



water technology



# PRODUCT CATALOGUE

submersible electric pumps  
and water treatment systems

50Hz

2014





# PRODUCT CATALOGUE

submersible electric pumps  
and water treatment systems

**50 Hz**

2014



All data made available remain non-binding. Zenit reserves the right to make unannounced product changes it deems appropriate



# Contents

|              |   |
|--------------|---|
| INTRODUCTION | 4 |
|--------------|---|

|                                |   |
|--------------------------------|---|
| 1.0 SUBMERSIBLE ELECTRIC PUMPS | 9 |
|--------------------------------|---|

|                                          |     |                                     |     |
|------------------------------------------|-----|-------------------------------------|-----|
| <b>1.1 DG (DRAGA)</b>                    | 20  | <b>1.5 GR (GRINDER)</b>             | 252 |
| With vortex impeller                     |     | Grinder pumps                       |     |
| DG Steel                                 | 22  | GR BluePRO                          | 254 |
| DG Blue                                  | 26  | GRS                                 | 258 |
| DG BluePRO                               | 30  | GRE                                 | 262 |
| DGE                                      | 36  | GRI                                 | 266 |
| DGO                                      | 44  | GRF                                 | 270 |
| DGI                                      | 60  | GRN                                 | 274 |
| DGF                                      | 64  | GRP                                 | 282 |
| DGN                                      | 78  |                                     |     |
| DGP                                      | 94  | <b>1.6 AP (ALTA PREVALENZA)</b>     | 286 |
| <b>1.2 DR (DRENO)</b>                    | 102 | With high head                      |     |
| With multi-channel open impeller         |     | AP BluePRO                          | 288 |
| DR Steel                                 | 104 | AP BluePRO HP                       | 292 |
| DR Blue                                  | 108 | APS                                 | 296 |
| DR BluePRO                               | 112 | APE                                 | 300 |
| DRE                                      | 118 | APF                                 | 304 |
| DRO                                      | 126 | APN                                 | 308 |
| DRF                                      | 134 | APP                                 | 314 |
| DRN                                      | 146 |                                     |     |
| DRP                                      | 160 | <b>1.7 Made of special alloys</b>   | 318 |
| <b>1.3 MA (MACS)</b>                     | 172 | DRX                                 | 320 |
| With single-channel open impeller        |     | DGX                                 | 326 |
| MAI                                      | 174 | DRY                                 | 336 |
| MAN                                      | 178 | DRB                                 | 346 |
| MAF                                      | 194 | DGB                                 | 352 |
| <b>1.4 SM - SB (SYSTEM M - SYSTEM B)</b> | 200 | <b>1.8 VL (VULCO)</b>               | 356 |
| With single/dual-channel closed impeller |     | For abrasive liquids                |     |
| SME                                      | 202 | VLP                                 | 358 |
| SMI                                      | 206 |                                     |     |
| SMN                                      | 210 |                                     |     |
| SMP                                      | 216 |                                     |     |
| SMF                                      | 226 |                                     |     |
| SBN                                      | 230 |                                     |     |
| SBP                                      | 244 |                                     |     |
|                                          |     |                                     |     |
|                                          |     | <b>PREMIUM EFFICIENCY CLASS IE3</b> | 365 |
|                                          |     | <b>1.9 ZU (Zenit UNIQA)</b>         |     |
|                                          |     | With vortex and channels impeller   |     |







## 2.0 AERATION and MIXING SYSTEMS 373

|     |                       |     |
|-----|-----------------------|-----|
| 2.1 | Air diffusers         | 375 |
| 2.2 | Submerged aerators    | 380 |
| 2.3 | Mixers and flow-maker | 388 |

## 3.0 LIFTING STATIONS 393

|     |                  |     |
|-----|------------------|-----|
| 3.1 | Lifting stations | 394 |
|-----|------------------|-----|

## 4.0 HYDRAULIC ACCESSORIES 411

|     |                                  |     |
|-----|----------------------------------|-----|
| 4.1 | Coupling devices and base plates | 412 |
| 4.2 | Fluxing valve                    | 420 |
| 4.3 | Check valves and gate valves     | 422 |
| 4.4 | Bend unions                      | 426 |
| 4.5 | Flanges and chains               | 428 |

## 5.0 ELECTRIC and ELECTRONIC ACCESSORIES 429

|     |                                                 |     |
|-----|-------------------------------------------------|-----|
| 5.1 | Electromechanical and electronic control panels | 430 |
| 5.2 | Alarms                                          | 444 |
| 5.3 | Floatswitches                                   | 445 |
| 5.4 | Remote control systems                          | 446 |

# The Zenit group



## One Group, One Goal

The Zenit Group ranks among the top national and international names in the design and manufacture of water treatment technologies. Its core business is the design and manufacture of submersible electric pumps for domestic and industrial use.

## Not just electric pumps

Thanks to the knowledge and experience it has acquired over the years Zenit has also featured on the market with aeration and mixing products, providing a comprehensive range of items designed to meet the most demanding needs.



## Character of Success

A solid tradition, dynamism and a penchant for innovation are the salient qualities that have led to Zenit's constant, steady growth, without ever losing sight of its origins and objectives.

## Uncompromising Quality

Shrewd corporate decision making has enabled the Zenit Group to carve out for itself considerable portions of the market in which it operates, thus ensuring its customers high technological content and ever-innovative services.



## The Customer First and Foremost

Its product differentiation in relation to that of competitors has enabled Zenit to establish with its customers a relationship of growing respect. Zenit is aware of the importance of customer satisfaction and it constantly strives to increase the fidelity of its customers.

We understand the value of finding a willing, efficient and competent business partner and every day at Zenit we work with these objectives in mind to consolidate and increase the faith our customers have placed in us.



## Many Members .... a single Group

Today Zenit is a Group that manages to have direct control over the markets it operates in, thanks to a targeted territorial presence. The Group is composed of four very distinct units that operate by pursuing a single, common, shared goal.

**Zenit Italia:** production site and sales office for Italy

**Zenit Pumps Suzhou:** production site and sales office for China

**Zenit Asia Pacific:** sales office for Asia and Oceanic market

**Zenit Europe:** sales office for Europe, Middle-East and Africa

## People, Product, Passion

The current structure of the Zenit Group is the result of a successful combination of entrepreneurial strategies and insights that have led to integration between company and globalisation. Bolstered by the conviction that the path we have undertaken is the right one, we can proceed along it together towards a single goal, guided by the 3P formula that has been our constant companion: People - Product - Passion.

# The history

Zenit was established at the end of the 50s. it was founded by Ugo Zeni to build and repair electric motors and hydraulic pumps. The head office is in Modena. The market is Italy.

In 1977 the company leadership was passed on to the founder's daughter, Adriana, and her husband, Italo Botton.

The range of products designed and built by Zenit is enriched: centrifugal electric, self priming, volumetric, submerged, submersible and surface pumps. The reference market is always the Italian one.

In 1985 the company makes a strategic choice: it decides to focus the production on submersible pumps for foul waste water.

1990 marks the beginning of Zenit expansion on foreign markets: Europe, Asia and South America.

It is also the year that Davide Botton, the owners' eldest son, joins the company.

From 1990 to 1994, Zenit triples its turnover and in 1995 obtains the UNI-EN-ISO 9001 certification.

In 1996 the company head office is moved to a new establishment in San Cesario, with a surface area of 10,000 sq m.

Lorenzo Botton, brother of Davide, joins the company.

The years from 1998-2002 are characterised by the expansion of the company on new markets and the range widened with products destined for sewage disposal: mixers, aerators, oxygenators.

APEX is founded in 2001, a software company which becomes part of the Zenit Group.

Between 2003 and 2004 Zenit obtains the UNI-EN-ISO 9001:2000 company certification and ATEX product certification.

In 2006 it opens a new Regional Office in Singapore and in 2007 it launches the new production and commercial unit in China, which occupies a total surface area of 16,500 sq m., of which 8,000 currently covered.

From 2006 to 2008 Zenit expands the San Cesario head office, which changes to a surface area of 19,000 sq m. and starts work to build a test tank, amongst the most complete in Europe.

In 2009 the new EMEA (Europe and Middle East Area) Regional Office in Luxembourg becomes operative; 3,000 sq m. covered on a total surface area of 6,500.



# The Zenit logo

**zenit**   **ZENIT**  
**elettropompe**

1958

1977



*Water technology at your service*

2000



water technology

2010

# Declaration of values

We inspire our work according to loyalty principles, honesty and respect for man, we dedicate ourselves to the environment and society.

## Innovation

We believe in product, process and concept innovation, as an instrument to generate new opportunities. Aware that, as a whole, the economical subjects determine the future, and we want to be part of it.

## Empowerment

Believing in the empowerment means operating in a company, respecting a quality approach, an objectives direction and an organisational development of Human Resources.

Such aspects imply the involvement of all the collaborators in the company dynamics, promoting training, professional growth, the increase in the control of one's own tasks and the capacity to evaluate one's own work, autonomously and responsibly.

An organisational culture which wants to diffuse the predisposition to invest constructive energies in the development of the various activities, through a positive attitude towards the expectations of success.

Zenit believes in empowerment!



## The company

Cooperation, participation, synergy. In Zenit, each component has its own task, but they all work together to reach the objectives of the organisation. A reality which interprets profit not as absolute value, but as expression of management efficiency and as instrument to support the development conditions.

## Passion

Our style distinguishes itself for the passion which integrates competence and professionalism, in the realisation of every project.

A Passion which livens, motivates, involves, taking with it enthusiasm, precision, commitment in research. In this sense, an interpretation of the activity as dynamic expression of the potentials and capacities of a person, is proposed.



## Competition

We interpret Competition as a push to improve and the market as a gym for confrontation, growing and developing.

In this sense, we believe in the importance of the additional value, "of that something extra" as principle of differentiation and as starting point in the research for alternative solutions.

## Transparency

To openly manifest one's own choices and projects is essential if one wishes to obtain trust from both collaborators and clients, and be able to ask for it in return.

Transparency and trust are essential in any activity based on merit and value recognition.

In Zenit we work with these criteria, in this way, even the human relationship can gain from the major communicative efficiency of informality, though remaining based on the maximum respect of professional value.



## Quality

We pursue the quality of products and services as a consequence of the company organisation and as inspiring principle in the relationships with clients and with the community. The quality is the result of a process based on responsibility and the necessary condition of any opportunity of well-being.

## Commitment, responsibility, environment

On performing our activity, we recognise the important value of social responsibility, committing ourselves in the realisation of useful, reliable and safe work.

Not only, we concretely use part of the company profits to promote the local community development and to finance social projects and have always recognised the basis for improving the community well-being and its economical, cultural and social development.





# Mission



Historical authenticity and dynamism are our primary hallmark features in terms of both our origins and future objectives.

Our know-how in the field of the water treatment has been gained during long years of work and research.

Every day we do our utmost to build upon and increase this legacy of knowledge. Although we have firmly established ourselves as a successful, trustworthy organization, we are still quite flexible and capable of further growth and transformation.

We promote a creative, stimulating and gratifying work environment that generates ideas capable of satisfying any and all new requirements.

We research, develop and market innovative, safe products based on environmentally sustainable production processes and company strategies which simplify and improve the work of the people using them. At the same time we create new professional opportunities for our employees and constantly strive to improve the quality of life of the entire community. We believe that these objectives can be achieved by investing in human resources, leaving space for creativity, fostering passion and accepting challenges.

**Producing water-treatment systems that improve the quality of life.**

# Vision



Zenit is a young and dynamic company that intends to reach its objectives by investing in human resources, providing space for creativity, fostering passion and accepting challenges.

Zenit wants to be the trusted partner one can always count on when it comes to ensuring professionalism, experience, product quality and efficient service.

The opening of branches and offices abroad is a clear demonstration of Zenit's determination to be geographically close to its customers.

Zenit wants to be a company where the client's needs are listened to, analysed and understood.

A company able to anticipate the expectations and needs of its own clients.

Zenit wants to be a future-oriented company.

The transition from local to global is natural and inevitable for those who are confident of their own abilities and focused on innovation.

Zenit wants to become a multinational company in order to effectively compete in the global market, while still taking full advantage of its local assets: flexibility, quick decision-making and a propensity to growth.

Zenit wants to exploit all the opportunities generated by globalisation.

Zenit wants to operate in an absolutely above-the-board, transparent manner because it has faith in its employees and wants to further consolidate and strengthen the trust its customers have shown in it. Zenit wants to be a company that manufactures in a sustainable and responsible manner, respecting people and the environment.

**Wherever there's water requiring efficient, responsible treatment, Zenit is there**



# Contacts



## Zenit Italia S.r.l.

**Headquarter, production site  
and sales office for the Italian market**

Via dell'Industria 11  
41018 San Cesario sul Panaro (MO), Italy  
Tel. (+39) 059.950.611 Fax (+39) 059.597.0399  
Mail [info.it@zenit.com](mailto:info.it@zenit.com)



## Zenit Europe SA

**Sales office and regional office for Europe,  
the Middle East, Africa, North and South  
America**

29-31 Zone Artisanale "Op Zaemer"  
4959 Bascharage, Luxembourg  
Tel. (+352) 270.305 Fax (+352) 246.111.76  
Mail [info.lu@zenit.com](mailto:info.lu@zenit.com)



## Zenit China, Ltd.

**Production site and sales office  
for the Chinese market**

26 Wupu Road, Shengpu dc.  
Suzhou Industrial Park, 215126 Jiangsu, P.R.C.  
中国江苏省苏州工业园区胜浦分区吴浦路26号  
Tel. (+86) 512.628.718.88 Fax (+86) 512.628.718.66  
Mail [info.cn@zenit.com](mailto:info.cn@zenit.com)



## Zenit Asia Pacific Pte Ltd.

**Sales Company for the Asia-Pacific region**

30 Toh Guan Road - #08-07  
ODC Districentre, Singapore 608840  
Tel. (+65) 656.011.01 Fax (+65) 656.011.41  
Mail [info.sg@zenit.com](mailto:info.sg@zenit.com)

# 1.0

## SUBMERSIBLE ELECTRIC PUMPS



# Hydraulic families

## DG (DRAGA)



### Set-back vortex impeller

The **DRAGA (DG)** family consists of electric pumps with Set-back Vortex impeller which allows ample free passages, often entirely free passages. Ideal for applications in industry in general and in agriculture, for pumping biological sludges, livestock farm slurry and soiled liquids containing solids.

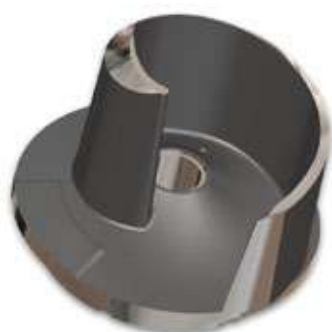
## DR (DRENO)



### Multi-channel open impeller

The **DRENO (DR)** family consists of electric pumps with multi-channel open impeller. Depending on which of the various motors available is fitted, this family is used for the treatment of mainly clean or slightly soiled water or can be used for lifting sewage, in wastewater treatment plants and in industrial applications in general.

## MA (MACS)



### Single-channel open impeller

The **MACS (MA)** family consists of electric pumps with single-channel open impeller which guarantees very high performances and ample free passages, often entirely free passages, which reduce the risk of fouling. Units in this family can be used for lifting sewage, for wastewater treatment plants, and for industrial applications in general.

## SM (SYSTEM M)



### Single-channel closed impeller

The **SYSTEM M (SM)** family consists of electric pumps with single-channel closed impeller which allows ample free passages and high performances. Used with soiled wastewaters containing suspended solids. 'Ideal for handling soiled biological liquids with small solid particles in suspension and strained biological liquids. Generally used in industry, especially in sectors such as wastewater treatment plants and sewage disposal systems.

## SB (SYSTEM B)



### Dual-channel closed impeller

The **SYSTEM B (SB)** family consists of electric pumps with dual-channel closed impeller. The ample free passage and excellent performance are the two features that enable the SB family to operate with soiled liquids containing suspended solids. The ideal solution for pumping slurry, soiled water with and without solids, untreated or activated sludges, strained and unstrained biological liquids and rainwater or seepage. Ideal for lifting water from public establishments and plants for public works or hospitals.

## GR (GRINDER)



### Impeller with grinder system

The **GRINDER (GR)** family consists of electric pumps with immersed multi-channel impeller with a grinding system on the intake. The intended use varies depending on whether 2 or 4 pole motors are used; in the former case, applications are in the livestock farming and food industries where sewage is present. In the second case, applications are mainly in agriculture and livestock farming, with particularly heavily soiled liquids.

## AP (AP)



### High head impeller

The **AP** family consists of electric pumps with high-head immersed multi-channel impeller. Units in this family are used for clean or soiled water containing sand or small solids but not filaments. Suitable for applications in sectors such as the residential, public and irrigation sectors, or cleaning out wells for sanding. The high manometric head ensures excellent results for the creation of water features and fountains.

## VL (VULCO)



### Multi-channel open impeller with Vulkollan coating

The **VULCO (VL)** family pumps are built with hydraulic units in cast iron coated with a thick layer of hard-wearing polyurethane (Vulkollan). Multichannel open impeller with metal core coated with a thick layer of hard-wearing polyurethane. This coating's virtually unlimited duration allows its application where other materials generate too many problems with excessive wear and insufficient time between services. Designed for use in the ceramics industry, for the processing of granite, marble and glass, for metal cutting, in quarries and mines, in aggregate processing systems and in concrete production plants.



# Electromechanical assemblies

## UNIQA® Steel Blue



### Uniqua series

Electromechanical assembly in EN-GJL-250 cast iron or AISI 316 stainless steel, suited for submerged or dry operation (equipped with patented closed loop cooling circuit). Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor.



### Steel series

Electromechanical assembly in AISI 304 chrome-nickel steel, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump with food-grade oil lubrication, and V-ring in direct contact with the liquid. Structure in chrome-nickel AISI 304 steel.



### Blue & BluePRO series

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

# E



### E series

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor.

# O



### O series

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, installed opposing with oil lubrication. Oil bath motor.

# I



### I series

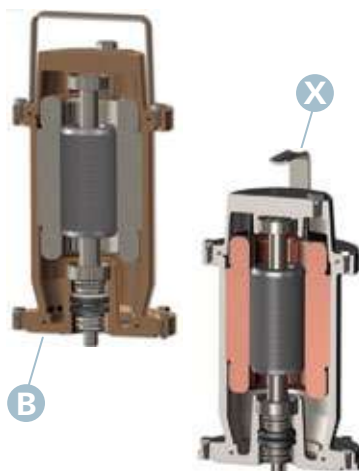
Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump. Ecological dry motor.

S

**S series**

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Pump body in single casting with motor casing.

B-X

**B-X series**

Electromechanical assembly for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing and with oil lubrication. Oil bath motor.

B Series: bronz B10

X Series: acciaio inox CF-8M(AISI 316)

F

**F series**

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

N

**N series**

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in explosion-proof ATEX version.

P

**P series**

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

Y

**Y series**

Electromechanical assembly in CF-8M (AISI 316) stainless steel, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

# Key to product code

# DRO 50/2/G32V A0BM/50

①

②

③

(A)

(B)

(C)

④

⑤

⑥

⑦

⑧

⑨

## ① Family

**DG = DRAGA**

Vortex impeller with full free passage

**DR = DRENO**

Multi-channel open impeller

**MA = MACS**

Single-channel open impeller

**SM = SYSTEM M**

Single-channel closed impeller

**SB = SYSTEM B**

Dual-channel closed impeller

**GR = GRINDER**

Impeller with grinder system

**AP = HIGH HEAD**

High head impeller

**VL = VULCO**

Impeller with Vulkollan coating

## ② Series

**Steel =** Stainless steel structure, 2 (two) mechanical seals in oil bath and 1 (one) V-ring. Dry motor.

**Blue =** Cast iron structure, 2 (two) mechanical seals in oil bath and 1 (one) V-ring. Dry motor.

**BluePRO =** Cast iron structure, 2 (two) mechanical seals in oil bath and 1 (one) V-ring. Dry motor.

**S =** Cast iron structure, 1 (one) mechanical seal and 1 (one) lip seal. Dry motor.

**E =** Cast iron structure, 1 (one) mechanical seal and 1 (one) lip seal. Dry motor.

**O =** Cast iron structure, 2 (two) mechanical seals. Oil-bath motor.

**I =** Cast iron structure, 2 (two) mechanical seals in oil bath. Dry motor.

**B =** Bronze structure, 2 (two) mechanical seals. Oil-bath motor.

**X =** Stainless steel structure, 2 (two) mechanical seals. Oil-bath motor.

**F =** Cast iron structure, 2 (two) mechanical seals in oil bath. Dry motor. ATEX certification.

**N =** Cast iron structure, 2 mechanical seals in oil bath. Dry motor.

**P =** Cast iron structure, 3 (three) mechanical seals in oil bath. Oil-bath motor.

**Y =** Stainless steel structure, 3 (three) mechanical seals in oil bath. Oil-bath motor.

## ③ Power

(HPx100) / motor poles

## ④ Delivery rate

**(A) TYPE**

G = GAS thread (if no letter appears, the pump is flanged)

**(B) DIAMETER**

32 = 1¼"      40 = 1½"

50 = 2"      65 = 2½"

**(C) POSITION**

V = vertical

H = horizontal

## ⑤ Hydraulic model

Basic hydraulic unit "A". Other versions may be available identified by different letters representing alternative duty curves

## ⑥ Version number

Basic value "0". Different values indicate modifications not compatible with the previous version

## ⑦ Motor size

Identifies the diameter of the motor assembly. Needed to distinguish between products with the same power but with motors of different sizes

## ⑧ Motor phases

M = Single-phase

T = Three-phase

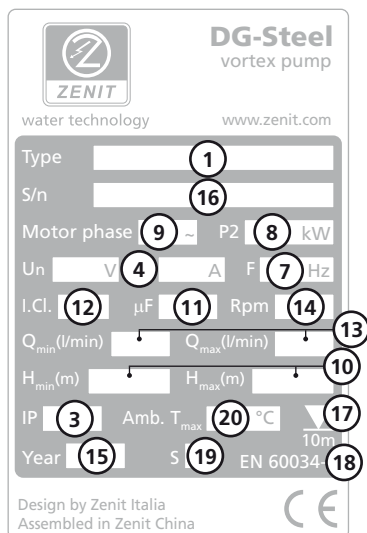
## ⑨ Power supply voltage frequency

50 = 50Hz

60 = 60Hz

# Product identification

## Steel series models

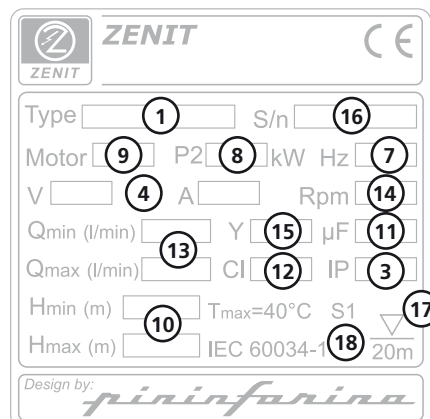


**DG-Steel**  
vortex pump

water technology www.zenit.com

Type **1**  
S/n **16**  
Motor phase **9** ~ P2 **8** kW  
Un **4** V **7** A **7** Hz  
I.CL. **12**  $\mu$ F **11** Rpm **14**  
Q<sub>min</sub> (l/min) **13** Q<sub>max</sub> (l/min) **13**  
H<sub>min</sub> (m) **10** H<sub>max</sub> (m) **10**  
IP **3** Amb. T<sub>max</sub> **20** °C **17**  
Year **15** S **19** EN 60034-1 **18**  
Design by Zenit Italia  
Assembled in Zenit China

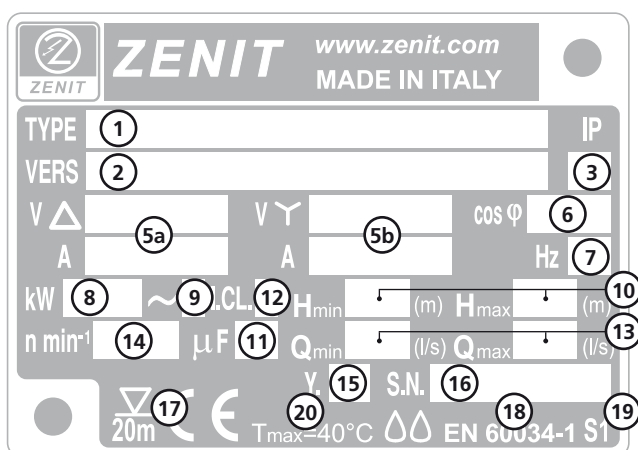
## Blue and BluePRO series models



**ZENIT**

Type **1** S/n **16**  
Motor **9** P2 **8** kW Hz **7**  
V **4** A **14** Rpm **14**  
Q<sub>min</sub> (l/min) **13** Y **15**  $\mu$ F **11**  
Q<sub>max</sub> (l/min) **13** CI **12** IP **3**  
H<sub>min</sub> (m) **10** T<sub>max</sub>=40°C S1 **17**  
H<sub>max</sub> (m) **10** IEC 60034-1 **18** 20m  
Design by: *pininfarina*

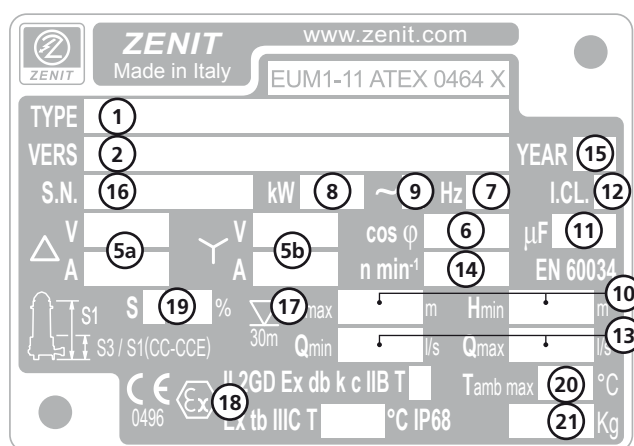
## Standard models



**ZENIT** www.zenit.com  
MADE IN ITALY

TYPE **1** IP **3**  
VERS **2**  
V  $\Delta$  **5a** V  $\sim$  **5b** COS  $\phi$  **6**  
A **5a** A **5b** Hz **7**  
kW **8** ~ **9** I.CL. **12** H<sub>min</sub> (m) **10** H<sub>max</sub> (m) **10**  
n min<sup>-1</sup> **14**  $\mu$ F **11** Q<sub>min</sub> (l/s) **13** Q<sub>max</sub> (l/s) **13**  
Y. **15** S.N. **16**  
20m **17**  $\epsilon$  T<sub>max</sub>=40°C  $\Delta$  EN 60034-1 **18** S1 **19**

## ATEX certified models



**ZENIT** www.zenit.com  
Made in Italy EUM1-11 ATEX 0464 X

TYPE **1** YEAR **15**  
VERS **2** S.N. **16** kW **8** ~ **9** Hz **7**  
I.CL. **12**  
V  $\Delta$  **5a** V  $\sim$  **5b** COS  $\phi$  **6**  $\mu$ F **11**  
A **5a** A **5b** n min<sup>-1</sup> **14** EN 60034-1 **10**  
S1 **19** % **17** max **10** H<sub>min</sub> (m) **10**  
S3 / S1(CC-CCE) 30m Q<sub>min</sub> (l/s) **13** Q<sub>max</sub> (l/s) **13**  
 $\epsilon$  0496  $\epsilon$  **18** II 2GD Ex db k c IIB T **20** °C  
Ex tb IIIC T **21** °C IP68 **21** Kg

- 1** Article part of the article code
- 2** Varying part of the article code
- 3** Casing protection rating
- 4** Power supply and current
- 5a** Power supply and current (delta connection)
- 5b** Power supply and current (star connection)
- 6** Power factor
- 7** Power supply voltage frequency
- 8** Motor power
- 9** Number of phases
- 10** Minimum and maximum head

- 11** Capacitor capacity
- 12** Motor insulation class
- 13** Minimum and maximum flow-rate
- 14** Rpm
- 15** Year of manufacture
- 16** Serial number
- 17** Maximum immersion depth
- 18** Reference standards / EX mark
- 19** Continuous/alternate operation
- 20** Maximum room temperature
- 21** Weight

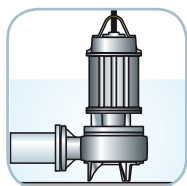


# Versions available

## Electrical variants

|              |                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAE</b>   | <b>No electric accessories installed (electrical cable only)</b><br>The pump is not equipped with any electrical accessories. This version is normally used for installation with electrical cabinets and floats/sensors to control the operating level.                                                                                                                      |
| <b>T</b>     | <b>Thermal protection</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator.<br>Series O SINGLE-PHASE models do not have a capacitor and it is therefore necessary to use an external electrical cabinet for hookup.                                                                                                                               |
| <b>TC</b>    | <b>Thermal protection, capacitor</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator and capacitor in the motor cover.                                                                                                                                                                                                                           |
| <b>TCD</b>   | <b>Thermal protection, capacitor, startup capacitor</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator and capacitor in the motor cover. An external electrical cabinet must be used to install the 80 uF startup capacitor (circuit breaker) included in the supply and the thermal protection.                                                |
| <b>TCDT</b>  | <b>Thermal protection, capacitor, startup capacitor, overload protection</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator, capacitor in the motor cover and 80 uF startup capacitor (circuit breaker) in the cabinet supplied with the pump, which also includes an overload protection.                                                      |
| <b>TCDGT</b> | <b>Thermal protection, capacitor, startup capacitor, overload protection, float switch</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator, capacitor in the motor cover and 80 uF startup capacitor (circuit breaker) in the cabinet supplied with the pump, which also includes an overload protection.                                        |
| <b>TCG</b>   | <b>Thermal protection, capacitor, float switch</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator, capacitor in the motor cover and float switch.                                                                                                                                                                                               |
| <b>TCST</b>  | <b>Thermal protection, capacitor, electrical cabinet, overload protection</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator, and an electrical cabinet housing the capacitor and overload protection.                                                                                                                                          |
| <b>TCSGT</b> | <b>Thermal protection, capacitor, float switch, electrical cabinet, overload protection</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator, float switch, and an electrical cabinet housing the capacitor and overload protection.                                                                                                              |
| <b>TCW</b>   | <b>Thermal protection, capacitor, capacitor, vertical travel float switch</b><br>The pump is equipped with thermal protection devices (bi-metal) inside the stator, capacitor in the motor cover and vertical travel bell float switch.                                                                                                                                       |
| <b>TS</b>    | <b>Thermal protection, sensor for detecting water in the mechanical seal oil sump</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator and sensor for detecting water infiltration from the mechanical seal oil sump. It must be installed in the electrical cabinet to read the signal.<br>This version is only available for THREE-PHASE pumps. |
| <b>TR</b>    | <b>Thermal protection, relay for motor protection</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator and motor protection relay in the cover.                                                                                                                                                                                                   |
| <b>TRG</b>   | <b>Thermal protection, relay for motor protection, float switch</b><br>The pump is equipped with thermal protection (bi-metal) inside the stator, float switch, and motor protection relay in the cover.                                                                                                                                                                      |

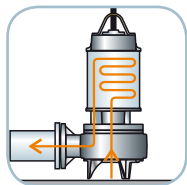
## Cooling system



**N**

### No cooling and/or seal flushing system

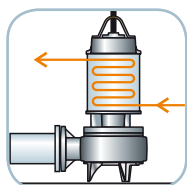
The pump is not equipped with any motor or mechanical seal cooling system and must thus operate submerged.



**CC**

### Closed jacket cooling system

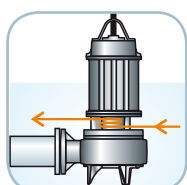
A part of the liquid handled by the pump, due to the special design of the impeller's rear section, is conducted to the gap between case and jacket, thus cooling the motor. Once the gap is full, the liquid is taken into the pump body via a suction duct and then expelled. This version should not be used in applications with high-density liquids and fibrous matter contents.



**CCE**

### Open jacket cooling system

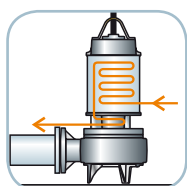
The cooling liquid conducted into the gap between the case and jacket to cool the motor comes from an external pressurised source.



**FT**

### System for flushing seals with external liquid

The cooling liquid, delivered from an external circuit, enters the mechanical seal housing, lubricates the seals, and is then flushed via the outlet hole.



**CGFT**

### Cooling jacket and system for flushing seals with external liquid

The cooling liquid, delivered from an external circuit, enters the inlet hole, fills the gap between case and jacket, and cools the motor. It then flows through a duct into the mechanical seal housing and lubricates the seals, after which it is flushed via the outlet hole.

## Set of mechanical seals



**2SIC**

2 mechanical seals in silicon carbide



**SICM**

1 mechanical seal in silicon carbide and 1 lip seal



**SICAL**

1 mechanical seal in silicon carbide and 1 mechanical seal in alumina graphite (NBR)

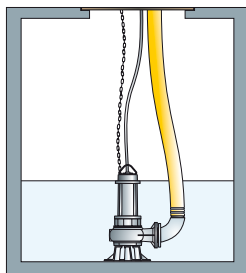


**2SICAL**

2 mechanical seals in silicon carbide and 1 mechanical seal in alumina graphite (NBR)

# Installations

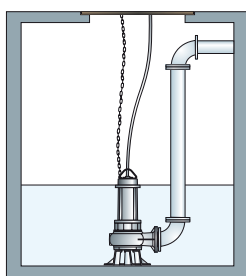
A



## FREE installation

The electric pump, standing on its feet or base, is connected to the delivery flexible pipe using a joint fixed to the discharge. This installation allows to move easily the electrical pump

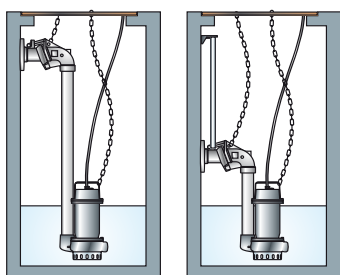
B



## FIXED installation

The electric pump, standing on its feet or base, is connected to the delivery pipe, which is screwed to the discharge if threaded, or fixed to a bend if the port is flanged. The pump-hose connection may be threaded or flanged, depending on the pump fitting.

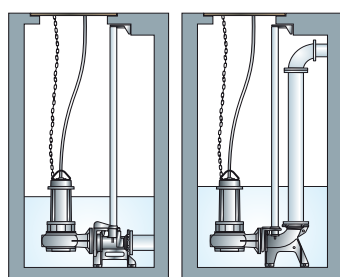
C



## Installation with EXTERNAL COUPLER

Available for electric pumps with threaded discharge. The pump unit is supported by a special device fitted to the delivery pipe. This device can be installed at any time without having to empty the tank. It simplifies any maintenance work on the pump, which can be lifted out and resubmerged with great ease. It is recommended in particular for installations of small size, and does not require the pump to be resting on the bottom of the tank.

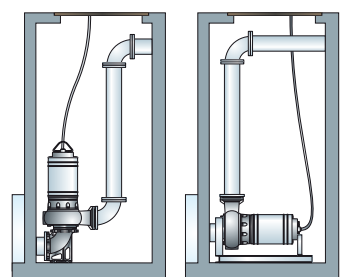
D



## Installation with BASE COUPLING FOOT

For submerged installation, available for electric pumps with flanged or threaded horizontal discharge. The coupling device is fixed to the bottom of the tank and the pump is lowered in with the aid of two guide pipes fitted earlier, until the connection to the foot is completed. The delivery pipe is fixed to the coupling device discharge. This device makes routine checks, any maintenance work or replacement of the pump extremely easy, with no need to empty the tank. A specific kit also allowing pumps with vertical discharge to be installed with the base coupling foot is available.

E



## Dry installation with COOLING SYSTEM

Submersible electric pumps can also be used in dry chambers thanks to the cooling jacket. The cooling liquid used may be the process liquid, if its density is low, it is not seriously soiled and it does not contain suspended solids, or a liquid from the outside. The electric pump is mounted on a supporting bracket, to which the intake line is connected. This type of installation is also possible with the electric pump kept horizontal.

# Technical norms

## Standard models

|                                         |             |
|-----------------------------------------|-------------|
| MACHINERY DIRECTIVE                     | 2006/42/CE  |
| LOW VOLTAGE DIRECTIVE                   | 2006/95/CE  |
| ELECTROMAGNETIC COMPATIBILITY DIRECTIVE | 2004/108/CE |

### Regulations applied

UNI EN ISO 12100-1; UNI EN ISO 12100-2; CEI EN 60529; CEI EN 60034-1; CEI EN 60034-2; CEI EN 60335-1; CEI EN 60335-2-41; UNI EN ISO 9906; CEI EN 60204; UNI EN 1561; UNI EN 1563;

## Explosion-proof version models

|                               |             |
|-------------------------------|-------------|
| ATEX                          | 94/9/CE     |
| Machine directive             | 2006/42/CE  |
| Electromagnetic compatibility | 2004/108/CE |

### The following main standards are applied:

EN 1127-1; EN 13463-1; EN 13463-5; EN 13463-8; EN 60079-0; EN 60079-1; EN 61241-0; EN 61241-1; EN ISO 12100-1; EN ISO 12100-2; EN 1050; EN 414; EN 60529; EN 60034-1; EN 60034-2; EN 60335-1; EN 60335-2-41; EN 9906; EN 60204-1; EN 1561; EN 1563; EN 614.

# Technical data key

| ① | ②                    | ③   | ④      | ⑤       | ⑥       | ⑦   | ⑧    | ⑨     | ⑩            | ⑪         | ⑫            |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|-----------|--------------|
|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Cable (*) | Free passage |
| ① | DGN 200/4/80 A1DT/50 | 400 | 3      | 2.0     | 1.5     | 4.1 | 1450 | Dir   | DN80 PN10-16 | A - B     | 80 mm        |
| ② | DGN 300/4/80 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN80 PN10-16 | A - B     | 80 mm        |
| ③ | DGN 400/4/80 A1FT/50 | 400 | 3      | 3.7     | 2.8     | 7.5 | 1450 | Dir   | DN80 PN10-16 | A - B     | 80 mm        |

- |                                 |                              |
|---------------------------------|------------------------------|
| ① Hydraulic curve reference     | ⑧ Rpm 2900 = 2 poles         |
| ② Model                         | 1450 = 4 poles               |
| ③ power supply                  | 960 = 6 poles                |
| ④ Motor phases 1 = single phase | ⑨ Start Dir= direct          |
| 3 = three phase                 | Y Δ= delta-star              |
| ⑤ Input power                   | ⑩ Discharge diameter         |
| ⑥ Rated power output            | ⑪ Electrical cable           |
| ⑦ Nominal absorbed current      | ⑫ Max dimension solid bodies |

## Note

The technical specifications given in the catalogue refer to the standard version. Models with other power, startup type and cable length specifications are available on request. Please contact Customer Service for details.

This catalogue is available for browsing on [www.zenit.com](http://www.zenit.com)



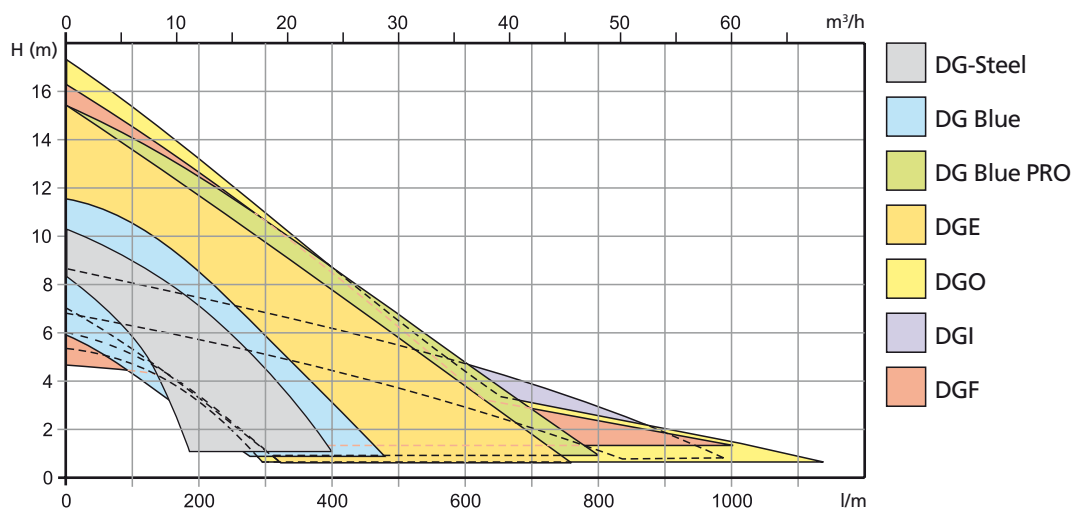
# 1.1 DG (DRAGA)

## pumps with vortex impeller

The **DRAGA (DG)** family consists of electric pumps with set-back Vortex impeller which allows ample free passages, often entirely free passages. Ideal for applications in industry in general and in agriculture, for pumping biological sludges, livestock farm slurry and soiled liquids containing solids.

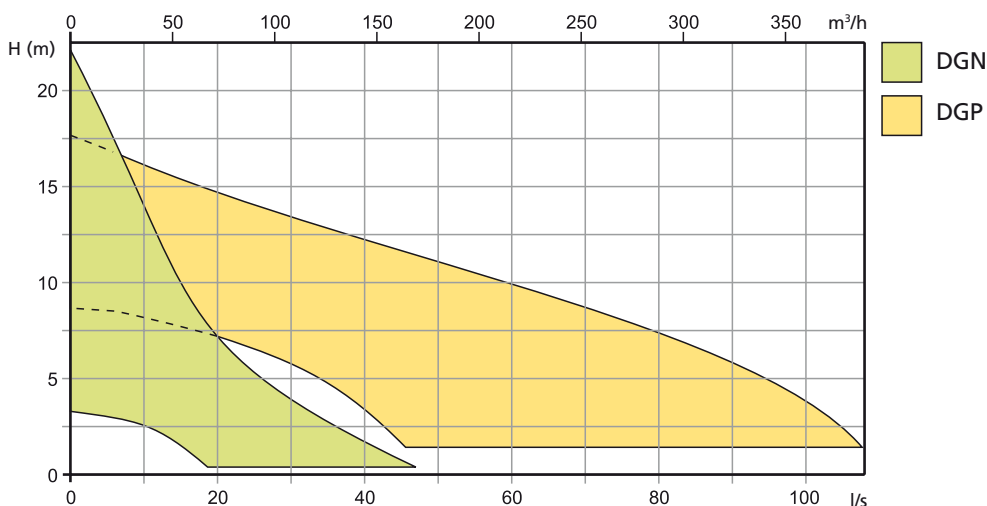
### 0.3 ÷ 1.5 kW

Thanks to the ample free passage, DG models with motors up to 1.5 kW are ideal for applications in industry, agriculture and livestock farming.



### 1.1 ÷ 16.4 kW

DG models with motors up to 16.4 kW have free passage of up to 150 mm and are suitable for the treatment of biological sludges, slurry from livestock farms and soiled liquids containing solids.



### 0.3 ÷ 1.5 kW



#### DG-Steel

Electromechanical assembly in AISI 304 chrome-nickel steel, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump with food-grade oil lubrication, and V-ring in direct contact with the liquid. Structure in chrome-nickel AISI 304 steel. For clean or slightly dirty water, containing solids up to 40 mm grain size. For sewerage plants, livestock farms, car washes, hydro-sanitary applications.

page 22

**DG**

Pumps with vortex impeller

0.3 ÷ 1.5 kW

**DG Blue**

page 26

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide and graphite alumina mechanical seals in oil sump, V-ring in direct contact with the liquid. Ecological dry motor. Technopolymer handle and impeller. Pump body in single casting with motor casing. Only available in single-phase version. Used with soiled biological wastewaters and sewage. Suitable and reliable for domestic use and residential applications.

**DG BluePRO**

page 30

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in oil sump, V-ring in direct contact with the liquid. Ecological dry motor. Aluminium handle, cast iron impeller. Pump body in single casting with motor casing. Suitable for heavy-duty applications with soiled biological liquids, sewage, rainwater and seepage. This electric pump is intended for both domestic and professional use.

**DGE**

page 36

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller. Suitable with soiled biological liquids and sewage. Suitable for domestic and residential use.

**DGO**

page 44

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, installed opposing with oil lubrication. Oil bath motor. Stainless steel handle, cast iron impeller. Suitable for heavy-duty domestic and residential applications with soiled biological liquids, sewage, rainwater and seepage.

**DGI**

page 60

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump. Ecological dry motor. Stainless steel handle, cast iron impeller. Suitable for heavy-duty applications with soiled biological wastewaters, sewage, rainwater and seepage.

**DGF**

page 64

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Cast iron handle and impeller. Models with ATEX explosion-proof certification. Specifically developed for use where there are traces of flammable liquids or in potentially explosive atmospheres, the DGF is used where the use of ordinary submersible electric pumps would not be possible. The main sectors of use are industrial and for the removal of landfill percolates and soiled biological liquids.

1.1 ÷ 16.4 kW

**DGN**

page 78

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals (optional). Models available in ATEX explosion-proof version (on request). Used with unstrained soiled biological wastewaters and sewage and for civil lifting applications. It is thus ideal for application in wastewater treatment plants, sewer systems, livestock farms, industry and agriculture. These models are prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation (on request).

**DGP**

page 94

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposing graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor. Used with unstrained soiled biological wastewaters and sewage and for civil lifting applications. It is thus ideal for heavy-duty applications in wastewater treatment plants, sewer systems, livestock farms, industry and agriculture.

# DG-Steel

Stainless steel pumps  
with vortex impeller

All product images are indicative only



## General characteristics

|                          |                      |
|--------------------------|----------------------|
| set-back vortex impeller |                      |
| motor power              | 0,37 ÷ 0,75 kW       |
| poles                    | 2                    |
| discharge                | GAS 1¼"-1½" Vertical |
| free passage             | max 40 mm            |
| max flow rate            | 6.3 l/s              |
| max head                 | 10.0 m               |

## Electromechanical assembly

Electromechanical assembly in AISI 304 chrome-nickel steel, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump with food-grade oil lubrication, and V-ring in direct contact with the liquid. Structure in chrome-nickel AISI 304 steel.

## Applications

For clean or slightly dirty water, containing solids up to 40 mm grain size. For sewerage plants, livestock farms, car washes, hydro-sanitary applications.

## Construction materials

|                                  |                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Case                             | Chrome-nickel steel AISI 304                                                                                                           |
| Impeller                         | Chrome-nickel steel AISI 304                                                                                                           |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                                                          |
| Standard gasket                  | Rubber - NBR                                                                                                                           |
| Shaft                            | Steel - AISI 431                                                                                                                       |
| Set of standard mechanical seals | Three mechanical seals; double seal (SiC-Al) in oil sump with food-grade oil lubrication, one V-ring in direct contact with the liquid |

## Operating limits

|                               |                       |
|-------------------------------|-----------------------|
| Maximum operating temperature | 40°C (90°C max 3 min) |
| PH of treated fluid           | 6 ÷ 14                |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s  |
| Maximum immersion depth       | 10 m                  |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup>  |
| Maximum acoustic pressure     | <70 dB                |
| max starts per hour           | 30                    |



#### Lifting handle

Chrome-nickel steel AISI 304.



#### Cooling System

As for the internal ricyle pumped liquid system, the motor cooling is guaranted even if the pump is partially covered by the liquid.



#### Mechanical seal

Three mechanical seals; double seal (SiC-Al) in oil sump with food-grade oil lubrication, one V-ring in direct contact with the liquid.



#### Strainer

Chrome-nickel steel AISI 304  
Max free passage 40 mm.



#### Impeller

Chrome-nickel steel AISI 304.



#### Optional

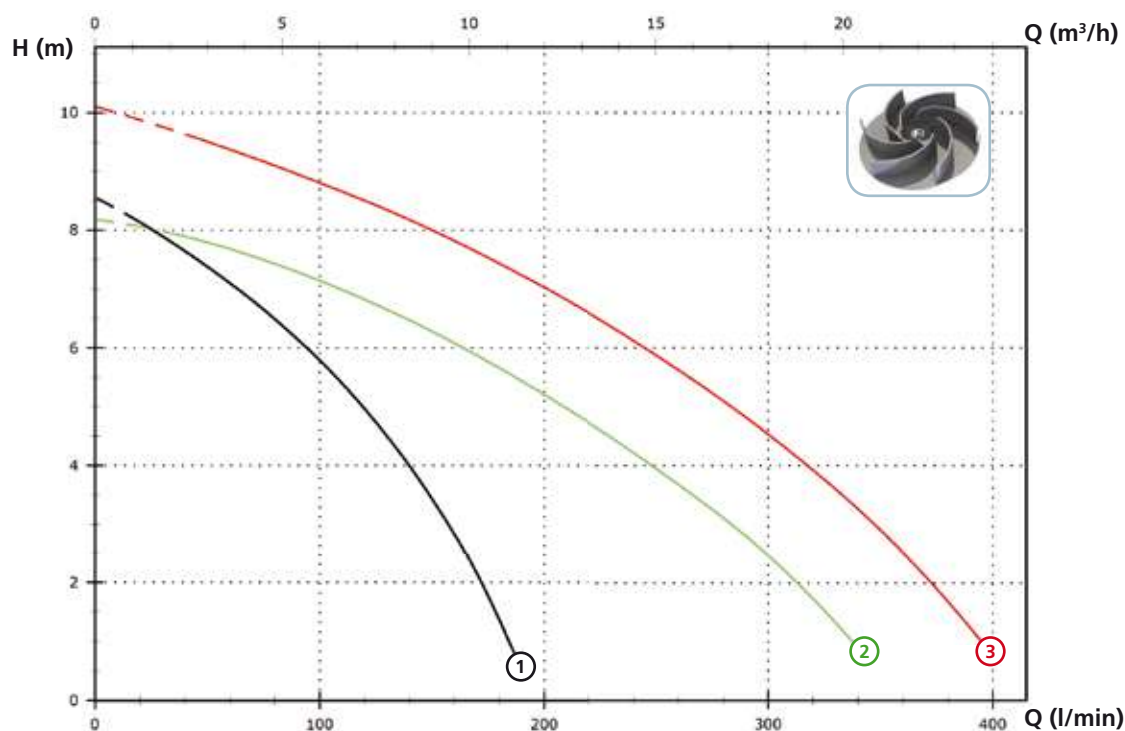
Vertically sliding level regulator, recommended for installation in small wells.

# DG-Steel

## Models with vertical GAS 1½"- 1¼" threaded discharge - 2 poles

### Performances

|                        | l/s   | 0    | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0  | 3.5  | 4.0  | 4.5  | 5.0  | 5.5  | 6.0  |
|------------------------|-------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
|                        | l/min | 0    | 30  | 60  | 90  | 120 | 150 | 180  | 210  | 240  | 270  | 300  | 330  | 360  |
|                        | m³/h  | 0    | 1.8 | 3.6 | 5.4 | 7.2 | 9.0 | 10.8 | 12.7 | 14.5 | 16.3 | 18.1 | 19.9 | 21.7 |
| ① DG-Steel 37/2 M50    |       | 8.7  | 7.6 | 7.1 | 6.1 | 5.0 | 3.4 | 1.3  |      |      |      |      |      |      |
| ② DG-Steel 55/2 M50    |       | 8.1  | 7.8 | 7.5 | 7.0 | 6.6 | 6.2 | 5.7  | 4.8  | 4.1  | 3.2  | 2.3  | 1.3  |      |
| ③ DG-Steel 75/2 M(T)50 |       | 10.0 | 9.5 | 9.2 | 8.6 | 8.2 | 7.8 | 7.5  | 6.7  | 6.0  | 5.2  | 4.1  | 3.2  | 2.1  |



### Technical data

|                     | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Ø     | Free passage |
|---------------------|-----|--------|---------|---------|-----|------|-------|--------------|
| ① DG-Steel 37/2 M50 | 230 | 1      | -       | 0.37    | 3.0 | 2900 | G 1¼" | 25 mm        |
| ② DG-Steel 55/2 M50 | 230 | 1      | -       | 0.55    | 4.3 | 2900 | G 1½" | 40 mm        |
| ③ DG-Steel 75/2 M50 | 230 | 1      | -       | 0.75    | 5.6 | 2900 | G 1½" | 40 mm        |

|                     | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Ø     | Free passage |
|---------------------|-----|--------|---------|---------|-----|------|-------|--------------|
| ③ DG-Steel 75/2 T50 | 400 | 3      | -       | 0.75    | 2.4 | 2900 | G 1½" | 40 mm        |



# DG-STEEL

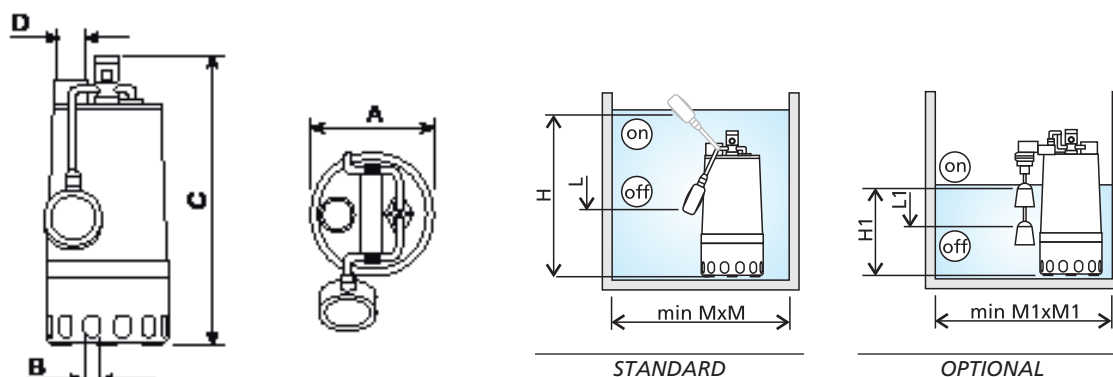
## Versions available

(Key to versions on page 16)

(key to versions on page 16)

|                   | Electrical variants |   |        |             |                  |                       |             |                  |                       |             |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|-------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|-------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                   | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>C<br>W | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DG-Steel 37/2 M50 |                     |   |        |             |                  |                       | ●           |                  |                       | ●           |        |        |             |   | ●         |    |                  |      |      | ●     |        |
| DG-Steel 55/2 M50 |                     |   |        |             |                  |                       | ●           |                  |                       | ●           |        |        |             |   | ●         |    |                  |      |      | ●     |        |
| DG-Steel 75/2 M50 |                     |   |        |             |                  |                       | ●           |                  |                       | ●           |        |        |             |   | ●         |    |                  |      |      | ●     |        |
| DG-Steel 75/2 T50 | ●                   |   |        |             |                  |                       |             |                  |                       |             |        |        | ●           |   | ●         |    |                  |      |      | ●     |        |

## Overall dimensions and weights



|                      | Ø A | B  | C   | D     | H   | L   | M   | H1  | L1  | M1  | kg  |
|----------------------|-----|----|-----|-------|-----|-----|-----|-----|-----|-----|-----|
| DG-Steel 37/2 M50    | 170 | 25 | 350 | G 1¼" | 435 | 195 | 350 | 205 | 115 | 300 | 6.6 |
| DG-Steel 55/2 M50    | 210 | 40 | 405 | G 1½" | 490 | 250 | 400 | 260 | 170 | 350 | 8.1 |
| DG-Steel 75/2 M(T)50 | 210 | 40 | 405 | G 1½" | 490 | 250 | 400 | 260 | 170 | 500 | 8.9 |

Dimensions in mm

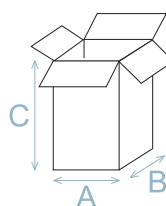
M - M1 Minimum dimensions - 500mm x 500mm Suggested dimensions

## Packaging dimension

|                      | A   | B   | C   |
|----------------------|-----|-----|-----|
| DG-Steel 37/2 M50    | 200 | 200 | 400 |
| DG-Steel 55/2 M50    | 240 | 250 | 470 |
| DG-Steel 75/2 M(T)50 | 240 | 250 | 470 |

Dimension in mm

All weights and dimensions are indicative only

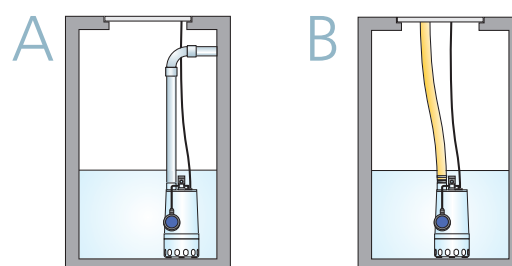


## No. pieces per pallet

For DG-Steel 37 models each pallet (EUR 1000x1200 mm) is able to take 90 pieces.

For DG-Steel 55-75 models each pallet (EUR 1000x1200 mm) is able to take 40 pieces.

## Installations available



# DG Blue

Set-back vortex impeller

DESIGN BY

*pininfarina*

All product images are indicative only



## General characteristics

|                          |                  |
|--------------------------|------------------|
| set-back vortex impeller |                  |
| motor power              | 0,3 ÷ 0,74 kW    |
| poles                    | 2                |
| discharge                | GAS 1½" vertical |
| free passage             | max 40 mm        |
| max flow rate            | 7.7 l/s          |
| max head                 | 11.6 m           |

## Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Used with soiled biological wastewaters and sewage. Suitable and reliable for domestic use and residential applications.

## Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Technopolymer                                                                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)                                           |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one alumina graphite mechanical seal (AL), V-ring |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

Models available in IECEx certified version

Ex nA IIC T3  
Ex nA nC IIC T3

# DG Blue



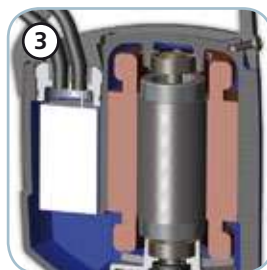
## Lifting handle

Ergonomic technopolymer lifting and carrying handle. Clip floatswitch adjustment.



## Cable gland System

Innovative cable gland system with twin O-rings to ensure maximum tightness.



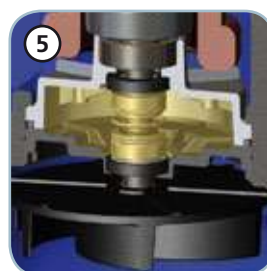
## Motor and electrical accessories

Dry motor with thermal protections. Internal startup capacitor.



## Mechanical seals

One silicon carbide mechanical seal (SiC) and one alumina-graphite mechanical seal (AL), V-ring in direct contact with the liquid.



## Oil sump

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.



## Support foot

Support foot in impact-resistant polypropylene.



## Free passage

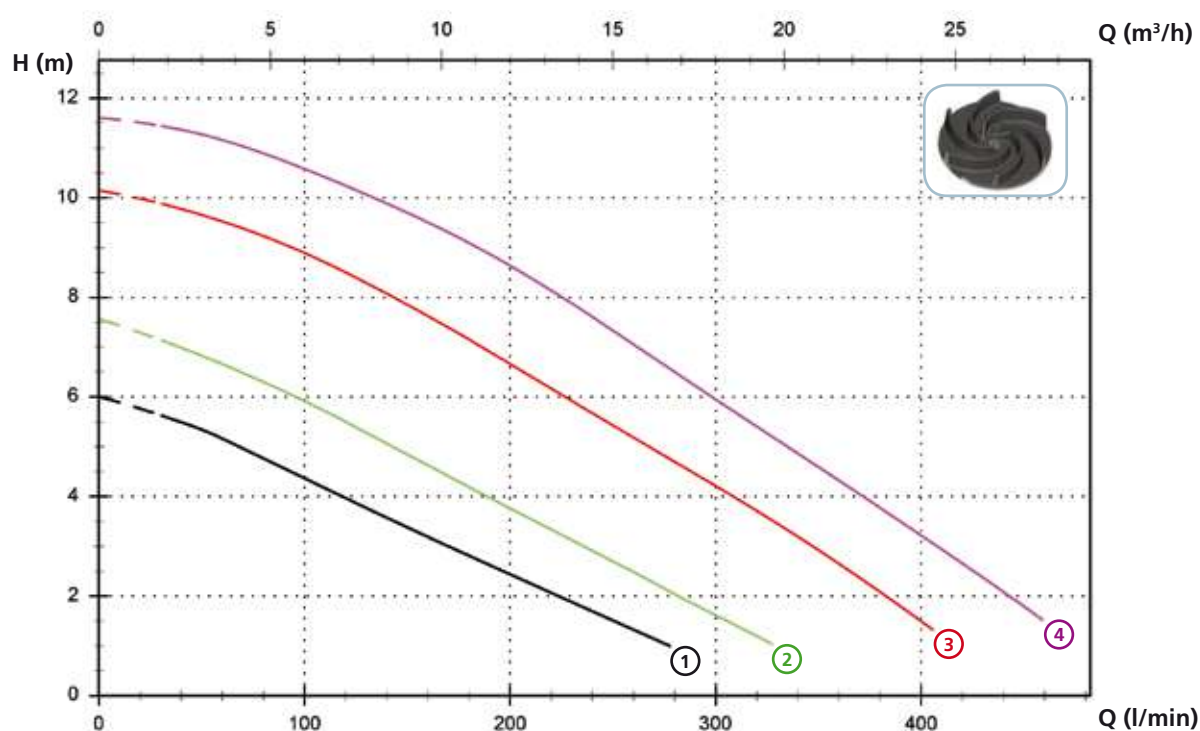
Full free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DG Blue

## Models with vertical GAS 1½" threaded discharge - 2 poles

### Performances

|                              | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|------------------------------|-------|------|------|------|------|------|------|------|------|
|                              | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  | 420  |
|                              | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 |
| ① DG Blue 40/2/G40V A1BM/50  |       | 6.0  | 5.2  | 4.0  | 2.8  | 1.7  |      |      |      |
| ② DG Blue 50/2/G40V A1BM/50  |       | 7.6  | 6.7  | 5.5  | 4.2  | 2.9  | 1.6  |      |      |
| ③ DG Blue 75/2/G40V A1BM/50  |       | 10.1 | 9.5  | 8.5  | 7.2  | 5.7  | 4.2  | 2.6  |      |
| ④ DG Blue 100/2/G40V A1BM/50 |       | 11.6 | 11.2 | 10.2 | 9.1  | 7.6  | 6.0  | 4.3  | 2.7  |



### Technical data

|                              | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Ø     | Free passage |
|------------------------------|-----|--------|---------|---------|-----|------|-------|--------------|
| ① DG Blue 40/2/G40V A1BM/50  | 230 | 1      | -       | 0.3     | 2.3 | 2900 | G 1½" | 40 mm        |
| ② DG Blue 50/2/G40V A1BM/50  | 230 | 1      | -       | 0.37    | 2.8 | 2900 | G 1½" | 40 mm        |
| ③ DG Blue 75/2/G40V A1BM/50  | 230 | 1      | -       | 0.55    | 4.1 | 2900 | G 1½" | 40 mm        |
| ④ DG Blue 100/2/G40V A1BM/50 | 230 | 1      | -       | 0.74    | 5.6 | 2900 | G 1½" | 40 mm        |

# DG Blue

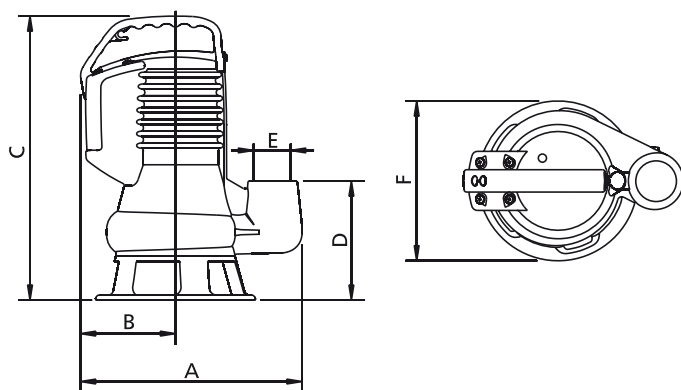
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                            | Electrical variants |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|----------------------------|---------------------|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                            | N<br>A<br>E         | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DG Blue 40/2/G40V A1BM/50  |                     |        |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DG Blue 50/2/G40V A1BM/50  |                     |        |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DG Blue 75/2/G40V A1BM/50  |                     |        |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DG Blue 100/2/G40V A1BM/50 |                     |        |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |

## Overall dimensions and weights



|                            | A   | B   | C   | D   | E     | F   | kg   |
|----------------------------|-----|-----|-----|-----|-------|-----|------|
| DG Blue 40/2/G40V A1BM/50  | 265 | 115 | 335 | 140 | G 1½" | 190 | 12.5 |
| DG Blue 50/2/G40V A1BM/50  | 265 | 115 | 335 | 140 | G 1½" | 190 | 13   |
| DG Blue 75/2/G40V A1BM/50  | 265 | 115 | 365 | 140 | G 1½" | 190 | 15   |
| DG Blue 100/2/G40V A1BM/50 | 265 | 115 | 365 | 140 | G 1½" | 190 | 15.5 |

Dimensions in mm

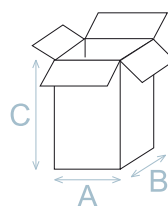
All weights and dimensions are indicative only

## Packaging dimension

|                            | A   | B   | C   |
|----------------------------|-----|-----|-----|
| DG Blue 40/2/G40V A1BM/50  | 240 | 200 | 400 |
| DG Blue 50/2/G40V A1BM/50  | 240 | 200 | 400 |
| DG Blue 75/2/G40V A1BM/50  | 240 | 200 | 400 |
| DG Blue 100/2/G40V A1BM/50 | 240 | 200 | 400 |

Dimensions in mm

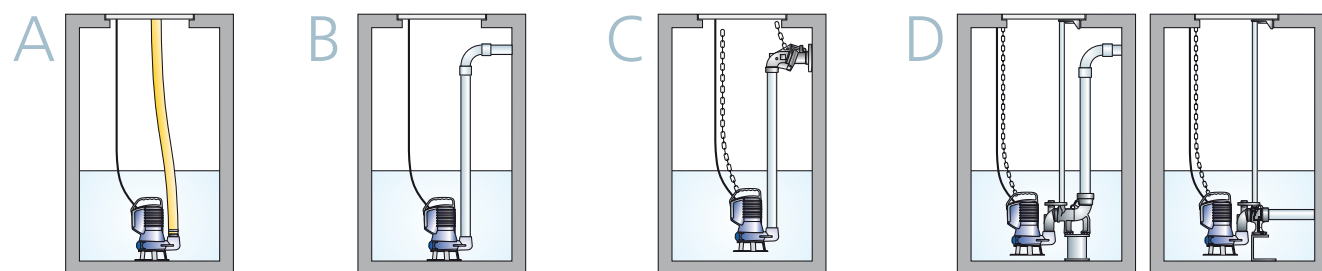
All weights and dimensions are indicative only



## No. pieces per pallet

For DG Blue models each pallet (EUR 1000x1200 mm) is able to take 75 pieces.

## Installations available





# DG BluePRO

Set-back vortex impeller

DESIGN BY

*pininfarina*

All product images are indicative only



## General characteristics

|                          |                       |
|--------------------------|-----------------------|
| set-back vortex impeller |                       |
| motor power              | 0,37 ÷ 1,5 kW         |
| poles                    | 2                     |
| discharge                | GAS 1½" - 2" vertical |
| free passage             | max 50 mm             |
| max flow rate            | 12.6 l/s              |
| max head                 | 15.3 m                |

## Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Suitable for heavy-duty applications with soiled biological wastewaters, sewage, rainwater and seepage. This electric pump is intended for both domestic and professional use.

## Construction materials

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                  |
| Impeller                         | Cast iron EN-GJL-250                                  |
| Nuts and bolts                   | Stainless steel - Class A2-70                         |
| Standard gasket                  | Rubber - NBR                                          |
| Shaft                            | Stainless steel - AISI 420                            |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC), V-ring   |

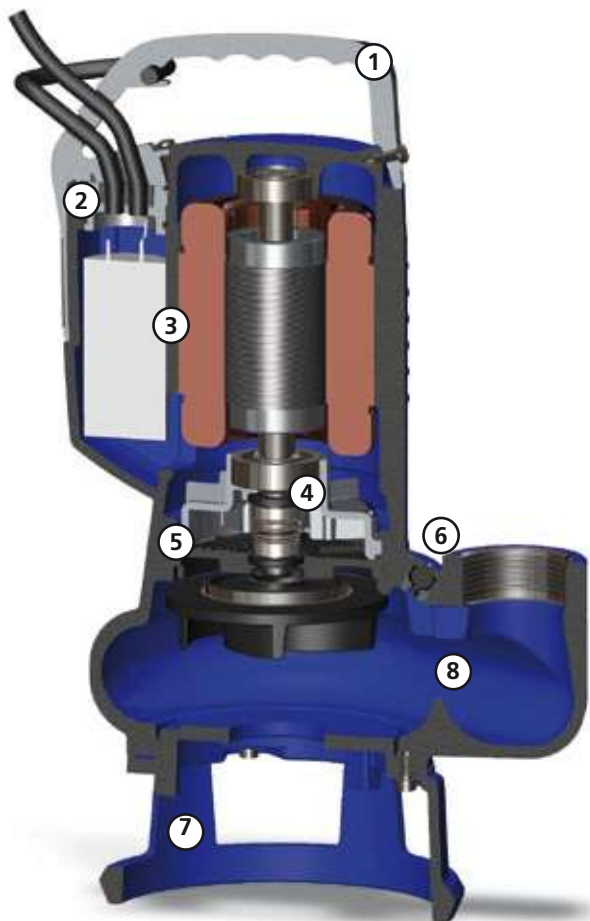
## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

Models available in IECEx certified version

Ex nA IIC T3  
Ex nA nC IIC T3

# DG BluePRO



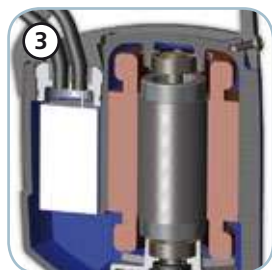
## Lifting handle

Ergonomic aluminium alloy lifting and carrying handle, coated for excellent mechanical strength and corrosion resistance. Clip floatswitch adjustment.



## Cable gland System

Innovative cable gland system with twin O-rings to ensure maximum tightness.



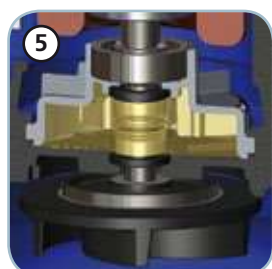
## Motor and electrical accessories

Dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay (option).



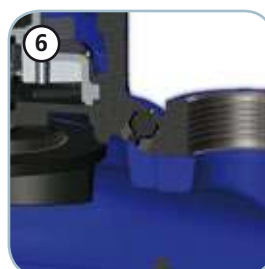
## Mechanical seals

Two silicon carbide mechanical seals (2SiC), and V-ring in direct contact with the liquid.



## Oil sump

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.



## Breather

Breather which allows the air to be vented and ensure reliable pump priming even after long periods out of use.



## Support foot

Reinforced technopolymer support foot with stainless steel plate (models 50, 75 and 100) or cast iron support foot (models 150 and 200).



## Free passage

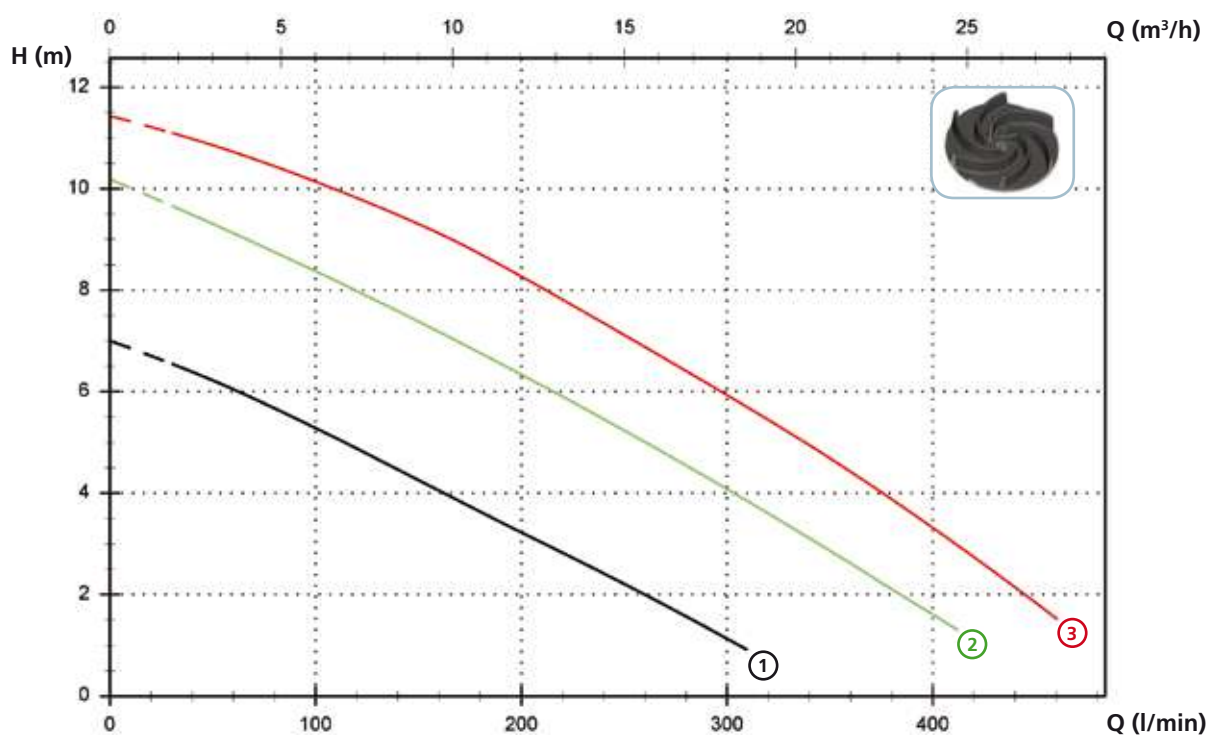
Full free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DG BluePRO

## Models with vertical GAS 1½" threaded discharge - 2 poles

### Performances

|                                    | l/s   | 0    | 1    | 2   | 3    | 4    | 5    | 6    | 7    |
|------------------------------------|-------|------|------|-----|------|------|------|------|------|
|                                    | l/min | 0    | 60   | 120 | 180  | 240  | 300  | 360  | 420  |
|                                    | m³/h  | 0    | 3.6  | 7.2 | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 |
| ① DG BluePRO 50/2/G40V A1BM(T)/50  |       | 7.0  | 6.0  | 4.9 | 3.6  | 2.4  | 1.1  |      |      |
| ② DG BluePRO 75/2/G40V A1BM(T)/50  |       | 10.2 | 9.1  | 8.0 | 6.8  | 5.5  | 4.1  | 2.6  |      |
| ③ DG BluePRO 100/2/G40V A1BM(T)/50 |       | 11.4 | 10.7 | 9.8 | 8.7  | 7.4  | 5.9  | 4.4  | 2.7  |



### Technical data

|                                 | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---------------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DG BluePRO 50/2/G40V A1BM/50  | 230 | 1      | -       | 0.37    | 2.8 | 2900 | Dir   | G 1½" | 40 mm        |
| ② DG BluePRO 75/2/G40V A1BM/50  | 230 | 1      | -       | 0.55    | 4.1 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ DG BluePRO 100/2/G40V A1BM/50 | 230 | 1      | -       | 0.74    | 5.6 | 2900 | Dir   | G 1½" | 40 mm        |

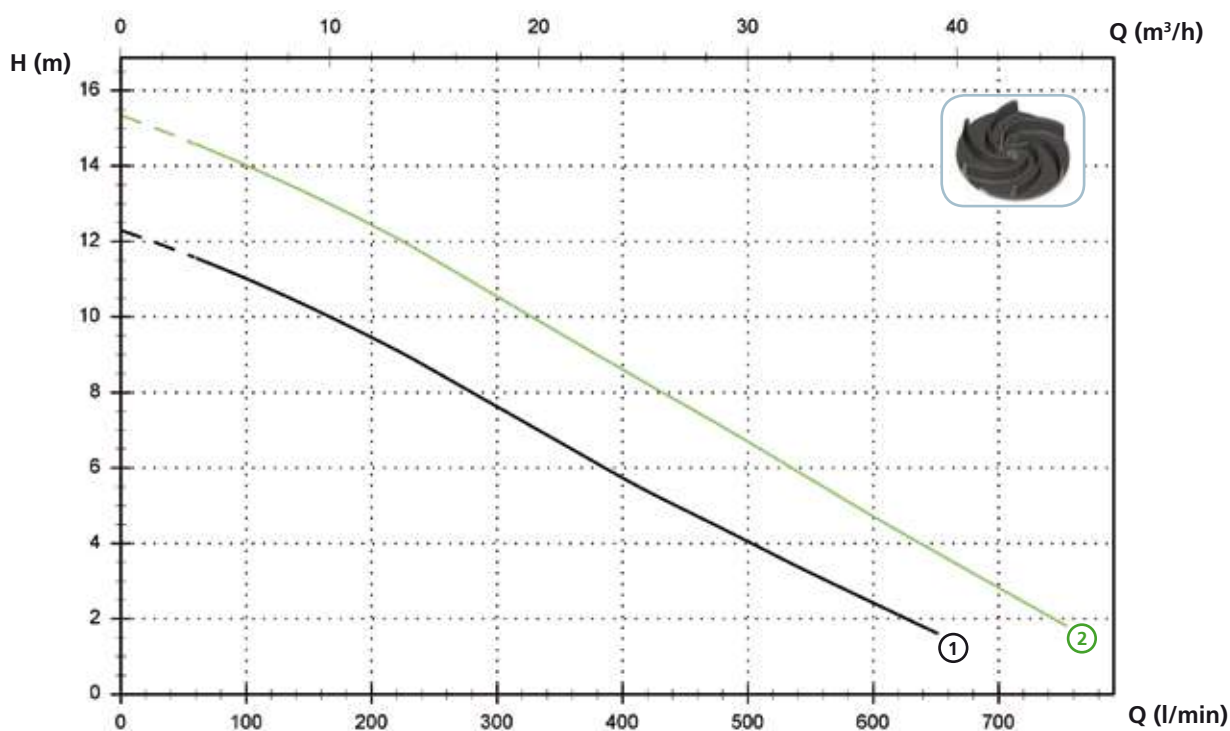
|                                 | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø     | Free passage |
|---------------------------------|-----|--------|---------|---------|------|------|-------|-------|--------------|
| ① DG BluePRO 50/2/G40V A1BT/50  | 400 | 3      | -       | 0.37    | 1.15 | 2900 | Dir   | G 1½" | 40 mm        |
| ② DG BluePRO 75/2/G40V A1BT/50  | 400 | 3      | -       | 0.55    | 1.6  | 2900 | Dir   | G 1½" | 40 mm        |
| ③ DG BluePRO 100/2/G40V A1BT/50 | 400 | 3      | -       | 0.74    | 2.15 | 2900 | Dir   | G 1½" | 40 mm        |

# DG BluePRO

## Models with vertical GAS 2" threaded discharge - 2 poles

### Performances

|   |                                  |      |      |      |      |      |      |      |
|---|----------------------------------|------|------|------|------|------|------|------|
|   | <i>l/s</i>                       | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|   | <i>l/min</i>                     | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|   | <i>m³/h</i>                      | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① | DG BluePRO 150/2/G50V A1CM(T)/50 | 12.3 | 10.7 | 8.8  | 6.5  | 4.4  | 2.4  |      |
| ② | DG BluePRO 200/2/G50V A1CM(T)/50 | 15.3 | 13.7 | 11.7 | 9.4  | 7.1  | 4.7  | 2.5  |



### Technical data

|   |                               | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|-------------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DG BluePRO 150/2/G50V A1CM/50 | 230 | 1      | -       | 1.1     | 7.5 | 2900 | Dir   | G 2" | 50 mm        |
| ② | DG BluePRO 200/2/G50V A1CM/50 | 230 | 1      | -       | 1.5     | 10  | 2900 | Dir   | G 2" | 50 mm        |

|   |                               | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|-------------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DG BluePRO 150/2/G50V A1CT/50 | 400 | 3      | -       | 1.1     | 3.2 | 2900 | Dir   | G 2" | 50 mm        |
| ② | DG BluePRO 200/2/G50V A1CT/50 | 400 | 3      | -       | 1.5     | 4.3 | 2900 | Dir   | G 2" | 50 mm        |

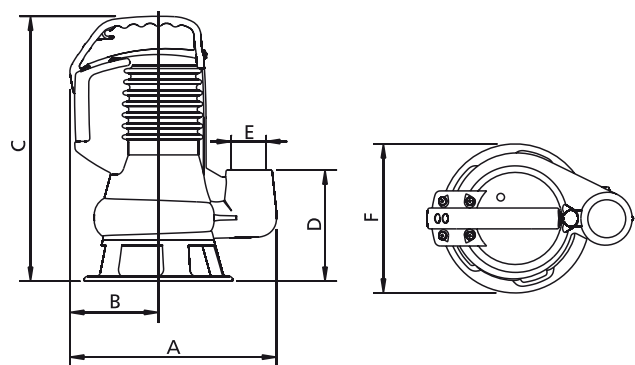
# DG BluePRO

## Versions available

(Key to versions on page 16)

|                               | Electrical variants |   |        |             |                  |                  |             |             |                  |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|-------------------------------|---------------------|---|--------|-------------|------------------|------------------|-------------|-------------|------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                               | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G | T<br>C<br>G | T<br>C<br>S | T<br>C<br>S<br>G | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| DG BluePRO 50/2/G40V A1BM/50  |                     |   | ●      |             |                  |                  | ●           |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 75/2/G40V A1BM/50  |                     |   | ●      |             |                  |                  | ●           |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 100/2/G40V A1BM/50 |                     |   | ●      |             |                  |                  | ●           |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 150/2/G50V A1CM/50 |                     |   | ●      |             |                  |                  | ●           |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 200/2/G50V A1CM/50 |                     |   | ●      |             |                  |                  | ●           |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 50/2/G40V A1BT/50  | ●                   |   |        |             |                  |                  |             |             |                  |        |        | ●           | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 75/2/G40V A1BT/50  | ●                   |   |        |             |                  |                  |             |             |                  |        |        | ●           | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 100/2/G40V A1BT/50 | ●                   |   |        |             |                  |                  |             |             |                  |        |        | ●           | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 150/2/G50V A1CT/50 | ●                   |   |        |             |                  |                  |             |             |                  |        |        | ●           | ●       |           |    |                  | ●                |      |       |        |
| DG BluePRO 200/2/G50V A1CT/50 | ●                   |   |        |             |                  |                  |             |             |                  |        |        | ●           | ●       |           |    |                  | ●                |      |       |        |

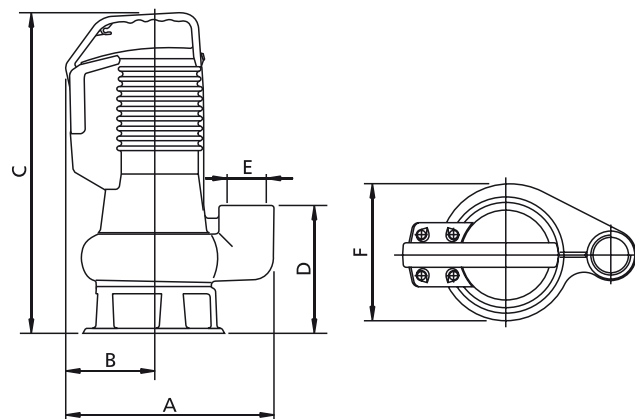
## Overall dimensions and weights



|                                  | A   | B   | C   | D   | E     | F   | kg   |
|----------------------------------|-----|-----|-----|-----|-------|-----|------|
| DG BluePRO 50/2/G40V A1BM(T)/50  | 265 | 115 | 335 | 140 | G 1½" | 190 | 13   |
| DG BluePRO 75/2/G40V A1BM(T)/50  | 265 | 115 | 365 | 140 | G 1½" | 190 | 15   |
| DG BluePRO 100/2/G40V A1BM(T)/50 | 265 | 115 | 365 | 140 | G 1½" | 190 | 15.5 |

Dimensions in mm

All weights and dimensions are indicative only



|                                  | A   | B   | C   | D   | E    | F   | kg |
|----------------------------------|-----|-----|-----|-----|------|-----|----|
| DG BluePRO 150/2/G50V A1CM(T)/50 | 295 | 125 | 465 | 195 | G 2" | 200 | 23 |
| DG BluePRO 200/2/G50V A1CM(T)/50 | 295 | 125 | 465 | 195 | G 2" | 200 | 24 |

Dimensions in mm

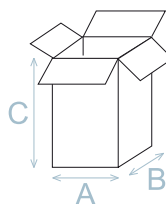
All weights and dimensions are indicative only



# DG BluePRO

## Packaging dimension

|                                  | A   | B   | C   |
|----------------------------------|-----|-----|-----|
| DG BluePRO 50/2/G40V A1BM(T)/50  | 240 | 200 | 400 |
| DG BluePRO 75/2/G40V A1BM(T)/50  | 240 | 200 | 400 |
| DG BluePRO 100/2/G40V A1BM(T)/50 | 240 | 200 | 400 |
| DG BluePRO 150/2/G50V A1CM(T)/50 | 300 | 250 | 480 |
| DG BluePRO 200/2/G50V A1CM(T)/50 | 300 | 250 | 480 |



Dimensions in mm

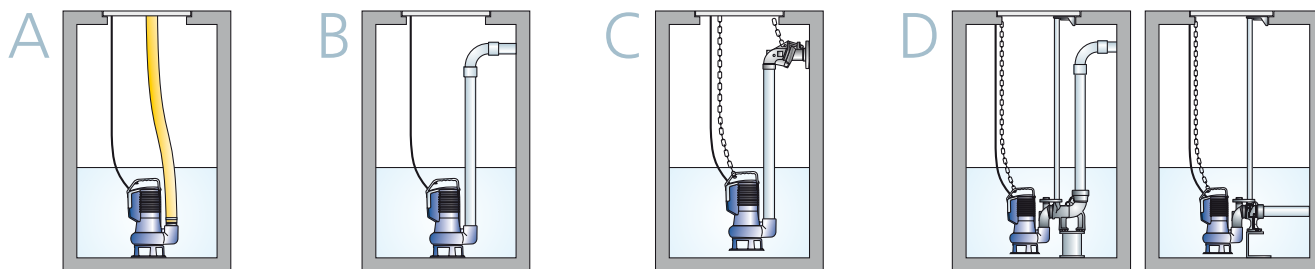
All weights and dimensions are indicative only

## No. pieces per pallet

For DG BluePRO 50-75-100 models each pallet (EUR 1000x1200 mm) is able to take 75 pieces.

For DG BluePRO 150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available



DGE

## Set-back vortex impeller

All product images are indicative only



## General characteristics

|                          |                                             |
|--------------------------|---------------------------------------------|
| set-back vortex impeller |                                             |
| motor power              | 0,37 ÷ 1,5 kW                               |
| poles                    | 2                                           |
| discharge                | GAS 2" vertical<br>GAS 2" - DN50 horizontal |
| free passage             | max 50 mm                                   |
| max flow rate            | 11.6 l/s                                    |
| max head                 | 15.7 m                                      |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor.

## Applications

Suitable with slightly soiled biological wastewaters and sewage. Suitable for domestic and residential use.

## Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Shaft                            | Stainless Steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| Max starts per hour           | 30                   |



#### Handle

AISI 304 stainless steel lifting and carrying handle.



#### Capacitor/relay

Single-phase models with internal capacitor. Three-phase models with motor protection relay (option).



#### Motor

Ecological dry motor with thermal protections.



#### Mechanical seals

One mechanical seal in silicon carbide (SiC) and one lip seal.



#### Impeller

Cast iron vortex impeller.



#### Free passage

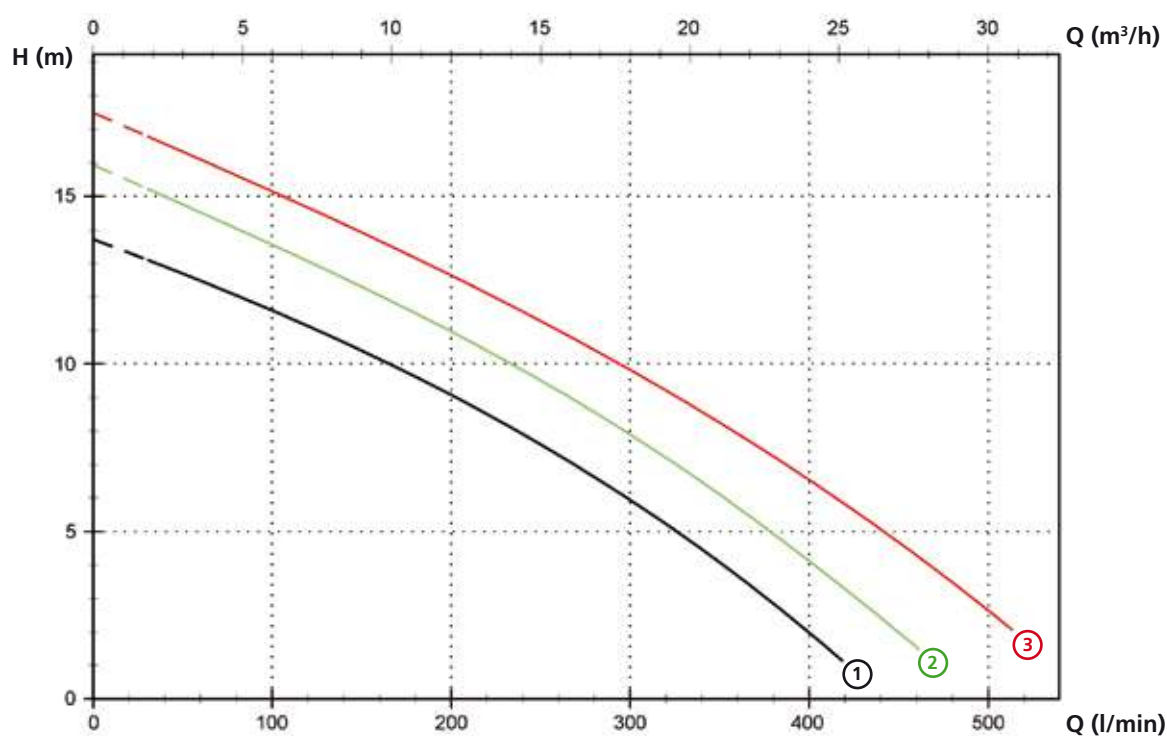
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DGE

## Models with vertical GAS 1½" threaded discharge - 2 poles

### Performances

|                             | l/s   | 0    | 2    | 4    | 6    | 8    |
|-----------------------------|-------|------|------|------|------|------|
|                             | l/min | 0    | 120  | 240  | 360  | 480  |
|                             | m³/h  | 0    | 7.2  | 14.4 | 21.6 | 28.8 |
| ① DGE 100/2/G40V A0CM(T)/50 |       | 13.7 | 11.1 | 7.9  | 3.7  |      |
| ② DGE 150/2/G40V A0CM(T)/50 |       | 15.9 | 13.1 | 9.8  | 5.7  |      |
| ③ DGE 200/2/G40V A0CM(T)/50 |       | 17.5 | 14.7 | 11.6 | 7.9  | 3.5  |



### Technical data

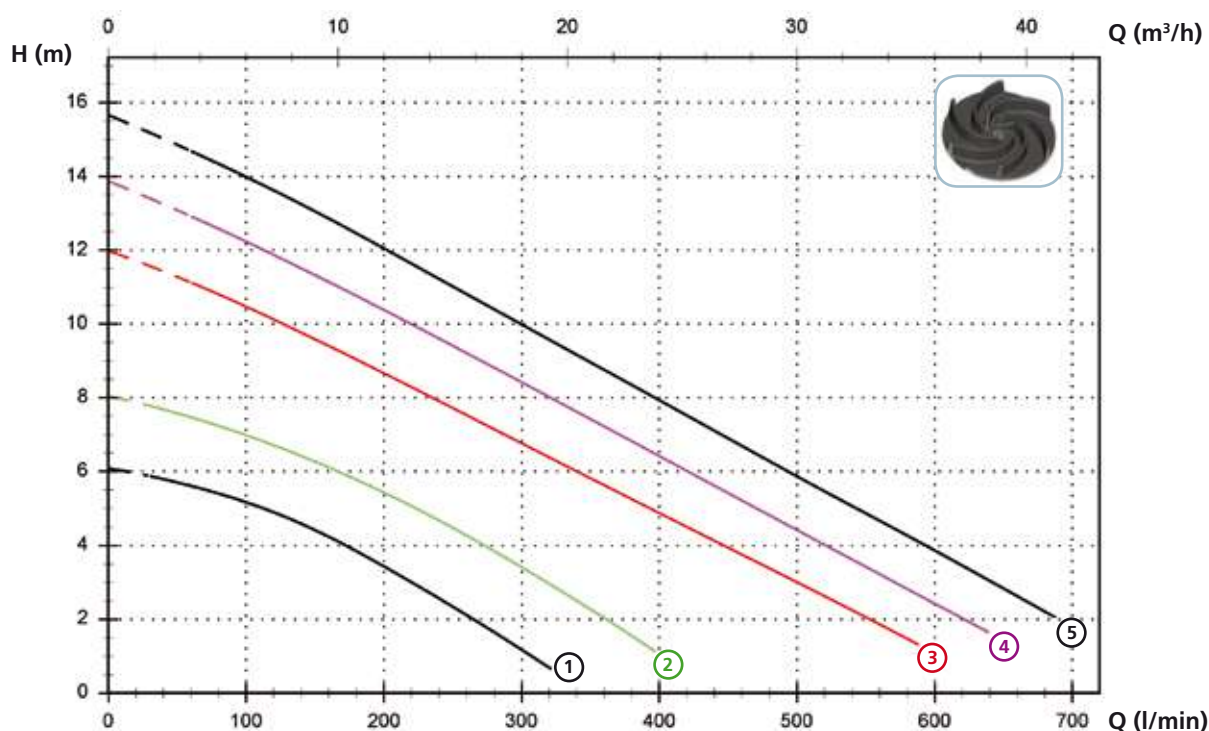
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DGE 100/2/G40V A0CM/50 | 230 | 1      | -       | 0.88    | 6.0 | 2900 | Dir   | G 1½" | 40 mm        |
| ② DGE 150/2/G40V A0CM/50 | 230 | 1      | -       | 1.1     | 7.6 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ DGE 200/2/G40V A0CM/50 | 230 | 1      | -       | 1.5     | 8.9 | 2900 | Dir   | G 1½" | 40 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|-------|--------------|
| ① DGE 100/2/G40V A0CT/50 | 400 | 3      | -       | 0.88    | 2.0  | 2900 | Dir   | G 1½" | 40 mm        |
| ② DGE 150/2/G40V A0CT/50 | 400 | 3      | -       | 1.1     | 2.46 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ DGE 200/2/G40V A0CT/50 | 400 | 3      | -       | 1.5     | 3.2  | 2900 | Dir   | G 1½" | 40 mm        |

## Models with vertical GAS 2" threaded discharge - 2 poles

### Performances

|                             | l/s   | 0    | 2    | 4    | 6    | 8    | 10   |
|-----------------------------|-------|------|------|------|------|------|------|
|                             | l/min | 0    | 120  | 240  | 360  | 480  | 600  |
|                             | m³/h  | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 |
| ① DGE 50/2/G50V B0BM(T)/50  |       | 6.1  | 4.9  | 2.6  |      |      |      |
| ② DGE 75/2/G50V B0BM(T)/50  |       | 8.0  | 6.7  | 4.7  | 2.0  |      |      |
| ③ DGE 100/2/G50V B0CM(T)/50 |       | 12.0 | 10.1 | 7.9  | 5.6  | 3.4  |      |
| ④ DGE 150/2/G50V B0CM(T)/50 |       | 13.9 | 11.9 | 9.6  | 7.2  | 4.8  | 2.4  |
| ⑤ DGE 200/2/G50V B0CM(T)/50 |       | 15.7 | 13.6 | 11.2 | 8.8  | 6.3  | 3.9  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGE 50/2/G50V B0BM/50  | 230 | 1      | -       | 0.37    | 2.8 | 2900 | Dir   | G 2" | 40 mm        |
| ② DGE 75/2/G50V B0BM/50  | 230 | 1      | -       | 0.55    | 3.6 | 2900 | Dir   | G 2" | 40 mm        |
| ③ DGE 100/2/G50V B0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 50 mm        |
| ④ DGE 150/2/G50V B0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 50 mm        |
| ⑤ DGE 200/2/G50V B0CM/50 | 230 | 1      | -       | 1.5     | 9.4 | 2900 | Dir   | G 2" | 50 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGE 50/2/G50V B0BT/50  | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 2" | 40 mm        |
| ② DGE 75/2/G50V B0BT/50  | 400 | 3      | -       | 0.55    | 1.3 | 2900 | Dir   | G 2" | 40 mm        |
| ③ DGE 100/2/G50V B0CT/50 | 400 | 3      | -       | 0.88    | 2.2 | 2900 | Dir   | G 2" | 50 mm        |
| ④ DGE 150/2/G50V B0CT/50 | 400 | 3      | -       | 1.1     | 2.6 | 2900 | Dir   | G 2" | 50 mm        |
| ⑤ DGE 200/2/G50V B0CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 2" | 50 mm        |

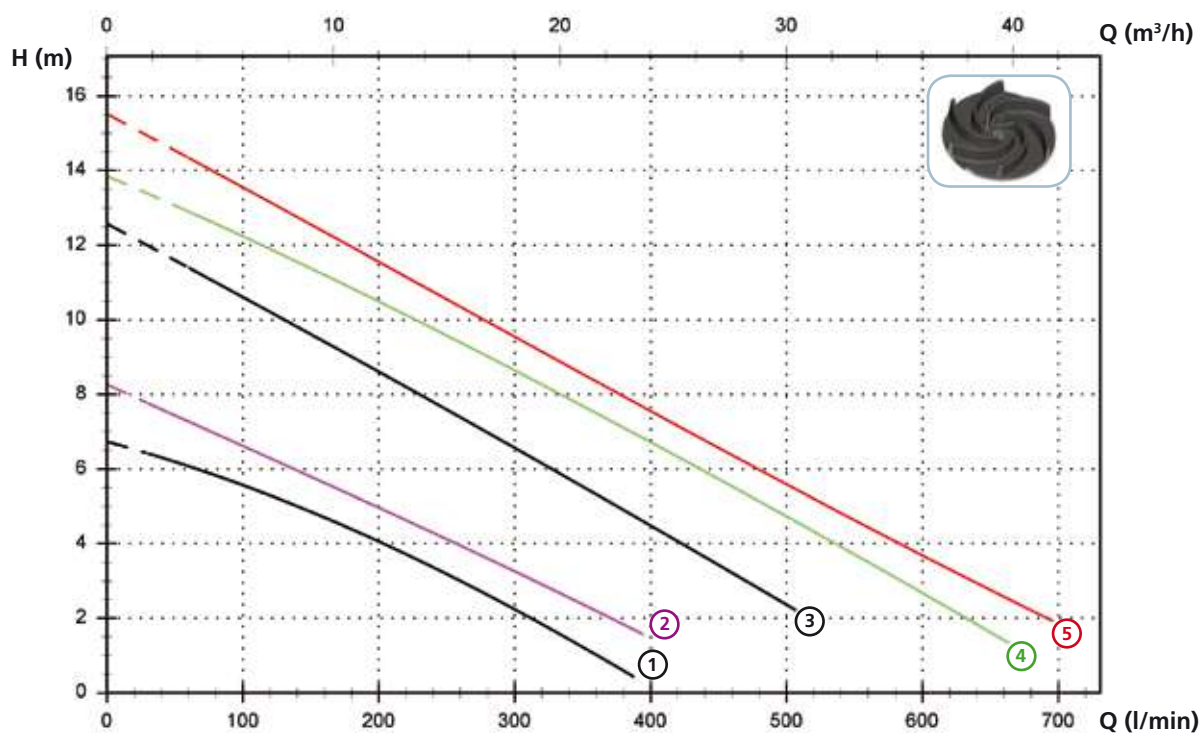


# DGE

## Models with horizontal GAS 2" threaded - DN50 PN10-16 flanged discharge - 2 poles

### Performances

|                          | l/s               | 0    | 2    | 4    | 6    | 8    | 10   |
|--------------------------|-------------------|------|------|------|------|------|------|
|                          | l/min             | 0    | 120  | 240  | 360  | 480  | 600  |
|                          | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 |
| ① DGE 50/2/G50H A1BM/50  |                   | 6.7  | 5.3  | 3.4  | 1.0  |      |      |
| ② DGE 75/2/G50H A1BM/50  |                   | 8.3  | 6.3  | 4.3  | 2.2  |      |      |
| ③ DGE 100/2/G50H A0CM/50 |                   | 12.6 | 10.2 | 7.8  | 5.3  | 2.8  |      |
| ④ DGE 150/2/G50H A0CM/50 |                   | 13.8 | 11.9 | 9.8  | 7.5  | 5.1  | 2.7  |
| ⑤ DGE 200/2/G50H A0CM/50 |                   | 15.5 | 13.2 | 10.8 | 8.3  | 6.0  | 3.7  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DGE 50/2/G50H A1BM/50  | 230 | 1      | -       | 0.37    | 2.8 | 2900 | Dir   | G2" - DN50 PN10-16 | 40 mm        |
| ② DGE 75/2/G50H A1BM/50  | 230 | 1      | -       | 0.55    | 3.6 | 2900 | Dir   | G2" - DN50 PN10-16 | 40 mm        |
| ③ DGE 100/2/G50H A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G2" - DN50 PN10-16 | 50 mm        |
| ④ DGE 150/2/G50H A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G2" - DN50 PN10-16 | 50 mm        |
| ⑤ DGE 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.5     | 9.4 | 2900 | Dir   | G2" - DN50 PN10-16 | 50 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DGE 50/2/G50H A1BT/50  | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G2" - DN50 PN10-16 | 40 mm        |
| ② DGE 75/2/G50H A1BT/50  | 400 | 3      | -       | 0.55    | 1.3 | 2900 | Dir   | G2" - DN50 PN10-16 | 40 mm        |
| ③ DGE 100/2/G50H A0CT/50 | 400 | 3      | -       | 0.88    | 2.2 | 2900 | Dir   | G2" - DN50 PN10-16 | 50 mm        |
| ④ DGE 150/2/G50H A0CT/50 | 400 | 3      | -       | 1.1     | 2.6 | 2900 | Dir   | G2" - DN50 PN10-16 | 50 mm        |
| ⑤ DGE 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G2" - DN50 PN10-16 | 50 mm        |

## Versions available

(Key to versions on page 16)

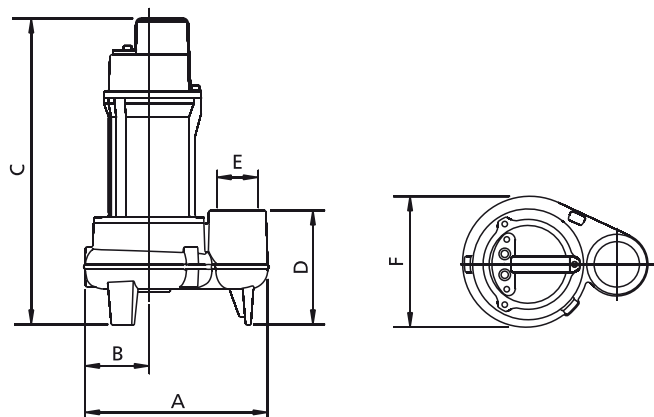
Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGE 100/2/G40V A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 150/2/G40V A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 200/2/G40V A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 100/2/G40V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 150/2/G40V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 200/2/G40V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 50/2/G50V B0BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 75/2/G50V B0BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 100/2/G50V B0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 150/2/G50V B0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 200/2/G50V B0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 50/2/G50V B0BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 75/2/G50V B0BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 100/2/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 150/2/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 200/2/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 50/2/G50H A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 75/2/G50H A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 100/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 150/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 200/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DGE 50/2/G50H A1BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 75/2/G50H A1BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 100/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 150/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DGE 200/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |

# DGE

## Overall dimensions and weights

### Models with vertical discharge

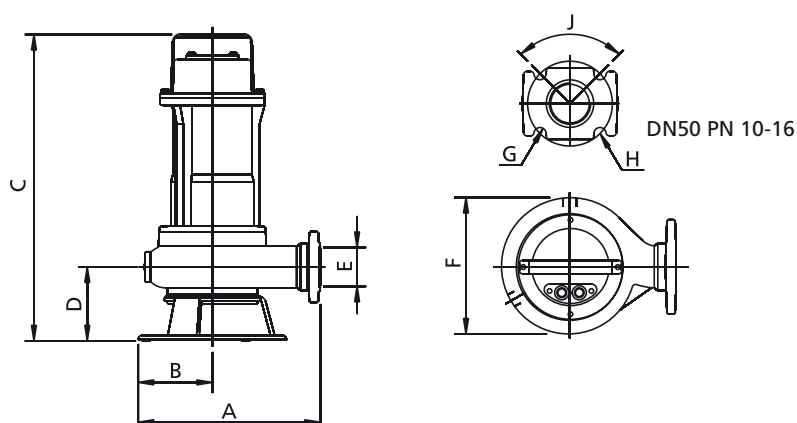


|                           | A   | B   | C   | D   | E     | F   | kg |
|---------------------------|-----|-----|-----|-----|-------|-----|----|
| DGE 100/2/G40V A0CM(T)/50 | 260 | 100 | 405 | 125 | G 1½" | 205 | 19 |
| DGE 150/2/G40V A0CM(T)/50 | 260 | 100 | 405 | 125 | G 1½" | 205 | 20 |
| DGE 200/2/G40V A0CM(T)/50 | 260 | 100 | 405 | 125 | G 1½" | 205 | 21 |
| DGE 50/2/G50V B0BM(T)/50  | 230 | 80  | 385 | 120 | G 2"  | 165 | 12 |
| DGE 75/2/G50V B0BM(T)/50  | 230 | 80  | 385 | 120 | G 2"  | 165 | 14 |
| DGE 100/2/G50V B0CM(T)/50 | 270 | 100 | 425 | 130 | G 2"  | 205 | 19 |
| DGE 150/2/G50V B0CM(T)/50 | 270 | 100 | 425 | 130 | G 2"  | 205 | 20 |
| DGE 200/2/G50V B0CM(T)/50 | 270 | 100 | 425 | 130 | G 2"  | 205 | 21 |

Dimensions in mm

All weights and dimensions are indicative only

### Models with horizontal discharge



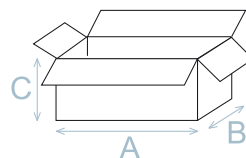
|                           | A   | B   | C   | D   | E         | F   | G  | H   | J   | kg |
|---------------------------|-----|-----|-----|-----|-----------|-----|----|-----|-----|----|
| DGE 50/2/G50H A1BM(T)/50  | 220 | 80  | 365 | 65  | G 2"-DN50 | 160 | 18 | 125 | 90° | 12 |
| DGE 75/2/G50H A1BM(T)/50  | 220 | 80  | 365 | 65  | G 2"-DN50 | 160 | 18 | 125 | 90° | 14 |
| DGE 100/2/G50H A0CM(T)/50 | 270 | 110 | 455 | 110 | G 2"-DN50 | 205 | 18 | 125 | 90° | 19 |
| DGE 150/2/G50H A0CM(T)/50 | 270 | 110 | 455 | 110 | G 2"-DN50 | 205 | 18 | 125 | 90° | 20 |
| DGE 200/2/G50H A0CM(T)/50 | 270 | 110 | 455 | 110 | G 2"-DN50 | 205 | 18 | 125 | 90° | 21 |

Dimensions in mm

All weights and dimensions are indicative only

## Packaging dimension

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DGE 100/2/G40V A0CM(T)/50 | 475 | 285 | 235 |
| DGE 150/2/G40V A0CM(T)/50 | 475 | 285 | 235 |
| DGE 200/2/G40V A0CM(T)/50 | 475 | 285 | 235 |
| DGE 50/2/G50V B0BM(T)/50  | 385 | 225 | 245 |
| DGE 75/2/G50V B0BM(T)/50  | 385 | 225 | 245 |
| DGE 100/2/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGE 150/2/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGE 200/2/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGE 50/2/G50H A1BM(T)/50  | 385 | 225 | 245 |
| DGE 75/2/G50H A1BM(T)/50  | 385 | 225 | 245 |
| DGE 100/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DGE 150/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DGE 200/2/G50H A0CM(T)/50 | 475 | 285 | 235 |



Dimensions in mm

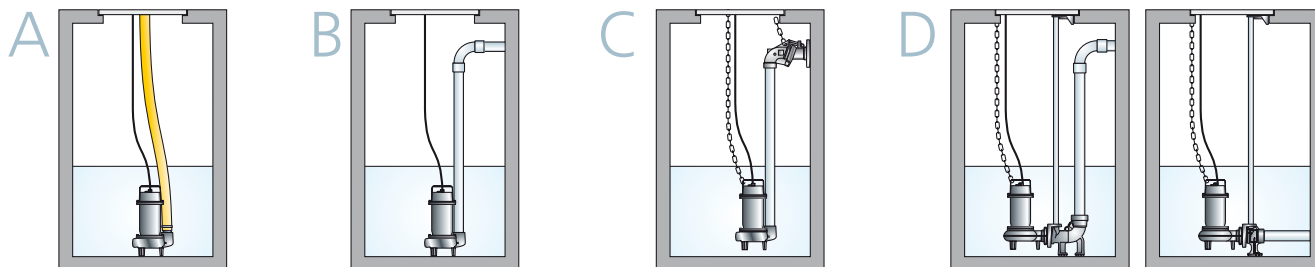
All weights and dimensions are  
indicative only

## No. pieces per pallet

For DGE 50-75 models each pallet (EUR 1000x1200 mm) is able to take 48 pieces.

For DGE 100-150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available



DGO

## Set-back vortex impeller

All product images are indicative only



## General characteristics

## Set-back vortex impeller

|               |                                                                              |
|---------------|------------------------------------------------------------------------------|
| motor power   | 0,37 ÷ 1,5 kW                                                                |
| poles         | 2 / 4                                                                        |
| discharge     | GAS 1½" ÷ 2½" vertical<br>GAS 2" - DN50 horizontal<br>DN65 - DN80 horizontal |
| free passage  | max 80 mm                                                                    |
| max flow rate | 19.0 l/s                                                                     |
| max head      | 17.3 m                                                                       |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, installed opposing with oil lubrication. Oil bath motor.

## Applications

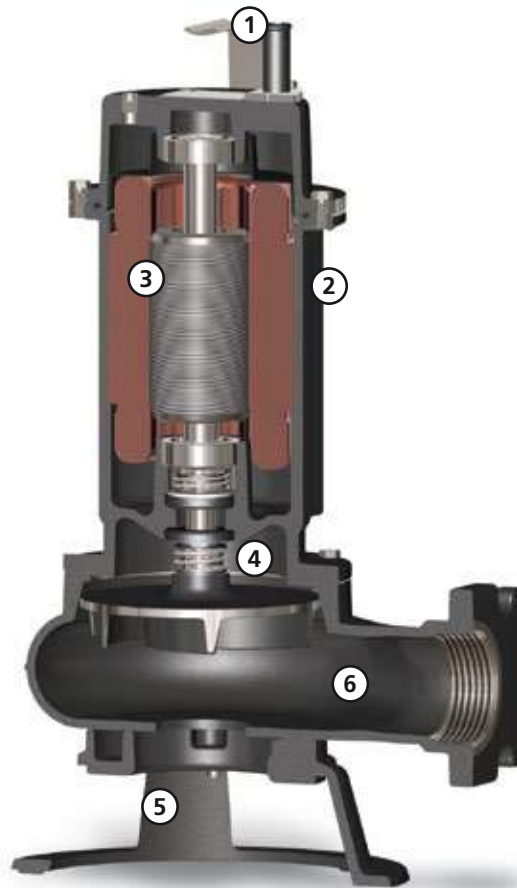
Suitable for heavy-duty applications with soiled biological wastewaters, sewage, rainwater and seepage.

## Construction materials

|                                  |                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                          |
| Impeller                         | Cast iron EN-GJL-250                                                                          |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                 |
| Standard gasket                  | Rubber - NBR                                                                                  |
| Shaft                            | Stainless steel - AISI 420                                                                    |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)                                         |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one carbon-aluminium oxide mechanical seal (AL) |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| Max starts per hour           | 30       |

**DGO****Handle**

AISI 304 stainless steel lifting and carrying handle.

**Structure**

Constructed in GJL-250 cast iron.

**Motor**

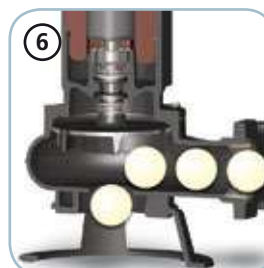
Oil bath motor with thermal protections. Capacitor and overload protection in external cabinet.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one mechanical seal in alumina graphite (AL).

**Discharge - support foot**

Threaded, flanged discharge for the maximum ease of installation.

**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

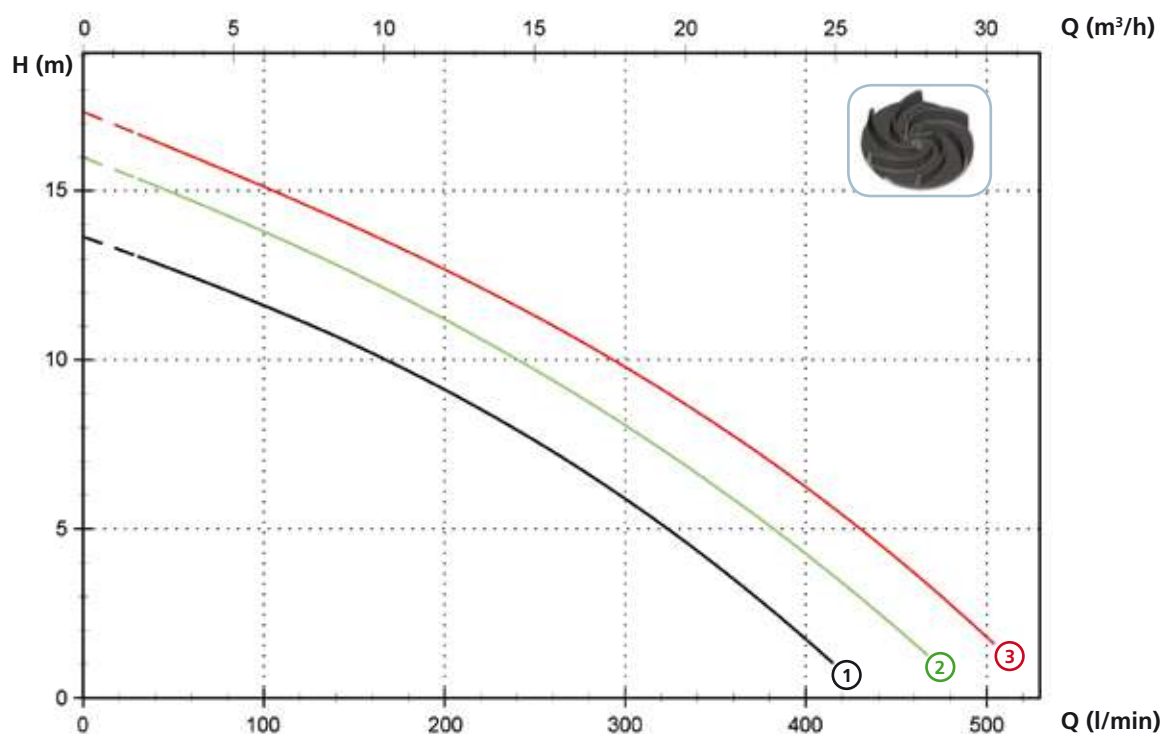


# DGO

## Models with vertical GAS 1½" threaded discharge - 2 poles

### Performances

|                             | l/s   | 0    | 2    | 4    | 6    | 8    |
|-----------------------------|-------|------|------|------|------|------|
|                             | l/min | 0    | 120  | 240  | 360  | 480  |
|                             | m³/h  | 0    | 7.2  | 14.4 | 21.6 | 28.8 |
| ① DGO 100/2/G40V B1CM(T)/50 |       | 13.6 | 11.2 | 7.9  | 3.5  |      |
| ② DGO 150/2/G40V B1CM(T)/50 |       | 16.0 | 13.3 | 10   | 5.9  |      |
| ③ DGO 200/2/G40V B1CM(T)/50 |       | 17.3 | 14.7 | 11.6 | 7.8  | 2.8  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DGO 100/2/G40V B1CT/50 | 230 | 1      | -       | 0.88    | 6.4 | 2900 | Dir   | G 1½" | 40 mm        |
| ② DGO 150/2/G40V B1CT/50 | 230 | 1      | -       | 1.1     | 8.3 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ DGO 200/2/G40V B1CT/50 | 230 | 1      | -       | 1.5     | 9.6 | 2900 | Dir   | G 1½" | 40 mm        |

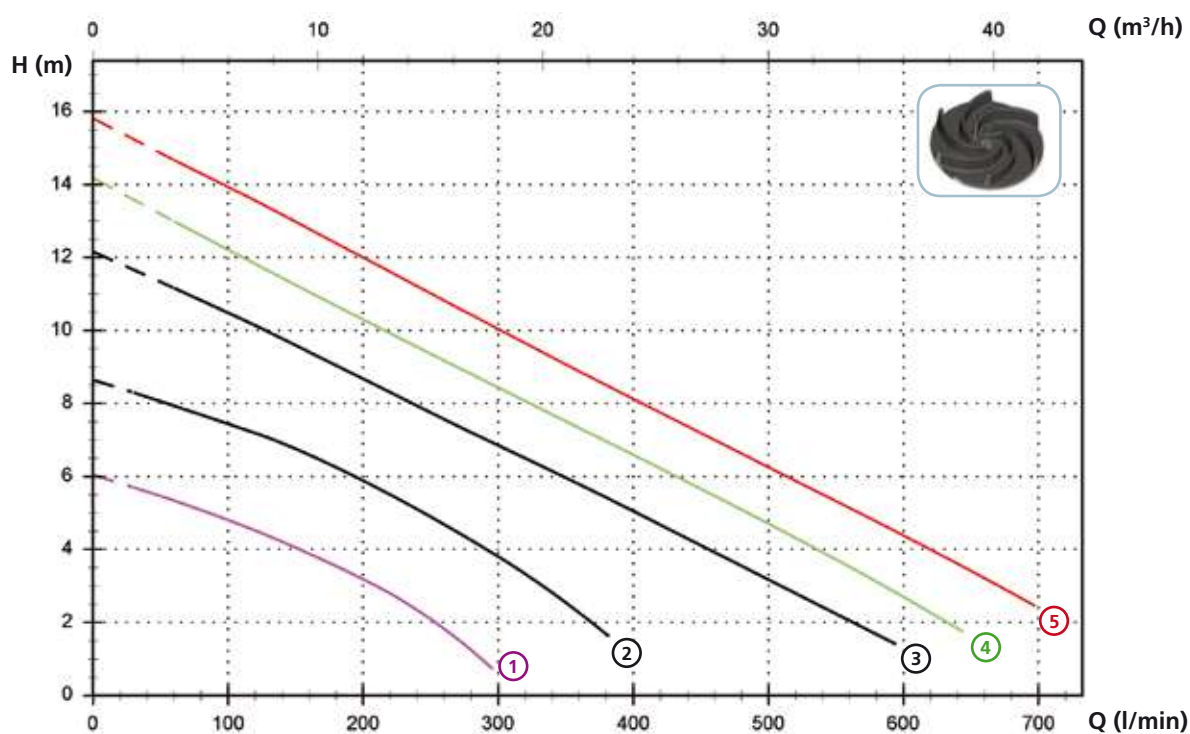
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DGO 100/2/G40V B1CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 1½" | 40 mm        |
| ② DGO 150/2/G40V B1CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ DGO 200/2/G40V B1CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 1½" | 40 mm        |

## Models with vertical GAS 2" threaded discharge - 2 poles

### Performances

|                   |   |     |      |      |      |      |
|-------------------|---|-----|------|------|------|------|
| l/s               | 0 | 2   | 4    | 6    | 8    | 10   |
| l/min             | 0 | 120 | 240  | 360  | 480  | 600  |
| m <sup>3</sup> /h | 0 | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 |

|                             |      |      |      |     |     |     |
|-----------------------------|------|------|------|-----|-----|-----|
| ① DGO 50/2/G50V B0CM(T)/50  | 6.0  | 4.5  | 2.3  |     |     |     |
| ② DGO 75/2/G50V B0CM(T)/50  | 8.6  | 7.2  | 5.1  | 2.3 |     |     |
| ③ DGO 100/2/G50V B0CM(T)/50 | 12.2 | 10.1 | 7.9  | 5.8 | 3.6 |     |
| ④ DGO 150/2/G50V B0CM(T)/50 | 14.2 | 11.8 | 9.5  | 7.3 | 5.1 | 2.7 |
| ⑤ DGO 200/2/G50V B0CM(T)/50 | 15.8 | 13.6 | 11.2 | 8.9 | 6.6 | 4.4 |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------|--------------|
| ① DGO 50/2/G50V B0CM/50  | 230 | 1      | -       | 0.37    | 2.9  | 2900 | Dir   | G 2" | 40 mm        |
| ② DGO 75/2/G50V B0CM/50  | 230 | 1      | -       | 0.55    | 3.9  | 2900 | Dir   | G 2" | 40 mm        |
| ③ DGO 100/2/G50V B0CM/50 | 230 | 1      | -       | 0.88    | 6.9  | 2900 | Dir   | G 2" | 50 mm        |
| ④ DGO 150/2/G50V B0CM/50 | 230 | 1      | -       | 1.1     | 8.7  | 2900 | Dir   | G 2" | 50 mm        |
| ⑤ DGO 200/2/G50V B0CM/50 | 230 | 1      | -       | 1.5     | 10.4 | 2900 | Dir   | G 2" | 50 mm        |

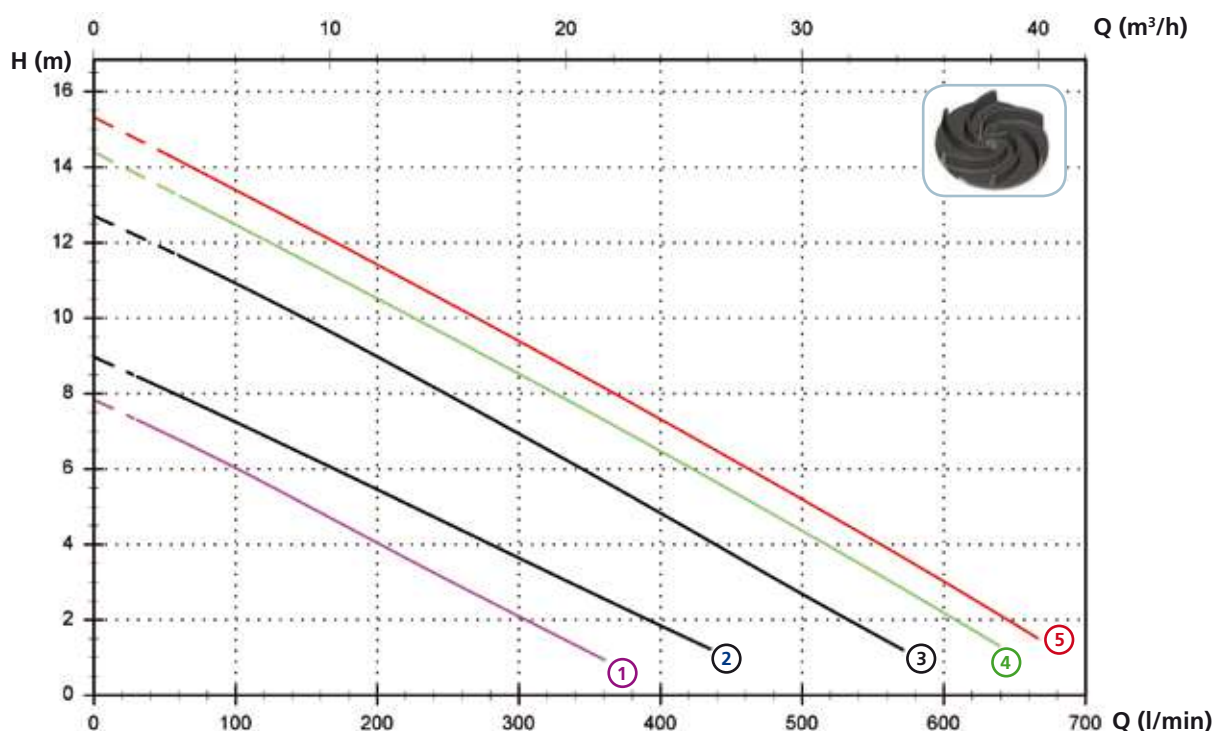
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGO 50/2/G50V B0CT/50  | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 2" | 40 mm        |
| ② DGO 75/2/G50V B0CT/50  | 400 | 3      | -       | 0.55    | 1.4 | 2900 | Dir   | G 2" | 40 mm        |
| ③ DGO 100/2/G50V B0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2" | 50 mm        |
| ④ DGO 150/2/G50V B0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2" | 50 mm        |
| ⑤ DGO 200/2/G50V B0CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 2" | 50 mm        |

# DGO

## Models with horizontal GAS 2" threaded - DN50 PN10-16 flanged discharge - 2 poles

### Performances

|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   |
|-----------------------------|-------------------|------|------|------|------|------|------|
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 |
| ① DGO 50/2/G50H A1CM(T)/50  |                   | 7.8  | 5.6  | 3.3  | 1.0  |      |      |
| ② DGO 75/2/G50H A1CM(T)/50  |                   | 9.0  | 6.9  | 4.7  | 2.6  |      |      |
| ③ DGO 100/2/G50H A0CM(T)/50 |                   | 12.7 | 10.6 | 8.2  | 5.7  | 3.1  |      |
| ④ DGO 150/2/G50H A0CM(T)/50 |                   | 14.4 | 12.1 | 9.7  | 7.3  | 4.8  | 2.2  |
| ⑤ DGO 200/2/G50H A0CM(T)/50 |                   | 15.3 | 13.0 | 10.6 | 8.2  | 5.6  | 3.0  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DGO 50/2/G50H A1CM/50  | 230 | 1      | -       | 0.37    | 2.9 | 2900 | Dir   | G 2"- DN50 PN10-16 | 40 mm        |
| ② DGO 75/2/G50H A1CM/50  | 230 | 1      | -       | 0.55    | 3.9 | 2900 | Dir   | G 2"- DN50 PN10-16 | 40 mm        |
| ③ DGO 100/2/G50H A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2"- DN50 PN10-16 | 50 mm        |
| ④ DGO 150/2/G50H A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2"- DN50 PN10-16 | 50 mm        |
| ⑤ DGO 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2"- DN50 PN10-16 | 50 mm        |

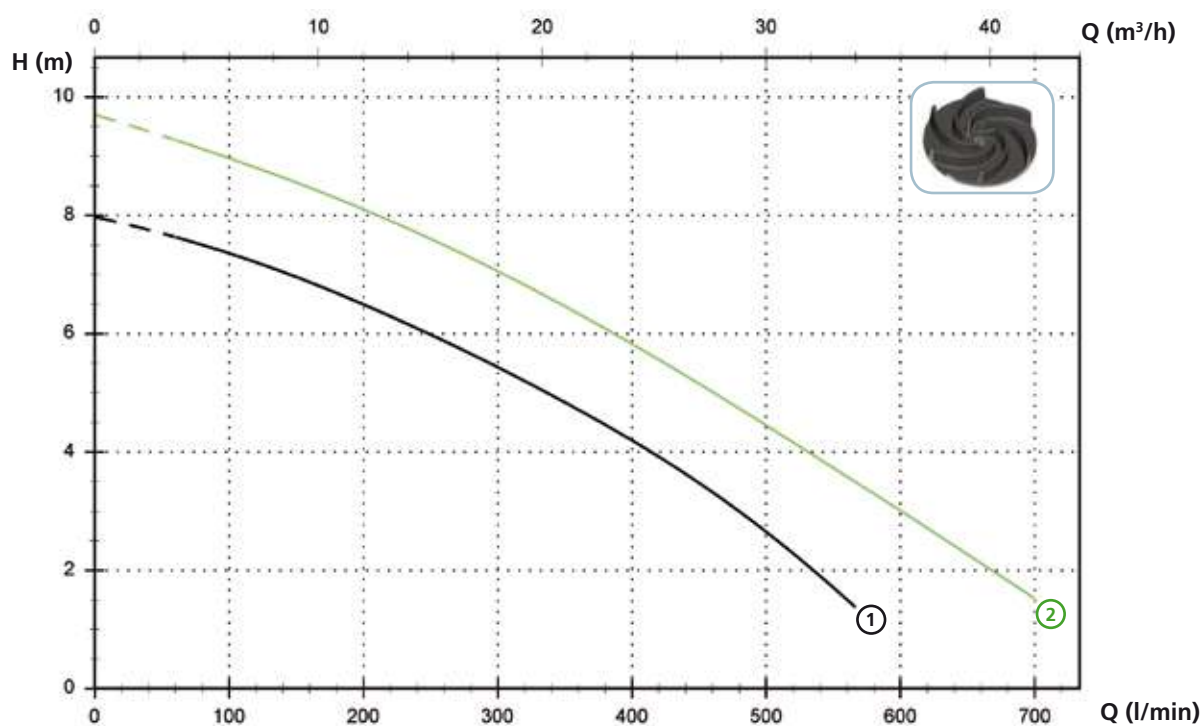
  

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DGO 50/2/G50H A1CT/50  | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 2"- DN50 PN10-16 | 40 mm        |
| ② DGO 75/2/G50H A1CT/50  | 400 | 3      | -       | 0.55    | 1.4 | 2900 | Dir   | G 2"- DN50 PN10-16 | 40 mm        |
| ③ DGO 100/2/G50H A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2"- DN50 PN10-16 | 50 mm        |
| ④ DGO 150/2/G50H A0CT/50 | 400 | 3      | -       | 1.1     | 2.6 | 2900 | Dir   | G 2"- DN50 PN10-16 | 50 mm        |
| ⑤ DGO 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 2"- DN50 PN10-16 | 50 mm        |

## Models with vertical GAS 2½" threaded discharge - 2 poles

### Performances

|   |                           |     |     |      |      |      |      |
|---|---------------------------|-----|-----|------|------|------|------|
|   | <i>l/s</i>                | 0   | 2   | 4    | 6    | 8    | 10   |
|   | <i>l/min</i>              | 0   | 120 | 240  | 360  | 480  | 600  |
|   | <i>m³/h</i>               | 0   | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 |
| ① | DGO 150/2/G65V A1CM(T)/50 | 8.0 | 7.2 | 6.1  | 4.7  | 3.0  |      |
| ② | DGO 200/2/G65V A1CM(T)/50 | 9.7 | 8.8 | 7.7  | 6.3  | 4.7  | 3.0  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DGO 150/2/G65V A1CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2½" | 65 mm        |
| ② DGO 200/2/G65V A1CM/50 | 230 | 1      | -       | 1.5     | 9.9 | 2900 | Dir   | G 2½" | 65 mm        |

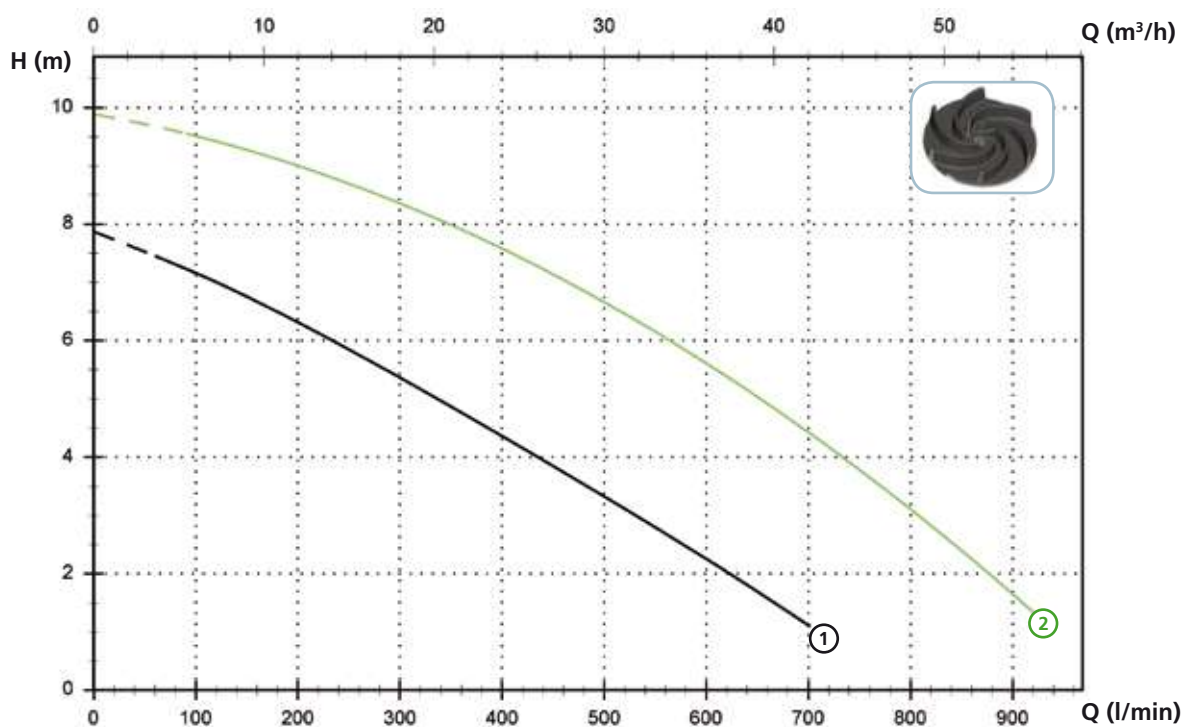
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DGO 150/2/G65V A1CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2½" | 65 mm        |
| ② DGO 200/2/G65V A1CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 2½" | 65 mm        |

# DGO

## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances

|                           | l/s               | 0   | 2   | 4    | 6    | 8    | 10   | 12   | 14   |
|---------------------------|-------------------|-----|-----|------|------|------|------|------|------|
|                           | l/min             | 0   | 120 | 240  | 360  | 480  | 600  | 720  | 840  |
|                           | m <sup>3</sup> /h | 0   | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 |
| ① DGO 150/2/65 A1CM(T)/50 |                   | 7.9 | 7.0 | 5.9  | 4.8  | 3.5  | 2.3  |      |      |
| ② DGO 200/2/65 A1CM(T)/50 |                   | 9.9 | 9.4 | 8.8  | 7.9  | 6.9  | 5.6  | 4.2  | 2.5  |



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 150/2/65 A1CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ② DGO 200/2/65 A1CM/50 | 230 | 1      | -       | 1.5     | 9.9 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |

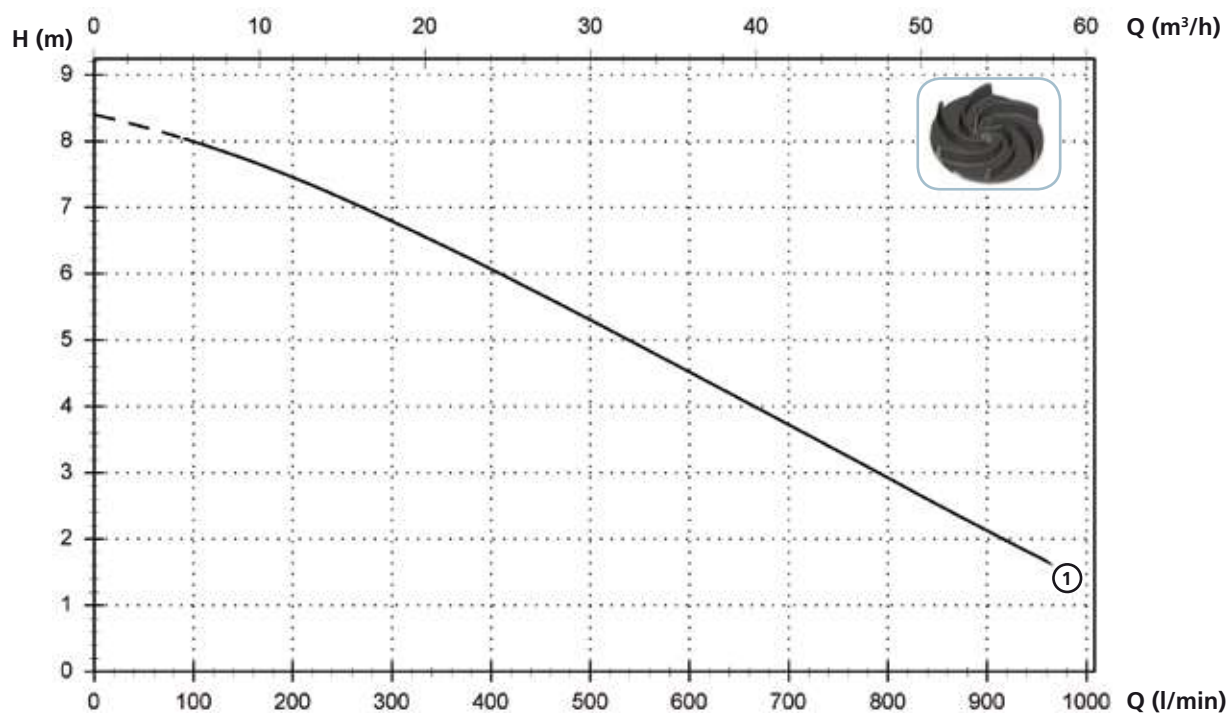
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 150/2/65 A1CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ② DGO 200/2/65 A1CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances

|                   |   |     |      |      |      |      |      |      |      |
|-------------------|---|-----|------|------|------|------|------|------|------|
| l/s               | 0 | 2   | 4    | 6    | 8    | 10   | 12   | 14   | 16   |
| l/min             | 0 | 120 | 240  | 360  | 480  | 600  | 720  | 840  | 960  |
| m <sup>3</sup> /h | 0 | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 | 57.6 |

|                           |     |     |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ① DGO 200/2/80 A1CM(T)/50 | 8.4 | 7.9 | 7.2 | 6.4 | 5.5 | 4.5 | 3.6 | 2.6 | 1.7 |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① DGO 200/2/80 A1CM/50 | 230 | 1      | -       | 1.7     | 11.2 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 200/2/80 A1CT/50 | 400 | 3      | -       | 1.7     | 3.9 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |



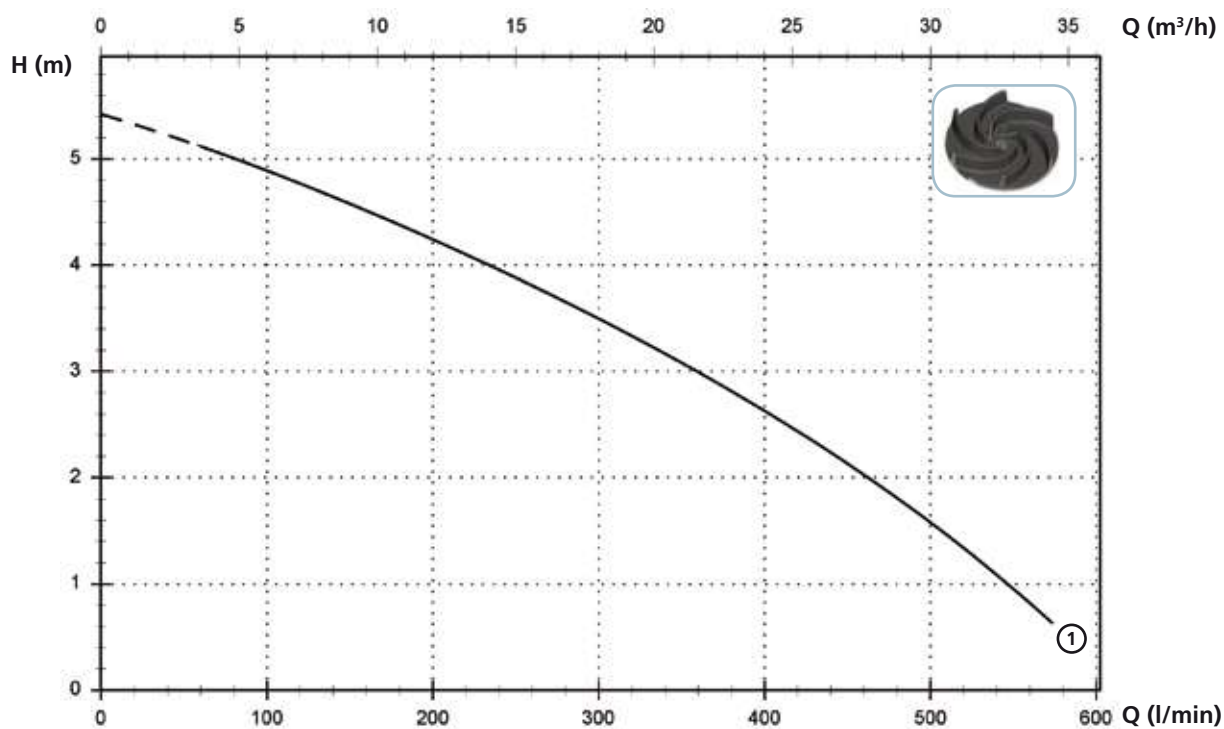
# DGO

## Models with horizontal GAS 2" threaded discharge - 4 poles

### Performances

|                   |   |     |     |      |      |      |      |      |      |      |
|-------------------|---|-----|-----|------|------|------|------|------|------|------|
| l/s               | 0 | 1   | 2   | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
| l/min             | 0 | 60  | 120 | 180  | 240  | 300  | 360  | 420  | 480  | 540  |
| m <sup>3</sup> /h | 0 | 3.6 | 7.2 | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 | 28.8 | 32.4 |

|                             |     |     |     |     |     |     |     |     |     |     |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ① DGO 100/4/G50V B0CM(T)/50 | 5.4 | 5.1 | 4.8 | 4.4 | 4.0 | 3.5 | 3.0 | 2.4 | 1.8 | 1.1 |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGO 100/4/G50V B0CM/50 | 230 | 1      | -       | 0.7     | 4.5 | 1450 | Dir   | G 2" | 45 mm        |

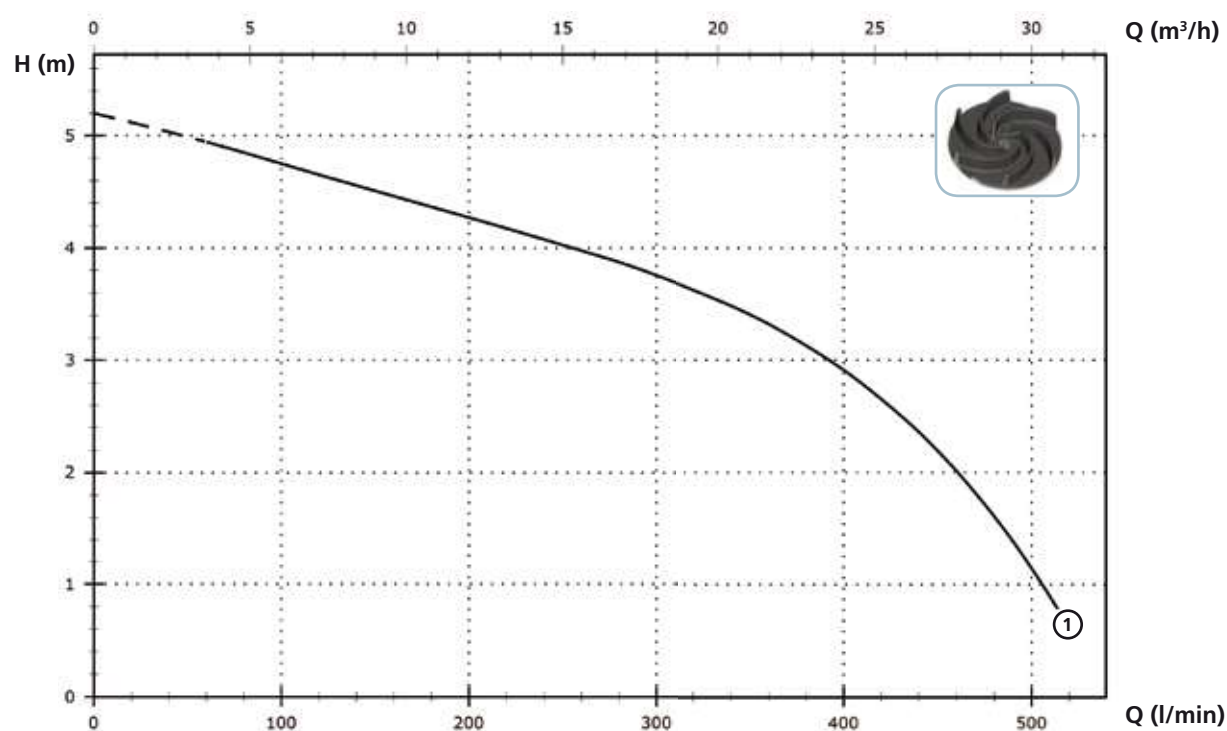
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGO 100/4/G50V B0CT/50 | 400 | 3      | -       | 0.7     | 1.6 | 1450 | Dir   | G 2" | 45 mm        |

## Models with horizontal GAS 2" threaded - DN50 PN10 flanged discharge - 4 poles

### Performances

|              |   |     |     |      |      |     |      |      |      |
|--------------|---|-----|-----|------|------|-----|------|------|------|
| <i>l/s</i>   | 0 | 1   | 2   | 3    | 4    | 5   | 6    | 7    | 8    |
| <i>l/min</i> | 0 | 60  | 120 | 180  | 240  | 300 | 360  | 420  | 480  |
| <i>m³/h</i>  | 0 | 3.6 | 7.2 | 10.8 | 14.4 | 18  | 21.6 | 25.2 | 28.8 |

|                             |     |     |     |     |     |     |     |     |     |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ① DGO 100/4/G50H A0CM(T)/50 | 5.2 | 4.9 | 4.7 | 4.4 | 4.1 | 3.8 | 3.3 | 2.7 | 1.6 |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① DGO 100/4/G50H A0CM/50 | 230 | 1      | -       | 0.7     | 5.7 | 1450 | Dir   | G 2" DN50 PN10 | 45 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① DGO 100/4/G50H A0CT/50 | 400 | 3      | -       | 0.7     | 2.2 | 1450 | Dir   | G 2" DN50 PN10 | 45 mm        |

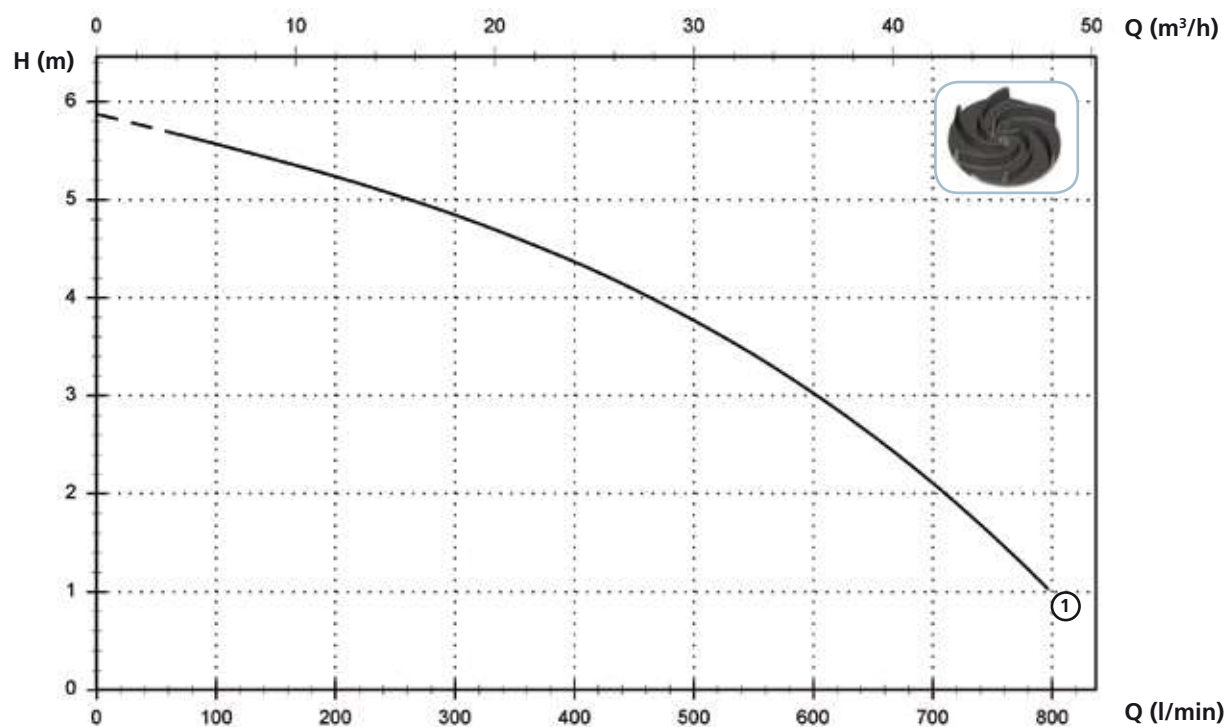
# DGO

## Models with horizontal DN65 PN10-16 flanged discharge - 4 poles

### Performances

|              |   |     |      |      |      |      |      |
|--------------|---|-----|------|------|------|------|------|
| <i>l/s</i>   | 0 | 2   | 4    | 6    | 8    | 10   | 12   |
| <i>l/min</i> | 0 | 120 | 240  | 360  | 480  | 600  | 720  |
| <i>m³/h</i>  | 0 | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |

|                           |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|
| ① DGO 150/4/65 A0CM(T)/50 | 5.9 | 5.5 | 5.1 | 4.6 | 3.9 | 3.0 | 1.9 |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 150/4/65 A0CM/50 | 230 | 1      | -       | 0.9     | 7.5 | 1450 | Dir   | DN65 PN10-16 | 45 mm        |

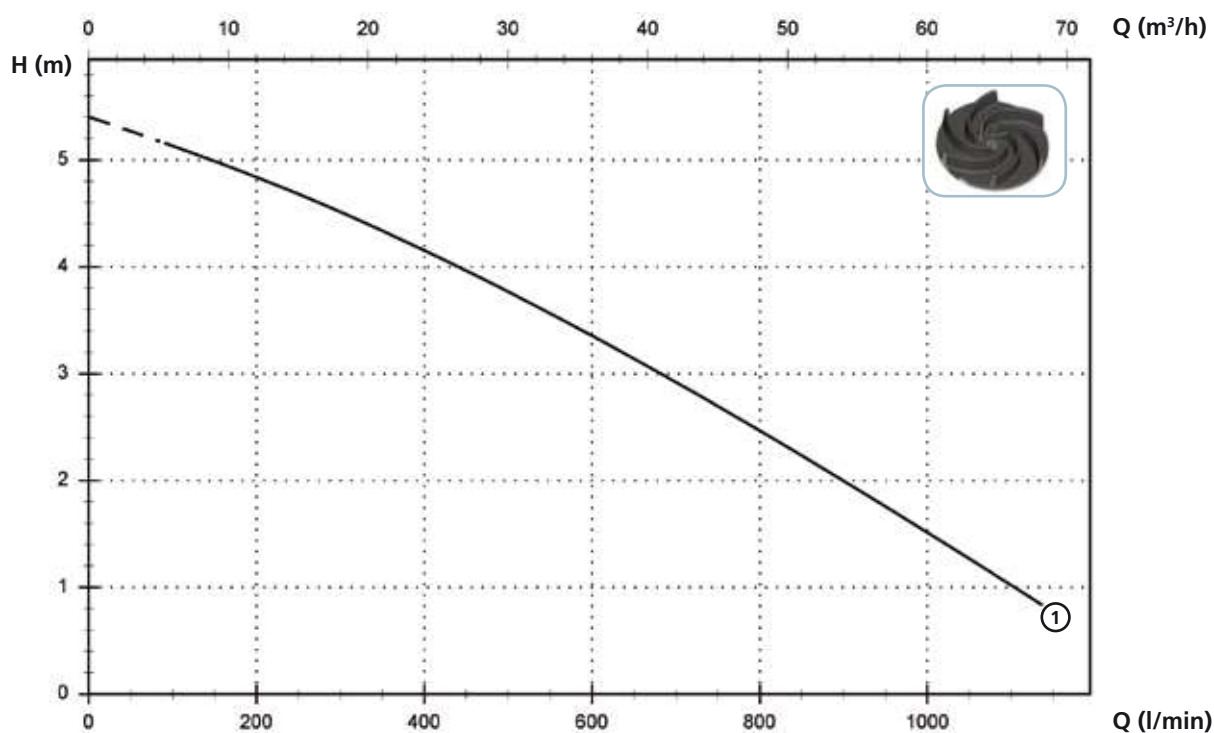
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 150/4/65 A0CT/50 | 400 | 3      | -       | 0.9     | 2.8 | 1450 | Dir   | DN65 PN10-16 | 45 mm        |

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances

|              |   |     |      |      |      |      |      |      |      |      |
|--------------|---|-----|------|------|------|------|------|------|------|------|
| <i>l/s</i>   | 0 | 2   | 4    | 6    | 8    | 10   | 12   | 14   | 16   | 18   |
| <i>l/min</i> | 0 | 120 | 240  | 360  | 480  | 600  | 720  | 840  | 960  | 1080 |
| <i>m³/h</i>  | 0 | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 | 57.6 | 64.8 |

|                           |     |     |     |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ① DGO 150/4/80 A0CM(T)/50 | 5.4 | 5.1 | 4.7 | 4.3 | 3.8 | 3.4 | 2.8 | 2.3 | 1.7 | 1.1 |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 150/4/80 A0CM/50 | 230 | 1      | -       | 0.9     | 7.5 | 1450 | Dir   | DN80 PN10-16 | 60 mm        |

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGO 150/4/80 A0CT/50 | 400 | 3      | -       | 0.9     | 2.8 | 1450 | Dir   | DN80 PN10-16 | 60 mm        |

# DGO

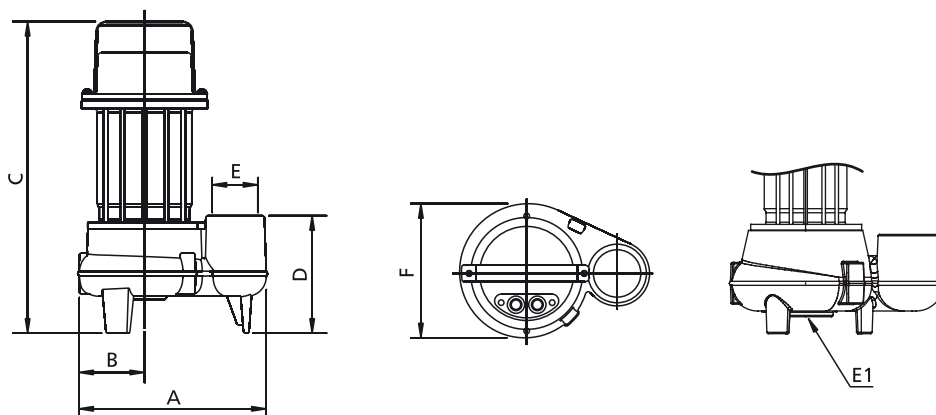
## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGO 100/2/G40V B1CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G40V B1CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G40V B1CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/2/G40V B1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G40V B1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G40V B1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 50/2/G50V B0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 75/2/G50V B0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/2/G50V B0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G50V B0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G50V B0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 50/2/G50V B0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 75/2/G50V B0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/2/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 50/2/G50H A1CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 75/2/G50H A1CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/2/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 50/2/G50H A1CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 75/2/G50H A1CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G65V A1CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G65V A1CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/G65V A1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/G65V A1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/65 A1CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/65 A1CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/2/65 A1CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/65 A1CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/80 A1CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 200/2/80 A1CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/4/G50V B0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/4/G50V B0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/4/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 100/4/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/4/65 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/4/65 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/4/80 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DGO 150/4/80 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |

## Overall dimensions and weights

### Models with vertical discharge

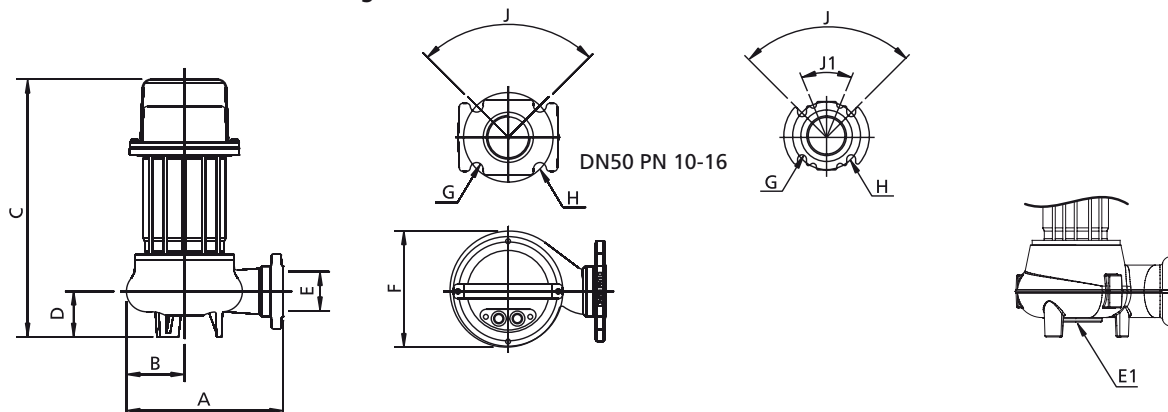


|                            | A   | B   | C   | D   | E     | E1        | F   | kg   |
|----------------------------|-----|-----|-----|-----|-------|-----------|-----|------|
| DGO 100/2/G40V B1CM(T)/50  | 260 | 100 | 440 | 125 | G 1½" | -         | 205 | 18   |
| DGO 150/2/G40V B10CM(T)/50 | 260 | 100 | 440 | 125 | G 1½" | -         | 205 | 19   |
| DGO 200/2/G40V B1CM(T)/50  | 260 | 100 | 440 | 125 | G 1½" | -         | 205 | 20   |
| DGO 50/2/G50V B0CM(T)/50   | 230 | 80  | 380 | 120 | G 2"  | -         | 165 | 16.5 |
| DGO 75/2/G50V B0CM(T)/50   | 230 | 80  | 380 | 120 | G 2"  | -         | 165 | 16.5 |
| DGO 100/2/G50V B0CM(T)/50  | 270 | 100 | 455 | 130 | G 2"  | -         | 205 | 19.5 |
| DGO 150/2/G50V B0CM(T)/50  | 270 | 100 | 455 | 130 | G 2"  | -         | 205 | 20.5 |
| DGO 200/2/G50V B0CM(T)/50  | 270 | 100 | 455 | 130 | G 2"  | -         | 205 | 21.5 |
| DGO 150/2/G65V A1CM(T)/50  | 300 | 105 | 435 | 140 | G 2½" | 3xM8 Ø160 | 210 | 21   |
| DGO 200/2/G65V A1CM(T)/50  | 300 | 105 | 435 | 140 | G 2½" | 3xM8 Ø160 | 210 | 22   |
| DGO 100/4/G50V B0CM(T)/50  | 270 | 100 | 455 | 130 | G 2"  | -         | 205 | 21   |

Dimensions in mm

All weights and dimensions are indicative only

### Models with horizontal discharge



|                           | A   | B   | C   | D   | E           | E1        | F   | G  | H   | J   | J1  | kg   |
|---------------------------|-----|-----|-----|-----|-------------|-----------|-----|----|-----|-----|-----|------|
| DGO 50/2/G50H A1CM(T)/50  | 220 | 80  | 360 | 65  | G 2" - DN50 | -         | 160 | 18 | 125 | 90° | -   | 16.5 |
| DGO 75/2/G50H A1CM(T)/50  | 220 | 80  | 360 | 65  | G 2" - DN50 | -         | 160 | 18 | 125 | 90° | -   | 16.5 |
| DGO 100/2/G50H A0CM(T)/50 | 270 | 110 | 455 | 110 | G 2" - DN50 | -         | 205 | 18 | 125 | 90° | -   | 19.5 |
| DGO 150/2/G50H A0CM(T)/50 | 270 | 110 | 455 | 110 | G 2" - DN50 | -         | 205 | 18 | 125 | 90° | -   | 20.5 |
| DGO 200/2/G50H A0CM(T)/50 | 270 | 110 | 455 | 110 | G 2" - DN50 | -         | 205 | 18 | 125 | 90° | -   | 21.5 |
| DGO 150/2/65 A1CM(T)/50   | 295 | 110 | 435 | 70  | 65          | 3xM8 Ø160 | 210 | 18 | 145 | 90° | -   | 22   |
| DGO 200/2/65 A1CM(T)/50   | 295 | 110 | 435 | 70  | 65          | 3xM8 Ø160 | 210 | 18 | 145 | 90° | -   | 23   |
| DGO 200/2/80 A1CM(T)/50   | 290 | 105 | 450 | 80  | 80          | 3xM8 Ø160 | 210 | 18 | 160 | 90° | 45° | 23   |
| DGO 100/4/G50H A0CM(T)/50 | 270 | 110 | 450 | 110 | G 2" - DN50 | -         | 205 | 18 | 125 | 90° | -   | 21   |
| DGO 150/4/65 A0CM(T)/50   | 270 | 110 | 450 | 105 | 65          | -         | 220 | 18 | 145 | 90° | -   | 27   |
| DGO 150/4/80 A0CM(T)/50   | 270 | 115 | 480 | 125 | 80          | -         | 225 | 18 | 160 | 90° | -   | 29   |

Dimensions in mm

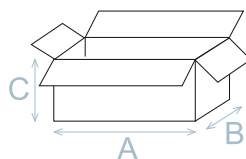
All weights and dimensions are indicative only



# DGO

## Packaging dimension

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DGO 100/2/G40V B1CM(T)/50 | 475 | 285 | 235 |
| DGO 150/2/G40V B1CM(T)/50 | 475 | 285 | 235 |
| DGO 200/2/G40V B1CM(T)/50 | 475 | 285 | 235 |
| DGO 50/2/G50V B0CM(T)/50  | 385 | 225 | 245 |
| DGO 75/2/G50V B0CM(T)/50  | 385 | 225 | 245 |
| DGO 100/2/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGO 150/2/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGO 200/2/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGO 50/2/G50H A1CM(T)/50  | 385 | 225 | 245 |
| DGO 75/2/G50H A1CM(T)/50  | 385 | 225 | 245 |
| DGO 100/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DGO 150/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DGO 200/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DGO 150/2/G65V A1CM(T)/50 | 475 | 285 | 235 |
| DGO 200/2/G65V A1CM(T)/50 | 475 | 285 | 235 |
| DGO 150/2/65 A1CM(T)/50   | 580 | 310 | 310 |
| DGO 200/2/65 A1CM(T)/50   | 580 | 310 | 310 |
| DGO 200/2/80 A1CM(T)/50   | 580 | 310 | 310 |
| DGO 100/4/G50V B0CM(T)/50 | 475 | 285 | 235 |
| DGO 100/4/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DGO 150/4/65 A0CM(T)/50   | 580 | 310 | 310 |
| DGO 150/4/80 A0CM(T)/50   | 580 | 310 | 310 |



Dimensions in mm

All weights and dimensions are  
indicative only

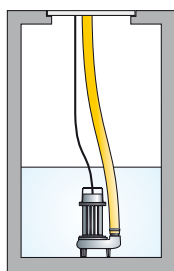
## No. pieces per pallet

For DGO 50-75 models each pallet (EUR 1000x1200 mm) is able to take 48 pieces.

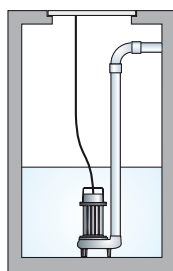
For DGO 100-150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available

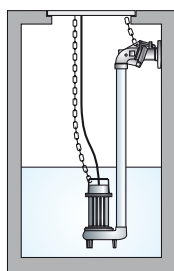
A



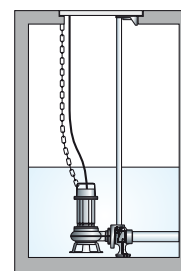
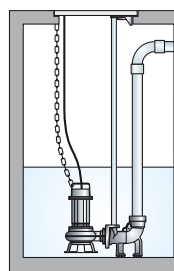
B

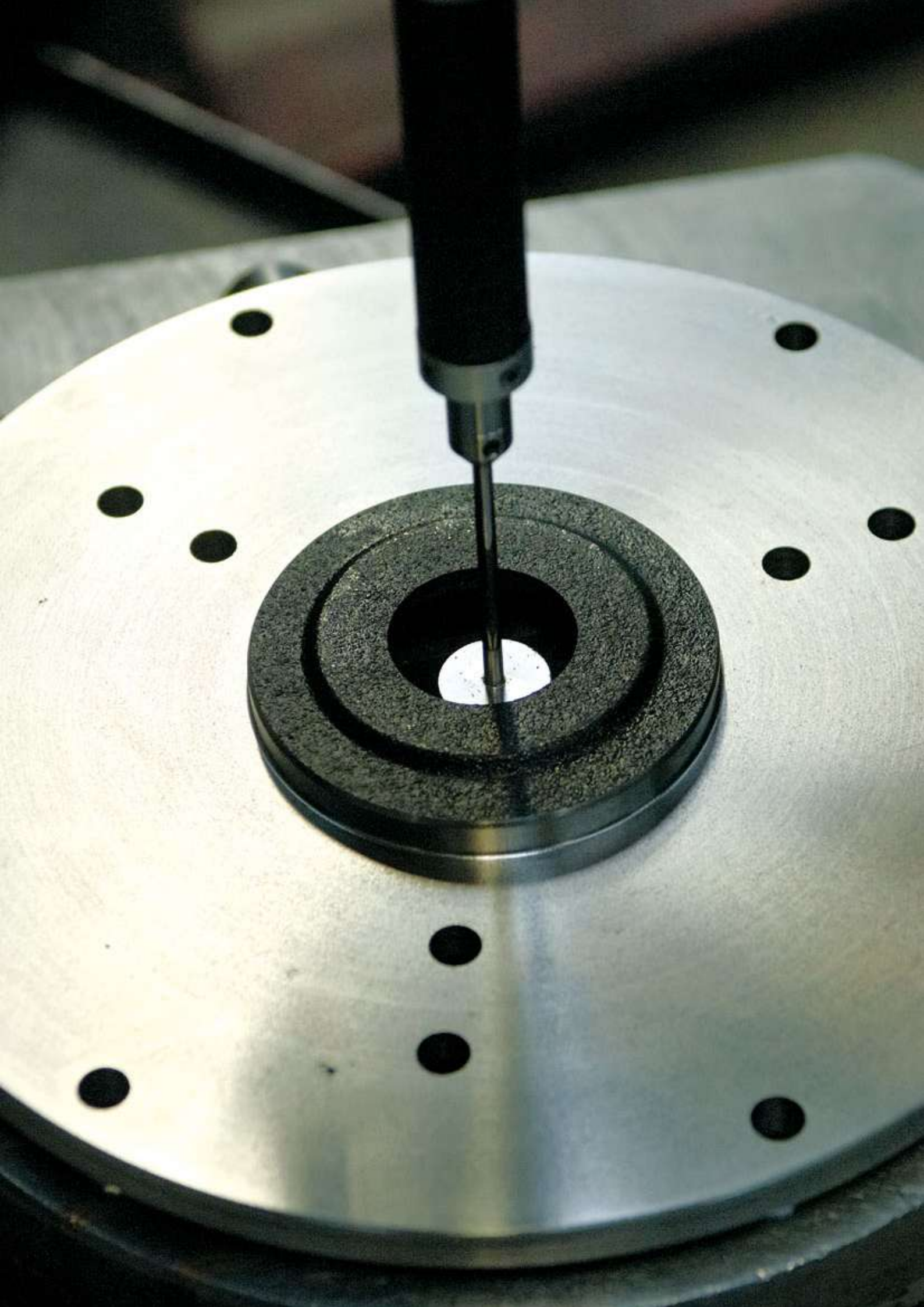


C



D





# DGI

## Set-back vortex impeller

All product images are indicative only



### General characteristics

| set-back vortex impeller |                 |
|--------------------------|-----------------|
| motor power              | 0,74 ÷ 1,5 kW   |
| poles                    | 2 / 4           |
| discharge                | DN80 horizontal |
| free passage             | max 80 mm       |
| max flow rate            | 15.2 l/s        |
| max head                 | 8.4 m           |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals, installed in series in inspectable oil sump. Ecological dry motor.

### Applications

Suitable for heavy-duty applications with soiled biological wastewaters, sewage, rainwater and seepage.

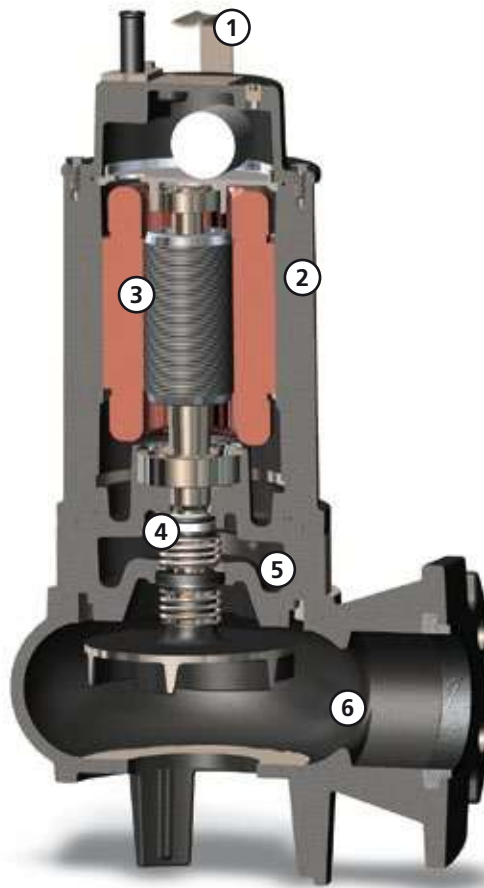
### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

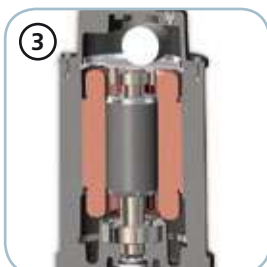
DGI

**Handle**

AISI 304 stainless steel lifting and carrying handle.

**Structure**

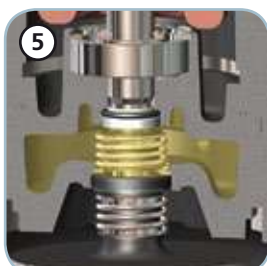
Constructed in GJL-250 cast iron.

**Motor**

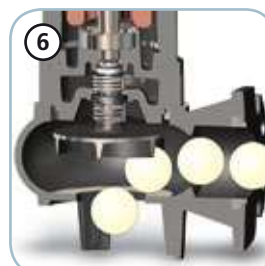
Ecological dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC).

