ZENIT®

water technology



PRODUCT CATALOGUE

submersible electric pumps
and water treatment systems

50Hz 2014

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submersible electric pumps and water treatment systems

50 Hz

2014

CE

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



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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 Bottan.
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 Bottan, 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 Bottan, 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

ZENIT
Water technology at your service

ZENIT
water technology

1958 1977 2000 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



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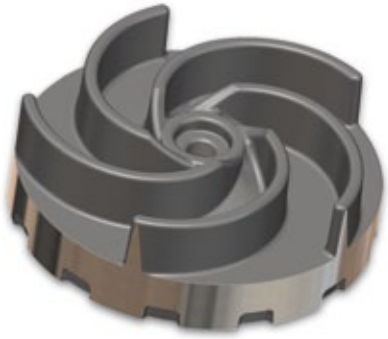
1.0

SUBMERSIBLE ELECTRIC PUMPS



Hydraulic families

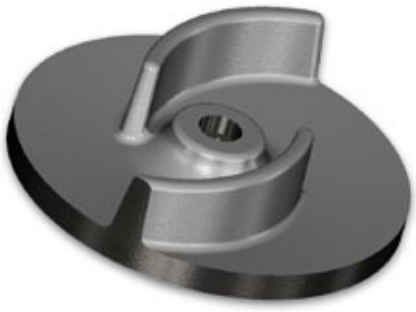
DG (DRAGA)



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.

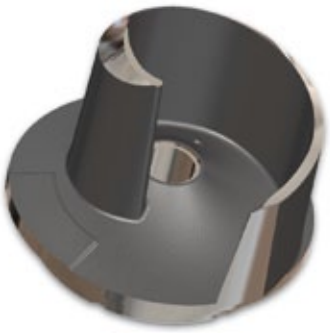
DR (DRENO)



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 waste-water 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.

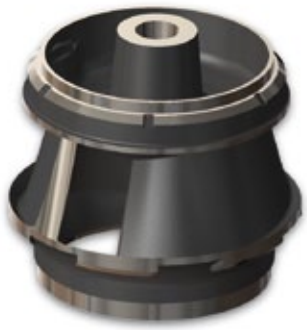
SM (SYSTEM M)



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®



Uniqa 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



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



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.

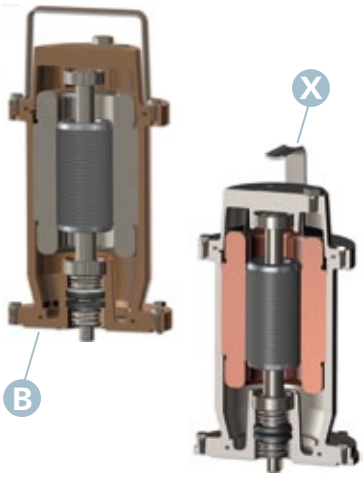
S



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: bronzo 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

(A) (B) (C)

① ② ③ 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

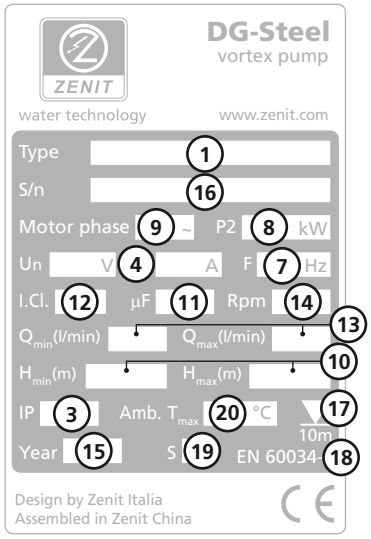
M = Single-phase
T = Three-phase

⑨ Power supply voltage frequency

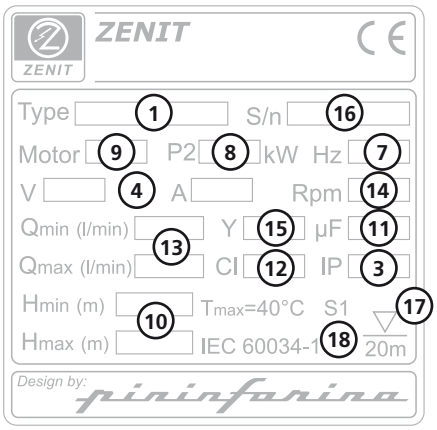
50 = 50Hz
60 = 60Hz

Product identification

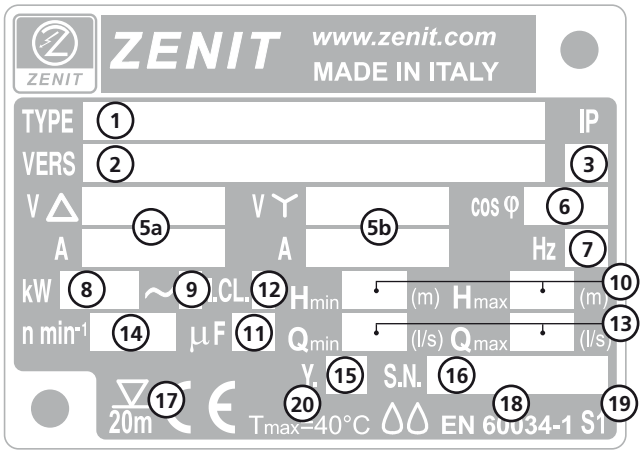
Steel series models



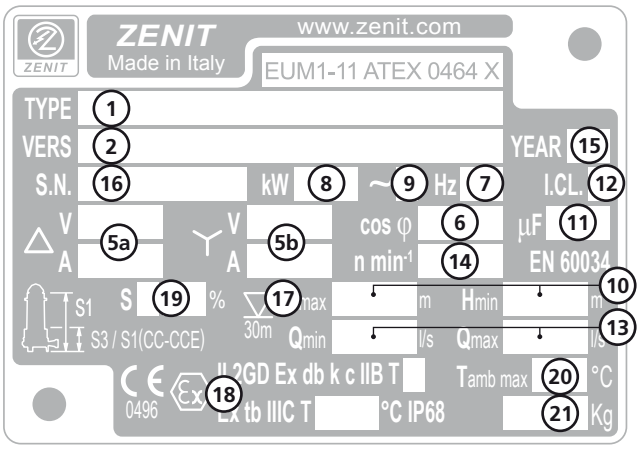
Blue and BluePRO series models



Standard models



ATEX certified models



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

NAE — No electric accessories installed (electrical cable only)
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.

T — Thermal protection
The pump is equipped with thermal protection (bi-metal) inside the stator.
Series O SINGLE-PHASE models do not have a capacitor and it is therefore necessary to use an external electrical cabinet for hookup.

TC — Thermal protection, capacitor
The pump is equipped with thermal protection (bi-metal) inside the stator and capacitor in the motor cover.

TCD — Thermal protection, capacitor, startup capacitor
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.

TCDT — Thermal protection, capacitor, startup capacitor, overload protection
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.

TCDGT — Thermal protection, capacitor, startup capacitor, overload protection, float switch
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.

TCG — Thermal protection, capacitor, float switch
The pump is equipped with thermal protection (bi-metal) inside the stator, capacitor in the motor cover and float switch.

TCST — Thermal protection, capacitor, electrical cabinet, overload protection
The pump is equipped with thermal protection (bi-metal) inside the stator, and an electrical cabinet housing the capacitor and overload protection.

TCSGT — Thermal protection, capacitor, float switch, electrical cabinet, overload protection
The pump is equipped with thermal protection (bi-metal) inside the stator, float switch, and an electrical cabinet housing the capacitor and overload protection.

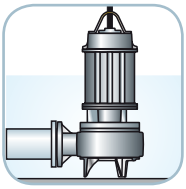
TCW — Thermal protection, capacitor,capacitor, vertical travel float switch
The pump is equipped with thermal protection devices (bi-metal) inside the stator, capacitor in the motor cover and vertical travel bell float switch.

TS — Thermal protection, sensor for detecting water in the mechanical seal oil sump
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.
This version is only available for THREE-PHASE pumps.

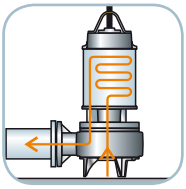
TR — Thermal protection, relay for motor protection
The pump is equipped with thermal protection (bi-metal) inside the stator and motor protection relay in the cover.

TRG — Thermal protection, relay for motor protection, float switch
The pump is equipped with thermal protection (bi-metal) inside the stator, float switch, and motor protection relay in the cover.

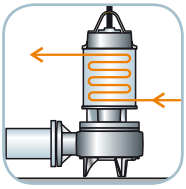
Cooling system



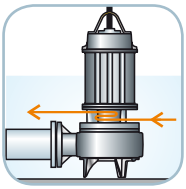
N
No cooling and/or seal flushing system
The pump is not equipped with any motor or mechanical seal cooling system and must thus operate submerged.



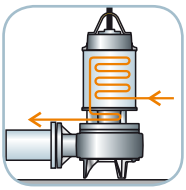
CC
Closed jacket cooling system
A part of the liquid handled by the pump, due to the special design of the impeller's rear section, is conducted to the gap between case and jacket, thus cooling the motor. Once the gap is full, the liquid is taken into the pump body via a suction duct and then expelled. 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



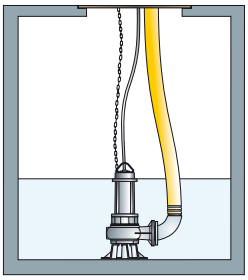
SICAL
1 mechanical seal in silicon carbide and 1 mechanical seal in alumina graphite (NBR)



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

Installations

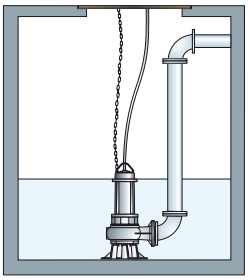
A



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

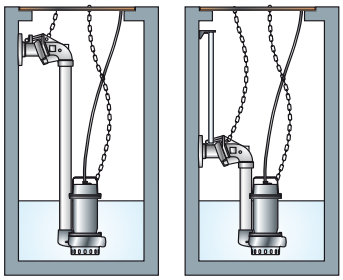
B



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.

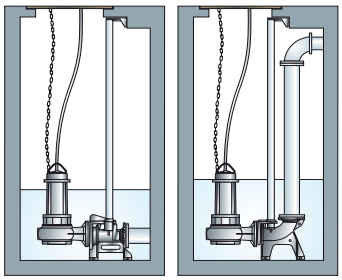
C



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.

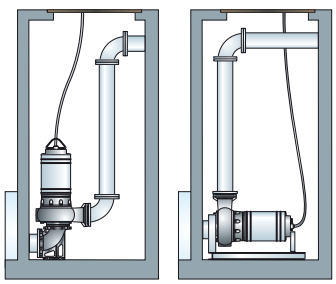
D



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 ; EN61241-0 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

		③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
①	②	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							

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

1.1 DG (DRAGA)

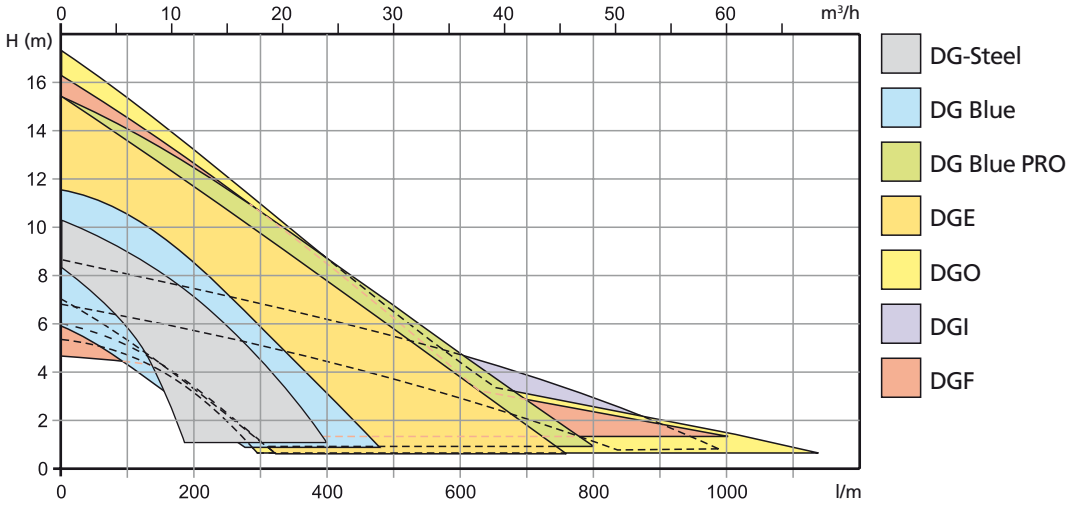
pumps with vortex impeller

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.

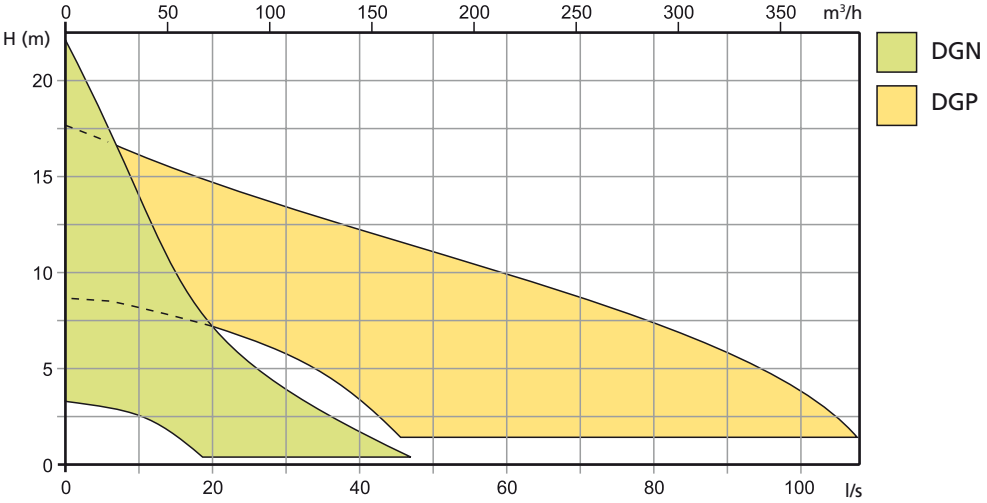




1.1 ÷ 16.4 kW

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

page 22

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.

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



All product images are indicative only

Stainless steel pumps with vortex impeller

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

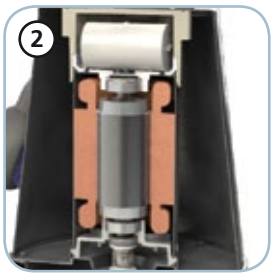
Maximum operating temperature	40°C (90°C max 3 min)
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	10 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	<70 dB
max starts per hour	30





Lifting handle

Chrome-nickel steel AISI 304.



Cooling Systemv

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



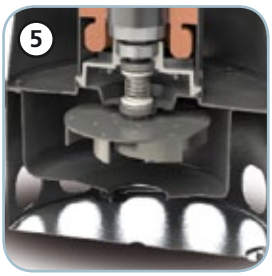
Mechanical seal

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

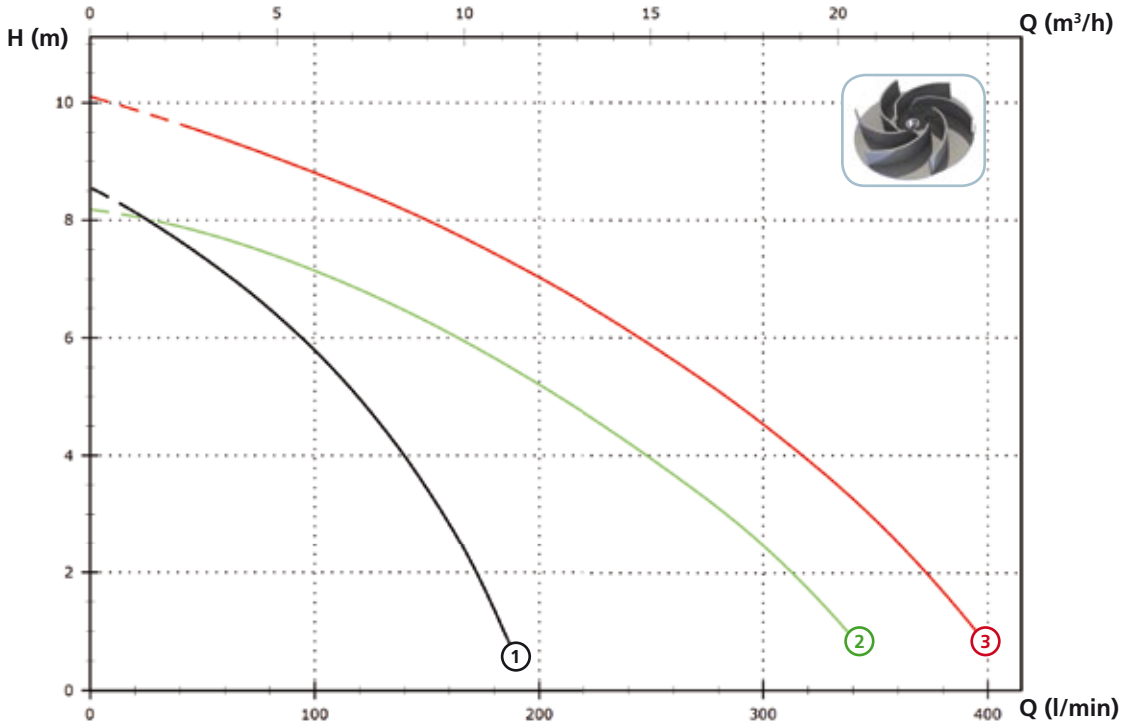
Vertically sliding level regulator, recommended for installation in small wells.

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

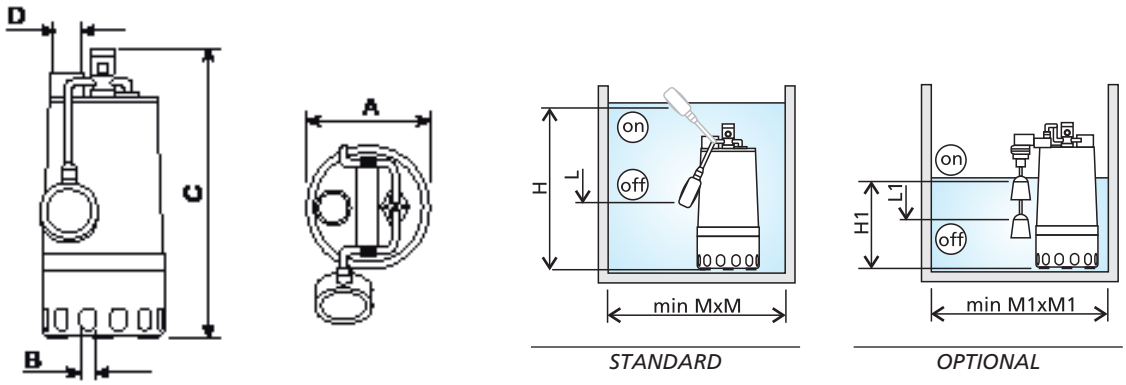
DG-STEEL

Versions available

(Key to versions on page 16)

	Electrical variants													Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TCW	TS	TR	TRG	N	CC CCE	FT	CGFT	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



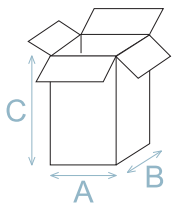
	Ø A	B	C	D	H	L	M	H1	L1	M1	kg
DG-Steel 37/2 M50	170	25	350	G 1¼"	435	195	350	205	115	300	6.6
DG-Steel 55/2 M50	210	40	405	G 1½"	490	250	400	260	170	350	8.1
DG-Steel 75/2 M(T)50	210	40	405	G 1½"	490	250	400	260	170	500	8.9

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

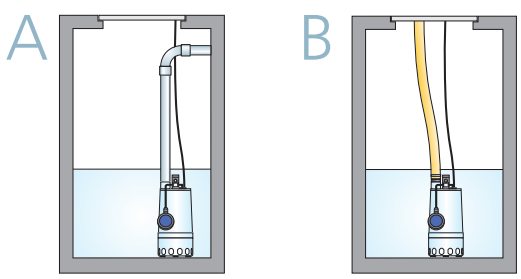
All weights and dimensions are indicative only

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



All product images are indicative only

Set-back vortex impeller

DESIGN BY pininfarina

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

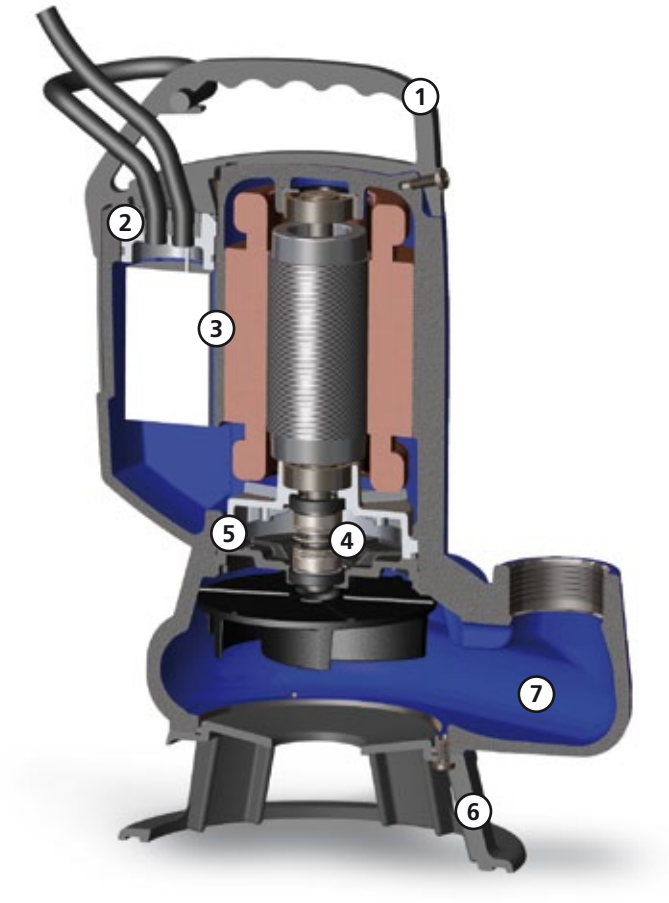
Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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





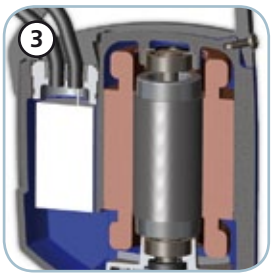
Lifting handle

Ergonomic technopolymer lifting and carrying handle. Clip floatswitch adjustment.



Cable gland System

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



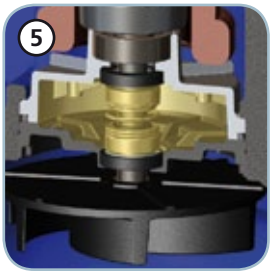
Motor and electrical accessories

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

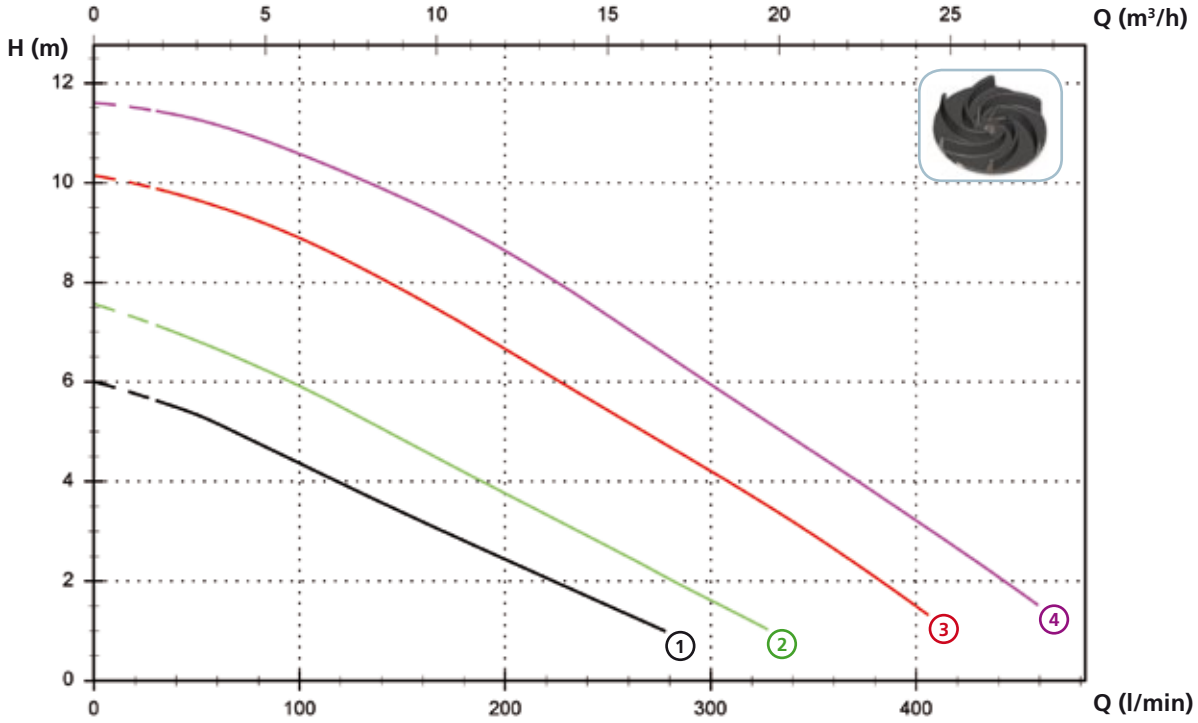
Full free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

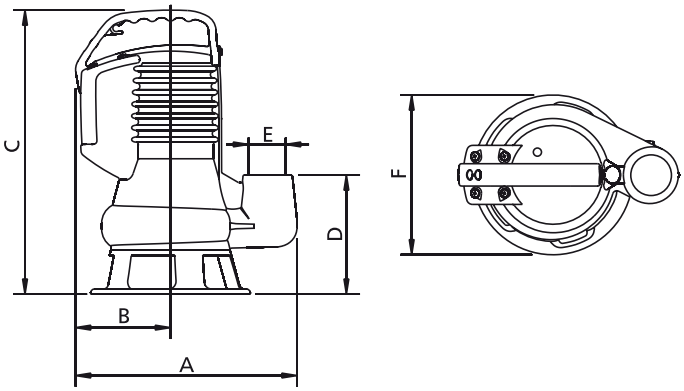
DG Blue

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

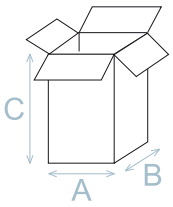


	A	B	C	D	E	F	kg
DG Blue 40/2/G40V A1BM/50	265	115	335	140	G 1½"	190	12.5
DG Blue 50/2/G40V A1BM/50	265	115	335	140	G 1½"	190	13
DG Blue 75/2/G40V A1BM/50	265	115	365	140	G 1½"	190	15
DG Blue 100/2/G40V A1BM/50	265	115	365	140	G 1½"	190	15.5

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

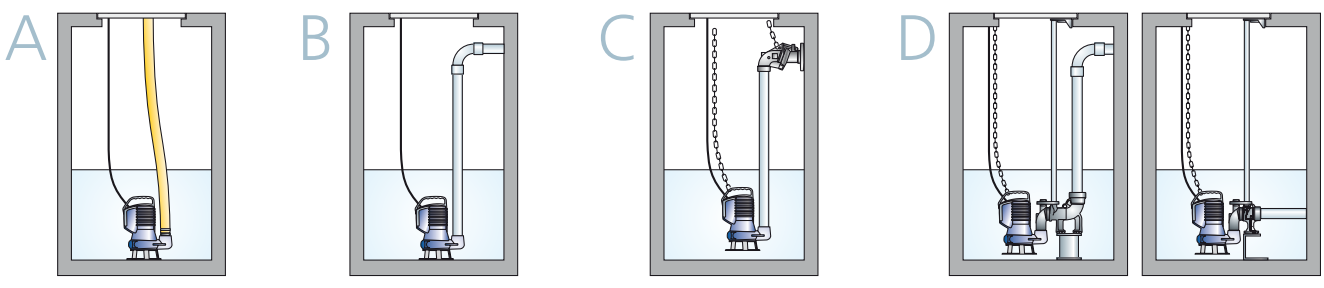


Dimensions in mm *All weights and dimensions are indicative only*

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



All product images are indicative only

DESIGN BY pininfarina

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

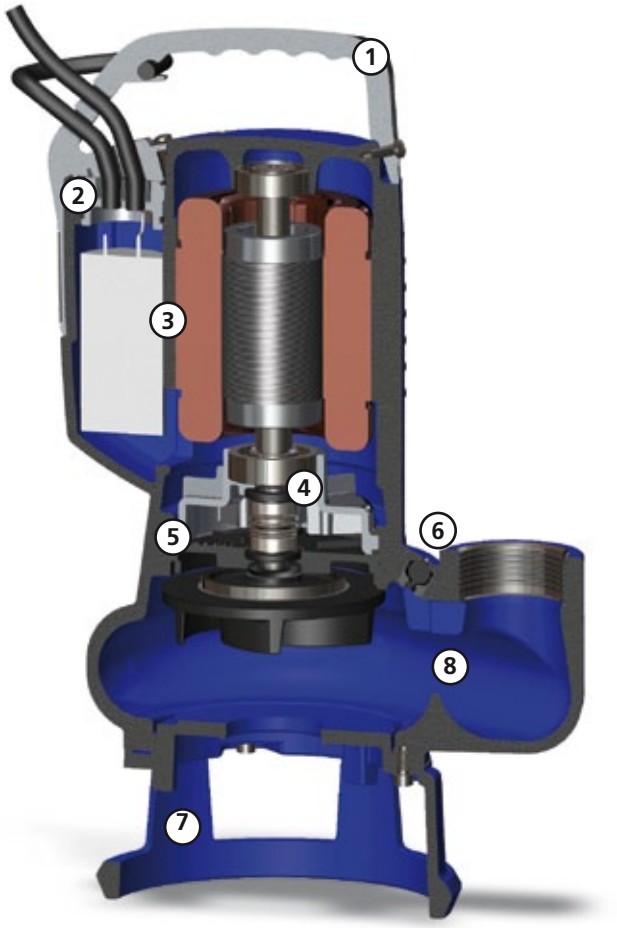
Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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





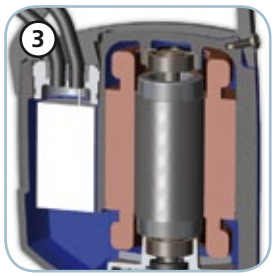
Lifting handle

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).



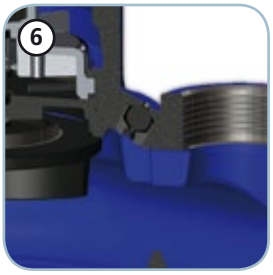
Mechanical seals

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



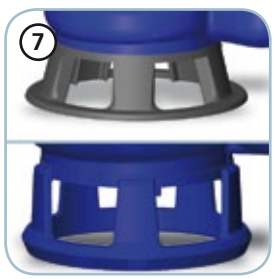
Oil sump

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



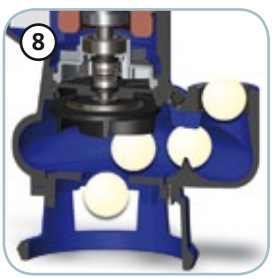
Breather

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

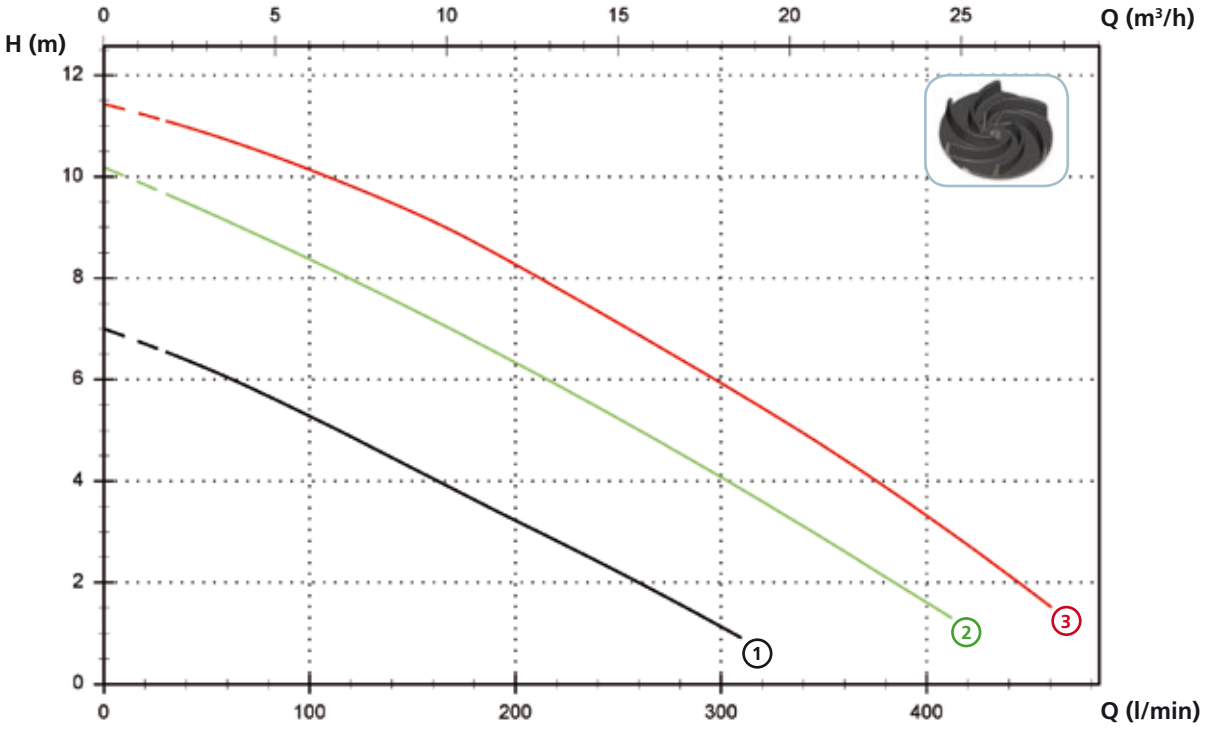
Full free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

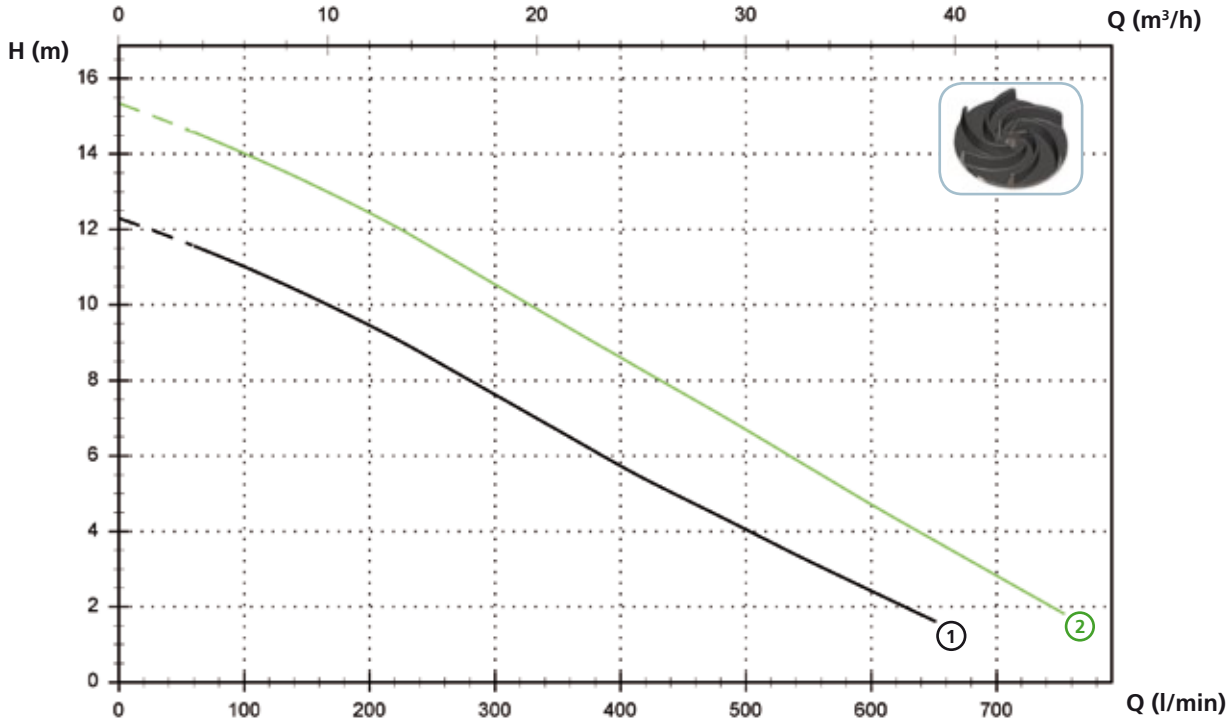
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1 DG BluePRO 50/2/G40V A1BT/50	400	3	-	0.37	1.15	2900	Dir	G 1½"	40 mm
2 DG BluePRO 75/2/G40V A1BT/50	400	3	-	0.55	1.6	2900	Dir	G 1½"	40 mm
3 DG BluePRO 100/2/G40V A1BT/50	400	3	-	0.74	2.15	2900	Dir	G 1½"	40 mm

DG BluePRO

Models with vertical GAS 2" threaded discharge - 2 poles

Performances

	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 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

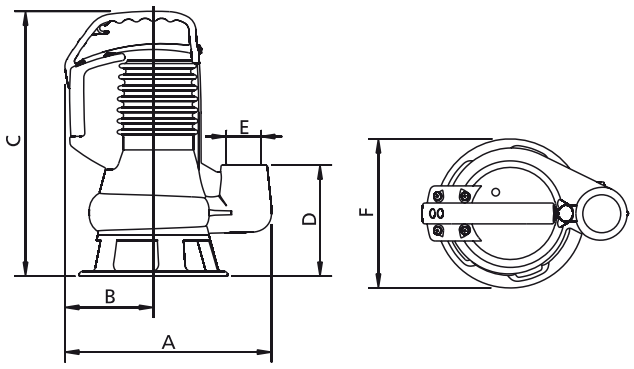
DG BluePRO

Versions available

(Key to versions on page 16)

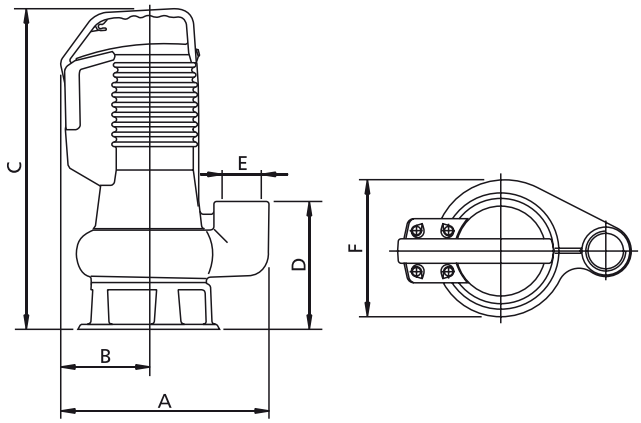
	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	2SIC	SICM	SICAL	2SICAL
DG BluePRO 50/2/G40V A1BM/50			●				●						●				●			
DG BluePRO 75/2/G40V A1BM/50			●				●						●				●			
DG BluePRO 100/2/G40V A1BM/50			●				●						●				●			
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*



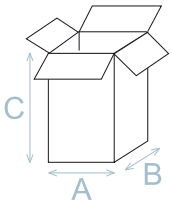
	A	B	C	D	E	F	kg
DG BluePRO 150/2/G50V A1CM(T)/50	295	125	465	195	G 2"	200	23
DG BluePRO 200/2/G50V A1CM(T)/50	295	125	465	195	G 2"	200	24

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



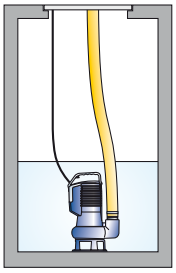
Dimensions in mm *All weights and dimensions are indicative only*

No. pieces per pallet

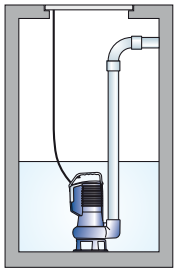
For DG BluePRO 50-75-100 models each pallet (EUR 1000x1200 mm) is able to take 75 pieces.
For DG BluePRO 150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

Installations available

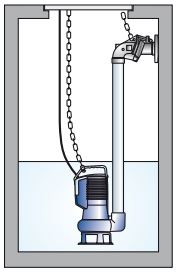
A



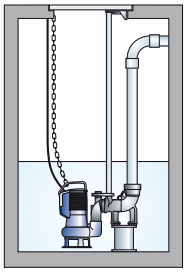
B

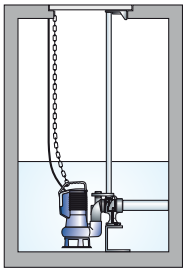


C



D





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 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.