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

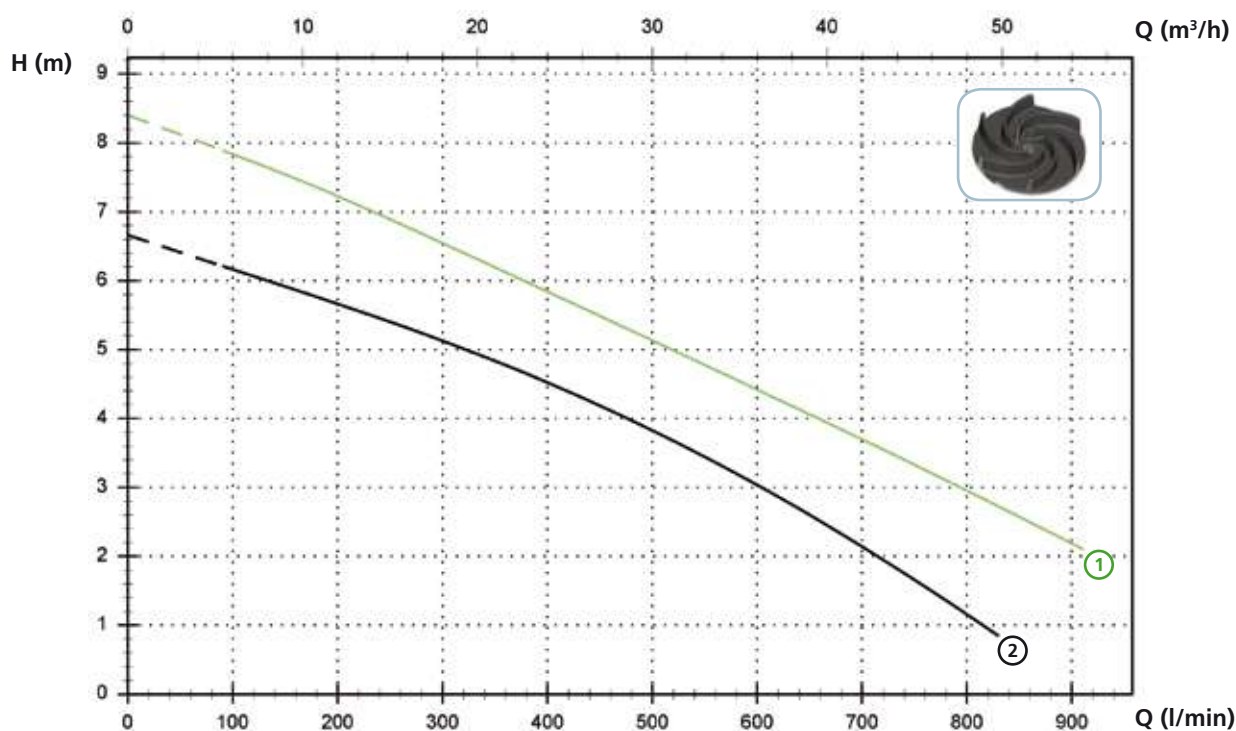


# DGI

## Models with horizontal DN80 PN10 flanged discharge - 2 poles DN80 PN10-16 flanged discharge - 4 poles

### Performances

|                           | l/s   | 0   | 2   | 4    | 6    | 8    | 10   | 12   | 14   |
|---------------------------|-------|-----|-----|------|------|------|------|------|------|
|                           | l/min | 0   | 120 | 240  | 360  | 480  | 600  | 720  | 840  |
|                           | m³/h  | 0   | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 |
| ① DGI 200/2/80 A0CM(T)/50 |       | 8.4 | 7.7 | 7.0  | 6.1  | 5.3  | 4.4  | 3.6  | 2.6  |
| ② DGI 100/4/80 A0CM(T)/50 |       | 6.7 | 6.1 | 5.5  | 4.8  | 4.0  | 3.0  | 2.0  |      |



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGI 200/2/80 A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | DN80 PN10    | 50 mm        |
| ② DGI 100/4/80 A0CM/50 | 230 | 1      | -       | 0.74    | 5.5 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |

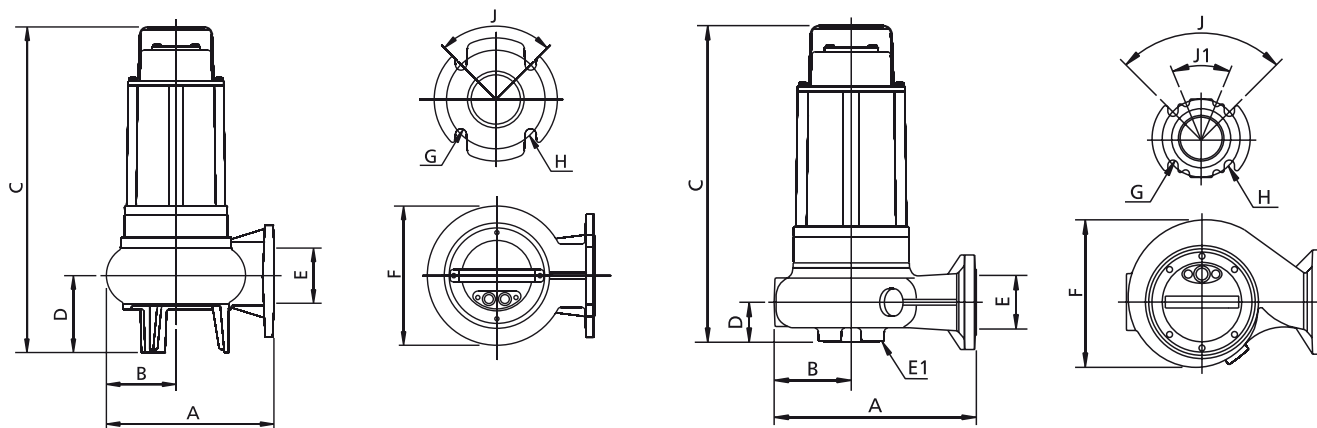
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGI 200/2/80 A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | DN80 PN10    | 50 mm        |
| ② DGI 100/4/80 A0CT/50 | 400 | 3      | -       | 0.74    | 2.3 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |

## Versions available

(Key to versions on page 16)

|                      | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|----------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                      | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGI 200/2/80 A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGI 200/2/80 A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ● |           |    |                  | ●    |      |       |        |
| DGI 100/4/80 A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGI 100/4/80 A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights



|                         | A   | B   | C   | D   | E  | E1(*) | F   | G  | H   | J   | J1  | kg |
|-------------------------|-----|-----|-----|-----|----|-------|-----|----|-----|-----|-----|----|
| DGI 200/2/80 A0CM(T)/50 | 270 | 115 | 530 | 125 | 80 | -     | 225 | 18 | 160 | 90° | -   | 34 |
| DGI 100/4/80 A0CM(T)/50 | 315 | 125 | 525 | 80  | 80 | 80    | 245 | 18 | 160 | 90° | 45° | 40 |

Dimensions in mm

All weights and dimensions are indicative only

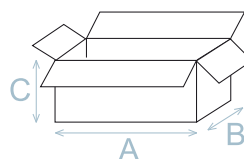
(\*) DN of the suction flange - PN6

## Packaging dimension

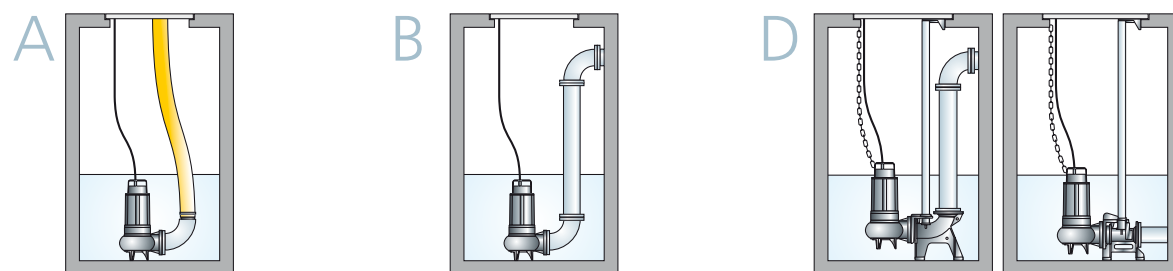
|                         | A   | B   | C   |
|-------------------------|-----|-----|-----|
| DGI 200/2/80 A0CM(T)/50 | 725 | 445 | 415 |
| DGI 100/4/80 A0CM(T)/50 | 725 | 445 | 415 |

Dimensions in mm

All weights and dimensions are indicative only



## Installations available





# DGF

## Set-back vortex impeller



All product images are indicative only



### General characteristics

#### Set-back vortex impeller

|               |                                                |
|---------------|------------------------------------------------|
| motor power   | 0,55 ÷ 1,5 kW                                  |
| poles         | 2 / 4                                          |
| discharge     | GAS 1½" ÷ 2½" vertical<br>DN65-DN80 horizontal |
| free passage  | max 80 mm                                      |
| max flow rate | 16.7 l/s                                       |
| max head      | 17.5 m                                         |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

### Applications

Specifically developed for use where there are traces of flammable liquids or in potentially explosive atmospheres, the DGF is used where the use of ordinary submersible electric pumps would not be possible. The main sectors of use are industrial and for the removal of landfill percolates and soiled biological liquids.

### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR - VITON                                   |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

**DGF**

CE 0496  II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids



#### Handle/Cable gland

Cast iron lifting and carrying handle.  
The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



#### Mechanical seals

Two silicon carbide (2SiC) mechanical seals in oil sump.



#### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



#### Drive shaft

Impeller connected to the drive shaft by means of tapered coupling.



#### Free passage

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.



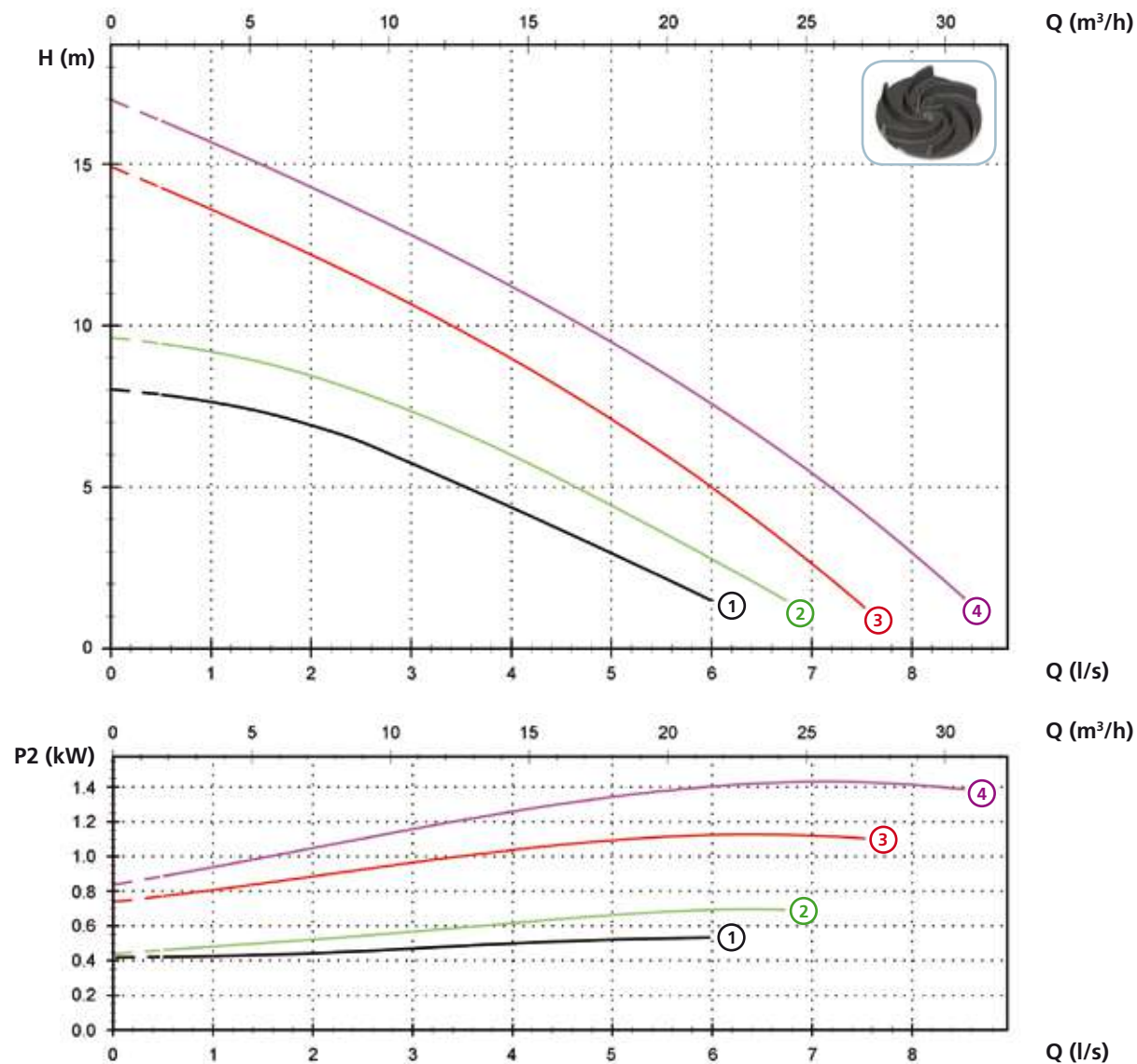
#### Discharge - support foot

Threaded, flanged discharge for the maximum ease of installation.  
Cast iron support foot.

# DGF

## Models with vertical GAS 1½" threaded discharge - 2 poles

### Performances



### Technical data

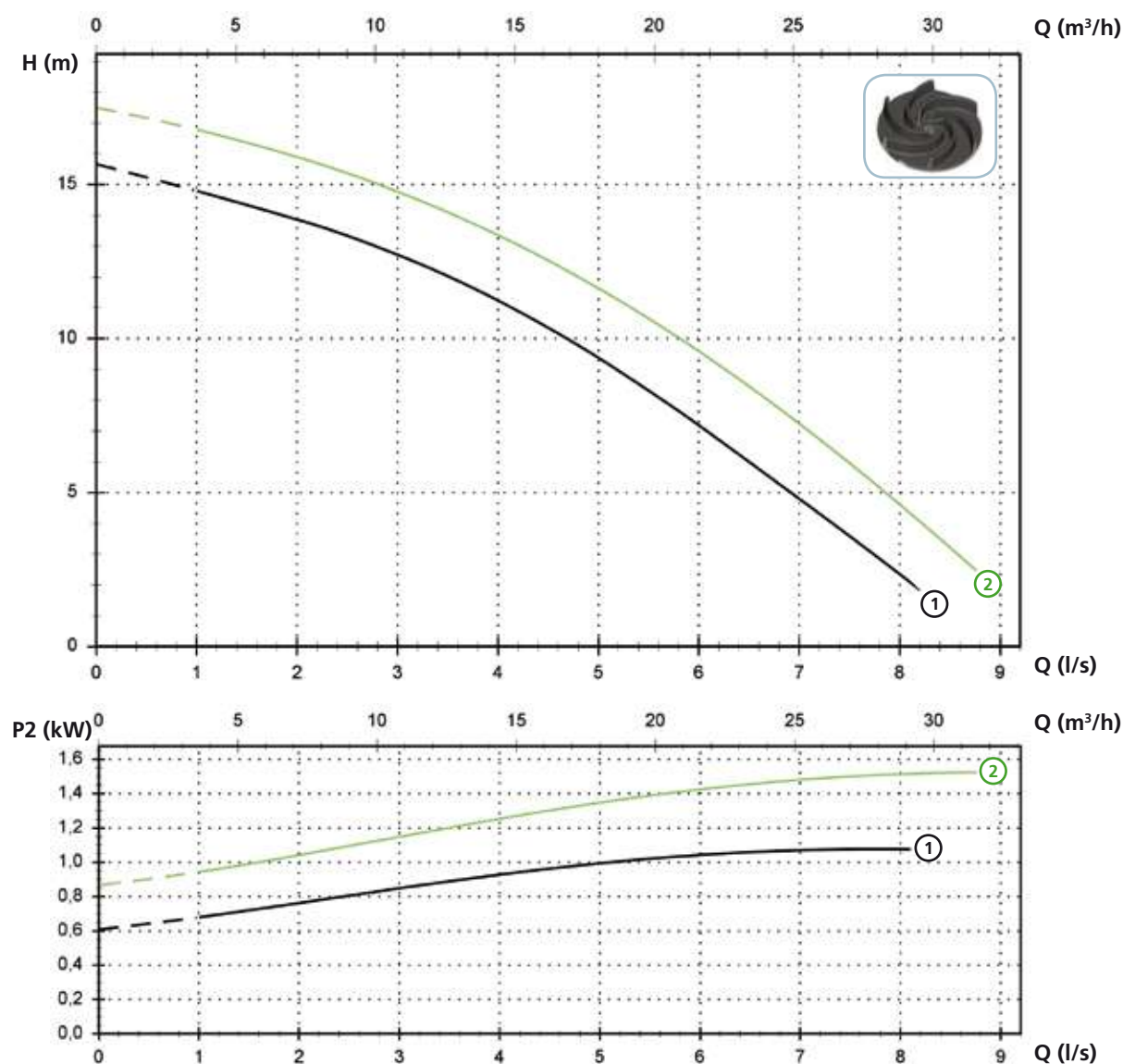
|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① | DGF 75/2/G40V A1CM/50  | 230 | 1      | 0.9     | 0.55    | 3.9 | 2900 | Dir   | G 1½" | 40 mm        |
| ② | DGF 100/2/G40V A1CM/50 | 230 | 1      | 1.1     | 0.74    | 4.9 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ | DGF 150/2/G40V A2CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 1½" | 40 mm        |
| ④ | DGF 200/2/G40V A2CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 1½" | 40 mm        |

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① | DGF 75/2/G40V A1CT/50  | 400 | 3      | 0.8     | 0.55    | 1.5 | 2900 | Dir   | G 1½" | 40 mm        |
| ② | DGF 100/2/G40V A1CT/50 | 400 | 3      | 1.1     | 0.74    | 1.9 | 2900 | Dir   | G 1½" | 40 mm        |
| ③ | DGF 150/2/G40V A2CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 1½" | 40 mm        |
| ④ | DGF 200/2/G40V A2CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 1½" | 40 mm        |

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------------------|--------------|
| ① | DGF 150/2/G40H A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 1½" - DN32 PN6 | 40 mm        |
| ② | DGF 200/2/G40H A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 1½" - DN32 PN6 | 40 mm        |

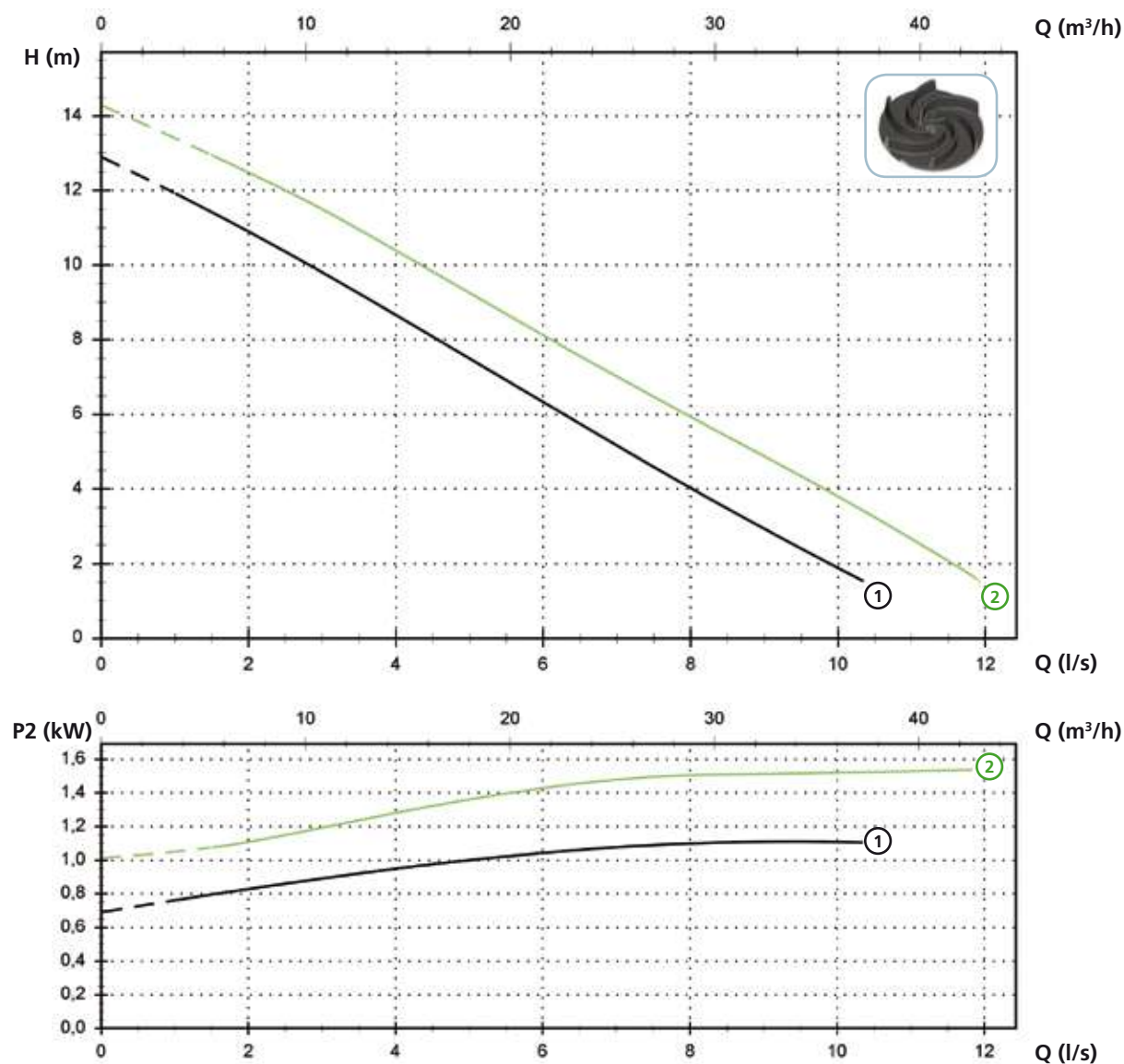
  

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① | DGF 150/2/G40H A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 1½" DN32 PN6 | 40 mm        |
| ② | DGF 200/2/G40H A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 1½" DN32 PN6 | 40 mm        |

# DGF

## Models with vertical GAS 2" threaded discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DGF 150/2/G50V A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 2" | 50 mm        |
| ② | DGF 200/2/G50V A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 2" | 50 mm        |

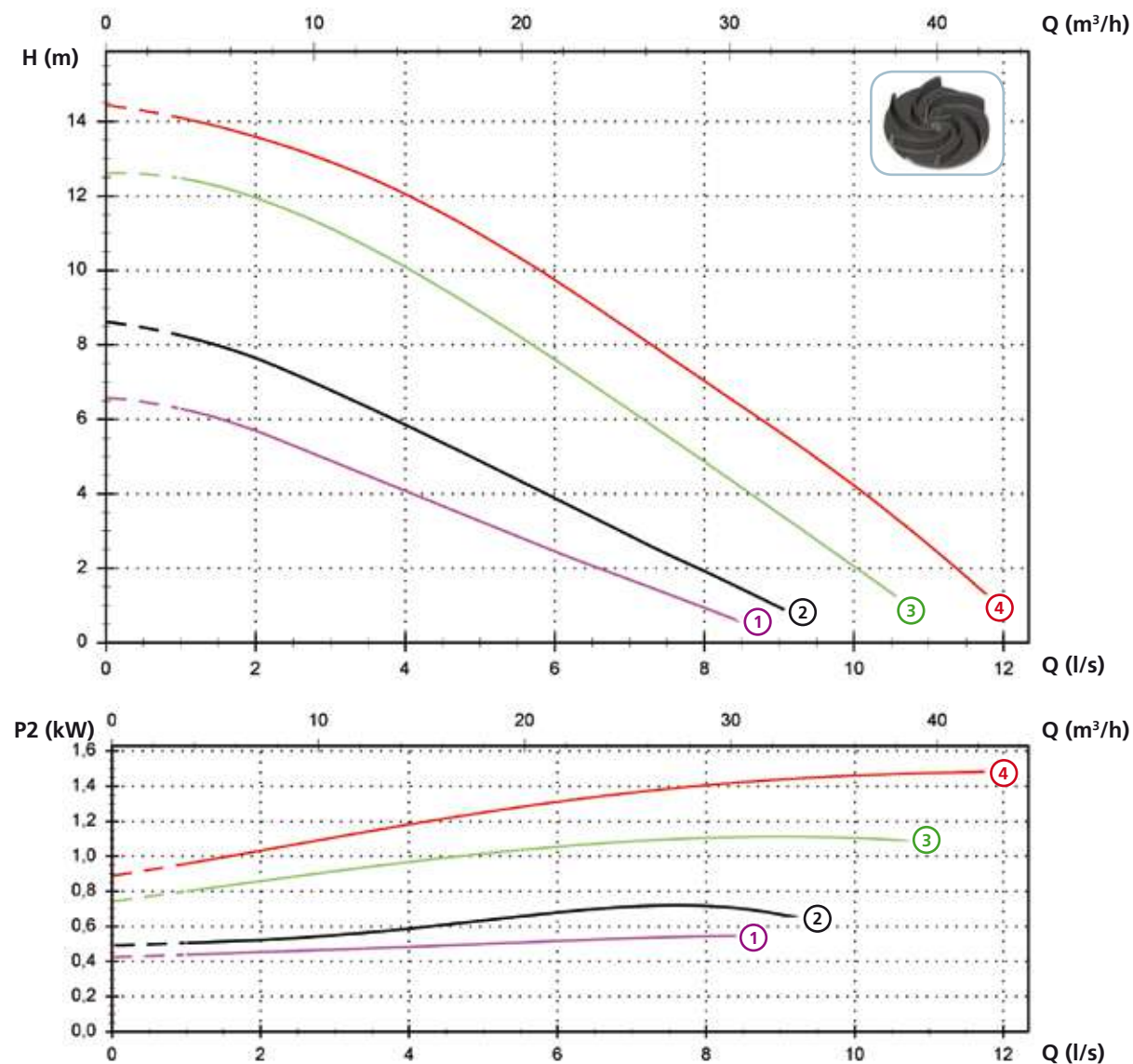
  

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DGF 150/2/G50V A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 2" | 50 mm        |
| ② | DGF 200/2/G50V A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 2" | 50 mm        |



## Models with horizontal GAS 2" threaded - DN50 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                   | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|---------------------|--------------|
| ① DGF 75/2/G50H A1CM/50  | 230 | 1      | 0.8     | 0.55    | 3.9 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |
| ② DGF 100/2/G50H A1CM/50 | 230 | 1      | 1.1     | 0.74    | 4.9 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |
| ③ DGF 150/2/G50H A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |
| ④ DGF 200/2/G50H A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |

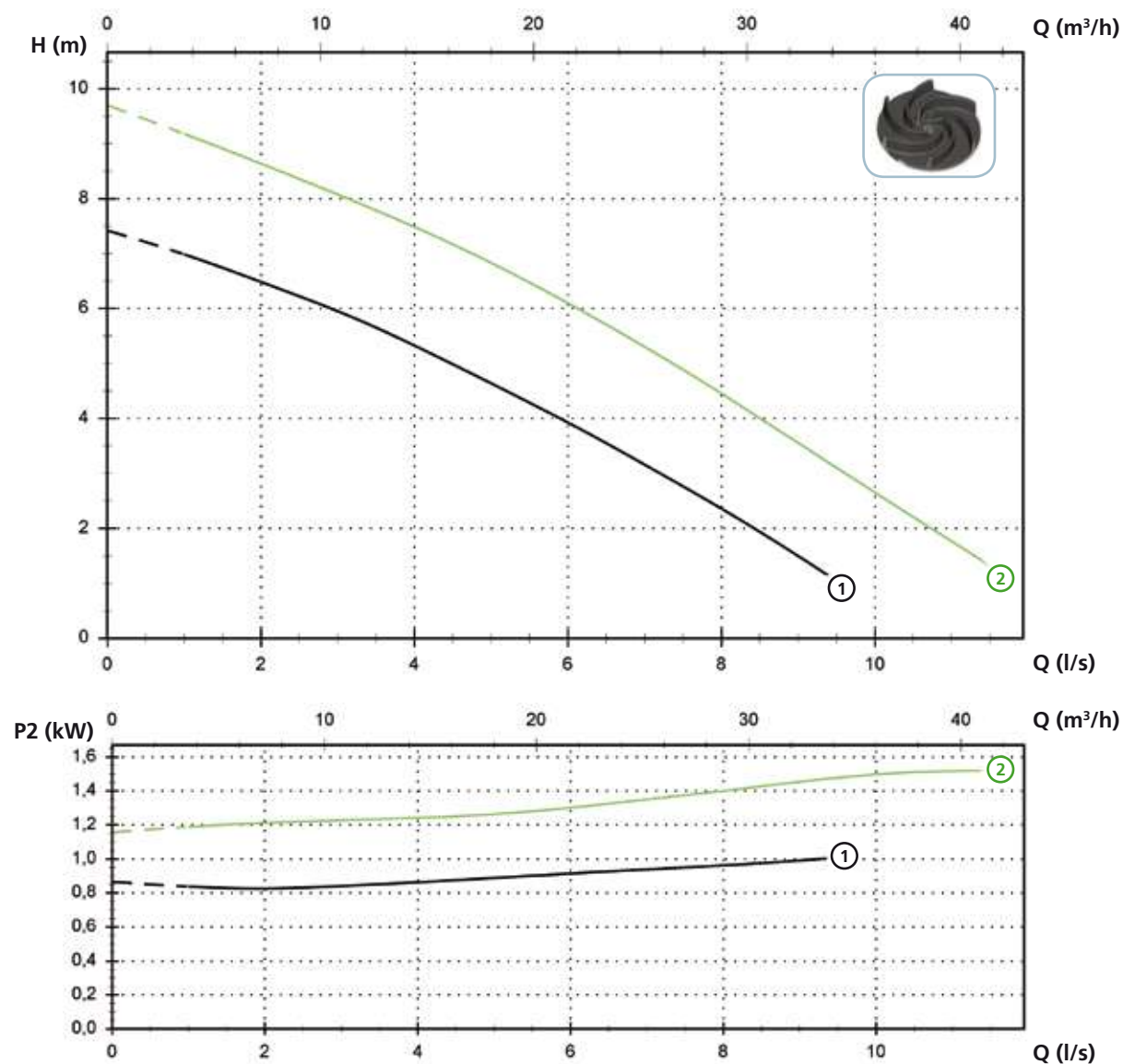
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                   | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|---------------------|--------------|
| ① DGF 75/2/G50H A1CT/50  | 400 | 3      | 0.8     | 0.55    | 1.5 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |
| ② DGF 100/2/G50H A1CT/50 | 400 | 3      | 1.1     | 0.74    | 1.9 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |
| ③ DGF 150/2/G50H A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |
| ④ DGF 200/2/G50H A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 2" - DN50 PN10-16 | 50 mm        |



# DGF

## Models with vertical GAS 2½" threaded discharge - 2 poles

### Performances



### Technical data

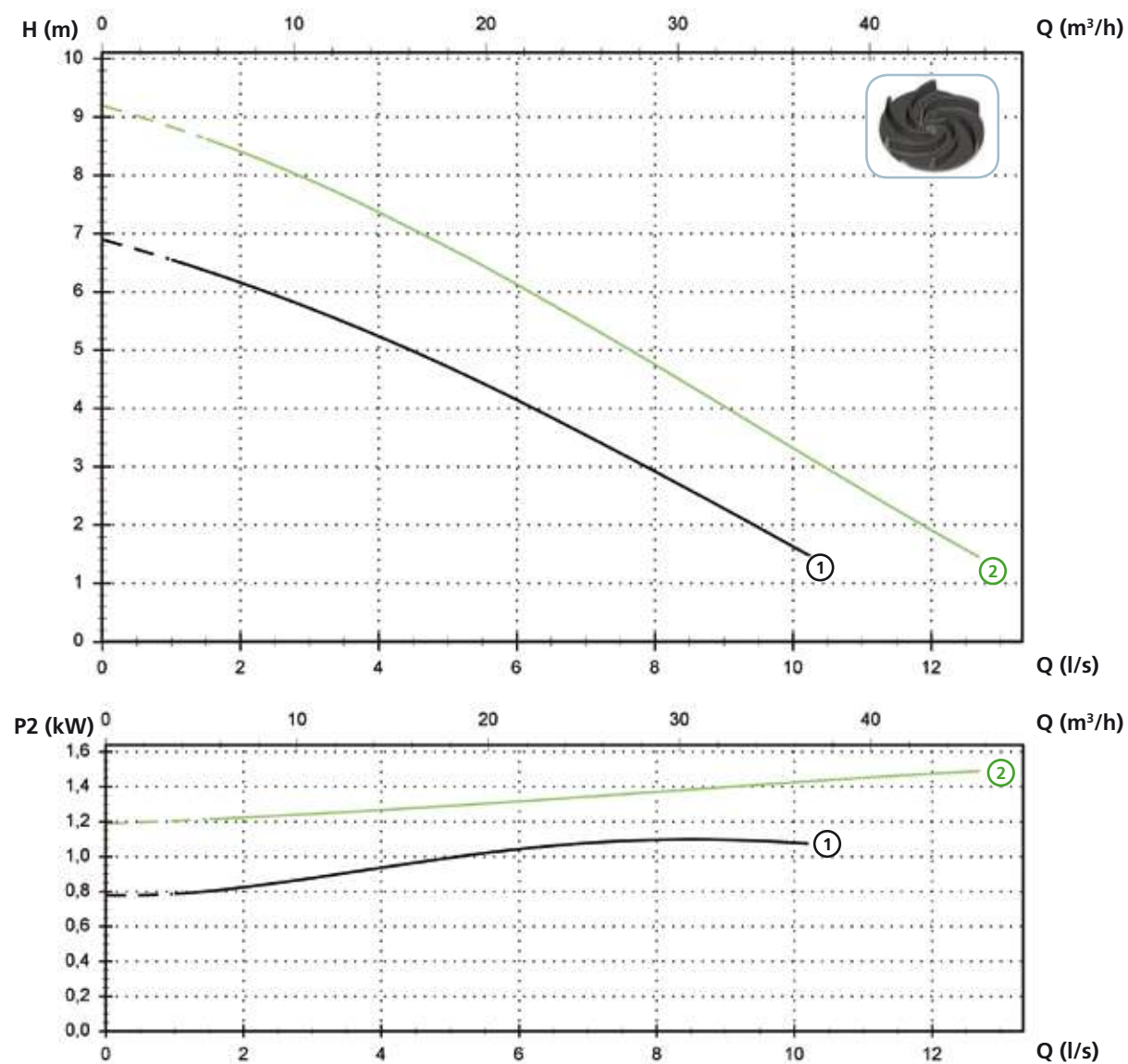
|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① | DGF 150/2/G65V A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 2½" | 65 mm        |
| ② | DGF 200/2/G65V A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 2½" | 65 mm        |

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① | DGF 150/2/G65V A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 2½" | 65 mm        |
| ② | DGF 200/2/G65V A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 2½" | 65 mm        |

## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | DGF 150/2/65 A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ② | DGF 200/2/65 A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |

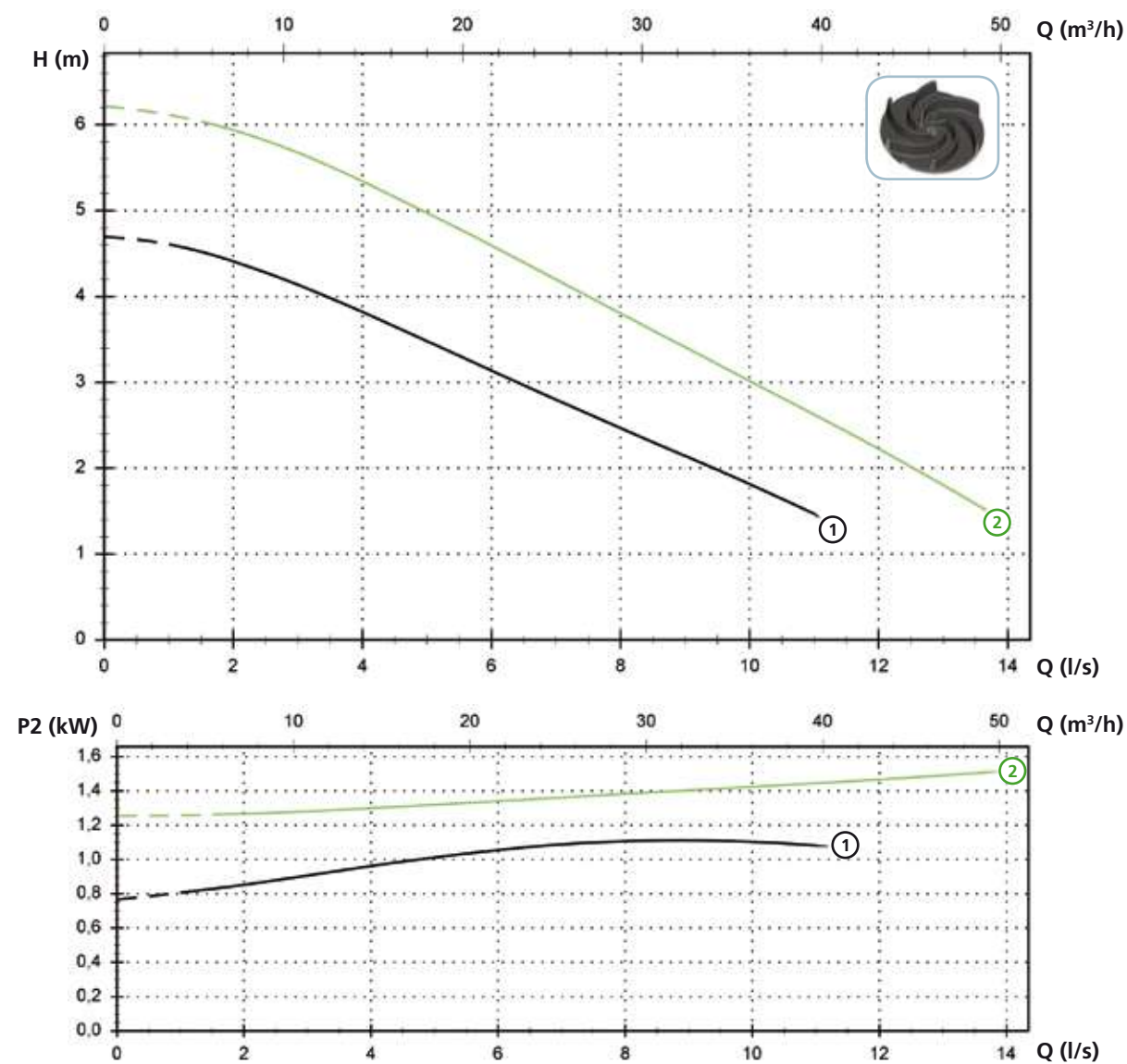
  

|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | DGF 150/2/65 A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ② | DGF 200/2/65 A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |

# DGF

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

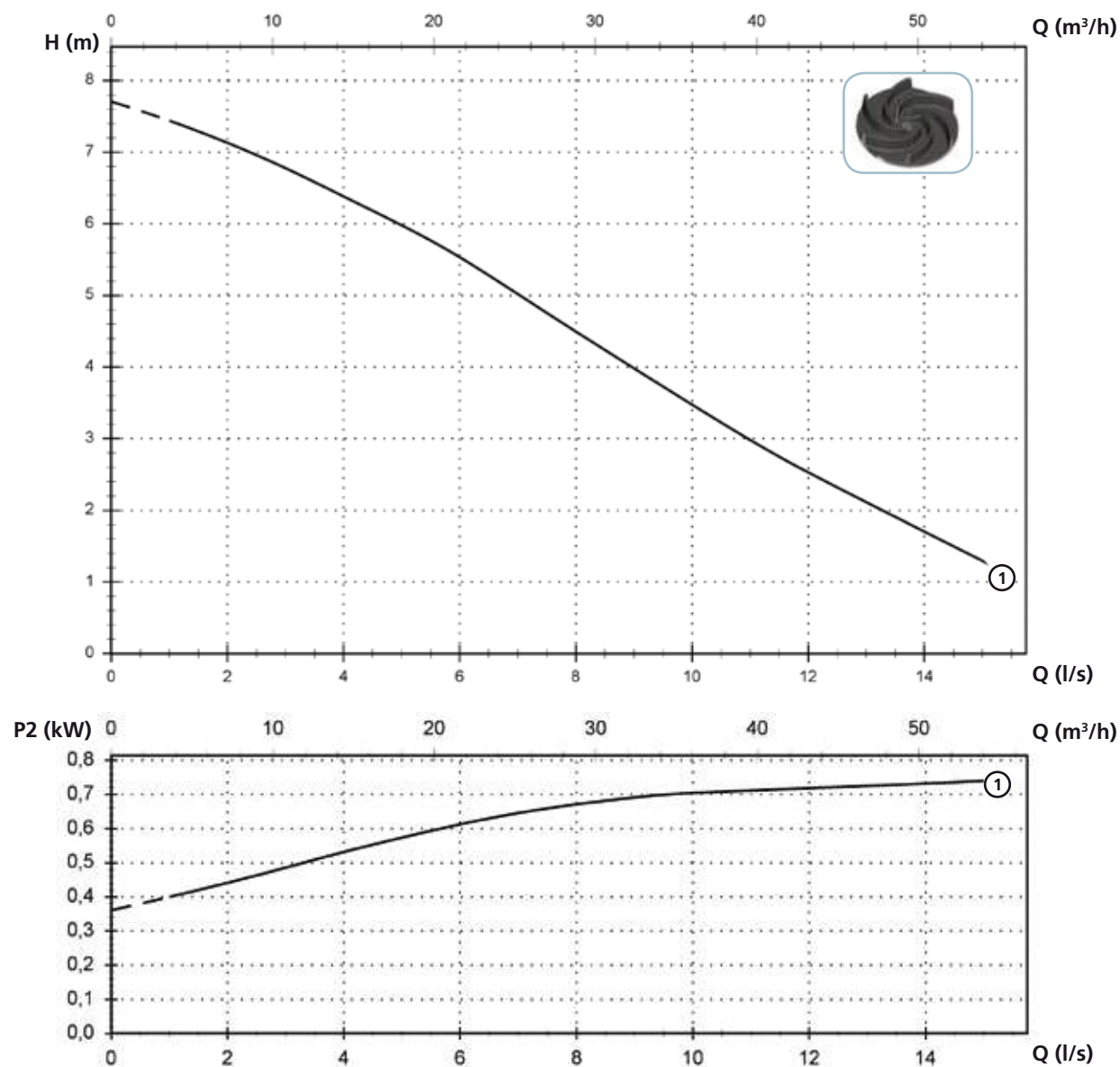
|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | DGF 150/2/80 A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |
| ② | DGF 200/2/80 A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |

|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | DGF 150/2/80 A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |
| ② | DGF 200/2/80 A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |

## Models with horizontal DN65 PN10-16 flanged discharge - 4 poles

### Performances



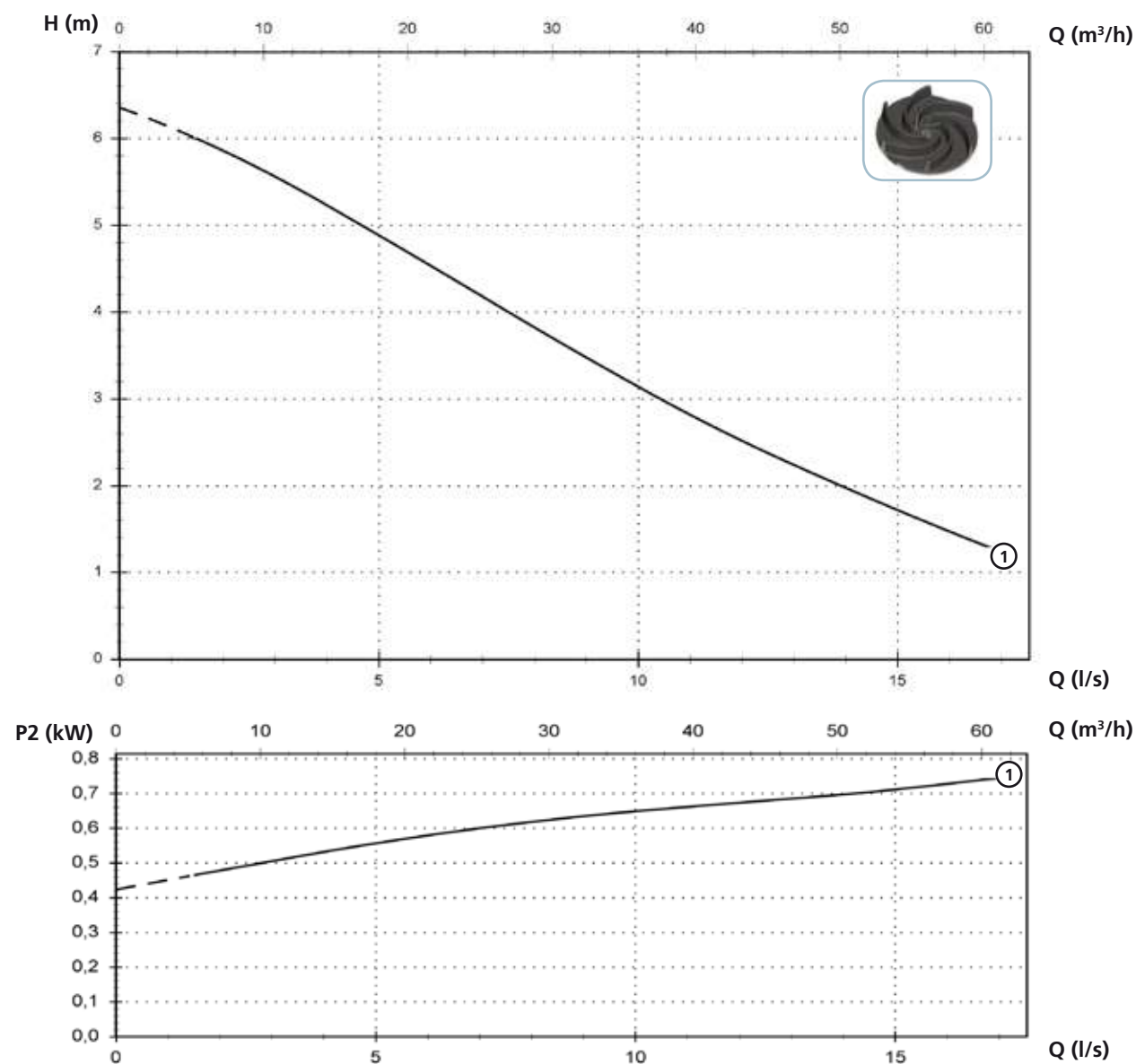
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGF 100/4/65 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN65 PN10-16 | 50 mm        |

# DGF

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGF 100/4/80 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.1 | 1450 | Dir   | DN80 PN10-16 | 65 mm        |

## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGF 75/2/G40V A1CM/50  |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 100/2/G40V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G40V A2CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G40V A2CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 75/2/G40V A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 100/2/G40V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G40V A2CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G40V A2CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G40H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G40H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G50V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G50V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G50V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G50V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 75/2/G50H A1CM/50  |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 100/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 75/2/G50H A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 100/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G65V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G65V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/G65V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/G65V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/65 A1CM/50   |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/65 A1CM/50   |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/65 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/65 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/80 A1CM/50   |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/80 A1CM/50   |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 150/2/80 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 200/2/80 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 100/4/65 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGF 100/4/80 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |

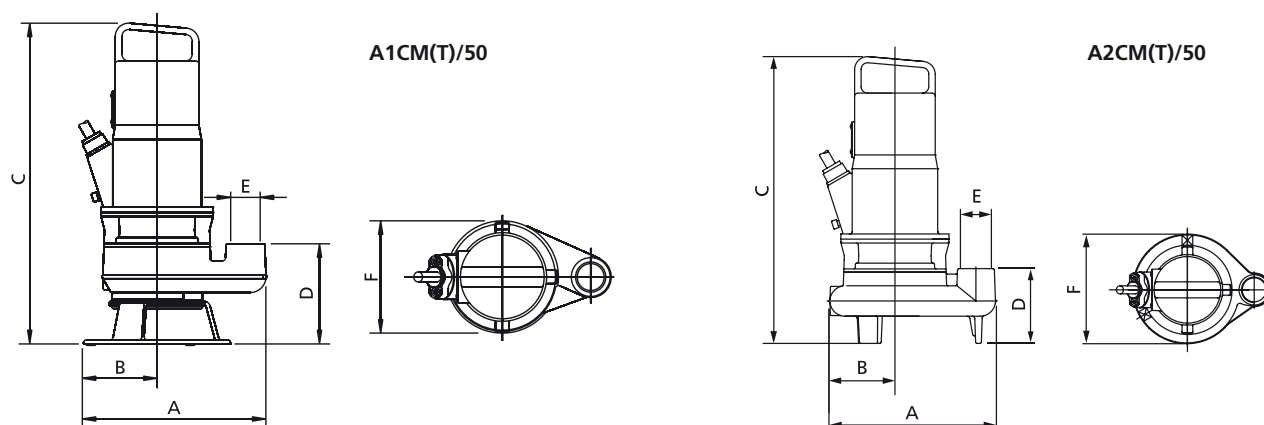
NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.  
Capacitor supplied but not connected to the pump cable.  
The use of an electrical panel as circuit breaker housing is mandatory.  
For installation please see use and maintenance instructions booklet.



# DGF

## Overall dimensions and weights

### Models with vertical discharge - 2 poles

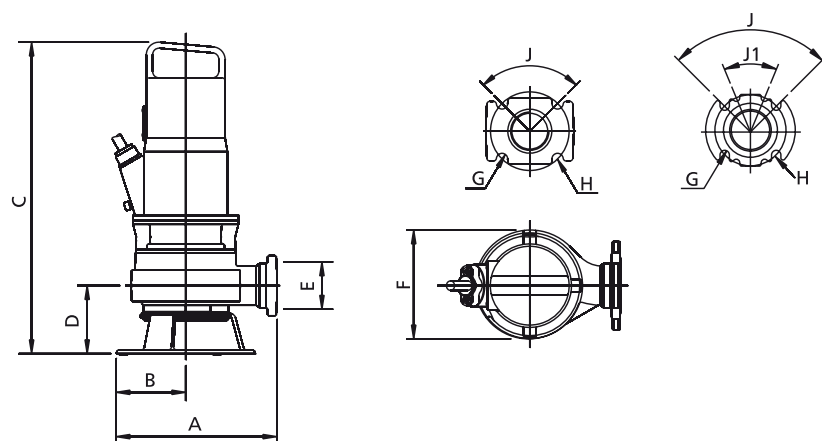


|                           | A   | B   | C   | D   | E     | F   | kg |
|---------------------------|-----|-----|-----|-----|-------|-----|----|
| DGF 75/2/G40V A1CM(T)/50  | 245 | 80  | 480 | 150 | G 1½" | 170 | 27 |
| DGF 100/2/G40V A1CM(T)/50 | 245 | 80  | 480 | 150 | G 1½" | 170 | 28 |
| DGF 150/2/G40V A2CM(T)/50 | 260 | 102 | 445 | 115 | G 1½" | 205 | 30 |
| DGF 200/2/G40V A2CM(T)/50 | 260 | 102 | 445 | 115 | G 1½" | 205 | 31 |
| DGF 150/2/G50V A1CM(T)/50 | 270 | 100 | 495 | 140 | G 2"  | 205 | 32 |
| DGF 200/2/G50V A1CM(T)/50 | 270 | 100 | 495 | 140 | G 2"  | 205 | 33 |
| DGF 150/2/G65V A1CM(T)/50 | 300 | 105 | 475 | 140 | G 2½" | 210 | 31 |
| DGF 200/2/G65V A1CM(T)/50 | 300 | 105 | 475 | 140 | G 2½" | 210 | 33 |

Dimensions in mm

All weights and dimensions are indicative only

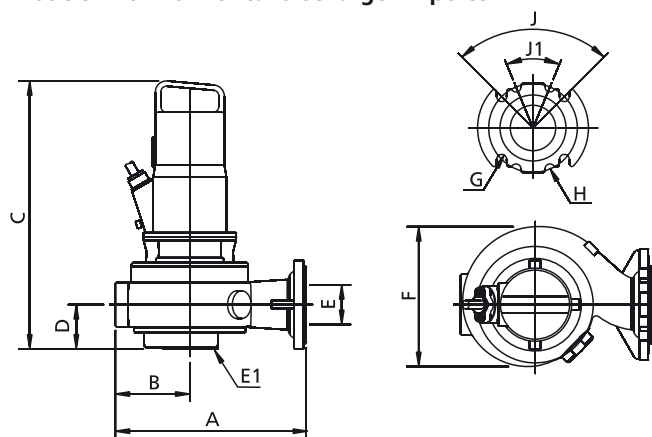
### Models with horizontal discharge - 2 poles



|                           | A   | B   | C   | D   | E            | F   | G  | H   | J   | J1  | kg |
|---------------------------|-----|-----|-----|-----|--------------|-----|----|-----|-----|-----|----|
| DGF 150/2/G40H A1CM(T)/50 | 260 | 100 | 480 | 102 | G 1½" - DN40 | 205 | 14 | 90  | 90° | -   | 29 |
| DGF 200/2/G40H A1CM(T)/50 | 260 | 100 | 480 | 102 | G 1½" - DN40 | 205 | 14 | 90  | 90° | -   | 30 |
| DGF 75/2/G50H A1CM(T)/50  | 230 | 90  | 495 | 110 | G 2" - DN50  | 175 | 18 | 125 | 90° | -   | 28 |
| DGF 100/2/G50H A1CM(T)/50 | 230 | 90  | 495 | 110 | G 2" - DN50  | 175 | 18 | 125 | 90° | -   | 29 |
| DGF 150/2/G50H A1CM(T)/50 | 260 | 100 | 480 | 100 | G 2" - DN50  | 205 | 18 | 125 | 90° | -   | 31 |
| DGF 200/2/G50H A1CM(T)/50 | 260 | 100 | 480 | 100 | G 2" - DN50  | 205 | 18 | 125 | 90° | -   | 32 |
| DGF 150/2/65 A1CM(T)/50   | 290 | 105 | 475 | 70  | 65           | 210 | 18 | 145 | 90° | -   | 32 |
| DGF 200/2/65 A1CM(T)/50   | 290 | 105 | 475 | 70  | 65           | 210 | 18 | 145 | 90° | -   | 34 |
| DGF 150/2/80 A1CM(T)/50   | 290 | 105 | 495 | 80  | 80           | 210 | 18 | 160 | 90° | 45° | 33 |
| DGF 200/2/80 A1CM(T)/50   | 290 | 105 | 495 | 80  | 80           | 210 | 18 | 160 | 90° | 45° | 35 |

Dimensions in mm

All weights and dimensions are indicative only

**DGF****Models with horizontal discharge - 4 poles**

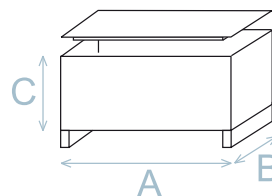
|                      | A   | B   | C   | D  | E  | E1(*) | F   | G  | H   | J   | J1  | kg |
|----------------------|-----|-----|-----|----|----|-------|-----|----|-----|-----|-----|----|
| DGF 100/4/65 A1CT/50 | 320 | 130 | 490 | 80 | 65 | 65    | 250 | 18 | 145 | 90° | -   | 38 |
| DGF 100/4/80 A1CT/50 | 320 | 130 | 440 | 80 | 80 | 80    | 250 | 18 | 160 | 90° | 45° | 41 |

Dimensions in mm

All weights and dimensions are indicative only

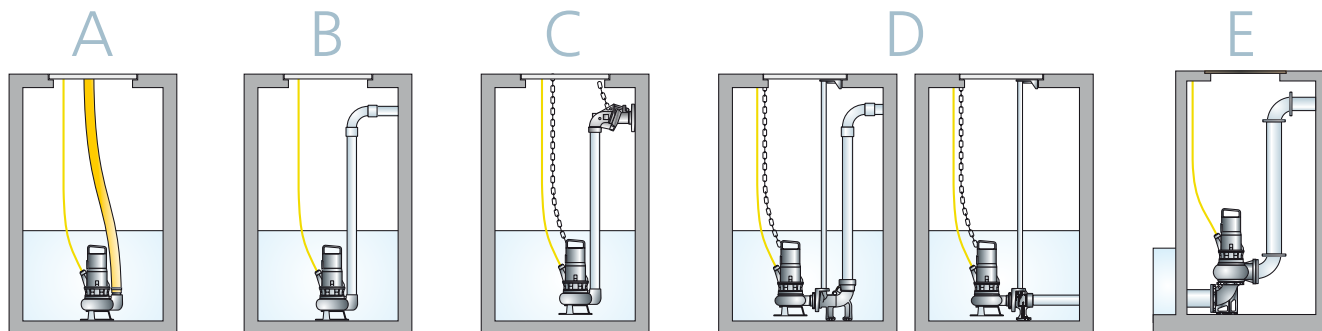
**Packaging dimension**

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DGF 75/2/G40V A1CM(T)/50  | 580 | 310 | 310 |
| DGF 100/2/G40V A1CM(T)/50 | 580 | 310 | 310 |
| DGF 150/2/G40V A2CM(T)/50 | 580 | 310 | 310 |
| DGF 200/2/G40V A2CM(T)/50 | 580 | 310 | 310 |
| DGF 150/2/G40H A1CM(T)/50 | 580 | 310 | 310 |
| DGF 200/2/G40H A1CM(T)/50 | 580 | 310 | 310 |
| DGF 150/2/G50V A1CM(T)/50 | 580 | 310 | 310 |
| DGF 200/2/G50V A1CM(T)/50 | 580 | 310 | 310 |
| DGF 75/2/G50H A1CM(T)/50  | 580 | 310 | 310 |
| DGF 100/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| DGF 150/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| DGF 200/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| DGF 150/2/G65V A1CM(T)/50 | 580 | 310 | 310 |
| DGF 200/2/G65V A1CM(T)/50 | 580 | 310 | 310 |
| DGF 150/2/65 A1CM(T)/50   | 725 | 445 | 415 |
| DGF 200/2/65 A1CM(T)/50   | 725 | 445 | 415 |
| DGF 150/2/80 A1CM(T)/50   | 725 | 445 | 415 |
| DGF 200/2/80 A1CM(T)/50   | 725 | 445 | 415 |
| DGF 100/4/65 A1CT/50      | 725 | 445 | 415 |
| DGF 100/4/80 A1CT/50      | 725 | 445 | 415 |



Dimension in mm

All weights and dimensions are indicative only

**Installations available**

Dry installation available in S3 mode for models with suction flange.  
Contact Customer Service for more information.

DGN

## Set-back vortex impeller

All product images are indicative only



## General characteristics

| Set-back vortex impeller |                                           |
|--------------------------|-------------------------------------------|
| motor power              | 1,1 ÷ 4,1 kW                              |
| poles                    | 2 / 4 / 6                                 |
| discharge                | GAS 2½" vertical<br>DN65÷DN150 horizontal |
| free passage             | max 150 mm                                |
| max flow rate            | 46.4 l/s                                  |
| max head                 | 22.3 m                                    |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in ATEX explosion-proof version.

## Applications

Used with unstrained soiled biological wastewaters and sewage and for civil lifting applications. It is thus ideal for wastewater treatment plants, sewer systems, livestock farms, industry and agriculture. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

## Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Stainless steel - AISI 304                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

DGN



### Cooling system

Dry installation available using the cooling jacket (see details to page 17)



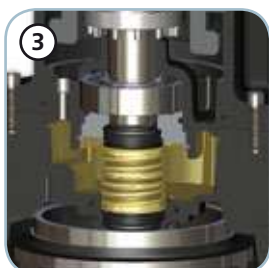
### Cable Gland

Cable gland system to guarantee perfect water-tightness. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



### Mechanical seals

Two silicon carbide (2SiC) mechanical seals in oil sump.



### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime. A threaded flange can be easily removed to replace the mechanical seals.



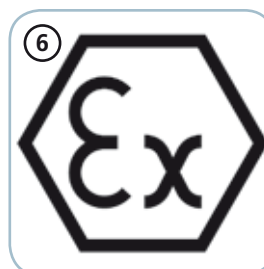
### Drive shaft

Impeller connected to the drive shaft by means of tapered coupling.



### Free passage

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.



### EX

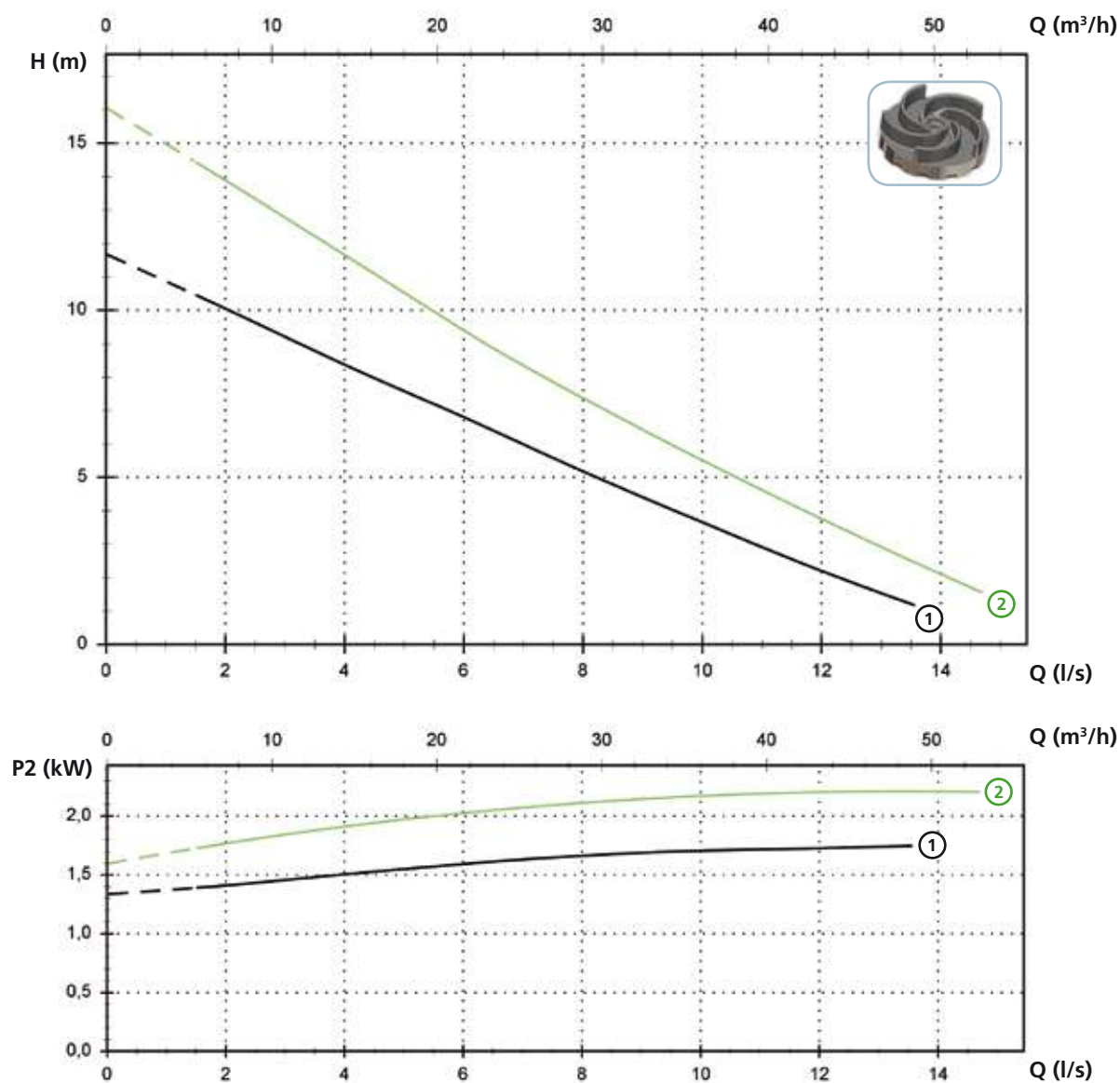
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

# DGN

## Models with vertical GAS 2½" threaded discharge - 2 poles

### Performances

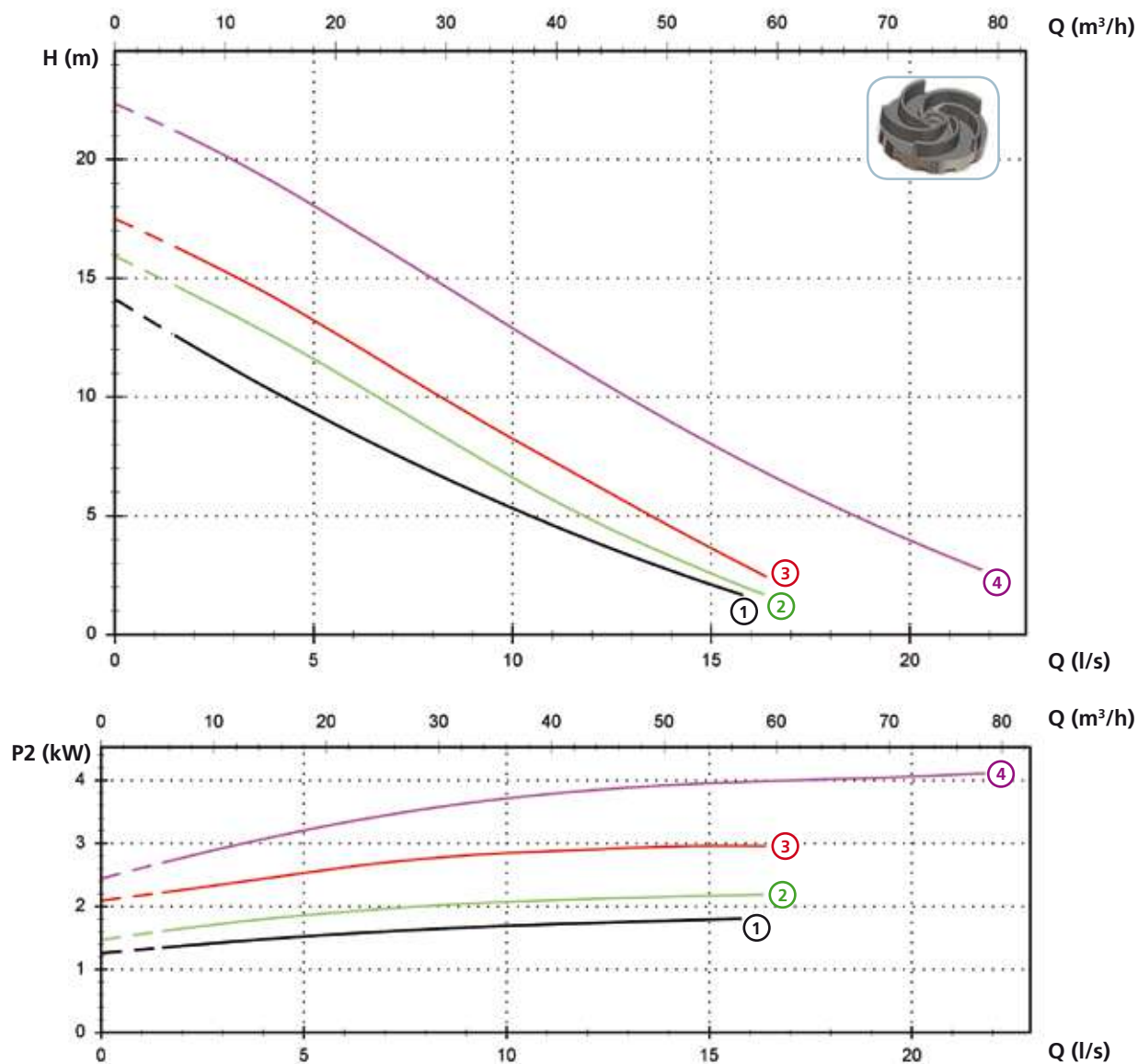


### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|-------|--------------|
| ① DGN 250/2/G65V A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | G 2½" | 65 mm        |
| ① DGN 250/2/G65V A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | G 2½" | 65 mm        |
| ② DGN 300/2/G65V A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | G 2½" | 65 mm        |

## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

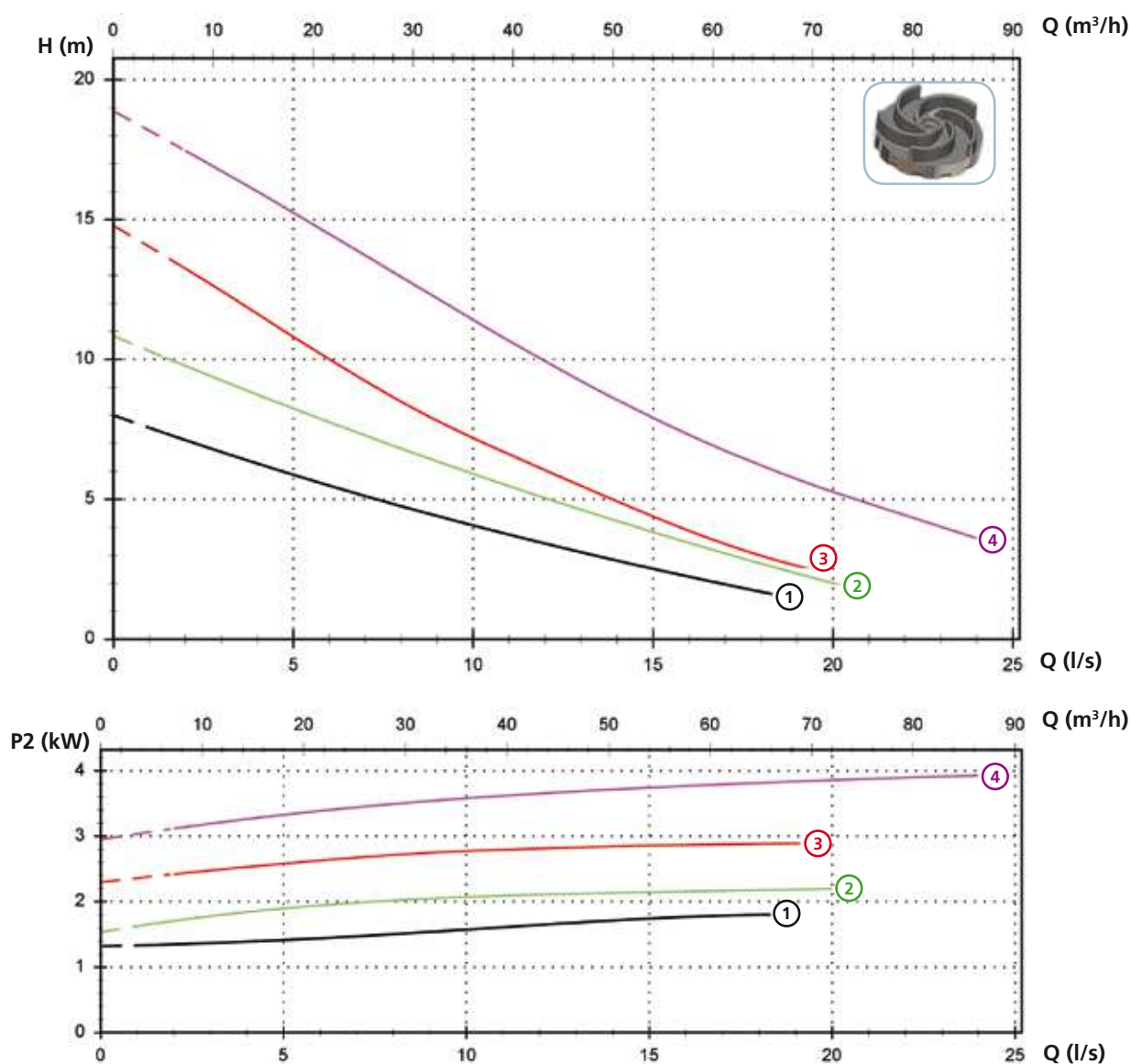
|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① DGN 250/2/65 A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ① DGN 250/2/65 A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ② DGN 300/2/65 A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ③ DGN 400/2/65 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7  | 2900 | Dir   | DN65 PN10-16 | 65 mm        |
| ④ DGN 550/2/65 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7  | 2900 | Dir   | DN65 PN10-16 | 65 mm        |



# DGN

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances

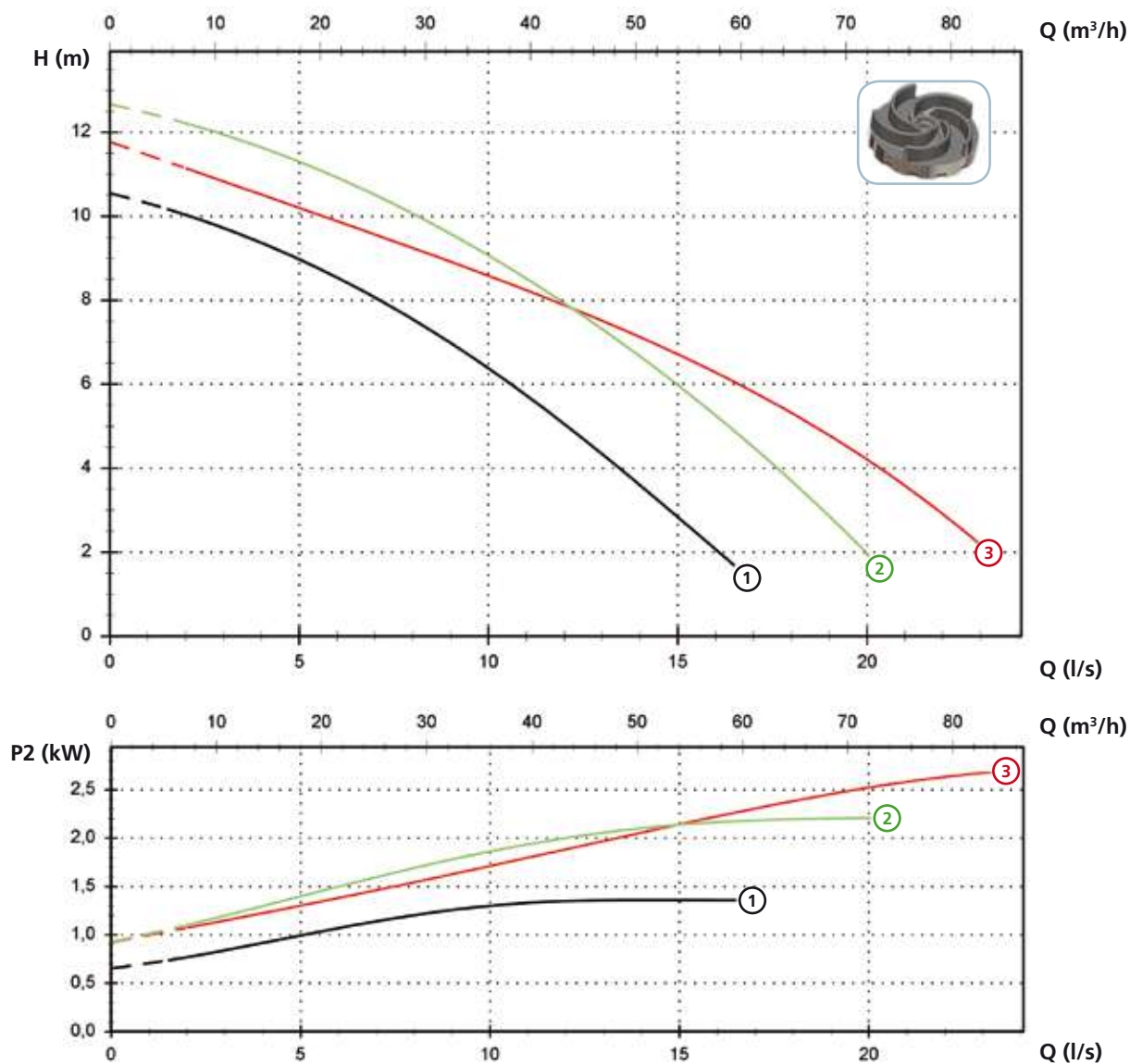


### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① DGN 250/2/80 A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | DN80 PN10-16 | 80 mm        |
| ① DGN 250/2/80 A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | DN80 PN10-16 | 80 mm        |
| ② DGN 300/2/80 A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | DN80 PN10-16 | 80 mm        |
| ③ DGN 400/2/80 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7  | 2900 | Dir   | DN80 PN10-16 | 80 mm        |
| ④ DGN 550/2/80 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7  | 2900 | Dir   | DN80 PN10-16 | 80 mm        |

## Models with horizontal DN65 PN10-16 flanged discharge - 4 poles

### Performances



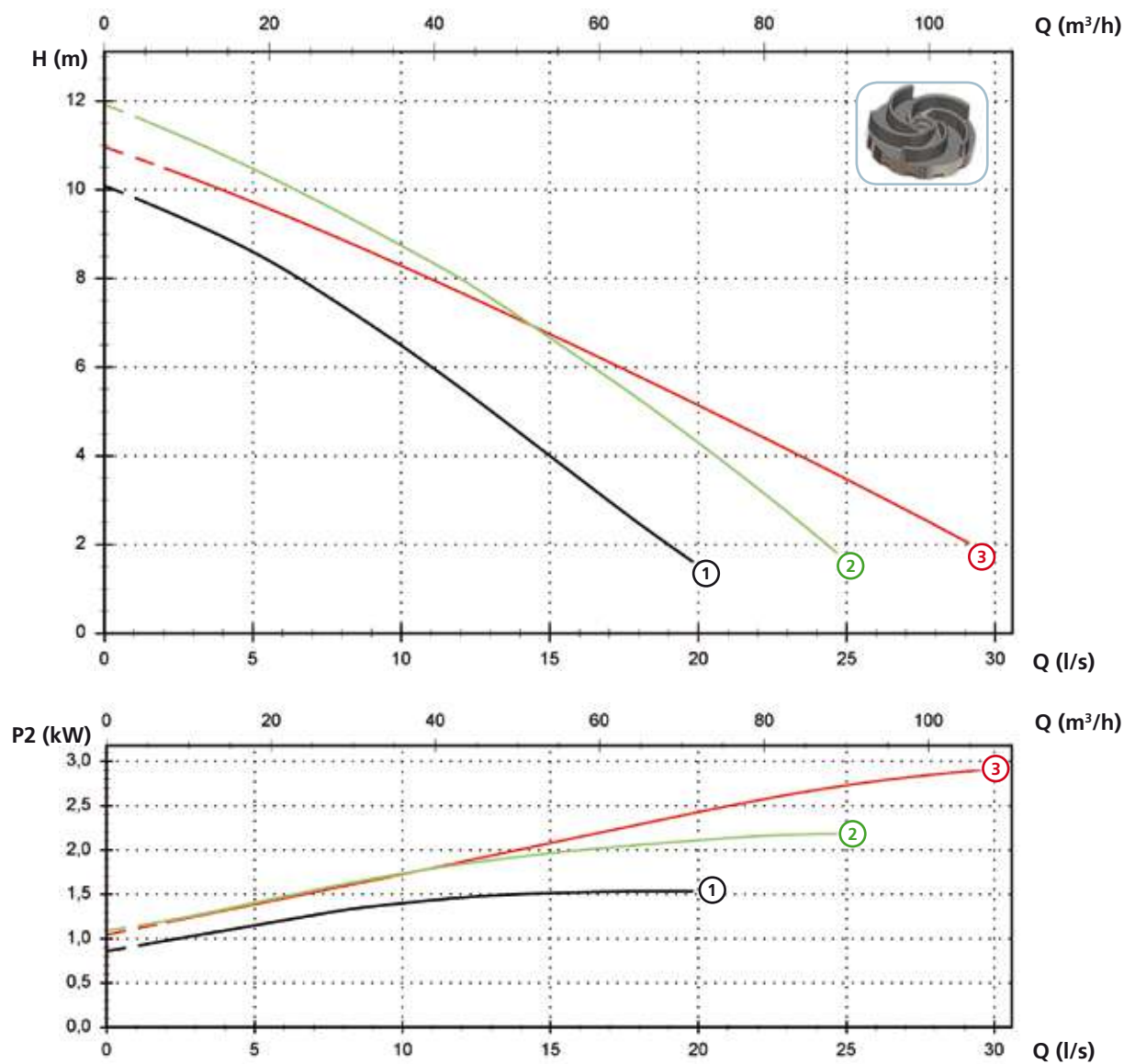
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGN 200/4/65 A1DT/50 | 400 | 3      | 2.0     | 1.5     | 4.1 | 1450 | Dir   | DN65 PN10-16 | 65 mm        |
| ② DGN 300/4/65 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN65 PN10-16 | 65 mm        |
| ③ DGN 400/4/65 A1FT/50 | 400 | 3      | 3.4     | 3       | 6.7 | 1450 | Dir   | DN65 PN10-16 | 65 mm        |

# DGN

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances

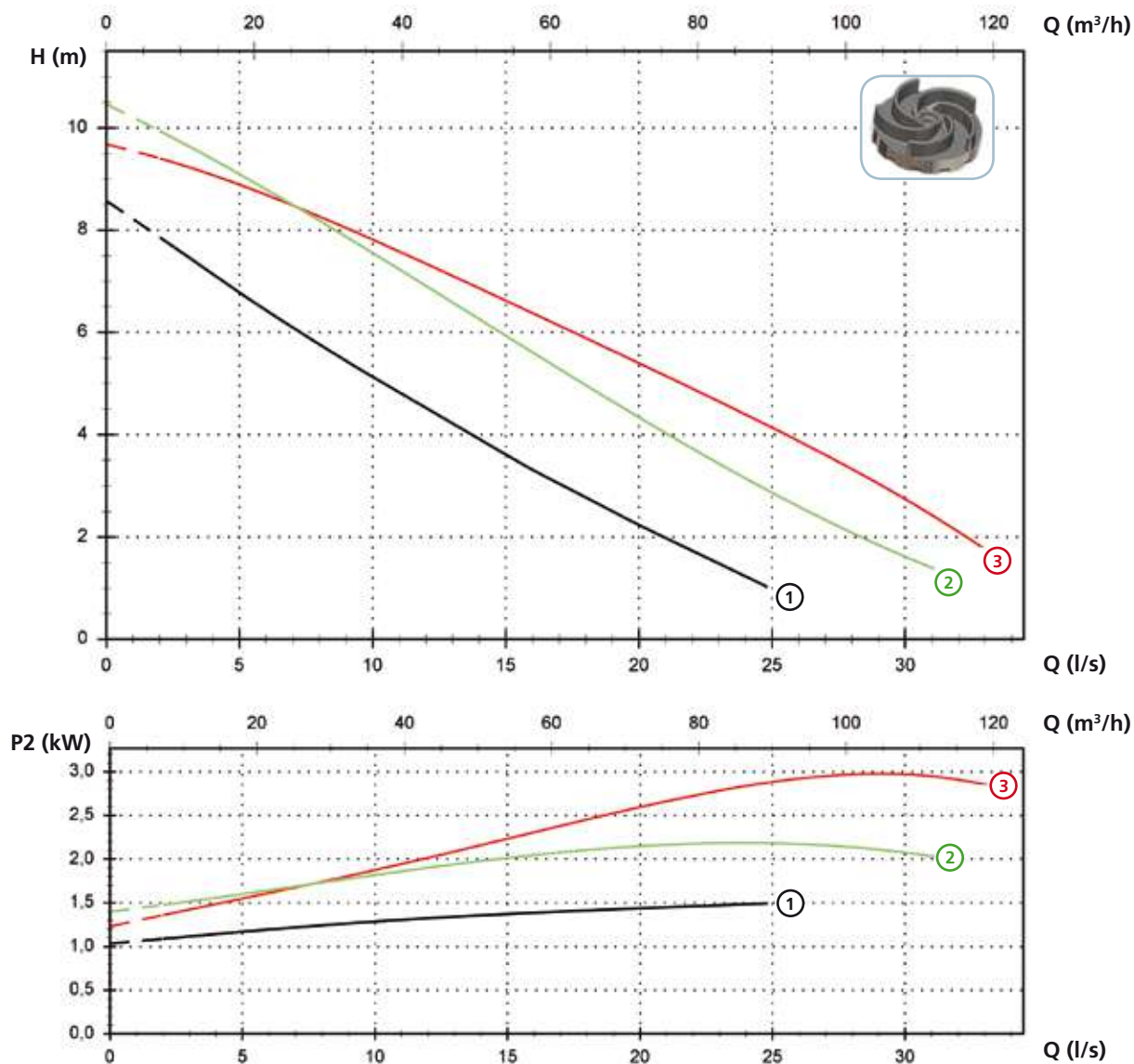


### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGN 200/4/80 A1DT/50 | 400 | 3      | 2.0     | 1.5     | 4.1 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |
| ② DGN 300/4/80 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |
| ③ DGN 400/4/80 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



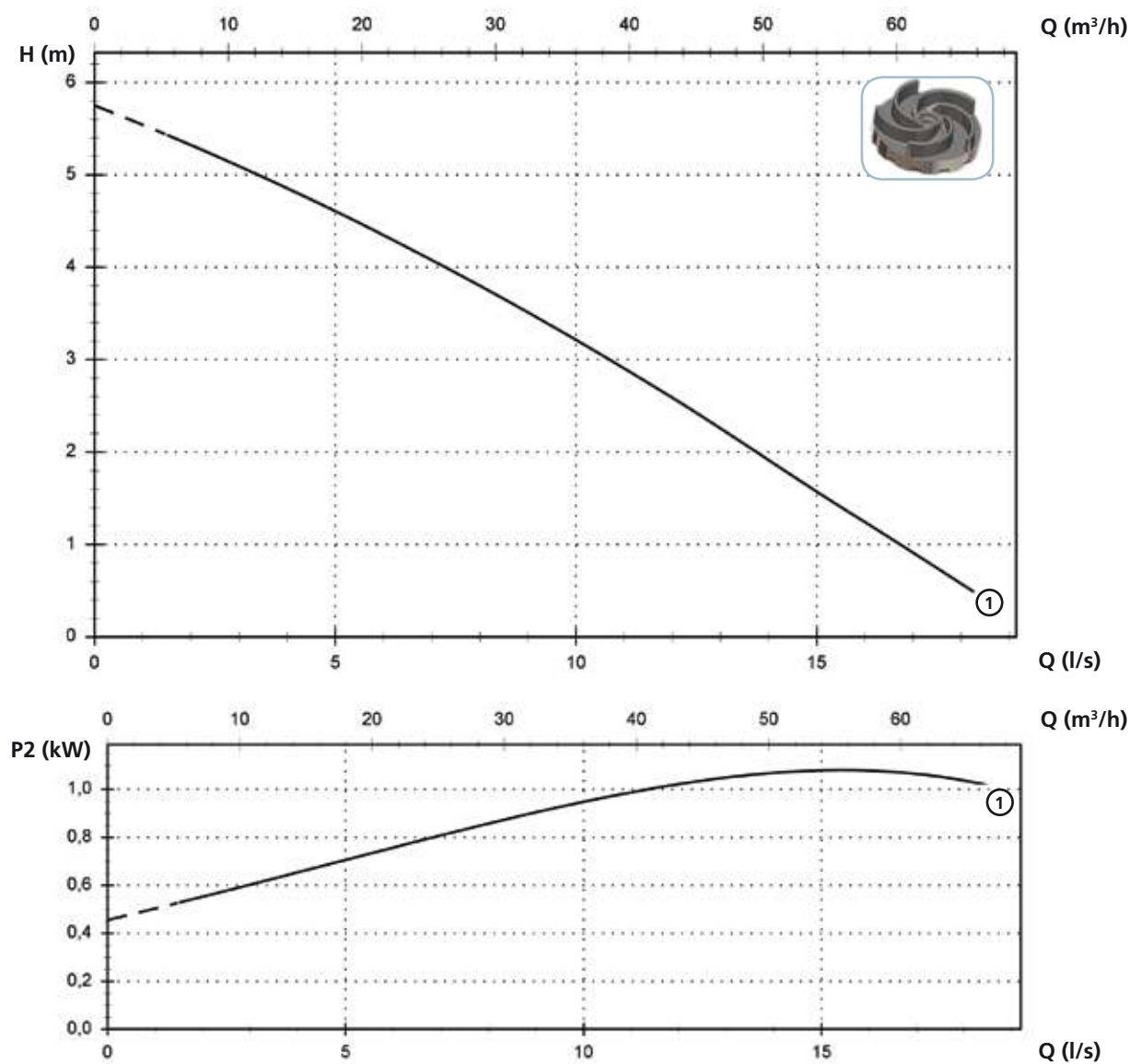
### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① | DGN 200/4/100 A1DT/50 | 400 | 3      | 2.0     | 1.5     | 4.1 | 1450 | Dir   | DN100 PN10-16 | 100 mm       |
| ② | DGN 300/4/100 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN100 PN10-16 | 100 mm       |
| ③ | DGN 400/4/100 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN100 PN10-16 | 100 mm       |

# DGN

## Models with horizontal DN65 PN10-16 flanged discharge - 6 poles

### Performances



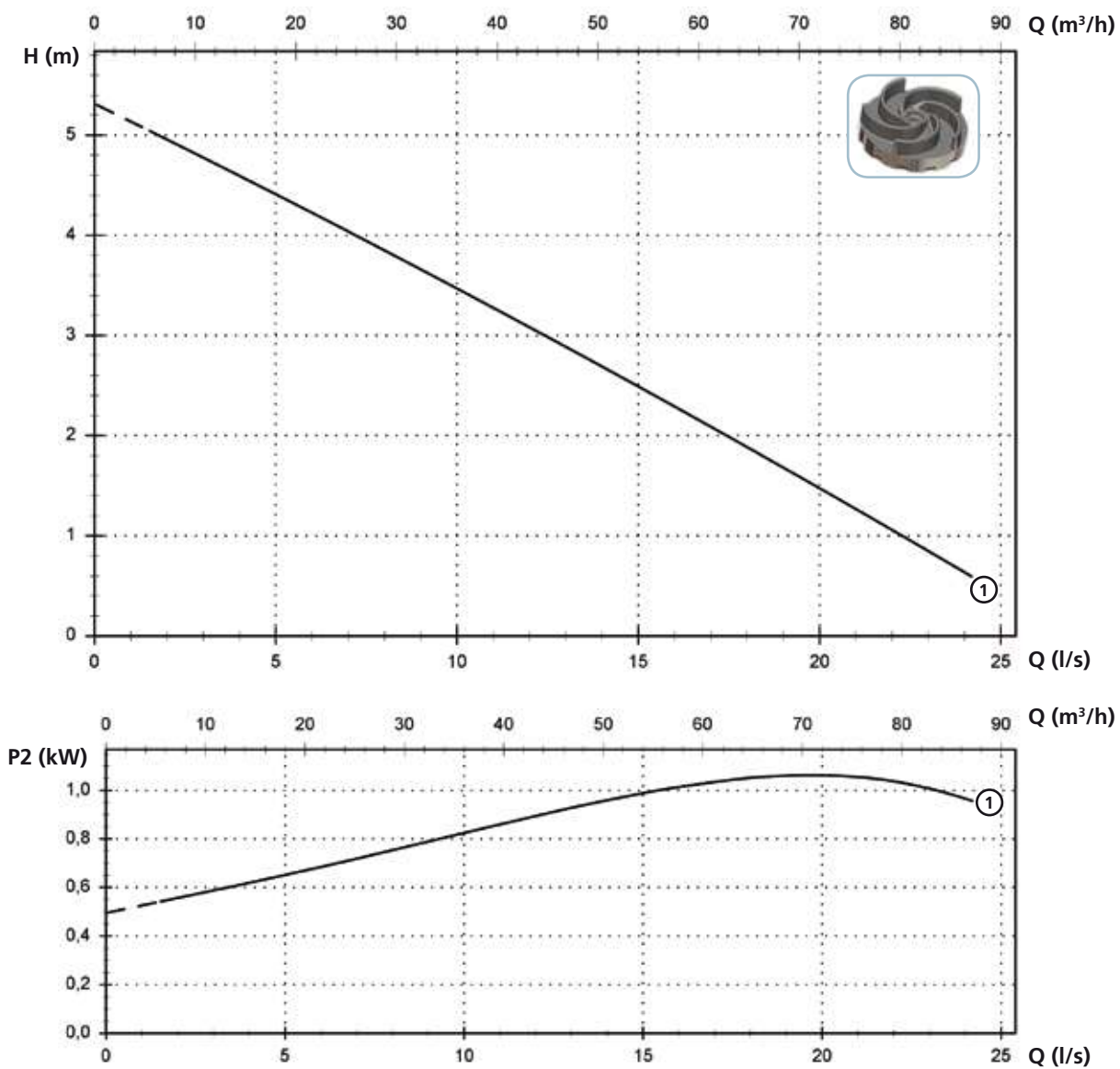
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|-----|-------|--------------|--------------|
| ① DGN 150/6/65 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 3.7 | 960 | Dir   | DN65 PN10-16 | 65 mm        |



## Models with horizontal DN80 PN10-16 flanged discharge - 6 poles

### Performances



### Technical data

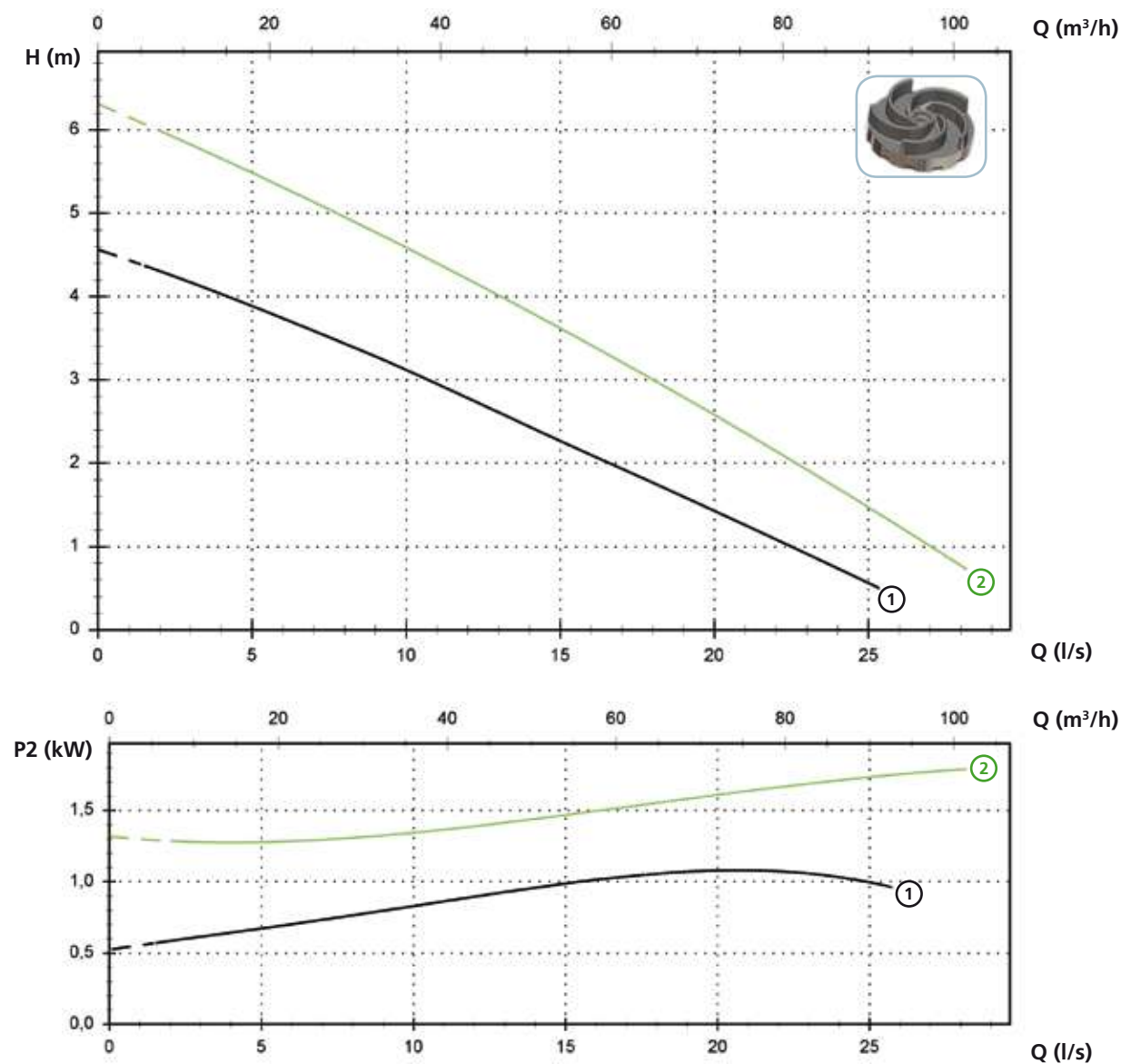
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|-----|-------|--------------|--------------|
| ① DGN 150/6/80 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 4.3 | 960 | Dir   | DN80 PN10-16 | 80 mm        |



# DGN

## Models with horizontal DN100 PN10-16 flanged discharge - 6 poles

### Performances

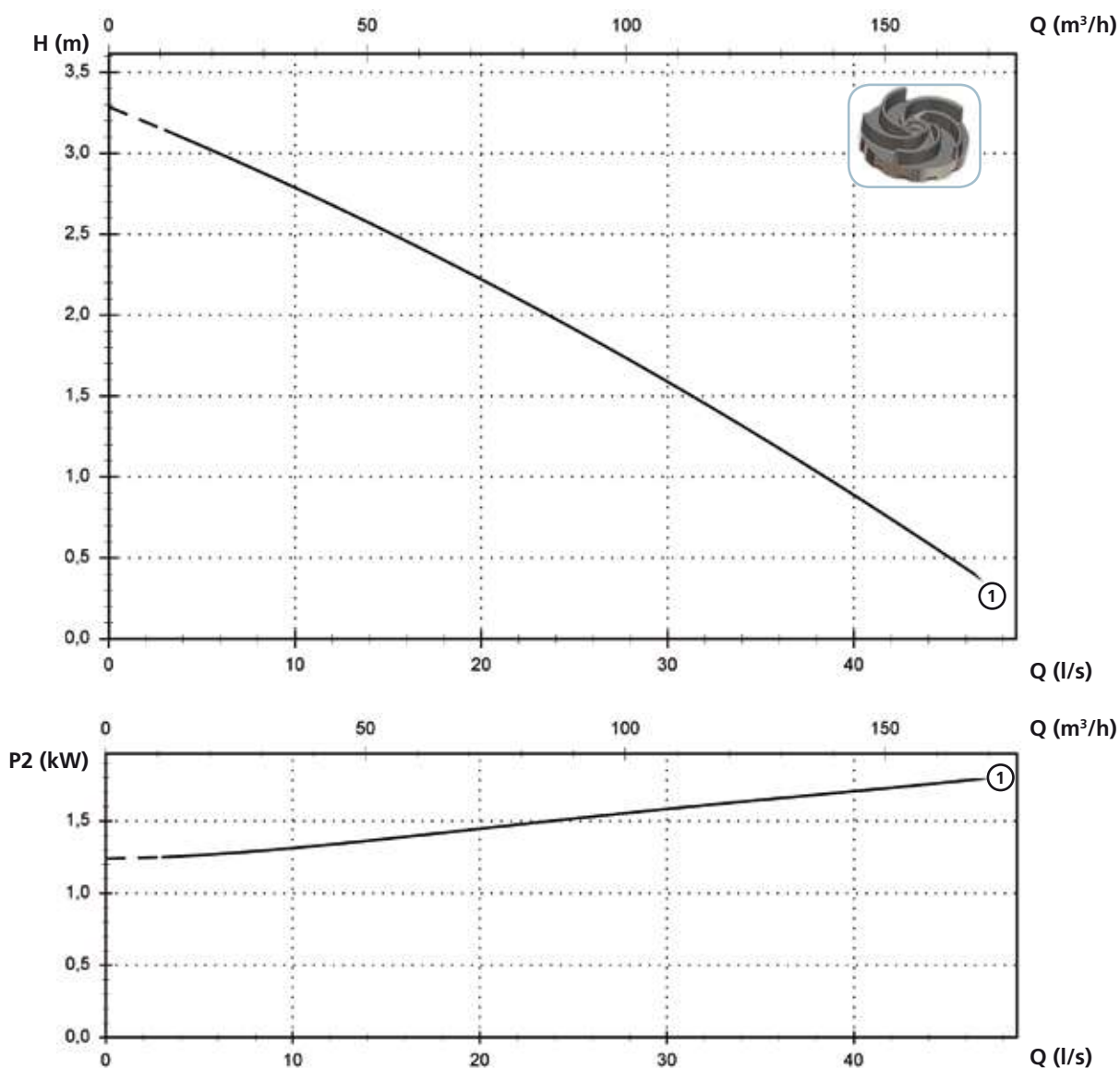


### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|-----|-------|---------------|--------------|
| ① DGN 150/6/100 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 3.7 | 960 | Dir   | DN100 PN10-16 | 100 mm       |
| ② DGN 250/6/100 A1FT/50 | 400 | 3      | 2.6     | 1.8     | 5.7 | 960 | Dir   | DN100 PN10-16 | 100 mm       |

## Models with horizontal DN150 PN10-16 flanged discharge - 6 poles

### Performances



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|-----|-------|---------------|--------------|
| ① DGN 250/6/150 A1FT/50 | 400 | 3      | 2.6     | 1.8     | 5.7 | 960 | Dir   | DN150 PN10-16 | 150 mm       |

## DGN

## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGN 250/2/G65V A1DM/50 |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/2/G65V A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 300/2/G65V A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/2/65 A1DM/50   |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/2/65 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 300/2/65 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 400/2/65 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 550/2/65 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/2/80 A1DM/50   |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/2/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 300/2/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 400/2/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 550/2/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 200/4/65 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 300/4/65 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 400/4/65 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 200/4/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 300/4/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 400/4/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 200/4/100 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 300/4/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 400/4/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 150/6/65 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 150/6/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 150/6/100 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/6/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DGN 250/6/150 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.

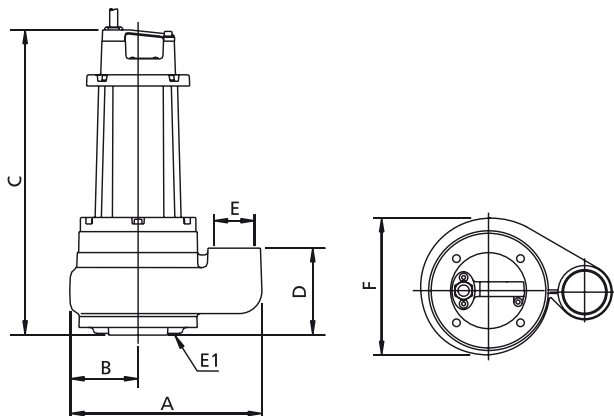
Start capacitor inside the pump. Circuit breaker supplied but not connected to the pump cable.

The use of an electrical panel as circuit breaker housing is mandatory.

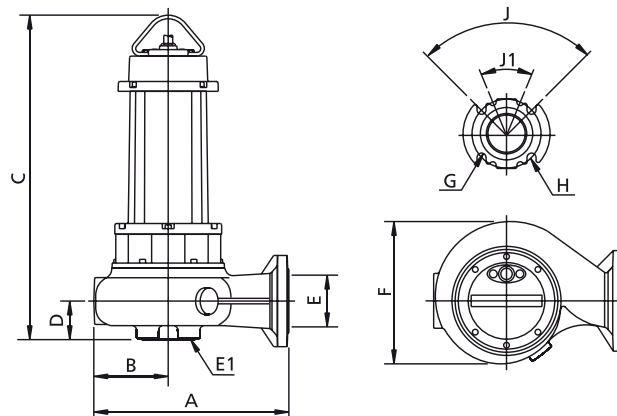
For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights

### Models with vertical discharge



### Models with horizontal discharge



|                           | A   | B   | C   | D   | E     | E1 (*) | F   | G  | H   | J   | J1  | kg  |
|---------------------------|-----|-----|-----|-----|-------|--------|-----|----|-----|-----|-----|-----|
| DGN 250/2/G65V A1DM(T)/50 | 310 | 110 | 560 | 135 | G 2½" | 65     | 220 | -  | -   | -   | -   | 49  |
| DGN 300/2/G65V A1DT/50    | 310 | 110 | 560 | 135 | G 2½" | 65     | 220 | -  | -   | -   | -   | 51  |
| DGN 250/2/65 A1DM(T)/50   | 300 | 120 | 560 | 60  | 65    | 65     | 220 | 18 | 145 | 90° | -   | 51  |
| DGN 300/2/65 A1DT/50      | 320 | 130 | 580 | 80  | 65    | 65     | 250 | 18 | 145 | 90° | -   | 53  |
| DGN 400/2/65 A1FT/50      | 320 | 130 | 720 | 80  | 65    | 65     | 250 | 18 | 145 | 90° | -   | 74  |
| DGN 550/2/65 A1FT/50      | 320 | 130 | 720 | 80  | 65    | 65     | 250 | 18 | 145 | 90° | -   | 78  |
| DGN 250/2/80 A1DM(T)/50   | 310 | 120 | 585 | 80  | 80    | 80     | 230 | 18 | 160 | 90° | 45° | 53  |
| DGN 300/2/80 A1DT/50      | 315 | 125 | 585 | 80  | 80    | 80     | 245 | 18 | 160 | 90° | 45° | 55  |
| DGN 400/2/80 A1FT/50      | 315 | 125 | 725 | 80  | 80    | 80     | 245 | 18 | 160 | 90° | 45° | 75  |
| DGN 550/2/80 A1FT/50      | 315 | 125 | 725 | 80  | 80    | 80     | 245 | 18 | 160 | 90° | 45° | 79  |
| DGN 200/4/65 A1DT/50      | 390 | 155 | 595 | 70  | 65    | 65     | 305 | 18 | 145 | 90° | -   | 63  |
| DGN 300/4/65 A1FT/50      | 390 | 155 | 700 | 70  | 65    | 65     | 305 | 18 | 145 | 90° | -   | 78  |
| DGN 400/4/65 A1FT/50      | 390 | 155 | 700 | 70  | 65    | 65     | 305 | 18 | 145 | 90° | -   | 82  |
| DGN 200/4/80 A1DT/50      | 385 | 155 | 610 | 80  | 80    | 80     | 300 | 18 | 160 | 90° | 45° | 64  |
| DGN 300/4/80 A1FT/50      | 385 | 155 | 720 | 80  | 80    | 80     | 300 | 18 | 160 | 90° | 45° | 79  |
| DGN 400/4/80 A1FT/50      | 385 | 155 | 720 | 80  | 80    | 80     | 300 | 18 | 160 | 90° | 45° | 83  |
| DGN 200/4/100 A1DT/50     | 410 | 160 | 635 | 90  | 100   | 100    | 305 | 18 | 180 | 45° | -   | 66  |
| DGN 300/4/100 A1FT/50     | 410 | 160 | 740 | 90  | 100   | 100    | 305 | 18 | 180 | 45° | -   | 81  |
| DGN 400/4/100 A1FT/50     | 410 | 160 | 740 | 90  | 100   | 100    | 305 | 18 | 180 | 45° | -   | 85  |
| DGN 150/6/65 A1DT/50      | 390 | 155 | 595 | 70  | 65    | 65     | 305 | 18 | 145 | 90° | -   | 61  |
| DGN 150/6/80 A1DT/50      | 385 | 155 | 610 | 80  | 80    | 80     | 300 | 18 | 160 | 90° | 45° | 62  |
| DGN 150/6/100 A1DT/50     | 410 | 160 | 635 | 90  | 100   | 100    | 305 | 18 | 180 | 45° | -   | 66  |
| DGN 250/6/100 A1FT/50     | 495 | 190 | 770 | 90  | 100   | 100    | 375 | 18 | 180 | 45° | -   | 111 |
| DGN 250/6/150 A1FT/50     | 550 | 215 | 825 | 120 | 150   | 150    | 400 | 24 | 240 | 45° | -   | 114 |

Dimensions in mm

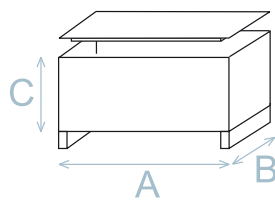
All weights and dimensions are indicative only

(\*) DN of the suction flange - PN6

# DGN

## Packaging dimension

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DGN 250/2/G65V A1DM(T)/50 | 725 | 555 | 415 |
| DGN 300/2/G65V A1DT/50    | 725 | 555 | 415 |
| DGN 250/2/65 A1DM(T)/50   | 725 | 555 | 415 |
| DGN 300/2/65 A1DT/50      | 725 | 555 | 415 |
| DGN 400/2/65 A1FT/50      | 915 | 515 | 555 |
| DGN 550/2/65 A1FT/50      | 915 | 515 | 555 |
| DGN 250/2/80 A1DM(T)/50   | 725 | 445 | 415 |
| DGN 300/2/80 A1DT/50      | 725 | 445 | 415 |
| DGN 400/2/80 A1FT/50      | 915 | 515 | 555 |
| DGN 550/2/80 A1FT/50      | 915 | 515 | 555 |
| DGN 200/4/65 A1DT/50      | 725 | 445 | 415 |
| DGN 300/4/65 A1FT/50      | 915 | 515 | 555 |
| DGN 400/4/65 A1FT/50      | 915 | 515 | 555 |
| DGN 200/4/80 A1DT/50      | 725 | 445 | 415 |
| DGN 300/4/80 A1FT/50      | 915 | 515 | 555 |
| DGN 400/4/80 A1FT/50      | 915 | 515 | 555 |
| DGN 200/4/100 A1DT/50     | 725 | 445 | 415 |
| DGN 300/4/100 A1FT/50     | 915 | 515 | 555 |
| DGN 400/4/100 A1FT/50     | 915 | 515 | 555 |
| DGN 150/6/65 A1DT/50      | 915 | 515 | 555 |
| DGN 150/6/80 A1DT/50      | 915 | 515 | 555 |
| DGN 150/6/100 A1DT/50     | 915 | 515 | 555 |
| DGN 250/6/100 A1FT/50     | 915 | 515 | 555 |
| DGN 250/6/150 A1FT/50     | 915 | 515 | 555 |

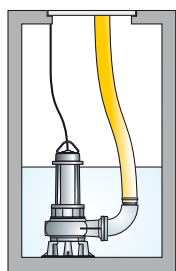


Dimension in mm

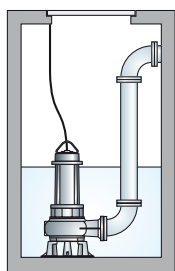
All weights and dimensions are  
indicative only

## Installations available

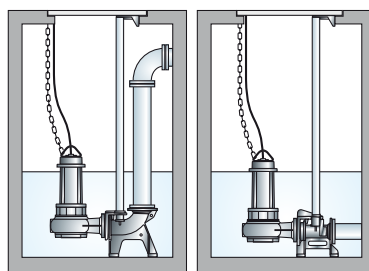
A



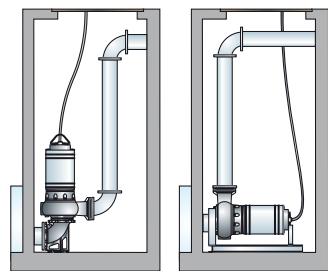
B



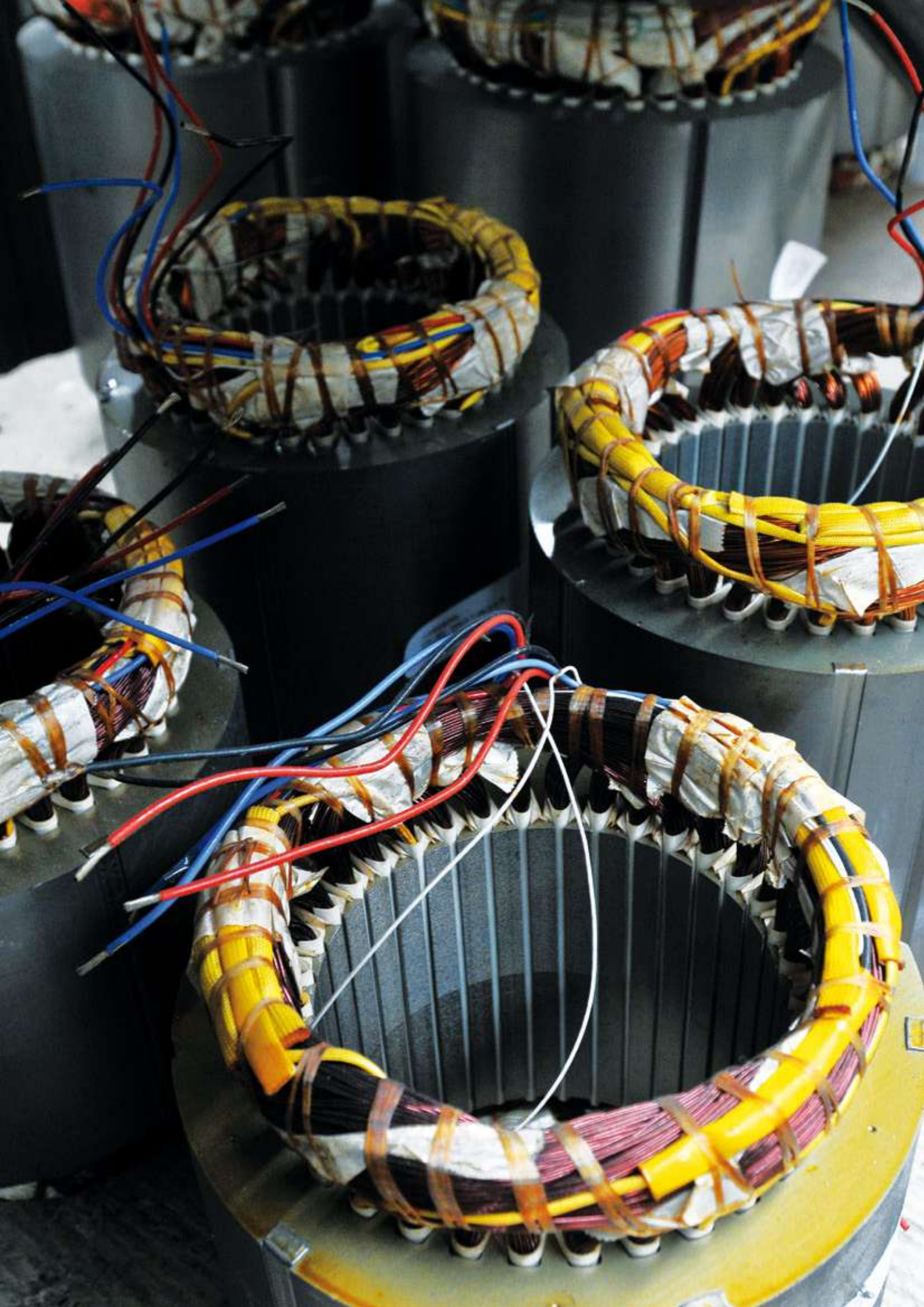
D



E









DGP

## Set-back vortex impeller



All product images are indicative only

## General characteristics

| Set-back vortex impeller |               |
|--------------------------|---------------|
| motor power              | 4,6 ÷ 16,4 kW |
| poles                    | 2 / 4         |
| discharge                | DN80 ÷ DN125  |
| free passage             | max 102 mm    |
| max flow rate            | 101.4 l/s     |
| max head                 | 17.9 m        |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

## Applications

Used with unstrained soiled biological wastewaters and sewage and for civil lifting applications. It is thus ideal for heavy-duty applications in wastewater treatment plants, sewer systems, livestock farms, industry and agriculture.

## Construction materials

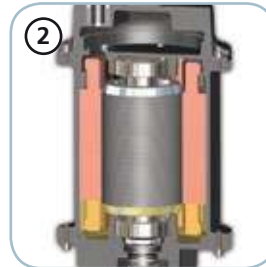
|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Cast iron EN-GJL-250                                                                            |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Cooling jacket                   | Carbon steel or AISI 304 stainless steel                                                        |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                          |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

**DGP****Structure**

Constructed in GJL-250 cast iron.

**Motor**

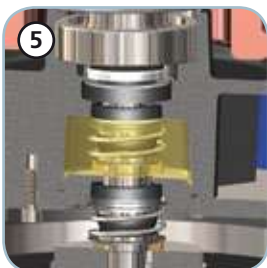
Oil-bath motor with thermal protections.

**Bearings**

Shielded ball bearings with lifetime autolubrication.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

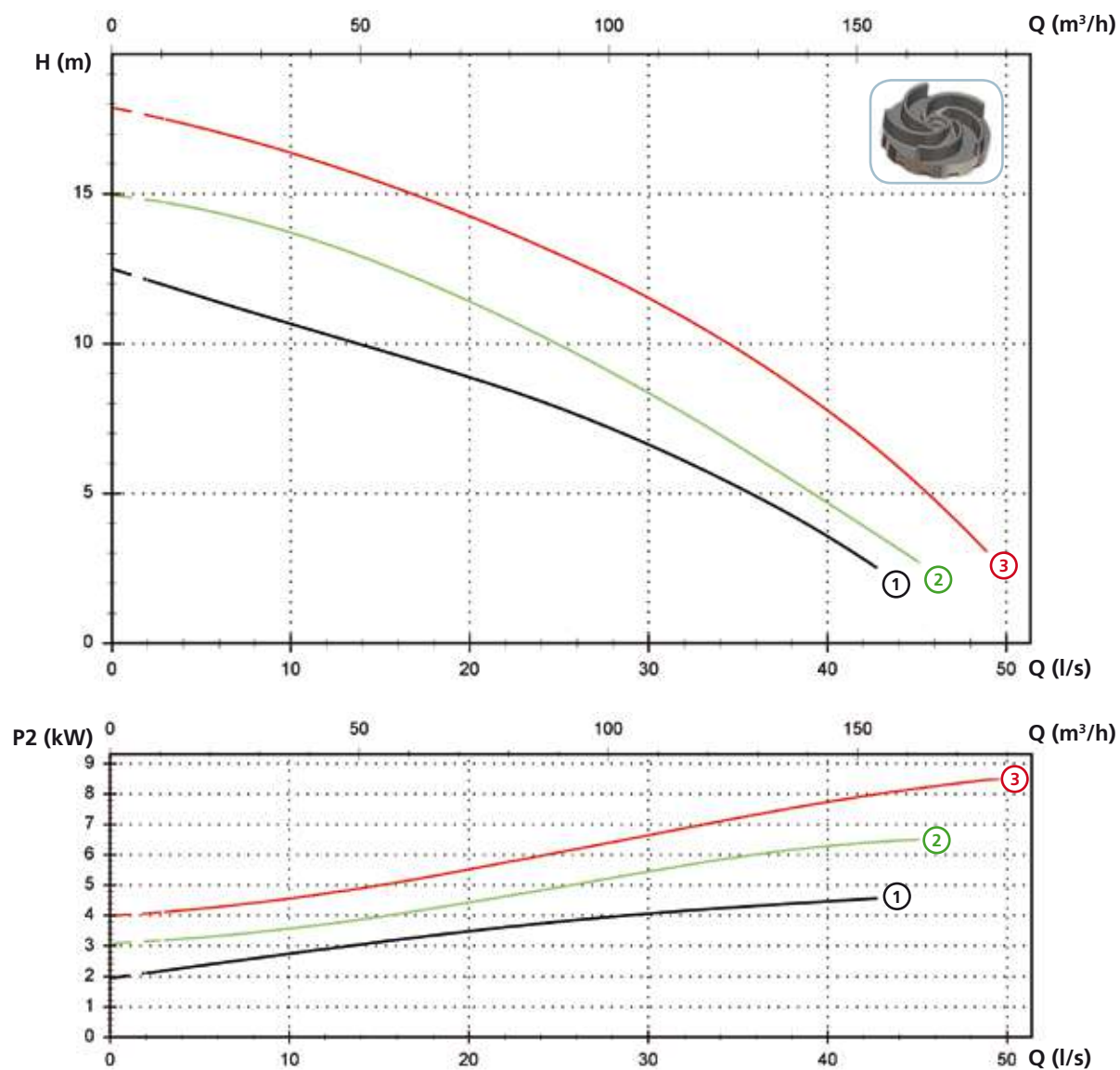
**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DGP

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances

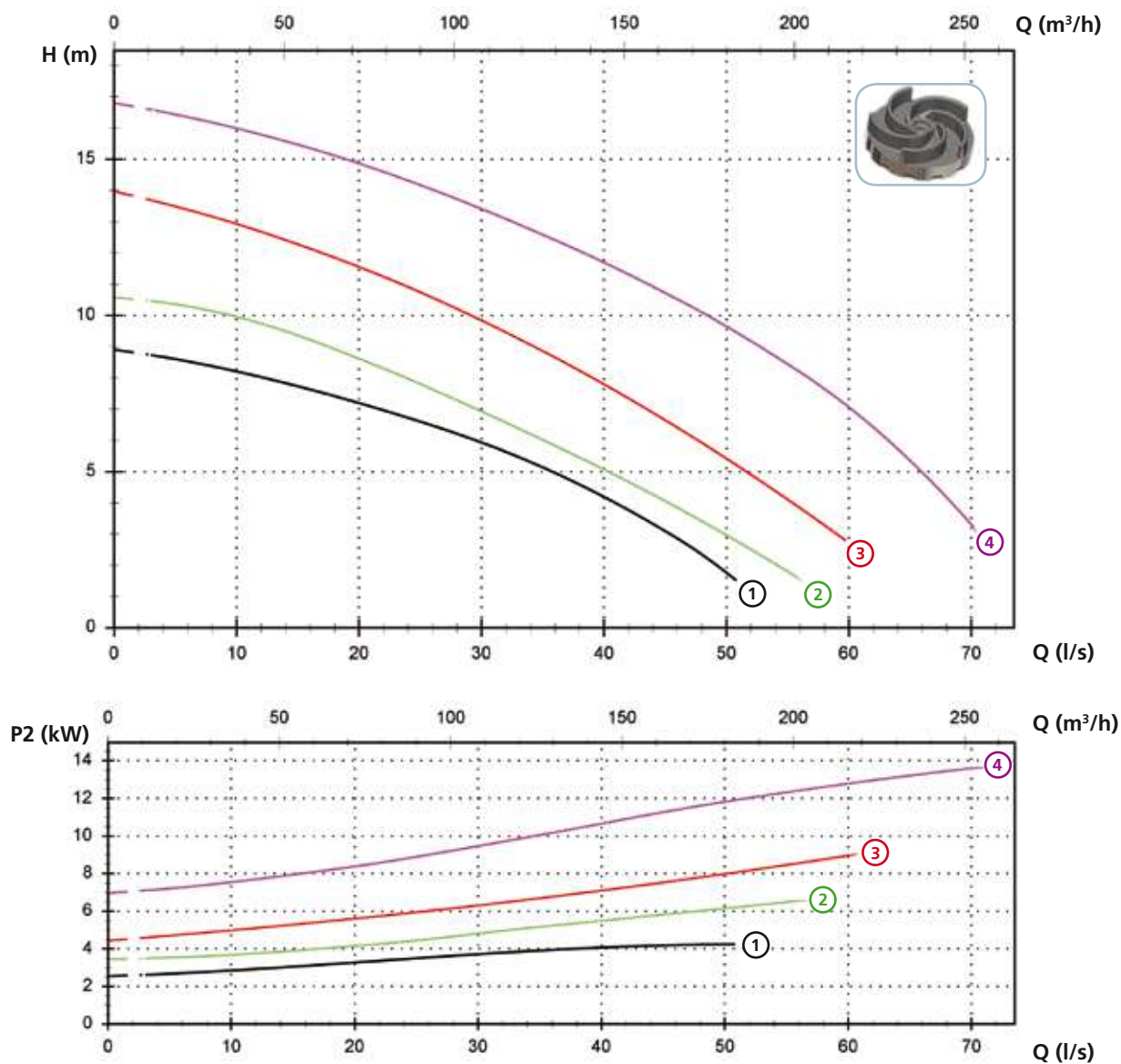


### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|---|-----------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① | DGP 550/4/80 A0GT/50  | 400 | 3      | 5.9     | 4.6     | 10.1 | 1450 | Dir   | DN80 PN10-16 | 60 mm        |
| ② | DGP 750/4/80 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | YΔ    | DN80 PN10-16 | 60 mm        |
| ③ | DGP 1000/4/80 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | YΔ    | DN80 PN10-16 | 60 mm        |

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



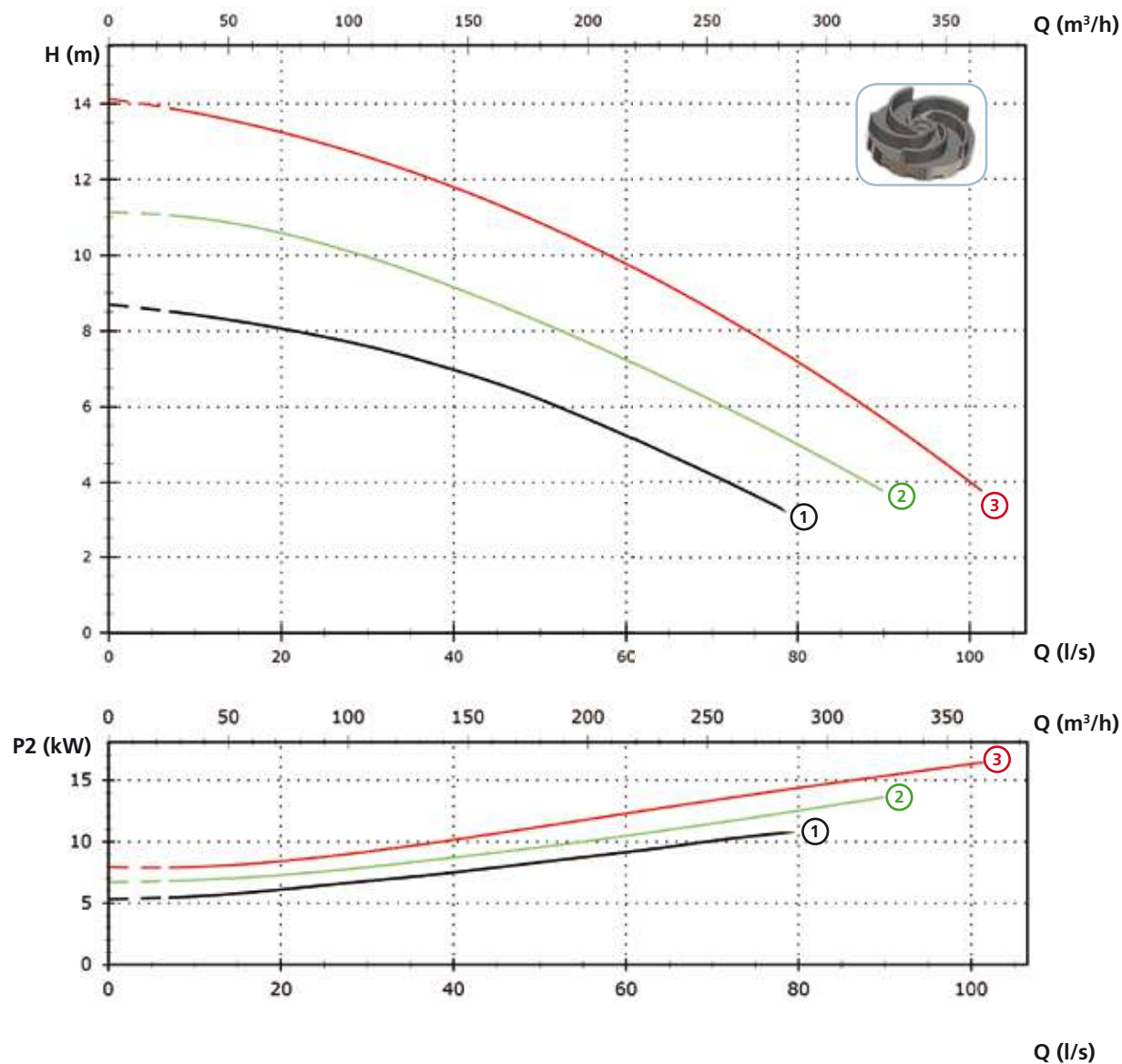
### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | DGP 550/4/100 A0GT/50  | 400 | 3      | 5.9     | 4.6     | 10.1 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |
| ② | DGP 750/4/100 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | YΔ    | DN100 PN10-16 | 85 mm        |
| ③ | DGP 1000/4/100 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | YΔ    | DN100 PN10-16 | 85 mm        |
| ④ | DGP 1500/4/100 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | YΔ    | DN100 PN10-16 | 80 mm        |

# DGP

## Models with horizontal DN125 PN10 flanged discharge - 4 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① DGP 1000/4/125 A0HT/50 | 400 | 3      | 11.5    | 8.7     | 20   | 1450 | YΔ    | DN125 PN10 | 98 mm        |
| ② DGP 1500/4/125 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | YΔ    | DN125 PN10 | 102 mm       |
| ③ DGP 2000/4/125 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | YΔ    | DN125 PN10 | 102 mm       |

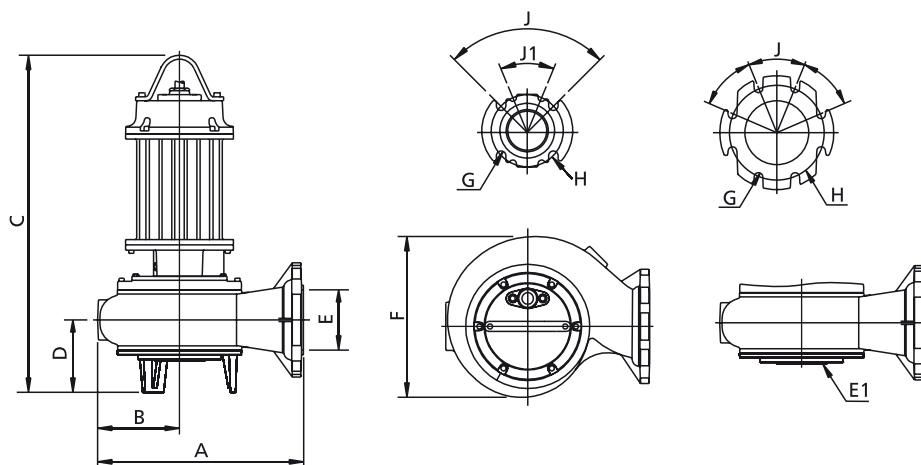
## Versions available

(Key to versions on page 16)

Key to versions on page 107

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGP 550/4/80 A0GT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 750/4/80 A0HT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 1000/4/80 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 550/4/100 A0GT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 750/4/100 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 1000/4/100 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 1500/4/100 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 1000/4/125 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 1500/4/125 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DGP 2000/4/125 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |

## Overall dimensions and weights



|                        | A   | B   | C    | D   | E   | E1 (*)     | F   | G  | H   | J   | J1  | kg  |
|------------------------|-----|-----|------|-----|-----|------------|-----|----|-----|-----|-----|-----|
| DGP 550/4/80 A0GT/50   | 390 | 150 | 725  | 150 | 80  | -          | 290 | 18 | 160 | 90° | 45° | 81  |
| DGP 750/4/80 A0HT/50   | 445 | 175 | 810  | 155 | 80  | DN80 PN6   | 340 | 18 | 160 | 90° | 45° | 122 |
| DGP 1000/4/80 A0HT/50  | 445 | 175 | 810  | 155 | 80  | DN80 PN6   | 340 | 18 | 160 | 90° | 45° | 130 |
| DGP 550/4/100 A0GT/50  | 415 | 160 | 740  | 155 | 100 | -          | 310 | 18 | 180 | 45° | -   | 84  |
| DGP 750/4/100 A0HT/50  | 430 | 165 | 820  | 160 | 100 | DN100 PN6  | 335 | 18 | 180 | 45° | -   | 115 |
| DGP 1000/4/100 A0HT/50 | 430 | 165 | 820  | 160 | 100 | DN100 PN6  | 335 | 18 | 180 | 45° | -   | 125 |
| DGP 1500/4/100 A0IT/50 | 430 | 165 | 970  | 160 | 100 | DN100 PN6  | 335 | 18 | 180 | 45° | -   | 165 |
| DGP 1000/4/125 A0HT/50 | 580 | 280 | 890  | 200 | 125 | DN150 PN10 | 555 | 18 | 210 | 90° | -   | 180 |
| DGP 1500/4/125 A0IT/50 | 580 | 280 | 1010 | 200 | 125 | DN150 PN10 | 555 | 18 | 210 | 90° | -   | 199 |
| DGP 2000/4/125 A0IT/50 | 580 | 280 | 1010 | 200 | 125 | DN150 PN10 | 555 | 18 | 210 | 90° | -   | 216 |

Dimensions in mm

All weights and dimensions are indicative only

(\*) Suction flange available upon request



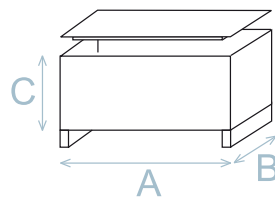
# DGP

## Packaging dimension

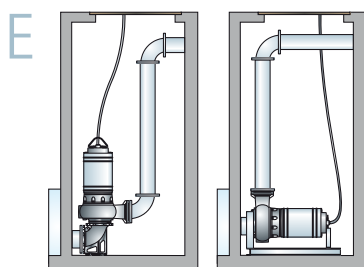
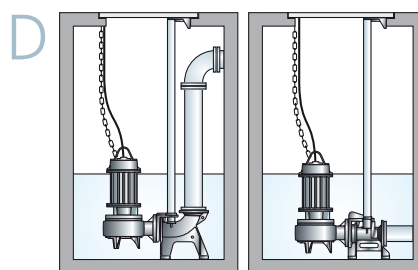
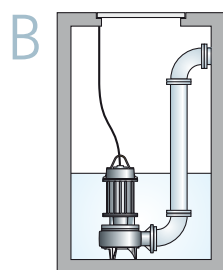
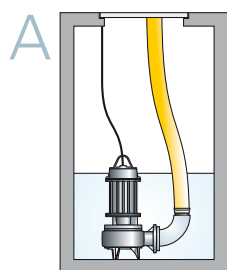
|                        | A    | B   | C   |
|------------------------|------|-----|-----|
| DGP 550/4/80 A0GT/50   | 725  | 445 | 415 |
| DGP 750/4/80 A0HT/50   | 915  | 515 | 555 |
| DGP 1000/4/80 A0HT/50  | 915  | 515 | 555 |
| DGP 550/4/100 A0GT/50  | 725  | 445 | 415 |
| DGP 750/4/100 A0HT/50  | 915  | 515 | 555 |
| DGP 1000/4/100 A0HT/50 | 915  | 515 | 555 |
| DGP 1500/4/100 A0IT/50 | 915  | 515 | 555 |
| DGP 1000/4/125 A0HT/50 | 915  | 515 | 555 |
| DGP 1500/4/125 A0IT/50 | 1165 | 720 | 685 |
| DGP 2000/4/125 A0IT/50 | 1165 | 720 | 685 |

Dimension in mm

All weights and dimensions are  
indicative only



## Installations available





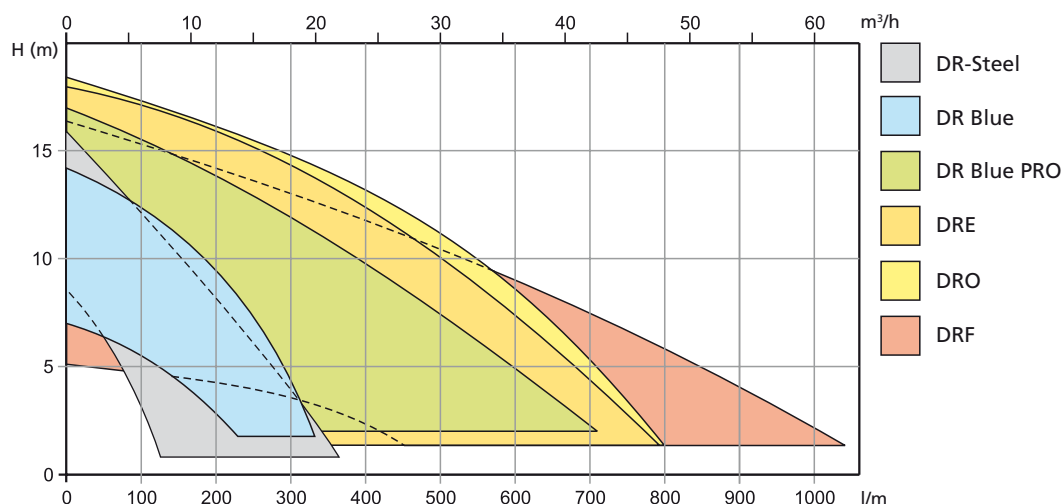
# 1.2 DR (DRENO)

## Pumps with multi-channel open impeller

The **DRENO (DR)** family consists of electric pumps with multi-channel open impeller. Depending on which of the various motors available is fitted, this family is used for the treatment of mainly clean or slightly soiled water or can be used for lifting sewage, in wastewater treatment plants and in industrial applications in general.

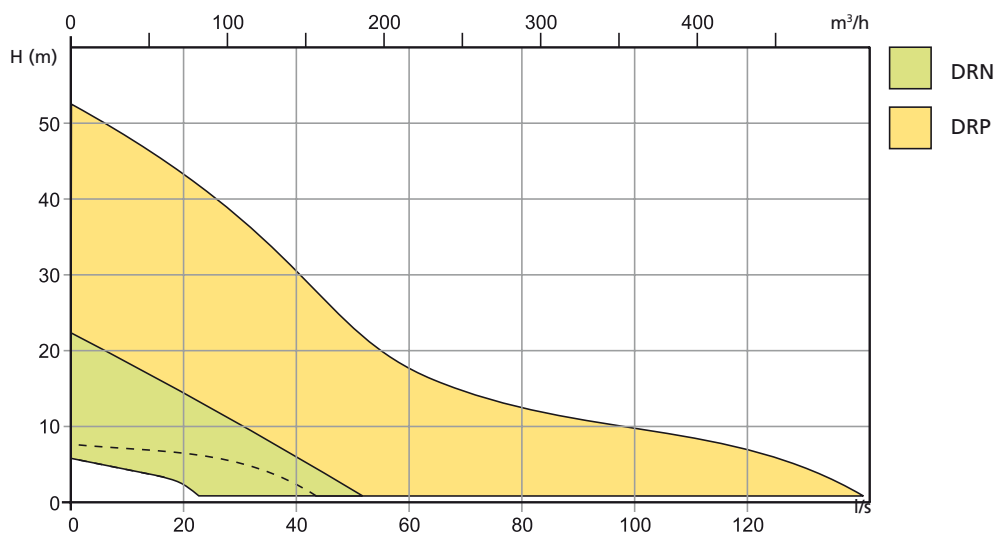
### 0.3 ÷ 1.5 kW

The DR impeller, fitted with motors rated up to 1.5 kW, is used for the treatment of mainly clean or only slightly soiled wastewaters. A steel strainer on the intake allows solids up to 15 mm in diameter to pass.



### 1.1 ÷ 19.3 kW

The DR impeller, fitted with motors rated up to 19.3 kW, can be used for lifting sewage, for wastewater treatment plants, and for industrial applications in general. No strainer is fitted in this type of hydraulic unit, allowing solids of up to a maximum of 120 mm to pass.



### 0.3 ÷ 1.5 KW



#### DR-Steel

Electromechanical assembly in AISI 304 chrome-nickel steel, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump with food-grade oil lubrication, and V-ring in direct contact with the liquid.

Structure in chrome-nickel AISI 304 steel. For clean water containing solids up to 12 mm. For draining rooms or emptying tanks. For water from ponds, streams or pits and for rainwater collection.

page 104

**DR**

Pumps with multi-channel open impeller

0.3 ÷ 1.5 kW

**DR Blue**

page 108



Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide and graphite alumina mechanical seals in oil sump, V-ring in direct contact with the liquid. Ecological dry motor. Technopolymer handle and impeller. Pump body in single casting with motor casing. Only available in single-phase version.

The ideal solution for use with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground. Suitable and for specifically domestic use, including heavy-duty applications.

**DR BluePRO**

page 112



Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in oil sump, V-ring in direct contact with the liquid. Ecological dry motor. Aluminium handle, cast iron impeller. Pump body in single casting with motor casing.

Suitable for use with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground, where high pumping rates are required. This electric pump is intended for both domestic and professional use.

**DRE**

page 118



Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller.

Can be used with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground. Suitable for domestic applications.

**DRO**

page 126



Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, installed opposing with oil lubrication. Oil bath motor. Stainless steel handle, cast iron impeller.

Can be used with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground. Suitable for heavy-duty domestic and professional applications.

**DRF**

page 134



Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Cast iron handle and impeller. Models with ATEX explosion-proof certification.

Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the DRF is used where the use of ordinary submersible electric pumps would not be possible. The main sectors of use are industrial and for the removal of landfill percolates.

1.1 ÷ 19.3 kW

**DRN**

page 146



Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals (optional). Models available in ATEX explosion-proof version (on request).

Designed for mainly professional and industrial use such as wastewater treatment plants, sewage systems and livestock farms, it is particularly suitable for the treatment of liquids containing suspended solids and low or medium density activated sludges. These models are prefitted for installation of the ZENIT cooling system, for dry or semi-submerged installation (on request).

**DRP**

page 160



Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor.

Designed to transport heavily soiled wastewater, activated sludges and solids. Particularly suitable for applications in wastewater treatment, sewer systems, civil lifting systems and the paper, tanning and leather industries.

# DR-Steel

## Stainless steel pumps for drainage

All product images are indicative only



### General characteristics

|                             |                   |
|-----------------------------|-------------------|
| multi-channel open impeller |                   |
| motor power                 | 0,25 ÷ 0,75 kW    |
| poles                       | 2                 |
| discharge                   | GAS 1¼" - GAS 1½" |
| free passage                | max 12 mm         |
| max flow rate               | 335 l/min         |
| max head                    | 16.0 m            |

### Electromechanical assembly

Electromechanical assembly in AISI 304 chrome-nickel steel, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump with food-grade oil lubrication, and V-ring in direct contact with the liquid. Structure in chrome-nickel AISI 304 steel.

### Applications

For clean water containing solids up to 12 mm. For draining rooms or emptying tanks. For water from ponds, streams or pits and for rainwater collection.

### Construction materials

|                                  |                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Case                             | Chrome-nickel steel AISI 304                                                                                                           |
| Impeller                         | Chrome-nickel steel AISI 304                                                                                                           |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                                                          |
| Standard gasket                  | Rubber - NBR                                                                                                                           |
| Shaft                            | Steel - AISI 431                                                                                                                       |
| Set of standard mechanical seals | Three mechanical seals; double seal (SiC-Al) in oil sump with food-grade oil lubrication, one V-ring in direct contact with the liquid |

### Operating limits

|                               |                       |
|-------------------------------|-----------------------|
| Maximum operating temperature | 40°C (90°C max 3 min) |
| PH of treated fluid           | 6 - 14                |
| Viscosity of treated fluid    | 1 mm²/s               |
| Maximum immersion depth       | 10 m                  |
| Density of treated fluid      | 1 Kg/dm³              |
| Maximum acoustic pressure     | <70 dB                |
| max starts per hour           | 30                    |





#### Lifting handle

Chrome-nickel steel AISI 304.



#### Cooling system

As for the internal ricyle pumped liquid system, the motor cooling is guaranted even if the pump is partially covered by the liquid.



#### Mechanical seal

Three mechanical seals; double seal (SiC-Al) in oil sump with food-grade oil lubrication, one V-ring in direct contact with the liquid.



#### Strainer

A special set allows the sewage pump to be transformed into a dry floor one. The minimum level of liquid can be lowered to 5 mm from the ground by setting two special shiming.



#### Impeller

Chrome-nickel steel AISI 304.



#### Optional

Vertically sliding level regulator, recommended for installation in small wells.

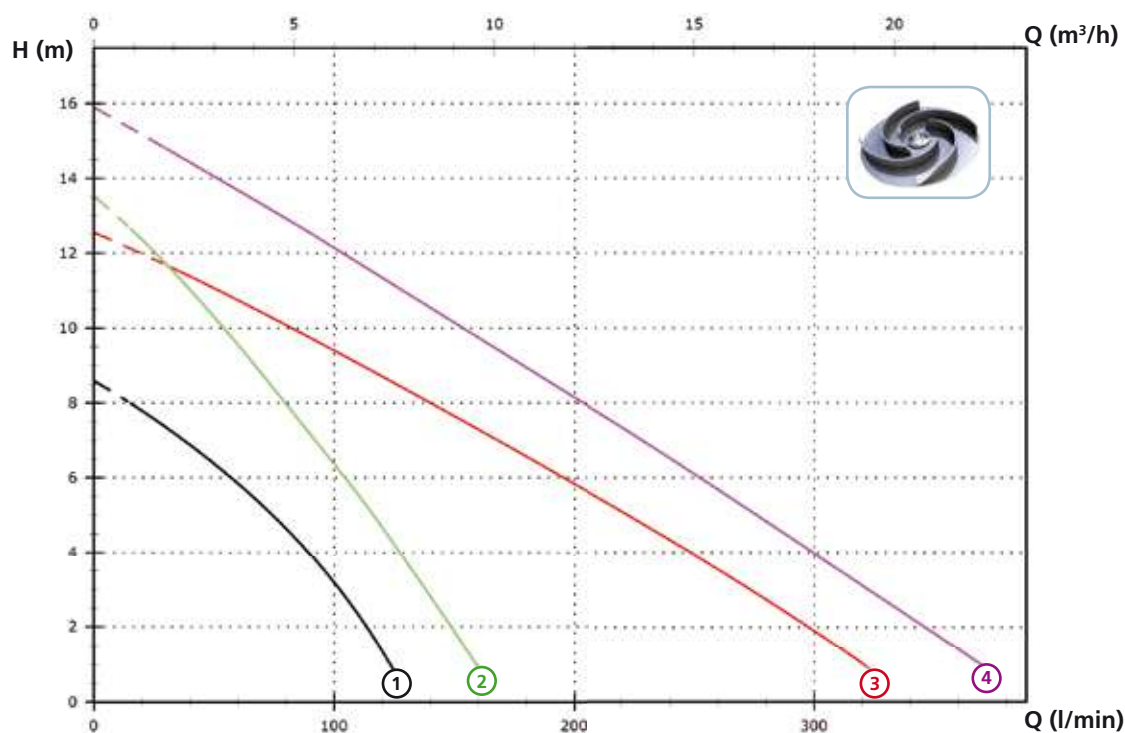


# DR-Steel

## Models with vertical GAS 1½"- 1¼" threaded discharge - 2 poles

### Performances

|                        | l/s   | 0.0  | 0.5  | 1.0  | 1.5  | 2.0  | 2.5  | 3.0  | 3.5  | 4.0  | 4.5  | 5.0  | 5.5  |
|------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
|                        | l/min | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |
|                        | m³/h  | 0.0  | 1.8  | 3.6  | 5.4  | 7.2  | 9.0  | 10.8 | 12.7 | 14.5 | 16.3 | 18.1 | 19.9 |
| ① DR-Steel 25/2 M50    |       | 8.5  | 7.0  | 5.7  | 4.0  | 1.3  |      |      |      |      |      |      |      |
| ② DR-Steel 37/2 M50    |       | 13.6 | 11.6 | 9.5  | 7.0  | 4.5  | 1.9  |      |      |      |      |      |      |
| ③ DR-Steel 55/2 M50    |       | 12.4 | 11.3 | 10.4 | 9.2  | 8.4  | 7.2  | 6.3  | 5.0  | 4.0  | 3.0  | 1.8  |      |
| ④ DR-Steel 75/2 M(T)50 |       | 16.0 | 15.0 | 13.4 | 12.4 | 11.2 | 10.0 | 8.8  | 7.6  | 6.5  | 5.2  | 3.8  | 2.5  |



### Technical data

|                     | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Ø     | Free passage |
|---------------------|-----|--------|---------|---------|-----|------|-------|--------------|
| ① DR-Steel 25/2 M50 | 230 | 1      | -       | 0.25    | 2.3 | 2900 | G 1¼" | 10 mm        |
| ② DR-Steel 37/2 M50 | 230 | 1      | -       | 0.37    | 3.1 | 2900 | G 1¼" | 10 mm        |
| ③ DR-Steel 55/2 M50 | 230 | 1      | -       | 0.55    | 4.3 | 2900 | G 1½" | 12 mm        |
| ④ DR-Steel 75/2 M50 | 230 | 1      | -       | 0.75    | 5.6 | 2900 | G 1½" | 12 mm        |

|                     | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Ø     | Free passage |
|---------------------|-----|--------|---------|---------|-----|------|-------|--------------|
| ④ DR-Steel 75/2 T50 | 400 | 3      | -       | 0.75    | 2.4 | 2900 | G 1½" | 12 mm        |

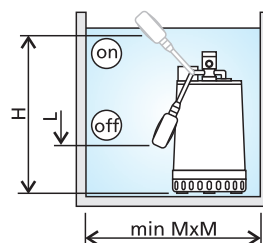
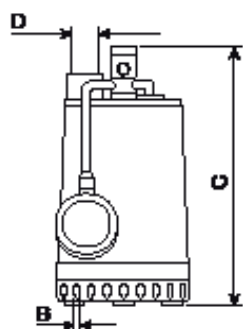
# DR-STEEL

## Versions available

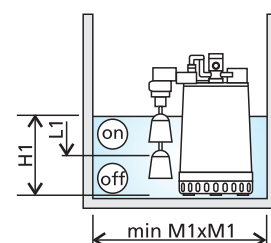
(Key to versions on page 16)

|                   | Electrical variants |        |             |                  |                       |             |                  |                       |             |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|-------------------|---------------------|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|-------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                   | N<br>A<br>E         | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>C<br>W | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DR-Steel 25/2 M50 |                     |        |             |                  |                       | ●           |                  |                       | ●           |        |        |             |   | ●         |    |                  |      |      | ●     |        |
| DR-Steel 37/2 M50 |                     |        |             |                  |                       | ●           |                  |                       | ●           |        |        |             |   | ●         |    |                  |      |      | ●     |        |
| DR-Steel 55/2 M50 |                     |        |             |                  |                       | ●           |                  |                       | ●           |        |        |             |   | ●         |    |                  |      |      | ●     |        |
| DR-Steel 75/2 M50 |                     |        |             |                  |                       | ●           |                  |                       | ●           | ●      |        |             |   | ●         |    |                  |      |      | ●     |        |
| DR-Steel 75/2 T50 | ●                   |        |             |                  |                       |             |                  |                       |             |        | ●      |             |   | ●         |    |                  |      |      | ●     |        |

## Overall dimensions and weights



STANDARD



OPTIONAL

|                      | Ø A | B  | C   | D     | H   | L   | M   | H1  | L1  | M1  | kg  |
|----------------------|-----|----|-----|-------|-----|-----|-----|-----|-----|-----|-----|
| DR-Steel 25/2 M50    | 170 | 10 | 300 | G 1¼" | 385 | 145 | 350 | 155 | 65  | 300 | 5.9 |
| DR-Steel 37/2 M50    | 170 | 10 | 300 | G 1¼" | 385 | 145 | 350 | 155 | 65  | 300 | 6.3 |
| DR-Steel 55/2 M50    | 215 | 12 | 335 | G 1½" | 420 | 180 | 400 | 190 | 100 | 350 | 7.7 |
| DR-Steel 75/2 M(T)50 | 215 | 12 | 335 | G 1½" | 420 | 180 | 400 | 190 | 100 | 350 | 8.4 |

Dimensions in mm

M - M1 Minimum dimensions - 500mm x 500mm Suggested dimensions

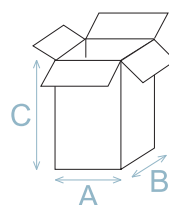
All weights and dimensions are indicative only

## Packaging dimension

|                    | A   | B   | C   |
|--------------------|-----|-----|-----|
| DR-Steel 25-37 M50 | 200 | 200 | 350 |
| DR-Steel 55-75 M50 | 240 | 250 | 400 |
| DR-Steel 75/2 T50  | 240 | 250 | 400 |

Dimension in mm

All weights and dimensions are indicative only



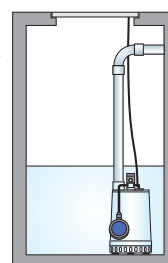
## No. pieces per pallet

For DR-Steel 25-37 models each pallet (EUR 1000X1200 mm) is able to take 90 pieces.

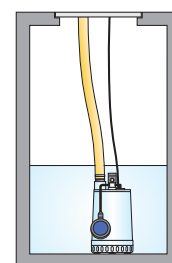
For DR-Steel 55-75 models each pallet (EUR 1000X1200 mm) is able to take 60 pieces.

## Installations available

A



B



# DR Blue

## Multi-channel open impeller

DESIGN BY

*pininfarina*

### General characteristics

|                             |                  |
|-----------------------------|------------------|
| multi-channel open impeller |                  |
| motor power                 | 0,3 ÷ 0,74 kW    |
| poles                       | 2                |
| discharge                   | GAS 1¼" vertical |
| free passage                | 7 mm             |
| max flow rate               | 5.3 l/s          |
| max head                    | 14.2 m           |

### Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing mechanical seals in silicon carbide and alumina graphite in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

### Applications

The ideal solution for use with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground. Suitable and reliable for domestic use, including heavy-duty applications.

### Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Technopolymer                                                                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)                                           |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one alumina graphite mechanical seal (AL), V-ring |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

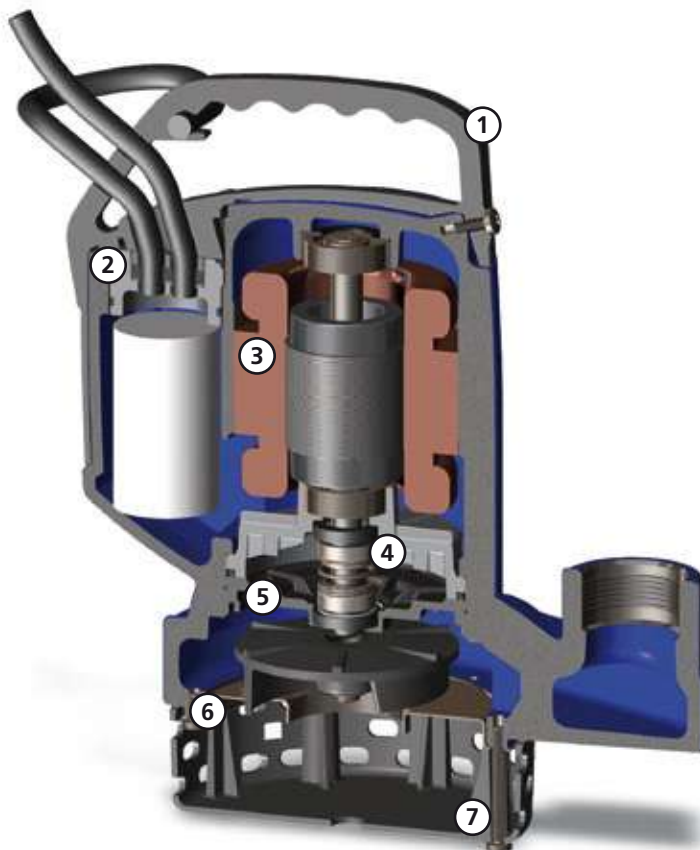
Models available in IECEx certified version

Ex nA IIC T3  
Ex nA nC IIC T3

All product images are indicative only



# DR Blue



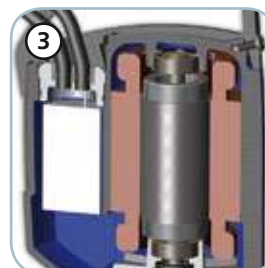
## Lifting handle

Ergonomic technopolymer lifting and carrying handle. Clip floatswitch adjustment.



## Cable gland System

Innovative cable gland system with twin O-rings to ensure maximum tightness.



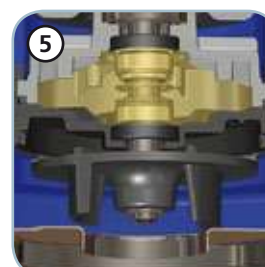
## Motor and electrical accessories

Dry motor with thermal protections. Internal startup capacitor.



## Mechanical seals

One silicon carbide mechanical seal (SiC) and one alumina graphite mechanical seal (AL), V-ring in direct contact with the liquid.



## Oil sump

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.



## Anti-clogging System

The diffuser plate incorporates the Anti Clogging System (ACS), consisting of grooves in the plate to facilitate the ejection of solids..



## Intake strainer

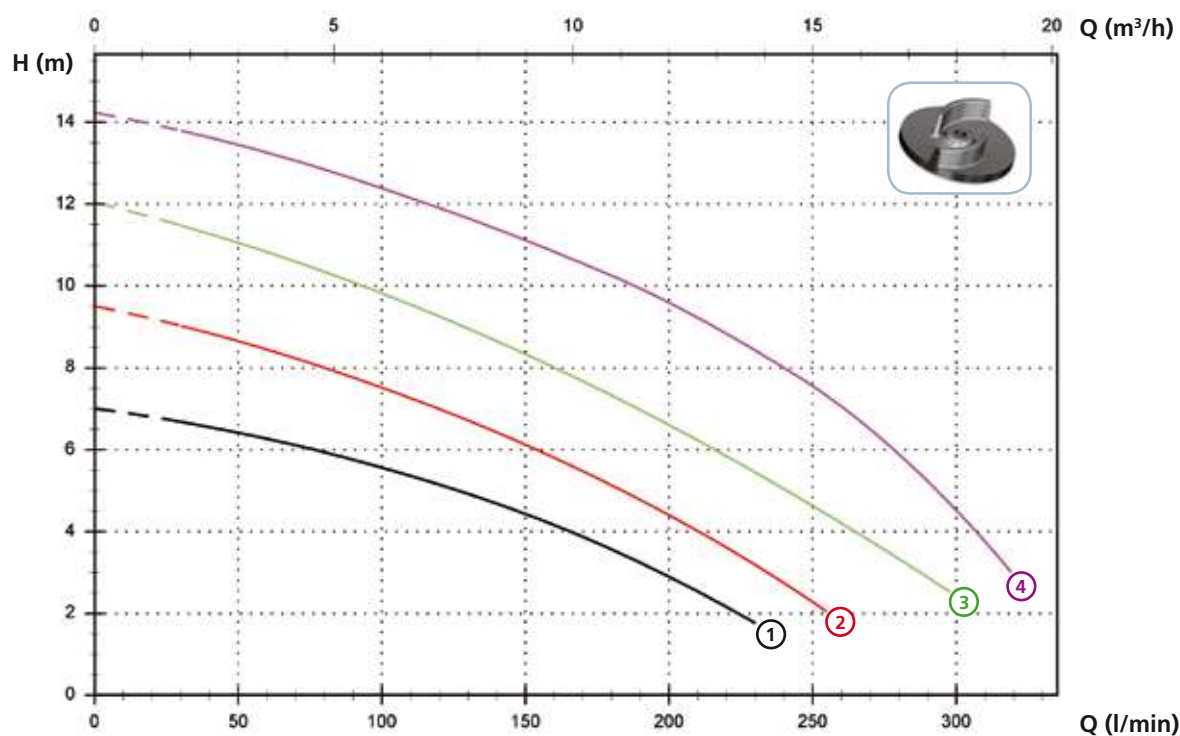
Intake strainer in impact-resistant polypropylene.

# DR Blue

## Models with vertical GAS 1¼" threaded discharge - 2 poles motor

### Performances

|                              | l/s   | 0    | 1    | 2    | 3    | 4    | 5    |
|------------------------------|-------|------|------|------|------|------|------|
|                              | l/min | 0    | 60   | 120  | 180  | 240  | 300  |
|                              | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 |
| ① DR Blue 40/2/G32V A1BM/50  |       | 7.0  | 6.3  | 5.1  | 3.6  |      |      |
| ② DR Blue 50/2/G32V A1BM/50  |       | 9.5  | 8.4  | 7.0  | 5.1  | 2.7  |      |
| ③ DR Blue 75/2/G32V A1BM/50  |       | 12.0 | 10.8 | 9.3  | 7.3  | 5.0  |      |
| ④ DR Blue 100/2/G32V A1BM/50 |       | 14.2 | 13.3 | 11.9 | 10.3 | 8.0  | 4.5  |



### Technical data

|                              | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Ø     | Free passage |
|------------------------------|-----|--------|---------|---------|-----|------|-------|--------------|
| ① DR Blue 40/2/G32V A1BM/50  | 230 | 1      | -       | 0.3     | 2.3 | 2900 | G 1¼" | 7 mm         |
| ② DR Blue 50/2/G32V A1BM/50  | 230 | 1      | -       | 0.37    | 2.8 | 2900 | G 1¼" | 7 mm         |
| ③ DR Blue 75/2/G32V A1BM/50  | 230 | 1      | -       | 0.55    | 4.1 | 2900 | G 1¼" | 7 mm         |
| ④ DR Blue 100/2/G32V A1BM/50 | 230 | 1      | -       | 0.74    | 5.6 | 2900 | G 1¼" | 7 mm         |

# DR Blue

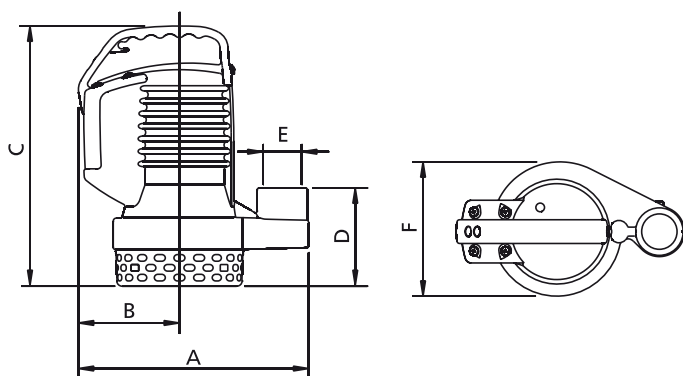
## Versions available

(Key to versions on page 16)

Key to versions on page 16)

|                            | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|----------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                            | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DR Blue 40/2/G32V A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DR Blue 50/2/G32V A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DR Blue 75/2/G32V A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DR Blue 100/2/G32V A1BM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |

## Overall dimensions and weights



|                            | A   | B   | C   | D   | E     | F   | kg   |
|----------------------------|-----|-----|-----|-----|-------|-----|------|
| DR Blue 40/2/G32V A1BM/50  | 255 | 115 | 295 | 110 | G 1¼" | 150 | 11.5 |
| DR Blue 50/2/G32V A1BM/50  | 255 | 115 | 295 | 110 | G 1¼" | 150 | 12   |
| DR Blue 75/2/G32V A1BM/50  | 255 | 115 | 325 | 110 | G 1¼" | 150 | 13.5 |
| DR Blue 100/2/G32V A1BM/50 | 255 | 115 | 325 | 110 | G 1¼" | 150 | 15.5 |

Dimensions in mm

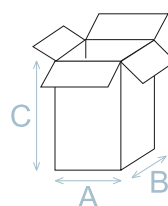
All weights and dimensions are indicative only

## Packaging dimension

|                            | A   | B   | C   |
|----------------------------|-----|-----|-----|
| DR Blue 40/2/G32V A1BM/50  | 240 | 200 | 350 |
| DR Blue 50/2/G32V A1BM/50  | 240 | 200 | 350 |
| DR Blue 75/2/G32V A1BM/50  | 240 | 200 | 350 |
| DR Blue 100/2/G32V A1BM/50 | 240 | 200 | 350 |

Dimension in mm

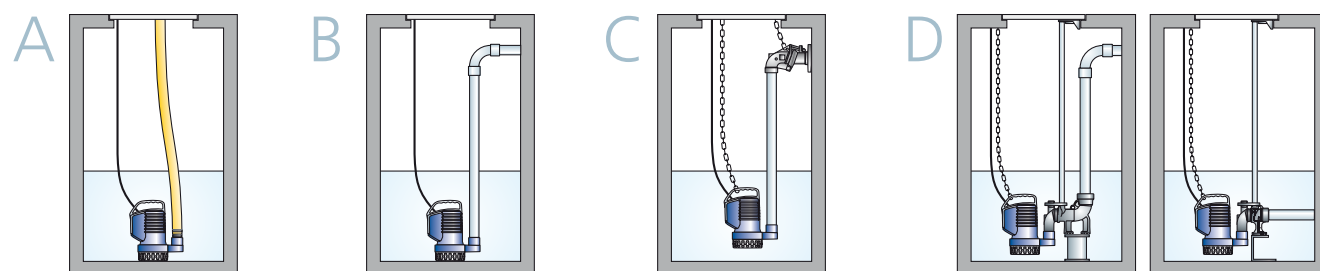
All weights and dimensions are indicative only



## No. pieces per pallet

For DR Blue models each pallet (EUR 1000x1200 mm) is able to take 75 pieces.

## Installations available



For C and D installations the joint for reduction is necessary (not included)



# DR BluePRO

Multi-channel open impeller

DESIGN BY

*pininfarina*

## General characteristics

|                             |                       |
|-----------------------------|-----------------------|
| multi-channel open impeller |                       |
| motor power                 | 0,37 ÷ 1,5 kW         |
| poles                       | 2                     |
| discharge                   | GAS 1¼" - 2" vertical |
| free passage                | max 15 mm             |
| max flow rate               | 11.5 l/s              |
| max head                    | 17.0 m                |

All product images are indicative only



## Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Suitable for use with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground, where high pumping rates are required. This electric pump is intended for both domestic and professional use.

## Construction materials

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                  |
| Impeller                         | Cast iron EN-GJL-250                                  |
| Nuts and bolts                   | Stainless steel - Class A2-70                         |
| Standard gasket                  | Rubber - NBR                                          |
| Shaft                            | Stainless steel - AISI 420                            |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC), V-ring   |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

Models available in IECEx certified version

Ex nA IIC T3  
Ex nA nC IIC T3

# DR BluePRO



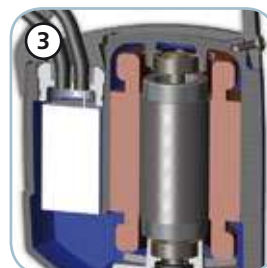
## Lifting handle

Ergonomic aluminium lifting and carrying handle, coated for excellent mechanical strength and corrosion resistance. Clip floatswitch adjustment.



## Cable gland System

Innovative cable gland system with twin O-rings to ensure maximum tightness.



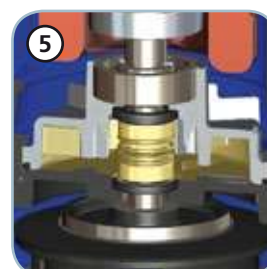
## Motor and electrical accessories

Dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay (option).



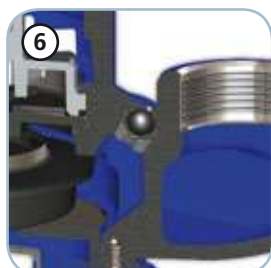
## Mechanical seals

Two silicon carbide mechanical seals (2SiC), and V-ring in direct contact with the liquid.



## Oil sump

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.



## Breather

Breather which allows the air to be vented and ensure reliable pump priming even after long periods out of use.



## Intake strainer

Stainless steel intake strainer and diffuser plate (models 50, 75 and 100). Polypropylene intake strainer with cast iron diffuser plate and foot (models 150 and 200).

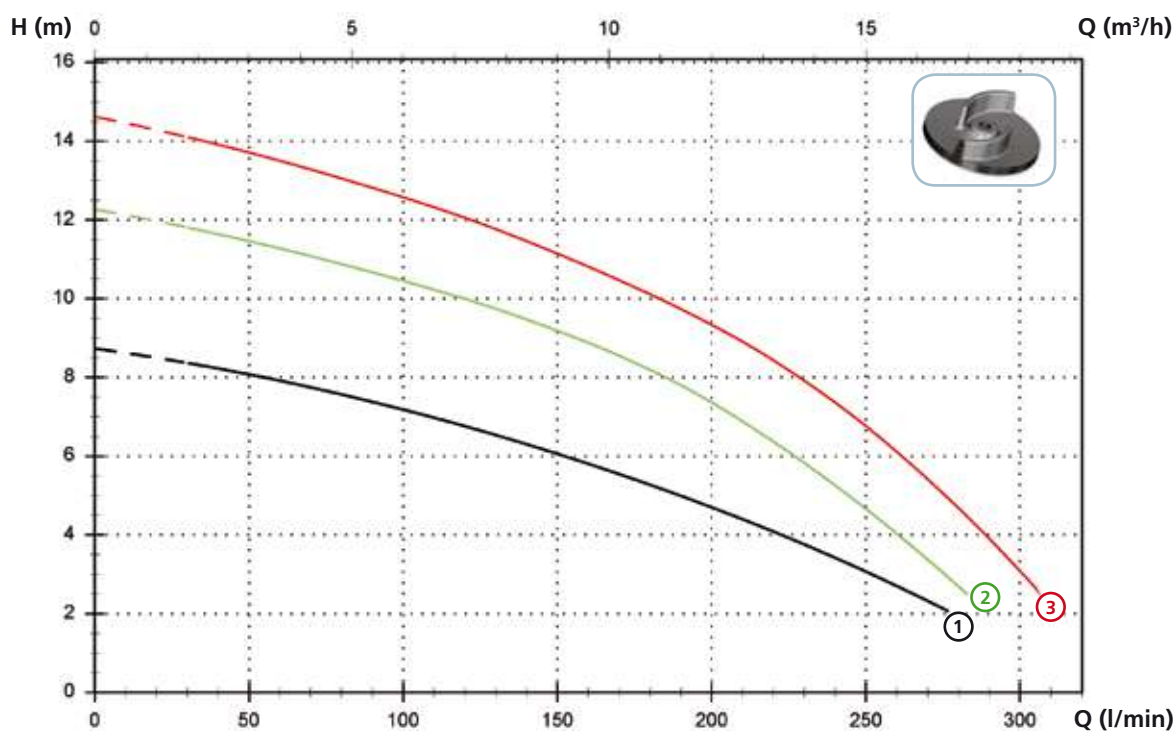
# DR BluePRO

## Models with vertical GAS 1¼" threaded discharge - 2 poles motor

### Performances

|       |   |     |     |      |      |      |
|-------|---|-----|-----|------|------|------|
| l/s   | 0 | 1   | 2   | 3    | 4    | 5    |
| l/min | 0 | 60  | 120 | 180  | 240  | 300  |
| m³/h  | 0 | 3.6 | 7.2 | 10.8 | 14.4 | 18.0 |

|                                    |      |      |      |      |     |     |
|------------------------------------|------|------|------|------|-----|-----|
| ① DR BluePRO 50/2/G32V A1BM(T)/50  | 8.7  | 7.9  | 6.8  | 5.3  | 3.4 |     |
| ② DR BluePRO 75/2/G32V A1BM(T)/50  | 12.3 | 11.3 | 10.0 | 8.2  | 5.3 |     |
| ③ DR BluePRO 100/2/G32V A1BM(T)/50 | 14.6 | 13.5 | 12.1 | 10.1 | 7.4 | 3.1 |



### Technical data

|                                 | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---------------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DR BluePRO 50/2/G32V A1BM/50  | 230 | 1      | -       | 0.37    | 2.8 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DR BluePRO 75/2/G32V A1BM/50  | 230 | 1      | -       | 0.55    | 4.1 | 2900 | Dir   | G 1¼" | 15 mm        |
| ③ DR BluePRO 100/2/G32V A1BM/50 | 230 | 1      | -       | 0.74    | 5.6 | 2900 | Dir   | G 1¼" | 15 mm        |

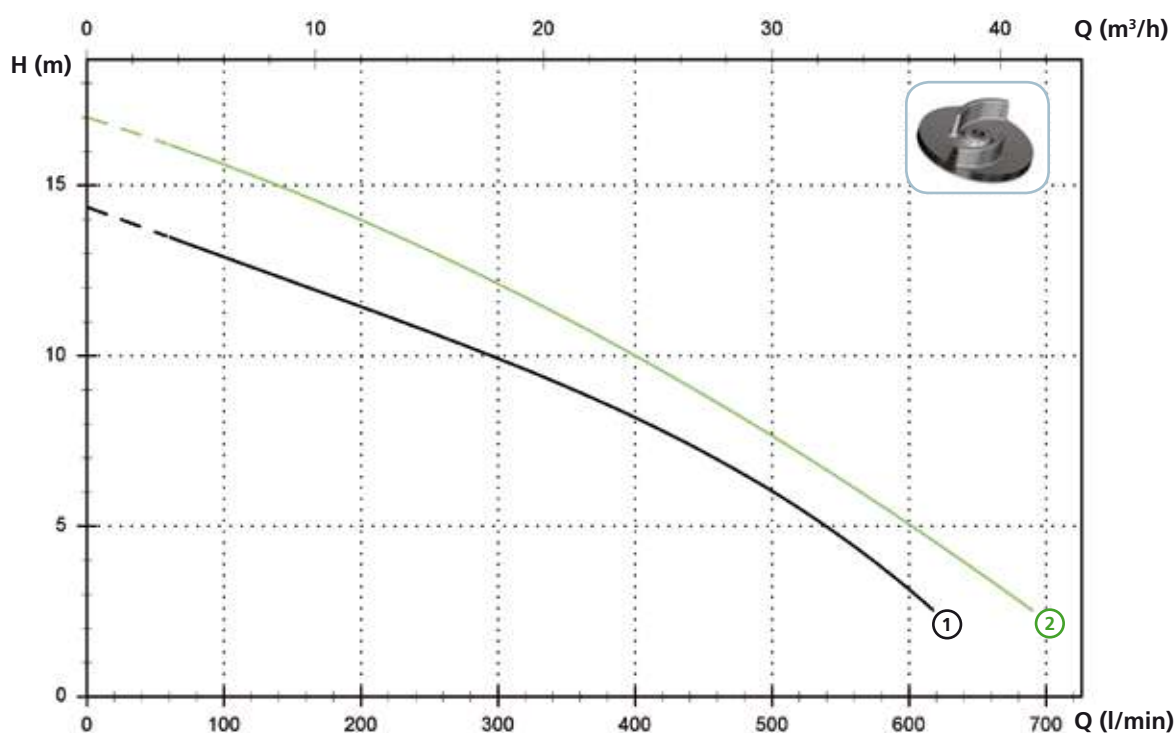
|                                 | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø     | Free passage |
|---------------------------------|-----|--------|---------|---------|------|------|-------|-------|--------------|
| ① DR BluePRO 50/2/G32V A1BT/50  | 400 | 3      | -       | 0.37    | 1.15 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DR BluePRO 75/2/G32V A1BT/50  | 400 | 3      | -       | 0.55    | 1.6  | 2900 | Dir   | G 1¼" | 15 mm        |
| ③ DR BluePRO 100/2/G32V A1BT/50 | 400 | 3      | -       | 0.74    | 2.15 | 2900 | Dir   | G 1¼" | 15 mm        |

# DR BluePRO

## Models with vertical GAS 2" threaded discharge - 2 poles motor

### Performances

|   |                                  |      |      |      |      |      |      |
|---|----------------------------------|------|------|------|------|------|------|
|   | <i>l/s</i>                       | 0    | 2    | 4    | 6    | 8    | 10   |
|   | <i>l/min</i>                     | 0    | 120  | 240  | 360  | 480  | 600  |
|   | <i>m³/h</i>                      | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 |
| ① | DR BluePRO 150/2/G50V A1CM(T)/50 | 14.4 | 12.6 | 10.9 | 8.9  | 6.5  | 3.1  |
| ② | DR BluePRO 200/2/G50V A1CM(T)/50 | 17.0 | 15.3 | 13.3 | 10.9 | 8.1  | 5.1  |



### Technical data

|   |                               | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|-------------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DR BluePRO 150/2/G50V A1CM/50 | 230 | 1      | -       | 1.1     | 7.5 | 2900 | Dir   | G 2" | 10x30 mm     |
| ② | DR BluePRO 200/2/G50V A1CM/50 | 230 | 1      | -       | 1.5     | 10  | 2900 | Dir   | G 2" | 10x30 mm     |

|   |                               | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|-------------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DR BluePRO 150/2/G50V A1CT/50 | 400 | 3      | -       | 1.1     | 3.2 | 2900 | Dir   | G 2" | 10x30 mm     |
| ② | DR BluePRO 200/2/G50V A1CT/50 | 400 | 3      | -       | 1.5     | 4.3 | 2900 | Dir   | G 2" | 10x30 mm     |

# DR BluePRO

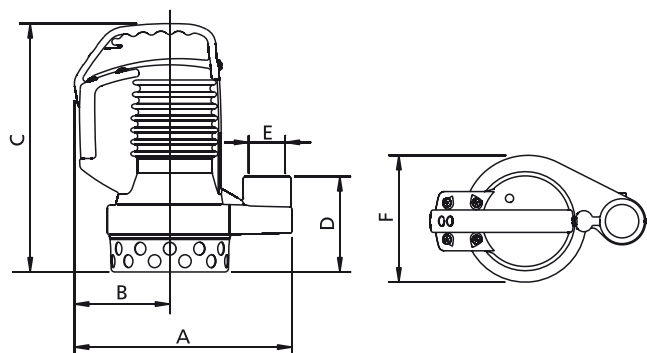
## Versions available

(Key to versions on page 16)

Key to versions on page 16)

|                               | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|-------------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                               | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DR BluePRO 50/2/G32V A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 75/2/G32V A1BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 100/2/G32V A1BM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 150/2/G50V A1CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 200/2/G50V A1CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 50/2/G32V A1BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 75/2/G32V A1BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 100/2/G32V A1BT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 150/2/G50V A1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  | ●    |      |       |        |
| DR BluePRO 200/2/G50V A1CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  | ●    |      |       |        |

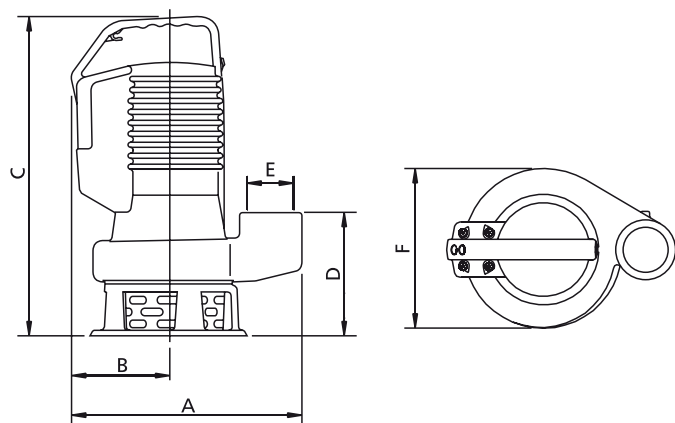
## Overall dimensions and weights



|                                  | A   | B   | C   | D   | E        | F   | kg   |
|----------------------------------|-----|-----|-----|-----|----------|-----|------|
| DR BluePRO 50/2/G32V A1BM(T)/50  | 255 | 115 | 290 | 110 | G 1 1/4" | 150 | 12   |
| DR BluePRO 75/2/G32V A1BM(T)/50  | 255 | 115 | 320 | 110 | G 1 1/4" | 150 | 13.5 |
| DR BluePRO 100/2/G32V A1BM(T)/50 | 255 | 115 | 320 | 110 | G 1 1/4" | 150 | 14   |

Dimensions in mm

All weights and dimensions are indicative only



|                                  | A   | B   | C   | D   | E    | F   | kg |
|----------------------------------|-----|-----|-----|-----|------|-----|----|
| DR BluePRO 150/2/G50V A1CM(T)/50 | 295 | 125 | 420 | 170 | G 2" | 200 | 23 |
| DR BluePRO 200/2/G50V A1CM(T)/50 | 295 | 125 | 420 | 170 | G 2" | 200 | 24 |

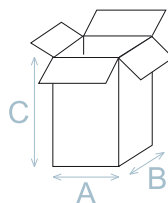
Dimensions in mm

All weights and dimensions are indicative only

# DR BluePRO

## Packaging dimension

|                                  | A   | B   | C   |
|----------------------------------|-----|-----|-----|
| DR BluePRO 50/2/G32V A1BM(T)/50  | 240 | 200 | 350 |
| DR BluePRO 75/2/G32V A1BM(T)/50  | 240 | 200 | 350 |
| DR BluePRO 100/2/G32V A1BM(T)/50 | 240 | 200 | 350 |
| DR BluePRO 150/2/G50V A1CM(T)/50 | 300 | 250 | 480 |
| DR BluePRO 200/2/G50V A1CM(T)/50 | 300 | 250 | 480 |



Dimension in mm

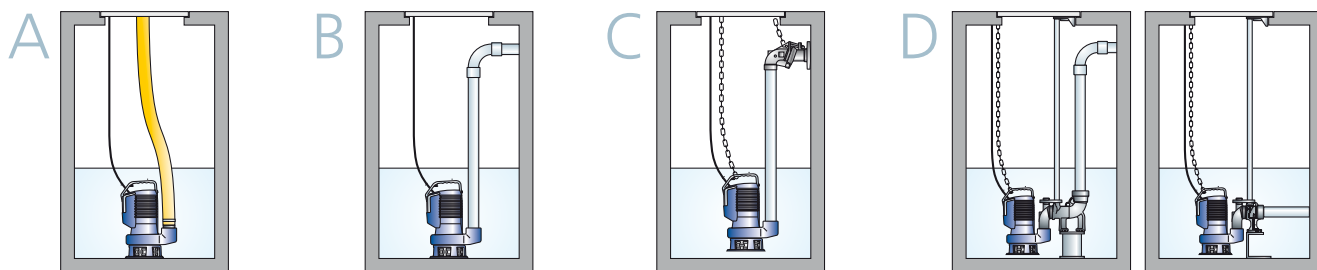
All weights and dimensions are  
indicative only

## No. pieces per pallet

For DR BluePRO 50-75-100 models each pallet (EUR 1000x1200 mm) is able to take 75 pieces.

For DR BluePRO 150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available



For C and D installations of the models DR BluePRO 50-75-100 the joint for reduction is necessary (not included)



DRE

## Multi-channel open impeller



All product images are indicative only

## General characteristics

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Multi-channel open impeller |                                                   |
| motor power                 | 0,37 ÷ 1,5 kW                                     |
| poles                       | 2                                                 |
| delivery port               | GAS 1¼" - 2" vertical<br>GAS 2" - DN50 horizontal |
| free passage                | max 15 mm                                         |
| max flow rate               | 12.6 l/s                                          |
| max head                    | 18.0 m                                            |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor.

## Applications

Can be used with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground. Suitable for specifically domestic use.

## Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Shaft                            | Stainless steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

**DRE****Handle**

AISI 304 stainless steel lifting and carrying handle.

**Capacitor/relay**

Single-phase models with internal capacitor. Three-phase models with motor protection relay (option).

**Motor**

Ecological dry motor with thermal overloads.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one lip seal.

**Anti-clogging system**

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.

**Intake strainer**

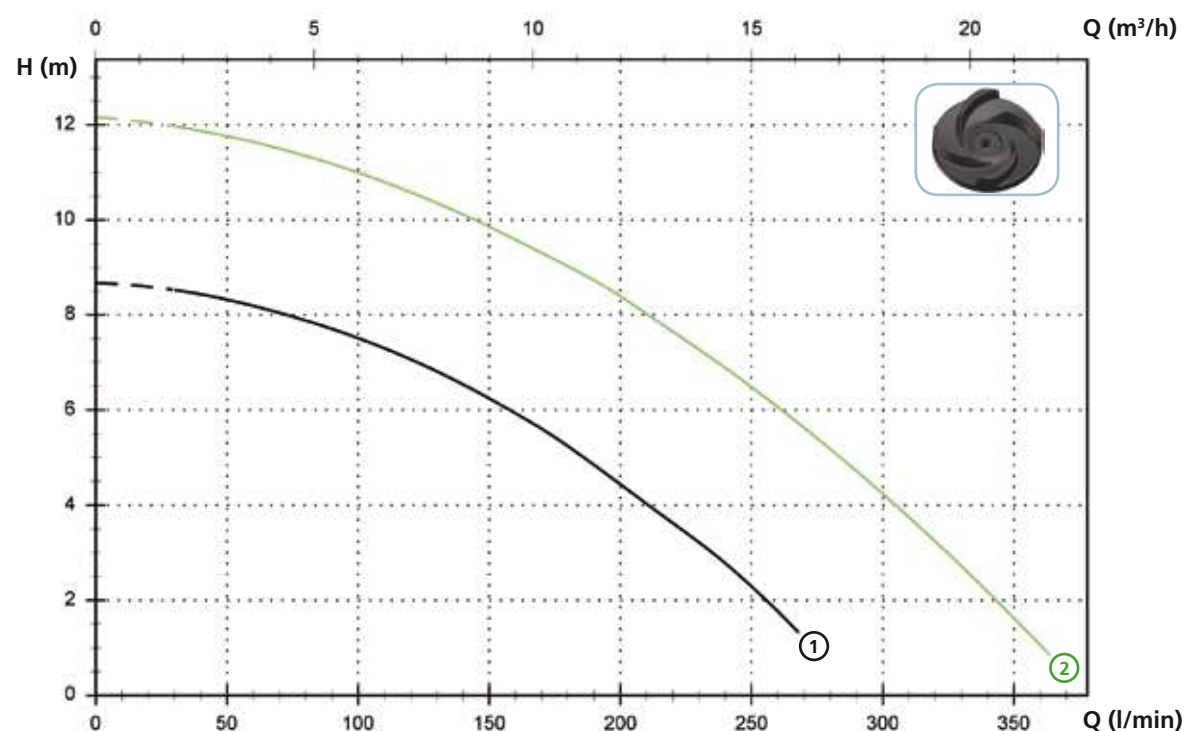
Intake strainer in stainless steel.

# DRE

## Models with vertical GAS 1¼" threaded delivery port - 2 poles

### Performances

|                            | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    |
|----------------------------|-------|------|------|------|------|------|------|------|
|                            | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  |
|                            | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 |
| ① DRE 50/2/G32V A0BM(T)/50 |       | 8.7  | 8.2  | 7.1  | 5.2  | 2.8  |      |      |
| ② DRE 75/2/G32V A0BM(T)/50 |       | 12.2 | 11.6 | 10.6 | 9.0  | 6.9  | 4.2  | 1.1  |



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRE 50/2/G32V A0BM/50 | 230 | 1      | -       | 0.37    | 2.8 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRE 75/2/G32V A0BM/50 | 230 | 1      | -       | 0.55    | 3.8 | 2900 | Dir   | G 1¼" | 15 mm        |

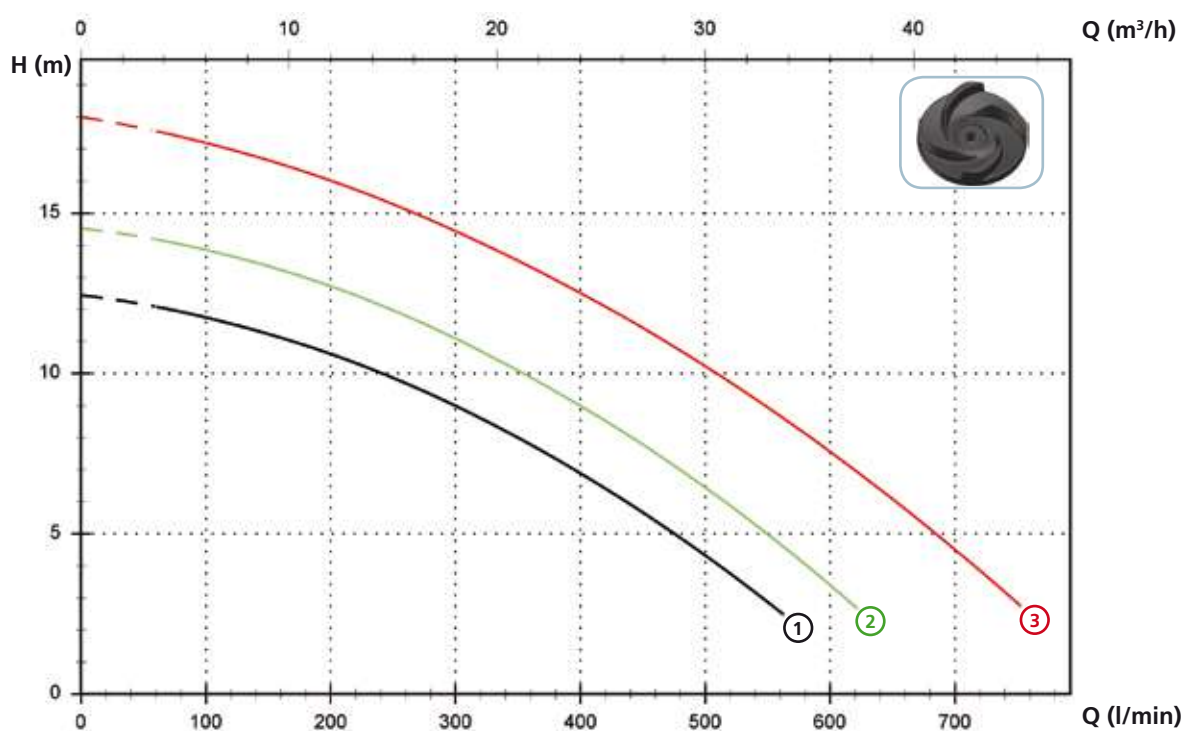
  

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRE 50/2/G32V A0BT/50 | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRE 75/2/G32V A0BT/50 | 400 | 3      | -       | 0.55    | 1.3 | 2900 | Dir   | G 1¼" | 15 mm        |

## Models with vertical GAS 2" threaded delivery port - 2 poles

### Performances

|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|-----------------------------|-------------------|------|------|------|------|------|------|------|
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① DRE 100/2/G50V A0CM(T)/50 |                   | 12.4 | 11.6 | 10.0 | 7.8  | 4.9  |      |      |
| ② DRE 150/2/G50V A0CM(T)/50 |                   | 14.5 | 13.7 | 12.1 | 9.9  | 7.0  | 3.4  |      |
| ③ DRE 200/2/G50V A0CM(T)/50 |                   | 18.0 | 17.0 | 15.4 | 13.3 | 10.7 | 7.6  | 3.9  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRE 100/2/G50V A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRE 150/2/G50V A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRE 200/2/G50V A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2" | 15 mm        |

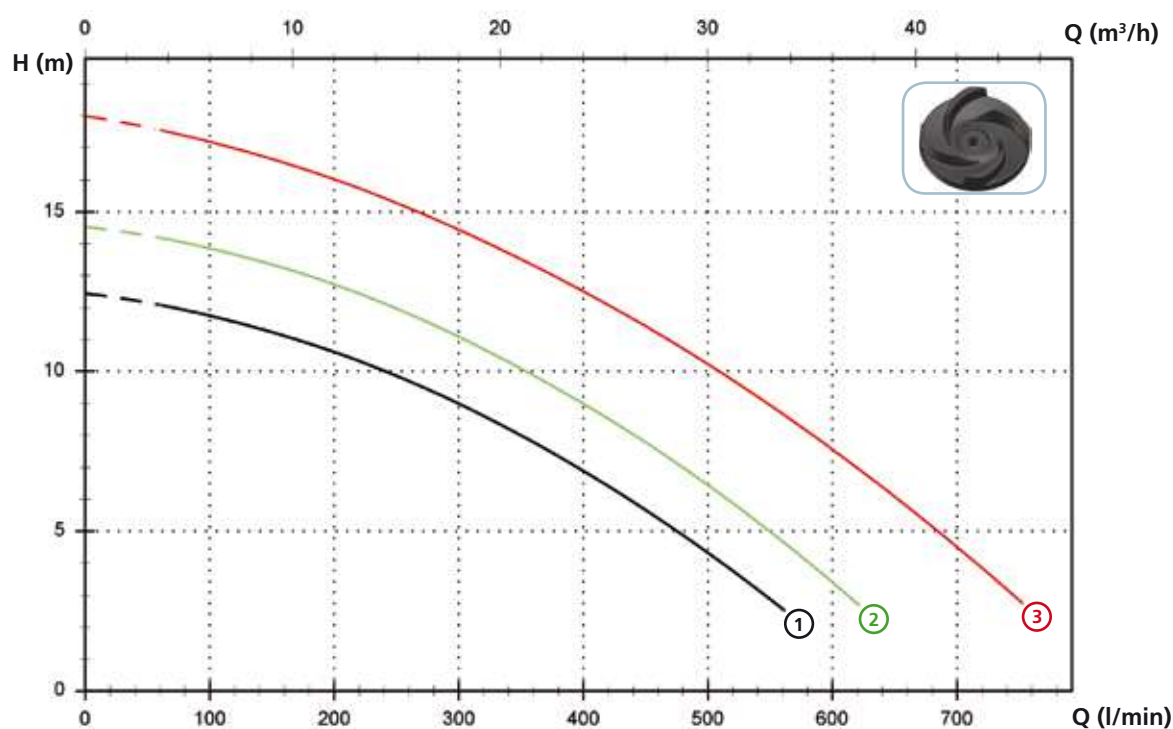
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRE 100/2/G50V A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRE 150/2/G50V A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRE 200/2/G50V A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | G 2" | 15 mm        |

# DRE

## Models with horizontal GAS 2" threaded - DN50 PN10-16 flanged delivery port - 2 poles

### Performances

|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|-----------------------------|-------------------|------|------|------|------|------|------|------|
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① DRE 100/2/G50H A0CM(T)/50 |                   | 12.4 | 11.6 | 10.0 | 7.8  | 4.9  |      |      |
| ② DRE 150/2/G50H A0CM(T)/50 |                   | 14.5 | 13.7 | 12.1 | 9.9  | 7.0  | 3.4  |      |
| ③ DRE 200/2/G50H A0CM(T)/50 |                   | 18.0 | 17.0 | 15.4 | 13.3 | 10.7 | 7.6  | 3.9  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DRE 100/2/G50H A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ② DRE 150/2/G50H A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ③ DRE 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DRE 100/2/G50H A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ② DRE 150/2/G50H A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ③ DRE 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |

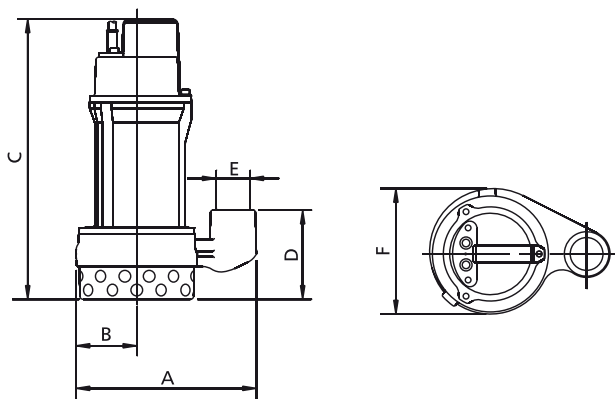
## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DRE 50/2/G32V A0BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 75/2/G32V A0BM/50  |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 100/2/G50V A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 150/2/G50V A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 200/2/G50V A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 100/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 150/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 200/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| DRE 50/2/G32V A0BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 75/2/G32V A0BT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 100/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 150/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 200/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 100/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 150/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |
| DRE 200/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        | ●           | ● |           |    |                  |      | ●    |       |        |

## Overall dimensions and weights

### Models with vertical delivery port



|                            | A   | B   | C   | D   | E     | F   | kg |
|----------------------------|-----|-----|-----|-----|-------|-----|----|
| DRE 50/2/G32V A0BM(T)/50   | 215 | 70  | 335 | 105 | G 1¼" | 150 | 11 |
| DRE 75/2/G32V A0BM (T)/50  | 215 | 70  | 335 | 105 | G 1¼" | 150 | 13 |
| DRE 100/2/G50V A0CM (T)/50 | 265 | 100 | 385 | 125 | G 2"  | 190 | 19 |
| DRE 150/2/G50V A0CM (T)/50 | 265 | 100 | 385 | 125 | G 2"  | 190 | 20 |
| DRE 200/2/G50V A0CM (T)/50 | 265 | 100 | 385 | 125 | G 2"  | 190 | 21 |

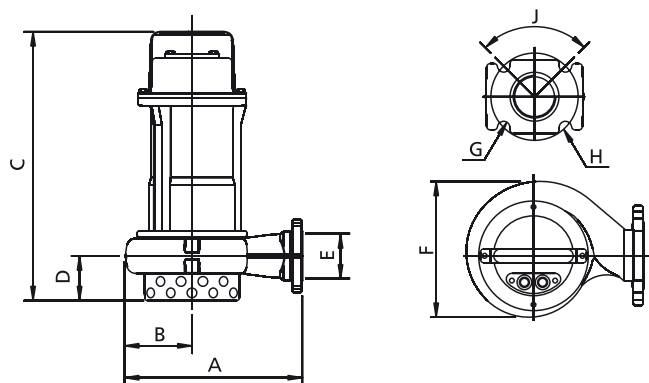
Measurements in mm

All weights and dimensions are indicative only



# DRE

## Models with horizontal delivery port

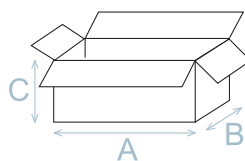


|                            | A   | B  | C   | D  | E         | F   | G  | H   | J   | kg |
|----------------------------|-----|----|-----|----|-----------|-----|----|-----|-----|----|
| DRE 100/2/G50H A0CM (T)/50 | 255 | 95 | 385 | 65 | G 2"-DN50 | 195 | 18 | 125 | 90° | 19 |
| DRE 150/2/G50H A0CM (T)/50 | 255 | 95 | 385 | 65 | G 2"-DN50 | 195 | 18 | 125 | 90° | 20 |
| DRE 200/2/G50H A0CM (T)/50 | 255 | 95 | 385 | 65 | G 2"-DN50 | 195 | 18 | 125 | 90° | 21 |

All weights and dimensions are indicative only

## Packaging dimension

|                            | A   | B   | C   |
|----------------------------|-----|-----|-----|
| DRE 50/2/G32V A0BM(T)/50   | 385 | 225 | 245 |
| DRE 75/2/G32V A0BM (T)/50  | 385 | 225 | 245 |
| DRE 100/2/G50V A0CM (T)/50 | 475 | 285 | 235 |
| DRE 150/2/G50V A0CM (T)/50 | 475 | 285 | 235 |
| DRE 200/2/G50V A0CM (T)/50 | 475 | 285 | 235 |
| DRE 100/2/G50H A0CM (T)/50 | 475 | 285 | 235 |
| DRE 150/2/G50H A0CM (T)/50 | 475 | 285 | 235 |
| DRE 200/2/G50H A0CM (T)/50 | 475 | 285 | 235 |



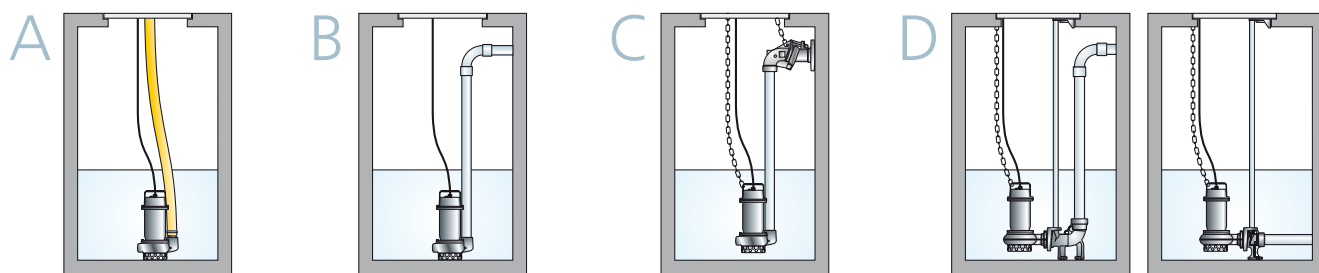
Dimension in mm

All weights and dimensions are indicative only

## No. pieces per pallet

For DRE 50-75-100 models each pallet (EUR 1000x1200 mm) is able to take 48 pieces.  
For DRE 150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available





|                                          |                                         |                                               |
|------------------------------------------|-----------------------------------------|-----------------------------------------------|
| vorazione                                | non quotati: 0.5x45°                    | Tolleranza profondità utile filettature: ±0.5 |
| note non tollerati                       | Gole non quotate: E 0.6x0.2 UNI 4386.75 | ricever                                       |
| 5 a 30                                   |                                         |                                               |
| >30 a 120                                |                                         |                                               |
| >120 a 315                               |                                         |                                               |
| >315 a 1000                              |                                         |                                               |
| concentricità                            |                                         |                                               |
| 1                                        |                                         |                                               |
| Materiale                                | Scale                                   |                                               |
| 02                                       | 1:1                                     |                                               |
| Vedi Tab. M...                           |                                         |                                               |
| TIPOLOGIA IDRAULICA: PER GIR. A RASAM... |                                         |                                               |
| INC. IDR. Ø129 - MANDATA Ø G50V          |                                         |                                               |

# DRO

## Multi-channel open impeller

All product images are indicative only



### General characteristics

#### Multi-channel open impeller

|               |                                                   |
|---------------|---------------------------------------------------|
| motor power   | 0,37 ÷ 1,5 kW                                     |
| poles         | 2                                                 |
| discharge     | GAS 1¼" - 2" vertical<br>GAS 2" - DN50 horizontal |
| free passage  | max 15 mm                                         |
| max flow rate | 13.0 l/s                                          |
| max head      | 18.4 m                                            |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, installed opposing with oil lubrication. Oil bath motor.

### Applications

Can be used with clear or slightly soiled wastewaters containing small solids, strained water, rainwater, seepage and water pumped from underground. Suitable for heavy-duty domestic and professional applications

### Construction materials

|                                  |                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                          |
| Impeller                         | Cast iron EN-GJL-250                                                                          |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                 |
| Standard gasket                  | Rubber - NBR                                                                                  |
| Shaft                            | Stainless steel - AISI 420                                                                    |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)                                         |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one carbon-aluminium oxide mechanical seal (AL) |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

**DRO****Handle**

AISI 304 stainless steel lifting and carrying handle.

**Structure**

Constructed in cast iron.

**Motor**

Oil bath motor with thermal protections. Capacitor and overload protection in external cabinet.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one mechanical seal in alumina graphite (AL).

**Anti-clogging system**

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.

**Intake strainer**

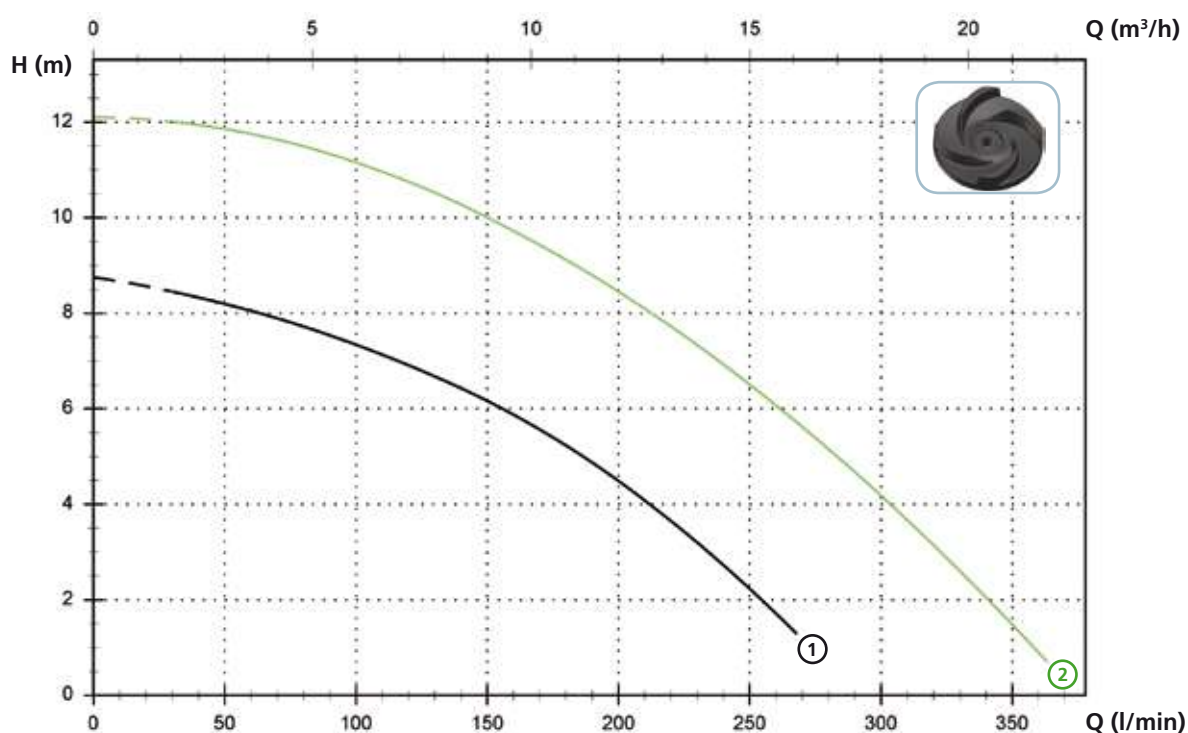
Intake strainer in stainless steel.

# DRO

## Models with vertical GAS 1¼" threaded discharge - 2 poles

### Performances

|                            | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    |
|----------------------------|-------|------|------|------|------|------|------|------|
|                            | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  |
|                            | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 |
| ① DRO 50/2/G32V A0CM(T)/50 |       | 8.8  | 8.1  | 6.9  | 5.2  | 2.7  |      |      |
| ② DRO 75/2/G32V A0CM(T)/50 |       | 12.1 | 11.8 | 10.8 | 9.1  | 6.9  | 4.2  | 0.9  |



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRO 50/2/G32V A0CM/50 | 230 | 1      | -       | 0.37    | 2.9 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRO 75/2/G32V A0CM/50 | 230 | 1      | -       | 0.55    | 3.9 | 2900 | Dir   | G 1¼" | 15 mm        |

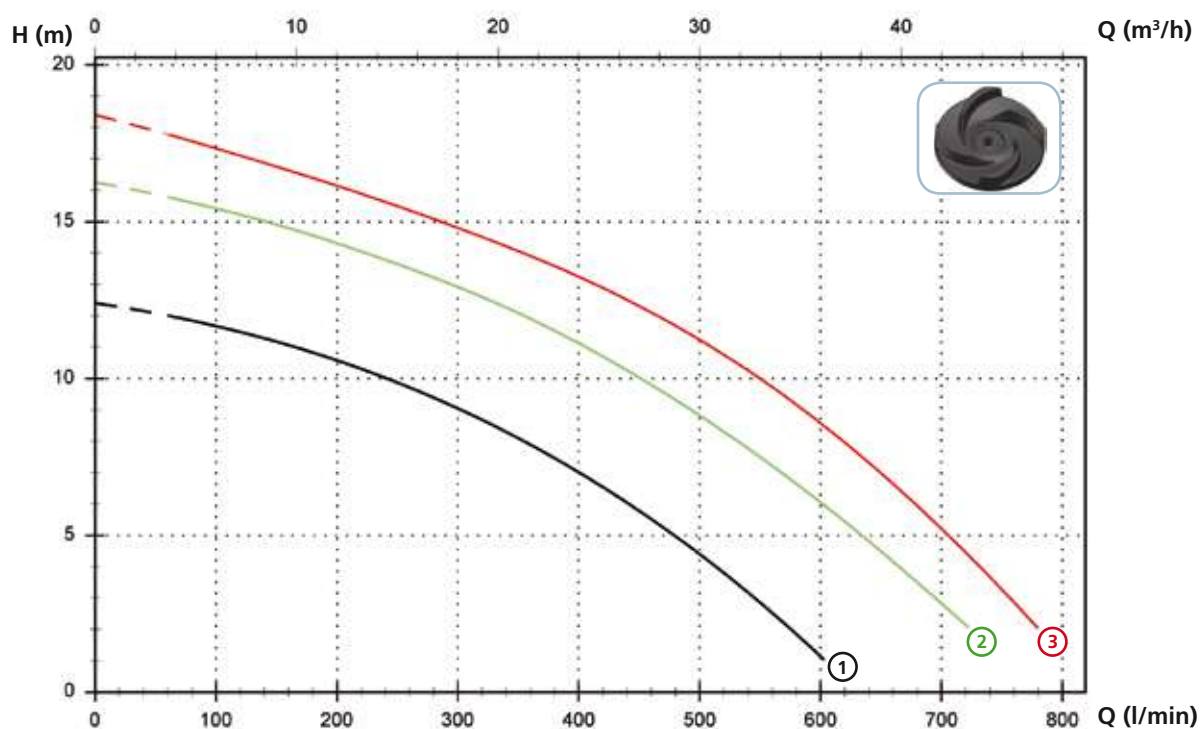
  

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRO 50/2/G32V A0CT/50 | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRO 75/2/G32V A0CT/50 | 400 | 3      | -       | 0.55    | 1.4 | 2900 | Dir   | G 1¼" | 15 mm        |



**DRO****Models with vertical GAS 2" threaded discharge - 2 poles****Performances**

|                             | l/s   | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|-----------------------------|-------|------|------|------|------|------|------|------|
|                             | l/min | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|                             | m³/h  | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① DRO 100/2/G50V A0CM(T)/50 |       | 12.4 | 11.5 | 10.0 | 7.9  | 5.0  | 1.1  |      |
| ② DRO 150/2/G50V A0CM(T)/50 |       | 16.3 | 15.2 | 13.8 | 11.9 | 9.3  | 6.0  | 2.1  |
| ③ DRO 200/2/G50V A0CM(T)/50 |       | 18.4 | 17.1 | 15.6 | 13.9 | 11.7 | 8.6  | 4.5  |

**Technical data**

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRO 100/2/G50V A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRO 150/2/G50V A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRO 200/2/G50V A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2" | 15 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRO 100/2/G50V A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRO 150/2/G50V A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRO 200/2/G50V A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | G 2" | 15 mm        |

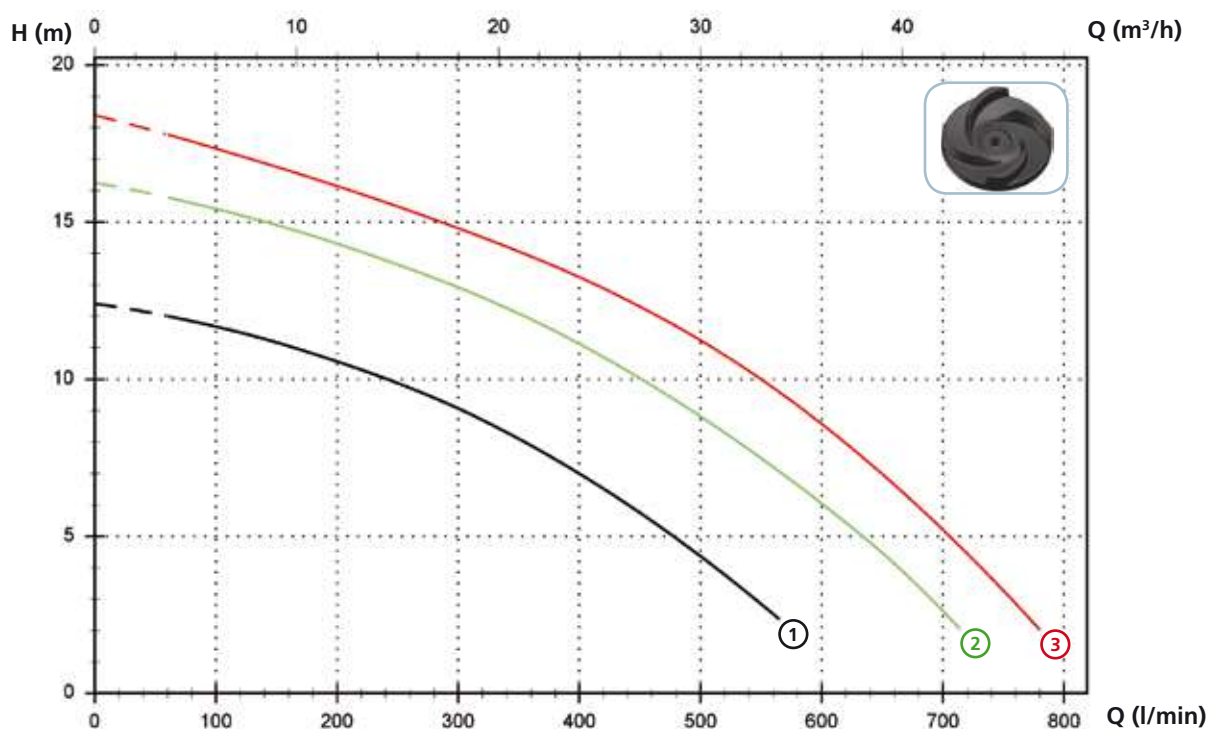


# DRO

## Models with horizontal GAS 2" threaded - DN50 PN10-16 flanged discharge - 2 poles

### Performances

|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|-----------------------------|-------------------|------|------|------|------|------|------|------|
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① DRO 100/2/G50H A0CM(T)/50 |                   | 12.4 | 11.5 | 10.0 | 7.9  | 4.9  |      |      |
| ② DRO 150/2/G50H A0CM(T)/50 |                   | 16.3 | 15.2 | 13.8 | 11.9 | 9.3  | 6.0  |      |
| ③ DRO 200/2/G50H A0CM(T)/50 |                   | 18.4 | 17.1 | 15.6 | 13.9 | 11.7 | 8.6  | 4.5  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DRO 100/2/G50H A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ② DRO 150/2/G50H A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ③ DRO 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① DRO 100/2/G50H A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ② DRO 150/2/G50H A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |
| ③ DRO 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | G 2"- DN50 PN10-16 | 15 mm        |

## DRO

## Versions available

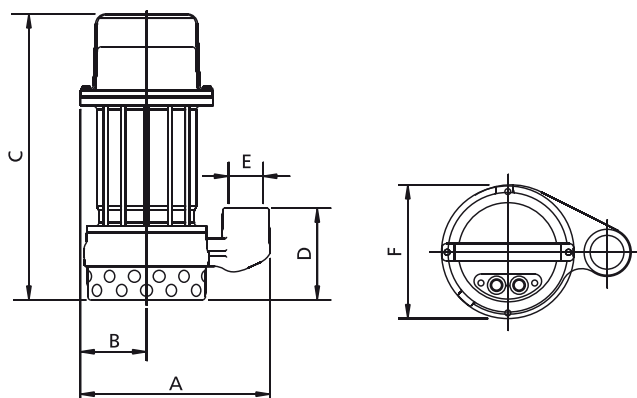
(Key to versions on page 16)

Key to versions on page 10

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DRO 50/2/G32V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 75/2/G32V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 100/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 150/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 200/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 100/2/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 150/2/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 200/2/G50H A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 50/2/G32V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 75/2/G32V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 100/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 150/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 200/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 100/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 150/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |
| DRO 200/2/G50H A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  |      |      | ●     |        |

## Overall dimensions and weights

## Models with vertical discharge



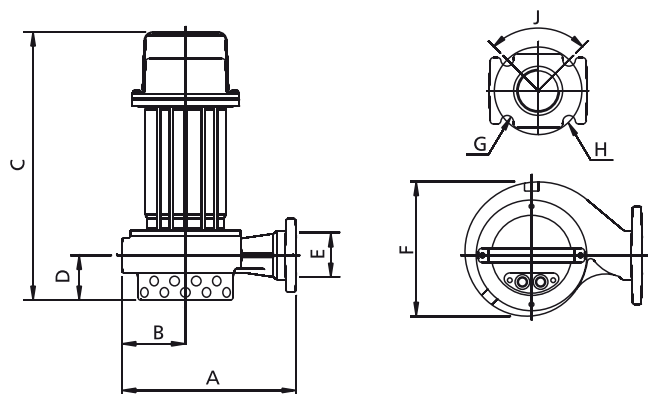
|                           | A   | B  | C   | D   | E     | F   | kg   |
|---------------------------|-----|----|-----|-----|-------|-----|------|
| DRO 50/2/G32V A0CM(T)/50  | 220 | 75 | 330 | 105 | G 1¼" | 155 | 15   |
| DRO 75/2/G32V A0CM(T)/50  | 220 | 75 | 330 | 105 | G 1¼" | 155 | 15.5 |
| DRO 100/2/G50V A0CM(T)/50 | 260 | 95 | 385 | 125 | G 2"  | 195 | 19.5 |
| DRO 150/2/G50V A0CM(T)/50 | 260 | 95 | 385 | 125 | G 2"  | 195 | 20.5 |
| DRO 200/2/G50V A0CM(T)/50 | 260 | 95 | 385 | 125 | G 2"  | 195 | 21.5 |

Dimensions in mm

All weights and dimensions are indicative only

# DRO

## Models with horizontal discharge



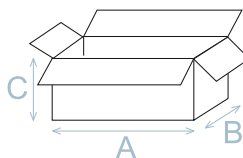
|                           | A   | B  | C   | D  | E         | F   | G  | H   | J   | kg   |
|---------------------------|-----|----|-----|----|-----------|-----|----|-----|-----|------|
| DRO 100/2/G50H A0CM(T)/50 | 250 | 90 | 385 | 65 | G 2"-DN50 | 195 | 18 | 125 | 90° | 19.5 |
| DRO 150/2/G50H A0CM(T)/50 | 250 | 90 | 385 | 65 | G 2"-DN50 | 195 | 18 | 125 | 90° | 20.5 |
| DRO 200/2/G50H A0CM(T)/50 | 250 | 90 | 385 | 65 | G 2"-DN50 | 195 | 18 | 125 | 90° | 21.5 |

Dimensions in mm

All weights and dimensions are indicative only

## Packaging dimension

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DRO 50/2/G32V A0CM(T)/50  | 385 | 225 | 245 |
| DRO 75/2/G32V A0CM(T)/50  | 385 | 225 | 245 |
| DRO 100/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DRO 150/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DRO 200/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DRO 100/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DRO 150/2/G50H A0CM(T)/50 | 475 | 285 | 235 |
| DRO 200/2/G50H A0CM(T)/50 | 475 | 285 | 235 |



Dimension in mm

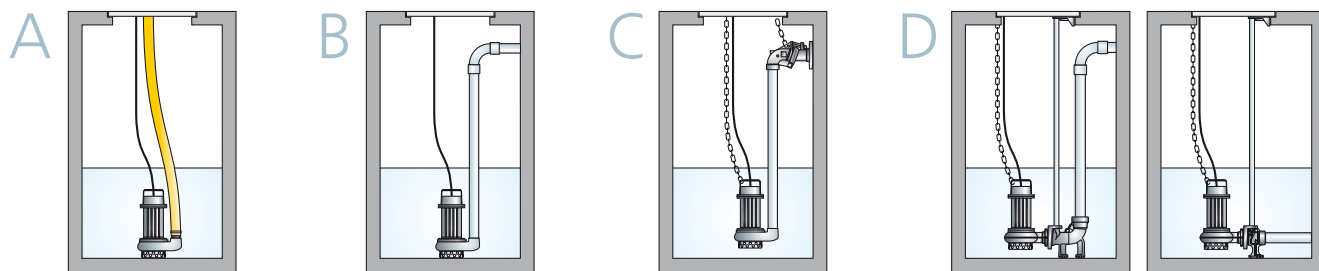
All weights and dimensions are indicative only

## No. pieces per pallet

For DRO 50-75 models each pallet (EUR 1000x1200 mm) is able to take 48 pieces.

For DRO 100-150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available







# DRF

## Multi-channel open impeller



### General characteristics

|                             |                                                                                |
|-----------------------------|--------------------------------------------------------------------------------|
| Multi-channel open impeller |                                                                                |
| motor power                 | 0,55 ÷ 1,5 kW                                                                  |
| poles                       | 2 / 4                                                                          |
| discharge                   | GAS 1½" - 2" vertical<br>GAS 1½" DN32 - GAS 2" DN50 horizontal<br>DN65 ÷ DN100 |
| free passage                | max 50 mm                                                                      |
| max flow rate               | 17.6 l/s                                                                       |
| max head                    | 16.5 m                                                                         |

All product images are indicative only



### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

### Applications

Specifically developed for use with flammable liquids or in potentially explosive atmospheres, the DRF is used where the use of ordinary submersible electric pumps would not be possible. The main sectors of use are industrial and for the removal of landfill percolates.

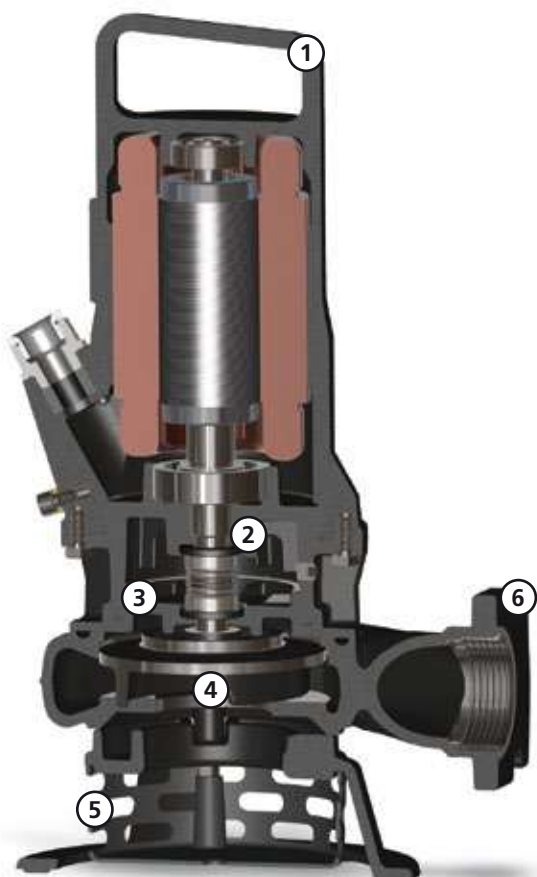
### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR - VITON                                   |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

DRF



CE 0496  II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids



#### Handle/Cable gland

Cast iron lifting and carrying handle. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



#### Mechanical seals

Two silicon carbide (2SiC) mechanical seals in oil sump.



#### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



#### Drive shaft

Impeller connected to the drive shaft by means of tapered coupling.



#### Intake strainer

Intake strainer in tough polypropylene and cast iron feet.



#### Discharge

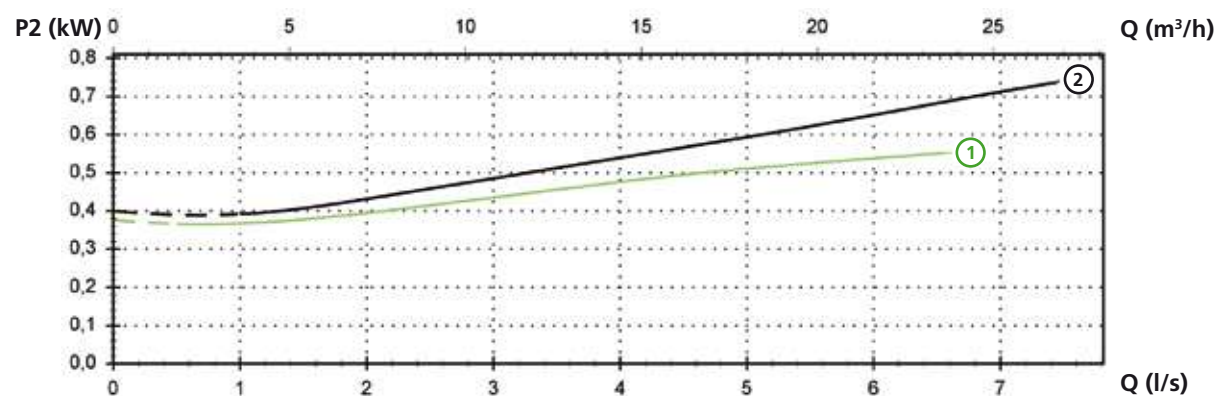
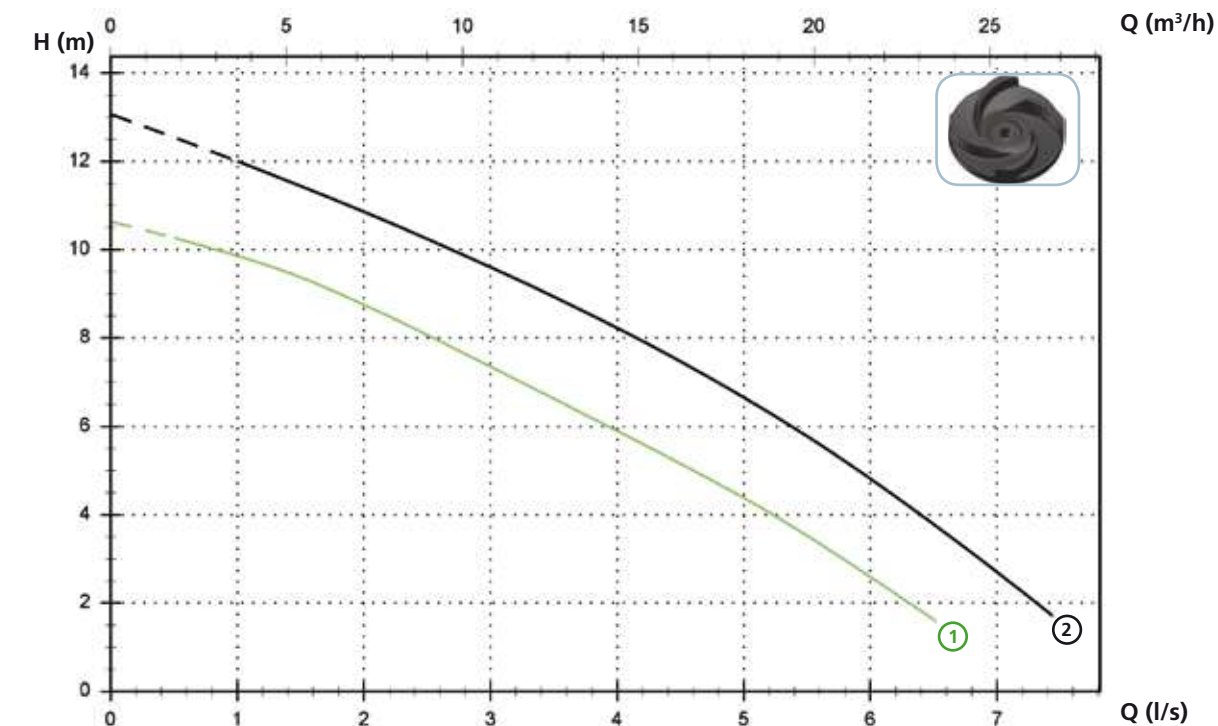
Threaded, flanged discharge for the maximum ease of installation.



# DRF

## Models with vertical GAS 1½" threaded discharge - 2 poles

### Performances



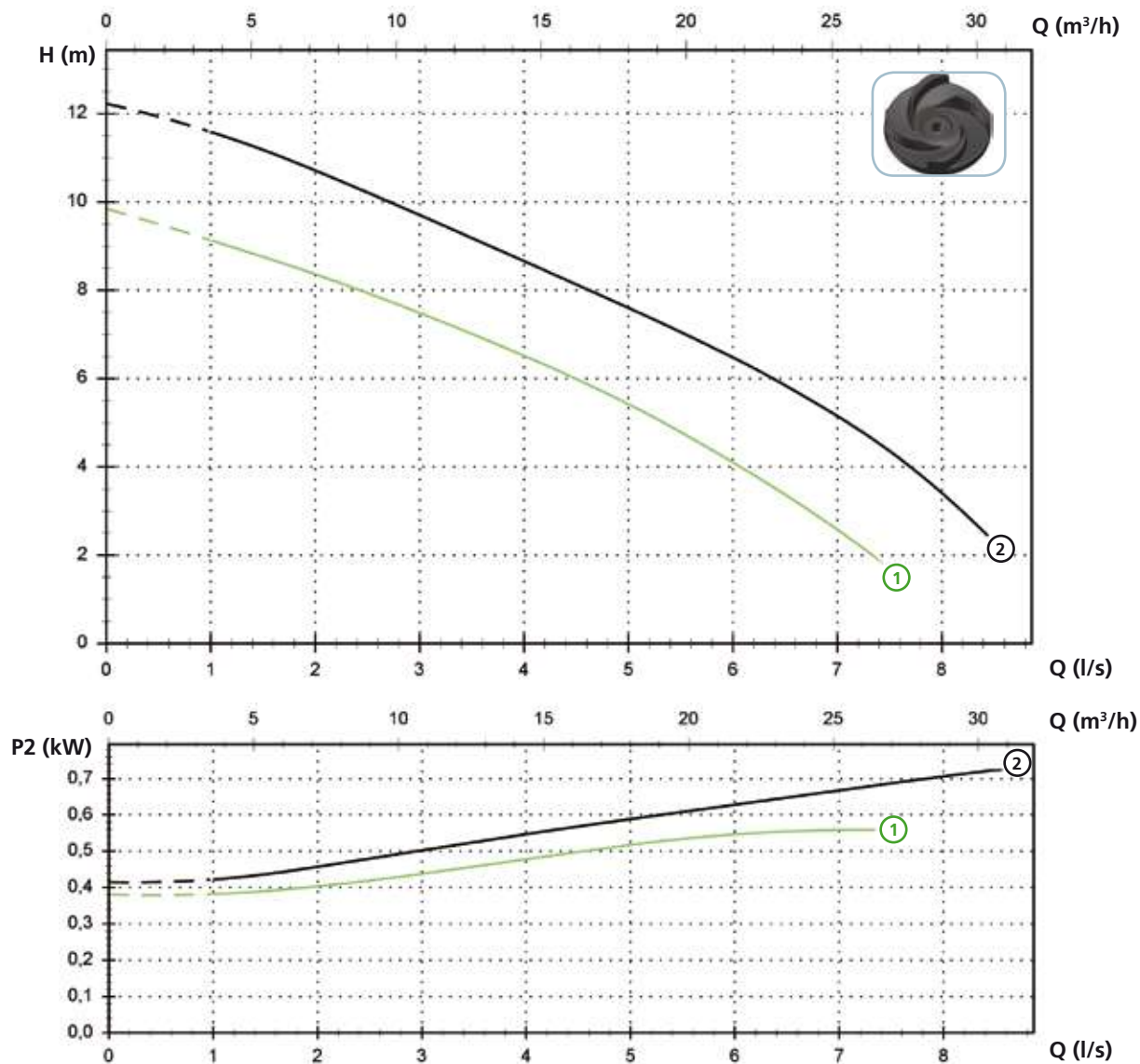
### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① | DRF 75/2/G40V A1CM/50  | 230 | 1      | 0.8     | 0.55    | 3.9 | 2900 | Dir   | G 1½" | 10x30 mm     |
| ② | DRF 100/2/G40V A1CM/50 | 230 | 1      | 1.1     | 0.74    | 4.9 | 2900 | Dir   | G 1½" | 10x30 mm     |
|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
| ① | DRF 75/2/G40V A1CT/50  | 400 | 3      | 0.8     | 0.55    | 1.5 | 2900 | Dir   | G 1½" | 10x30 mm     |
| ② | DRF 100/2/G40V A1CT/50 | 400 | 3      | 1.1     | 0.74    | 1.9 | 2900 | Dir   | G 1½" | 10x30 mm     |

**DRF**

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------------------|--------------|
| ① | DRF 75/2/G40H A1CM/50  | 230 | 1      | 0.8     | 0.55    | 3.9 | 2900 | Dir   | G 1½" - DN32 PN6 | 10x30 mm     |
| ② | DRF 100/2/G40H A1CM/50 | 230 | 1      | 1.1     | 0.74    | 4.9 | 2900 | Dir   | G 1½" - DN32 PN6 | 10x30 mm     |

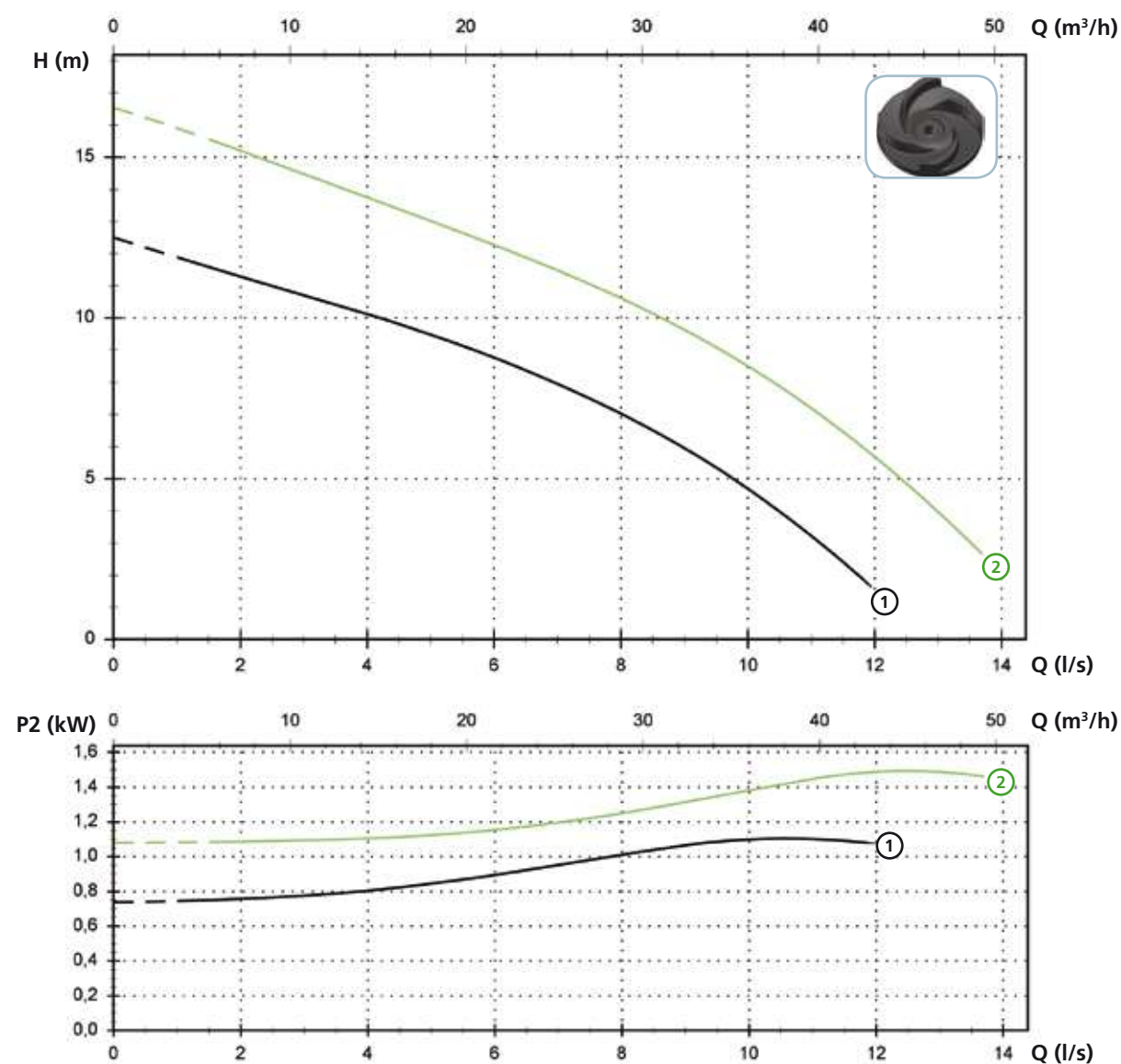
  

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------------------|--------------|
| ① | DRF 75/2/G40H A1CT/50  | 400 | 3      | 0.8     | 0.55    | 1.5 | 2900 | Dir   | G 1½" - DN32 PN6 | 10x30 mm     |
| ② | DRF 100/2/G40H A1CT/50 | 400 | 3      | 1.1     | 0.74    | 1.9 | 2900 | Dir   | G 1½" - DN32 PN6 | 10x30 mm     |

# DRF

## Models with vertical GAS 2" threaded discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DRF 150/2/G50V A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 2" | 10x30 mm     |
| ② | DRF 200/2/G50V A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 2" | 10x30 mm     |

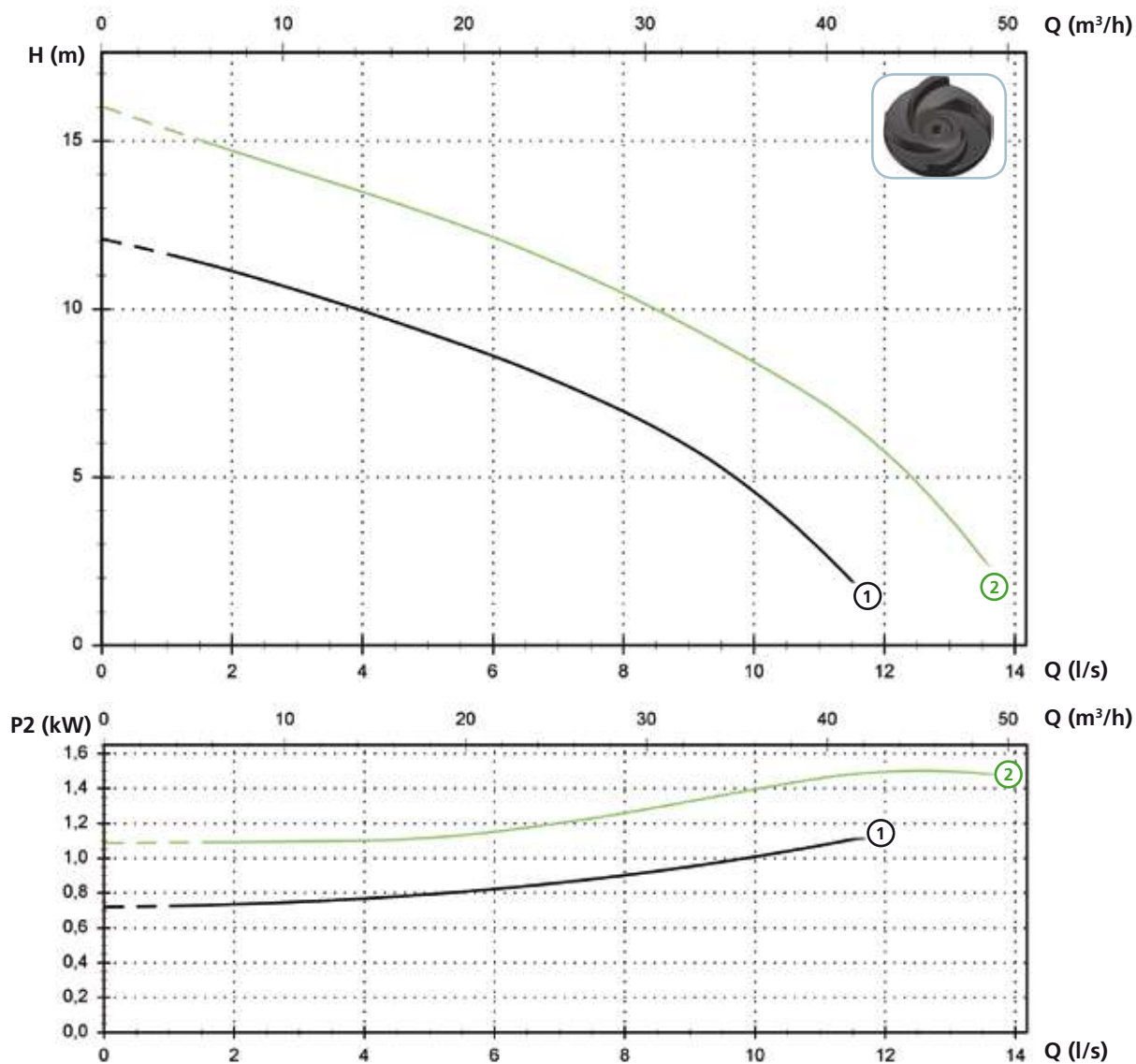
  

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① | DRF 150/2/G50V A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 2" | 10x30 mm     |
| ② | DRF 200/2/G50V A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 2" | 10x30 mm     |

**DRF**

## Models with horizontal GAS 2" threaded - DN50 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① | DRF 150/2/G50H A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 2"- DN50 PN10-16 | 10x30 mm     |
| ② | DRF 200/2/G50H A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 2"- DN50 PN10-16 | 10x30 mm     |

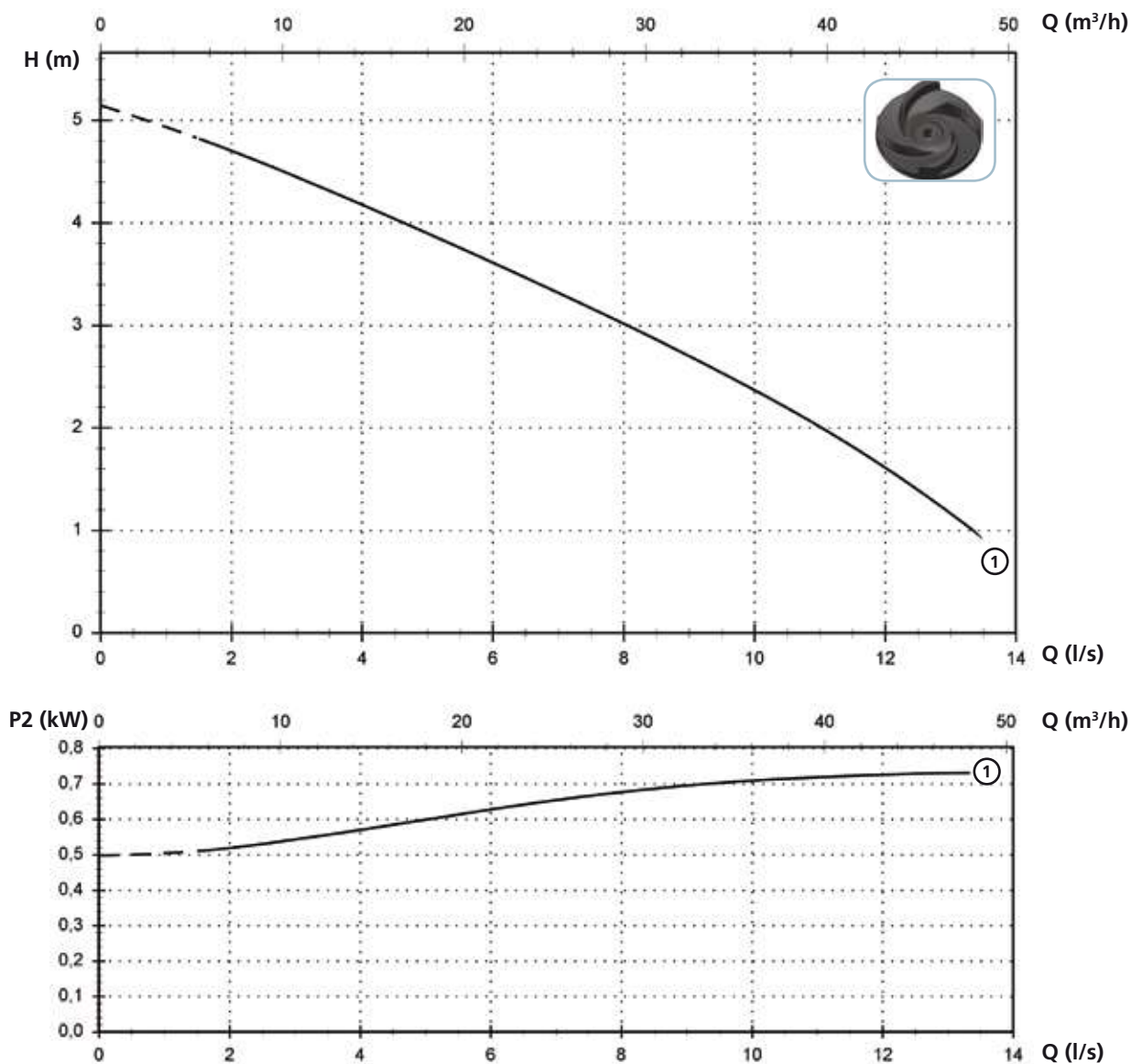
  

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø                  | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|--------------------|--------------|
| ① | DRF 150/2/G50H A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 2"- DN50 PN10-16 | 10x30 mm     |
| ② | DRF 200/2/G50H A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 2"- DN50 PN10-16 | 10x30 mm     |

# DRF

## Models with horizontal DN65 PN10-16 flanged discharge - 4 poles

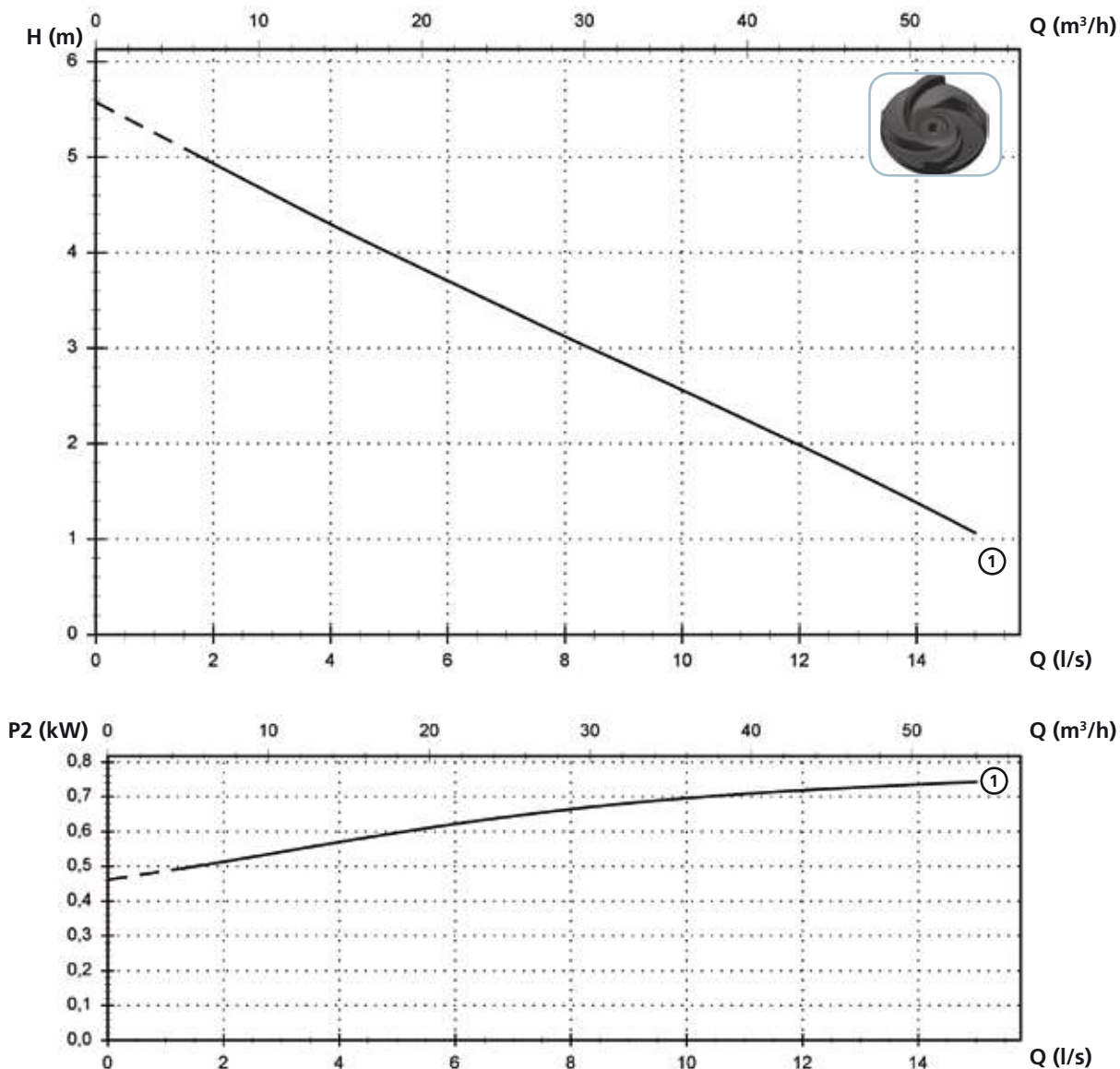
### Performances



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① DRF 100/4/65 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN65 PN10 -16 | 50 mm        |



**DRF****Models with horizontal DN80 PN10-16 flanged discharge - 4 poles****Performances****Technical data**

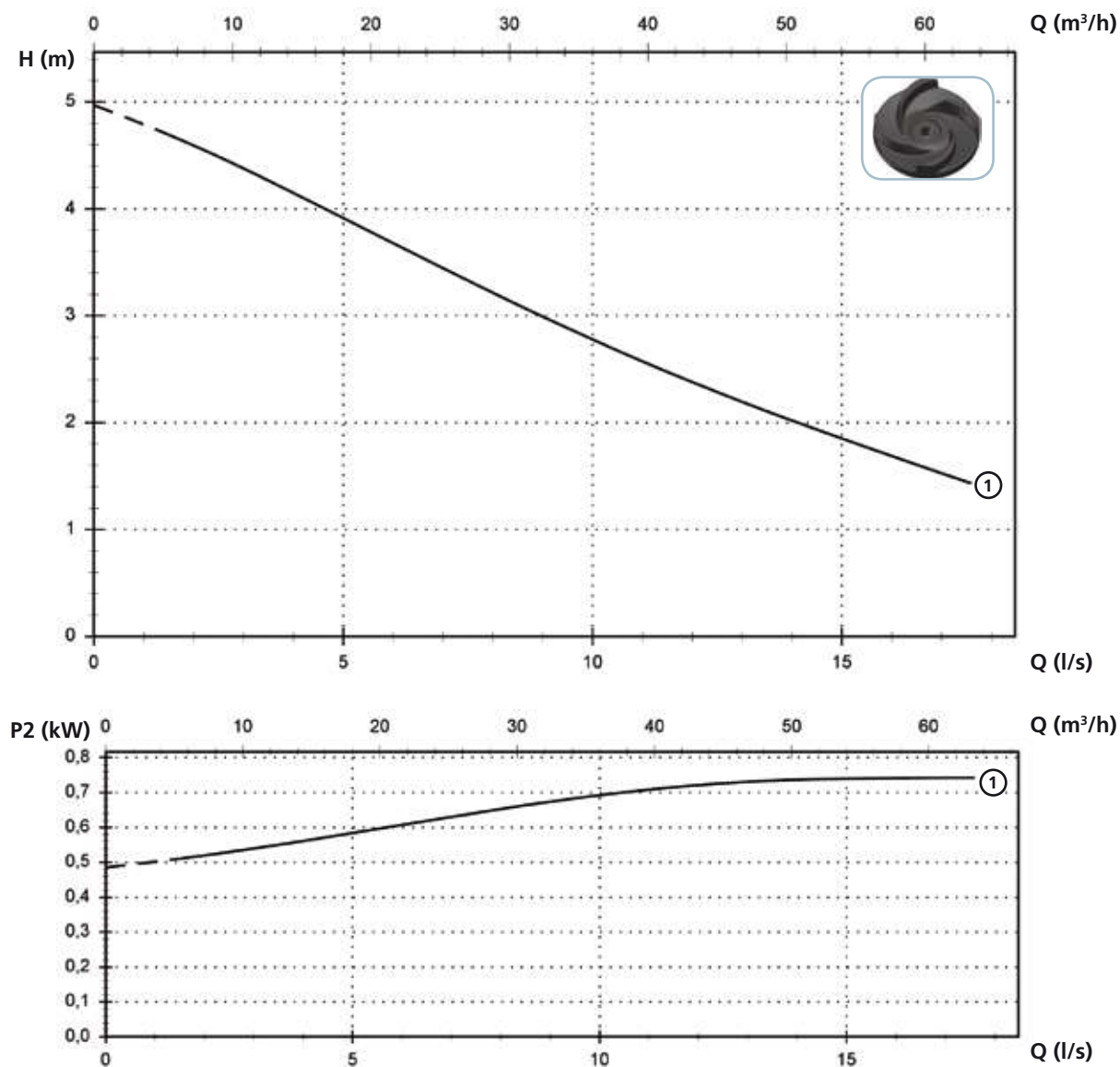
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DRF 100/4/80 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN80 PN10-16 | 50 mm        |



# DRF

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① DRF 100/4/100 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN100 PN10-16 | 50 mm        |

## Versions available

(Key to versions on page 16)

Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DRF 75/2/G40V A1CM/50  |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/2/G40V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 150/2/G50V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 200/2/G50V A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 75/2/G40H A1CM/50  |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/2/G40H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 150/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 200/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 75/2/G40V A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/2/G40V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 150/2/G50V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 200/2/G50V A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 75/2/G40H A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 150/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 200/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/4/65 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/4/80 A1CT/50   |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DRF 100/4/100 A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.

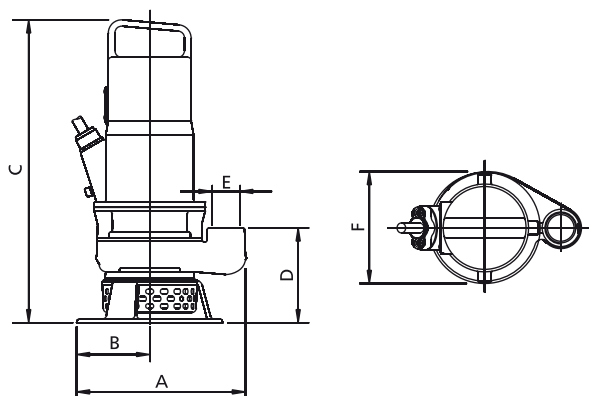
Capacitor supplied but not connected to the pump cable.

The use of an electrical panel as circuit breaker housing is mandatory.

For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights

### Models with vertical discharge - 2 poles



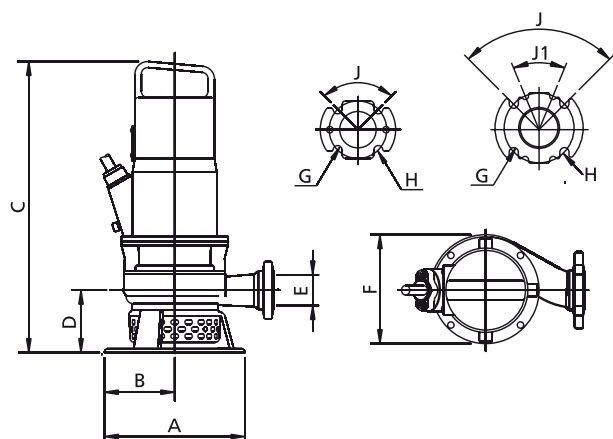
|                           | A   | B   | C   | D   | E     | F   | kg |
|---------------------------|-----|-----|-----|-----|-------|-----|----|
| DRF 75/2/G40V A1CM(T)/50  | 225 | 80  | 455 | 145 | G 1½" | 170 | 27 |
| DRF 100/2/G40V A1CM(T)/50 | 225 | 80  | 455 | 145 | G 1½" | 170 | 28 |
| DRF 150/2/G50V A1CM(T)/50 | 265 | 100 | 465 | 165 | G 2"  | 190 | 32 |
| DRF 200/2/G50V A1CM(T)/50 | 265 | 100 | 465 | 165 | G 2"  | 190 | 32 |

Dimensions in mm

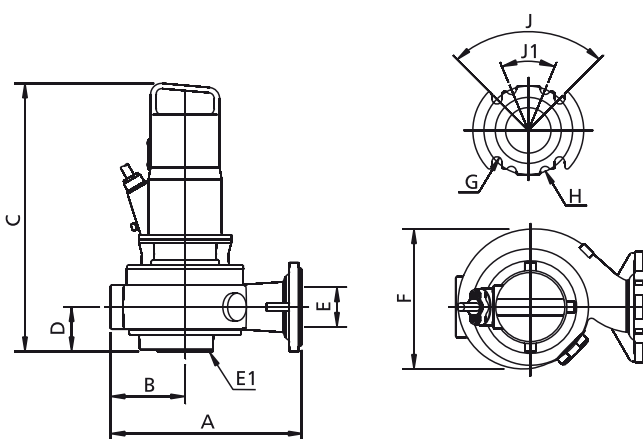
All weights and dimensions are indicative only

# DRF

## Models with horizontal discharge - 2 poles



## Models with horizontal discharge - 4 poles



|                           | A   | B   | C   | D   | E     | E1(*) | F   | G  | H   | J   | J1  | kg |
|---------------------------|-----|-----|-----|-----|-------|-------|-----|----|-----|-----|-----|----|
| DRF 75/2/G40H A1CM(T)/50  | 225 | 80  | 455 | 100 | G 1½" | -     | 170 | 14 | 90  | 90° | -   | 28 |
| DRF 100/2/G40H A1CM(T)/50 | 225 | 80  | 455 | 100 | G 1½" | -     | 170 | 14 | 90  | 90° | -   | 31 |
| DRF 150/2/G50H A1CM(T)/50 | 250 | 90  | 465 | 105 | G 2"  | -     | 195 | 18 | 125 | 90° | -   | 31 |
| DRF 200/2/G50H A1CM(T)/50 | 250 | 90  | 465 | 105 | G 2"  | -     | 195 | 18 | 125 | 90° | -   | 32 |
| DRF 100/4/65 A1CT/50      | 345 | 135 | 455 | 80  | 65    | 65    | 255 | 18 | 145 | 90° | -   | 41 |
| DRF 100/4/80 A1CT/50      | 345 | 135 | 455 | 80  | 80    | 65    | 255 | 18 | 160 | 90° | 45° | 42 |
| DRF 100/4/100 A1CT/50     | 430 | 170 | 475 | 90  | 100   | 80    | 325 | 18 | 180 | 45° | -   | 47 |

Dimensions in mm

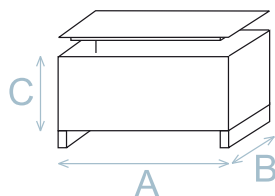
All weights and dimensions are indicative only

(\*) DN of the suction flange - PN6

## Packaging dimension

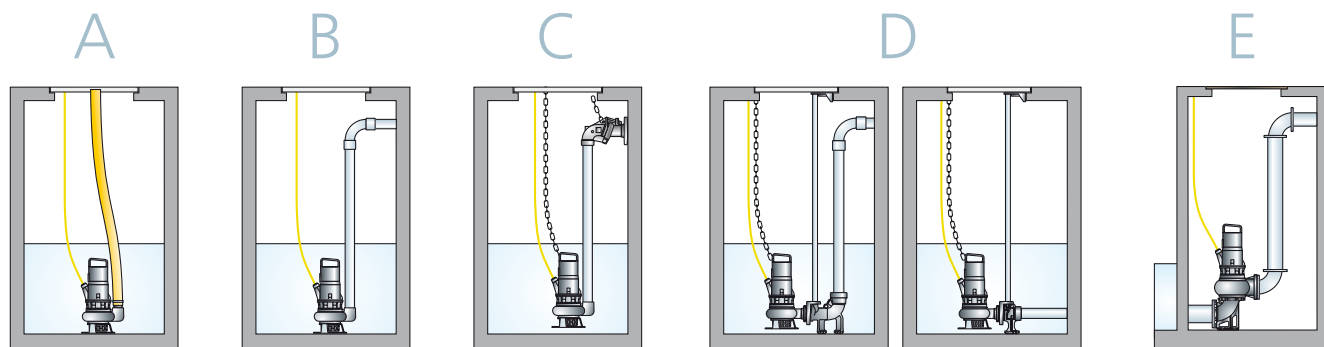
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DRF 75/2/G40V A1CM(T)/50  | 580 | 310 | 310 |
| DRF 100/2/G40V A1CM(T)/50 | 580 | 310 | 310 |
| DRF 150/2/G50V A1CM(T)/50 | 580 | 310 | 310 |
| DRF 200/2/G50V A1CM(T)/50 | 580 | 310 | 310 |
| DRF 75/2/G40H A1CM(T)/50  | 580 | 310 | 310 |
| DRF 100/2/G40H A1CM(T)/50 | 580 | 310 | 310 |
| DRF 150/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| DRF 200/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| DRF 100/4/65 A1CT/50      | 725 | 445 | 415 |
| DRF 100/4/80 A1CT/50      | 725 | 445 | 415 |
| DRF 100/4/100 A1CT/50     | 725 | 445 | 415 |

Dimension in mm



All weights and dimensions are indicative only

## Installations available



Dry installation available in S3 mode for models with suction flange.  
Contact Customer Service for more information.



# DRN

## Multi-channel open impeller

All product images are indicative only



### General characteristics

| Multi-channel open impeller |                         |
|-----------------------------|-------------------------|
| motor power                 | 1,1 ÷ 4,1 kW            |
| poles                       | 2 / 4 / 6               |
| delivery port               | DN65 ÷ DN150 horizontal |
| free passage                | 40 ÷ 100 mm             |
| max flow rate               | 47.1 l/s                |
| max head                    | 23.2 m                  |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in ATEX explosion-proof version.

### Applications

Designed for mainly professional and industrial use such as wastewater treatment plants, sewage systems and livestock farms, it is particularly suitable for the treatment of liquids containing suspended solids or filaments, and low or medium density activated sludges. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Carbon steel - Fe360 ÷ Fe370                           |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

DRN



### Cooling system

Dry installation available using the cooling jacket (see details to page 17)



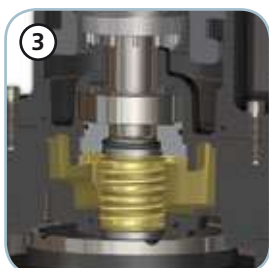
### Cable gland

Cable gland system to guarantee perfect water-tightness. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



### Mechanical seals

Two silicon carbide (2SiC) mechanical seals in oil sump.



### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime. A threaded flange can be easily removed to replace the mechanical seals.



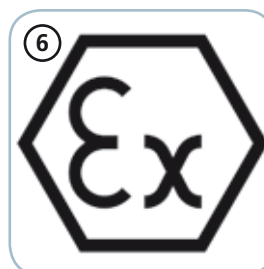
### Drive shaft

A special bronze bush coupled to the tapered shaft enables quick and easy impeller clearance adjustment, thus maintaining the pump's hydraulic specifications.



### Anti-clogging system

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.



### EX

Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

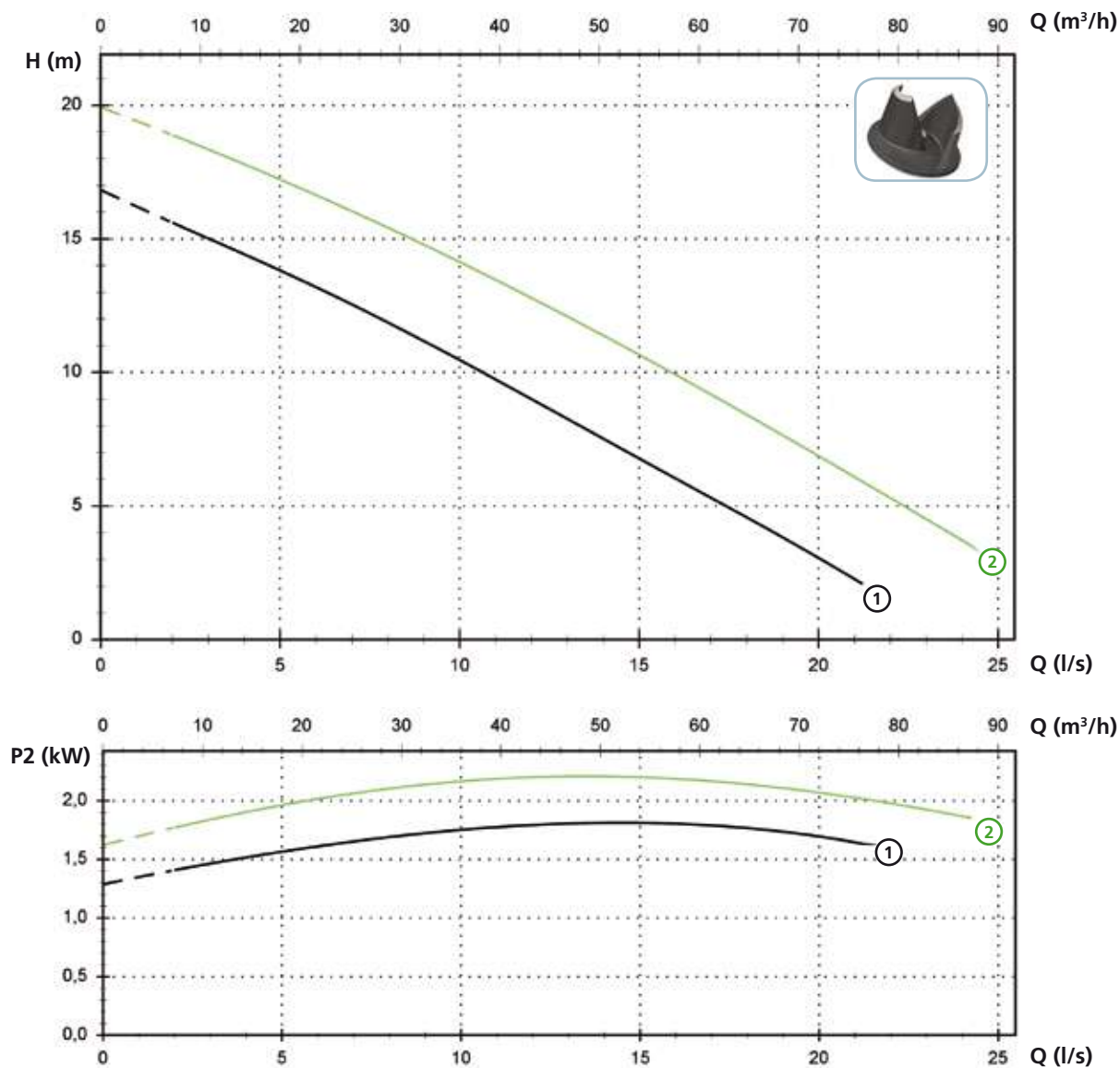
CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68



# DRN

## Models with horizontal DN65 PN10-16 flanged delivery port - 2 poles

### Performances



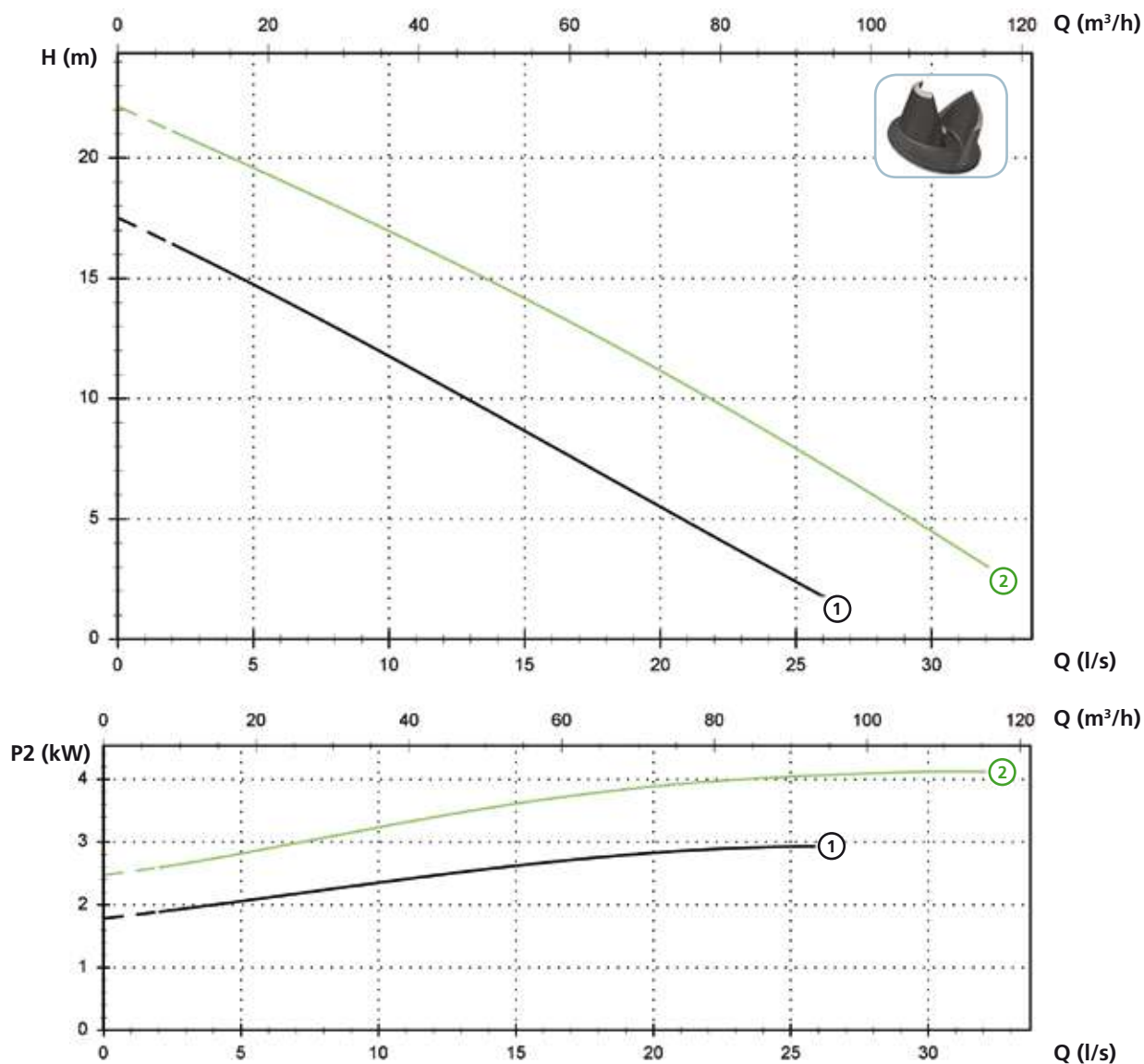
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① DRN 250/2/65 A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | DN65 PN10-16 | 40 mm        |
| ① DRN 250/2/65 A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | DN65 PN10-16 | 40 mm        |
| ② DRN 300/2/65 A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | DN65 PN10-16 | 40 mm        |

**DRN**

## Models with horizontal DN65 PN10-16 flanged delivery port - 2 poles

### Performances



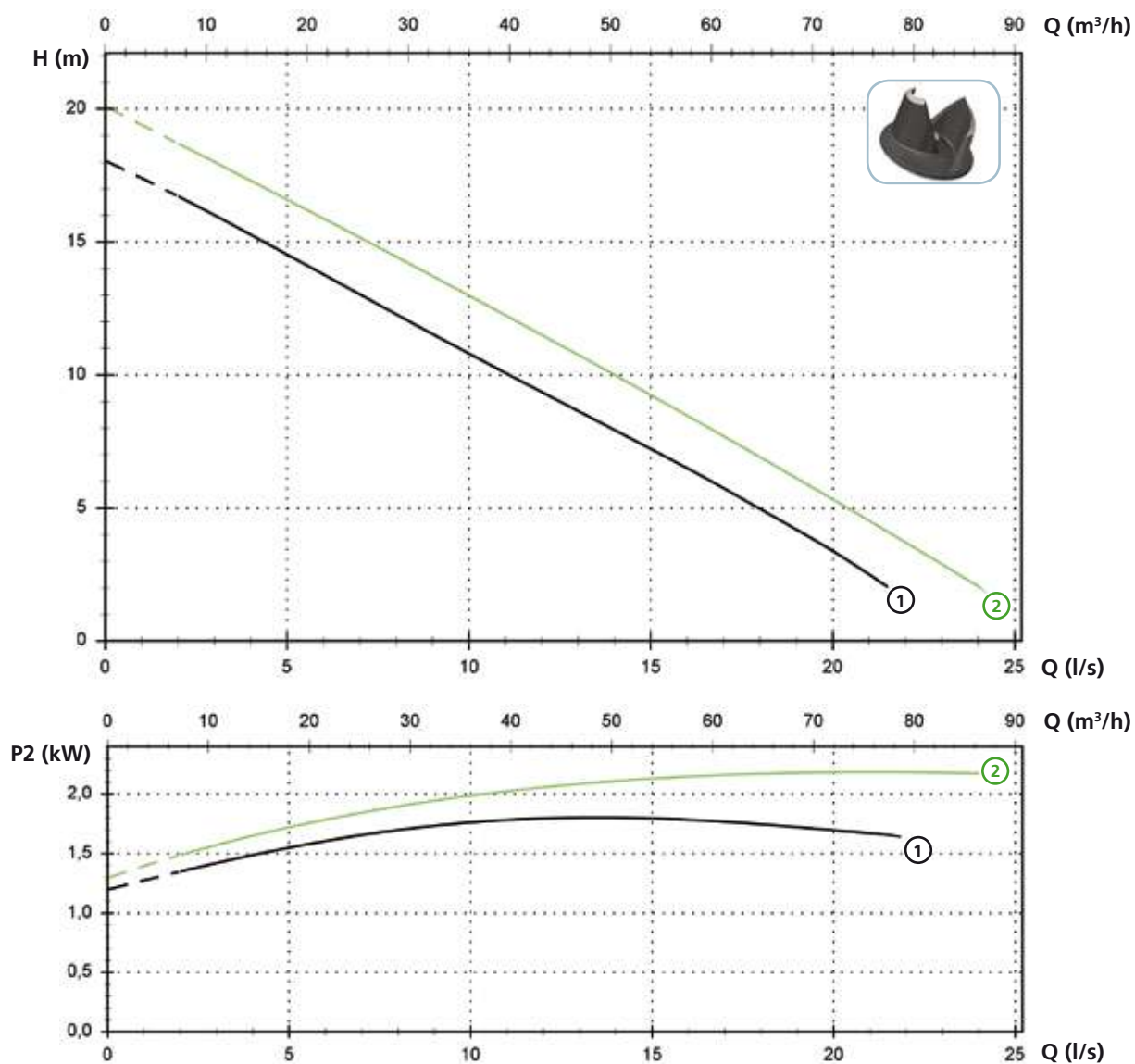
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DRN 400/2/65 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |
| ② DRN 550/2/65 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |

# DRN

## Models with horizontal DN80 PN10-16 flanged delivery port - 2 poles

### Performances

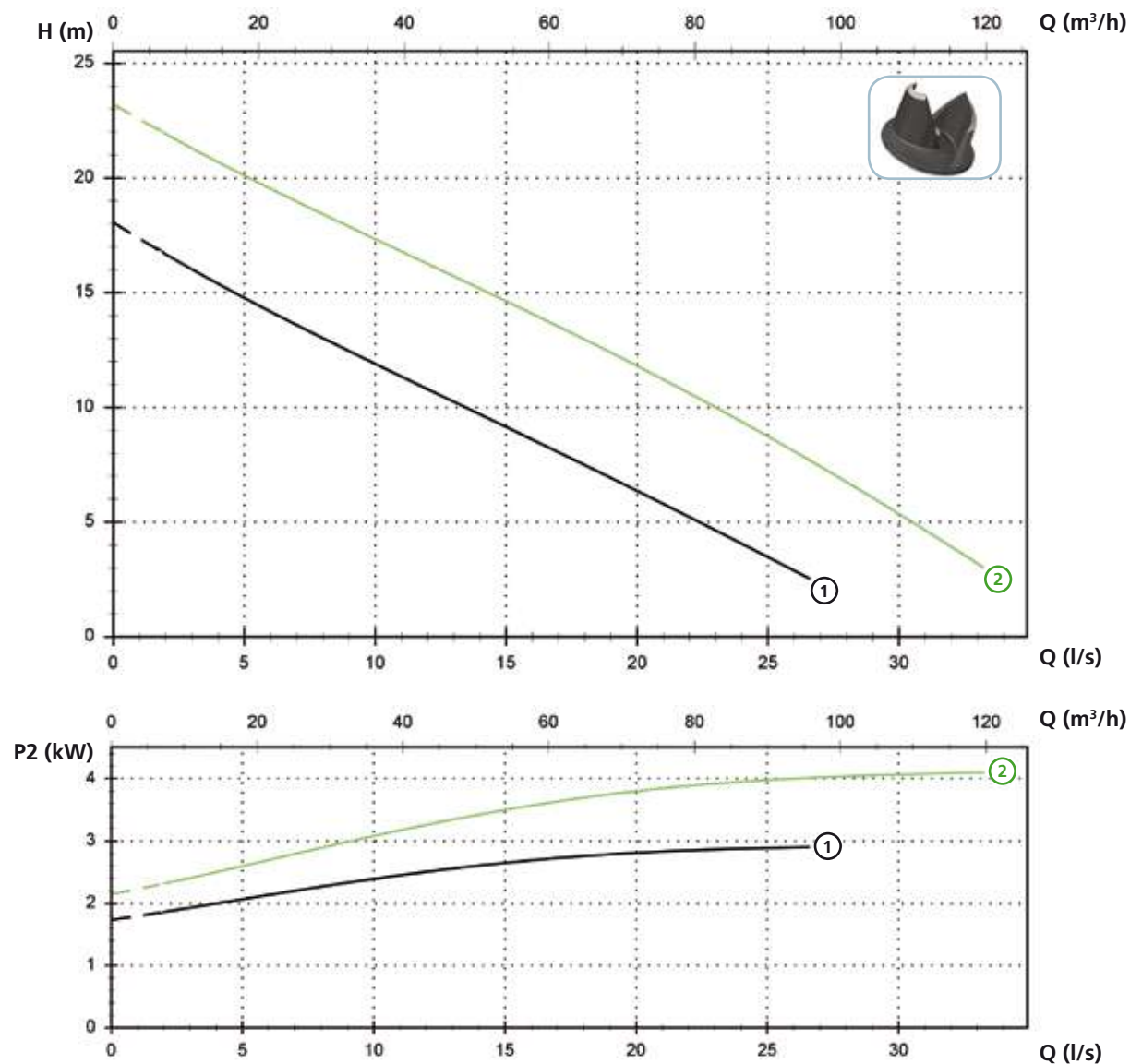


### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① DRN 250/2/80 A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | DN80 PN10-16 | 40 mm        |
|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
| ① DRN 250/2/80 A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | DN80 PN10-16 | 40 mm        |
| ② DRN 300/2/80 A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | DN80 PN10-16 | 40 mm        |

## Models with horizontal DN80 PN10-16 flanged delivery port - 2 poles

### Performances



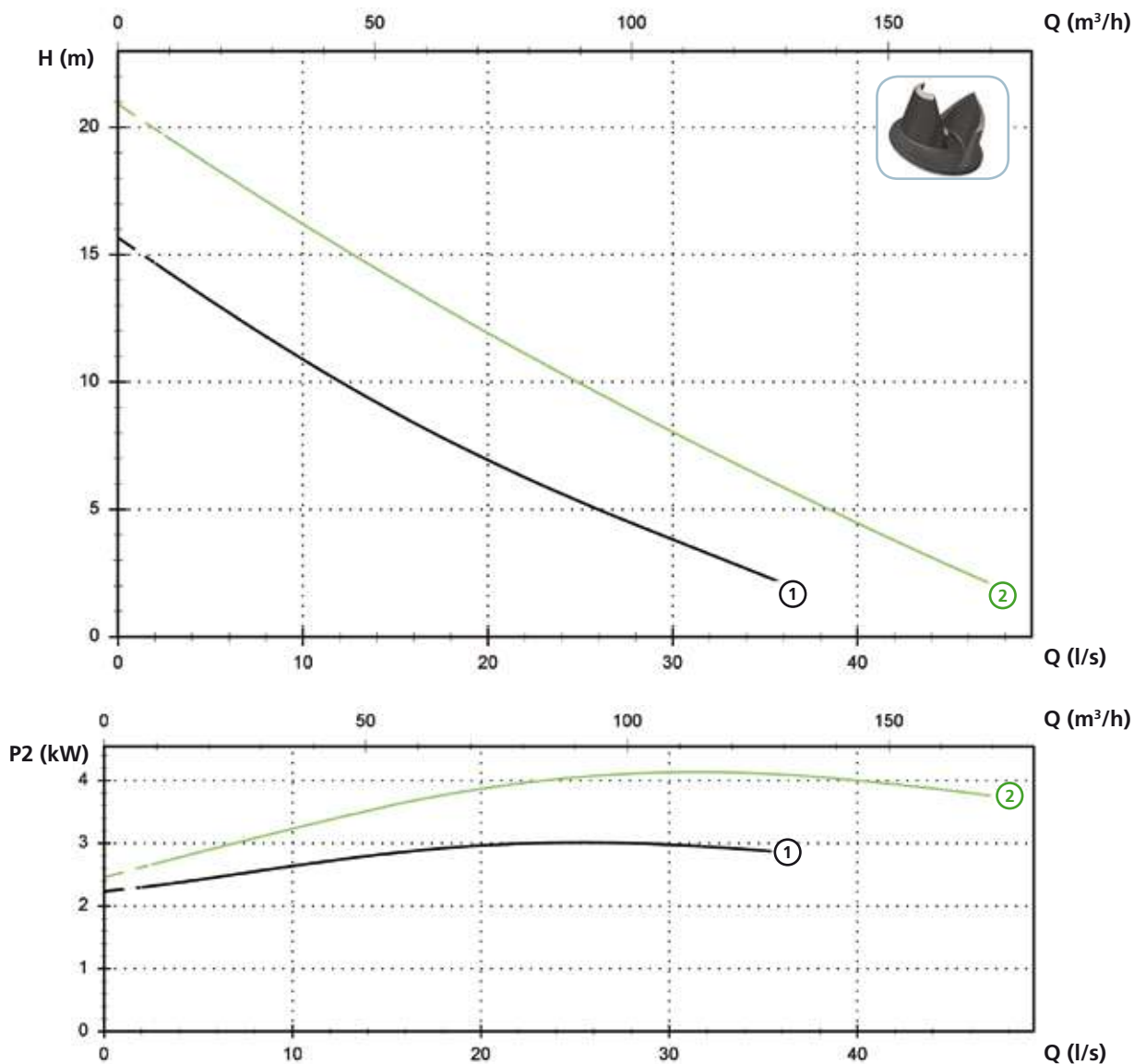
### Technical data

|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | DRN 400/2/80 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | DN80 PN10-16 | 45 mm        |
| ② | DRN 550/2/80 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | DN80 PN10-16 | 45 mm        |

# DRN

## Models with horizontal DN100 PN10-16 flanged delivery port - 2 poles

### Performances

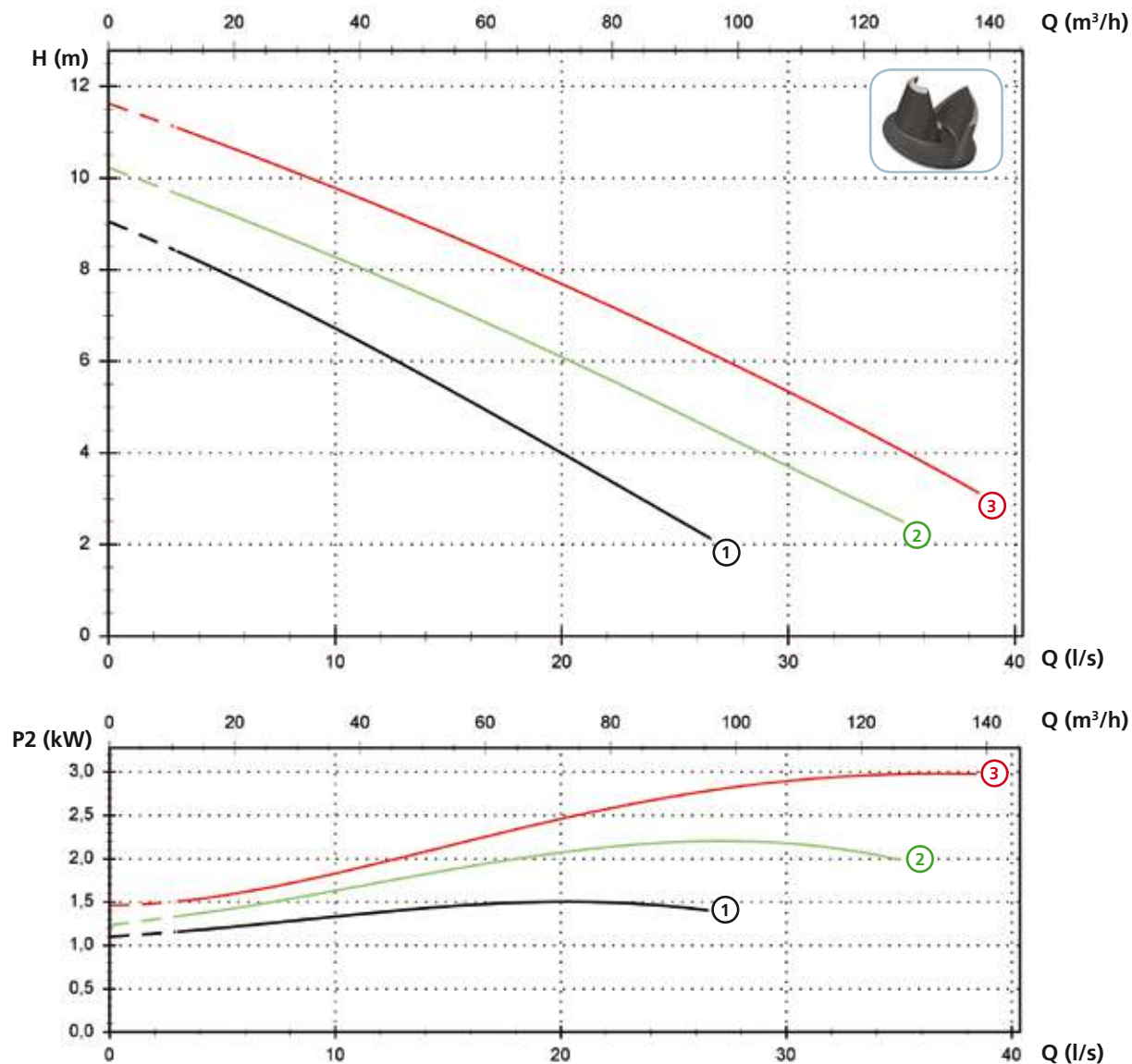


### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① DRN 400/2/100 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | DN100 PN10-16 | 50 mm        |
| ② DRN 550/2/100 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | DN100 PN10-16 | 50 mm        |

## Models with horizontal DN80 PN10-16 flanged delivery port - 4 poles

### Performances



### Technical data

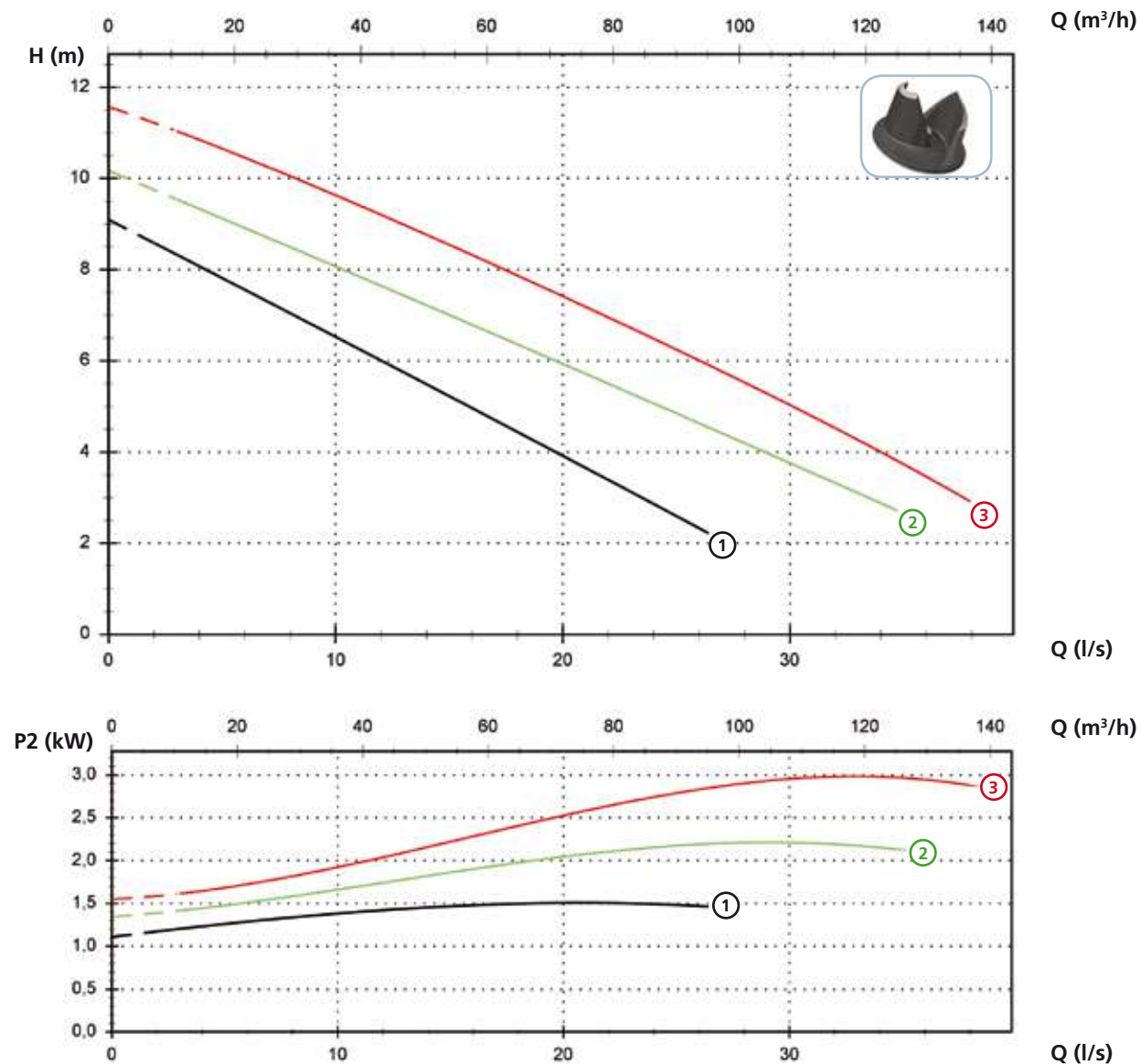
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DRN 200/4/80 A1DT/50 | 400 | 3      | 2.0     | 1.5     | 4.1 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |
| ② DRN 300/4/80 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |
| ③ DRN 400/4/80 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |



# DRN

## Models with horizontal DN100 PN10-16 flanged delivery port - 4 poles

### Performances



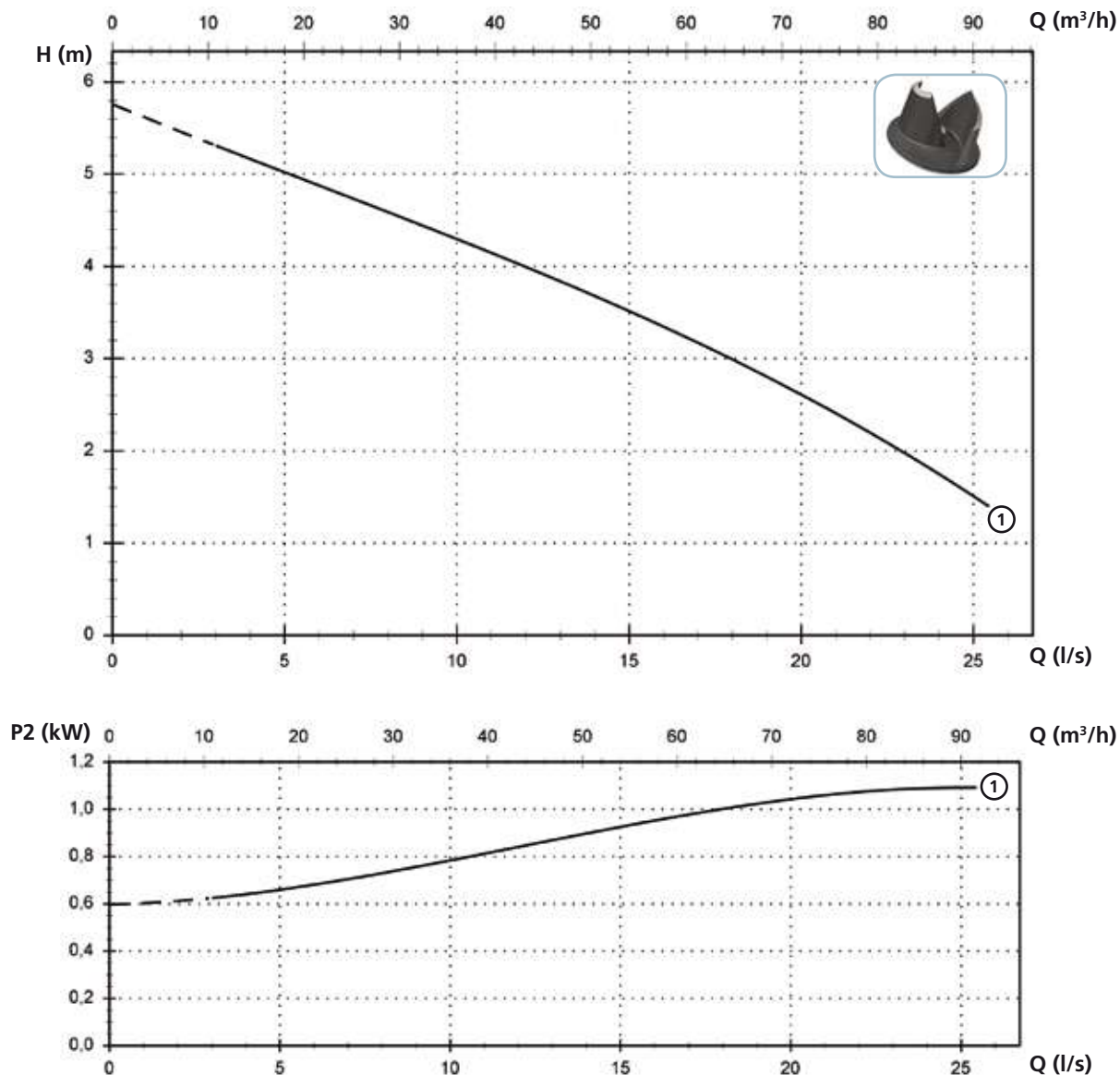
### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① | DRN 200/4/100 A1DT/50 | 400 | 3      | 2.0     | 1.5     | 4.1 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |
| ② | DRN 300/4/100 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |
| ③ | DRN 400/4/100 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |

DRN

## Models with horizontal DN80 PN10-16 flanged delivery port - 6 poles

### Performances



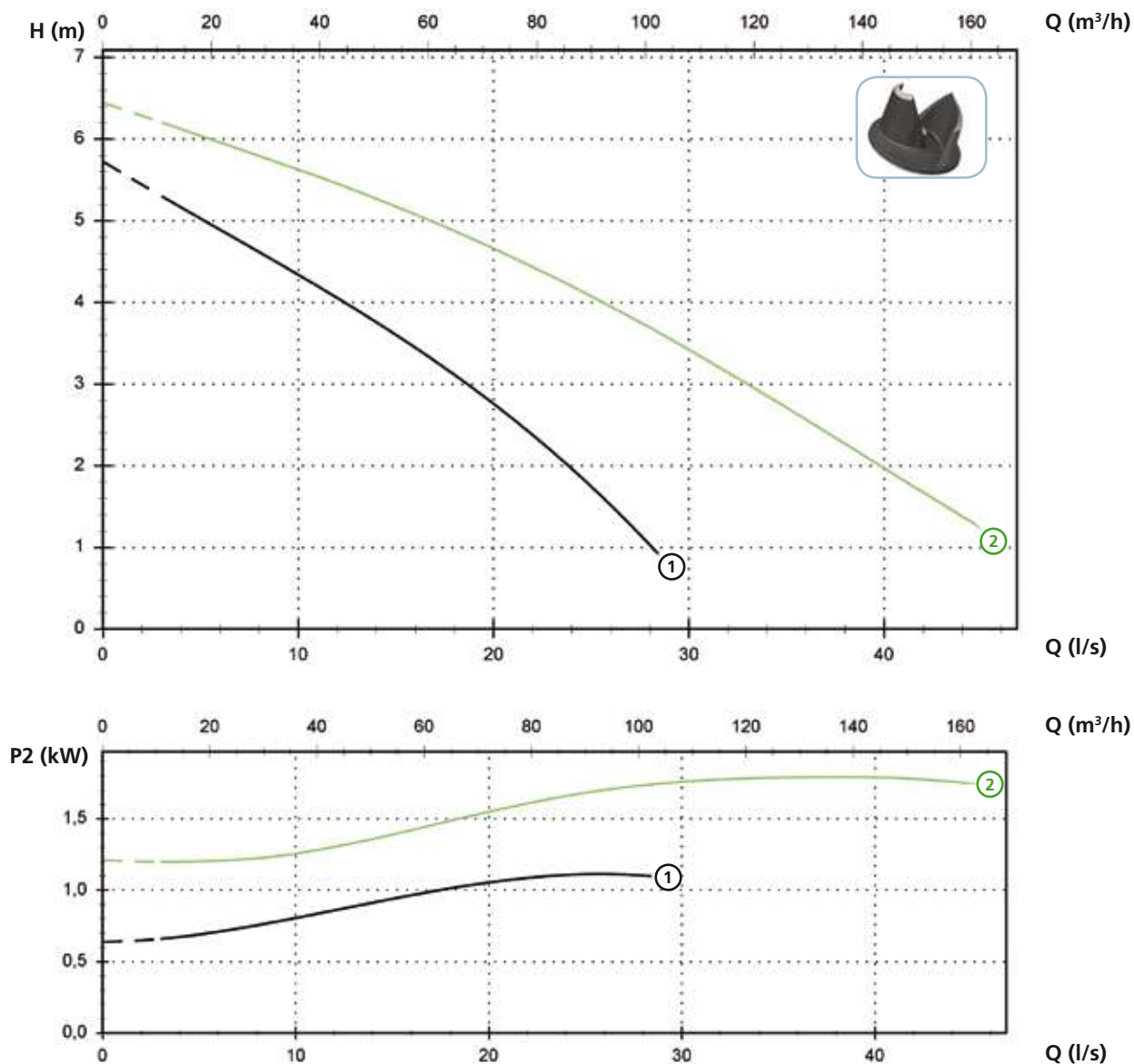
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|-----|-------|--------------|--------------|
| ① DRN 150/6/80 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 3.7 | 960 | Dir   | DN80 PN10-16 | 80 mm        |

# DRN

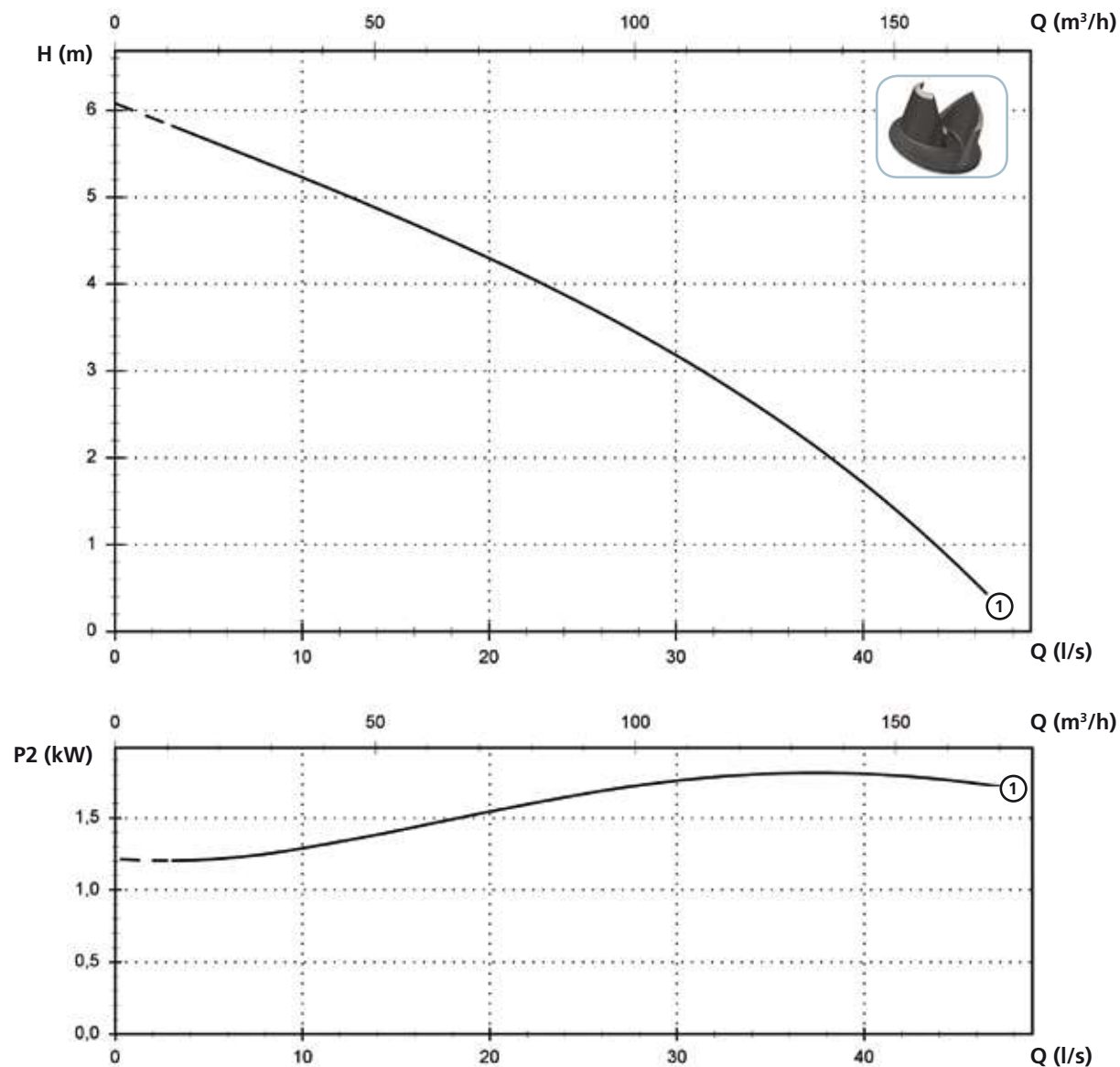
## Models with horizontal DN100 PN10-16 flanged delivery port - 6 poles

### Performances



### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|-----|-------|---------------|--------------|
| ① | DRN 150/6/100 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 3.7 | 960 | Dir   | DN100 PN10-16 | 80 mm        |
| ② | DRN 250/6/100 A1FT/50 | 400 | 3      | 2.6     | 1.8     | 5.7 | 960 | Dir   | DN100 PN10-16 | 100 mm       |

**DRN****Models with horizontal DN150 PN10-16 flanged delivery port - 6 poles****Performances****Technical data**

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|-----|-------|---------------|--------------|
| ① DRN 250/6/150 A1FT/50 | 400 | 3      | 2.6     | 1.8     | 5.7 | 960 | Dir   | DN150 PN10-16 | 100 mm       |

# DRN

## Versions available

(Key to versions on page 16)

|                       | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|-----------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                       | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DRN 250/2/65 A1DM/50  |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 250/2/65 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 300/2/65 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 400/2/65 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 550/2/65 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 250/2/80 A1DM/50  |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 250/2/80 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 300/2/80 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 400/2/80 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 550/2/80 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 400/2/100 A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 550/2/100 A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 200/4/80 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 300/4/80 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 400/4/80 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 200/4/100 A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 300/4/100 A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 400/4/100 A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 150/6/80 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 150/6/100 A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 250/6/100 A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| DRN 250/6/150 A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.  
Start capacitor inside the pump. Circuit breaker supplied but not connected to the pump cable.  
The use of an electrical panel as circuit breaker housing is mandatory. For installation please see use and maintenance booklet.

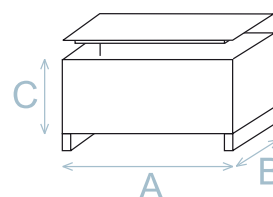
## Packaging dimension

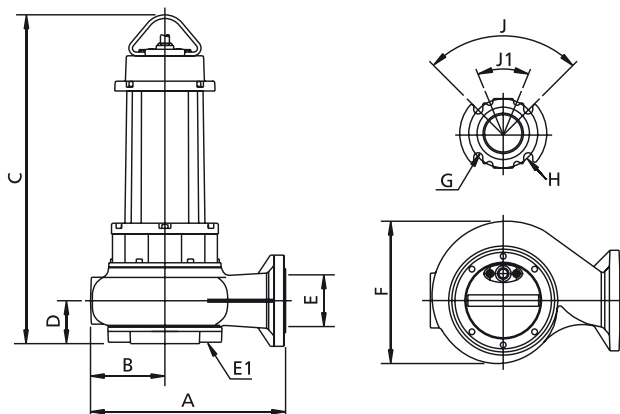
|                         | A   | B   | C   |
|-------------------------|-----|-----|-----|
| DRN 250/2/65 A1DM(T)/50 | 725 | 445 | 415 |
| DRN 300/2/65 A1DT/50    | 725 | 445 | 415 |
| DRN 400/2/65 A1FT/50    | 725 | 445 | 415 |
| DRN 550/2/65 A1FT/50    | 725 | 445 | 415 |
| DRN 250/2/80 A1DM(T)/50 | 725 | 445 | 415 |
| DRN 300/2/80 A1DT/50    | 725 | 445 | 415 |
| DRN 400/2/80 A1FT/50    | 725 | 445 | 415 |
| DRN 550/2/80 A1FT/50    | 725 | 445 | 415 |
| DRN 400/2/100 A1FT/50   | 725 | 445 | 415 |
| DRN 550/2/100 A1FT/50   | 725 | 445 | 415 |
| DRN 200/4/80 A1DT/50    | 725 | 445 | 415 |
| DRN 300/4/80 A1FT/50    | 725 | 445 | 415 |
| DRN 400/4/80 A1FT/50    | 725 | 445 | 415 |
| DRN 200/4/100 A1DT/50   | 725 | 445 | 415 |
| DRN 300/4/100 A1FT/50   | 725 | 445 | 415 |
| DRN 400/4/100 A1FT/50   | 725 | 445 | 415 |
| DRN 150/6/80 A1DT/50    | 915 | 515 | 555 |

|                       | A   | B   | C   |
|-----------------------|-----|-----|-----|
| DRN 150/6/100 A1DT/50 | 915 | 515 | 555 |
| DRN 250/6/100 A1FT/50 | 915 | 515 | 555 |
| DRN 250/6/150 A1FT/50 | 915 | 515 | 555 |

Dimension in mm

All weights and dimensions are indicative only



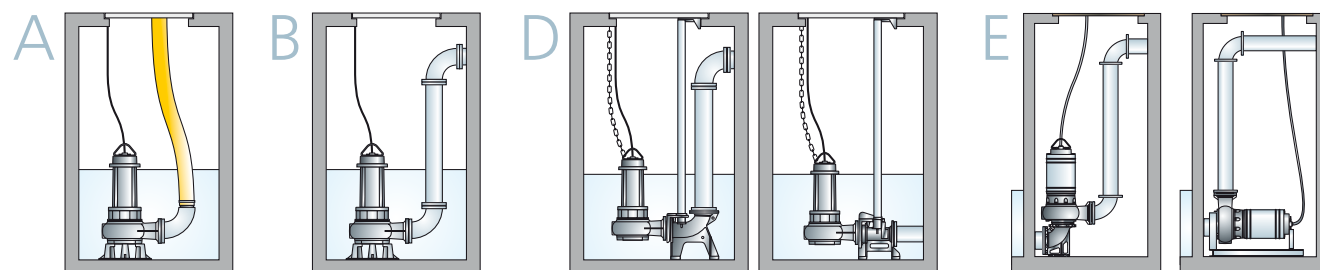
**DRN****Overall dimensions and weights**

|                         | A   | B   | C   | D   | E   | E1(*) | F   | G  | H   | J   | J1  | kg  |
|-------------------------|-----|-----|-----|-----|-----|-------|-----|----|-----|-----|-----|-----|
| DRN 250/2/65 A1DM(T)/50 | 340 | 135 | 545 | 80  | 65  | 65    | 255 | 18 | 145 | 90° | -   | 56  |
| DRN 300/2/65 A1DT/50    | 340 | 135 | 545 | 80  | 65  | 65    | 255 | 18 | 145 | 90° | -   | 58  |
| DRN 400/2/65 A1FT/50    | 340 | 135 | 685 | 80  | 65  | 65    | 260 | 18 | 145 | 90° | -   | 74  |
| DRN 550/2/65 A1FT/50    | 340 | 135 | 685 | 80  | 65  | 65    | 260 | 18 | 145 | 90° | -   | 77  |
| DRN 250/2/80 A1DM(T)/50 | 345 | 135 | 545 | 80  | 80  | 65    | 255 | 18 | 160 | 90° | 45° | 56  |
| DRN 300/2/80 A1DT/50    | 345 | 135 | 545 | 80  | 80  | 65    | 255 | 18 | 160 | 90° | 45° | 58  |
| DRN 400/2/80 A1FT/50    | 345 | 135 | 685 | 80  | 80  | 65    | 260 | 18 | 160 | 90° | 45° | 79  |
| DRN 550/2/80 A1FT/50    | 345 | 135 | 685 | 80  | 80  | 65    | 260 | 18 | 160 | 90° | 45° | 77  |
| DRN 400/2/100 A1FT/50   | 430 | 170 | 705 | 90  | 100 | 80    | 325 | 18 | 180 | 45° | -   | 82  |
| DRN 550/2/100 A1FT/50   | 430 | 170 | 705 | 90  | 100 | 80    | 325 | 18 | 180 | 45° | -   | 85  |
| DRN 200/4/80 A1DT/50    | 390 | 150 | 590 | 90  | 80  | 100   | 290 | 18 | 160 | 90° | 45° | 66  |
| DRN 300/4/80 A1FT/50    | 390 | 150 | 700 | 90  | 80  | 100   | 290 | 18 | 160 | 90° | 45° | 87  |
| DRN 400/4/80 A1FT/50    | 390 | 150 | 700 | 90  | 80  | 100   | 290 | 18 | 160 | 90° | 45° | 89  |
| DRN 200/4/100 A1DT/50   | 415 | 160 | 595 | 90  | 100 | 100   | 310 | 18 | 180 | 45° | -   | 68  |
| DRN 300/4/100 A1FT/50   | 415 | 160 | 700 | 90  | 100 | 100   | 310 | 18 | 180 | 45° | -   | 89  |
| DRN 400/4/100 A1FT/50   | 415 | 160 | 700 | 90  | 100 | 100   | 310 | 18 | 180 | 45° | -   | 91  |
| DRN 150/6/80 A1DT/50    | 390 | 150 | 590 | 90  | 80  | 100   | 290 | 18 | 160 | 90° | 45° | 66  |
| DRN 150/6/100 A1DT/50   | 415 | 160 | 595 | 90  | 100 | 100   | 310 | 18 | 180 | 45° | -   | 68  |
| DRN 250/6/100 A1FT/50   | 505 | 200 | 740 | 115 | 100 | 100   | 395 | 18 | 180 | 45° | -   | 109 |
| DRN 250/6/150 A1FT/50   | 505 | 200 | 740 | 115 | 150 | 100   | 395 | 24 | 240 | 45° | -   | 112 |

Dimensions in mm

All weights and dimensions are indicative only

(\*) DN of the suction flange - PN6

**Installations available**



# DRP

## Multi-channel open impeller

All product images are indicative only



### General characteristics

| Multi-channel open impeller |                         |
|-----------------------------|-------------------------|
| motor power                 | 4,1 ÷ 19,3 kW           |
| poles                       | 2 / 4 / 6               |
| discharge                   | DN80 ÷ DN150 horizontal |
| free passage                | max 125 mm              |
| max flow rate               | 140.9 l/s               |
| max head                    | 52.6 m                  |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

### Applications

Designed to transport heavily soiled wastewater, activated sludges and solids. Particularly suitable for applications in wastewater treatment plants, sewer systems, civil lifting systems and the paper, tanning and leather industries.

### Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Cast iron EN-GJL-250                                                                            |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Cooling jacket                   | Carbon steel or AISI 304 stainless steel                                                        |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                          |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

# DRP



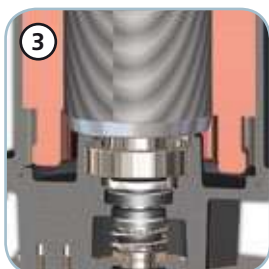
## Structure

Constructed in GJL-250 cast iron.



## Motor

Oil-bath motor with thermal protections.



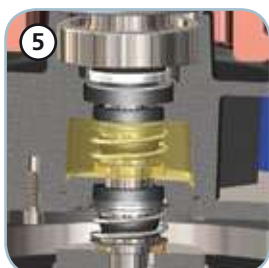
## Bearings

Shielded ball bearings with lifetime autolubrication.



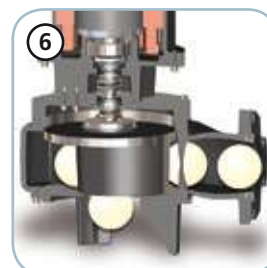
## Mechanical seals

Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.



## Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



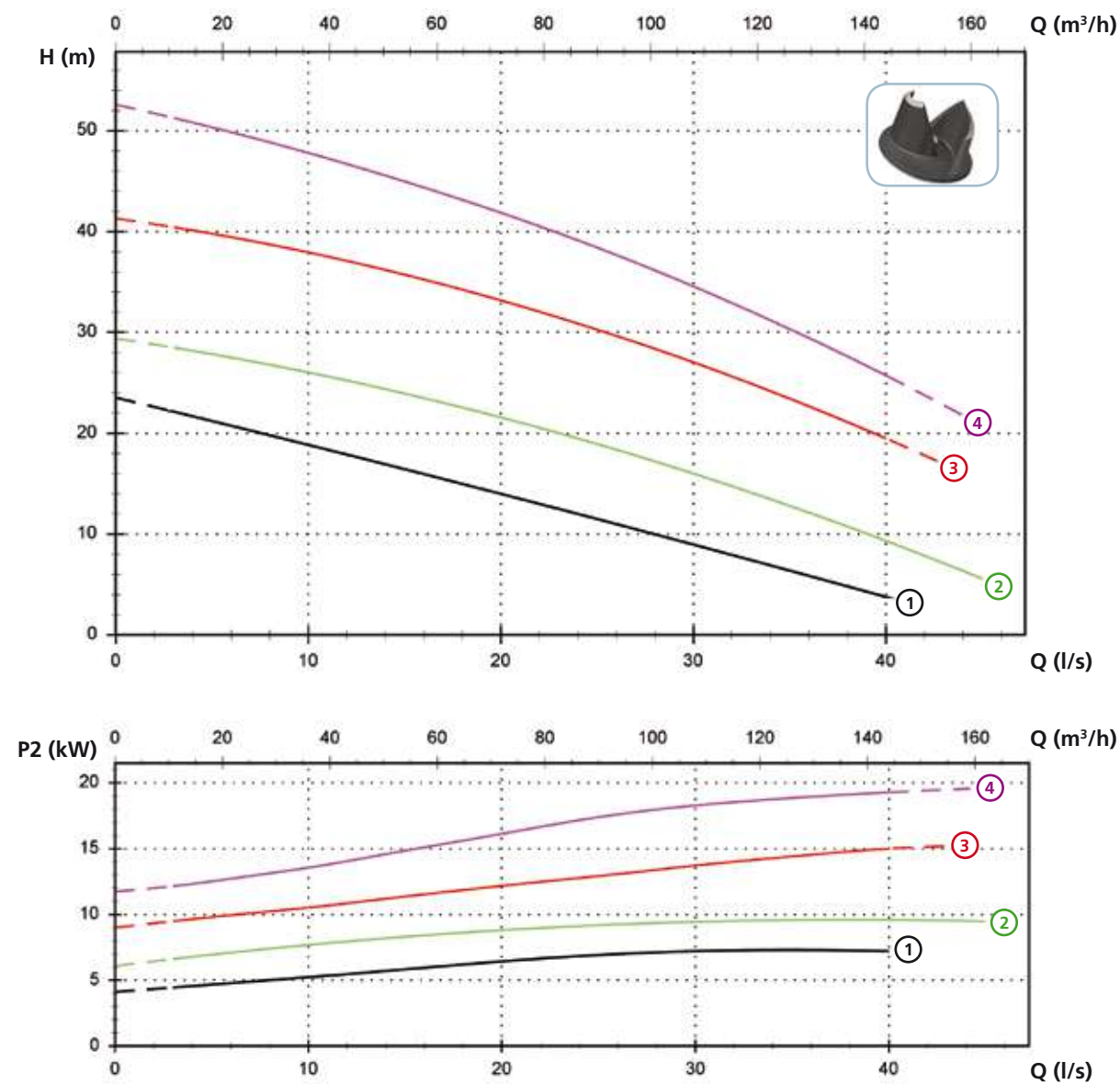
## Free passage

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DRP

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances

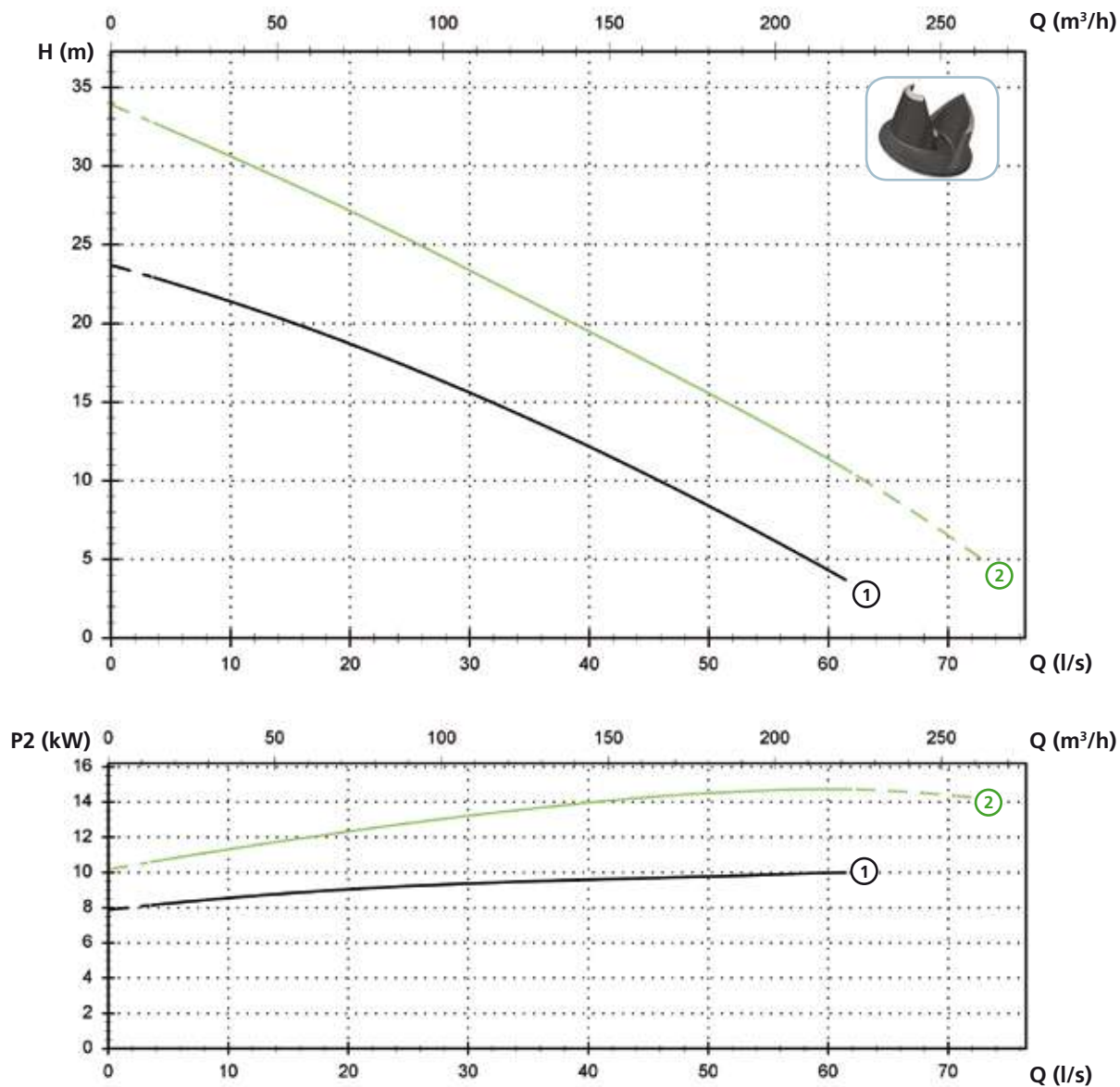


### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|---|-----------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① | DRP 750/2/80 A0HT/50  | 400 | 3      | 8.8     | 7.2     | 14.5 | 2900 | Y Δ   | DN80 PN10-16 | 55x65 mm     |
| ② | DRP 1000/2/80 A1HT/50 | 400 | 3      | 12.4    | 10      | 19.8 | 2900 | Y Δ   | DN80 PN10-16 | 55x65 mm     |
| ③ | DRP 1500/2/80 A0HT/50 | 400 | 3      | 16.7    | 15      | 27.2 | 2900 | Y Δ   | DN80 PN10-16 | 50x60 mm     |
| ④ | DRP 2000/2/80 A0IT/50 | 400 | 3      | 22.7    | 19.3    | 36   | 2900 | Y Δ   | DN80 PN10-16 | 35x60 mm     |

## Models with horizontal DN100 PN10-16 flanged discharge - 2 poles

### Performances



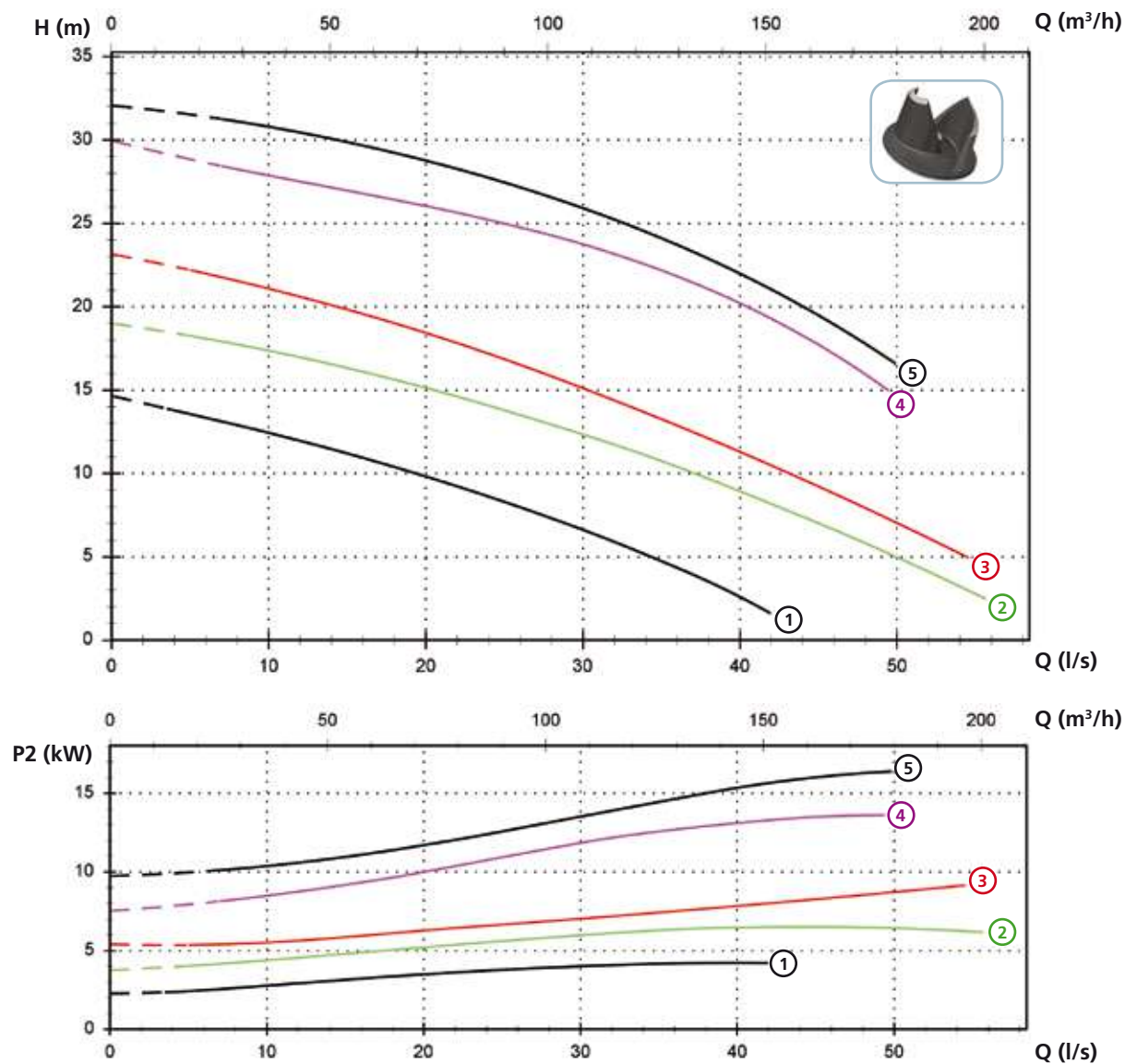
### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | DRP 1000/2/100 A1HT/50 | 400 | 3      | 12.4    | 10      | 19.8 | 2900 | Y Δ   | DN100 PN10-16 | 75x80 mm     |
| ② | DRP 1500/2/100 A0HT/50 | 400 | 3      | 17.7    | 15      | 28.2 | 2900 | Y Δ   | DN100 PN10-16 | 70x80 mm     |

# DRP

## Models with horizontal DN80 PN10/10-16 flanged discharge - 4 poles

### Performances



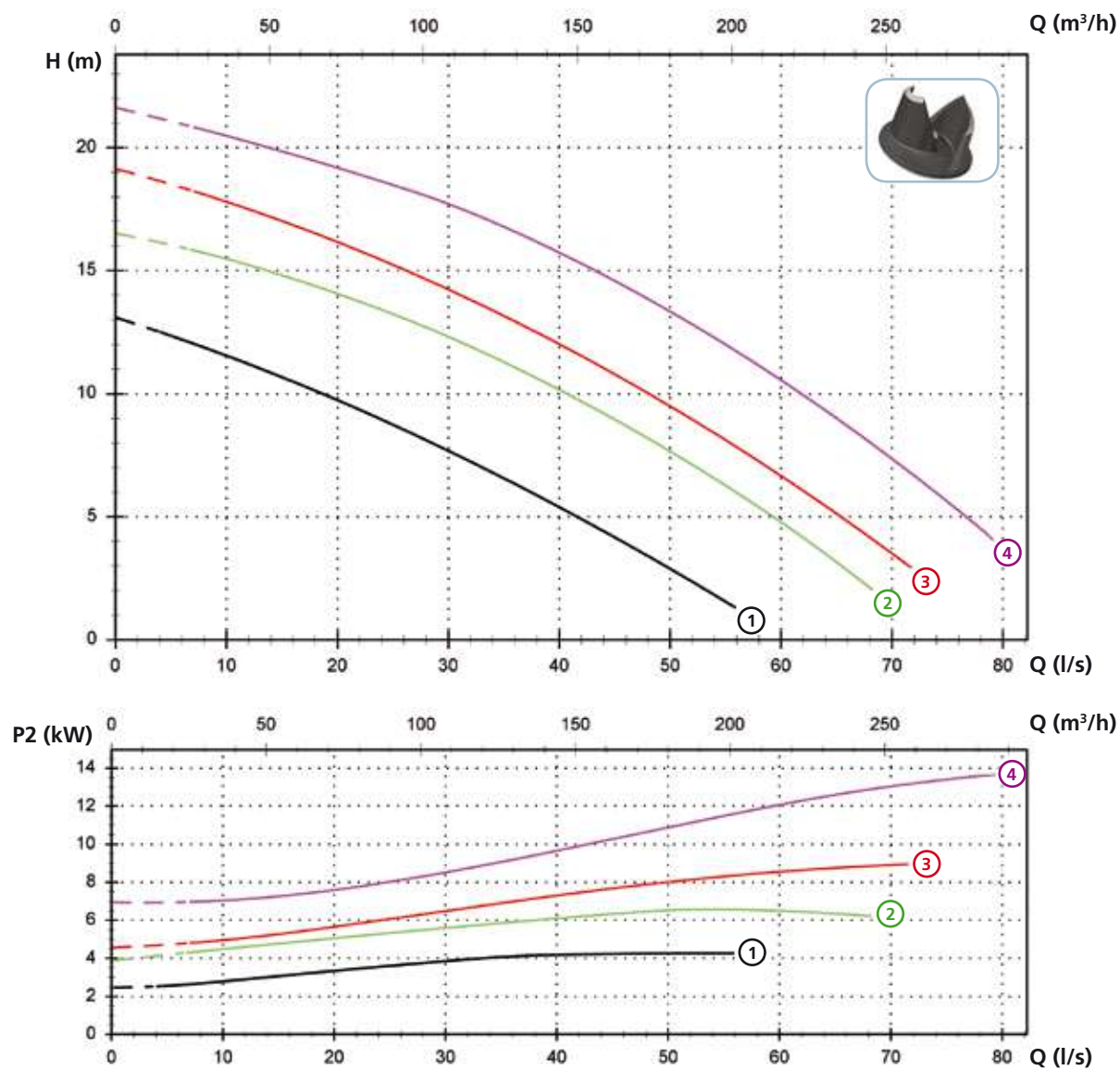
### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|---|-----------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① | DRP 550/4/80 A0GT/50  | 400 | 3      | 5.9     | 4.6     | 10.1 | 1450 | Dir   | DN80 PN10-16 | 60x70 mm     |
| ② | DRP 750/4/80 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN80 PN10-16 | 60x70 mm     |
| ③ | DRP 1000/4/80 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN80 PN10-16 | 60x70 mm     |
| ④ | DRP 1500/4/80 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | Y Δ   | DN80 PN10    | 50x70 mm     |
| ⑤ | DRP 2000/4/80 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN80 PN10    | 50x70 mm     |



## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

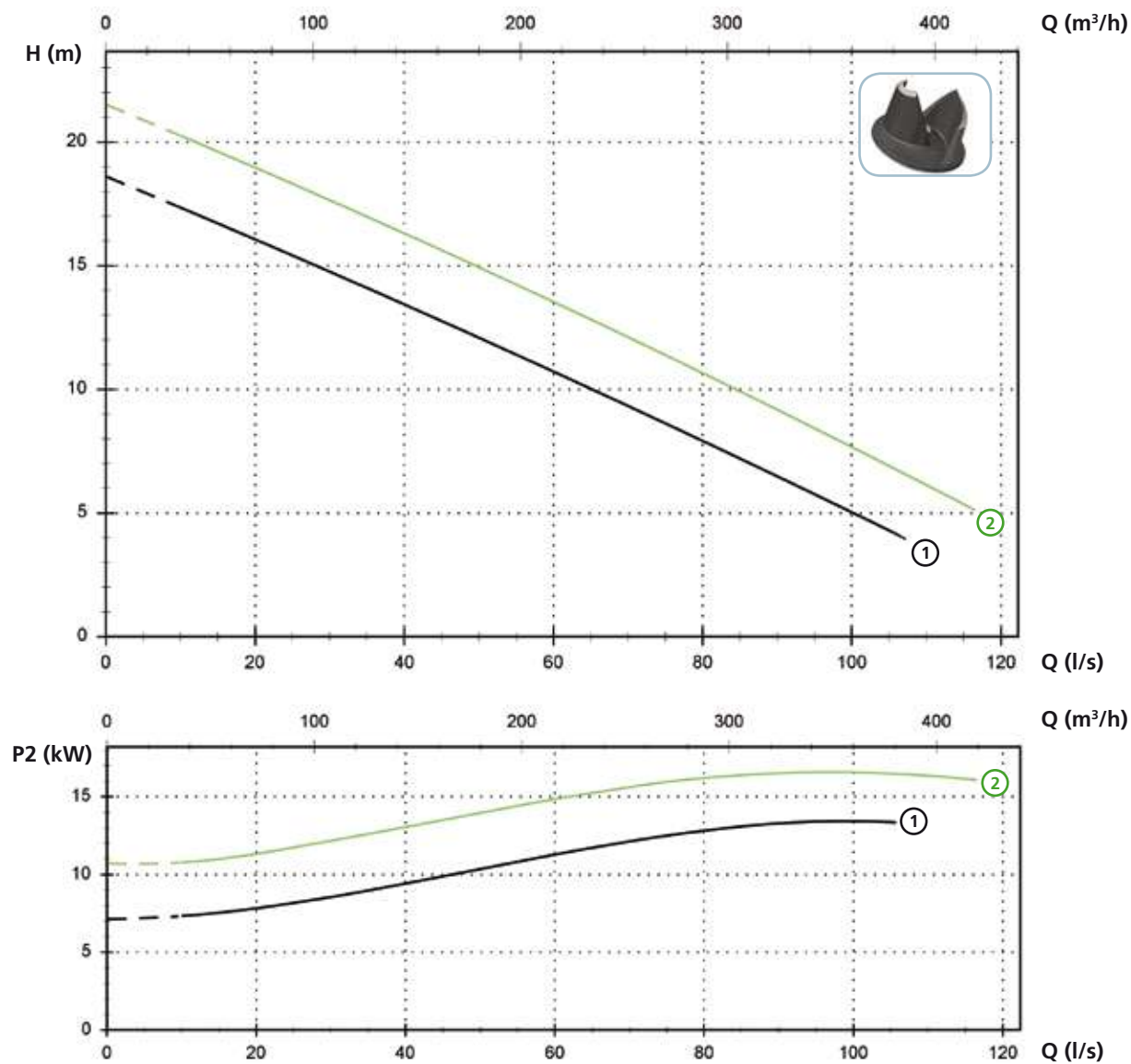
|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | DRP 550/4/100 A0GT/50  | 400 | 3      | 5.9     | 4.6     | 10.1 | 1450 | Dir   | DN100 PN10-16 | 65x70 mm     |
| ② | DRP 750/4/100 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN100 PN10-16 | 85x95 mm     |
| ③ | DRP 1000/4/100 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN100 PN10-16 | 80x95 mm     |
| ④ | DRP 1500/4/100 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | Y Δ   | DN100 PN10-16 | 70x95 mm     |



# DRP

## Models with horizontal DN125 PN10 flanged discharge - 4 poles

### Performances

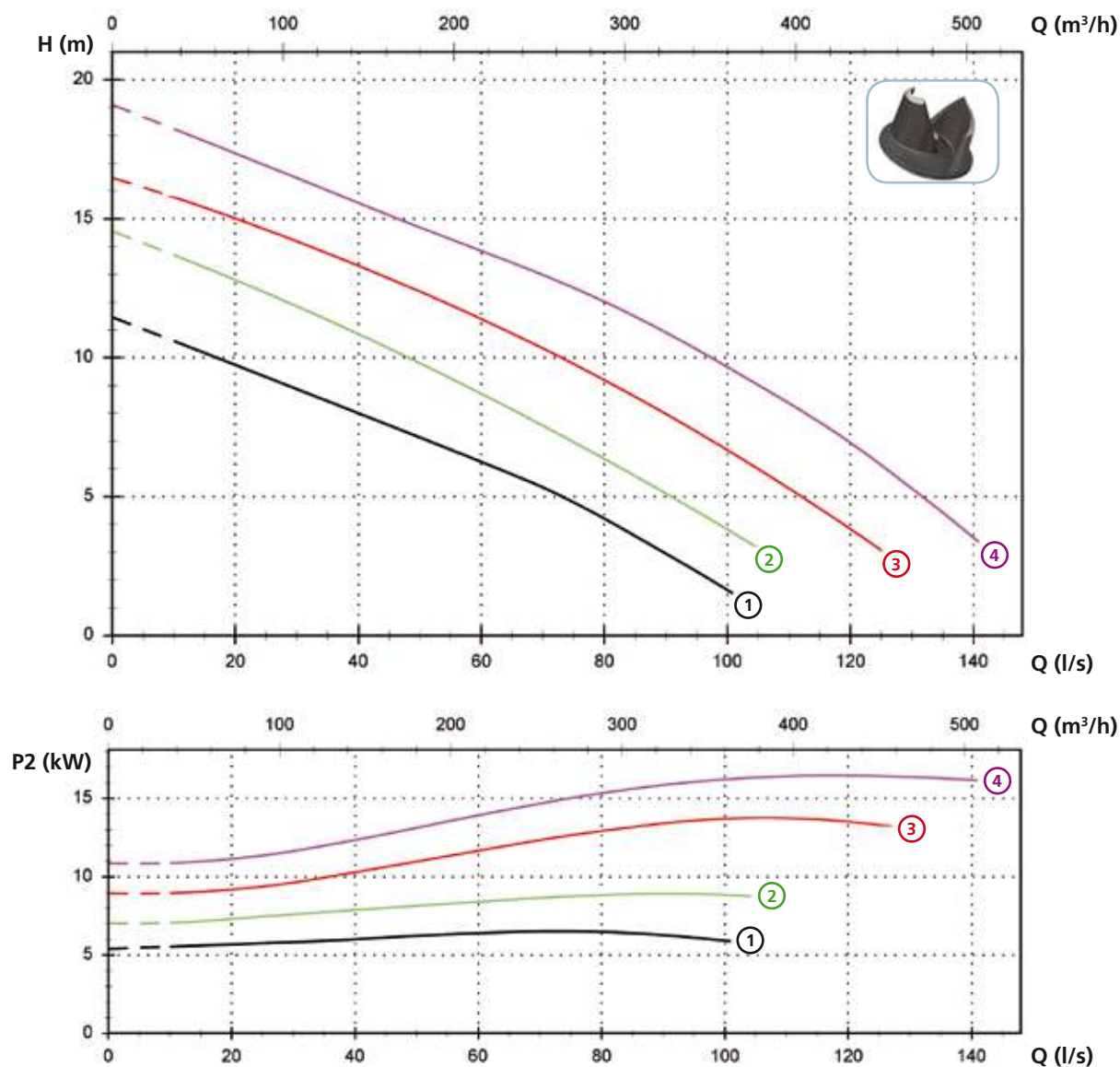


### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① | DRP 1500/4/125 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | Y Δ   | DN125 PN10 | 90x105 mm    |
| ② | DRP 2000/4/125 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN125 PN10 | 90x105 mm    |

## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances



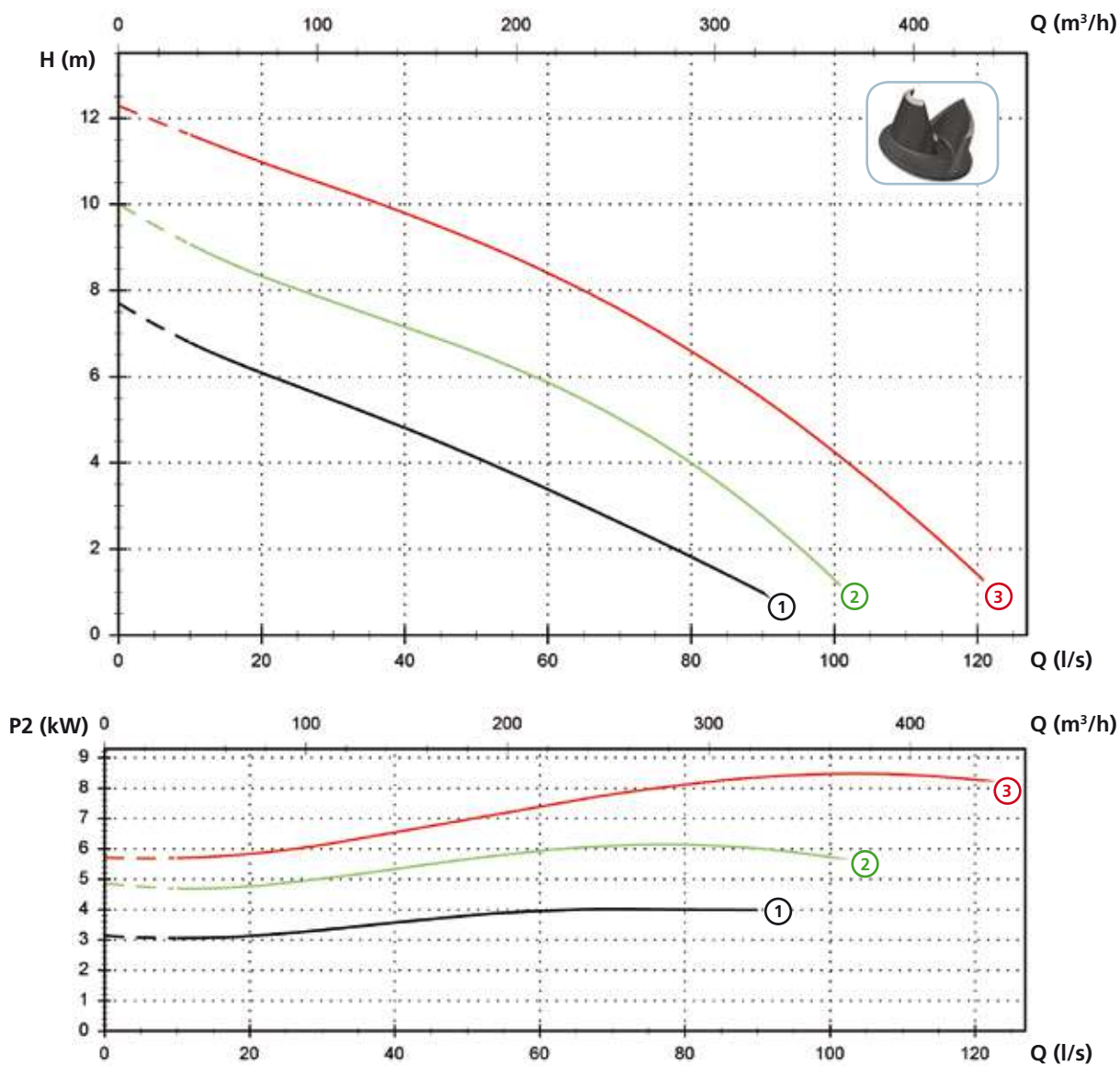
### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | DRP 750/4/150 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN150 PN10-16 | 95 mm        |
| ② | DRP 1000/4/150 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN150 PN10-16 | 95 mm        |
| ③ | DRP 1500/4/150 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | Y Δ   | DN150 PN10-16 | 95x110 mm    |
| ④ | DRP 2000/4/150 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN150 PN10-16 | 95x115 mm    |

# DRP

## Models with horizontal DN150 PN10-16 flanged discharge - 6 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|-----|-------|---------------|--------------|
| ① | DRP 550/6/150 A0HT/50  | 400 | 3      | 5.3     | 4.1     | 10.7 | 960 | Y Δ   | DN150 PN10-16 | 115 mm       |
| ② | DRP 750/6/150 A0HT/50  | 400 | 3      | 7.8     | 6.1     | 15.2 | 960 | Y Δ   | DN150 PN10-16 | 110x125 mm   |
| ③ | DRP 1000/6/150 A0IT/50 | 400 | 3      | 11.4    | 8.4     | 20.1 | 960 | Y Δ   | DN150 PN10-16 | 95x115 mm    |

## DRP

## Versions available

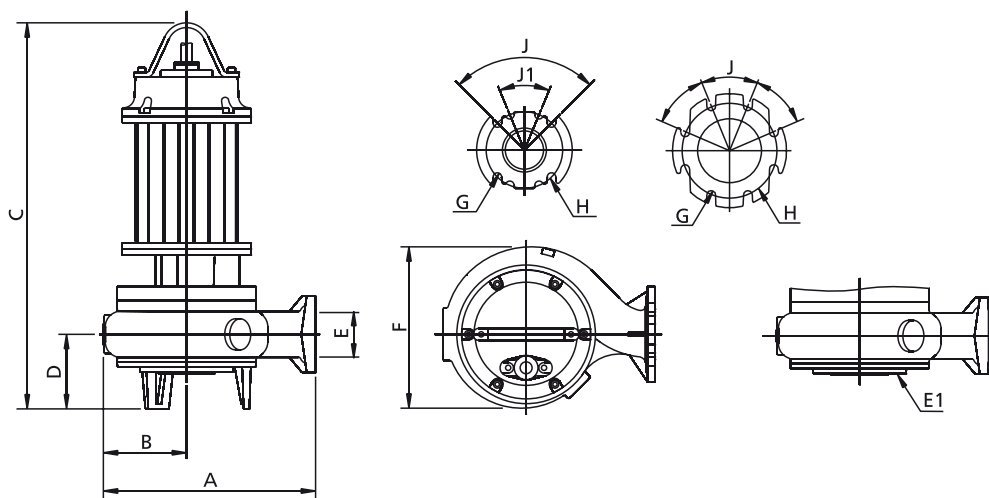
(Key to versions on page 16)

Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DRP 750/2/80 A0HT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1000/2/80 A1HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1500/2/80 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 2000/2/80 A0IT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1000/2/100 A1HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1500/2/100 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 550/4/80 A0GT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 750/4/80 A0HT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1000/4/80 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1500/4/80 A0IT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 2000/4/80 A0IT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 550/4/100 A0GT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 750/4/100 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1000/4/100 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1500/4/100 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1500/4/125 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 2000/4/125 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 750/4/150 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1000/4/150 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1500/4/150 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 2000/4/150 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 550/6/150 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 750/6/150 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |
| DRP 1000/6/150 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  |      |      |       | ●      |

# DRP

## Overall dimensions and weights



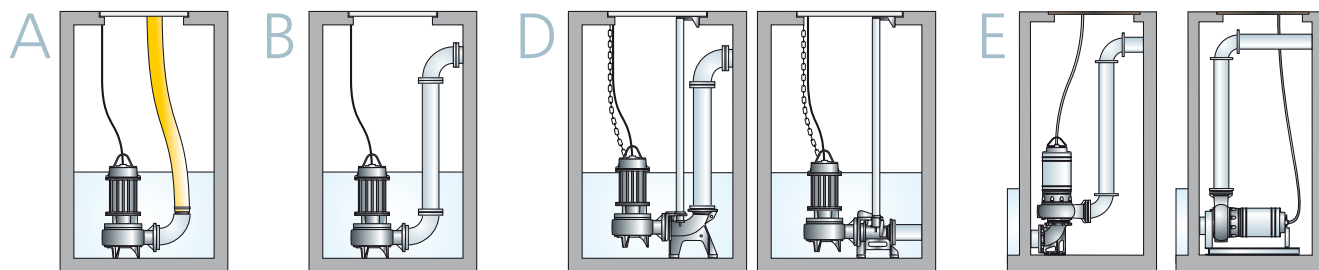
|                        | A   | B   | C    | D   | E   | E1 (*)     | F   | G  | H   | J   | J1  | kg  |
|------------------------|-----|-----|------|-----|-----|------------|-----|----|-----|-----|-----|-----|
| DRP 750/2/80 A0HT/50   | 390 | 150 | 770  | 150 | 80  | -          | 295 | 18 | 160 | 90° | 45° | 100 |
| DRP 1000/2/80 A1HT/50  | 390 | 150 | 770  | 150 | 80  | -          | 295 | 18 | 160 | 90° | 45° | 105 |
| DRP 1500/2/80 A0HT/50  | 390 | 150 | 770  | 150 | 80  | -          | 295 | 18 | 160 | 90° | 45° | 128 |
| DRP 2000/2/80 A0IT/50  | 390 | 150 | 935  | 150 | 80  | DN80 PN6   | 310 | 18 | 160 | 90° | 45° | 158 |
| DRP 1000/2/100 A1HT/50 | 415 | 160 | 798  | 155 | 100 | -          | 310 | 18 | 180 | 45° | -   | 108 |
| DRP 1500/2/100 A0HT/50 | 415 | 160 | 830  | 155 | 100 | -          | 310 | 18 | 180 | 45° | -   | 130 |
| DRP 550/4/80 A0GT/50   | 390 | 150 | 725  | 150 | 80  | DN80 PN6   | 290 | 18 | 160 | 90° | 45° | 82  |
| DRP 750/4/80 A0HT/50   | 445 | 175 | 810  | 155 | 80  | DN80 PN6   | 340 | 18 | 160 | 90° | 45° | 125 |
| DRP 1000/4/80 A0HT/50  | 445 | 175 | 810  | 155 | 80  | DN80 PN6   | 340 | 18 | 160 | 90° | 45° | 133 |
| DRP 1500/4/80 A0IT/50  | 455 | 200 | 950  | 150 | 80  | -          | 435 | 18 | 160 | 90° | -   | 181 |
| DRP 2000/4/80 A0IT/50  | 455 | 200 | 950  | 150 | 80  | -          | 435 | 18 | 160 | 90° | -   | 196 |
| DRP 550/4/100 A0GT/50  | 415 | 160 | 740  | 155 | 100 | -          | 310 | 18 | 180 | 45° | -   | 85  |
| DRP 750/4/100 A0HT/50  | 430 | 165 | 820  | 160 | 100 | DN100 PN6  | 335 | 18 | 180 | 45° | -   | 123 |
| DRP 1000/4/100 A0HT/50 | 430 | 165 | 820  | 160 | 100 | DN100 PN6  | 335 | 18 | 180 | 45° | -   | 131 |
| DRP 1500/4/100 A0IT/50 | 430 | 165 | 970  | 160 | 100 | DN100 PN6  | 335 | 18 | 180 | 45° | -   | 171 |
| DRP 1500/4/125 A0IT/50 | 580 | 280 | 1010 | 200 | 125 | DN150 PN10 | 555 | 18 | 210 | 90° | -   | 199 |
| DRP 2000/4/125 A0IT/50 | 580 | 280 | 1010 | 200 | 125 | DN150 PN10 | 555 | 18 | 210 | 90° | -   | 220 |
| DRP 750/4/150 A0HT/50  | 500 | 215 | 845  | 190 | 150 | DN150 PN6  | 400 | 24 | 240 | 45° | -   | 138 |
| DRP 1000/4/150 A0HT/50 | 500 | 215 | 845  | 190 | 150 | DN150 PN6  | 400 | 24 | 240 | 45° | -   | 146 |
| DRP 1500/4/150 A0IT/50 | 650 | 255 | 1020 | 205 | 150 | DN150 PN10 | 505 | 24 | 240 | 45° | -   | 213 |
| DRP 2000/4/150 A0IT/50 | 650 | 255 | 1020 | 205 | 150 | DN150 PN10 | 505 | 24 | 240 | 45° | -   | 228 |
| DRP 550/6/150 A0HT/50  | 500 | 215 | 865  | 190 | 150 | DN150 PN6  | 400 | 24 | 240 | 45° | -   | 141 |
| DRP 750/6/150 A0HT/50  | 650 | 255 | 900  | 205 | 150 | DN150 PN10 | 505 | 24 | 240 | 45° | -   | 138 |
| DRP 1000/6/150 A0IT/50 | 650 | 255 | 1019 | 205 | 150 | DN150 PN10 | 505 | 24 | 240 | 45° | -   | 213 |

Dimensions in mm

All weights and dimensions are indicative only

(\*) Suction flange available upon request

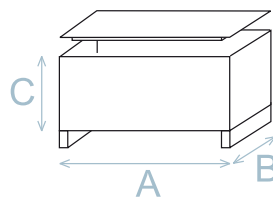
## Installations available



## Packaging dimension

|                        | A    | B   | C   |
|------------------------|------|-----|-----|
| DRP 750/2/80 A0HT/50   | 915  | 515 | 555 |
| DRP 1000/2/80 A1HT/50  | 915  | 515 | 555 |
| DRP 1500/2/80 A0HT/50  | 915  | 515 | 555 |
| DRP 2000/2/80 A0IT/50  | 915  | 515 | 555 |
| DRP 1000/2/100 A1HT/50 | 915  | 515 | 555 |
| DRP 1500/2/100 A0HT/50 | 915  | 515 | 555 |
| DRP 550/4/80 A0GT/50   | 725  | 445 | 415 |
| DRP 750/4/80 A0HT/50   | 915  | 515 | 555 |
| DRP 1000/4/80 A0HT/50  | 915  | 515 | 555 |
| DRP 1500/4/80 A0IT/50  | 915  | 515 | 555 |
| DRP 2000/4/80 A0IT/50  | 915  | 515 | 555 |
| DRP 550/4/100 A0GT/50  | 725  | 445 | 415 |
| DRP 750/4/100 A0HT/50  | 915  | 515 | 555 |
| DRP 1000/4/100 A0HT/50 | 915  | 515 | 555 |
| DRP 1500/4/100 A0IT/50 | 915  | 515 | 555 |
| DRP 1500/4/125 A0IT/50 | 1165 | 720 | 685 |
| DRP 2000/4/125 A0IT/50 | 1165 | 720 | 685 |
| DRP 750/4/150 A0HT/50  | 915  | 515 | 555 |
| DRP 1000/4/150 A0HT/50 | 915  | 515 | 555 |
| DRP 1500/4/150 A0IT/50 | 1165 | 720 | 685 |
| DRP 2000/4/150 A0IT/50 | 1165 | 720 | 685 |
| DRP 550/6/150 A0HT/50  | 1165 | 720 | 685 |
| DRP 750/6/150 A0HT/50  | 1165 | 720 | 685 |
| DRP 1000/6/150 A0IT/50 | 1165 | 720 | 685 |

Dimension in mm

All weights and dimensions are  
indicative only



# 1.3 MA (MACS)

## pumps with single-channel open impeller

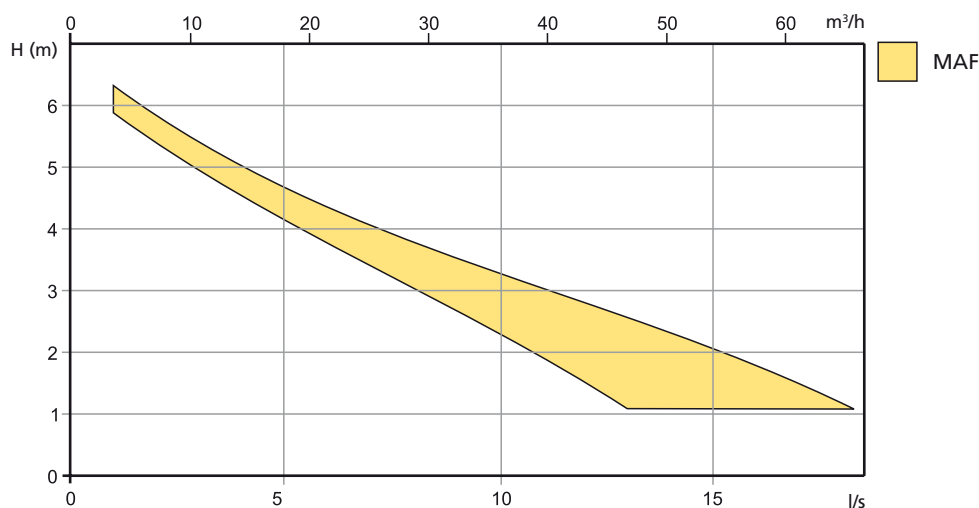
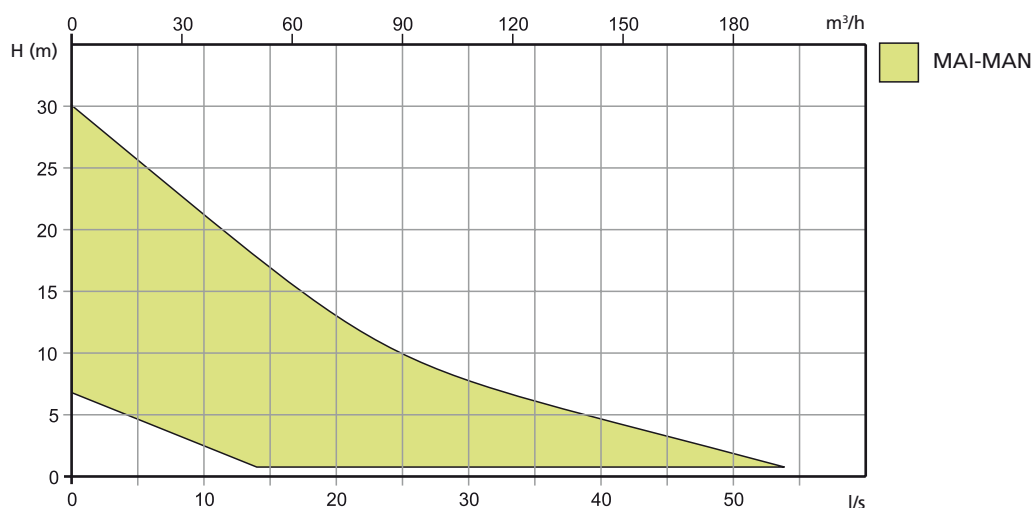
The **MACS (MA)** family consists of electric pumps with single-channel open impeller which allows very high performance and ample free passages, often entirely free passages, which reduce the risk of fouling. Units in this family can be used for lifting sewage, for wastewater treatment plants, and for industrial applications in general.