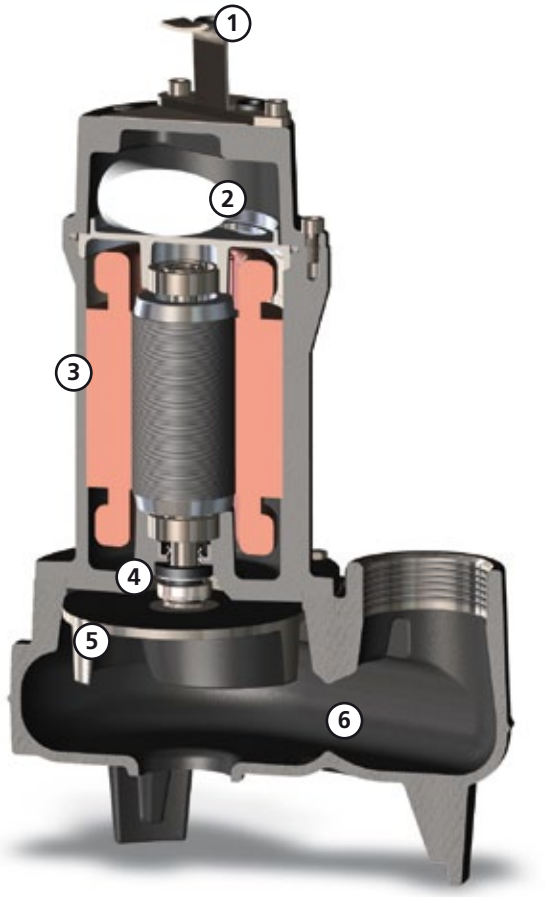
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
Max starts per hour	30

DGE





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.



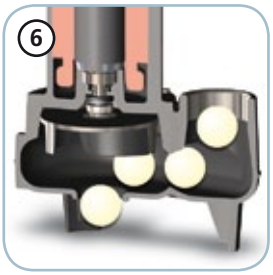
Mechanical seals

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



Impeller

Cast iron vortex impeller.



Free passage

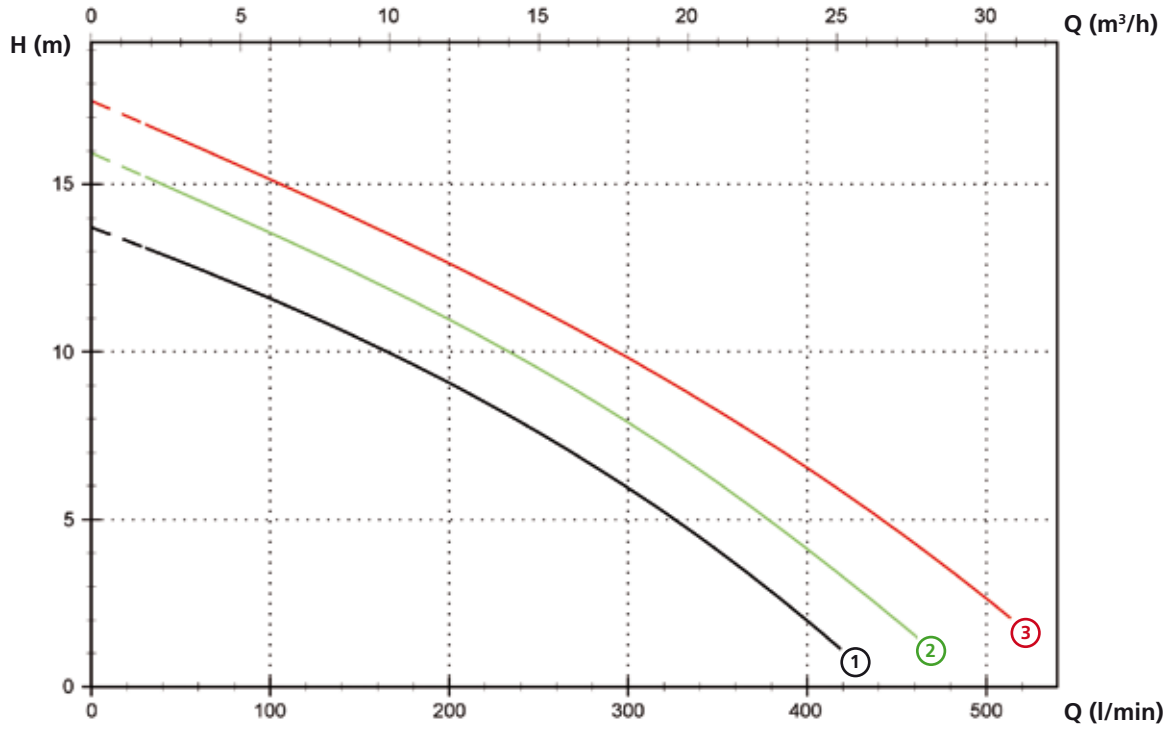
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

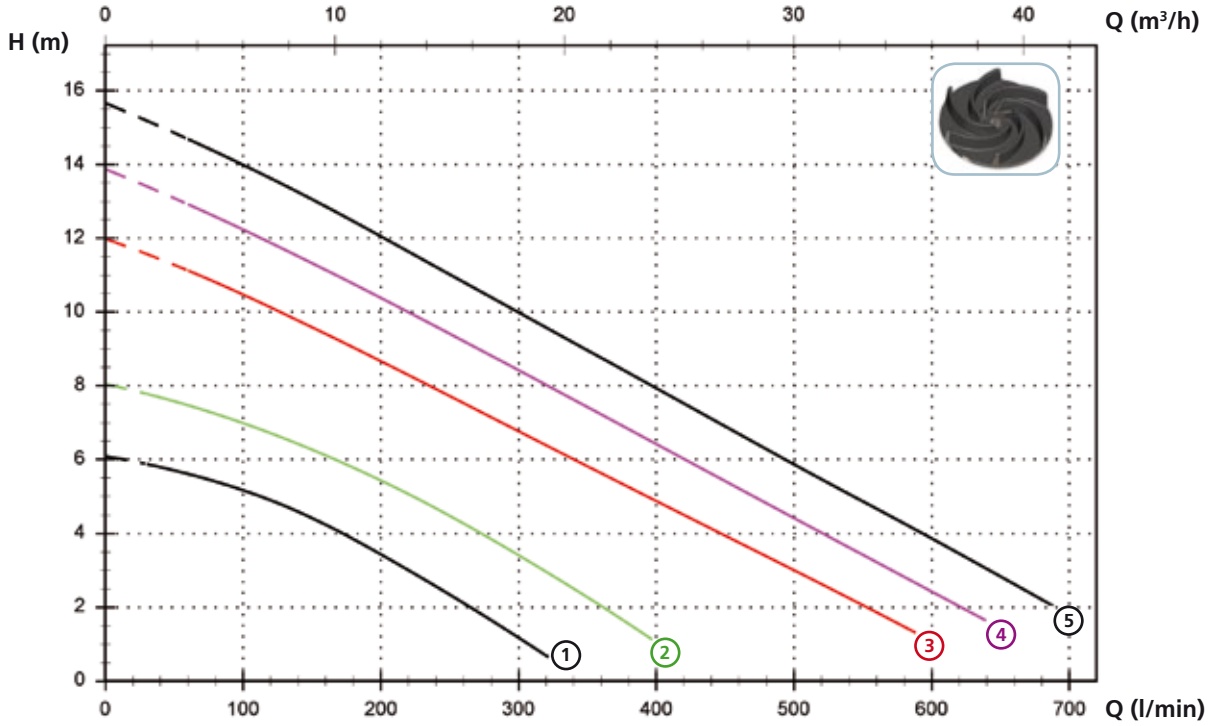
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGE 100/2/G40V A0CM/50	230	1	-	0.88	6.0	2900	Dir	G 1½"	40 mm
2	DGE 150/2/G40V A0CM/50	230	1	-	1.1	7.6	2900	Dir	G 1½"	40 mm
3	DGE 200/2/G40V A0CM/50	230	1	-	1.5	8.9	2900	Dir	G 1½"	40 mm

		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

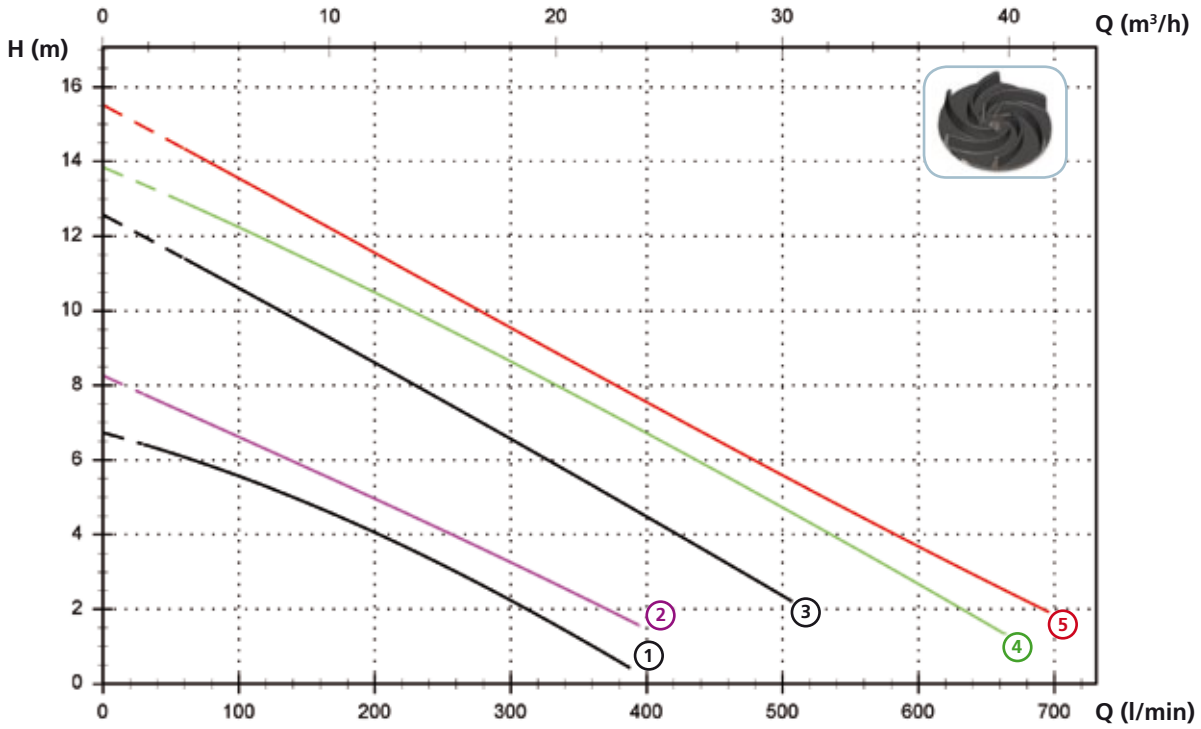
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGE 50/2/G50V B0BT/50	400	3	-	0.37	1.1	2900	Dir	G 2"	40 mm
2	DGE 75/2/G50V B0BT/50	400	3	-	0.55	1.3	2900	Dir	G 2"	40 mm
3	DGE 100/2/G50V B0CT/50	400	3	-	0.88	2.2	2900	Dir	G 2"	50 mm
4	DGE 150/2/G50V B0CT/50	400	3	-	1.1	2.6	2900	Dir	G 2"	50 mm
5	DGE 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
	m³/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

DGE

Versions available

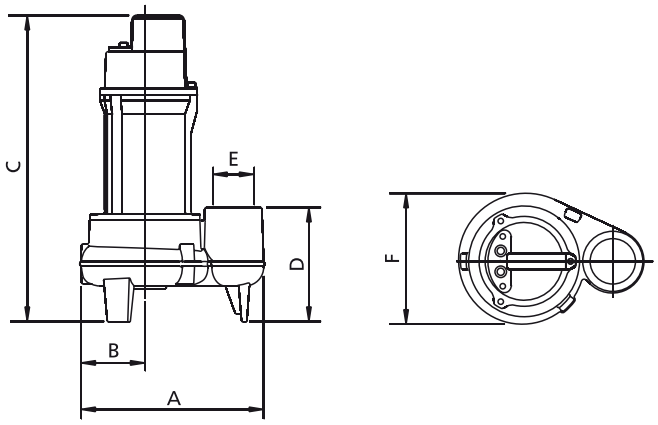
(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

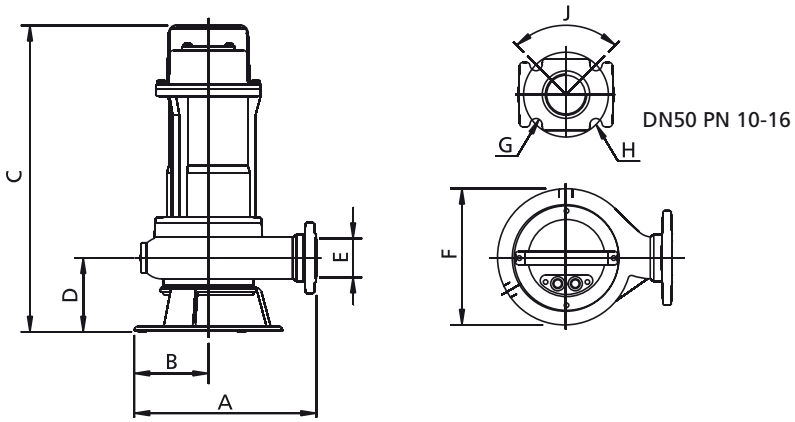
Models with vertical discharge



	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

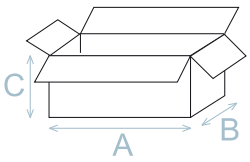


	A	B	C	D	E	F	G	H	J	kg
DGE 50/2/G50H A1BM(T)/50	220	80	365	65	G 2"-DN50	160	18	125	90°	12
DGE 75/2/G50H A1BM(T)/50	220	80	365	65	G 2"-DN50	160	18	125	90°	14
DGE 100/2/G50H A0CM(T)/50	270	110	455	110	G 2"-DN50	205	18	125	90°	19
DGE 150/2/G50H A0CM(T)/50	270	110	455	110	G 2"-DN50	205	18	125	90°	20
DGE 200/2/G50H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



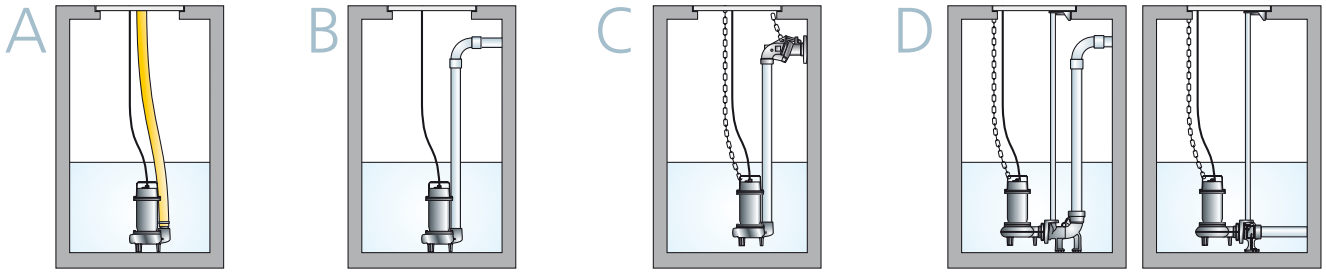
Dimensions in mm

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



All product images are indicative only

Set-back vortex impeller

General characteristics

Set-back vortex impeller	
motor power	0,37 ÷ 1,5 kW
poles	2 / 4
discharge	GAS 1½"÷ 2½" vertical GAS 2"- DN50 horizontal 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.

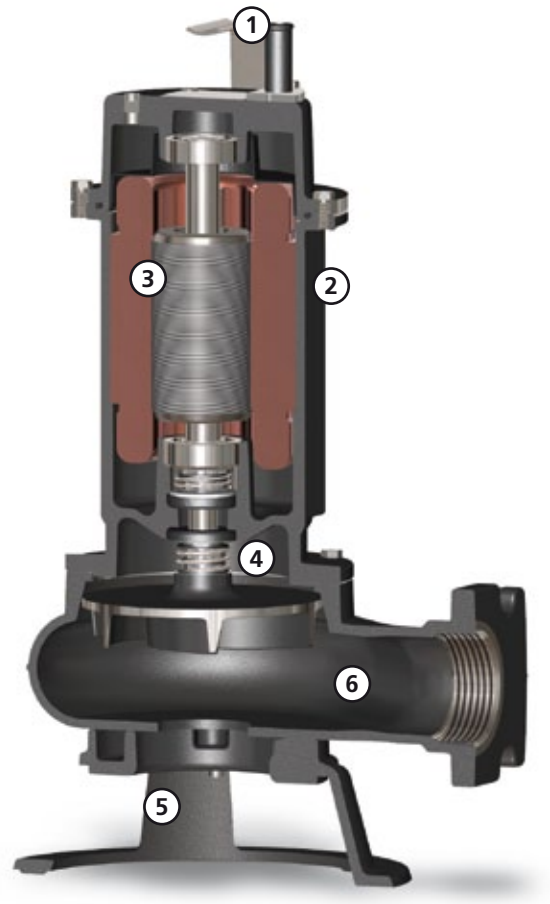
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
Max starts per hour	30

DGO





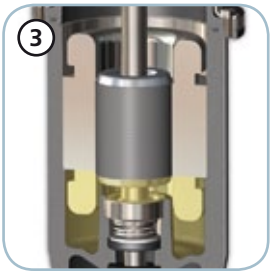
Handle

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

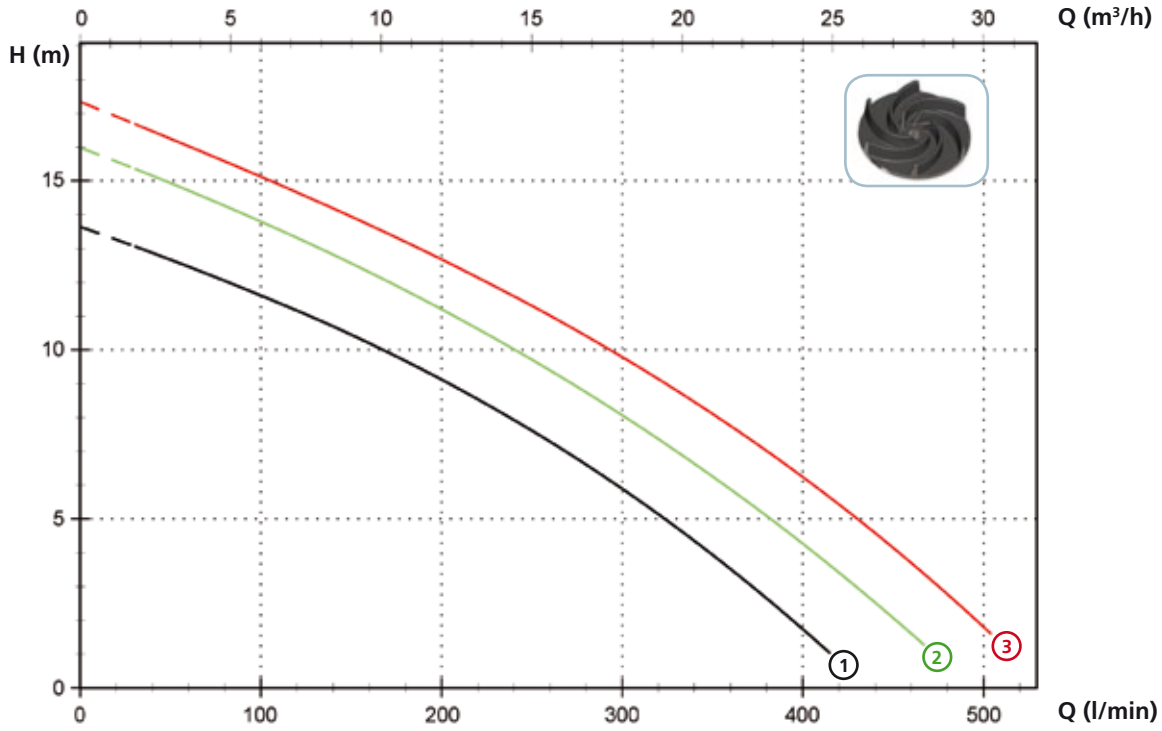
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

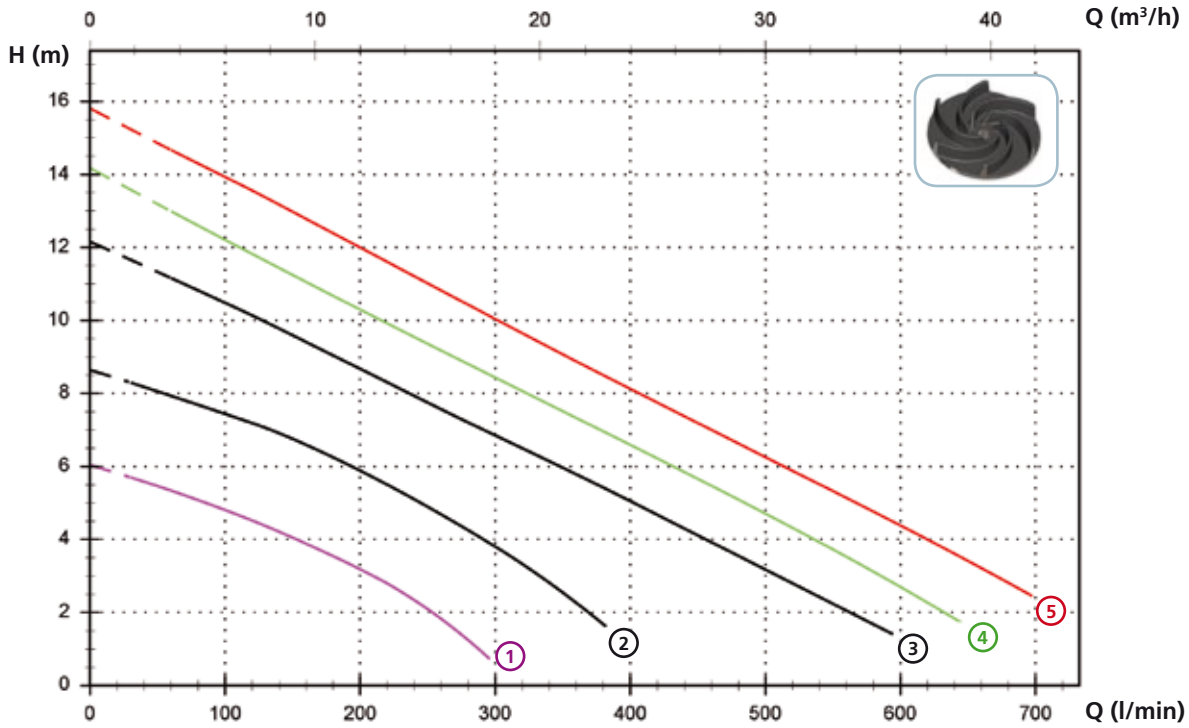
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGO 100/2/G40V B1CM/50	230	1	-	0.88	6.4	2900	Dir	G 1½"	40 mm
2	DGO 150/2/G40V B1CM/50	230	1	-	1.1	8.3	2900	Dir	G 1½"	40 mm
3	DGO 200/2/G40V B1CM/50	230	1	-	1.5	9.6	2900	Dir	G 1½"	40 mm

		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
	m³/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

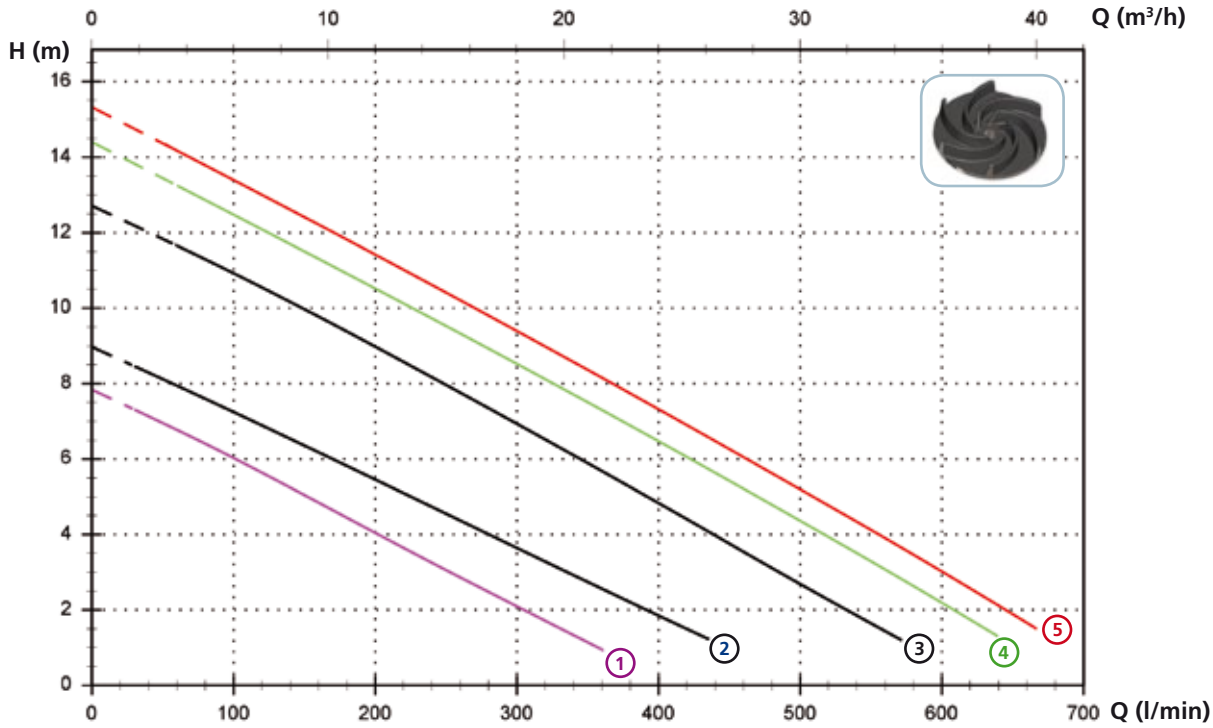
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGO 50/2/G50V B0CT/50	400	3	-	0.37	1.1	2900	Dir	G 2"	40 mm
(2) DGO 75/2/G50V B0CT/50	400	3	-	0.55	1.4	2900	Dir	G 2"	40 mm
(3) DGO 100/2/G50V B0CT/50	400	3	-	0.88	2.3	2900	Dir	G 2"	50 mm
(4) DGO 150/2/G50V B0CT/50	400	3	-	1.1	2.7	2900	Dir	G 2"	50 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
	m³/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

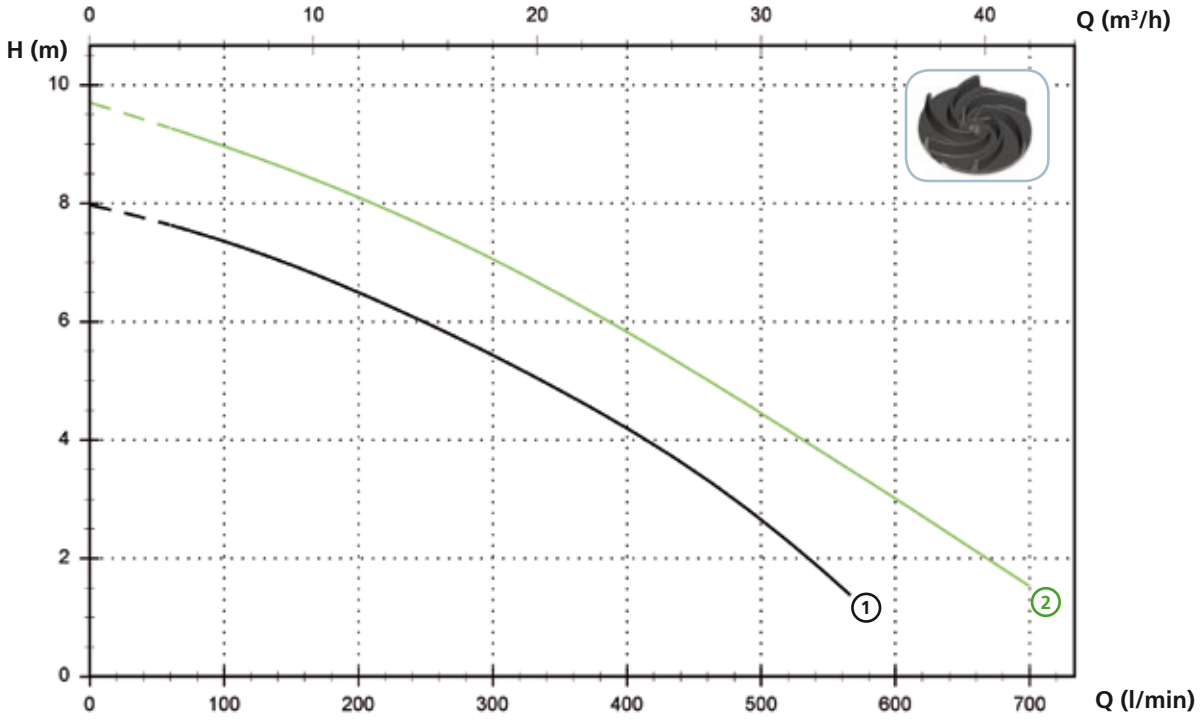
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGO 50/2/G50H A1CT/50	400	3	-	0.37	1.1	2900	Dir	G 2"- DN50 PN10-16	40 mm
2	DGO 75/2/G50H A1CT/50	400	3	-	0.55	1.4	2900	Dir	G 2"- DN50 PN10-16	40 mm
3	DGO 100/2/G50H A0CT/50	400	3	-	0.88	2.3	2900	Dir	G 2"- DN50 PN10-16	50 mm
4	DGO 150/2/G50H A0CT/50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

DGO

Models with vertical GAS 2½" 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 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

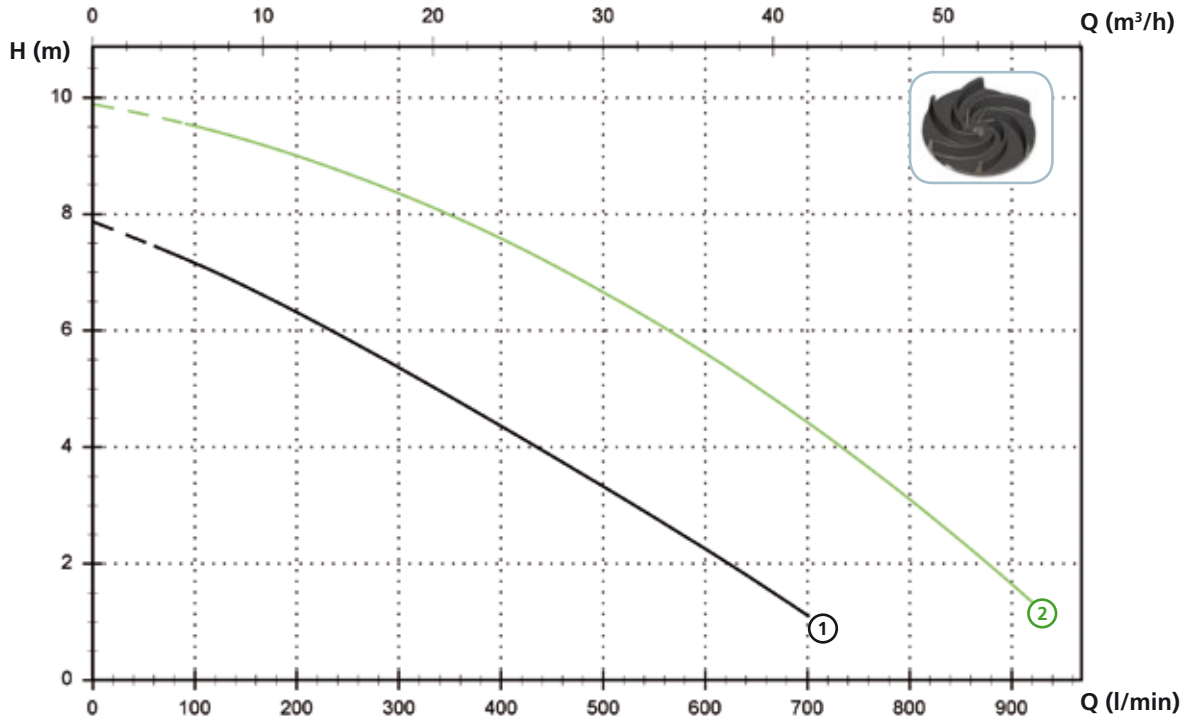
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGO 150/2/G65V A1CT/50	400	3	-	1.1	2.7	2900	Dir	G 2½"	65 mm
② DGO 200/2/G65V A1CT/50	400	3	-	1.5	3.6	2900	Dir	G 2½"	65 mm

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
	m³/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

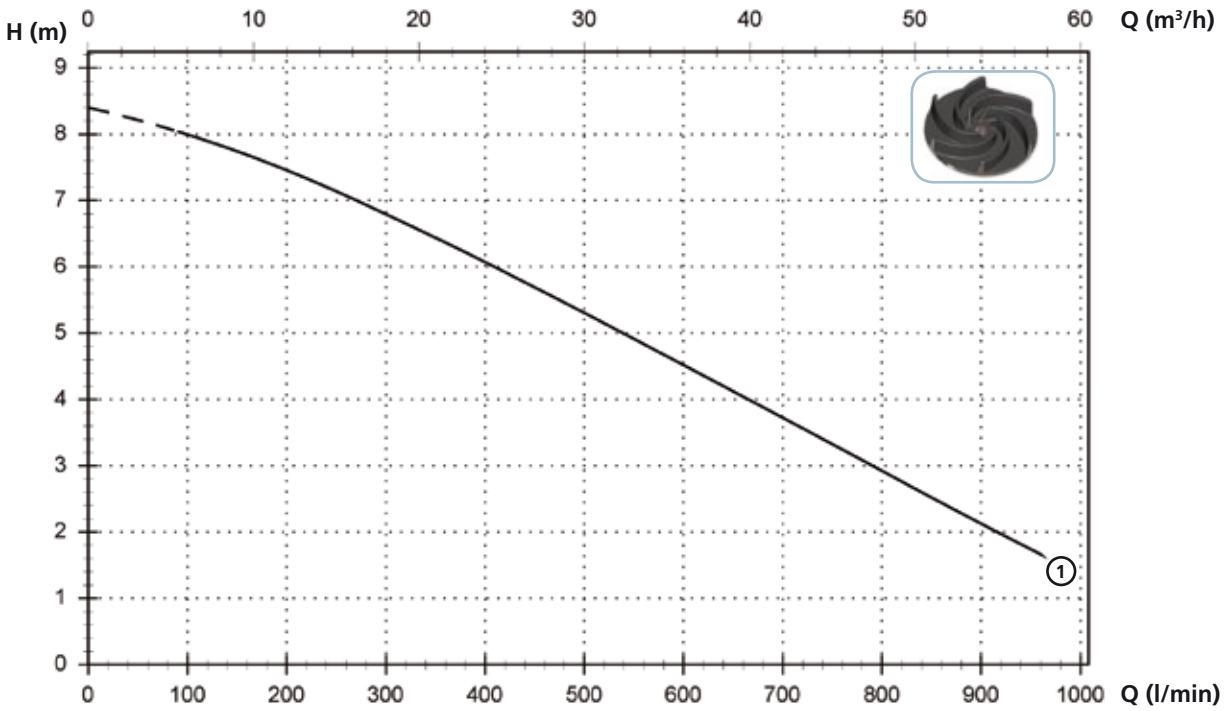
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
①	DGO 150/2/65 A1CT/50	400	3	-	1.1	2.7	2900	Dir	DN65 PN10-16	65 mm
②	DGO 200/2/65 A1CT/50	400	3	-	1.5	3.6	2900	Dir	DN65 PN10-16	65 mm

DGO

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^3/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

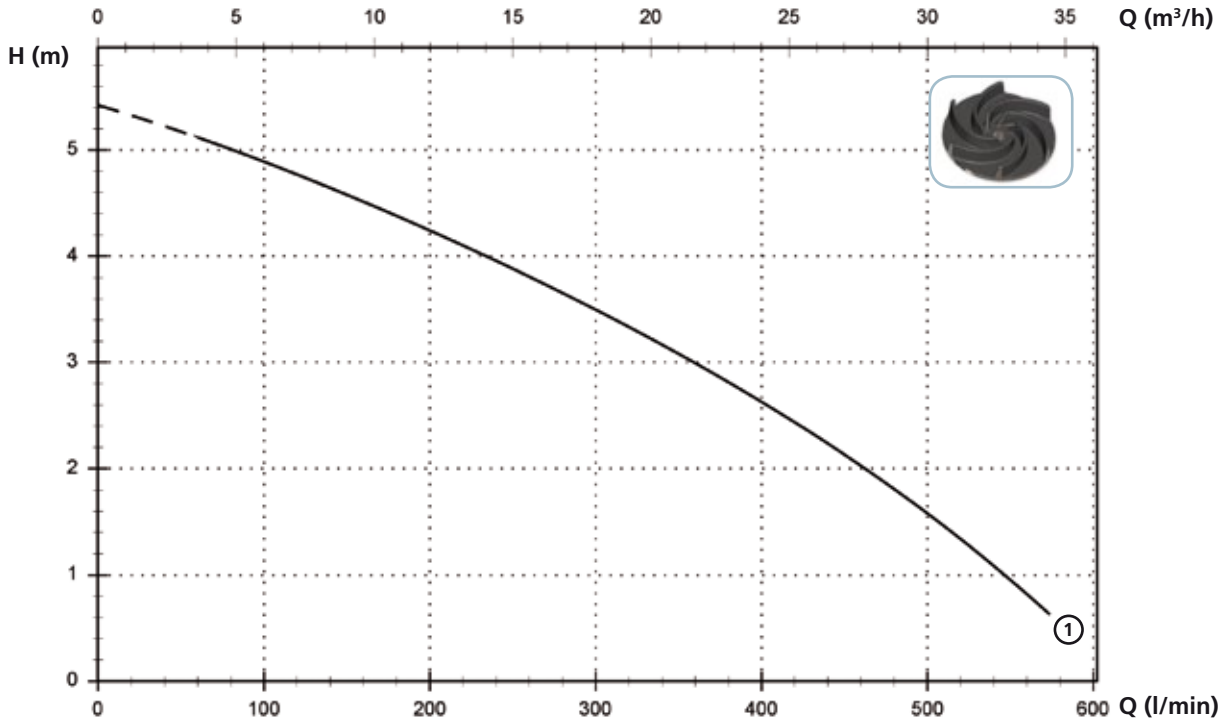
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGO 200/2/80 A1CT/50	400	3	-	1.7	3.9	2900	Dir	DN80 PN10-16	80 mm

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^3/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

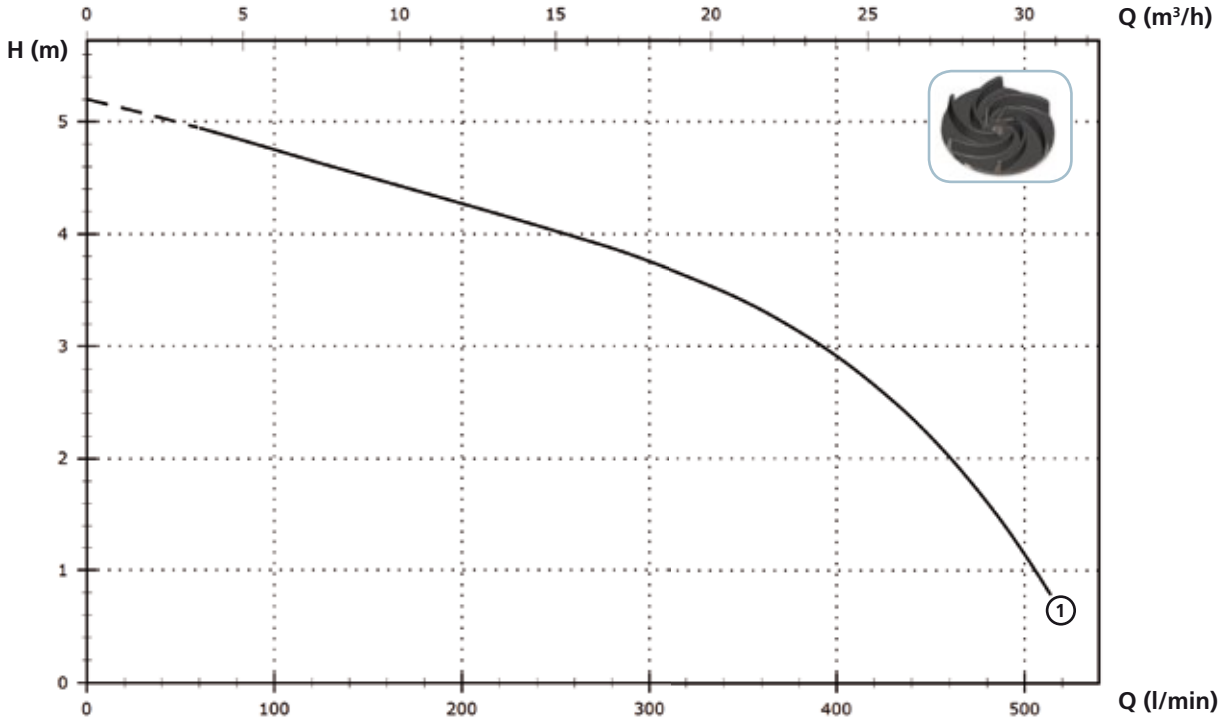
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGO 100/4/G50V B0CT/50	400	3	-	0.7	1.6	1450	Dir	G 2"	45 mm

DGO

Models with horizontal GAS 2" threaded - DN50 PN10 flanged 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
	m³/h	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

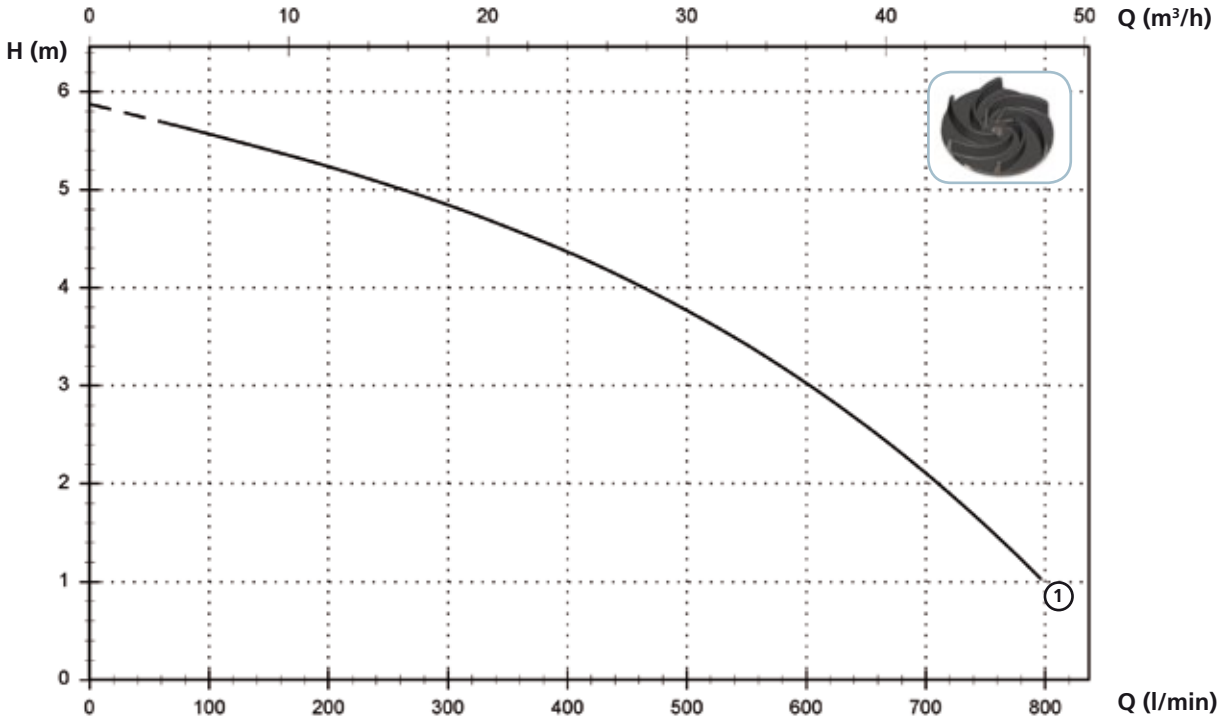
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGO 100/4/G50H A0CT/50	400	3	-	0.7	2.2	1450	Dir	G 2" DN50 PN10	45 mm

DGO

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

Performances

	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 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

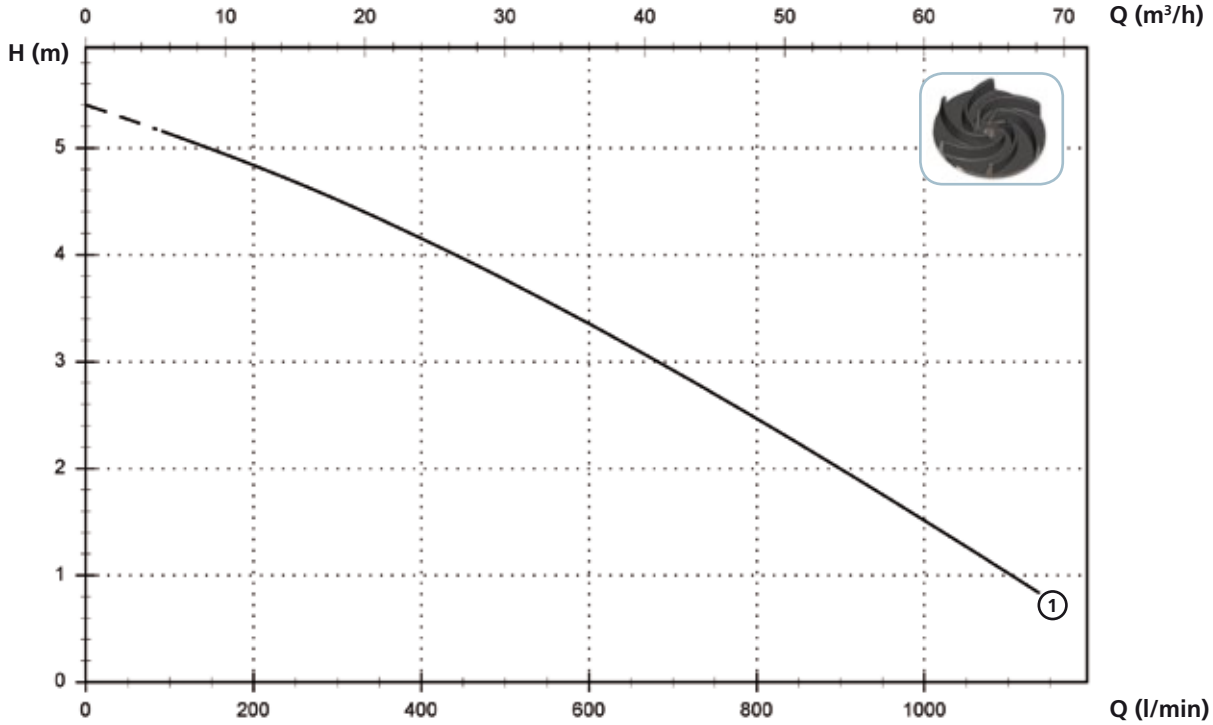
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGO 150/4/65 A0CT/50	400	3	-	0.9	2.8	1450	Dir	DN65 PN10-16	45 mm

DGO

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

Performances

	l/s	0	2	4	6	8	10	12	14	16	18
	l/min	0	120	240	360	480	600	720	840	960	1080
	m³/h	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

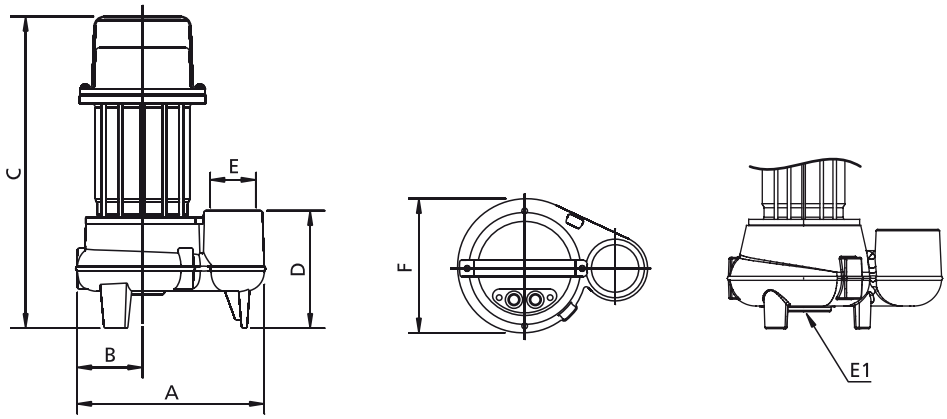
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

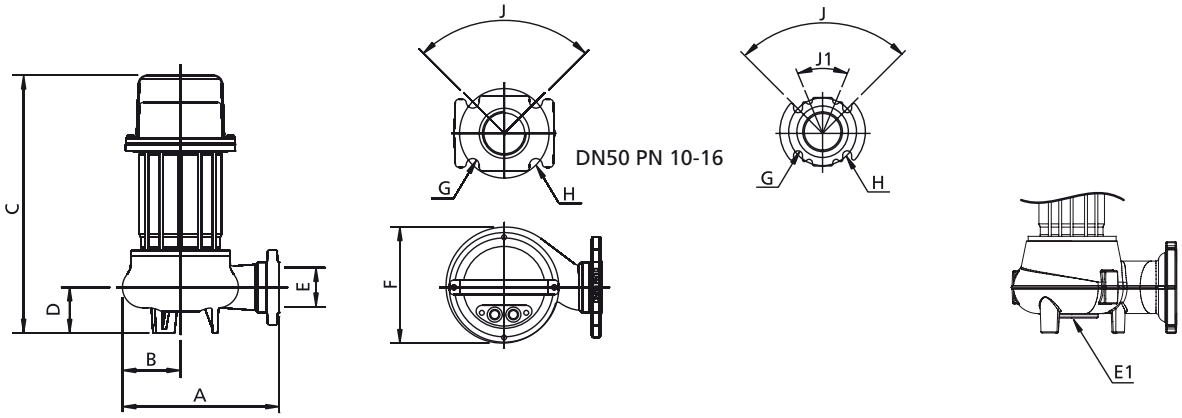
Models with vertical discharge



	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



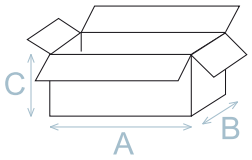
	A	B	C	D	E	E1	F	G	H	J	J1	kg
DGO 50/2/G50H A1CM(T)/50	220	80	360	65	G 2" - DN50	-	160	18	125	90°	-	16.5
DGO 75/2/G50H A1CM(T)/50	220	80	360	65	G 2" - DN50	-	160	18	125	90°	-	16.5
DGO 100/2/G50H A0CM(T)/50	270	110	455	110	G 2" - DN50	-	205	18	125	90°	-	19.5
DGO 150/2/G50H A0CM(T)/50	270	110	455	110	G 2" - 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

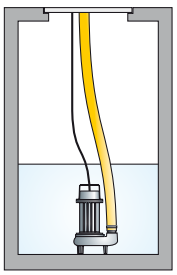
All weights and dimensions are indicative only

No. pieces per pallet

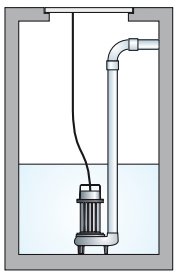
For DGO 50-75 models each pallet (EUR 1000x1200 mm) is able to take 48 pieces.
For DGO 100-150-200 models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

Installations available

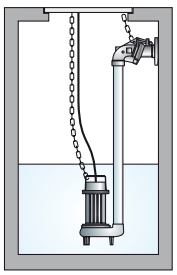
A



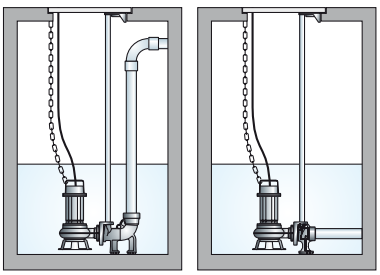
B

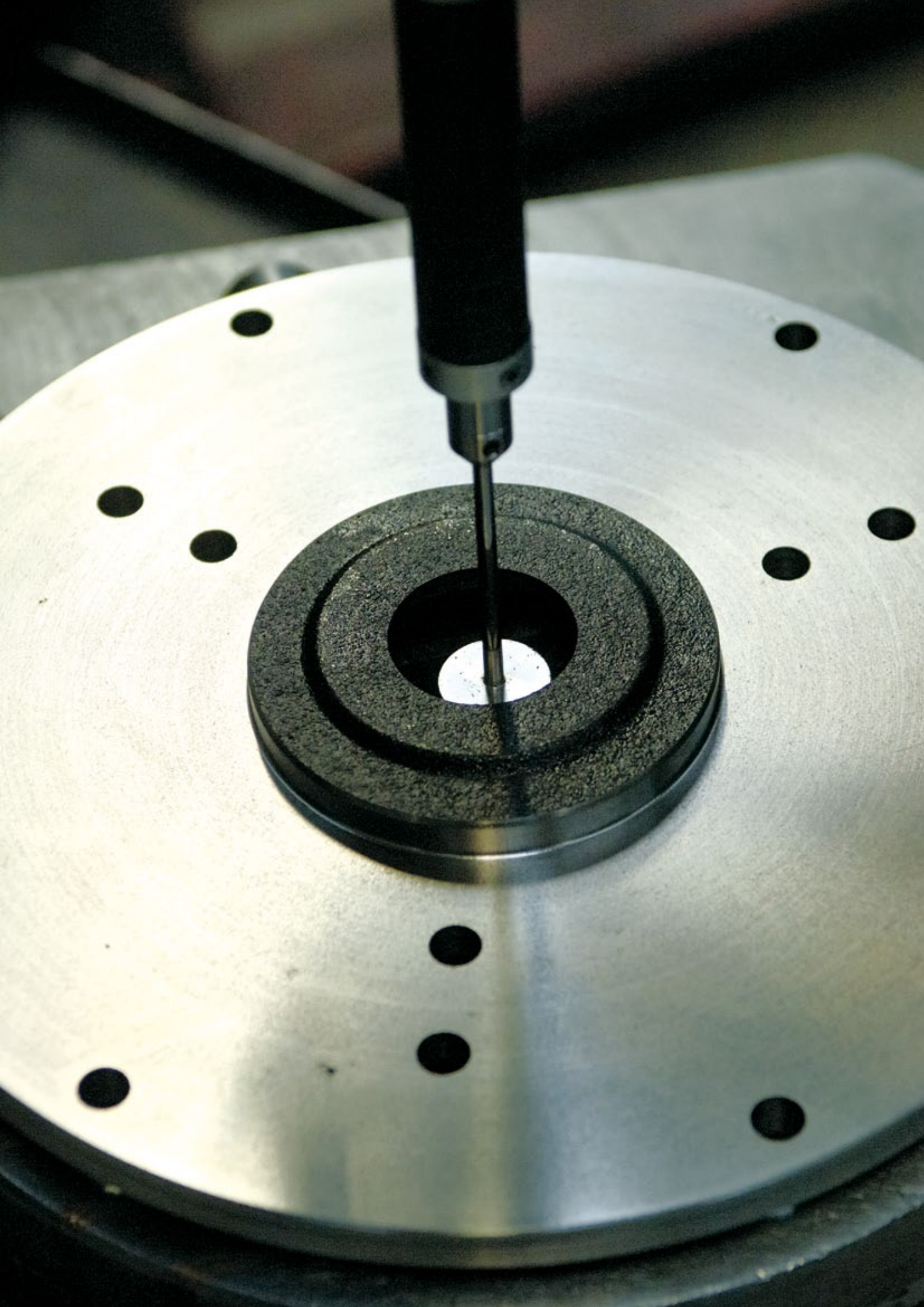


C



D





DGI



All product images are indicative only

Set-back vortex impeller

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.

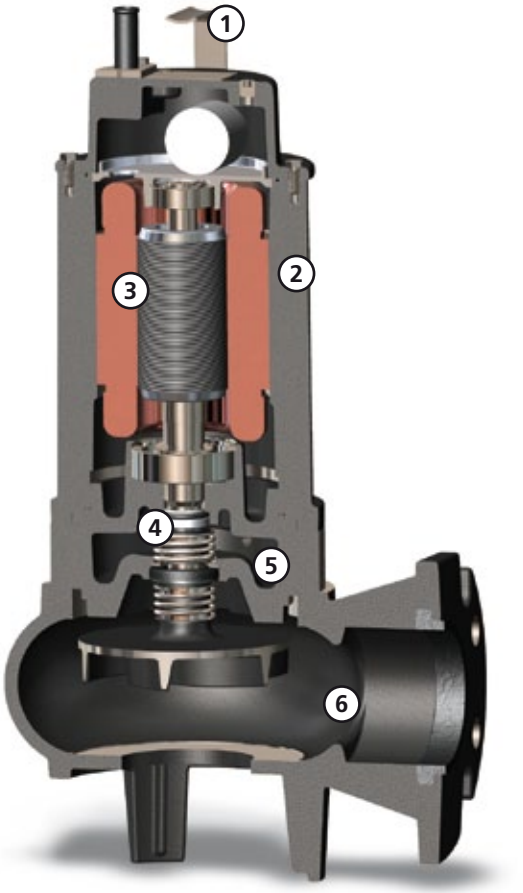
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DGI





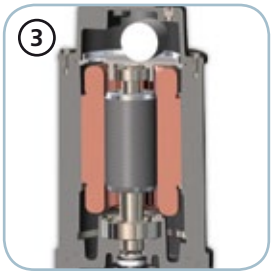
Handle

AISI 304 stainless steel lifting and carrying handle.



Structure

Constructed in GJL-250 cast iron.



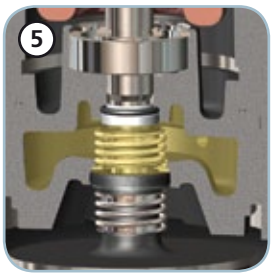
Motor

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



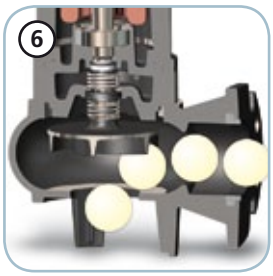
Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Free passage

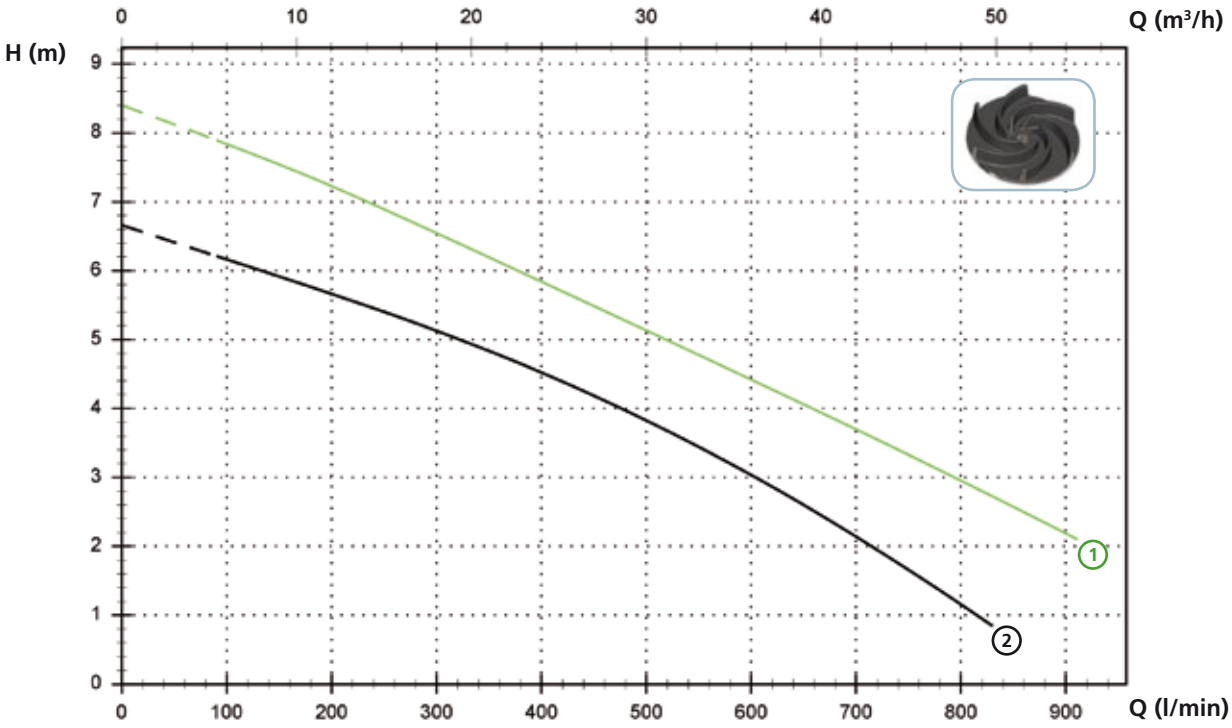
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

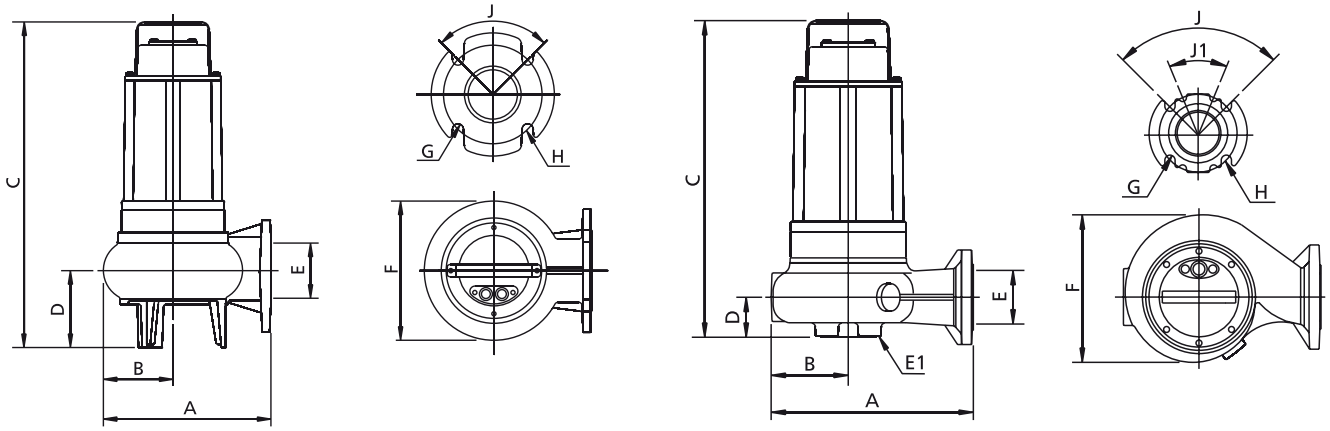
DGI

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

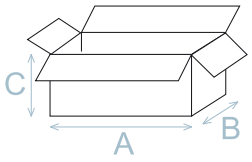
Dimensions in mm

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

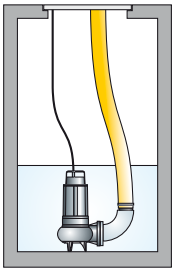


Dimensions in mm

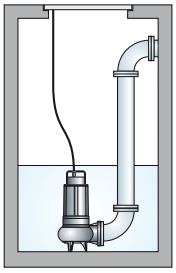
All weights and dimensions are indicative only

Installations available

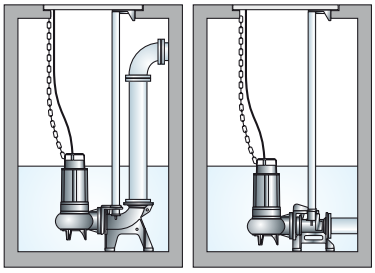
A



B



D



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 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.

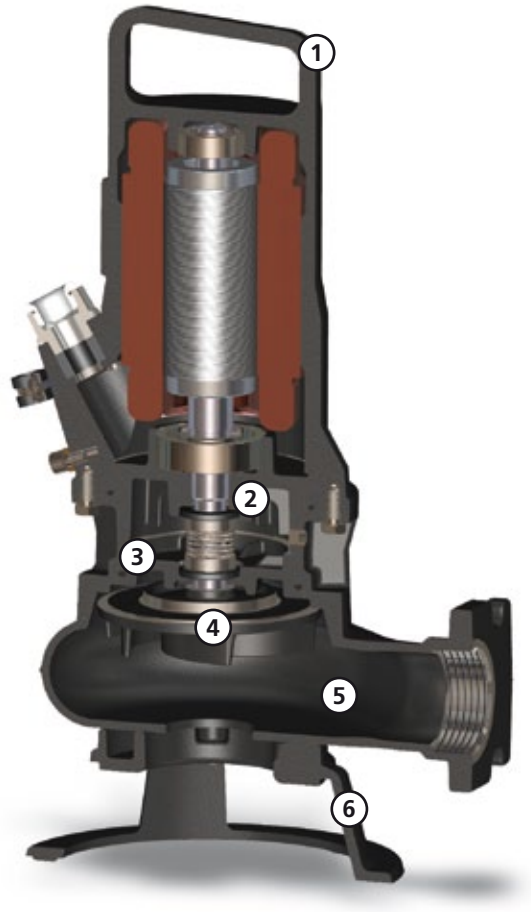
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DGF



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.



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.



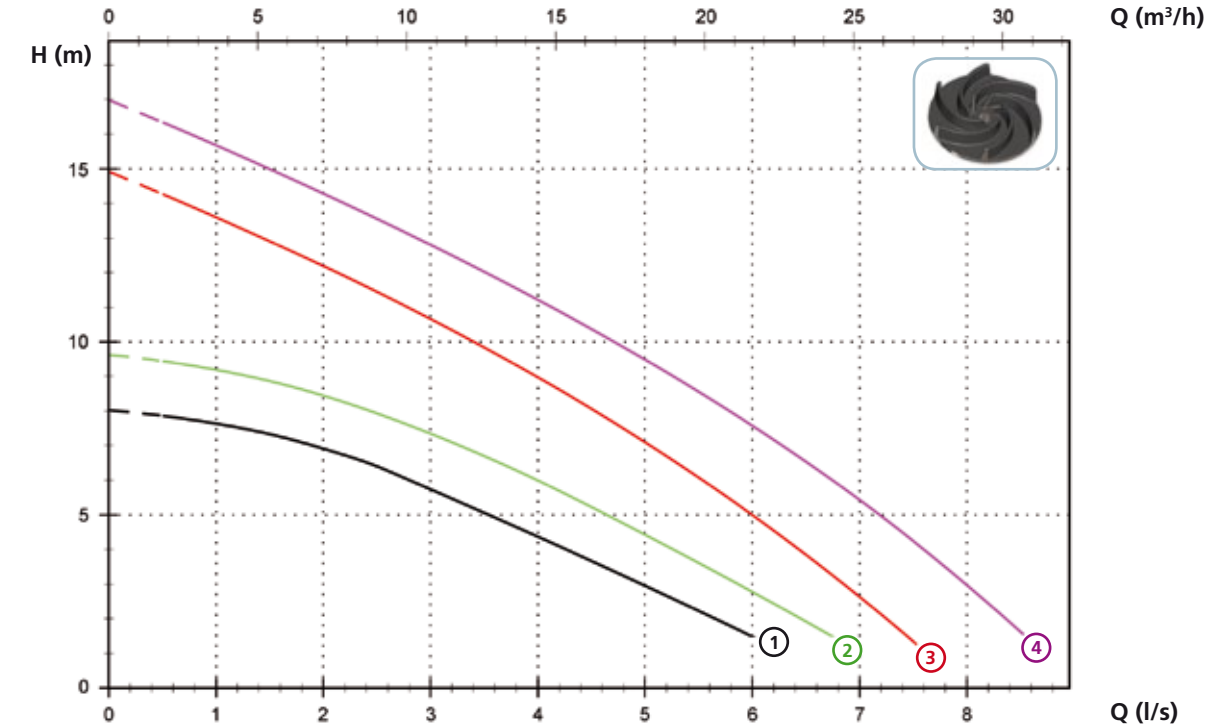
Discharge - support foot

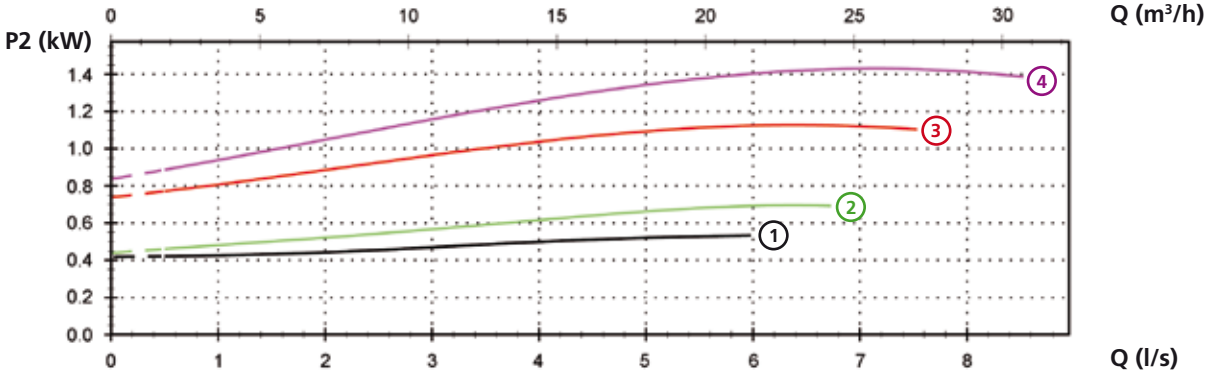
Threaded, flanged discharge for the maximum ease of installation.
Cast iron support foot.

DGF

Models with vertical GAS 1½" threaded discharge - 2 poles

Performances





Technical data

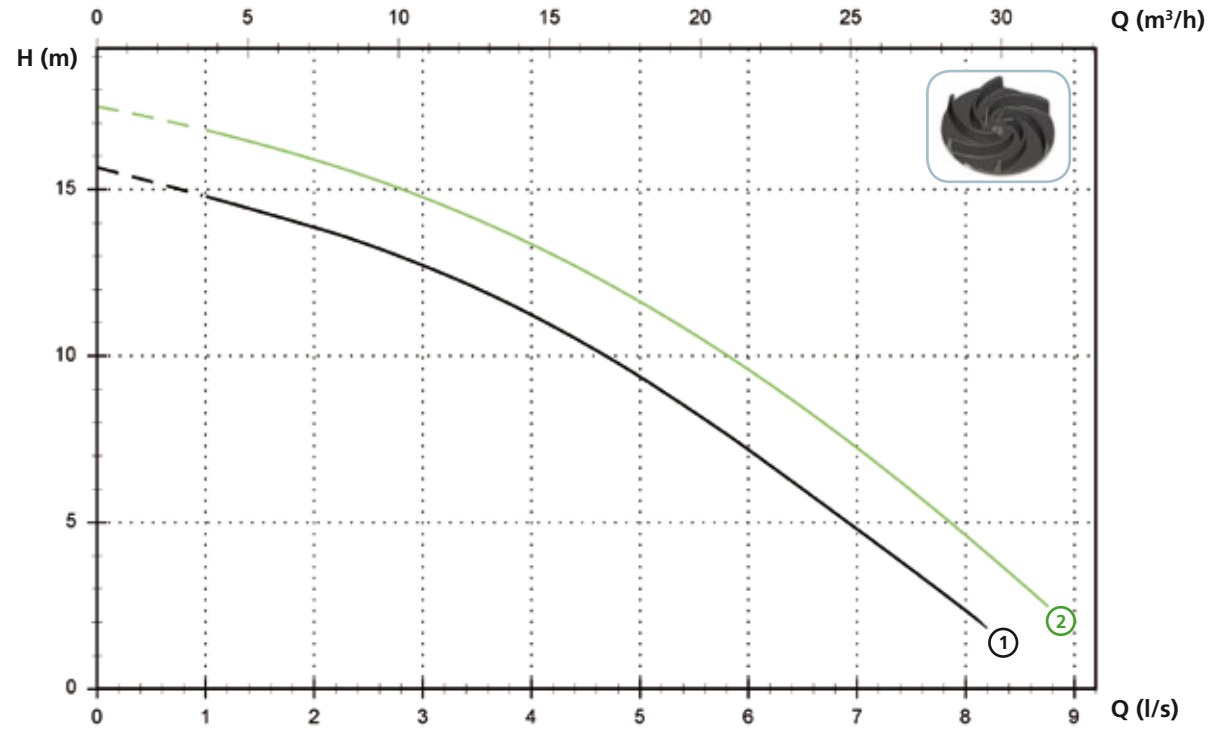
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 75/2/G40V A1CM/50	230	1	0.9	0.55	3.9	2900	Dir	G 1½"	40 mm
2	DGF 100/2/G40V A1CM/50	230	1	1.1	0.74	4.9	2900	Dir	G 1½"	40 mm
3	DGF 150/2/G40V A2CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 1½"	40 mm
4	DGF 200/2/G40V A2CM/50	230	1	2.2	1.5	9.8	2900	Dir	G 1½"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

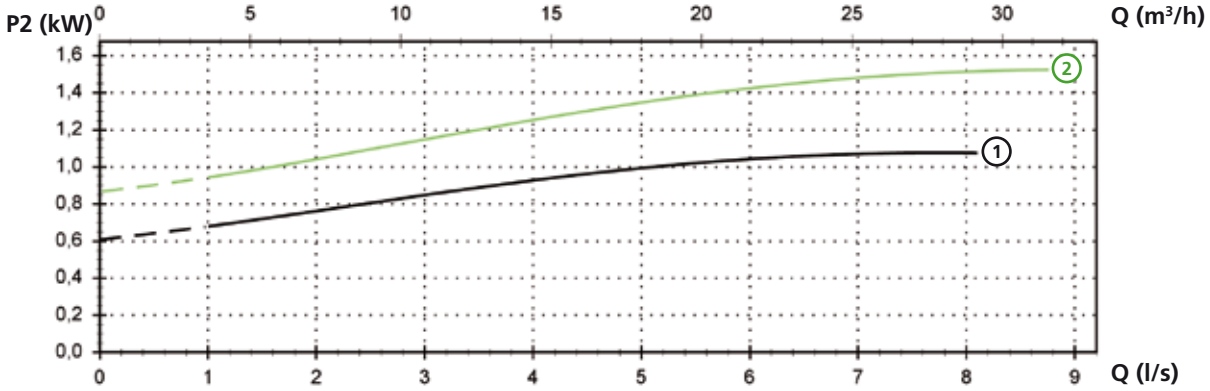
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 75/2/G40V A1CT/50	400	3	0.8	0.55	1.5	2900	Dir	G 1½"	40 mm
2	DGF 100/2/G40V A1CT/50	400	3	1.1	0.74	1.9	2900	Dir	G 1½"	40 mm
3	DGF 150/2/G40V A2CT/50	400	3	1.7	1.1	2.9	2900	Dir	G 1½"	40 mm
4	DGF 200/2/G40V A2CT/50	400	3	2.1	1.5	3.7	2900	Dir	G 1½"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