0.74 ÷ 4.1 kW



The unusual shape of the impeller blade and diffuser plate ensures that solids will be ejected by providing them with an escape route. A special tapered bushing can be used to adjust the axial play of the impeller to restore hydraulic performance lost due to wear of moving parts, guaranteeing a longer working life and constant efficiency over time.

The location of the blades in the rear of the impeller doubles the water flow through the cooling jacket, in installations in dry chamber, reducing the risk of fouling and ensuring the motor is cooled effectively even in heavy-duty conditions.



**MA**

Pumps with single-channel open impeller

0.74 ÷ 4.1 kW

**MAI**

page 174

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump. Ecological dry motor. Stainless steel handle, cast iron impeller. Suitable for pumping wastewater from public establishments, small sewer systems, livestock farms, the food industry and agriculture.

**MAN**

page 178

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals (optional). Models available in ATEX explosion-proof version (on request). Used with unstrained soiled biological wastewaters and sewage and for civil lifting applications. It is thus ideal for application in wastewater treatment plants, sewer systems, livestock farms, industry and agriculture. These models are prefitted for installation of the ZENIT cooling system, for dry or semi-submerged installation (on request).

**MAF**

page 194

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Cast iron handle and impeller. Model with ATEX explosion-proof certification. Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the MAF can be used with soiled liquids containing traces of flammable substances, and in gassy environments.

MAI

## Single-channel open impeller



## General characteristics

## Single-channel open impeller

|               |                 |
|---------------|-----------------|
| motor power   | 0,74 kW         |
| poles         | 4               |
| discharge     | DN80 horizontal |
| free passage  | 50 mm           |
| max flow rate | 13.9 l/s        |
| max head      | 7.0 m           |

All product images are indicative only

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals, installed in series in inspectable oil sump. Ecological dry motor.

## Applications

Suitable for pumping wastewater from public establishments, small sewer systems, livestock farms, the food industry and agriculture.

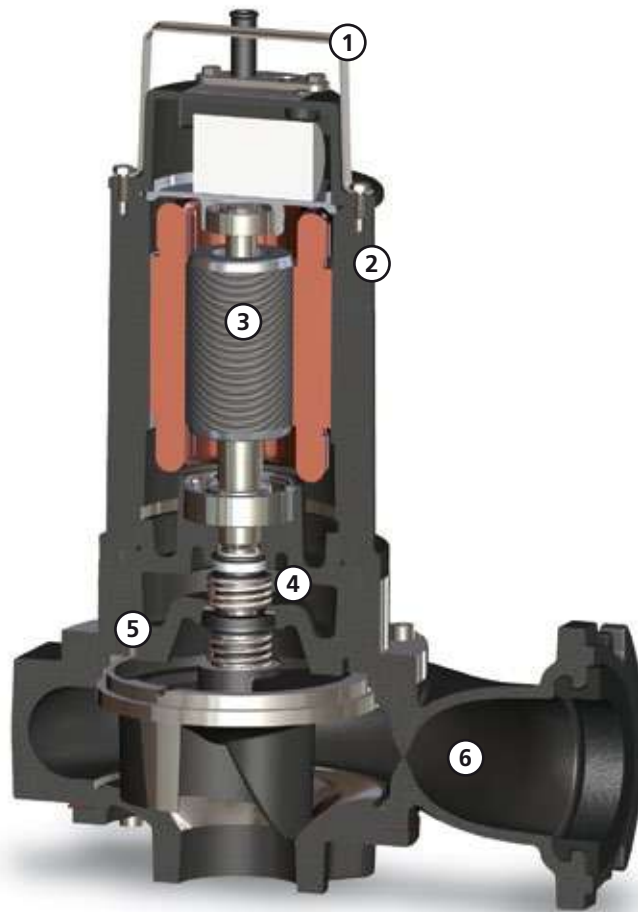
## Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

MAI



①

**Handle**

AISI 304 stainless steel lifting and carrying handle.



②

**Structure**

Constructed in GJL-250 cast iron.



③

**Motor**

Ecological dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay.



④

**Mechanical seals**

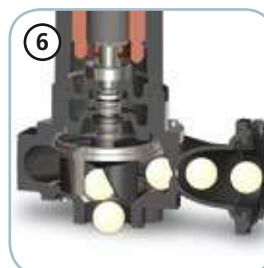
Two mechanical seals in silicon carbide (2SiC).



⑤

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.



⑥

**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

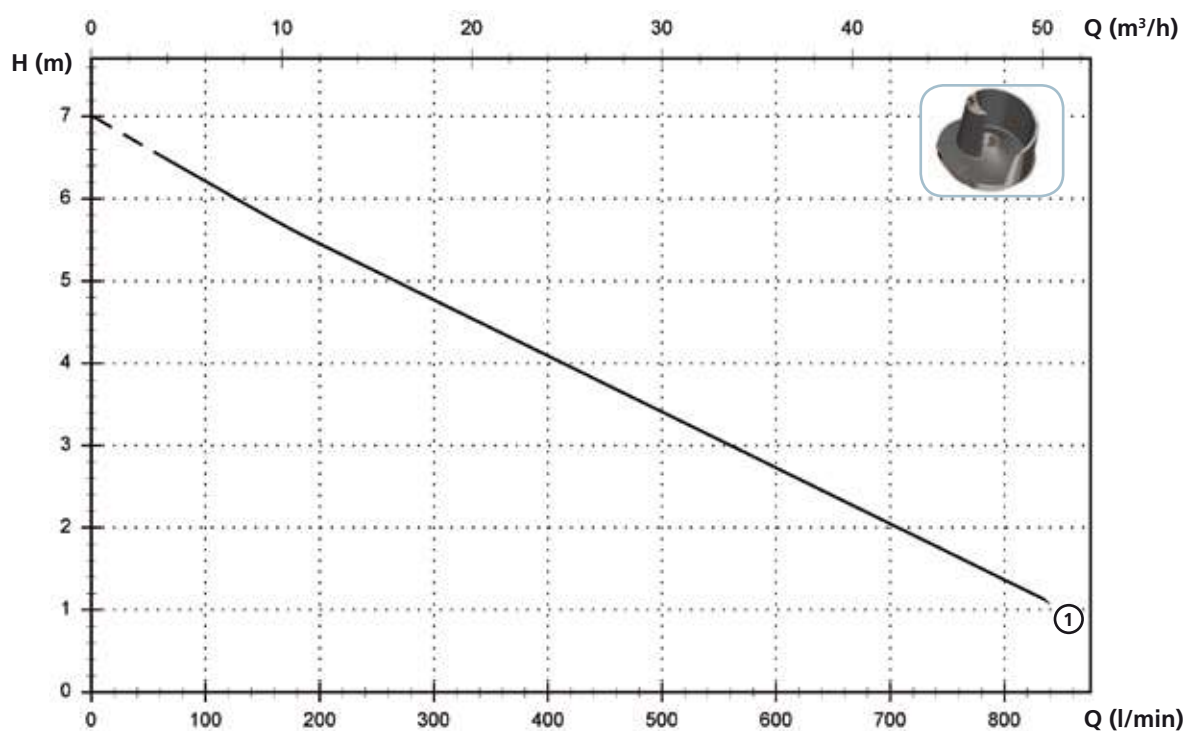
# MAI

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances

|              |   |     |      |      |      |      |      |
|--------------|---|-----|------|------|------|------|------|
| <i>l/s</i>   | 0 | 2   | 4    | 6    | 8    | 10   | 12   |
| <i>l/min</i> | 0 | 120 | 240  | 360  | 480  | 600  | 720  |
| <i>m³/h</i>  | 0 | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |

|                        |     |     |     |     |     |     |     |
|------------------------|-----|-----|-----|-----|-----|-----|-----|
| ① MAI 100/4/80 A0CM/50 | 6.4 | 6.1 | 5.2 | 4.4 | 3.5 | 2.7 | 1.9 |
|------------------------|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① MAI 100/4/80 A0CM/50 | 230 | 1      | 1.1     | 0.74    | 5.5 | 1450 | Dir   | DN80 PN10-16 | 50 mm        |

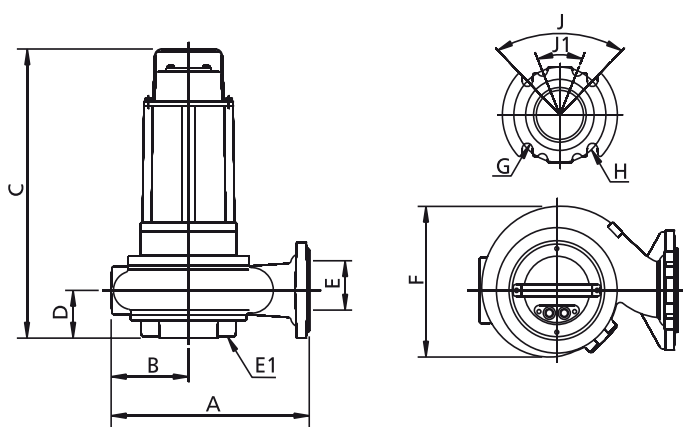
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① MAI 100/4/80 A0CT/50 | 400 | 3      | 1.2     | 0.74    | 2.3 | 1450 | Dir   | DN80 PN10-16 | 50 mm        |

## Versions available

(Key to versions on page 16)

|                      | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|----------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                      | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| MAI 100/4/80 A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| MAI 100/4/80 A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights



|                         | A   | B   | C   | D  | E  | E1(*) | F   | G  | H   | J   | J1  | kg |
|-------------------------|-----|-----|-----|----|----|-------|-----|----|-----|-----|-----|----|
| MAI 100/4/80 A0CM(T)/50 | 345 | 135 | 485 | 80 | 80 | 65    | 255 | 18 | 160 | 90° | 45° | 42 |

Dimensions in mm

All weights and dimensions are indicative only

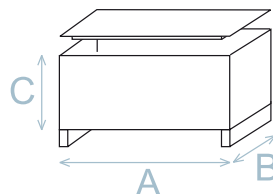
(\*) DN of the suction flange - PN6

## Packaging dimension

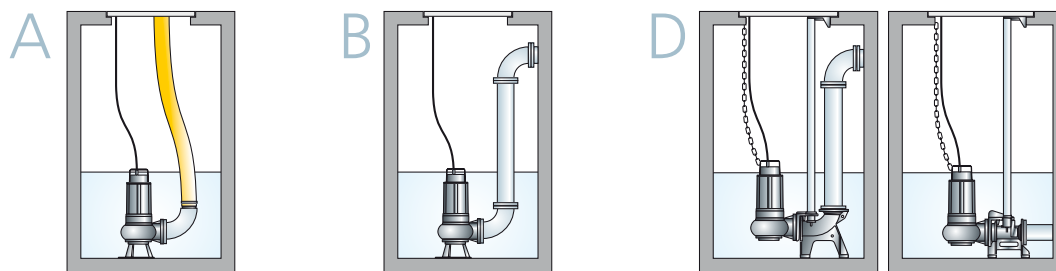
|                         | A   | B   | C   |
|-------------------------|-----|-----|-----|
| MAI 100/4/80 A0CM(T)/50 | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available





# MAN

All product images are indicative only



## Single-channel open impeller



### General characteristics

| Single-channel open impeller |                                             |
|------------------------------|---------------------------------------------|
| motor power                  | 1,1 ÷ 4,1 kW                                |
| poles                        | 2 / 4 / 6                                   |
| discharge                    | GAS 2½" vertical<br>DN65 ÷ DN150 horizontal |
| free passage                 | 40 ÷ 100 mm                                 |
| max flow rate                | 53.9 l/s                                    |
| max head                     | 30.2 m                                      |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in ATEX explosion-proof version.

### Applications

Used with unstrained soiled biological wastewaters and sewage and for civil lifting applications. It is thus ideal for wastewater treatment plants, sewer systems, livestock farms, industry and agriculture. The pump is also available in explosion-proof version with ATEX certification. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Stainless steel - AISI 304                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |



### Cooling system

Dry installation available using the cooling jacket (see details on page 17)



### Cable gland

Cable gland system to guarantee perfect water-tightness. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



### Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



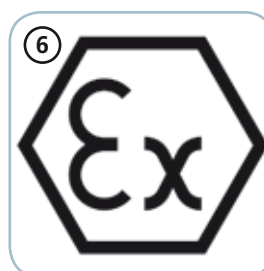
### Drive shaft

A special bronze bush coupled to the tapered shaft enables quick and easy impeller clearance adjustment, thus maintaining the pump's hydraulic specifications.



### Anti-clogging system

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.



### EX

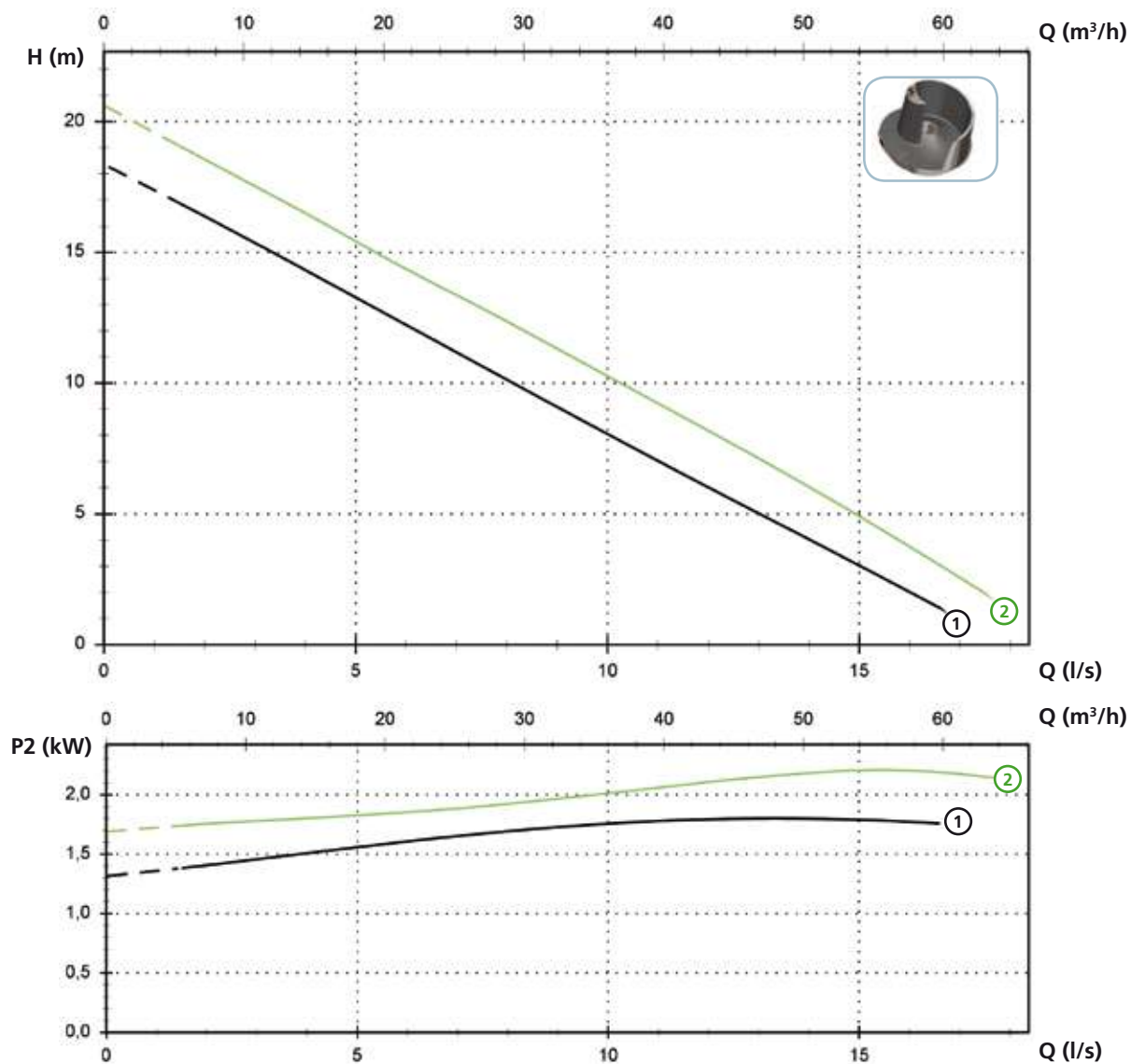
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

# MAN

## Models with vertical GAS 2½" threaded discharge - 2 poles

### Performances

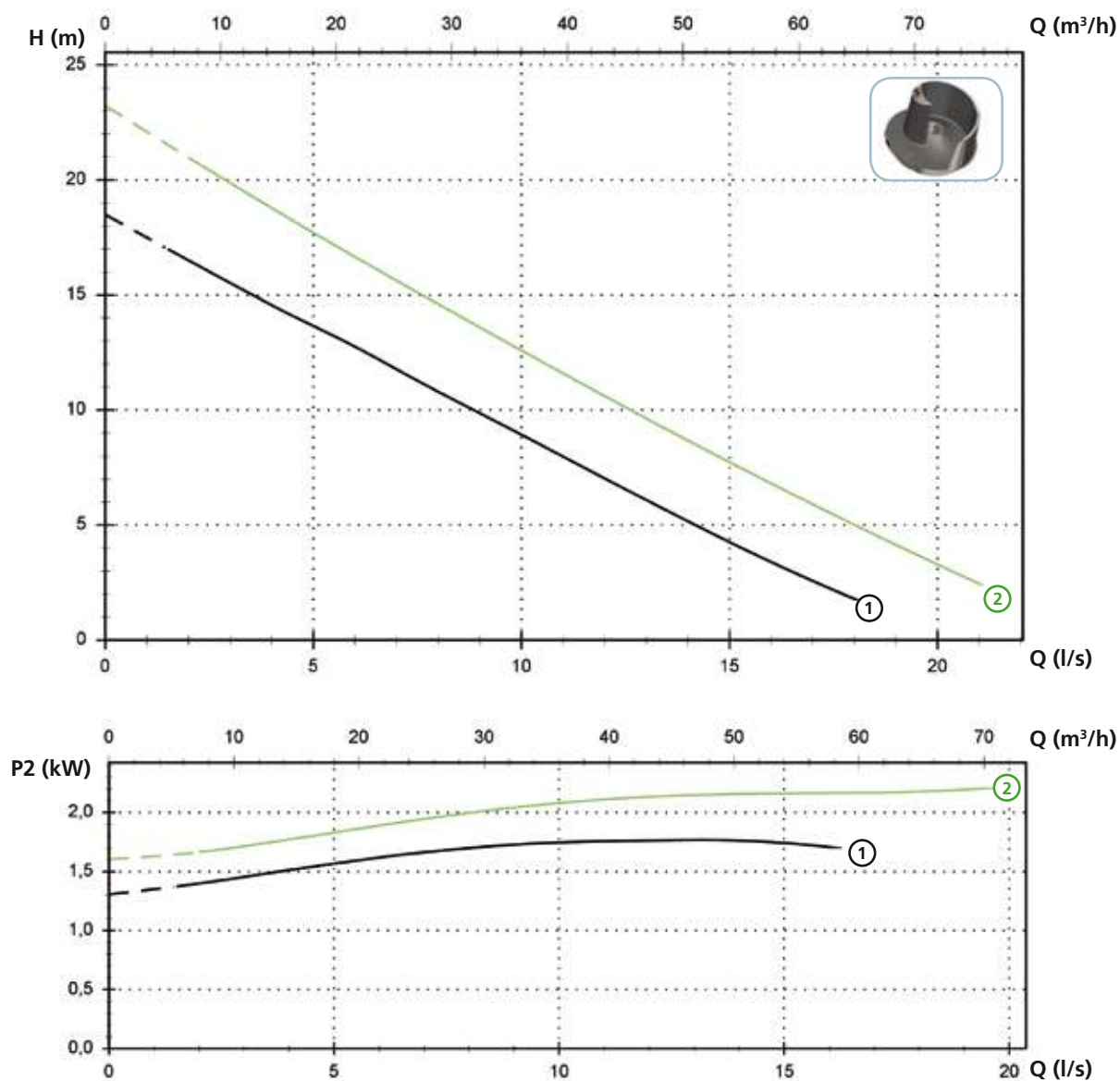


### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø     | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|-------|--------------|
| ① MAN 250/2/G65V A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | G 2½" | 40 mm        |
| ① MAN 250/2/G65V A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | G 2½" | 40 mm        |
| ② MAN 300/2/G65V A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | G 2½" | 40 mm        |

## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances



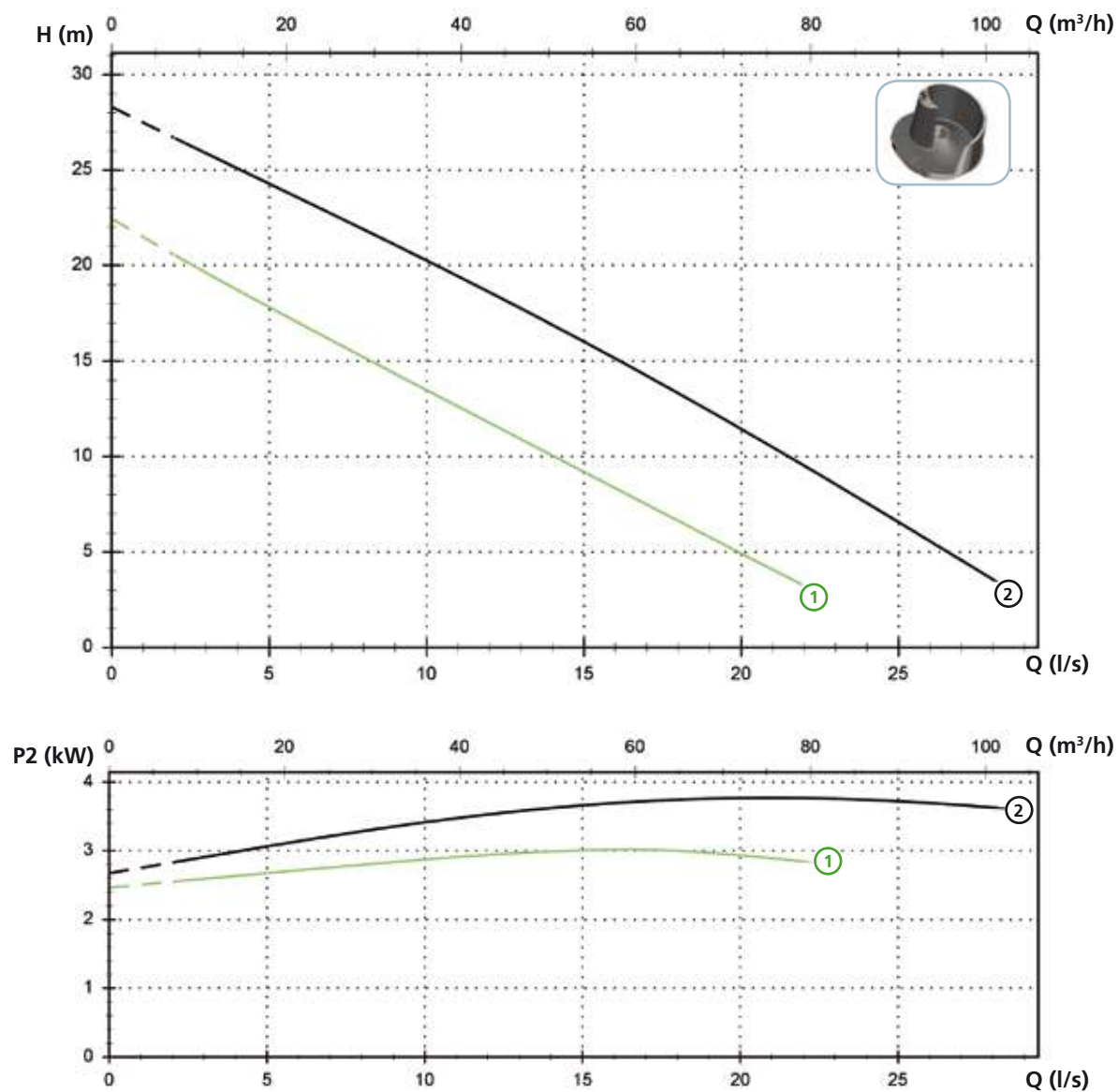
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① MAN 250/2/65 A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | DN65 PN10-16 | 40 mm        |
| ② MAN 300/2/65 A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | DN65 PN10-16 | 40 mm        |

# MAN

## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances

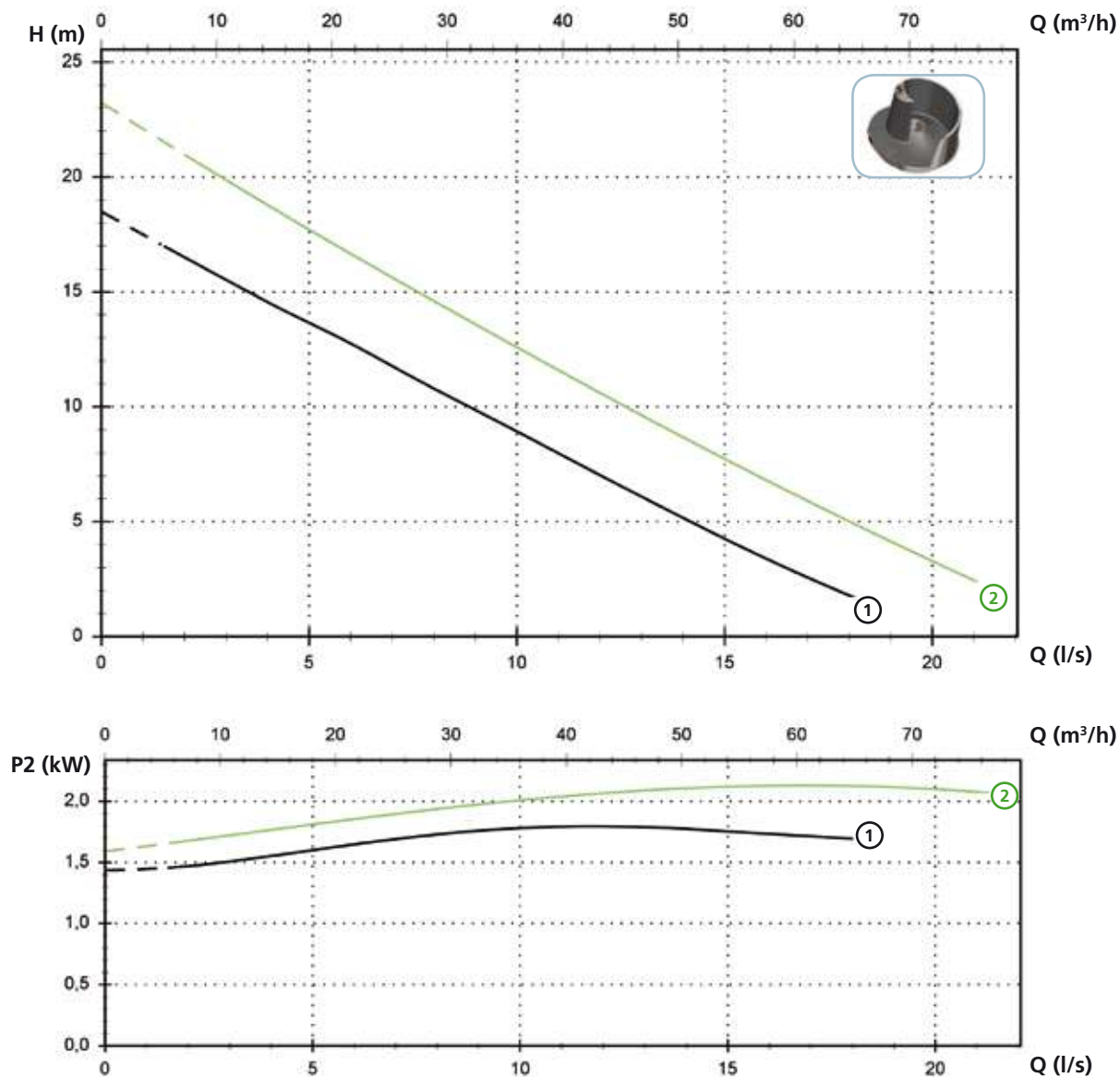


### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① MAN 400/2/65 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | DN65 PN10-16 | 45 mm        |
| ② MAN 550/2/65 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

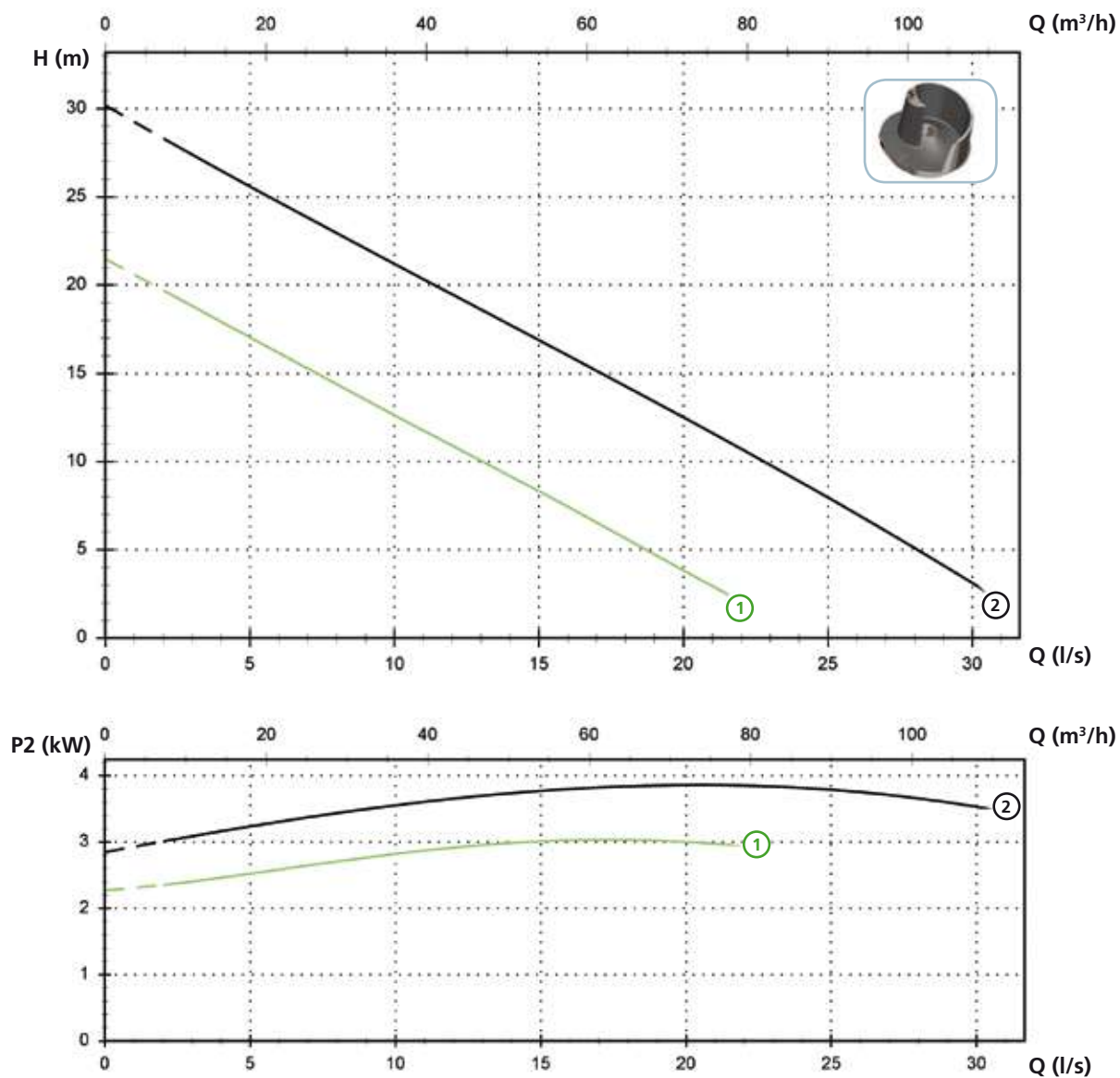
|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① MAN 250/2/80 A1DM/50 | 230 | 1      | 2.8     | 1.8     | 12.5 | 2900 | Dir   | DN80 PN10-16 | 40 mm        |
| ① MAN 250/2/80 A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | DN80 PN10-16 | 40 mm        |
| ② MAN 300/2/80 A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1  | 2900 | Dir   | DN80 PN10-16 | 40 mm        |



# MAN

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances

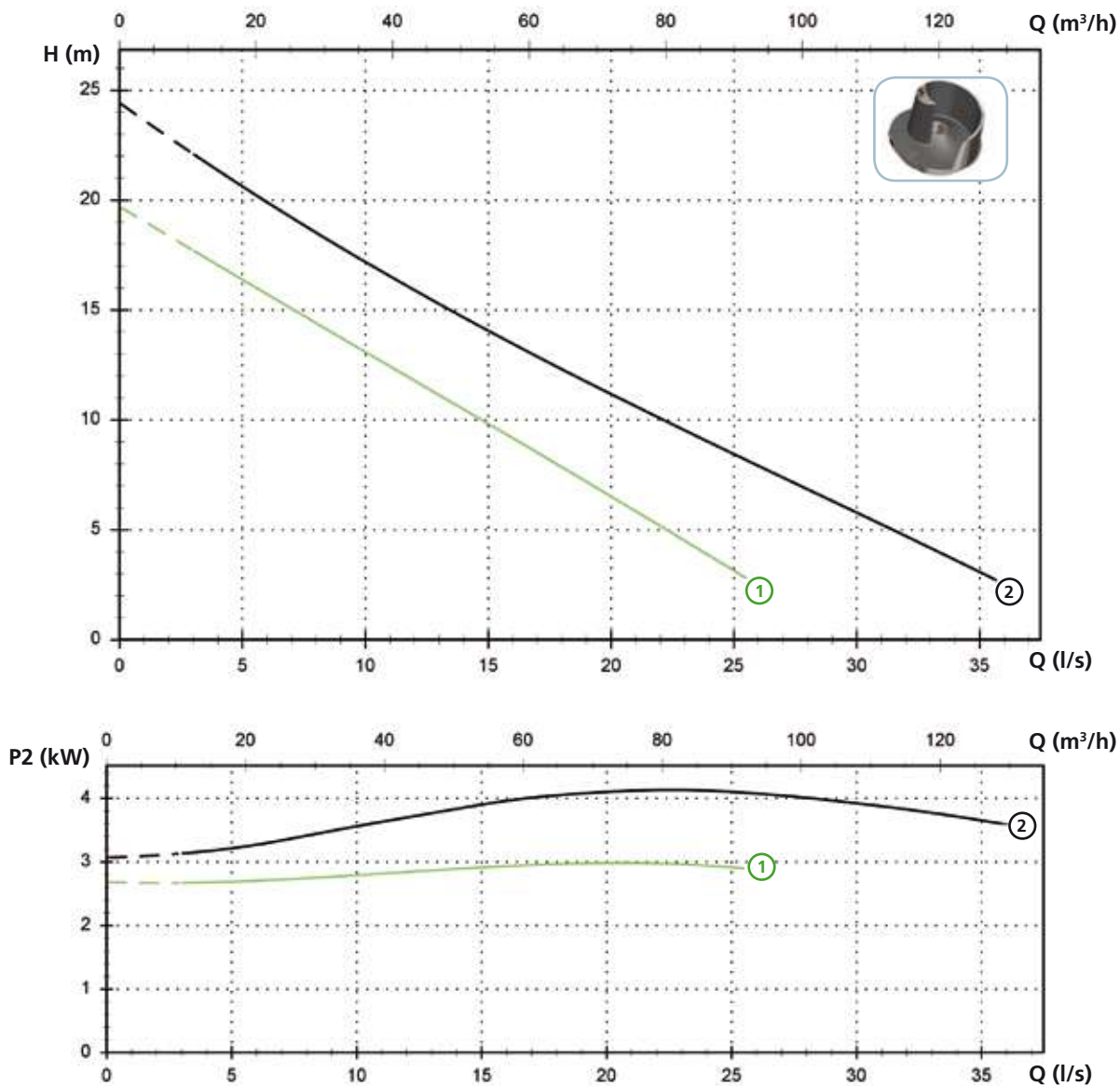


### Technical data

|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | MAN 400/2/80 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | DN80 PN10-16 | 40 mm        |
| ② | MAN 550/2/80 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | DN80 PN10-16 | 45 mm        |

## Models with horizontal DN100 PN10-16 flanged discharge - 2 poles

### Performances



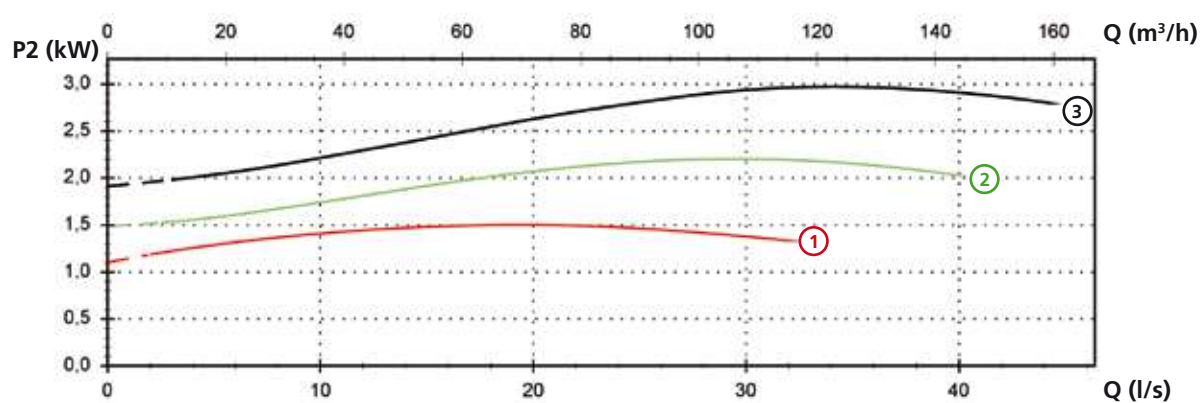
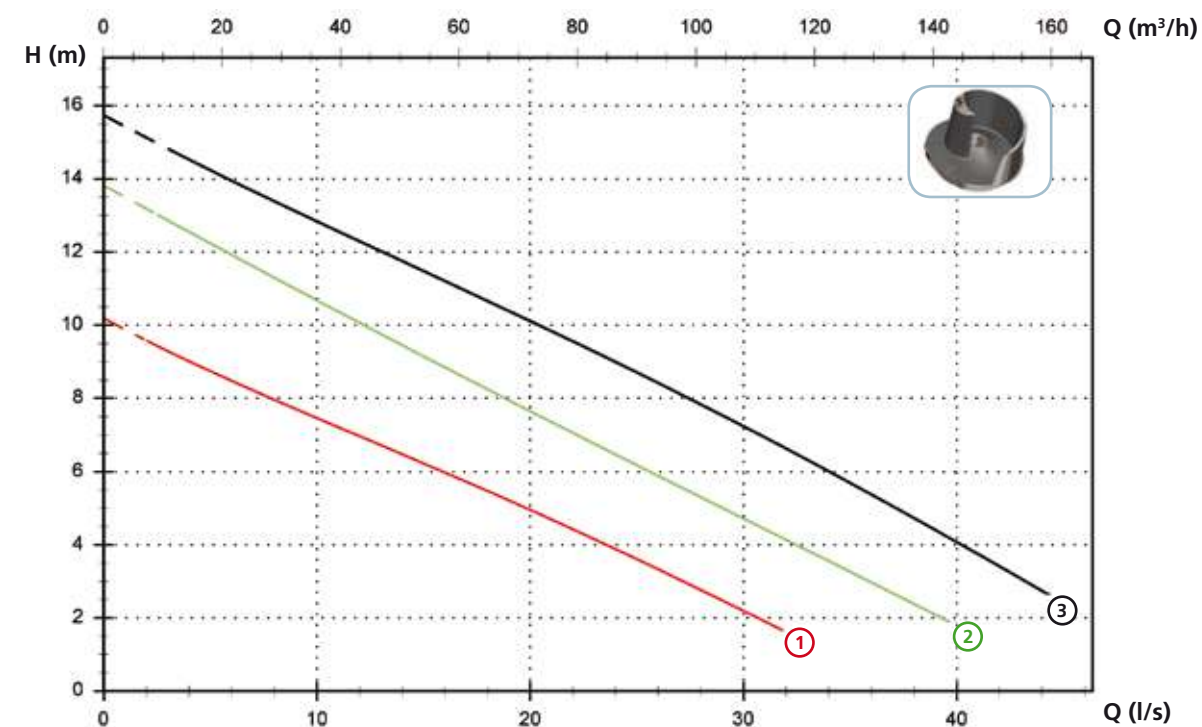
### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① | MAN 400/2/100 A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | DN100 PN10-16 | 50 mm        |
| ② | MAN 550/2/100 A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | DN100 PN10-16 | 50 mm        |

# MAN

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances

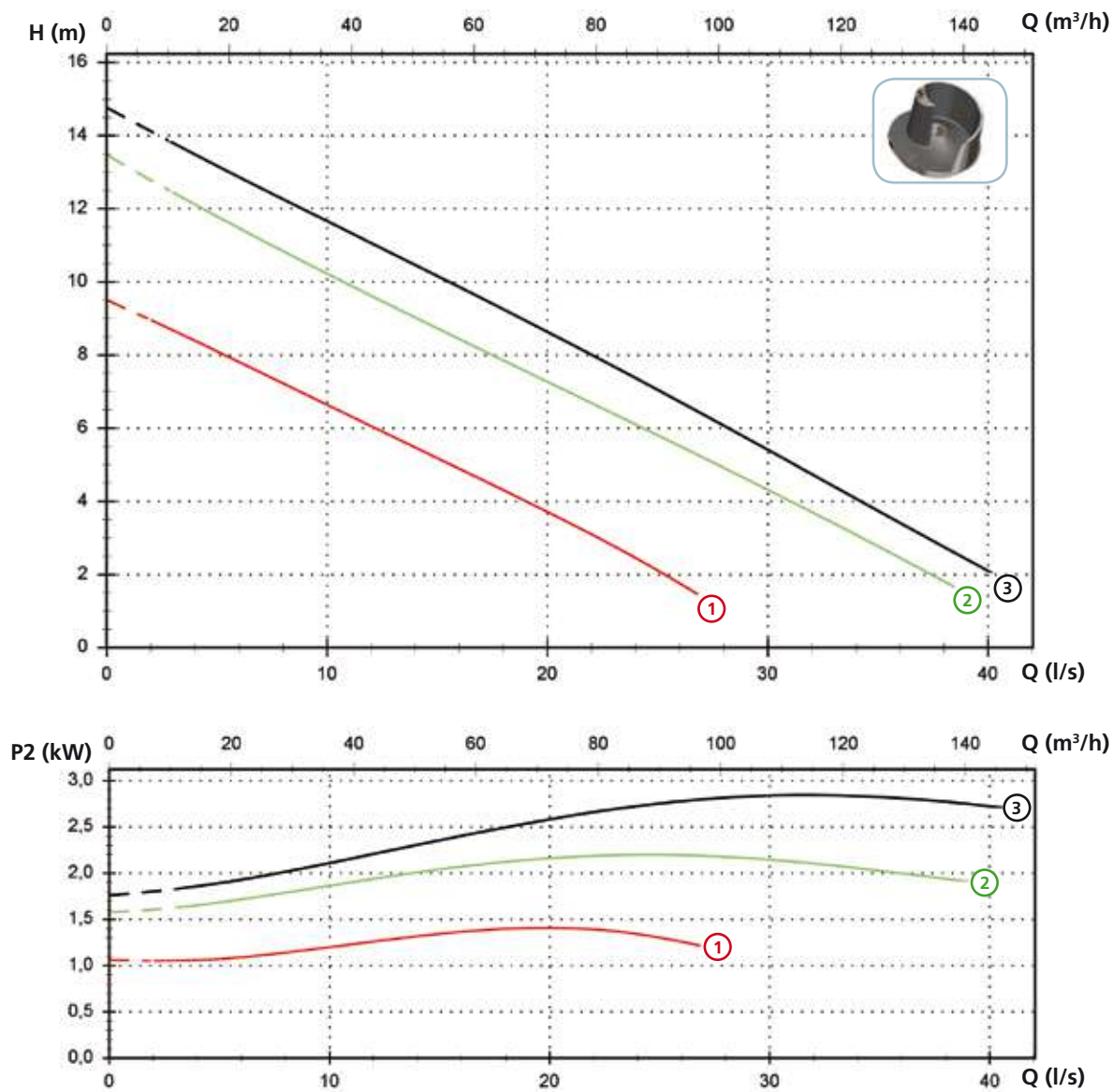


### Technical data

|   |                      | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|---|----------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① | MAN 200/4/80 A1DT/50 | 400 | 3      | 2       | 1.5     | 4.1 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |
| ② | MAN 300/4/80 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |
| ③ | MAN 400/4/80 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN80 PN10-16 | 80 mm        |

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



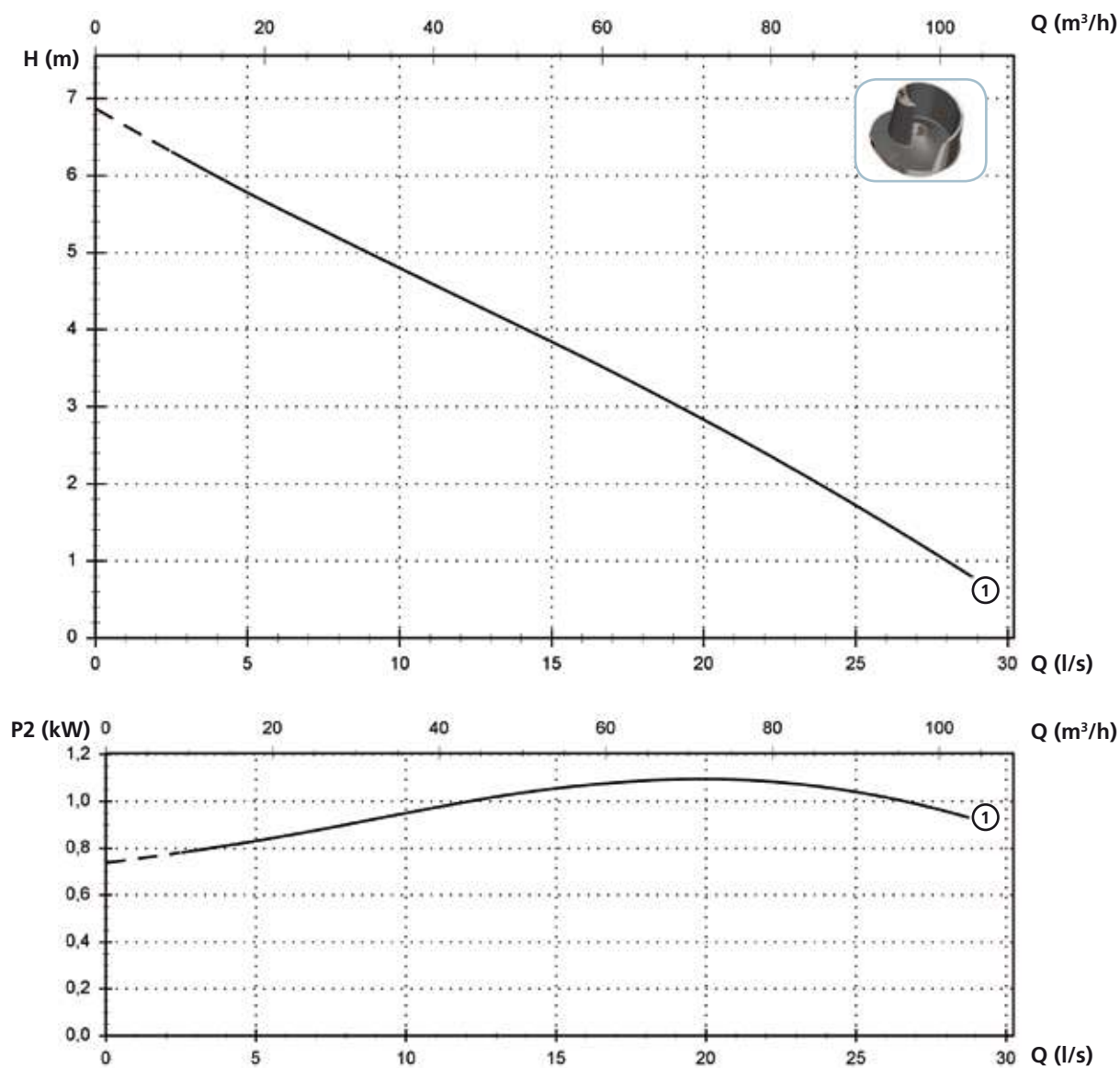
### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① | MAN 200/4/100 A1DT/50 | 400 | 3      | 2       | 1.5     | 4.1 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |
| ② | MAN 300/4/100 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |
| ③ | MAN 400/4/100 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN100 PN10-16 | 80 mm        |

# MAN

## Models with horizontal DN80 PN10-16 flanged discharge - 6 poles

### Performances



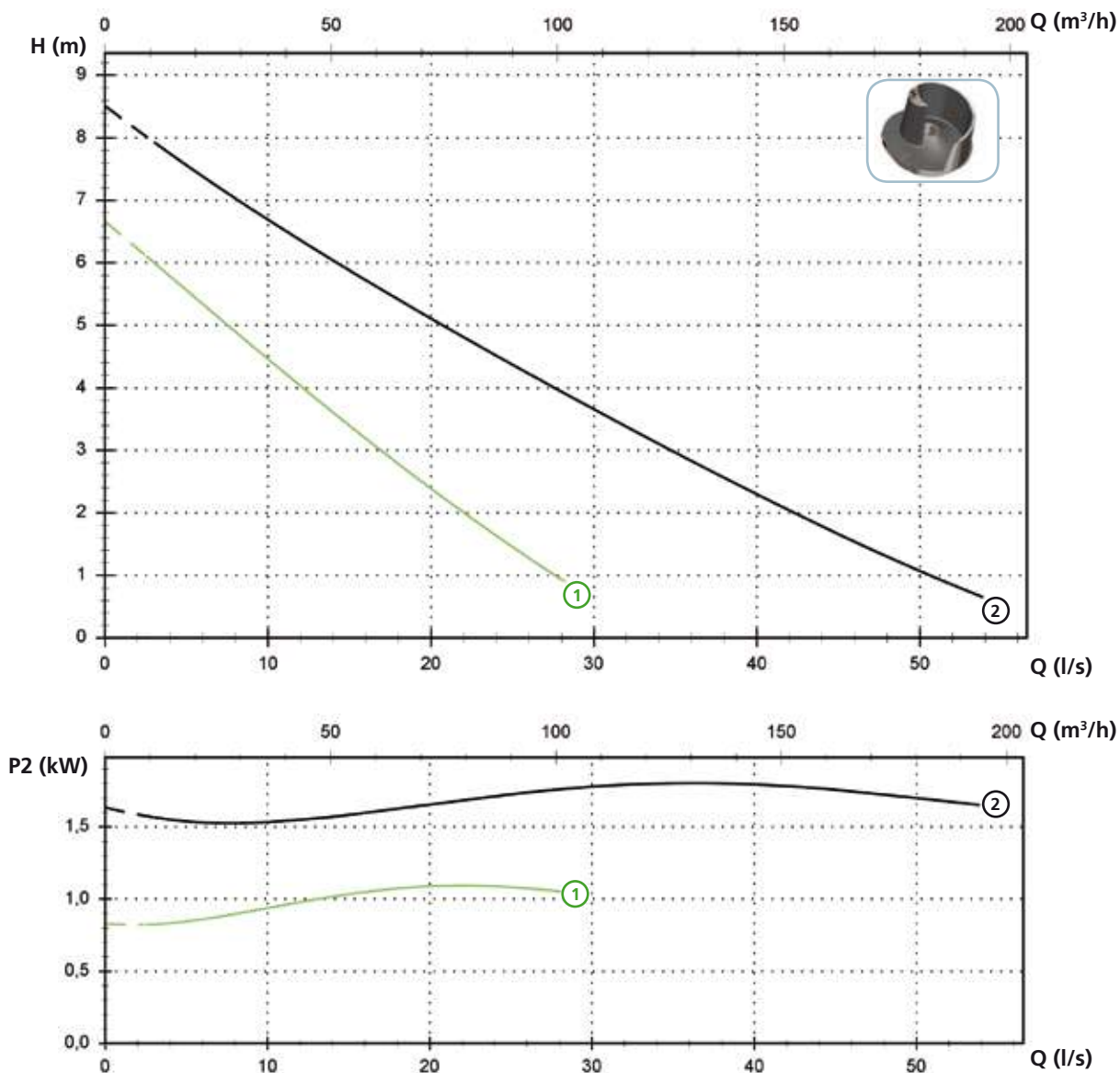
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|-----|-------|--------------|--------------|
| ① MAN 150/6/80 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 3.7 | 960 | Dir   | DN80 PN10-16 | 80 mm        |



## Models with horizontal DN100 PN10-16 flanged discharge - 6 poles

### Performances



### Technical data

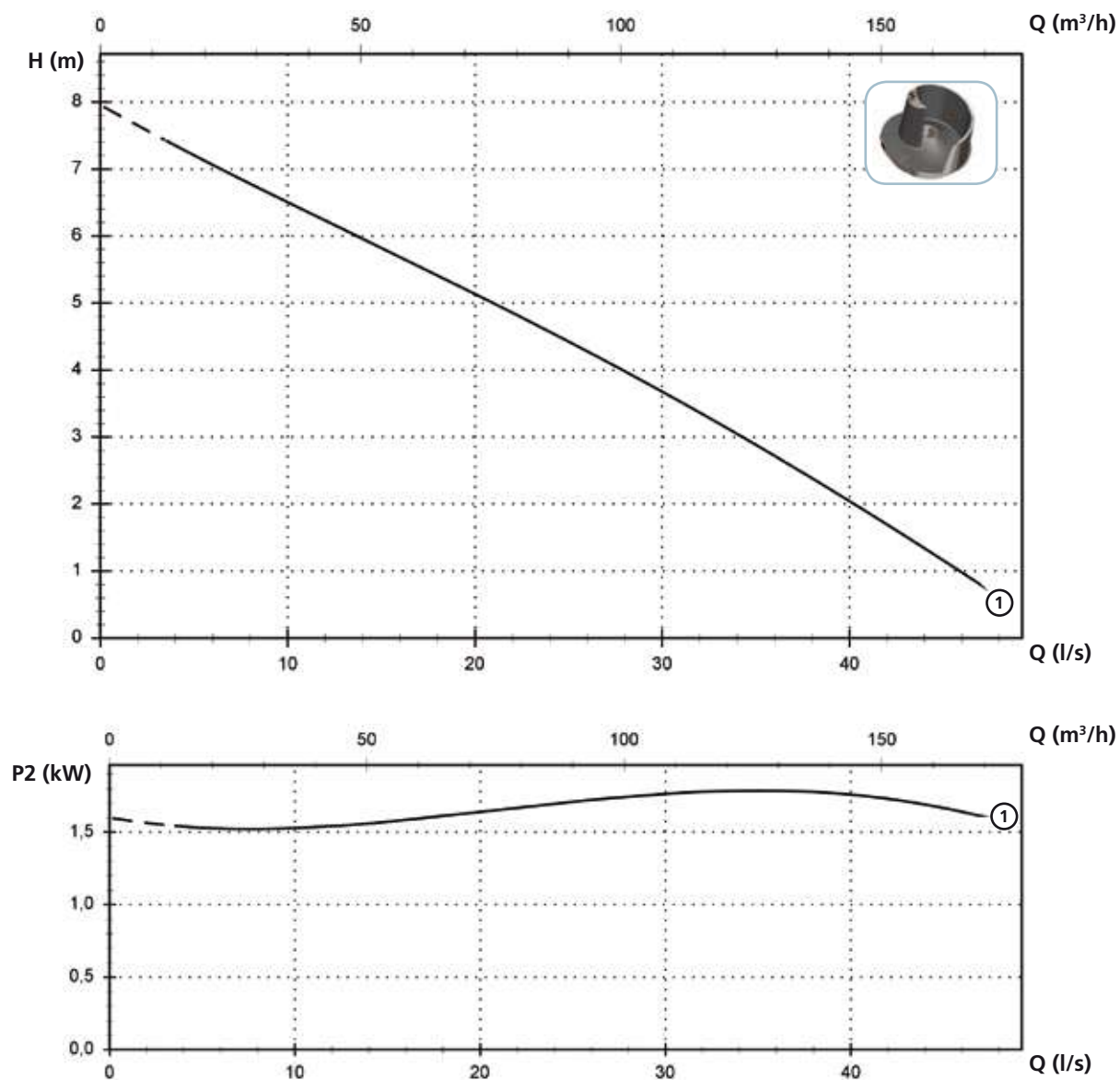
|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|-----|-------|---------------|--------------|
| ① | MAN 150/6/100 A1DT/50 | 400 | 3      | 1.6     | 1.1     | 3.7 | 960 | Dir   | DN100 PN10-16 | 80 mm        |
| ② | MAN 250/6/100 A1FT/50 | 400 | 3      | 2.6     | 1.8     | 5.7 | 960 | Dir   | DN100 PN10-16 | 100 mm       |



# MAN

## Models with horizontal DN150 PN10-16 flanged discharge - 6 poles

### Performances



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|-----|-------|---------------|--------------|
| ① MAN 250/6/150 A1FT/50 | 400 | 3      | 2.6     | 1.8     | 5.7 | 960 | Dir   | DN150 PN10-16 | 100 mm       |

## Versions available

(Key to versions on page 16)

Key to versions on page 16)

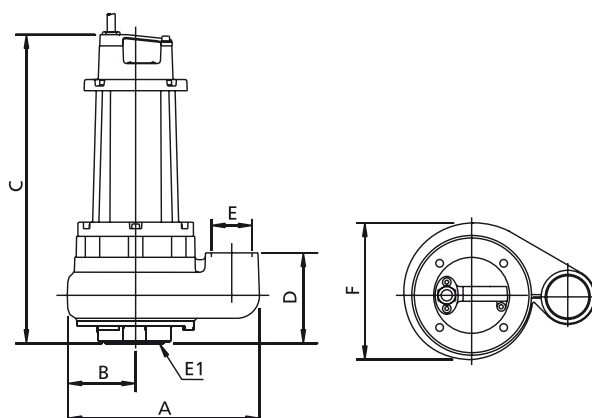
|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| MAN 250/2/G65V A1DM/50 |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/2/G65V A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 300/2/G65V A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/2/65 A1DM/50   |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/2/65 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 300/2/65 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 400/2/65 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 550/2/65 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/2/80 A1DM/50   |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/2/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 300/2/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 400/2/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 550/2/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 400/2/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 550/2/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 200/4/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 300/4/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 400/4/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 200/4/100 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 300/4/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 400/4/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 150/6/80 A1DT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 150/6/100 A1DT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/6/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| MAN 250/6/150 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.  
 Start capacitor inside the pump. Circuit breaker supplied but not connected to the pump cable.  
 The use of an electrical panel as circuit breaker housing is mandatory.  
 For installation please see use and maintenance instructions booklet.

# MAN

## Overall dimensions and weights

### Models with vertical discharge



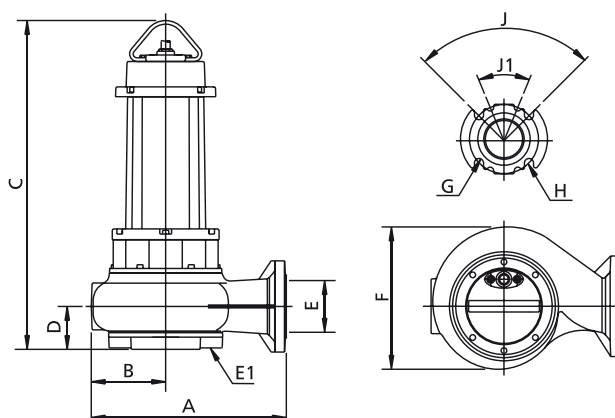
|                           | A   | B   | C   | D   | E        | E1 (*) | F   | kg |
|---------------------------|-----|-----|-----|-----|----------|--------|-----|----|
| MAN 250/2/G65V A1DM(T)/50 | 335 | 125 | 545 | 155 | G 2 1/2" | 65     | 240 | 52 |
| MAN 300/2/G65V A1DT/50    | 335 | 125 | 545 | 155 | G 2 1/2" | 65     | 240 | 52 |

Dimensions in mm

(\*) DN of the suction flange - PN6

All weights and dimensions are indicative only

### Models with horizontal discharge



|                         | A   | B   | C   | D   | E   | E1 (*) | F   | G  | H   | J   | J1  | kg  |
|-------------------------|-----|-----|-----|-----|-----|--------|-----|----|-----|-----|-----|-----|
| MAN 250/2/65 A1DM(T)/50 | 340 | 135 | 545 | 80  | 65  | 65     | 255 | 18 | 145 | 90° | -   | 58  |
| MAN 300/2/65 A1DT/50    | 340 | 135 | 545 | 80  | 65  | 65     | 255 | 18 | 145 | 90° | -   | 58  |
| MAN 400/2/65 A1FT/50    | 340 | 135 | 685 | 80  | 65  | 65     | 260 | 18 | 145 | 90° | -   | 74  |
| MAN 550/2/65 A1FT/50    | 340 | 135 | 685 | 80  | 65  | 65     | 260 | 18 | 145 | 90° | -   | 77  |
| MAN 250/2/80 A1DM(T)/50 | 345 | 135 | 545 | 80  | 80  | 65     | 255 | 18 | 160 | 90° | 45° | 56  |
| MAN 300/2/80 A1DT/50    | 345 | 135 | 685 | 80  | 80  | 65     | 260 | 18 | 160 | 90° | 45° | 58  |
| MAN 400/2/80 A1FT/50    | 345 | 135 | 685 | 80  | 80  | 65     | 260 | 18 | 160 | 90° | 45° | 74  |
| MAN 550/2/80 A1FT/50    | 345 | 135 | 685 | 80  | 80  | 65     | 260 | 18 | 160 | 90° | 45° | 77  |
| MAN 400/2/100 A1FT/50   | 430 | 170 | 705 | 90  | 100 | 80     | 325 | 18 | 180 | 45° | -   | 82  |
| MAN 550/2/100 A1FT/50   | 430 | 170 | 705 | 90  | 100 | 80     | 325 | 18 | 180 | 45° | -   | 85  |
| MAN 200/4/80 A1DT/50    | 390 | 150 | 590 | 90  | 80  | 100    | 290 | 18 | 160 | 90° | 45° | 66  |
| MAN 300/4/80 A1FT/50    | 390 | 150 | 700 | 90  | 80  | 100    | 290 | 18 | 160 | 90° | 45° | 86  |
| MAN 400/4/80 A1FT/50    | 390 | 150 | 700 | 90  | 80  | 100    | 290 | 18 | 160 | 90° | 45° | 89  |
| MAN 200/4/100 A1DT/50   | 415 | 160 | 595 | 90  | 100 | 100    | 310 | 18 | 180 | 45° | -   | 68  |
| MAN 300/4/100 A1FT/50   | 415 | 160 | 700 | 90  | 100 | 100    | 310 | 18 | 180 | 45° | -   | 88  |
| MAN 400/4/100 A1FT/50   | 415 | 160 | 700 | 90  | 100 | 100    | 310 | 18 | 180 | 45° | -   | 91  |
| MAN 150/6/80 A1DT/50    | 390 | 150 | 595 | 90  | 80  | 100    | 290 | 18 | 160 | 90° | 45° | 65  |
| MAN 150/6/100 A1DT/50   | 415 | 160 | 595 | 90  | 100 | 100    | 310 | 18 | 180 | 45° | -   | 67  |
| MAN 250/6/100 A1FT/50   | 505 | 200 | 740 | 115 | 100 | 100    | 395 | 18 | 180 | 45° | -   | 111 |
| MAN 250/6/150 A1FT/50   | 505 | 200 | 740 | 115 | 150 | 100    | 395 | 24 | 240 | 45° | -   | 114 |

(\*) DN of the suction flange - PN6

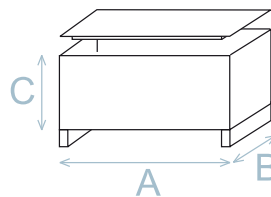
Dimensions in mm

All weights and dimensions are indicative only

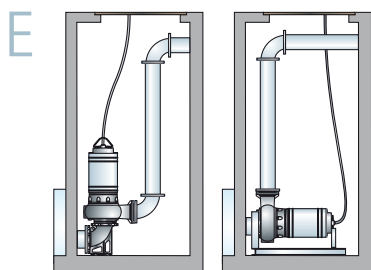
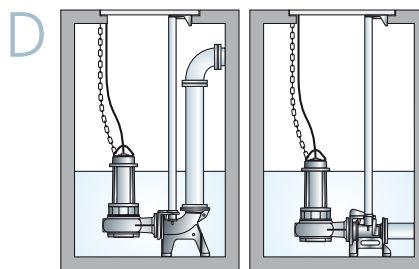
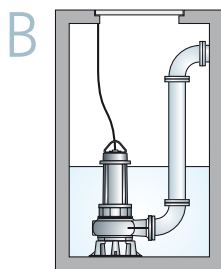
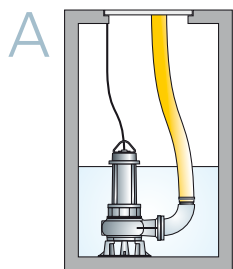
## Packaging dimension

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| MAN 250/2/G65V A1DM(T)/50 | 725 | 445 | 415 |
| MAN 300/2/G65V A1DT/50    | 725 | 445 | 415 |
| MAN 250/2/65 A1DM(T)/50   | 725 | 445 | 415 |
| MAN 300/2/65 A1DT/50      | 725 | 445 | 415 |
| MAN 400/2/65 A1FT/50      | 725 | 445 | 415 |
| MAN 550/2/65 A1FT/50      | 725 | 445 | 415 |
| MAN 250/2/80 A1DM(T)/50   | 725 | 445 | 415 |
| MAN 300/2/80 A1DT/50      | 725 | 445 | 415 |
| MAN 400/2/80 A1FT/50      | 725 | 445 | 415 |
| MAN 550/2/80 A1FT/50      | 725 | 445 | 415 |
| MAN 400/2/100 A1FT/50     | 725 | 445 | 415 |
| MAN 550/2/100 A1FT/50     | 725 | 445 | 415 |
| MAN 200/4/80 A1DT/50      | 725 | 445 | 415 |
| MAN 300/4/80 A1FT/50      | 725 | 445 | 415 |
| MAN 400/4/80 A1FT/50      | 725 | 445 | 415 |
| MAN 200/4/100 A1DT/50     | 725 | 445 | 415 |
| MAN 300/4/100 A1FT/50     | 725 | 445 | 415 |
| MAN 400/4/100 A1FT/50     | 725 | 445 | 415 |
| MAN 150/6/80 A1DT/50      | 725 | 445 | 415 |
| MAN 150/6/100 A1DT/50     | 725 | 445 | 415 |
| MAN 250/6/100 A1FT/50     | 725 | 445 | 415 |
| MAN 250/6/150 A1FT/50     | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are  
indicative only

## Installations available



# MAF



## Single-channel open impeller



### General characteristics

| Single-channel open impeller |                         |
|------------------------------|-------------------------|
| motor power                  | 0,74 kW                 |
| poles                        | 4                       |
| discharge                    | DN65 ÷ DN100 horizontal |
| free passage                 | max 55 mm               |
| max flow rate                | 17.6 l/s                |
| max head                     | 6.9 m                   |

All product images are indicative only

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

### Applications

Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the MAF can be used with liquids containing traces of flammable substances, and in gassy environments.

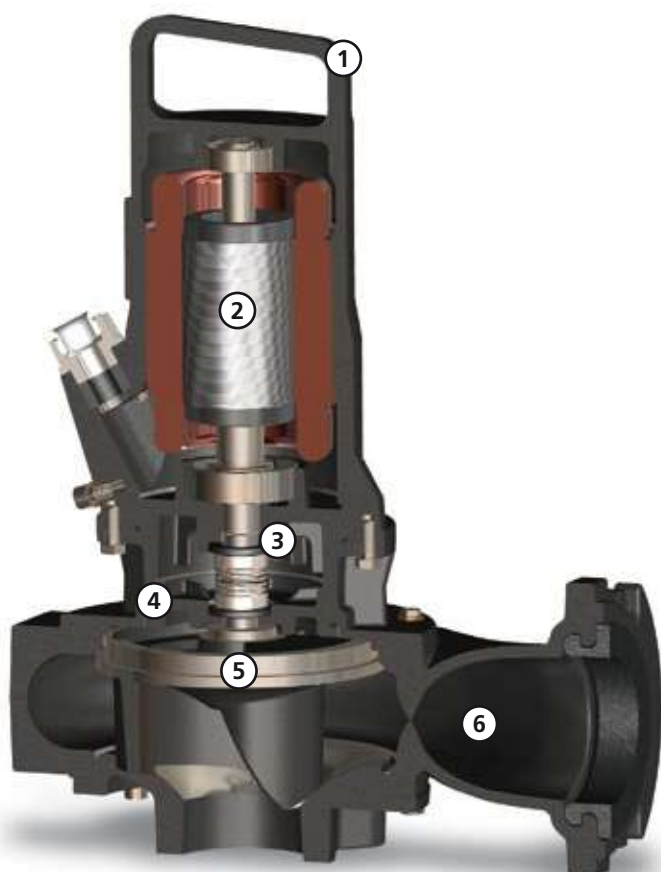
### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR - VITON                                   |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

MAF



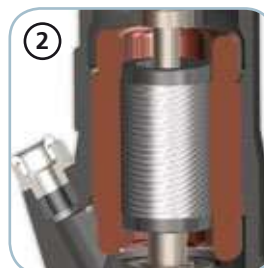
CE 0496  II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids



#### Handle/Cable gland

Cast iron lifting and carrying handle. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



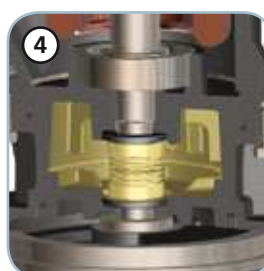
#### Motor

Ecological dry motor with thermal protections.



#### Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



#### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



#### Drive shaft

Impeller connected to the drive shaft by means of tapered coupling.



#### Free passage

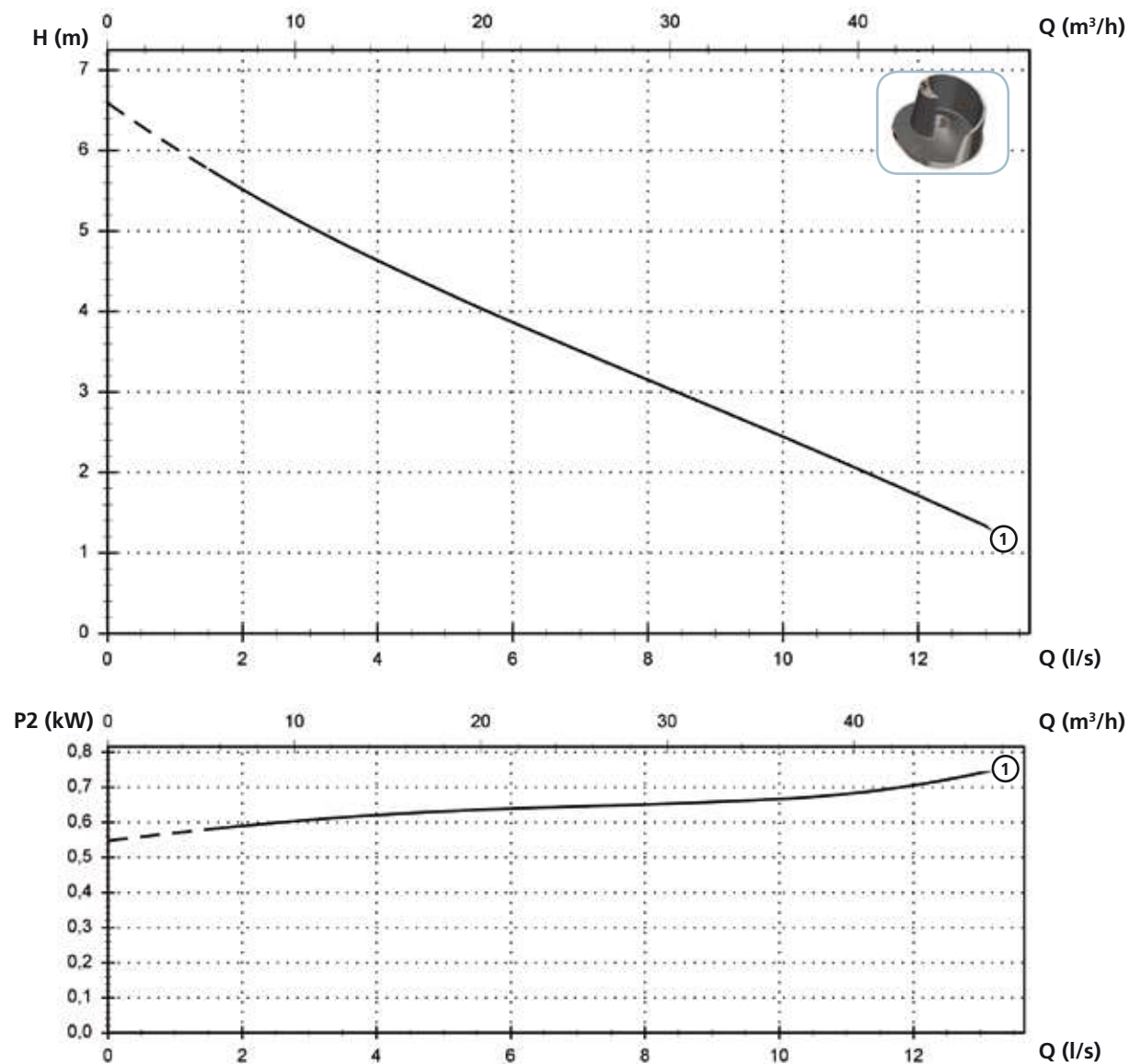
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.



# MAF

## Models with horizontal DN65 PN10-16 flanged discharge - 4 poles

### Performances



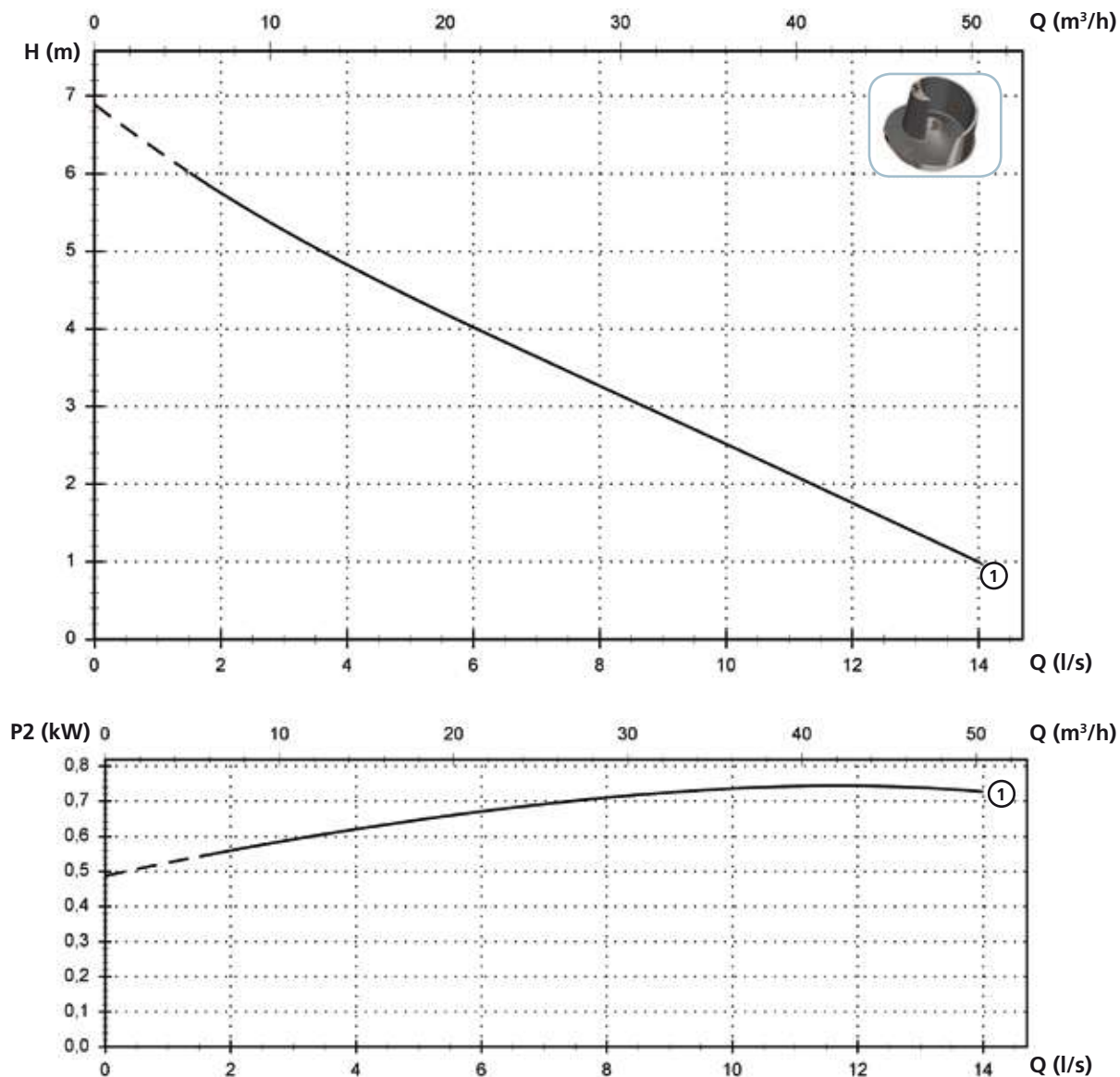
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① MAF 100/4/65 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN65 PN10-16 | 50 mm        |

MAF

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

## Performances



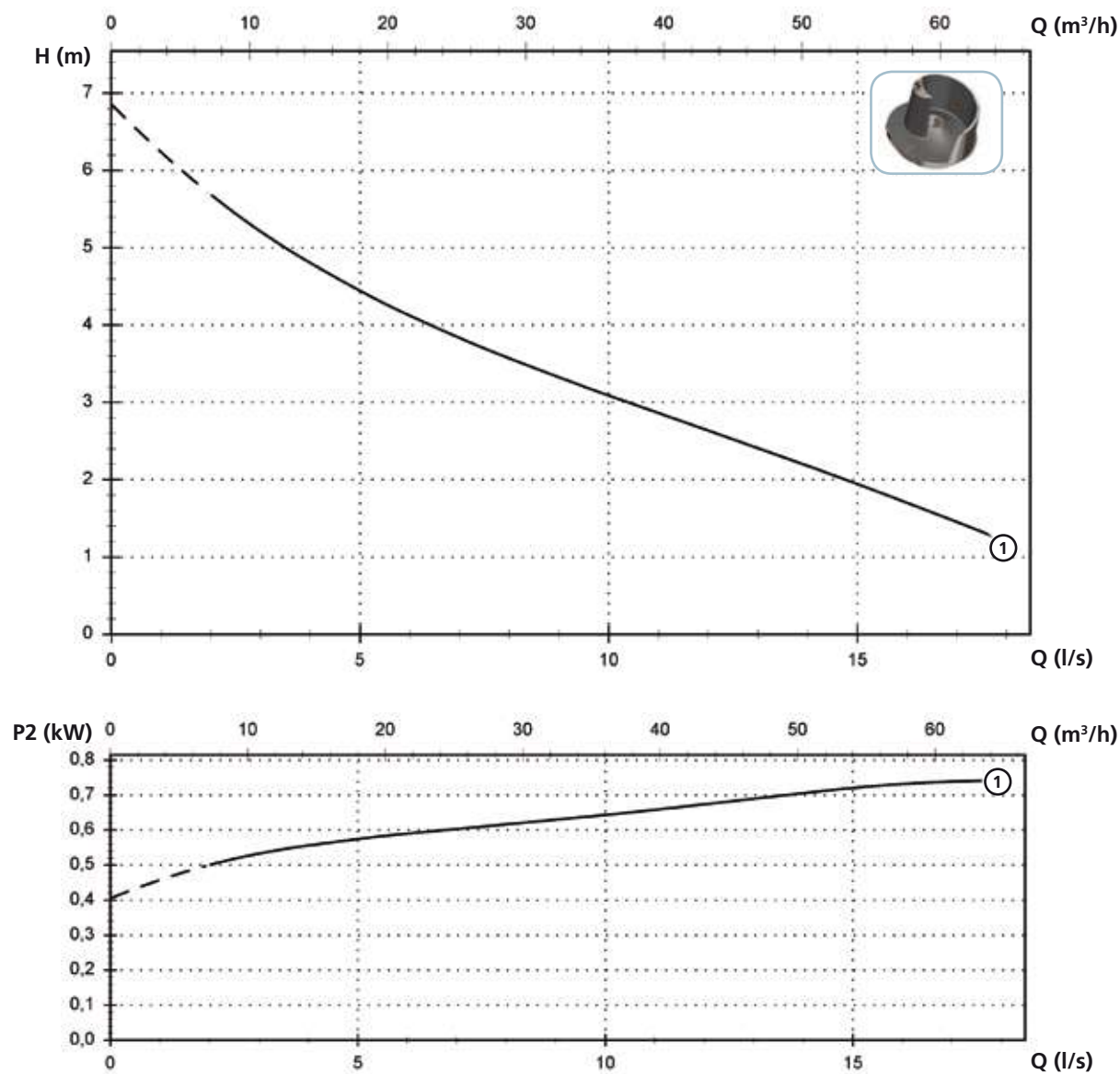
## Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① MAF 100/4/80 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN80 PN10-16 | 50 mm        |

# MAF

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① MAF 100/4/100 A1CT/50 | 400 | 3      | 1.1     | 0.74    | 2.2 | 1450 | Dir   | DN100 PN10-16 | 55 mm        |

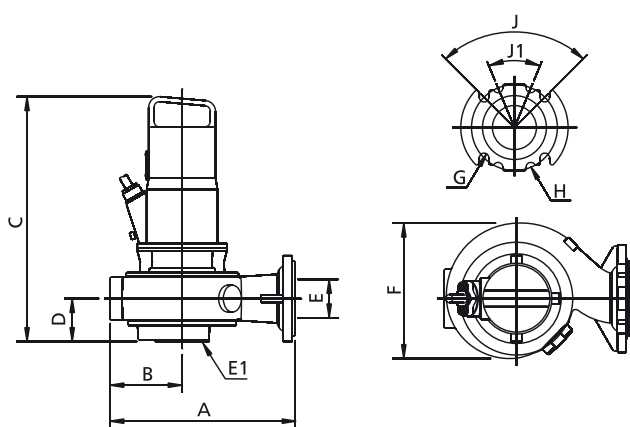
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                       | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|-----------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                       | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| MAF 100/4/65 A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| MAF 100/4/80 A1CT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| MAF 100/4/100 A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights



|                       | A   | B   | C   | D  | E   | E1 (*) | F   | G  | H   | J   | J1  | kg |
|-----------------------|-----|-----|-----|----|-----|--------|-----|----|-----|-----|-----|----|
| MAF 100/4/65 A1CT/50  | 345 | 135 | 455 | 80 | 65  | 65     | 255 | 18 | 145 | 90° | -   | 42 |
| MAF 100/4/80 A1CT/50  | 345 | 135 | 455 | 80 | 80  | 80     | 255 | 18 | 160 | 90° | 45° | 42 |
| MAF 100/4/100 A1CT/50 | 430 | 170 | 475 | 90 | 100 | 80     | 325 | 18 | 180 | 45° | -   | 48 |

Dimensions in mm

All weights and dimensions are indicative only

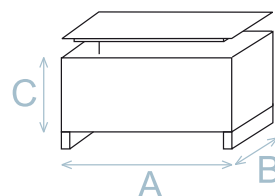
(\*) DN of the suction flange - PN6

## Packaging dimension

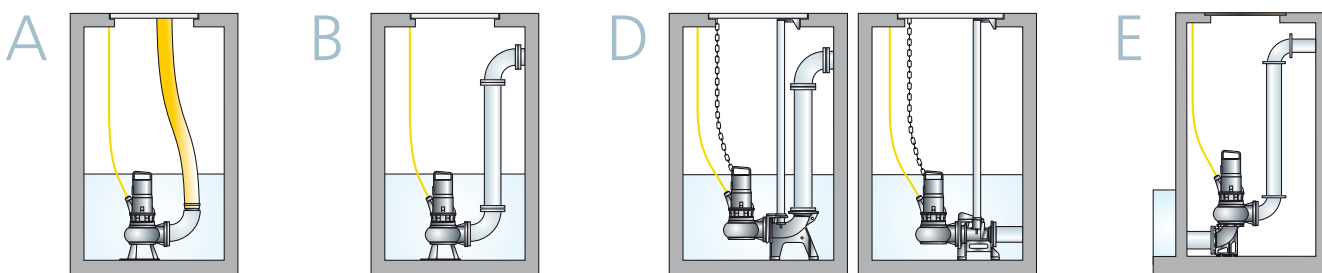
|                       | A   | B   | C   |
|-----------------------|-----|-----|-----|
| MAF 100/4/65 A1CT/50  | 725 | 445 | 415 |
| MAF 100/4/80 A1CT/50  | 725 | 445 | 415 |
| MAF 100/4/100 A1CT/50 | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



Dry installation available in S3 mode.  
Contact Customer Service for more information.

# 1.4 SM-SB (SYSTEM M-SYSTEM B)

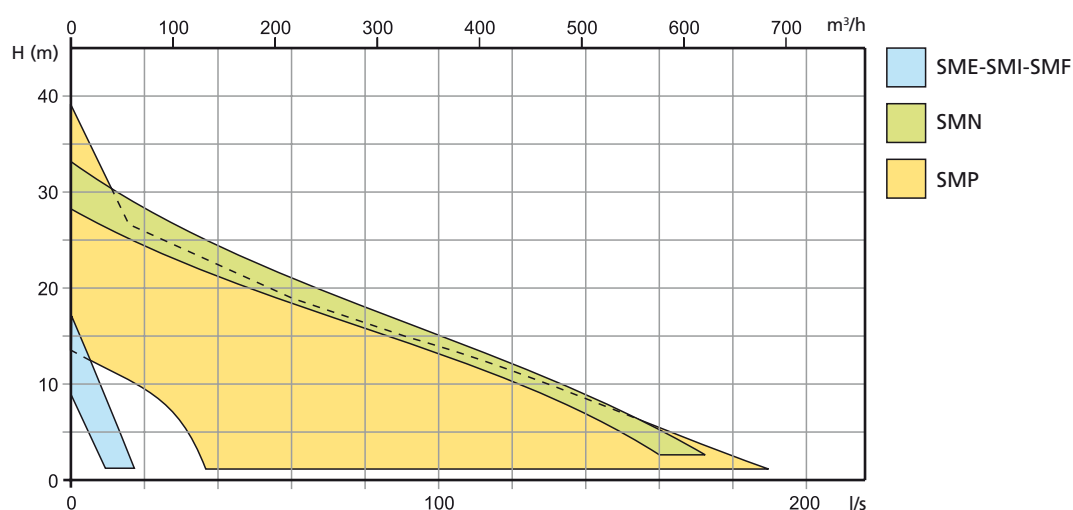
## pumps with single- and dual-channel closed impeller

The **SM (SYSTEM M)** family consists of electric pumps with single-channel closed impeller which allows ample free passages and high consists. Used with soiled wastewaters containing suspended solids.

**0.74 ÷ 22.0 kW**



Ideal for handling soiled biological liquids with suspended solid particles and strained biological liquids. Generally used in industry, especially in sectors such as wastewater treatment plants and sewage disposal systems.

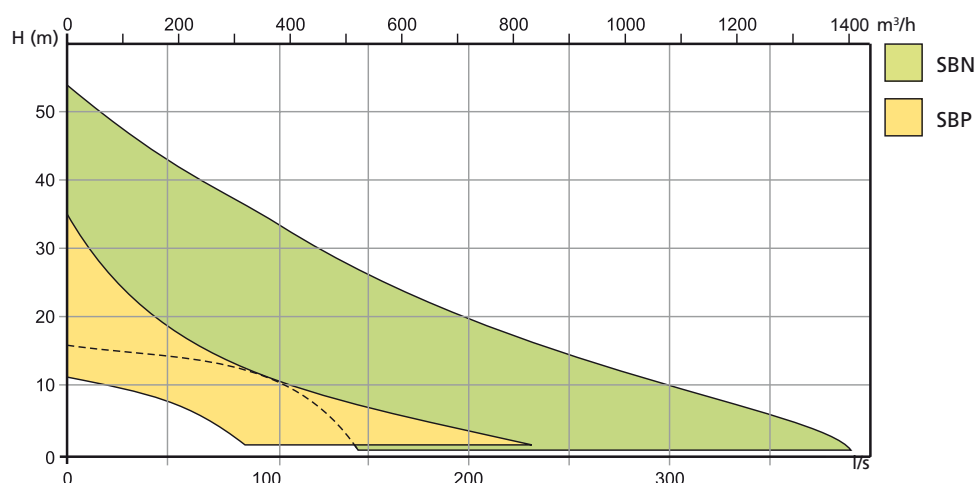


The **SB (SYSTEM B)** family consists of electric pumps with dual-channel closed impeller. The ample free passage and excellent performance are the two features that enable the SB family to operate with soiled liquids containing suspended solids.

**6.5 ÷ 50.0 kW**



The ideal solution for pumping slurry, soiled water with and without solids, untreated or activated sludges, strained and unstrained biological liquids and rainwater or seepage. Ideal for lifting water from public establishments and plants for public works or hospitals.



# SM-SB

Pumps with single- and dual-channel closed impeller

## 0.74 ÷ 22.0 kW Models with single-channel closed impeller (SM)



### SME

page 202

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller.

Suitable for pumping wastewater in small sewer systems, livestock farms, the food industry, agriculture and irrigation.



### SMI

page 206

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump. Ecological dry motor. Stainless steel handle, cast iron impeller.

Suitable for pumping wastewater from public establishments, small sewer systems, livestock farms, the food industry, agriculture and for irrigation. This electric pump is intended for both domestic and professional use.



### SMN

page 210

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals.

Designed for heavy-duty applications, they are generally used in civil and industrial wastewater treatment plants, for lifting in sewer systems and for pumping industrial sludges. Transporting rainwater containing solids and recycling raw or activated sludges and biological liquids. These models are prefitted for installation of the ZENIT cooling system, for dry or semi-submerged installation (on request).



### SMP

page 216

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor.

Designed for heavy-duty applications, they are generally used in wastewater treatment, residential and sewer plants and for the treatment of wastewater from public establishments. Suitable for pumping industrial sludges.



### SMF

page 226

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Cast iron handle and impeller. Models with ATEX explosion-proof certification.

Designed specifically for operation where there are traces of flammable liquids or in potentially explosive atmospheres, the SMF can be used with soiled liquids containing traces of flammable substances, and in gassy environments.

## 6.5 ÷ 50.0 kW Models with dual-channel closed impeller (SB)



### SBN

page 230

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals.

Designed for heavy-duty professional applications, they are used in civil and industrial wastewater treatment plants. Lifting sewage, pumping industrial sludges and rainwater containing solids, and recycling raw or activated sludges and biological liquids. These models are prefitted for installation of the ZENIT cooling system, for dry or semi-submerged installation (on request).



### SBP

page 244

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor.

Suitable for heavy-duty industrial applications, they are generally used in civil and industrial wastewater treatment plants, for lifting sewage, for pumping industrial sludges and rainwater containing solids, and for recycling raw or activated sludges and biological liquids.



# SME

## Single-channel closed impeller

All product images are indicative only



### General characteristics

| Single-channel closed impeller |                          |
|--------------------------------|--------------------------|
| motor power                    | 1,5 kW                   |
| poles                          | 2                        |
| discharge                      | GAS 2" - DN80 horizontal |
| free passage                   | max 50 mm                |
| max flow rate                  | 16.1 l/s                 |
| max head                       | 17.2 m                   |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor.

### Applications

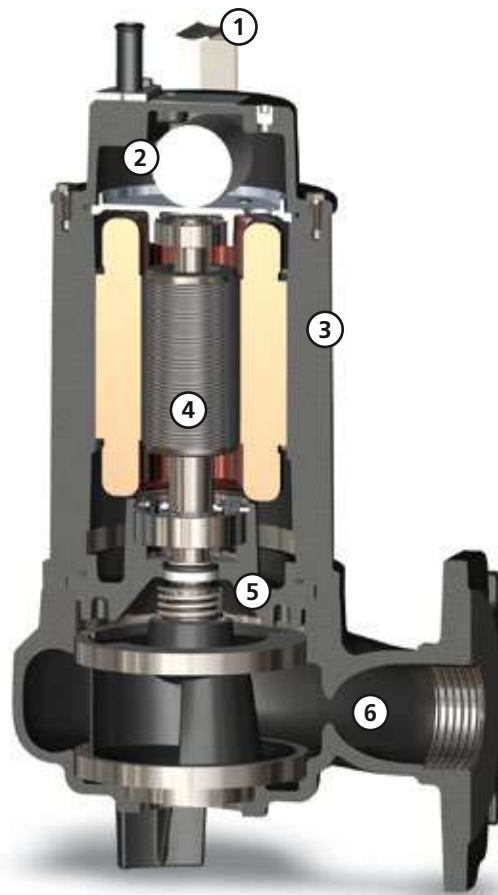
Suitable for pumping wastewater in small sewer systems, livestock farms, the food industry, agriculture and irrigation.

### Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Shaft                            | Stainless steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

**SME****Handle**

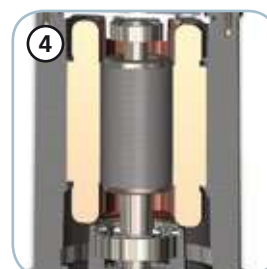
AISI 304 stainless steel lifting and carrying handle.

**Capacitor/relay**

Single-phase models with internal capacitor. Three-phase models with motor protection relay.

**Structure**

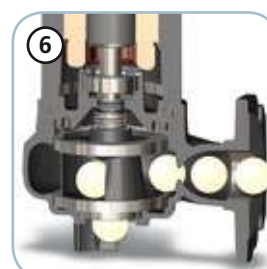
Constructed in GJL-250 cast iron.

**Motor**

Ecological dry motor with thermal protections.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one lip seal.

**Free passage**

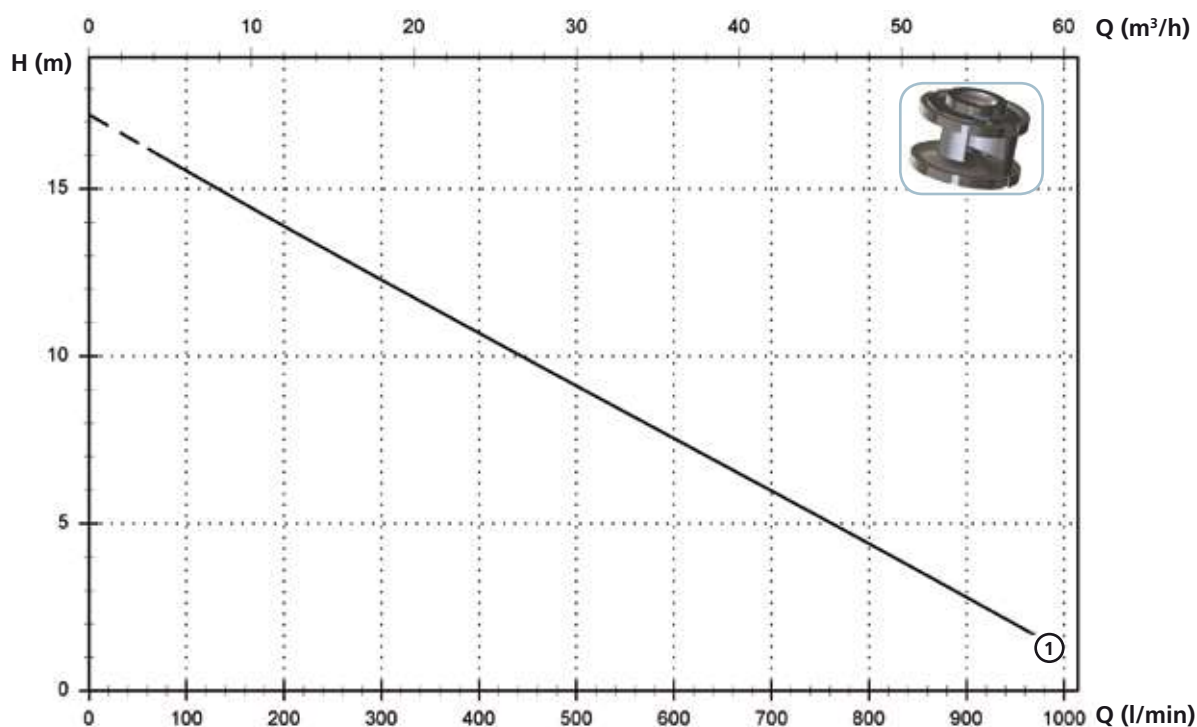
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# SME

## Models with horizontal GAS 2" threaded and DN80 PN10 flanged discharge - 2 poles

### Performances

|                             |                   |      |      |      |      |      |      |      |      |      |
|-----------------------------|-------------------|------|------|------|------|------|------|------|------|------|
|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   | 12   | 14   | 16   |
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  | 720  | 840  | 960  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 | 57.6 |
| ① SME 200/2/G50H A0CM(T)/50 |                   | 16.8 | 15.2 | 13.2 | 11.3 | 9.4  | 7.5  | 5.7  | 3.8  | 1.8  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-----------------|--------------|
| ① SME 200/2/G50H A0CM/50 | 230 | 1      | 1.8     | 1.5     | 9.3 | 2900 | Dir   | G 2"- DN80 PN10 | 50 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-----------------|--------------|
| ① SME 200/2/G50H A0CT/50 | 400 | 3      | 2.0     | 1.5     | 3.5 | 2900 | Dir   | G 2"- DN80 PN10 | 50 mm        |

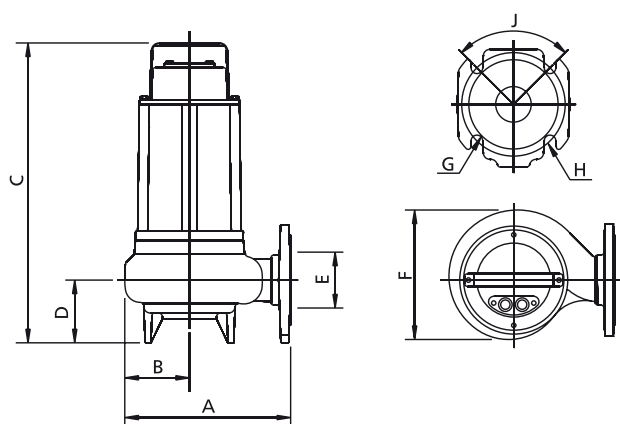
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| SME 200/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ●       |           |    |                  |                  | ●    |       |        |
| SME 200/2/G50H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  |                  | ●    |       |        |

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E    | F   | G  | H   | J   | kg |
|---------------------------|-----|-----|-----|----|------|-----|----|-----|-----|----|
| SME 200/2/G50H A0CM(T)/50 | 255 | 100 | 465 | 95 | G 2" | 200 | 18 | 160 | 90° | 31 |

Dimensions in mm

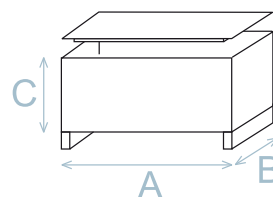
All weights and dimensions are indicative only

## Packaging dimension

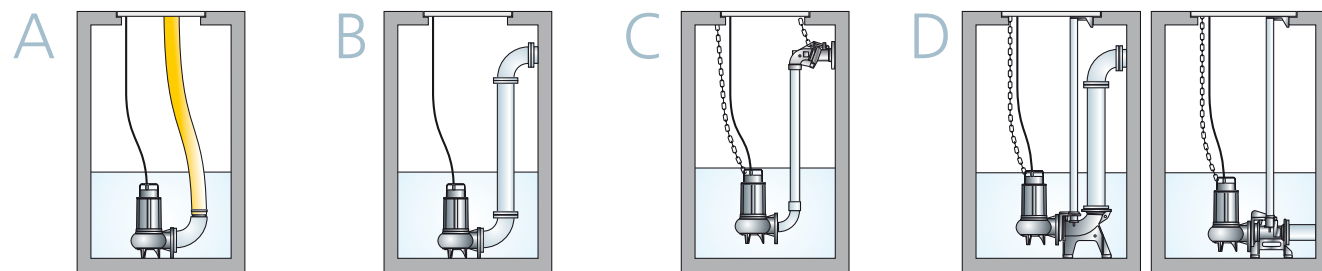
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| SME 200/2/G50H A0CM(T)/50 | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



SMI

## Single-channel closed impeller

All product images are indicative only



## General characteristics

|                                |                        |
|--------------------------------|------------------------|
| Single-channel closed impeller |                        |
| motor power                    | 1,5 kW                 |
| poles                          | 2                      |
| discharge                      | GAS 2"-DN80 horizontal |
| free passage                   | 50 mm                  |
| max flow rate                  | 16.1 l/s               |
| max head                       | 17.2 m                 |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals, installed in series in inspectable oil sump. Ecological dry motor.

## Applications

Suitable for pumping wastewater from public establishments, small sewer systems, livestock farms, the food industry, agriculture and for irrigation. This electric pump is intended for both domestic and professional use.

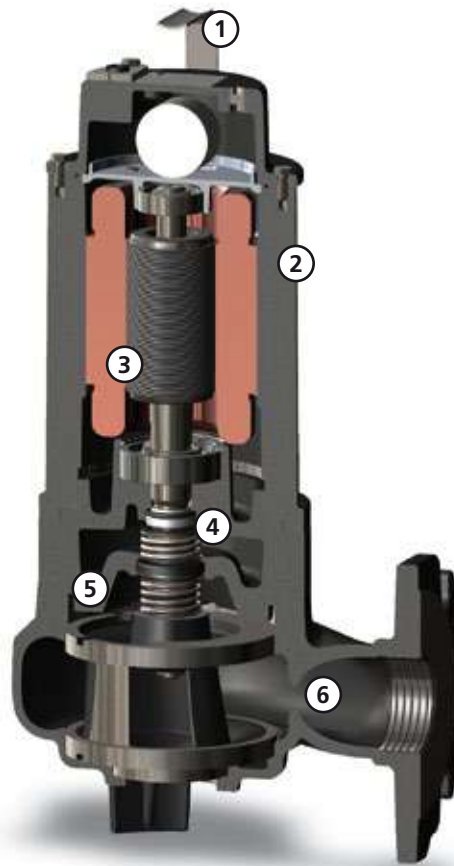
## Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

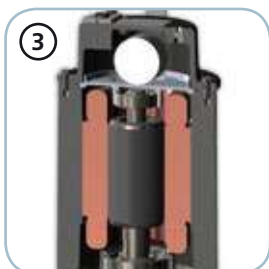
SMI

**Handle**

AISI 304 stainless steel lifting and carrying handle.

**Structure**

Constructed in GJL-250 cast iron.

**Motor**

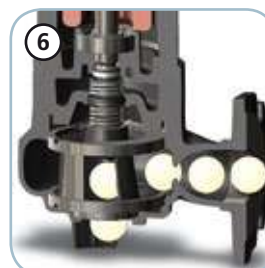
Ecological dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC).

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

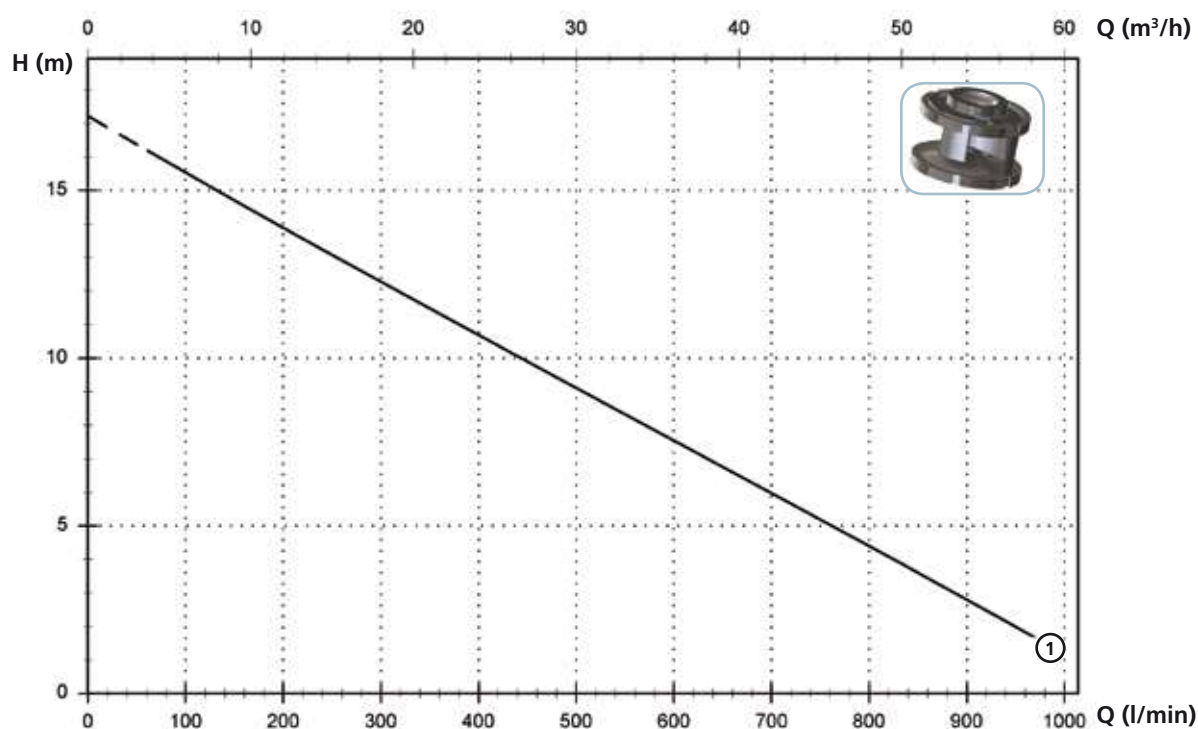


# SMI

## Models with horizontal GAS 2" threaded and DN80 PN10 flanged discharge - 2 poles

### Performances

|                             |                   |      |      |      |      |      |      |      |      |      |
|-----------------------------|-------------------|------|------|------|------|------|------|------|------|------|
|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   | 12   | 14   | 16   |
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  | 720  | 840  | 960  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 | 57.6 |
| ① SMI 200/2/G50H A0CM(T)/50 |                   | 16.8 | 15.2 | 13.2 | 11.3 | 9.4  | 7.5  | 5.7  | 3.8  | 1.8  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① SMI 200/2/G50H A0CM/50 | 230 | 1      | 1.9     | 1.5     | 9.9 | 2900 | Dir   | G 2" DN80 PN10 | 50 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① SMI 200/2/G50H A0CT/50 | 400 | 3      | 2.0     | 1.5     | 3.5 | 2900 | Dir   | G 2" DN80 PN10 | 50 mm        |

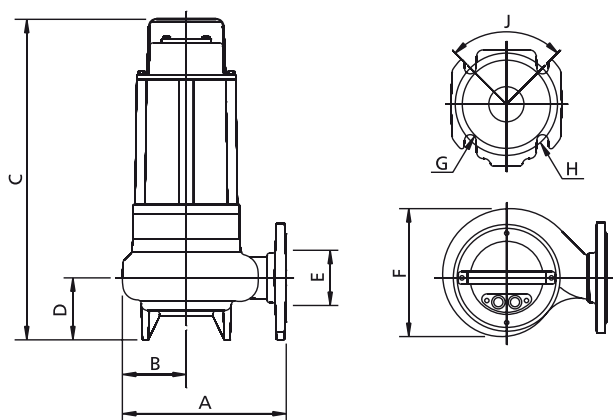
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| SMI 200/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| SMI 200/2/G50H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E    | F   | G  | H   | J   | kg |
|---------------------------|-----|-----|-----|----|------|-----|----|-----|-----|----|
| SMI 200/2/G50H A0CM(T)/50 | 255 | 100 | 505 | 95 | G 2" | 200 | 18 | 160 | 90° | 38 |

Dimensions in mm

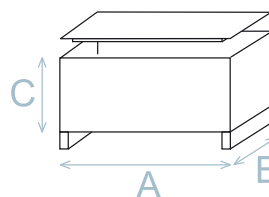
All weights and dimensions are indicative only

## Packaging dimension

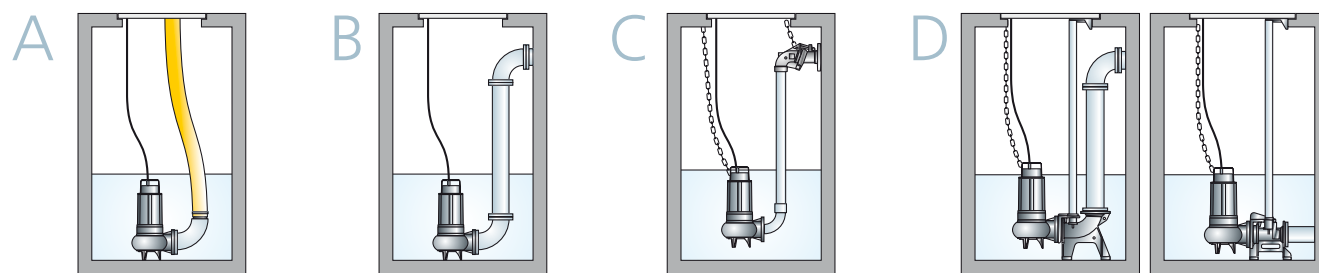
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| SMI 200/2/G50H A0CM(T)/50 | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



# SMN

## Single-channel closed impeller

All product images are indicative only



### General characteristics

|                                |                          |
|--------------------------------|--------------------------|
| Single-channel closed impeller |                          |
| motor power                    | 22,0 kW                  |
| poles                          | 4                        |
| discharge                      | DN150 ÷ DN250 horizontal |
| free passage                   | max 130 mm               |
| max flow rate                  | 170 l/s                  |
| max head                       | 33.0 m                   |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor.

### Applications

Designed for heavy-duty applications, they are generally used in civil and industrial wastewater treatment plants, for lifting in sewer systems and for pumping industrial sludges. Transporting rainwater containing solids and recycling raw or activated sludges and biological liquids. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

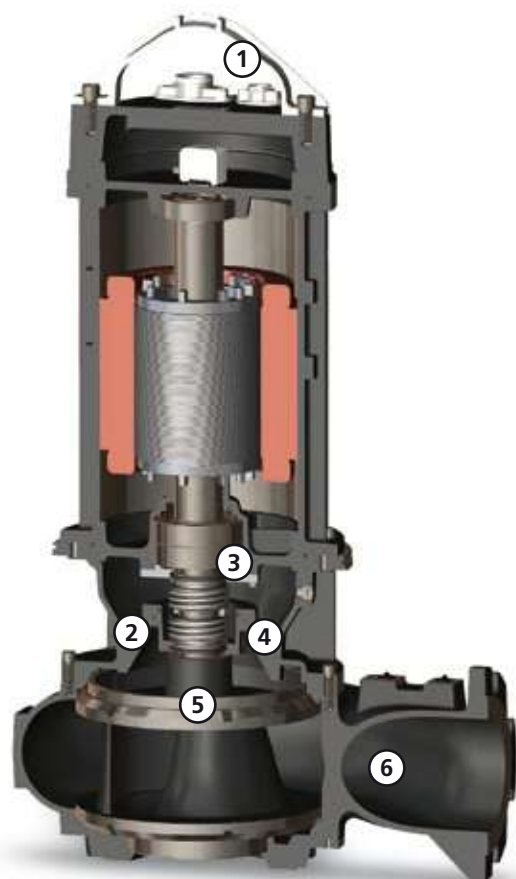
### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Carbon steel or AISI 304 stainless steel               |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

SMN



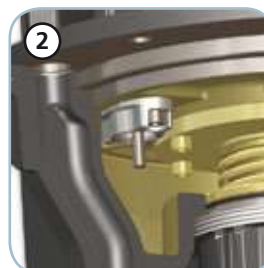
### Cooling system

Dry installation available using the cooling jacket (see details to page 17)



### Cable Gland

Cable gland system to guarantee perfect water-tightness. The universal thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



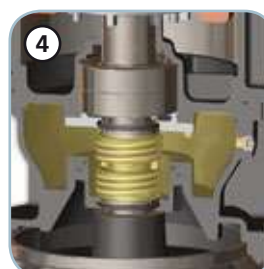
### Sensor

Sensor for detecting water in the mechanical seal oil chamber. Connected to an electrical panel, the sensor provides immediate warning of wear on the first mechanical seal, preventing possible damage to the motor.



### Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



### Drive shaft

Impeller connected to the drive shaft by means of tapered coupling.



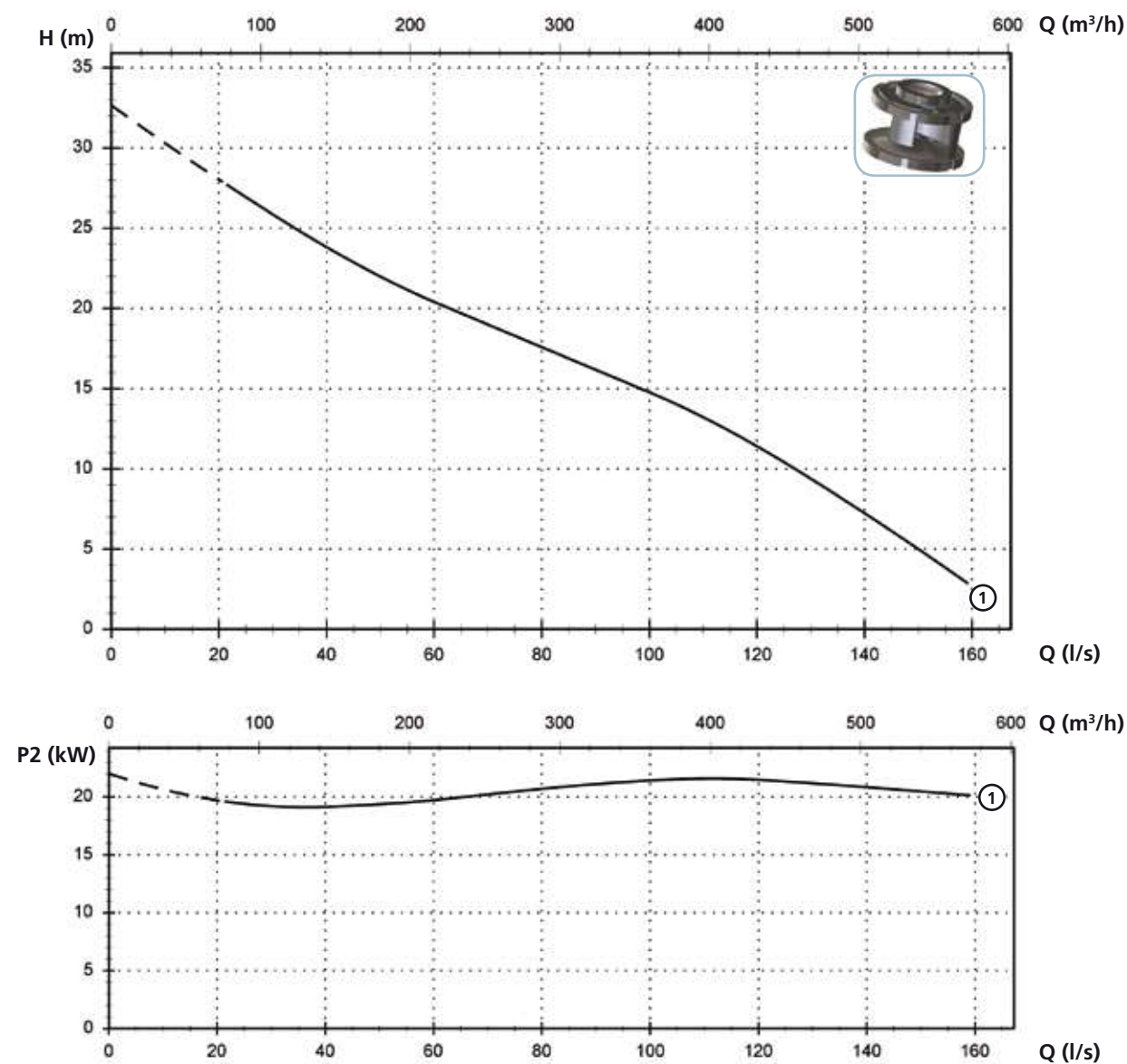
### Free passage

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# SMN

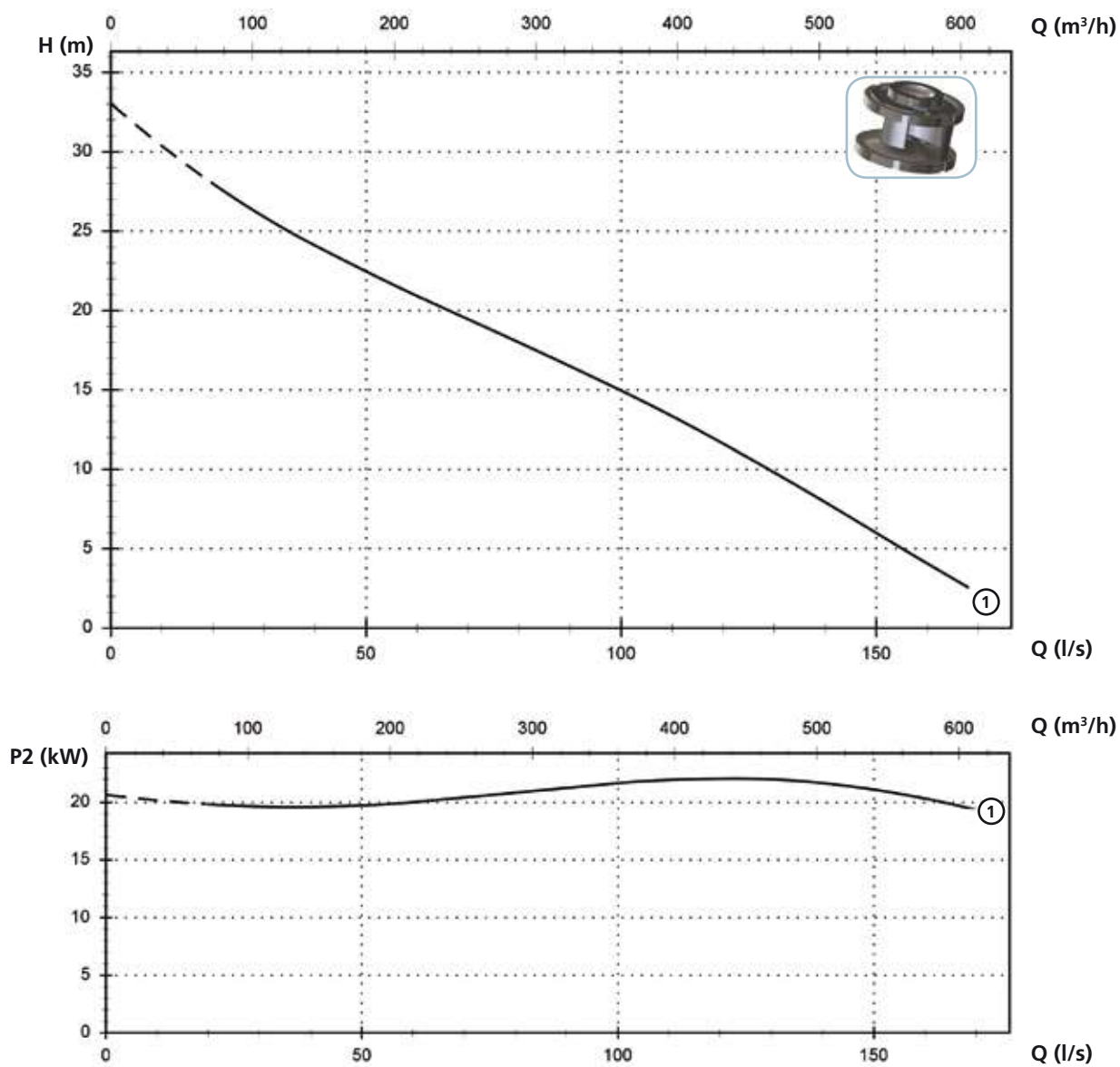
## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① SMN 3000/4/150 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN150 PN10-16 | 100x130 mm   |

**SMN****Models with horizontal DN200 PN10 flanged discharge - 4 poles****Performances****Technical data**

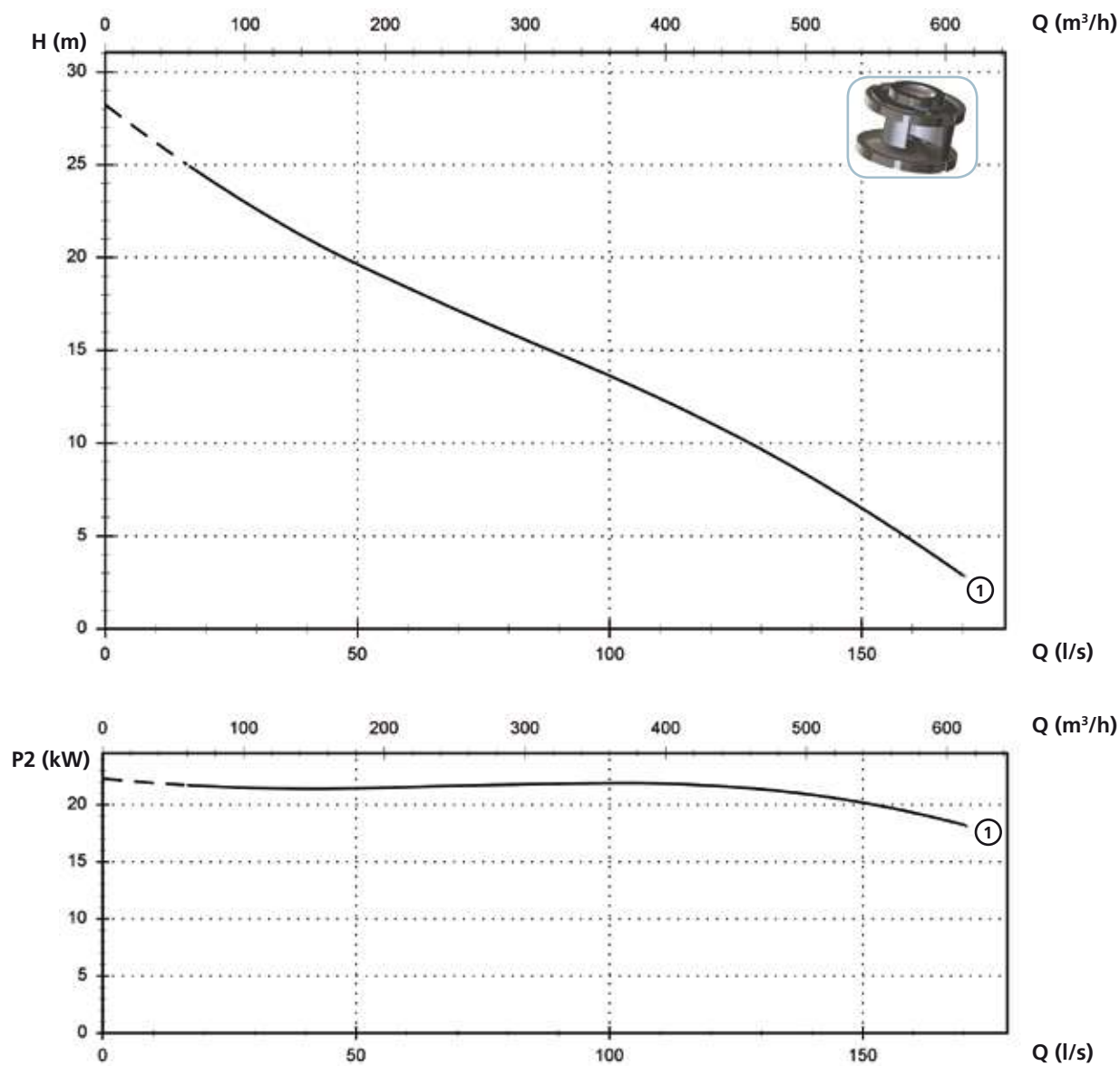
|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① SMN 3000/4/200 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN200 PN10 | 100x130 mm   |



# SMN

## Models with horizontal DN250 PN10 flanged discharge - 4 poles

### Performances



### Technical data

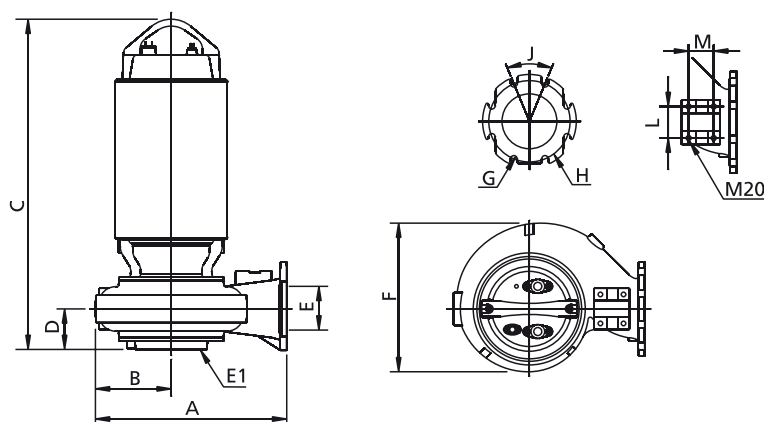
|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① SMN 3000/4/250 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN250 PN10 | 100x130 mm   |

**SMN****Versions available**

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        | Cooling |             |   |           | Mechanical seals |                  |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|---------|-------------|---|-----------|------------------|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R  | T<br>R<br>G | N | CC<br>CCE | FT               | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| SMN 3000/4/150 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |         |             | ● | ●         |                  |                  | ●    |      |       |        |
| SMN 3000/4/200 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |         |             | ● | ●         |                  |                  | ●    |      |       |        |
| SMN 3000/4/250 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |         |             | ● | ●         |                  |                  | ●    |      |       |        |

**Overall dimensions and weights**

|                        | A   | B   | C    | D   | E   | E1 (*) | F   | G  | H   | J   | L   | M  | kg  |
|------------------------|-----|-----|------|-----|-----|--------|-----|----|-----|-----|-----|----|-----|
| SMN 3000/4/150 A1LT/50 | 650 | 255 | 1200 | 140 | 150 | 200    | 505 | 24 | 240 | 45° | 109 | 79 | 392 |
| SMN 3000/4/200 A1LT/50 | 695 | 275 | 1200 | 145 | 200 | 200    | 540 | 24 | 295 | 45° | 109 | 79 | 393 |
| SMN 3000/4/250 A1LT/50 | 785 | 310 | 1200 | 145 | 250 | 200    | 610 | 24 | 350 | 30° | 109 | 79 | 402 |

Dimensions in mm

All weights and dimensions are indicative only

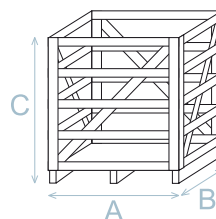
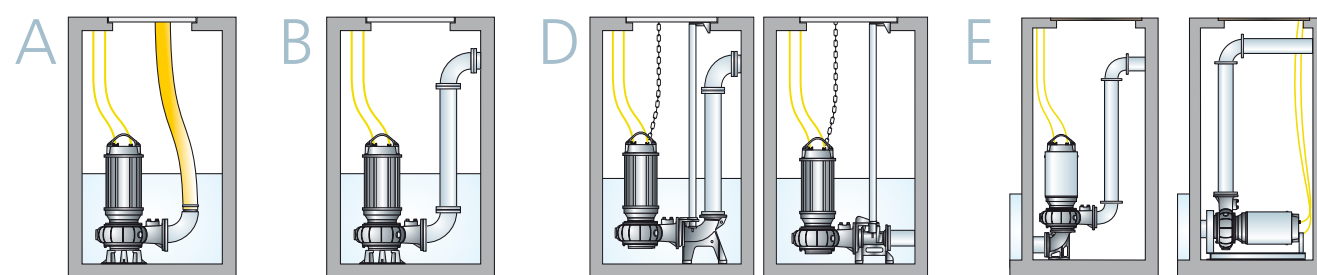
(\*) DN of the suction flange - PN6

**Packaging dimension**

|                        | A    | B   | C    |
|------------------------|------|-----|------|
| SMN 3000/4/150 A1LT/50 | 1100 | 900 | 1350 |
| SMN 3000/4/200 A1LT/50 | 1100 | 900 | 1350 |
| SMN 3000/4/250 A1LT/50 | 1100 | 900 | 1350 |

Dimension in mm

All weights and dimensions are indicative only

**Installations available**

# SMP

## Single-channel closed impeller

All product images are indicative only



### General characteristics

| Single-channel closed impeller |                         |
|--------------------------------|-------------------------|
| motor power                    | 3,0 kW ÷ 16,4 kW        |
| poles                          | 2 / 4 / 6               |
| discharge                      | DN80 ÷ DN250 horizontal |
| free passage                   | 53 ÷ 130 mm             |
| max flow rate                  | 182.9 l/s               |
| max head                       | 39.3 m                  |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

### Applications

Designed for heavy-duty applications, they are generally used in wastewater treatment, residential and sewer plants and for the treatment of wastewater from public establishments. Suitable for pumping industrial sludges.

### Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Cast iron EN-GJL-250                                                                            |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Cooling jacket                   | Carbon steel or stainless steel AISI 304                                                        |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                          |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

### Operating limits

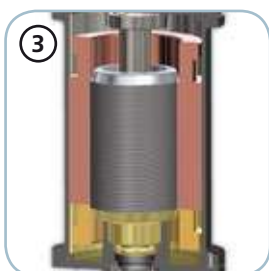
|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

**SMP****Structure**

Constructed in GJL-250 cast iron.

**Bearings**

Shielded ball bearings with lifetime lubrication.

**Motor**

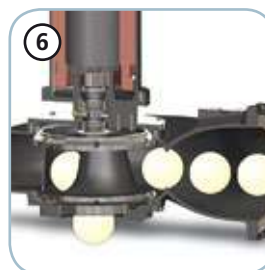
Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

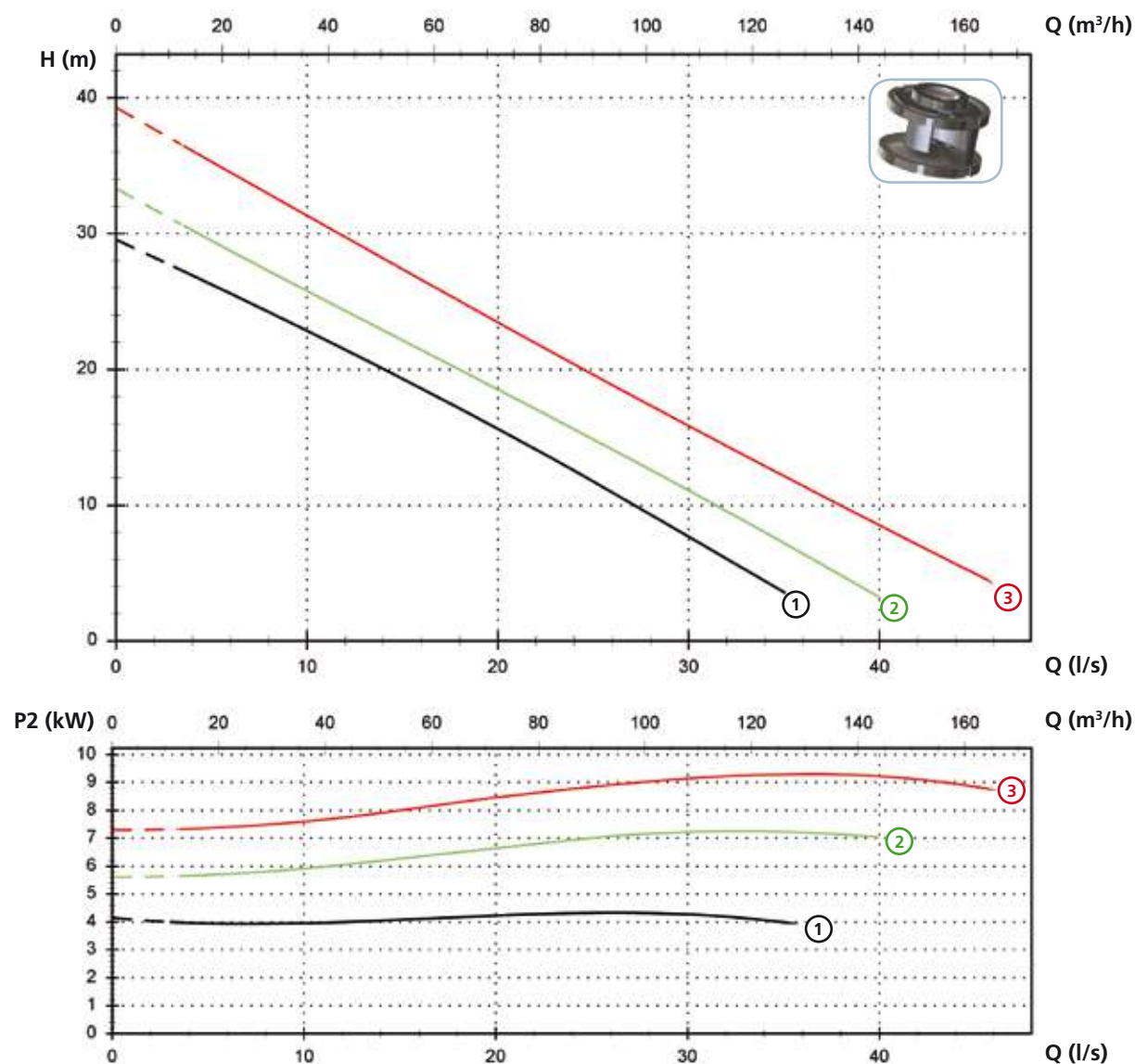
**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# SMP

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances

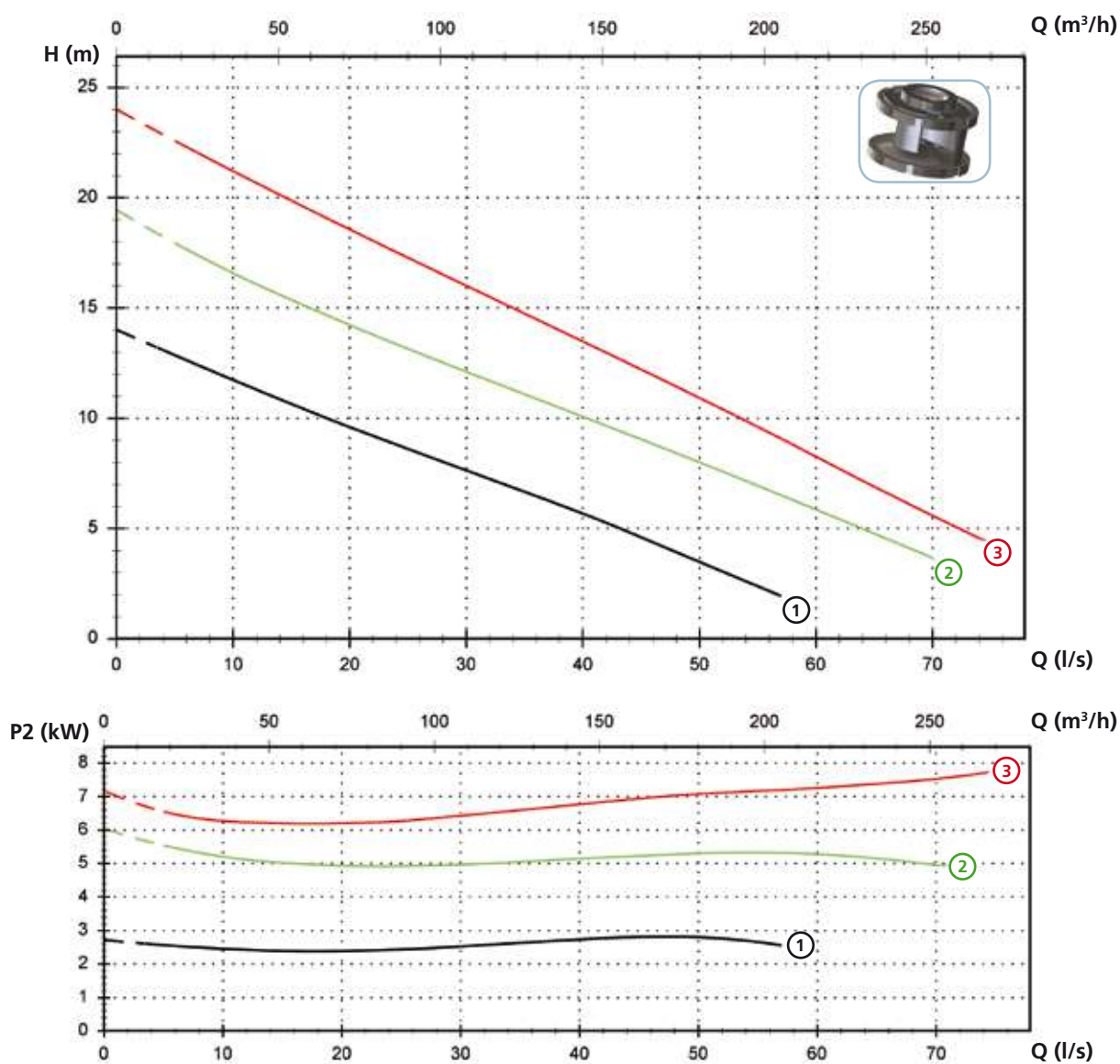


### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|-------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① SMP 550/2/80 A0GT/50  | 400 | 3      | 6.8     | 5.5     | 11.5 | 2900 | Dir   | DN80 PN10-16 | 53 mm        |
| ② SMP 750/2/80 A0HT/50  | 400 | 3      | 8.9     | 7.2     | 14.5 | 2900 | Y Δ   | DN80 PN10-16 | 55x65 mm     |
| ③ SMP 1000/2/80 A0HT/50 | 400 | 3      | 12.4    | 10      | 19.8 | 2900 | Y Δ   | DN80 PN10-16 | 55x65 mm     |

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

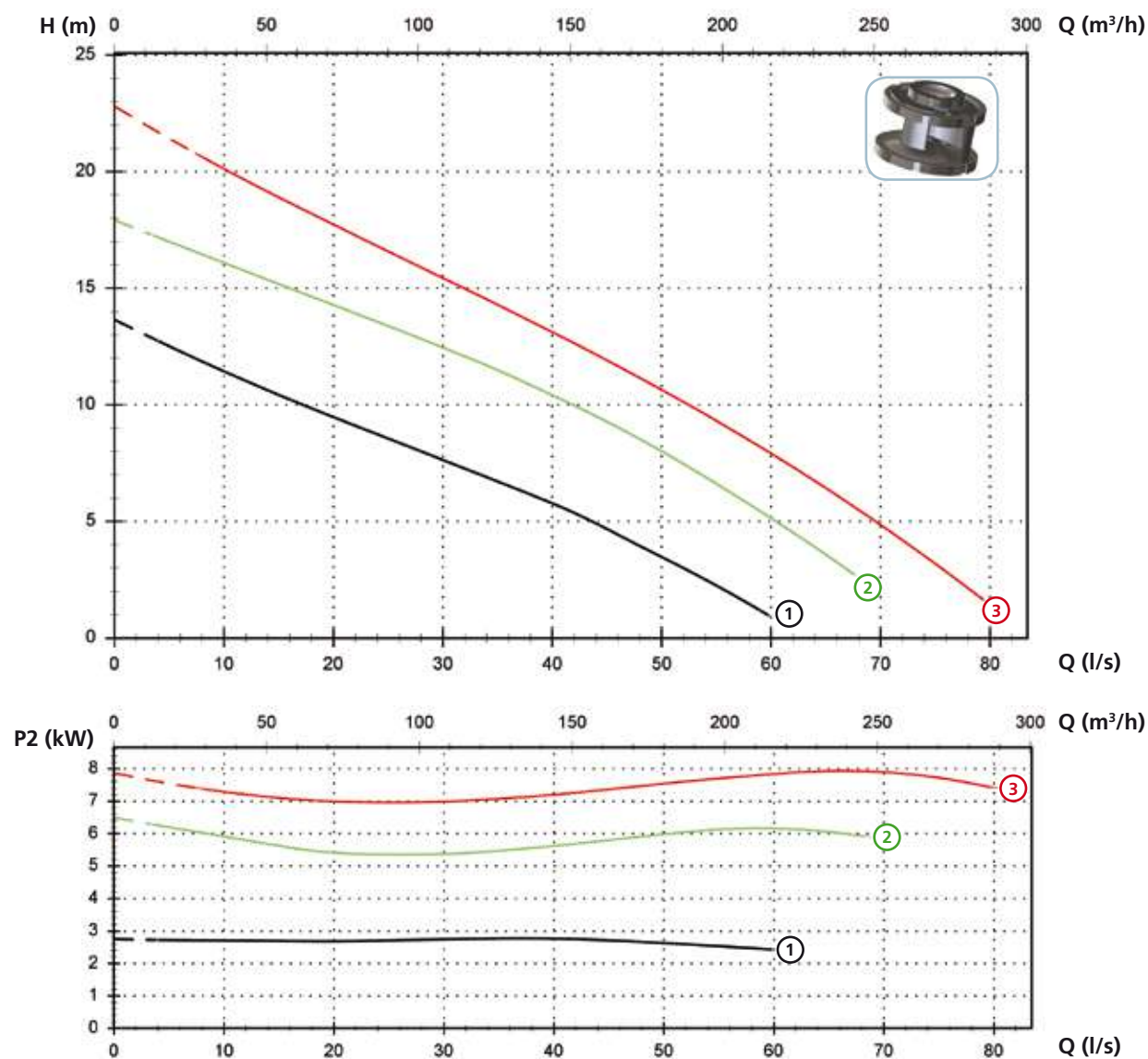
|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | SMP 400/4/100 A0FT/50  | 400 | 3      | 4.1     | 3       | 7.9  | 1450 | Dir   | DN100 PN10-16 | 75x100 mm    |
| ② | SMP 750/4/100 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN100 PN10-16 | 80x100 mm    |
| ③ | SMP 1000/4/100 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN100 PN10-16 | 80x100 mm    |



# SMP

## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances

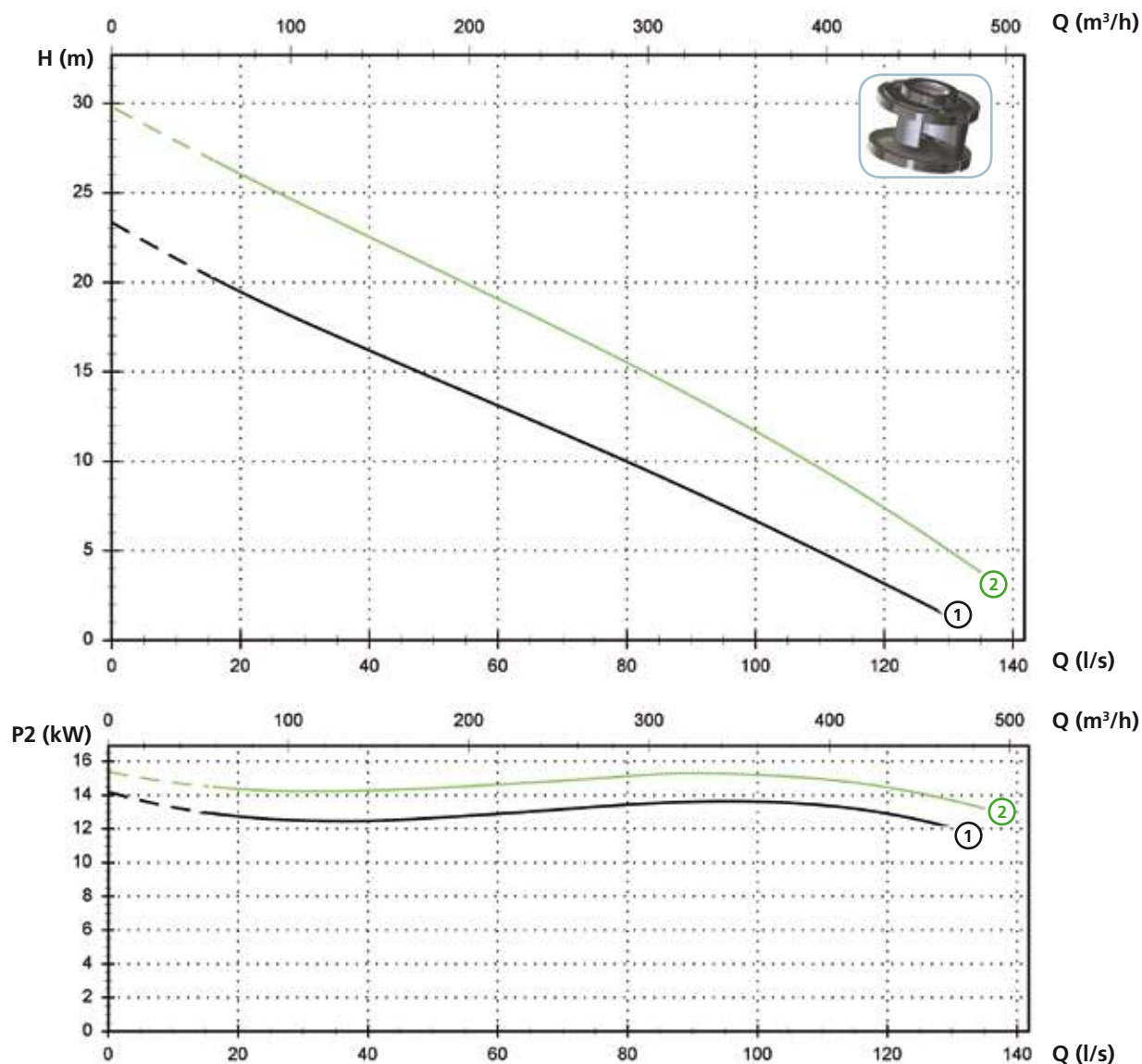


### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① SMP 400/4/150 A0FT/50  | 400 | 3      | 4.1     | 3       | 7.9  | 1450 | Dir   | DN150 PN10-16 | 75x100 mm    |
| ② SMP 750/4/150 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN150 PN10-16 | 80x100 mm    |
| ③ SMP 1000/4/150 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN150 PN10-16 | 80x100 mm    |

## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances



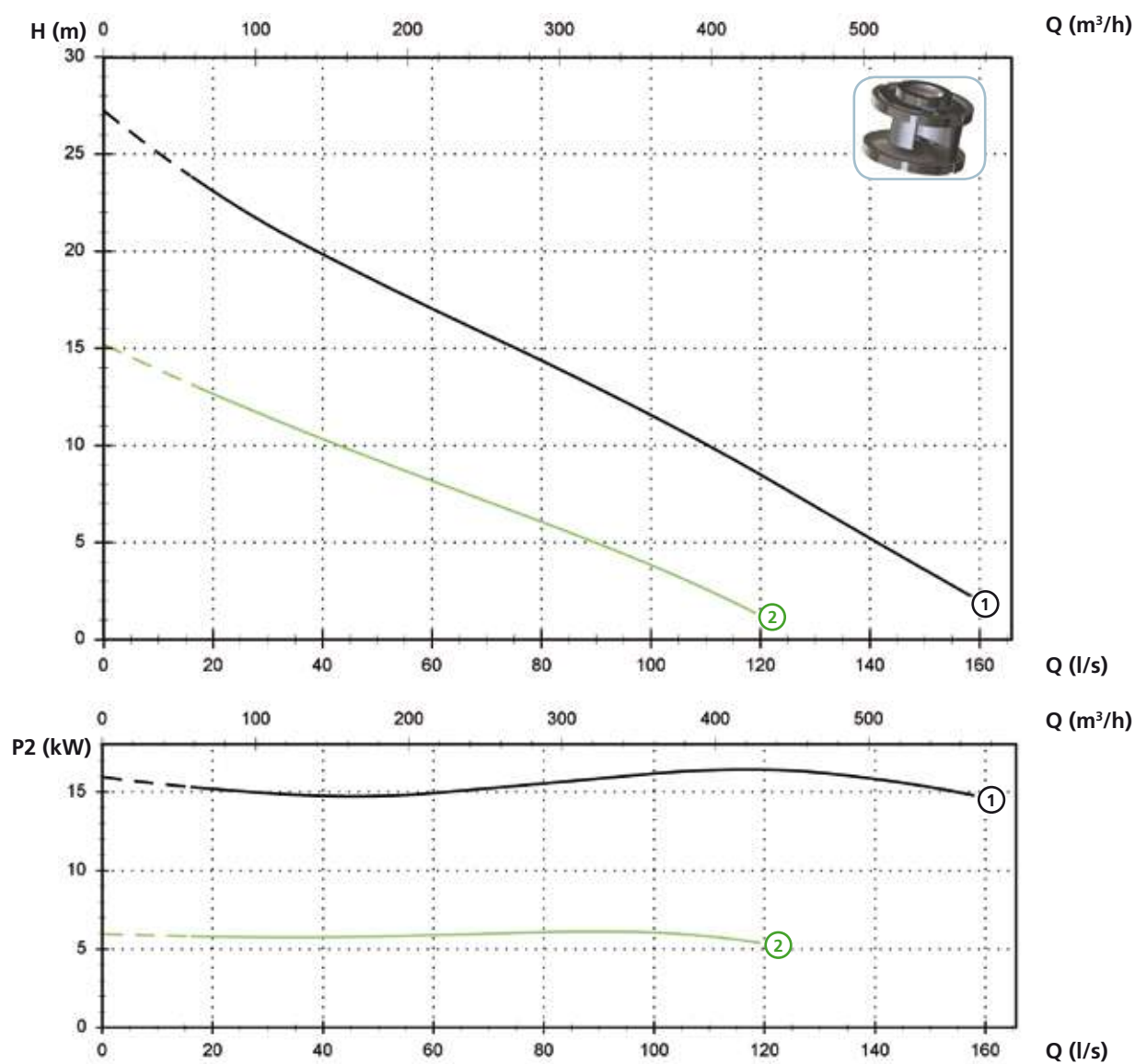
### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① SMP 1500/4/150 A0IT/50 | 400 | 3      | 16.5    | 14.2    | 29.5 | 1450 | Y Δ   | DN150 PN10-16 | 95x110 mm    |
| ② SMP 2000/4/150 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN150 PN10-16 | 100x130 mm   |

# SMP

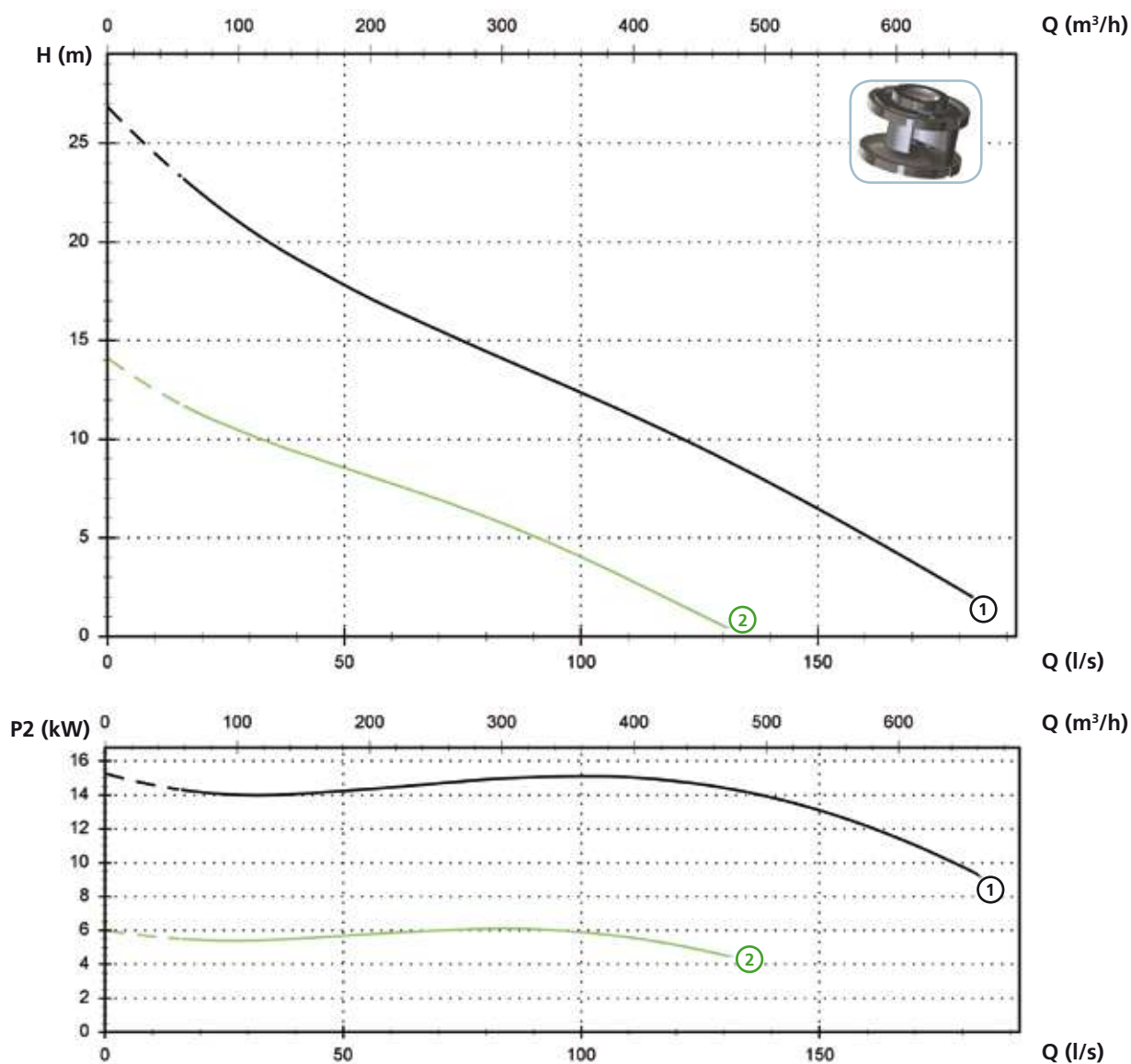
## Models with horizontal DN200 PN10 flanged discharge - 4/6 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① SMP 2000/4/200 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN200 PN10 | 100x130 mm   |
| ② SMP 750/6/200 A0HT/50  | 400 | 3      | 7.8     | 6.1     | 15.2 | 960  | Y Δ   | DN200 PN10 | 100x130 mm   |

**SMP****Models with horizontal DN250 PN10 flanged discharge - 4/6 poles****Performances****Technical data**

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① SMP 2000/4/250 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN250 PN10 | 100x130 mm   |
| ② SMP 750/6/250 A0HT/50  | 400 | 3      | 7.8     | 6.1     | 15.2 | 960  | Y Δ   | DN250 PN10 | 100x130 mm   |

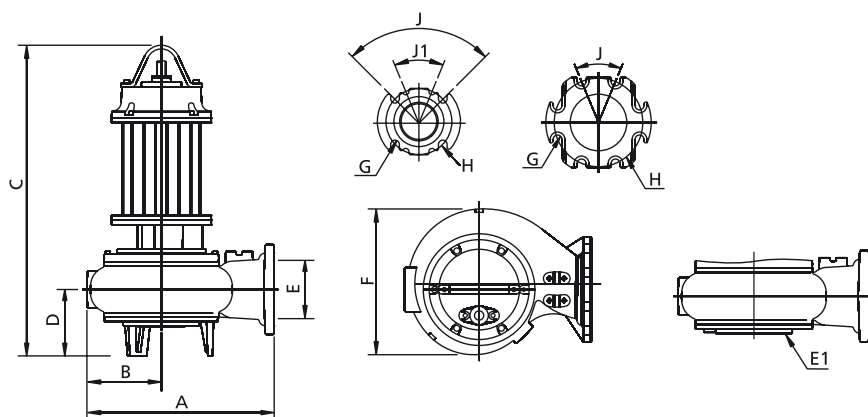
# SMP

## Versions available

(Key to versions on page 16)

|                        | Electrical variants |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| SMP 550/2/80 A0GT/50   |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 750/2/80 A0HT/50   |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 1000/2/80 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 400/4/100 A0FT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 750/4/100 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 1000/4/100 A0HT/50 |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 400/4/150 A0FT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 750/4/150 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 1000/4/150 A0HT/50 |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 1500/4/150 A0IT/50 |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 2000/4/150 A0IT/50 |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 2000/4/200 A0IT/50 |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 2000/4/250 A0IT/50 |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 750/6/200 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SMP 750/6/250 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |

## Overall dimensions and weights



All weights and dimensions are indicative only

|                        | A   | B   | C   | D   | E   | E1 (*)    | F   | G  | H   | J   | J1  | kg  |
|------------------------|-----|-----|-----|-----|-----|-----------|-----|----|-----|-----|-----|-----|
| SMP 550/2/80 A0GT/50   | 390 | 150 | 735 | 150 | 80  | -         | 290 | 18 | 160 | 90° | 45° | 73  |
| SMP 750/2/80 A0HT/50   | 390 | 150 | 795 | 150 | 80  | -         | 295 | 18 | 160 | 90° | 45° | 76  |
| SMP 1000/2/80 A0HT/50  | 390 | 150 | 795 | 150 | 80  | -         | 295 | 18 | 160 | 90° | 45° | 110 |
| SMP 400/4/100 A0FT/50  | 505 | 200 | 700 | 130 | 100 | -         | 395 | 18 | 180 | 45° | -   | 81  |
| SMP 750/4/100 A0HT/50  | 505 | 200 | 780 | 120 | 100 | DN150 PN6 | 395 | 18 | 180 | 45° | -   | 132 |
| SMP 1000/4/100 A0HT/50 | 505 | 200 | 760 | 100 | 100 | DN150 PN6 | 395 | 18 | 180 | 45° | -   | 141 |
| SMP 400/4/150 A0FT/50  | 507 | 200 | 700 | 130 | 150 | -         | 395 | 24 | 240 | 45° | -   | 88  |
| SMP 750/4/150 A0HT/50  | 505 | 200 | 780 | 120 | 150 | DN150 PN6 | 395 | 24 | 240 | 45° | -   | 140 |
| SMP 1000/4/150 A0HT/50 | 505 | 200 | 760 | 100 | 150 | DN150 PN6 | 395 | 24 | 240 | 45° | -   | 150 |
| SMP 1500/4/150 A0IT/50 | 650 | 255 | 955 | 140 | 150 | DN200 PN6 | 505 | 24 | 240 | 45° | -   | 206 |
| SMP 2000/4/150 A0IT/50 | 650 | 255 | 955 | 140 | 150 | DN200 PN6 | 505 | 24 | 240 | 45° | -   | 252 |
| SMP 2000/4/200 A0IT/50 | 695 | 275 | 970 | 145 | 200 | DN200 PN6 | 540 | 24 | 295 | 45° | -   | 221 |
| SMP 2000/4/250 A0IT/50 | 785 | 310 | 970 | 145 | 250 | DN200 PN6 | 610 | 24 | 350 | 30° | -   | 229 |
| SMP 750/6/200 A0HT/50  | 695 | 275 | 850 | 145 | 200 | DN200 PN6 | 540 | 24 | 295 | 45° | -   | 190 |
| SMP 750/6/250 A0HT/50  | 785 | 310 | 850 | 145 | 250 | DN200 PN6 | 610 | 24 | 350 | 30° | -   | 198 |

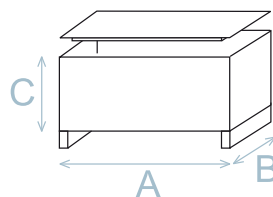
(\*) DN of the suction flange

Dimensions in mm

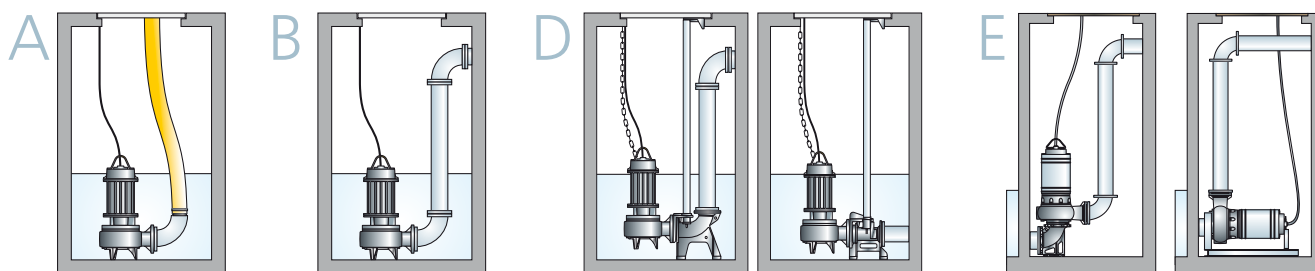
## Packaging dimension

|                        | A    | B   | C   |
|------------------------|------|-----|-----|
| SMP 550/2/80 A0GT/50   | 915  | 515 | 555 |
| SMP 750/2/80 A0HT/50   | 915  | 515 | 555 |
| SMP 1000/2/80 A0HT/50  | 915  | 515 | 555 |
| SMP 400/4/100 A0FT/50  | 725  | 445 | 415 |
| SMP 750/4/100 A0HT/50  | 915  | 515 | 555 |
| SMP 1000/4/100 A0HT/50 | 915  | 515 | 555 |
| SMP 400/4/150 A0FT/50  | 915  | 515 | 555 |
| SMP 750/4/150 A0HT/50  | 915  | 515 | 555 |
| SMP 1000/4/150 A0HT/50 | 915  | 515 | 555 |
| SMP 1500/4/150 A0IT/50 | 915  | 515 | 555 |
| SMP 2000/4/150 A0IT/50 | 1165 | 720 | 685 |
| SMP 2000/4/200 A0IT/50 | 1165 | 720 | 685 |
| SMP 2000/4/250 A0IT/50 | 1165 | 720 | 685 |
| SMP 750/6/200 A0HT/50  | 1165 | 720 | 685 |
| SMP 750/6/250 A0HT/50  | 1165 | 720 | 685 |

Dimension in mm

All weights and dimensions are  
indicative only

## Installations available





# SMF

## Single-channel closed impeller



All product images are indicative only



### General characteristics

| Single-channel closed impeller |                        |
|--------------------------------|------------------------|
| motor power                    | 0,74 kW ÷ 1,5 kW       |
| poles                          | 2                      |
| discharge                      | GAS 2"-DN80 horizontal |
| free passage                   | 50 mm                  |
| max flow rate                  | 14 l/s                 |
| max head                       | 16.1 m                 |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

### Applications

Designed specifically for operation where there are traces of flammable liquids or in potentially explosive atmospheres, the SMF can be used with soiled liquids containing traces of flammable substances, and in gassy environments.

### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR - VITON                                   |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

SMF



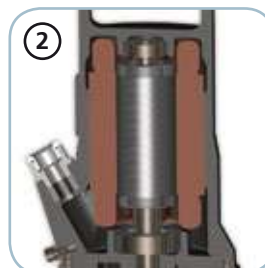
CE 0496  II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids



#### Handle/Cable gland

Cast iron lifting and carrying handle. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



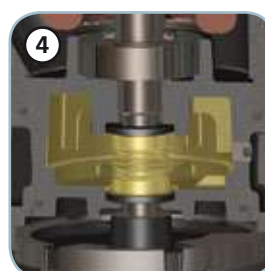
#### Motor

Ecological dry motor with thermal protections.



#### Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



#### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



#### Drive shaft

Impeller connected to the drive shaft by means of tapered coupling.



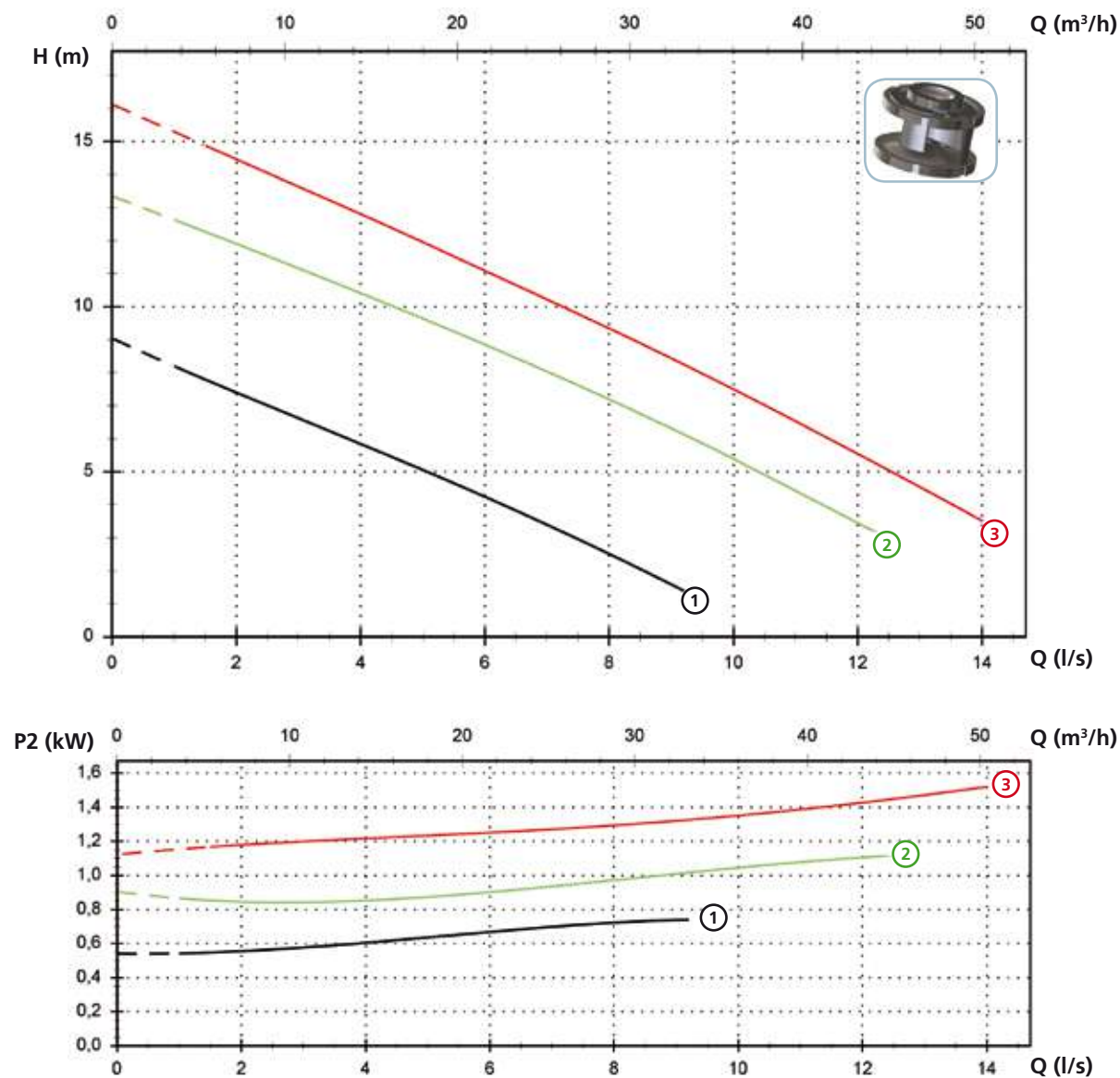
#### Discharge and foot

Threaded, flanged discharge for the maximum ease of installation. Cast iron foot.

# SMF

## Models with horizontal GAS 2" threaded - DN50 PN10 flanged discharge - 2 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① SMF 100/2/G50H A1CM/50 | 230 | 1      | 1.0     | 0.74    | 4.9 | 2900 | Dir   | G 2"-DN80 PN10 | 50 mm        |
| ② SMF 150/2/G50H A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 2"-DN80 PN10 | 50 mm        |
| ③ SMF 200/2/G50H A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 2"-DN80 PN10 | 50 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① SMF 100/2/G50H A1CT/50 | 400 | 3      | 1.1     | 0.74    | 1.9 | 2900 | Dir   | G 2"-DN80 PN10 | 50 mm        |
| ② SMF 150/2/G50H A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 2"-DN80 PN10 | 50 mm        |
| ③ SMF 200/2/G50H A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 2"-DN80 PN10 | 50 mm        |

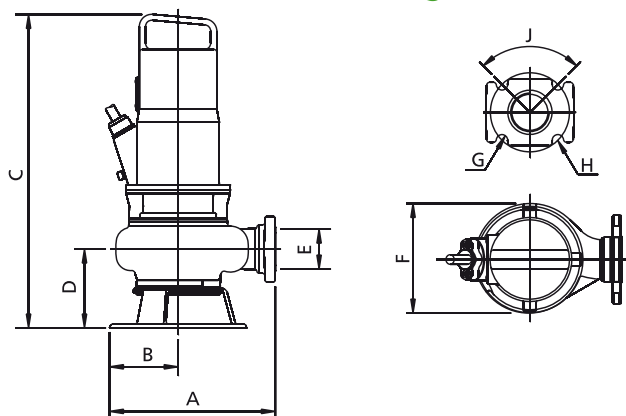
## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| SMF 100/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| SMF 150/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| SMF 200/2/G50H A1CM/50 |                     |   | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| SMF 100/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| SMF 150/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| SMF 200/2/G50H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel. Capacitor supplied but not connected to the pump cable. The use of an electrical panel as circuit breaker housing is mandatory. For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights



|                           | A   | B   | C   | D   | E    | F   | G  | H   | J   | kg |
|---------------------------|-----|-----|-----|-----|------|-----|----|-----|-----|----|
| SMF 100/2/G50H A1CM(T)/50 | 255 | 100 | 505 | 130 | G 2" | 205 | 18 | 160 | 90° | 34 |
| SMF 150/2/G50H A1CM(T)/50 | 255 | 100 | 505 | 130 | G 2" | 205 | 18 | 160 | 90° | 35 |
| SMF 200/2/G50H A1CM(T)/50 | 255 | 100 | 505 | 130 | G 2" | 205 | 18 | 160 | 90° | 36 |

Dimensions in mm

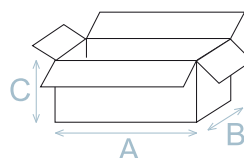
All weights and dimensions are indicative only

## Packaging dimension

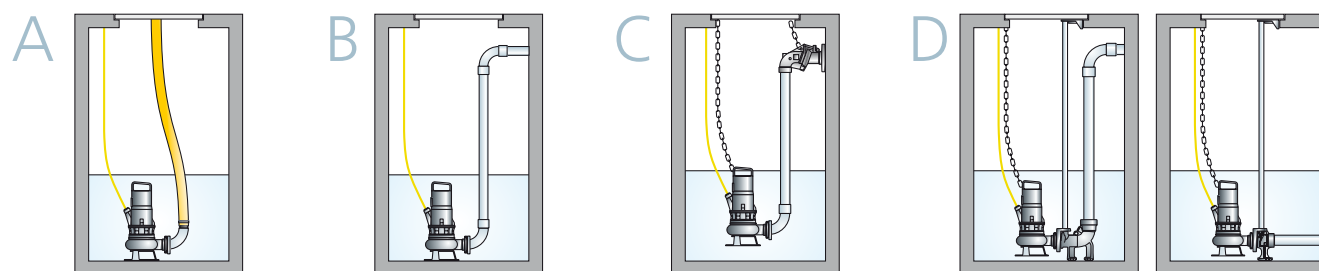
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| SMF 100/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| SMF 150/2/G50H A1CM(T)/50 | 580 | 310 | 310 |
| SMF 200/2/G50H A1CM(T)/50 | 580 | 310 | 310 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



# SBN

All product images are indicative only



## Dual-channel closed impeller

### General characteristics

| Dual-channel closed impeller |                          |
|------------------------------|--------------------------|
| motor power                  | 18,5 ÷ 50,0 kW           |
| poles                        | 4 / 6                    |
| discharge                    | DN150 ÷ DN300 horizontal |
| free passage                 | 90 ÷ 140 mm              |
| max flow rate                | 378.0 l/s                |
| max head                     | 53.2 m                   |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor.

### Applications

Designed for heavy-duty professional applications, they are used in civil and industrial wastewater treatment plants. Lifting sewage, pumping industrial sludges and rainwater containing solids, and recycling raw or activated sludges and biological liquids. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Carbon steel or AISI 304 stainless steel               |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

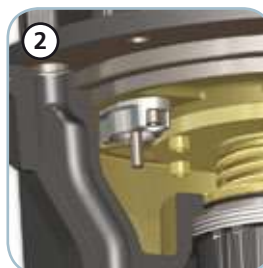
|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

**SBN****Cooling system**

Dry installation available using the cooling jacket (see details to page 17)

**Cable Gland**

Cable gland system to guarantee perfect water-tightness. The universal thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.

**Sensor**

Sensor for detecting water in the mechanical seal oil chamber. Connected to an electrical panel, the sensor provides immediate warning of wear on the first mechanical seal, preventing possible damage to the motor.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC) in oil sump.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

**Drive shaft**

Impeller connected to the drive shaft by means of tapered coupling.

**Free passage**

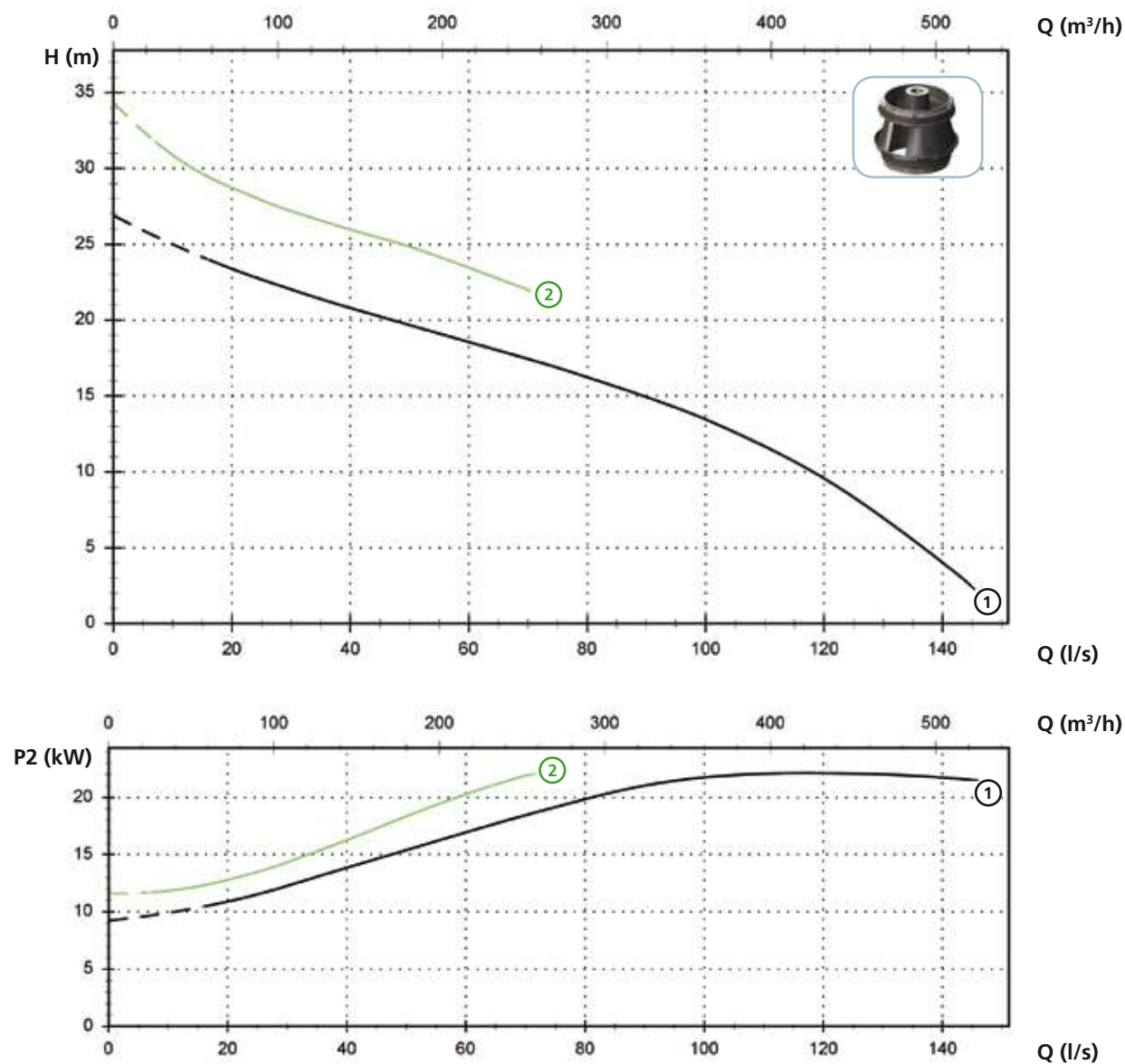
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.



# SBN

## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances

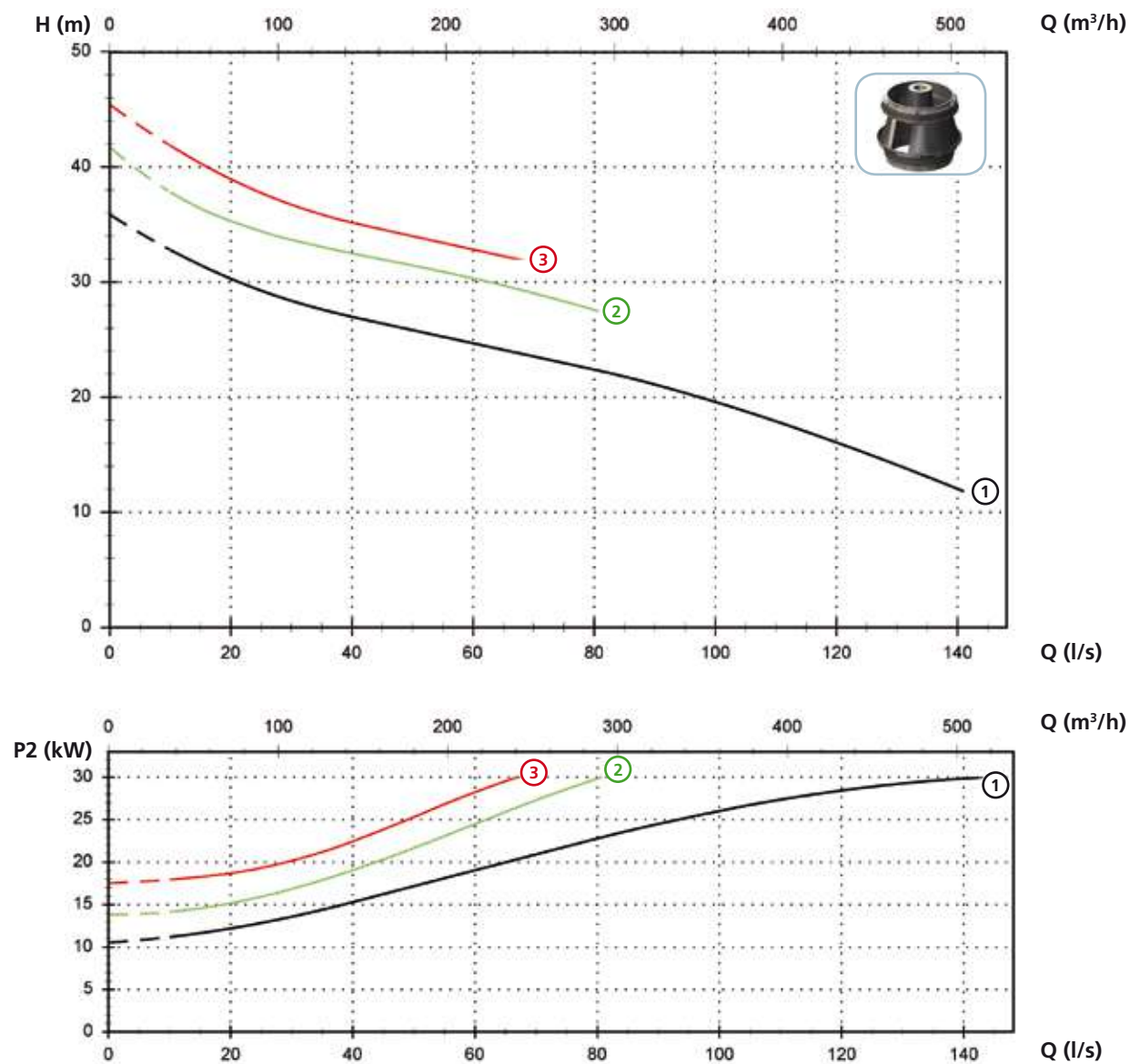


### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① SBN 3000/4/150 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ② SBN 3000/4/150 F1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |

## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances



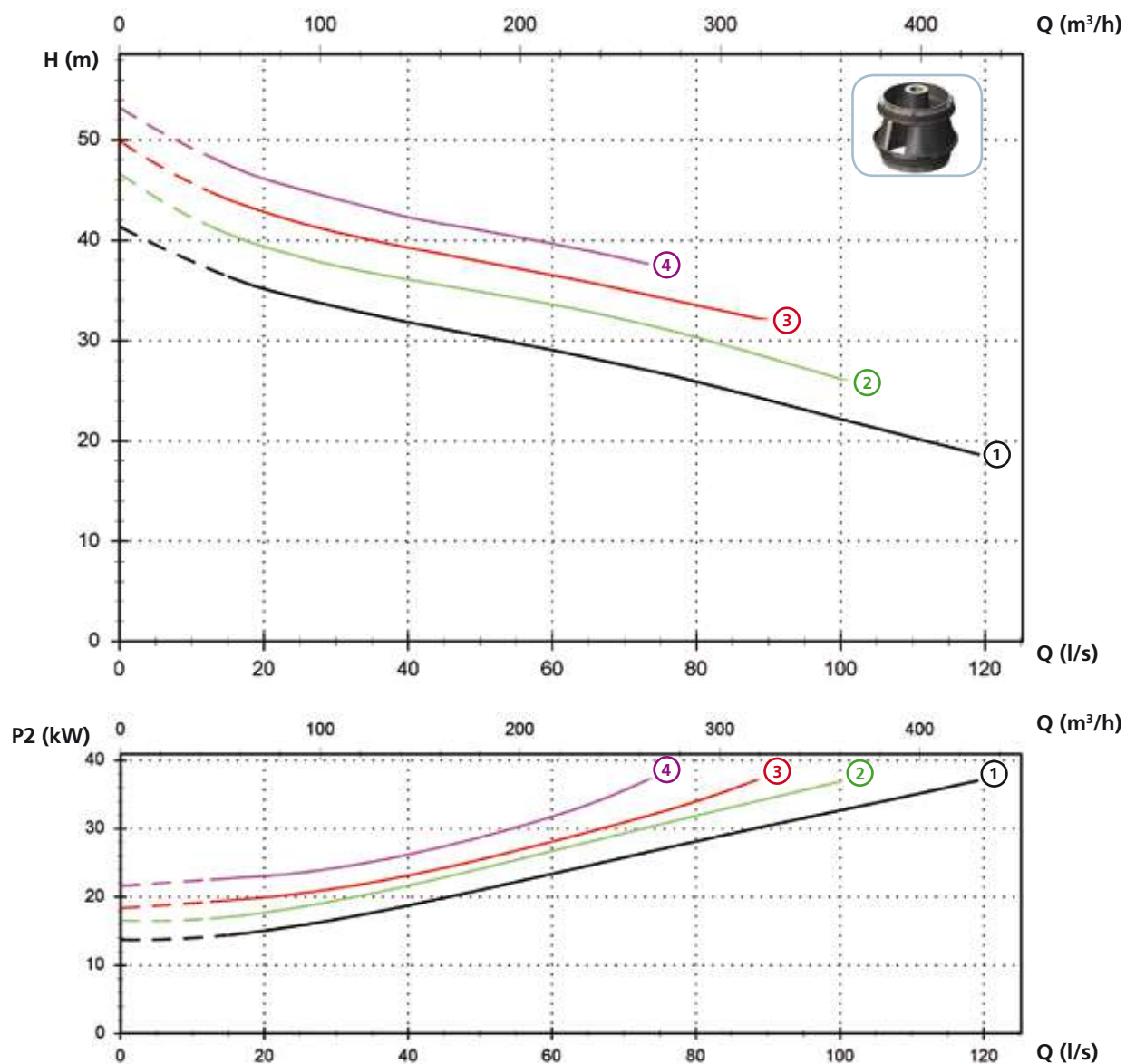
### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|----|------|-------|---------------|--------------|
| ① SBN 4000/4/150 A1LT/50 | 400 | 3      | 35.9    | 30      | 61 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ② SBN 4000/4/150 F1LT/50 | 400 | 3      | 35.9    | 30      | 61 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ③ SBN 4000/4/150 G1LT/50 | 400 | 3      | 35.9    | 30      | 61 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |

# SBN

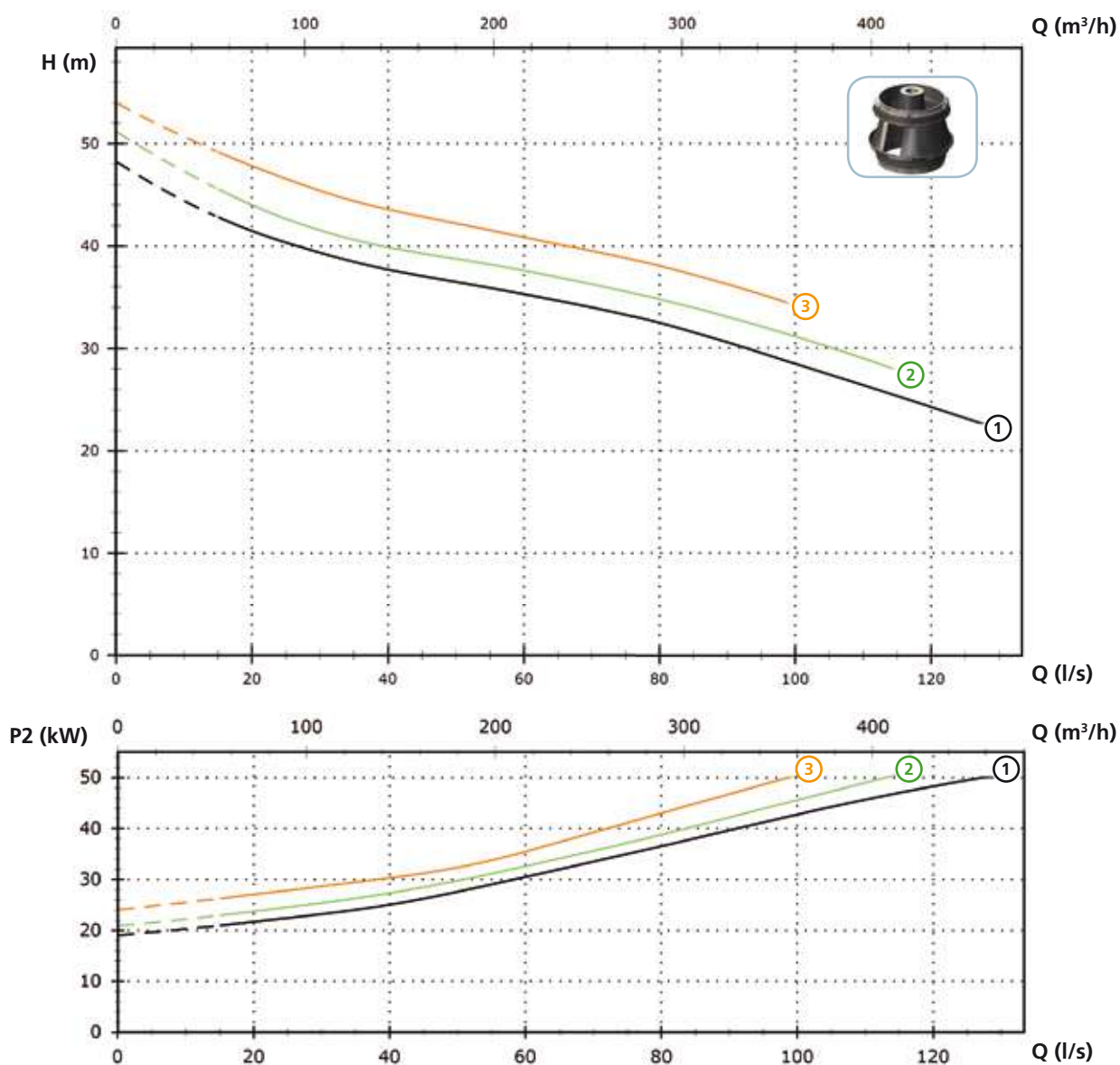
## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|----|------|-------|---------------|--------------|
| ① SBN 5000/4/150 A1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ② SBN 5000/4/150 F1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ③ SBN 5000/4/150 G1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ④ SBN 5000/4/150 H1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |

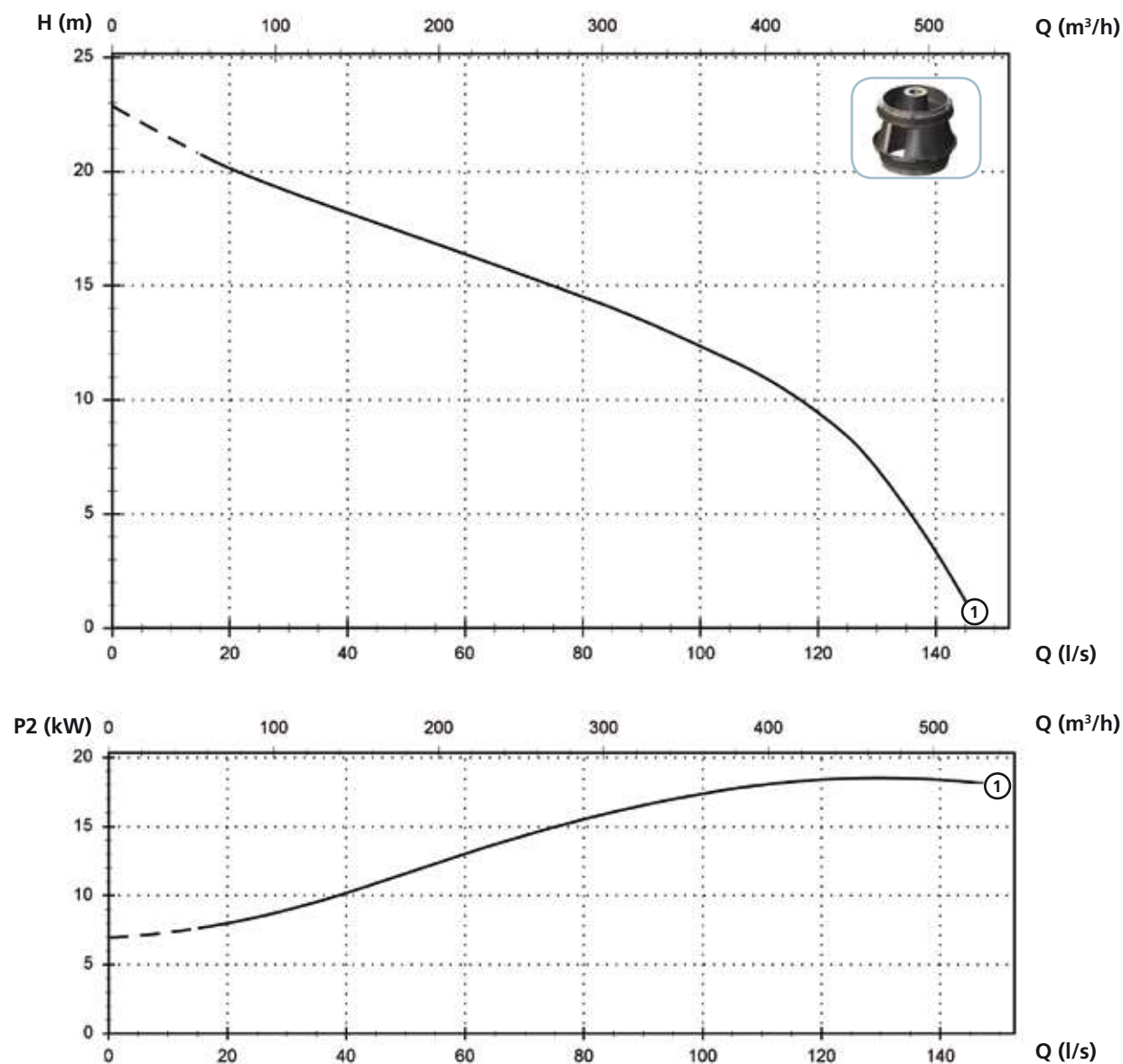
**SBN****Models with horizontal DN150 PN10-16 flanged discharge - 4 poles****Performances****Technical data**

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|----|------|-------|---------------|--------------|
| ① SBN 6500/4/150 A0MT/50 | 400 | 3      | 54.8    | 50      | 90 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ② SBN 6500/4/150 F0MT/50 | 400 | 3      | 54.8    | 50      | 90 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |
| ③ SBN 6500/4/150 G0MT/50 | 400 | 3      | 54.8    | 50      | 90 | 1450 | Y Δ   | DN150 PN10-16 | 90 mm        |

# SBN

## Models with horizontal DN150 PN10-16 flanged discharge - 6 poles

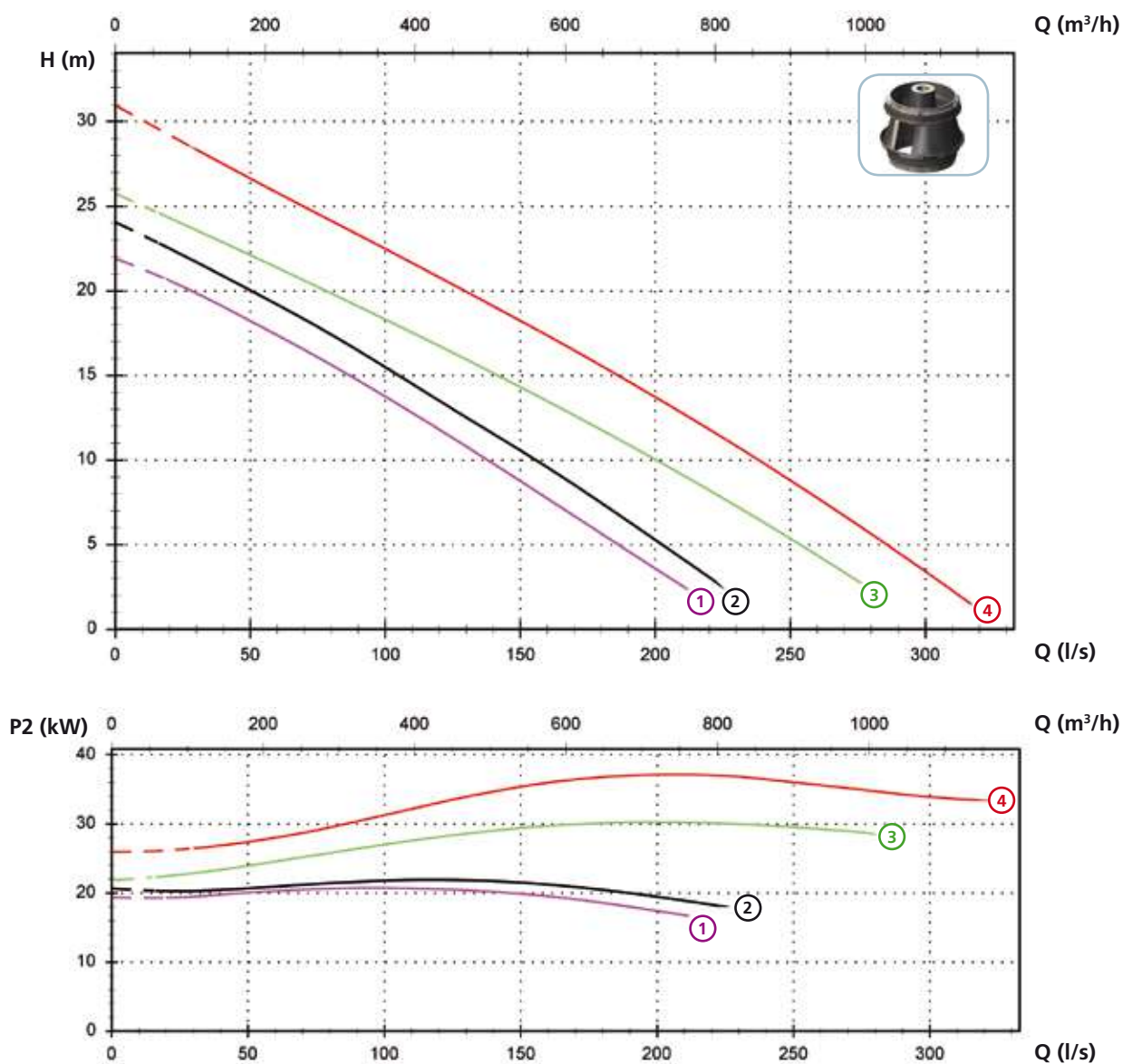
### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|----|-----|-------|---------------|--------------|
| ① SBN 2500/6/150 A1LT/50 | 400 | 3      | 23.0    | 18.5    | 40 | 960 | Y Δ   | DN150 PN10-16 | 90 mm        |



**SBN****Models with horizontal DN200 PN10 flanged discharge - 4 poles****Performances****Technical data**

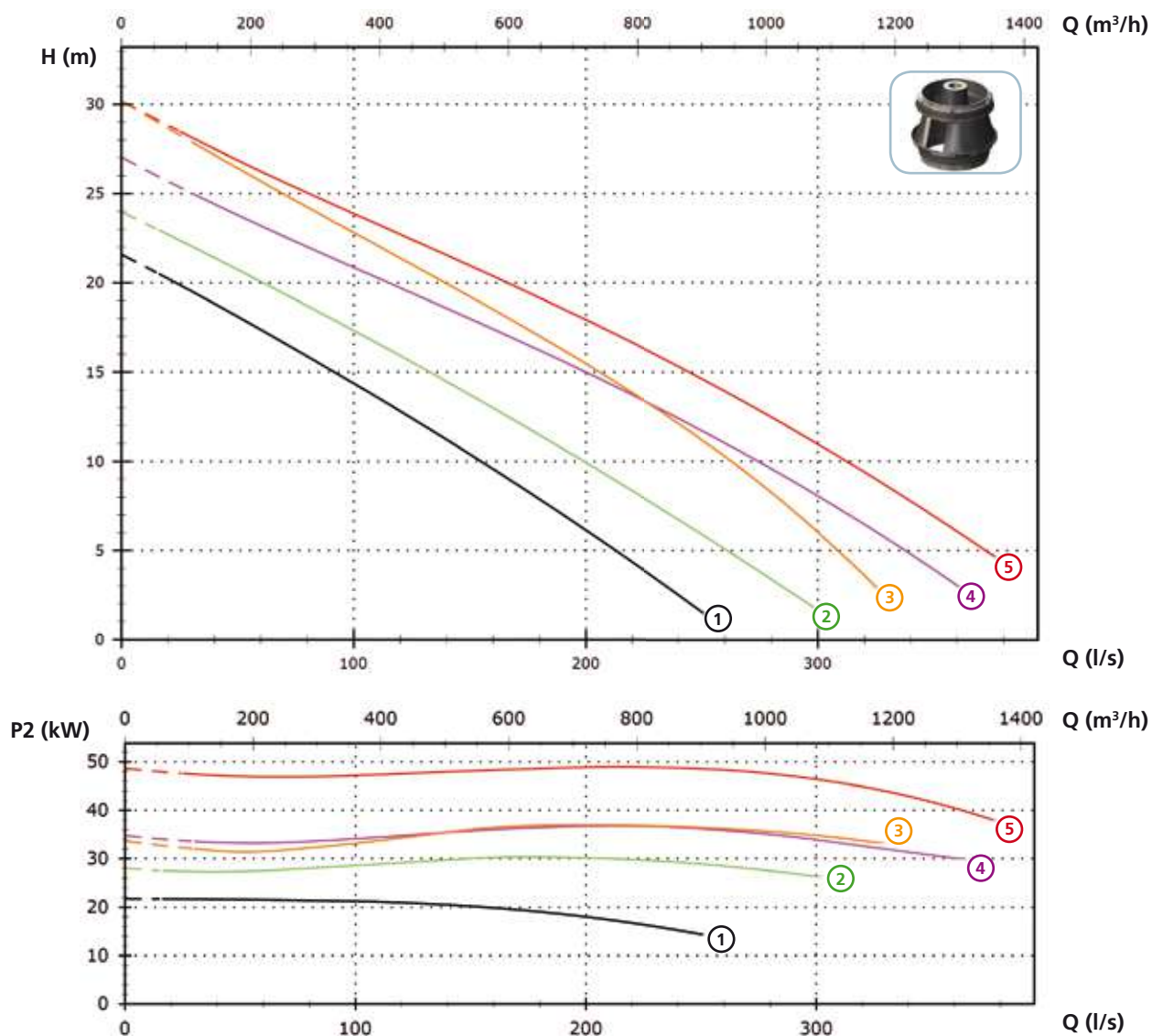
|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① SBN 3000/4/200 B1LT/50 | 400 | 3      | 23.8    | 22      | 41   | 1450 | Y Δ   | DN200 PN10 | 105x140 mm   |
| ② SBN 3000/4/200 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN200 PN10 | 105x140 mm   |
| ③ SBN 4000/4/200 A1LT/50 | 400 | 3      | 35.9    | 30      | 61   | 1450 | Y Δ   | DN200 PN10 | 105x140 mm   |
| ④ SBN 5000/4/200 A1LT/50 | 400 | 3      | 45.8    | 37      | 76   | 1450 | Y Δ   | DN200 PN10 | 105x140 mm   |



# SBN

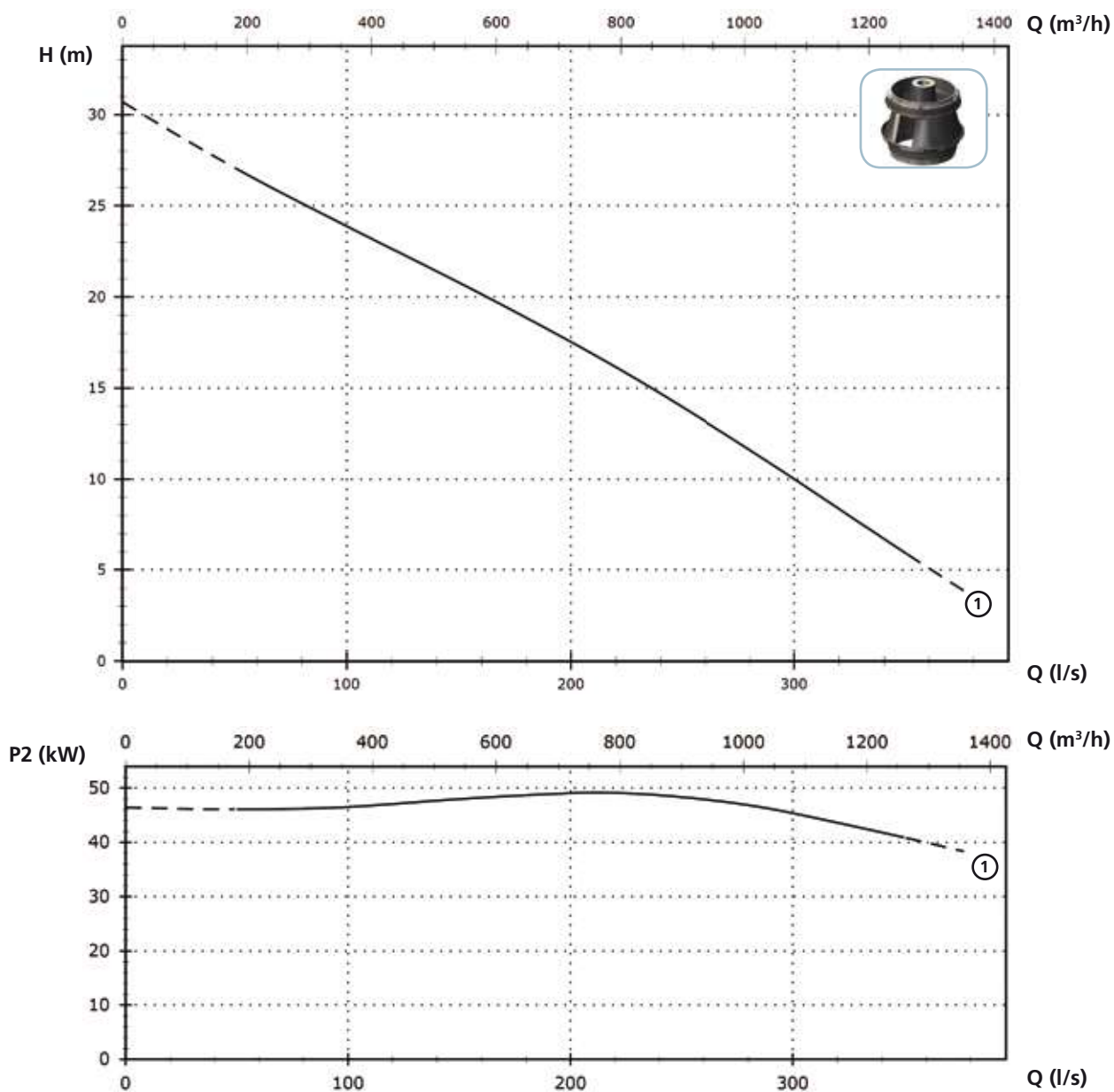
## Models with horizontal DN250 PN10 flanged discharge - 4 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------------|--------------|
| ① SBN 3000/4/250 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | Y Δ   | DN250 PN10 | 105x140 mm   |
| ② SBN 4000/4/250 A1LT/50 | 400 | 3      | 35.9    | 30      | 61   | 1450 | Y Δ   | DN250 PN10 | 105x140 mm   |
| ③ SBN 5000/4/250 A1LT/50 | 400 | 3      | 45.8    | 37      | 76   | 1450 | Y Δ   | DN250 PN10 | 105x140 mm   |
| ④ SBN 5000/4/250 B1LT/50 | 400 | 3      | 45.8    | 37      | 76   | 1450 | Y Δ   | DN250 PN10 | 135 mm       |
| ⑤ SBN 6500/4/250 A1MT/50 | 400 | 3      | 54.8    | 50      | 90   | 1450 | Y Δ   | DN250 PN10 | 110 mm       |

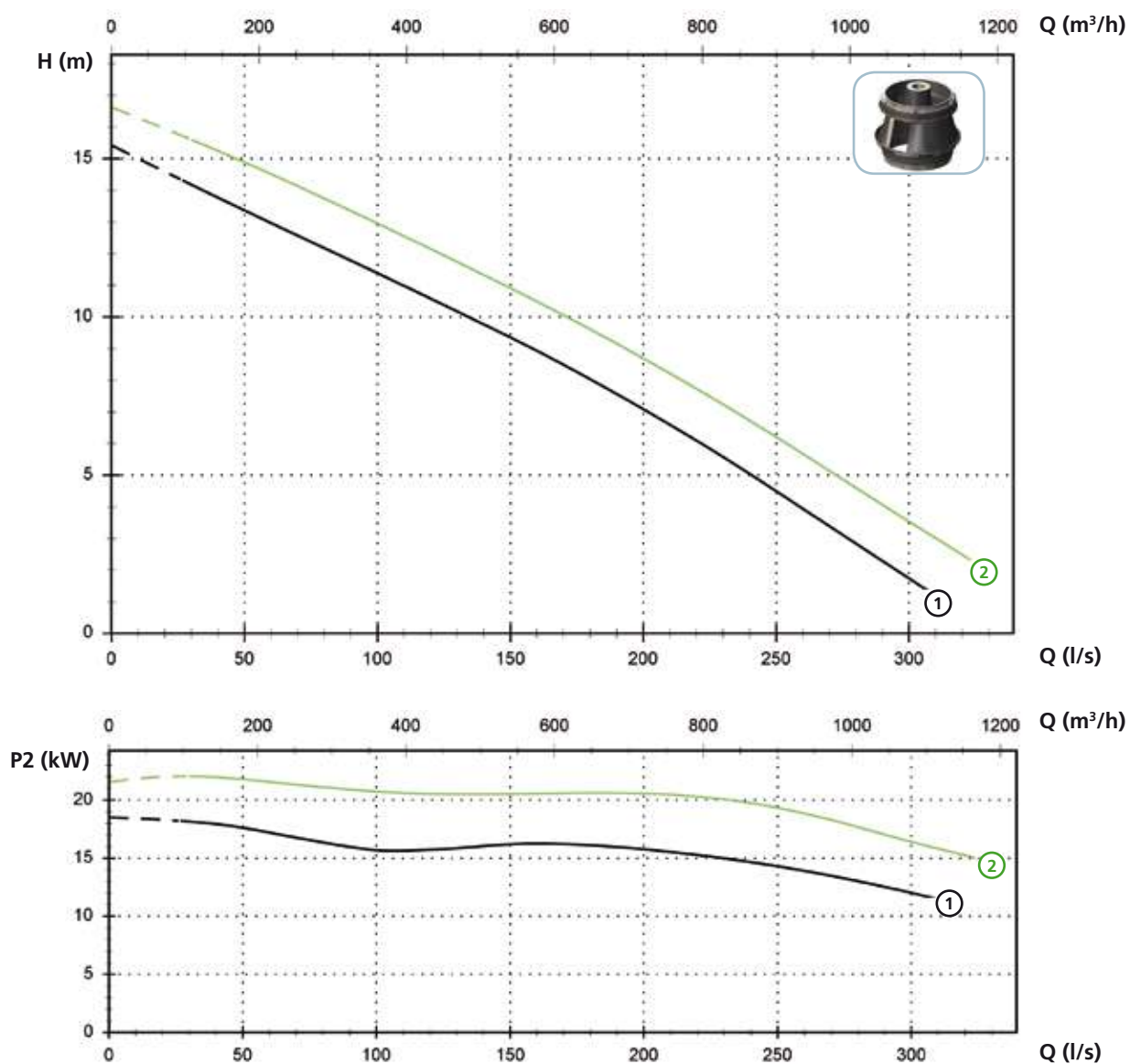
**SBN****Models with horizontal DN300 PN10 flanged discharge - 4 poles****Performances****Technical data**

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm  | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|----|------|-------|------------|--------------|
| ① SBN 6500/4/300 A0MT/50 | 400 | 3      | 54.8    | 50      | 90 | 1450 | Y Δ   | DN300 PN10 | 110 mm       |

# SBN

## Models with horizontal DN250 PN10 flanged discharge - 6 poles

### Performances

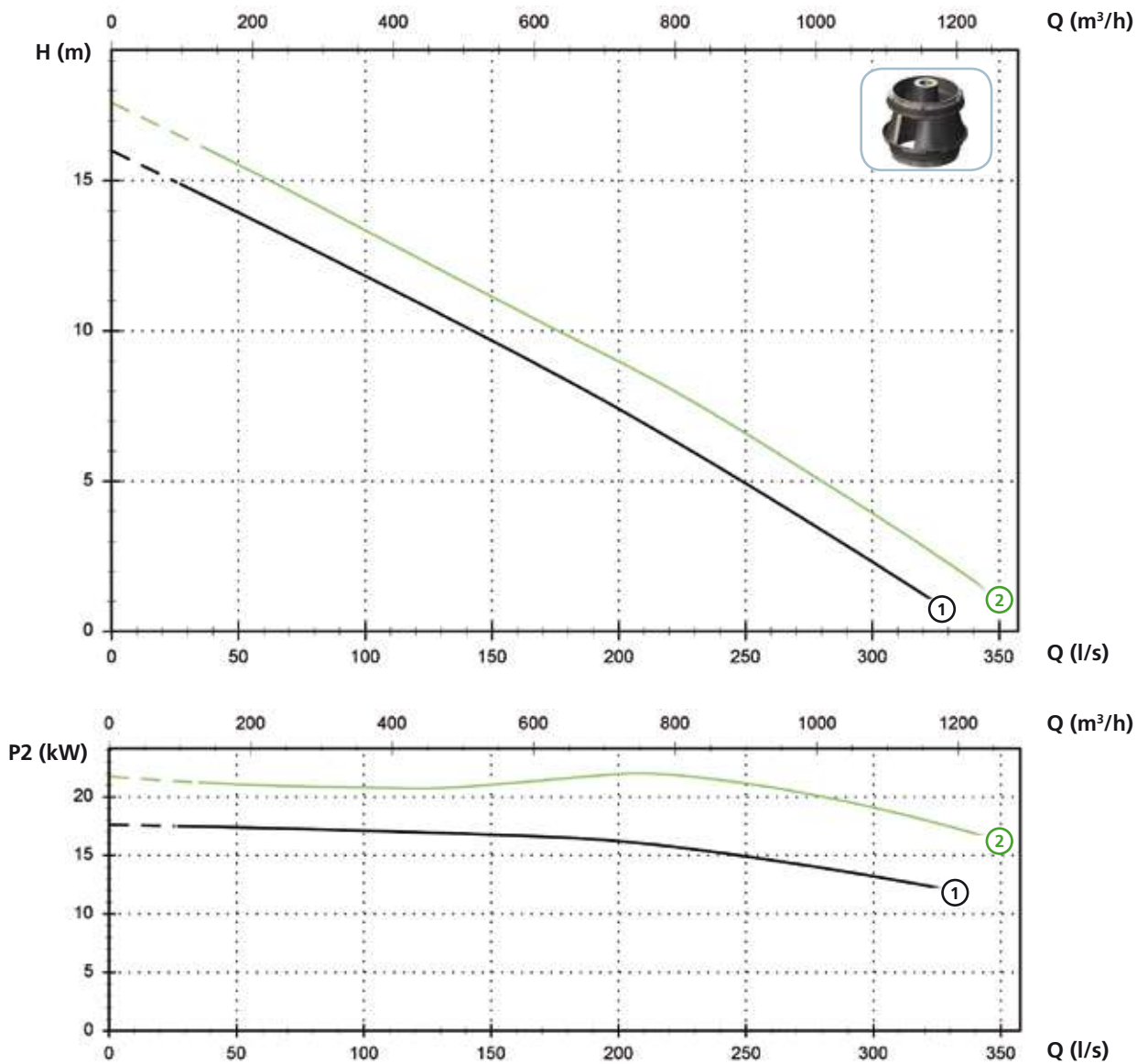


### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|----|-----|-------|------------|--------------|
| ① SBN 2500/6/250 A2LT/50 | 400 | 3      | 23.0    | 18.5    | 40 | 960 | Y Δ   | DN250 PN10 | 130 mm       |
| ② SBN 3000/6/250 A2LT/50 | 400 | 3      | 26.1    | 22      | 46 | 960 | Y Δ   | DN250 PN10 | 130 mm       |

## Models with horizontal DN300 PN10 flanged discharge - 6 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|----|-----|-------|------------|--------------|
| ① SBN 2500/6/300 A1LT/50 | 400 | 3      | 23.0    | 18.5    | 40 | 960 | Y Δ   | DN300 PN10 | 130 mm       |
| ② SBN 3000/6/300 A1LT/50 | 400 | 3      | 26.1    | 22      | 46 | 960 | Y Δ   | DN300 PN10 | 130 mm       |

# SBN

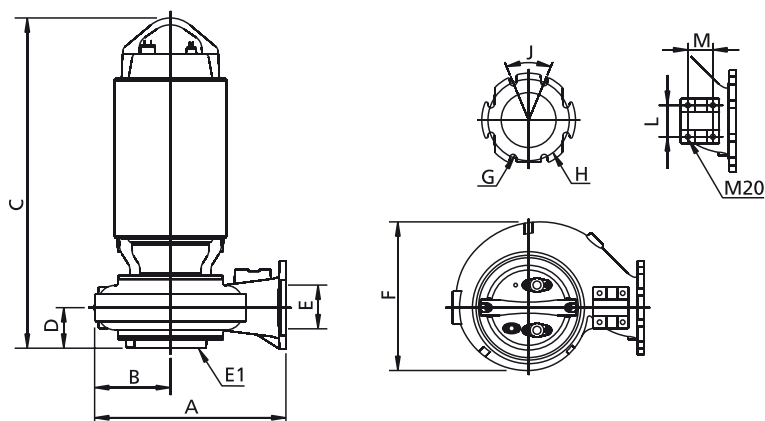
## Versions available

(Key to versions on page 16)

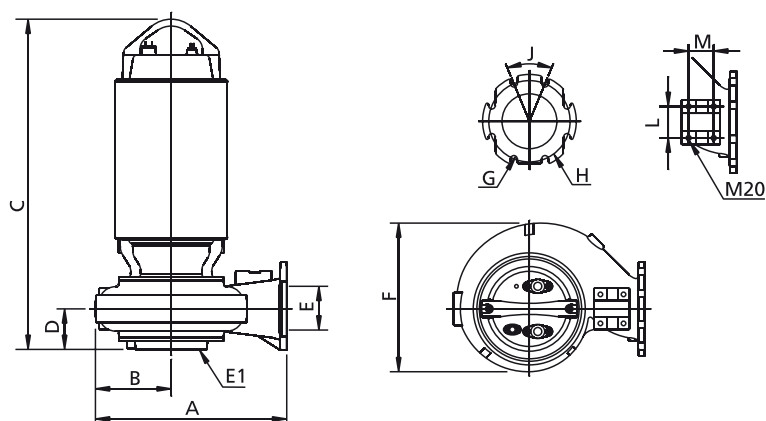
Key to versions on page 16)

|                                 | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|---------------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                                 | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| SBN 3000/4/150 A(F)1LT/50       |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 4000/4/150 A(F)(G)1LT/50    |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 5000/4/150 A(F)(G)(H)1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 6500/4/150 A(F)(G)0MT/50    |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       |           |    |                  | ●                |      |       |        |
| SBN 2500/6/150 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 3000/4/200 A(B)1LT/50       |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 4000/4/200 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 5000/4/200 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 3000/4/250 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 4000/4/250 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 5000/4/250 A(B)1LT/50       |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 6500/4/250 A1MT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       |           |    |                  | ●                |      |       |        |
| SBN 2500/6/250 A2LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 3000/6/250 A2LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 6500/4/300 A0MT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       |           |    |                  | ●                |      |       |        |
| SBN 2500/6/300 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBN 3000/6/300 A1LT/50          |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |

## Overall dimensions and weights



|                                 | A   | B   | C    | D   | E   | E1 (*)  | F   | G  | H   | J   | L   | M  | kg  |
|---------------------------------|-----|-----|------|-----|-----|---------|-----|----|-----|-----|-----|----|-----|
| SBN 3000/4/150 A(F)1LT/50       | 695 | 265 | 1155 | 130 | 150 | 150-200 | 520 | 24 | 240 | 45° | 109 | 79 | 385 |
| SBN 4000/4/150 A(F)(G)1LT/50    | 695 | 265 | 1155 | 130 | 150 | 150-200 | 520 | 24 | 240 | 45° | 109 | 79 | 410 |
| SBN 5000/4/150 A(F)(G)(H)1LT/50 | 695 | 265 | 1155 | 130 | 150 | 150-200 | 520 | 24 | 240 | 45° | 109 | 79 | 423 |
| SBN 6500/4/150 A(F)(G)0MT/50    | 695 | 265 | 1215 | 130 | 150 | 150     | 520 | 24 | 240 | 45° | 109 | 79 | 476 |
| SBN 2500/6/150 A1LT/50          | 695 | 265 | 1155 | 130 | 150 | 150-200 | 520 | 24 | 240 | 45° | 109 | 79 | 410 |
| SBN 3000/4/200 A(B)1LT/50       | 695 | 275 | 1205 | 150 | 200 | 200     | 540 | 24 | 295 | 45° | 109 | 79 | 385 |
| SBN 4000/4/200 A1LT/50          | 695 | 275 | 1205 | 155 | 200 | 200     | 540 | 24 | 295 | 45° | 109 | 79 | 410 |
| SBN 5000/4/200 A1LT/50          | 695 | 275 | 1205 | 150 | 200 | 200     | 540 | 24 | 295 | 45° | 109 | 79 | 423 |
| SBN 3000/4/250 A1LT/50          | 785 | 310 | 1200 | 150 | 250 | 250     | 610 | 24 | 350 | 30° | 109 | 79 | 393 |
| SBN 4000/4/250 A1LT/50          | 785 | 310 | 1205 | 155 | 250 | 200     | 610 | 24 | 350 | 30° | 109 | 79 | 418 |
| SBN 5000/4/250 A(B)1LT/50       | 785 | 310 | 1205 | 155 | 250 | 200     | 610 | 24 | 350 | 30° | 109 | 79 | 431 |
| SBN 6500/4/250 A1MT/50          | 880 | 370 | 1250 | 185 | 250 | 250     | 735 | 24 | 350 | 30° | 109 | 79 | 525 |

**SBN**

|                        | A   | B   | C    | D   | E   | E1 (*) | F   | G  | H   | J   | L   | M  | kg  |
|------------------------|-----|-----|------|-----|-----|--------|-----|----|-----|-----|-----|----|-----|
| SBN 2500/6/250 A2LT/50 | 880 | 370 | 1275 | 195 | 250 | 300    | 735 | 24 | 350 | 30° | 109 | 79 | 470 |
| SBN 3000/6/250 A2LT/50 | 880 | 370 | 1275 | 195 | 250 | 300    | 735 | 24 | 350 | 30° | 109 | 79 | 480 |
| SBN 6500/4/300 A0MT/50 | 945 | 405 | 1320 | 190 | 300 | 250    | 790 | 22 | 400 | 30° | 109 | 79 | 548 |
| SBN 2500/6/300 A1LT/50 | 940 | 400 | 1275 | 200 | 300 | 300    | 790 | 24 | 400 | 30° | 109 | 79 | 520 |
| SBN 3000/6/300 A1LT/50 | 940 | 400 | 1275 | 200 | 300 | 300    | 790 | 24 | 400 | 30° | 109 | 79 | 540 |

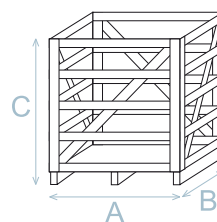
Dimensions in mm

All weights and dimensions are indicative only

(\*) DN of the suction flange - PN6

## Packaging dimension

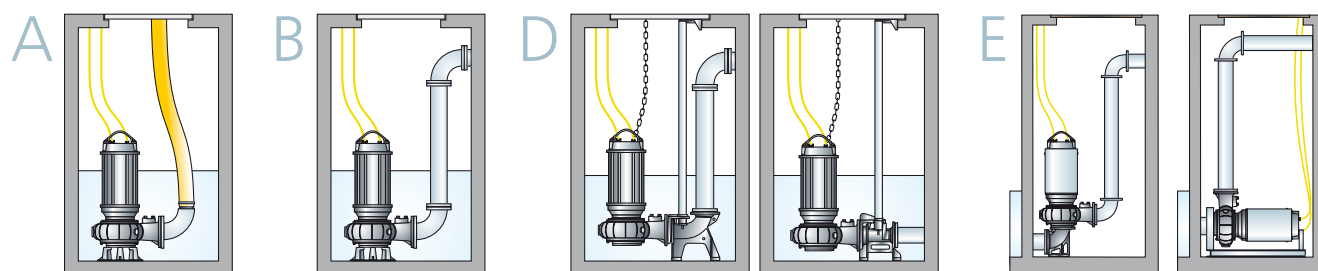
|                                 | A    | B    | C    |
|---------------------------------|------|------|------|
| SBN 3000/4/150 A(F)1LT/50       | 1080 | 1245 | 1135 |
| SBN 4000/4/150 A(F)(G)1LT/50    | 1080 | 1245 | 1135 |
| SBN 5000/4/150 A(F)(G)(H)1LT/50 | 1080 | 1245 | 1135 |
| SBN 6500/4/150 A(F)(G)0MT/50    | 1080 | 1245 | 1135 |
| SBN 2500/6/150 A1LT/50          | 1080 | 1245 | 1135 |
| SBN 3000/4/200 A(B)1LT/50       | 1080 | 1245 | 1135 |
| SBN 4000/4/200 A1LT/50          | 1080 | 1245 | 1135 |
| SBN 5000/4/200 A1LT/50          | 1080 | 1245 | 1135 |
| SBN 3000/4/250 A1LT/50          | 1080 | 1245 | 1135 |
| SBN 4000/4/250 A1LT/50          | 1080 | 1245 | 1135 |
| SBN 5000/4/250 A(B)1LT/50       | 1080 | 1245 | 1135 |
| SBN 6500/4/250 A1MT/50          | 1080 | 1245 | 1135 |
| SBN 2500/6/250 A2LT/50          | 1080 | 1245 | 1135 |
| SBN 3000/6/250 A2LT/50          | 1080 | 1245 | 1135 |
| SBN 6500/4/300 A0MT/50          | 1080 | 1245 | 1135 |
| SBN 2500/6/300 A1LT/50          | 1080 | 1245 | 1135 |
| SBN 3000/6/300 A1LT/50          | 1080 | 1245 | 1135 |



Dimension in mm

All weights and dimensions are indicative only

## Installations available





# SBP

## Dual-channel closed impeller

All product images are indicative only



### General characteristics

| Dual-channel closed impeller |                          |
|------------------------------|--------------------------|
| motor power                  | 6,5 ÷ 12,3 kW            |
| poles                        | 2 / 4 / 6                |
| discharge                    | DN80 ÷ DN250 orizzontale |
| free passage                 | 36 ÷ 140 mm              |
| max flow rate                | 232.6 l/s                |
| max head                     | 34.2 m                   |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

### Applications

Suitable for heavy-duty industrial applications, they are generally used in civil and industrial wastewater treatment plants, for lifting sewage, for pumping industrial sludges and rainwater containing solids, and for recycling raw or activated sludges and biological liquids.

### Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Cast iron EN-GJL-250                                                                            |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Cooling jacket                   | Carbon steel or stainless steel AISI 304                                                        |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                          |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

### Operating limits

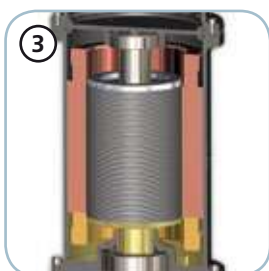
|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

**Bearings**

Shielded ball bearings with lifetime lubrication.

**Structure**

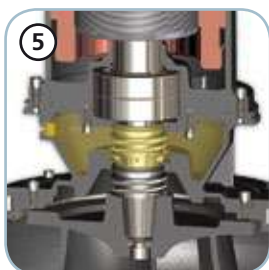
Constructed in GJL-250 cast iron.

**Motor**

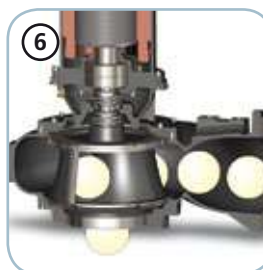
Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

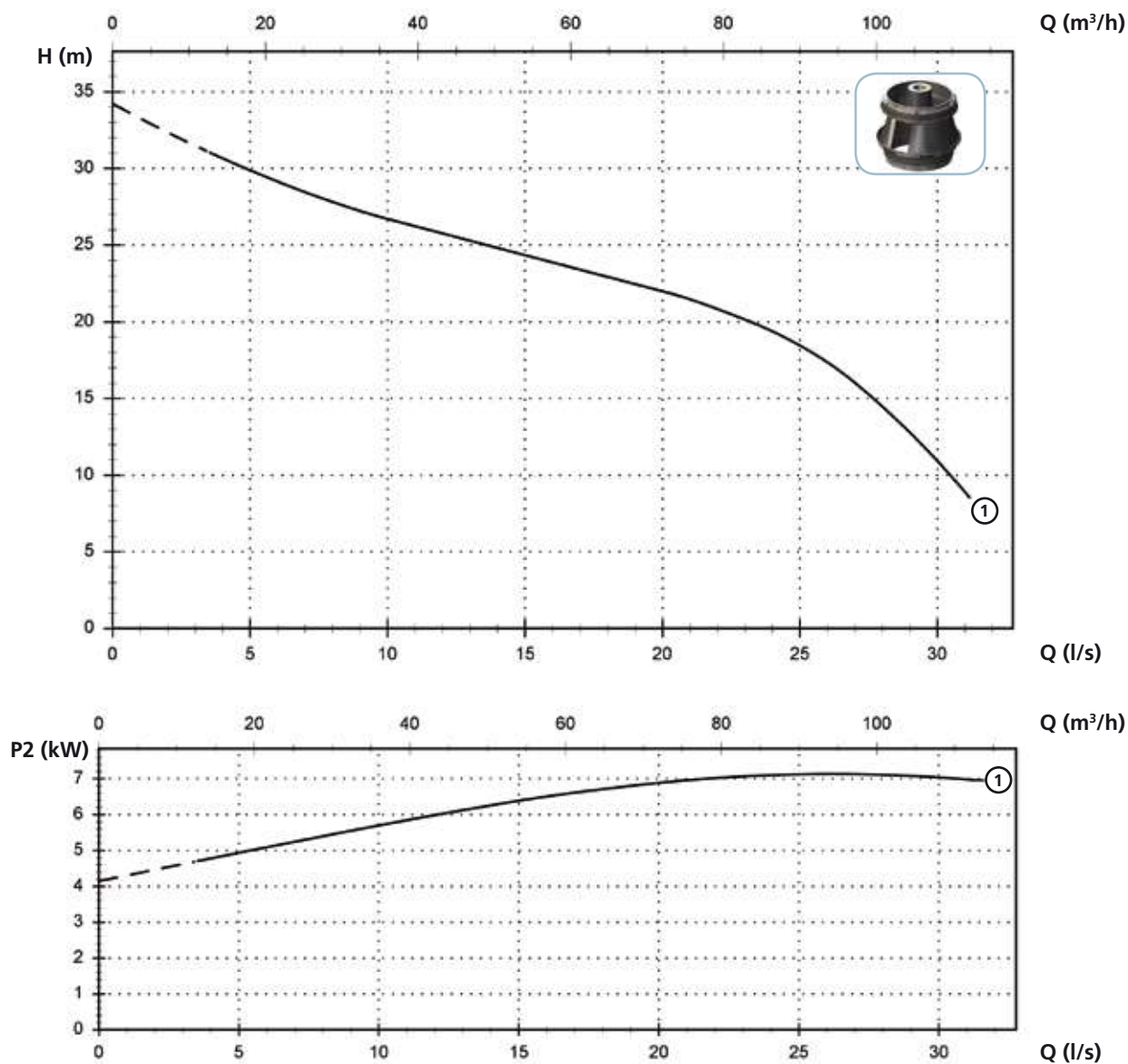
**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# SBP

## Models with horizontal DN80 PN10-16 flanged discharge - 2 poles

### Performances

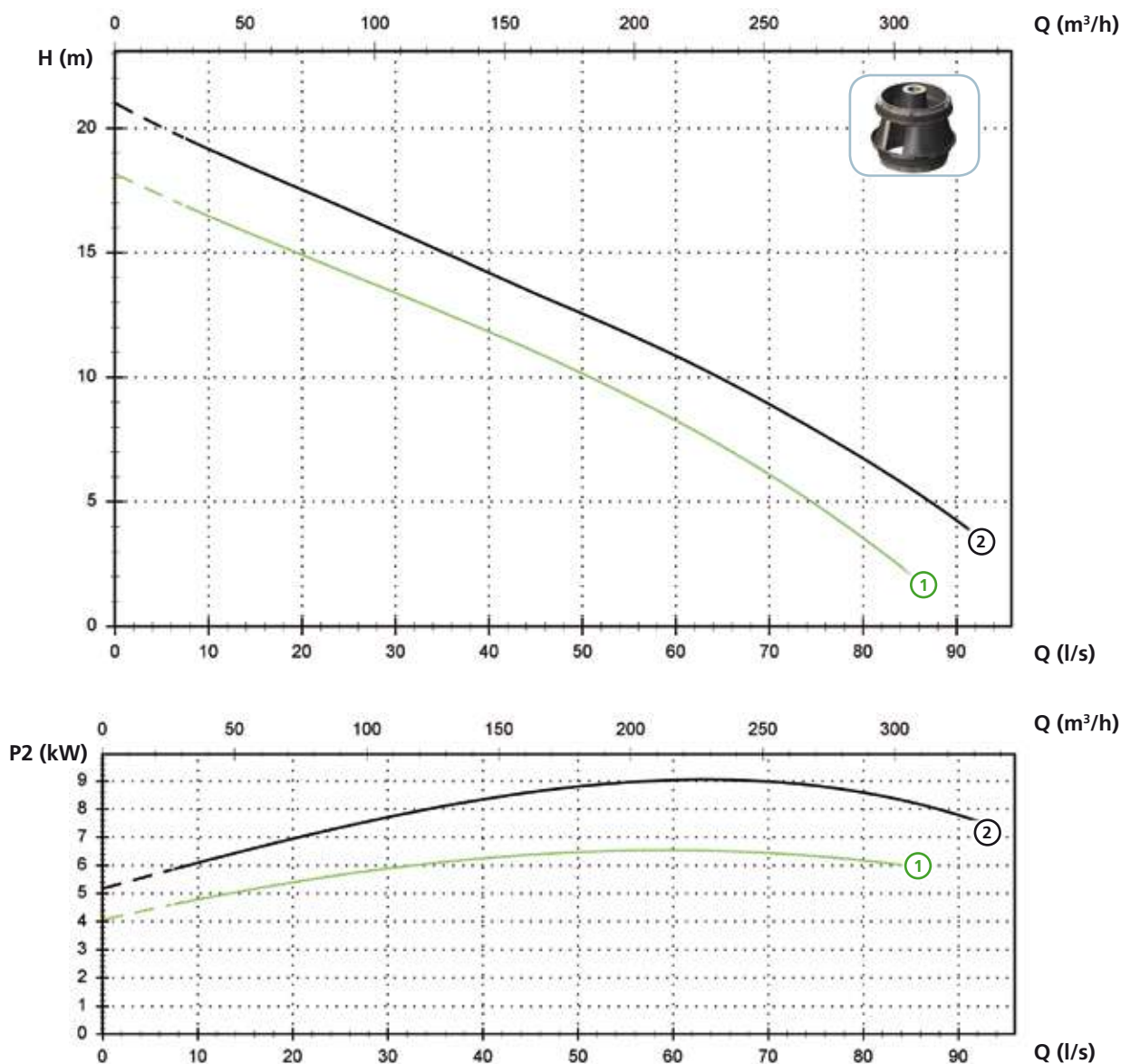


### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① SBP 750/2/80 A0HT/50 | 400 | 3      | 8.8     | 7.2     | 14.5 | 2900 | Y Δ   | DN80 PN10-16 | 36 mm        |

## Models with horizontal DN150 PN10-16 flanged discharge - 4 poles

### Performances



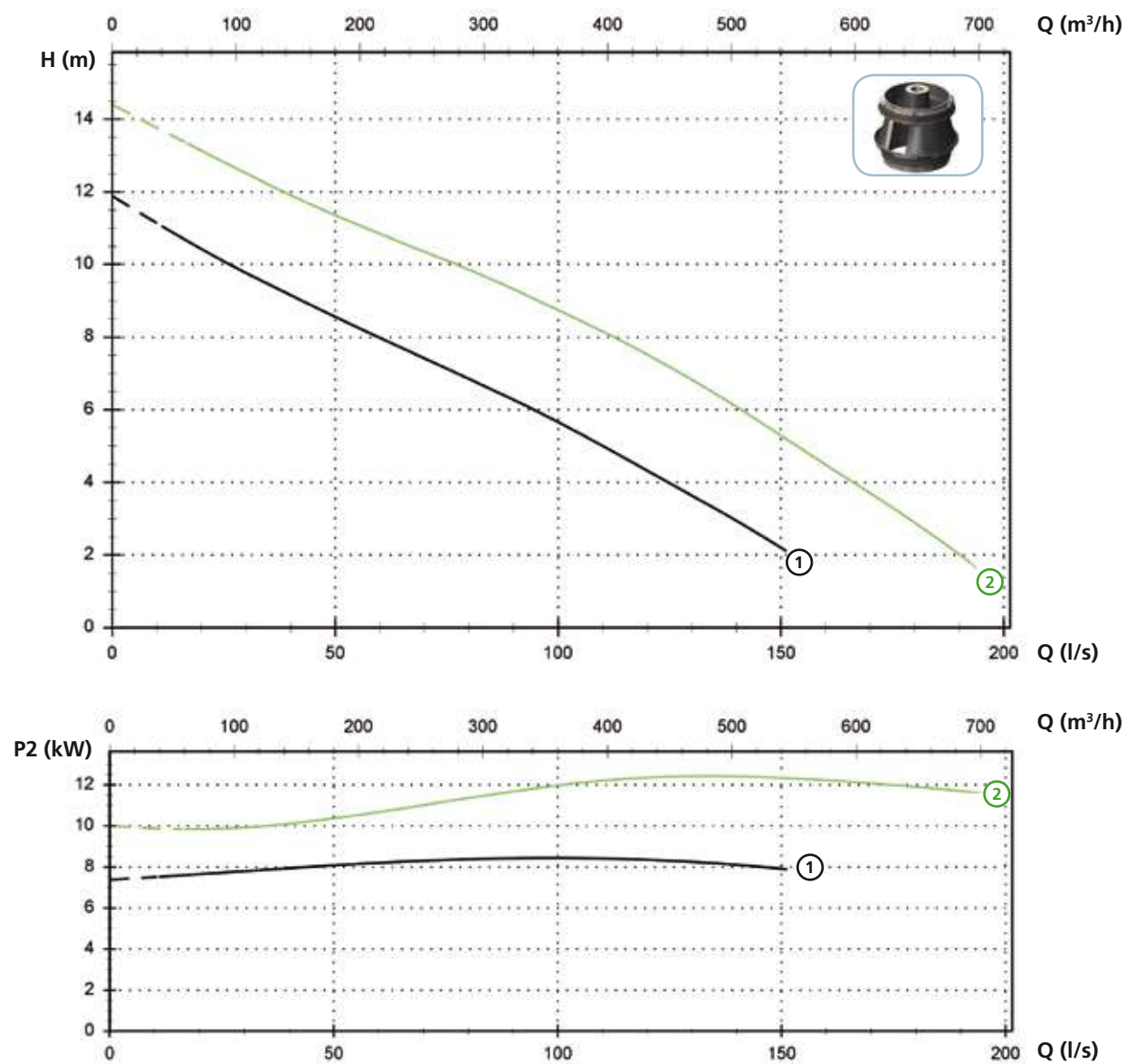
### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | SBP 750/4/150 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN150 PN10-16 | 70 mm        |
| ② | SBP 1000/4/150 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN150 PN10-16 | 70 mm        |

# SBP

## Models with horizontal DN200 PN10 flanged discharge - 6 poles

### Performances



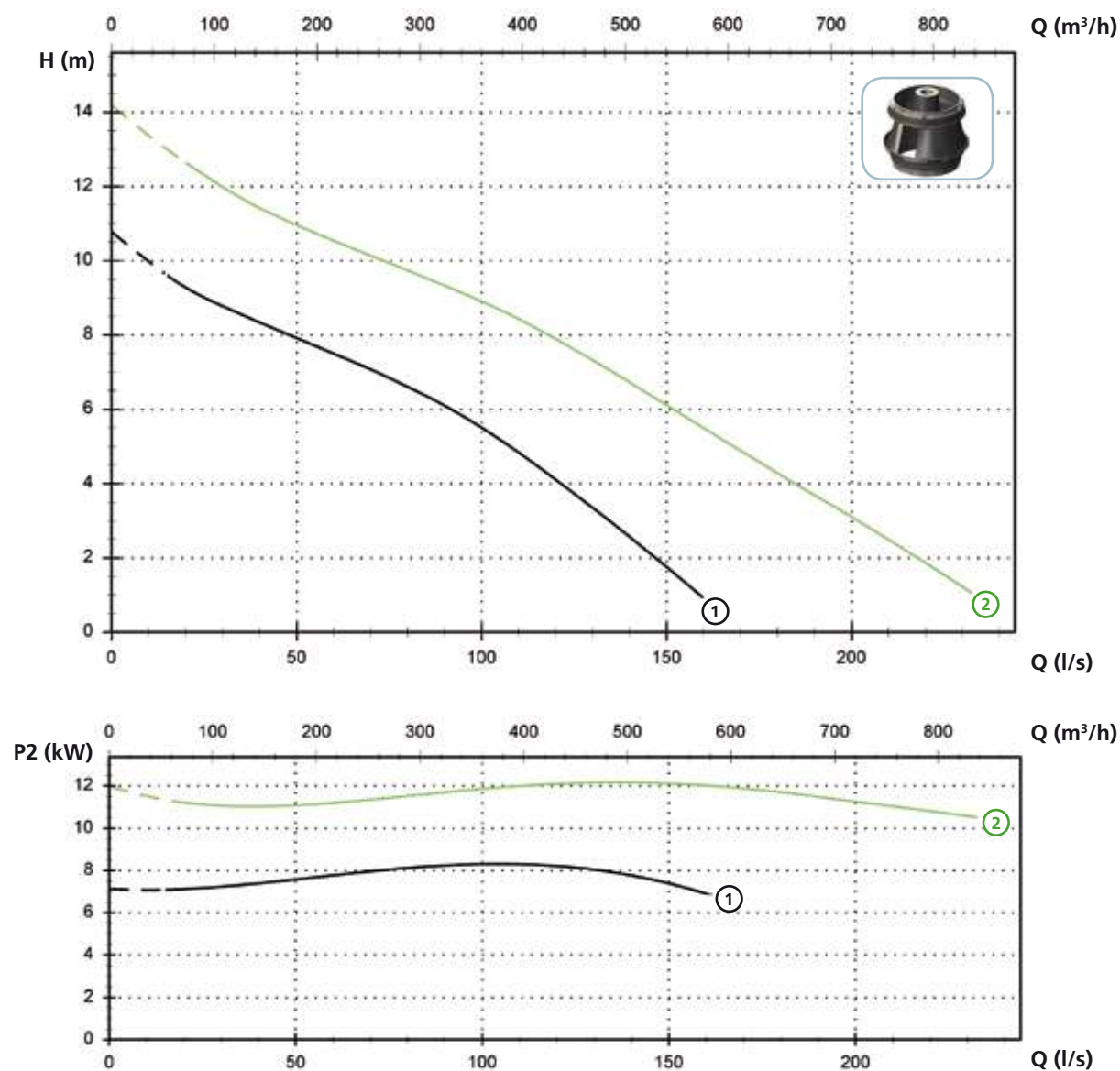
### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|-----|-------|------------|--------------|
| ① SBP 1000/6/200 A0IT/50 | 400 | 3      | 11.4    | 8.4     | 20.1 | 960 | Y Δ   | DN200 PN10 | 100 mm       |
| ② SBP 1500/6/200 A1IT/50 | 400 | 3      | 14.8    | 12.3    | 28.2 | 960 | Y Δ   | DN200 PN10 | 105x140 mm   |



## Models with horizontal DN250 PN10 flanged discharge - 6 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm | Start | Ø          | Free passage |
|--------------------------|-----|--------|---------|---------|------|-----|-------|------------|--------------|
| ① SBP 1000/6/250 A0IT/50 | 400 | 3      | 11.4    | 8.4     | 20.1 | 960 | Y Δ   | DN250 PN10 |              |
| ② SBP 1500/6/250 A1IT/50 | 400 | 3      | 14.8    | 12.3    | 28.2 | 960 | Y Δ   | DN250 PN10 |              |



# SBP

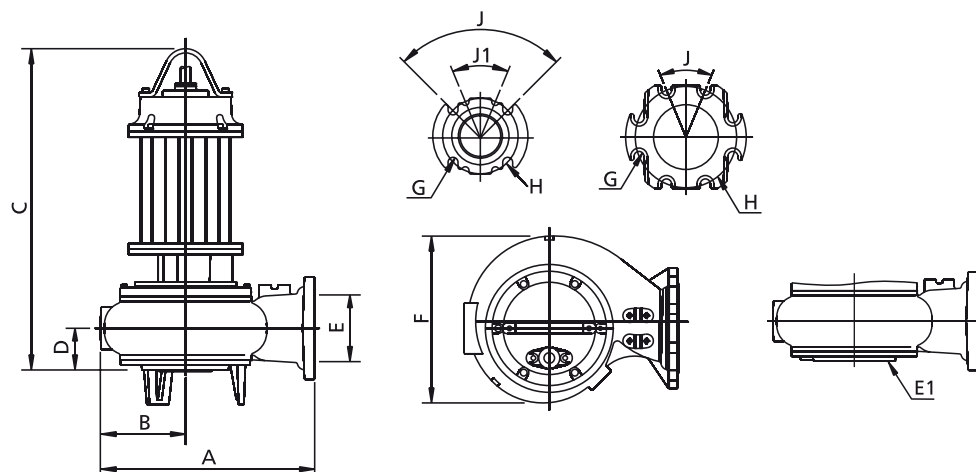
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| SBP 750/2/80 A0HT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SBP 750/4/150 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SBP 1000/4/150 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SBP 1000/6/200 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SBP 1500/6/200 A1IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| SBP 1000/6/250 C0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  |                  |      |       | ●      |
| SBP 1500/6/250 A1IT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |

## Overall dimensions and weights



|                        | A   | B   | C   | D   | E   | E1           | F   | G  | H   | J   | J1  | kg  |
|------------------------|-----|-----|-----|-----|-----|--------------|-----|----|-----|-----|-----|-----|
| SBP 750/2/80 A0HT/50   | 345 | 135 | 725 | 110 | 80  | DN65 PN6(*)  | 275 | 18 | 160 | 90° | 45° | 103 |
| SBP 750/4/150 A0HT/50  | 585 | 225 | 855 | 200 | 150 | DN125 PN6(*) | 440 | 24 | 240 | 45° | -   | 135 |
| SBP 1000/4/150 A0HT/50 | 585 | 225 | 855 | 200 | 150 | DN125 PN6(*) | 440 | 24 | 240 | 45° | -   | 151 |
| SBP 1000/6/200 A0IT/50 | 695 | 275 | 970 | 145 | 200 | DN250 PN6    | 540 | 24 | 295 | 45° | -   | 215 |
| SBP 1500/6/200 A1IT/50 | 695 | 275 | 975 | 155 | 200 | DN200 PN6    | 540 | 24 | 295 | 45° | -   | 245 |
| SBP 1000/6/250 C0IT/50 | 785 | 310 | 970 | 145 | 250 | DN250 PN6    | 610 | 24 | 350 | 30° | -   | 223 |
| SBP 1500/6/250 A1IT/50 | 785 | 310 | 975 | 155 | 250 | DN200 PN6    | 610 | 24 | 350 | 30° | -   | 255 |

Dimensions in mm

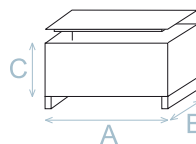
All weights and dimensions are indicative only

(\*) Suction flange available upon request

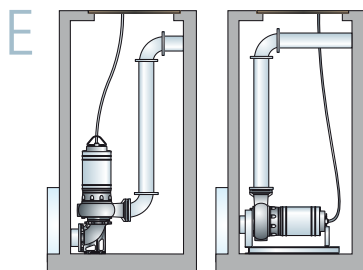
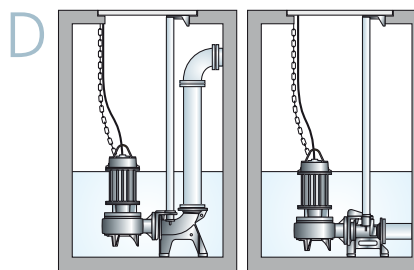
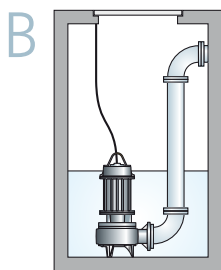
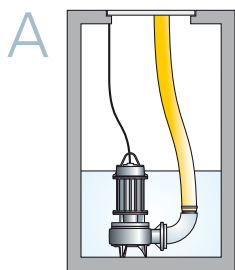
## Packaging dimension

|                        | A    | B   | C    |
|------------------------|------|-----|------|
| SBP 750/2/80 A0HT/50   | 915  | 515 | 555  |
| SBP 750/4/150 A0HT/50  | 915  | 515 | 555  |
| SBP 1000/4/150 A0HT/50 | 915  | 515 | 555  |
| SBP 1000/6/200 A0IT/50 | 1000 | 750 | 1200 |
| SBP 1500/6/200 A1IT/50 | 1000 | 750 | 1200 |
| SBP 1000/6/250 C0IT/50 | 1000 | 750 | 1200 |
| SBP 1500/6/250 A1IT/50 | 1000 | 750 | 1200 |

Dimension in mm

All weights and dimensions are  
indicative only

## Installations available



# 1.5 GR (GRINDER)

## Grinder pumps

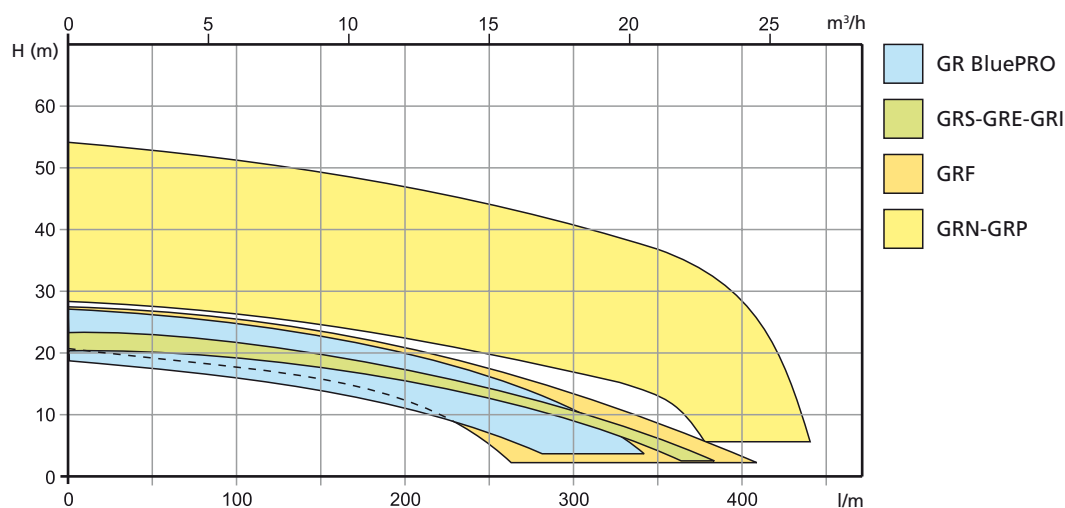
The **GRINDER (GR)** family consists of electric pumps with multi-channel open impeller with a grinding system .

The intended use varies depending on whether 2 or 4 pole motors are used; in the former case, applications are in the residential sector and livestock farming where sewage is present. In the second case, applications are mainly in agriculture and livestock farming, with particularly heavily soiled liquids.

### 0.74 ÷ 1.5 kW 2 POLES



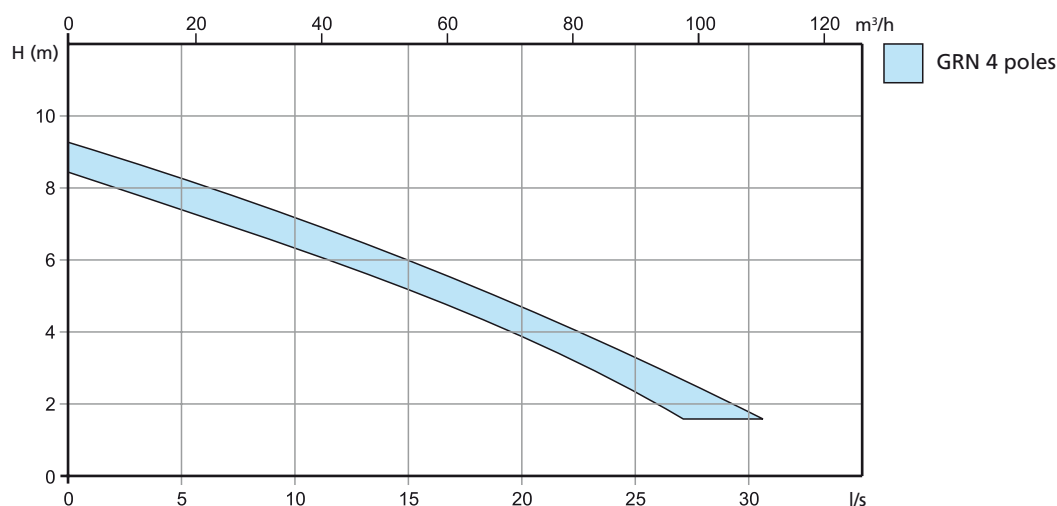
The GR impeller, designed to provide high heads and high efficiency, is applied to motors with power up to 7.2 kW, for use in the livestock farming, food and residential sectors and wherever grinding of the pumped liquid is required. The diffuser plate incorporates the Anti Clogging System (ACS), consisting of grooves in the plate to facilitate the ejection of solids, which ensures that the pump will not become fouled and restarts quickly even with lower power ratings.



### 1.8 ÷ 7.2 kW 4 POLES



The special hydraulic unit used with motors from 2.2 to 3.0 kW 4 poles comprises a grinding system consisting of a rugged "S"-shaped impeller operating snug against the diffuser plate, with serrated intake orifice. Both the impeller and the diffuser plate are in EN-GJS-600-3 cast iron, heat treated for greater surface hardness. This system is recommended in agriculture, livestock farming and civil applications for liquids with particularly high contents of solids suitable for grinding.



**GR**

Grinder pumps

## 0.74 ÷ 1.5 kW 2 poles

**GR BluePRO**

page 254

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in oil sump, V-ring in direct contact with the liquid. Ecological dry motor. Aluminium handle, cast iron impeller. Pump body in single casting with motor casing.

Recommended for unstrained civil wastewaters, including those containing filaments or fibres. This electric pump is intended for both domestic and professional use.

**GRS**

page 258

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller. Pump body in single casting with motor casing.

Suitable for lifting soiled wastewaters containing filaments or fibres, and unstrained household sewage in general.

**GRE**

page 262

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller.

Suitable for lifting soiled wastewaters containing filaments or fibres, and unstrained household sewage in general.

**GRI**

page 266

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump. Ecological dry motor. Stainless steel handle, cast iron impeller.

Can be used for lifting soiled wastewaters containing filaments or fibres, and heavy-duty applications with unstrained civil wastewaters in general.

**GRF**

page 270

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Cast iron handle and impeller. Models with ATEX explosion-proof certification.

Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the GRF is especially recommended for wastewaters containing filaments or fibres, and unstrained civil and industrial wastewaters in general.

## 1.8 ÷ 7.2 kW 2/4 poles

**GRN**

page 274

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals (optional). Models available in ATEX explosion-proof version (on request).

Designed for professional and industrial use, it is suitable for the treatment of liquids containing suspended solids or fibres, and low or medium density activated sludges. These models are prefitted for installation of the ZENIT cooling system, for dry or semi-submerged installation (on request).

**GRP**

page 282

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. 1 opposing graphite alumina mechanical seal lubricated with motor oil. Oil bath motor.

Suitable for professional and industrial use, it is suitable for lifting liquids containing suspended solids or fibres, and activated sludges.

# GR Blue PRO

Impeller with grinder system

DESIGN BY

*pininfarina*

All product images are indicative only



## General characteristics

|                              |                         |
|------------------------------|-------------------------|
| impeller with grinder system |                         |
| motor power                  | 0,74 ÷ 1,5 kW           |
| poles                        | 2                       |
| discharge                    | GAS 1½"-DN32 horizontal |
| free passage                 | -                       |
| max flow rate                | 5.6 l/s                 |
| max head                     | 27 m                    |

## Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Recommended for unstrained civil wastewaters, including those containing filaments or fibres. This electric pump is intended for both domestic and professional use.

## Construction materials

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                  |
| Impeller                         | Cast iron EN-GJL-250                                  |
| Nuts and bolts                   | Stainless steel - Class A2-70                         |
| Standard gasket                  | Rubber - NBR                                          |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                       |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                       |
| Shaft                            | Stainless steel - AISI 420                            |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC), V-ring   |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

Models available in IECEx certified version

Ex nA IIC T3  
Ex nA nC IIC T3

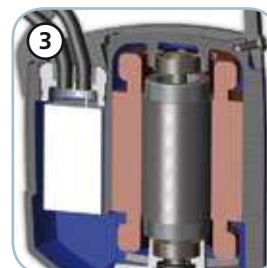
## GR BluePRO

**Lifting handle**

Ergonomic technopolymer lifting and carrying handle. Clip floatswitch adjustment.

**Cable gland System**

Innovative cable gland system with twin O-rings to ensure maximum tightness.

**Motor and electrical equipment**

Dry motor with thermal protections. Single-phase models with internal capacitor and control cabinet with circuit breaker capacitor and overload protection. Three-phase models with motor protection relay.

**Mechanical seals**

Two silicon carbide mechanical seals (2SiC), and V-ring in direct contact with the liquid.

**Oil sump**

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.

**Cutter**

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

Up to 69.000 cuts per minute

**Discharge and foot**

Threaded, flanged discharge for the maximum ease of installation. Cast iron foot.

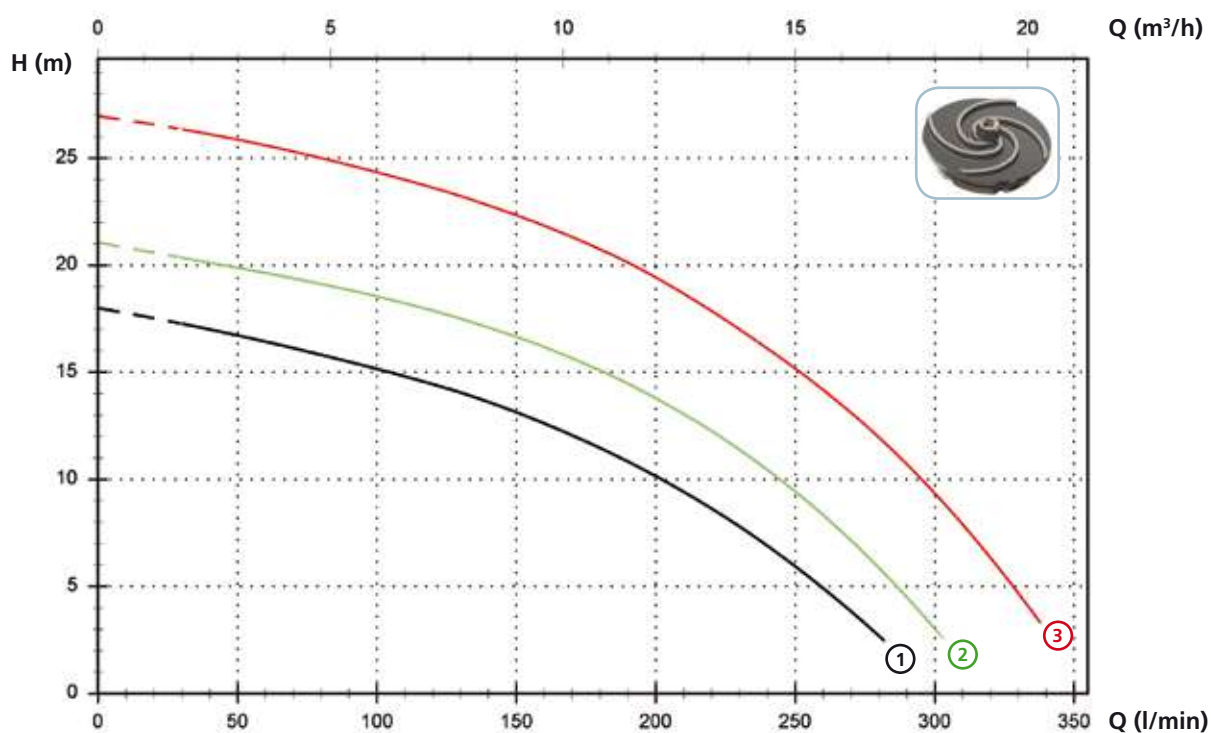


# GR Blue PRO

Models with horizontal GAS 1½" threaded discharge and DN32 PN6 flange - 2 poles

## Performances

|                                    | l/s   | 0    | 1    | 2    | 3    | 4    | 5    |
|------------------------------------|-------|------|------|------|------|------|------|
|                                    | l/min | 0    | 60   | 120  | 180  | 240  | 300  |
|                                    | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 |
| ① GR BluePRO 100/2/G40H A1CM(T)/50 |       | 18.0 | 16.4 | 14.4 | 11.5 | 6.9  |      |
| ② GR BluePRO 150/2/G40H A1CM(T)/50 |       | 21.1 | 19.6 | 17.9 | 15.1 | 10.4 | 3.0  |
| ③ GR BluePRO 200/2/G40H A1CM(T)/50 |       | 27.0 | 25.6 | 23.6 | 20.7 | 16.1 | 9.3  |



## Technical data

|                                 | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|---------------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① GR BluePRO 100/2/G40H A1CM/50 | 230 | 1      | -       | 0.74    | 5.5 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
| ② GR BluePRO 150/2/G40H A1CM/50 | 230 | 1      | -       | 1.1     | 7.5 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
| ③ GR BluePRO 200/2/G40H A1CM/50 | 230 | 1      | -       | 1.5     | 10  | 2900 | Dir   | G 1½"-DN32 PN6 | -            |

|                                 | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|---------------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① GR BluePRO 100/2/G40H A1CT/50 | 400 | 3      | -       | 0.74    | 2.7 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
| ② GR BluePRO 150/2/G40H A1CT/50 | 400 | 3      | -       | 1.1     | 3.2 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
| ③ GR BluePRO 200/2/G40H A1CT/50 | 400 | 3      | -       | 1.5     | 4.3 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |

# GR BluePRO

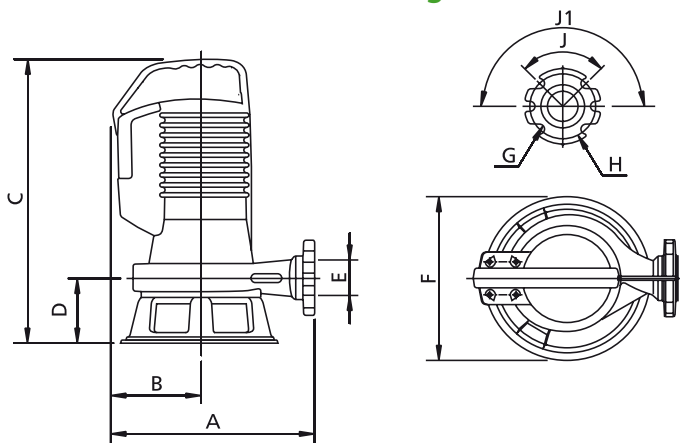
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                               | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|-------------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                               | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| GR BluePRO 100/2/G40H A1CM/50 |                     |   |        |             | ●                | ●                     |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| GR BluePRO 100/2/G40H A1CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  | ●                |      |       |        |
| GR BluePRO 150/2/G40H A1CM/50 |                     |   |        |             | ●                | ●                     |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| GR BluePRO 150/2/G40H A1CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  | ●                |      |       |        |
| GR BluePRO 200/2/G40H A1CM/50 |                     |   |        |             | ●                | ●                     |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| GR BluePRO 200/2/G40H A1CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  | ●                |      |       |        |

## Overall dimensions and weights



|                                  | A   | B   | C   | D   | E     | F   | G  | H  | J   | J1   | kg |
|----------------------------------|-----|-----|-----|-----|-------|-----|----|----|-----|------|----|
| GR BluePRO 100/2/G40H A1CM(T)/50 | 270 | 130 | 365 | 95  | G 1½" | 220 | 14 | 90 | 90° | 180° | 19 |
| GR BluePRO 150/2/G40H A1CM(T)/50 | 285 | 125 | 410 | 100 | G 1½" | 230 | 14 | 90 | 90° | 180° | 24 |
| GR BluePRO 200/2/G40H A1CM(T)/50 | 285 | 125 | 410 | 100 | G 1½" | 230 | 14 | 90 | 90° | 180° | 25 |

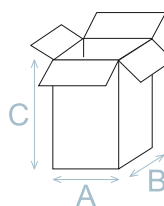
Dimensions in mm

All weights and dimensions are indicative only

## Packaging dimension

|                                  | A   | B   | C   |
|----------------------------------|-----|-----|-----|
| GR BluePRO 100/2/G40H A1CM(T)/50 | 300 | 250 | 400 |
| GR BluePRO 150/2/G40H A1CM(T)/50 | 300 | 250 | 440 |
| GR BluePRO 200/2/G40H A1CM(T)/50 | 300 | 250 | 440 |

Dimension in mm

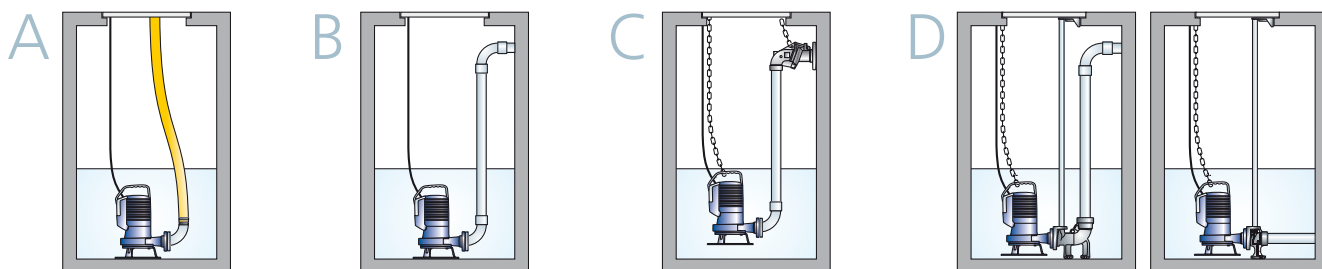


All weights and dimensions are indicative only

## No. pieces per pallet

For GR BluePRO models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available



GRS

## Impeller with grinder system

All product images are indicative only



## General characteristics

## Impeller with grinder system

|               |                         |
|---------------|-------------------------|
| motor power   | 0,9 kW                  |
| poles         | 2                       |
| discharge     | GAS 1½"-DN32 horizontal |
| free passage  | -                       |
| max flow rate | 4.3 l/s                 |
| max head      | 20.4 m                  |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Suitable for lifting soiled wastewaters containing filaments or fibres, and unstrained household sewage in general.

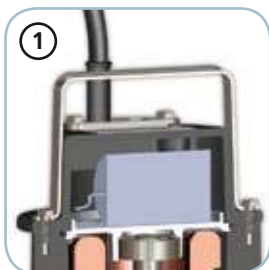
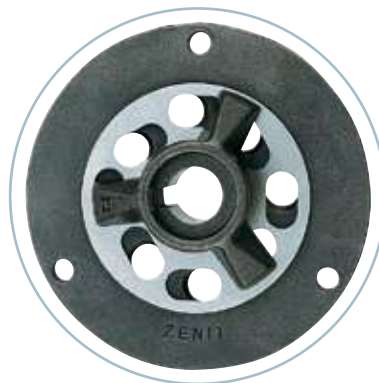
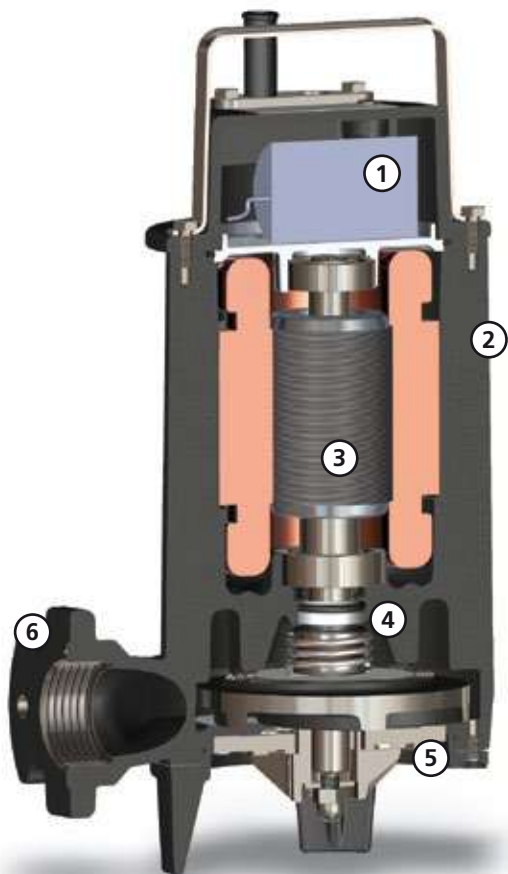
## Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                            |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                            |
| Shaft                            | Stainless steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

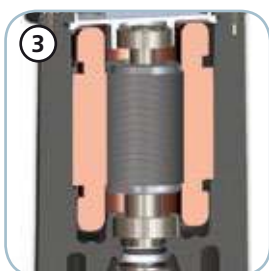
GRS

**Capacitor/relay**

Single-phase models with internal capacitor and control cabinet with circuit breaker capacitor and overload protection. Three-phase models with motor protection relay.

**Structure**

Constructed in GJL-250 cast iron.

**Motor**

Ecological dry motor with thermal protections.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one lip seal.

**Grinder system**

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

Up to 69.000 cuts per minute

**Discharge**

Threaded, flanged discharge for the maximum ease of installation.

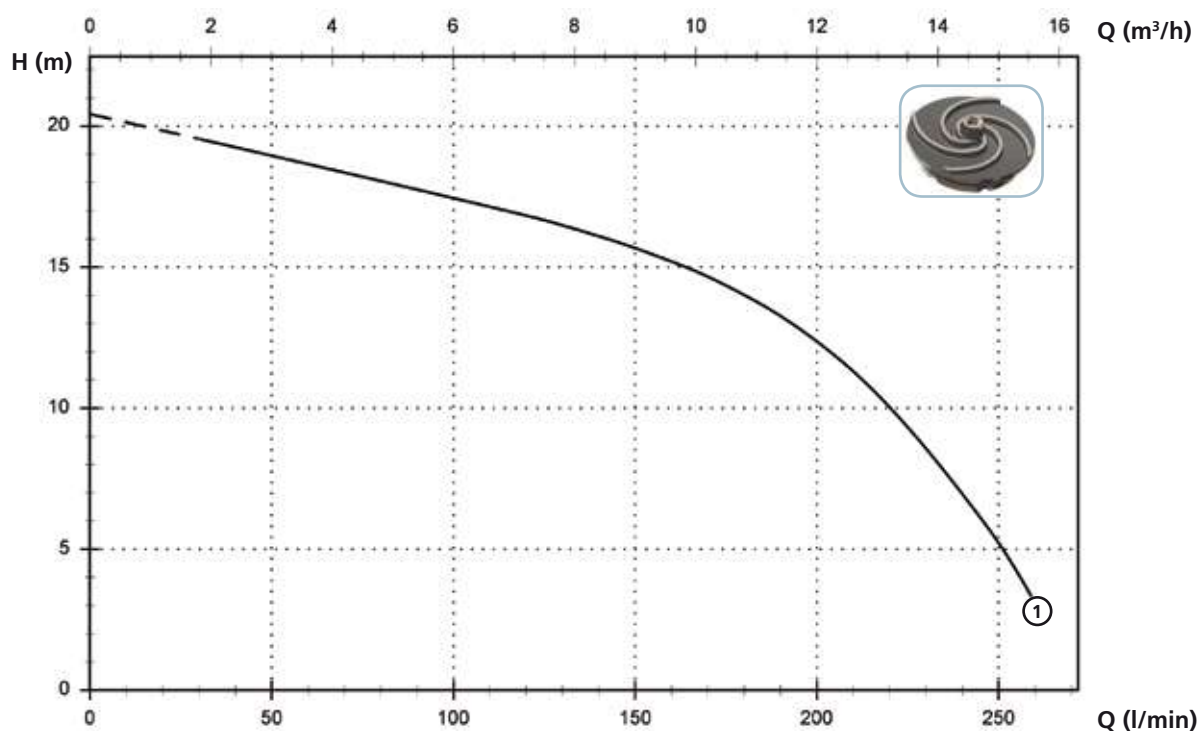
# GRS

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances

|              |   |     |     |      |      |
|--------------|---|-----|-----|------|------|
| <i>l/s</i>   | 0 | 1   | 2   | 3    | 4    |
| <i>l/min</i> | 0 | 60  | 120 | 180  | 240  |
| <i>m³/h</i>  | 0 | 3.6 | 7.2 | 10.8 | 14.4 |

|                             |      |      |      |      |     |
|-----------------------------|------|------|------|------|-----|
| ① GRS 100/2/G40H A0CM(T)/50 | 20.4 | 18.7 | 16.8 | 14.0 | 7.0 |
|-----------------------------|------|------|------|------|-----|



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① GRS 100/2/G40H A0CM/50 | 230 | 1      | -       | 0.9     | 6.6 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
| ① GRS 100/2/G40H A0CT/50 | 400 | 3      | -       | 0.9     | 2.3 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |

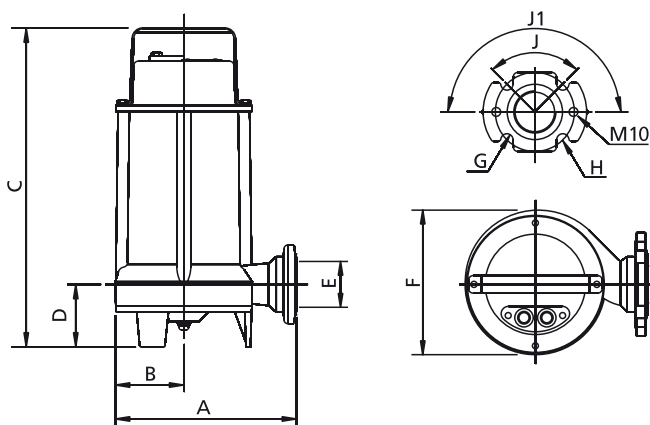
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| GRS 100/2/G40H A0CM/50 |                     |   |        |             | ●                | ●                     |             |                  |                       |        |        |             | ●       |           |    |                  |                  | ●    |       |        |
| GRS 100/2/G40H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  |                  | ●    |       |        |

## Overall dimensions and weights



|                           | A   | B  | C   | D  | E        | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|----|-----|----|----------|-----|----|----|-----|------|----|
| GRS 100/2/G40H A0CM(T)/50 | 205 | 80 | 365 | 70 | G 1 1/2" | 165 | 14 | 90 | 90° | 180° | 21 |

Dimensions in mm

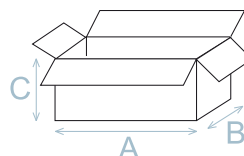
All weights and dimensions are indicative only

## Packaging dimension

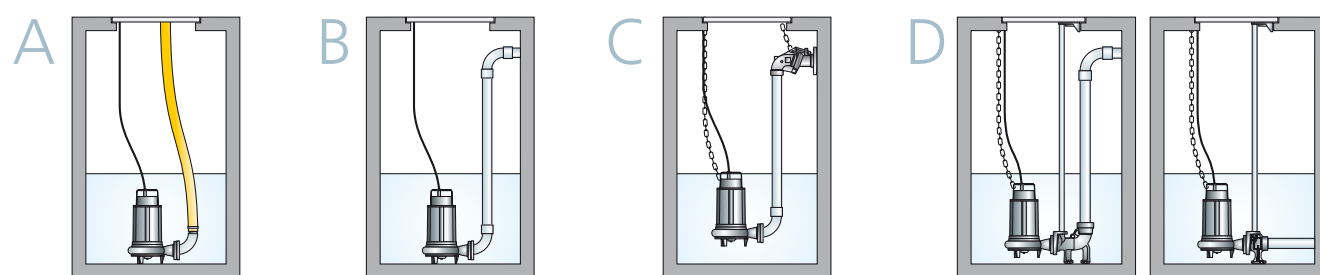
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| GRS 100/2/G40H A0CM(T)/50 | 385 | 225 | 245 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available





GRE

## Impeller with grinder system

All product images are indicative only



## General characteristics

## Impeller with grinder system

|               |                        |
|---------------|------------------------|
| motor power   | 1,5 kW                 |
| poles         | 2                      |
| discharge     | GAS 2"-DN32 horizontal |
| free passage  | -                      |
| max flow rate | 6.3 l/s                |
| max head      | 27.3 m                 |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor.

## Applications

Suitable for lifting soiled wastewaters containing filaments or fibres, and unstrained household sewage in general.

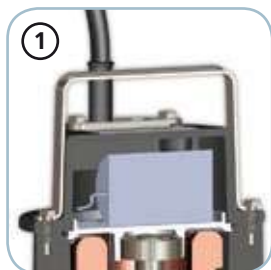
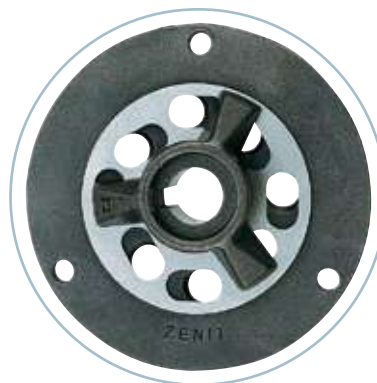
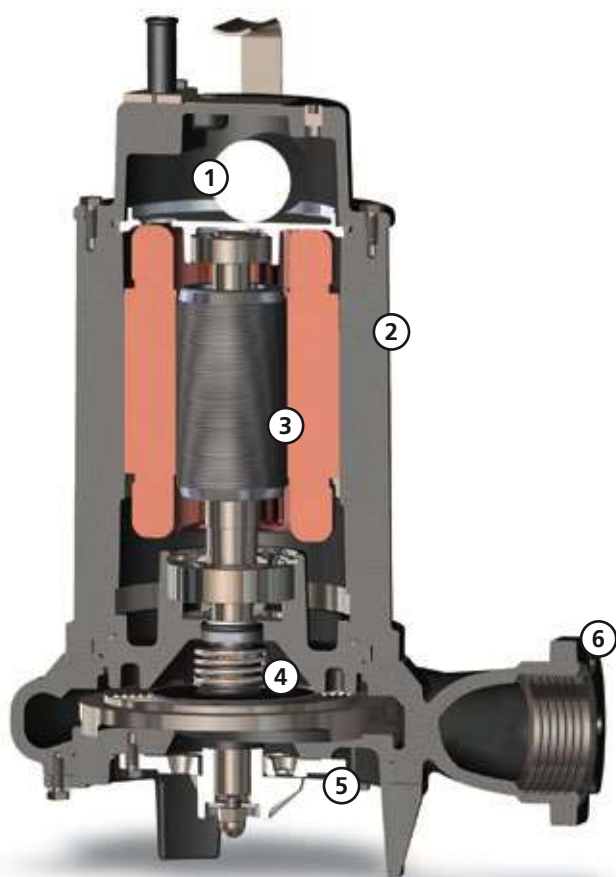
## Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                            |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                            |
| Shaft                            | Stainless steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

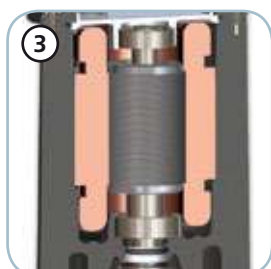
GRE

**Capacitor/relay**

Single-phase models with internal capacitor and control cabinet with circuit breaker capacitor and overload protection. Three-phase models with motor protection relay.

**Structure**

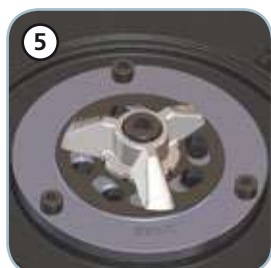
Constructed in GJL-250 cast iron.

**Motor**

Ecological dry motor with thermal protections.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one lip seal.

**Grinder system**

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

Up to 69.000 cuts per minute

**Discharge**

Threaded, flanged discharge for the maximum ease of installation.

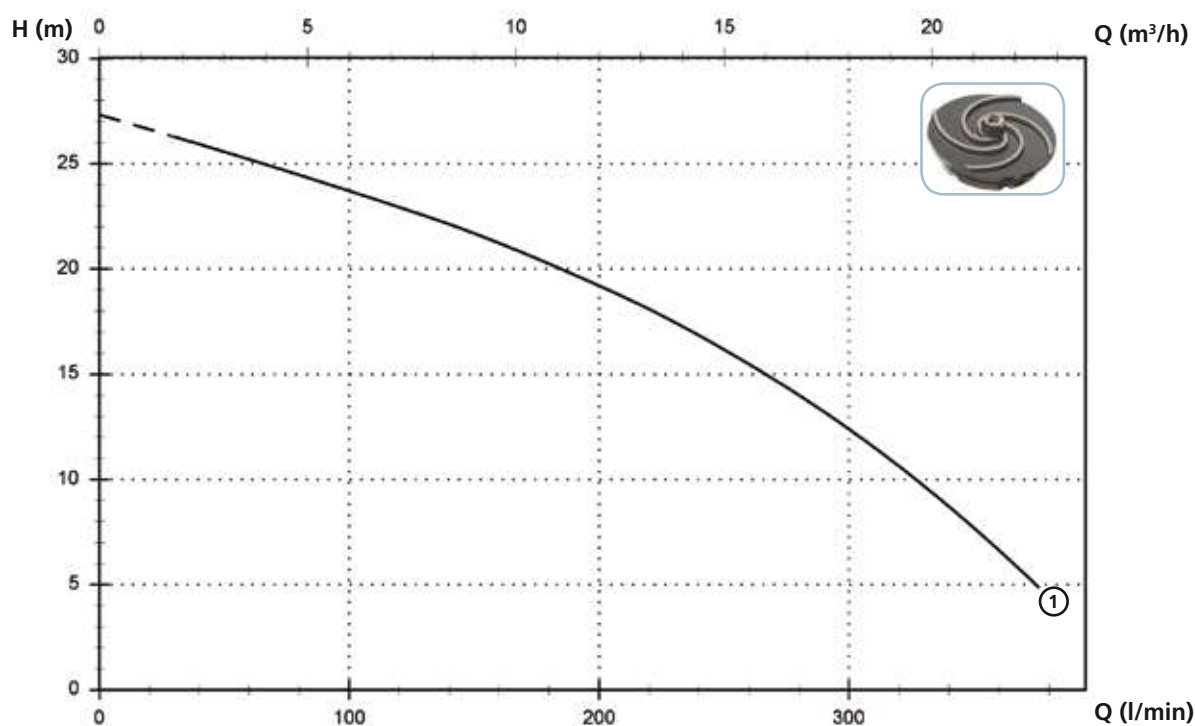
# GRE

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances

|              |   |     |     |      |      |      |      |
|--------------|---|-----|-----|------|------|------|------|
| <i>l/s</i>   | 0 | 1   | 2   | 3    | 4    | 5    | 6    |
| <i>l/min</i> | 0 | 60  | 120 | 180  | 240  | 300  | 360  |
| <i>m³/h</i>  | 0 | 3.6 | 7.2 | 10.8 | 14.4 | 18.0 | 21.6 |

|                            |      |      |      |      |      |      |     |
|----------------------------|------|------|------|------|------|------|-----|
| ① GRE 200/2/G50H A0CM(T)50 | 27.3 | 25.2 | 22.9 | 20.2 | 16.8 | 12.4 | 6.6 |
|----------------------------|------|------|------|------|------|------|-----|



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① GRE 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.7     | 10.6 | 2900 | Dir   | G 2"-DN32 PN6 | -            |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① GRE 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.7     | 3.8 | 2900 | Dir   | G 2"-DN32 PN6 | -            |

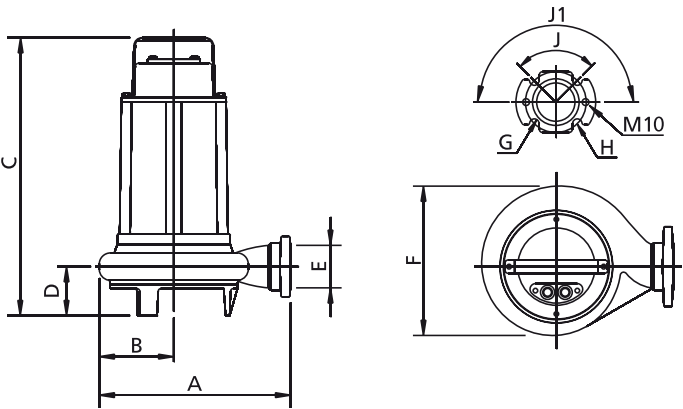
Versions available

(Key to versions on page 16)

(only to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        | Cooling |             |   |           | Mechanical seals |                  |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|---------|-------------|---|-----------|------------------|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R  | T<br>R<br>G | N | CC<br>CCE | FT               | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| GRE 200/2/G50H A0CM/50 |                     |   |        |             | ●                | ●                     |             |                  |                       |        |         |             | ● |           |                  |                  |      | ●    |       |        |
| GRE 200/2/G50H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●       | ●           | ● |           |                  |                  |      | ●    |       |        |

Overall dimensions and weights



|                           | A   | B   | C   | D  | E    | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|-----|-----|----|------|-----|----|----|-----|------|----|
| GRE 200/2/G50H A0CM(T)/50 | 285 | 110 | 410 | 75 | G 2" | 220 | 14 | 90 | 90° | 180° | 26 |

Dimensions in mm

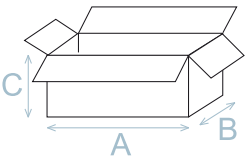
All weights and dimensions are indicative only

Packaging dimension

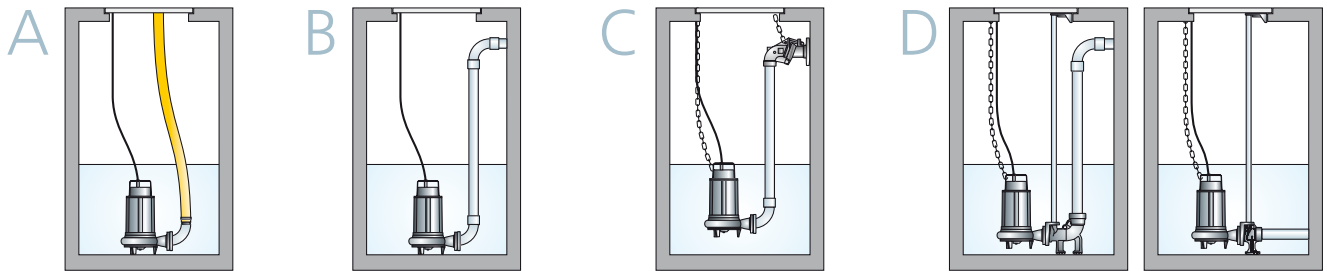
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| GRE 200/2/G50H A0CM(T)/50 | 475 | 285 | 235 |

Dimension in mm

All weights and dimensions are indicative only



Installations available



GRI

## Impeller with grinder system

All product images are indicative only



## General characteristics

| Impeller with grinder system |                        |
|------------------------------|------------------------|
| motor power                  | 1,7 kW                 |
| poles                        | 2                      |
| discharge                    | GAS 2"-DN32 horizontal |
| free passage                 | -                      |
| max flow rate                | 6.8 l/s                |
| max head                     | 23.4 m                 |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals, installed in series in inspectable oil sump. Ecological dry motor.

## Applications

Can be used for lifting soiled wastewaters containing filaments or fibres, and heavy-duty applications with unstrained civil wastewaters in general.

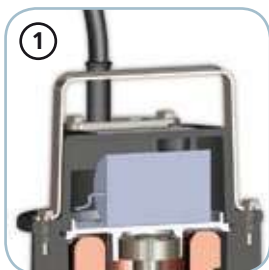
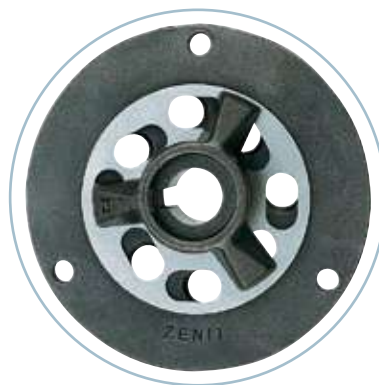
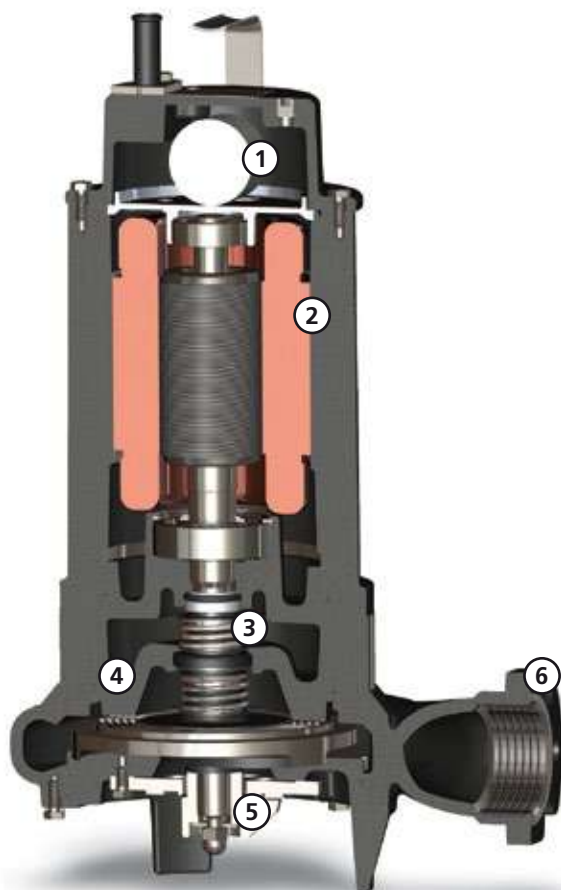
## Construction materials

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                  |
| Impeller                         | Cast iron EN-GJL-250                                  |
| Nuts and bolts                   | Stainless steel - Class A2-70                         |
| Standard gasket                  | Rubber - NBR                                          |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                       |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                       |
| Shaft                            | Stainless steel - AISI 420                            |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)           |

## Operating limits

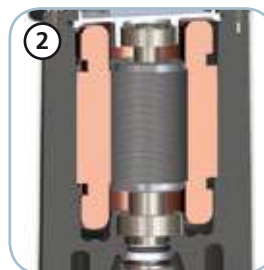
|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

GRI



#### Capacitor/relay

Single-phase models with internal capacitor and control cabinet with circuit breaker capacitor and overload protection. Three-phase models with motor protection relay.



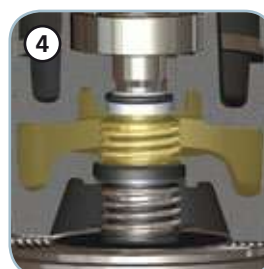
#### Structure and motor

Constructed in GJL-250 cast iron. Ecological dry motor with thermal protections.



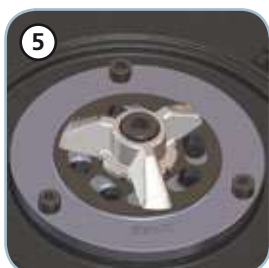
#### Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



#### Oil sump

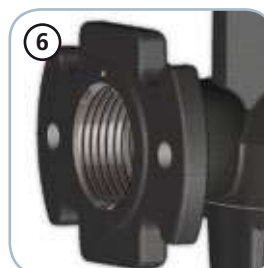
Large oil sump to guarantee longer mechanical seal lifetime.



#### Grinder system

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

Up to 69.000 cuts per minute



#### Discharge

Threaded, flanged discharge for the maximum ease of installation.



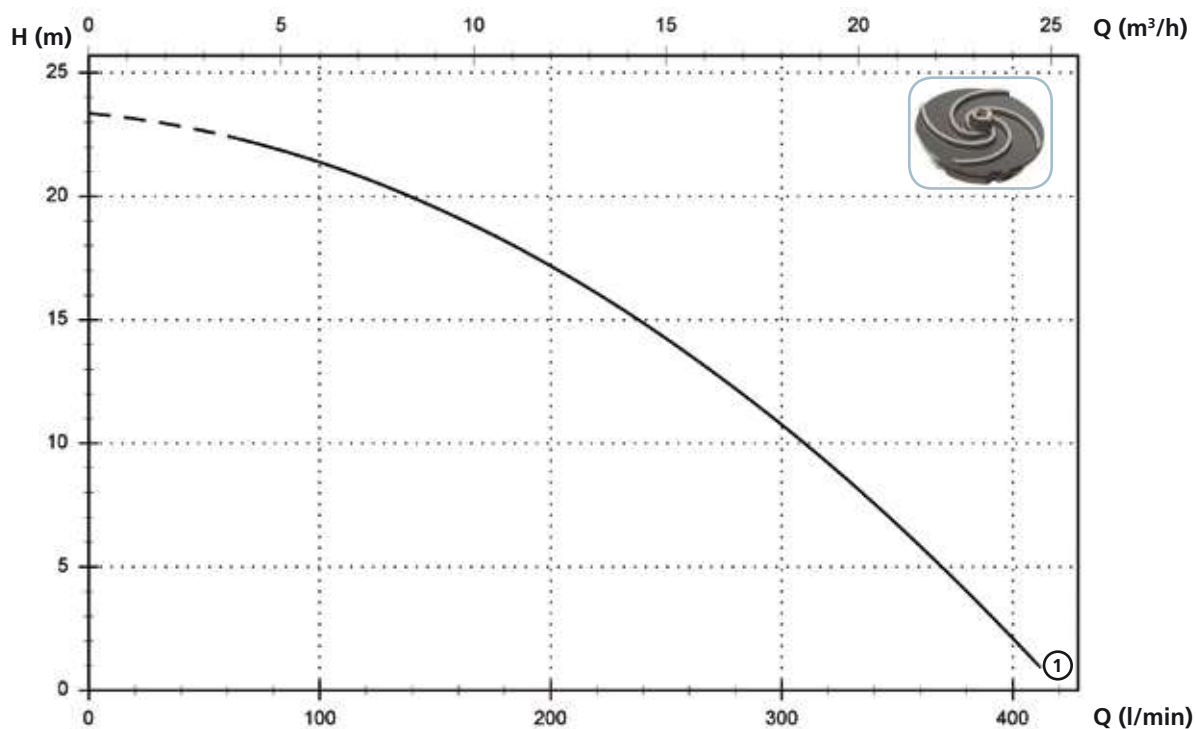
# GRI

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances

|              |   |     |     |      |      |      |      |
|--------------|---|-----|-----|------|------|------|------|
| <i>l/s</i>   | 0 | 1   | 2   | 3    | 4    | 5    | 6    |
| <i>l/min</i> | 0 | 60  | 120 | 180  | 240  | 300  | 360  |
| <i>m³/h</i>  | 0 | 3.6 | 7.2 | 10.8 | 14.4 | 18.0 | 21.6 |

|                             |      |      |      |      |      |      |     |
|-----------------------------|------|------|------|------|------|------|-----|
| ① GRI 200/2/G50H A0CM(T)/50 | 23.4 | 22.4 | 20.7 | 18.2 | 14.9 | 10.8 | 5.8 |
|-----------------------------|------|------|------|------|------|------|-----|



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① GRI 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.7     | 10.6 | 2900 | Dir   | G 2"-DN32 PN6 | -            |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① GRI 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.7     | 3.8 | 2900 | Dir   | G 2"-DN32 PN6 | -            |

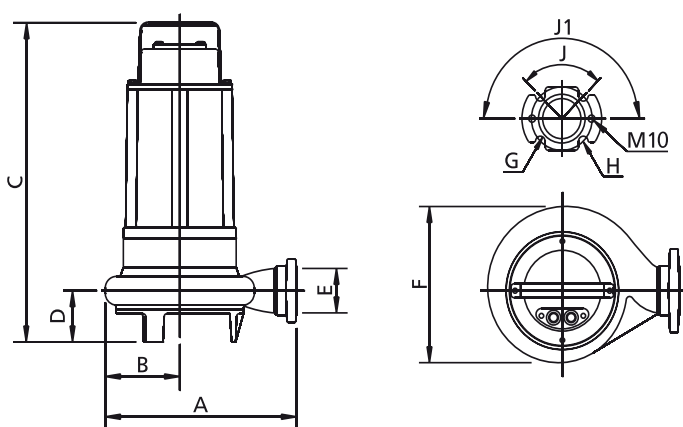
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| GRI 200/2/G50H A0CM/50 |                     |   |        |             | ●                | ●                     |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| GRI 200/2/G50H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E    | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|-----|-----|----|------|-----|----|----|-----|------|----|
| GRI 200/2/G50H A0CM(T)/50 | 285 | 110 | 450 | 75 | G 2" | 220 | 14 | 90 | 90° | 180° | 32 |

Dimensions in mm

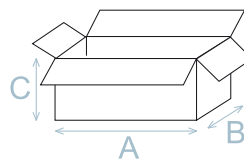
All weights and dimensions are indicative only

## Packaging dimension

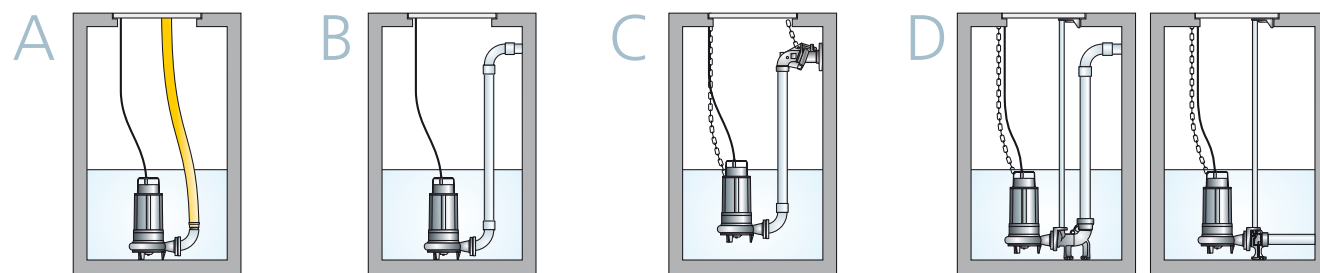
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| GRI 200/2/G50H A0CM(T)/50 | 580 | 310 | 310 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



# GRF

## Impeller with grinder system



All product images are indicative only



### General characteristics

#### Impeller with grinder system

|               |                         |
|---------------|-------------------------|
| motor power   | 1,1 ÷ 1,5 kW            |
| poles         | 2                       |
| discharge     | GAS 1½"-DN32 horizontal |
| free passage  | -                       |
| max flow rate | 6.4 l/s                 |
| max head      | 23 m                    |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

### Applications

Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the GRF is especially recommended for wastewaters containing filaments or fibres, and unstrained civil and industrial wastewaters in general.

### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR - VITON                                   |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                        |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                        |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

GRF



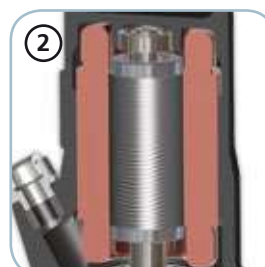
CE 0496 Ex II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids



#### Handle/Cable gland

Cast iron lifting and carrying handle. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



#### Motor

Ecological dry motor with thermal protections.



#### Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



#### Oil sump

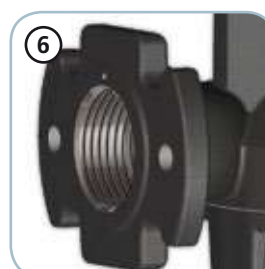
Large oil sump to guarantee longer mechanical seal lifetime.



#### Grinder system

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

Up to 69.000 cuts per minute



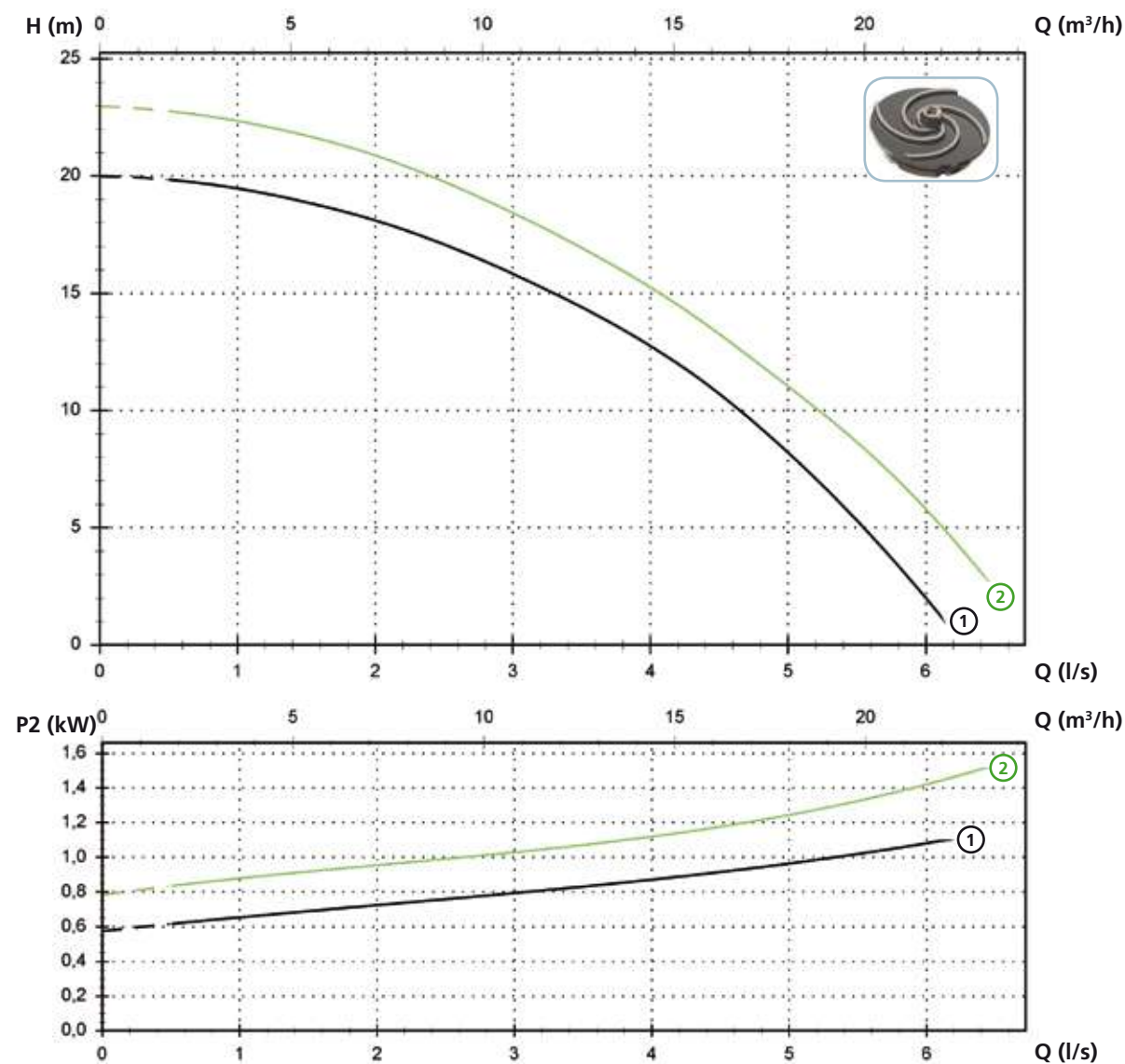
#### Discharge

Threaded, flanged discharge for the maximum ease of installation.

# GRF

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① GRF 150/2/G40H A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
| ② GRF 200/2/G40H A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① GRF 150/2/G40H A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |
| ② GRF 200/2/G40H A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 1½"-DN32 PN6 | -            |

## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |    |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|----|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| GRF 150/2/G40H A1CM/50 |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● |    |    |                  | ●    |      |       |        |
| GRF 200/2/G40H A1CM/50 |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● |    |    |                  | ●    |      |       |        |
| GRF 150/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |    |    |                  | ●    |      |       |        |
| GRF 200/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |    |    |                  | ●    |      |       |        |

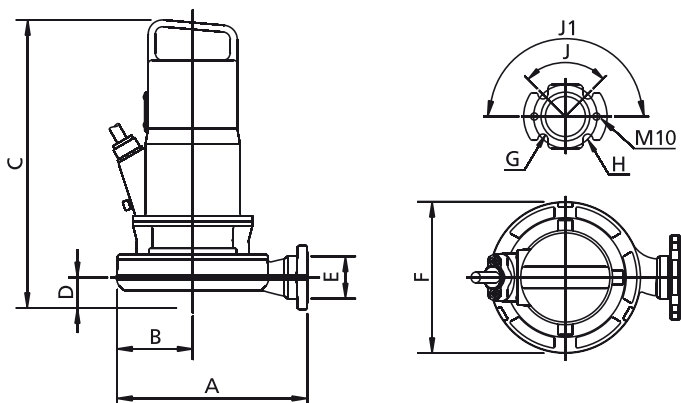
NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.

Capacitor supplied but not connected to the pump cable.

The use of an electrical panel as circuit breaker housing is mandatory.

For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E     | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|-----|-----|----|-------|-----|----|----|-----|------|----|
| GRF 150/2/G40H A1CM(T)/50 | 265 | 105 | 405 | 45 | G 1½" | 215 | 14 | 90 | 90° | 180° | 32 |
| GRF 200/2/G40H A1CM(T)/50 | 265 | 105 | 405 | 45 | G 1½" | 215 | 14 | 90 | 90° | 180° | 34 |

Dimensions in mm

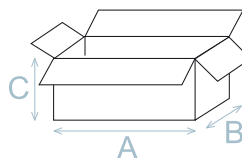
All weights and dimensions are indicative only

## Packaging dimension

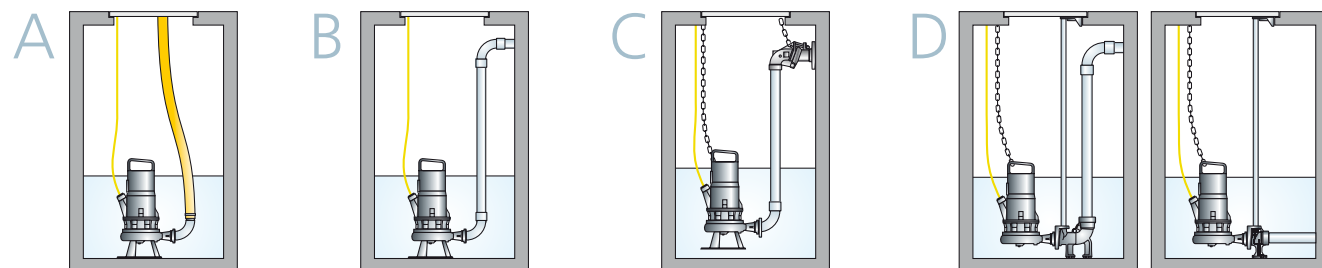
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| GRF 150/2/G40H A1CM(T)/50 | 580 | 310 | 310 |
| GRF 200/2/G40H A1CM(T)/50 | 580 | 310 | 310 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available





GRN

## Impeller with grinder system

All product images are indicative only



## General characteristics

| Impeller with grinder system |                                            |
|------------------------------|--------------------------------------------|
| motor power                  | 1,8 ÷ 4,1 kW                               |
| poles                        | 2 / 4                                      |
| discharge                    | GAS 1½"-2" DN32 horizontal<br>DN80 - DN100 |
| free passage                 | -                                          |
| max flow rate                | 29.6 l/s                                   |
| max head                     | 47.6 m                                     |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in explosion-proof ATEX version.

## Applications

Designed for professional and industrial use, it is suitable for the treatment of liquids containing suspended solids or fibres, and low or medium density activated sludges. The pump is also available in explosion-proof version with ATEX certification. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

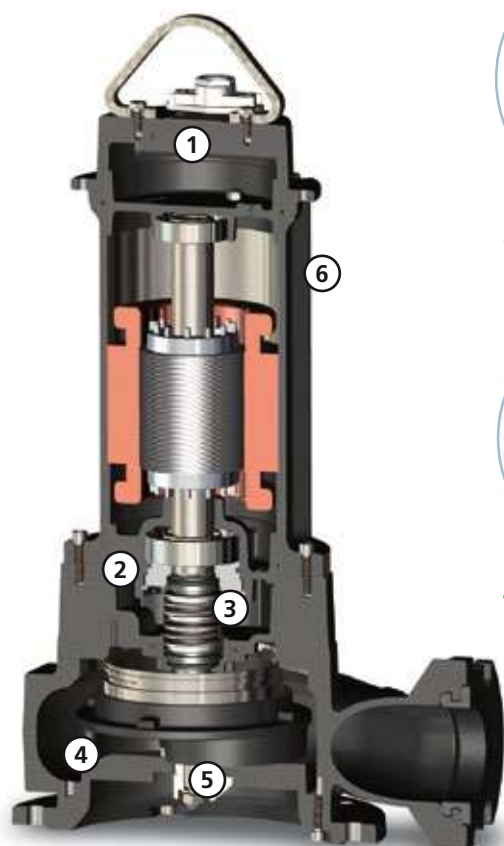
## Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                        |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                        |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Stainless steel - AISI 304                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

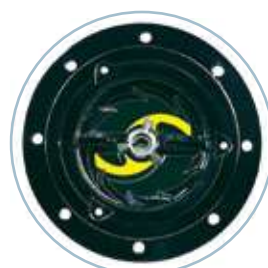
## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

GRN



2 poles motor models



4 poles motor models

**Cooling system**

Dry installation available using the cooling jacket  
(see details to page 17)

**Cable Gland**

Cable gland system to guarantee perfect water-tightness. The universal thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.

**Mechanical seals**

Two silicon carbide (SiC) mechanical seals in oil sump.

**Oil sump**

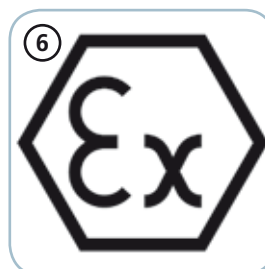
Large oil sump to guarantee longer mechanical seal lifetime.

**Anti-clogging system**

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.

**Grinder system**

Grinder system comprising a revolving cutter and a plate with holes with sharpened edges (2 pole models) or a cast iron flange with saw-tooth edges (4 pole models) that fine-chops filaments, preventing fouling of the impeller.

**EX**

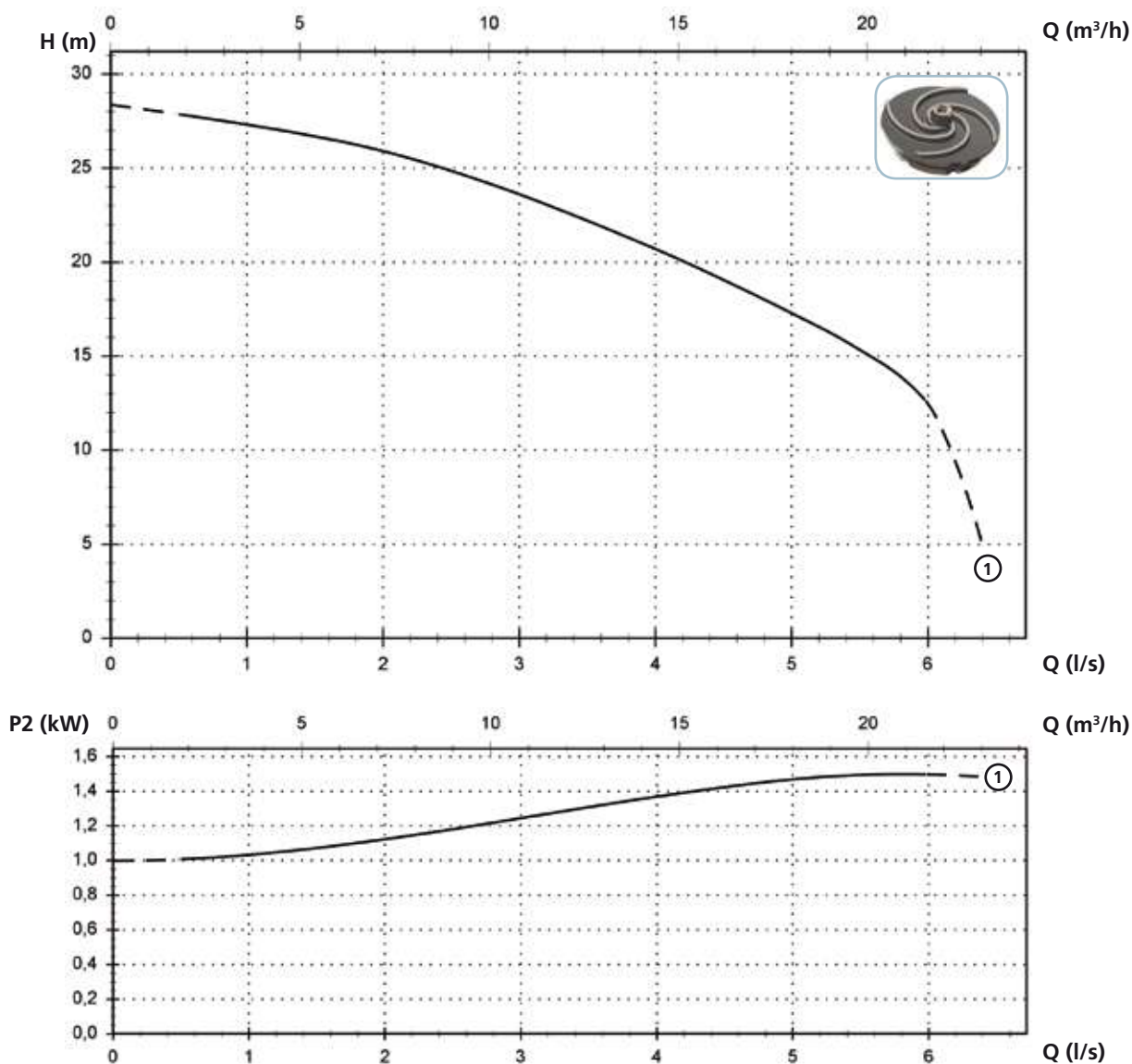
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

CE 0496 Ex db k c IIB T5 Ex tb IIIC T100°C IP68

# GRN

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

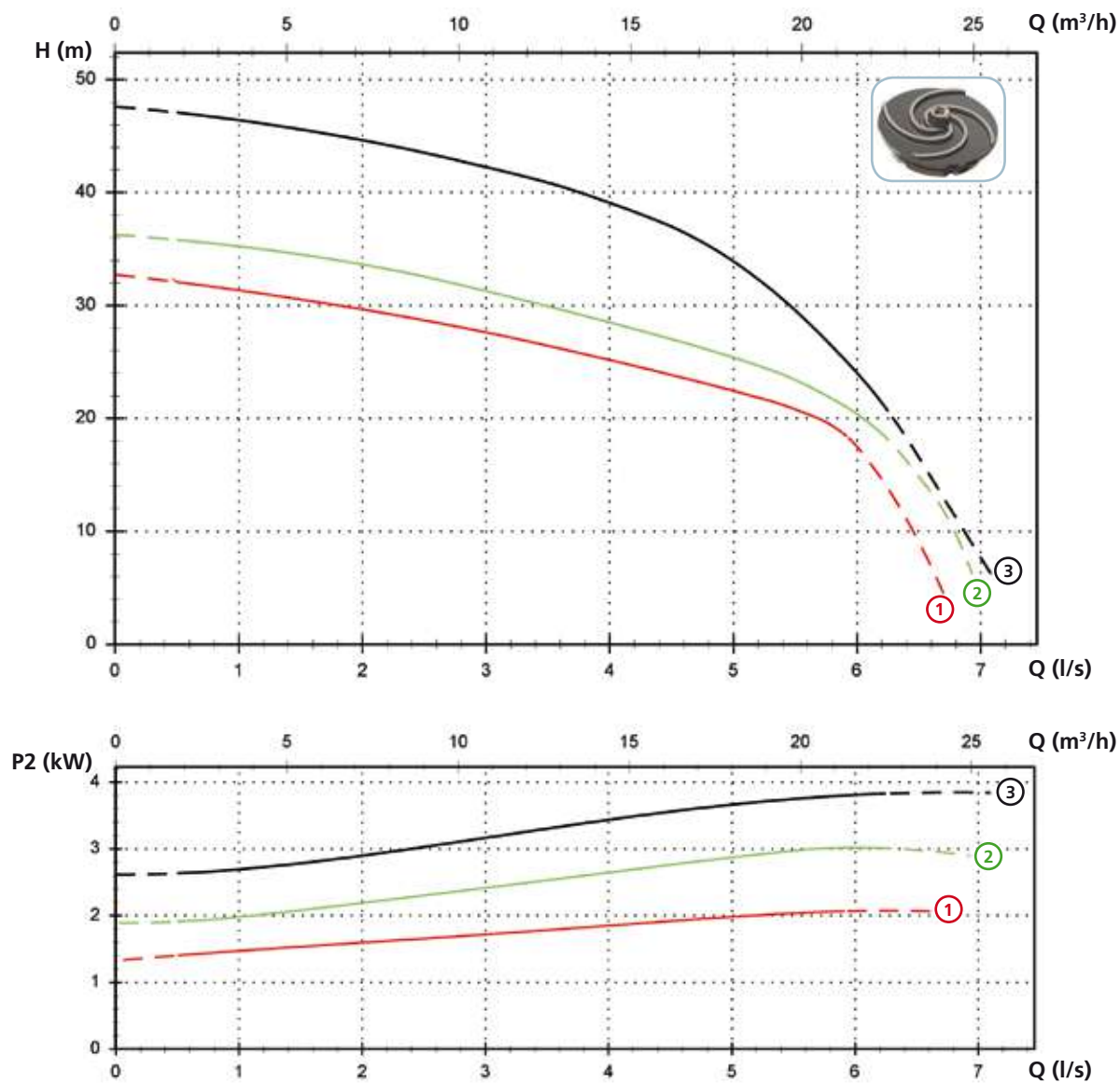
|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|-----------------|--------------|
| ① GRN 250/2/G40H A1DM/50 | 230 | 1      | 2.7     | 1.8     | 12.5 | 2900 | Dir   | G 1½"- DN32 PN6 | -            |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-----------------|--------------|
| ① GRN 250/2/G40H A1DT/50 | 400 | 3      | 2.3     | 1.8     | 3.9 | 2900 | Dir   | G 1½"- DN32 PN6 | -            |

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



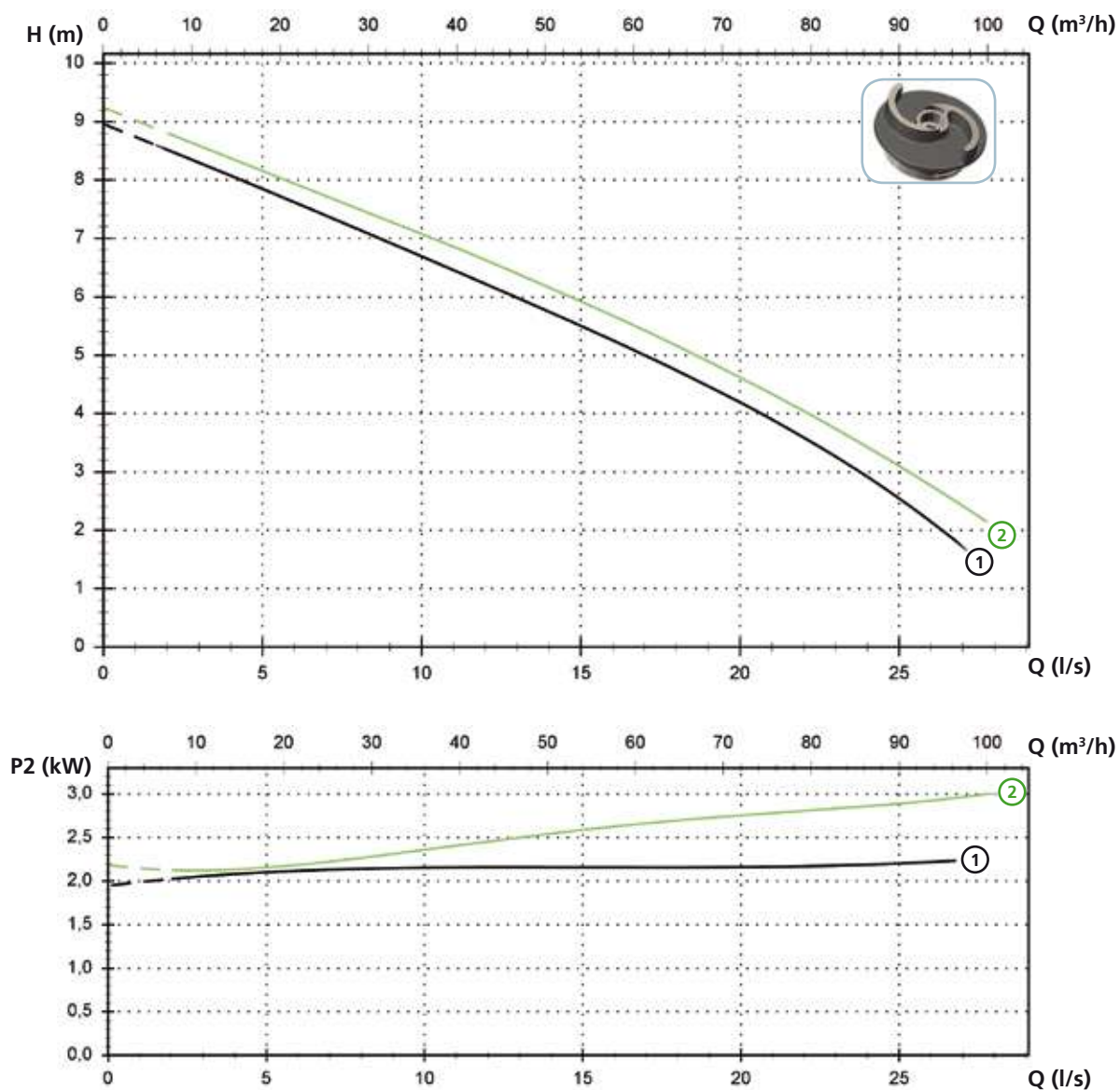
### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① | GRN 300/2/G50H A1DT/50 | 400 | 3      | 2.9     | 2.2     | 5.1 | 2900 | Dir   | G 2"-DN32 PN6 | -            |
| ② | GRN 400/2/G50H A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | G 2"-DN32 PN6 | -            |
| ③ | GRN 550/2/G50H A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | G 2"-DN32 PN6 | -            |

# GRN

## Models with horizontal DN80 PN10-16 flanged discharge - 4 poles

### Performances



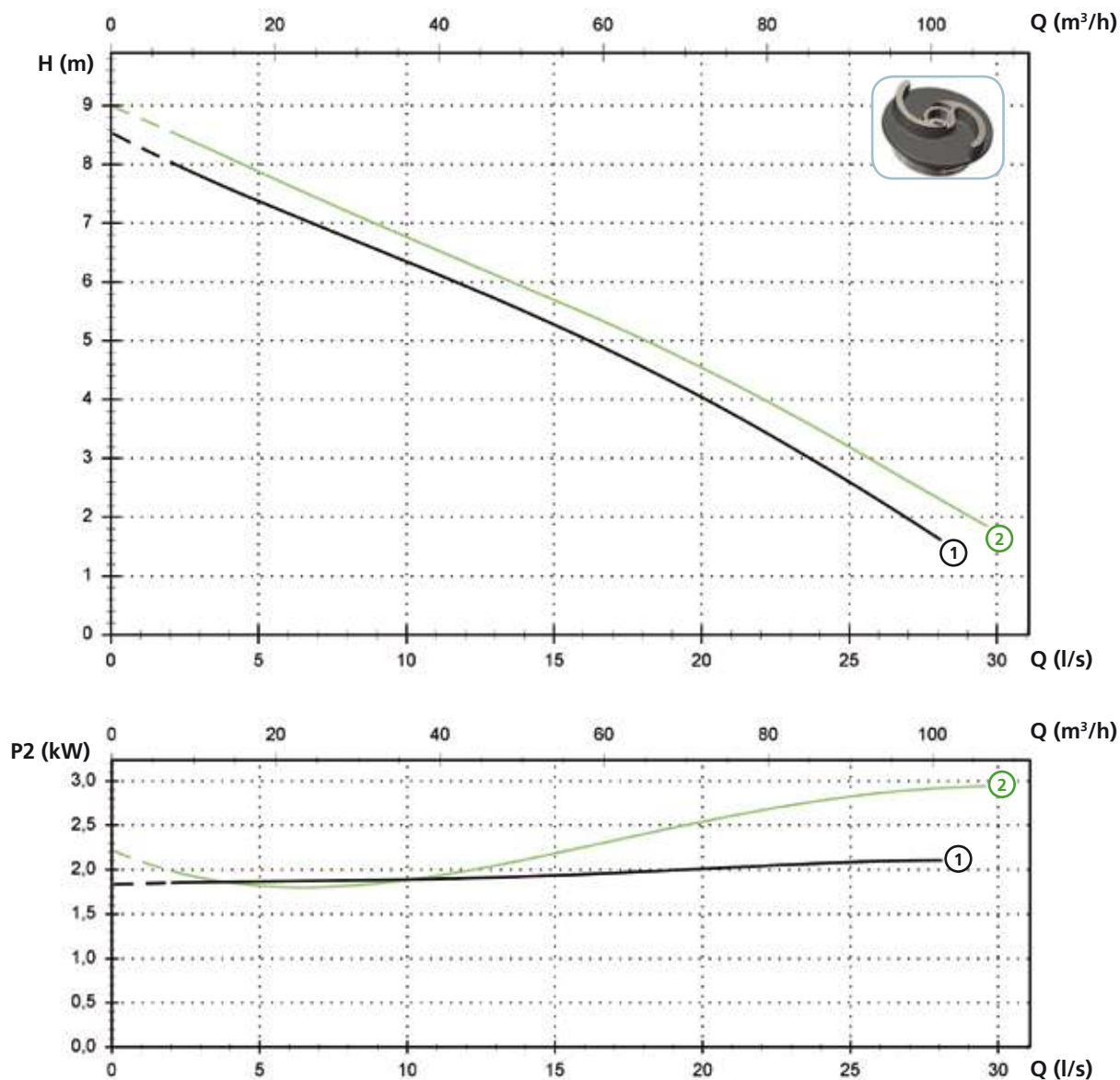
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① GRN 300/4/80 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN80 PN10-16 | -            |
| ② GRN 400/4/80 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN80 PN10-16 | -            |



## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø             | Free passage |
|---|-----------------------|-----|--------|---------|---------|-----|------|-------|---------------|--------------|
| ① | GRN 300/4/100 A1FT/50 | 400 | 3      | 2.9     | 2.2     | 5.8 | 1450 | Dir   | DN100 PN10-16 | -            |
| ② | GRN 400/4/100 A1FT/50 | 400 | 3      | 3.7     | 3       | 7.3 | 1450 | Dir   | DN100 PN10-16 | -            |



# GRN

## Versions available

(Key to versions on page 16)

Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| GRN 250/2/G40H A1DM/50 |                     |   |        | ●           |                  |                       |             |                  |                       |        |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 250/2/G40H A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 300/2/G50H A1DT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 400/2/G50H A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 550/2/G50H A1FT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 300/4/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 400/4/80 A1FT/50   |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 300/4/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |
| GRN 400/4/100 A1FT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● | ●         |    |                  | ●    |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.

Start capacitor inside the pump.

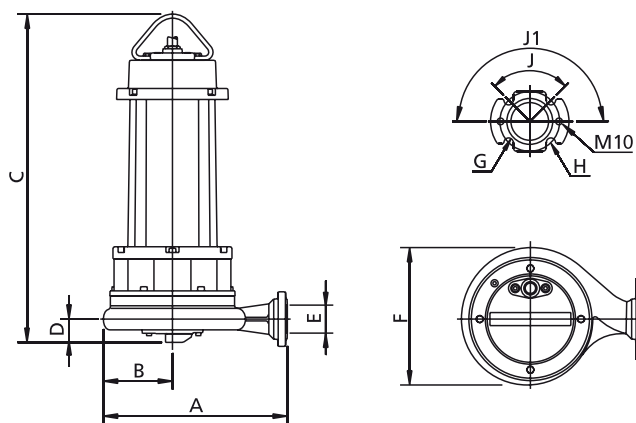
Circuit breaker supplied but not connected to the pump cable.

The use of an electrical panel as circuit breaker housing is mandatory.

For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights

### 2 poles motor models

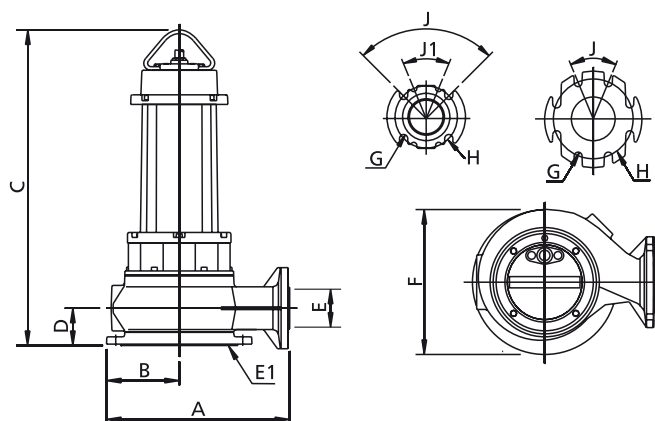


|                        | A   | B   | C   | D  | E     | F   | G  | H  | J   | J1   | kg |
|------------------------|-----|-----|-----|----|-------|-----|----|----|-----|------|----|
| GRN 250/2/G40H A1DM/50 | 265 | 105 | 495 | 45 | G 1½" | 215 | 14 | 90 | 90° | 180° | 44 |
| GRN 250/2/G40H A1DT/50 | 265 | 105 | 495 | 45 | G 1½" | 215 | 14 | 90 | 90° | 180° | 44 |
| GRN 300/2/G50H A1DT/50 | 305 | 110 | 500 | 45 | G 2"  | 225 | 14 | 90 | 90° | 180° | 44 |
| GRN 400/2/G50H A1FT/50 | 350 | 130 | 630 | 45 | G 2"  | 265 | 14 | 90 | 90° | 180° | 69 |
| GRN 550/2/G50H A1FT/50 | 350 | 130 | 630 | 45 | G 2"  | 265 | 14 | 90 | 90° | 180° | 72 |

Dimensions in mm

All weights and dimensions are indicative only

## 4 poles motor models



|                       | A   | B   | C   | D  | E   | E1 (*) | F   | G  | H   | J   | J1  | kg |
|-----------------------|-----|-----|-----|----|-----|--------|-----|----|-----|-----|-----|----|
| GRN 300/4/80 A1FT/50  | 400 | 160 | 695 | 80 | 80  | 200    | 290 | 18 | 160 | 90° | 45° | 87 |
| GRN 400/4/80 A1FT/50  | 400 | 160 | 695 | 80 | 80  | 200    | 290 | 18 | 160 | 90° | 45° | 90 |
| GRN 300/4/100 A1FT/50 | 415 | 160 | 700 | 90 | 100 | 200    | 310 | 18 | 180 | 45° | -   | 89 |
| GRN 400/4/100 A1FT/50 | 415 | 160 | 700 | 90 | 100 | 200    | 310 | 18 | 180 | 45° | -   | 92 |

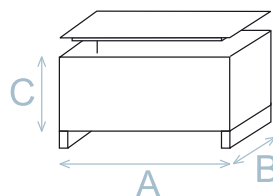
Dimensions in mm

All weights and dimensions are indicative only

(\*) DN of the suction flange - PN6

## Packaging dimension

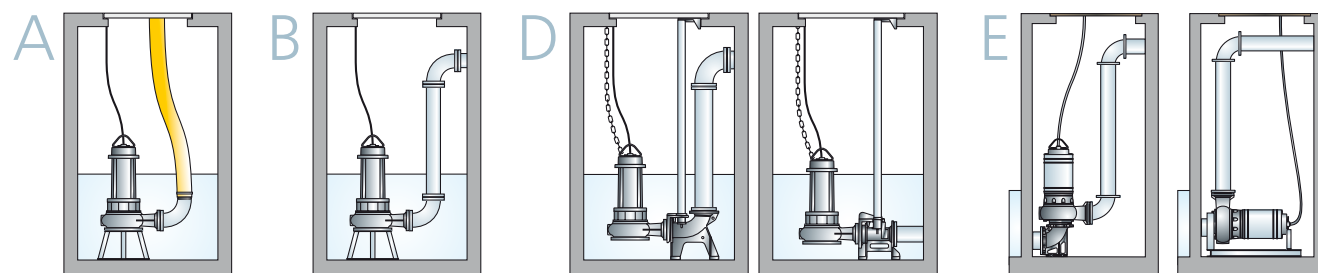
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| GRN 250/2/G40H A1DM(T)/50 | 725 | 445 | 415 |
| GRN 300/2/G50H A1DT/50    | 725 | 445 | 415 |
| GRN 400/2/G50H A1FT/50    | 725 | 445 | 415 |
| GRN 550/2/G50H A1FT/50    | 725 | 445 | 415 |
| GRN 300/4/80 A1FT/50      | 725 | 445 | 415 |
| GRN 400/4/80 A1FT/50      | 725 | 445 | 415 |
| GRN 300/4/100 A1FT/50     | 725 | 445 | 415 |
| GRN 400/4/100 A1FT/50     | 725 | 445 | 415 |



Dimension in mm

All weights and dimensions are indicative only

## Installations available



4 poles motor models

# GRP

## Impeller with grinder system

All product images are indicative only



### General characteristics

#### Impeller with grinder system

|               |                        |
|---------------|------------------------|
| motor power   | 7,2 kW                 |
| poles         | 2                      |
| discharge     | GAS 2" DN32 horizontal |
| free passage  | -                      |
| max flow rate | 6.7 l/s                |
| max head      | 53.9 m                 |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

### Applications

Designed for professional and industrial use, it is suitable for the treatment of liquids containing suspended solids or fibres, and low or medium density activated sludges.

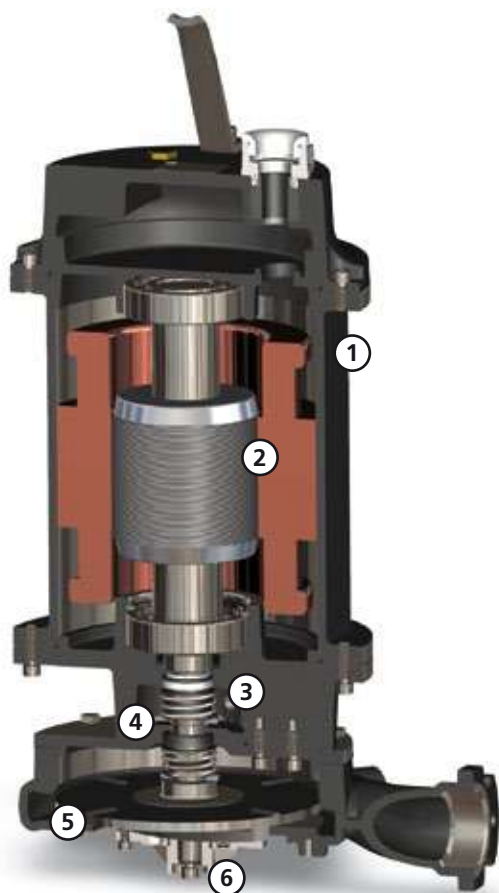
### Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron - EN-GJL 250                                                                          |
| Impeller                         | Cast iron EN-GJL-250                                                                            |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Cutter material                  | Chromium steel - X102 CrMo17 KU                                                                 |
| Cutting disk material            | Chromium steel - X102 CrMo17 KU                                                                 |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                          |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

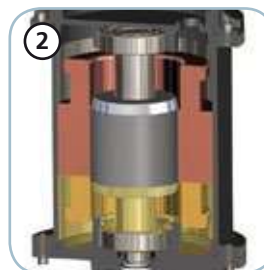
### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 20       |

GRP

**Structure**

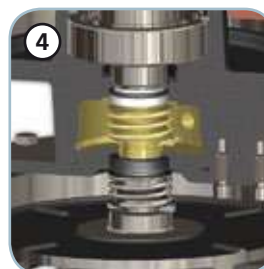
Constructed in GJL-250 cast iron.

**Motor**

Oil-bath motor with thermal protections.

**Mechanical seals**

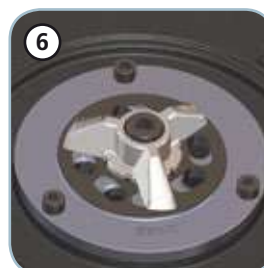
Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

**Anti-clogging system**

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.

**Grinder system**

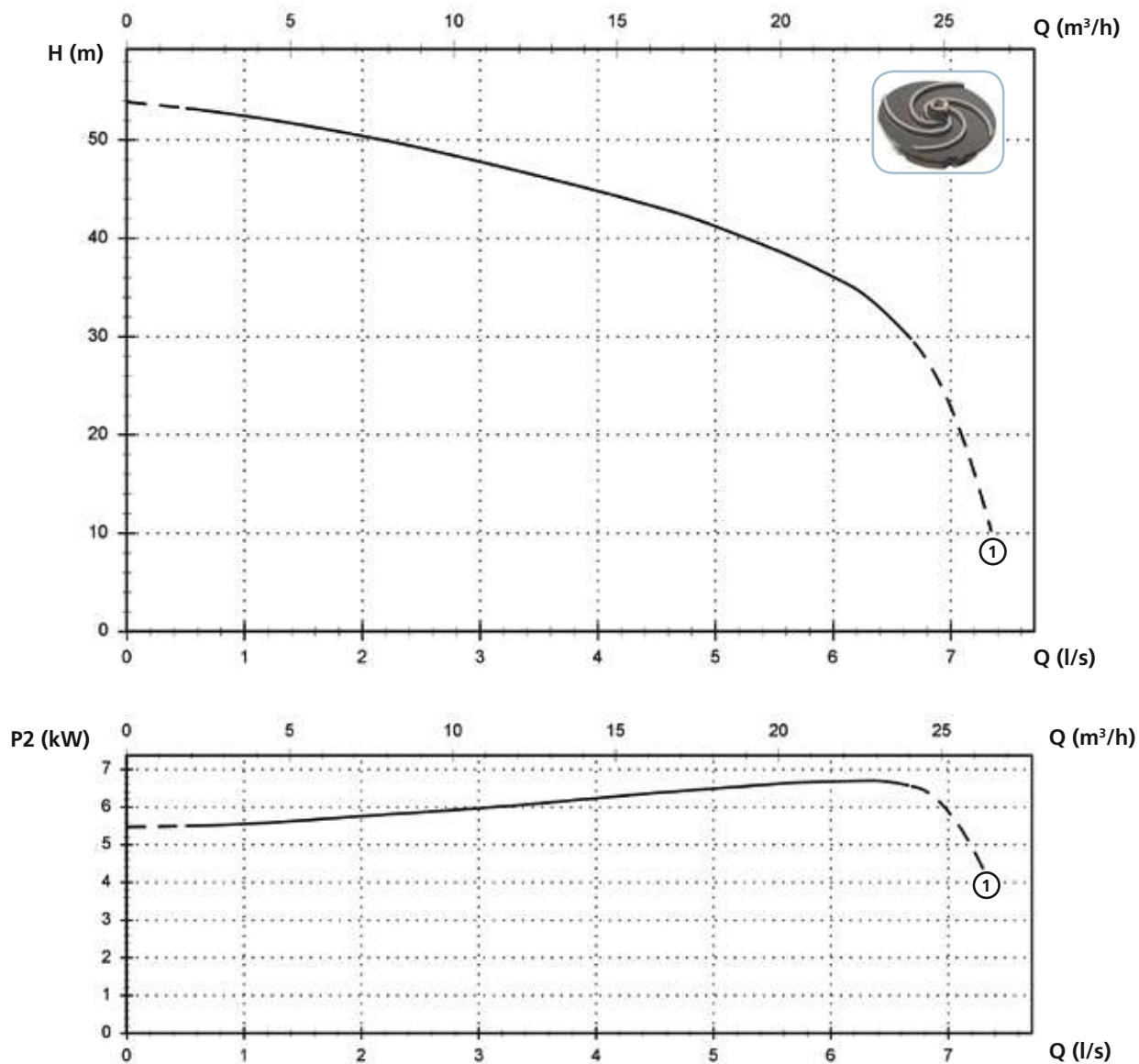
Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

Up to 69.000 cuts per minute

# GRP

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① GRP 750/2/G50H A0HT/50 | 400 | 3      | 8.8     | 7.2     | 14.5 | 2900 | Y Δ   | G2"-DN32 PN6 | -            |

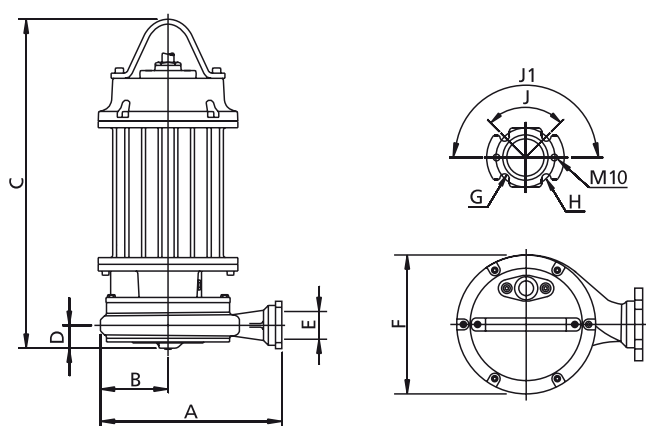
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| GRP 750/2/G50H A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ●       |           |    |                  |                  |      |       | ●      |

## Overall dimensions and weights



|                        | A   | B   | C   | D  | E    | F   | G  | H  | J   | J1   | kg |
|------------------------|-----|-----|-----|----|------|-----|----|----|-----|------|----|
| GRP 750/2/G50H A0HT/50 | 350 | 130 | 670 | 80 | G 2" | 270 | 14 | 90 | 90° | 180° | 91 |

Dimensions in mm

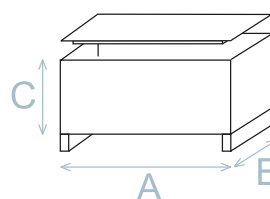
All weights and dimensions are indicative only

## Packaging dimension

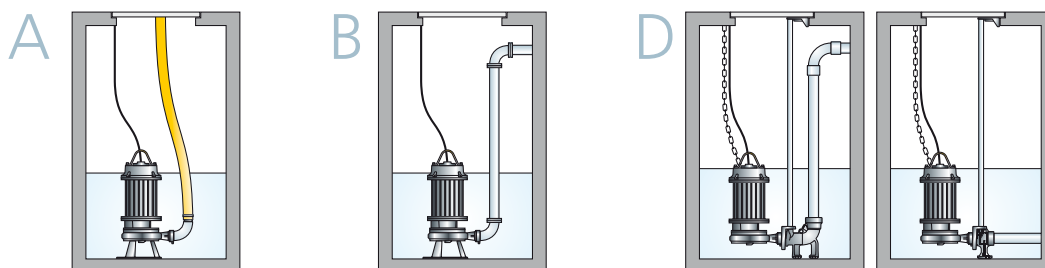
|                        | A   | B   | C   |
|------------------------|-----|-----|-----|
| GRP 750/2/G50H A0HT/50 | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available





# 1.6 AP (ALTA PREVALENZA)

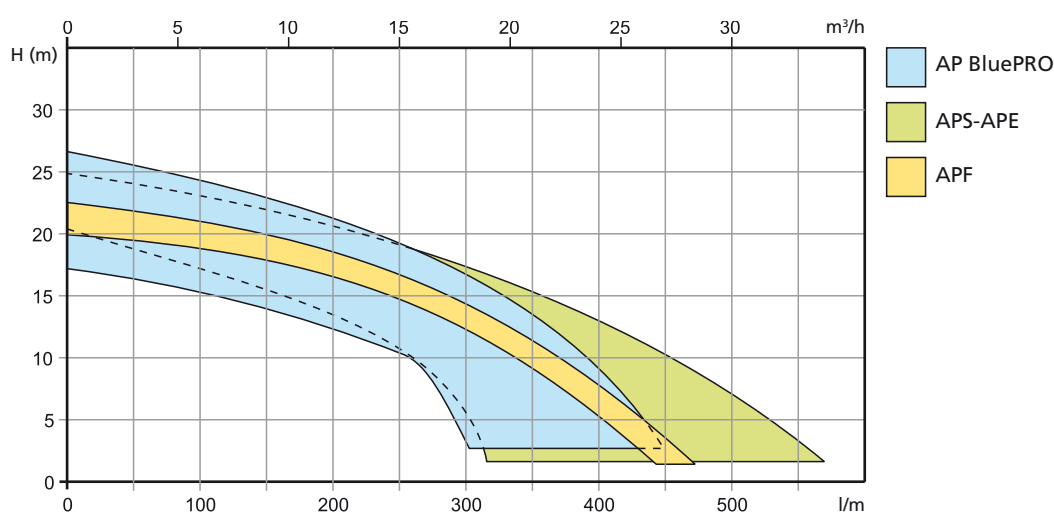
## Pumps with high head impeller

The **AP** family consists of electric pumps with high-head immersed multi-channel open impeller. Units in this family are used for clean or soiled water containing sand or small solids but not filaments. Suitable for applications in sectors such as the residential, public and irrigation sectors, or cleaning out wells for sanding. The considerable manometric head ensures excellent results for the creation of water features and decorative fountains.