DGF

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

Performances





Technical data

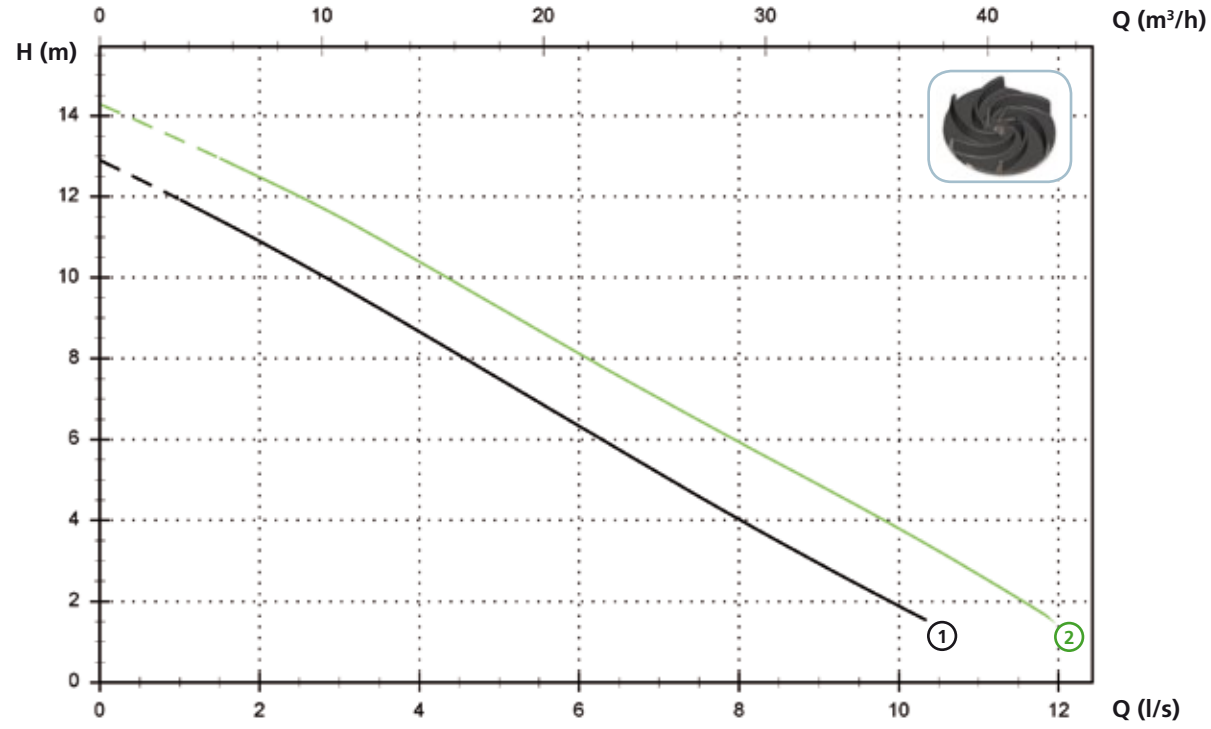
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 150/2/G40H A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 1½" - DN32 PN6	40 mm
2	DGF 200/2/G40H A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	G 1½" - DN32 PN6	40 mm

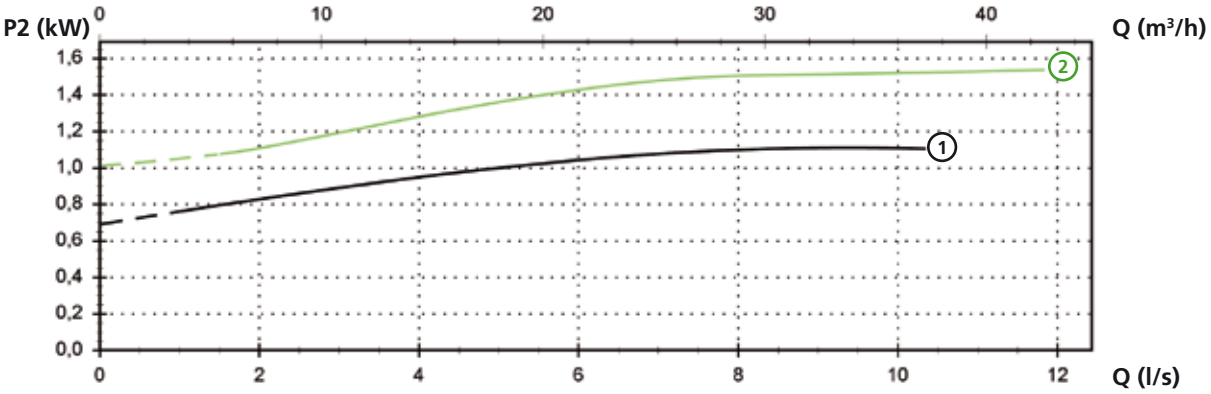
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 150/2/G40H A1CT/50	400	3	1.7	1.1	2.9	2900	Dir	G 1½" DN32 PN6	40 mm
2	DGF 200/2/G40H A1CT/50	400	3	2.1	1.5	3.7	2900	Dir	G 1½" DN32 PN6	40 mm

DGF

Models with vertical GAS 2" threaded discharge - 2 poles

Performances





Technical data

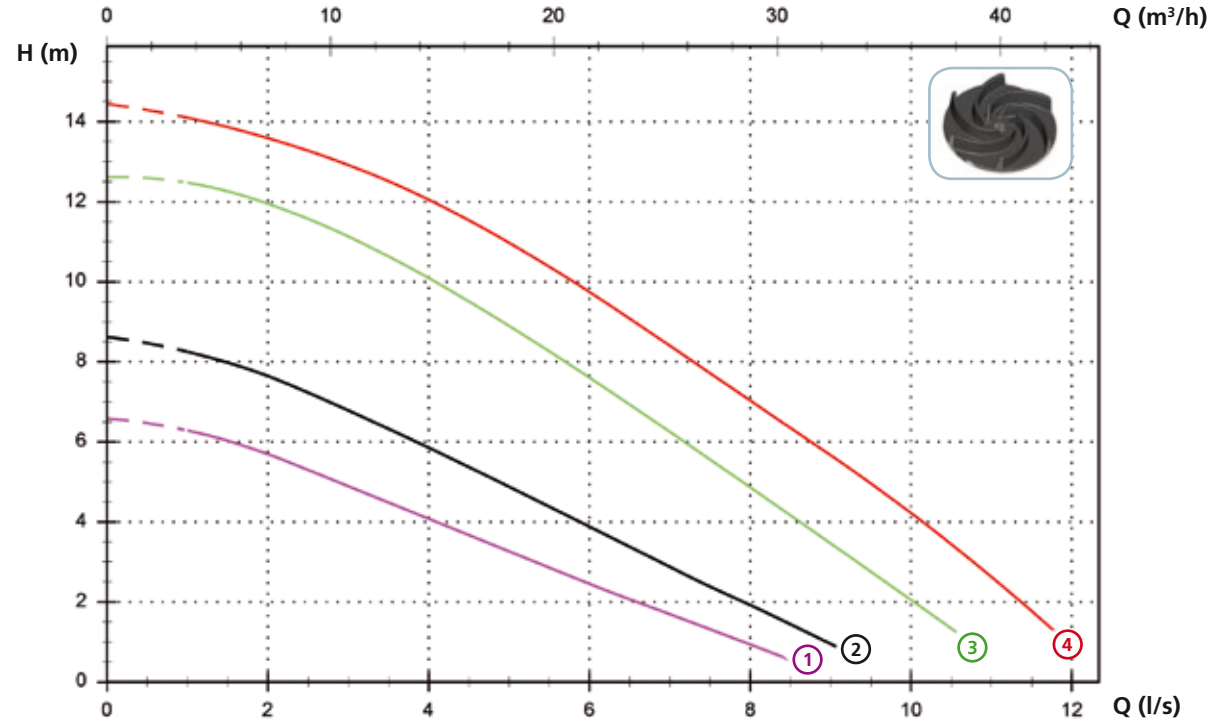
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGF 150/2/G50V A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 2"	50 mm
(2) DGF 200/2/G50V A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	G 2"	50 mm

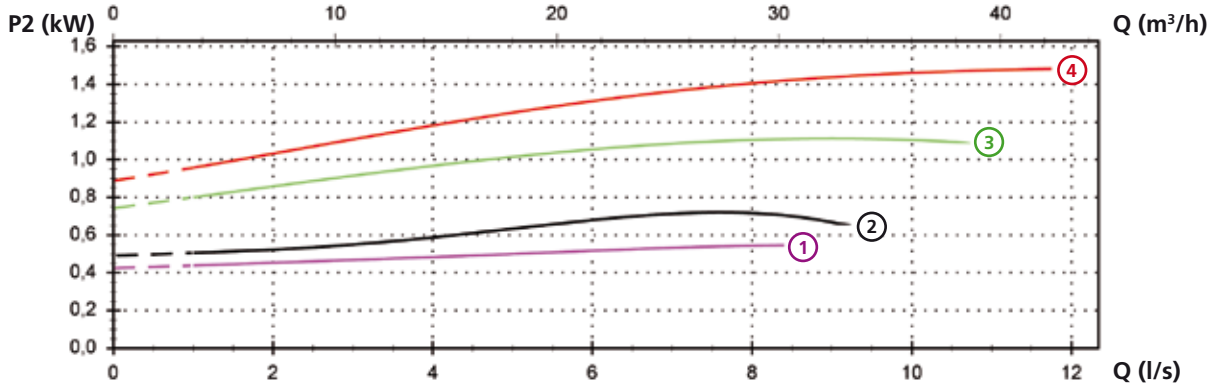
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGF 150/2/G50V A1CT/50	400	3	1.7	1.1	2.9	2900	Dir	G 2"	50 mm
(2) DGF 200/2/G50V A1CT/50	400	3	2.1	1.5	3.7	2900	Dir	G 2"	50 mm

DGF

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

Performances





Technical data

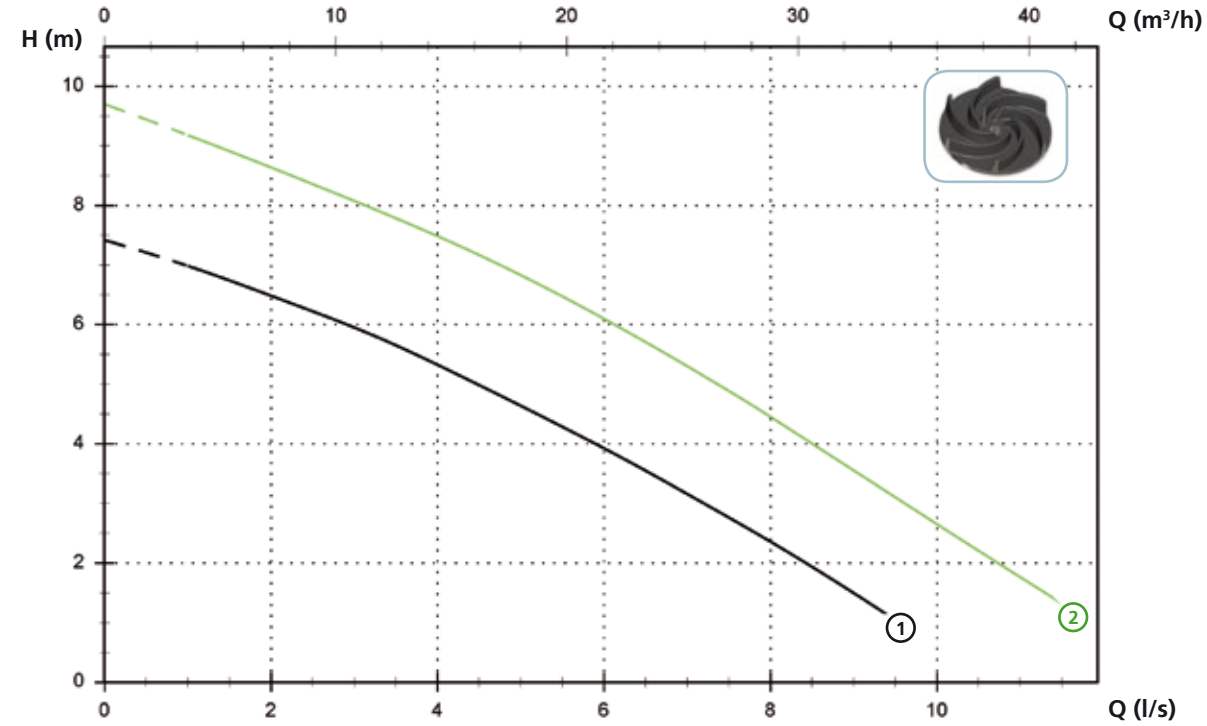
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGF 75/2/G50H A1CM/50	230	1	0.8	0.55	3.9	2900	Dir	G 2" - DN50 PN10-16	50 mm
(2) DGF 100/2/G50H A1CM/50	230	1	1.1	0.74	4.9	2900	Dir	G 2" - DN50 PN10-16	50 mm
(3) DGF 150/2/G50H A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 2" - DN50 PN10-16	50 mm
(4) DGF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

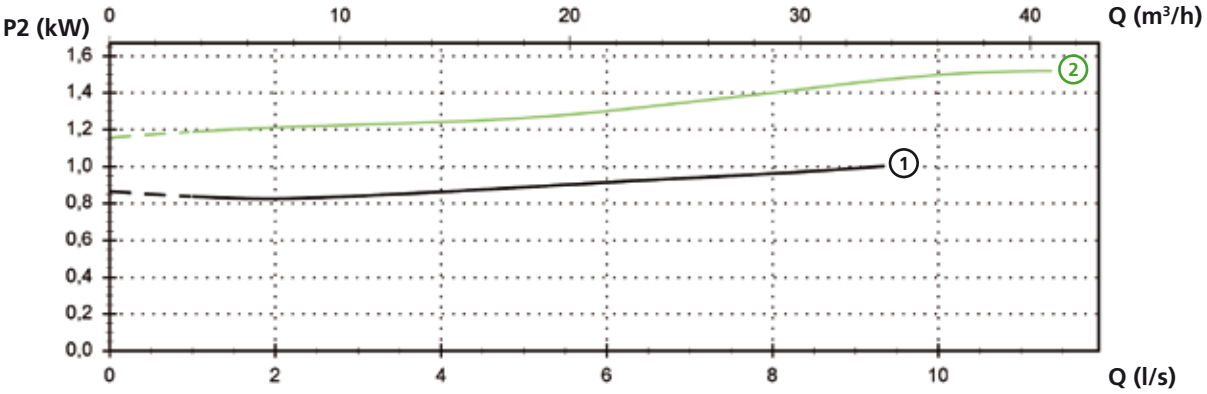
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGF 75/2/G50H A1CT/50	400	3	0.8	0.55	1.5	2900	Dir	G 2" - DN50 PN10-16	50 mm
(2) DGF 100/2/G50H A1CT/50	400	3	1.1	0.74	1.9	2900	Dir	G 2" - DN50 PN10-16	50 mm
(3) DGF 150/2/G50H A1CT/50	400	3	1.7	1.1	2.9	2900	Dir	G 2" - DN50 PN10-16	50 mm
(4) DGF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





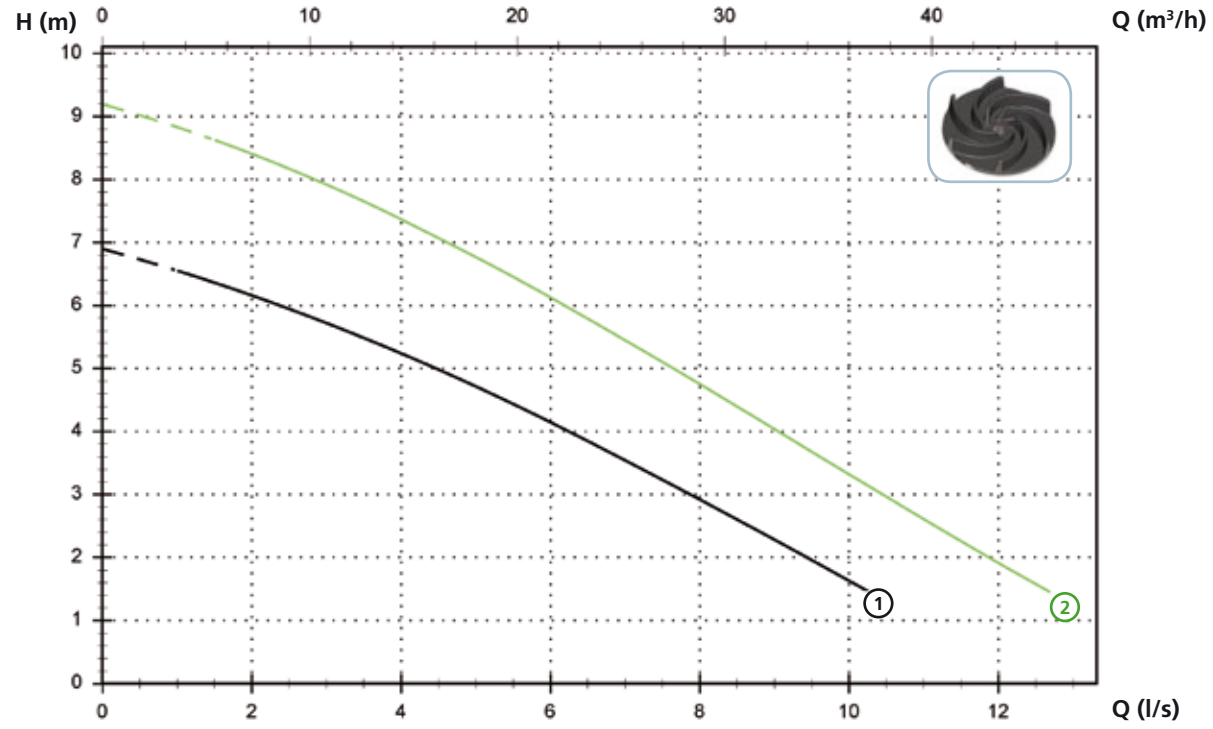
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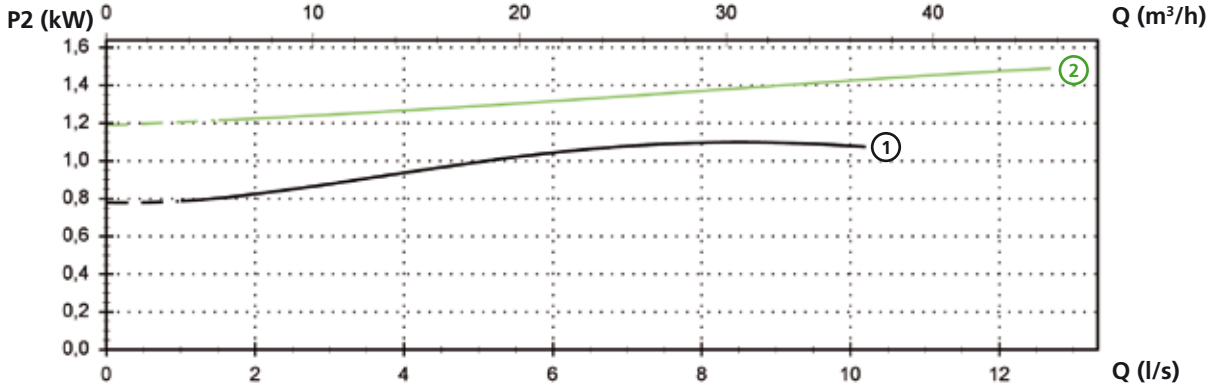
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 150/2/G65V A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 2½"	65 mm
2	DGF 200/2/G65V A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	G 2½"	65 mm

		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

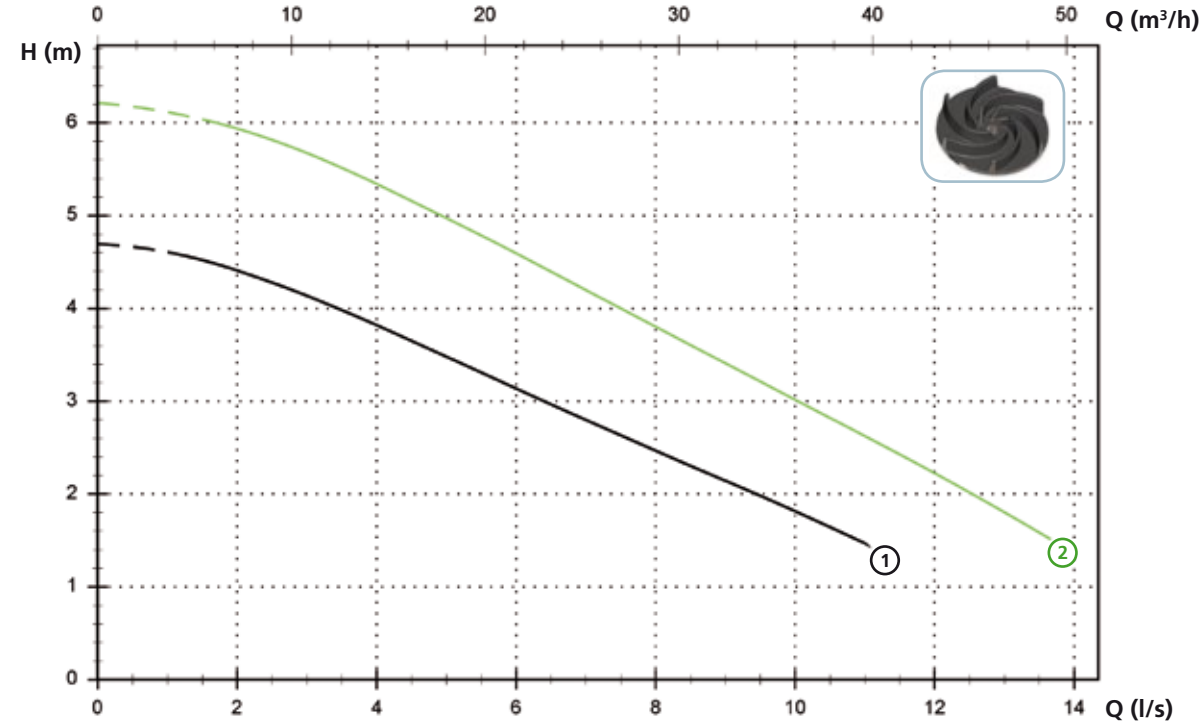
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 150/2/65 A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	DN65 PN10-16	65 mm
2	DGF 200/2/65 A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	DN65 PN10-16	65 mm

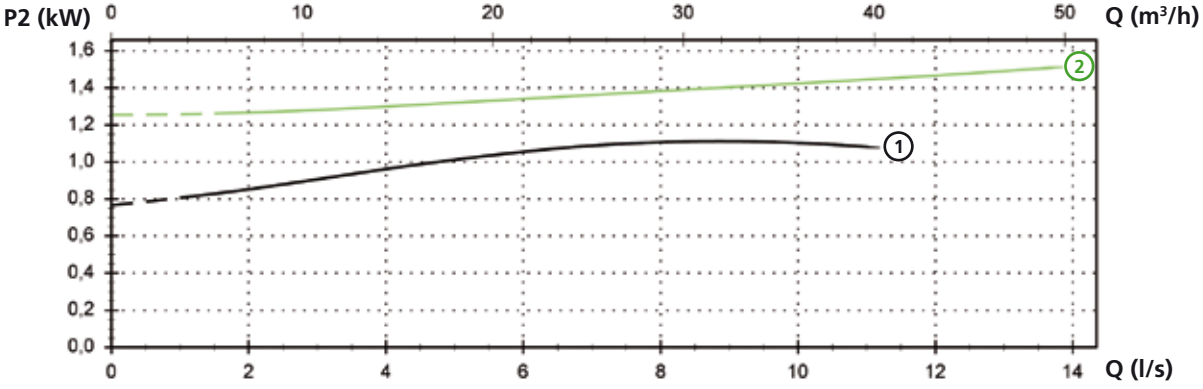
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 150/2/65 A1CT/50	400	3	1.7	1.1	2.9	2900	Dir	DN65 PN10-16	65 mm
2	DGF 200/2/65 A1CT/50	400	3	2.1	1.5	3.7	2900	Dir	DN65 PN10-16	65 mm

DGF

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

Performances





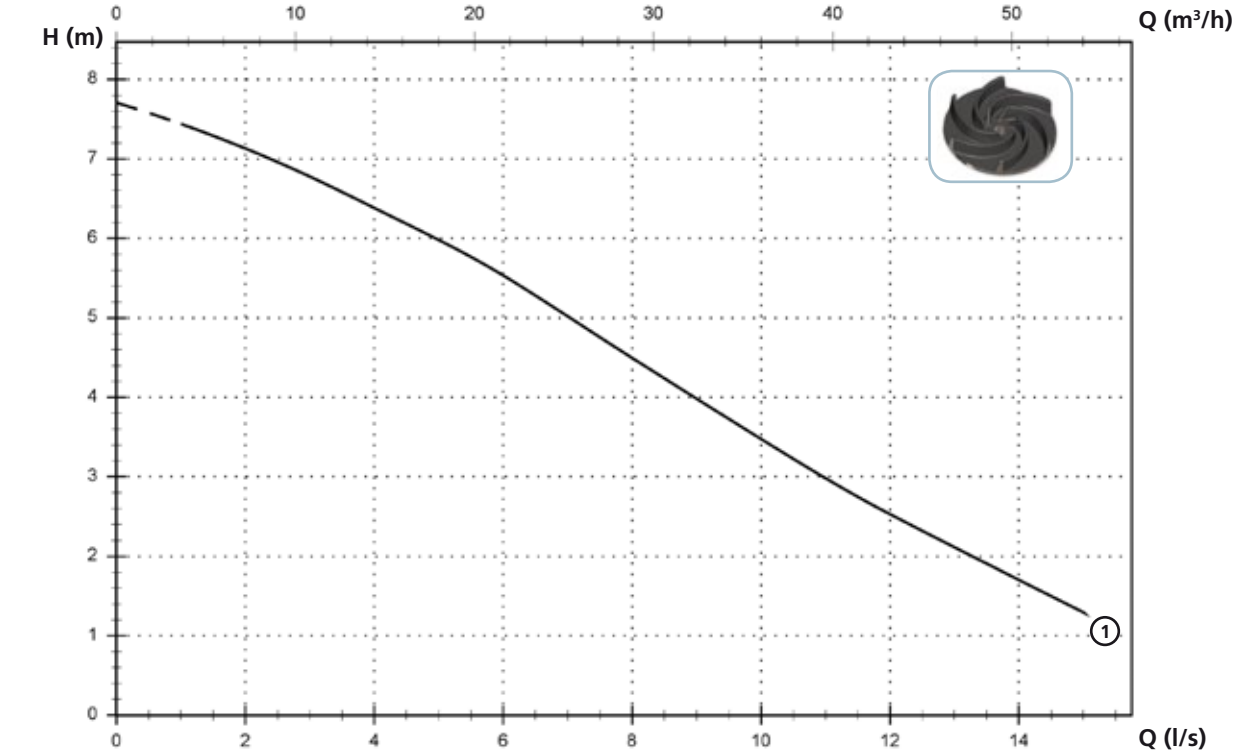
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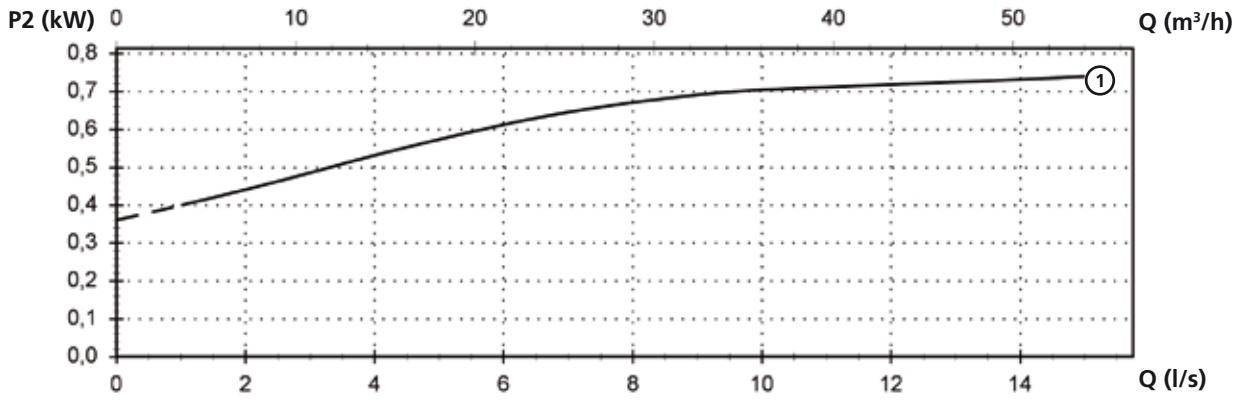
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGF 150/2/80 A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	DN80 PN10-16	80 mm
2	DGF 200/2/80 A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	DN80 PN10-16	80 mm

		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





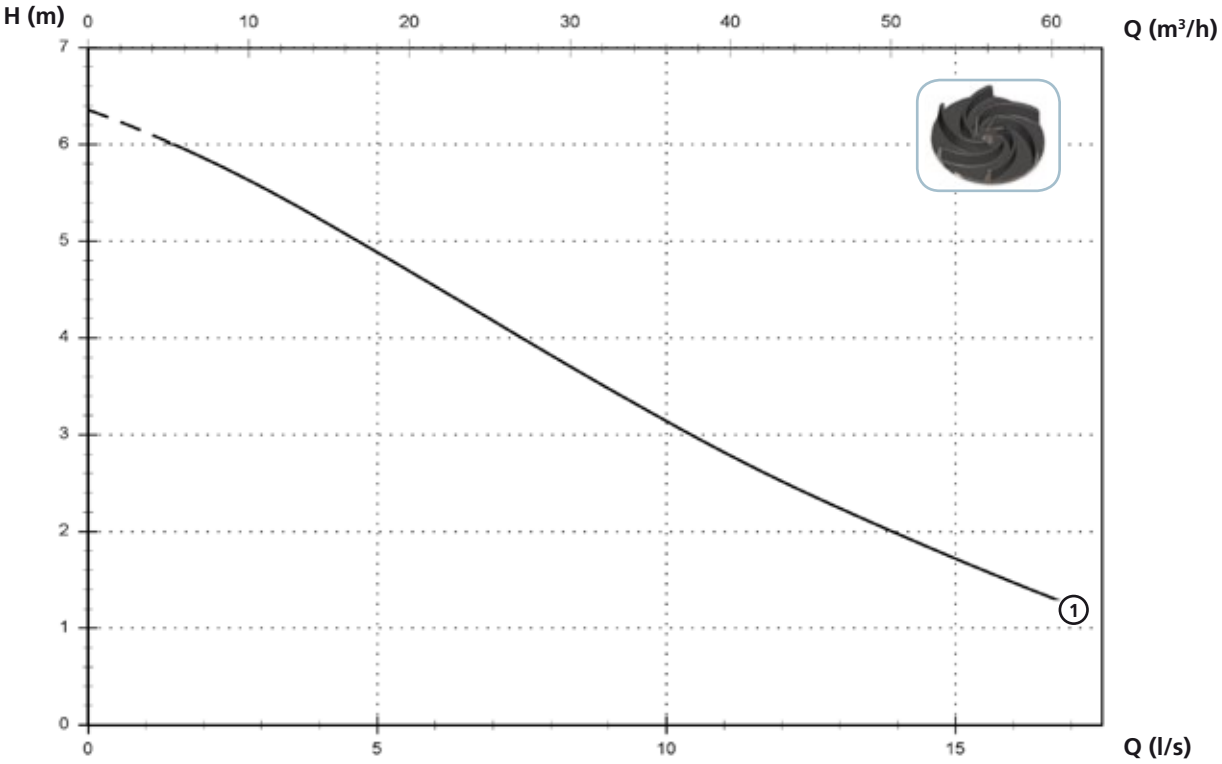
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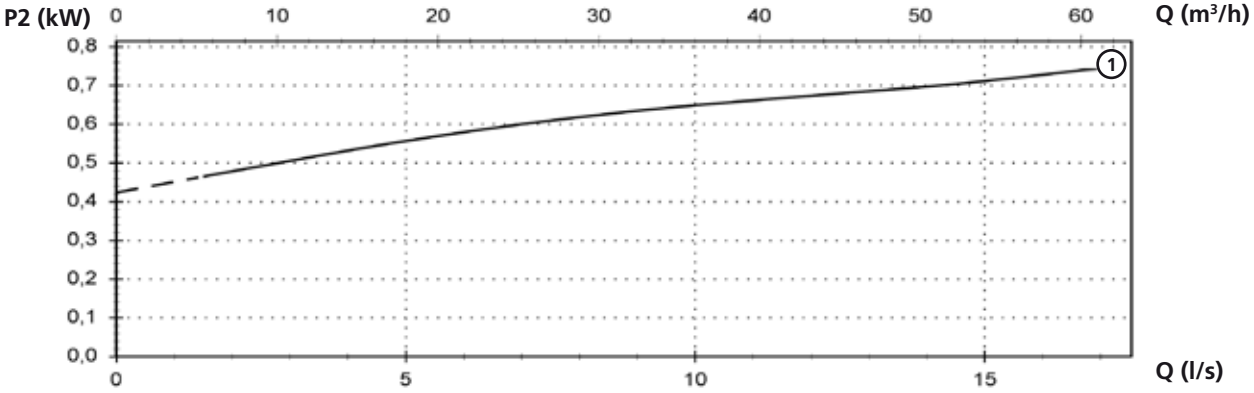
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGF 100/4/65 A1CT/50	400	3	1.1	0.74	2.2	1450	Dir	DN65 PN10-16	50 mm

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

DGF

Versions available

(Key to versions on page 16)

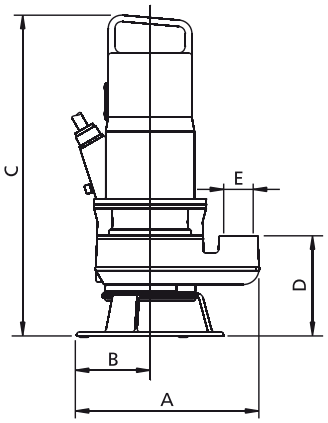
	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	2SIC	SICM	SICAL	2SICAL
DGF 75/2/G40V A1CM/50			●										●				●			
DGF 100/2/G40V A1CM/50			●										●				●			
DGF 150/2/G40V A2CM/50			●										●				●			
DGF 200/2/G40V 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.

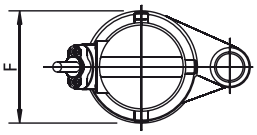
DGF

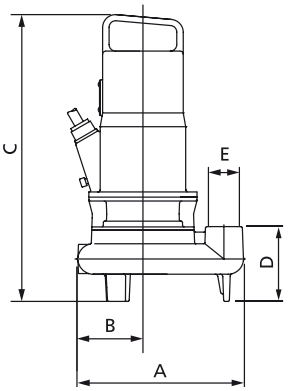
Overall dimensions and weights

Models with vertical discharge - 2 poles

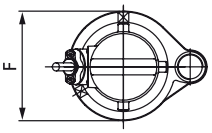


A1CM(T)/50





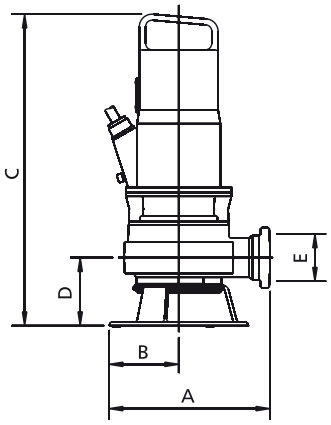
A2CM(T)/50

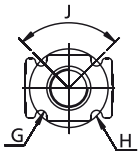


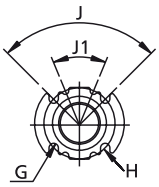
	A	B	C	D	E	F	kg
DGF 75/2/G40V A1CM(T)/50	245	80	480	150	G 1½"	170	27
DGF 100/2/G40V A1CM(T)/50	245	80	480	150	G 1½"	170	28
DGF 150/2/G40V A2CM(T)/50	260	102	445	115	G 1½"	205	30
DGF 200/2/G40V A2CM(T)/50	260	102	445	115	G 1½"	205	31
DGF 150/2/G50V A1CM(T)/50	270	100	495	140	G 2"	205	32
DGF 200/2/G50V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

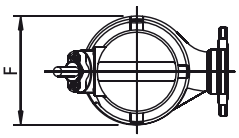
Dimensions in mm *All weights and dimensions are indicative only*

Models with horizontal discharge - 2 poles







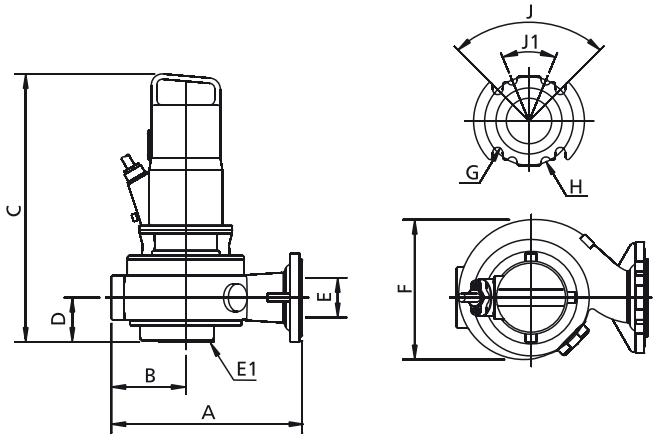


	A	B	C	D	E	F	G	H	J	J1	kg
DGF 150/2/G40H A1CM(T)/50	260	100	480	102	G 1½" - DN40	205	14	90	90°	-	29
DGF 200/2/G40H A1CM(T)/50	260	100	480	102	G 1½" - DN40	205	14	90	90°	-	30
DGF 75/2/G50H A1CM(T)/50	230	90	495	110	G 2" - DN50	175	18	125	90°	-	28
DGF 100/2/G50H A1CM(T)/50	230	90	495	110	G 2" - DN50	175	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

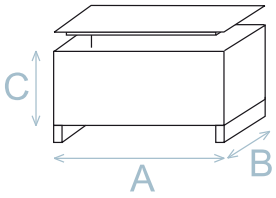


	A	B	C	D	E	E1(*)	F	G	H	J	J1	kg
DGF 100/4/65 A1CT/50	320	130	490	80	65	65	250	18	145	90°	-	38
DGF 100/4/80 A1CT/50	320	130	440	80	80	80	250	18	160	90°	45°	41

Dimensions in mm *All weights and dimensions are indicative only*

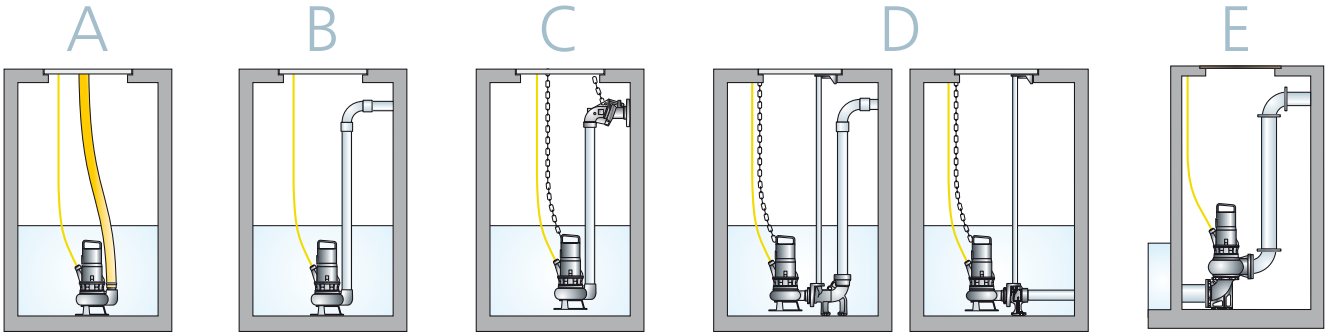
Packaging dimension

	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



All product images are indicative only

Set-back vortex impeller

General characteristics

Set-back vortex impeller	
motor power	1,1 ÷ 4,1 kW
poles	2 / 4 / 6
discharge	GAS 2½" vertical 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.