**0.74 ÷ 1.7 kW**



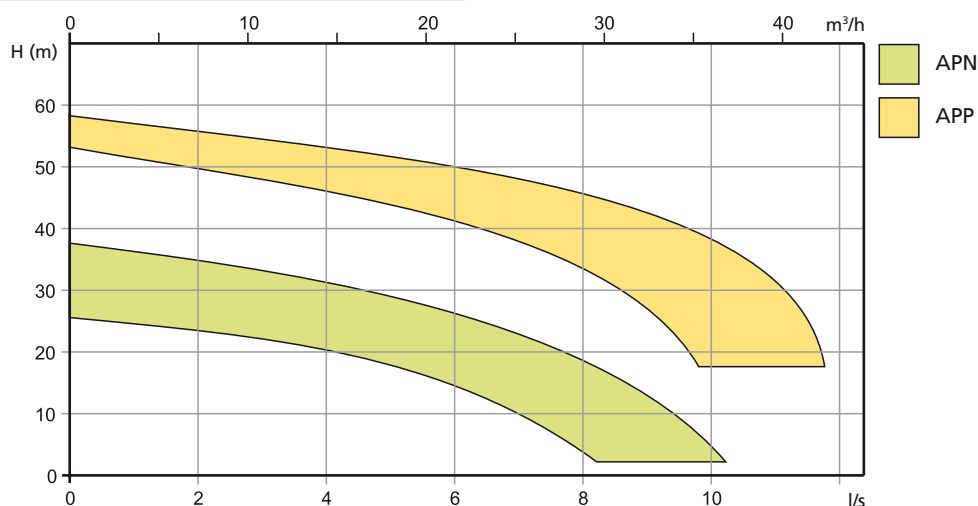
The AP impeller, fitted with motors rated up to 1.5 kW, is used for clear wastewaters. Intended for domestic or industrial use, with solid particles up to 7 mm.



**1.8 ÷ 10 kW**



Models with motors up to 10 kW are intended for industrial use due to the ample head guaranteed; particularly useful in sectors such as agriculture, fish processing and irrigation. Ideal for the treatment of slightly soiled waters, rainwater and seepage, or in wastewaters containing fine sand with particle size up to 10 mm.



**AP**

Pumps with high head impeller

0.74 ÷ 1.7 kW

**AP BluePRO**

page 288

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in oil sump, V-ring in direct contact with the liquid. Ecological dry motor. Aluminium handle, cast iron impeller. Pump body in single casting with motor casing.

Used for clear wastewater, rainwater and seepage containing small amounts of sand. Its high manometric head makes this series suitable for the creation of water features and decorative fountains. This electric pump is intended for both domestic and professional use.

**AP BluePRO HP**

page 292

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing. Used for clear wastewater, rainwater and seepage containing small amounts of sand. Its high manometric head makes this series suitable for the creation of water features and decorative fountains. This electric pump is intended for both domestic and professional use.

**APS**

page 296

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller. Pump body in single casting with motor casing.

Used for clear wastewater, rainwater and seepage containing small amounts of sand. The considerable manometric head makes these units suitable for irrigation and the fish processing sector.

**APE**

page 300

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Stainless steel handle, cast iron impeller.

Used for clear wastewater, rainwater and seepage containing small amounts of sand. The considerable manometric head makes these units suitable for irrigation and the fish processing sector.

**APF**

page 304

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Cast iron handle and impeller. Models with ATEX explosion-proof certification.

Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the APF can be used with liquids containing traces of flammable substances, and in gassy environments.

1.8 ÷ 10 kW

**APN**

page 308

Electromechanical assembly in EN-GJL-25 cast iron. 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Sensor for detecting damage to the mechanical seals (optional). Models available in ATEX explosion-proof version (on request).

Suitable for clear wastewater, rainwater and seepage. The considerable manometric head guarantees excellent results for the creation of water features and decorative fountains; suitable for use in agriculture, irrigation and the fish processing sector. This series is prefitted for installation of the ZENIT cooling system, for dry or semi-submerged installation (on request).

**APP**

page 314

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposing graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor.

Used for clear and sandy wastewater, rainwater and seepage. The considerable manometric head guarantees excellent results for the creation of water features and decorative fountains; suitable for use in agriculture, irrigation and the fish processing sector.

# AP BluePRO

High head impeller

DESIGN BY

*pininfarina*

All product images are indicative only



## General characteristics

|                    |                         |
|--------------------|-------------------------|
| high head impeller |                         |
| motor power        | 0,74 ÷ 1,5 kW           |
| poles              | 2                       |
| discharge          | GAS 1½"-DN32 horizontal |
| free passage       | max 6 mm                |
| max flow rate      | 7.1 l/s                 |
| max head           | 26.6 m                  |

## Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Used for clear wastewater, rainwater and seepage containing small amounts of sand. Its high manometric head makes this series suitable for the creation of water features and decorative fountains. This electric pump is intended for both domestic and professional use.

## Construction materials

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                  |
| Impeller                         | Cast iron EN-GJL-250                                  |
| Nuts and bolts                   | Stainless steel - Class A2-70                         |
| Standard gasket                  | Rubber - NBR                                          |
| Shaft                            | Stainless steel - AISI 420                            |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC), V-ring   |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

Models available in IECEx certified version

Ex nA IIC T3  
Ex nA nC IIC T3

# AP BluePRO



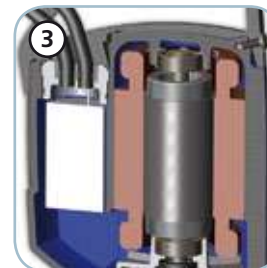
## Lifting handle

Ergonomic technopolymer lifting and carrying handle. Clip floatswitch adjustment.



## Cable gland System

Innovative cable gland system with twin O-rings to ensure maximum tightness.



## Motor and electrical equipment

Dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay.



## Mechanical seals

Two silicon carbide mechanical seals (2SiC), and V-ring in direct contact with the liquid.



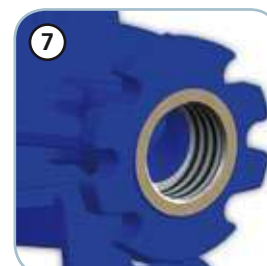
## Oil sump

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.



## Intake strainer

Intake strainer in impact-resistant polypropylene and spheroidal cast iron feet.



## Discharge

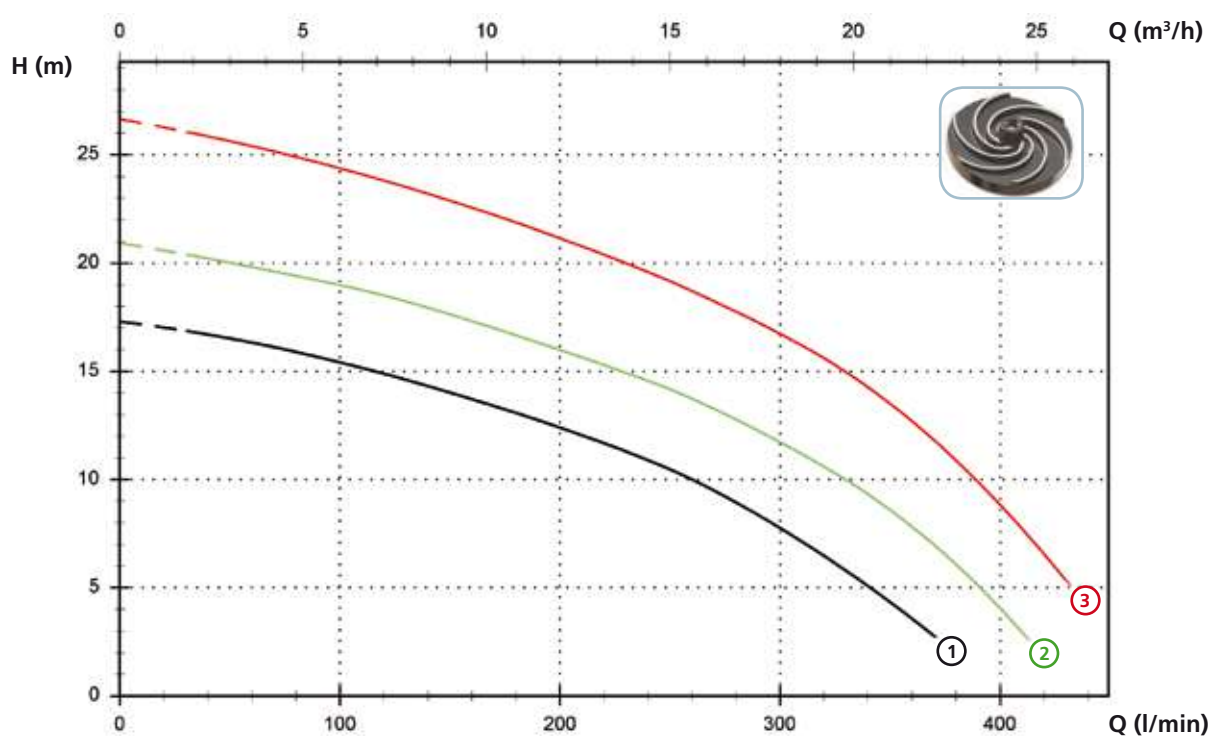
Threaded, flanged discharge for the maximum ease of installation.

# AP BluePRO

Models with horizontal GAS 1½" threaded discharge and DN32 PN6 flange - 2 poles

## Performances

|                                    | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|------------------------------------|-------|------|------|------|------|------|------|------|------|
|                                    | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  | 420  |
|                                    | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 |
| ① AP BluePRO 100/2/G40H A1CM(T)/50 |       | 17.3 | 16.3 | 14.9 | 13.1 | 10.9 | 7.8  | 3.6  |      |
| ② AP BluePRO 150/2/G40H A1CM(T)/50 |       | 20.9 | 19.8 | 18.5 | 16.7 | 14.6 | 11.7 | 7.8  |      |
| ③ AP BluePRO 200/2/G40H A1CM(T)/50 |       | 26.6 | 25.4 | 23.8 | 21.9 | 19.6 | 16.7 | 12.7 | 6.6  |



## Technical data

|                                 | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|---------------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① AP BluePRO 100/2/G40H A1CM/50 | 230 | 1      | -       | 0.74    | 5.5 | 2900 | Dir   | G 1½"-DN32 PN6 | 6 mm         |
| ② AP BluePRO 150/2/G40H A1CM/50 | 230 | 1      | -       | 1.1     | 7.5 | 2900 | Dir   | G 1½"-DN32 PN6 | 6 mm         |
| ③ AP BluePRO 200/2/G40H A1CM/50 | 230 | 1      | -       | 1.5     | 10  | 2900 | Dir   | G 1½"-DN32 PN6 | 6 mm         |

|                                 | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|---------------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① AP BluePRO 100/2/G40H A1CT/50 | 400 | 3      | -       | 0.74    | 2.7 | 2900 | Dir   | G 1½"-DN32 PN6 | 6 mm         |
| ② AP BluePRO 150/2/G40H A1CT/50 | 400 | 3      | -       | 1.1     | 3.2 | 2900 | Dir   | G 1½"-DN32 PN6 | 6 mm         |
| ③ AP BluePRO 200/2/G40H A1CT/50 | 400 | 3      | -       | 1.5     | 4.3 | 2900 | Dir   | G 1½"-DN32 PN6 | 6 mm         |





# AP BluePRO HP



High head impeller

DESIGN BY

*pininfarina*

## General characteristics

|                    |                         |
|--------------------|-------------------------|
| high head impeller |                         |
| motor power        | 1,1 kW                  |
| poles              | 2                       |
| outlet             | GAS 1½"-DN32 horizontal |
| free passage       | max 4 mm                |
| max flow rate      | 290 l/m                 |
| max head           | 26 m                    |

All product images are indicative only



## Electromechanical assembly

Electromechanical assembly in EN-GJL-250 cast iron, for submerged operation, fitted with 2 (two) opposing silicon carbide mechanical seals in oil sump, and V-ring in direct contact with the liquid. Ecological dry motor. Pump body in single casting with motor casing.

## Applications

Used for clear wastewater, rainwater and seepage containing small amounts of sand. Its high manometric head makes this series suitable for the creation of water features and decorative fountains. This electric pump is intended for both domestic and professional use.

## Construction materials

|                  |                                                       |
|------------------|-------------------------------------------------------|
| Case             | Cast iron EN-GJL 250                                  |
| Impeller         | Cast iron EN-GJL-250                                  |
| Nuts and bolts   | Stainless steel - Class A2-70                         |
| Standard gasket  | Rubber - NBR                                          |
| Shaft            | Stainless steel - AISI 420                            |
| Paint type       | Ecological bicomponent epoxy (medium thickness 80 µm) |
| Mechanical seals | Two silicon carbide (2SiC) + V-ring                   |

## Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| Max starts per hour           | 30       |

# AP BluePRO HP



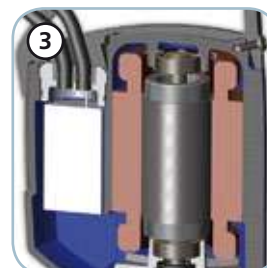
## Lifting handle

Ergonomic technopolymer lifting and carrying handle. Clip floatswitch adjustment.



## Cable gland System

Innovative cable gland system with twin O-rings to ensure maximum tightness.



## Motor and electrical equipment

Dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay.



## Mechanical seals

Two silicon carbide mechanical seals (2SiC), and V-ring in direct contact with the liquid.



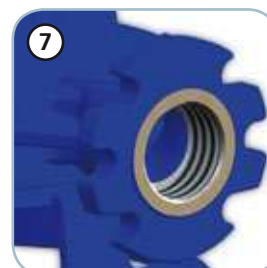
## Oil sump

Oil sump which guarantees longer mechanical seal lifetime, and is easily accessible thanks to a patented system to simplify maintenance procedures.



## Intake strainer

Intake strainer in impact-resistant polypropylene and spheroidal cast iron feet.



## Discharge

Threaded, flanged discharge for the maximum ease of installation.

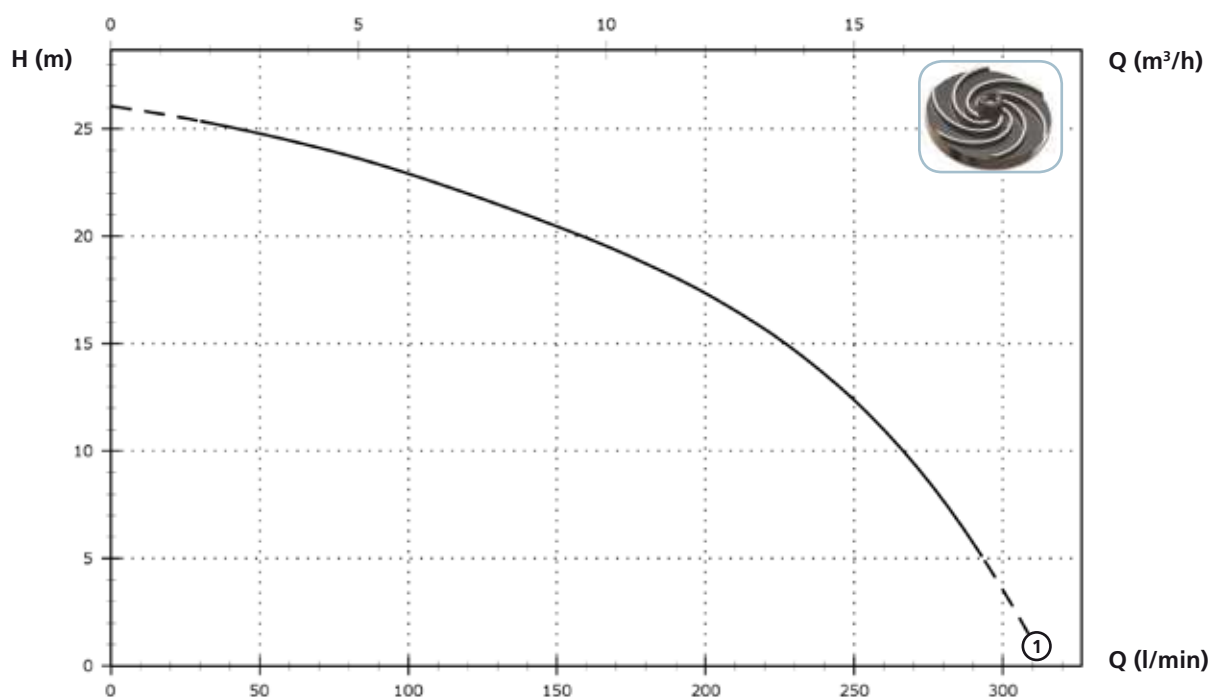
# AP BluePRO HP

Models with horizontal GAS 1½" threaded discharge and DN32 PN6 flange - 2 poles

## Performances

|       |   |     |     |      |      |     |
|-------|---|-----|-----|------|------|-----|
| l/s   | 0 | 1   | 2   | 3    | 4    | 5   |
| l/min | 0 | 60  | 120 | 180  | 240  | 300 |
| m³/h  | 0 | 3,6 | 7,2 | 10,8 | 14,4 | 18  |

|                                       |      |      |      |      |      |     |
|---------------------------------------|------|------|------|------|------|-----|
| ① AP BluePRO HP 150/2/G40H A1CM(T)/50 | 26.1 | 24.5 | 22.0 | 18.7 | 13.6 | 3.5 |
|---------------------------------------|------|------|------|------|------|-----|



## Technical data

|                                    | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|------------------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① AP BluePRO HP 150/2/G40H A1CM/50 | 230 | 1      | -       | 1.1     | 7.5 | 2900 | Dir   | G 1½"-DN32 PN6 | 4 mm         |
| AP BluePRO HP 150/2/G40H A1CT/50   | 400 | 3      | -       | 1.1     | 3.2 | 2900 | Dir   | G 1½"-DN32 PN6 | 4 mm         |

# AP BluePRO HP

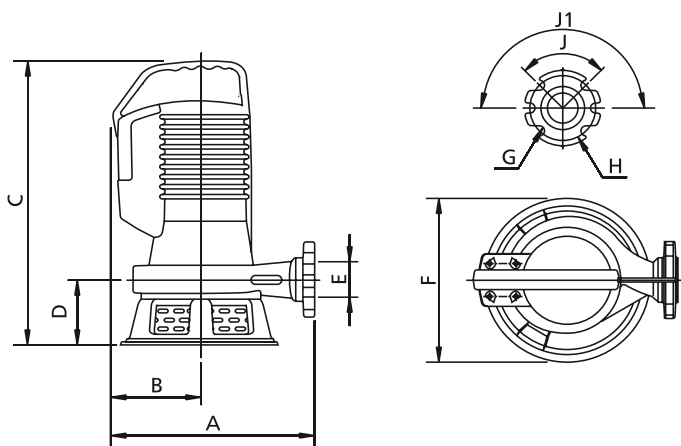
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                                  | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|----------------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                                  | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| AP BluePRO HP 150/2/G40H A1CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| AP BluePRO HP 150/2/G40H A1CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  | ●                |      |       |        |

## Overall dimensions and weights



|                                     | A   | B   | C   | D   | E     | F   | G  | H  | J   | J1   | kg |
|-------------------------------------|-----|-----|-----|-----|-------|-----|----|----|-----|------|----|
| AP BluePRO HP 150/2/G40H A1CM(T)/50 | 285 | 125 | 410 | 100 | G 1½" | 230 | 14 | 90 | 90° | 180° | 24 |

Dimensions in mm

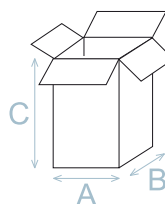
All weights and dimensions are indicative only

## Packaging dimension

|                                     | A   | B   | C   |
|-------------------------------------|-----|-----|-----|
| AP BluePRO HP 150/2/G40H A1CM(T)/50 | 300 | 250 | 440 |

Dimension in mm

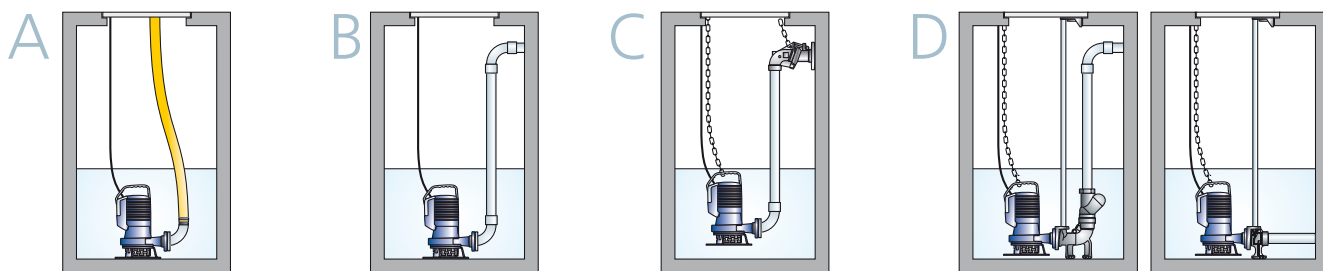
All weights and dimensions are indicative only



## No. pieces per pallet

For AP BluePRO HP models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

## Installations available



# APS

## High head impeller

All product images are indicative only



### General characteristics

|                    |                         |
|--------------------|-------------------------|
| High head impeller |                         |
| motor power        | 0,9 kW                  |
| poles              | 2                       |
| discharge          | GAS 1½"-DN32 horizontal |
| free passage       | 7 mm                    |
| max flow rate      | 5.2 l/s                 |
| max head           | 20.3 m                  |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor. Pump body in single casting with motor casing.

### Applications

Used for clear wastewater, rainwater and seepage containing small amounts of sand. The considerable manometric head makes these units suitable for irrigation and the fish processing sector.

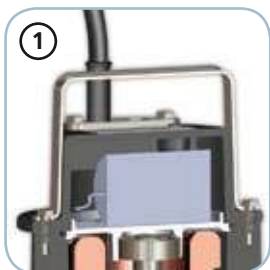
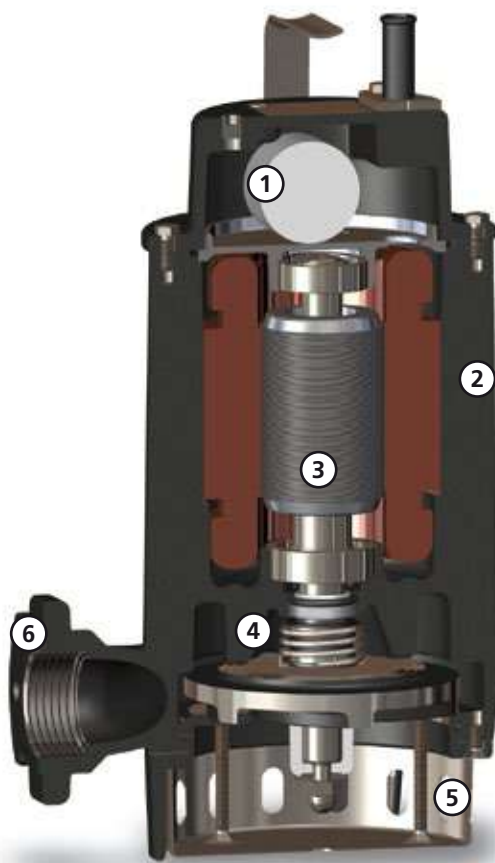
### Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Shaft                            | Stainless steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

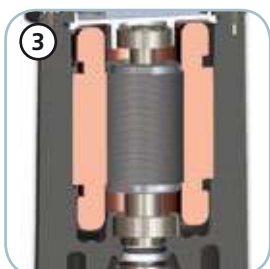
APS

**Capacitor/relay**

Dry motor with thermal protections. Single-phase models with internal capacitor. Three-phase models with motor protection relay.

**Structure**

Constructed in GJL-250 cast iron.

**Motor**

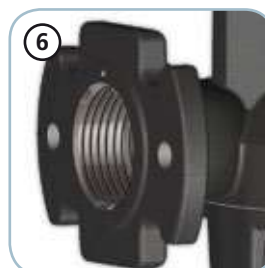
Ecological dry motor with thermal protections.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one lip seal.

**Intake strainer**

Intake strainer in stainless steel.

**Discharge**

Threaded, flanged discharge for the maximum ease of installation.

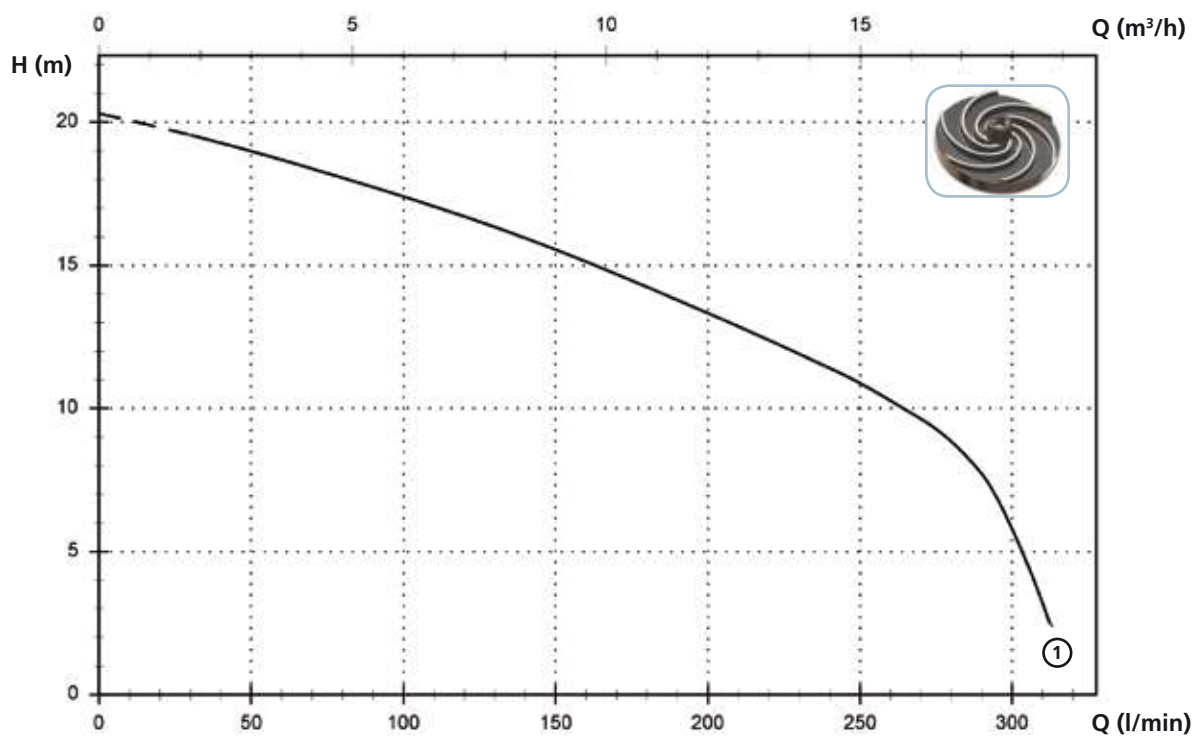


# APS

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances

|                             |              |      |      |      |      |      |      |
|-----------------------------|--------------|------|------|------|------|------|------|
|                             | <i>l/s</i>   | 0    | 1    | 2    | 3    | 4    | 5    |
|                             | <i>l/min</i> | 0    | 60   | 120  | 180  | 240  | 300  |
|                             | <i>m³/h</i>  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 |
| ① APS 100/2/G40H A0CM(T)/50 |              | 20.3 | 18.7 | 16.7 | 14.2 | 11.4 | 5.8  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-----------------|--------------|
| ① APS 100/2/G40H A0CM/50 | 230 | 1      | -       | 0.9     | 6.6 | 2900 | Dir   | G 1½"- DN32 PN6 | 7 mm         |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-----------------|--------------|
| ① APS 100/2/G40H A0CT/50 | 400 | 3      | -       | 0.9     | 2.3 | 2900 | Dir   | G 1½"- DN32 PN6 | 7 mm         |

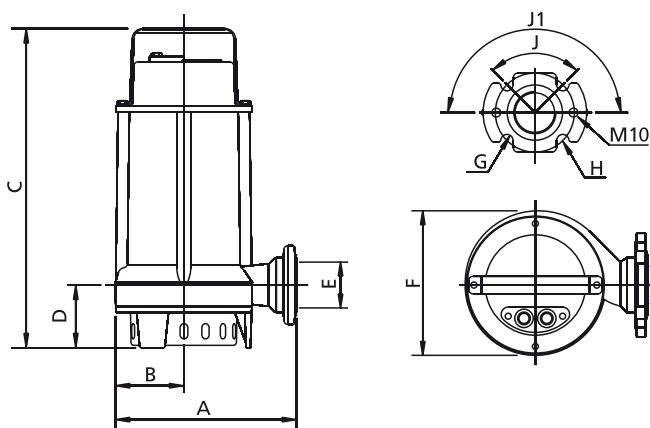
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| APS 100/2/G40H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ● |           |    |                  |      | ●    |       |        |
| APS 100/2/G40H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ● |           |    |                  |      | ●    |       |        |

## Overall dimensions and weights



|                           | A   | B  | C   | D  | E          | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|----|-----|----|------------|-----|----|----|-----|------|----|
| APS 100/2/G40H A0CM(T)/50 | 210 | 80 | 370 | 80 | G 1½"-DN32 | 165 | 14 | 90 | 90° | 180° | 20 |

Dimensions in mm

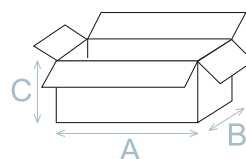
All weights and dimensions  
are indicative only

## Packaging dimension

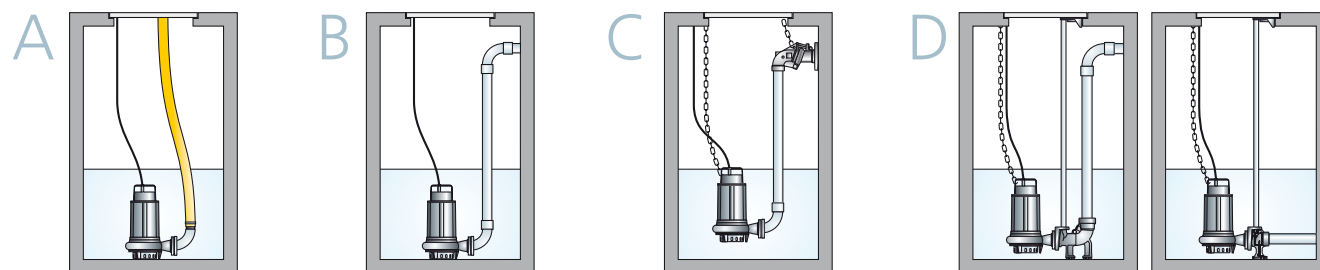
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| APS 100/2/G40H A0CM(T)/50 | 385 | 225 | 245 |

Dimension in mm

All weights and dimensions  
are indicative only



## Installations available



# APE

## High head impeller

All product images are indicative only



### General characteristics

| High head impeller |                        |
|--------------------|------------------------|
| motor power        | 1.5 kW                 |
| poles              | 2                      |
| discharge          | GAS 2"-DN32 horizontal |
| free passage       | 7 mm                   |
| max flow rate      | 9.5 l/s                |
| max head           | 24.9 m                 |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 1 (one) silicon carbide mechanical seal and 1 (one) lip seal. Ecological dry motor.

### Applications

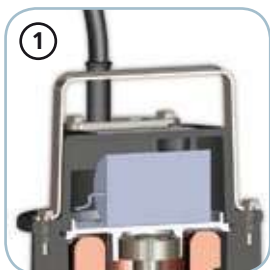
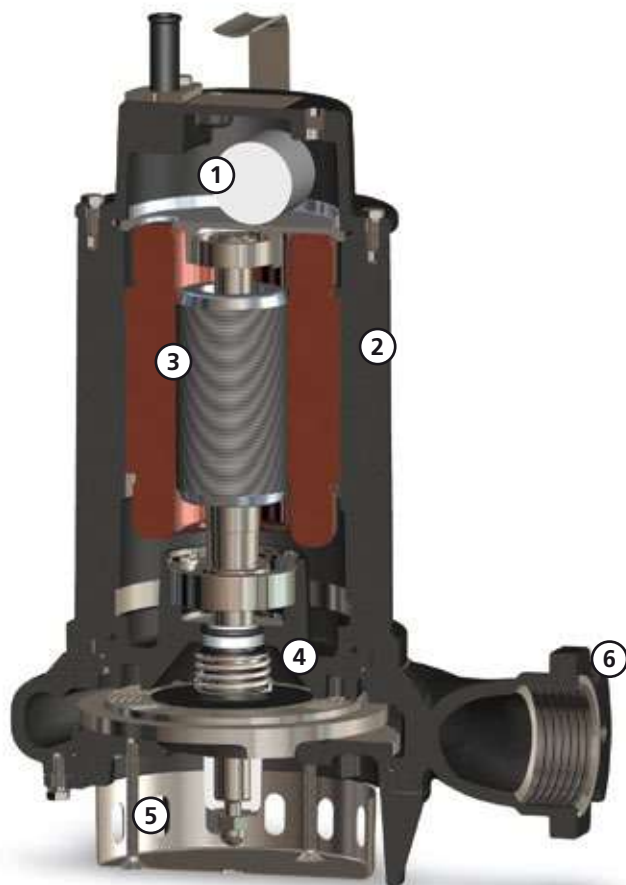
Used for clear wastewater, rainwater and seepage containing small amounts of sand. The considerable manometric head makes these units suitable for irrigation and the fish processing sector.

### Construction materials

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                       |
| Impeller                         | Cast iron EN-GJL-250                                       |
| Nuts and bolts                   | Stainless steel - Class A2-70                              |
| Standard gasket                  | Rubber - NBR                                               |
| Shaft                            | Stainless steel - AISI 420                                 |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 80 µm)      |
| Set of standard mechanical seals | One silicon carbide mechanical seal (SiC) and one lip seal |

### Operating limits

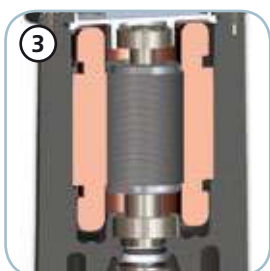
|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

**APE****Capacitor/relay**

Single-phase models with internal capacitor. Three-phase models with motor protection relay.

**Structure**

Constructed in GJL-250 cast iron.

**Motor**

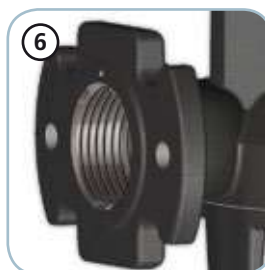
Dry motor with thermal protections.

**Mechanical seals**

One mechanical seal in silicon carbide (SiC) and one lip seal.

**Intake strainer**

Intake strainer in stainless steel.

**Discharge**

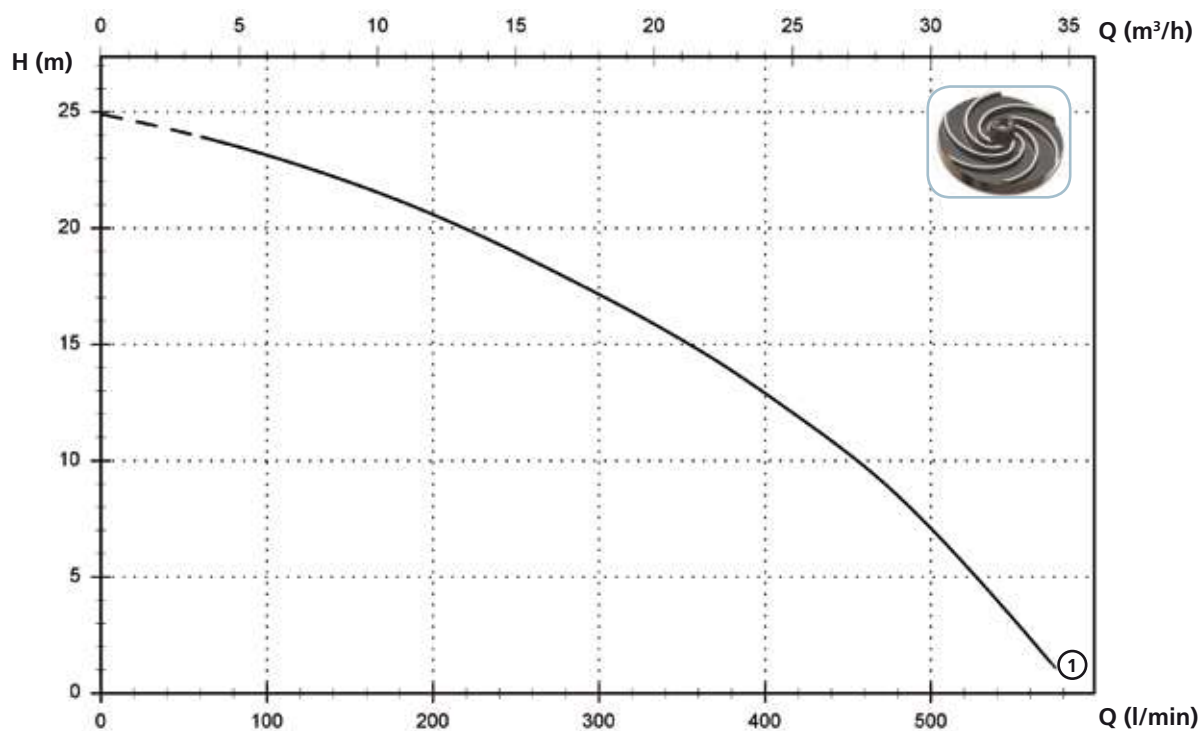
Threaded, flanged discharge for the maximum ease of installation.

# APE

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances

|                             |                   |      |      |      |      |      |      |      |      |      |      |
|-----------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|
|                             | l/s               | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
|                             | l/min             | 0    | 60   | 120  | 180  | 240  | 300  | 360  | 420  | 480  | 540  |
|                             | m <sup>3</sup> /h | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 | 28.8 | 32.4 |
| ① APE 200/2/G50H A0CM(T)/50 |                   | 24.9 | 23.9 | 22.7 | 21.2 | 19.3 | 17.2 | 14.8 | 11.9 | 8.5  | 4.0  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|-----------------|--------------|
| ① APE 200/2/G50H A0CM/50 | 230 | 1      | -       | 1.7     | 10.6 | 2900 | Dir   | G 2" - DN32 PN6 | 7 mm         |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø               | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|-----------------|--------------|
| ① APE 200/2/G50H A0CT/50 | 400 | 3      | -       | 1.7     | 3.8 | 2900 | Dir   | G 2" - DN32 PN6 | 7 mm         |

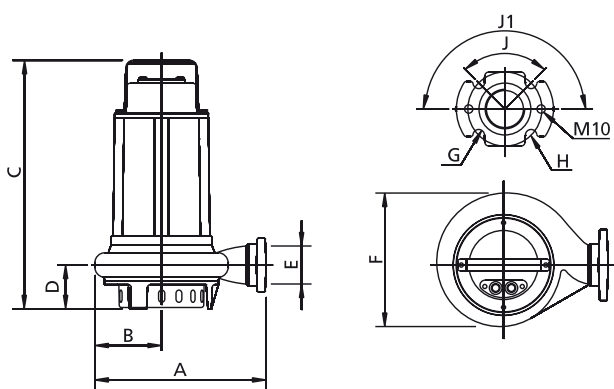
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| APE 200/2/G50H A0CM/50 |                     |   | ●      |             |                  |                       | ●           |                  |                       |        |        |             | ●       |           |    |                  |                  | ●    |       |        |
| APE 200/2/G50H A0CT/50 |                     |   |        |             |                  |                       |             |                  |                       |        | ●      | ●           | ●       |           |    |                  |                  | ●    |       |        |

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E    | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|-----|-----|----|------|-----|----|----|-----|------|----|
| APE 200/2/G50H A0CM(T)/50 | 285 | 110 | 410 | 75 | G 2" | 220 | 14 | 90 | 90° | 180° | 26 |

Dimensions in mm

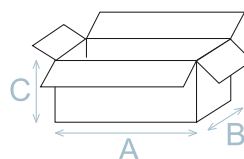
All weights and dimensions are indicative only

## Packaging dimension

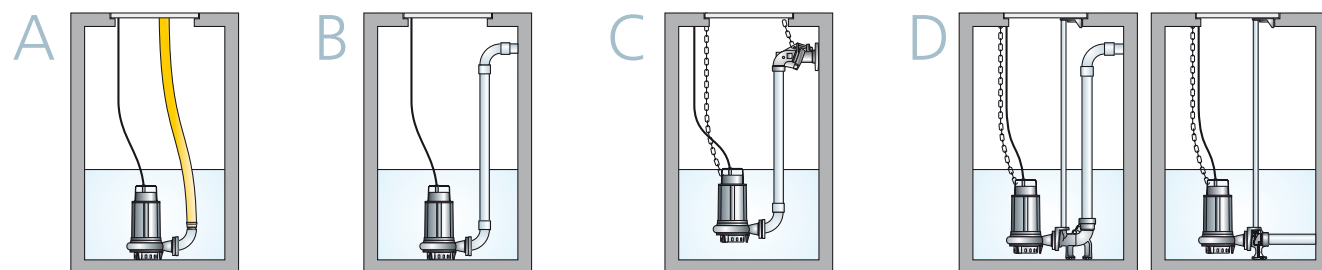
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| APE 200/2/G50H A0CM(T)/50 | 475 | 285 | 235 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available





# APF



All product images are indicative only

## High head impeller



### General characteristics

#### High head impeller

|               |                           |
|---------------|---------------------------|
| motor power   | 1,1 ÷ 1,5 kW              |
| poles         | 2                         |
| discharge     | GAS 1½" - DN32 Horizontal |
| free passage  | max 7 mm                  |
| max flow rate | 7.6 l/s                   |
| max head      | 22.6 m                    |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing in inspectable oil sump. Ecological dry motor. Series with explosion-proof ATEX certification.

### Applications

Designed specifically for use where there are traces of flammable liquids or in potentially explosive atmospheres, the APF can be used with liquids containing traces of flammable substances, and in gassy environments.

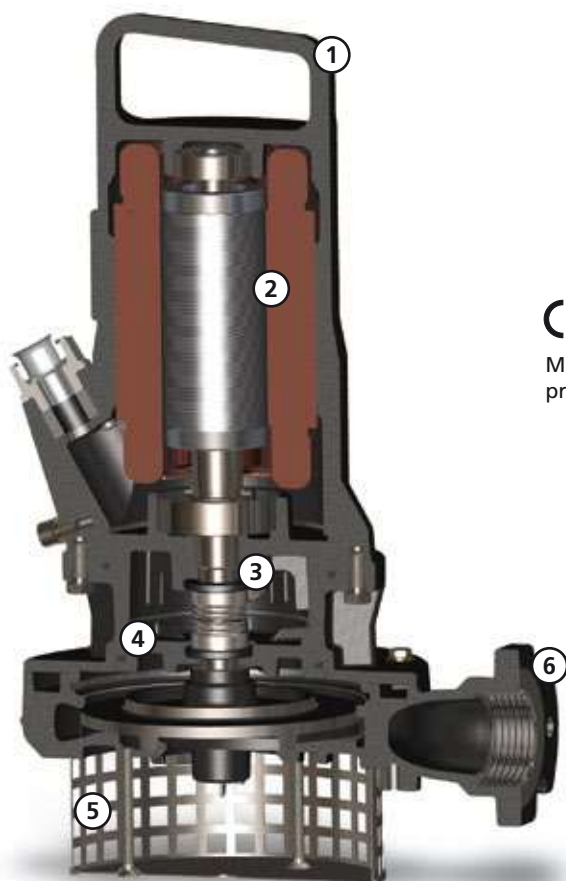
### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller                         | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR - VITON                                   |
| Shaft                            | Stainless steel - AISI 420                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

APF



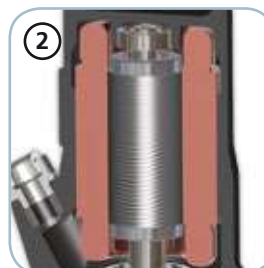
CE 0496  II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids



#### Handle/Cable gland

Cast iron lifting and carrying handle.  
The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



#### Motor

Ecological dry motor with thermal protections.



#### Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump.



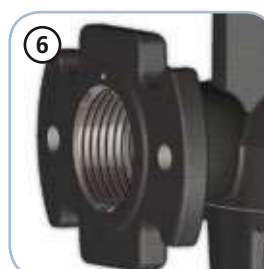
#### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



#### Intake strainer

Intake strainer in stainless steel.



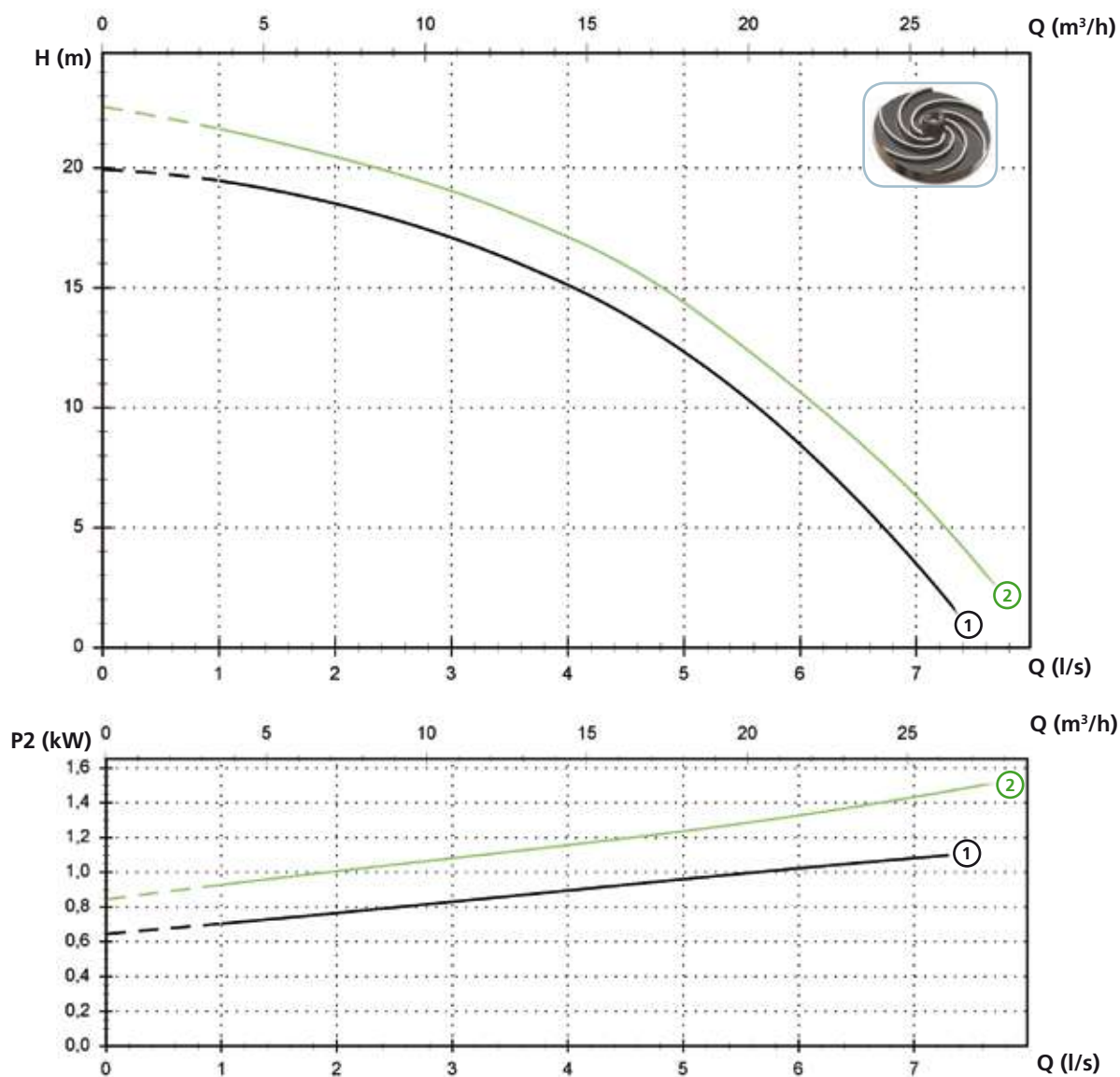
#### Discharge

Threaded, flanged discharge for the maximum ease of installation.

# APF

## Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① APF 150/2/G40H A1CM/50 | 230 | 1      | 1.6     | 1.1     | 7.2 | 2900 | Dir   | G 1½"-DN32 PN6 | 7 mm         |
| ② APF 200/2/G40H A1CM/50 | 230 | 1      | 2.2     | 1.5     | 9.8 | 2900 | Dir   | G 1½"-DN32 PN6 | 7 mm         |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① APF 150/2/G40H A1CT/50 | 400 | 3      | 1.7     | 1.1     | 2.9 | 2900 | Dir   | G 1½"-DN32 PN6 | 7 mm         |
| ② APF 200/2/G40H A1CT/50 | 400 | 3      | 2.1     | 1.5     | 3.7 | 2900 | Dir   | G 1½"-DN32 PN6 | 7 mm         |

## Versions available

(Key to versions on page 16)

[Return to versions on page 167](#)

|                        | Electrical variants |   |        |             |                  |                       |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| APF 150/2/G40H A1CM/50 |                     |   | ●      |             |                  |                       |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| APF 200/2/G40H A1CM/50 |                     |   | ●      |             |                  |                       |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| APF 150/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| APF 200/2/G40H A1CT/50 |                     | ● |        |             |                  |                       |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |

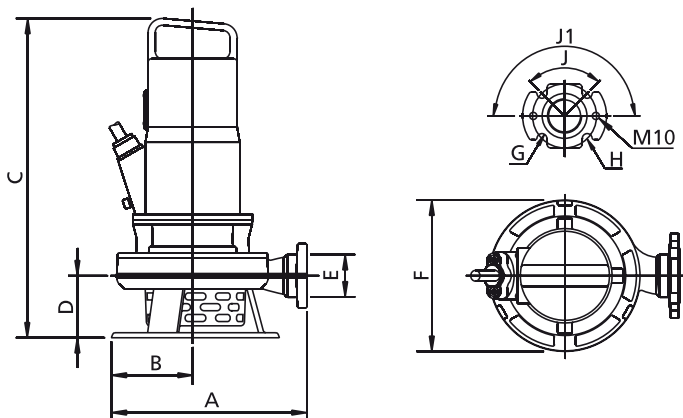
NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.

Capacitor supplied but not connected to the pump cable.

The use of an electrical panel as circuit breaker housing is mandatory.

For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E     | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|-----|-----|----|-------|-----|----|----|-----|------|----|
| APF 150/2/G40H A1CM(T)/50 | 265 | 105 | 440 | 80 | G 1½" | 215 | 14 | 90 | 90° | 180° | 32 |
| APF 200/2/G40H A1CM(T)/50 | 265 | 105 | 440 | 80 | G 1½" | 215 | 14 | 90 | 90° | 180° | 34 |

Dimensions in mm

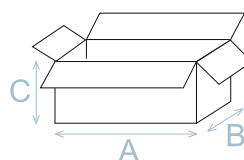
All weights and dimensions are indicative only

## Packaging dimension

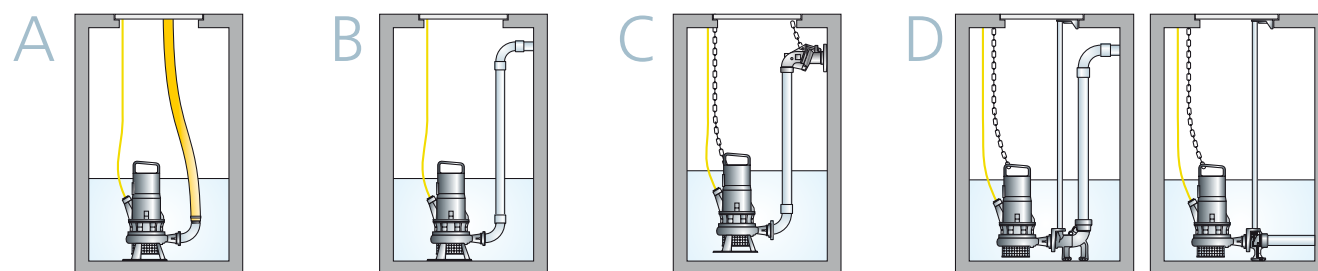
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| APF 150/2/G40H A1CM(T)/50 | 580 | 310 | 310 |
| APF 200/2/G40H A1CM(T)/50 | 580 | 310 | 310 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



# APN

## High head impeller

All product images are indicative only



### General characteristics

| High head impeller |                             |
|--------------------|-----------------------------|
| motor power        | 1,8 ÷ 4,1 kW                |
| poles              | 2                           |
| discharge          | GAS 1½" -2" DN32 horizontal |
| free passage       | max 10 mm                   |
| max flow rate      | 10 l/s                      |
| max head           | 38.7 m                      |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Series available in explosion-proof ATEX version.

### Applications

Suitable for clear wastewater, rainwater and seepage. The considerable manometric head guarantees excellent results for the creation of water features and decorative fountains; suitable for use in agriculture, irrigation and the fish processing sector. The pump is also available in explosion-proof version with ATEX certification. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

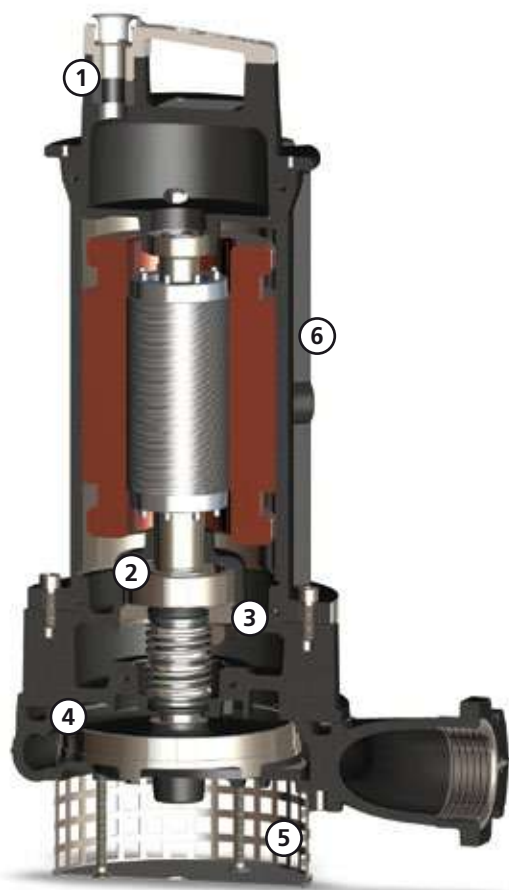
### Construction materials

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                   |
| Impeller material                | Cast iron EN-GJL-250                                   |
| Nuts and bolts                   | Stainless steel - Class A2-70                          |
| Standard gasket                  | Rubber - NBR                                           |
| Shaft                            | Stainless steel - AISI 420                             |
| Cooling jacket                   | Stainless steel - AISI 304                             |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm) |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC)            |

### Operating limits

|                               |          |
|-------------------------------|----------|
| Maximum operating temperature | 40 °C    |
| PH of treated fluid           | 6 ÷ 14   |
| Viscosity of treated fluid    | 1 mm²/s  |
| Maximum immersion depth       | 20 m     |
| Density of treated fluid      | 1 Kg/dm³ |
| Maximum acoustic pressure     | 70 dB    |
| max starts per hour           | 30       |

APN



### Cooling system

Dry installation available using the cooling jacket (see details to page 17)



### Cable gland

Cable gland system to guarantee perfect water-tightness. The GAS thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable.



### Mechanical seals

Two silicon carbide (2SiC) mechanical seals in oil sump.



### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



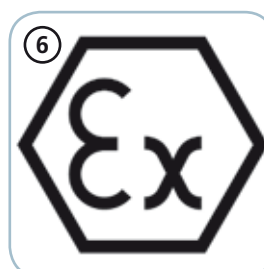
### Anti-clogging system

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.



### Intake strainer

Intake strainer in stainless steel.



### EX

Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

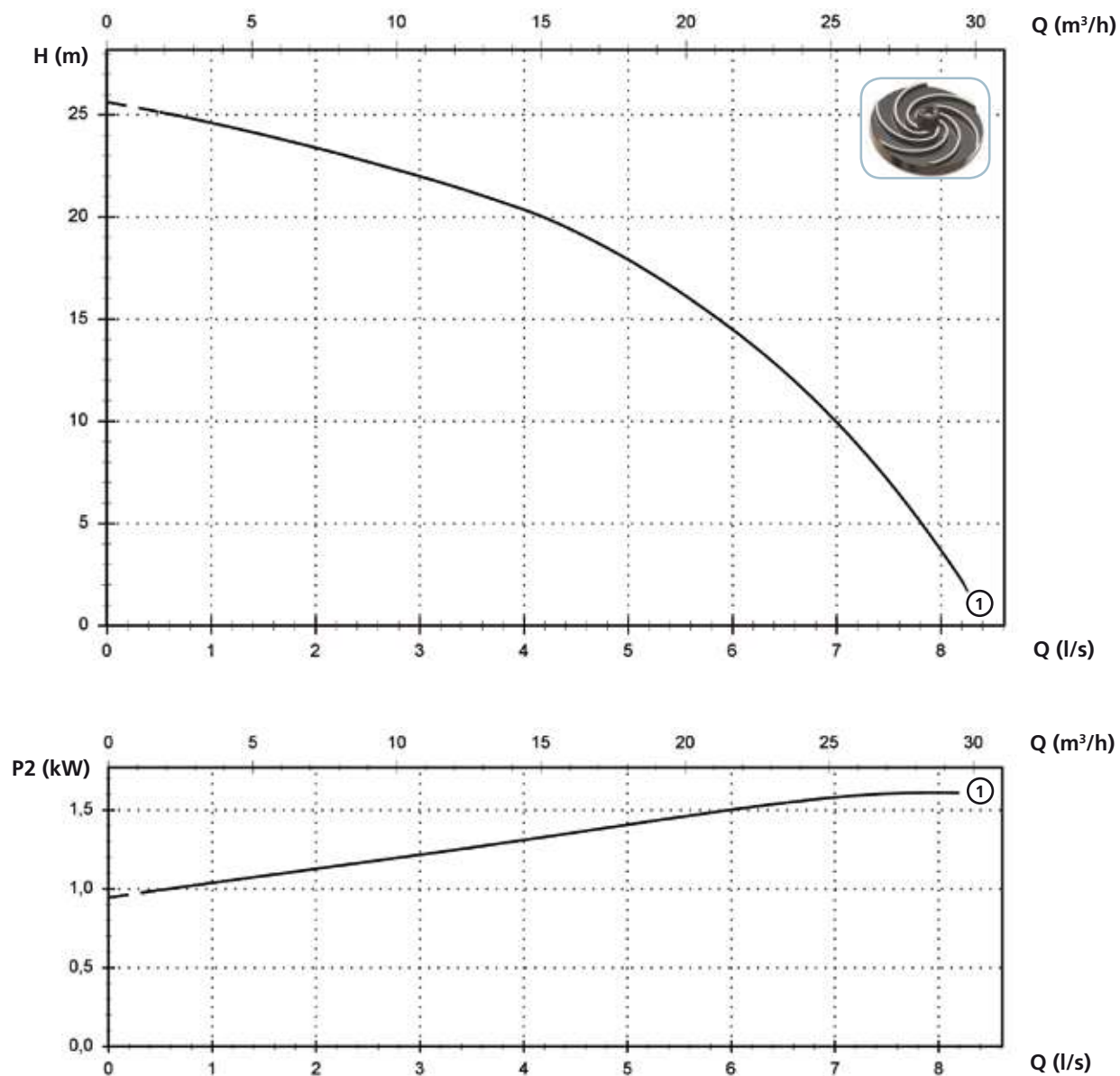
CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68



# APN

Models with horizontal GAS 1½" threaded - DN32 PN6 flanged discharge - 2 poles

## Performances

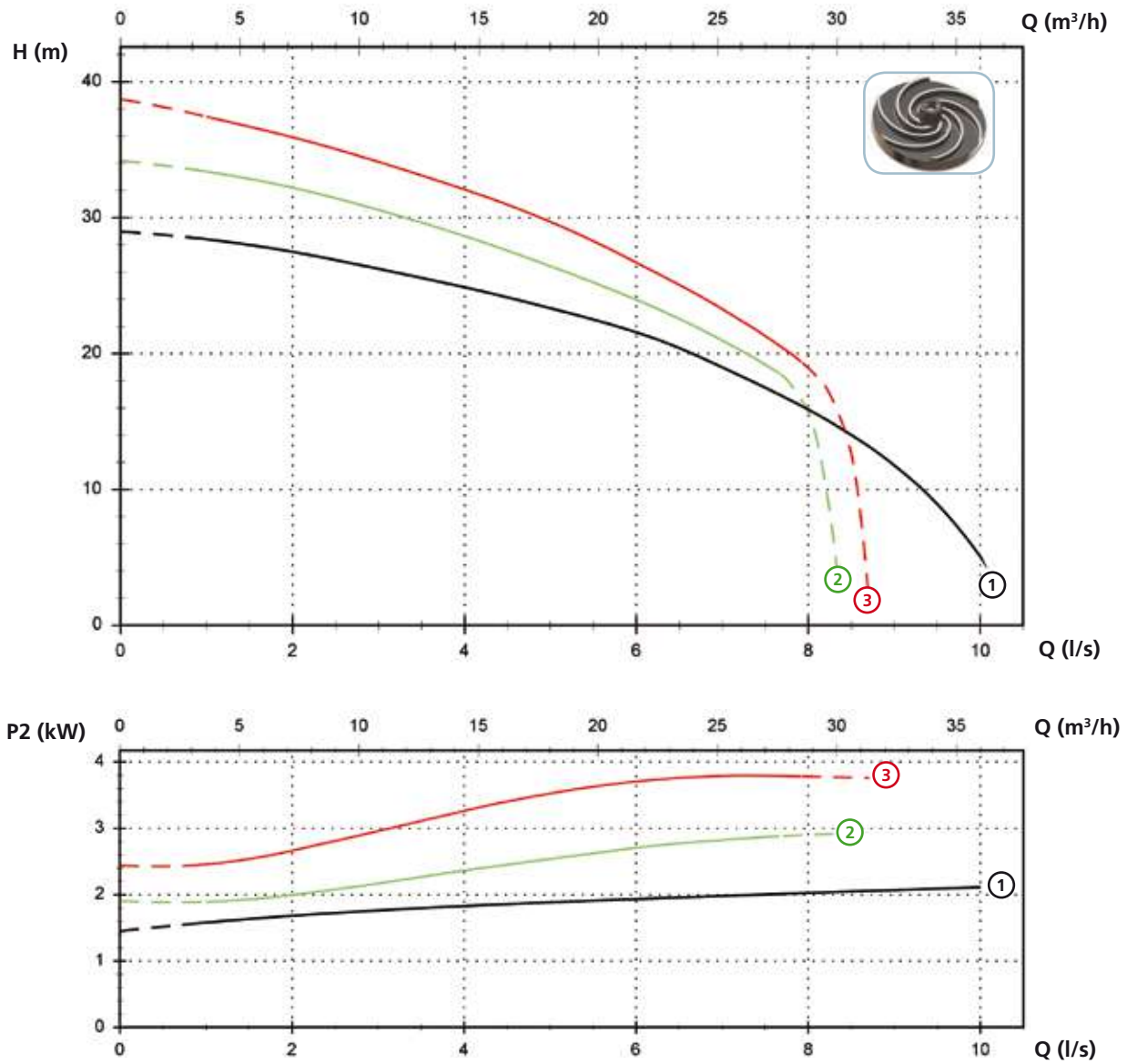


## Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø              | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|----------------|--------------|
| ① APN 250/2/G40H A1DM/50 | 230 | 1      | 2.7     | 1.8     | 12.5 | 2900 | Dir   | G 1½"-DN32 PN6 | 10 mm        |
|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø              | Free passage |
| ① APN 250/2/G40H A1DT/50 | 400 | 3      | 2.5     | 1.8     | 4.3  | 2900 | Dir   | G 1½"-DN32 PN6 | 10 mm        |

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø              | Free passage |
|---|------------------------|-----|--------|---------|---------|-----|------|-------|----------------|--------------|
| ① | APN 300/2/G50H A1DT/50 | 400 | 3      | 3.7     | 2.2     | 5.1 | 2900 | Dir   | G 2"- DN32 PN6 | 10 mm        |
| ② | APN 400/2/G50H A1FT/50 | 400 | 3      | 4.0     | 3       | 6.7 | 2900 | Dir   | G 2"- DN32 PN6 | 10 mm        |
| ③ | APN 550/2/G50H A1FT/50 | 400 | 3      | 5.0     | 4.1     | 8.7 | 2900 | Dir   | G 2"- DN32 PN6 | 10 mm        |

# APN

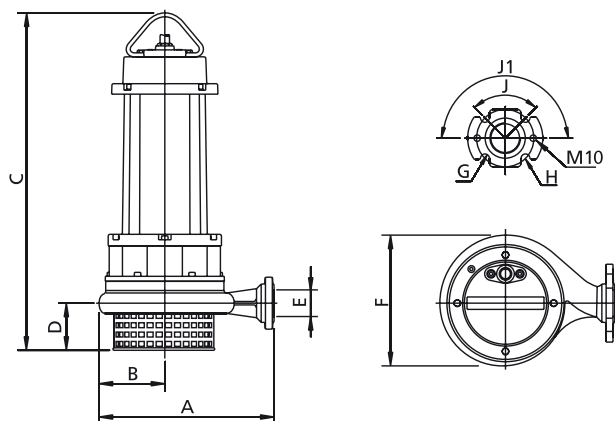
## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                  |             |                  |                  |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|------------------|-------------|------------------|------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| APN 250/2/G40H A1DM/50 |                     |   |        | ●           |                  |                  |             |                  |                  |        |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| APN 250/2/G40H A1DT/50 |                     | ● |        |             |                  |                  |             |                  |                  | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| APN 300/2/G50H A1DT/50 |                     | ● |        |             |                  |                  |             |                  |                  | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| APN 400/2/G50H A1FT/50 |                     | ● |        |             |                  |                  |             |                  |                  | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |
| APN 550/2/G50H A1FT/50 |                     | ● |        |             |                  |                  |             |                  |                  | ●      |        |             | ●       | ●         |    |                  | ●                |      |       |        |

NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.  
Start capacitor inside the pump. Circuit breaker supplied but not connected to the pump cable.  
The use of an electrical panel as circuit breaker housing is mandatory.  
For installation please see use and maintenance instructions booklet.

## Overall dimensions and weights



|                           | A   | B   | C   | D  | E     | F   | G  | H  | J   | J1   | kg |
|---------------------------|-----|-----|-----|----|-------|-----|----|----|-----|------|----|
| APN 250/2/G40H A1DM(T)/50 | 265 | 105 | 530 | 80 | G 1½" | 215 | 14 | 90 | 90° | 180° | 43 |
| APN 300/2/G50H A1DT/50    | 305 | 110 | 530 | 80 | G 2"  | 225 | 14 | 90 | 90° | 180° | 46 |
| APN 400/2/G50H A1FT/50    | 350 | 130 | 660 | 80 | G 2"  | 265 | 14 | 90 | 90° | 180° | 68 |
| APN 550/2/G50H A1FT/50    | 350 | 130 | 660 | 80 | G 2"  | 265 | 14 | 90 | 90° | 180° | 71 |

Dimensions in mm

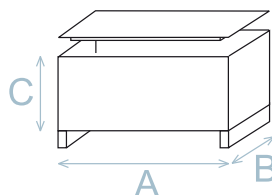
All weights and dimensions are indicative only

## Packaging dimension

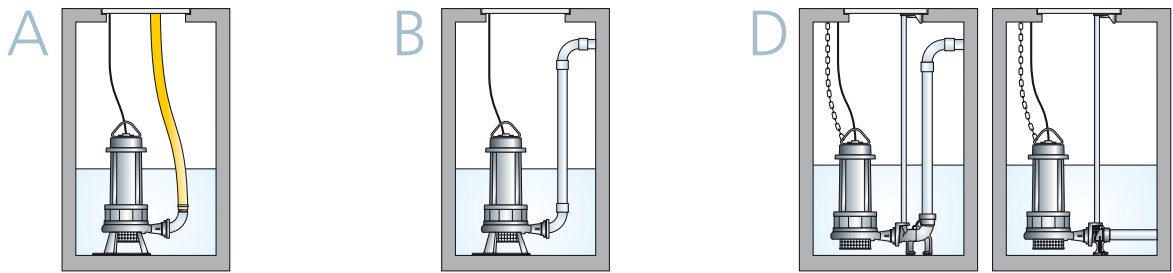
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| APN 250/2/G40H A1DM(T)/50 | 725 | 445 | 415 |
| APN 300/2/G50H A1DT/50    | 725 | 445 | 415 |
| APN 400/2/G50H A1FT/50    | 725 | 445 | 415 |
| APN 550/2/G50H A1FT/50    | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



Installations available



APP

## High head impeller

All product images are indicative only



## General characteristics

| High head impeller |                         |
|--------------------|-------------------------|
| motor power        | 7,2 ÷ 10 kW             |
| poles              | 2                       |
| discharge          | GAS 2"- DN32 horizontal |
| free passage       | 10 mm                   |
| max flow rate      | 11.8 l/s                |
| max head           | 58.3 m                  |

## Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

## Applications

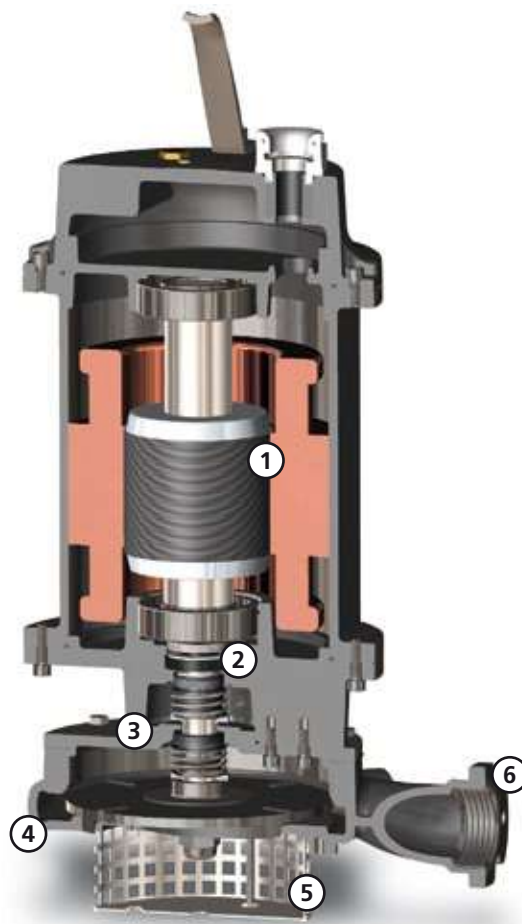
Used for clear and sandy wastewater, rainwater and seepage. The considerable manometric head guarantees excellent results for the creation of water features and decorative fountains; suitable for use in agriculture, irrigation and the fish processing sector.

## Construction materials

|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                            |
| Impeller                         | Cast iron EN-GJL-250                                                                            |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                   |
| Standard gasket                  | Rubber - NBR                                                                                    |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Cooling jacket                   | Carbon steel or stainless steel AISI 304                                                        |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                          |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

## Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |

**Motor**

Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

**Anti-clogging system**

The special design of the hydraulic part ensures the expulsion of suspended solids and prevents fouling of the impeller.

**Intake strainer**

Intake strainer in stainless steel.

**Discharge**

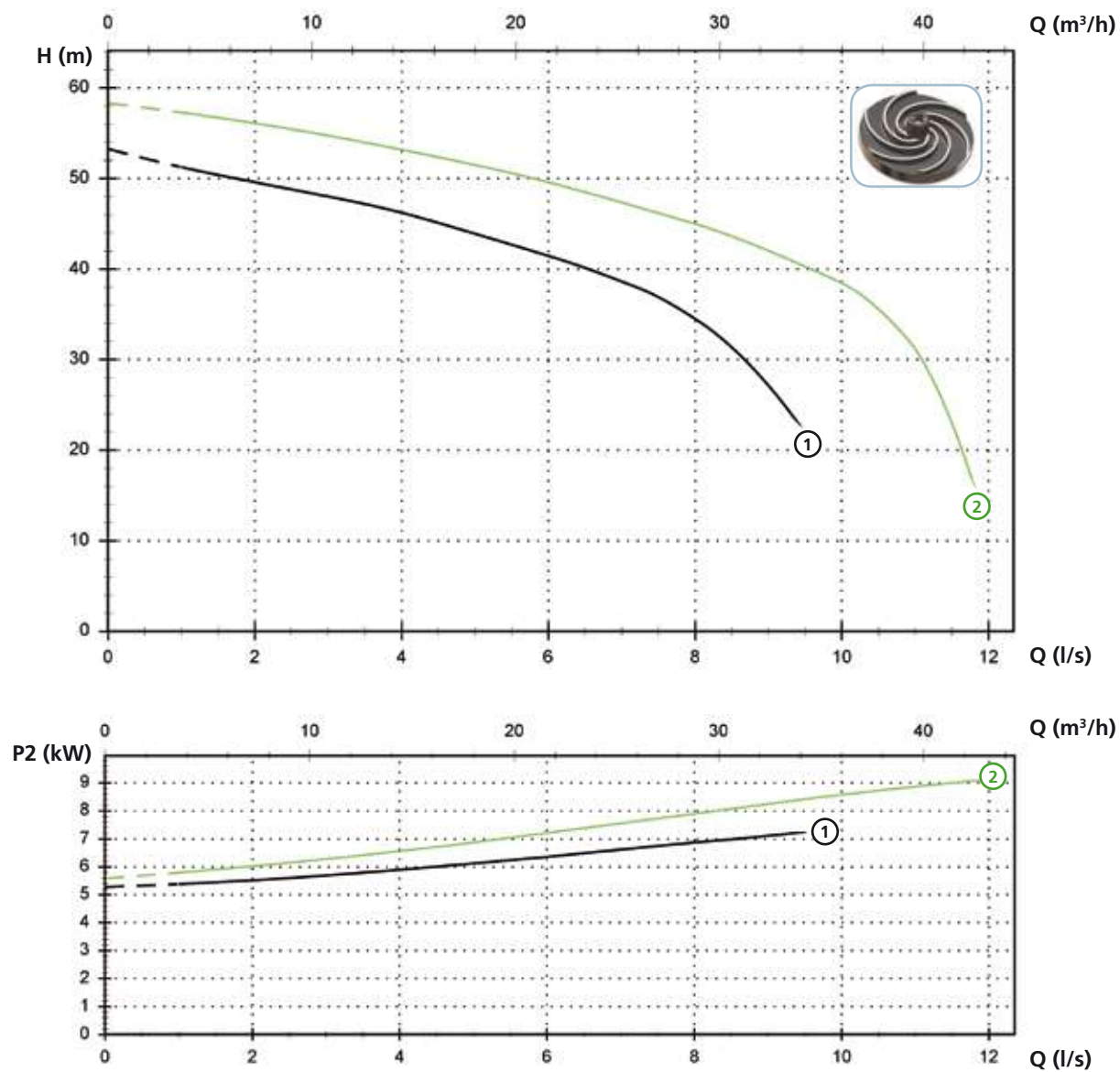
Threaded, flanged discharge for the maximum ease of installation.



# APP

## Models with horizontal GAS 2" threaded - DN32 PN6 flanged discharge - 2 poles

### Performances



### Technical data

|                           | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø               | Free passage |
|---------------------------|-----|--------|---------|---------|------|------|-------|-----------------|--------------|
| ① APP 750/2/G50H A0HT/50  | 400 | 3      | 8.8     | 7.2     | 14.5 | 2900 | Y Δ   | G 2" - DN32 PN6 | 10 mm        |
| ② APP 1000/2/G50H A1HT/50 | 400 | 3      | 12.4    | 10      | 19.8 | 2900 | Y Δ   | G 2" - DN32 PN6 | 10 mm        |

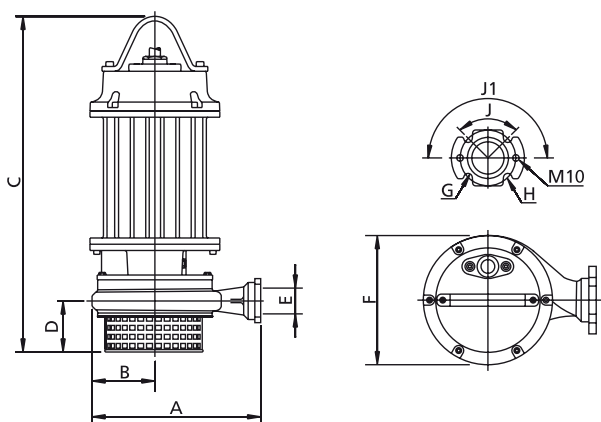
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                         | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|-------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                         | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| APP 750/2/G50H A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● |           |    |                  |      |      |       | ●      |
| APP 1000/2/G50H A1HT/50 |                     | ● |        |             |                  |                       |             |                  |                       | ●      |        |             | ● |           |    |                  |      |      |       | ●      |

## Overall dimensions and weights



|                         | A   | B   | C   | D  | E    | F   | G  | H  | J   | J1   | kg |
|-------------------------|-----|-----|-----|----|------|-----|----|----|-----|------|----|
| APP 750/2/G50H A0HT/50  | 355 | 135 | 650 | 45 | G 2" | 270 | 14 | 90 | 90° | 180° | 90 |
| APP 1000/2/G50H A1HT/50 | 355 | 135 | 650 | 45 | G 2" | 270 | 14 | 90 | 90° | 180° | 96 |

Dimensions in mm

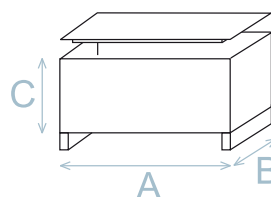
All weights and dimensions are indicative only

## Packaging dimension

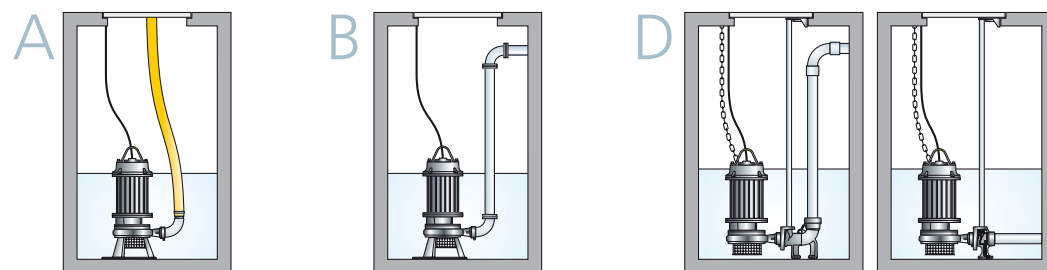
|                         | A   | B   | C   |
|-------------------------|-----|-----|-----|
| APP 750/2/G50H A0HT/50  | 725 | 445 | 415 |
| APP 1000/2/G50H A1HT/50 | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available



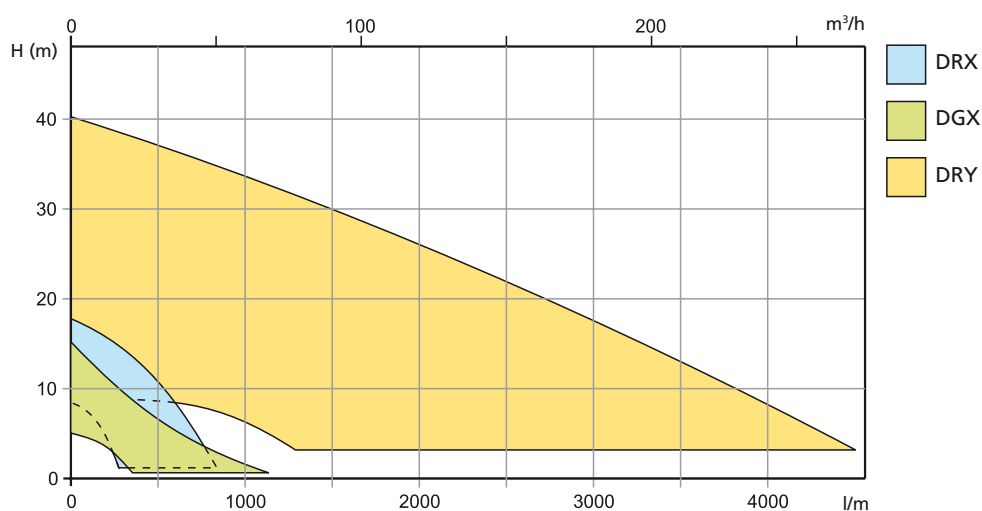
# 1.7 Special alloy pumps

## AISI 316 stainless steel models - 0.37 ÷ 15.0 kW



**DRX, DRY and DGX** pumps are constructed in CF8-M (AISI 316) stainless steel and have multi-channel open impeller suitable for wastewater containing solids (DRX and DRY) and vortex impeller for soiled wastewater (DGX).

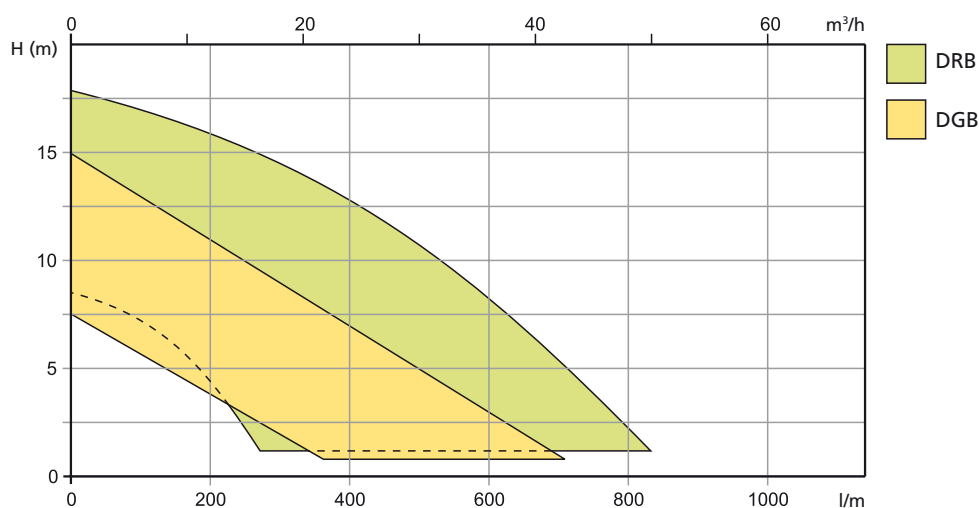
They are recommended for applications with corrosive and aggressive liquids, and can therefore be used for industrial plants in the chemical and pharmaceutical sector, or with seawater.



## B10 bronze models - 0.37 ÷ 1.5 kW



**DRB and DGB** pumps are constructed in B10 bronze and have multi-channel open impeller suitable for wastewater containing solids (DRB) and vortex impeller for soiled wastewater (DGB). They are recommended for applications with seawater or brine, in the fish processing and livestock farming sectors.



## 0.37 ÷ 15.0 kW Stainless steel models



### DRX

page 320

Electromechanical assembly and impeller in CF-8M (AISI 316) stainless steel. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing and with oil lubrication. Oil bath motor. Stainless steel multichannel open impeller.

Designed for the treatment of strongly corrosive or chemically aggressive liquids, especially in the chemical industry, this unit is for a specific industrial application.



### DGX

page 326

Electromechanical assembly and impeller in CF-8M (AISI 316) stainless steel. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing with oil lubrication. Oil bath motor. Stainless steel vortex impeller.

Ideal for lifting strongly corrosive or aggressive strained liquids, especially in the chemical industry. Intended for specific industrial applications.



### DRY

page 336

Electromechanical assembly and impeller in CF-8M (AISI 316) stainless steel. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor.

Stainless steel multichannel open impeller.

Designed for the treatment of strongly corrosive or chemically aggressive liquids, especially in the chemical industry, this unit is for a specific industrial application. Suitable for treating medium-low density fluids, containing solid and fibrous parts, sand and activated sludges.

## 0.37 ÷ 1.5 kW Bronze models



### DRB

page 346

Electromechanical assembly and impeller in B10 bronze. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing with oil lubrication. Oil bath motor. Multichannel open impeller in B10 bronze.

Suitable for treating chemically aggressive strained liquids, dyes and seawater. Can be used for applications in the tanning industry and the shipping sector.



### DGB

page 352

Electromechanical assembly and impeller in B10 bronze. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing with oil lubrication. Oil bath motor. Vortex impeller in B10 bronze.

Suitable for lifting chemically aggressive soiled liquids, dyes and seawater. Therefore ideal for applications in the tanning industry, the paper industry and the shipping sector.

# DRX

## Special alloy pumps



All product images are indicative only

### General characteristics

|                    |                     |
|--------------------|---------------------|
| Special alloy pump |                     |
| motor power        | 0,37 ÷ 1,5 kW       |
| poles              | 2                   |
| discharge          | GAS 1¼"-2" vertical |
| free passage       | max 15 mm           |
| max flow rate      | 12.5 l/s            |
| max head           | 17.8 m              |

### Electromechanical assembly

Electromechanical assembly in CF-8M (AISI 316) stainless steel, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing and with oil lubrication. Oil bath motor.

### Applications

Designed for the treatment of strongly corrosive or chemically aggressive liquids, especially in the chemical industry, this unit is for a specific industrial application.

### Construction materials

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Case                             | Cast stainless steel - CF-8M (AISI 316)     |
| Impeller                         | Stainless steel                             |
| Nuts and bolts                   | Stainless steel - Class A4-70               |
| Standard gasket                  | Rubber - VITON                              |
| Shaft                            | Stainless steel - AISI 316                  |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) |

### Operating limits

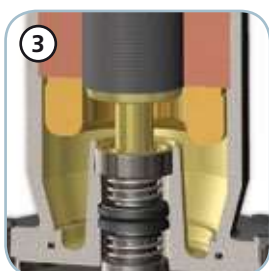
|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 3 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

**DRX****Handle and cable gland**

AISI 316 stainless steel lifting and carrying handle. A rigid or flexible duct can be fixed to the cable gland to protect the power supply cable.

**Structure**

CF-8M (AISI 316) steel construction which makes the pump suitable for use in saline environments.

**Motor**

Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC).

**Impeller**

Multichannel open impeller in CF-8M steel.

**Intake strainer**

Intake strainer in stainless steel (AISI 316).

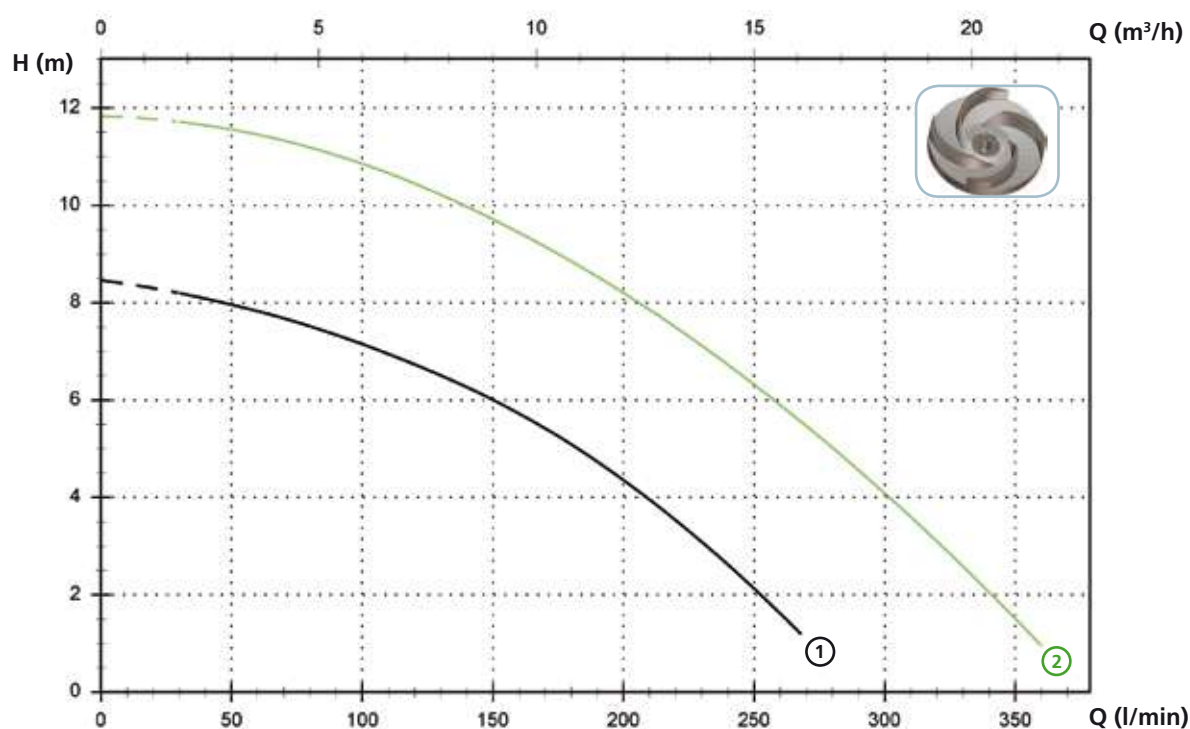


# DRX

## Models with vertical GAS 1¼" threaded discharge - 2 poles

### Performances

|                         | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    |
|-------------------------|-------|------|------|------|------|------|------|------|
|                         | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  |
|                         | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 |
| ① DRX 50/2/G32V A0CM/50 |       | 8.5  | 7.8  | 6.7  | 5.1  | 2.6  |      |      |
| ② DRX 75/2/G32V A0CM/50 |       | 11.8 | 11.5 | 10.5 | 8.9  | 6.7  | 4.1  | 1.0  |



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRX 50/2/G32V A0CT/50 | 230 | 1      | -       | 0.37    | 2.9 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRX 75/2/G32V A0CM/50 | 230 | 1      | -       | 0.55    | 3.9 | 2900 | Dir   | G 1¼" | 15 mm        |

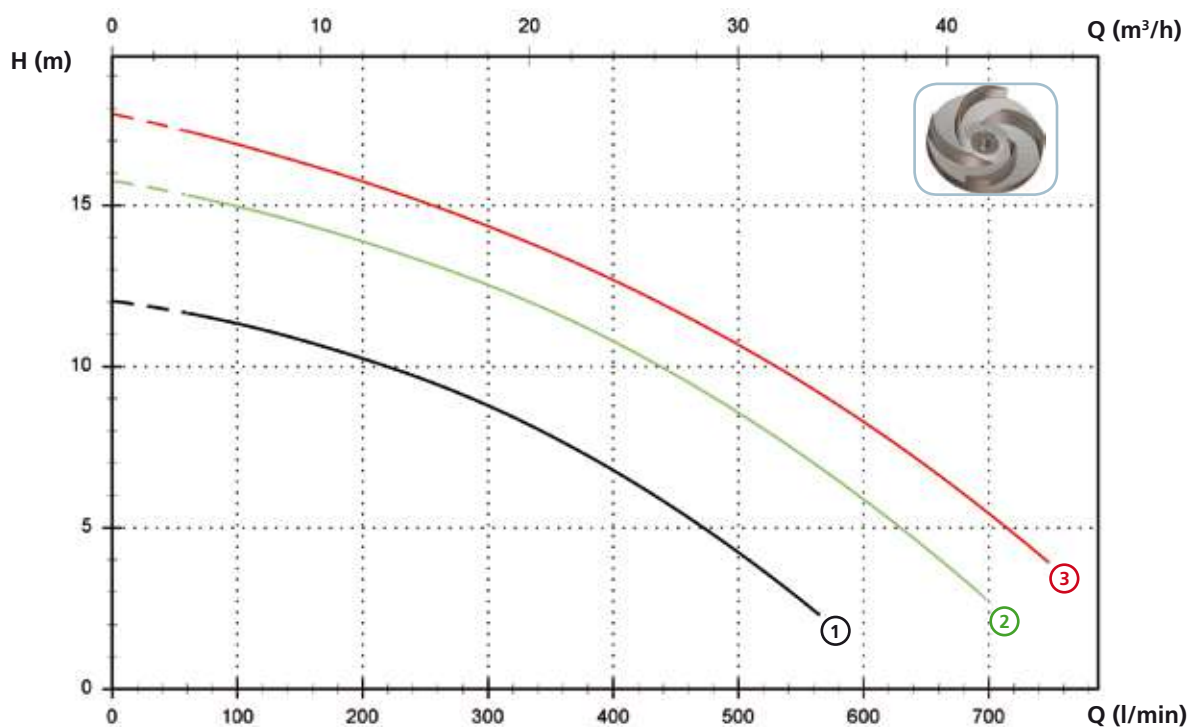
|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRX 50/2/G32V A0CT/50 | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRX 75/2/G32V A0CT/50 | 400 | 3      | -       | 0.55    | 1.4 | 2900 | Dir   | G 1¼" | 15 mm        |

DRX

## Models with vertical GAS 2" threaded discharge - 2 poles

## Performances

|                          | l/s   | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|--------------------------|-------|------|------|------|------|------|------|------|
|                          | l/min | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|                          | m³/h  | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① DRX 100/2/G50V A0CM/50 |       | 12.0 | 11.1 | 9.7  | 7.6  | 4.8  |      |      |
| ② DRX 150/2/G50V A0CM/50 |       | 15.8 | 14.8 | 13.4 | 11.5 | 9.0  | 5.9  |      |
| ③ DRX 200/2/G50V A0CM/50 |       | 17.8 | 16.7 | 15.2 | 13.4 | 11.1 | 8.3  | 4.8  |



## Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRX 100/2/G50V A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRX 150/2/G50V A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRX 200/2/G50V A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2" | 15 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRX 100/2/G50V A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRX 150/2/G50V A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRX 200/2/G50V A0CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 2" | 15 mm        |

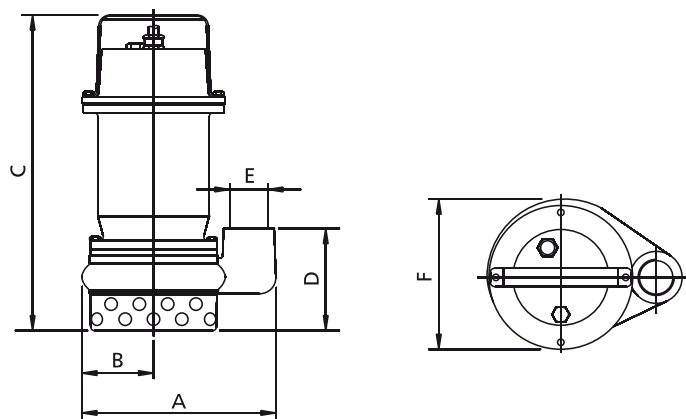
# DRX

## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| DRX 50/2/G32V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 75/2/G32V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 100/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 150/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 200/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 50/2/G32V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 75/2/G32V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 100/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 150/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRX 200/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  | ●                |      |       |        |

## Overall dimensions and weights



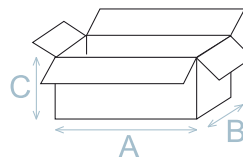
|                           | A   | B   | C   | D   | E     | F   | kg |
|---------------------------|-----|-----|-----|-----|-------|-----|----|
| DRX 50/2/G32V A0CM(T)/50  | 210 | 75  | 340 | 110 | G 1¼" | 160 | 17 |
| DRX 75/2/G32V A0CM(T)/50  | 210 | 75  | 340 | 110 | G 1¼" | 160 | 17 |
| DRX 100/2/G50V A0CM(T)/50 | 265 | 100 | 390 | 125 | G 2"  | 190 | 21 |
| DRX 150/2/G50V A0CM(T)/50 | 265 | 100 | 390 | 125 | G 2"  | 190 | 23 |
| DRX 200/2/G50V A0CM(T)/50 | 265 | 100 | 390 | 125 | G 2"  | 190 | 23 |

Dimensions in mm

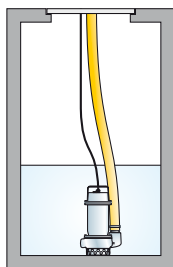
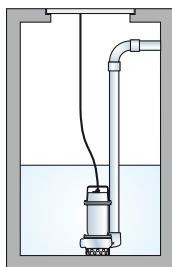
All weights and dimensions are indicative only

**DRX****Packaging dimension**

|                        | A   | B   | C   |
|------------------------|-----|-----|-----|
| DRX 50/2/G32V A0CM/50  | 385 | 225 | 245 |
| DRX 75/2/G32V A0CM/50  | 385 | 225 | 245 |
| DRX 100/2/G50V A0CM/50 | 475 | 285 | 235 |
| DRX 150/2/G50V A0CM/50 | 475 | 285 | 235 |
| DRX 200/2/G50V A0CM/50 | 475 | 285 | 235 |
| DRX 50/2/G32V A0CT/50  | 385 | 225 | 245 |
| DRX 75/2/G32V A0CT/50  | 385 | 225 | 245 |
| DRX 100/2/G50V A0CT/50 | 475 | 285 | 235 |
| DRX 150/2/G50V A0CT/50 | 475 | 285 | 235 |
| DRX 200/2/G50V A0CT/50 | 475 | 285 | 235 |



Dimension in mm

All weights and dimensions  
are indicative only**Installations available****A****B**

# DGX

## Special alloy pumps



All product images are indicative only

### General characteristics

| Special alloy pump |                                           |
|--------------------|-------------------------------------------|
| motor power        | 0,37 ÷ 1,5 kW                             |
| poles              | 2 / 4                                     |
| discharge          | GAS 2" vertical<br>DN65 - DN80 horizontal |
| free passage       | max 60 mm                                 |
| max flow rate      | 18.4 l/s                                  |
| max head           | 14.9 m                                    |

### Electromechanical assembly

Electromechanical assembly in CF-8M (AISI 316) stainless steel, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing and with oil lubrication. Oil bath motor.

### Applications

Ideal for lifting strongly corrosive or aggressive strained liquids, especially in the chemical industry. Intended for specific industrial applications.

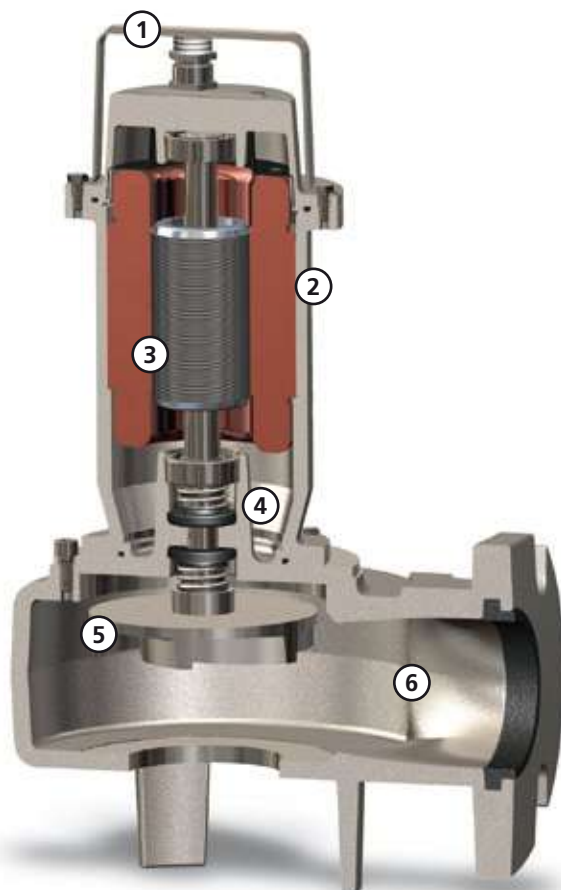
### Construction materials

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Case                             | Cast stainless steel - CF-8M (AISI 316)     |
| Impeller                         | Stainless steel                             |
| Nuts and bolts                   | Stainless steel - Class A4-70               |
| Standard gasket                  | Rubber - VITON                              |
| Shaft                            | Stainless steel - AISI 316                  |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 5 ÷ 10               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

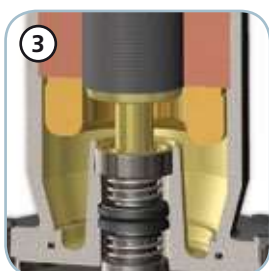
DGX

**Handle and cable gland**

AISI 316 stainless steel lifting and carrying handle. A rigid or flexible duct can be fixed to the cable gland to protect the power supply cable.

**Structure**

CF-8M steel construction which makes the pump suitable for use in saline environments.

**Motor**

Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC).

**Impeller**

Vortex impeller in CF-8M steel.

**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

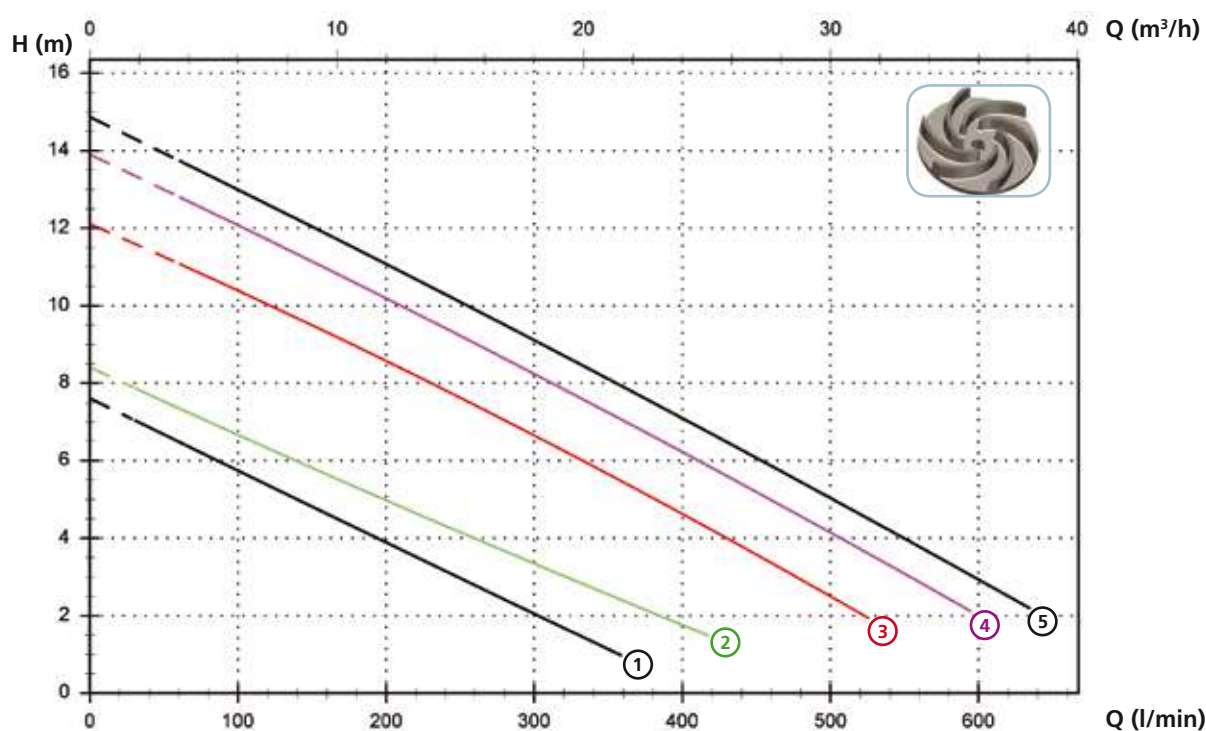


# DGX

## Models with vertical GAS 2" threaded discharge - 2 poles

### Performances

|                             | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
|-----------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
|                             | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  | 420  | 480  | 540  | 600  |
|                             | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 | 28.8 | 32.4 | 36.0 |
| ① DGX 50/2/G50V A0CM(T)/50  |       | 7.6  | 6.5  | 5.4  | 4.3  | 3.2  | 2.1  |      |      |      |      |      |
| ② DGX 75/2/G50V A0CM(T)/50  |       | 8.4  | 7.4  | 6.3  | 5.3  | 4.3  | 3.3  | 2.4  |      |      |      |      |
| ③ DGX 100/2/G50V A0CM(T)/50 |       | 12.1 | 11.1 | 10.0 | 8.9  | 7.8  | 6.7  | 5.4  | 4.2  | 2.9  |      |      |
| ④ DGX 150/2/G50V A0CM(T)/50 |       | 13.9 | 12.8 | 11.7 | 10.6 | 9.4  | 8.2  | 7.0  | 5.8  | 4.6  | 3.3  |      |
| ⑤ DGX 200/2/G50V A0CM(T)/50 |       | 14.9 | 13.7 | 12.6 | 11.5 | 10.3 | 9.1  | 7.9  | 6.7  | 5.5  | 4.2  | 2.9  |



### Technical data

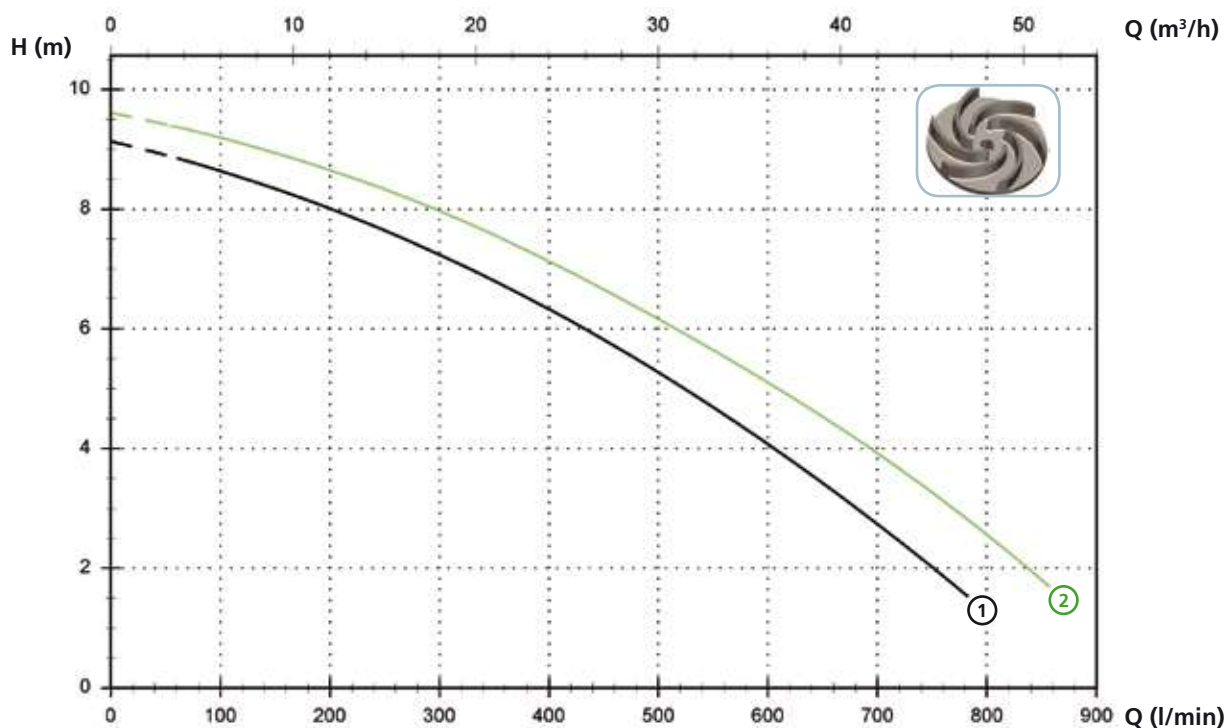
|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGX 50/2/G50V A0CM/50  | 230 | 1      | -       | 0.37    | 2.9 | 2900 | Dir   | G 2" | 38 mm        |
| ② DGX 75/2/G50V A0CM/50  | 230 | 1      | -       | 0.55    | 3.9 | 2900 | Dir   | G 2" | 38 mm        |
| ③ DGX 100/2/G50V A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 38 mm        |
| ④ DGX 150/2/G50V A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 38 mm        |
| ⑤ DGX 200/2/G50V A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2" | 38 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------|--------------|
| ① DGX 50/2/G50V A0CT/50  | 400 | 3      | -       | 0.37    | 1.1  | 2900 | Dir   | G 2" | 38 mm        |
| ② DGX 75/2/G50V A0CT/50  | 400 | 3      | -       | 0.55    | 1.42 | 2900 | Dir   | G 2" | 38 mm        |
| ③ DGX 100/2/G50V A0CT/50 | 400 | 3      | -       | 0.88    | 2.3  | 2900 | Dir   | G 2" | 38 mm        |
| ④ DGX 150/2/G50V A0CT/50 | 400 | 3      | -       | 1.1     | 2.7  | 2900 | Dir   | G 2" | 38 mm        |
| ⑤ DGX 200/2/G50V A0CT/50 | 400 | 3      | -       | 1.5     | 3.5  | 2900 | Dir   | G 2" | 38 mm        |

## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances

|                           |              |     |     |      |      |      |      |      |      |
|---------------------------|--------------|-----|-----|------|------|------|------|------|------|
|                           | <i>l/s</i>   | 0   | 2   | 4    | 6    | 8    | 10   | 12   | 14   |
|                           | <i>l/min</i> | 0   | 120 | 240  | 360  | 480  | 600  | 720  | 840  |
|                           | <i>m³/h</i>  | 0   | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 |
| ① DGX 150/2/65 A0CM(T)50  |              | 9.1 | 8.5 | 7.7  | 6.7  | 5.5  | 4.1  | 2.5  |      |
| ② DGX 200/2/65 A0CM/(T)50 |              | 9.6 | 9.1 | 8.4  | 7.5  | 6.4  | 5.1  | 3.7  | 2.0  |



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGX 150/2/65 A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |
| ② DGX 200/2/65 A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |

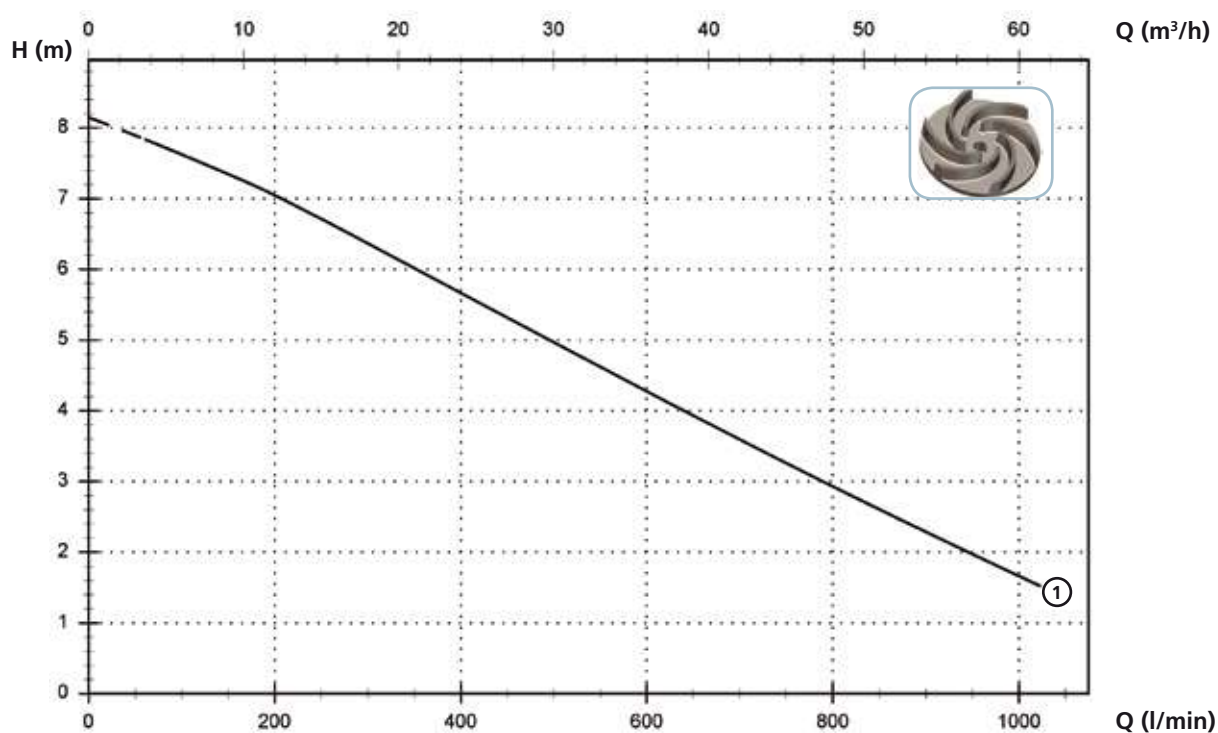
|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGX 150/2/65 A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |
| ② DGX 200/2/65 A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | DN65 PN10-16 | 50 mm        |

# DGX

## Models with horizontal DN80 PN10 flanged discharge - 2 poles

### Performances

|                            |                   |     |     |      |      |      |      |      |      |      |
|----------------------------|-------------------|-----|-----|------|------|------|------|------|------|------|
|                            | l/s               | 0   | 2   | 4    | 6    | 8    | 10   | 12   | 14   | 16   |
|                            | l/min             | 0   | 120 | 240  | 360  | 480  | 600  | 720  | 840  | 960  |
|                            | m <sup>3</sup> /h | 0   | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 | 57.6 |
| ① DGX 200/2/80A A0CM(T)/50 |                   | 8.1 | 7.5 | 6.8  | 5.9  | 5.1  | 4.3  | 3.5  | 2.7  | 1.9  |



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø         | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|-----------|--------------|
| ① DGX 200/2/80 A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | DN80 PN10 | 60 mm        |

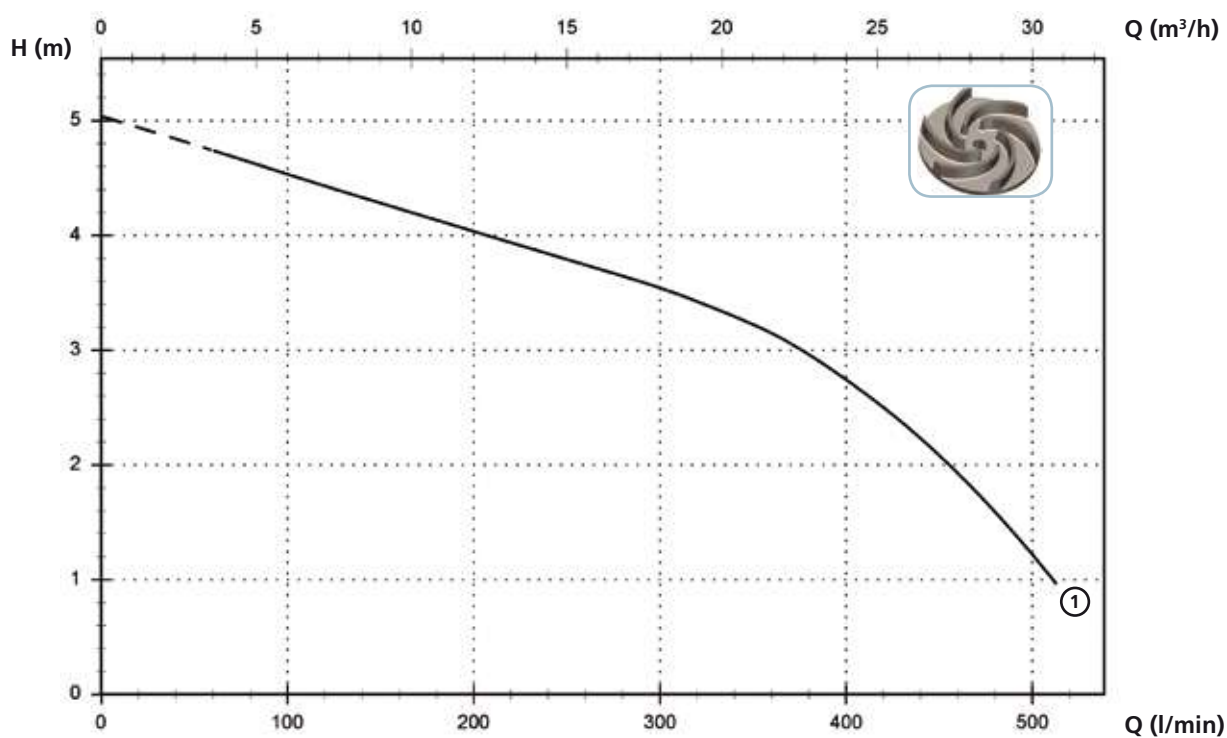
  

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø         | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|-----------|--------------|
| ① DGX 200/2/80 A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | DN80 PN10 | 60 mm        |

## Models with vertical GAS 2" threaded discharge - 4 poles

### Performances

|                             |                   |     |     |     |      |      |      |      |      |      |
|-----------------------------|-------------------|-----|-----|-----|------|------|------|------|------|------|
|                             | l/s               | 0   | 1   | 2   | 3    | 4    | 5    | 6    | 7    | 8    |
|                             | l/min             | 0   | 60  | 120 | 180  | 240  | 300  | 360  | 420  | 480  |
|                             | m <sup>3</sup> /h | 0   | 3.6 | 7.2 | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 | 28.8 |
| ① DGX 100/4/G50V A0CM(T)/50 |                   | 5.0 | 4.7 | 4.4 | 4.1  | 3.8  | 3.5  | 3.1  | 2.5  | 1.6  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGX 100/4/G50V A0CM/50 | 230 | 1      | -       | 0.63    | 4.5 | 1450 | Dir   | G 2" | 20 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|-------|------|--------------|
| ① DGX 100/4/G50V A0CT/50 | 400 | 3      | -       | 0.63    | 1.85 | 1450 | Dir   | G 2" | 20 mm        |

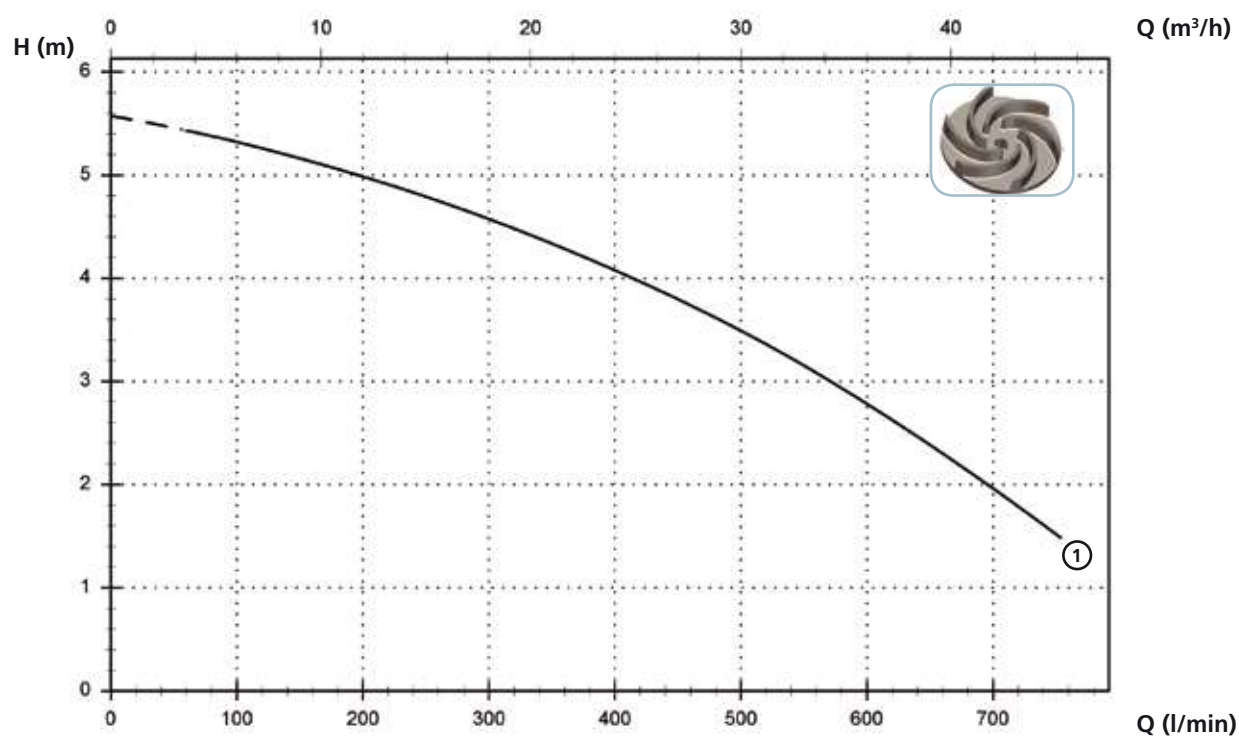
# DGX

## Models with horizontal DN65 PN10-16 flanged discharge - 4 poles

### Performances

|              |   |     |      |      |      |      |      |
|--------------|---|-----|------|------|------|------|------|
| <i>l/s</i>   | 0 | 2   | 4    | 6    | 8    | 10   | 12   |
| <i>l/min</i> | 0 | 120 | 240  | 360  | 480  | 600  | 720  |
| <i>m³/h</i>  | 0 | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |

|                           |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|
| ① DGX 150/4/65 A0CM(T)/50 | 5.6 | 5.3 | 4.8 | 4.3 | 3.6 | 2.8 | 1.8 |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGX 150/4/65 A0CM/50 | 230 | 1      | -       | 0.9     | 6.3 | 1450 | Dir   | DN65 PN10-16 | 45 mm        |

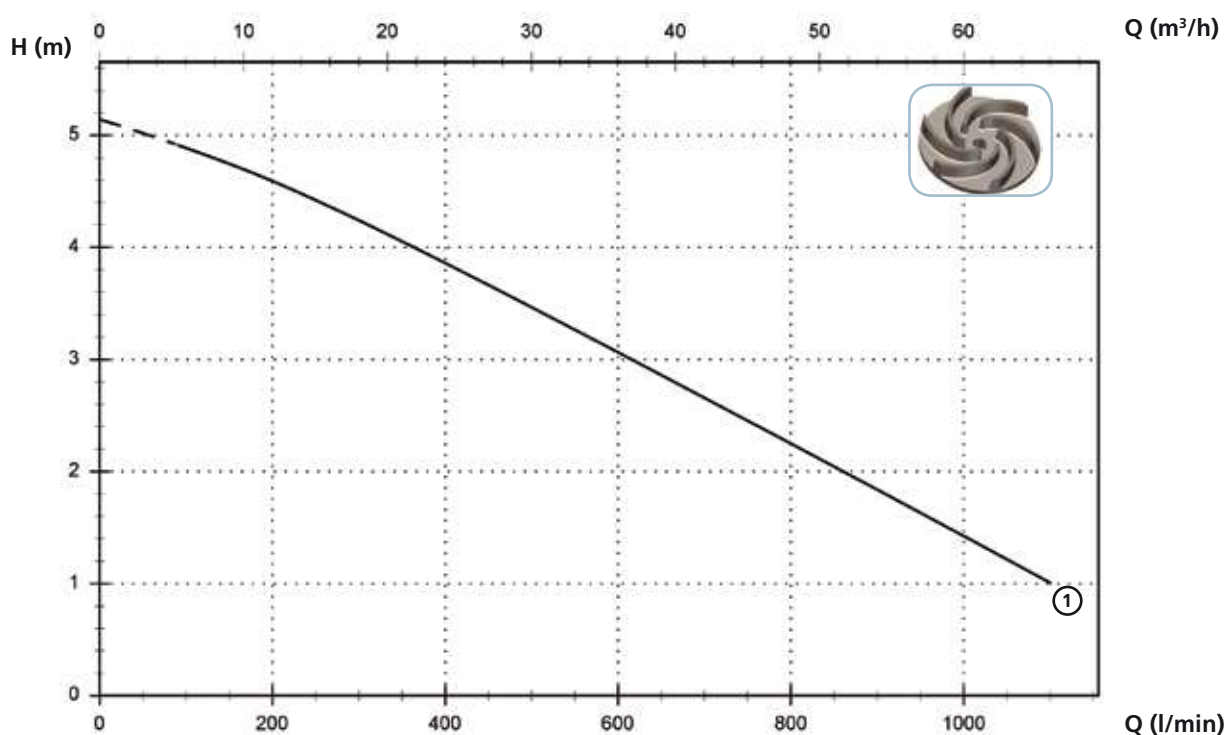
  

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① DGX 150/4/65 A0CT/50 | 400 | 3      | -       | 0.9     | 2.2 | 1450 | Dir   | DN65 PN10-16 | 45 mm        |

## Models with horizontal DN80 PN10 flanged discharge - 4 poles

### Performances

|                           |              |     |     |      |      |      |      |      |      |      |      |
|---------------------------|--------------|-----|-----|------|------|------|------|------|------|------|------|
|                           | <i>l/s</i>   | 0   | 2   | 4    | 6    | 8    | 10   | 12   | 14   | 16   | 18   |
|                           | <i>l/min</i> | 0   | 120 | 240  | 360  | 480  | 600  | 720  | 840  | 960  | 1080 |
|                           | <i>m³/h</i>  | 0   | 7.2 | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 | 50.4 | 57.6 | 64.8 |
| ① DGX 150/4/80 A0CM(T)/50 |              | 5.1 | 4.8 | 4.5  | 4.0  | 3.5  | 3.1  | 2.6  | 2.1  | 1.6  | 1.1  |



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø         | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|-----------|--------------|
| ① DGX 150/4/80 A0CM/50 | 230 | 1      | -       | 0.9     | 6.3 | 1450 | Dir   | DN80 PN10 | 60 mm        |

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø         | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|-----------|--------------|
| ① DGX 150/4/80 A0CT/50 | 400 | 3      | -       | 0.9     | 2.23 | 1450 | Dir   | DN80 PN10 | 60 mm        |



# DGX

## Versions available

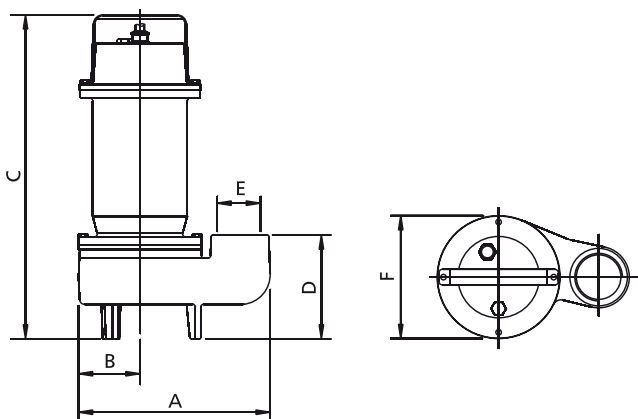
(Key to versions on page 16)

Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGX 50/2/G50V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 75/2/G50V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 100/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 200/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 50/2/G50V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 75/2/G50V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 100/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 200/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/2/65 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 200/2/65 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/2/65 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 200/2/65 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 200/2/80 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 200/2/80 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 100/4/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 100/4/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/4/65 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/4/65 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/4/80 A0CM/50   |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGX 150/4/80 A0CT/50   | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights

### Models with vertical discharge



|                            | A   | B  | C   | D   | E    | F   | kg |
|----------------------------|-----|----|-----|-----|------|-----|----|
| DGX 50/2/G50V A0CM(T)/50   | 225 | 75 | 360 | 120 | G 2" | 155 | 18 |
| DGX 75/2/G50V A0CM(T)/50   | 225 | 75 | 360 | 120 | G 2" | 155 | 18 |
| DGX 100/2/G50V A0CM (T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 22 |
| DGX 150/2/G50V A0CM (T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 23 |
| DGX 200/2/G50V A0CM (T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 22 |
| DGX 100/4/G50V A0CM (T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 22 |

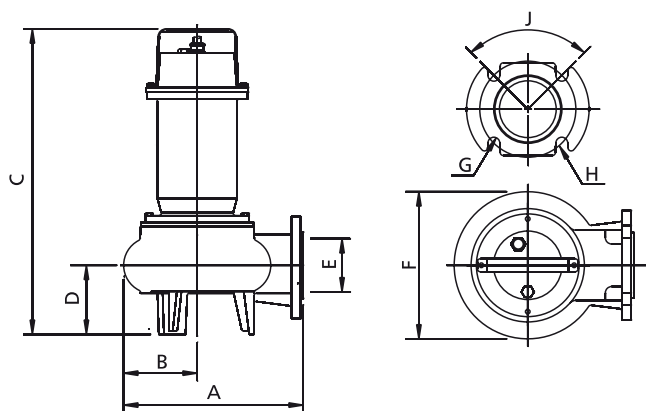
Dimensions in mm

All weights and dimensions are indicative only

**DGX**

## Overall dimensions and weights

### Models with horizontal discharge



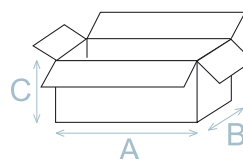
|                         | A   | B   | C   | D   | E  | F   | G  | H   | J   | kg   |
|-------------------------|-----|-----|-----|-----|----|-----|----|-----|-----|------|
| DGX 150/2/65 A0CM(T)/50 | 270 | 110 | 460 | 105 | 65 | 220 | 18 | 145 | 90° | 28   |
| DGX 200/2/65 A0CM(T)/50 | 270 | 110 | 460 | 105 | 65 | 220 | 18 | 145 | 90° | 29   |
| DGX 200/2/80 A0CM(T)/50 | 270 | 110 | 460 | 105 | 80 | 220 | 18 | 160 | 90° | 33.5 |
| DGX 150/4/65 A0CM(T)/50 | 270 | 110 | 460 | 105 | 65 | 220 | 18 | 145 | 90° | 29   |
| DGX 150/4/80 A0CM(T)/50 | 295 | 120 | 470 | 115 | 80 | 220 | 18 | 160 | 90° | 33.5 |

Dimensions in mm

All weights and dimensions are indicative only

### Packaging dimension

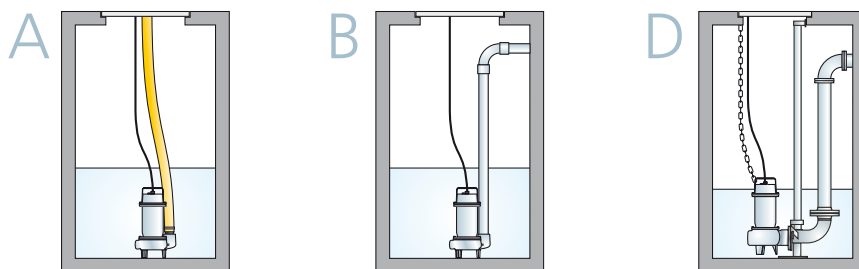
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DGX 50/2/G50V A0CM(T)/50  | 385 | 225 | 245 |
| DGX 75/2/G50V A0CM(T)/50  | 385 | 225 | 245 |
| DGX 100/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DGX 150/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DGX 200/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DGX 100/4/G50V A0CM(T)/50 | 580 | 310 | 310 |
| DGX 150/2/65 A0CM(T)/50   | 580 | 310 | 310 |
| DGX 200/2/65 A0CM(T)/50   | 580 | 310 | 310 |
| DGX 200/2/80 A0CM(T)/50   | 580 | 310 | 310 |
| DGX 150/4/65 A0CM(T)/50   | 580 | 310 | 310 |
| DGX 150/4/80 A0CM(T)/50   | 580 | 310 | 310 |



Dimension in mm

All weights and dimensions are indicative only

### Installations available



# DRY

## Special alloy pumps

All product images are indicative only



### General characteristics

| Special alloy pump |                         |
|--------------------|-------------------------|
| motor power        | 2,4 ÷ 15 kW             |
| poles              | 2 / 4                   |
| discharge          | DN65 ÷ DN100 horizontal |
| free passage       | max 80 mm               |
| max flow rate      | 72.8 l/s                |
| max head           | 40.2 m                  |

### Electromechanical assembly

Electromechanical assembly in CF-8M (AISI 316) stainless steel, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

### Applications

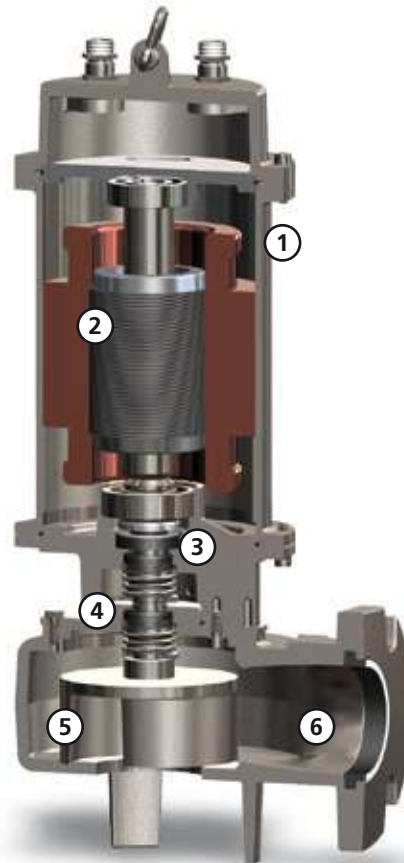
Designed for the treatment of strongly corrosive or chemically aggressive liquids, especially in the chemical industry, this unit is for a specific industrial application. Suitable for treating medium-low density fluids, containing solid and fibrous parts, sand and activated sludges.

### Construction materials

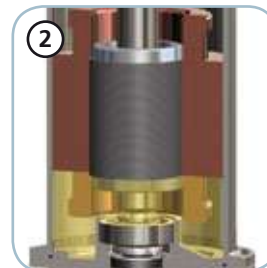
|                                  |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| Case                             | Cast stainless steel - CF-8M                                                                    |
| Impeller                         | Stainless steel                                                                                 |
| Nuts and bolts                   | Stainless steel - Class A4-70                                                                   |
| Standard gasket                  | Rubber - VITON                                                                                  |
| Shaft                            | Stainless steel - AISI 420                                                                      |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) and one carbon-aluminium oxide mechanical seal (AL) |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 3 ÷ 14               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

**DRY****Structure**

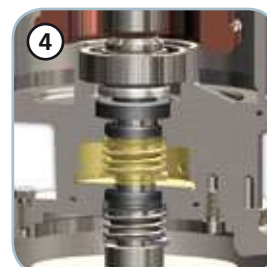
CF-8M steel construction which makes the pump suitable for use in saline environments.

**Motor**

Oil-bath motor with thermal protections.

**Mechanical seals**

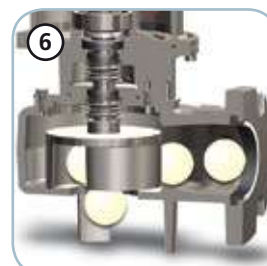
Two mechanical seals in silicon carbide (2SiC) and one mechanical seal in alumina graphite (AL) for maximum reliability even in heavy-duty applications.

**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime.

**Impeller**

Multichannel open impeller in CF-8M steel.

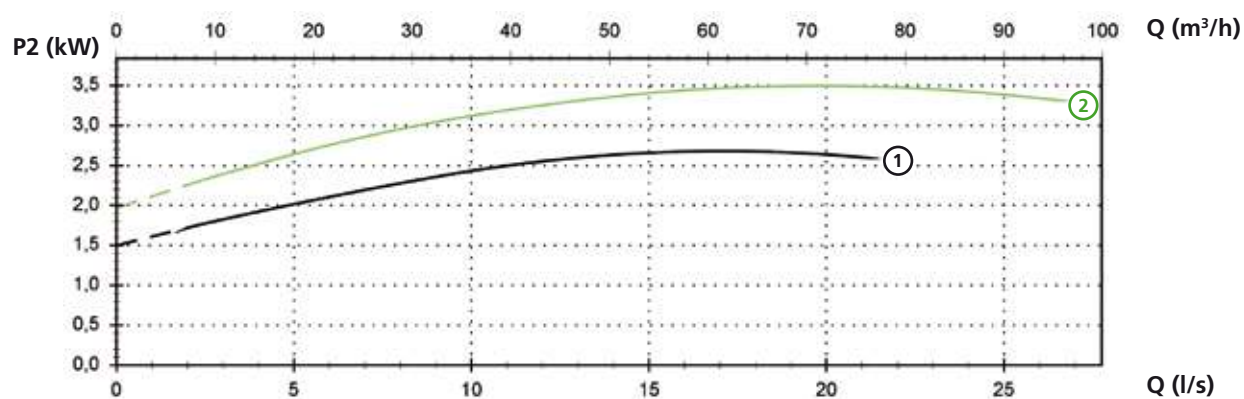
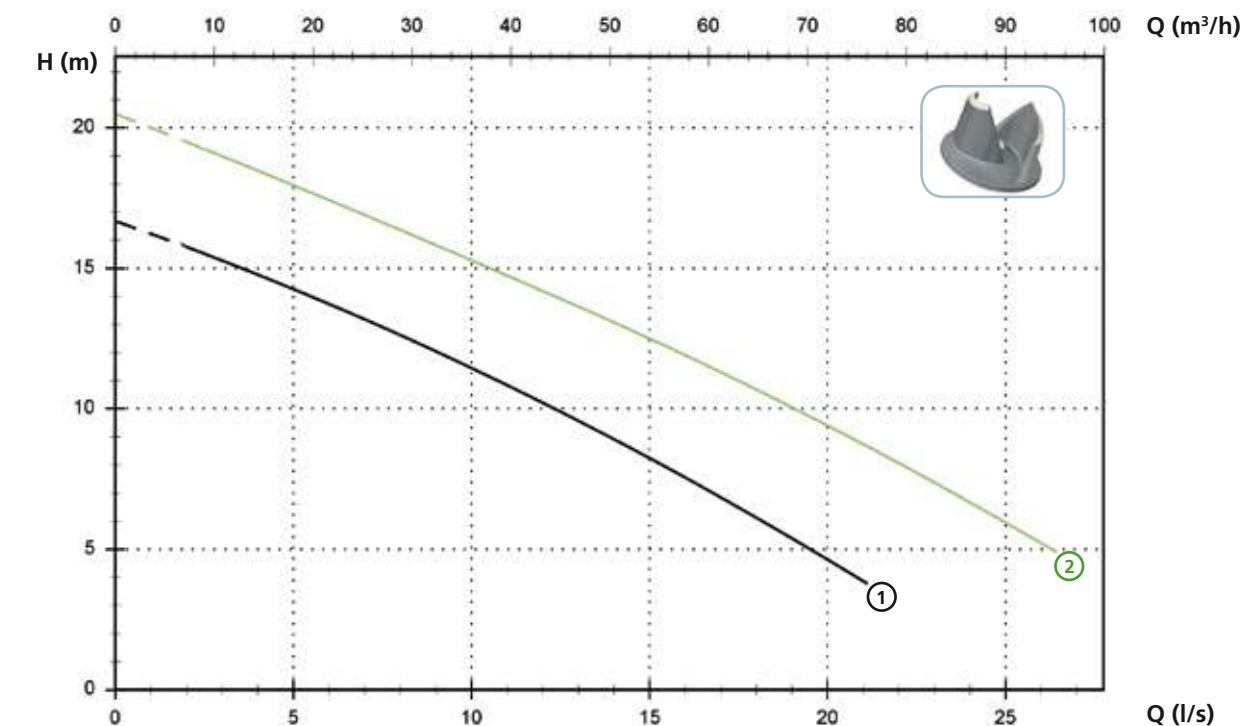
**Free passage**

Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DRY

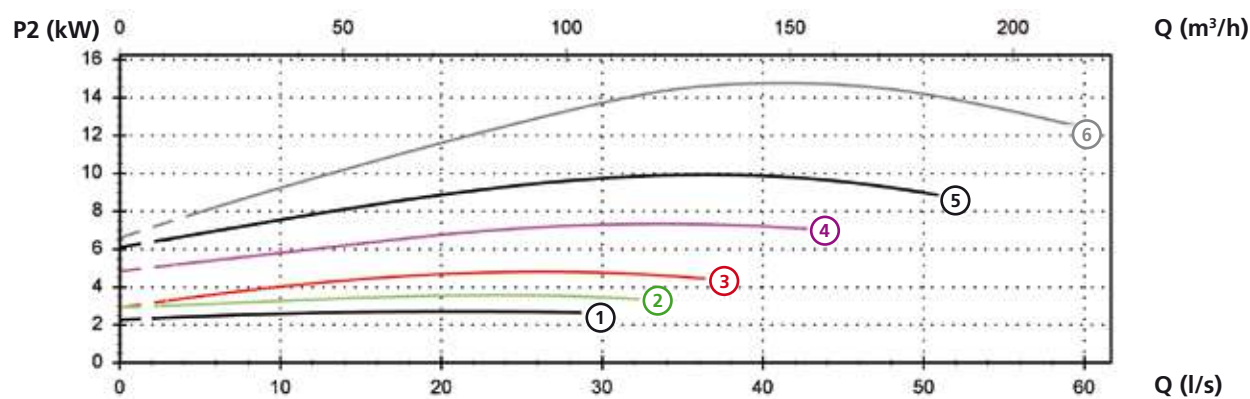
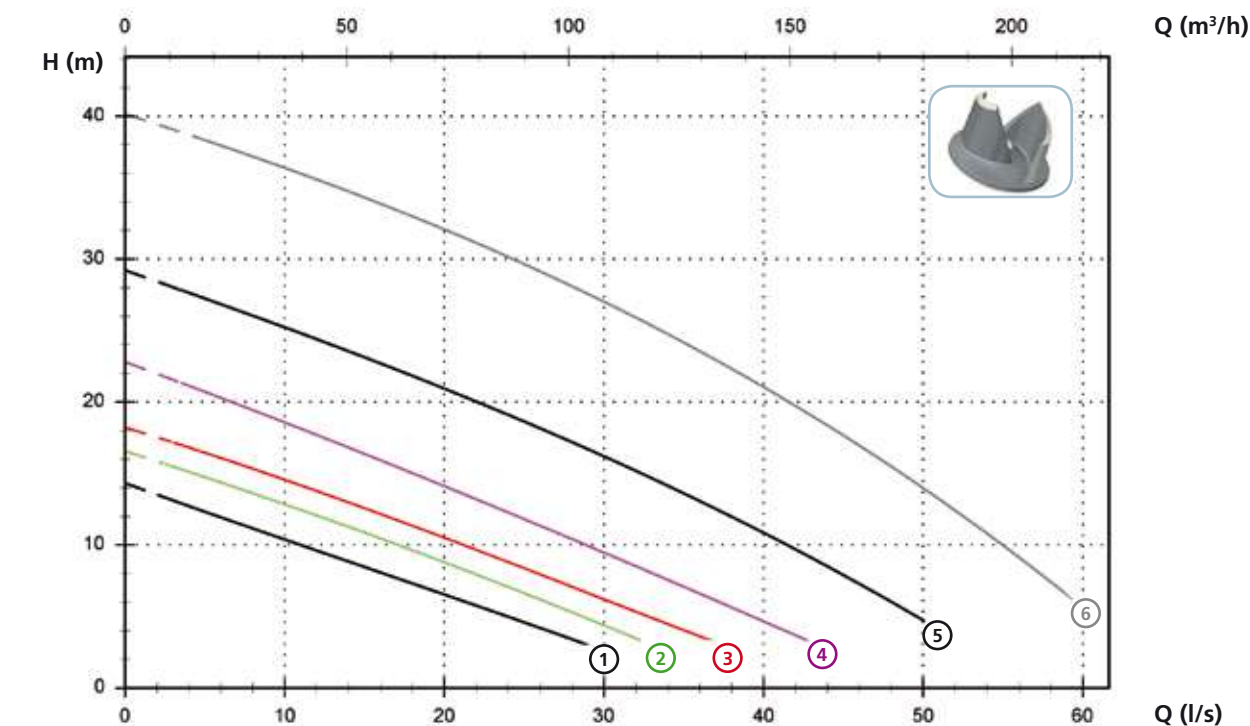
## Models with horizontal DN65 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|---|------|-------|--------------|--------------|
| ① DRY 300/2/65 A0ET/50 | 400 | 3      | 3.7     | 2.7     | 6 | 2900 | Dir   | DN65 PN10-16 | 43 mm        |
| ② DRY 400/2/65 A0FT/50 | 400 | 3      | 4.7     | 3.6     | 8 | 2900 | Dir   | DN65 PN10-16 | 43 mm        |

**DRY****Models with horizontal DN80 PN10 flanged discharge - 2 poles****Performances****Technical data**

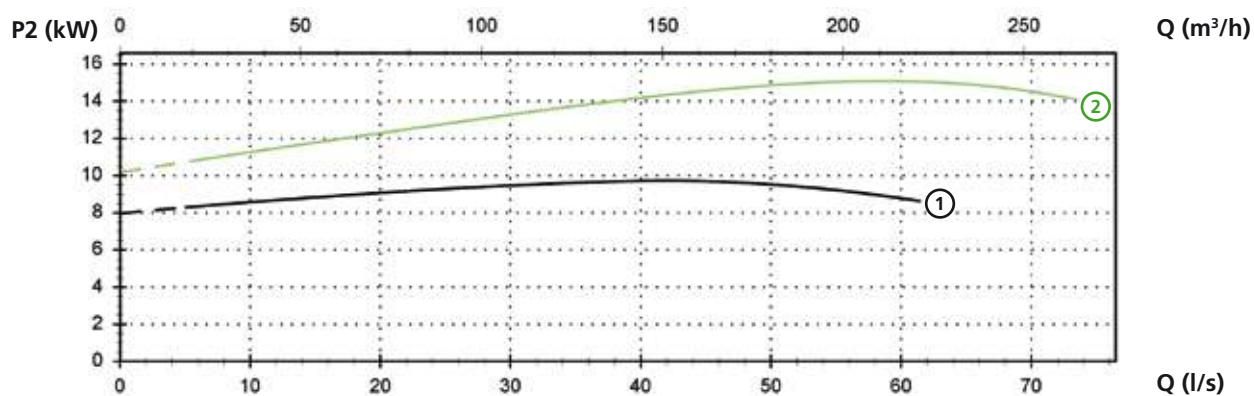
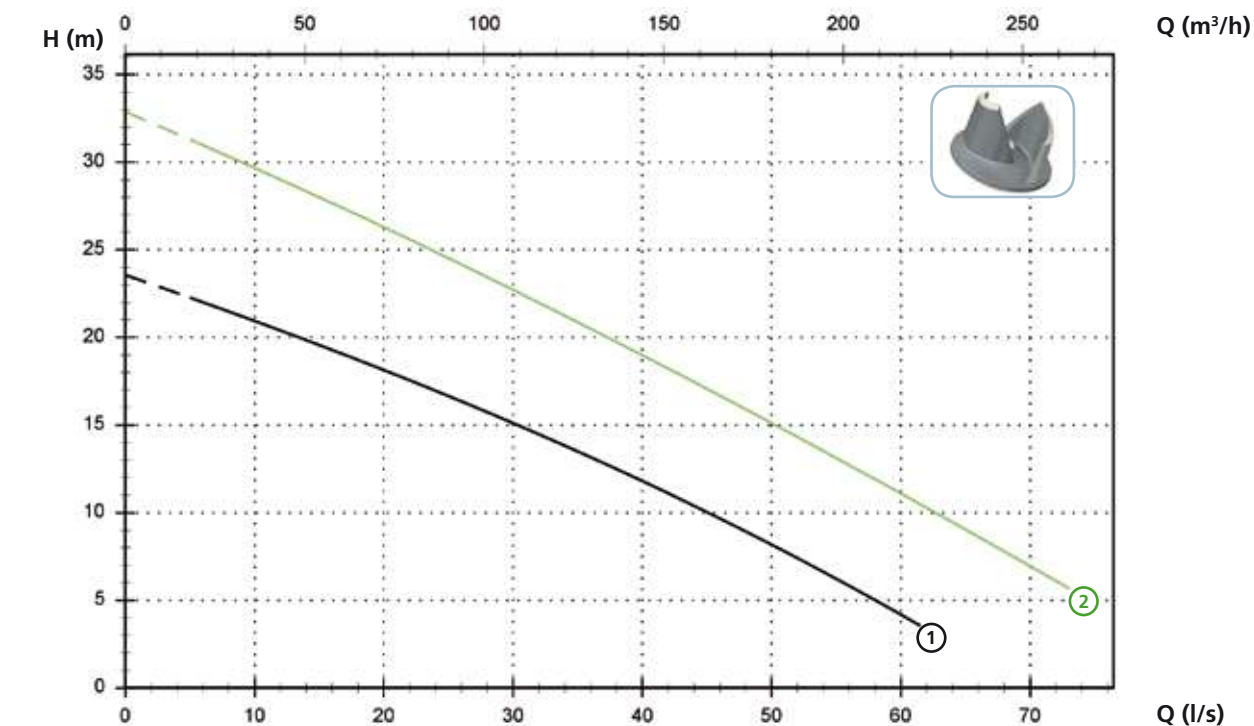
|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø         | Free passage |
|---|-----------------------|-----|--------|---------|---------|------|------|-------|-----------|--------------|
| ① | DRY 300/2/80 A0ET/50  | 400 | 3      | 3.7     | 2.7     | 6    | 2900 | Dir   | DN80 PN10 | 56 mm        |
| ② | DRY 400/2/80 A0FT/50  | 400 | 3      | 4.7     | 3.6     | 8    | 2900 | Dir   | DN80 PN10 | 56 mm        |
| ③ | DRY 550/2/80 A0GT/50  | 400 | 3      | 5.9     | 4.9     | 10.1 | 2900 | Dir   | DN80 PN10 | 56 mm        |
| ④ | DRY 750/2/80 A0HT/50  | 400 | 3      | 8.8     | 7.2     | 14.5 | 2900 | Y Δ   | DN80 PN10 | 63 mm        |
| ⑤ | DRY 1000/2/80 A0HT/50 | 400 | 3      | 12.4    | 10      | 19.8 | 2900 | Y Δ   | DN80 PN10 | 65 mm        |
| ⑥ | DRY 1500/2/80 A0HT/50 | 400 | 3      | 17.7    | 15      | 28.2 | 2900 | Y Δ   | DN80 PN10 | 60 mm        |



# DRY

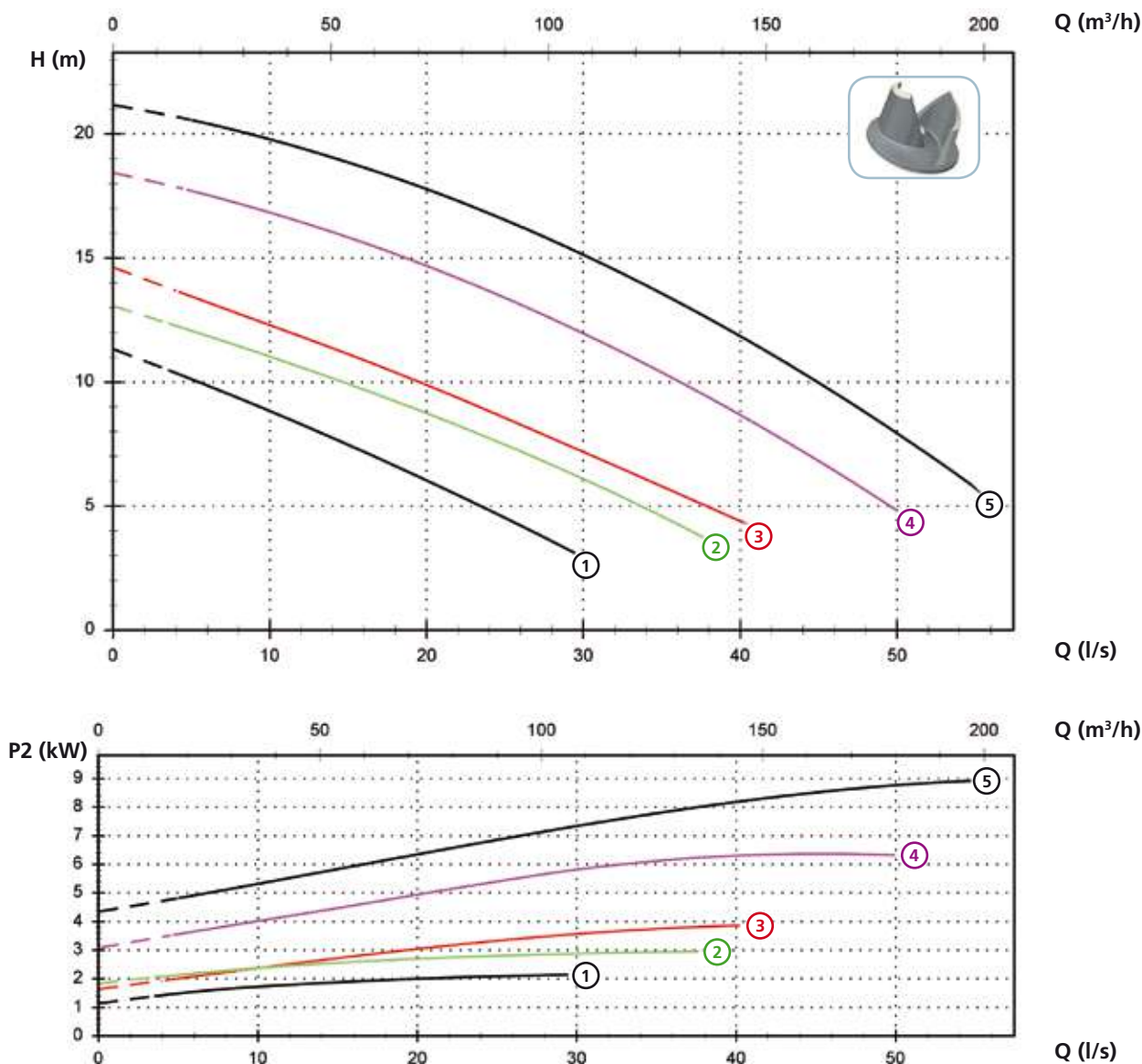
## Models with horizontal DN100 PN10-16 flanged discharge - 2 poles

### Performances



### Technical data

|   |                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|---|------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① | DRY 1000/2/100 A0HT/50 | 400 | 3      | 12.4    | 10      | 19.8 | 2900 | Y Δ   | DN100 PN10-16 | 80 mm        |
| ② | DRY 1500/2/100 A0HT/50 | 400 | 3      | 17.7    | 15      | 28.2 | 2900 | Y Δ   | DN100 PN10-16 | 80 mm        |

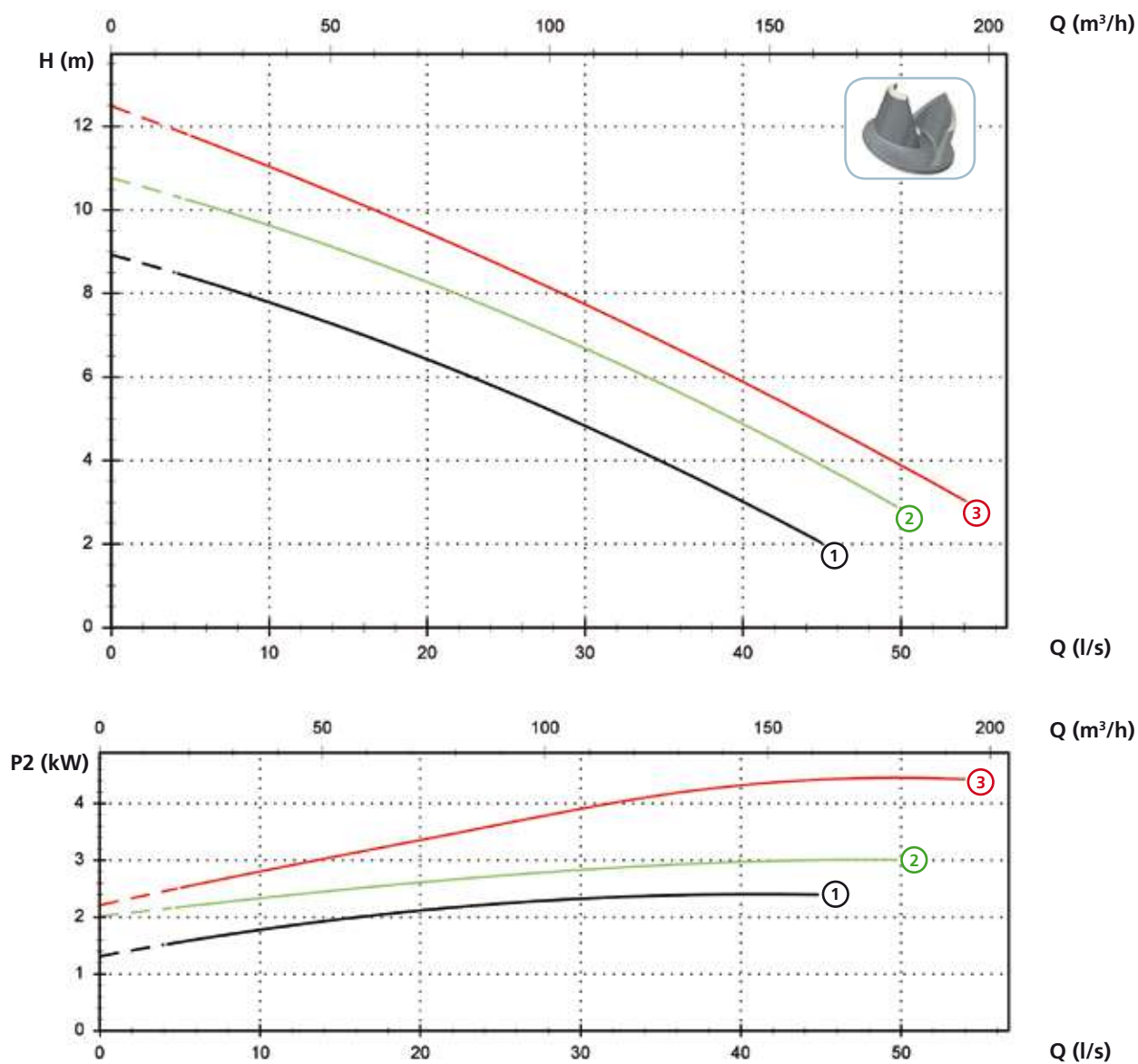
**DRY****Models with horizontal DN80 PN10 flanged discharge - 4 poles****Performances****Technical data**

|   |                       | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø         | Free passage |
|---|-----------------------|-----|--------|---------|---------|------|------|-------|-----------|--------------|
| ① | DRY 300/4/80 A0FT/50  | 400 | 3      | 3.1     | 2.4     | 6.1  | 1450 | Dir   | DN80 PN10 | 67 mm        |
| ② | DRY 400/4/80 A0FT/50  | 400 | 3      | 4.1     | 3       | 7.9  | 1450 | Dir   | DN80 PN10 | 67 mm        |
| ③ | DRY 550/4/80 A0GT/50  | 400 | 3      | 5.9     | 4.6     | 10.1 | 1450 | Dir   | DN80 PN10 | 67 mm        |
| ④ | DRY 750/4/80 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN80 PN10 | 70 mm        |
| ⑤ | DRY 1000/4/80 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN80 PN10 | 70 mm        |

# DRY

## Models with horizontal DN100 PN10-16 flanged discharge - 4 poles

### Performances



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø             | Free passage |
|-------------------------|-----|--------|---------|---------|------|------|-------|---------------|--------------|
| ① DRY 300/4/100 A0FT/50 | 400 | 3      | 3.1     | 2.4     | 6.1  | 1450 | Dir   | DN100 PN10-16 | 76 mm        |
| ② DRY 400/4/100 A0FT/50 | 400 | 3      | 4.1     | 3       | 7.9  | 1450 | Dir   | DN100 PN10-16 | 76 mm        |
| ③ DRY 550/4/100 A0GT/50 | 400 | 3      | 5.9     | 4.6     | 10.1 | 1450 | Dir   | DN100 PN1016  | 76 mm        |

# DRY

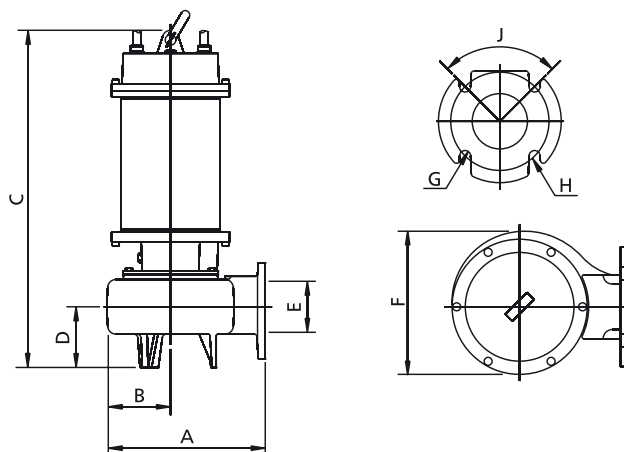
## Versions available

(Key to versions on page 16)

|                        | Electrical variants |        |             |                  |                       |             |                  |                       |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| DRY 300/2/65 A0ET/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 400/2/65 A0FT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 300/2/80 A0ET/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 400/2/80 A0FT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 550/2/80 A0GT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 750/2/80 A0HT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 1000/2/80 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 1500/2/80 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 1000/2/100 A0HT/50 |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 1500/2/100 A0HT/50 |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 300/4/80 A0FT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 400/4/80 A0FT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 550/4/80 A0GT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 750/4/80 A0HT/50   |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 1000/4/80 A0HT/50  |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 300/4/100 A0FT/50  |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 400/4/100 A0FT/50  |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |
| DRY 550/4/100 A0GT/50  |                     | ●      |             |                  |                       |             |                  |                       |        |        |             | ●       |           |    |                  |                  |      |       | ●      |

## Overall dimensions and weights

### 2 poles motor models



|                        | A   | B   | C   | D   | E   | F   | G  | H   | J   | kg  |
|------------------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|
| DRY 300/2/65 A0ET/50   | 270 | 110 | 570 | 105 | 65  | 220 | 18 | 145 | 90° | 50  |
| DRY 400/2/65 A0FT/50   | 270 | 110 | 645 | 105 | 65  | 220 | 18 | 145 | 90° | 54  |
| DRY 300/2/80 A0ET/50   | 295 | 120 | 580 | 115 | 80  | 220 | 18 | 160 | 90° | 51  |
| DRY 400/2/80 A0FT/50   | 295 | 120 | 660 | 115 | 80  | 235 | 18 | 160 | 90° | 65  |
| DRY 550/2/80 A0GT/50   | 295 | 120 | 665 | 115 | 80  | 235 | 18 | 160 | 90° | 62  |
| DRY 750/2/80 A0HT/50   | 390 | 150 | 755 | 150 | 80  | 295 | 18 | 160 | 90° | 104 |
| DRY 1000/2/80 A0HT/50  | 390 | 150 | 755 | 150 | 80  | 295 | 18 | 160 | 90° | 110 |
| DRY 1500/2/80 A0HT/50  | 390 | 150 | 755 | 150 | 80  | 295 | 18 | 160 | 90° | 130 |
| DRY 1000/2/100 A0HT/50 | 415 | 160 | 770 | 155 | 100 | 310 | 18 | 180 | 90° | 115 |
| DRY 1500/2/100 A0HT/50 | 415 | 160 | 770 | 155 | 100 | 310 | 18 | 180 | 90° | 144 |

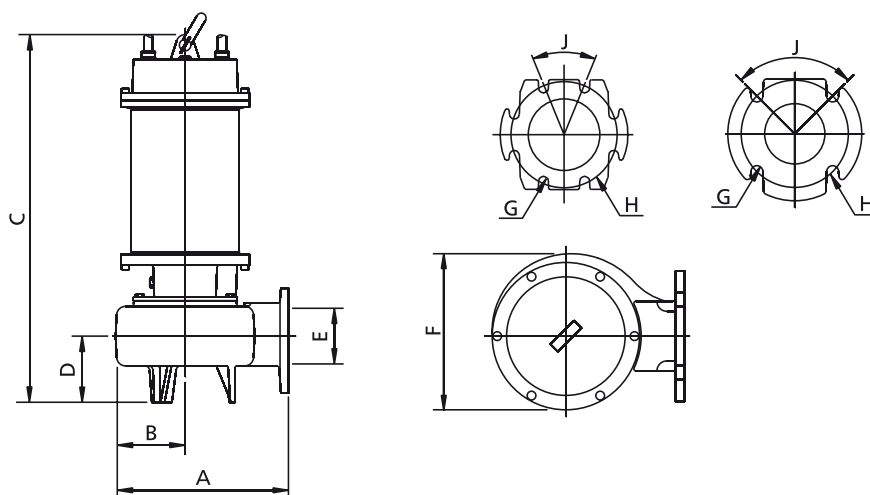
Dimensions in mm

All weights and dimensions are indicative only

# DRY

## Overall dimensions and weights

### 4 poles motor models



|                       | A   | B   | C   | D   | E   | F   | G  | H   | J   | kg  |
|-----------------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|
| DRY 300/4/80 A0FT/50  | 390 | 150 | 710 | 150 | 80  | 290 | 18 | 160 | 90° | 73  |
| DRY 400/4/80 A0FT/50  | 390 | 150 | 710 | 150 | 80  | 290 | 18 | 160 | 90° | 81  |
| DRY 550/4/80 A0GT/50  | 390 | 150 | 720 | 150 | 80  | 290 | 18 | 160 | 90° | 87  |
| DRY 750/4/80 A0HT/50  | 440 | 170 | 775 | 155 | 80  | 340 | 18 | 160 | 90° | 120 |
| DRY 1000/4/80 A0HT/50 | 440 | 170 | 775 | 155 | 80  | 340 | 18 | 160 | 90° | 128 |
| DRY 300/4/100 A0FT/50 | 415 | 160 | 725 | 155 | 100 | 310 | 18 | 180 | 45° | 75  |
| DRY 400/4/100 A0FT/50 | 415 | 160 | 720 | 155 | 100 | 310 | 18 | 180 | 45° | 85  |
| DRY 550/4/100 A0GT/50 | 415 | 160 | 725 | 155 | 100 | 310 | 18 | 180 | 45° | 91  |

Dimensions in mm

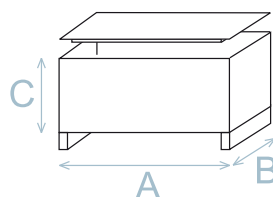
All weights and dimensions are indicative only

## Packaging dimension

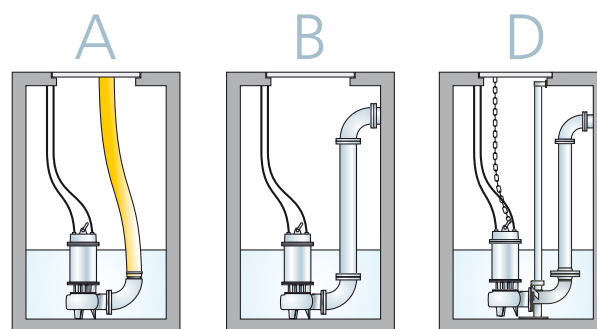
|                        | A   | B   | C   |
|------------------------|-----|-----|-----|
| DRY 300/2/65 A0ET/50   | 725 | 445 | 415 |
| DRY 400/2/65 A0FT/50   | 725 | 445 | 415 |
| DRY 300/2/80 A0ET/50   | 725 | 445 | 415 |
| DRY 400/2/80 A0FT/50   | 725 | 445 | 415 |
| DRY 550/2/80 A0GT/50   | 725 | 445 | 415 |
| DRY 750/2/80 A0HT/50   | 915 | 515 | 555 |
| DRY 1000/2/80 A0HT/50  | 915 | 515 | 555 |
| DRY 1500/2/80 A0HT/50  | 915 | 515 | 555 |
| DRY 1000/2/100 A0HT/50 | 915 | 515 | 555 |
| DRY 1500/2/100 A0HT/50 | 915 | 515 | 555 |
| DRY 300/4/80 A0FT/50   | 725 | 445 | 415 |
| DRY 400/4/80 A0FT/50   | 725 | 445 | 415 |
| DRY 550/4/80 A0GT/50   | 725 | 445 | 415 |
| DRY 750/4/80 A0HT/50   | 915 | 515 | 555 |
| DRY 1000/4/80 A0HT/50  | 915 | 515 | 555 |
| DRY 300/4/100 A0FT/50  | 725 | 445 | 415 |
| DRY 400/4/100 A0FT/50  | 725 | 445 | 415 |
| DRY 550/4/100 A0GT/50  | 725 | 445 | 415 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available









# DRB

## Special alloy pumps

All product images are indicative only



### General characteristics

| Special alloy pumps |                       |
|---------------------|-----------------------|
| motor power         | 0,37 ÷ 1,5 kW         |
| poles               | 2                     |
| discharge           | GAS 1¼" - 2" vertical |
| free passage        | max 15 mm             |
| max flow rate       | 12.5 l/s              |
| max head            | 18 m                  |

### Electromechanical assembly

Electromechanical assembly in B10 bronze, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing and with oil lubrication. Oil bath motor.

### Applications

Suitable for treating chemically aggressive strained liquids, dyes and seawater. Can be used for applications in the tanning industry and the shipping sector.

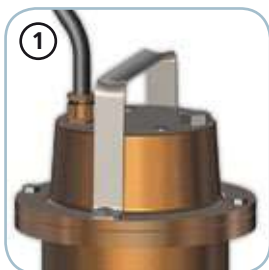
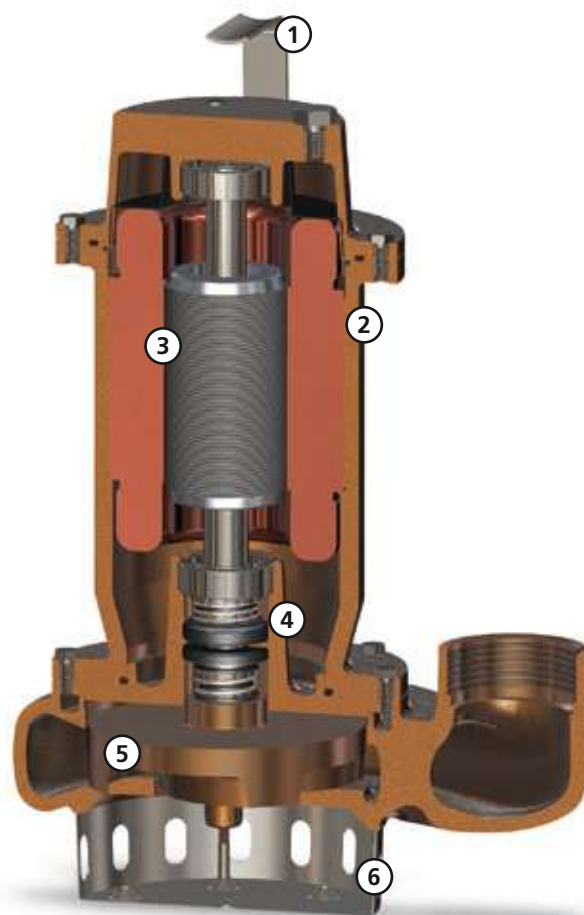
### Construction materials

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Case                             | Bronze B10                                  |
| Impeller                         | Bronze B10                                  |
| Nuts and bolts                   | Stainless steel - Class A4                  |
| Standard gasket                  | Rubber - VITON                              |
| Shaft                            | Stainless steel - AISI 316                  |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) |

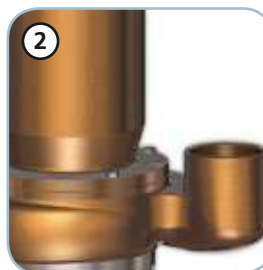
### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 5 ÷ 11               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

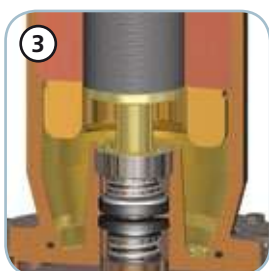
DRB

**Handle**

AISI 316 stainless steel lifting and carrying handle.

**Structure**

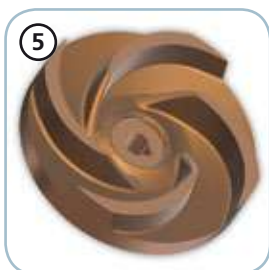
B10 bronze construction which makes the pump suitable for use with chemically aggressive liquids.

**Motor**

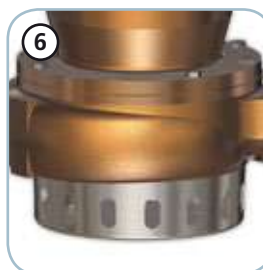
Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC).

**Impeller**

Multichannel open impeller in B10 bronze.

**Intake strainer**

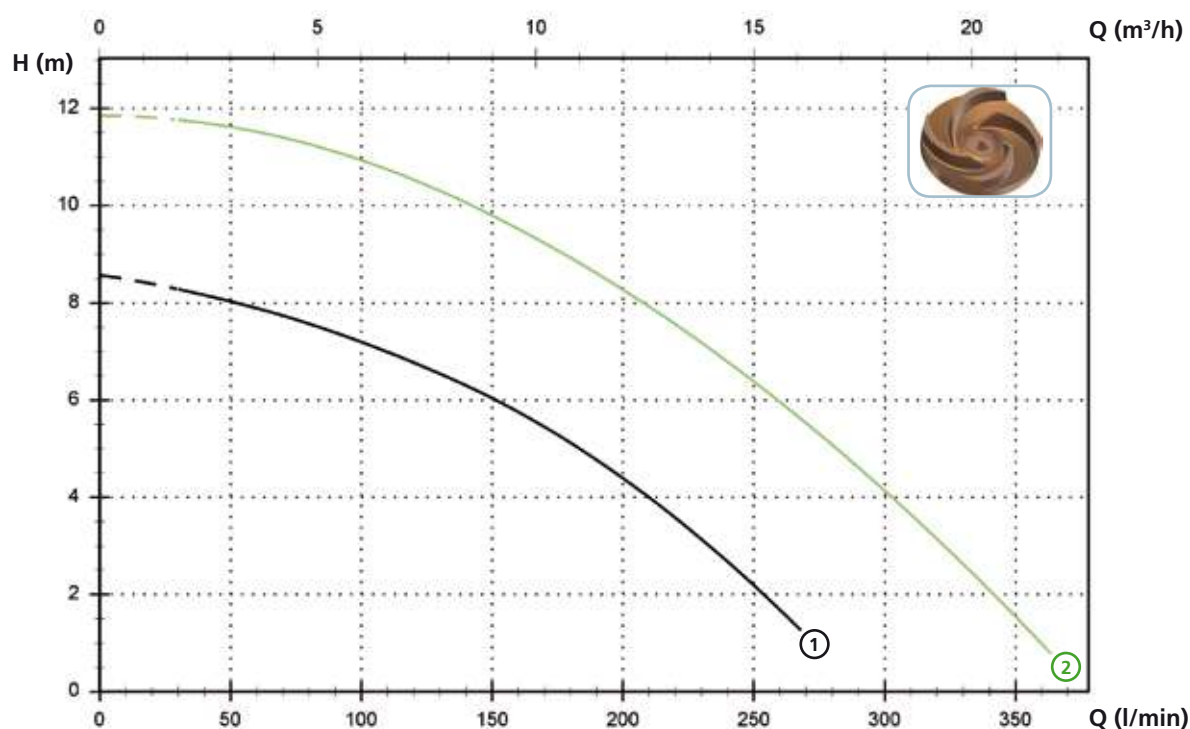
Intake strainer in stainless steel.

# DRB

## Models with vertical GAS 1¼" threaded discharge - 2 poles

### Performances

|                            | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    |
|----------------------------|-------|------|------|------|------|------|------|------|
|                            | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  |
|                            | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 |
| ① DRB 50/2/G32V A0CM(T)/50 |       | 8.6  | 7.9  | 6.8  | 5.1  | 2.7  |      |      |
| ② DRB 75/2/G32V A0CM(T)/50 |       | 11.9 | 11.5 | 10.5 | 8.9  | 6.8  | 4.1  | 1.0  |



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRB 50/2/G32V A0CT/50 | 230 | 1      | -       | 0.37    | 2.9 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRB 75/2/G32V A0CM/50 | 230 | 1      | -       | 0.55    | 3.9 | 2900 | Dir   | G 1¼" | 15 mm        |

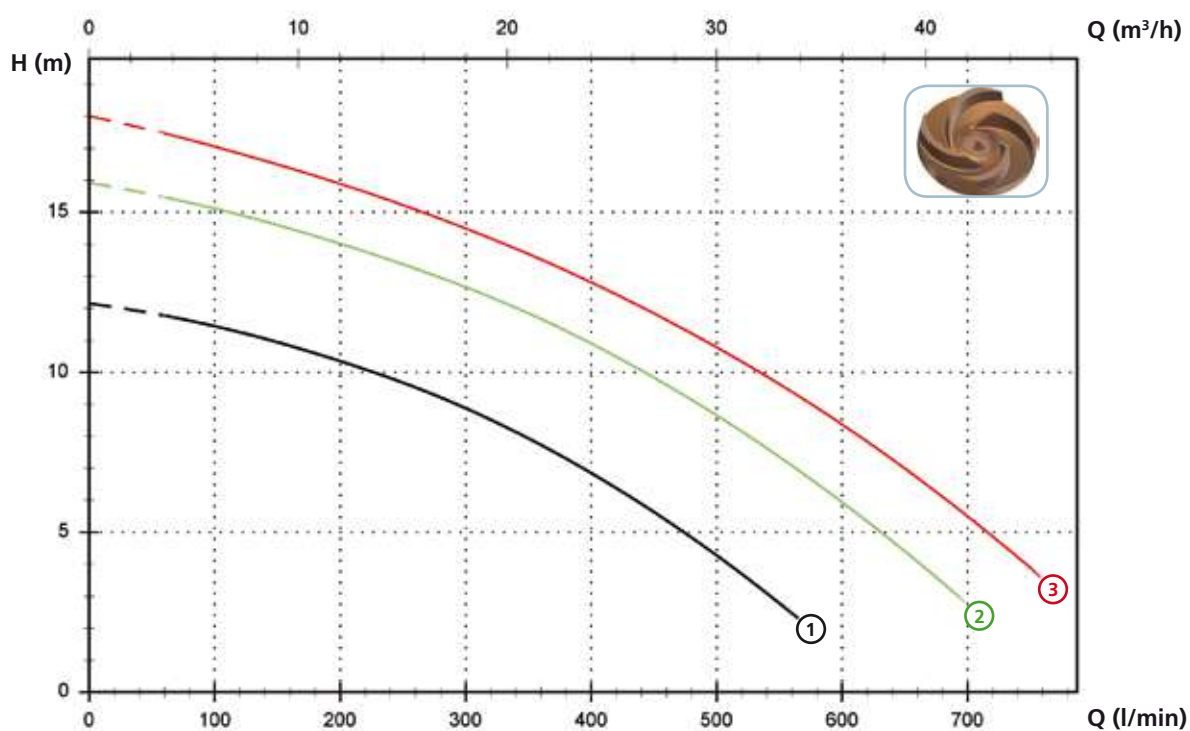
  

|                         | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø     | Free passage |
|-------------------------|-----|--------|---------|---------|-----|------|-------|-------|--------------|
| ① DRB 50/2/G32V A0CT/50 | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 1¼" | 15 mm        |
| ② DRB 75/2/G32V A0CT/50 | 400 | 3      | -       | 0.55    | 1.4 | 2900 | Dir   | G 1¼" | 15 mm        |

## Models with vertical GAS 2" threaded discharge - 2 poles

## Performances

|                             |                   |      |      |      |      |      |      |      |
|-----------------------------|-------------------|------|------|------|------|------|------|------|
|                             | l/s               | 0    | 2    | 4    | 6    | 8    | 10   | 12   |
|                             | l/min             | 0    | 120  | 240  | 360  | 480  | 600  | 720  |
|                             | m <sup>3</sup> /h | 0    | 7.2  | 14.4 | 21.6 | 28.8 | 36.0 | 43.2 |
| ① DRB 100/2/G50V A0CM(T)/50 |                   | 12.2 | 11.3 | 9.8  | 7.7  | 4.8  |      |      |
| ② DRB 150/2/G50V A0CM(T)/50 |                   | 15.9 | 14.9 | 13.5 | 11.7 | 9.1  | 5.9  |      |
| ③ DRB 200/2/G50V A0CM(T)/50 |                   | 18.0 | 16.8 | 15.4 | 13.5 | 11.2 | 8.4  | 4.9  |



## Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRB 100/2/G50V A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRB 150/2/G50V A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRB 200/2/G50V A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2" | 15 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DRB 100/2/G50V A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2" | 15 mm        |
| ② DRB 150/2/G50V A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2" | 15 mm        |
| ③ DRB 200/2/G50V A0CT/50 | 400 | 3      | -       | 1.5     | 3.5 | 2900 | Dir   | G 2" | 15 mm        |

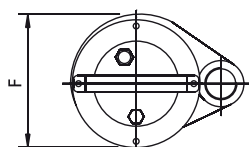
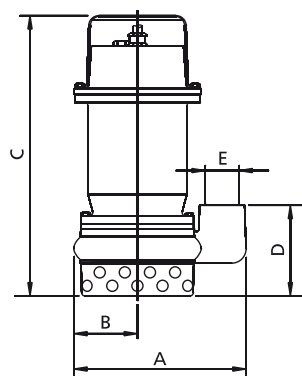
# DRB

## Versions available

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                  |             |             |                  |        |        |             | Cooling |           |    |                  | Mechanical seals |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|------------------|-------------|-------------|------------------|--------|--------|-------------|---------|-----------|----|------------------|------------------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G | T<br>C<br>G | T<br>C<br>S | T<br>C<br>S<br>G | T<br>S | T<br>R | T<br>R<br>G | N       | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC             | SICM | SICAL | 2SICAL |
| DRB 50/2/G32V A0CM/50  |                     | ● |        |             |                  |                  |             | ●           | ●                |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 75/2/G32V A0CM/50  |                     | ● |        |             |                  |                  |             | ●           | ●                |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 100/2/G50V A0CM/50 |                     | ● |        |             |                  |                  |             | ●           | ●                |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 150/2/G50V A0CM/50 |                     | ● |        |             |                  |                  |             | ●           | ●                |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 200/2/G50V A0CM/50 |                     | ● |        |             |                  |                  |             | ●           | ●                |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 50/2/G32V A0CT/50  | ●                   |   |        |             |                  |                  |             |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 75/2/G32V A0CT/50  | ●                   |   |        |             |                  |                  |             |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 100/2/G50V A0CT/50 | ●                   |   |        |             |                  |                  |             |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 150/2/G50V A0CT/50 | ●                   |   |        |             |                  |                  |             |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |
| DRB 200/2/G50V A0CT/50 | ●                   |   |        |             |                  |                  |             |             |                  |        |        |             | ●       |           |    |                  | ●                |      |       |        |

## Overall dimensions and weights



Dimensions in mm

All weights and dimensions are indicative only

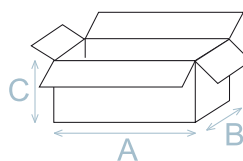
|                            | A   | B   | C   | D   | E     | F   | kg |
|----------------------------|-----|-----|-----|-----|-------|-----|----|
| DRB 50/2/G32V A0CM(T)/50   | 210 | 75  | 340 | 110 | G 1¼" | 160 | 17 |
| DRB 75/2/G32V A0CM (T)/50  | 210 | 75  | 340 | 110 | G 1¼" | 160 | 17 |
| DRB 100/2/G50V A0CM (T)/50 | 265 | 100 | 390 | 125 | G 2"  | 190 | 21 |
| DRB 150/2/G50V A0CM (T)/50 | 265 | 100 | 390 | 125 | G 2"  | 190 | 23 |
| DRB 200/2/G50V A0CM (T)/50 | 265 | 100 | 390 | 125 | G 2"  | 190 | 23 |

## Packaging dimension

|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DRB 50/2/G32V A0CM(T)/50  | 385 | 225 | 245 |
| DRB 75/2/G32V A0CM(T)/50  | 385 | 225 | 245 |
| DRB 100/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DRB 150/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DRB 200/2/G50V A0CM(T)/50 | 475 | 285 | 235 |

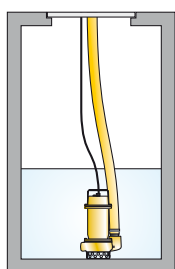
Dimension in mm

All weights and dimensions are indicative only

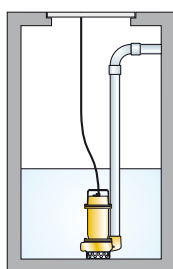


## Installations available

A



B









# DGB

## Special alloy pumps

All product images are indicative only



### General characteristics

| Special alloy pump |                 |
|--------------------|-----------------|
| motor power        | 0,37 ÷ 1,5 kW   |
| poles              | 2               |
| discharge          | GAS 2" vertical |
| free passage       | max 38 mm       |
| max flow rate      | 10.6 l/s        |
| max head           | 15 m            |

### Electromechanical assembly

Electromechanical assembly in B10 bronze, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals assembled opposing and with oil lubrication. Oil bath motor.

### Applications

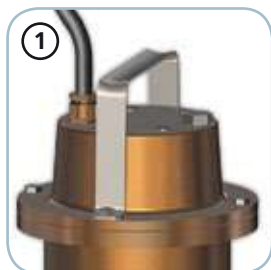
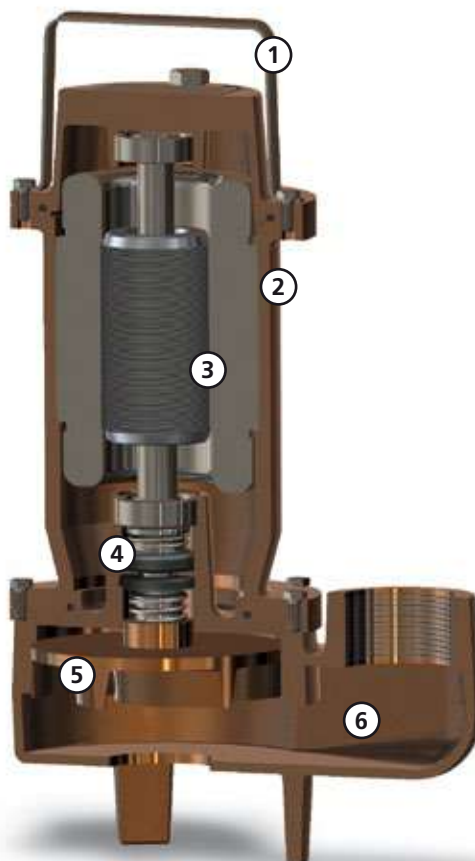
Suitable for lifting chemically aggressive soiled liquids, dyes and seawater. These units are therefore ideal for applications in the tanning industry, the paper industry and the shipping sector.

### Construction materials

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Case                             | Bronze B10                                  |
| Impeller                         | Bronze B10                                  |
| Nuts and bolts                   | Stainless steel - Class A4                  |
| Standard gasket                  | Rubber - VITON                              |
| Shaft                            | Stainless steel - AISI 316                  |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (2SiC) |

### Operating limits

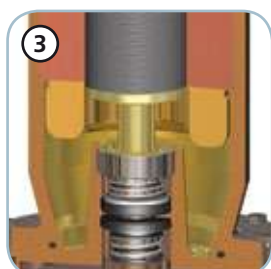
|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 5 ÷ 11               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 30                   |

**DGB****Handle**

AISI 316 stainless steel lifting and carrying handle.

**Structure**

B10 bronze construction which makes the pump suitable for use with chemically aggressive liquids.

**Motor**

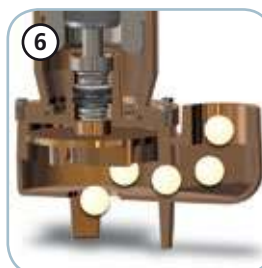
Oil-bath motor with thermal protections.

**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC).

**Impeller**

Vortex impeller in B10 bronze.

**Free passage**

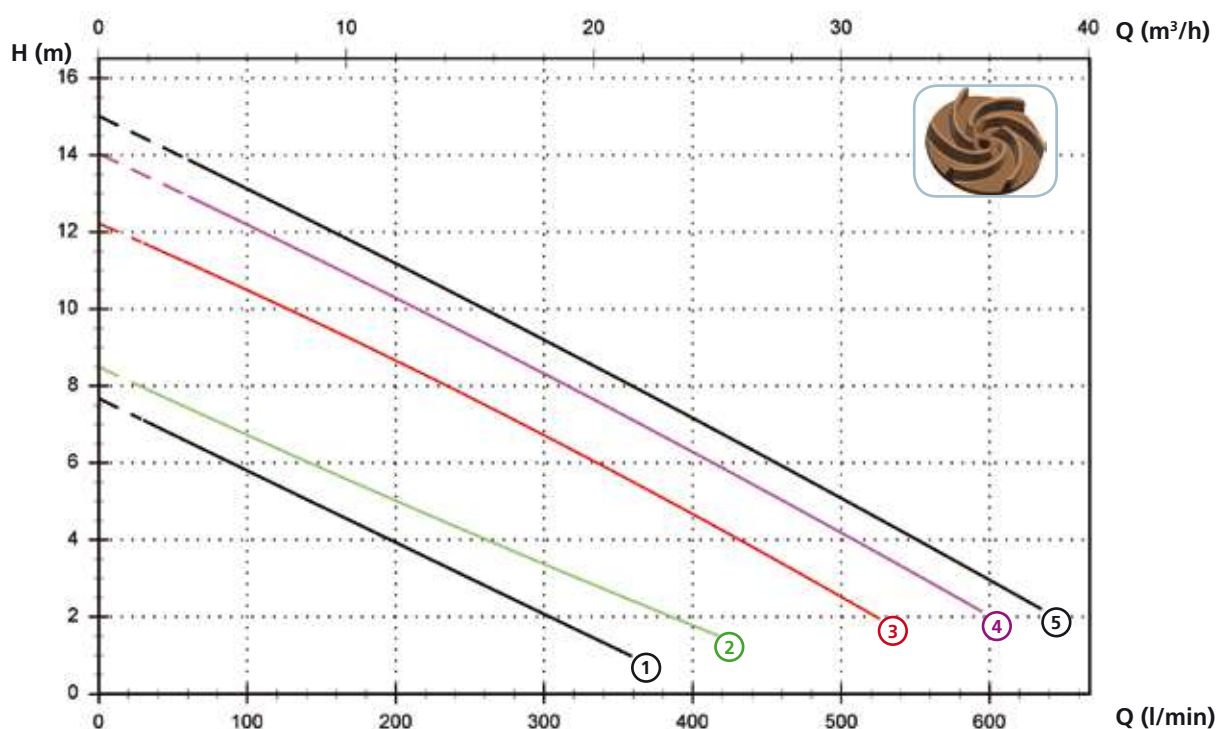
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

# DGB

## Models with vertical GAS 1 1/4" threaded discharge - 2 poles

### Performances

|                              | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
|                              | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  | 420  | 480  | 540  | 600  |
|                              | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 | 25.2 | 28.8 | 32.4 | 36.0 |
| ① DGB 50/2/G50V A0CM(T)/50   |       | 7.7  | 6.6  | 5.4  | 4.3  | 3.2  | 2.1  |      |      |      |      |      |
| ② DGB 75/2/G50V A0CM (T)/50  |       | 8.5  | 7.4  | 6.4  | 5.4  | 4.4  | 3.4  | 2.4  |      |      |      |      |
| ③ DGB 100/2/G50V A0CM (T)/50 |       | 12.2 | 11.2 | 10.1 | 9.0  | 7.9  | 6.7  | 5.5  | 4.3  | 3.0  |      |      |
| ④ DGB 150/2/G50V A0CM (T)/50 |       | 14.0 | 12.9 | 11.8 | 10.7 | 9.5  | 8.3  | 7.1  | 5.9  | 4.6  | 3.3  |      |
| ⑤ DGB 200/2/G50V A0CM (T)/50 |       | 15.0 | 13.9 | 12.7 | 11.6 | 10.4 | 9.2  | 8.0  | 6.8  | 5.5  | 4.2  | 3.0  |



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGB 50/2/G50V A0CM/50  | 230 | 1      | -       | 0.37    | 2.9 | 2900 | Dir   | G 2" | 38 mm        |
| ② DGB 75/2/G50V A0CM/50  | 230 | 1      | -       | 0.55    | 3.9 | 2900 | Dir   | G 2" | 38 mm        |
| ③ DGB 100/2/G50V A0CM/50 | 230 | 1      | -       | 0.88    | 6.5 | 2900 | Dir   | G 2" | 38 mm        |
| ④ DGB 150/2/G50V A0CM/50 | 230 | 1      | -       | 1.1     | 8.2 | 2900 | Dir   | G 2" | 38 mm        |
| ⑤ DGB 200/2/G50V A0CM/50 | 230 | 1      | -       | 1.5     | 9.3 | 2900 | Dir   | G 2" | 38 mm        |

|                          | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø    | Free passage |
|--------------------------|-----|--------|---------|---------|-----|------|-------|------|--------------|
| ① DGB 50/2/G50V A0CT/50  | 400 | 3      | -       | 0.37    | 1.1 | 2900 | Dir   | G 2" | 38 mm        |
| ② DGB 75/2/G50V A0CT/50  | 400 | 3      | -       | 0.55    | 1.4 | 2900 | Dir   | G 2" | 38 mm        |
| ③ DGB 100/2/G50V A0CT/50 | 400 | 3      | -       | 0.88    | 2.3 | 2900 | Dir   | G 2" | 38 mm        |
| ④ DGB 150/2/G50V A0CT/50 | 400 | 3      | -       | 1.1     | 2.7 | 2900 | Dir   | G 2" | 38 mm        |
| ⑤ DGB 200/2/G50V A0CT/50 | 400 | 3      | -       | 1.5     | 3.6 | 2900 | Dir   | G 2" | 38 mm        |

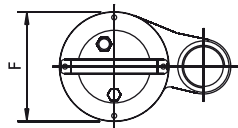
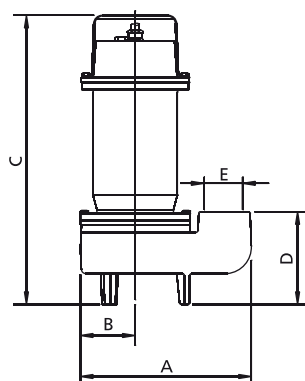
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |    | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|----|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | FT | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| DGB 50/2/G50V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 75/2/G50V A0CM/50  |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 100/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 150/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 200/2/G50V A0CM/50 |                     | ● |        |             |                  |                       |             | ●                | ●                     |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 50/2/G50V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 75/2/G50V A0CT/50  | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 100/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 150/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |
| DGB 200/2/G50V A0CT/50 | ●                   |   |        |             |                  |                       |             |                  |                       |        |        |             | ● |           |    |                  | ●    |      |       |        |

## Overall dimensions and weights



Dimensions in mm

All weights and dimensions are indicative only

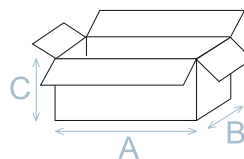
|                           | A   | B  | C   | D   | E    | F   | kg   |
|---------------------------|-----|----|-----|-----|------|-----|------|
| DGB 50/2/G50V A0CM(T)/50  | 225 | 75 | 360 | 120 | G 2" | 155 | 16.5 |
| DGB 75/2/G50V A0CM(T)/50  | 225 | 75 | 360 | 120 | G 2" | 155 | 18   |
| DGB 100/2/G50V A0CM(T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 22   |
| DGB 150/2/G50V A0CM(T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 23   |
| DGB 200/2/G50V A0CM(T)/50 | 245 | 80 | 410 | 130 | G 2" | 155 | 26   |

## Packaging dimension

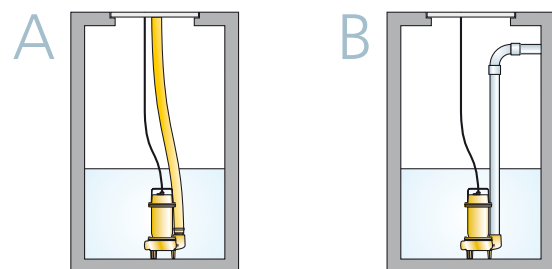
|                           | A   | B   | C   |
|---------------------------|-----|-----|-----|
| DGB 50/2/G50V A0CM(T)/50  | 385 | 225 | 245 |
| DGB 75/2/G50V A0CM(T)/50  | 385 | 225 | 245 |
| DGB 100/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DGB 150/2/G50V A0CM(T)/50 | 475 | 285 | 235 |
| DGB 200/2/G50V A0CM(T)/50 | 475 | 285 | 235 |

Dimension in mm

All weights and dimensions are indicative only



## Installations available

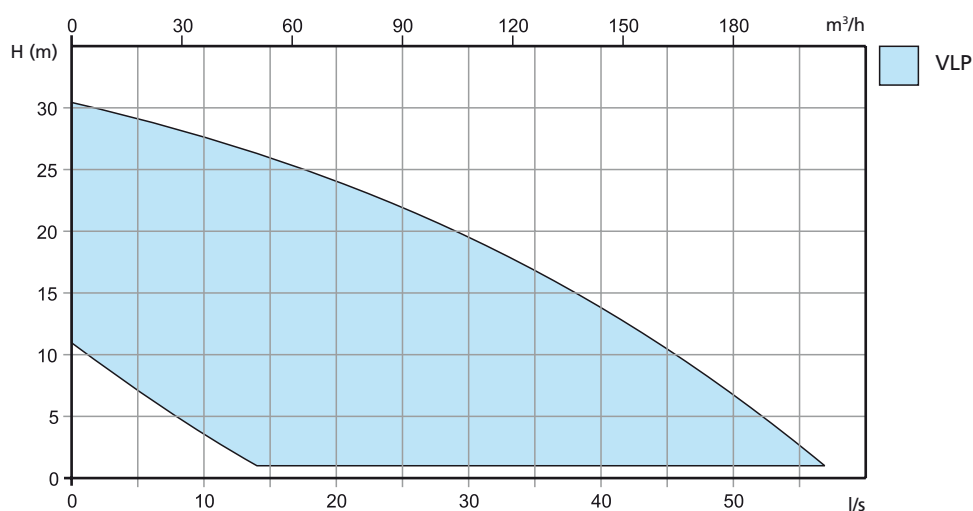
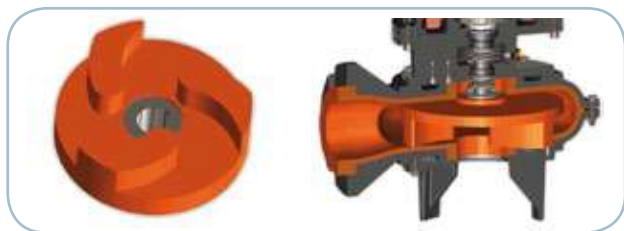


# 1.8 VL (VULCO)

## pumps for abrasive liquids

**VULCO (VL)** family pumps are built with hydraulic units in cast iron coated with a thick layer of hard-wearing polyurethane (Vulkollan). This coating's virtually unlimited duration allows its application where other materials generate too many problems with excessive wear and insufficient time between services. Designed for use in the ceramics industry, for the processing of granite, marble and glass, for metal cutting, in quarries and mines, in aggregate processing systems and in concrete production plants.

1.5 ÷ 16.4 kW



### VLP

page 358

Electromechanical assembly in EN-GJL-25 cast iron. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite alumina mechanical seal lubricated by the motor oil. Oil bath motor. Multichannel open impeller with metal core coated with a thick layer of hard-wearing polyurethane (Vulkollan).

The special coating on the impeller and hydraulic unit makes this electric pump ideal for transferring ceramic glazes or pumping very dense, strongly abrasive liquids.

VL

pumps for abrasive liquids

## Vulkollan: the high-performance elastomer

Vulkollan is one of the elastomers with the highest performance on the market.

Its mechanical and dynamic properties are astonishingly high.

It is used in a large number of technological fields for the most heavy-duty applications, where especially high dynamic stresses must be withstood.

Vulkollan items are manufactured by casting at temperatures over 100° C. This high-performance elastomer is produced by a multi-stage process, involving the chemical reaction between polyester polyols and glycols.

### Vulkollan's key features are:

- High mechanical strength
- Exceptional dynamic load-bearing capacity



### Main characteristics

- Resistance to high dynamic stresses
- High tear strength
- Low water absorption (ensures trouble-free operation in the most widely varying weather conditions)
- Good resistance to uv radiation, ozone, fats and oils
- Low variation in properties at different operating temperatures (from -30° c to +80° c)
- High wear resistance
- Low permanent deformation
- High resilience



### Where it is normally used

- Pump diaphragms
- Couplers
- Disks for open-end spinning machines
- Scraper blades for screen printing
- Wheel coatings
- Sealing rings
- Support bearings
- Winding rollers
- Suspension systems





# VLP

All product images are indicative only



## Multi-channel open impeller with Vulkollan coating

### General characteristics

| Multi-channel open impeller with Vulkollan coating |                          |
|----------------------------------------------------|--------------------------|
| motor power                                        | 1,5 ÷ 16,4 kW            |
| poles                                              | 2 / 4                    |
| discharge                                          | DN 50 - DN 80 horizontal |
| free passage                                       | max 54 mm                |
| max flow rate                                      | 49.7 l/s                 |
| max head                                           | 30.7 m                   |

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) silicon carbide mechanical seals installed in series in inspectable oil sump and 1 (one) opposed graphite-alumina lip seal lubricated by the motor oil. Oil bath motor.

### Applications

The special coating on the impeller and hydraulic unit makes this electric pump ideal for transferring ceramic glazes or pumping very dense, strongly abrasive liquids.

### Construction materials

|                                  |                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------|
| Case                             | Cast iron EN-GJL 250                                                                           |
| Impeller                         | Cast iron with Vulkollan coating                                                               |
| Nuts and bolts                   | Stainless steel - Class A2-70                                                                  |
| Standard gasket                  | Rubber - NBR                                                                                   |
| Shaft                            | Stainless steel - AISI 420                                                                     |
| Cooling jacket                   | Carbon steel or stainless steel AISI 304                                                       |
| Paint type                       | Ecological bicomponent epoxy (medium thickness 150 µm)                                         |
| Set of standard mechanical seals | Two silicon carbide mechanical seals (SiC) and one carbon-aluminium oxide mechanical seal (AL) |

### Operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 ÷ 11               |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 20                   |



### Cooling system

The cooling liquid from an external circuit enters the cavity between the body and the jacket between an inlet hole to cool the motor. Once the cavity is full, the liquid flows down the special pipe into the mechanical seal sump, lubricating them before being expelled through the outlet hole.



### Structure

Constructed in GJL-250 cast iron.



### Bearings

Shielded ball bearings with lifetime lubrication.



### Motor

Oil-bath motor with thermal protections.



### Mechanical seals

Two mechanical seals in silicon carbide (SiC) and one mechanical seal in alumina graphite (AL).



### Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



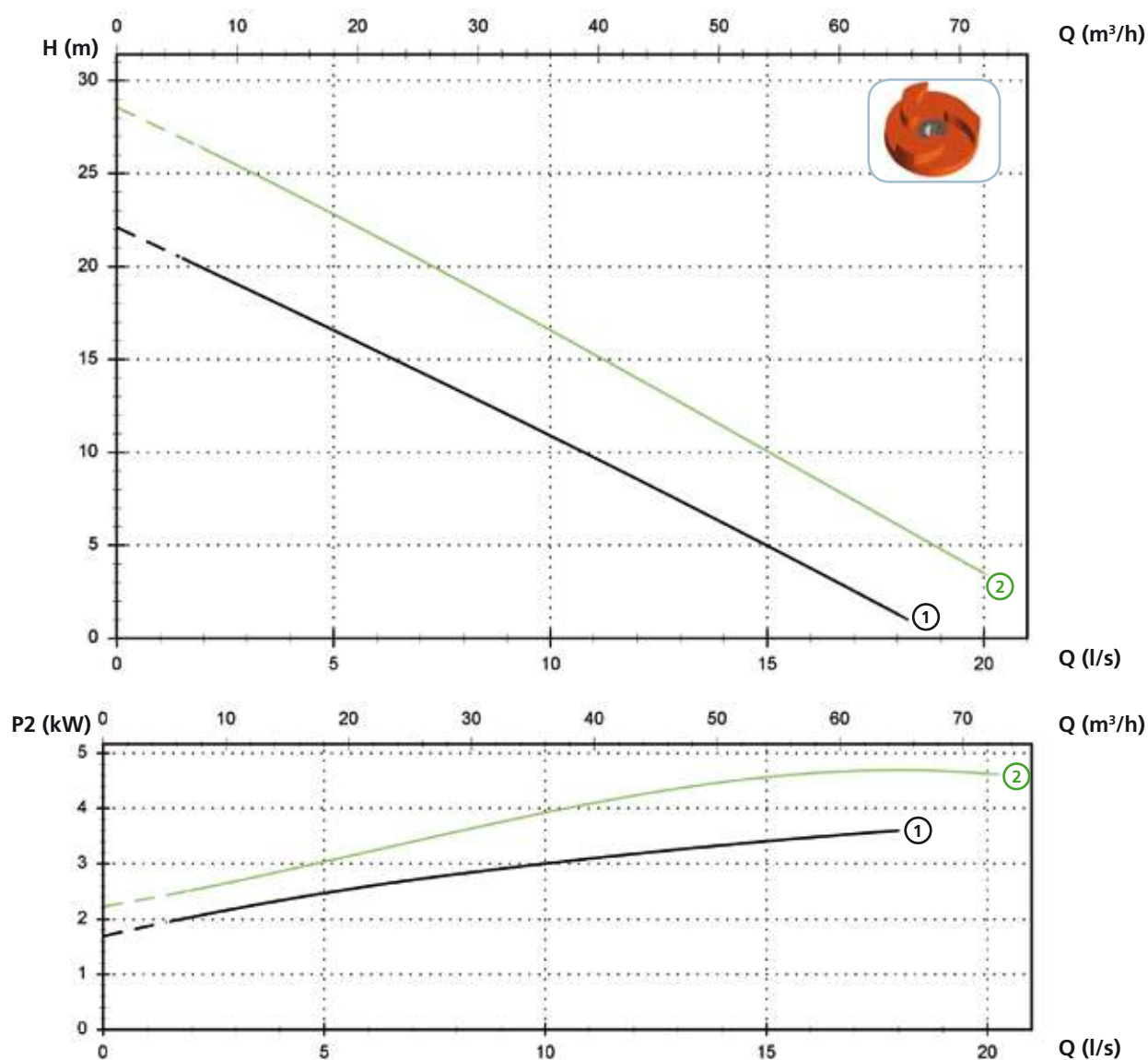
### Pump body

Impeller and pump body in GJL-250 cast iron coated with abrasion-resistant polyurethane (Vulkollan).

# VLP

## Models with horizontal DN50 PN10-16 flanged discharge - 2 poles

### Performances

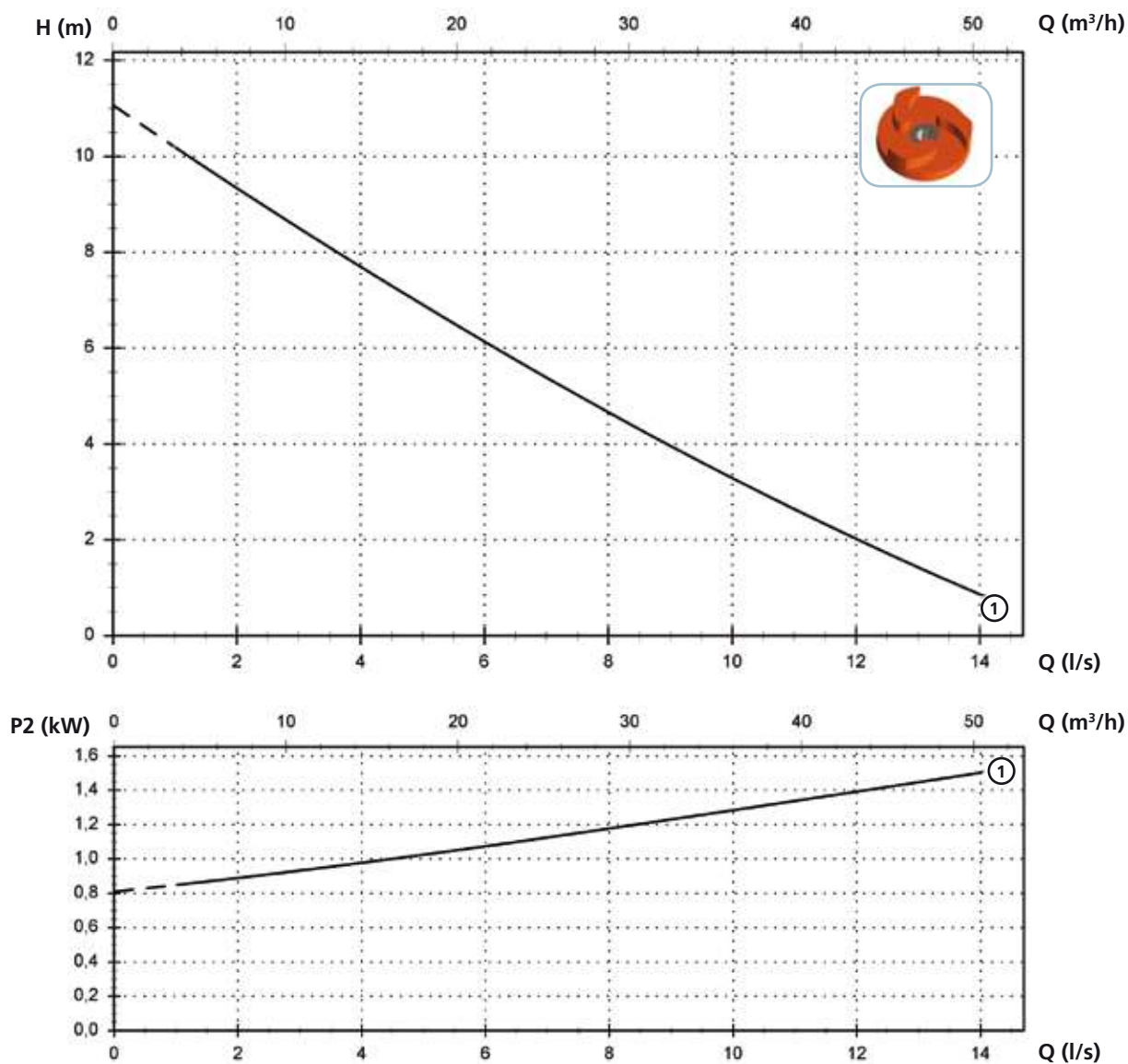


### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|------|------|-------|--------------|--------------|
| ① VLP 400/2/50 A0FT/50 | 400 | 3      | 4.7     | 3.6     | 8    | 2900 | Dir   | DN50 PN10-16 | 25 mm        |
| ② VLP 550/2/50 A0GT/50 | 400 | 3      | 5.9     | 4.9     | 10.1 | 2900 | Dir   | DN50 PN10-16 | 25 mm        |

## Models with horizontal DN50 PN10-16 flanged discharge - 4 poles

### Performances



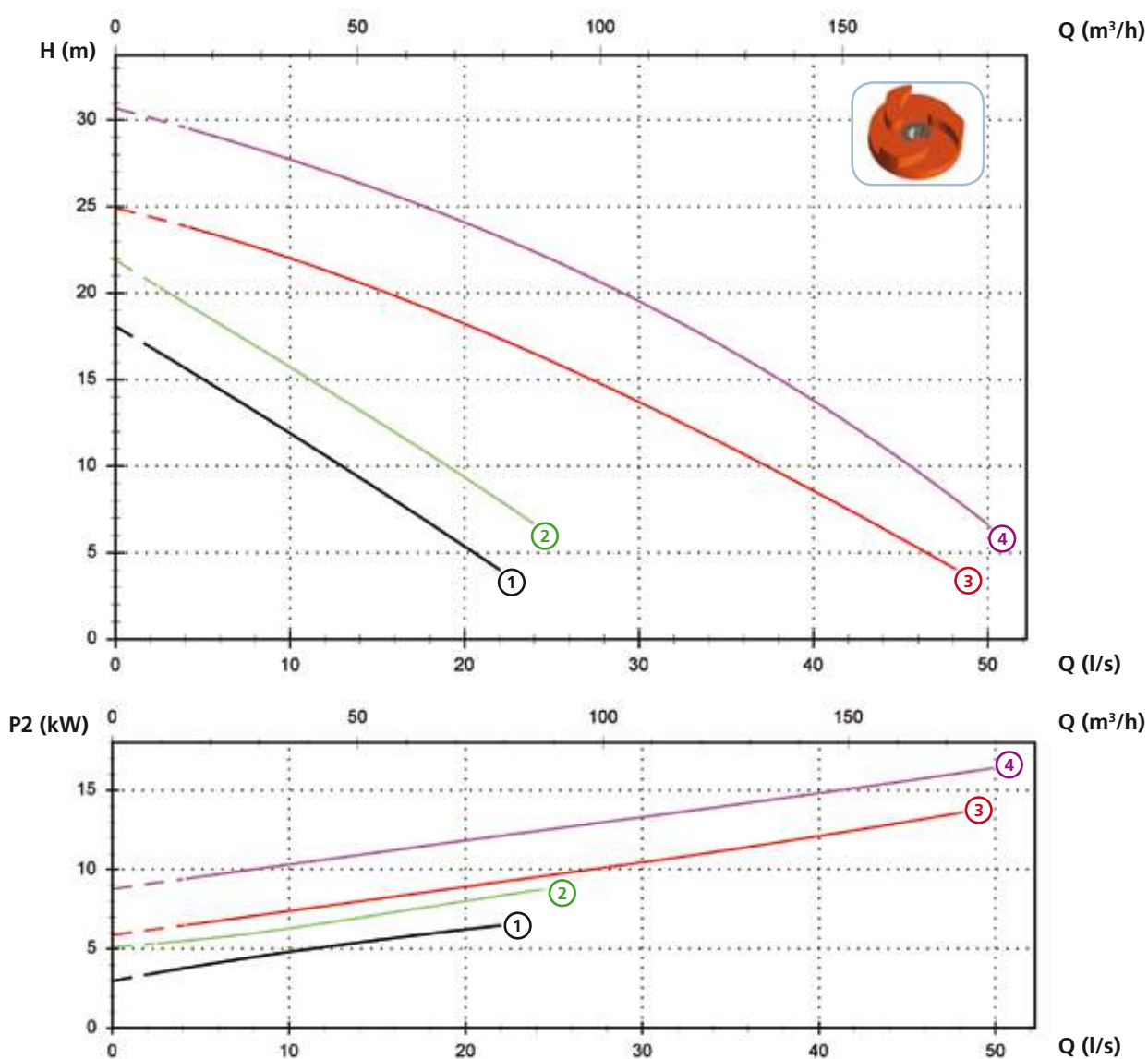
### Technical data

|                        | V   | Phases | P1 (kW) | P2 (kW) | A   | Rpm  | Start | Ø            | Free passage |
|------------------------|-----|--------|---------|---------|-----|------|-------|--------------|--------------|
| ① VLP 200/4/50 A0ET/50 | 400 | 3      | 2.1     | 1.5     | 4.1 | 1450 | Dir   | DN50 PN10-16 | 28 mm        |

# VLP

## Models with horizontal DN80 PN10 flanged discharge - 4 poles

### Performances



### Technical data

|                         | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Start | Ø         | Free passage |
|-------------------------|-----|--------|---------|---------|------|------|-------|-----------|--------------|
| ① VLP 750/4/80 A0HT/50  | 400 | 3      | 8.6     | 6.5     | 14.9 | 1450 | Y Δ   | DN80 PN10 | 45 mm        |
| ② VLP 1000/4/80 A0HT/50 | 400 | 3      | 11.5    | 8.9     | 20   | 1450 | Y Δ   | DN80 PN10 | 45 mm        |
| ③ VLP 1500/4/80 A0IT/50 | 400 | 3      | 15.8    | 13.6    | 28.2 | 1450 | Y Δ   | DN80 PN10 | 54 mm        |
| ④ VLP 2000/4/80 A0IT/50 | 400 | 3      | 20.7    | 16.4    | 36   | 1450 | Y Δ   | DN80 PN10 | 54 mm        |

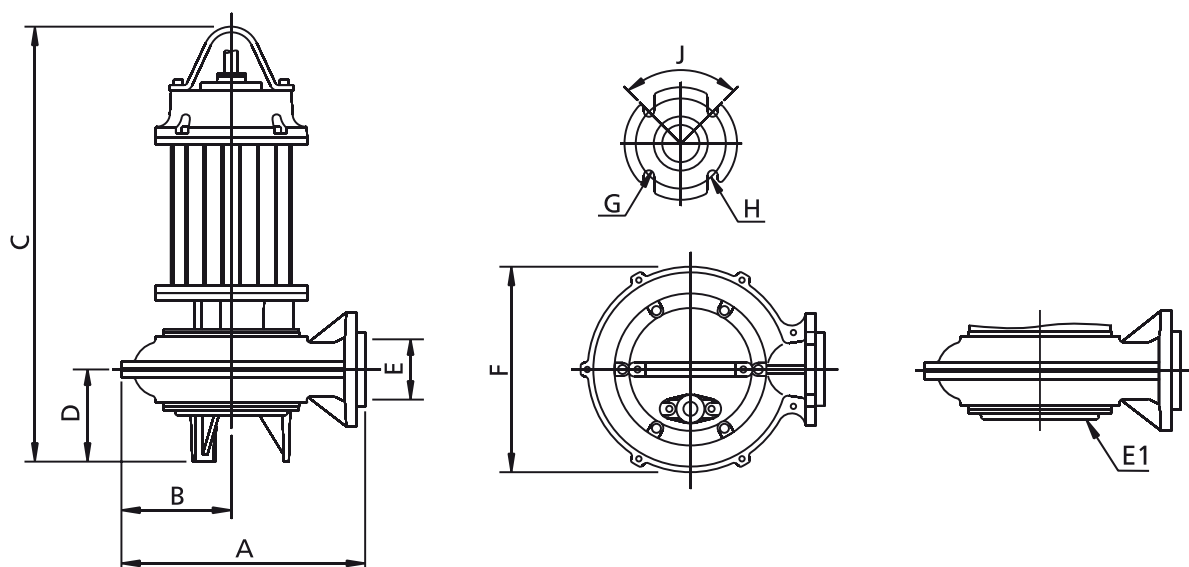
## Versions available

(Key to versions on page 16)

(Key to versions on page 16)

|                       | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        | Cooling     |   |           |        | Mechanical seals |      |      |       |        |
|-----------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|---|-----------|--------|------------------|------|------|-------|--------|
|                       | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | N | CC<br>CCE | F<br>T | C<br>G<br>F<br>T | 2SIC | SICM | SICAL | 2SICAL |
| VLP 400/2/50 A0FT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |
| VLP 550/2/50 A0GT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |
| VLP 200/4/50 A0ET/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |
| VLP 750/4/80 A0HT/50  |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |
| VLP 1000/4/80 A0HT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |
| VLP 1500/4/80 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |
| VLP 2000/4/80 A0IT/50 |                     | ● |        |             |                  |                       |             |                  |                       |        |        |             | ● |           | ●      | ●                |      |      |       | ●      |

## Overall dimensions and weights



|                       | A   | B   | C   | D   | E  | E1(*)      | F   | G  | H   | J   | kg  |
|-----------------------|-----|-----|-----|-----|----|------------|-----|----|-----|-----|-----|
| VLP 400/2/50 A0FT/50  | 290 | 140 | 555 | 105 | 50 | -          | 260 | 18 | 125 | 90° | 48  |
| VLP 550/2/50 A0GT/50  | 290 | 140 | 655 | 105 | 50 | -          | 260 | 18 | 125 | 90° | 67  |
| VLP 200/4/50 A0ET/50  | 290 | 140 | 555 | 105 | 50 | -          | 260 | 18 | 125 | 90° | 26  |
| VLP 750/4/80 A0HT/50  | 435 | 195 | 775 | 165 | 80 | DN150 PN10 | 365 | 18 | 160 | 90° | 80  |
| VLP 1000/4/80 A0HT/50 | 435 | 195 | 775 | 165 | 80 | DN100 PN10 | 365 | 18 | 160 | 90° | 81  |
| VLP 1500/4/80 A0IT/50 | 490 | 235 | 970 | 175 | 80 | -          | 440 | 18 | 160 | 90° | 172 |
| VLP 2000/4/80 A0IT/50 | 490 | 233 | 970 | 175 | 80 | -          | 440 | 18 | 160 | 90° | 190 |

Dimensions in mm

All weights and dimensions are indicative only

(\*) Suction flange available upon request



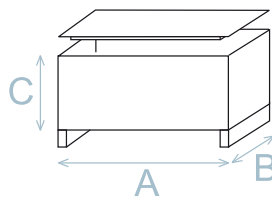
# VLP

## Packaging dimension

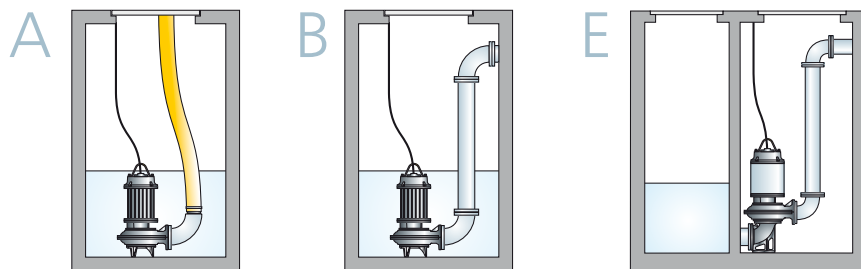
|                       | A   | B   | C   |
|-----------------------|-----|-----|-----|
| VLP 400/2/50 A0FT/50  | 725 | 445 | 415 |
| VLP 550/2/50 A0GT/50  | 725 | 445 | 415 |
| VLP 200/4/50 A0ET/50  | 725 | 445 | 415 |
| VLP 750/4/80 A0HT/50  | 915 | 515 | 555 |
| VLP 1000/4/80 A0HT/50 | 915 | 515 | 555 |
| VLP 1500/4/80 A0IT/50 | 915 | 515 | 555 |
| VLP 2000/4/80 A0IT/50 | 915 | 515 | 555 |

Dimension in mm

All weights and dimensions  
are indicative only



## Installations available



All product images are indicative only



## 1.9 Zenit **UNIQA**<sup>®</sup> {ZU}

High performance series



## ONLY USE WHAT YOU NEED: less waste, improved efficiency.

In emerging countries, the second largest expense in municipal budgets is generally the energy cost of water supplies. This situation is worsened by the fact that by 2020, 50% of the population of these countries will have moved to urban centres.

It is therefore clear that the energy consumed in supply drinking water and treating black water is destined to grow; at the present time, around 3% of world energy consumption is accounted by the pumping and treatment of civil and industrial water.

**It is critical that water systems be as efficient as possible, while reducing wastage to a minimum.**

## LCC: Life Cycle Cost

**Life Cycle Cost consists of 3 basic factors: initial costs, energy costs and maintenance.** It must be remembered that a pump or system's energy costs, together with installation, environmental, disposal and stoppage costs, account for **85 per cent** of the total cost. Maintenance then amounts to an additional 5 per cent. It thus becomes clear that **the initial cost only accounts for 10 per cent of LCC.**

Imagine the LCC as an iceberg, of which only 10% is visible, while the remaining 90% is concealed from view; in same way, the cost of an installation makes evident only the initial investment and conceals running and maintenance costs, which are by far greater than the initial purchase price.

Therefore, giving a submersible pump a highly efficient motor and internal components can guarantee impressive energy savings, recouping the extra investment compared to the purchase of a pump with the same hydraulic characteristics but poorer energy efficiency within just two years\*.

*\*Regular inspection of the system's components, operation and performance is essential for the achievement of efficiency targets.*

## The UNIQA solution

Starting from these considerations, Zenit has decided to orient its strategy towards the creation of products which satisfy restrictive efficiency and reliability criteria, thus minimising outages and running costs.

### UNCOMPROMISING EFFICIENCY

To reach the levels of efficiency set out in modern international standards, such as "NEMA A", Zenit has taken an uncompromising approach with UNIQA, a product intended to last for years in both civil and industrial settings, and which provides performance to **efficiency class Premium IE3.**

A wide choice of motors, from 4 to 200 kW with 2, 4, 6 and 8 pole windings, 50/60Hz power and DN65 to DN400 discharge ports, vortex impellers with full free passage and channels with anti-blockage systems, make the UNIQA series ideally suited to operation in any conditions.

The generously rated mechanical assemblies provide long service life, with long maintenance intervals and reduced downtime - all of which adds up to cost savings.

Performance is constant in continuous operations without costly downtime. The reliability of the submersible pump means smooth, regular operation. This is why UNIQA is made of innovative materials, using cutting edge technologies and a new patented cooling system.





## Efficiency, performance and reliability

The combination of **efficient motors, high hydraulic performance and reliability** give UNIQA a particularly high global efficiency rating, capable of ensuring a good return on investment over time.

### FROM WORDS TO DEEDS:

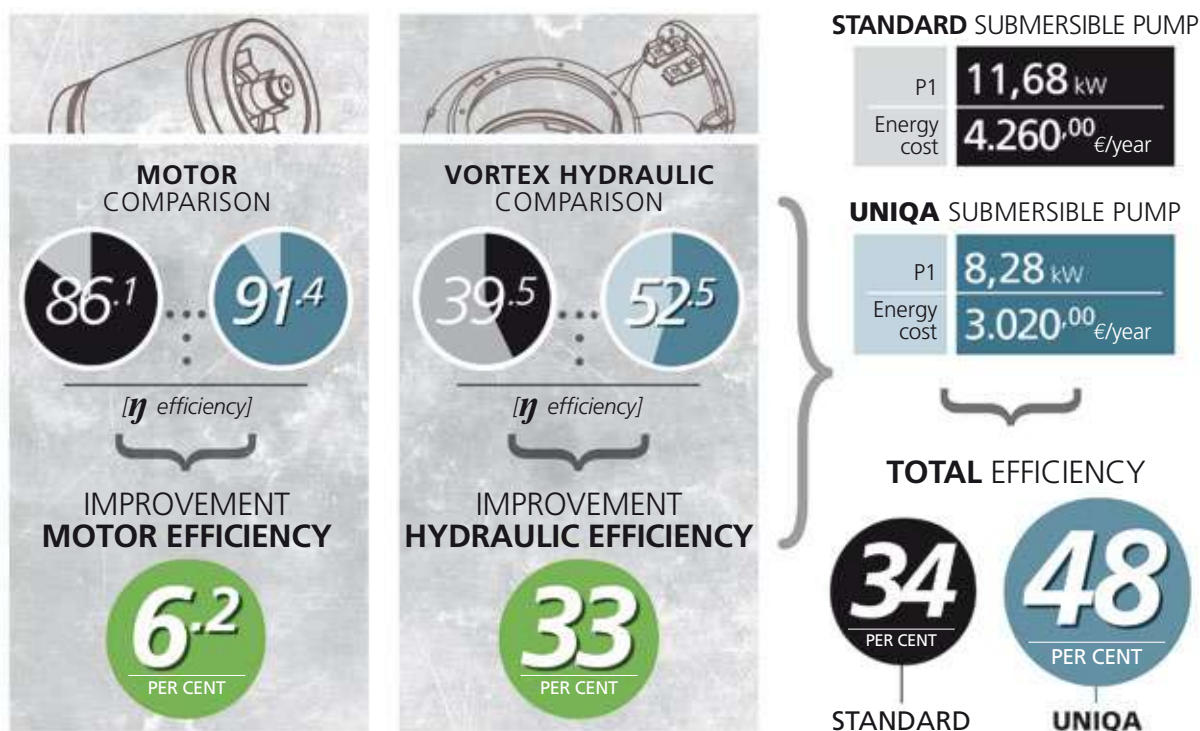
high efficiency, not just in performance, but also in running costs.

For a real understanding of how efficient UNIQA is, let's take a look at the figures for a small pumping station. Let's suppose we have calculated a "duty point" with a flow rate of 30 l/sec, lifted to a height of 13.5 m.

We now know we need a hydraulic power of 3,973 kW ( $P_{idr} = \rho \cdot g \cdot Q \cdot H$ ), for a total of 10 working hours a day (365 days/year), with an energy cost per kWh of 0.10 €/kWh. This is what our equipment aims to provide.

#### THE VALUE OF UNIQA

Let's compare the performance at the duty point indicated above of a UNIQA submersible pump with "efficiency class Premium IE3 and high efficiency hydraulics" (in blue) with that of an electric pump with **standard motor and conventional hydraulics** (in black).



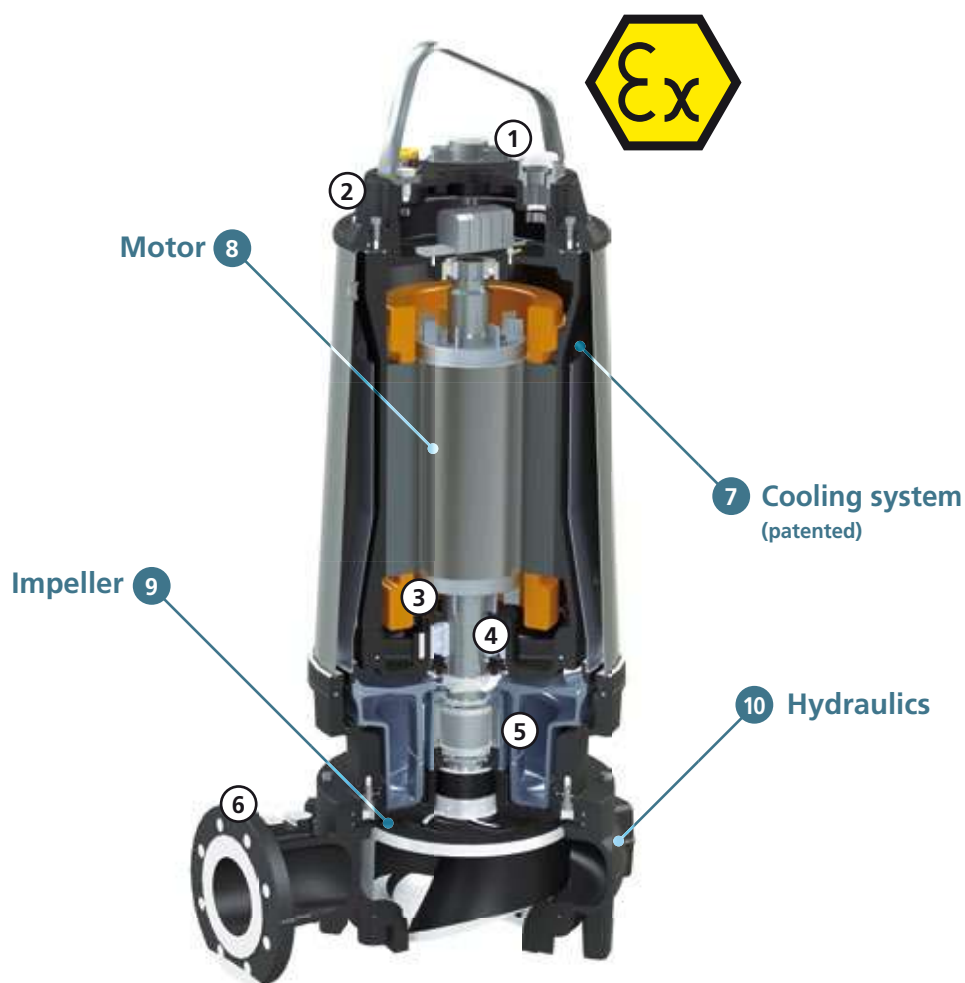
The example highlights the fact that using a **UNIQA pump with efficiency class PREMIUM IE3 (+6.2%) motor and high performance hydraulics (+33%)** compared to a **STANDARD pump**, yields improved global system efficiency, at the duty point in question, of 6%, thus providing considerable cost savings.

# 1.240€

THE EFFICIENCY ADVANTAGE\* OF A UNIQA PUMP WITH EFFICIENCY CLASS PREMIUM IE3 MOTOR AND HIGH PERFORMANCE HYDRAULICS CAN BE QUANTIFIED AT 1.240,00 €/YEAR OF COST SAVINGS

\* All calculations are for example only. Energy costs can vary by supplier and consumption tariffs.



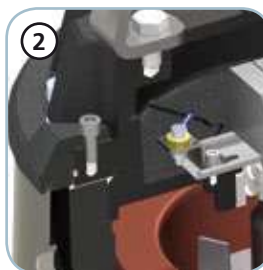


All product images are indicative only



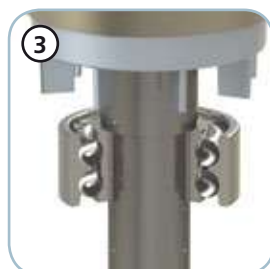
#### Cable gland

The cable gland can be sealed with extra resin upon request in order to prevent any possible leakage into the lid even if the cable gland seal fails.



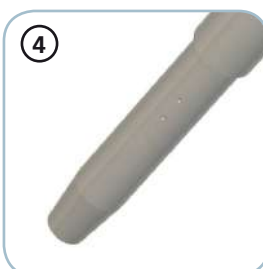
#### Motor compartment

Option to install one or more water/humidity sensors in the motor compartment.



#### Bearings

Oversized heavy-duty bearings designed for 50,000 hours of operation.



#### Motor shaft

The whole range is equipped with AISI 431 stainless steel shafts. The NITRONIC 50 version is also available upon request (this type of stainless steel has higher chemical and mechanical resistance compared to AISI 316 and AISI 329).



#### Mechanical seals

Two silicon carbide mechanical seals in the oil sump and V-rings. The oil can be checked and changed even with the pump vertical, using plugs on the exterior of the mount.



#### Flanges

Various flange drilling are available, including ANSI and BS.



## The heart of efficiency

UNIQA motors, rated 4 to 200 kW, have been designed to provide an efficiency class rating of Premium (IE3). UNIQA pumps can operate in S1 continuous duty up to 60°C, in compliance with the requirements of NEMA A classification.

All hydraulic components are designed for outstanding performance with a high hydraulic efficiency and wide free passages. Models with vortex set-back impeller are highly efficient, at the top of the range in comparison with other similar commercial configurations, so that these pumps can be used also with highly loaded waste water.

As for channel impeller models, also designed for large free passages and very high performance, note that they are fitted with the ACS anti-blockage system, which chops and expels fibres and ensures constant performance over time, regular operation and reduced running and maintenance costs. Furthermore, the impeller's diffuser plate can be adjusted axially to compensate for wear.

The special design of the rear section of the impeller, combined with the protected location of the mechanical seals, helps to prevent blockages even when handling very loaded fluids with fibrous impurities.

The seal system ensures continuous and regular duty due to the two counterposed mechanical seals, both in silicon carbide (motor and hydraulics sides), enclosed by an oil sump filled with ecological oil and an external V-ring. The oil sump can be fitted with a humidity sensor which, connected to an alarm system in the electrical enclosure, issues a warning when the first seal starts to degrade, thus allowing action to be taken in time to save the motor.

For non-submerged applications, a patented closed loop recirculating cooling circuit keeps the motor temperature low; the cooling fluid is separate from the waste water, thus ensuring long life and effective operation.

Small and medium sized machines are fabricated both in spheroidal cast iron and in AISI 316 stainless steel, thus allowing use even with highly aggressive fluids.



### 7 Cooling system (PATENTED)

The motor is cooled down by a patented closed-circuit internal re-circulation system. This way, should any soiled liquid penetrate the oil chamber due to possible wear of the first mechanical seal, the glycol used in the process wouldn't be affected.



### High efficiency motor

**Efficiency class PREMIUM IE3** motors function, in according with NEMA A standard, and insulation in class H. Guaranteed S1 duty cycle in fluids at 60° C or higher temperature.



### Impeller

Choice of 2 impeller types: vortex and high-efficiency channel type in cast iron, stainless steel or bronze/ aluminium.



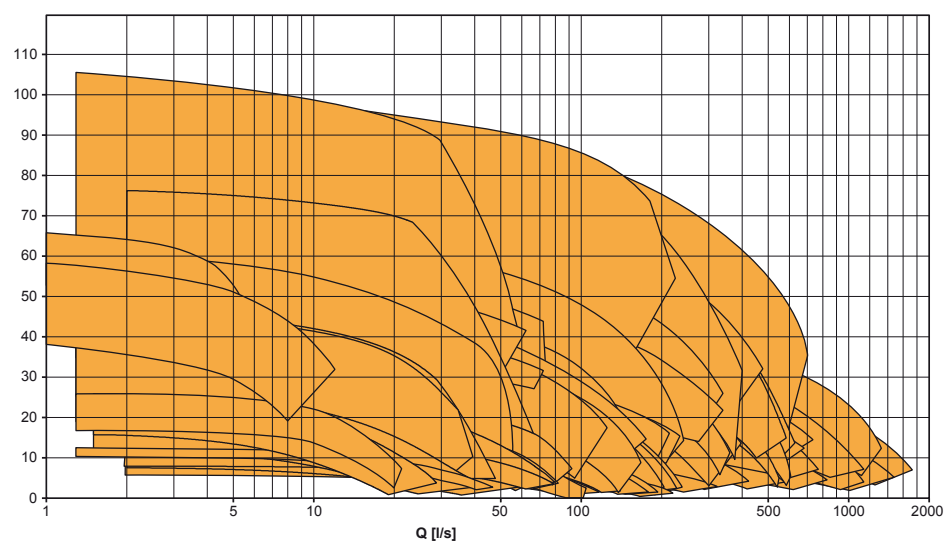
### Clogging-proof hydraulics

All hydraulic components are designed to provide highest efficiency and best performance combined with wide free passage. The Anti-Clogging-System (ACS) prevents blocking the impeller even in heavy-duty conditions.

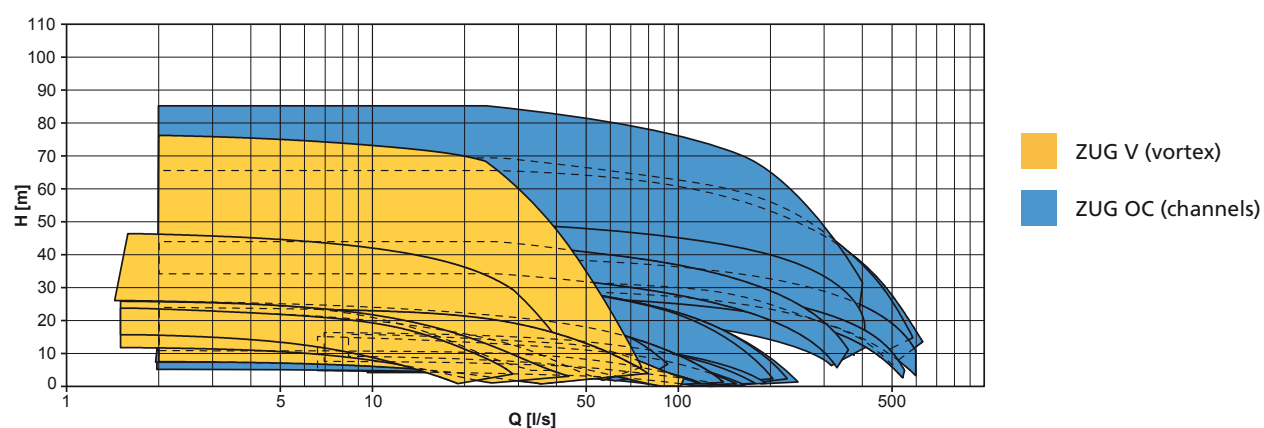




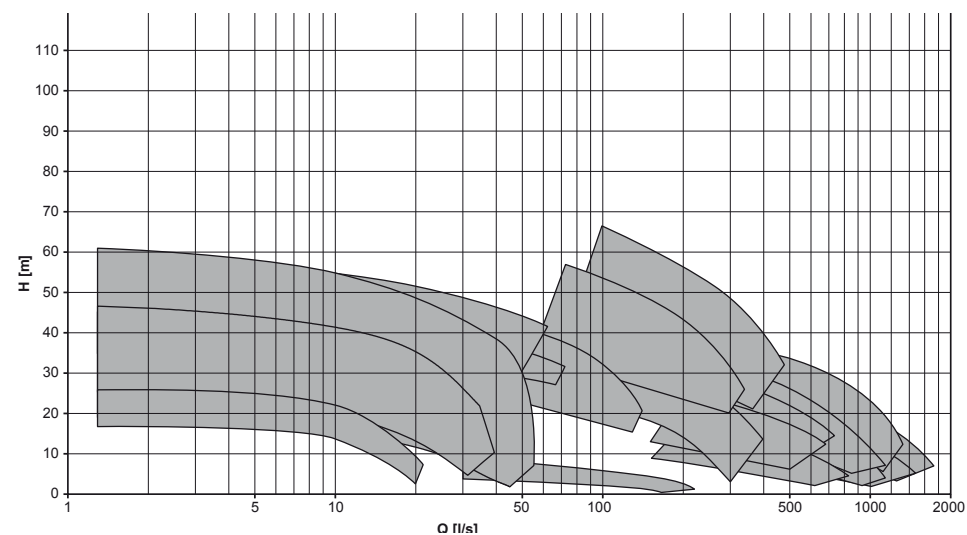
## Overview of operating ranges



## Currently available operating ranges



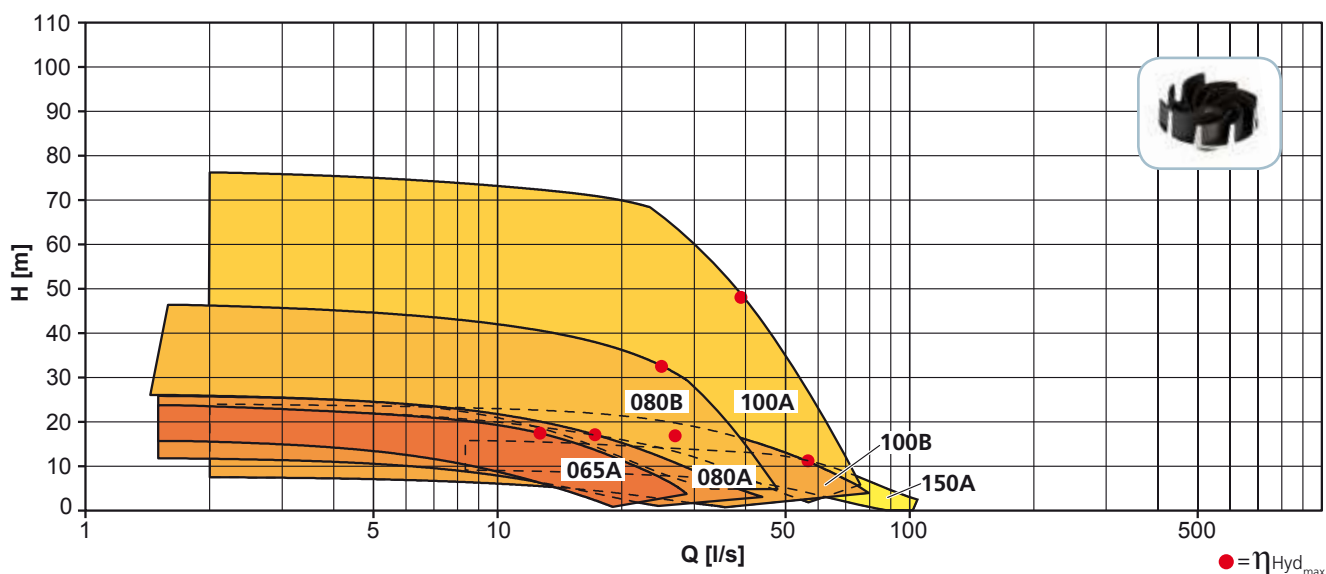
## Operating ranges scheduled for issue in 2016



The documentation for the UNIQA series as well as the catalogue, technical data sheets and user manuals are available at [www.zenit.com](http://www.zenit.com) or from Customer Service.



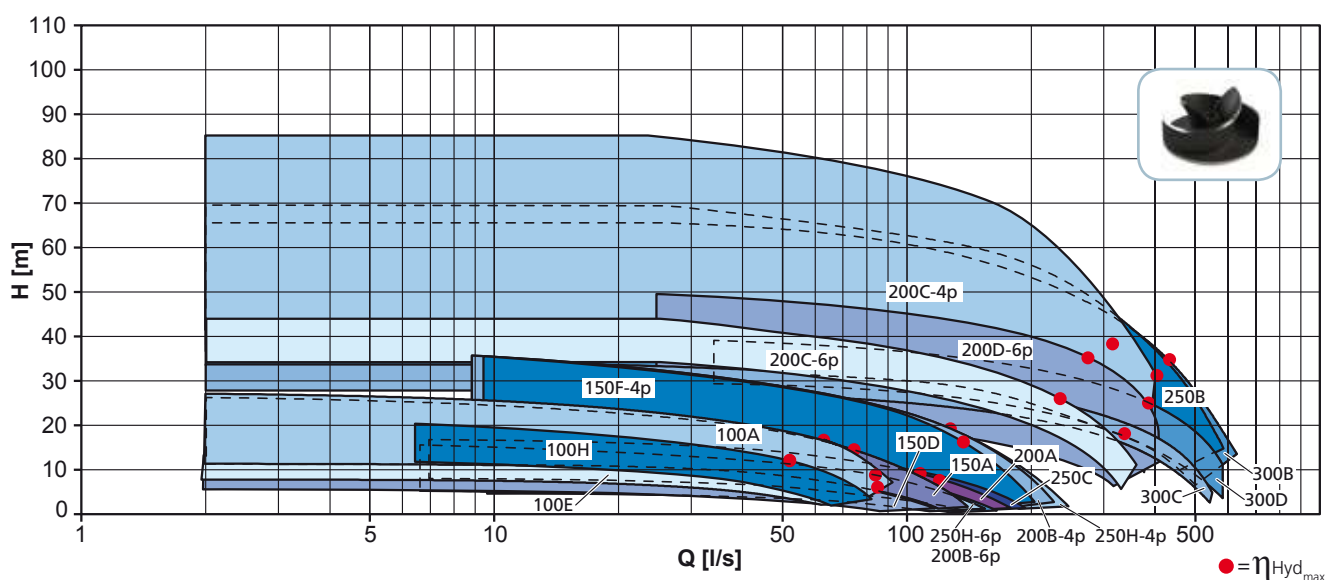
## Currently available operating ranges (VORTEX)



### ZUG V [VORTEX]

|                        |                    |              |                 |
|------------------------|--------------------|--------------|-----------------|
| <b>Vortex impeller</b> |                    | <b>Power</b> | da 4 kW a 37 kW |
| <b>Discharge</b>       | from DN65 to DN150 | <b>Poles</b> | 2 - 4           |

## Currently available operating ranges (CHANNELS)



### ZUG OC [CHANNELS]

|                          |                     |              |                     |
|--------------------------|---------------------|--------------|---------------------|
| <b>Channles impeller</b> |                     | <b>Power</b> | from 4 kW to 200 kW |
| <b>Discharge</b>         | from DN100 to DN300 | <b>Poles</b> | 4 - 6               |

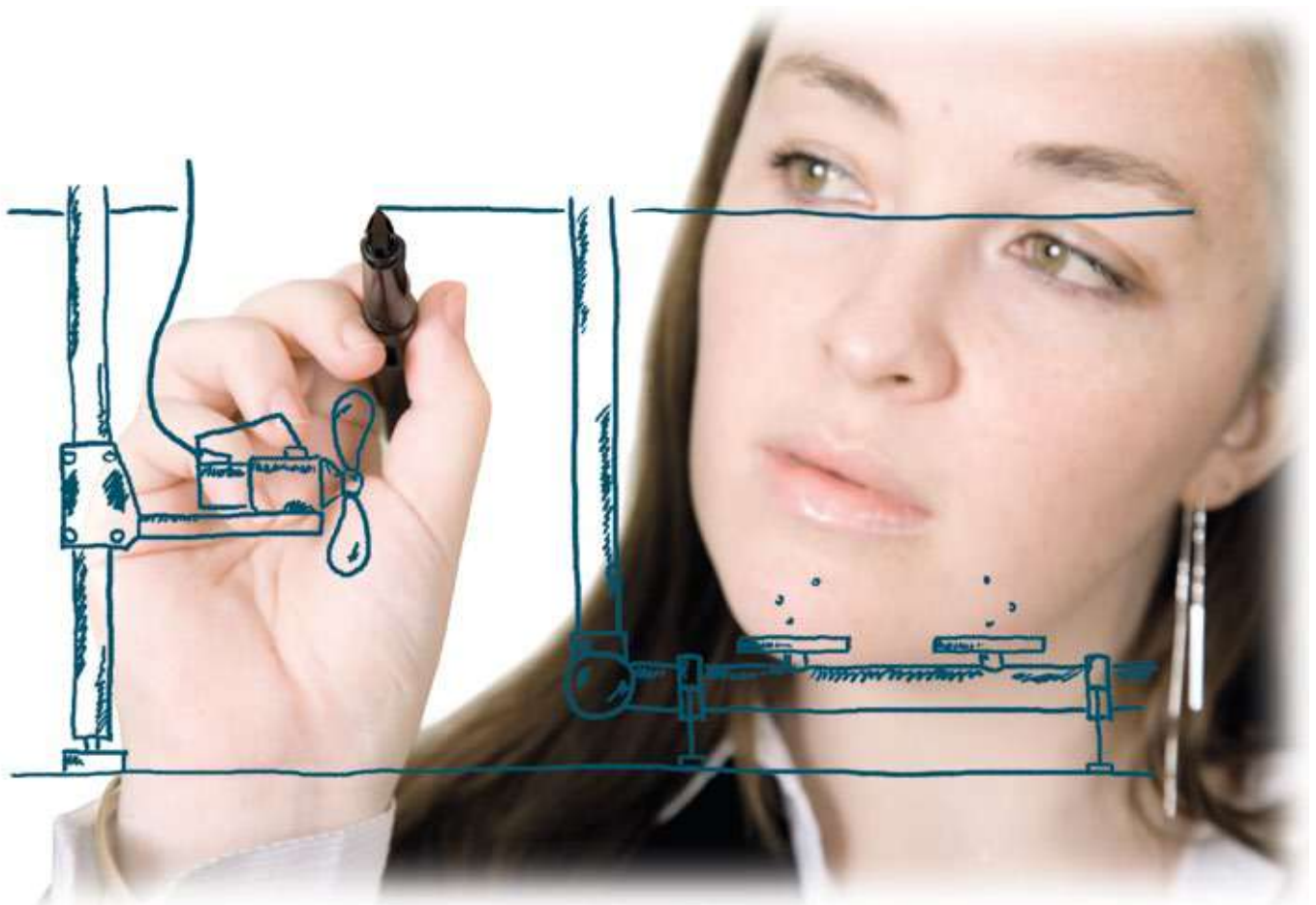






# 2.0

## AERATION and MIXING SYSTEMS



# Aeration and mixing systems

Zenit offers a line of aeration and mixing products for the highly specialized civil and industrial wastewater treatment sector.

The Zenit products include:

- 9" and 12" disc and 2" tube air diffusers with elastomer membranes providing high oxygen transfer efficiency;
- **Venturi-type submerged aerators**, which ensure an efficient combined mixing and aeration action and are especially suitable for homogenization tanks and storm water retention tank;
- **mixers and flow-makers** with self-cleaning propellers from 285 mm to 2100 mm diameter with a rotation speed from 1000 to 27 rpm.

As well as supplying products of outstanding quality, Zenit provides its customers with assistance during product selection and plant design, and supervision during assembly.



## Testing and inspection department

Constantly working to improve the quality of its products, Zenit has completed the construction of its new testing tank at the San Cesario sul Panaro (Modena) production location.

This structure, 8 metres square and 10 metres deep (6.50 metres underground) is capable of containing 600 m<sup>3</sup> of water (head of 9.50 metres) and will fulfil a large number of functions thanks to the large number of tests it will be able to perform, and its overall versatility.

Tests will be possible not only on submersible electric pumps but also on all aeration and mixing products.

Specifically, measurement will be possible of:

- flow rate - head - efficiency (up to dn 800);
- NPSH;
- oxygen transfer;
- air output;
- thrust measurement;
- flow configuration;
- degree of mixing.



## 2.1 AIR DIFFUSERS



The Zenit range includes both disc and tube membrane air diffusers. Both models are fitted with high-quality membranes with perforation ensuring high oxygen transfer with low headloss, minimizing the relative energy consumption. Disc diffusers can be fitted with ball check valves.

Zenit is able to design the most efficient aeration system for the customer's specifications, and supply the complete system, including detailed assembly drawings.

### Operating Principle

During operation, the membrane inflates to open the tiny holes and allow the air to flow out in the form of fine bubbles. When the blower stops, the membrane deflates and pressure of the water pushes it back into contact with the supporting disc.

In this condition, the holes are closed and the central part, free from holes and specially shaped, acts as a check valve, ruling out all possible inflow of liquid.



### Application

Membrane air diffusers are generally used in waste water treatment where sewage have to be aerated to activate biological oxidation of the organic material and nitrification processes.

They are also used in pre-aeration and aeration processes in oxidation tanks and aerobic digestion plants for civil and industrial sludges.





# OXYPLATE 9-12

## Disc air diffusers

### Description and applications

Disc diffusers having elastomer membrane with tiny holes for application in waste water treatment processes in reactors with continuous or intermittent aeration, especially recommended for high-efficiency permanent installations.

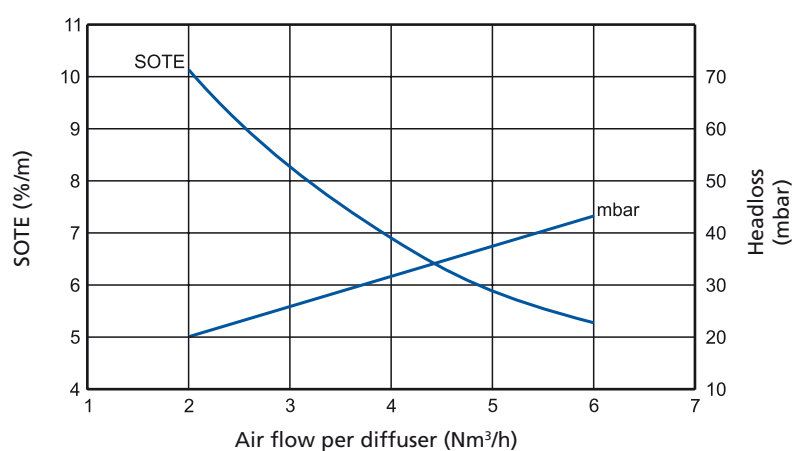
The quality, design and membrane hole size ensure unbeatable efficiency in terms of the ideal oxygen transfer-headloss balance.



All product images are indicative only

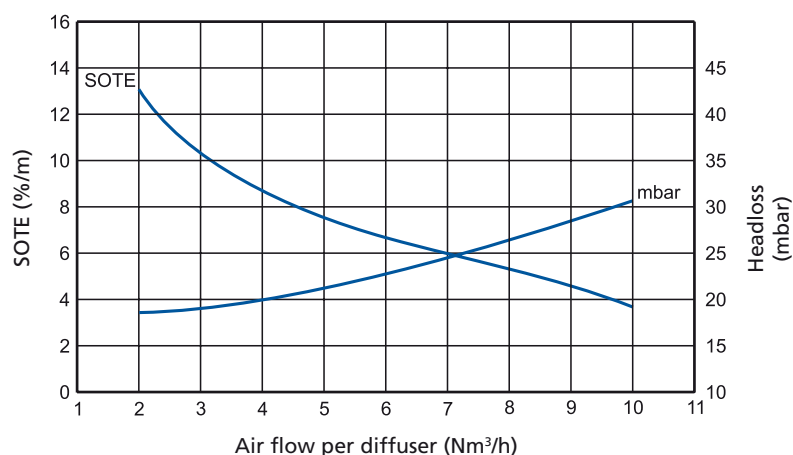
### Performance

#### OXYPLATE 9



EPDM LP membrane, fine bubbles  
Oxygen transfer according with ATV M209  
Density 6.5%

#### OXYPLATE 12



EPDM LP membrane, fine bubbles  
Oxygen transfer according with ATV M209  
Density 5.3%

### Technical characteristics

|                          |       | OXYPLATE 9" | OXYPLATE 12" |
|--------------------------|-------|-------------|--------------|
| External diameter        | mm    | 270         | 340          |
| Min. operating flow rate | Nm³/h | 2           | 2            |
| Max. operating flow rate | Nm³/h | 6           | 10           |
| Max overload flow *      | Nm³/h | 10          | 15           |
| Active surface area      | m²    | 0,038       | 0,06         |
| Membrane thickness       | mm    | 2 ± 0.15    | 2 ± 0.15     |

Data with fine-bubble EPDM LP membrane

\* No more than 10 min/day for membrane cleaning, tests, etc.

## Construction materials

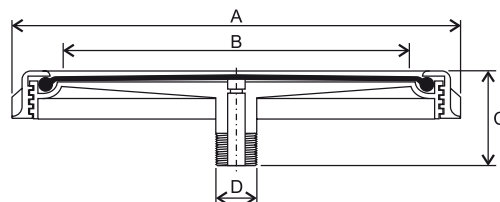
|               | OXYPLATE 9"        | OXYPLATE 12" |
|---------------|--------------------|--------------|
| Diffuser body | PP GF 30           | PP GF 30     |
| Ring-nut      | PP GF 30           | PP GF 30     |
| Membrane      | EPDM LP / SILICONE | EPDM LP      |

## Overall dimensions and weights

|              | A   | B   | C  | D       | Kg  |
|--------------|-----|-----|----|---------|-----|
| OXYPLATE 9"  | 270 | 220 | 76 | ¾ NPT m | 0.7 |
| OXYPLATE 12" | 340 | 310 | 76 | ¾ NPT m | 1.2 |

Dimensions in mm

All weights and dimensions are indicative only



## Accessories and components

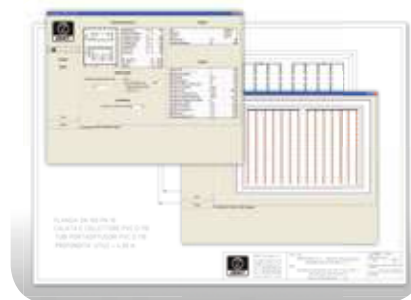
ZENIT is able to design and build complete aeration systems including disc-shaped diffusers and preassembled PVC air distribution networks.

The high degree of standardization, combined with the use of special components manufactured by ZENIT itself, allows the construction of simple, reliable, quick-to-install systems which are surprisingly inexpensive in spite of the use of top-quality materials such as PVC PN10 pipelines and stainless steel supports.



To facilitate the installation and servicing of its diffuser systems, Zenit has produced a series of tools that make every procedure quick and effective.

The use of dedicated software packages makes system design a quick operation, from the process to the optimal layout, through to cost analysis and generation of the bill of materials.

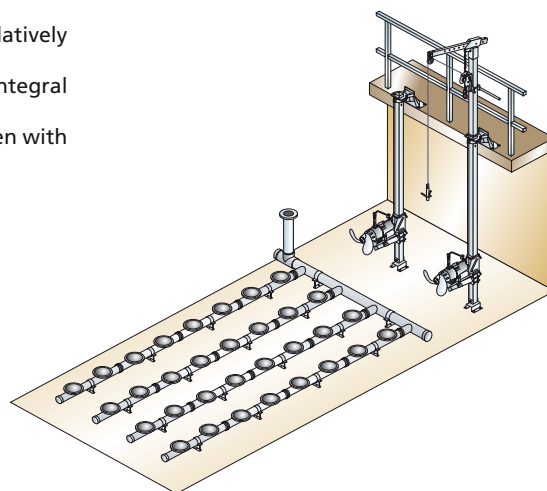


## Installations

Preassembled systems are designed for quick, easy installation even by relatively unskilled staff, following the detailed instructions provided.

All connections are made by means of special self-aligning flanges with integral seal.

The supports are easily height-adjustable (up to 20 cm) to allow levelling even with uneven or slightly sloping tank bottoms.



# OXYTUBE 2

## Tube air diffusers

### Description and applications

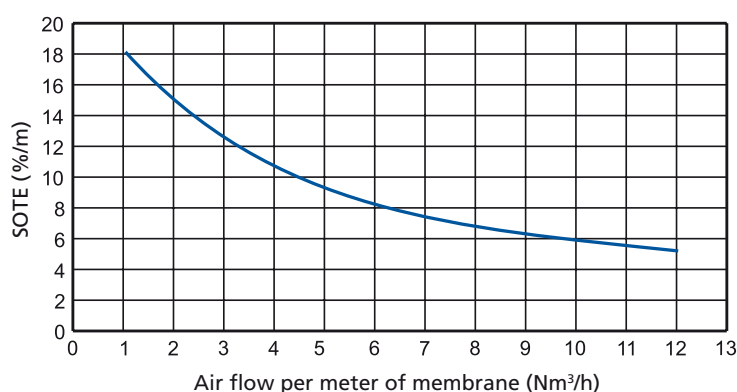
Especially recommended for the construction of lifting aeration systems and in all cases where a large output surface area is required with only a small number of air distribution pipelines.

Diffusers basically consist of a head with threaded connection, the rigid polypropylene support and the tubular membrane in elastomer with tiny holes, secured with stainless steel band clamps.



All product images are indicative only

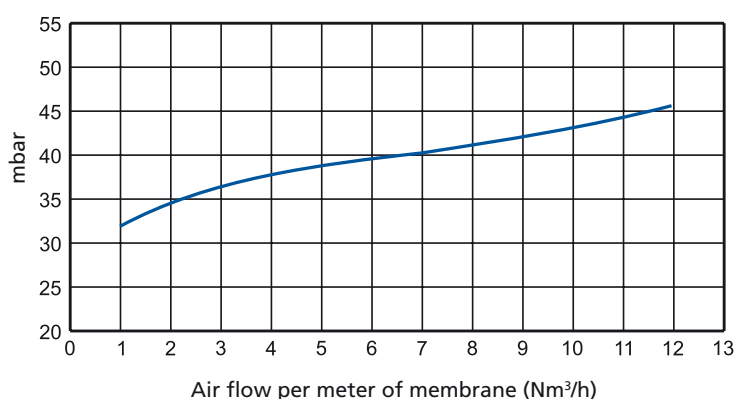
### Performance



#### Oxygen transfer

Density 10%

Test according with ATV-M 209



#### Headloss

### Technical characteristics

|                          |       | OXYTUBE 2-500 | OXYTUBE 2-750 | OXYTUBE 2-1000 |
|--------------------------|-------|---------------|---------------|----------------|
| Support diameter         | mm    | 63            | 63            | 63             |
| Perforation length       | mm    | 500           | 750           | 1000           |
| Min. operating flow rate | Nm³/h | 1             | 2             | 3              |
| Max. operating flow rate | Nm³/h | 6             | 9             | 12             |
| Max overload flow *      | Nm³/h | 10            | 15            | 20             |
| Active surface area      | m²    | 0.09          | 0.135         | 0.18           |
| Membrane thickness       | mm    | 1.7±0.2       | 1.7±0.2       | 1.7±0.2        |

Data with fine-bubble EPDM LP membrane

\* No more than 10 min/day for membrane cleaning, tests, etc.

## Construction materials

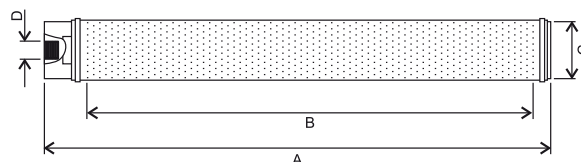
|             |                                         |
|-------------|-----------------------------------------|
| Membrane    | EPDM LP / SILICONE                      |
| Support     | PP                                      |
| Head        | PP GF 30                                |
| Band clamps | V2A (stainless steel 1.4301 – AISI 304) |
| Gasket      | EPDM th. 4 mm                           |
| Connector   | V2A (stainless steel 1.4301 – AISI 304) |

## Overall dimensions and weights

|              | A    | B    | C  | D         | Kg  |
|--------------|------|------|----|-----------|-----|
| OXYTUBE 500  | 560  | 500  | 63 | 3/4" WR f | 0.8 |
| OXYTUBE 750  | 810  | 750  | 63 | 3/4" WR f | 1.1 |
| OXYTUBE 1000 | 1060 | 1000 | 63 | 3/4" WR f | 1.3 |

Dimensions in mm

All weights and dimensions  
are indicative only



## Accessories and components

Membranes made of different materials are available for different applications:

- EPDM LP with low plasticizer content (<15%) for civil wastewater with some industrial input and industrial wastewater with low grease, oil and hydrocarbon content. Maximum operating temperature 80 °C;
- SILICONE for industrial wastewater with high grease and hydrocarbon content. Maximum operating temperature 100 °C;



- Stainless steel connectors for installation of diffusers in pairs facing each other on square manifold of 80x80 mm or 100x100 mm;
- Adaptors for manifolds with existing holes.

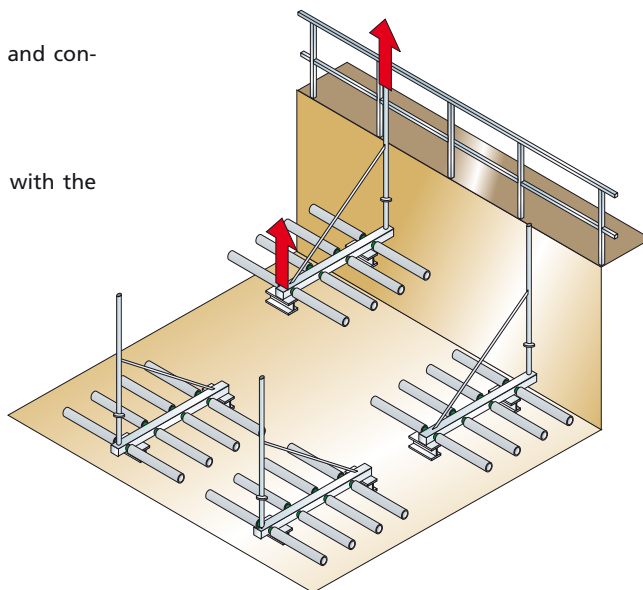
## Lifting systems

Especially recommended for small/medium sized systems, or in general in all cases where it is not possible to empty the tank for maintenance. These systems are built with stainless steel grids comprising basically a square manifold on which the diffusers are installed in facing pairs, a dropleg, one or more stiffener tie-rods and a draining system.

The individual grids are simply placed on the bottom of the tank and connected to the main air pipeline with a flange. Stability is ensured by counterweights that also act as feet.

No runner or anchor systems are required.

The individual assemblies are therefore easy to remove and install with the tank full and in operation.



## 2.2 SUBMERGED AERATORS

Venturi-type submerged aerators ensure an efficient combined mixing and aeration action and they are especially suitable for homogenization tanks and storm water retention tanks.

They are made by connecting submersible pumps with power levels up to 30 kW and channel-type impellers with large free passage combined with "OXY" series ejector devices.

OXY 80 and 150 units have a polyurethane (Vulkollan) diaphragm, easily replaceable without dismantling the pump from the ejector thanks to a patented system. The OXY80 device has a flange suitable for connection to electric pumps having delivery DN80 and DN100.

For unbeatable versatility, Zenit has created three different product lines, called respectively:

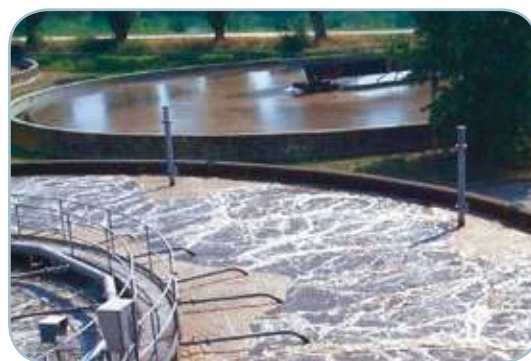
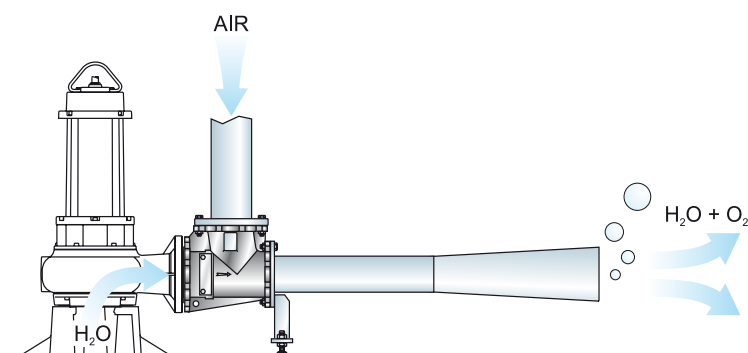
- OXY;
- SYSTEM OXY;
- JETOXY.



All product images are indicative only

### Operating Principle

In OXY devices, the liquid conveyed is mixed with the air by the "Venturi" effect, creating a mixture containing medium-fine air bubbles that increase the contact surface area and provide highly efficient oxygen transferring.



### Application

OXY submerged oxygenation systems are used in civil and industrial wastewater and sludge treatment plants, or whenever combined oxygenation and mixing are required.

These systems can be installed without emptying the tank.





## 2.2.1 OXY

### Key to product codes

# OXY 8055

- Product family
- Flange size
- Diaphragm diameter

### OXY 50



#### CHARACTERISTICS

- Cast iron structure (GJL-250);
- Suitable for use with DRO and DGO pumps;
- Can be permanently coupled to the pump or mounted on the bottom of the tank using the automatic coupling system (DAC type).

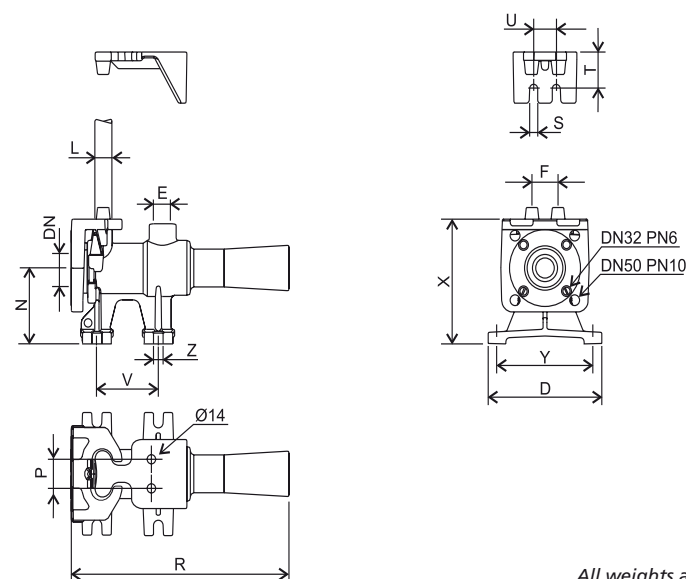
#### COMPOSITION OF OXY 50

- OXY body (cone + integral diaphragm);
- Sliding flange with gasket and stainless steel screws;
- Pipe guide.



A special technical detail on the OXY body allows mechanical fixing (using screws) between the ejector output flange and the sliding flange connected to the pump, creating a rigid system even suitable for mobile installation.

#### Overall dimensions



#### Construction materials

Body ..... Cast iron GJL-250  
 Diffuser cone ..... Cast iron GJL-250  
 Nuts and bolts ..... Stainless steel  
 Paintwork ..... Environment friendly epoxy-vinyl

#### Models

- OXY 5027

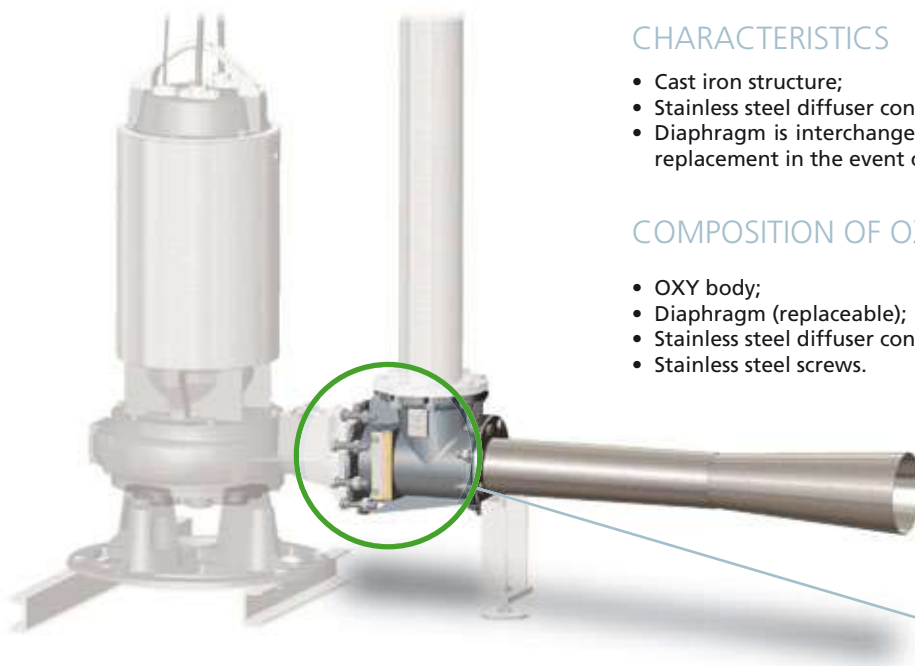
All weights and dimensions are indicative only

Dimensions in mm

|          | DN                   | D   | E    | F  | L    | N   | P  | R   | S  | T  | U  | V  | X   | Y   | Z  | Kg |
|----------|----------------------|-----|------|----|------|-----|----|-----|----|----|----|----|-----|-----|----|----|
| OXY 5027 | DN32 PN6 - DN50 PN10 | 170 | 3/4" | 40 | 3/4" | 105 | 40 | 325 | 12 | 50 | 35 | 90 | 170 | 140 | 14 | 10 |



# OXY 80-150



## CHARACTERISTICS

- Cast iron structure;
- Stainless steel diffuser cone ;
- Diaphragm is interchangeable for flow rate adjustment or for replacement in the event of wear (PATENTED SYSTEM).

## COMPOSITION OF OXY 80-150

- OXY body;
- Diaphragm (replaceable);
- Stainless steel diffuser cone;
- Stainless steel screws.



PATENTED SYSTEM

## Construction materials

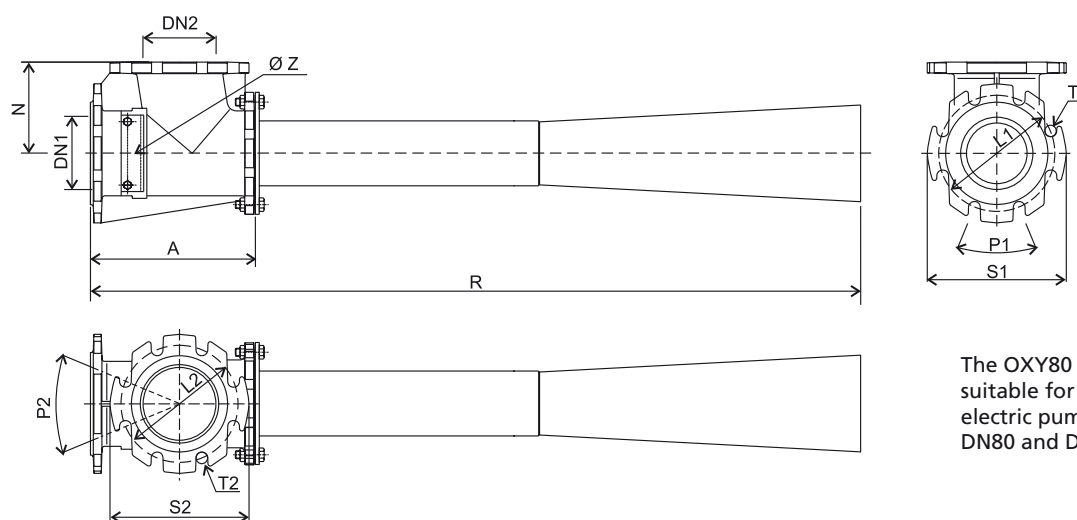
|                      |                                  |
|----------------------|----------------------------------|
| Body .....           | Cast iron GJL-250                |
| Diffuser cone .....  | AISI 304 Stainless Steel         |
| Diaphragm .....      | Vulkollan                        |
| Nuts and bolts ..... | A2 steel                         |
| Paintwork .....      | Environment-friendly epoxy-vinyl |

## Models

- OXY 8055
- OXY 8063
- OXY 15080
- OXY 15095

OXY 80 and 150 range units can be combined with the coupling foot base horizontal outlet of the same diameter (DAC H). This combination allows the OXY body to be fixed to the bottom of the tank for easier pump maintenance, and also allowing it to be used in more than one point (not simultaneously).

## Overall dimensions



The OXY80 device has a flange suitable for connection to electric pumps having delivery DN80 and DN100.

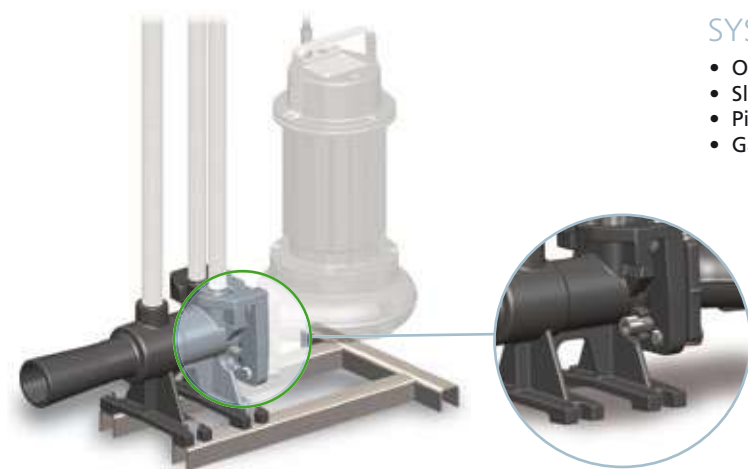
|           | Z  | A   | DN1    | DN2 | L1      | L2  | N   | P1      | P2  | R    | S1  | S2  | T1 | T2 | Kg |
|-----------|----|-----|--------|-----|---------|-----|-----|---------|-----|------|-----|-----|----|----|----|
| OXY 8055  | 55 | 250 | 80-100 | 100 | 160-180 | 180 | 145 | 45°-90° | 45° | 1000 | 200 | 220 | 17 | 20 | 19 |
| OXY 8063  | 63 | 250 | 80-100 | 100 | 160-180 | 180 | 145 | 45°-90° | 45° | 1000 | 200 | 220 | 17 | 20 | 19 |
| OXY 15080 | 80 | 340 | 150    | 150 | 240     | 240 | 190 | 45°     | 45° | 1500 | 285 | 285 | 24 | 24 | 48 |
| OXY 15095 | 95 | 340 | 150    | 150 | 240     | 240 | 190 | 45°     | 45° | 1500 | 285 | 285 | 24 | 24 | 48 |

Dimensions in mm

All weights and dimensions are indicative only

## 2.2.2 SYSTEM OXY

### SYSTEM OXY 50



#### SYSTEM OXY 50 COMPOSITION

- OXY body (cone + integral diaphragm);
- Sliding flange with gasket and stainless steel screws;
- Pipe guide;
- Galvanized steel base.

A special technical detail on the OXY body allows mechanical fixing (using screws) between the ejector output flange and the sliding flange connected to the pump, creating a rigid system even suitable for mobile installation.

#### Models

|                 | OXY System | OXY Ejector |      | Intake pipeline |         |
|-----------------|------------|-------------|------|-----------------|---------|
|                 | DN (mm)    | Nr.         | Type | L max. (m) (*)  | Ø       |
| S-OXY 50 1/5027 | 50         | 1           | 5027 | (**)            | ¾" (**) |

(\*) Maximum installation depth (\*\*) Intake pipeline not supplied  
For overall dimensions, see drawing of JETOXY 50

### SYSTEM OXY 80÷300



#### SYSTEM OXY 80÷300 COMPOSITION

- OXY body;
- Diaphragm (interchangeable);
- Stainless steel diffuser cone;
- Stainless steel screws;
- Air intake pipe with flue filter and galvanized steel lifting hook;
- Connecting tie-rod between pump and air intake pipe;
- Galvanized steel/spheroidal cast iron base.

#### Models

|                      | OXY System | OXY Ejector |       | Air intake pipe |         |
|----------------------|------------|-------------|-------|-----------------|---------|
|                      | DN (mm)    | Nr.         | Type  | L max. (m) *    | DN (mm) |
| S-OXY 80 1/8055 35   | 80/100     | 1           | 8055  | 3.50            | 100     |
| S-OXY 80 1/8055 50   | 80/100     | 1           | 8055  | 5.00            | 100     |
| S-OXY 80 1/8063 35   | 80/100     | 1           | 8063  | 3.50            | 100     |
| S-OXY 80 1/8063 50   | 80/100     | 1           | 8063  | 5.00            | 100     |
| S-OXY 150 1/15080 35 | 150        | 1           | 15080 | 3.50            | 150     |
| S-OXY 150 1/15080 50 | 150        | 1           | 15080 | 5.00            | 150     |
| S-OXY 150 1/15095 35 | 150        | 1           | 15095 | 3.50            | 150     |
| S-OXY 150 1/15095 50 | 150        | 1           | 15095 | 5.00            | 150     |
| S-OXY 250 2/15095 35 | 250        | 2           | 15095 | 3.50            | 200     |
| S-OXY 250 2/15095 50 | 250        | 2           | 15095 | 5.00            | 200     |
| S-OXY 300 2/15095 35 | 300        | 2           | 15095 | 3.50            | 200     |
| S-OXY 300 2/15095 50 | 300        | 2           | 15095 | 5.00            | 200     |

\* Maximum installation depth

## 2.2.3 JETOXY

### Submerged aeration systems

#### JETOXY 50

**JETOXY 50 SYSTEMS** include a Venturi-type ejector coupled to a submersible electric pump rated from 0.37 to 1.5 kW with open multi-channel or vortex impeller.

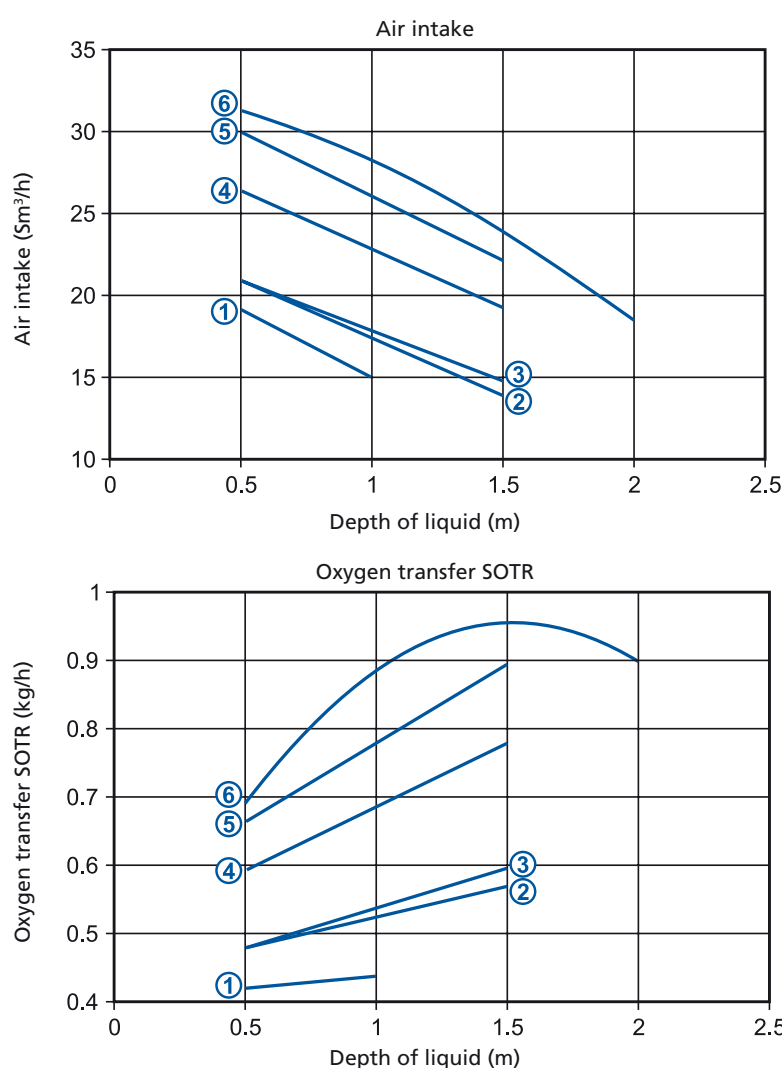
JETOXY SYSTEM models can be selected on the basis of the performance curve best suited to requirements, optimizing consumption.



#### Application

Fish farms, small water treatment tanks, holding pits.

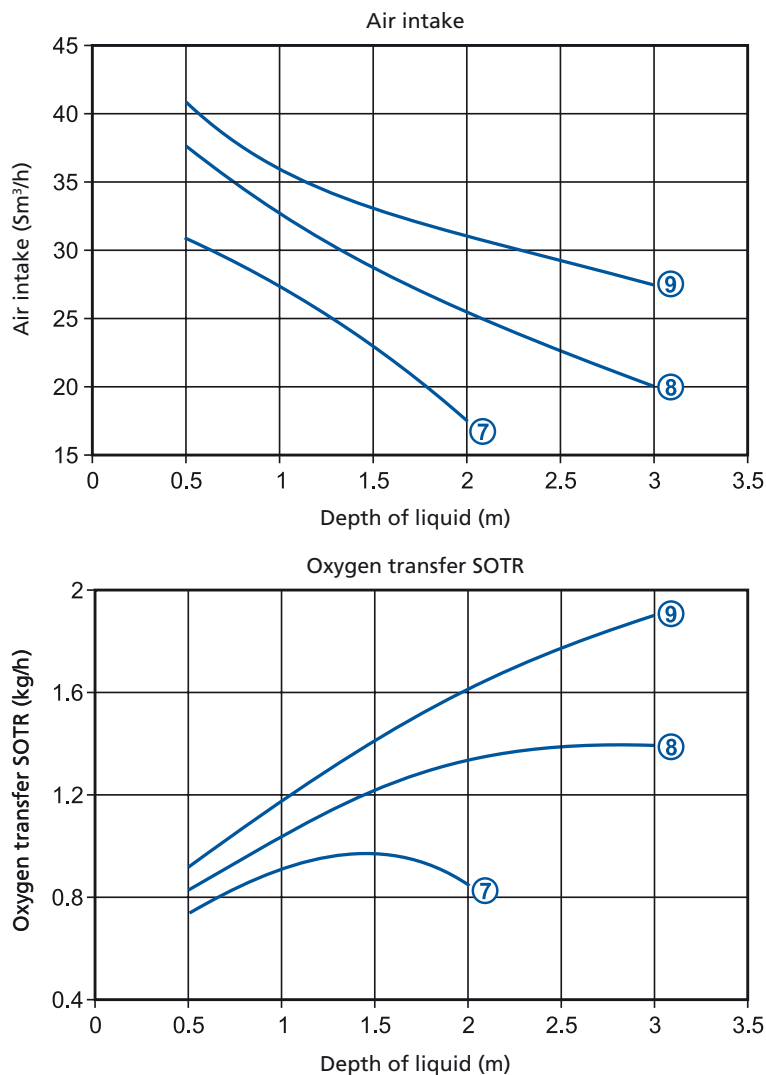
#### Performance of models with DG hydraulic units for sewage liquids



| Curve | Model             | Ejector |      |                  | Electric pump    |      |      |       |
|-------|-------------------|---------|------|------------------|------------------|------|------|-------|
|       |                   | No.     | Type | ø diaphragm (mm) | Model            | kW   | A    | Poles |
| 1     | J-OXY 1 DGO 50/2  | 1       | 5027 | 27               | DGO 50/2/G50H A  | 0.37 | 0.94 | 2     |
| 2     | J-OXY 1 DGO 75/2  | 1       | 5027 | 27               | DGO 75/2/G50H A  | 0.55 | 1.4  | 2     |
| 3     | J-OXY 1 DGO 100/4 | 1       | 5027 | 27               | DGO 100/4/G50H A | 0.63 | 1.9  | 4     |
| 4     | J-OXY 1 DGO 100/2 | 1       | 5027 | 27               | DGO 100/2/G50H A | 0.88 | 2.3  | 2     |
| 5     | J-OXY 1 DGO 150/2 | 1       | 5027 | 27               | DGO 150/2/G50H A | 1.1  | 2.7  | 2     |
| 6     | J-OXY 1 DGO 200/2 | 1       | 5027 | 27               | DGO 200/2/G50H A | 1.5  | 3.6  | 2     |

The technical data in the table refer to power supply voltage 400V/3/50Hz. Refer to the technical catalogue for a full view of the voltages available.

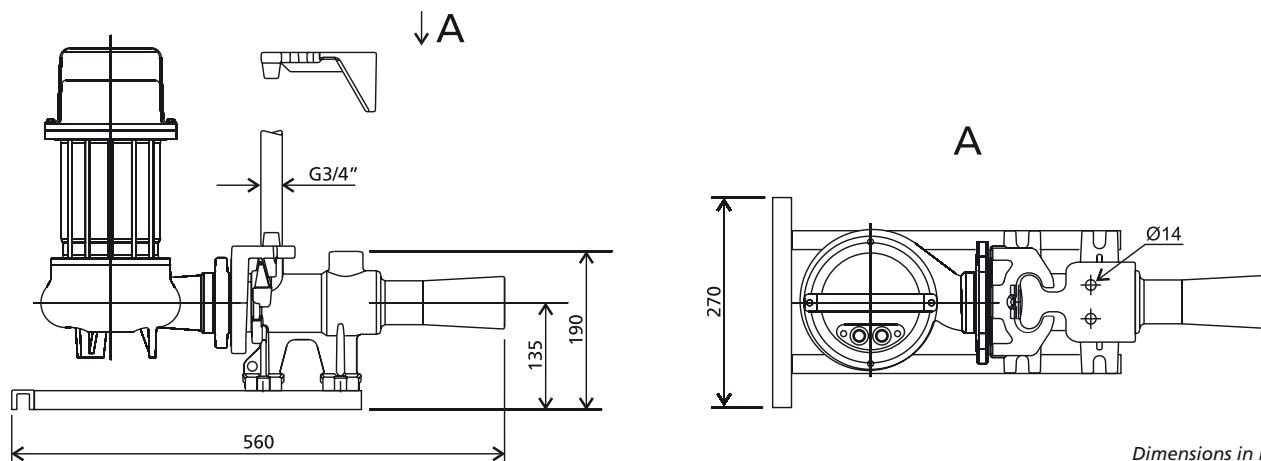
## Performance of models with DR hydraulic units for clean water



| Curve | Model             | Ejector |      |                  | Electric pump    |      |     |       |
|-------|-------------------|---------|------|------------------|------------------|------|-----|-------|
|       |                   | No.     | Type | Ø diaphragm (mm) | Model            | kW   | A   | Poles |
| 7     | J-OXY 1 DRO 100/2 | 1       | 5027 | 27               | DRO 100/2/G50H A | 0.88 | 2.3 | 2     |
| 8     | J-OXY 1 DRO 150/2 | 1       | 5027 | 27               | DRO 150/2/G50H A | 1.1  | 2.7 | 2     |
| 9     | J-OXY 1 DRO 200/2 | 1       | 5027 | 27               | DRO 200/2/G50H A | 1.5  | 3.6 | 2     |

The technical data in the table refer to power supply voltage 400V/3/50Hz. Refer to the technical catalogue for a full view of the voltages available.

## Overall dimensions



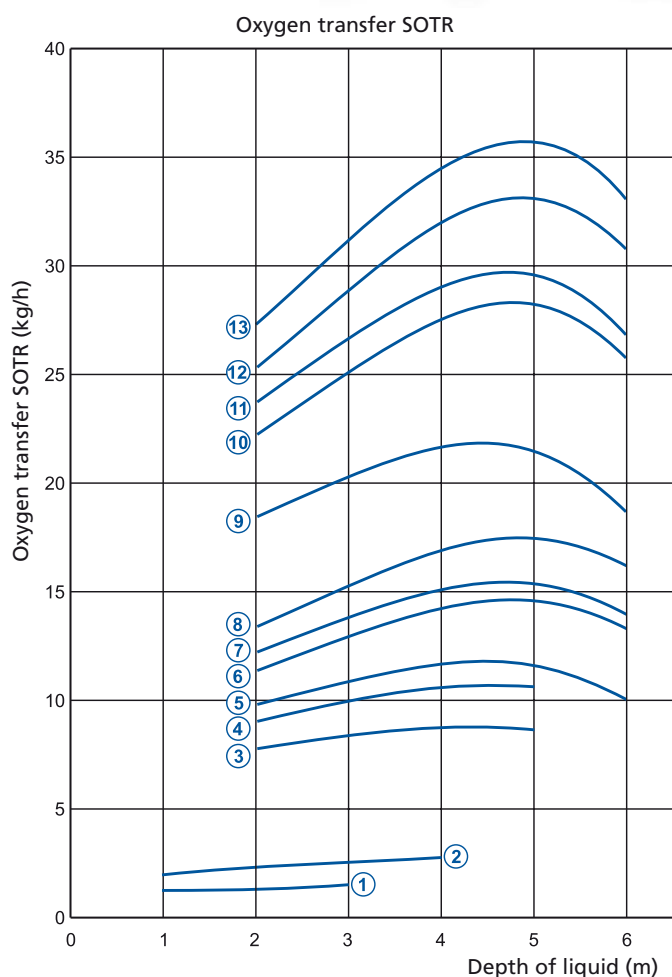
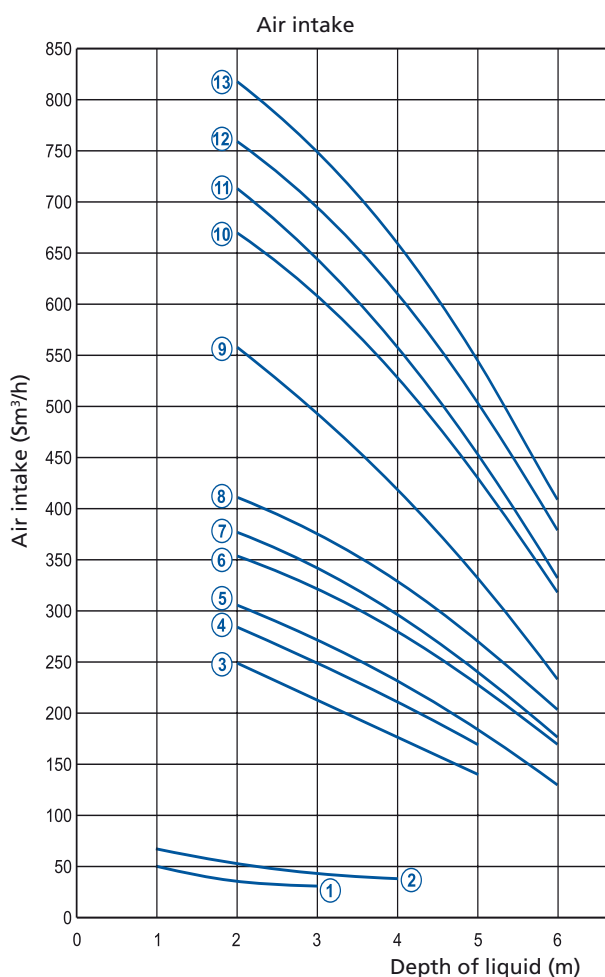
Dimensions in mm

## JETOXY 80÷300

JETOXY 80÷300 units include one or more Venturi-type ejectors with replaceable diaphragm coupled to a submersible electric pump rated from 2.2 to 30 kW. Open multi-channel, open single-channel, and closed single or dual-channel impellers may be used depending on the type of liquid to be processed.

### Application

Holding, homogenization and stabilization tanks, storm water retention tanks, oxidation tanks.



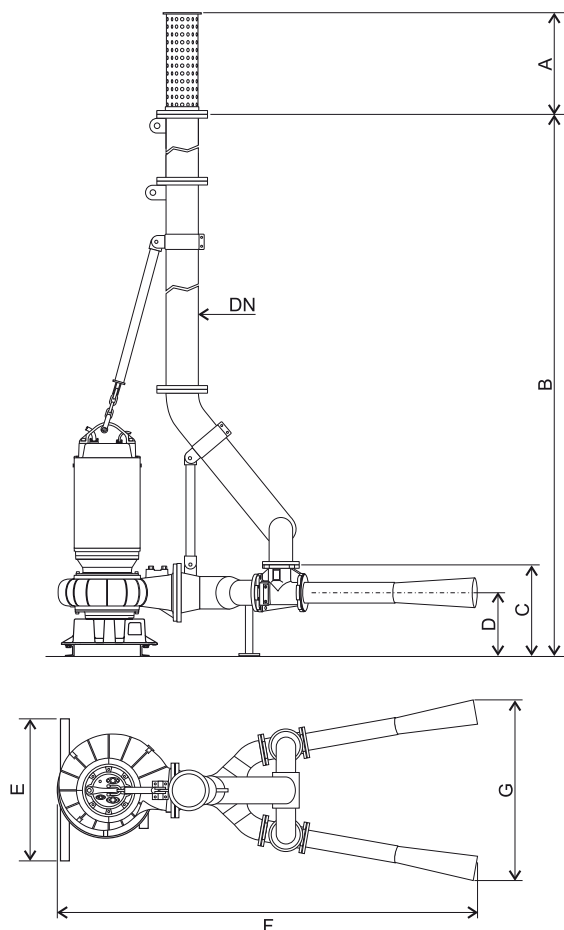
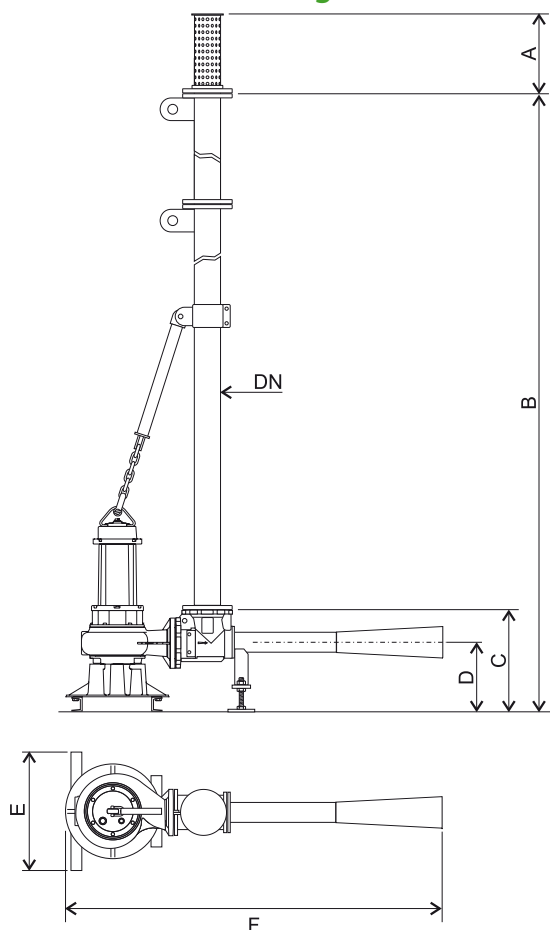
| Curve | Model                     | Ejector |       |                | Electric pump    |            |            |      |       | Air intake pipe |            | Power<br>** |
|-------|---------------------------|---------|-------|----------------|------------------|------------|------------|------|-------|-----------------|------------|-------------|
|       |                           | No.     | Type  | Ø<br>diaphragm | Model            | P1<br>(kW) | P2<br>(kW) | A    | Poles | max L.<br>(m)*  | DN<br>(mm) | P1<br>(kW)  |
| 1     | J-OXY 1/35 MAN 300/4      | 1       | 8055  | 55             | MAN 300/4/80 A   | 2.9        | 2.2        | 5.8  | 4     | 3.5             | 100        | 2.8         |
| 2     | J-OXY 1/35 MAN 400/4      | 1       | 8055  | 55             | MAN 400/4/80 A   | 3.8        | 3.0        | 7.3  | 4     | 3.5             | 100        | 3.3         |
| 3     | J-OXY 1/35(50) DRP 750/4  | 1       | 15095 | 95             | DRP 750/4/150 A  | 7.9        | 6.5        | 14.9 | 4     | 3.5(5)          | 150        | 7.8         |
| 4     | J-OXY 1/35(50) SMP 750/6  | 1       | 15095 | 95             | SMP 750/6/200 A  | 8.1        | 6.1        | 15.2 | 6     | 3.5(5)          | 150        | 8.0         |
| 5     | J-OXY 1/35(50) DRP 1000/4 | 1       | 15095 | 95             | DRP 1000/4/150 A | 10.8       | 8.9        | 20.0 | 4     | 3.5(5)          | 150        | 10.1        |
| 6     | J-OXY 1/35(50) SBP 1500/6 | 1       | 15095 | 95             | SBP 1500/6/200 A | 15.7       | 12.3       | 28.2 | 6     | 3.5(5)          | 150        | 13.0        |
| 7     | J-OXY 1/35(50) SMP 1500/4 | 1       | 15095 | 95             | SMP 1500/4/150 A | 15.8       | 13.6       | 28.2 | 4     | 3.5(5)          | 150        | 16.0        |
| 8     | J-OXY 1/35(50) DRP 2000/4 | 1       | 15095 | 95             | DRP 2000/4/150 A | 19.6       | 16.4       | 36.0 | 4     | 3.5(5)          | 150        | 18.4        |
| 9     | J-OXY 2/35(50) SBP 1500/6 | 2       | 15095 | 95             | SBP 1500/6/250 A | 15.7       | 12.3       | 28.2 | 6     | 3.5(5)          | 200        | 15.5        |
| 10    | J-OXY 2/35(50) SBN 2500/6 | 2       | 15095 | 95             | SBN 2500/6/250 A | 22.8       | 18.5       | 40.0 | 6     | 3.5(5)          | 200        | 22.7        |
| 11    | J-OXY 2/35(50) SBN 3000/4 | 2       | 15095 | 95             | SBN 3000/4/250 A | 26.0       | 22.0       | 43.5 | 4     | 3.5(5)          | 200        | 25.0        |
| 12    | J-OXY 2/35(50) SBN 3000/6 | 2       | 15095 | 95             | SBN 3000/6/250 A | 26.7       | 22.0       | 46.0 | 6     | 3.5(5)          | 200        | 25.7        |
| 13    | J-OXY 2/35(50) SBN 4000/4 | 2       | 15095 | 95             | SBN 4000/4/250 A | 36.0       | 30.0       | 61.0 | 4     | 3.5(5)          | 200        | 34.6        |

The technical data in the table refer to power supply voltage 400V/3/50Hz. Refer to the technical catalogue for a full view of the voltages available.

\* Maximum installation depth with standard air intake pipe. For greater depths, contact our technical service.

\*\* Power absorbed from the mains throughout the working range

## Dimensions and weights



## SYSTEM OXY

| Model                    | Dimensions (mm) |     |     |      |   |      |   | max. submergence (m) |     |        |     |
|--------------------------|-----------------|-----|-----|------|---|------|---|----------------------|-----|--------|-----|
|                          |                 |     |     |      |   |      |   | 3.5 m                |     | 5.00 m |     |
|                          |                 |     |     |      |   |      |   | B                    | Kg  | B      | Kg  |
| S-OXY 80 1/8055(63) 35   | 340             | 450 | 300 | 800  | - | -    | - | 4050                 | 105 | -      | -   |
| S-OXY 150 1/15080(95) 35 | 480             | 450 | 300 | 1200 | - | -    | - | 4050                 | 194 | -      | -   |
| S-OXY 250 2/15095 35     | 690             | 635 | 450 | 1200 | - | 1420 | - | 4330                 | 356 | -      | -   |
| S-OXY 300 2/15095 35     | 690             | 635 | 450 | 1200 | - | 1420 | - | 4330                 | 356 | -      | -   |
| S-OXY 80 1/8055(63) 50   | 340             | 450 | 300 | 800  | - | -    | - | -                    | -   | 5550   | 125 |
| S-OXY 150 1/15080(95) 50 | 480             | 450 | 300 | 1200 | - | -    | - | -                    | -   | 5550   | 271 |
| S-OXY 250 2/15095 50     | 690             | 635 | 450 | 1200 | - | 1420 | - | -                    | -   | 5830   | 400 |
| S-OXY 300 2/15095 50     | 690             | 635 | 450 | 1200 | - | 1420 | - | -                    | -   | 5830   | 400 |

Dimensions in mm

All weights and dimensions are indicative only

## JETOXY

| Model                     | Dimensions (mm) |     |     |      |      |      |     |      | max. submergence (m) |      |        |    |
|---------------------------|-----------------|-----|-----|------|------|------|-----|------|----------------------|------|--------|----|
|                           |                 |     |     |      |      |      |     |      | 3.5 m                |      | 5.00 m |    |
|                           |                 |     |     |      |      |      |     |      | B                    | Kg   | B      | Kg |
| J-OXY 1/35 MAN 300/4      | 340             | 450 | 300 | 800  | 1470 | -    | 100 | 4050 | 191                  | -    | -      | -  |
| J-OXY 1/35 MAN 400/4      | 340             | 450 | 300 | 800  | 1470 | -    | 100 | 4050 | 194                  | -    | -      | -  |
| J-OXY 1/35(50) DRP 750/4  | 480             | 450 | 300 | 1200 | 2000 | -    | 150 | 4050 | 317                  | 5550 | 353    | -  |
| J-OXY 1/35(50) SMP 750/6  | 480             | 450 | 300 | 1200 | 2500 | -    | 150 | 4050 | 369                  | 5550 | 405    | -  |
| J-OXY 1/35(50) DRP 1000/4 | 480             | 450 | 300 | 1200 | 2000 | -    | 150 | 4050 | 325                  | 5550 | 361    | -  |
| J-OXY 1/35(50) SBP 1500/6 | 480             | 450 | 300 | 1200 | 2500 | -    | 150 | 4050 | 424                  | 5550 | 460    | -  |
| J-OXY 1/35(50) SMP 1500/4 | 480             | 450 | 300 | 1200 | 2250 | -    | 150 | 4050 | 385                  | 5550 | 421    | -  |
| J-OXY 1/35(50) DRP 2000/4 | 480             | 450 | 300 | 1200 | 2150 | -    | 150 | 4050 | 407                  | 5550 | 443    | -  |
| J-OXY 2/35(50) SBP 1500/6 | 690             | 635 | 450 | 1200 | 2950 | 1420 | 200 | 4330 | 609                  | 5850 | 653    | -  |
| J-OXY 2/35(50) SBN 2500/6 | 690             | 635 | 450 | 1200 | 3050 | 1420 | 200 | 4330 | 836                  | 5850 | 880    | -  |
| J-OXY 2/35(50) SBN 3000/4 | 690             | 635 | 450 | 1200 | 2950 | 1420 | 200 | 4330 | 758                  | 5850 | 802    | -  |
| J-OXY 2/35(50) SBN 3000/6 | 690             | 635 | 450 | 1200 | 3050 | 1420 | 200 | 4330 | 876                  | 5850 | 920    | -  |
| J-OXY 2/35(50) SBN 4000/4 | 690             | 635 | 450 | 1200 | 2950 | 1420 | 200 | 4330 | 774                  | 5850 | 818    | -  |

Dimensions in mm

All weights and dimensions are indicative only



## 2.3 Mixers and flow-makers

Nowadays, submerged mixers are the key components of modern water treatment systems. They are mainly used in equalization, homogenization and denitrification processes, for phosphorus removal and where liquids have to be mixed or stirred to reduce sedimentation.

ZENIT PROpeller series mixers feature:

- Low operating costs, thanks to high efficiency leading to minimal energy consumption
- Versatility, since they can be installed in tanks of any shape and size;
- Flexibility, thanks to the large assortment of installation accessories allowing correct positioning in any point in the tank;
- Easy installation and maintenance provided by quick hoisting structures and a wide range of accessories allowing the user to adjust and position the machine exactly as required.

Choosing the right mixer for every application is no simple matter: there are a large number of factors to consider, and experience plays a vital role.

To select exactly the right product, users must consider how the following parameters interact:

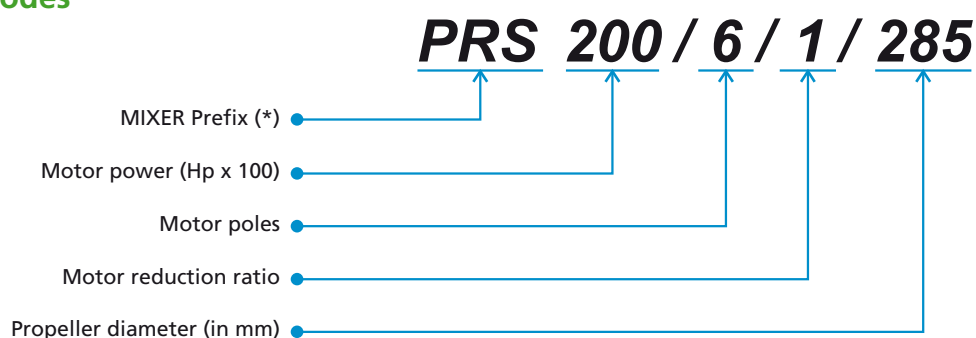
- shape, size and geometry of the tank;
- material and friction level of tank walls;
- items generating resistance inside the tank (pipelines, aerators, etc.);
- distance between the mixer propeller and the walls of the tank;
- the type of liquid for treatment and its specific weight;
- distance between mixers (for multiple installations).



### ZENIT helps you to choose the right PROpeller

ZENIT helps you to choose the mixer best suited to your needs by placing its decades of experience in water treatment at your service. Simply contact our Customer Service engineers with the details of your system for a quick reply specifying the best mixer for your installation.

### Key to product codes



- (\*)
- PRS - cast iron casing - direct transmission
  - PRX - stainless steel casing - direct transmission
  - PRO - cast iron casing - with reduction gear

# PRS-PRX-PRO

## Submerged mixers

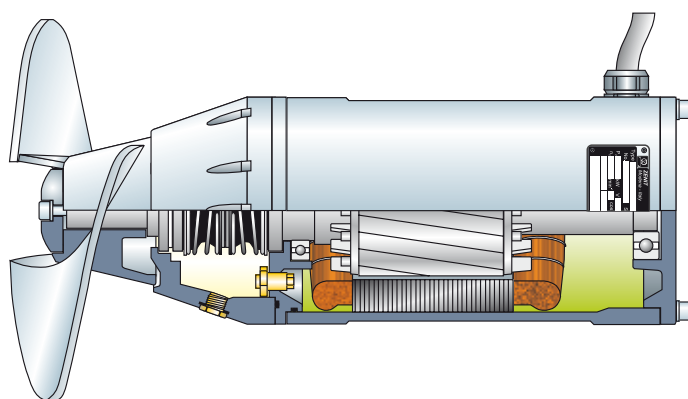
### Description and application

Zenit **PRS**, **PRX** and **PRO** series mixers are built in cast iron or stainless steel. The propellers, of self-cleaning design, are up to 850 mm in diameter. The electric motors are rated from 1.1 to 15 kW and have 4, 6 or 8 poles; transmission may be direct or by means of a planetary reduction gear.

They are used in mixing processes where large quantities of liquid have to be kept in motion to prevent sedimentation. The galvanized iron or stainless steel mounting accessories provide outstanding flexibility and allow mixers to be correctly positioned even if several are installed in the same tank.



All product images are indicative only

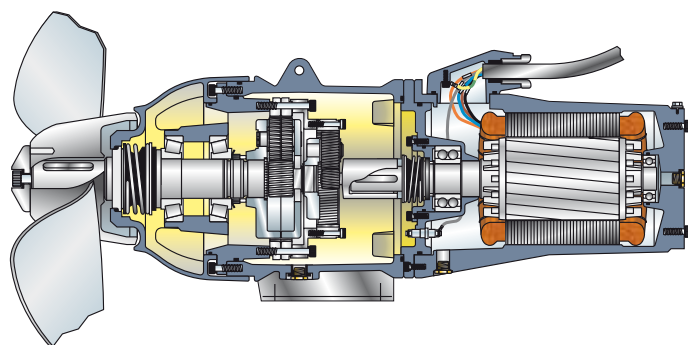


### PRS

- Cast iron structure;
- Propeller in Fe 510 iron (AISI 316 stainless steel optional);
- Motors from 1.5 to 3.0 kW, with 6 and 8 poles;
- From 750 to 1000 rpm, direct transmission;
- Suitable for applications with max 3% solid content.

### PRX

- Structure in AISI 316 stainless steel;
- Propeller in AISI 316 stainless steel;
- Motors from 1.5 to 3.0 kW, with 6 and 8 poles;
- From 750 to 1000 rpm, direct transmission;
- Suitable for applications with max 3% solid content.



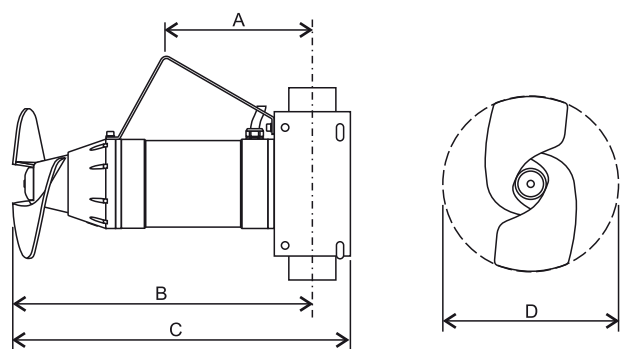
### PRO

- Cast iron structure;
- Propeller in Fe 510 iron (AISI 316 stainless steel optional);
- Motors from 1.1 to 15 kW, with 4 poles;
- From 222 to 350 rpm, transmission with reduction gear;
- Suitable for applications with max 12% solid content.

### Technical characteristics

|                  | P1<br>(kW) | P2<br>(kW) | current   |         | poles | start | cable  | rpm  | propeller |      |               |          |
|------------------|------------|------------|-----------|---------|-------|-------|--------|------|-----------|------|---------------|----------|
|                  |            |            | operating | startup |       |       |        |      | thrust N  | Ø mm | no. of blades | material |
| PRS 200/6/1/285  | 1.9        | 1.5        | 3.6       | 25      | 6     | DOL   | 7x1.5  | 1000 | 390       | 285  | 2             | Fe 510 D |
| PRS 300/6/1/325  | 3.0        | 2.2        | 6.4       | 45      | 6     | DOL   | 7x1.5  | 1000 | 530       | 325  | 2             | Fe 510 D |
| PRS 400/6/1/360  | 4.2        | 3.0        | 7.8       | 55      | 6     | DOL   | 7x1.5  | 1000 | 650       | 360  | 2             | Fe 510 D |
| PRS 200/8/1/380  | 2.2        | 1.5        | 5.8       | 41      | 8     | DOL   | 7x1.5  | 750  | 465       | 380  | 2             | Fe 510 D |
| PRS 350/8/1/440  | 3.4        | 2.5        | 7.1       | 50      | 8     | DOL   | 7x1.5  | 750  | 600       | 440  | 2             | Fe 510 D |
| PRX 200/6/1/285  | 1.9        | 1.5        | 3.6       | 25      | 6     | DOL   | 7x1.5  | 1000 | 390       | 285  | 2             | AISI 316 |
| PRX 300/6/1/325  | 3.0        | 2.2        | 6.4       | 45      | 6     | DOL   | 7x1.5  | 1000 | 530       | 325  | 2             | AISI 316 |
| PRX 400/6/1/360  | 4.2        | 3.0        | 7.8       | 55      | 6     | DOL   | 7x1.5  | 1000 | 650       | 360  | 2             | AISI 316 |
| PRX 200/8/1/380  | 2.2        | 1.5        | 5.8       | 41      | 8     | DOL   | 7x1.5  | 750  | 465       | 380  | 2             | AISI 316 |
| PRX 350/8/1/440  | 3.4        | 2.5        | 7.1       | 50      | 8     | DOL   | 7x1.5  | 750  | 600       | 440  | 2             | AISI 316 |
| PRO 150/4/7/540  | 1.7        | 1.1        | 3.0       | 21      | 4     | DOL   | 7x1.5  | 222  | 295       | 540  | 2             | Fe 510 D |
| PRO 200/4/6/540  | 2.1        | 1.5        | 3.9       | 27      | 4     | DOL   | 7x1.5  | 268  | 405       | 540  | 2             | Fe 510 D |
| PRO 300/4/6/550  | 2.8        | 2.2        | 5.2       | 36      | 4     | DOL   | 7x1.5  | 268  | 575       | 550  | 2             | Fe 510 D |
| PRO 400/4/4/540  | 4.0        | 3.0        | 7.2       | 51      | 4     | DOL   | 7x1.5  | 350  | 805       | 540  | 2             | Fe 510 D |
| PRO 550/4/4/550  | 5.0        | 4.0        | 8.6       | 60      | 4     | DOL   | 7x1.5  | 350  | 980       | 550  | 2             | Fe 510 D |
| PRO 750/4/4/600  | 7.2        | 5.5        | 12.5      | 88      | 4     | Y/Δ   | 12x2.5 | 350  | 1450      | 600  | 2             | Fe 510 D |
| PRO 1000/4/4/640 | 9.0        | 7.5        | 15.2      | 105     | 4     | Y/Δ   | 12x2.5 | 350  | 1950      | 640  | 2             | Fe 510 D |
| PRO 1500/4/6/800 | 15.1       | 11.0       | 25.4      | 178     | 4     | Y/Δ   | 12x2.5 | 268  | 3400      | 800  | 2             | Fe 510 D |
| PRO 2000/4/6/850 | 17.9       | 15.0       | 29.8      | 210     | 4     | Y/Δ   | 12x2.5 | 268  | 4600      | 850  | 2             | Fe 510 D |

## Overall dimensions and weights

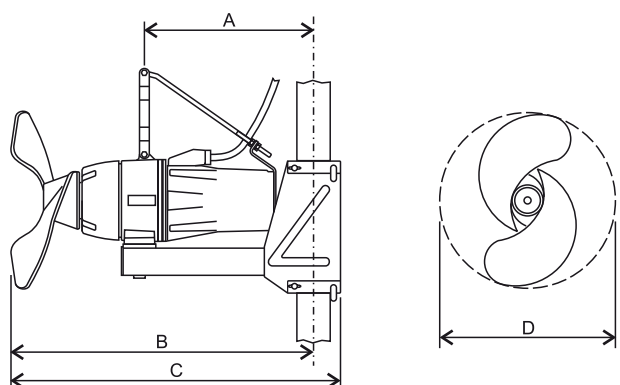


|                 | A   | B   | C   | D   | Kg |
|-----------------|-----|-----|-----|-----|----|
| PRS 200/6/1/285 | 260 | 585 | 670 | 285 | 59 |
| PRS 300/6/1/325 | 260 | 585 | 670 | 325 | 59 |
| PRS 400/6/1/360 | 260 | 585 | 670 | 360 | 59 |
| PRS 200/8/1/380 | 250 | 577 | 660 | 380 | 66 |
| PRS 350/8/1/440 | 250 | 577 | 660 | 440 | 67 |

|                 | A   | B   | C   | D   | Kg |
|-----------------|-----|-----|-----|-----|----|
| PRX 200/6/1/285 | 260 | 585 | 670 | 285 | 59 |
| PRX 300/6/1/325 | 260 | 585 | 670 | 325 | 59 |
| PRX 400/6/1/360 | 260 | 585 | 670 | 360 | 59 |
| PRX 200/8/1/380 | 250 | 577 | 660 | 380 | 66 |
| PRX 350/8/1/440 | 250 | 577 | 660 | 440 | 67 |

Dimensions in mm

All weights and dimensions are indicative only



|                  | A   | B    | C    | D   | Kg  |
|------------------|-----|------|------|-----|-----|
| PRO 150/4/7/540  | 450 | 988  | 1070 | 540 | 141 |
| PRO 200/4/6/540  | 450 | 988  | 1070 | 540 | 136 |
| PRO 300/4/6/550  | 450 | 978  | 1060 | 550 | 141 |
| PRO 400/4/4/540  | 450 | 988  | 1070 | 540 | 138 |
| PRO 550/4/4/550  | 450 | 978  | 1060 | 550 | 138 |
| PRO 750/4/4/600  | 540 | 1123 | 1220 | 600 | 223 |
| PRO 1000/4/4/650 | 540 | 1123 | 1220 | 640 | 229 |
| PRO 1500/4/6/800 | 650 | 1313 | 1410 | 800 | 314 |
| PRO 2000/4/6/850 | 625 | 1313 | 1410 | 850 | 337 |

Dimensions in mm

All weights and dimensions are indicative only

## Installation

PROpeller mixers can be supplied with a full range of installation accessories, which allow mounting and simplify maintenance in tanks of all kinds, as well as ensuring that the mixer is correctly positioned in the tank thanks to the various adjustments possible.

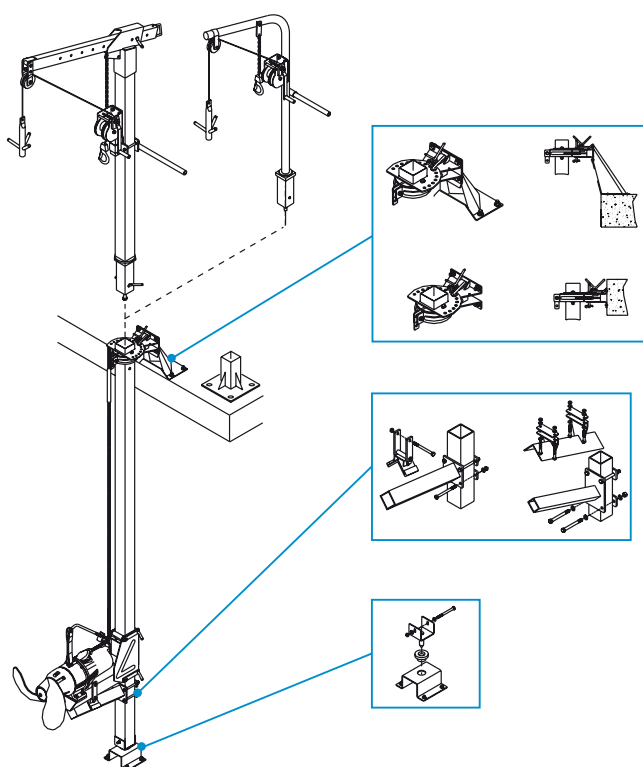
The mixer is supplied as standard with a runner and hoisting hook. All structural work can be supplied in hot-galvanized iron or stainless steel.

Various installation accessories are available for large-sized mixers on request.

All lifting systems are built with a rugged structure to guarantee efficiency and durability.

An additional advantage comes from full dismantlability into individual pieces, allowing the system to be assembled even without lifting equipment.

Thanks to a special connection on the top, all Zenit posts allow the lifting system to be removed for use on more than one installation.



# PRO

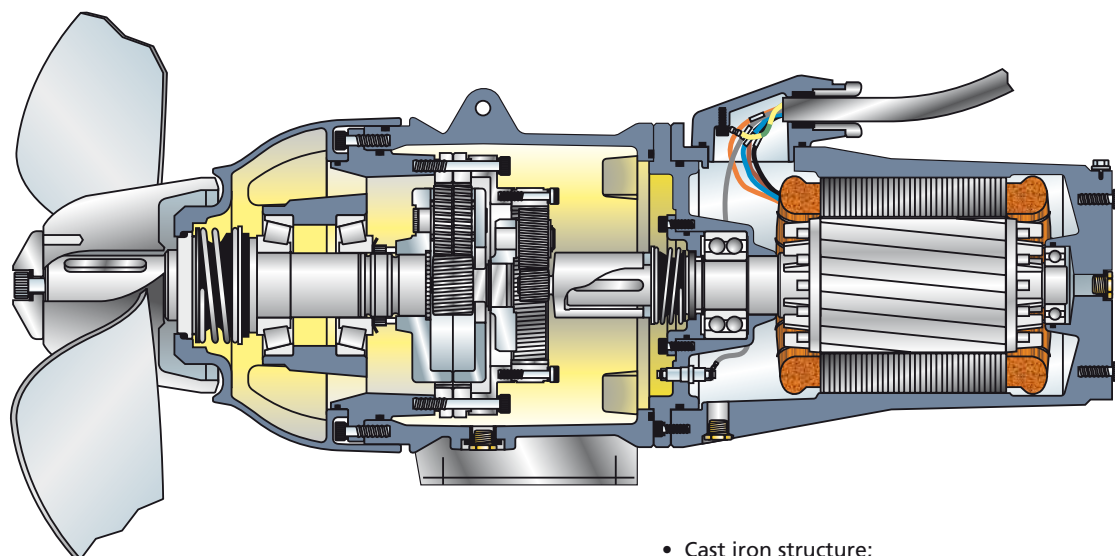
## Flow-maker

### Description and applications

Zenit **PRO** series flow-makers are built in cast iron or stainless steel. The propellers, of self-cleaning design, are up to 2,100 mm in diameter. The electric motors are rated from 0.8 to 5.5 kW with 4 or 6 poles; units have planetary reduction gear. The large propeller rotating at low rpm allows a large mass of water to be kept in motion at low speed. They are mainly used in oxidation and denitrification tanks and in all installations where the formation of sediment on the bottom of the tank has to be prevented.



All product images are indicative only

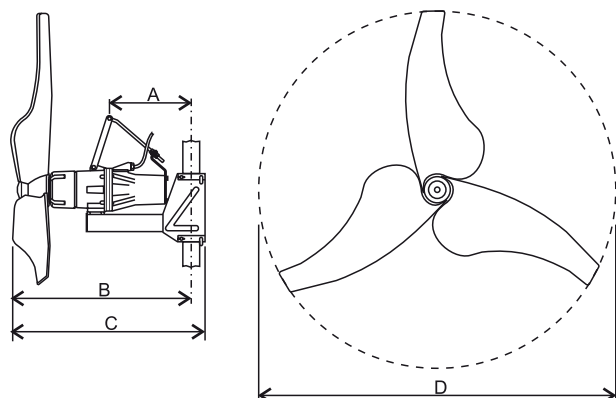


- Cast iron structure;
- Propeller in AISI 316;
- Motors from 0.8 to 5.5 kW, with 4-6 poles;
- From 27 to 148 rpm, transmission with reduction gear;
- Suitable for applications with max 1 or 3% solid content.

### Technical characteristics

|                   | P1<br>(kW) | P2<br>(kW) | current   |         | poles | start      | cable  | rpm | propeller |      |               |          |
|-------------------|------------|------------|-----------|---------|-------|------------|--------|-----|-----------|------|---------------|----------|
|                   |            |            | operating | startup |       |            |        |     | thrust N  | Ø mm | no. of blades | material |
| PRO 100/6/7/620   | 1.3        | 0.8        | 2.95      | 21      | 6     | DOL        | 7x1.5  | 148 | 290       | 620  | 3             | AISI 316 |
| PRO 150/6/7/660   | 1.8        | 1.1        | 4.3       | 30      | 6     | DOL        | 7x1.5  | 148 | 410       | 660  | 3             | AISI 316 |
| PRO 200/6/7/700   | 2.2        | 1.5        | 4.7       | 33      | 6     | DOL        | 7x1.5  | 148 | 550       | 700  | 3             | AISI 316 |
| PRO 300/6/7/750   | 3.0        | 2.2        | 6.4       | 45      | 6     | DOL        | 7x1.5  | 148 | 800       | 750  | 3             | AISI 316 |
| PRO 400/6/7/800   | 4.2        | 3.0        | 7.8       | 55      | 6     | DOL        | 7x1.5  | 148 | 1040      | 800  | 3             | AISI 316 |
| PRO 150/4/46/1900 | 1.7        | 1.1        | 3.0       | 21      | 4     | soft start | 7x1.5  | 33  | 1200      | 1900 | 2             | AISI 316 |
| PRO 200/4/46/2000 | 2.1        | 1.5        | 3.9       | 27      | 4     | soft start | 7x1.5  | 33  | 1600      | 2000 | 2             | AISI 316 |
| PRO 200/6/38/1700 | 2.2        | 1.5        | 4.7       | 33      | 6     | soft start | 7x1.5  | 27  | 1600      | 1700 | 3             | AISI 316 |
| PRO 300/4/46/1700 | 2.8        | 2.2        | 5.2       | 36      | 4     | soft start | 7x1.5  | 33  | 1800      | 1700 | 3             | AISI 316 |
| PRO 400/4/38/1750 | 4.0        | 3.0        | 7.2       | 51      | 4     | soft start | 7x1.5  | 40  | 2200      | 1750 | 3             | AISI 316 |
| PRO 550/4/46/2100 | 5.0        | 4.0        | 8.6       | 60      | 4     | soft start | 7x1.5  | 33  | 2600      | 2100 | 3             | AISI 316 |
| PRO 550/4/13/1040 | 5.0        | 4.0        | 8.6       | 60      | 4     | soft start | 7x1.5  | 119 | 1400      | 1040 | 3             | AISI 316 |
| PRO 750/4/38/2000 | 7.2        | 5.5        | 12.5      | 88      | 4     | soft start | 12x2.5 | 43  | 3200      | 2000 | 3             | AISI 316 |

## Overall dimensions and weights



|                   | A   | B    | C    | D    | Kg  |
|-------------------|-----|------|------|------|-----|
| PRO 100/6/7/620   | 460 | 893  | 975  | 620  | 137 |
| PRO 150/6/7/660   | 460 | 893  | 975  | 660  | 137 |
| PRO 200/6/7/700   | 460 | 893  | 975  | 700  | 139 |
| PRO 300/6/7/750   | 460 | 908  | 990  | 750  | 139 |
| PRO 400/6/7/800   | 410 | 923  | 1005 | 800  | 143 |
| PRO 150/4/46/1900 | 600 | 1144 | 1241 | 1900 | 206 |
| PRO 200/4/46/2000 | 600 | 1144 | 1241 | 2000 | 207 |
| PRO 200/6/38/1700 | 630 | 1107 | 1204 | 1700 | 207 |
| PRO 300/4/46/1700 | 630 | 1107 | 1204 | 1700 | 207 |
| PRO 400/4/38/1750 | 600 | 1144 | 1241 | 1750 | 207 |
| PRO 550/4/46/2100 | 655 | 1210 | 1300 | 2100 | 282 |
| PRO 550/4/13/1040 | 535 | 1074 | 1171 | 1040 | 175 |
| PRO 750/4/38/2000 | 685 | 1325 | 1425 | 2000 | 322 |

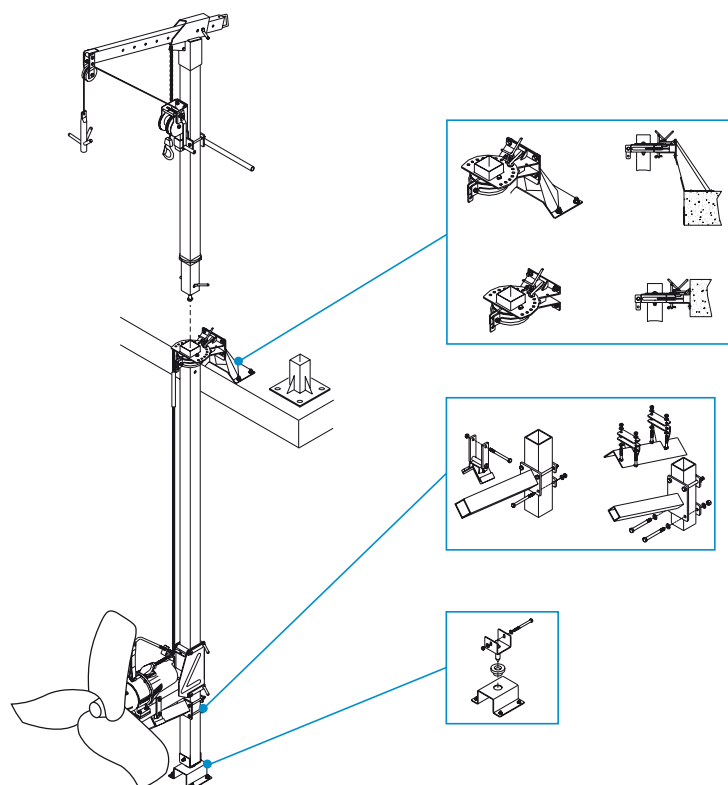
Dimensions in mm

All weights and dimensions are indicative only

## Installation

PRO flow-makers can be supplied with a full range of installation accessories, which allow mounting and simplify maintenance in tanks of all kinds, as well as ensuring that the mixer is correctly positioned in the tank thanks to the various adjustments possible.

The mixer is supplied as standard with a runner and hoisting hook. All structural work can be supplied in hot-galvanized iron or stainless steel.



All lifting systems are built with a rugged structure to guarantee efficiency and durability.

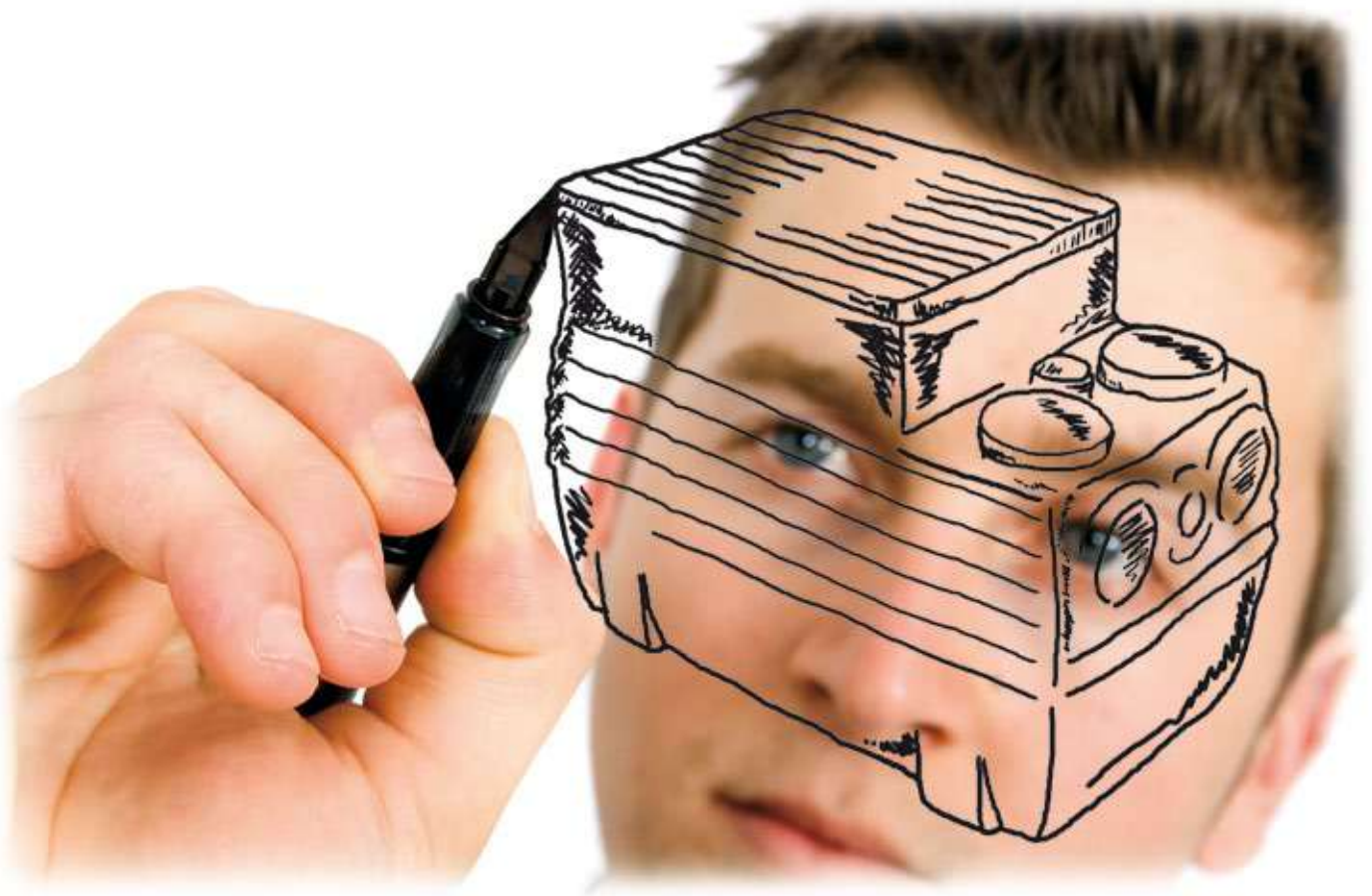
An additional advantage comes from full dismantlability into individual pieces, allowing the system to be assembled even without lifting equipment.

Thanks to a special connection on the top, all Zenit posts allow the lifting system to be removed for use on more than one installation.



# 3.0

## LIFTING STATIONS





# 3.1 Lifting stations



## **nanoBOX**

IDEAL FOR COLLECTING WATER EXCLUSIVELY FROM DOMESTIC DRAINS, INCLUDING WASHING MACHINES, SHOWERS AND SINKS (NOT SUITED FOR WC'S).



## **blueBOX**

IDEAL FOR COLLECTING AND LIFTING CLEAR, RAIN AND WASTE WATER FROM WASHING MACHINES, SINKS AND WC'S IN SYSTEMS INSTALLED AT A LOWER LEVEL THAN THE SEWER CONNECTION, SUCH AS GARAGES OR BASEMENTS.



## **BOX PRO**

THE BOX PRO SERIES IS COMPOSED OF ROBUST MEDIUM DENSITY POLYETHYLENE LIFTING STATIONS, FOR USE IN LARGE CAPACITY RESIDENTIAL AND CIVIL APPLICATIONS.

All product images are indicative only

**nanoBOX, BlueBOX and BOX PRO** prefabricated lifting stations are an effective solution for collecting and pumping wastewater to the sewer system, when a gravity feed is not available.

They are mainly used in rural or hilly areas with low population density, without an extensive municipal sewer system.

Zenit offers a full range of models for any kind of application, from small domestic installations (nanoBOX and BlueBOX) to more complex systems for civil installations (BOX PRO).

Given their many advantages, lifting stations are today the best choice for a low cost, safe and eco-compatible solution.

A problem and its solution. Polyethylene lifting stations can be adapted to any type of installation. Whether surface or underground, outdoors or indoors, they install quickly and easily with minimal construction work.

### **A problem and its solution**

Polyethylene lifting stations can be adapted to any type of installation. Whether surface or underground, outdoors or indoors, they install quickly and easily with minimal construction work.

### **Reduce costs**

Compared with conventional concrete tanks, prefabricated tanks do not require maintenance and are more resistant to the chemical and mechanical stress induced by black water, as well as being advantageously priced.

### **Weight does matter**

Lifting stations made in a lightweight, highly resistant material like polyethylene have a lower shipping cost and are easier to handle and install, while sacrificing nothing in terms of reliability.

### **Power consumption, but only when needed**

Lifting stations are designed for rational, optimised electricity consumption, thanks to the use of pumps rated to match tank capacity, with automatic float switch control.

# nanoBOX

**nanoBOX** is a high quality polyethylene tank intended for collecting water exclusively from domestic drains, including washing machines, showers and sinks (not suited for WC's). The tank has a 33 L maximum capacity and is supplied with a Zenit Steel series submersible pump already installed.

Thanks to its construction and small footprint, **nanoBOX** is very versatile and easy to install.

## Operation and Use

Ideal for collecting water exclusively from domestic drains, including washing machines, showers and sinks (not suited for WC's).

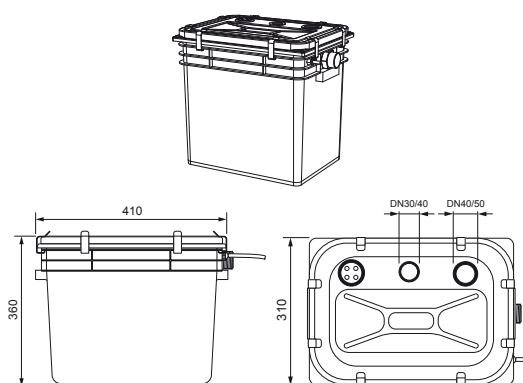


All product images are indicative only

## Features

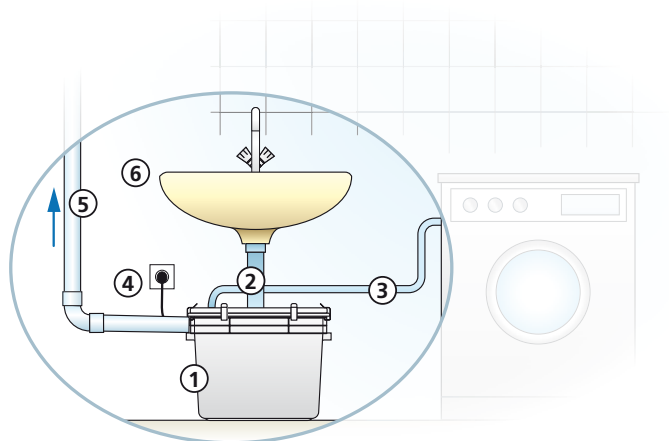
|               |                                         |
|---------------|-----------------------------------------|
| Capacity (L)* | 33                                      |
| Weight (Kg)   | 8 (Dr-Steel 25/2) - 8.7 (DR-Steel 37/2) |
| Nr. of pumps  | 1                                       |
| Voltage       | 220/240V ~1,50Hz                        |
| Protection    | IP68                                    |
| Inlet/Outlet  | 1 x DN30, 1 x DN40 / DN32 (male thread) |
| Start         | Automatic with floatswitch              |
| C° max water  | 35°C (for short periods up to 75°C)     |
| Free passage  | 10 mm                                   |

**Including:** Zenit DR-Steel 25/2 or 37/2 pump; 10 m cable and integral float switch.



## Installations

- ① nanoBOX
- ② Inlet from wash basin (with siphon)
- ③ Inlet from washing machine
- ④ Power supply
- ⑤ Outlet pipe
- ⑥ Breather outlet with activated carbon filter (remove filter when installing with breather pipe)



## Recommended pumps

|                   | V   | Phases | P2<br>(kW) | A   | Rpm  | Ø     | Free<br>passage |
|-------------------|-----|--------|------------|-----|------|-------|-----------------|
| DR-Steel 25/2 M50 | 230 | 1      | 0.25       | 2.3 | 2900 | G 1¼" | 10 mm           |
| DR-Steel 37/2 M50 | 230 | 1      | 0.37       | 3.1 | 2900 | G 1¼" | 10 mm           |

|          | Q    |      |     |     |     |     |
|----------|------|------|-----|-----|-----|-----|
| l/s      | 0.0  | 0.5  | 1.0 | 1.5 | 2.0 | 2.5 |
| l/min    | 0.0  | 30   | 60  | 90  | 120 | 150 |
| m³/h     | 0.0  | 1.8  | 3.6 | 5.4 | 7.2 | 9.0 |
| H<br>(m) | 8.5  | 7.0  | 5.7 | 4.0 | 1.3 |     |
|          | 13.6 | 11.6 | 9.5 | 7.0 | 4.5 | 1.9 |

\*\*For more information, see the Steel section in this catalog.

# blueBOX

The **BlueBOX** series consists of high quality rotary moulded polyethylene tanks for collecting white and black waste water.

The 60, 90, 150 and 250 litre models are equipped to house an electric pump, and are ideal for small domestic installations.

The 400 litre model is intended for medium capacity applications and is designed for use with two electric pumps.

The tanks' special shape is inspired by Pininfarina's design for the Blue Series of submersible pumps. Their construction characteristics and wide range of accessories make **BlueBOX** systems extremely versatile and easy to install.



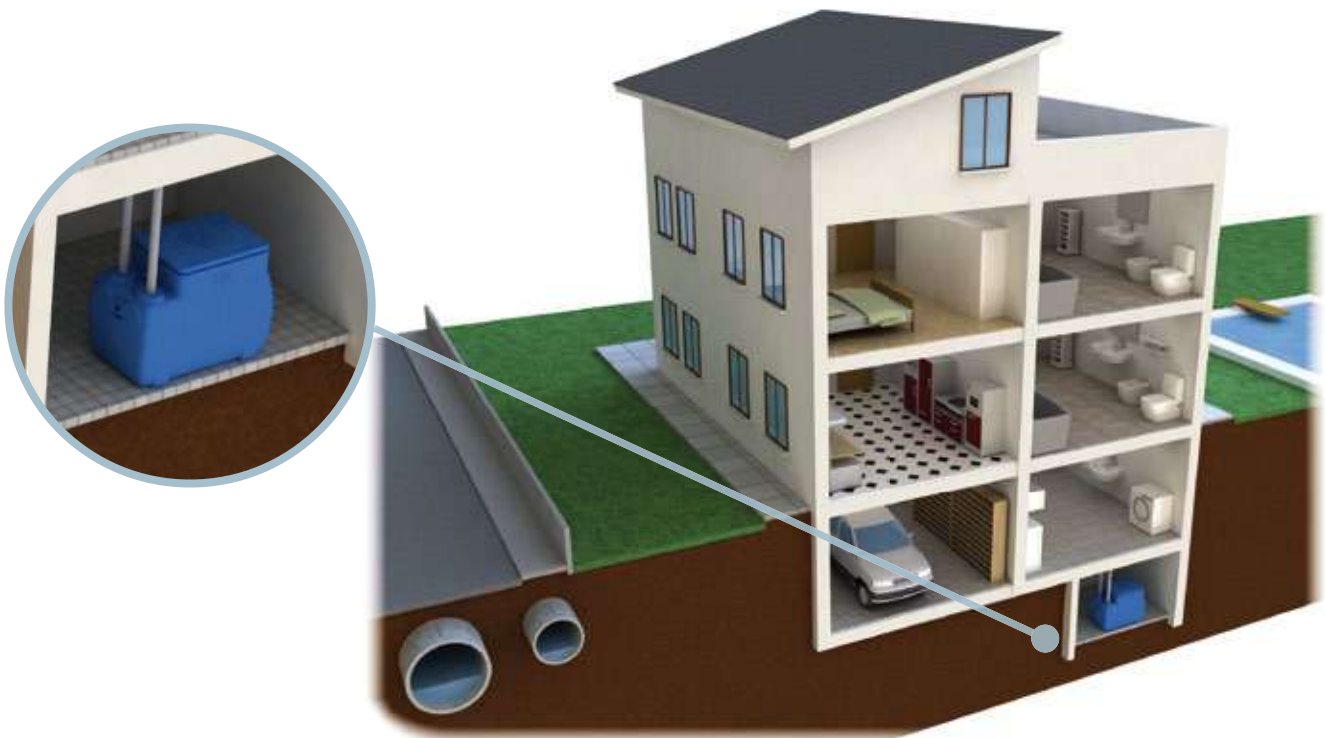
All product images are indicative only

## Operation and Use

The collection tank collects the domestic waste water coming from discharges of any kind and any rainwater or infiltration water traps.