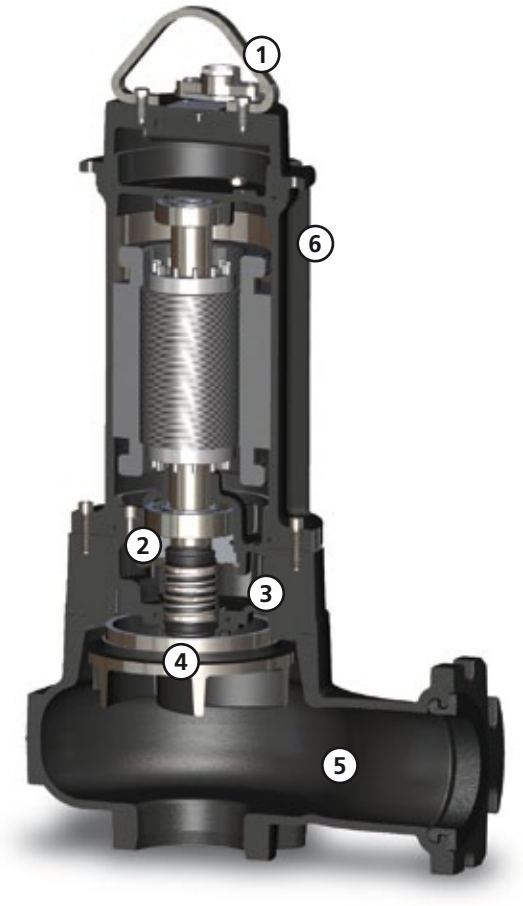
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

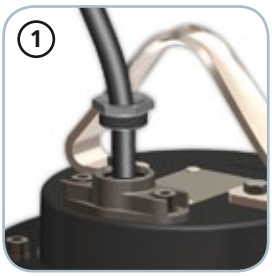
DGN





Cooling system

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



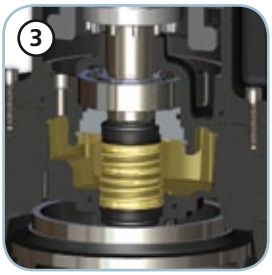
Cable Gland

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.



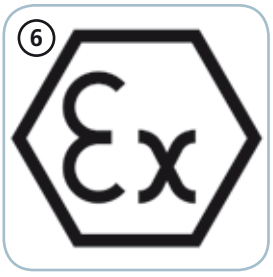
Drive shaft

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

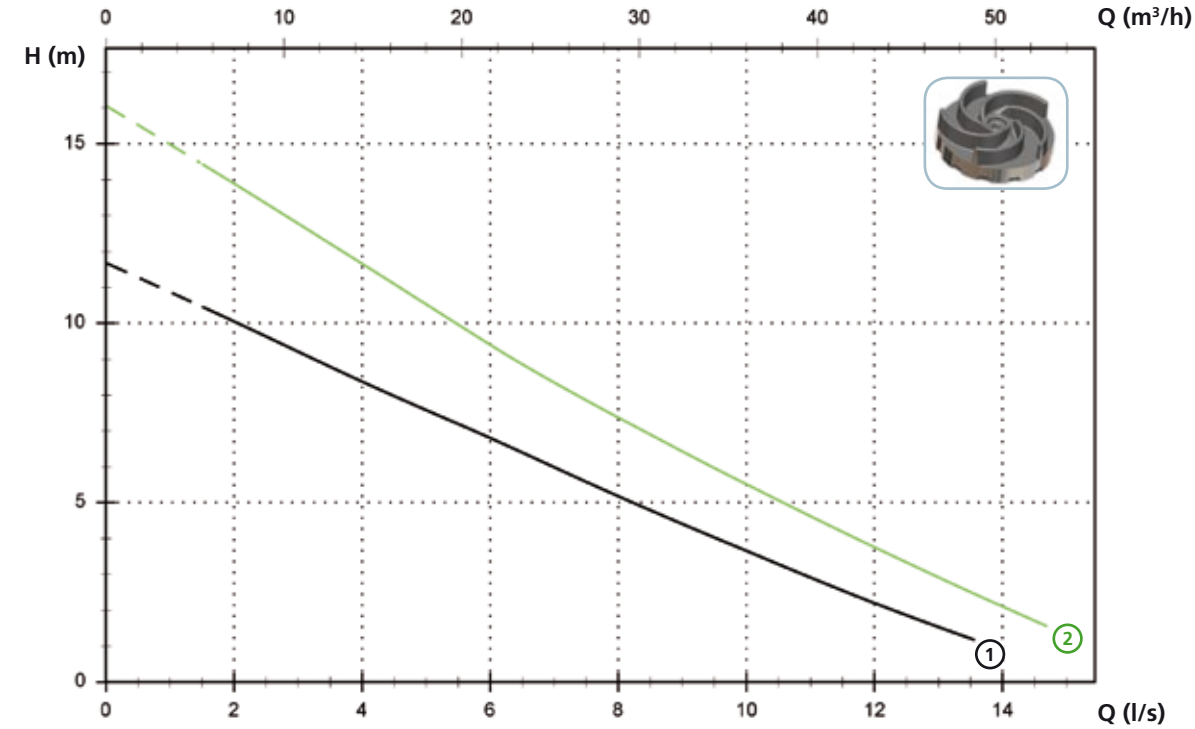
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

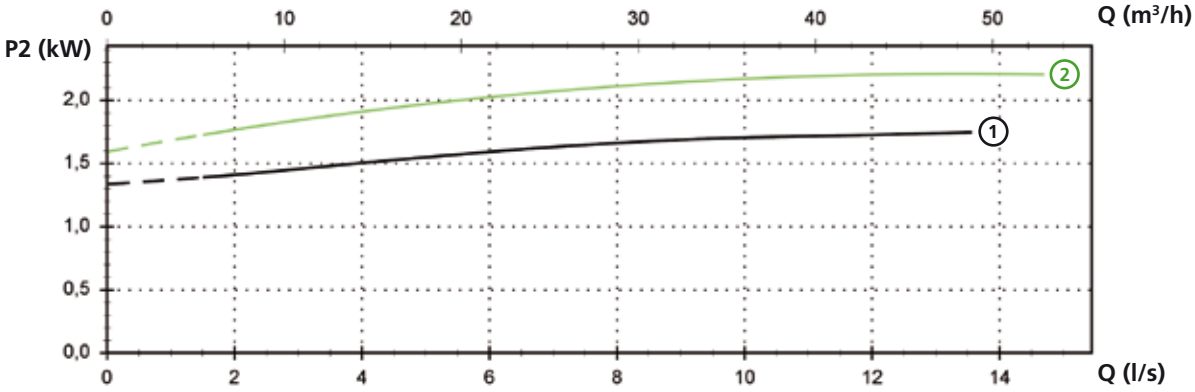
CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

DGN

Models with vertical GAS 2½" threaded discharge - 2 poles

Performances





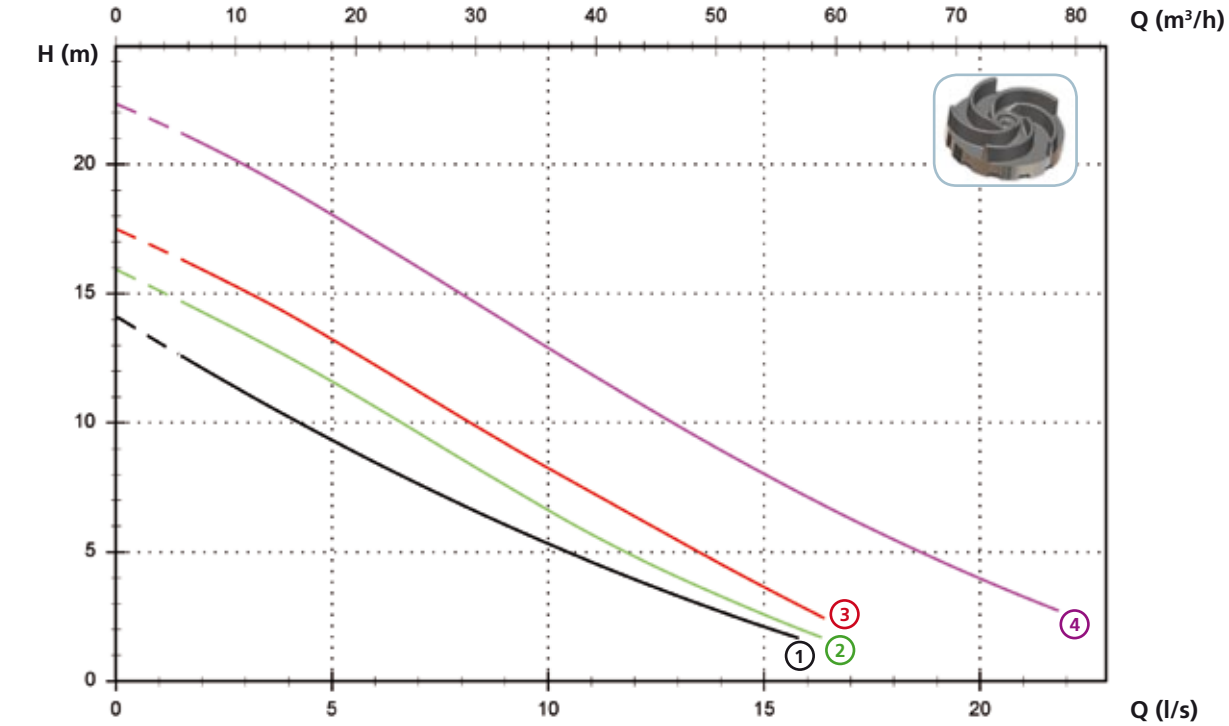
Technical data

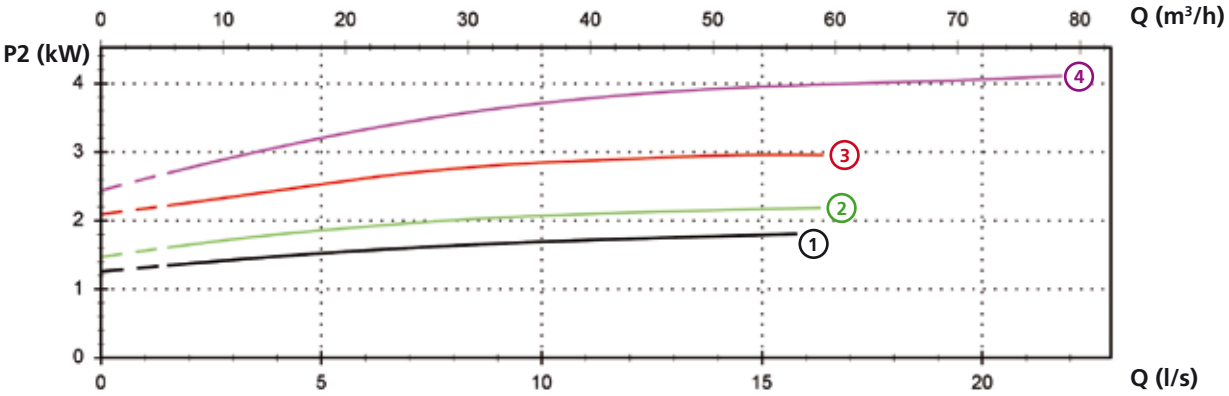
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGN 250/2/G65V A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	G 2½"	65 mm

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(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

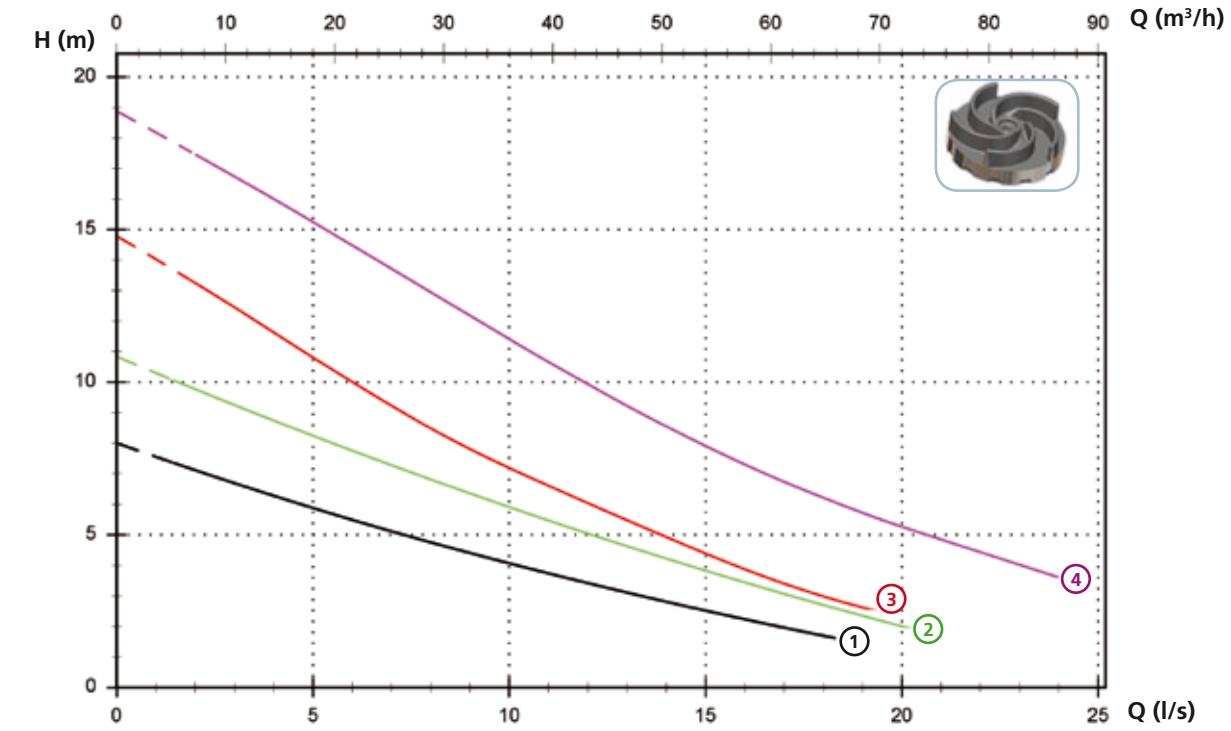
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGN 250/2/65 A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	DN65 PN10-16	65 mm

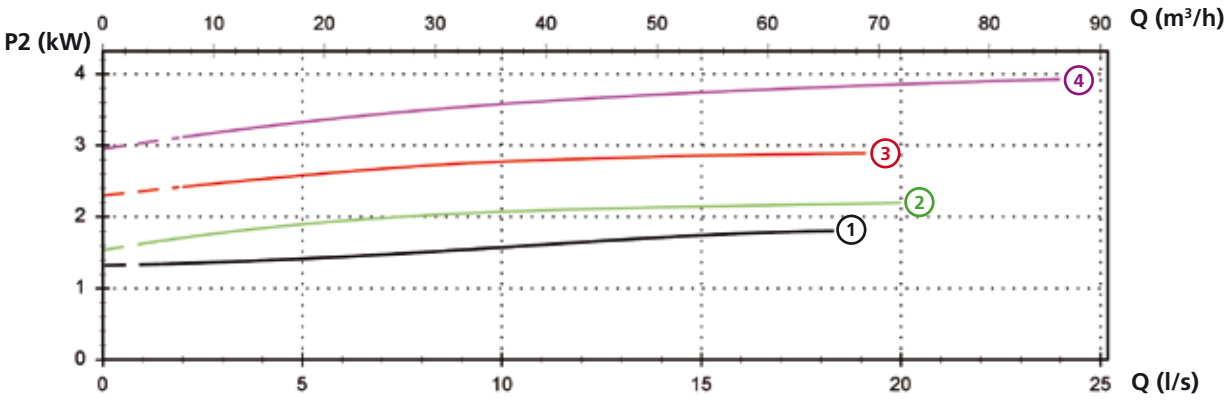
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGN 250/2/65 A1DT/50	400	3	2.5	1.8	4.3	2900	Dir	DN65 PN10-16	65 mm
② DGN 300/2/65 A1DT/50	400	3	2.9	2.2	5.1	2900	Dir	DN65 PN10-16	65 mm
③ DGN 400/2/65 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN65 PN10-16	65 mm
④ DGN 550/2/65 A1FT/50	400	3	5.0	4.1	8.7	2900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

DGN

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

Performances





Technical data

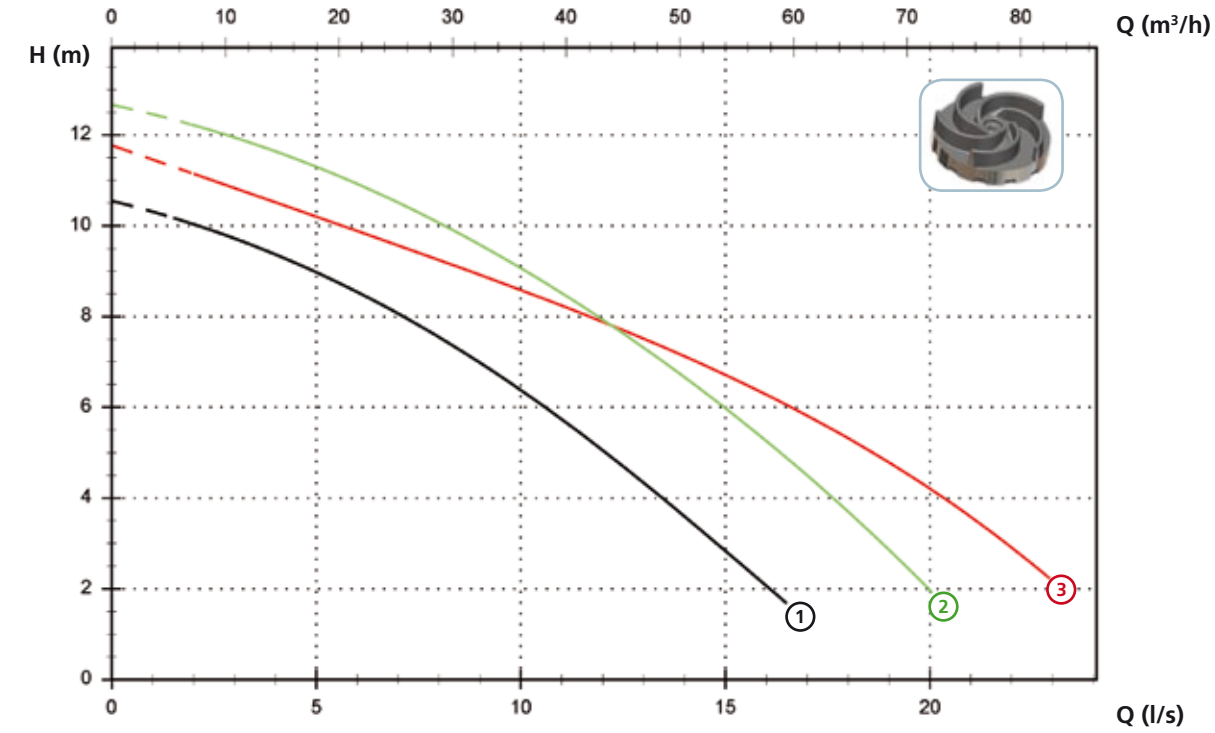
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGN 250/2/80 A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	DN80 PN10-16	80 mm

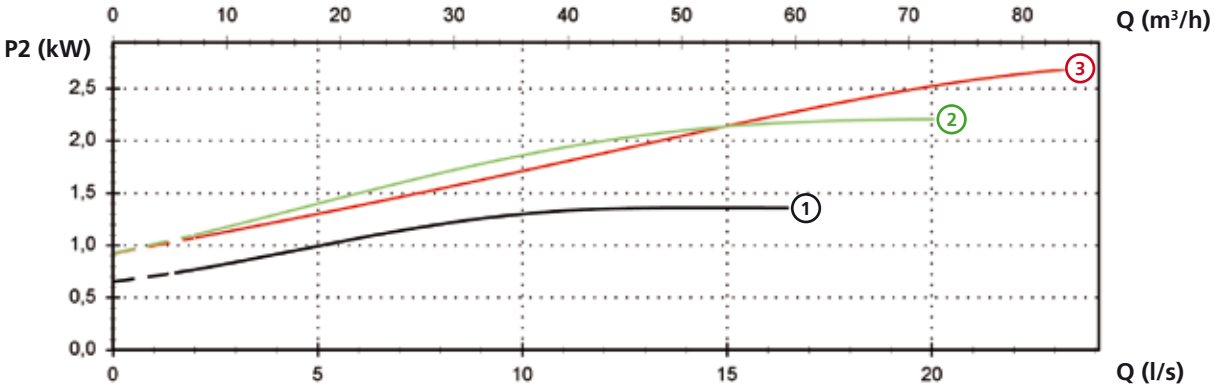
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGN 250/2/80 A1DT/50	400	3	2.5	1.8	4.3	2900	Dir	DN80 PN10-16	80 mm
2	DGN 300/2/80 A1DT/50	400	3	2.9	2.2	5.1	2900	Dir	DN80 PN10-16	80 mm
3	DGN 400/2/80 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN80 PN10-16	80 mm
4	DGN 550/2/80 A1FT/50	400	3	5.0	4.1	8.7	2900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

DGN

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

Performances





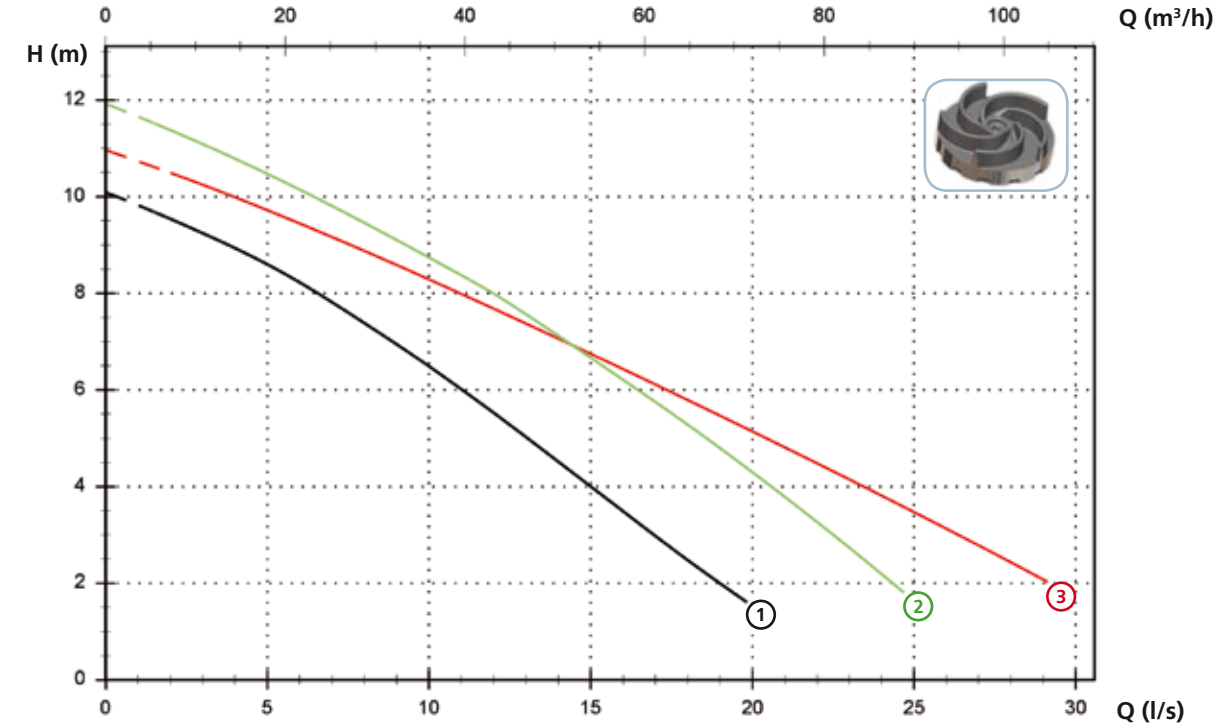
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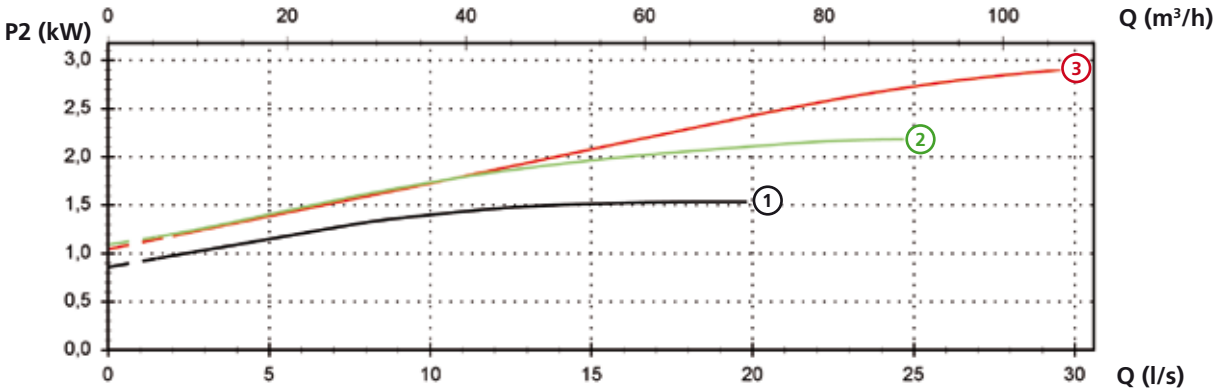
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1 DGN 200/4/65 A1DT/50	400	3	2.0	1.5	4.1	1450	Dir	DN65 PN10-16	65 mm
2 DGN 300/4/65 A1FT/50	400	3	2.9	2.2	5.8	1450	Dir	DN65 PN10-16	65 mm
3 DGN 400/4/65 A1FT/50	400	3	3.4	3	6.7	1450	Dir	DN65 PN10-16	65 mm

DGN

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

Performances





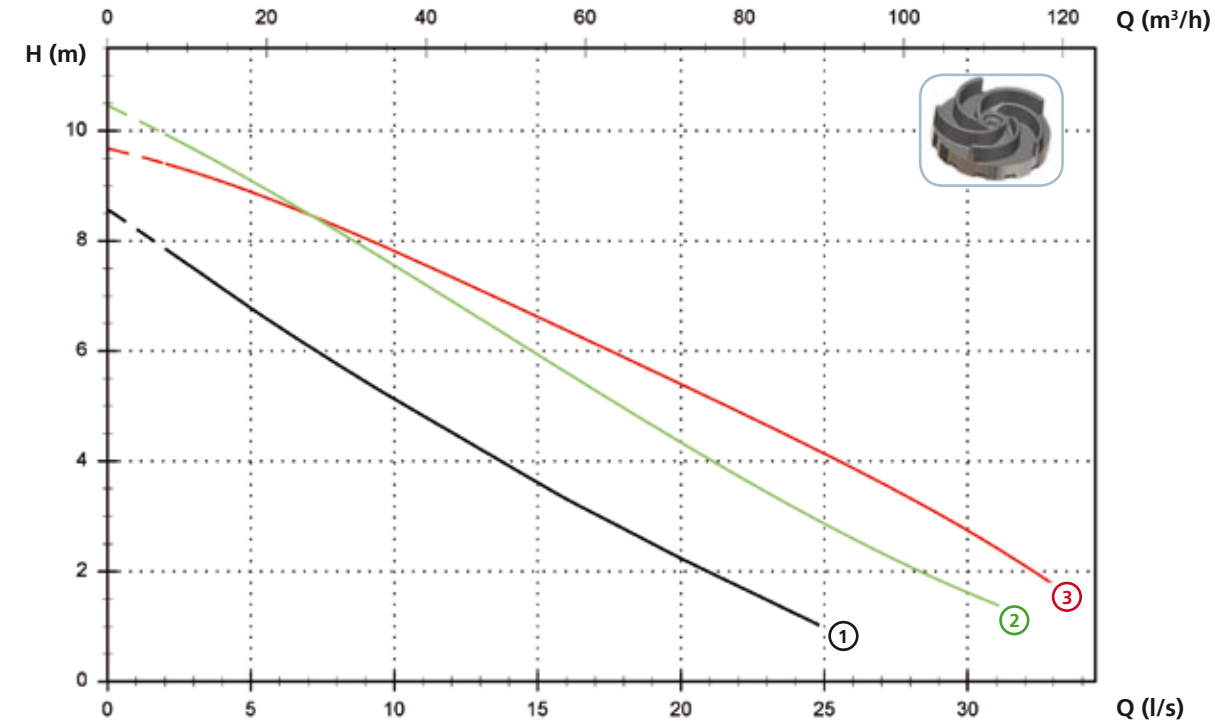
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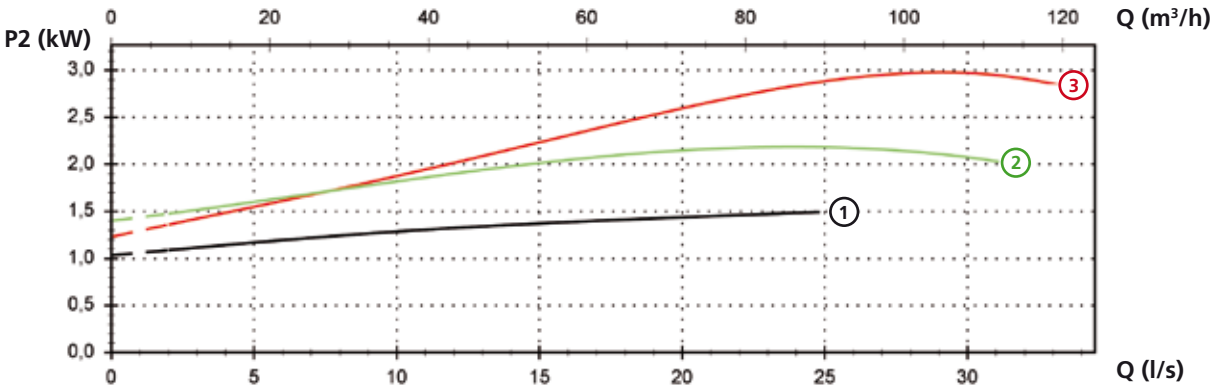
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGN 200/4/80 A1DT/50	400	3	2.0	1.5	4.1	1450	Dir	DN80 PN10-16	80 mm
(2) DGN 300/4/80 A1FT/50	400	3	2.9	2.2	5.8	1450	Dir	DN80 PN10-16	80 mm
(3) DGN 400/4/80 A1FT/50	400	3	3.7	3	7.3	1450	Dir	DN80 PN10-16	80 mm

DGN

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

Performances





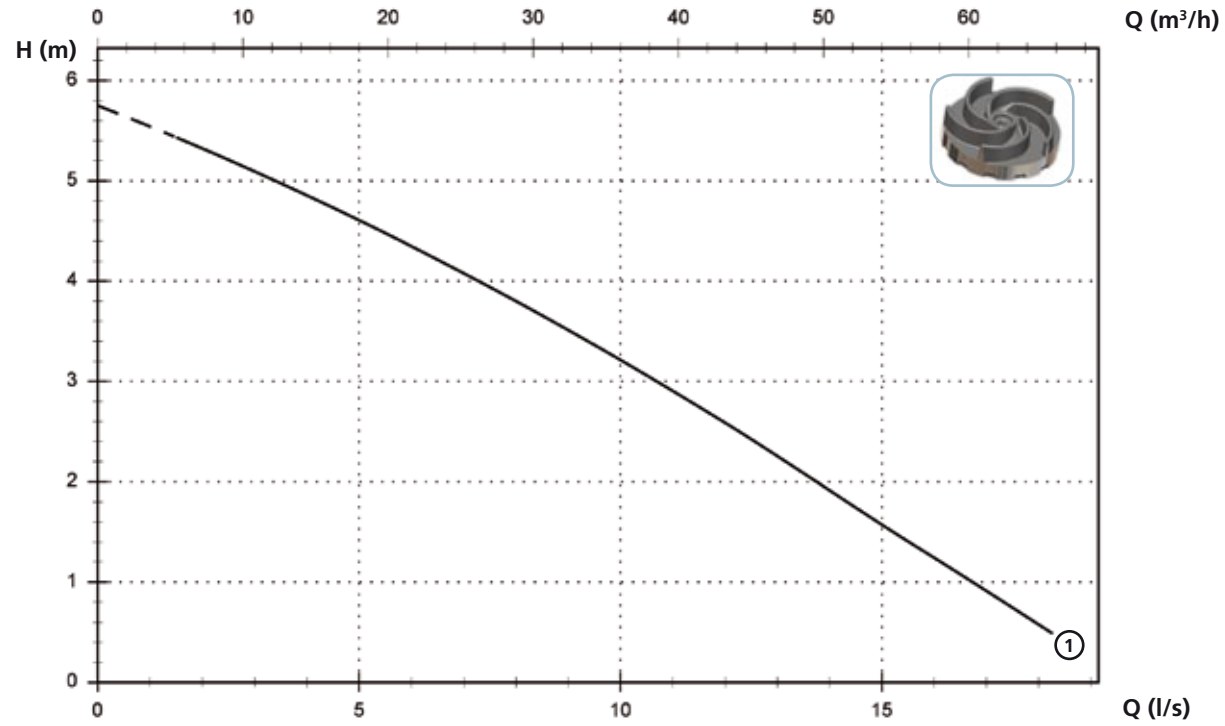
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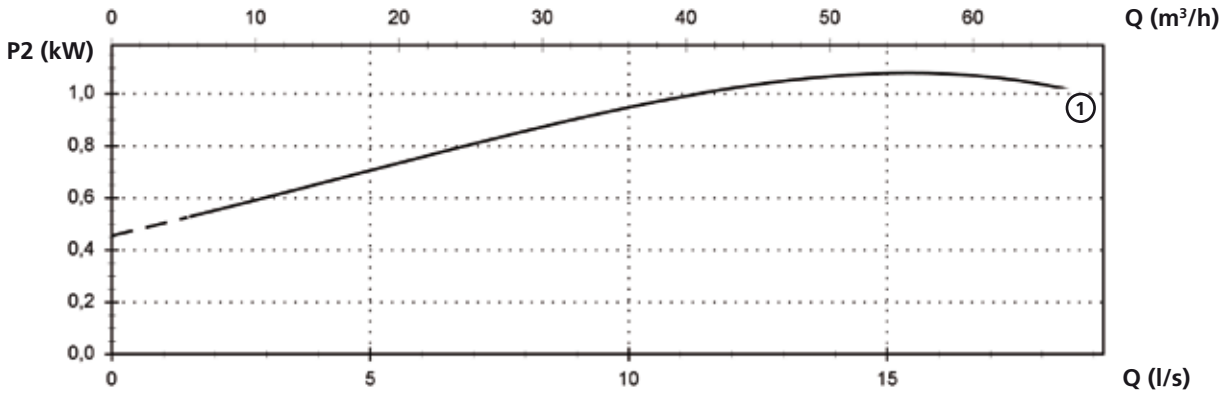
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGN 200/4/100 A1DT/50	400	3	2.0	1.5	4.1	1450	Dir	DN100 PN10-16	100 mm
(2) DGN 300/4/100 A1FT/50	400	3	2.9	2.2	5.8	1450	Dir	DN100 PN10-16	100 mm
(3) DGN 400/4/100 A1FT/50	400	3	3.7	3	7.3	1450	Dir	DN100 PN10-16	100 mm

DGN

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

Performances





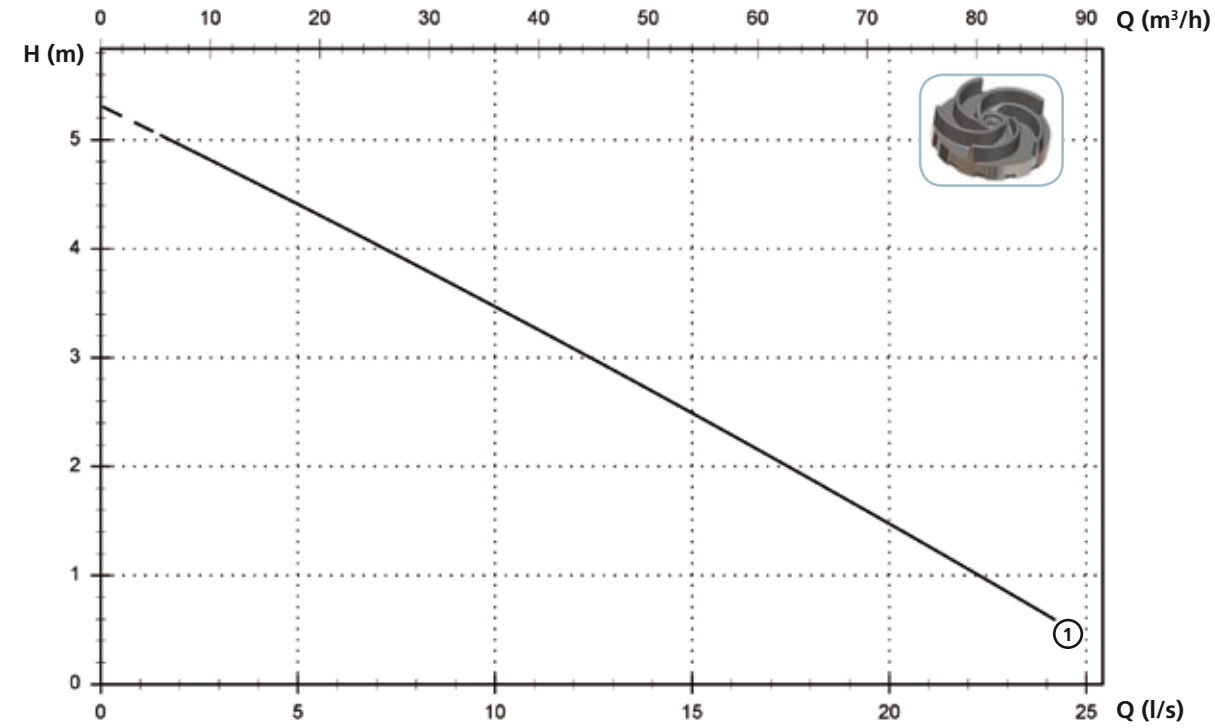
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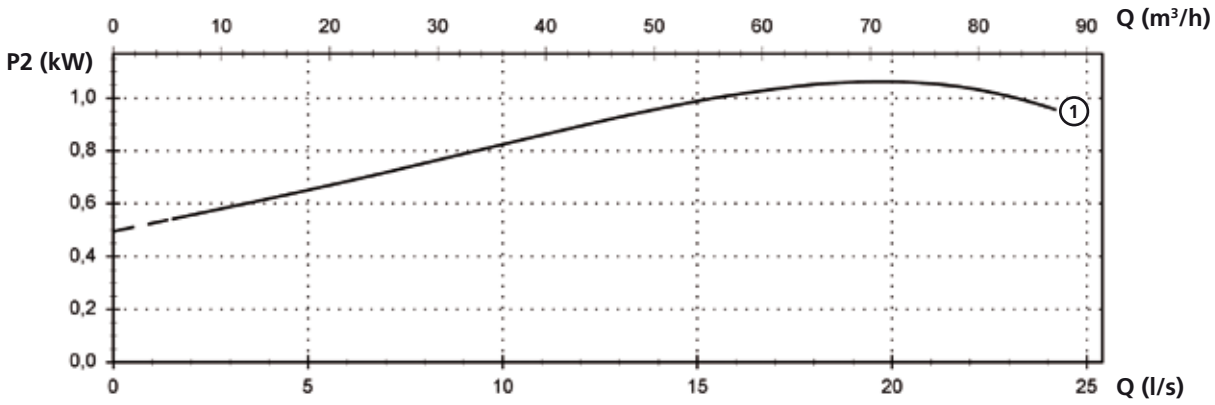
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGN 150/6/65 A1DT/50	400	3	1.6	1.1	3.7	960	Dir	DN65 PN10-16	65 mm