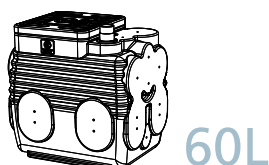
The pump installed inside the tank allows the water to be sent to the sewer. The cover and the connections for passing the pipes have gaskets to guarantee a perfect seal. **BlueBOX** is prepared for collection to the input, output and ventilation pipes on every side, enabling an optimal use even in small spaces.

Inside a grinding pump can be installed capable of chopping the extraneous bodies contained in the wastewater and sending them a considerable distance. In this way the liquid can also be made to pass through small diameter pipes, permitting a significant financial savings on the total cost of the installation.



# The BlueBOX range\*

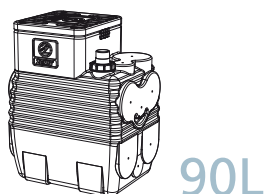
BlueBOX stations are suitable for collecting and lifting clear, rain and waste water from washing machines, sinks and WCs in systems installed at a lower level than the sewer, in locations such as garages or basements. The 60, 90 and 150 litre models are compact and easy to install, making them ideal for civil and residential contexts. Thanks to the rich assortment of electrical and hydraulic accessories available, the 250 and 400 litre versions are suitable for industrial and residential installations.



60L

|                       |                                                                    |
|-----------------------|--------------------------------------------------------------------|
| Capacity (l)          | 60                                                                 |
| Dimensions (mm)       | 482x370x480                                                        |
| Nr. of pumps          | 1                                                                  |
| Operation temperature | 40°C (90°C short time)                                             |
| Recommended pumps     | DGBlue, GRBluePRO, (DRBlue and APBlue with clear wastewaters only) |

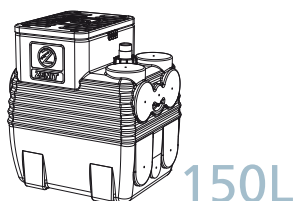
**Including:** cable gland, PVC delivery pipe\*\* Ø 1½", emergency draining connector, gasket kit for inlet pipe 1xØ110, 1x75, 1x50 mm, nr.1 special support to reduce the float switch level. Overflow alarm level OPTIONAL.



90L

|                       |                        |
|-----------------------|------------------------|
| Capacity (l)          | 90                     |
| Dimensions (mm)       | 480x370x610            |
| Nr. of pumps          | 1                      |
| Operation temperature | 40°C (90°C short time) |
| Recommended pumps     | DG Blue, GRBluePRO     |

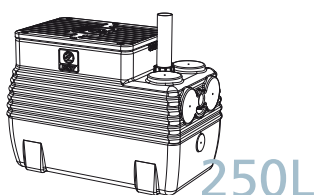
**Including:** cable gland, PVC delivery pipe\*\* Ø 1½", emergency draining connector, gasket kit for inlet pipe 1xØ110, 1x75, 1x50 mm, nr.1 special support to reduce the float switch level. Overflow alarm level OPTIONAL.



150L

|                       |                                 |
|-----------------------|---------------------------------|
| Capacity (l)          | 150                             |
| Dimensions (mm)       | 580x480x660                     |
| Nr. of pumps          | 1                               |
| Operation temperature | 40°C (90°C short time)          |
| Recommended pumps     | DG Blue, DG BluePRO, GR BluePRO |

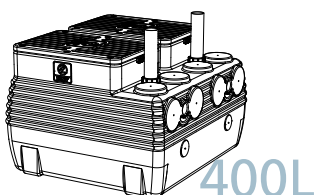
**Including:** cable gland, PVC delivery pipe\*\* Ø 1½", emergency draining connector, gasket kit for inlet pipes 2xØ110, 1xØ75 and 1xØ50 mm, nr.1 special support to reduce the float switch level. Overflow alarm level OPTIONAL.



250L

|                       |                                 |
|-----------------------|---------------------------------|
| Capacity (l)          | 250                             |
| Dimensions (mm)       | 900x500x660                     |
| Nr. of pumps          | 1                               |
| Operation temperature | 40°C (90°C short time)          |
| Recommended pumps     | DG Blue, DG BluePRO, GR BluePRO |

**Including:** cable gland, nr. 2 gaskets pipe Ø110, nr. 1 gasket pipe Ø75 mm.



400L

|                       |                                      |
|-----------------------|--------------------------------------|
| Capacity (l)          | 400                                  |
| Dimensions (mm)       | 900x1.000x660                        |
| Nr. of pumps          | 2                                    |
| Operation temperature | 40°C (90°C short time)               |
| Recommended pumps     | DG Blue, DG BluePRO, GR BluePRO, DGO |

**Including:** cable gland, nr. 4 gaskets pipe Ø110, nr. 2 gasket pipe Ø75 mm.

\* Dimension in mm - Data without pump and accessories - All weights and dimensions are indicative only - The capacity is guideline and refers to the maximum volume capacity before the contents overflow from the tank.  
 \*\* Union for connection to existing system.

# How it's made

## Technical features

- 60, 90 and 150 litres version for one pump directly installed;
- 250 litre version for one pump and 400 litre version for two pumps with coupling device or directly installed;
- Walk-over cover;
- O-ring seal between tank and cover;
- Simplified inlet, outlet and air venting pipe connections with seal;
- Integral lifting handles;
- Emergency drainage fitting located low down in the unit;
- Patented airtight cable gland allowing easy pump removal for any maintenance work;
- The side fins, in the middle of the tank, guarantee an excellent grip if the unit is installed in-floor (refer to relevant manual).



All product images are indicative only



**1** Sturdy walk-over cover  
The large top opening allows a backup pump to be used for emergency emptying, ensuring operations are simple and hygienic.



**2** PATENTED modular cable gland system allowing the pump to be removed with no need to disconnect or extract the power supply cable (refer to relevant manual).



**3** Guaranteed airtight thanks to NBR rubber seals. The seal allows the BlueBOX to be connected to the various pipelines quickly, solving the vibration problem and avoiding the use of silicone or glue.



**4** Wastewater pipeline inlet ports also provided on sides.



**5** Two integral handles for lifting and transport, for easy transfer even by hand.



**6** Emergency drainage fitting located low down in the unit.



# Recommended pumps

Additional configurations with submersible pumps from other Zenit families are possible. For further information, contact the Zenit Customer Service.

| VORTEX IMPELLER               | V   | Phases | P2 (kW) | A    | Rpm  | Ø     | Free passage | Suitable for BlueBOX |     |      |      |      |
|-------------------------------|-----|--------|---------|------|------|-------|--------------|----------------------|-----|------|------|------|
|                               |     |        |         |      |      |       |              | 60L                  | 90L | 150L | 250L | 400L |
| DG Blue 40/2/G40V A1BM/50     | 230 | 1      | 0.3     | 2.3  | 2900 | G 1½" | 40 mm        | •                    | •   |      |      |      |
| DG Blue 50/2/G40V A1BM/50     | 230 | 1      | 0.37    | 2.8  | 2900 | G 1½" | 40 mm        | •                    | •   | •    |      |      |
| DG Blue 75/2/G40V A1BM/50     | 230 | 1      | 0.55    | 4.1  | 2900 | G 1½" | 40 mm        | •                    | •   | •    |      |      |
| DG Blue 100/2/G40V A1BM/50    | 230 | 1      | 0.74    | 5.6  | 2900 | G 1½" | 40 mm        | •                    | •   | •    | •    | •    |
| DG BluePRO 50/2/G40V A1BM/50  | 230 | 1      | 0.37    | 2.8  | 2900 | G 1½" | 40 mm        | •                    |     | •    |      |      |
| DG BluePRO 75/2/G40V A1BM/50  | 230 | 1      | 0.55    | 4.1  | 2900 | G 1½" | 40 mm        | •                    |     | •    |      |      |
| DG BluePRO 100/2/G40V A1BM/50 | 230 | 1      | 0.74    | 5.6  | 2900 | G 1½" | 40 mm        | •                    |     | •    | •    | •    |
| DG BluePRO 150/2/G50V A1CM/50 | 230 | 1      | 1.1     | 7.5  | 2900 | G 2"  | 50 mm        |                      |     |      | •    | •    |
| DG BluePRO 200/2/G50V A1CM/50 | 230 | 1      | 1.5     | 10.0 | 2900 | G 2"  | 50 mm        |                      |     |      | •    | •    |
| DG BluePRO 50/2/G40V A1BT/50  | 400 | 3      | 0.37    | 1.15 | 2900 | G 1½" | 40 mm        |                      |     | •    |      |      |
| DG BluePRO 75/2/G40V A1BT/50  | 400 | 3      | 0.55    | 1.6  | 2900 | G 1½" | 40 mm        |                      |     | •    |      |      |
| DG BluePRO 100/2/G40V A1BT/50 | 400 | 3      | 0.74    | 2.15 | 2900 | G 1½" | 40 mm        |                      |     | •    | •    | •    |
| DG BluePRO 150/2/G50V A1CT/50 | 400 | 3      | 1.1     | 3.2  | 2900 | G 2"  | 50 mm        |                      |     |      | •    | •    |
| DG BluePRO 200/2/G50V A1CT/50 | 400 | 3      | 1.5     | 4.3  | 2900 | G 2"  | 50 mm        |                      |     |      | •    | •    |
| DGO 150/2/G65V A1CM/50        | 230 | 1      | 1.1     | 8.2  | 2900 | G 2½" | 65 mm        |                      |     |      |      | •    |
| DGO 200/2/G65V A1CM/50        | 230 | 1      | 1.5     | 9.9  | 2900 | G 2½" | 65 mm        |                      |     |      |      | •    |
| DGO 150/2/G65V A1CT/50        | 400 | 3      | 1.1     | 2.7  | 2900 | G 2½" | 65 mm        |                      |     |      |      | •    |
| DGO 200/2/G65V A1CT/50        | 400 | 3      | 1.5     | 3.6  | 2900 | G 2½" | 65 mm        |                      |     |      |      | •    |

## GRINDER IMPELLER

|                               |     |   |      |      |      |                   |   |   |   |   |   |   |
|-------------------------------|-----|---|------|------|------|-------------------|---|---|---|---|---|---|
| GR BluePRO 100/2/G40H A1CM/50 | 230 | 1 | 0.74 | 5.5  | 2900 | G 1½"<br>DN32 PN6 | - | • | • | • | • | • |
| GR BluePRO 150/2/G40H A1CM/50 | 230 | 1 | 1.1  | 7.5  | 2900 | G 1½"<br>DN32 PN6 | - |   |   |   | • | • |
| GR BluePRO 200/2/G40H A1CM/50 | 230 | 1 | 1.5  | 10.0 | 2900 | G 1½"<br>DN32 PN6 | - |   |   |   | • | • |
| GR BluePRO 100/2/G40H A1CT/50 | 400 | 3 | 0.74 | 2.7  | 2900 | G 1½"<br>DN32 PN6 | - | • | • | • | • | • |
| GR BluePRO 150/2/G40H A1CT/50 | 400 | 3 | 1.1  | 3.2  | 2900 | G 1½"<br>DN32 PN6 | - |   |   |   | • | • |
| GR BluePRO 200/2/G40H A1CT/50 | 400 | 3 | 1.5  | 4.3  | 2900 | G 1½"<br>DN32 PN6 | - |   |   |   | • | • |

|                                  | l/s   | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 8    | 10   | 12   |
|----------------------------------|-------|------|------|------|------|------|------|------|------|------|------|
|                                  | l/min | 0    | 60   | 120  | 180  | 240  | 300  | 360  | 480  | 600  | 720  |
|                                  | m³/h  | 0    | 3.6  | 7.2  | 10.8 | 14.4 | 18.0 | 21.6 | 28.8 | 36.0 | 43.2 |
| DGBLUE 40/2/G40V A1BM/50         | 6.0   |      |      | 4.0  |      | 1.7  |      |      |      |      |      |
| DGBLUE 50/2/G40V A1BM/50         | 7.6   |      |      | 5.5  |      | 2.9  |      |      |      |      |      |
| DGBLUE 75/2/G40V A1BM/50         | 10.1  |      |      | 8.5  |      | 5.7  |      | 2.6  |      |      |      |
| DGBLUE 100/2/G40V A1BM/50        | 11.6  |      |      | 10.2 |      | 7.6  |      | 4.3  |      |      |      |
| DG BluePRO 50/2/G40V A1BM(T)/50  | 7.0   |      |      | 4.9  |      | 2.4  |      |      |      |      |      |
| DG BluePRO 75/2/G40V A1BM(T)/50  | 10.2  |      |      | 8.0  |      | 5.5  |      | 2.6  |      |      |      |
| DG BluePRO 100/2/G40V A1BM(T)/50 | 11.4  |      |      | 9.8  |      | 7.4  |      | 4.4  |      |      |      |
| DG BluePRO 150/2/G50V A1CM(T)/50 | 12.3  |      |      | 10.7 |      | 8.8  |      | 6.5  | 4.4  | 2.4  |      |
| DG BluePRO 200/2/G50V A1CM(T)/50 | 15.3  |      |      | 13.7 |      | 11.7 |      | 9.4  | 7.1  | 4.7  | 2.5  |
| DGO 150/2/G65V A1CM(T)/50        | 8.0   |      |      | 7.2  |      | 6.1  |      | 4.7  | 3.0  |      |      |
| DGO 200/2/G65V A1CM(T)/50        | 9.7   |      |      | 8.8  |      | 7.7  |      | 6.3  | 4.7  | 3.0  |      |
| GR BluePRO 100/2/G40H A1CM(T)/50 | 18.0  | 16.4 | 14.4 | 11.5 | 6.9  |      |      |      |      |      |      |
| GR BluePRO 150/2/G40H A1CM(T)/50 | 21.1  | 19.6 | 17.9 | 15.1 | 10.4 | 3.0  |      |      |      |      |      |
| GR BluePRO 200/2/G40H A1CM(T)/50 | 27.0  | 25.6 | 23.6 | 20.7 | 16.1 | 9.3  |      |      |      |      |      |



# Types of installation

**BlueBOX** lifting stations can be installed on-floor or in-floor. They are prefitted for use with Zenit pumps with vortex impeller or with grinding systems, which must be ordered separately depending on the customer's specific requirements.

The large number of intake and outlet pipeline fittings allow optimal installation even on existing plants. What's more the many hydraulic and electric accessories make **BlueBOX** lifting stations convenient to install and use.

## BlueBOX 60 - 90 - 150

### Installations

In view of their small size, 60, 90 and 150 litre models can be installed coupled directly to the pump. The bottom of the **BlueBOX** is shaped to hold the pump in position without the aid of additional accessories. DG Blue pumps with vortex impeller or GRBlue models with grinder can be used. With grinders, an ordinary threaded 90° bend must be used to change the direction of the delivery line.

The BlueBOX 60 can be used with Zenit DRBlue or APBlue pumps for higher heads when pumping clear or washbasin wastewaters. The PVC outlet pipe connected to the pump has a coupling which allows the pump to be easily separated from the pump for any maintenance requirements, without disconnecting the pipelines from the lifting stations.

A ball check valve and/or a gate valve can be connected to the end of the delivery pipeline.



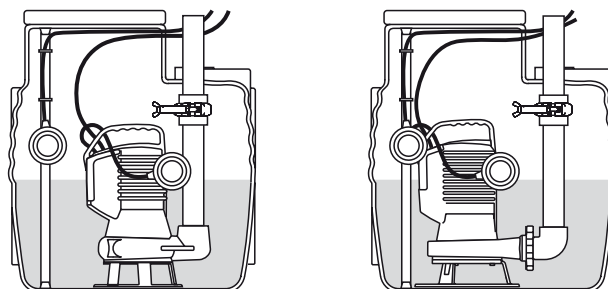
All product images are indicative only

### Electrical accessories

In these models, the use of pumps with start/stop float-switch is recommended.

This makes installation simple and inexpensive.

An optional float switch with an overflow alarm function, for connection to an electrical control panel, can be used if required.

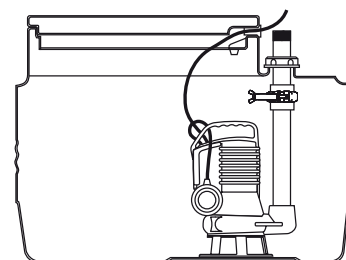


# BlueBOX 250 - 400

## Installations

### Fixed installation

Ideal installation for pump with vertical delivery outlet up to 2½". The pump rests on the bottom of the tank. The specially shaped bottom keeps the pump in the correct position. A ball check valve and/or a gate valve can be connected to the end of the delivery pipeline. Permanent installation is definitely the simplest and most economical.

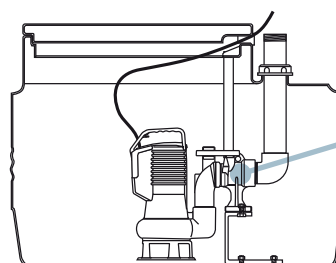
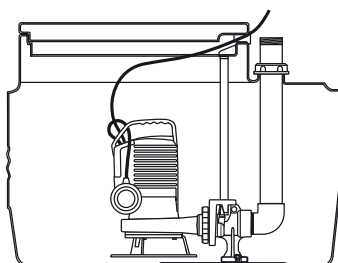


### Installation with bottom coupling device (DAC)

Installation with the bottom coupling device allows the pump to be raised and repositioned easily, with no need to empty the tank.

Vertical delivery pumps can be installed using a special kit for horizontal DAC units. This is a versatile installation option which simplifies pump maintenance or replacement.

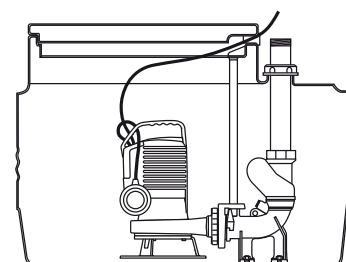
See Accessories section for further information.



### Installation with bottom coupling device (DAC) and ball valve (VAP)

This special, compact accessory provides all the benefits of an ordinary DAC, and also, thanks to an integral venting valve, it prevents air pockets from forming inside the pump body if the unit runs dry.

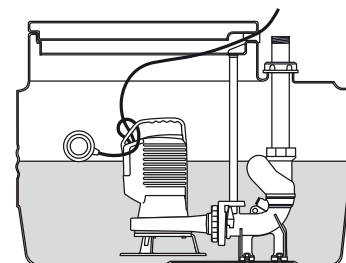
Thanks to this feature, a special ball check valve can be directly connected to the outlet of the DAC inside the BlueBOX, ensuring compact size and removing installation constraints.



## Electrical accessories

### With integral float switch

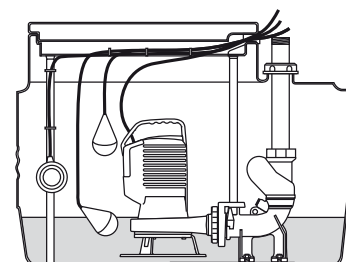
In the event of use of pumps with float switch, BlueBOX lifting stations can be used with no further electric accessories. The float switch starts and stops the pump depending on the level reached.



### Without integral float switch

In the event of use of pumps without float switch, the BlueBOX lifting station must be equipped with minimum and maximum level float switches, and alarm float switch if required.

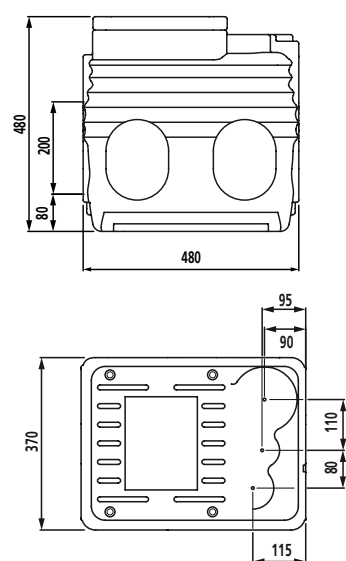
The electrical panel complete with all features required for operation of one or two pumps (BlueBOX 400L) and accessories such as alternating control device or alarm with buzzer and light is available on request.



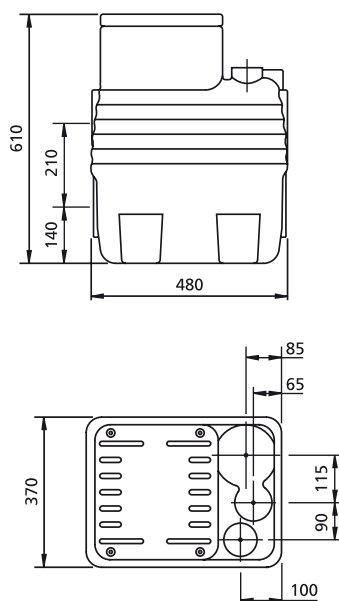
# Overall dimensions and weights\*

|              | Inlet                | Outlet               | Weight (kg) |
|--------------|----------------------|----------------------|-------------|
| BlueBOX 60L  | 9 x Ø 110 - 1 x Ø 75 | 1 x Ø 1½" - 1 x Ø 2" | 8           |
| BlueBOX 90L  | 9 x Ø 110 - 1 x Ø 75 | 1 x Ø 1½" - 1 x Ø 2" | 9           |
| BlueBOX 150L | 10 x Ø 75 ÷ 110      | 1 x Ø 1½" ÷ 2"       | 11          |
| BlueBOX 250L | 10 x Ø 75 ÷ 110      | 1 x Ø 1½" ÷ 2"       | 15          |
| BlueBOX 400L | 20 x Ø 75 ÷ 110      | 2 x Ø 1½" ÷ 2½"      | 31          |

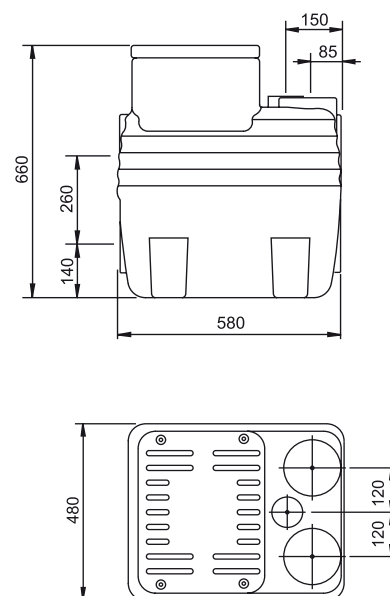
## BlueBOX 60L



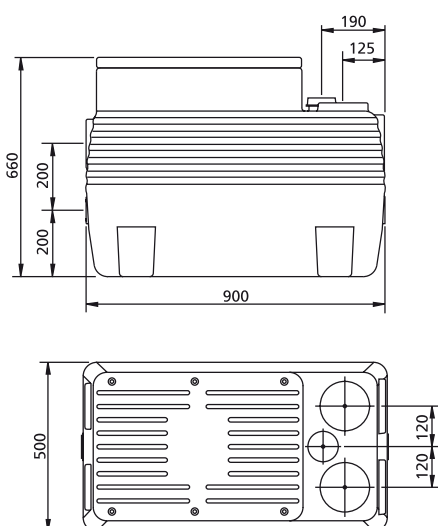
## BlueBOX 90L



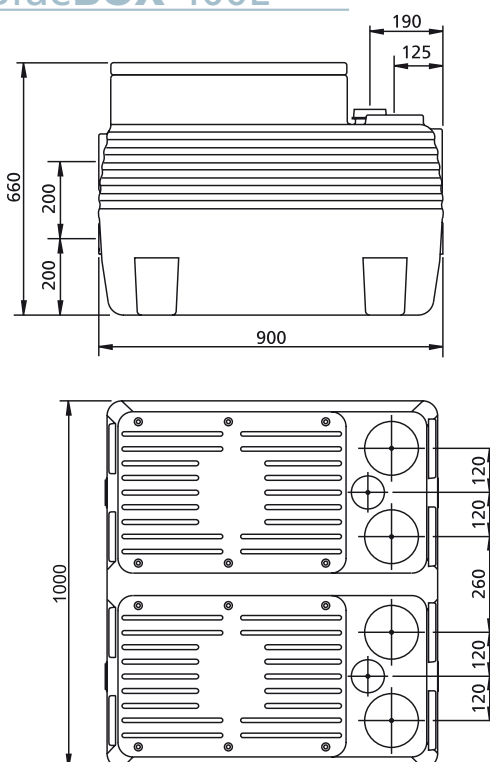
## BlueBOX 150L



## BlueBOX 250L



## BlueBOX 400L



\*Dimension in mm - Data without pump and accessories - All weights and dimensions are indicative only.

# How to install it

Installing a **BlueBOX** lifting station could not be easier. It is supplied partially assembled to speed up installation by the customer. A large number of construction features simplify installation, and the accessories supplied allow the system to be optimised in all conditions.



1

The **BlueBOX** tank can be installed on-floor or in-floor. Inlet and output pipeline fittings are provided on three sides, allowing installation to be optimised to requirements.



2

Before the unit is actually placed in position, holes are drilled in the sides using a flared grinding tool to take the seals and then the pipes in the chosen positions.



3

To ensure perfect sealing, the double lip seal provided is fitted. No additional sealants are required, making installation an extremely quick procedure.



4

Once our **BlueBOX** has been placed in the installation position, the wastewater inlet and ventilation pipes are fitted.



5

The next step is to install the pump, which will certainly be easier if a **BlueBOX** with DAC was chosen. In this case, the flange provided has only to be slid along the guide tubes to achieve perfect coupling to the body of the DAC. The **BlueBOX** contains an accessory that can be fitted to allow emptying in emergencies through the drainage hole low down in the unit.



6

The electrical cables are passed through special patented rubber cable glands that ensure a perfectly airtight seal. Before fitting the cable, perforate the chosen cable glands with a sharp tool, but leave the others intact to keep liquids or smells inside the unit.



7

Once installation is complete and operation of the pump and its float switches has been checked, the cover can be screwed into place. The cover is walk-over but will not support vehicles.



8

The **BlueBOX** lifting station is ready for use. The vast range of plumbing and electrical accessories covers all installation requirements.

# The BOX PRO range\*

The **BOX PRO** series is composed of pumping stations in medium density sturdy polyethylene, suitable for installations in large scale civil and residential establishments.

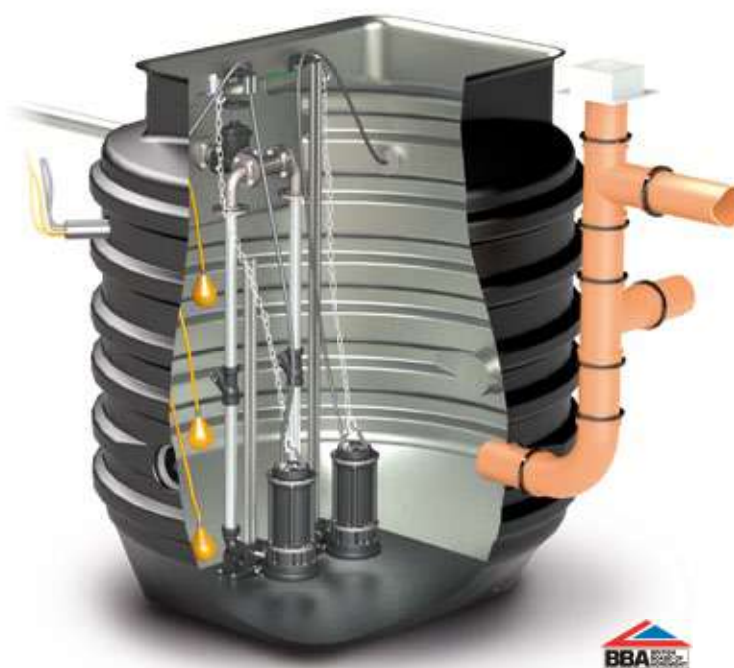
They are generally installed in areas where gravity drainage is not available to the waste water services. The below ground level installation facilitates collection of waste and drainage water.

Pumping stations are an engineered design so that the chamber can resist the ground and water pressures when installed.

Hygienically designed with smooth internal walls and an optimum collection area which aids the removal of the effluent to avoid smells and septicity ensuring that the **BOX PRO** System gives the best possible performance.

BOX PRO lifting stations can house either one or two submersible pumps with vortex, channel or grinding impellers.

The pumps must be installed with a bottom coupling system which enables them to be recovered quickly and easily, even without draining the tank.

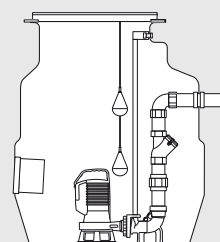


All product images are indicative only

## BlueBOX M

The ideal solution for small capacities from a single residence and where the available excavation depth is limited. Equipped for operation with one or two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer operation. Gate valve optional.

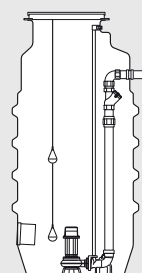
|                       |                                         |
|-----------------------|-----------------------------------------|
| Capacity (liters)     | 1.000                                   |
| Dimensions (mm)       | Ø1.016 - h1.224                         |
| Nr. of pumps          | 1-2                                     |
| Operation temperature | 40°C (90°C short time)                  |
| Recommended pumps     | DRO, DGO, SMI, DGI, GRBluePRO, GRI, GRE |



## BlueBOX S

This is the most widely used system for single residences, bathrooms or small offices with up to 10 occupants. Equipped for operation with one or two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer operation. Gate valve optional.

|                       |                                         |
|-----------------------|-----------------------------------------|
| Capacity (liters)     | 2.000                                   |
| Dimensions (mm)       | Ø1.016 - h2.310                         |
| Nr. of pumps          | 1-2                                     |
| Operation temperature | 40°C (90°C short time)                  |
| Recommended pumps     | DRO, DGO, SMI, DGI, GRBluePRO, GRI, GRE |



## Operation and Use

Every station has 3 inlet connections for the entry of the waste water, there are also 2 high level cable inlet connections for pump and float cables. A metal access cover are provide to suite pedestrian or highway applications.

The operation can be automated thanks to the control system using floats switches which also includes a high level alarm for an even more secure system.

There is an isolation gate valve on the S & J types that uses a special key which is included, allowing the control of the discharge gate through an inspection window from cover level, without entering the chamber.

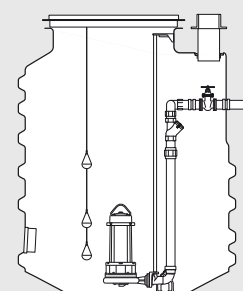
## Accessories

| INCLUDED                                                         | M | V | S | J |
|------------------------------------------------------------------|---|---|---|---|
| 3 Inlet pipe gaskets Ø160mm                                      | • | • | • | • |
| 2 Electrical cable pipes gaskets Ø110mm                          | • | • | • | • |
| Galvanized hook for pump lifting chain                           | • | • | • | • |
| Float switch hook support                                        | • | • | • | • |
| Ground connection net                                            | • | • | • | • |
| Single or double DN50 ABS outlet pipe                            | • | • | • | • |
| Single or double DN80-100-150 ductile iron pipe                  | • | • | • | • |
| Coupling foot for bottom installation with galvanized guidelines | • | • | • | • |
| Non-return ball check valve                                      | • | • | • | • |
| Gate valve and special key                                       |   |   | • | • |
| OPTIONAL                                                         | M | V | S | J |
| Stainless steel outlet pipe Ø50mm                                | • | • | • | • |
| Gate valve                                                       | • | • |   |   |
| Free standing cover                                              | • | • | • | • |
| Square cover with a round opening                                | • | • |   |   |
| Cover with strainer for rainwater collection                     | • | • | • | • |

## BlueBOX S

Ideal for small industrial/commercial facilities, restaurants, small hotels, retirement homes, camp sites. Larger capacities are available to special order. Equipped for operation with two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer operation.

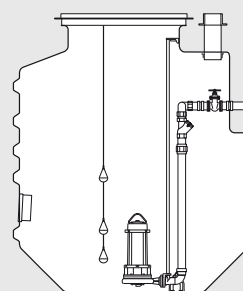
|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Capacity (liters)     | 4.000 ÷ 9.500                                                         |
| Dimensions (mm)       | Ø1.624 - h2.015, 3.000, 4.000, 4.500                                  |
| Nr. of pumps          | 2                                                                     |
| Operation temperature | 40°C (90°C short time)                                                |
| Recommended pumps     | DRO, DGO, DGN, DGP, MAN, GRBluePRO, GRI, GRE, GRP, GRN, APN, APP, SMP |



## BlueBOX J

Recommended for use in large capacity applications such as hotels, hospitals and wastewater treatment plants. Equipped for operation with two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer operation.

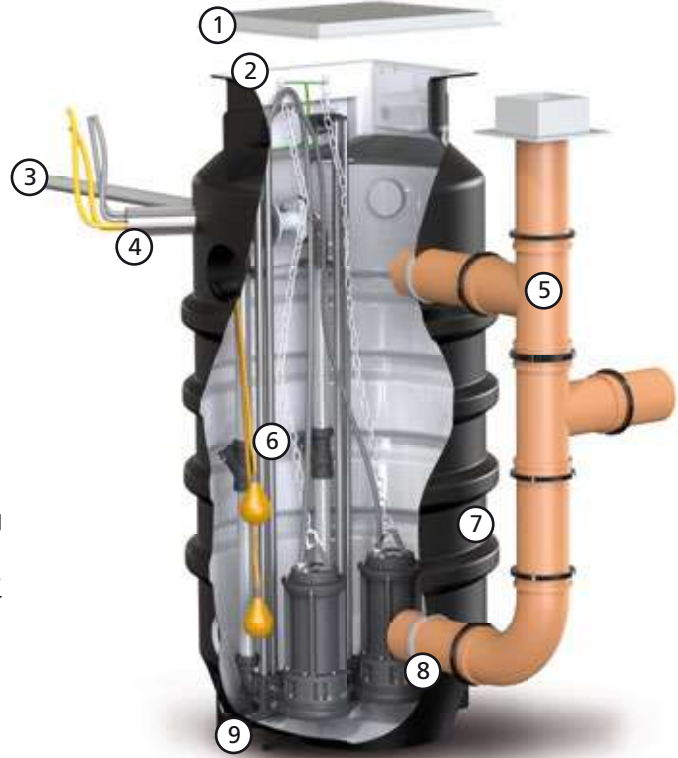
|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Capacity (liters)     | 10.000 ÷ 18.000                                                       |
| Dimensions (mm)       | Ø2.246 - h2.520, 3.500, 4.500                                         |
| Nr. of pumps          | 2                                                                     |
| Operation temperature | 40°C (90°C short time)                                                |
| Recommended pumps     | DRO, DGO, DGN, DGP, MAN, GRBluePRO, GRI, GRE, GRP, GRN, APN, APP, SMP |



\* Dimension in mm - Data without pump and accessories - All weights and dimensions are indicative only - The capacity is guideline and refers to the maximum volume capacity before the contents overflow from the tank.



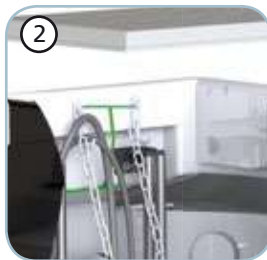
# How it's made



All product images are indicative only



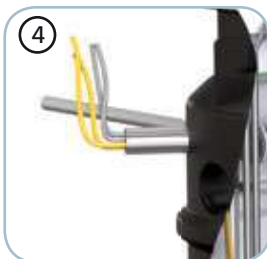
Metal cover for pedestrian and vehicle loading. Possibility of a free standing cover, grid access cover and square cover with a round opening.



Grounding of all metallic element inside the lift station by equipotential bonding.



DN50 discharge pipe in ABS and DN80-100-150 realized in ductile iron coated inside with cement mortar in accordance with regulation EN 545:2002 to guarantee a greater resistance to mechanical wear and corrosion. Possibility of a stainless steel outlet pipe Ø50mm



Two Ø110 mm outlets for the electric cables which facilitates the connection operation to the panel of the electric pumps, float switch and any ultrasound probes.



A fully adjustable external inlet stack assembly for single/multiple pipe work connections effectively directing all waste entering the systems to the base of the internal pumps, therefore reducing turbulence, odour problems whilst allowing full flexibility to overcome inlet pipe work level deviations and ensuring the flow of solid waste into the chamber preventing blockages.



Double non-return valve (only on dual stations).



Made in "medium density" polyethylene with enhanced thickness, more resistant for construction site and low temperatures. Totally recyclable.



Preparation for three waste water inlet pipes Ø160mm with rapid fastening using NBR gaskets without the use of sealant products. Possibility to use one of the two cable duct entries Ø110mm as an inlet.



Installation of the electric pump with level coupling fastened to the bottom using screws with hermetically sealing gasket and steel reinforcement bars. Start/stop system and overflow prevention alarm using floats.

# Recommended pumps

Additional configurations are possible with submersible pumps of other Zenit lines (check in advance the compatibility of the discharge opening with the coupling device). For further information, contact the Zenit Customer Service.

| VORTEX IMPELLER        | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø                  | Free<br>passage | Suitable for BOX PRO |   |   |   |
|------------------------|-----|--------|------------|------------|------|------|--------------------|-----------------|----------------------|---|---|---|
|                        |     |        |            |            |      |      |                    |                 | M                    | V | S | J |
| DGO 50/2/G50H A1CM/50  | 230 | 1      | -          | 0.37       | 2.9  | 2900 | G 2"- DN50 PN10-16 | 40 mm           | •                    | • | • | • |
| DGO 50/2/G50H A1CT/50  | 400 | 3      | -          | 0.37       | 1.1  | 2900 | G 2"- DN50 PN10-16 | 40 mm           | •                    | • | • | • |
| DGO 75/2/G50H A1CM/50  | 230 | 1      | -          | 0.55       | 3.9  | 2900 | G 2"- DN50 PN10-16 | 40 mm           | •                    | • | • | • |
| DGO 75/2/G50H A1CT/50  | 400 | 3      | -          | 0.55       | 1.4  | 2900 | G 2"- DN50 PN10-16 | 40 mm           | •                    | • | • | • |
| DGO 100/2/G50H A0CM/50 | 230 | 1      | -          | 0.88       | 6.5  | 2900 | G 2"- DN50 PN10-16 | 50 mm           | •                    | • | • | • |
| DGO 100/2/G50H A0CT/50 | 400 | 3      | -          | 0.88       | 2.3  | 2900 | G 2"- DN50 PN10-16 | 50 mm           | •                    | • | • | • |
| DGO 150/2/G50H A0CM/50 | 230 | 1      | -          | 1.1        | 8.2  | 2900 | G 2"- DN50 PN10-16 | 50 mm           | •                    | • | • | • |
| DGO 150/2/G50H A0CT/50 | 400 | 3      | -          | 1.1        | 2.6  | 2900 | G 2"- DN50 PN10-16 | 50 mm           | •                    | • | • | • |
| DGO 200/2/G50H A0CM/50 | 230 | 1      | -          | 1.5        | 9.3  | 2900 | G 2"- DN50 PN10-16 | 50 mm           | •                    | • | • | • |
| DGO 200/2/G50H A0CT/50 | 400 | 3      | -          | 1.5        | 3.6  | 2900 | G 2"- DN50 PN10-16 | 50 mm           | •                    | • | • | • |
| DGO 200/2/80 A1CM/50   | 230 | 1      | -          | 1.7        | 11.2 | 2900 | DN80 PN10-16       | 80 mm           | •                    | • | • | • |
| DGO 200/2/80 A1CT/50   | 400 | 3      | -          | 1.7        | 3.9  | 2900 | DN80 PN10-16       | 80 mm           | •                    | • | • | • |
| DGO 100/4/G50H A0CM/50 | 230 | 1      | -          | 0.7        | 5.7  | 1450 | G 2" DN50 PN10     | 45 mm           | •                    | • | • | • |
| DGO 100/4/G50H A0CT/50 | 400 | 3      | -          | 0.7        | 2.2  | 1450 | G 2" DN50 PN10     | 45 mm           | •                    | • | • | • |
| DGO 150/4/80 A0CM/50   | 230 | 1      | -          | 0.9        | 7.5  | 1450 | DN80 PN10-16       | 60 mm           | •                    | • | • | • |
| DGO 150/4/80 A0CT/50   | 400 | 3      | -          | 0.9        | 2.8  | 1450 | DN80 PN10-16       | 60 mm           | •                    | • | • | • |
| DGI 200/2/80 A0CM/50   | 230 | 1      | -          | 1.5        | 9.3  | 2900 | DN80 PN10          | 50 mm           | •                    | • | • | • |
| DGI 200/2/80 A0CT/50   | 400 | 3      | -          | 1.5        | 3.5  | 2900 | DN80 PN10          | 50 mm           | •                    | • | • | • |
| DGI 100/4/80 A0CM/50   | 230 | 1      | -          | 0.74       | 5.5  | 1450 | DN80 PN10-16       | 80 mm           | •                    | • | • | • |
| DGI 100/4/80 A0CT/50   | 400 | 3      | -          | 0.74       | 2.3  | 1450 | DN80 PN10-16       | 80 mm           | •                    | • | • | • |
| DGN 250/2/80 A1DM/50   | 230 | 1      | 2.8        | 1.8        | 12.5 | 2900 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 250/2/80 A1DT/50   | 400 | 3      | 2.5        | 1.8        | 4.3  | 2900 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 400/2/80 A1FT/50   | 400 | 3      | 4.0        | 3          | 6.7  | 2900 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 550/2/80 A1FT/50   | 400 | 3      | 5.0        | 4.1        | 8.7  | 2900 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 200/4/80 A1DT/50   | 400 | 3      | 2.0        | 1.5        | 4.1  | 1450 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 300/4/80 A1FT/50   | 400 | 3      | 2.9        | 2.2        | 5.8  | 1450 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 400/4/80 A1FT/50   | 400 | 3      | 3.7        | 3          | 7.3  | 1450 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| DGN 200/4/100 A1DT/50  | 400 | 3      | 2.0        | 1.5        | 4.1  | 1450 | DN100 PN10-16      | 100 mm          |                      |   | • | • |
| DGN 300/4/100 A1FT/50  | 400 | 3      | 2.9        | 2.2        | 5.8  | 1450 | DN100 PN10-16      | 100 mm          |                      |   | • | • |
| DGN 400/4/100 A1FT/50  | 400 | 3      | 3.7        | 3          | 7.3  | 1450 | DN100 PN10-16      | 100 mm          |                      |   | • | • |
| DGP 550/4/80 A0GT/50   | 400 | 3      | 5.9        | 4.6        | 10.1 | 1450 | DN80 PN10-16       | 60 mm           |                      |   | • | • |
| DGP 750/4/80 A0HT/50   | 400 | 3      | 8.6        | 6.5        | 14.9 | 1450 | DN80 PN10-16       | 60 mm           |                      |   | • | • |
| DGP 1000/4/80 A0HT/50  | 400 | 3      | 11.5       | 8.9        | 20   | 1450 | DN80 PN10-16       | 60 mm           |                      |   | • | • |
| DGP 550/4/100 A0GT/50  | 400 | 3      | 5.9        | 4.6        | 10.1 | 1450 | DN100 PN10-16      | 80 mm           |                      |   | • | • |
| DGP 750/4/100 A0HT/50  | 400 | 3      | 8.6        | 6.5        | 14.9 | 1450 | DN100 PN10-16      | 85 mm           |                      |   | • | • |
| DGP 1000/4/100 A0HT/50 | 400 | 3      | 11.5       | 8.9        | 20   | 1450 | DN100 PN10-16      | 85 mm           |                      |   | • | • |
| DGP 1500/4/100 A0IT/50 | 400 | 3      | 15.8       | 13.6       | 28.2 | 1450 | DN100 PN10-16      | 80 mm           |                      |   | • | • |

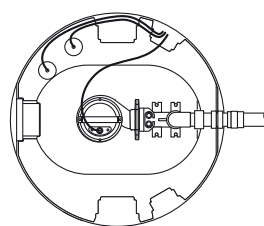
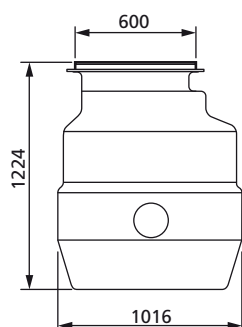
| OPEN MULTI<br>CHANNEL IMPELLER | V   | Phases | P1<br>(kW) | P2<br>(kW) | A   | Rpm  | Ø        | Free<br>passage | Suitable for BOX PRO |   |   |   |
|--------------------------------|-----|--------|------------|------------|-----|------|----------|-----------------|----------------------|---|---|---|
|                                |     |        |            |            |     |      |          |                 | M                    | V | S | J |
| DRO 50/2/G32V A0CM/50          | 230 | 1      | -          | 0.37       | 2.9 | 2900 | G 1 1/4" | 15 mm           | •                    | • | • | • |
| DRO 50/2/G32V A0CT/50          | 400 | 3      | -          | 0.37       | 1.1 | 2900 | G 1 1/4" | 15 mm           | •                    | • | • | • |
| DRO 75/2/G32V A0CM/50          | 230 | 1      | -          | 0.55       | 3.9 | 2900 | G 1 1/4" | 15 mm           | •                    | • | • | • |
| DRO 75/2/G32V A0CT/50          | 400 | 3      | -          | 0.55       | 1.4 | 2900 | G 1 1/4" | 15 mm           | •                    | • | • | • |
| DRO 100/2/G50V A0CM/50         | 230 | 1      | -          | 0.88       | 6.5 | 2900 | G 2"     | 15 mm           | •                    | • | • | • |
| DRO 100/2/G50V A0CT/50         | 400 | 3      | -          | 0.88       | 2.3 | 2900 | G 2"     | 15 mm           | •                    | • | • | • |
| DRO 150/2/G50V A0CM/50         | 230 | 1      | -          | 1.1        | 8.2 | 2900 | G 2"     | 15 mm           | •                    | • | • | • |
| DRO 150/2/G50V A0CT/50         | 400 | 3      | -          | 1.1        | 2.7 | 2900 | G 2"     | 15 mm           | •                    | • | • | • |
| DRO 200/2/G50V A0CM/50         | 230 | 1      | -          | 1.5        | 9.3 | 2900 | G 2"     | 15 mm           | •                    | • | • | • |
| DRO 200/2/G50V A0CT/50         | 400 | 3      | -          | 1.5        | 3.5 | 2900 | G 2"     | 15 mm           | •                    | • | • | • |

| OPEN MULTI<br>CHANNEL IMPELLER    | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø                  | Free<br>passage | Suitable for BOX PRO |   |   |   |
|-----------------------------------|-----|--------|------------|------------|------|------|--------------------|-----------------|----------------------|---|---|---|
|                                   |     |        |            |            |      |      |                    |                 | M                    | V | S | J |
| DRO 100/2/G50H A0CM/50            | 230 | 1      | -          | 0.88       | 6.5  | 2900 | G 2"- DN50 PN10-16 | 15 mm           | •                    | • | • | • |
| DRO 100/2/G50H A0CT/50            | 400 | 3      | -          | 0.88       | 2.3  | 2900 | G 2"- DN50 PN10-16 | 15 mm           | •                    | • | • | • |
| DRO 150/2/G50H A0CM/50            | 230 | 1      | -          | 1.1        | 8.2  | 2900 | G 2"- DN50 PN10-16 | 15 mm           | •                    | • | • | • |
| DRO 150/2/G50H A0CT/50            | 400 | 3      | -          | 1.1        | 2.7  | 2900 | G 2"- DN50 PN10-16 | 15 mm           | •                    | • | • | • |
| DRO 200/2/G50H A0CM/50            | 230 | 1      | -          | 1.5        | 9.3  | 2900 | G 2"- DN50 PN10-16 | 15 mm           | •                    | • | • | • |
| DRO 200/2/G50H A0CT/50            | 400 | 3      | -          | 1.5        | 3.5  | 2900 | G 2"- DN50 PN10-16 | 15 mm           | •                    | • | • | • |
| OPEN SINGLE<br>CHANNEL IMPELLER   | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø                  | Free<br>passage | Suitable for BOX PRO |   |   |   |
|                                   |     |        |            |            |      |      |                    |                 | M                    | V | S | J |
| MAN 250/2/80 A1DM/50              | 230 | 1      | 2.8        | 1.8        | 12.5 | 2900 | DN80 PN10-16       | 40 mm           |                      |   | • | • |
| MAN 250/2/80 A1DT/50              | 400 | 3      | 2.5        | 1.8        | 4.3  | 2900 | DN80 PN10-16       | 40 mm           |                      |   | • | • |
| MAN 300/2/80 A1DT/50              | 400 | 3      | 2.9        | 2.2        | 5.1  | 2900 | DN80 PN10-16       | 40 mm           |                      |   | • | • |
| MAN 400/2/80 A1FT/50              | 400 | 3      | 4.0        | 3          | 6.7  | 2900 | DN80 PN10-16       | 40 mm           |                      |   | • | • |
| MAN 550/2/80 A1FT/50              | 400 | 3      | 5.0        | 4.1        | 8.7  | 2900 | DN80 PN10-16       | 45 mm           |                      |   | • | • |
| MAN 400/2/100 A1FT/50             | 400 | 3      | 4.0        | 3          | 6.7  | 2900 | DN100 PN10-16      | 50 mm           |                      |   | • | • |
| MAN 550/2/100 A1FT/50             | 400 | 3      | 5.0        | 4.1        | 8.7  | 2900 | DN100 PN10-16      | 50 mm           |                      |   | • | • |
| MAN 200/4/80 A1DT/50              | 400 | 3      | 2          | 1.5        | 4.1  | 1450 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| MAN 300/4/80 A1FT/50              | 400 | 3      | 2.9        | 2.2        | 5.8  | 1450 | DN80 PN10-16       | 80 mm           |                      |   | • | • |
| MAN 300/4/100 A1FT/50             | 400 | 3      | 2.9        | 2.2        | 5.8  | 1450 | DN100 PN10-16      | 80 mm           |                      |   | • | • |
| MAN 400/4/100 A1FT/50             | 400 | 3      | 3.7        | 3          | 7.3  | 1450 | DN100 PN10-16      | 80 mm           |                      |   | • | • |
| CLOSED SINGLE<br>CHANNEL IMPELLER | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø                  | Free<br>passage | Suitable for BOX PRO |   |   |   |
|                                   |     |        |            |            |      |      |                    |                 | M                    | V | S | J |
| SMI 200/2/G50H A0CM/50            | 230 | 1      | 1.9        | 1.5        | 9.9  | 2900 | G 2" DN80 PN10     | 50 mm           | •                    | • |   |   |
| SMI 200/2/G50H A0CT/50            | 400 | 3      | 2.0        | 1.5        | 3.5  | 2900 | G 2" DN80 PN10     | 50 mm           | •                    | • |   |   |
| SMP 550/2/80 A0GT/50              | 400 | 3      | 6.8        | 5.5        | 11.5 | 2900 | DN80 PN10-16       | 53 mm           |                      |   | • | • |
| SMP 750/2/80 A0HT/50              | 400 | 3      | 8.9        | 7.2        | 14.5 | 2900 | DN80 PN10-16       | 55x65 mm        |                      |   | • | • |
| SMP 1000/2/80 A0HT/50             | 400 | 3      | 12.4       | 10         | 19.8 | 2900 | DN80 PN10-16       | 55x65 mm        |                      |   | • | • |
| SMP 400/4/100 A0FT/50             | 400 | 3      | 4.1        | 3          | 7.9  | 1450 | DN100 PN10-16      | 75x100 mm       |                      |   | • | • |
| SMP 750/4/100 A0HT/50             | 400 | 3      | 8.6        | 6.5        | 14.9 | 1450 | DN100 PN10-16      | 80x100 mm       |                      |   | • | • |
| SMP 1000/4/100 A0HT/50            | 400 | 3      | 11.5       | 8.9        | 20   | 1450 | DN100 PN10-16      | 80x100 mm       |                      |   | • | • |
| SMP 400/4/150 A0FT/50             | 400 | 3      | 4.1        | 3          | 7.9  | 1450 | DN150 PN10-16      | 75x100 mm       |                      |   | • | • |
| SMP 750/4/150 A0HT/50             | 400 | 3      | 8.6        | 6.5        | 14.9 | 1450 | DN150 PN10-16      | 80x100 mm       |                      |   | • | • |
| SMP 1000/4/150 A0HT/50            | 400 | 3      | 11.5       | 8.9        | 20   | 1450 | DN150 PN10-16      | 80x100 mm       |                      |   | • | • |
| SMP 1500/4/150 A0IT/50            | 400 | 3      | 16.5       | 14.2       | 29.5 | 1450 | DN150 PN10-16      | 100x130 mm      |                      |   | • | • |
| SMP 2000/4/150 A0IT/50            | 400 | 3      | 20.7       | 16.4       | 36   | 1450 | DN150 PN10-16      | 100x130 mm      |                      |   | • | • |
| GRINDERS                          | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø                  | Free<br>passage | Suitable for BOX PRO |   |   |   |
|                                   |     |        |            |            |      |      |                    |                 | M                    | V | S | J |
| GR BluePRO 100/2/G40H A1CM/50     | 230 | 1      | -          | 0.74       | 5.5  | 2900 | G 1½"-DN32 PN6     | -               | •                    | • | • | • |
| GR BluePRO 100/2/G40H A1CT/50     | 400 | 3      | -          | 0.74       | 2.7  | 2900 | G 1½"-DN32 PN6     | -               | •                    | • | • | • |
| GR BluePRO 150/2/G40H A1CM/50     | 230 | 1      | -          | 1.1        | 7.5  | 2900 | G 1½"-DN32 PN6     | -               | •                    | • | • | • |
| GR BluePRO 150/2/G40H A1CT/50     | 400 | 3      | -          | 1.1        | 3.2  | 2900 | G 1½"-DN32 PN6     | -               | •                    | • | • | • |
| GR BluePRO 200/2/G40H A1CM/50     | 230 | 1      | -          | 1.5        | 10   | 2900 | G 1½"-DN32 PN6     | -               | •                    | • | • | • |
| GR BluePRO 200/2/G40H A1CT/50     | 400 | 3      | -          | 1.5        | 4.3  | 2900 | G 1½"-DN32 PN6     | -               | •                    | • | • | • |
| GRE 200/2/G50H A0CM/50            | 230 | 1      | -          | 1.7        | 10.6 | 2900 | G 2"-DN32 PN6      | -               | •                    | • | • | • |
| GRE 200/2/G50H A0CT/50            | 400 | 3      | -          | 1.7        | 3.8  | 2900 | G 2"-DN32 PN6      | -               | •                    | • | • | • |
| GRI 200/2/G50H A0CM/50            | 230 | 1      | -          | 1.7        | 10.6 | 2900 | G 2"-DN32 PN6      | -               | •                    | • | • | • |
| GRI 200/2/G50H A0CT/50            | 400 | 3      | -          | 1.7        | 3.8  | 2900 | G 2"-DN32 PN6      | -               | •                    | • | • | • |
| GRN 300/2/G50H A1DT/50            | 400 | 3      | 2.9        | 2.2        | 5.1  | 2900 | G 2"-DN32 PN6      | -               |                      |   | • | • |
| GRN 400/2/G50H A1FT/50            | 400 | 3      | 4.0        | 3          | 6.7  | 2900 | G 2"-DN32 PN6      | -               |                      |   | • | • |
| GRN 550/2/G50H A1FT/50            | 400 | 3      | 5.0        | 4.1        | 8.7  | 2900 | G 2"-DN32 PN6      | -               |                      |   | • | • |
| GRP 750/2/G50H A0HT/50            | 400 | 3      | 8.8        | 7.2        | 14.5 | 2900 | G2"-DN32 PN6       | -               |                      |   | • | • |
| HIGH HEAD IMPELLER                | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø                  | Free<br>passage | Suitable for BOX PRO |   |   |   |
|                                   |     |        |            |            |      |      |                    |                 | M                    | V | S | J |
| APN 250/2/G40H A1DM/50            | 230 | 1      | 2.7        | 1.8        | 12.5 | 2900 | G 1½"-DN32 PN6     | 10 mm           |                      |   | • | • |
| APN 250/2/G40H A1DT/50            | 400 | 3      | 2.5        | 1.8        | 4.3  | 2900 | G 1½"-DN32 PN6     | 10 mm           |                      |   | • | • |

| HIGH HEAD IMPELLER      | V   | Phases | P1<br>(kW) | P2<br>(kW) | A    | Rpm  | Ø              | Free<br>passage | Suitable for BOX PRO |   |   |   |
|-------------------------|-----|--------|------------|------------|------|------|----------------|-----------------|----------------------|---|---|---|
|                         |     |        |            |            |      |      |                |                 | M                    | V | S | J |
| APN 300/2/G50H A1DT/50  | 400 | 3      | 3.7        | 2.2        | 5.1  | 2900 | G 2"- DN32 PN6 | 10 mm           |                      |   | • | • |
| APN 400/2/G50H A1FT/50  | 400 | 3      | 4.0        | 3          | 6.7  | 2900 | G 2"- DN32 PN6 | 10 mm           |                      |   | • | • |
| APN 550/2/G50H A1FT/50  | 400 | 3      | 5.0        | 4.1        | 8.7  | 2900 | G 2"- DN32 PN6 | 10 mm           |                      |   | • | • |
| APP 750/2/G50H A0HT/50  | 400 | 3      | 8.8        | 7.2        | 14.5 | 2900 | G 2"- DN32 PN6 | 10 mm           |                      |   | • | • |
| APP 1000/2/G50H A1HT/50 | 400 | 3      | 12.4       | 10         | 19.8 | 2900 | G 2"- DN32 PN6 | 10 mm           |                      |   | • | • |

## Overall dimensions and weights\*

### M Type



Inlet

3 x Ø 160  
2 x Ø 110 (cables)

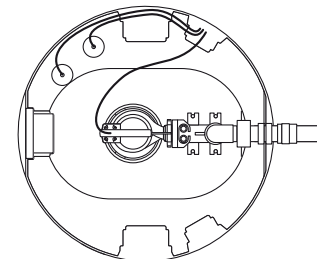
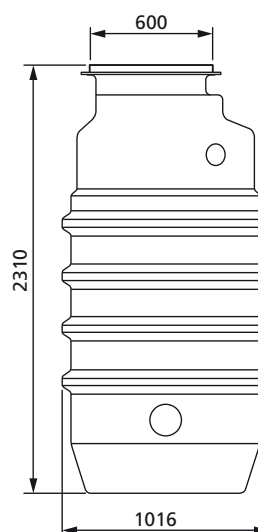
Outlet

1-2 x DN50÷150

Weight

85÷175 Kg

### V Type



Inlet

3 x Ø 160  
2 x Ø 110 (cables)

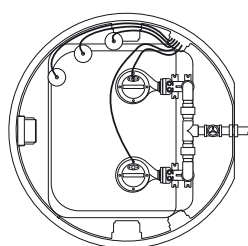
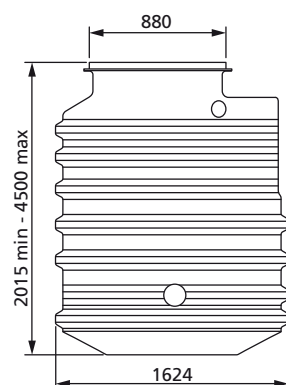
Outlet

1-2 x DN50÷150

Weight

134÷235 Kg

### S Type



Inlet

3 x Ø 160  
2 x Ø 110 (cables)

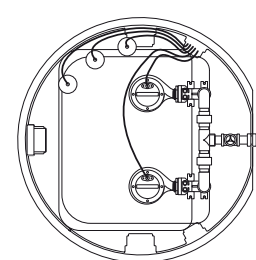
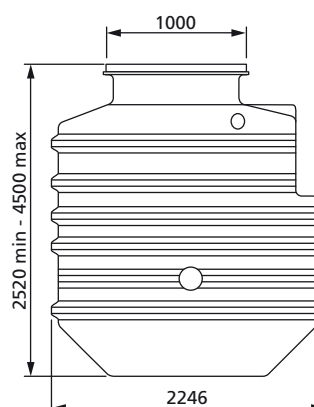
Outlet

1-2 x DN50÷150

Weight

242÷839 Kg

### J Type



Inlet

3 x Ø 160  
2 x Ø 110 (cables)

Outlet

1-2 x DN50÷150

Weight

422÷1508 Kg

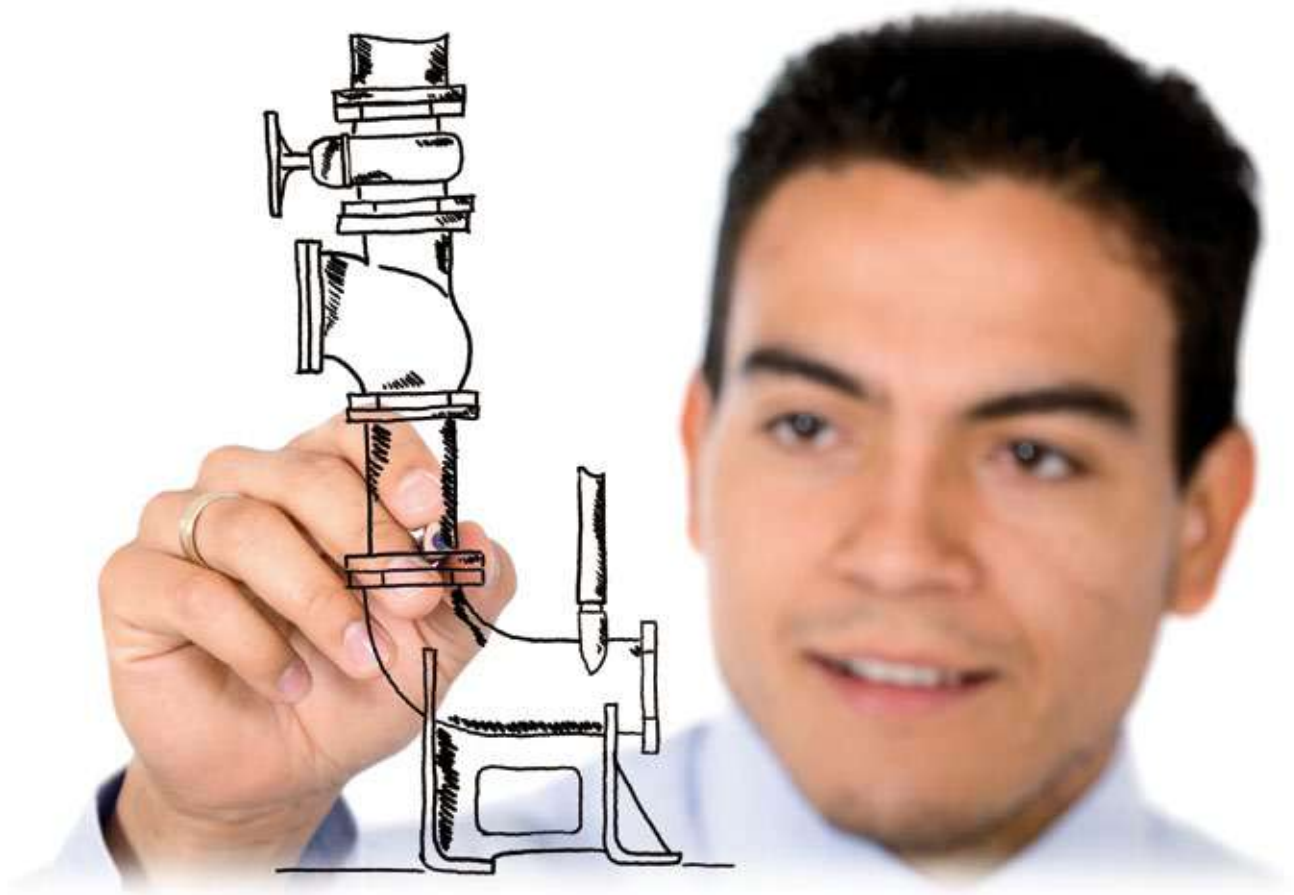
\* Dimension in mm - Data without pump and accessories - All weights and dimensions are indicative only - The capacity is guideline and refers to the maximum volume capacity before the contents overflow from the tank.





# 4.0

## HYDRAULIC ACCESSORIES





## 4.1 Coupling devices and base plates

Coupling devices are essential accessories for making a reversible hydraulic connection between the pump and the outlet piping. This system allows the pump to be brought to the surface and then quickly reconnected, with no need to drain the tank, often an expensive operation involving lengthy plant stoppages.

Perfect coupling between flange and device is ensured on all units in the Zenit range by means of a rubber seal. In addition, all bottom devices are designed with two guide pipes for trouble-free perfect alignment during coupling.

The external coupling device (DAC E), the only accessory of its type, can also be applied and used on existing plants. The unusual shape of the accessory allows the unpleasant and laborious task of tank draining to be avoided even during the installation stages.

The Zenit bottom coupling devices can have horizontal or vertical outlets in order to better adapt to the customer's needs.

All cast iron coupling devices are designed to receive 2 guide pipes which can accompany the pump into its working position without undesired twisting.

Furthermore, a PATENTED system simplifies pump release and reduces the mechanical stresses on the guide pipes, even after an extended period of time immersed in the wastewater.

There is also a special stainless steel device that is indicated for the installation with pumps from the DRY series when acids or sea water are present.

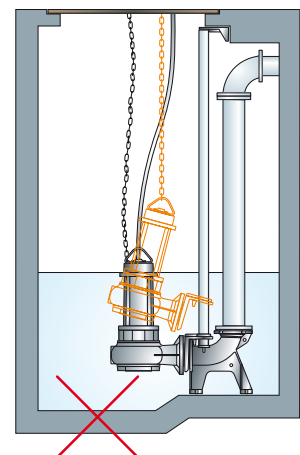
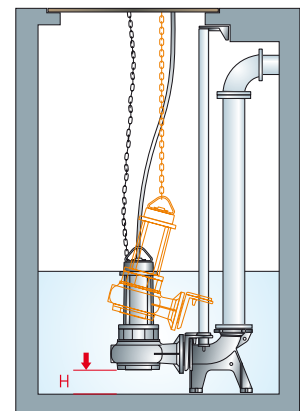
Another special feature of the Zenit vertical coupling systems is that they are designed to keep the pump's intake port at an ideal distance without the need for creating a step.

They therefore provide a considerable savings in terms of time and the costs involved in the building of the collection tanks as well as easy replacement in pre-existing plants.

The DAC V vertical bottom coupling device can be coupled to a special 2" ball valve. Thanks to the special breather valve incorporated into the DAC structure, any air pockets that may form during the summer, for example, when the water level in the well drops below the priming threshold, are expelled allowing the electric pump to operate regularly.

The image below shows the previously described version.

This accessory's reduced size allows for easy use in small dimension wells.



# DAC E (GAS 2")

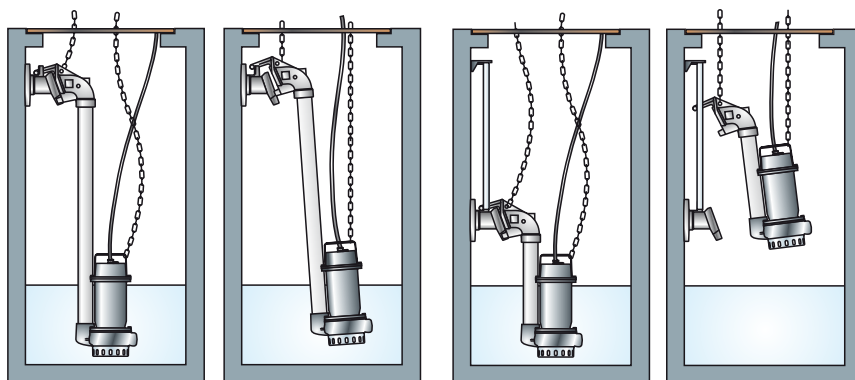
## External coupling devices

### General characteristics

- Fixed structure in GJL-250 cast iron - movable structure in gjs-600-3;
- Epoxy-vinyl paint;
- Seals in NBR rubber;
- Full free passage;
- Fixing to tank walls by means of DN50 PN10 flange or 2" gas thread;
- With a suitable male/female reduction adapter the accessory can also be used with gas 1¼" and gas 1½" delivery pumps.



All product images are indicative only

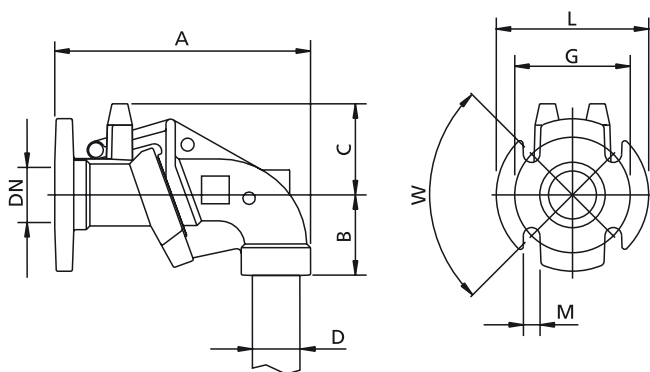


In installations in which the DAC-E needs to be fastened far from the well cover, two guide pipes (¾") may be used, which are helpful for accompanying the electric pump until it is perfectly coupled.

### Models

DAC -E G50/50H.....Inlet GAS 2", outlet GAS 2" and flange DN50 PN10

### Overall dimensions and weights



|                | A   | B  | C   | D    | DN   | G   | L   | M  | W   | kg |
|----------------|-----|----|-----|------|------|-----|-----|----|-----|----|
| DAC -E G50/50H | 280 | 90 | 100 | G 2" | G 2" | 125 | 165 | 18 | 90° | 8  |

Dimensions in mm

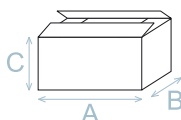
All weights and dimensions are indicative only

### Packaging dimension

|                | A   | B   | C   |
|----------------|-----|-----|-----|
| DAC -E G50/50H | 385 | 225 | 245 |

Dimensions in mm

All weights and dimensions are indicative only



# DAC V (1½" - 2" and DN32 PN6 - DN50 PN10)

## Bottom coupling devices with vertical outlet

### General characteristics

- Structure in GJL-250 cast iron;
- Seal in NBR rubber;
- Epoxy-vinyl paint;
- Full free passage;
- Complete with fitting for connection to polyethylene tube (ø 63 mm);
- Threaded outlet gas 2" and gas 2½";
- Complete with pipe guide and sliding flange with stainless steel fasteners;
- Allows the pump intake port to be kept at optimal height, meaning there is no need to provide a step in the bottom of the tank;
- Version with ball valve directly on the delivery port. This model comes with an incorporated breather valve for air venting.



All product images are indicative only

### Models

**DAC-N G40V/G50-65V**..... Inlet for vertical delivery pumps GAS 1½", outlet GAS 2" - 2½"

**DAC-N G50V/G50-65V**..... Inlet for vertical delivery pumps GAS 2", outlet GAS 2" - 2½"

Both of the accessories have a fitting for a PE 63 tube (GTP) or a ball check valve (VAP) + breather valve.

**DAC-N 32-50/G50-65V**..... Inlet DN32 PN6 and DN50 PN10, outlet GAS 2" and GAS 2 ½"

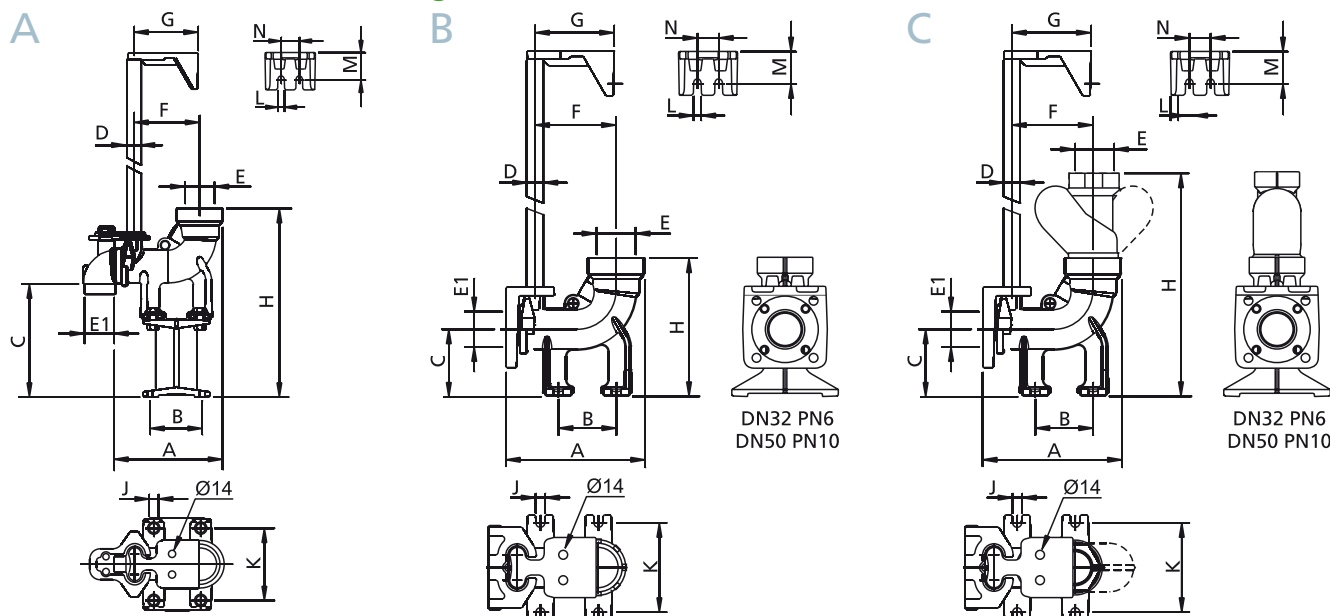
The accessory comes supplied with a fitting for a PE 63 (GTP) tube.

**DAC-N 32-50/G50V+VAP**..... Inlet DN32 PN6 and DN50 PN10, outlet GAS 2" (valve outlet diameter)

The accessory comes supplied with a 2" ball valve.

For correct operation, the DAC structure must have an automatic air release valve.

### Overall dimensions and weights



| A                  | A   | B  | C   | D  | E          | E1    | F   | G   | H   | J  | K   | L  | M  | N  | Kg |
|--------------------|-----|----|-----|----|------------|-------|-----|-----|-----|----|-----|----|----|----|----|
| DAC-N G40V/G50-65V | 200 | 90 | 165 | ¾" | G 2"-G 2½" | G 1½" | 130 | 125 | 360 | 14 | 140 | 12 | 50 | 35 | 11 |
| DAC-N G50V/G50-65V | 200 | 90 | 220 | ¾" | G 2"-G 2½" | G 2"  | 130 | 125 | 360 | 14 | 140 | 12 | 50 | 35 | 11 |

| B                   | A   | B  | C   | D  | E           | E1 | F   | G   | H   | J  | K   | L  | M  | N  | Kg |
|---------------------|-----|----|-----|----|-------------|----|-----|-----|-----|----|-----|----|----|----|----|
| DAC-N 32-50/G50-65V | 220 | 90 | 105 | ¾" | G 2"- G 2½" | 50 | 130 | 125 | 215 | 14 | 140 | 12 | 50 | 35 | 8  |

| C                    | A   | B  | C   | D  | E    | E1 | F   | G   | H   | J  | K   | L  | M  | N  | Kg |
|----------------------|-----|----|-----|----|------|----|-----|-----|-----|----|-----|----|----|----|----|
| DAC-N 32-50/G50V+VAP | 220 | 90 | 105 | ¾" | G 2" | 50 | 130 | 125 | 355 | 14 | 140 | 12 | 50 | 35 | 9  |

Dimensions in mm

All weights and dimensions are indicative only

# DAC V (DN65÷DN300)

## Bottom coupling devices with vertical outlet

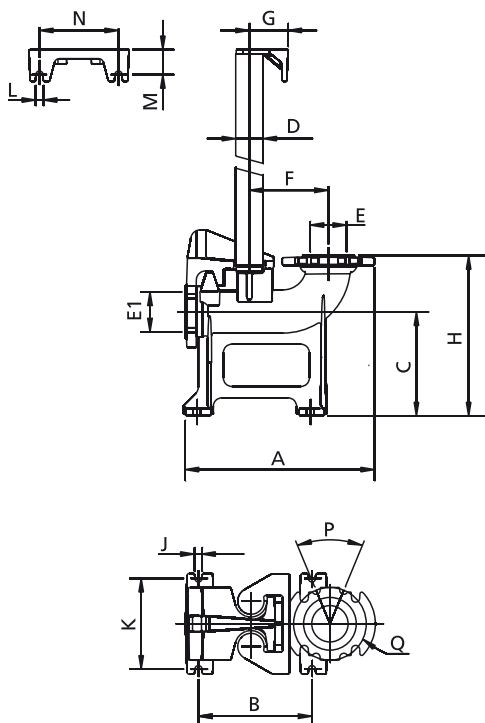
### General characteristics

- Structure in GJL-250 cast iron;
- Seal in NBR rubber;
- Epoxy-vinyl paint;
- Full free passage;
- Complete with pipe guide and sliding flange with stainless steel fasteners;
- Allows the pump intake port to be kept at optimal height, meaning there is no need to provide a step in the bottom of the tank;
- A PATENTED system simplifies pump release and reduces the mechanical stresses on the guide pipes.

### Models

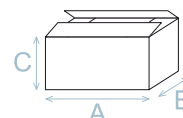
|                |                                                |
|----------------|------------------------------------------------|
| DAC-N 65/65V   | .....Inlet DN65 PN10-16, outlet DN65 PN10-16   |
| DAC-N 80/80V   | .....Inlet DN80 PN10, outlet DN80 PN10-16      |
| DAC-N 100/100V | .....Inlet DN100 PN10-16, outlet DN100 PN10-16 |
| DAC-N 150/200V | .....Inlet DN150 PN10-16, outlet DN200 PN10    |
| DAC-N 200/250V | .....Inlet DN200 PN10, outlet DN250 PN10       |
| DAC-N 250/300V | .....Inlet DN250 PN10, outlet DN300 PN10       |
| DAC-N 300/350V | .....Inlet DN300 PN10, outlet DN350 PN10       |

### Overall dimensions and weights



### Packaging dimension

|                      | A   | B   | C   |
|----------------------|-----|-----|-----|
| DAC-N G40V/G50-65V   | 385 | 225 | 245 |
| DAC-N G50V/G50-65V   | 385 | 225 | 245 |
| DAC-N 32-50/G50-65V  | 385 | 225 | 245 |
| DAC-N 32-50/G50V+VAP | 385 | 225 | 245 |
| DAC-N 65/65V         | 475 | 375 | 240 |
| DAC-N 80/80V         | 475 | 375 | 240 |
| DAC-N 100/100V       | 475 | 375 | 240 |



All weights and dimensions are indicative only

|                | A   | B   | C   | D  | E   | E1  | F   | G   | H   | J  | K   | L  | M  | N   | P     | Q   | Kg  |
|----------------|-----|-----|-----|----|-----|-----|-----|-----|-----|----|-----|----|----|-----|-------|-----|-----|
| DAC-N 65/65V   | 400 | 250 | 240 | 2" | 65  | 65  | 170 | 85  | 355 | 16 | 200 | 16 | 55 | 175 | 90°   | 145 | 26  |
| DAC-N 80/80V   | 420 | 250 | 230 | 2" | 80  | 80  | 175 | 85  | 355 | 16 | 200 | 16 | 55 | 175 | 45°   | 160 | 28  |
| DAC-N 100/100V | 450 | 250 | 220 | 2" | 100 | 100 | 195 | 85  | 355 | 16 | 200 | 16 | 55 | 175 | 45°   | 180 | 31  |
| DAC-N 150/200V | 625 | 280 | 410 | 2" | 200 | 150 | 305 | 150 | 600 | 24 | 250 | 14 | 50 | 100 | 45°   | 295 | 117 |
| DAC-N 200/250V | 700 | 500 | 370 | 2" | 250 | 200 | 355 | 150 | 600 | 24 | 250 | 14 | 50 | 100 | 30°   | 350 | 149 |
| DAC-N 250/300V | 810 | 500 | 525 | 2" | 300 | 250 | 430 | 150 | 805 | 24 | 250 | 14 | 50 | 100 | 30°   | 400 | 192 |
| DAC-N 300/350V | 955 | 500 | 495 | 3" | 350 | 300 | 445 | 135 | 850 | 24 | 460 | 20 | 75 | 180 | 22.5° | 460 | 293 |

Dimensions in mm

All weights and dimensions are indicative only

# DAC H (DN32 PN6 - DN50 PN10) - (DN65÷DN250)

## Bottom coupling devices with horizontal outlet

### General characteristics

- Structure in GJL-250 cast iron;
- Seal in NBR rubber;
- Epoxy-vinyl paint;
- Full free passage;
- Dn32-50 models complete with pipe guide, sliding flange (including stainless steel fasteners) and 2" gas threaded bend in stainless steel;
- Dn65÷250 models complete with pipe guide and sliding flange with stainless steel fasteners;
- A PATENTED system simplifies pump release and reduces the mechanical stresses on the guide pipes.



All product images are indicative only

### Models

DAC-N-N 32-50/G50H ... Inlet DN32 PN6 and DN50 PN10, horizontal outlet GAS 2"

DAC-N-N 65/65H ..... Inlet DN65 PN10-16, outlet DN65 PN10-16

DAC-N-N 80/80H ..... Inlet DN80 PN10, outlet DN80 PN10-16

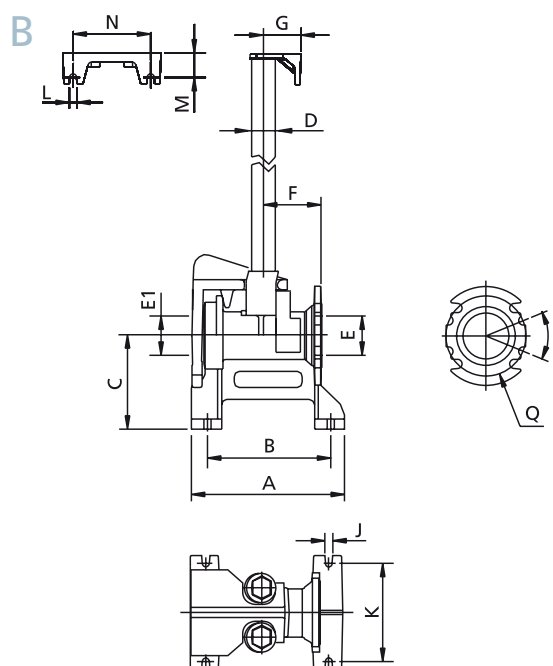
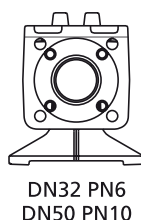
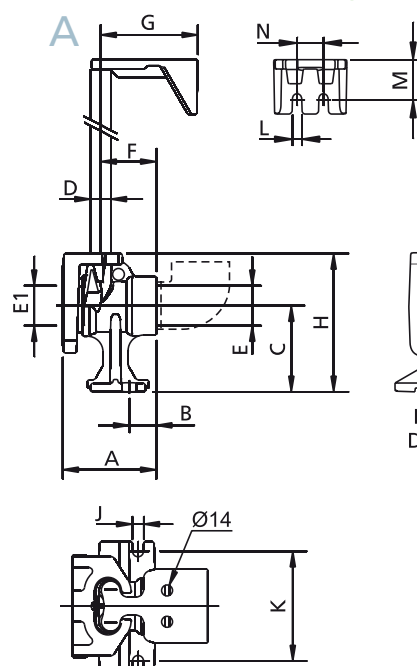
DAC-N-N 100/100H ..... Inlet DN100 PN10-16, outlet DN100 PN10-16

DAC-N-N 150/150H ..... Inlet DN150 PN10-16, outlet DN150 PN10-16

DAC-N-N 200/200H ..... Inlet DN200 PN10, outlet DN200 PN10

DAC-N-N 250/250H ..... Inlet DN250 PN10, outlet DN250 PN10

### Overall dimensions and weights



| A                | A   | B  | C   | D  | E1 | E    | F  | G   | J  | K   | L  | M  | N  | kg  |
|------------------|-----|----|-----|----|----|------|----|-----|----|-----|----|----|----|-----|
| DAC-N 32-50/G50H | 120 | 35 | 110 | ¾" | 50 | G 2" | 70 | 125 | 14 | 140 | 12 | 50 | 35 | 6.5 |

| B              | A   | B   | C   | D  | E1  | E2  | F   | G   | J  | K   | L  | M  | N   | P   | Q   | kg  |
|----------------|-----|-----|-----|----|-----|-----|-----|-----|----|-----|----|----|-----|-----|-----|-----|
| DAC-N 65/65H   | 310 | 250 | 180 | 2" | 65  | 65  | 120 | 85  | 16 | 200 | 16 | 55 | 174 | 90° | 145 | 35  |
| DAC-N 80/80H   | 310 | 250 | 190 | 2" | 80  | 80  | 120 | 85  | 16 | 200 | 16 | 55 | 174 | 45° | 160 | 35  |
| DAC-N 100/100H | 320 | 250 | 190 | 2" | 100 | 100 | 130 | 85  | 16 | 200 | 16 | 55 | 174 | 45° | 180 | 39  |
| DAC-N 150/150H | 405 | 250 | 240 | 2" | 150 | 150 | 160 | 150 | 24 | 250 | 14 | 50 | 100 | 45° | 240 | 70  |
| DAC-N 200/200H | 405 | 250 | 240 | 2" | 200 | 200 | 170 | 150 | 24 | 250 | 14 | 50 | 100 | 45° | 295 | 87  |
| DAC-N 250/250H | 540 | 400 | 375 | 2" | 250 | 250 | 265 | 150 | 24 | 250 | 14 | 50 | 100 | 30° | 350 | 120 |

Dimensions in mm

All weights and dimensions are indicative only

# DAC X (DN65÷DN100)

## Stainless steel bottom coupling devices

### General characteristics

- Structure and flange in aisi 316 stainless steel;
- Seal in NBR;
- Full free passage;
- Recommended for installations with corrosive or saline liquids.

### Models

DACX-N 65/65V.....Inlet DN65 PN10, outlet DN65 PN10-16  
 DACX-N 80/80V.....Inlet DN80 PN10, outlet DN80 PN10-16  
 DACX-N 100/100V.....Inlet DN100 PN10, outlet DN100 PN10-16

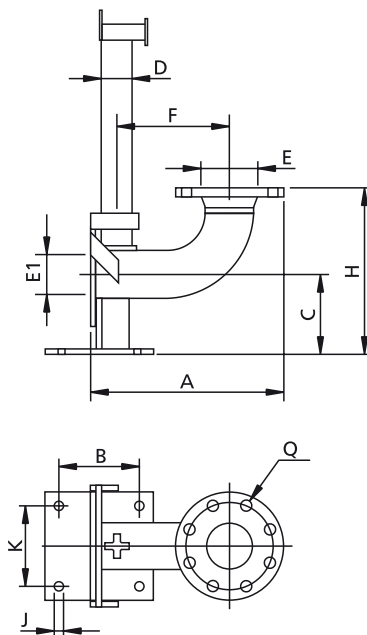


The DAC X bottom coupling devices are specially indicated for the used with DRY type pumps and allow you to obtain a system that is completely in stainless steel and resistant to chemically aggressive liquids.



All product images are indicative only

### Overall dimensions and weights



|                 | A   | B   | C   | D  | E   | E1  | F   | H   | J  | K   | Q   | Kg   |
|-----------------|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|------|
| DACX-N 65/65V   | 320 | 120 | 170 | 50 | 65  | 65  | 170 | 300 | 13 | 120 | 145 | 15   |
| DACX-N 80/80V   | 335 | 120 | 150 | 50 | 80  | 80  | 185 | 310 | 14 | 120 | 160 | 17   |
| DACX-N 100/100V | 390 | 120 | 185 | 50 | 100 | 100 | 220 | 380 | 13 | 120 | 180 | 19.2 |

Dimensions in mm

All weights and dimensions are indicative only



# Accessories for coupling devices

A wide range of accessories for coupling devices allow any type of plant to be optimized and reduce installation times.

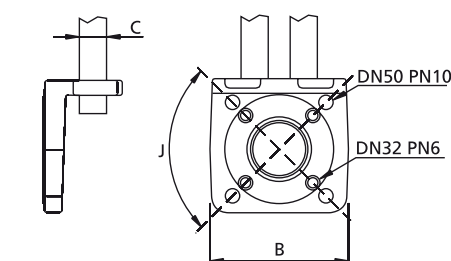
## KAF

Sliding flange for:

- OXY50 (KAF 32-50);
- DAC H (check the dimensions of KAF for correct coupling);
- DAC V (check the dimensions of KAF for correct coupling).

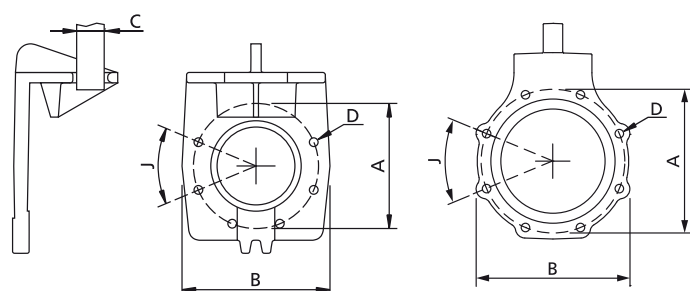
This accessory can be coupled to Flygt devices.

(pay special attention to the diameter of the guide pipes, letter C in the table)



|           | Flange         | B   | C  | D       | J   |
|-----------|----------------|-----|----|---------|-----|
| KAF 32-50 | 32 PN6-50 PN10 | 130 | ¾" | M12-M16 | 90° |

Dimensions in mm



KAF 65 - 80 - 100

KAF 150 - 200 - 250

|         | A   | B   | C  | D   | J   |
|---------|-----|-----|----|-----|-----|
| KAF 65  | 145 | 160 | 2" | M16 | 90° |
| KAF 80  | 160 | 160 | 2" | M16 | 90° |
| KAF 100 | 180 | 210 | 2" | M16 | 45° |
| KAF 150 | 240 | 260 | 2" | M20 | 45° |
| KAF 200 | 295 | 315 | 2" | M20 | 45° |
| KAF 250 | 350 | 390 | 2" | M20 | 30° |

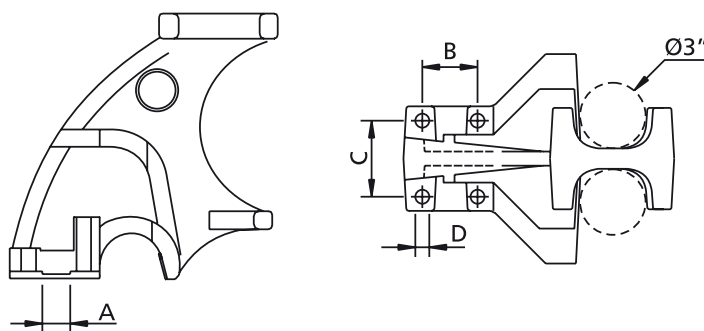
Dimensions in mm

All weights and dimensions are indicative only

- Supplied with NBR rubber seal and stainless steel fasteners;
- Contact the Zenit Sales Department for compatibility with other manufacturers.

## KGP

Hook for Zenit foot ideal for coupling with DAC of 300 mm diameter and above, with double 3" guide pipes.



This accessory can be used with any Zenit electric pump (check for the presence of the overall dimensions of the individual pumps on the drawing), allowing it to be coupled to DACs with 3" guide pipes and DAC Flygts with the same guide pipes.

|       | A  | B  | C   | D  | Kg |
|-------|----|----|-----|----|----|
| KGP-D | 40 | 79 | 109 | 21 | 40 |

Dimensions in mm

All weights and dimensions are indicative only

# Base plates

Base plates for FREE installation allow the pump to be positioned in the tank quickly and ensure a high level of stability thanks to the large contact surface. Made of cast iron (GJS-600.3) or galvanized steel. Complete with stainless steel fasteners.

## CAST IRON BASE PLATES

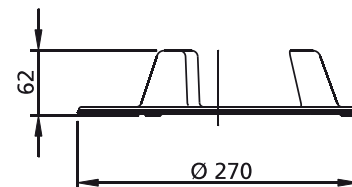
### 9024.010

Cast iron 3 spoke base plate for free installation. Suitable for the following models:

- DGO 150-200/2/G65V-65-80
- DGF 150-200/2/G65V-65-80



All product images are indicative only



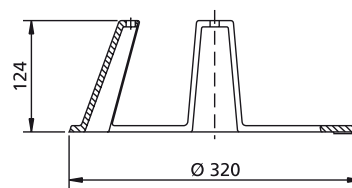
### 9024.006

Cast iron 3 spoke base plate for free installation. Suitable for the following models:

- |                            |                          |
|----------------------------|--------------------------|
| • DGI 100/4/80             | • GRF 150-200/2/G40H     |
| • DGF 100/4/65-80          | • GRN 250/2/G40H         |
| • DGN 250-300/2/G65V-65-80 | • GRN 300-400-550/2/G50H |
| • DGN 300-400-550/2/65-80  | • GRP 750/2/G50H         |
| • DRN 250-300/2/65-80      | • APF 150-200/2/G40H     |
| • MAI 100/4/80             | • APN 250/2/G40H         |
| • MAN 250-300/2/G65V-65-80 | • APN 300-400-550/2/G50H |
| • MAF 100/4/65-80          | • APP 750-1000/2/G50H    |



All product images are indicative only



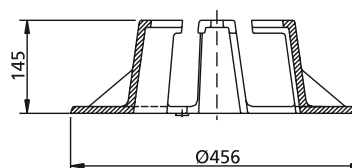
### 9024.007

Cast iron 4 spoke base plate for free installation. Suitable for the following models:

- |                               |                            |
|-------------------------------|----------------------------|
| • DGN 200-300-400/4/65-80-100 | • DRN 150/6/80-100         |
| • DGN 150/6/65-80-100         | • DRN 250/6/100-150        |
| • DGN 250/6/80-100-150        | • MAN 400-550/2/100        |
| • DRN 400-550/2/65-80-100;    | • MAN 200-300-400/4/80-100 |
| 200-300-400/4/80-100;         | • MAN 400-550/2/65-80      |
| 150/6/80-100;                 | • MAN 150/6/80-100         |
| 250/6/100-150                 | • MAN 250/6/80-100-150     |
| • DRF 100/4/65-80-100         | • MAF 100/4/100            |
| • DRN 200-300-400/4/80-100    |                            |



All product images are indicative only



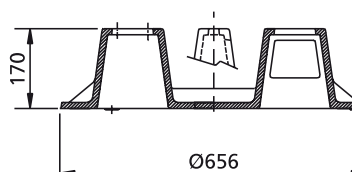
### 9024.009

Cast iron 4 spoke base plate for free installation. Suitable for the following models:

- |                          |                           |
|--------------------------|---------------------------|
| • SMN 3000/4/150-200-250 | • SBN 5000/4/150-200-250  |
| • SMP 750/6/200-250      | • SBN 2500/6/150-250-300  |
| • SMP 2000/4/200-250     | • SBN 3000/6/250-300      |
| • SBN 3000/4/150-200-250 | • SBP 1000-1500/6/200-250 |
| • SBN 4000/4/150-200-250 |                           |



All product images are indicative only



## GALVANISED IRON BASE PLATES

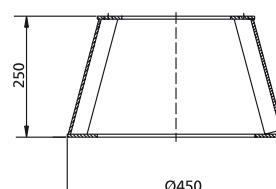
### 9024.008

Hot-galvanised steel base plate. Suitable for the following models:

- GRN 300-400/4/80-100



All product images are indicative only



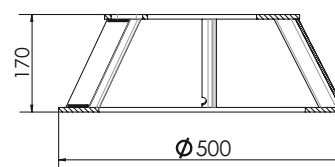
### 9024.012

Hot-galvanised steel base plate. Suitable for the following models:

- SMP 400/4/100-150
- SMP 750-1000/4/100-150
- SMP 1500-2000/4/150



All product images are indicative only



## 4.2 Flushing valve

Sediments often form in lifting stations which collect the wastewater from drain systems. Over time, the solids tend to compact on the bottom and sides of the tank, reducing its volume, and when they break away they very often foul the pump. A specific operation, involving a lengthy, expensive system shutdown, is therefore necessary to remove them.

The FLX flushing valve is an accessory that generates an adjustable-direction jet of water inside the pit to move the solids around and prevent sediment from accumulating on the bottom.

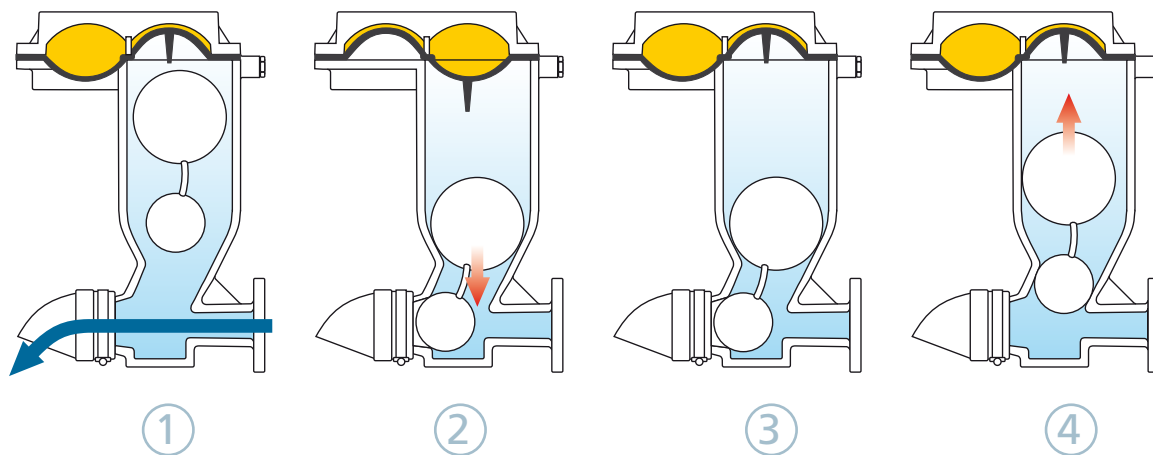
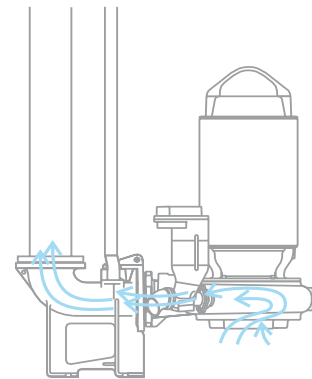
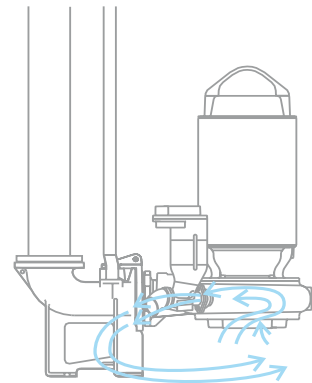
Constructed in cast iron, it can be installed directly on the pump casing by means of a threaded coupling. It operates on the Venturi principle and does not require an electricity supply.

A regulator allows the valve closure time to be set between 10 and 400 seconds, depending on pit size, pump power or the amount of sediment to be shifted.

The heart of the FLX flushing valve is an innovative patented system comprising 2 rubber balls joined together by a flexible diaphragm. When the pump starts up, the valve is open and the liquid in the pit is drawn into the pump and circulated through the pit, to place all the solid sediments in suspension (**phase 1**).

After a time set by the user by means of a regulator, the vacuum created in the valve body recalls a rubber diaphragm, which pushes the two balls downward to shut off the flow (**phase 2**) and allow the water to be conveyed to the delivery outlet before the solid is deposited on the bottom again.

When the pump stops, the vacuum inside the valve raises the diaphragm (**phase 3**) and the balls (**phase 4**), which open the valve ready for the next cycle.



The FLX flushing valve is a Zenit patent.

### This is what happens

The formation of a solid deposit in the tank (left) has made it necessary to install flushing valves to generate turbulence inside the tank and help to keep the solids in suspension (right).



# FLX

Flushing valve

### General characteristics

- Cast iron body;
- Hard-wearing rubber balls;
- Connection to system by means of a diamond-shaped flange compatible with competitor models, or with a gas 1 ½" threaded connection;
- Closure time setting from 10 to 400 seconds;
- Adjustable-direction jet.

### Advantages

- Lower noise level;
- No maintenance thanks to the rubber balls.

### Construction materials

Body material ..... Cast iron GJL-250  
Membrane material ..... Nitril rubber  
Ball material ..... SBR+polyurethane  
Liquid ..... Glycol in 10% solution

### Connected pump requirements

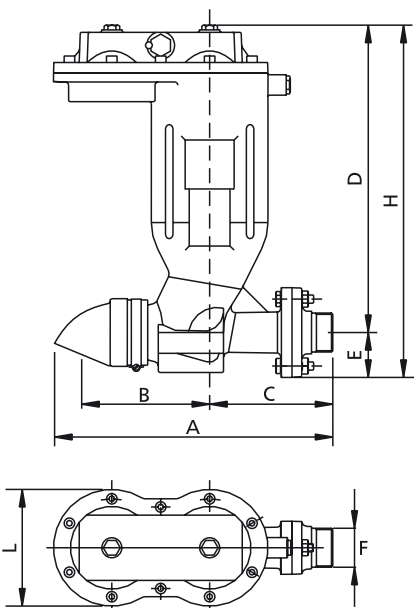
Total head..... 5÷20 m  
Delivery rate ..... 100÷17000 l/min  
Liquid temperature ..... 0÷40°C

### Connected pump working point

Maximum permitted delivery rate range ..... 750÷17000 l/min  
Pump minimum weight ..... 70 kg

Modified valves can be supplied for applications outside the permitted working range.  
**Note:** the operating limits refer to the valve connected to the pump volute.

### Overall dimensions and weights



|           | A   | B   | C   | D   | E  | F   | H   | L   | kg |
|-----------|-----|-----|-----|-----|----|-----|-----|-----|----|
| FLX - G40 | 341 | 157 | 151 | 337 | 55 | 1½" | 432 | 143 | 16 |

Dimensions in mm

All weights and dimensions are indicative only



All product images are indicative only



A year after installation, this is the condition of a metal ball of the type normally used in competitor flushing valves (left) and the rubber ball used in the Zenit FLX.

## 4.3 Check valves and gate valves

Zenit check valves, certified EN 12050-4 annex ZA standard EN 12050-4, are designed for use even with soiled liquids and provide full guarantees of operation even under heavy-duty working conditions.

The sinking ball system ensures a free passage since, at maximum opening, the valve has a completely free main line, greatly reducing pressure drops.

The fact that it can be installed in a horizontal or vertical position provides greater versatility and optimal assembly.

Clapet valves can be used for non abrasive clear wastewaters. Zenit models have a structure and disc made of GJL-250 cast iron and a seat of brass and EPDM rubber. The lever, which allows the mechanism to be moved, is made of GJS 400 cast iron in order to provide maximum reliability. The conformance to international design regulations expedites the installation and makes them compatible with any standard flange.



The knife gate valves, with handwheel control, have various functions and are used as interception units to regulate the flow in a pipeline or to temporarily isolate a section of the plant.

The gate valves have a structure in GJL-250 cast iron inside of which are the mechanisms used to partially or totally block the flow.

This product is set up to receive a servomotor for the remote partial or total opening/closing (without manual intervention).

The Zenit gate valves are made of GJL-250 cast iron, the gate's sliding seat is in brass to ensure maneuverability over time, even after long periods without use.

The flanges meet the UNI standards and ensure that they are perfectly interchangeable.

They are mainly used in civil and industrial wastewater treatment and distribution plants in general.





# VAP

## Ball check valves

### General characteristics

- Structure in GJL-250 cast iron with rubber seals included;
- Sinking ball in NBR rubber;
- Sealing ensured by rubber on rubber contact;
- Stainless steel metal fasteners;
- Epoxy paint resistant to aggressive liquids;
- Full free passage;
- Easily removable cover for plant inspection;
- Can be installed in a horizontal or vertical position.

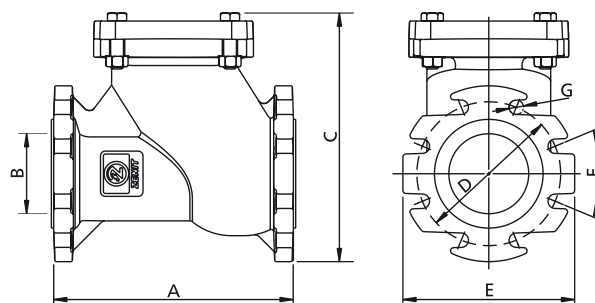
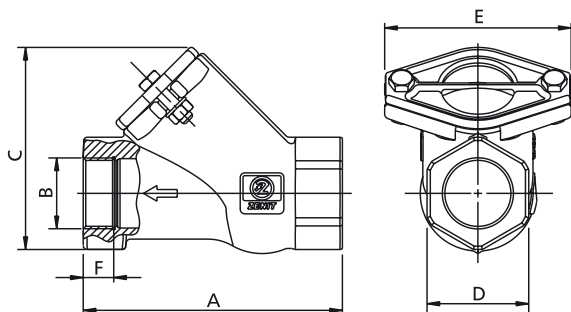
### Models

|         |       |                       |
|---------|-------|-----------------------|
| VAP/G32 | ..... | GAS 1 1/4" thread     |
| VAP/G40 | ..... | GAS 1 1/2" thread     |
| VAP/G50 | ..... | GAS 2" thread         |
| VAP/65  | ..... | DN65 PN10-16 flanged  |
| VAP/80  | ..... | DN80 PN10-16 flanged  |
| VAP/100 | ..... | DN100 PN10-16 flanged |
| VAP/125 | ..... | DN125 PN10 flanged    |
| VAP/150 | ..... | DN150 PN10-16 flanged |
| VAP/200 | ..... | DN200 PN10- flanged   |
| VAP/250 | ..... | DN250 PN10- flanged   |
| VAP/300 | ..... | DN300 PN10- flanged   |
| VAP/350 | ..... | DN350 PN10- flanged   |

### Reference standards

EN 12050-4, EN 12050-2, EN 12050-1, EN 1561, EN ISO 3506-1, EN ISO 3506-2, EN 10025, EN 1092-1, EN ISO 228-1, Directive 89/106/EEC

### Overall dimensions and weights



|         | A   | B      | C   | D  | E   | F   | G | kg  | Packaging dimensions |     |     |
|---------|-----|--------|-----|----|-----|-----|---|-----|----------------------|-----|-----|
|         |     |        |     |    |     |     |   |     | A                    | B   | C   |
| VAP/G32 | 155 | 1 1/4" | 120 | 60 | 110 | 20° | - | 2   | 200                  | 135 | 160 |
| VAP/G40 | 155 | 1 1/2" | 120 | 60 | 110 | 20° | - | 1.9 | 200                  | 135 | 160 |
| VAP/G50 | 180 | 2"     | 150 | 72 | 115 | 25° | - | 3   | 200                  | 135 | 160 |

|         | A   | B   | C   | D   | E   | F     | G  | kg   | Packaging dimensions |     |     |
|---------|-----|-----|-----|-----|-----|-------|----|------|----------------------|-----|-----|
|         |     |     |     |     |     |       |    |      | A                    | B   | C   |
| VAP/65  | 240 | 65  | 220 | 145 | 185 | 90°   | 18 | 11   | 235                  | 230 | 190 |
| VAP/80  | 260 | 80  | 255 | 160 | 200 | 45°   | 18 | 14   | 320                  | 280 | 190 |
| VAP/100 | 300 | 100 | 310 | 180 | 220 | 45°   | 18 | 24.5 | 390                  | 330 | 235 |
| VAP/125 | 350 | 125 | 330 | 210 | 250 | 90°   | 19 | 33   | -                    | -   | -   |
| VAP/150 | 400 | 150 | 425 | 240 | 285 | 45°   | 22 | 45   | -                    | -   | -   |
| VAP/200 | 500 | 200 | 540 | 295 | 340 | 45°   | 22 | 90   | -                    | -   | -   |
| VAP/250 | 600 | 250 | 630 | 350 | 395 | 30°   | 22 | 163  | -                    | -   | -   |
| VAP/300 | 700 | 300 | 680 | 400 | 445 | 30°   | 22 | 230  | -                    | -   | -   |
| VAP/350 | 800 | 350 | 830 | 460 | 505 | 22.5° | 23 | 290  | -                    | -   | -   |

Dimensions in mm

All weights and dimensions are indicative only



All product images are indicative only

### Advantages

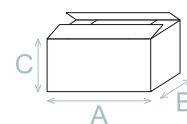
The entire range of ball valves have "rubber on rubber" coupling (rubber ball; seal on rubber gaskets).

- Lower noise level;
- Possibility of easily restoring the coupling between ball and lip closure;
- There is no need to purchase commercial gaskets for between the flanges.

### Operating limits

- Ambient temperature and treated liquid: 0 to +40°C;
- Ph of treated liquid: 6÷11;
- Density of treated liquid: 1 kg/dm<sup>3</sup>.

Contact Zenit if you have requirements that are outside the usage limits



The indication PN refers to the flange and not to the maximum operating pressure.



# VAC

## Clapet check valves

### General characteristics

- Structure and head in GJL-250 cast iron;
- Seal in EPDM rubber;
- Brass seats;
- Epoxy paint resistant to aggressive liquids;
- Can be installed in a horizontal or vertical position;
- Screws can be used for the manual partial opening of the valve, this option is particularly useful for the draining of the pipeline upstream of the valve during any maintenance interventions.



All product images are indicative only

### Models

|               |                       |
|---------------|-----------------------|
| VAC/100 ..... | DN100 PN 10-16 flange |
| VAC/150 ..... | DN150 PN 10-16 flange |
| VAC/200 ..... | DN200 PN 10 flange    |
| VAC/250 ..... | DN250 PN 10 flange    |
| VAC/300 ..... | DN300 PN 10 flange    |

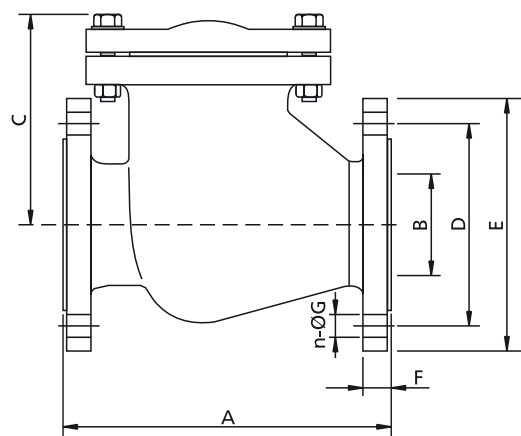
### Operating limits

Operating temperature .....Min 0°C - Max +50°C

### Reference standards

|                        |           |
|------------------------|-----------|
| Project standard ..... | EN 1074-3 |
| Gauge.....             | EN 558-1  |
| Flange .....           | EN 1092-2 |
| Testing .....          | EN 12266  |

### Overall dimensions and weights



|         | A   | B   | C   | D   | E   | F  | n-ØG  | kg   |
|---------|-----|-----|-----|-----|-----|----|-------|------|
| VAC/100 | 300 | 100 | 175 | 180 | 220 | 25 | 8-18  | 32   |
| VAC/150 | 400 | 150 | 230 | 240 | 285 | 25 | 8-18  | 71.5 |
| VAC/200 | 500 | 200 | 250 | 295 | 340 | 25 | 8-23  | 95   |
| VAC/250 | 600 | 250 | 310 | 350 | 395 | 30 | 12-23 | 139  |
| VAC/300 | 700 | 300 | 320 | 400 | 445 | 30 | 12-23 | 286  |

Dimensions in mm

All weights and dimensions are indicative only

Contact the Customer Service department for the availability of larger diameter products

# SRP

## Knife gate valves with handwheel control

### General characteristics

- Structure in GJL-250 cast iron;
- Stainless steel shaft with o-ring seal;
- Bronze seats;
- Epoxy paint;
- Can be installed in a horizontal or vertical position;
- Integral free passage when fully open.

### Models

|              |                                                   |
|--------------|---------------------------------------------------|
| SRP/50.....  | DN50 PN10-16 flange – installation height 150 mm  |
| SRP/65.....  | DN65 PN10-16 flange – installation height 170 mm  |
| SRP/80.....  | DN80 PN10-16 flange – installation height 180 mm  |
| SRP/100..... | DN100 PN10-16 flange – installation height 190 mm |
| SRP/150..... | DN150 PN10-16 flange – installation height 210 mm |
| SRP/200..... | DN200 PN10 flange – installation height 230 mm    |
| SRP/250..... | DN250 PN10 flange – installation height 250 mm    |
| SRP/300..... | DN300 PN10 flange – installation height 270 mm    |
| SRP/350..... | DN350 PN10 flange – installation height 290 mm    |



All product images are indicative only

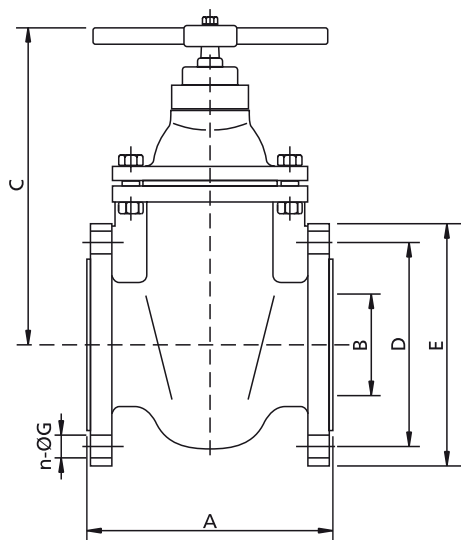
### Operating limits

Operating temperature ..... 0 - 90°C

### Reference standards

Project standard ..... EN 1171, EN 1074-2  
 Gauge..... EN 558-1 series 14  
 Flange ..... EN 1092-2  
 Testing ..... EN 12266

### Overall dimensions and weights



|         | A   | B   | C   | D   | E   | n-ØG  | kg   |
|---------|-----|-----|-----|-----|-----|-------|------|
| SRP/50  | 150 | 50  | 290 | 125 | 165 | 4-18  | 11.8 |
| SRP/65  | 170 | 65  | 325 | 145 | 185 | 4-18  | 15   |
| SRP/80  | 180 | 80  | 360 | 160 | 200 | 8-18  | 19.2 |
| SRP/100 | 190 | 100 | 380 | 180 | 220 | 8-18  | 26.4 |
| SRP/150 | 210 | 150 | 490 | 240 | 285 | 8-23  | 50   |
| SRP/200 | 230 | 200 | 580 | 295 | 340 | 8-23  | 78   |
| SRP/250 | 250 | 250 | 710 | 350 | 395 | 12-23 | 142  |
| SRP/300 | 270 | 300 | 770 | 400 | 445 | 12-23 | 179  |
| SRP/350 | 290 | 350 | 830 | 460 | 505 | 16-23 | 220  |

Dimensions in mm

All weights and dimensions are indicative only

## 4.4 Bend unions

Zenit bend unions are made from GFL-250 cast iron or galvanized steel and have UNI standard flanges to guarantee complete interchangeability.

There are 2 types of bend unions: inlet and outlet.

**KBC inlet bend unions** + the hydraulic connection to be made to pumps for dry chamber installations.

This accessory was created to sustain the weight of the pump and so that it could be fastened onto the support base.

The **KCR outlet unions** are designed to be coupled to the pump's delivery port or inside the plants, both of which provide a 90° direction change.

They may be flange-flange or flange-thread type, for maximum versatility.

They provide full free passage. Another advantage is the reduced curvature radius, which allows a lower overall dimension to be obtained with respect to all the other accessories on the market.

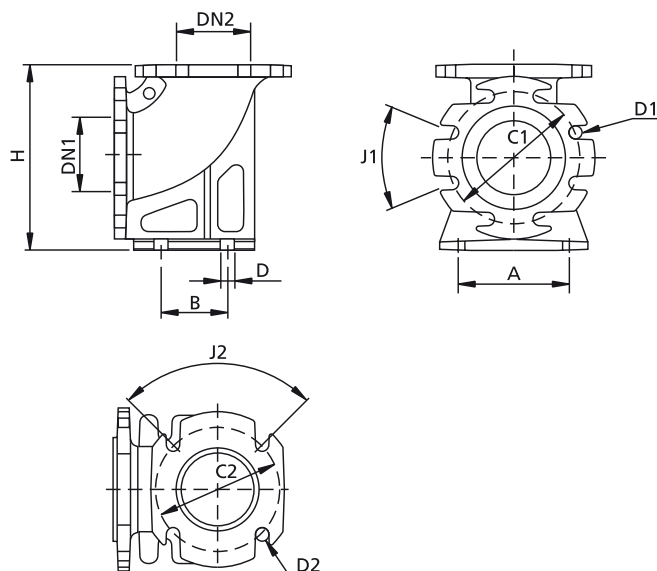
Depending on the models, they can be made of GJL-250 cast iron, galvanized steel or stainless steel.



### KBC Inlet bends

#### General characteristics

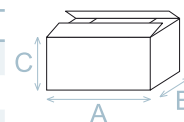
- Structure made of GJL-250 cast iron or galvanized steel;
- Epoxy paint;
- Seal in NBR.



All product images are indicative only

#### Packaging dimension

|             | A   | B   | D   |
|-------------|-----|-----|-----|
| KBC 50/50   | 385 | 225 | 245 |
| KBC 65/65   | 385 | 225 | 245 |
| KBC 80/80   | 385 | 225 | 245 |
| KBC 100/100 | 475 | 285 | 235 |



All weights and dimensions are indicative only

|             | A   | B   | D  | H    | DN1 | C1  | D1 | J1  | DN2 | C2  | D2 | J2  | kg   |
|-------------|-----|-----|----|------|-----|-----|----|-----|-----|-----|----|-----|------|
| KBC 50/50   | 120 | 90  | 17 | 220  | 50  | 125 | 18 | 90° | 50  | 125 | 18 | 90° | 8    |
| KBC 65/65   | 130 | 90  | 17 | 245  | 65  | 145 | 18 | 90° | 65  | 130 | 14 | 90° | 10   |
| KBC 80/80   | 150 | 90  | 18 | 240  | 80  | 160 | 18 | 90° | 80  | 150 | 18 | 90° | 12   |
| KBC 100/100 | 150 | 90  | 18 | 255  | 100 | 180 | 18 | 45° | 100 | 170 | 18 | 90° | 13.5 |
| KBC 200/150 | 240 | 150 | 18 | 460  | 200 | 295 | 22 | 45° | 150 | 225 | 18 | 45° | 42   |
| KBC 250/200 | 290 | 210 | 18 | 530  | 250 | 350 | 22 | 30° | 200 | 280 | 18 | 45° | 64.5 |
| KBC 300/250 | 420 | 600 | 22 | 1020 | 300 | 400 | 22 | 30° | 250 | 335 | 18 | 30° | 113  |

Dimensions in mm

All weights and dimensions are indicative only

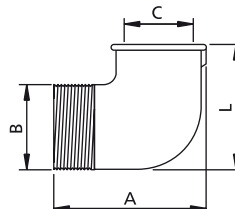
# KCR

## Outlet bends

### MALE-FEMALE THREAD (GAS 2")

#### General characteristics

- Structure in stainless steel.

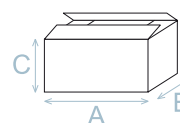


All product images are indicative only

|             | A  | B    | C    | L  | kg  | Packaging dimensions |     |     |
|-------------|----|------|------|----|-----|----------------------|-----|-----|
|             |    |      |      |    |     | A                    | B   | C   |
| KCR G50/G50 | 90 | G 2" | G 2" | 90 | 0.7 | 230                  | 130 | 180 |

Dimensions in mm

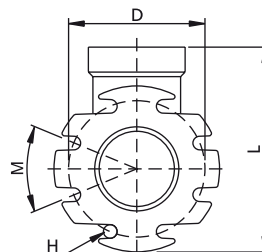
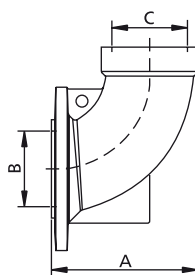
All weights and dimensions are indicative only



### FLANGE-THREAD (DN80-DN100)

#### General characteristics

- Structure in GJL-250 cast iron;
- Epoxy paint;
- Seal in NBR.

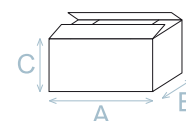


All product images are indicative only

|              | A   | B   | C    | D   | H  | L   | M   | kg  | Packaging dimensions |     |     |
|--------------|-----|-----|------|-----|----|-----|-----|-----|----------------------|-----|-----|
|              |     |     |      |     |    |     |     |     | A                    | B   | C   |
| KCR 80/G80   | 180 | 80  | G 3" | 160 | 18 | 250 | 90° | 7.5 | 385                  | 225 | 245 |
| KCR 100/G100 | 190 | 100 | G 4" | 180 | 18 | 270 | 45° | 12  | 385                  | 225 | 245 |

Dimensions in mm

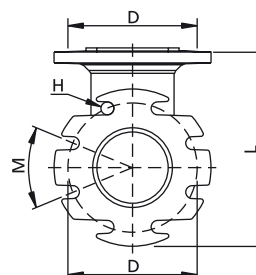
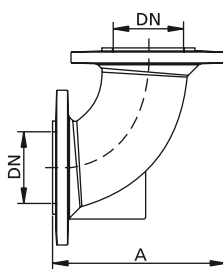
All weights and dimensions are indicative only



### FLANGE-FLANGE (DN65 PN10-16÷DN250 PN10)

#### General characteristics

- Structure made of GJL-250 cast iron or galvanized steel;
- Epoxy paint;
- Seal in NBR.

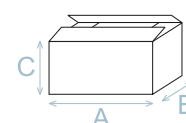


All product images are indicative only

|             | A   | L   | DN  | D   | H  | M   | kg   | Packaging dimensions |     |     |
|-------------|-----|-----|-----|-----|----|-----|------|----------------------|-----|-----|
|             |     |     |     |     |    |     |      | A                    | B   | C   |
| KCR 50/50   | 190 | 190 | 50  | 125 | 18 | 90° | 4    | 385                  | 225 | 245 |
| KCR 65/65   | 220 | 220 | 65  | 145 | 18 | 90° | 7    | 385                  | 225 | 245 |
| KCR 80/80   | 224 | 224 | 80  | 160 | 22 | 90° | 8.8  | 385                  | 225 | 245 |
| KCR 100/100 | 273 | 273 | 100 | 180 | 18 | 45° | 11   | 385                  | 225 | 245 |
| KCR 150/150 | 370 | 370 | 150 | 240 | 22 | 45° | 19.5 | 580                  | 310 | 310 |
| KCR 200/200 | 475 | 475 | 200 | 295 | 22 | 45° | 33.5 | 725                  | 445 | 415 |
| KCR 250/250 | 580 | 580 | 250 | 350 | 22 | 30° | 45   | -                    | -   | -   |

Dimensions in mm

All weights and dimensions are indicative only



# 4.5 Flanges and chains

## KFL

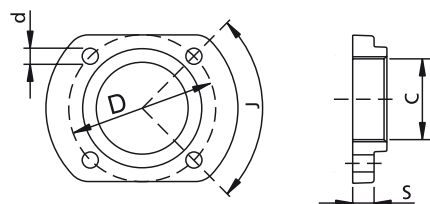
### Flange

#### General characteristics

Flange in GJL-250 cast iron painted with epoxy coating.



All product images are indicative only



Cast iron flange to transform the delivery port from GAS 1½" to GAS 2". Designed to be coupled to electric pumps with DN32 PN6 outlet flange.

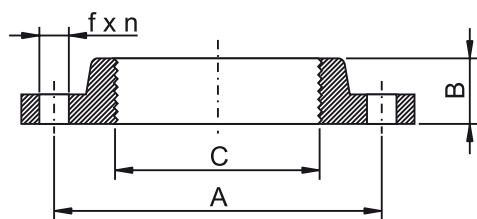
|            | C    | d   | D  | J   | S  | kg   |
|------------|------|-----|----|-----|----|------|
| KFL 32/G50 | G 2" | M12 | 90 | 90° | 15 | 0.75 |

All weights and dimensions are indicative only

Dimensions in mm

#### General characteristics

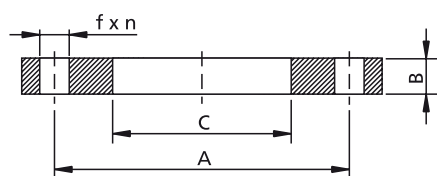
Threaded and welded flanges PN6 and PN 10-16 in accordance with standard EN 1092-1.



|                    | A   | B  | C   | f  | n | kg  |
|--------------------|-----|----|-----|----|---|-----|
| KFL / G50 PN10-16  | 125 | 30 | 2"  | 18 | 4 | 2.8 |
| KFL / G65 PN10-16  | 145 | 30 | 2½" | 18 | 4 | 3.5 |
| KFL / G80 PN10-16  | 160 | 35 | 3"  | 18 | 8 | 4.2 |
| KFL / G100 PN10-16 | 180 | 40 | 4"  | 18 | 8 | 4.9 |

All weights and dimensions are indicative only

Dimensions in mm



|                   | A   | B  | C   | f  | n  | kg   |
|-------------------|-----|----|-----|----|----|------|
| KFL / 150 PN10-16 | 240 | 25 | 168 | 22 | 8  | 7.6  |
| KFL / 200 PN10    | 295 | 25 | 216 | 22 | 8  | 10.0 |
| KFL / 250 PN10    | 350 | 30 | 267 | 22 | 12 | 13.4 |
| KFL / 300 PN10    | 400 | 30 | 318 | 22 | 12 | 14.8 |

All weights and dimensions are indicative only

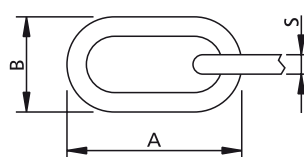
Dimensions in mm

## KAT

### Chains

#### General characteristics

Stainless steel or galvanized steel chains.  
Suitable for moving pumps from tanks and wells.



All weights and dimensions are indicative only

Dimensions in mm

| material | dimensions |      |    | weight<br>(gr/m) | max load (*)<br>(kg) |
|----------|------------|------|----|------------------|----------------------|
|          | D          | d    | s  |                  |                      |
| AISI 316 | 33         | 19.5 | 5  | 482              | 325                  |
| AISI 316 | 51         | 30.5 | 8  | 1250             | 700                  |
| Fe 430   | 51         | 30.5 | 8  | 1205             | 650                  |
| Fe 430   | 71.5       | 44.5 | 12 | 2895             | 1500                 |

(\*) Uncertified approximate loads

# 5.0

## ELECTRIC and ELECTRONIC ACCESSORIES



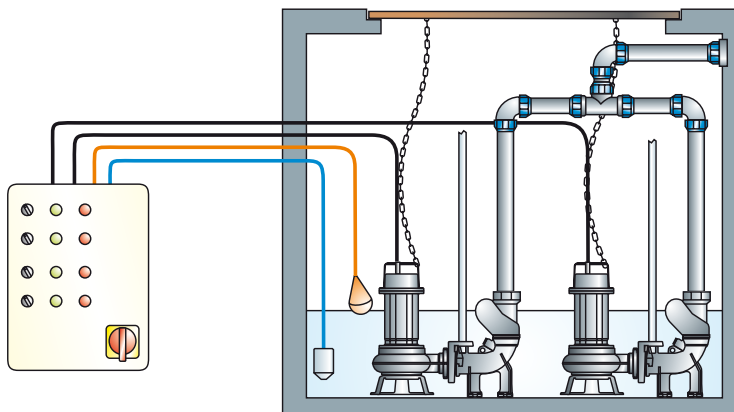


# 5.1 Electromechanical and electronic control panels

Zenit electromechanical and electronic control panels are suitable for the management of any submersible electric pump, from 0.37 to 55 kW, single-phase or three-phase, with direct or star/delta starting.

They are designed for use with float switches and level gauges.

The vast array of standard products is accompanied by customised panels designed to meet specific customer needs.



## Wiring done with care

All internal wiring is done in an extremely rational and clear manner.

The connection cables are identified with numbered labels for easy reference to the wiring diagram and to facilitate any interventions by technical personnel.

The attention given to the assembly translates into a qualitatively better product in which there is a lower risk of faults and malfunctions.



## Compliance to the standards

Every control panel is created in compliance with the current standards with regard to electrical constructions.

All control panels come with complete documentation, electric diagrams and CE declaration of conformity.



## Quality

The control panels are made using the best components available in order to guarantee excellent reliability and easy procurement of replacement parts.

They are subject to severe functional and quality checks before delivery.



## Advantages

Zenit electromechanical and electronic control panels are optimized for use with submersible pumps and the wide range of accessories make them versatile and reliable. Having just one contact for the supplying of control systems and machines translates into definite advantages in economic terms and with regard to intervention times.

# Q1M

## Electromechanical control panel for 1 single-phase pump

### General characteristics

All product images are indicative only

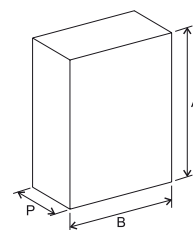


- Input voltage 1 ~ 50/60 Hz 230V  $\pm$  10%;
- 230/24 V transformer for auxiliary circuits;
- Blue light for power on (standard);
- Green light for motor running (standard);
- Red light for motor protection alarm (standard);
- 24 V AC line contactors, AC3 duty;
- Auxiliary circuits protection fuse;
- Motor protection fuses;
- Main switch with safety door that can be locked in the OFF position;
- Thermal relay for overload protection on every motor with internally resettable adjustable scale;
- Very low voltage input for command from pressure switch or operating level float switch;
- Very low voltage input for command from pressure switch or minimum level float switch;
- Selector for AUTO-OFF-MANUAL motor operation (standard);
- ABS housing;
- Output with cable holder;
- IP55 protection rating;
- Start/stop kit for 2 float switches.

### Technical characteristics

|          | power |      | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|-------|------|----------------------------------|------------|-----|-----|--------------|
|          | kW    | HP   |                                  | A          | B   | P   |              |
| Q1M 0402 | 0.37  | 0.5  | 3÷4.5                            | 340        | 240 | 170 | 4            |
| Q1M 0404 | 0.55  | 0.75 | 4.5÷6.5                          | 340        | 240 | 170 | 4            |
| Q1M 0406 | 0.75  | 1    | 6÷9                              | 340        | 240 | 170 | 4            |
| Q1M 0408 | 1.1   | 1.5  | 9÷10.5                           | 340        | 240 | 170 | 4            |
| Q1M 0410 | 1.5   | 2    | 9÷13.5                           | 340        | 240 | 170 | 4            |
| Q1M 0412 | 2.2   | 3    | 14÷18                            | 340        | 240 | 170 | 4            |

*All weights and dimensions are indicative only*



Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Flashing visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Level control wired on the panel for water infiltration sensor;
- 20  $\mu$ F wired capacitor kit;
- 30  $\mu$ F wired capacitor kit;
- 40  $\mu$ F wired capacitor kit;
- 50  $\mu$ F wired capacitor kit;
- 70  $\mu$ F wired capacitor kit;
- 500V F.S. voltmeter (wired);
- 25 A F.S. ammeter (wired);
- 60 A F.S. ammeter (wired);
- 100 A F.S. ammeter (wired).

# Q2M

## Electromechanical control panel for 2 single-phase pumps

### General characteristics

All product images are indicative only

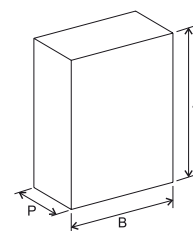


- Input voltage 1 ~ 50/60 Hz 230V  $\pm$  10%;
- Input for command from pressure switch or float switch protecting against dry running;
- 230/24 V transformer for auxiliary circuits;
- Selectors for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- Green light for motor running (standard);
- Red light for motor protection alarm (standard);
- 2 24V AC line contactors, AC3 duty;
- Main switch with door lock;
- Thermal relay for overload protection on every motor with internally resettable adjustable scale;
- Very low voltage input for command from pressure switch or float switch;
- Thermoplastic housing;
- IP55 protection rating;
- 2 pumps alternation relay.

### Technical characteristics

|          | power |      | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|-------|------|----------------------------------|------------|-----|-----|--------------|
|          | kW    | HP   |                                  | A          | B   | P   |              |
| Q2M 0602 | 0.37  | 0.5  | 3÷4.5                            | 420        | 300 | 150 | 7            |
| Q2M 0604 | 0.55  | 0.75 | 4.5÷6.5                          | 420        | 300 | 150 | 7            |
| Q2M 0606 | 0.75  | 1    | 6÷9                              | 420        | 300 | 150 | 7            |
| Q2M 0608 | 1.1   | 1.5  | 9÷10.5                           | 420        | 300 | 150 | 7            |
| Q2M 0610 | 1.5   | 2    | 9÷13.5                           | 420        | 300 | 150 | 7            |
| Q2M 0612 | 2.2   | 3    | 14÷18                            | 420        | 300 | 150 | 7            |

*All weights and dimensions are indicative only*



Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed)

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired).

# Q3M

## Electromechanical control panel for 3 single-phase pumps

### General characteristics

All product images are indicative only

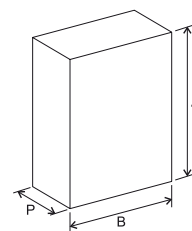


- Input voltage 1 ~ 50/60 Hz 230V  $\pm$  10%;
- 230/24 V transformer for auxiliary circuits;
- Very low voltage input for command from pressure switch or float switch;
- Input for command from pressure switch or float switch protecting against dry running;
- 230/24 V transformer for auxiliary circuits;
- 3 selectors for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- 3 green lights for motor running (standard);
- 3 red lights for motor protection alarm (standard);
- 24 V AC line contactors, AC3 duty;
- Thermal relays for overload protection on every motor with internally resettable adjustable scale;
- Main switch with door lock;
- Metal housing;
- Output with cable holder;
- IP55 protection rating;
- 3 pump alternation relay.

### Technical characteristics

|          | power |      | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|-------|------|----------------------------------|------------|-----|-----|--------------|
|          | kW    | HP   |                                  | A          | B   | P   |              |
| Q3M 0802 | 0.37  | 0.5  | 3÷4.5                            | 540        | 400 | 230 | 14           |
| Q3M 0804 | 0.55  | 0.75 | 4.5÷6.5                          | 540        | 400 | 230 | 14           |
| Q3M 0806 | 0.75  | 1    | 6÷9                              | 540        | 400 | 230 | 14           |

All weights and dimensions are indicative only



Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 24V Undecal 2 pump alternation relay~;
- 24V Undecal 3 pump alternation relay~;
- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired);
- 40 A F.S. ammeter kit (wired);
- 60 A F.S. ammeter kit (wired);
- 100 A F.S. ammeter kit (wired).

# Q1T

## Electromechanical control panel for 1 three-phase pump

All product images are indicative only

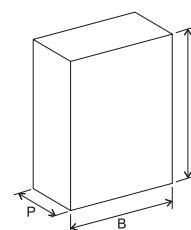


### General characteristics

- Input voltage 3 ~ 50/60 Hz 400V  $\pm$  10%;
- 400/24 V transformer for auxiliary circuits;
- Selector for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- Green light for motor running (standard);
- Red light for motor protection alarm (standard);
- 24 V AC line contactors, AC3 duty;
- Auxiliary circuits protection fuse;
- Motor protection fuses;
- Main switch with safety door that can be locked in the OFF position;
- Thermal relay for overload protection on every motor with internally resettable adjustable scale;
- Very low voltage input for command from pressure switch or operating level float switch;
- Very low voltage input for command from pressure switch or minimum level float switch;
- ABS housing;
- Output with cable holder;
- IP55 protection rating.

### Technical characteristics

|          | power    |       | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|----------|-------|----------------------------------|------------|-----|-----|--------------|
|          | kW       | HP    |                                  | A          | B   | P   |              |
| Q1T 1014 | 0.37     | 0.5   | 0.9÷1.3                          | 340        | 240 | 170 | 4            |
| Q1T 1016 | 0.55     | 0.75  | 1.4÷2                            | 340        | 240 | 170 | 4            |
| Q1T 1018 | 0.75÷1.1 | 1÷1.5 | 2÷3.2                            | 340        | 240 | 170 | 4            |
| Q1T 1020 | 1.5      | 2     | 3÷4.5                            | 340        | 240 | 170 | 4            |
| Q1T 1022 | 2.2      | 3     | 4.5÷6.8                          | 340        | 240 | 170 | 4            |
| Q1T 1024 | 3.7      | 5.5   | 6÷9                              | 340        | 240 | 170 | 4            |
| Q1T 1026 | 5.5      | 7.5   | 9÷12                             | 340        | 240 | 170 | 4.5          |
| Q1T 1028 | 7.5      | 10    | 14÷16                            | 340        | 240 | 170 | 4.5          |
| Q1T 1030 | 9.2      | 12.5  | 14÷20                            | 340        | 240 | 170 | 4.5          |
| Q1T 1032 | 11       | 15    | 17÷25                            | 340        | 240 | 170 | 5.5          |
| Q1T 1034 | 15       | 20    | 20÷32                            | 420        | 300 | 150 | 12           |



All weights and dimensions are indicative only

Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Flashing visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Level control wired on the panel for water infiltration sensor;
- 500V F.S. voltmeter (wired);
- 25 A F.S. ammeter (wired);
- 60 A F.S. ammeter (wired);
- 100 A F.S. ammeter (wired)

# Q2T

## Electromechanical control panel for 2 three-phase pumps

All product images are indicative only

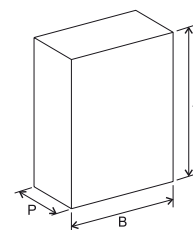


### General characteristics

- Input voltage 3 ~ 50/60 Hz 400V  $\pm$  10%;
- Input for command from pressure switch or float switch protecting against dry running;
- 400/24 V transformer for auxiliary circuits;
- Selectors for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- Green light for motor running (standard);
- Red light for motor protection alarm (standard);
- 2 24V AC line contactors, AC3 duty;
- Very low voltage input for command from pressure switch or float switch;
- Thermal relay for overload protection on every motor with internally resettable adjustable scale;
- Main switch with door lock;
- Thermoplastic housing;
- IP55 protection rating;
- 2 pump alternation relay.

### Technical characteristics

|          | power |      | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|-------|------|----------------------------------|------------|-----|-----|--------------|
|          | kW    | HP   |                                  | A          | B   | P   |              |
| Q2T 1214 | 0.37  | 0.5  | 0.9÷1.3                          | 420        | 300 | 150 | 7            |
| Q2T 1216 | 0.55  | 0.75 | 1.4÷2                            | 420        | 300 | 150 | 7            |
| Q2T 1218 | 1.1   | 1.5  | 2÷3.2                            | 420        | 300 | 150 | 7            |
| Q2T 1220 | 1.5   | 2    | 3÷4.5                            | 420        | 300 | 150 | 7            |
| Q2T 1222 | 2.2   | 3    | 4.5÷6.8                          | 420        | 300 | 150 | 7            |
| Q2T 1224 | 3.7   | 5.5  | 6÷9                              | 420        | 300 | 150 | 7            |
| Q2T 1226 | 5.5   | 7.5  | 9÷12                             | 420        | 300 | 150 | 7            |
| Q2T 1228 | 7.5   | 10   | 14÷16                            | 420        | 300 | 150 | 8            |
| Q2T 1230 | 9.2   | 12.5 | 14÷20                            | 420        | 300 | 150 | 8            |
| Q2T 1232 | 11    | 15   | 17÷25                            | 420        | 300 | 150 | 14.5         |
| Q2T 1234 | 15    | 20   | 20÷32                            | 530        | 400 | 230 | 14.5         |



All weights and dimensions are indicative only

Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed)

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired);
- 40 A F.S. ammeter kit (wired);
- 60 A F.S. ammeter kit (wired);
- 100 A F.S. ammeter kit (wired).



# Q3T

## Electromechanical control panel for 3 three-phase pumps

### General characteristics

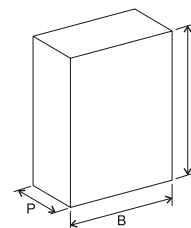
All product images are indicative only



- Input voltage 3 ~ 50/60 Hz 400V  $\pm$  10%;
- 230/24 transformer for auxiliary circuits;
- Very low voltage input for command from pressure switch or float switch;
- Input for command from pressure switch or float switch protecting against dry running;
- 400/24 V transformer for auxiliary circuits;
- 3 selectors for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- 3 green lights for motor running (standard);
- 3 red lights for motor protection alarm (standard);
- 24 V AC line contactors, AC3 duty;
- Thermal relays for overload protection on every motor with internally resettable adjustable scale;
- Main switch with door lock;
- Metal housing;
- Output with cable holder;
- IP55 protection rating;
- 3 pump alternation relay.

### Technical characteristics

|          | power    |       | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|----------|-------|----------------------------------|------------|-----|-----|--------------|
|          | kW       | HP    |                                  | A          | B   | P   |              |
| Q3T 1414 | 0.37     | 0.5   | 0.9÷1.3                          | 540        | 400 | 230 | 14           |
| Q3T 1416 | 0.55     | 0.75  | 1.4÷2                            | 540        | 400 | 230 | 14           |
| Q3T 1418 | 0.75÷1.1 | 1÷1.5 | 2÷3.2                            | 540        | 400 | 230 | 14           |
| Q3T 1420 | 1.5      | 2     | 3÷4.5                            | 540        | 400 | 230 | 14           |
| Q3T 1422 | 2.2      | 3     | 4.5÷6.8                          | 540        | 400 | 230 | 14           |
| Q3T 1424 | 3÷4      | 4÷5.5 | 6÷9                              | 540        | 400 | 230 | 14           |
| Q3T 1426 | 5.5      | 7.5   | 9÷12                             | 540        | 400 | 230 | 14           |
| Q3T 1428 | 7.5      | 10    | 10÷16                            | 540        | 400 | 230 | 15           |
| Q3T 1430 | 11       | 15    | 15÷20                            | 540        | 400 | 230 | 15           |
| Q3T 1432 | 15       | 20    | 24÷31                            | 540        | 400 | 230 | 15           |



*All weights and dimensions are indicative only*

Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 24V Undecal 2 pump alternation relay~;
- 24V Undecal 3 pump alternation relay~;
- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired);
- 40 A F.S. ammeter kit (wired);
- 60 A F.S. ammeter kit (wired);
- 100 A F.S. ammeter kit (wired).

# Q1ST

## Star/delta electromechanical control panel for 1 three-phase pump

### General characteristics

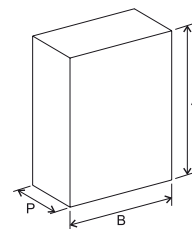
All product images are indicative only



- Input voltage 3 ~ 50/60 Hz 400V  $\pm$  10%;
- Very low voltage input for command from pressure switch or float switch;
- Input for command from pressure switch or float switch protecting against dry running;
- 400/24 V transformer for auxiliary circuits;
- Selector for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- Green light for motor running (standard);
- Red light for motor protection alarm (standard);
- Line contactor, AC3 duty;
- Star contactor, AC3 duty;
- Delta contactor, AC3 duty;
- Adjustable star-delta changeover timer 0÷30";
- Thermal relay for overload protection on every motor with internally resettable adjustable scale;
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Main switch with door lock;
- Thermoplastic (up to 15 HP) or metallic housing;
- Output with cable holder;
- IP 55 protection rating.

### Technical characteristics

|           | power |     | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|-----------|-------|-----|----------------------------------|------------|-----|-----|--------------|
|           | kW    | HP  |                                  | A          | B   | P   |              |
| Q1ST 2036 | 2.2   | 3   | 5÷8                              | 420        | 320 | 170 | 6            |
| Q1ST 2038 | 4     | 5.5 | 8÷11.5                           | 420        | 320 | 170 | 6            |
| Q1ST 2040 | 5.5   | 7.5 | 10÷14                            | 420        | 320 | 170 | 6            |
| Q1ST 2042 | 7.5   | 10  | 10÷16                            | 420        | 320 | 170 | 6            |
| Q1ST 2044 | 11    | 15  | 15÷20                            | 420        | 320 | 170 | 6            |
| Q1ST 2046 | 15    | 20  | 24÷31                            | 530        | 400 | 230 | 16           |
| Q1ST 2048 | 18.5  | 25  | 24÷36                            | 530        | 400 | 230 | 16           |
| Q1ST 2050 | 22    | 30  | 34÷50                            | 530        | 400 | 230 | 16           |
| Q1ST 2052 | 30    | 40  | 48÷62                            | 530        | 400 | 230 | 20           |
| Q1ST 2054 | 37    | 50  | 60÷77                            | 630        | 500 | 230 | 30           |
| Q1ST 2056 | 45    | 60  | 79÷98                            | 630        | 500 | 230 | 30           |



*All weights and dimensions are indicative only*

Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired);
- 40 A F.S. ammeter kit (wired);
- 60 A F.S. ammeter kit (wired);
- 100 A F.S. ammeter kit (wired);
- 150 A F.S. ammeter kit (wired);
- 200 A F.S. ammeter kit (wired);
- Control of sequence and lack of phases (wired).

# Q2ST

## Star/delta electromechanical control panel for 2 three-phase pumps

All product images are indicative only

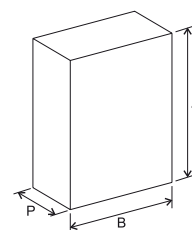


### General characteristics

- Input voltage 3 ~ 50/60 Hz 400V  $\pm$  10%;
- Input for command from pressure switch or float switch protecting against dry running;
- 400V/24V transformer for auxiliary circuits;
- 2 selectors for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- 2 green lights for motor running (standard);
- 2 red lights for motor protection alarm (standard);
- 2 24V AC line contactors, AC3 duty;
- 2 24V AC star contactors, AC3 duty;
- 2 24V AC delta contactors, AC3 duty;
- 2 adjustable star-delta changeover timers 0÷30";
- Very low voltage input for command from 2 pressure switches or float switches;
- Thermal relays for overload protection on every motor with internally resettable adjustable scale;
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Main switch with door lock;
- Metal housing;
- Output with cable holder;
- IP55 protection rating;
- 2 pump alternation relay.

### Technical characteristics

|           | power |     | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|-----------|-------|-----|----------------------------------|------------|-----|-----|--------------|
|           | kW    | HP  |                                  | A          | B   | P   |              |
| Q2ST 2236 | 2.2   | 3   | 5÷8                              | 630        | 400 | 230 | 12           |
| Q2ST 2238 | 4     | 5.5 | 8÷11.5                           | 630        | 400 | 230 | 12           |
| Q2ST 2240 | 5.5   | 7.5 | 10÷14                            | 630        | 400 | 230 | 12           |
| Q2ST 2242 | 7.5   | 10  | 10÷16                            | 630        | 400 | 230 | 12           |
| Q2ST 2244 | 11    | 15  | 15÷20                            | 630        | 400 | 230 | 12           |
| Q2ST 2246 | 15    | 20  | 24÷31                            | 690        | 500 | 230 | 32           |
| Q2ST 2248 | 18.5  | 25  | 24÷36                            | 740        | 500 | 230 | 40           |
| Q2ST 2250 | 22    | 30  | 34÷50                            | 740        | 500 | 230 | 40           |
| Q2ST 2252 | 30    | 40  | 48÷62                            | 840        | 600 | 330 | 60           |
| Q2ST 2254 | 37    | 50  | 60÷77                            | 840        | 600 | 330 | 60           |
| Q2ST 2256 | 45    | 60  | 79÷98                            | 840        | 600 | 330 | 80           |



All weights and dimensions are indicative only

Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed);
- Maneuvers/hour frequency: a maximum of 4 of which not more than 2 consecutively.

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired);
- 40 A F.S. ammeter kit (wired);
- 60 A F.S. ammeter kit (wired);
- 100 A F.S. ammeter kit (wired);
- Control of sequence and lack of phases.

# Q3ST

## Star/delta electromechanical control panel for 3 three-phase pumps

All product images are indicative only

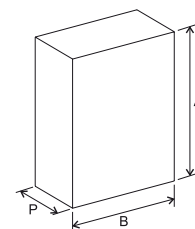


### General characteristics

- Input voltage 3 ~ 50/60 Hz 400V  $\pm$  10%;
- 400/24 transformer for auxiliary circuits;
- Very low voltage input for command from pressure switch or float switch;
- Input for command from pressure switch or float switch protecting against dry running;
- 230/24 V transformer for auxiliary circuits;
- 3 selectors for AUTO-OFF-MANUAL motor operation (standard);
- Blue light for power on (standard);
- 3 green lights for motor running (standard);
- 3 red lights for motor protection alarm (standard);
- 3 24V AC line contactors, AC3 duty;
- 3 24V AC star contactors, AC3 duty;
- 3 24V AC delta contactors, AC3 duty;
- 3 adjustable star-delta changeover timers 0-30";
- Thermal relays for overload protection on every motor with internally resettable adjustable scale;
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Main switch with door lock;
- Metal housing;
- IP55 protection rating;
- 3 pump alternation relay.

### Technical characteristics

|           | power |     | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|-----------|-------|-----|----------------------------------|------------|-----|-----|--------------|
|           | kW    | HP  |                                  | A          | B   | P   |              |
| Q3ST 2436 | 2.2   | 3   | 5÷8                              | 630        | 400 | 230 | 12           |
| Q3ST 2438 | 4     | 5.5 | 8÷11.5                           | 630        | 400 | 230 | 12           |
| Q3ST 2440 | 5.5   | 7.5 | 10÷14                            | 630        | 400 | 230 | 12           |
| Q3ST 2442 | 7.5   | 10  | 10÷16                            | 630        | 400 | 230 | 12           |
| Q3ST 2444 | 11    | 15  | 15÷20                            | 630        | 400 | 230 | 12           |
| Q3ST 2446 | 15    | 20  | 24÷31                            | 740        | 500 | 230 | 32           |
| Q3ST 2448 | 18.5  | 25  | 24÷36                            | 840        | 600 | 230 | 40           |
| Q3ST 2450 | 22    | 30  | 34÷50                            | 840        | 600 | 230 | 40           |
| Q3ST 2452 | 30    | 40  | 48÷62                            | 1040       | 800 | 330 | 60           |
| Q3ST 2454 | 37    | 50  | 60÷77                            | 1040       | 800 | 330 | 70           |
| Q3ST 2456 | 45    | 60  | 79÷98                            | 1040       | 800 | 330 | 80           |



All weights and dimensions are indicative only

Contact Customer Service for higher power electric control panels.

### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- Pump alternation relay;
- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- Wired level control;
- 500 V F.S. voltmeter kit (wired);
- 25 A F.S. ammeter kit (wired);
- 40 A F.S. ammeter kit (wired);
- 60 A F.S. ammeter kit (wired);
- 100 A F.S. ammeter kit (wired);
- Control of sequence and lack of phases.

# Q1EL M

## Electronic control panel for 1 single-phase pump

All product images are indicative only



### General characteristics

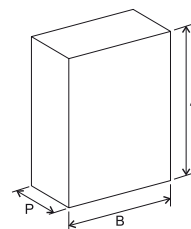
- Power supply 1~ 50/60Hz 230V +/- 10%;
- Very low voltage input for command from pressure switch or float switch;
- Very low voltage input for external command from 3 minimum level gauges;
- Ideal for used with sensors for non-flammable conductive liquids (not included);
- Selector for the operation of filling/draining sensors;
- Internal sensor sensitivity regulator;
- Buttons for "Automatic-Off-Manual" motor operation;
- Green "Power On" LED;
- Green "Automatic Operation" LED;
- Green "motor running" LED;
- Red "level alarm" LED;
- Red "motor overload protection alarm" LED;
- Protection reset button;
- Adjustable electronic protection for motor overload;
- Time for protection activation: 5";
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Alarm output with N.O.-C-N.C. changeover contacts (16A 250V resistive load capacity);
- Main switch with door lock;
- Set up for insertion of a capacitor;
- ABS housing;
- Output with cable holder;
- IP55 protection rating.

### Technical characteristics

|         | power    |       | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|---------|----------|-------|----------------------------------|------------|-----|-----|--------------|
|         | kW       | HP    |                                  | A          | B   | P   |              |
| Q1 EL M | 0.37÷2.2 | 0.5÷3 | 2÷16                             | 340        | 240 | 170 | 1.5          |

*All weights and dimensions are indicative only*

Contact Customer Service for higher power electric control panels.



### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Flashing visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- 20 µF wired capacitor kit;
- 30 µF wired capacitor kit;
- 40 µF wired capacitor kit;
- 50 µF wired capacitor kit;
- 70 µF wired capacitor kit.

# Q2EL M

## Electronic control panel for 2 single-phase pumps

All product images are indicative only



### General characteristics

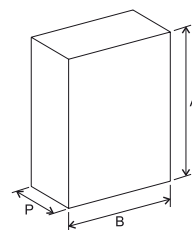
- Power supply 1~ 50/60Hz 400V +/- 10%;
- Very low voltage input for command from 2 pressure switches or float switches;
- Very low voltage input for command from pressure switch or level alarm float switch;
- Very low voltage input for external command from 3 minimum level gauges;
- Built-in pump alternation circuit with 4" startup delay;
- Internal selector for pump alternation exclusion;
- Selector for the operation of filling/draining sensors;
- 2 selectors for "Automatic-Off-Manual" motor operation;
- Green "Power On" LED;
- 2 green "Automatic Operation" LEDs;
- 2 green "motor running" LEDs;
- Red "level alarm" LED;
- 2 red "motor overload protection alarm" LEDs;
- Time for protection activation: 5";
- Protection reset button;
- Internal sensor sensitivity regulator;
- Adjustable amperage protection for motor overload;
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Alarm output with N.O.-C-N.C. changeover contacts (16A 250V resistive load capacity);
- Main switch with door lock;
- Output with cable holder;
- ABS housing;
- IP55 protection rating;
- 2 pump alternation relay.

### Technical characteristics

|         | power    |       | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|---------|----------|-------|----------------------------------|------------|-----|-----|--------------|
|         | kW       | HP    |                                  | A          | B   | P   |              |
| Q2 EL M | 0.37÷2.2 | 0.5÷3 | 2÷16                             | 340        | 240 | 170 | 3            |

*All weights and dimensions are indicative only*

Contact Customer Service for higher power electric control panels.



### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Flashing visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection.



# Q1EL T

## Electronic control panel for 1 three-phase pump

All product images are indicative only



### General characteristics

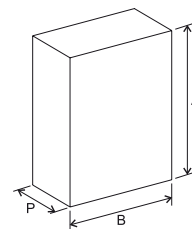
- Power supply 3~ 50/60Hz 400V +/- 10%;
- Very low voltage input for command from pressure switch or float switch;
- Very low voltage input for external command from 3 minimum level gauges;
- Ideal for used with sensors for non-flammable conductive liquids (not included);
- Selector for the operation of filling/draining sensors;
- Internal sensor sensitivity regulator;
- Buttons for "Automatic-Off-Manual" motor operation;
- Green "Power On" LED;
- Green "Automatic Operation" LED;
- Green "motor running" LED;
- Red "level alarm" LED;
- Red "motor overload protection alarm" LED;
- Protection reset button;
- Adjustable electronic protection for motor overload;
- Time for protection activation: 5";
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Alarm output with N.O.-C-N.C. changeover contacts (16A 250V resistive load capacity);
- Main switch with door lock;
- ABS housing;
- Output with cable holder;
- IP55 protection rating.

### Technical characteristics

|         | power    |          | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|---------|----------|----------|----------------------------------|------------|-----|-----|--------------|
|         | kW       | HP       |                                  | A          | B   | P   |              |
| Q1 EL T | 0.55÷3.7 | 0.75÷5.5 | 2÷8                              | 340        | 240 | 170 | 2            |

*All weights and dimensions are indicative only*

Contact Customer Service for higher power electric control panels.



### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Flashing visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection;
- 20 µF wired capacitor kit;
- 30 µF wired capacitor kit;
- 40 µF wired capacitor kit;
- 50 µF wired capacitor kit;
- 70 µF wired capacitor kit.

# Q2EL T

## Electronic control panel for 2 three-phase pumps

All product images are indicative only



### General characteristics

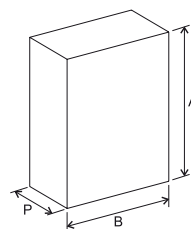
- Power supply 1~ 50/60Hz 400V +/- 10%;
- Very low voltage input for command from 2 pressure switches or float switches;
- Very low voltage input for command from pressure switch or level alarm float switch;
- Very low voltage input for external command from 3 minimum level gauges;
- Built-in pump alternation circuit with 4" startup delay;
- Internal selector for pump alternation exclusion;
- Selector for the operation of filling/draining sensors;
- 2 selectors for "Automatic-Off-Manual" motor operation;
- Green "Power On" LED;
- 2 green "Automatic Operation" LEDs;
- 2 green "motor running" LEDs;
- Red "level alarm" LED;
- 2 red "motor overload protection alarm" LEDs;
- Time for protection activation: 5";
- Protection reset button;
- Internal sensor sensitivity regulator;
- Adjustable amperage protection for motor overload;
- Motor protection fuses;
- Auxiliary circuits protection fuse;
- Alarm output with N.O.-C-N.C. changeover contacts (16A 250V resistive load capacity);
- Main switch with door lock;
- Output with cable holder;
- ABS housing;
- IP55 protection rating;
- 2 pump alternation relay.

### Technical characteristics

|          | power    |          | thermal protection<br>rating (A) | dimensions |     |     | weight<br>Kg |
|----------|----------|----------|----------------------------------|------------|-----|-----|--------------|
|          | kW       | HP       |                                  | A          | B   | P   |              |
| Q 2 EL T | 0.55÷3.7 | 0.75÷5.5 | 2÷8                              | 340        | 240 | 170 | 4.5          |

*All weights and dimensions are indicative only*

Contact Customer Service for higher power electric control panels.



### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed)

### Optional accessories

- 90 dB acoustic alarm - input command from float switch or pressure switch;
- Flashing visual alarm - complete with input command terminals;
- Acoustic alarm with buffer battery (involves box change);
- Kit of 3 level gauges for dry running protection.

## 5.2 Alarms

The alarm devices provide acoustic and/or acoustic/visual signalling of plant malfunctions such as power blackouts, allowing swift corrective action. The internal buffer battery ensures lengthy autonomy.

### SA1 - SLA1

#### Self-powered alarm panel

All product images are indicative only



#### General characteristics

- Power supply 1~ 50/60Hz 230V +/- 10%;
- Very low voltage input for alarm command from free contacts N.O. and N.C.;
- Green "Power On" LED;
- Red "level alarm" LED;
- Red "acoustic alarm off" LED;
- Alarm siren 90 dB at 1 mt.;
- Red electronic flasher (only on model SLA1);
- Acoustic alarm ON/OFF buttons;
- Alarm reset button;
- Battery charger and buffer battery for 24 hour power supply;
- Internal selector "continuous/self-resetting alarm";
- Internal selector for alarm-timer activation;
- Acoustic alarm timer adjuster 0-180";
- ABS housing;
- Output with cable holder;
- IP55 protection rating.

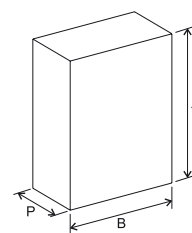
#### Technical characteristics

|       | duration of the<br>batteries | acoustic<br>pressure | dimensions |     |     | weight<br>Kg |
|-------|------------------------------|----------------------|------------|-----|-----|--------------|
|       |                              |                      | A          | B   | P   |              |
| SA/1  | 24h                          | 90 dBm               | 340        | 240 | 170 | 1            |
| SLA/1 | 24h                          | 90 dBm               | 410        | 240 | 170 | 1.5          |

*All weights and dimensions are indicative only*

#### Operating limits

- Ambient temperature: -5/+40°C;
- 50% relative humidity at 40°C (not condensed).



## 5.3 Float switches

Specific for controlling electric pumps, even for installations with dense and soiled liquids.  
Models with explosion-proof certification also available.



### Technical characteristics

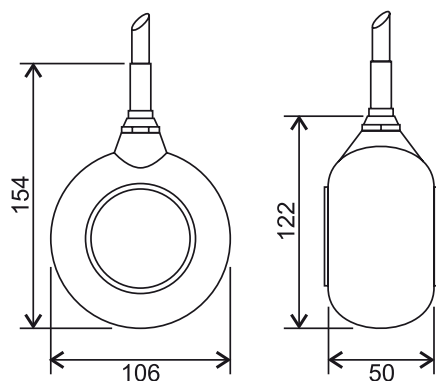
| Current    | Cable   |       |            |
|------------|---------|-------|------------|
|            | Type    | Wires | Length (m) |
| 10A / 250V | H07RN-F | 3G1   | 0.50       |
| 10A / 250V | H07RN-F | 3G1   | 5          |
| 10A / 250V | H07RN-F | 3G1   | 10         |

Used ONLY for draining

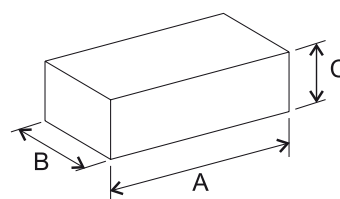


All product images are indicative only

### Overall dimensions



### Packaging dimensions



| A   | B   | C   |
|-----|-----|-----|
| 225 | 120 | 160 |

All weights and dimensions are indicative only



### Technical characteristics

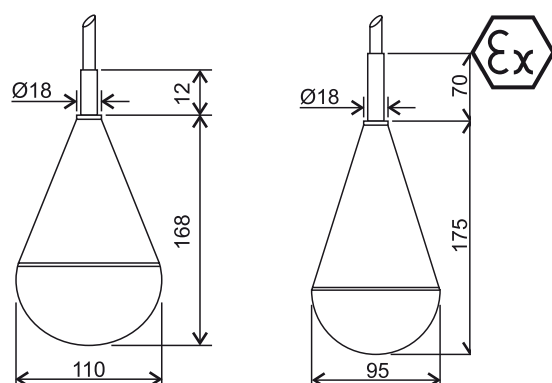
| Current    | Cable                |           |            |
|------------|----------------------|-----------|------------|
|            | Type                 | Wires     | Length (m) |
| 10A / 250V | TPK                  | 3G x 0.75 | 10         |
| 10A / 250V | TPK                  | 3G x 0.75 | 20         |
| 10A / 250V | TPK (ATEX certified) | 3 x 0.75  | 10         |

Suitable for draining and filling

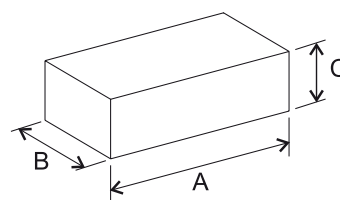


All product images are indicative only

### Overall dimensions



### Packaging dimensions



| A   | B   | C   |
|-----|-----|-----|
| 225 | 120 | 160 |

All weights and dimensions are indicative only

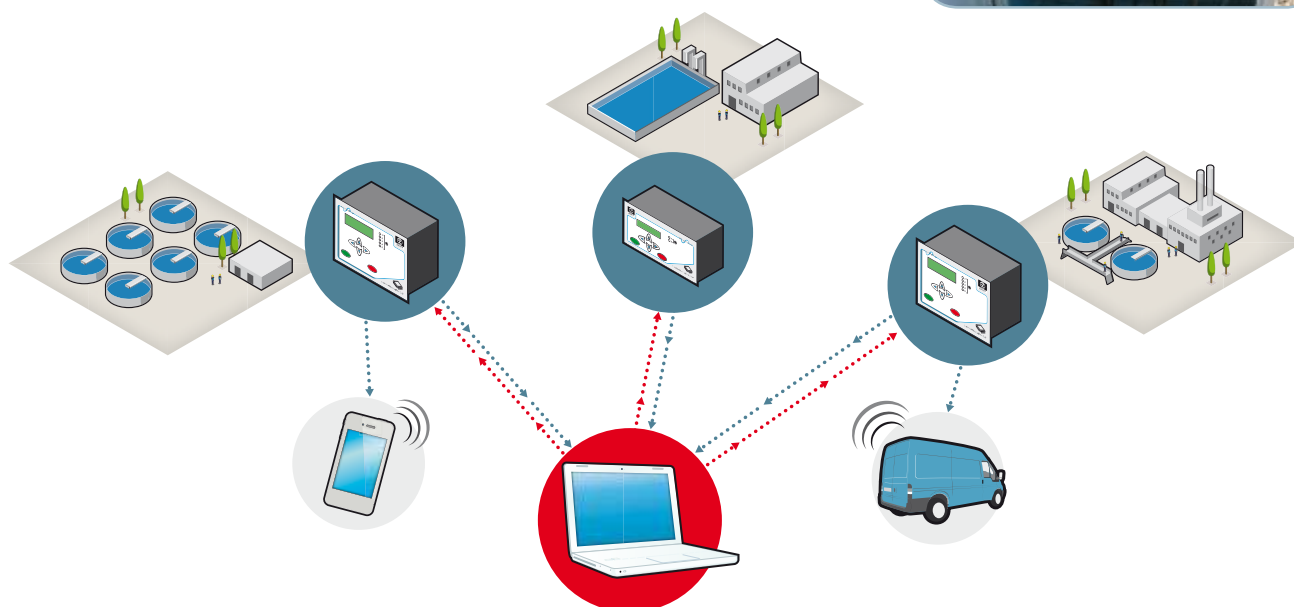
## 5.4 Remote Control Systems

Nowadays, microprocessor remote control systems are an essential tool for the managing of water treatment plants.

There are many benefits to be had from the use of remote control systems, due mainly to the capability for receiving and sending data to and from remote positions in real time. This allows the simultaneous management of several plants, with rapid intervention in response to malfunctions only, reducing the costs arising from scheduled servicing and inspections.

What's more, the uniform distribution of the workload across the various machines installed optimises wear of rotary components, reducing expenditures on parts and labour.

The saving of the key data for the pumps installed in a log file allows constant monitoring of their operating parameters and scheduling of servicing work to prevent inconvenient plant stoppages.



### Safety above all

The use of "intelligent" systems also generates an improvement in safety standards. The processing of alarms linked to operating parameters provides notification and allows immediate intervention in case of malfunctions such as, for example, surpassing of level thresholds, dry running and the accidental entry of water into the mechanical seal oil sump before these events can constitute a threat to normal operation of the plant. There is also a specific input for a tamper alarm, preventing unauthorised modification of the set parameters, ensuring completely safe operation.



# COMMANDER 20-50

## Remote control system

The COMMANDER is a microprocessor unit for integration in the electrical control panel, capable of managing plant operation.

COMMANDER is available in 2 versions: the COMMANDER 20 for control of up to 2 pumps and the COMMANDER 50, able to control up to 5 pumps.

Use is simplified by a menu which guides the user through the setting and selection of the various functions step by step.

The user can use a liquid crystal display showing plant data and a keypad for setting the operating parameters.

The programmable functions for plant management are:

- draining or filling, based on the signal from a sensor and on the start and stop thresholds;
- management of pumps in a group, alternating operation, based on the number of starts or the maximum continuous operating time;
- control of the maximum number of pumps in operation to prevent electrical overloading;
- activation of emergency pump set by the user which replaces another pump which is malfunctioning;
- startup delay between one pump and another to avoid peaks in power draw;
- extended operation to encourage the cleaning of the tank and the surface of the liquid;
- periodic startup in case of prolonged stops in order to prevent the blockage of the pump;
- pumps can be operated in continuous (s1) or intermittent (s3/s9) mode.

The functions that can be activated for managing alarms and faults are:

- reporting of pump malfunctions with shutdown in case of blocking fault (entry of water into the mechanical seal sump, entry of water into the motor compartment, tripping of thermal cut-out, overloading, lack of electrical power phase, lack of pump startup);
- notification that the hours of operation/number of starts threshold has been reached for scheduled maintenance;
- reports from the auxiliary analogue and digital data acquisition channels (surpassing of the set limits for each input channel);
- management of extreme minimum and extreme maximum float switches and thresholds in case of level gauge breakdown;
- reporting of power blackouts;
- magnetothermic cutout on the electrical control panel (overload);
- warning of control panel opening or intrusion into the plant.

Reporting of low emergency batteryCOMMANDER stores the following historical data in its internal memory or on the PC:

- total operating time per pump ;
- number of starts per pump;
- data from the auxiliary channels;
- historical data regarding the alarms, divided by pump and type.

The COMMANDER unit can be connected to a piezocapacitive, piezoresistive or ultrasound level gauge.

For improved safety, COMMANDER also controls two emergency float switches located in the tank, corresponding to the extreme maximum level (beyond which there is the risk of overflowing) and the extreme minimum (below which the pumps run dry).

In the case of gauge fault, the emergency float switches guarantees plant operation and the COMMANDER unit reports the anomaly in real time as an acoustic-visual alarm, with notification on the remote computer through the SW COMMANDER and, if the optional GSM module is installed on the device, via text message to the mobile phone of the maintenance personnel.

COMMANDER can send all alarm messages by means of text messaging to a maximum of 3 different telephone numbers. The software also gives notification that the residual credit on the SIM card is finished.

The automatic system restart option ensures that the plant will continue operating after a possible black-out or distractions by the operators.

Conversely, a specific option stops the plant, avoiding the undesired starting of the pumps in case of maintenance interventions.

The COMMANDER unit has 4 analogue channels and 3 digital auxiliary inputs designed for the connection of sensors or transducers for the reading of measurable parameters of the fluids, such as:

- level measuring devices;
- flowrate measuring devices;
- pH meter;
- oxygen measuring devices;
- density measuring devices;
- ammeters.



All product images are indicative only



## Technical characteristics

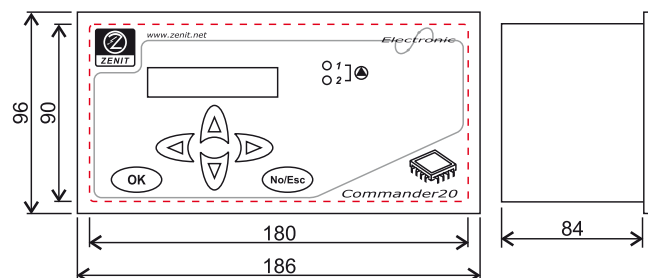
|  | Commander20 | Commander50 |
|--|-------------|-------------|
|--|-------------|-------------|

|                                                                                        |  |  |
|----------------------------------------------------------------------------------------|--|--|
| 2 line display                                                                         |  |  |
| 4 line display                                                                         |  |  |
| Pump status indication on the front panel (on/off/alarm) with luminous LED             |  |  |
| Possibility of selecting the menu language                                             |  |  |
| Management of up to 2 pumps                                                            |  |  |
| Management of up to 5 pumps                                                            |  |  |
| Management of extreme maximum level                                                    |  |  |
| Management of extreme minimum level                                                    |  |  |
| Management of alternating startup and extended running                                 |  |  |
| Emergency pump management                                                              |  |  |
| Alarm for the entry of water into the seal sump                                        |  |  |
| Alarm for the entry of water into the motor compartment                                |  |  |
| Pump overheating alarm                                                                 |  |  |
| No phase alarm                                                                         |  |  |
| No power alarm                                                                         |  |  |
| Alarm for the magnetothermic cutout in the electrical control panel (OVERLOAD)         |  |  |
| Intrusion alarm                                                                        |  |  |
| 9 additional programmable ON/OFF relays that can be activated from the analogue inputs |  |  |
| 2 additional programmable N.C./N.O. changeover relays                                  |  |  |
| 4 programmable analogue inputs with intervention thresholds                            |  |  |
| ON/OFF relay for command of the pumps                                                  |  |  |
| Acoustic/visual alarm management relay                                                 |  |  |
| Analogue input for the level gauge                                                     |  |  |
| Digital input for the generic pulse counter                                            |  |  |
| Analogue output to replicate the signal from the sensor                                |  |  |
| LOCAL RS232 serial port output                                                         |  |  |
| HOST RS485 serial port output                                                          |  |  |
| GSM module and antenna with capacity of 3 stored numbers                               |  |  |

● Standard      ● Optional      ● Not available

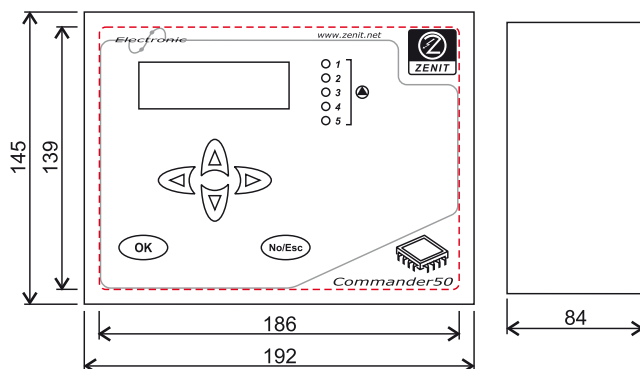
## Overall dimensions

### Commander20



All weights and dimensions are indicative only

### Commander50



# COMMANDER SW

## Plant management software

SOFTWARE COMMANDER is the special programme which, once installed on your PC, displays and manages the plant's situation in real time and allows you to modify the operating parameters.

To consult the station's operating status from a distance, one or more COMMANDER units can be managed, graphically and numerically, by COMMANDER SW.

This software can check the operating parameters and status of numerous units situated on the territory.

Communication between PC and COMMANDER units can be done by:

- local serial port cable RS232 (standard);
- RS485 interface cable (optional);
- GSM modem (optional in replacement of RS485).