DGN

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

Performances





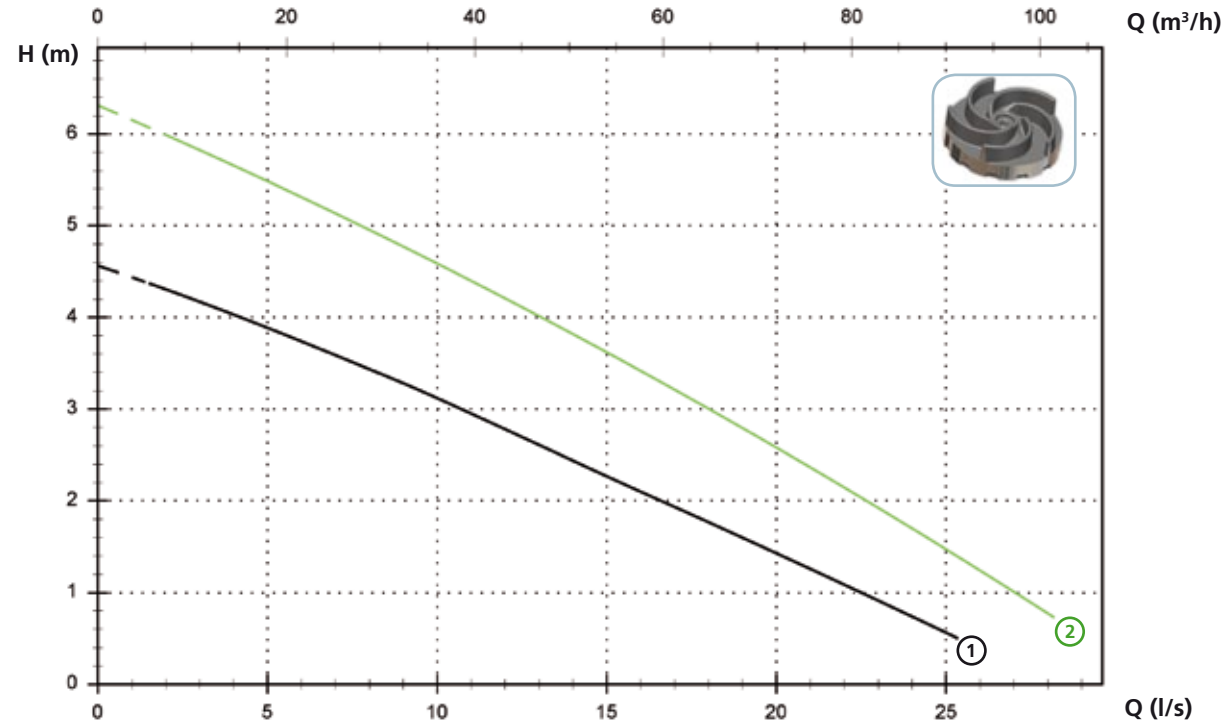
Technical data

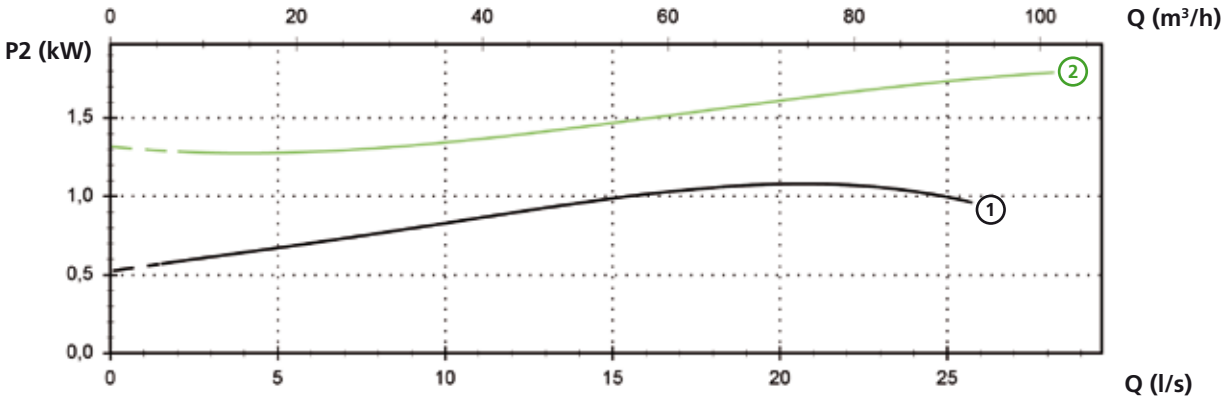
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGN 150/6/80 A1DT/50	400	3	1.6	1.1	4.3	960	Dir	DN80 PN10-16	80 mm

DGN

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

Performances



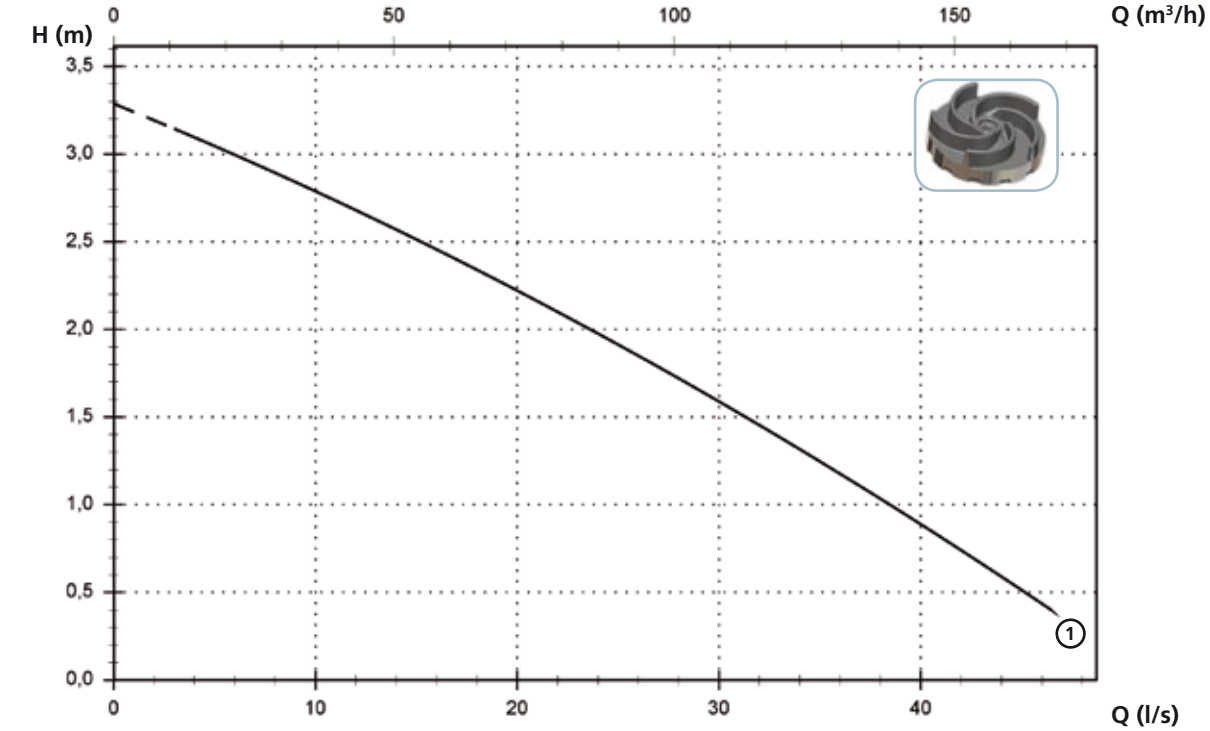


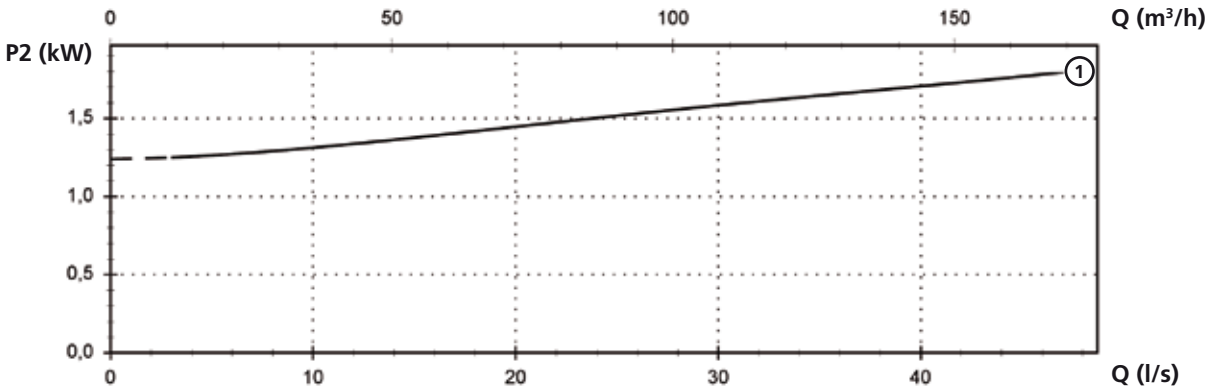
Technical data

	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

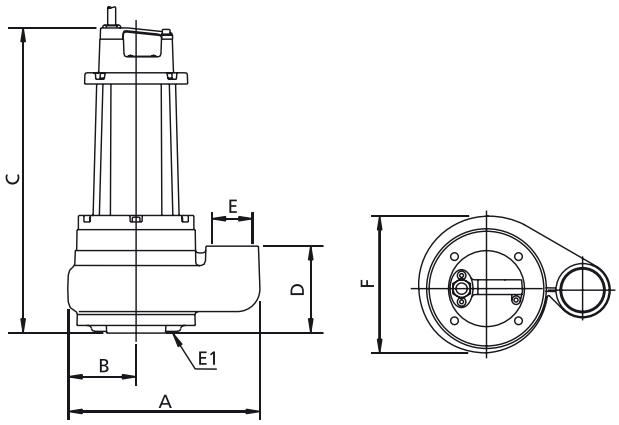
(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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		●								●			●	●			●			

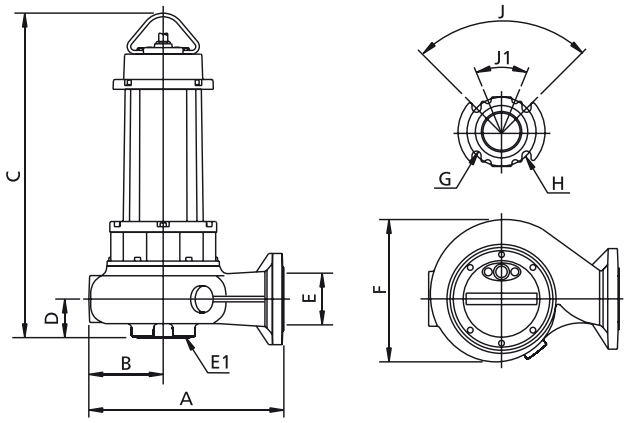
NOTE FOR SINGLE PHASE PUMPS: thermal protections into the winding have to be connected to the electrical panel.
Start capacitor inside the pump. Circuit breaker supplied but not connected to the pump cable.
The use of an electrical panel as circuit breaker housing is mandatory.
For installation please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

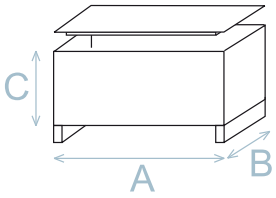
All weights and dimensions are indicative only

(*) DN of the suction flange - PN6

DGN

Packaging dimension

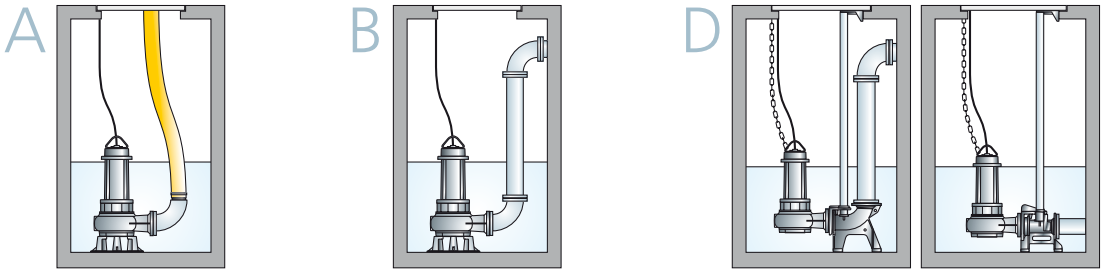
	A	B	C
DGN 250/2/G65V A1DM(T)/50	725	555	415
DGN 300/2/G65V A1DT/50	725	555	415
DGN 250/2/65 A1DM(T)/50	725	555	415
DGN 300/2/65 A1DT/50	725	555	415
DGN 400/2/65 A1FT/50	915	515	555
DGN 550/2/65 A1FT/50	915	515	555
DGN 250/2/80 A1DM(T)/50	725	445	415
DGN 300/2/80 A1DT/50	725	445	415
DGN 400/2/80 A1FT/50	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

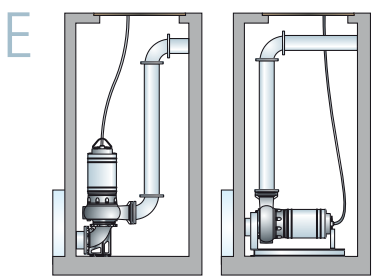


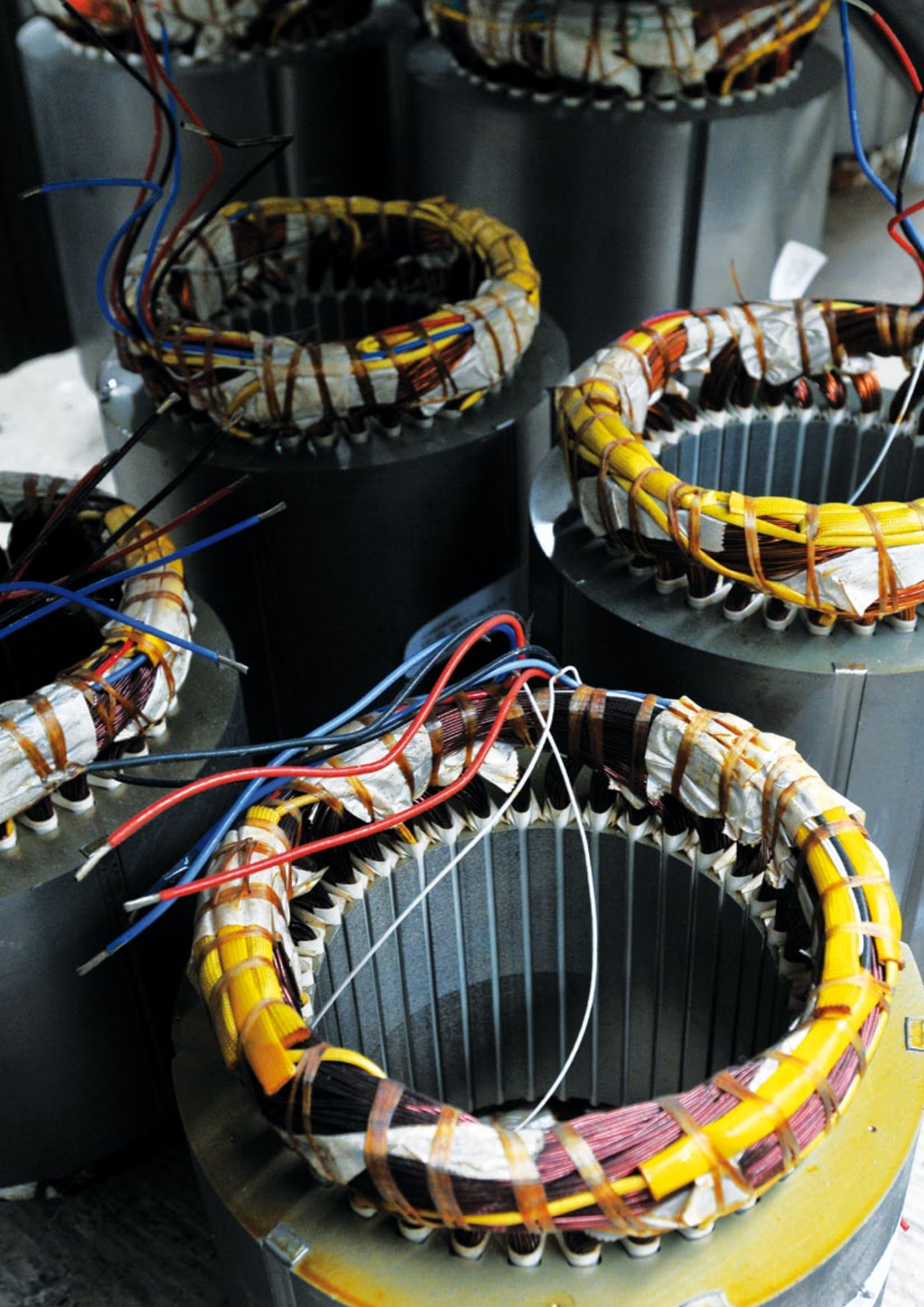
Dimension in mm

All weights and dimensions are indicative only

Installations available







DGP



All product images are indicative only

Set-back vortex impeller

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.

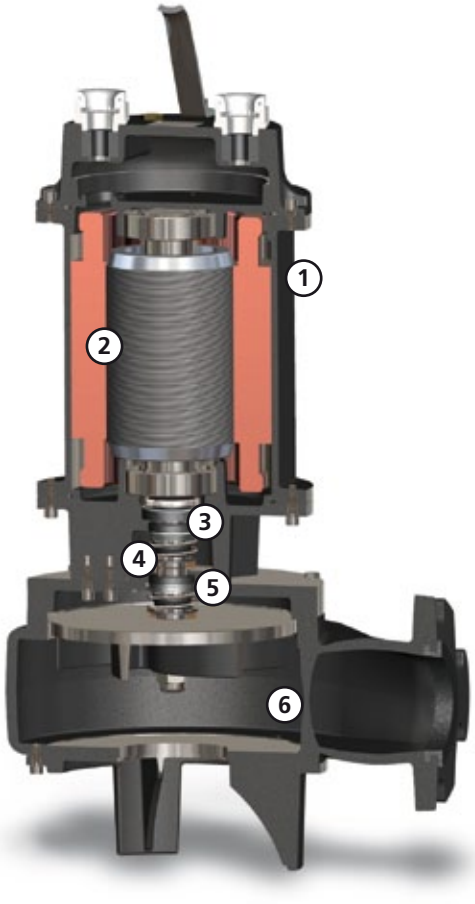
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

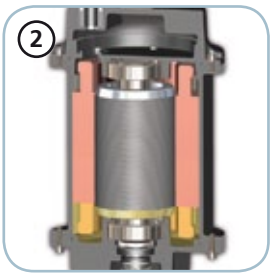
DGP





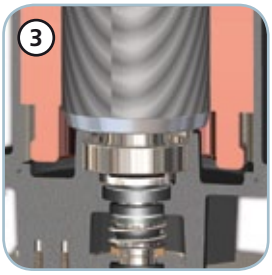
Structure

Constructed in GJL-250 cast iron.



Motor

Oil-bath motor with thermal protections.



Bearings

Shielded ball bearings with lifetime autolubrication.



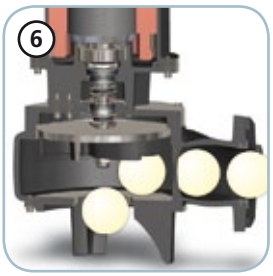
Mechanical seals

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.



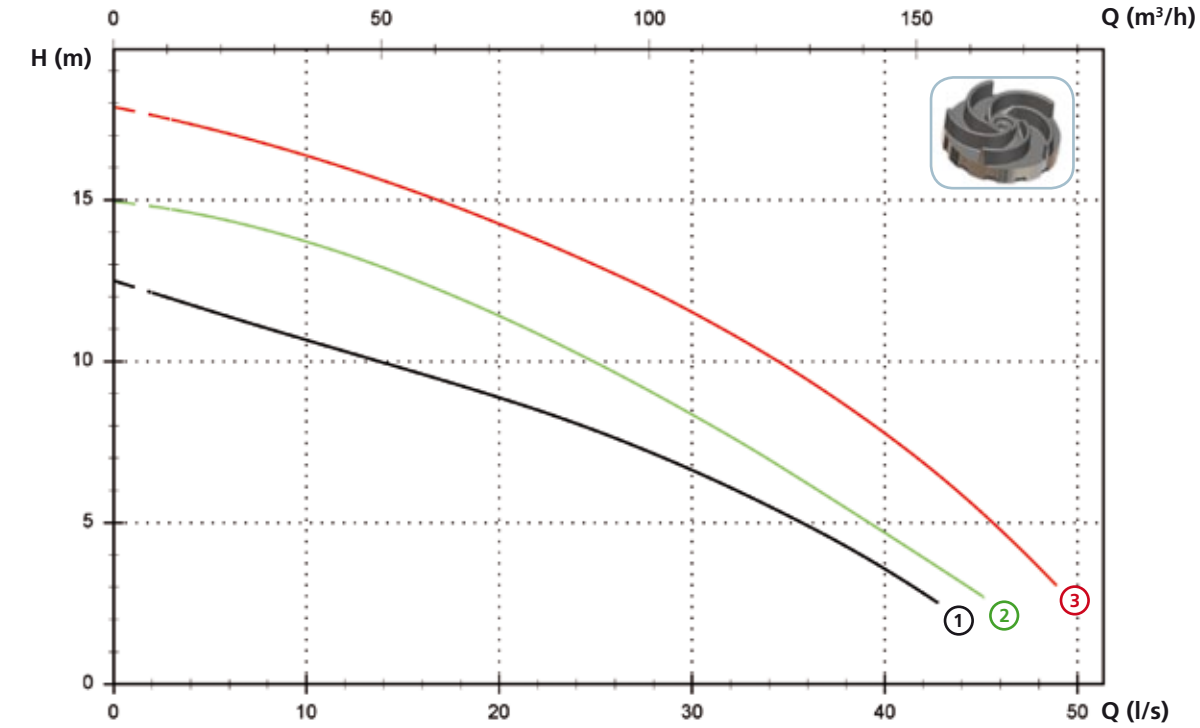
Free passage

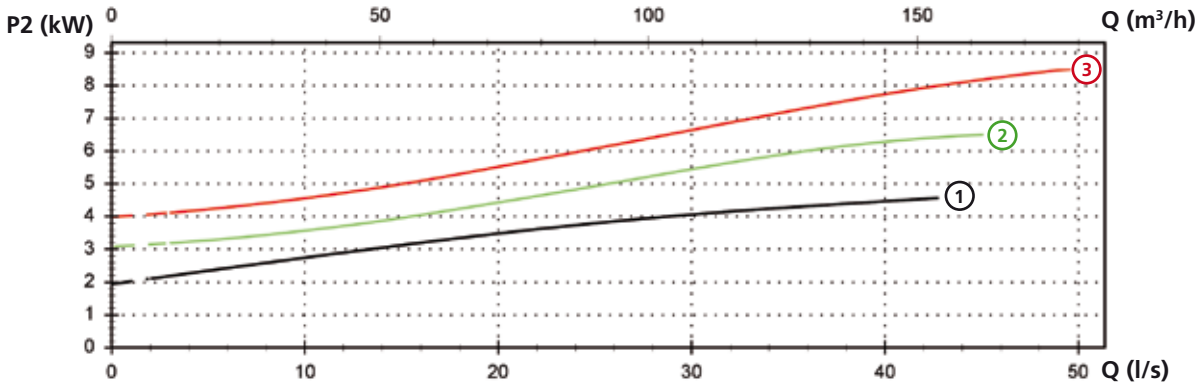
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

DGP

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

Performances





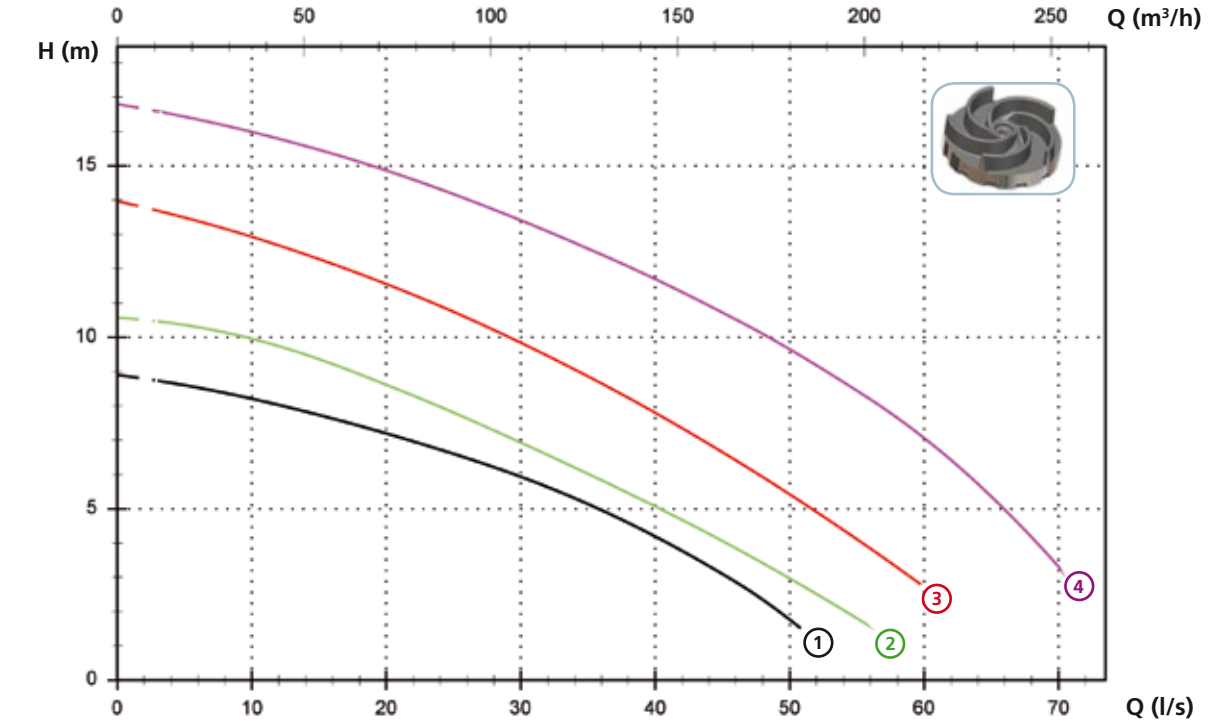
Technical data

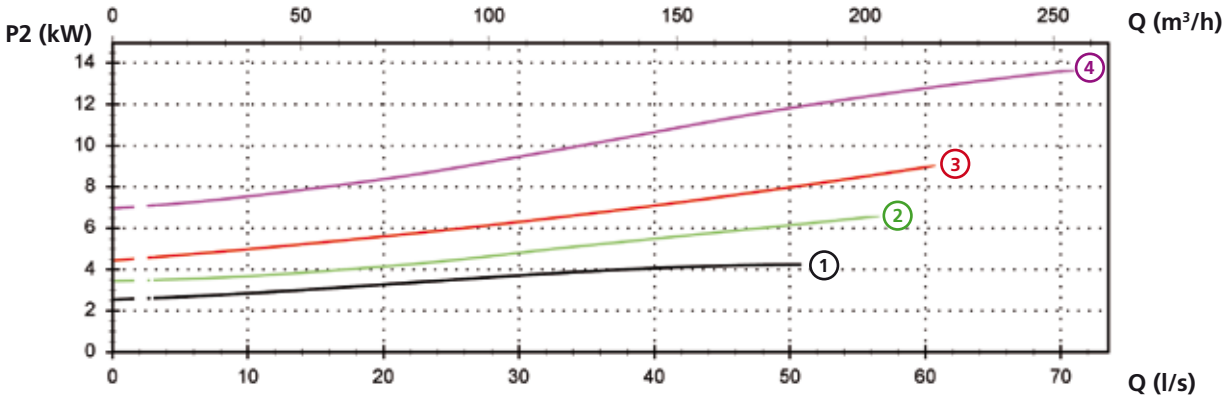
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGP 550/4/80 A0GT/50	400	3	5.9	4.6	10.1	1450	Dir	DN80 PN10-16	60 mm
(2) DGP 750/4/80 A0HT/50	400	3	8.6	6.5	14.9	1450	YΔ	DN80 PN10-16	60 mm
(3) DGP 1000/4/80 A0HT/50	400	3	11.5	8.9	20	1450	YΔ	DN80 PN10-16	60 mm

DGP

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

Performances





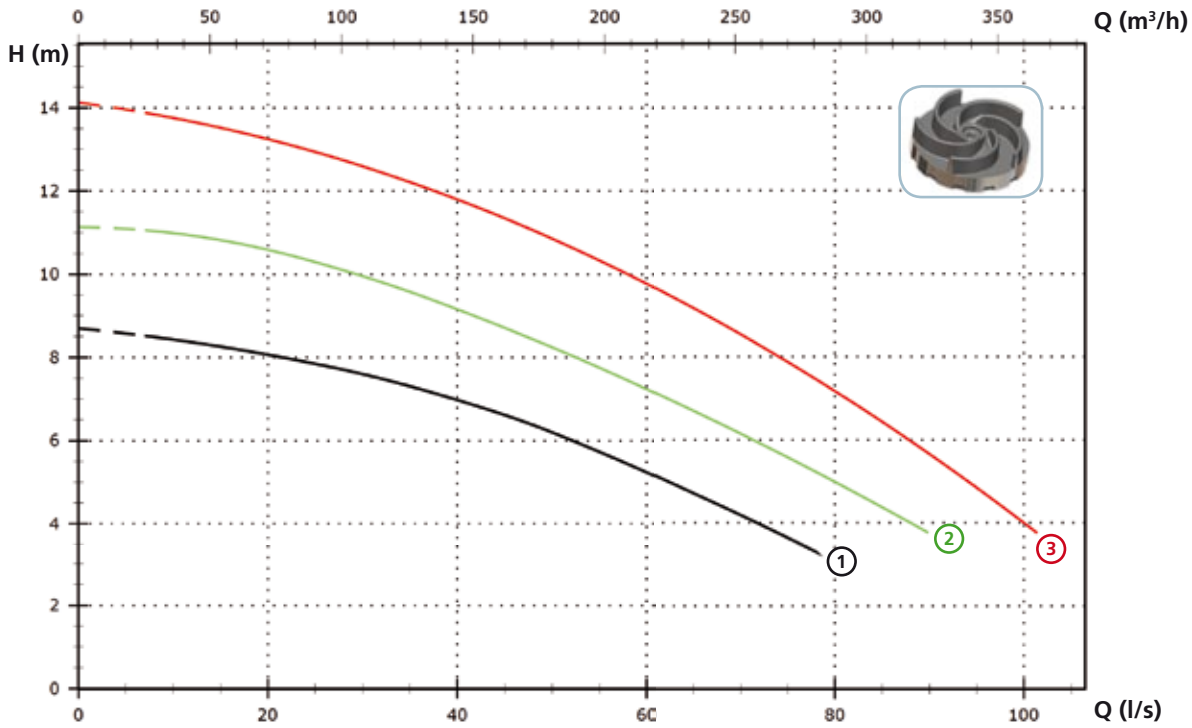
Technical data

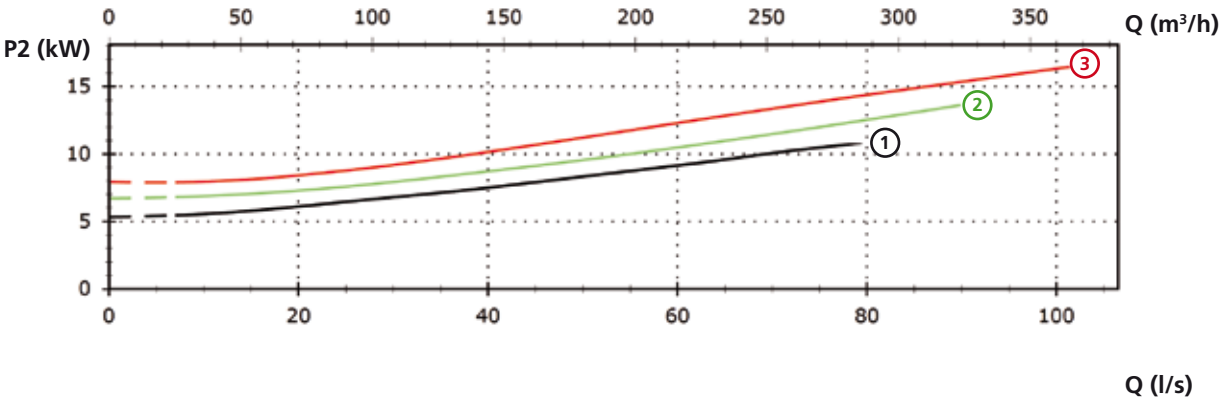
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGP 550/4/100 A0GT/50	400	3	5.9	4.6	10.1	1450	Dir	DN100 PN10-16	80 mm
2	DGP 750/4/100 A0HT/50	400	3	8.6	6.5	14.9	1450	YΔ	DN100 PN10-16	85 mm
3	DGP 1000/4/100 A0HT/50	400	3	11.5	8.9	20	1450	YΔ	DN100 PN10-16	85 mm
4	DGP 1500/4/100 A0IT/50	400	3	15.8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

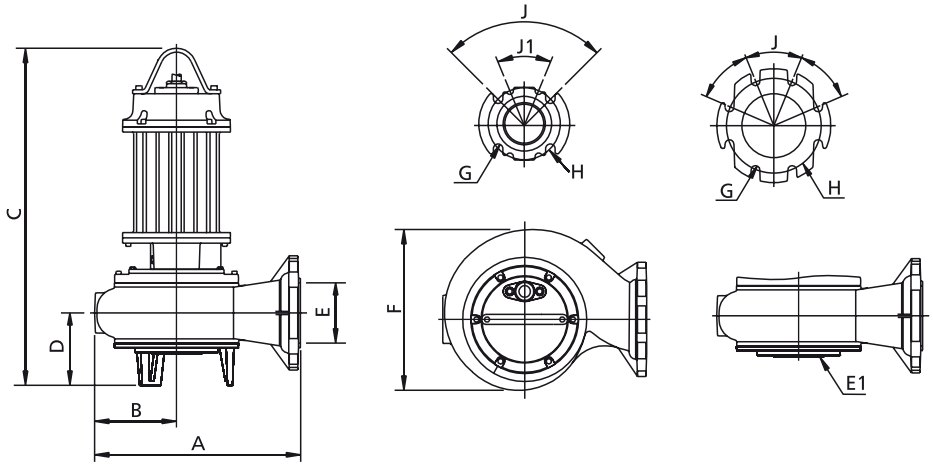
DGP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

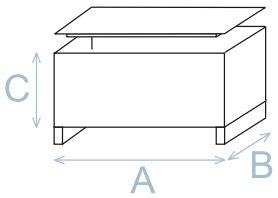
All weights and dimensions are indicative only

(*) Suction flange available upon request

DGP

Packaging dimension

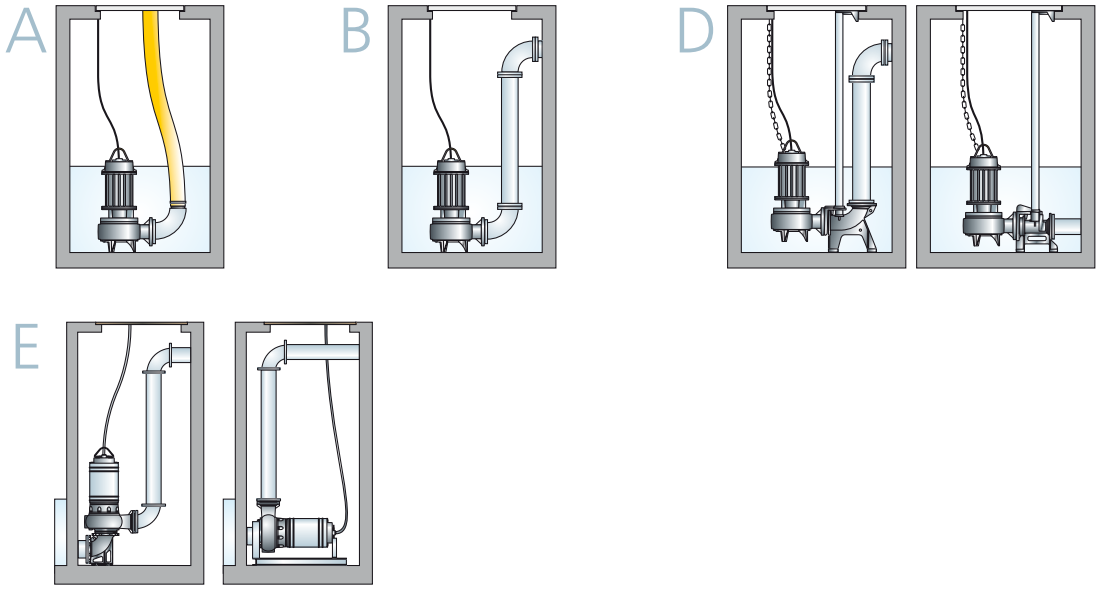
	A	B	C
DGP 550/4/80 A0GT/50	725	445	415
DGP 750/4/80 A0HT/50	915	515	555
DGP 1000/4/80 A0HT/50	915	515	555
DGP 550/4/100 A0GT/50	725	445	415
DGP 750/4/100 A0HT/50	915	515	555
DGP 1000/4/100 A0HT/50	915	515	555
DGP 1500/4/100 A0IT/50	915	515	555
DGP 1000/4/125 A0HT/50	915	515	555
DGP 1500/4/125 A0IT/50	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)

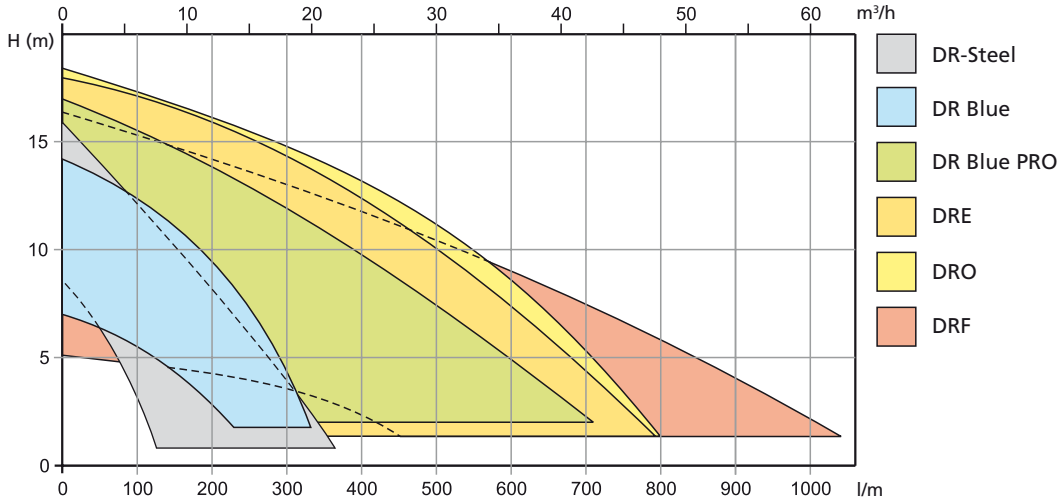
Pumps with multi-channel open impeller

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.

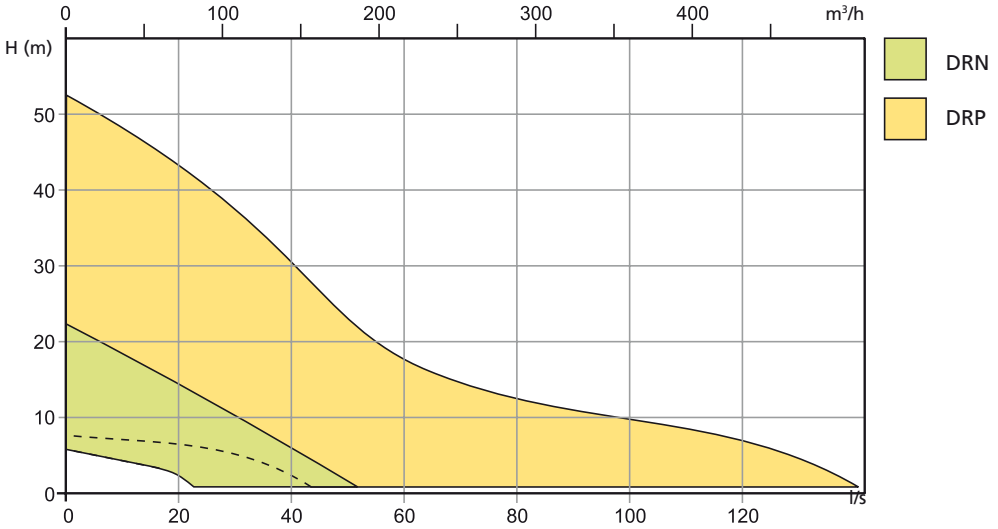




1.1 ÷ 19.3 kW

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

page 104

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.

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



All product images are indicative only

Stainless steel pumps for drainage

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

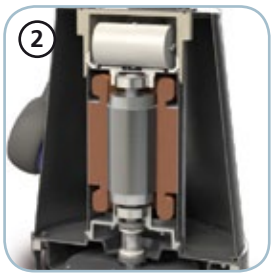
Maximum operating temperature	40°C (90°C max 3 min)
PH of treated fluid	6 - 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	10 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	<70 dB
max starts per hour	30





Lifting handle

Chrome-nickel steel AISI 304.



Cooling system

As for the internal ricycle 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 shimming.



Impeller

Chrome-nickel steel AISI 304.



Optional

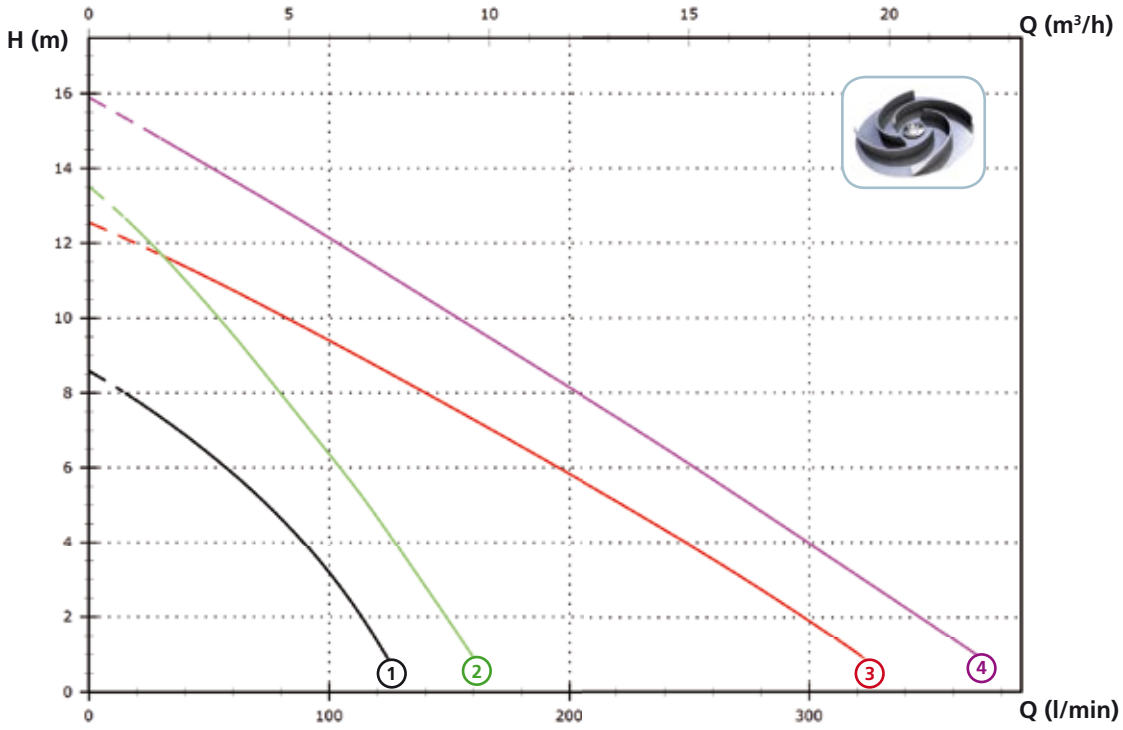
Vertically sliding level regulator, recommended for installation in small wells.

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

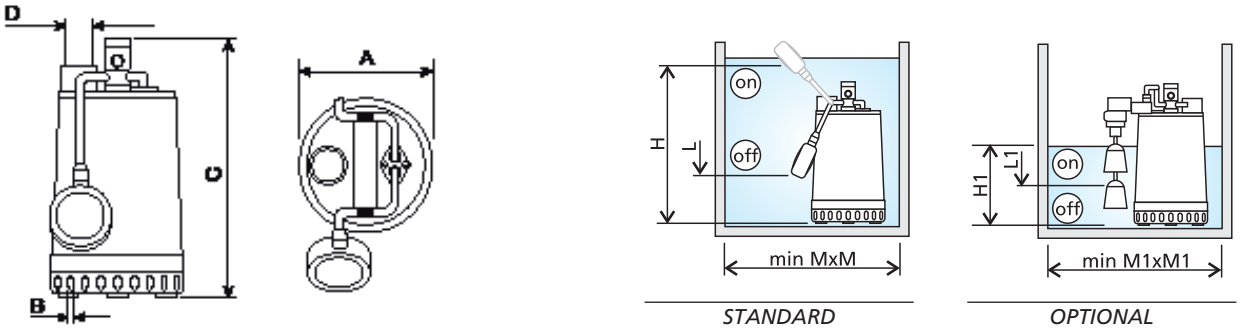
DR-STEEL

Versions available

(Key to versions on page 16)

	Electrical variants													Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TCW	TS	TR	TRG	N	CC CCE	FT	CGFT	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



	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

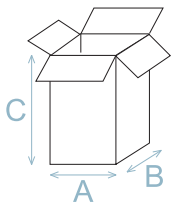
Dimensions in mm

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

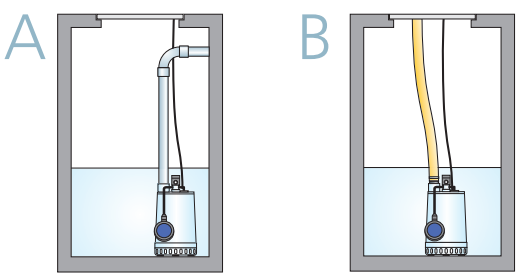
All weights and dimensions are indicative only

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



DR Blue



All product images are indicative only

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

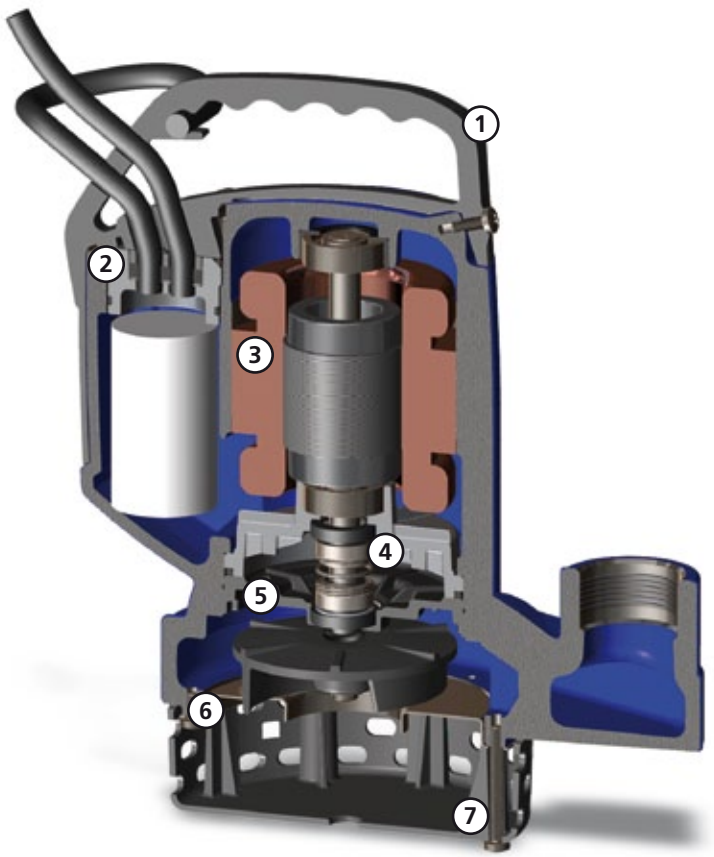
Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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 Blue





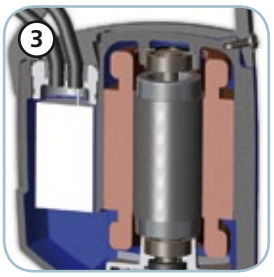
Lifting handle

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.



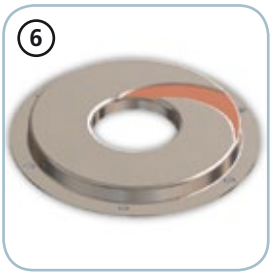
Mechanical seals

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

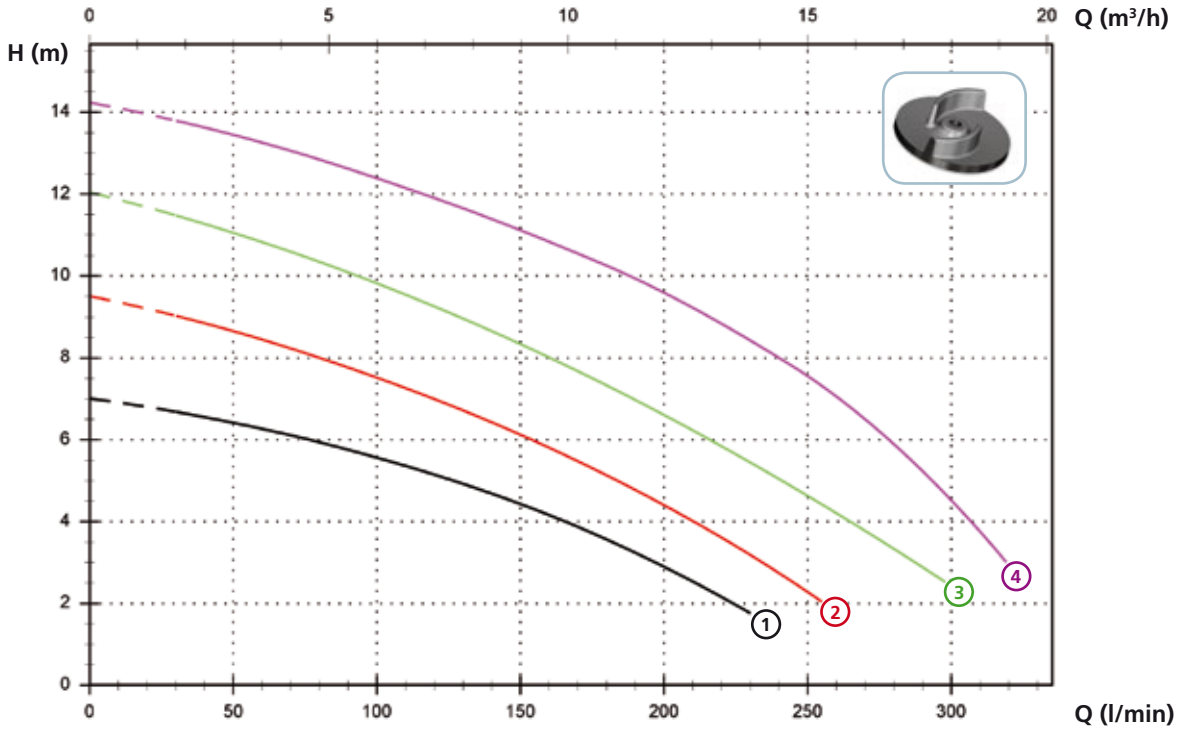
Intake strainer in impact-resistant polypropylene.

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

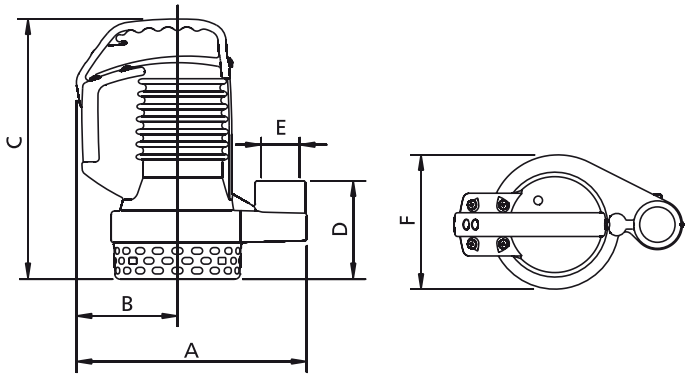
DR Blue

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

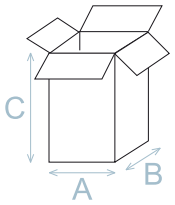


	A	B	C	D	E	F	kg
DR Blue 40/2/G32V A1BM/50	255	115	295	110	G 1¼"	150	11.5
DR Blue 50/2/G32V A1BM/50	255	115	295	110	G 1¼"	150	12
DR Blue 75/2/G32V A1BM/50	255	115	325	110	G 1¼"	150	13.5
DR Blue 100/2/G32V A1BM/50	255	115	325	110	G 1¼"	150	15.5

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

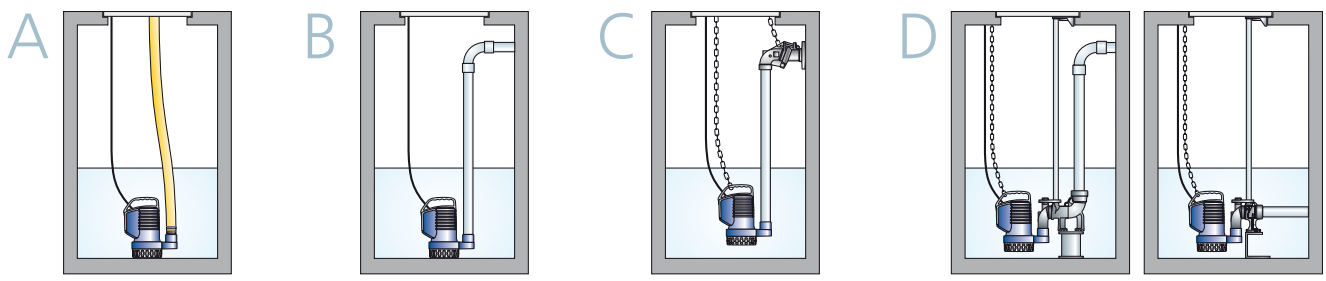


Dimension in mm *All weights and dimensions are indicative only*

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



All product images are indicative only

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

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

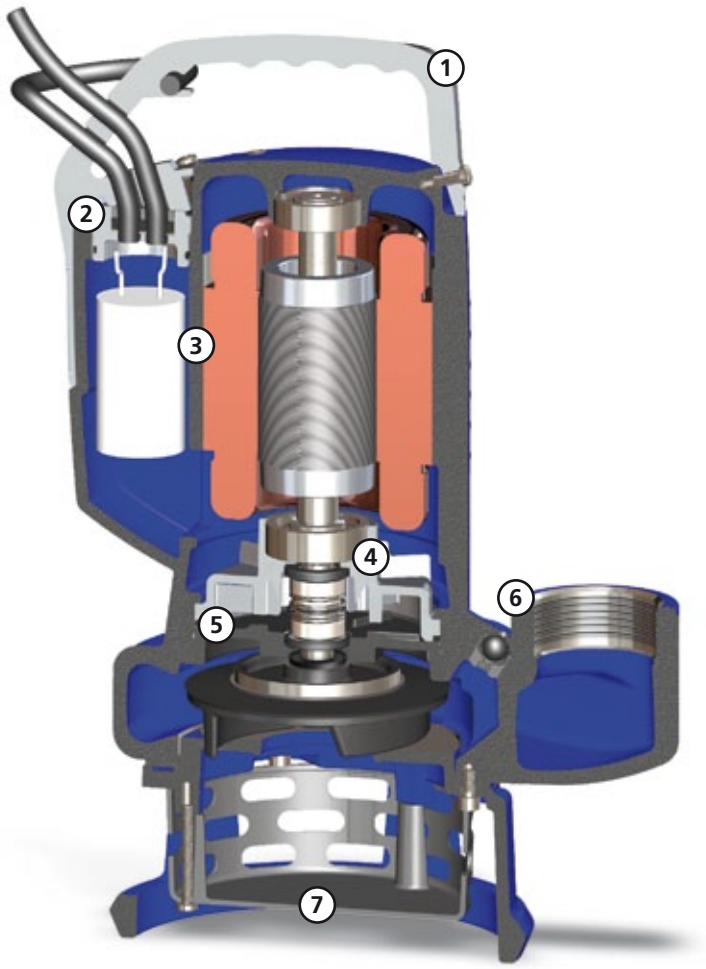
Case	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Paint type	Ecological bicomponent epoxy (medium thickness 80 µm)
Set of standard mechanical seals	Two silicon carbide mechanical seals (2SiC),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

Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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





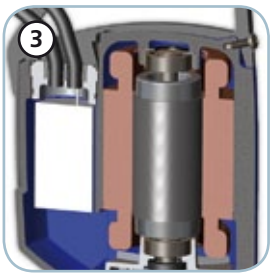
Lifting handle

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).



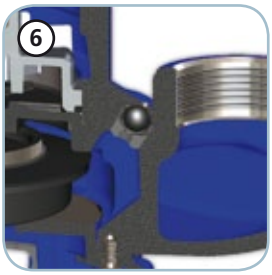
Mechanical seals

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

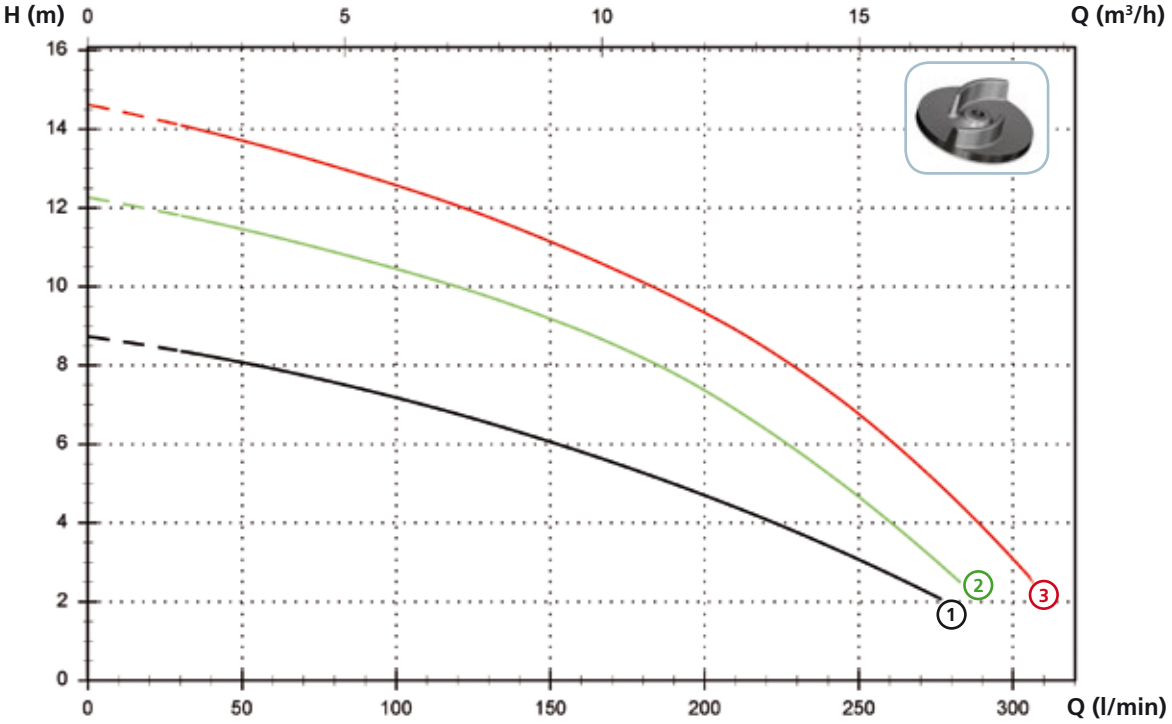
Stainless steel intake strainer and diffuser plate (models 50, 75 and 100). Polypropylene intake strainer with cast iron diffuser plate and foot (models 150 and 200).

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
	m^3/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

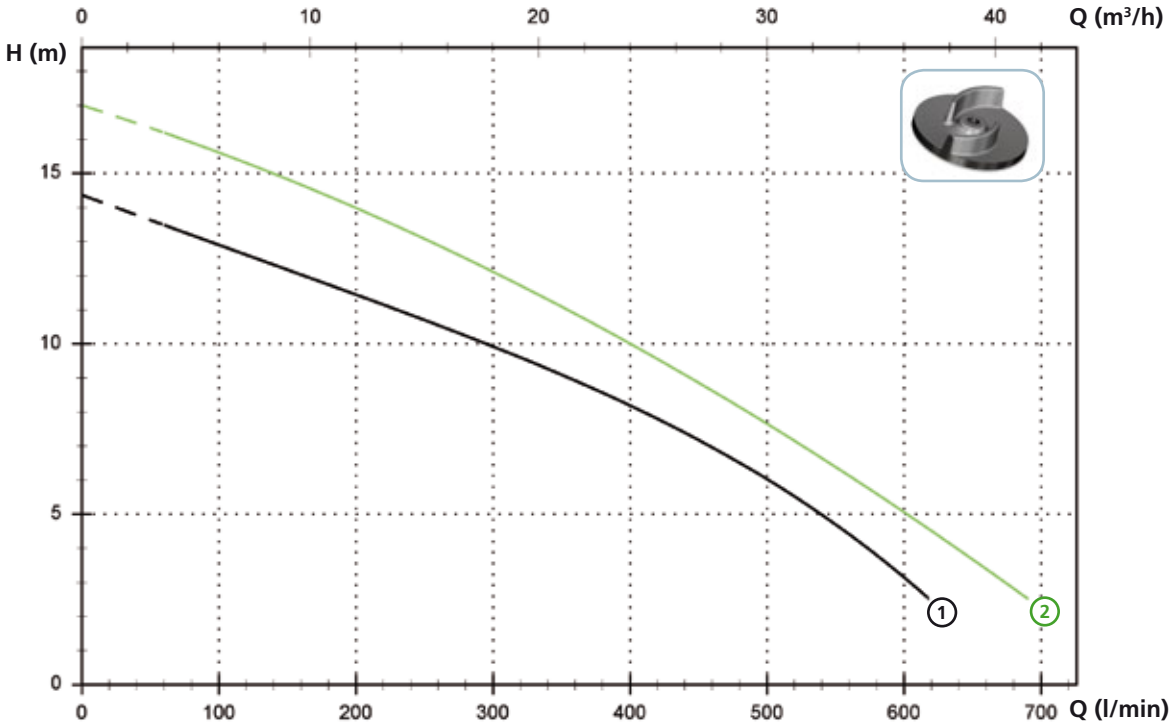
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DR BluePRO 50/2/G32V A1BT/50	400	3	-	0.37	1.15	2900	Dir	G 1¼"	15 mm
2	DR BluePRO 75/2/G32V A1BT/50	400	3	-	0.55	1.6	2900	Dir	G 1¼"	15 mm
3	DR BluePRO 100/2/G32V A1BT/50	400	3	-	0.74	2.15	2900	Dir	G 1¼"	15 mm

DR BluePRO

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

Performances

	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 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

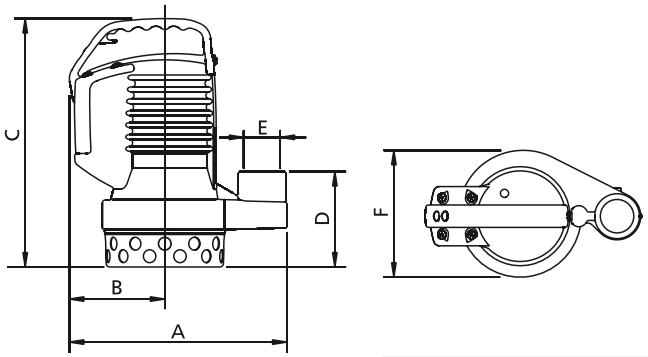
DR BluePRO

Versions available

(Key to versions on page 16)

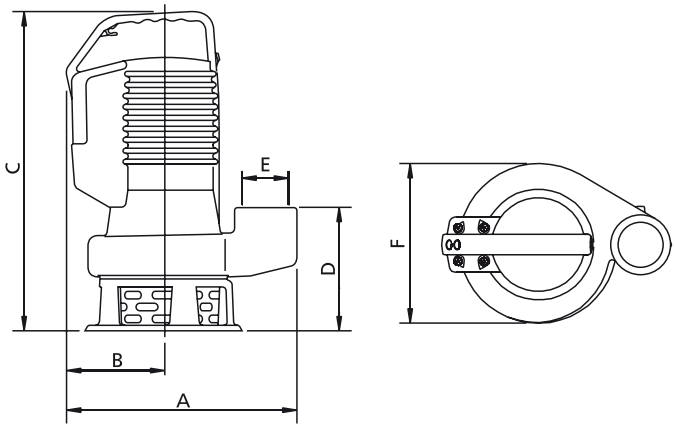
	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	2SIC	SICM	SICAL	2SICAL
DR BluePRO 50/2/G32V A1BM/50			●				●						●				●			
DR BluePRO 75/2/G32V A1BM/50			●				●						●				●			
DR BluePRO 100/2/G32V A1BM/50			●				●						●				●			
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 1¼"	150	12
DR BluePRO 75/2/G32V A1BM(T)/50	255	115	320	110	G 1¼"	150	13.5
DR BluePRO 100/2/G32V A1BM(T)/50	255	115	320	110	G 1¼"	150	14

Dimensions in mm *All weights and dimensions are indicative only*



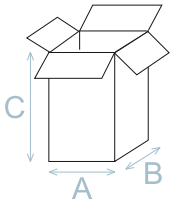
	A	B	C	D	E	F	kg
DR BluePRO 150/2/G50V A1CM(T)/50	295	125	420	170	G 2"	200	23
DR BluePRO 200/2/G50V A1CM(T)/50	295	125	420	170	G 2"	200	24

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



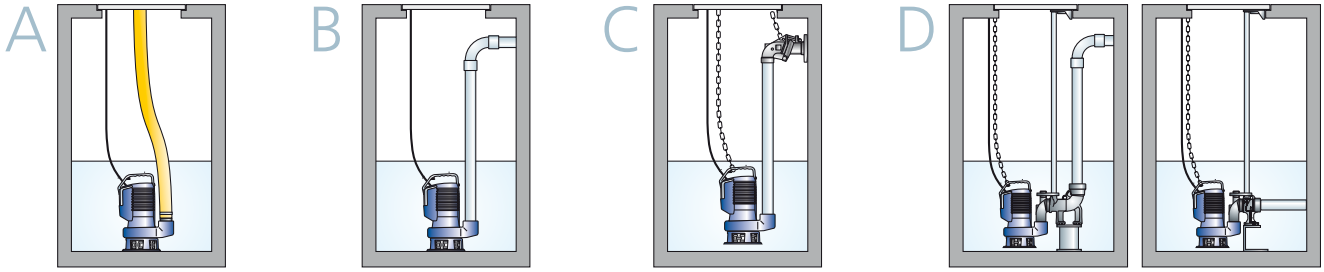
Dimension in mm

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



All product images are indicative only

Multi-channel open impeller

General characteristics

Multi-channel open impeller	
motor power	0,37 ÷ 1,5 kW
poles	2
delivery port	GAS 1¼"- 2" vertical 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.

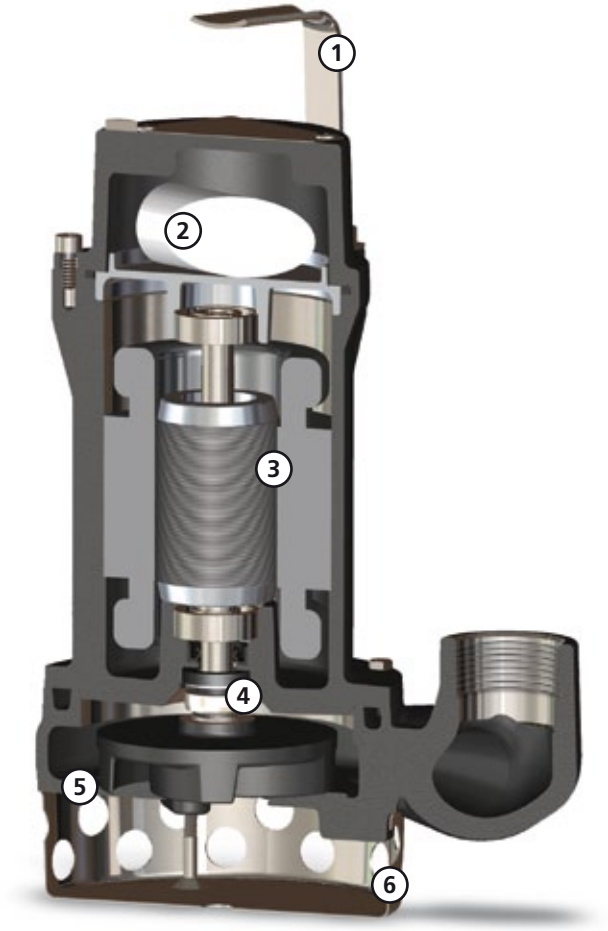
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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

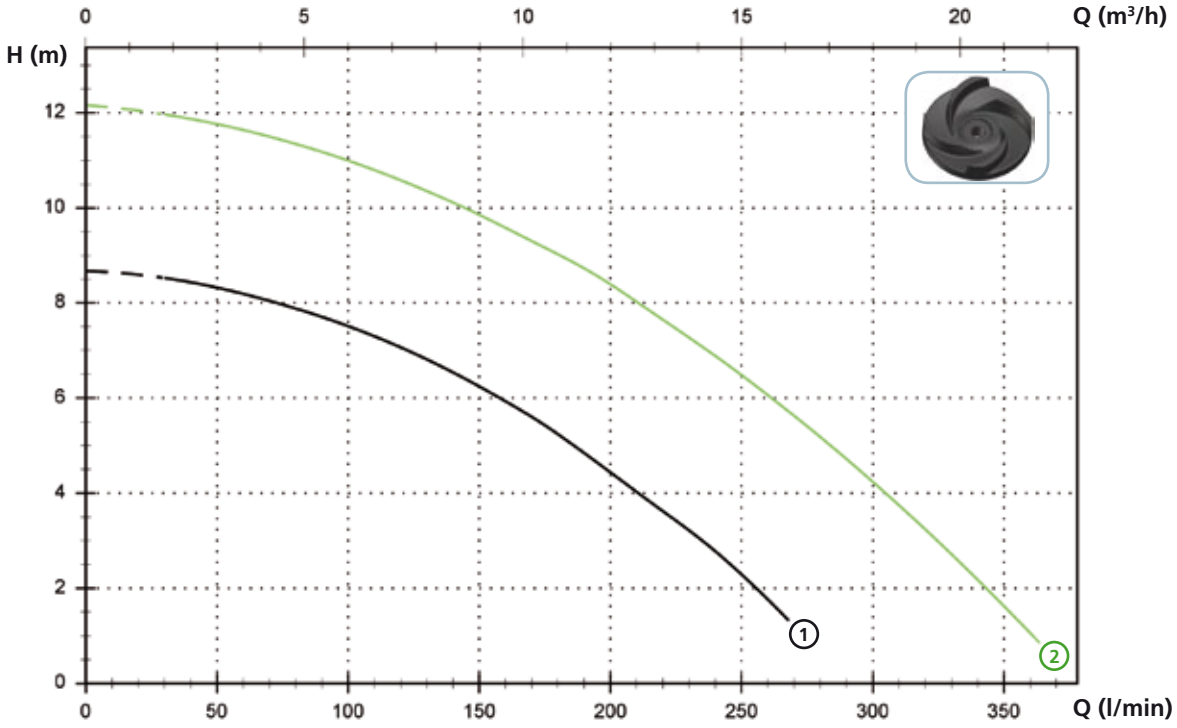
Intake strainer in stainless steel.

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

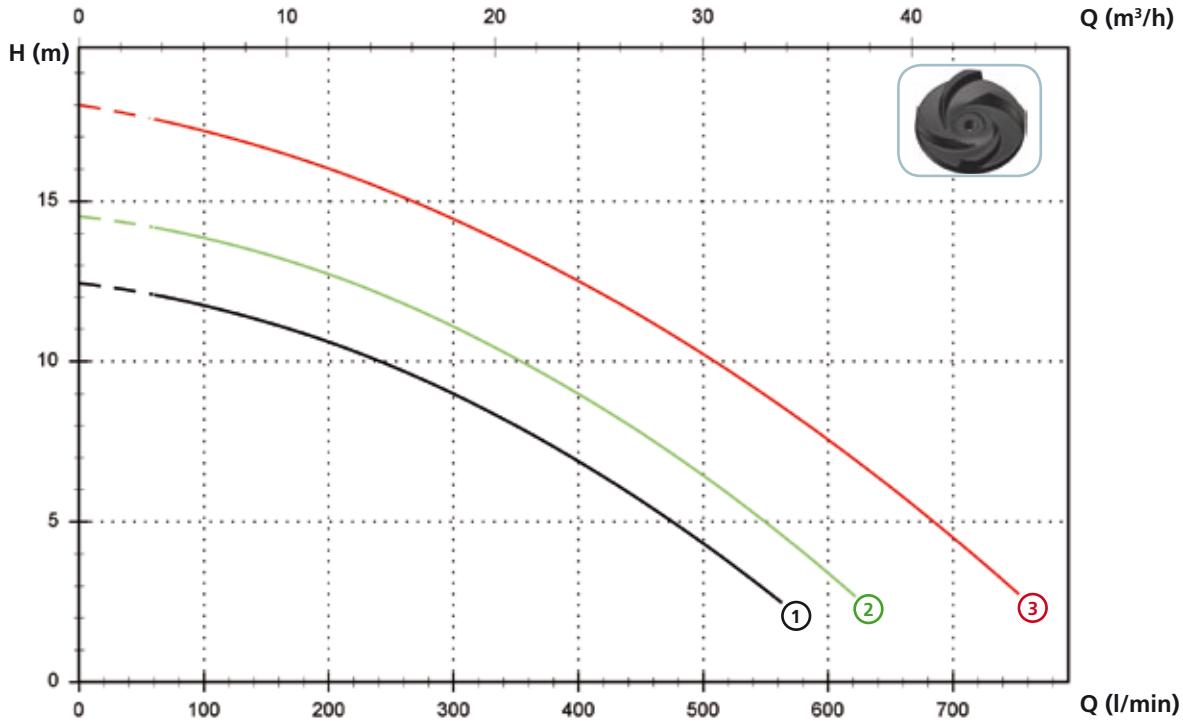
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
①	DRE 50/2/G32V A0BM/50	230	1	-	0.37	2.8	2900	Dir	G 1¼"	15 mm
②	DRE 75/2/G32V A0BM/50	230	1	-	0.55	3.8	2900	Dir	G 1¼"	15 mm

		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
	m³/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

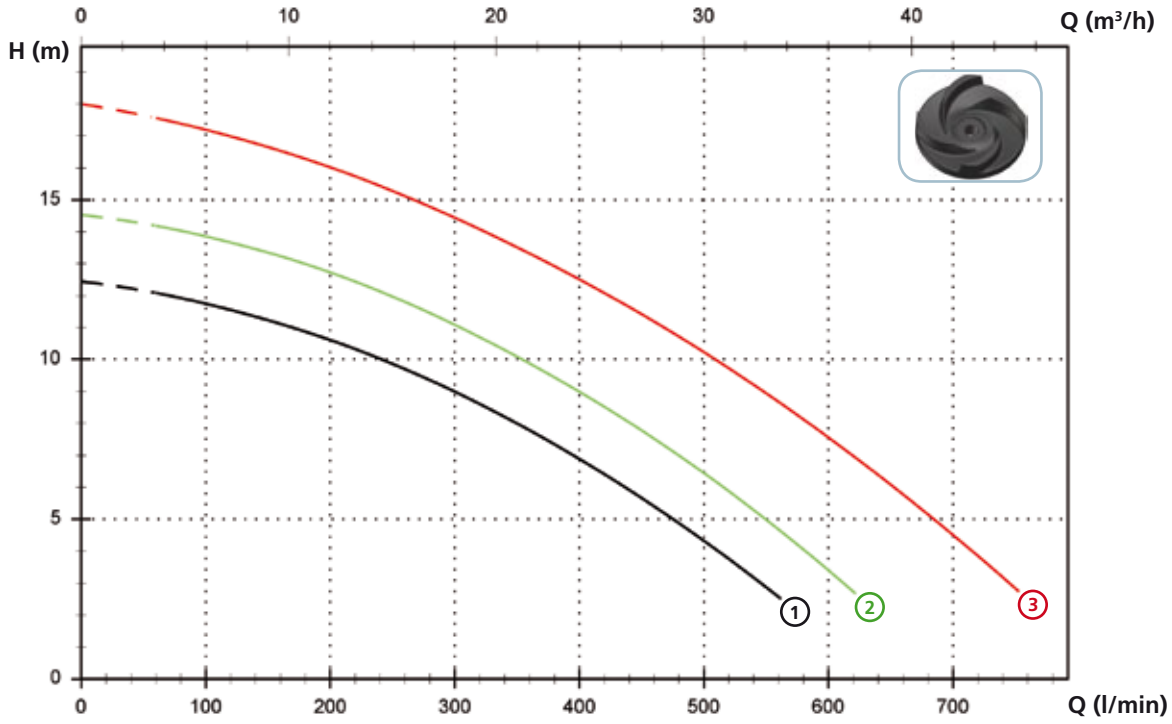
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DRE 100/2/G50V A0CT/50	400	3	-	0.88	2.3	2900	Dir	G 2"	15 mm
(2) DRE 150/2/G50V A0CT/50	400	3	-	1.1	2.7	2900	Dir	G 2"	15 mm
(3) DRE 200/2/G50V A0CT/50	400	3	-	1.5	3.5	2900	Dir	G 2"	15 mm

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
	m³/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

DRE

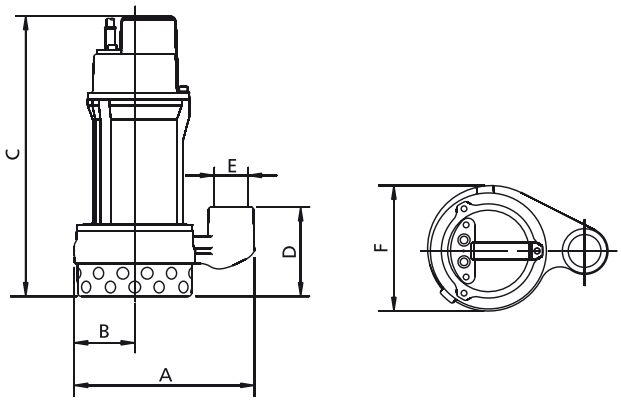
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



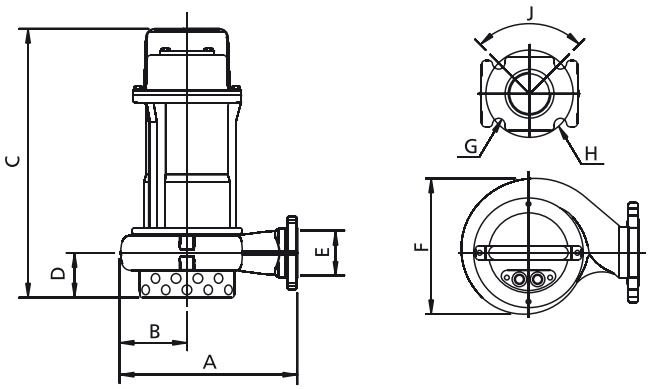
	A	B	C	D	E	F	kg
DRE 50/2/G32V A0BM(T)/50	215	70	335	105	G 1¼"	150	11
DRE 75/2/G32V A0BM (T)/50	215	70	335	105	G 1¼"	150	13
DRE 100/2/G50V A0CM (T)/50	265	100	385	125	G 2"	190	19
DRE 150/2/G50V A0CM (T)/50	265	100	385	125	G 2"	190	20
DRE 200/2/G50V A0CM (T)/50	265	100	385	125	G 2"	190	21

Measurements in mm

All weights and dimensions are indicative only

DRE

Models with horizontal delivery port

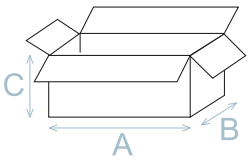


	A	B	C	D	E	F	G	H	J	kg
DRE 100/2/G50H A0CM (T)/50	255	95	385	65	G 2”-DN50	195	18	125	90°	19
DRE 150/2/G50H A0CM (T)/50	255	95	385	65	G 2”-DN50	195	18	125	90°	20
DRE 200/2/G50H A0CM (T)/50	255	95	385	65	G 2”-DN50	195	18	125	90°	21

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



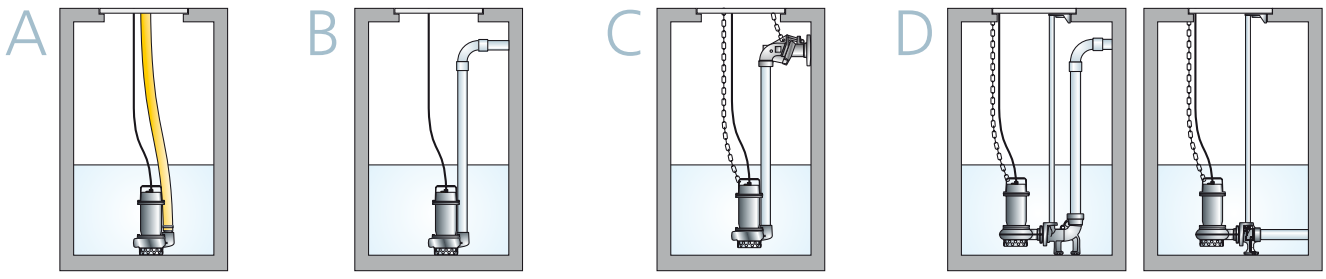
Dimension in mm

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




mm/inch ON 0 OFF
Mahr
IP67
90°
A
TIPOLOGIA IDRAULICA: PER GIR. A RASAM
INC. IDR. Ø129 - MANDATA Ø G50V
CORPO POMPA -L-
Gole non quotate: E 0,6x0,2 UNI 4386-75
Tolleranza profondità utile filettature ±0,5
Materiale
02
Scala
1:1

DRO



All product images are indicative only

Multi-channel open impeller

General characteristics

Multi-channel open impeller	
motor power	0,37 ÷ 1,5 kW
poles	2
discharge	GAS 1¼" - 2" vertical 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

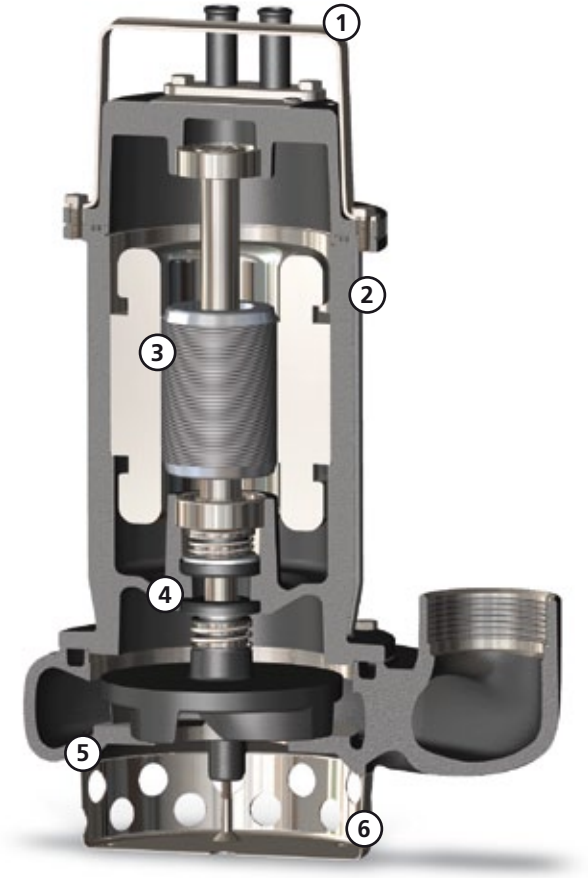
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DRO





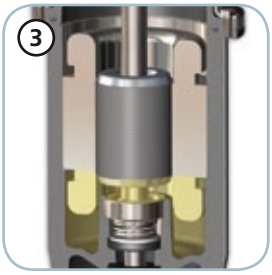
Handle

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

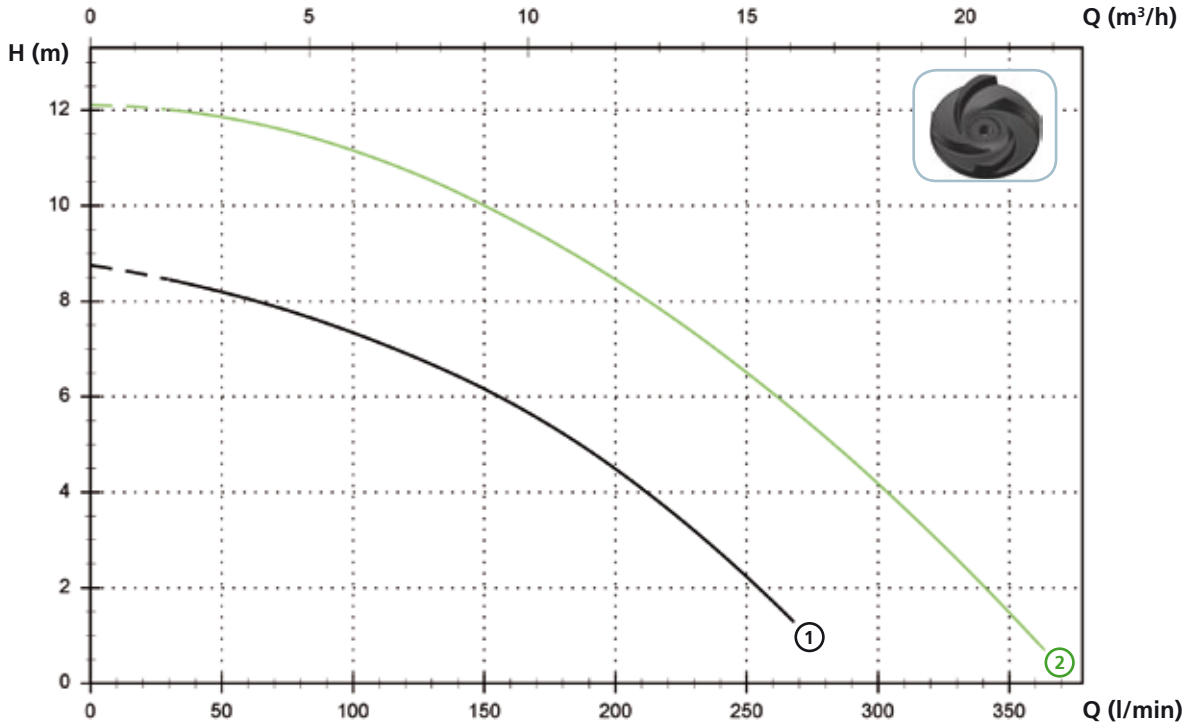
Intake strainer in stainless steel.

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

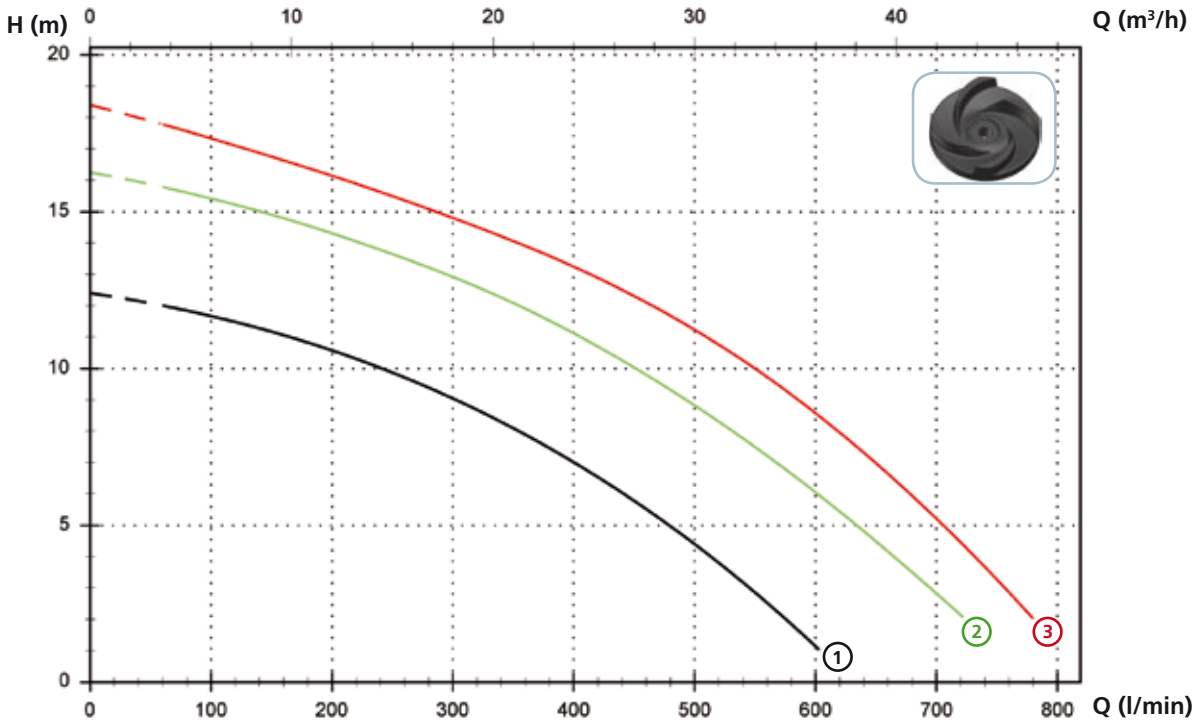
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
①	DRO 50/2/G32V A0CM/50	230	1	-	0.37	2.9	2900	Dir	G 1¼"	15 mm
②	DRO 75/2/G32V A0CM/50	230	1	-	0.55	3.9	2900	Dir	G 1¼"	15 mm

		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

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

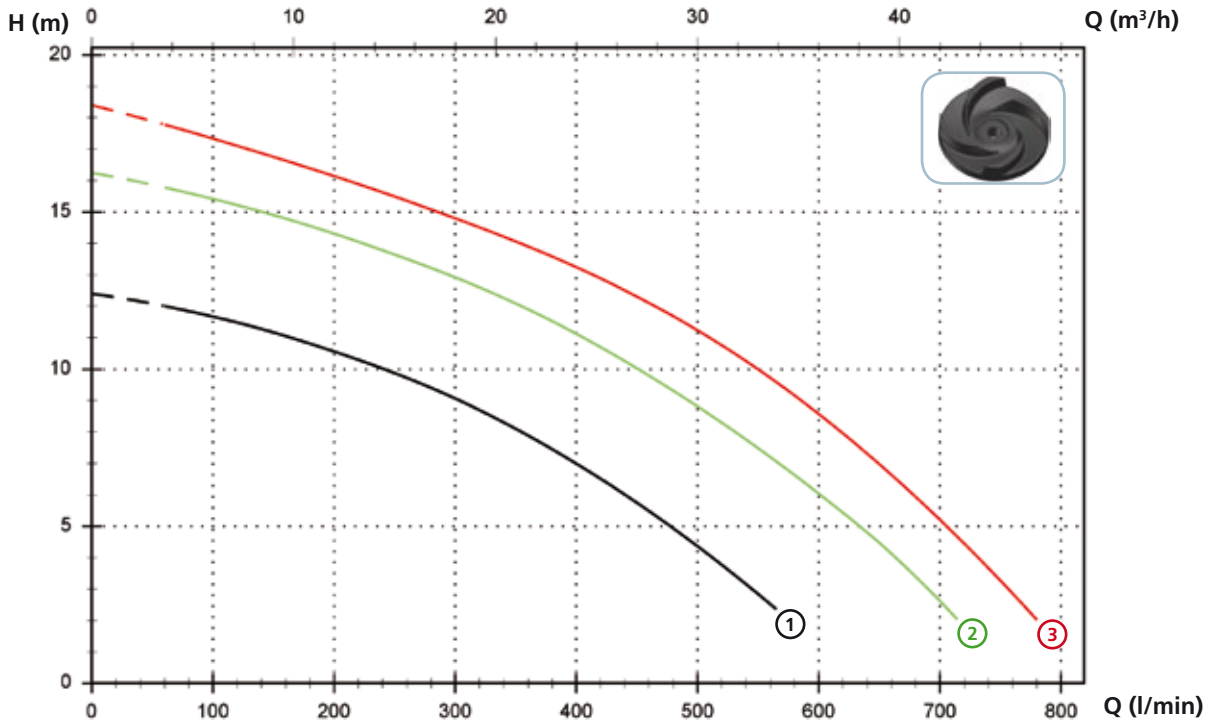
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
①	DRO 100/2/G50V A0CT/50	400	3	-	0.88	2.3	2900	Dir	G 2"	15 mm
②	DRO 150/2/G50V A0CT/50	400	3	-	1.1	2.7	2900	Dir	G 2"	15 mm
③	DRO 200/2/G50V A0CT/50	400	3	-	1.5	3.5	2900	Dir	G 2"	15 mm

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
	m³/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

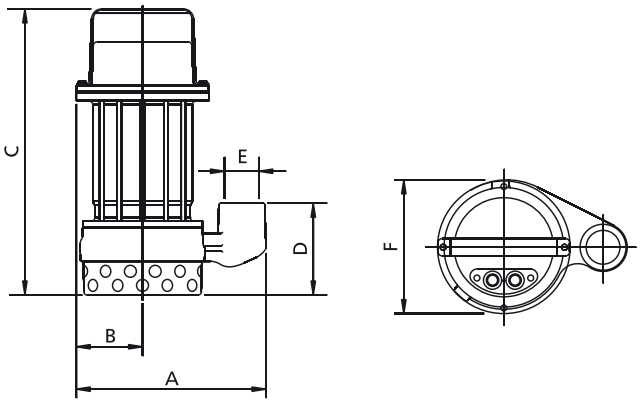
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



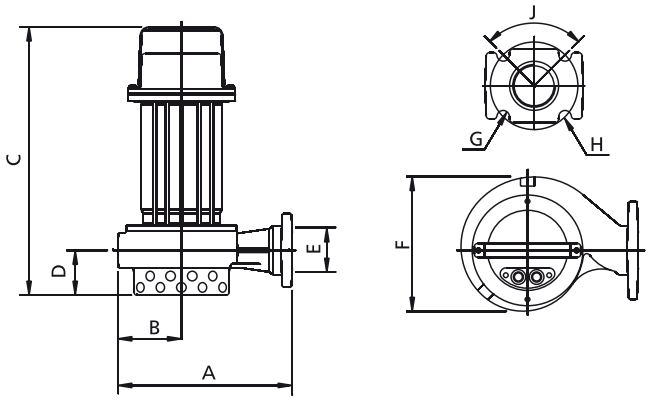
	A	B	C	D	E	F	kg
DRO 50/2/G32V A0CM(T)/50	220	75	330	105	G 1¼"	155	15
DRO 75/2/G32V A0CM(T)/50	220	75	330	105	G 1¼"	155	15.5
DRO 100/2/G50V A0CM(T)/50	260	95	385	125	G 2"	195	19.5
DRO 150/2/G50V A0CM(T)/50	260	95	385	125	G 2"	195	20.5
DRO 200/2/G50V A0CM(T)/50	260	95	385	125	G 2"	195	21.5

Dimensions in mm

All weights and dimensions are indicative only

DRO

Models with horizontal discharge



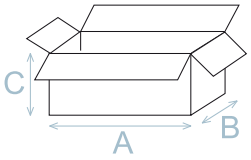
	A	B	C	D	E	F	G	H	J	kg
DRO 100/2/G50H A0CM(T)/50	250	90	385	65	G 2”-DN50	195	18	125	90°	19.5
DRO 150/2/G50H A0CM(T)/50	250	90	385	65	G 2”-DN50	195	18	125	90°	20.5
DRO 200/2/G50H A0CM(T)/50	250	90	385	65	G 2”-DN50	195	18	125	90°	21.5

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



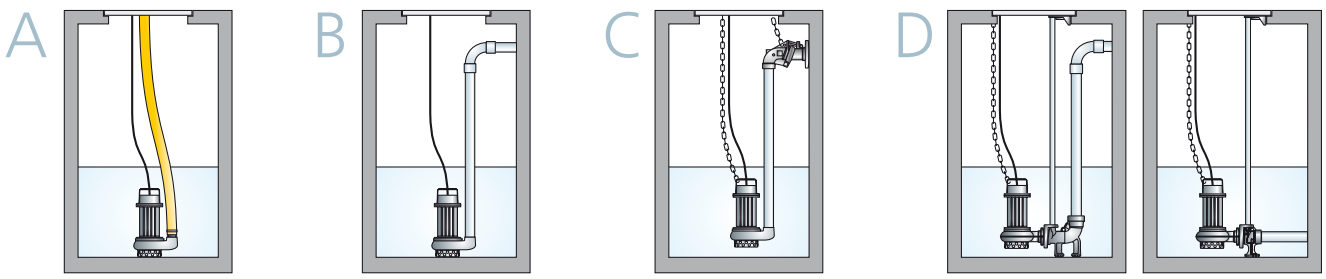
Dimension in mm

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



All product images are indicative only

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 GAS 1½"DN32 - GAS 2" DN50 horizontal DN65 ÷ DN100
free passage	max 50 mm
max flow rate	17.6 l/s
max head	16.5 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 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.

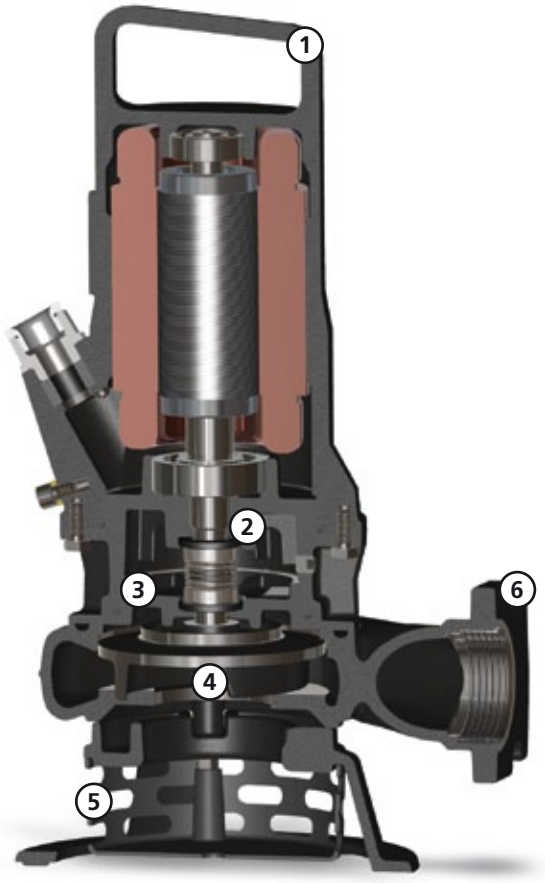
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DRF



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.



Mechanical seals

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



Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



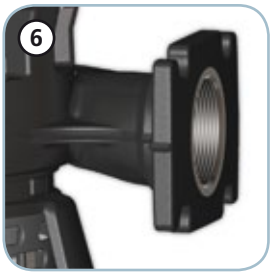
Drive shaft

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



Intake strainer

Intake strainer in tough polypropylene and cast iron feet.



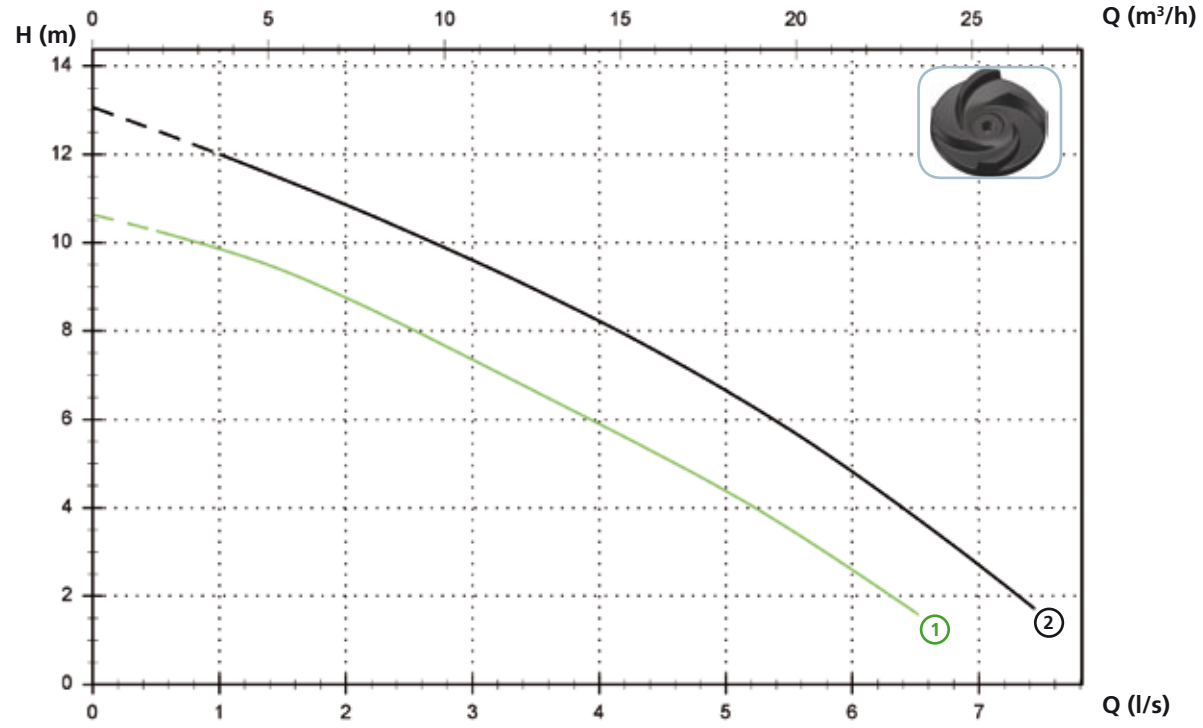
Discharge

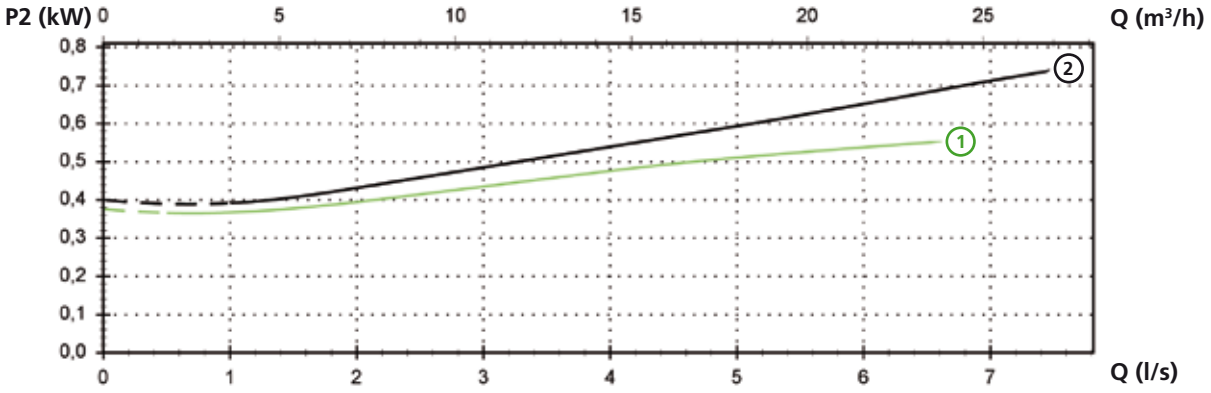
Threaded, flanged discharge for the maximum ease of installation.

DRF

Models with vertical GAS 1½" threaded discharge - 2 poles

Performances





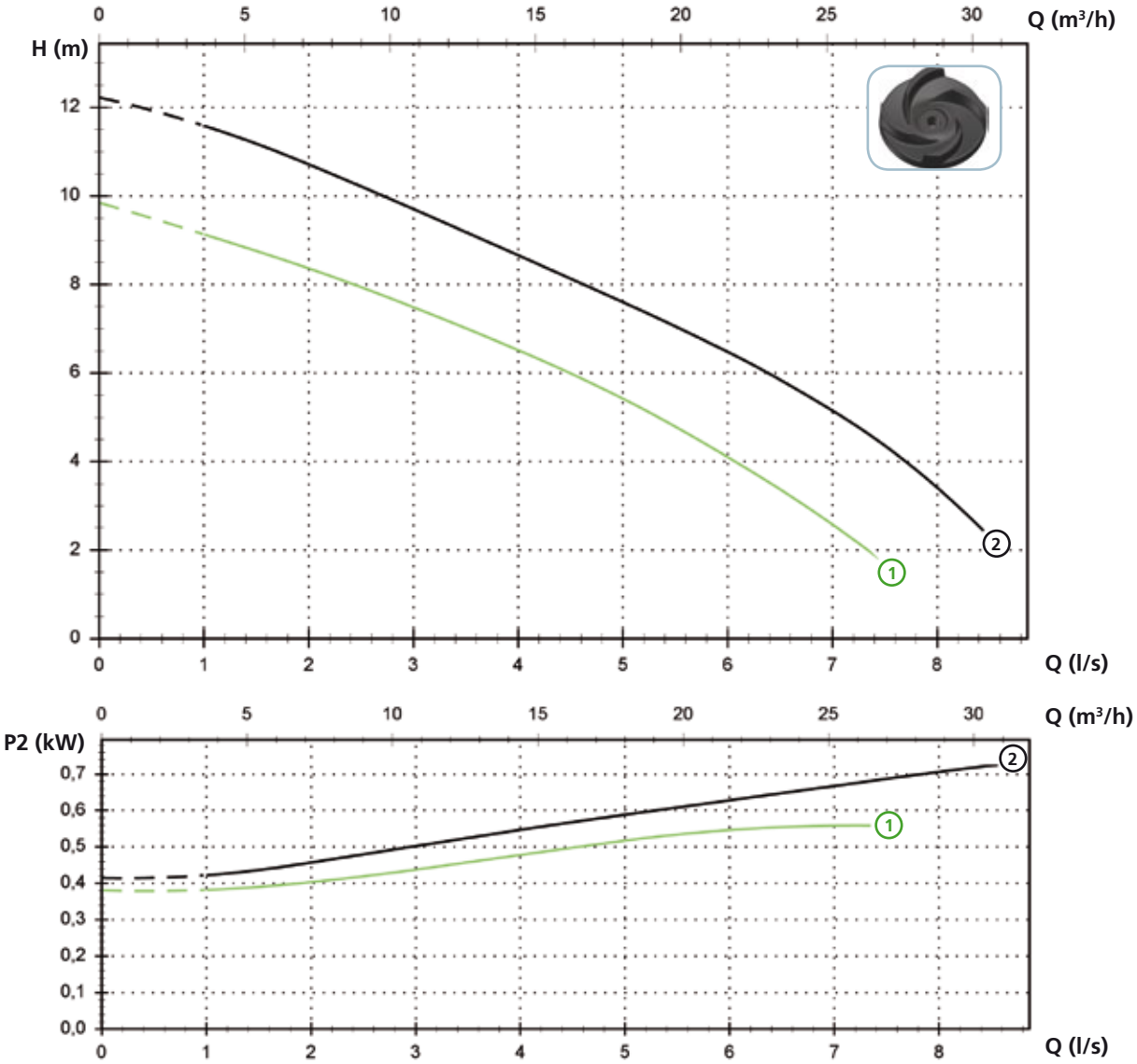
Technical data

	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

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

Performances



Technical data

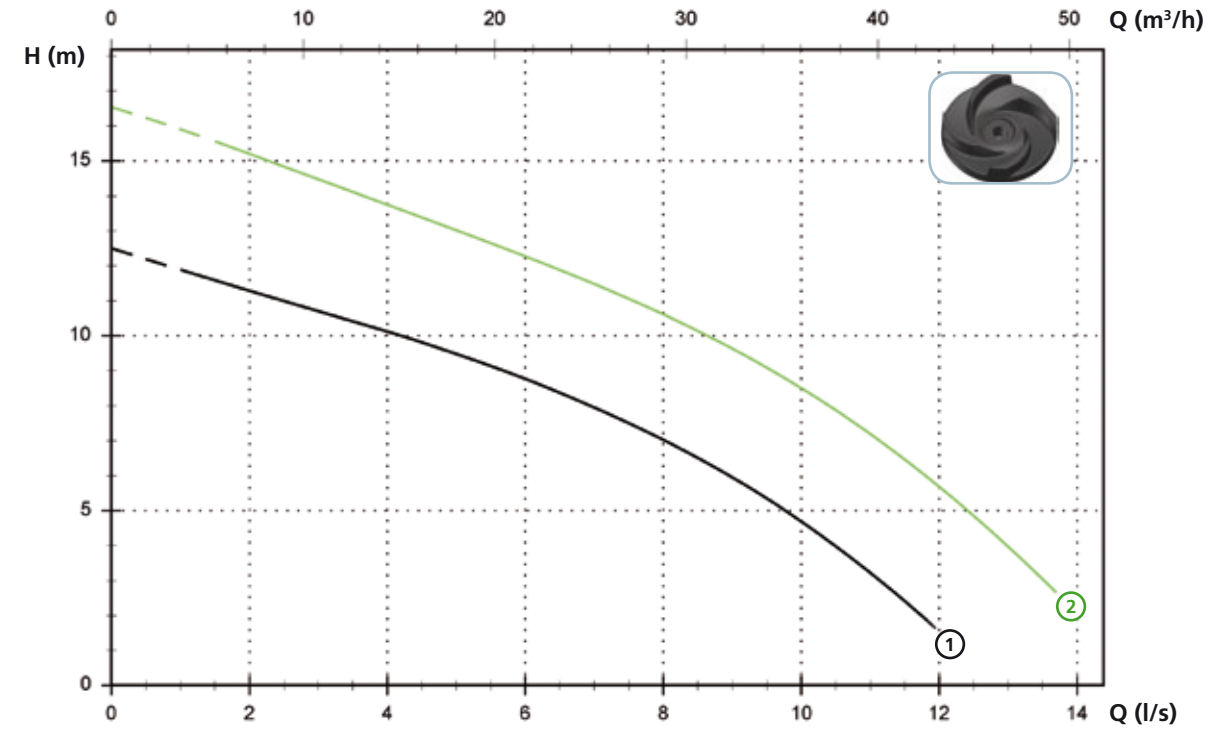
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRF 75/2/G40H A1CM/50	230	1	0.8	0.55	3.9	2900	Dir	G 1½" - DN32 PN6	10x30 mm
2	DRF 100/2/G40H A1CM/50	230	1	1.1	0.74	4.9	2900	Dir	G 1½" - DN32 PN6	10x30 mm

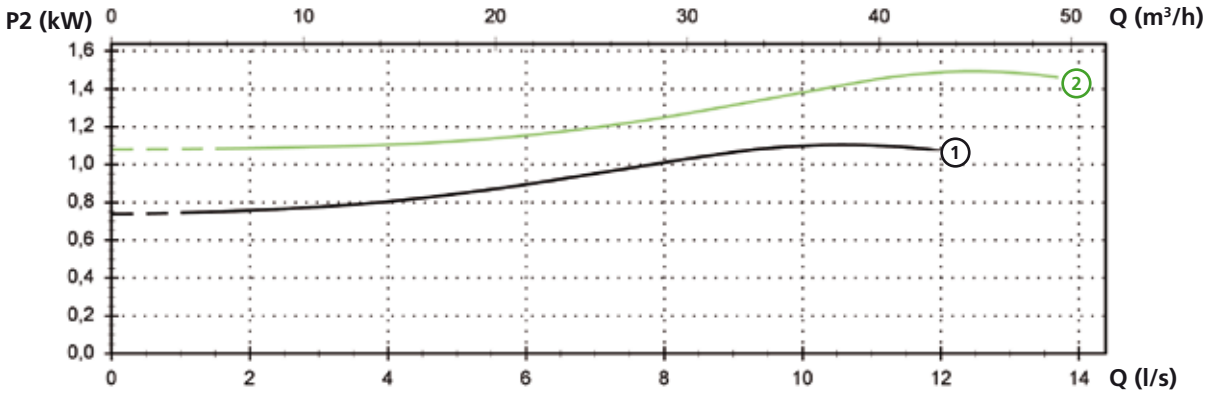
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRF 75/2/G40H A1CT/50	400	3	0.8	0.55	1.5	2900	Dir	G 1½" - DN32 PN6	10x30 mm
2	DRF 100/2/G40H A1CT/50	400	3	1.1	0.74	1.9	2900	Dir	G 1½" - DN32 PN6	10x30 mm

DRF

Models with vertical GAS 2" threaded discharge - 2 poles

Performances





Technical data

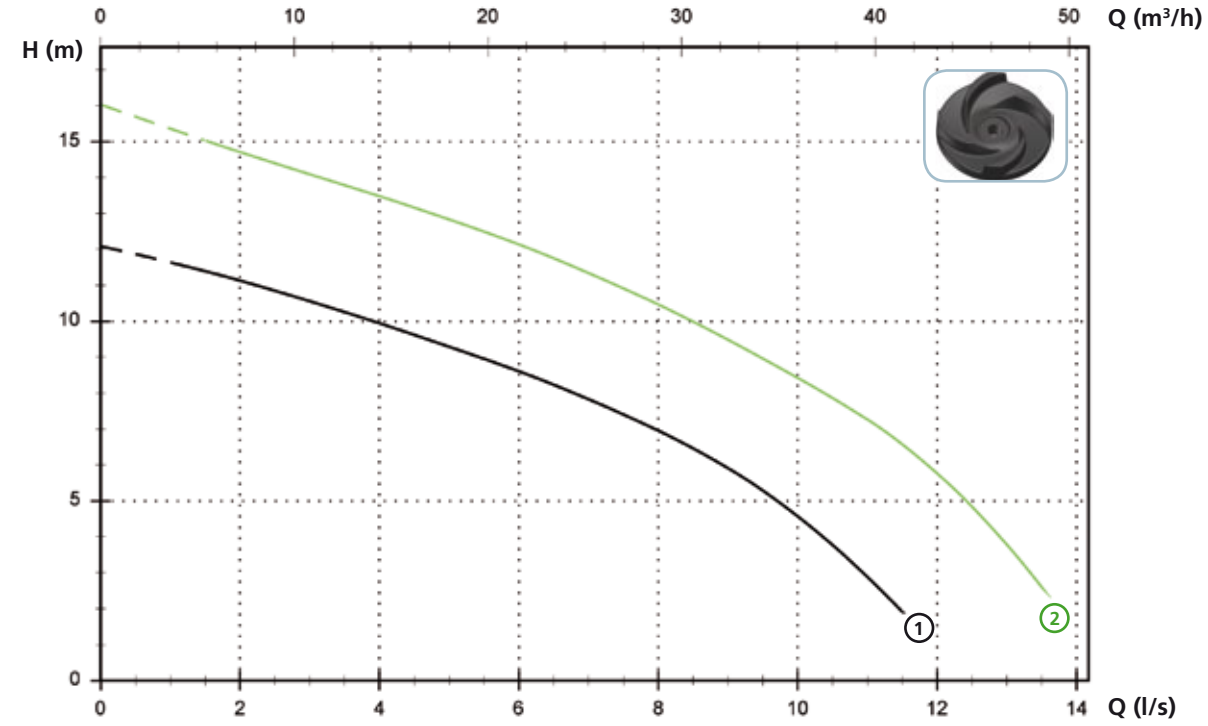
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DRF 150/2/G50V A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 2"	10x30 mm
(2) DRF 200/2/G50V A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	G 2"	10x30 mm

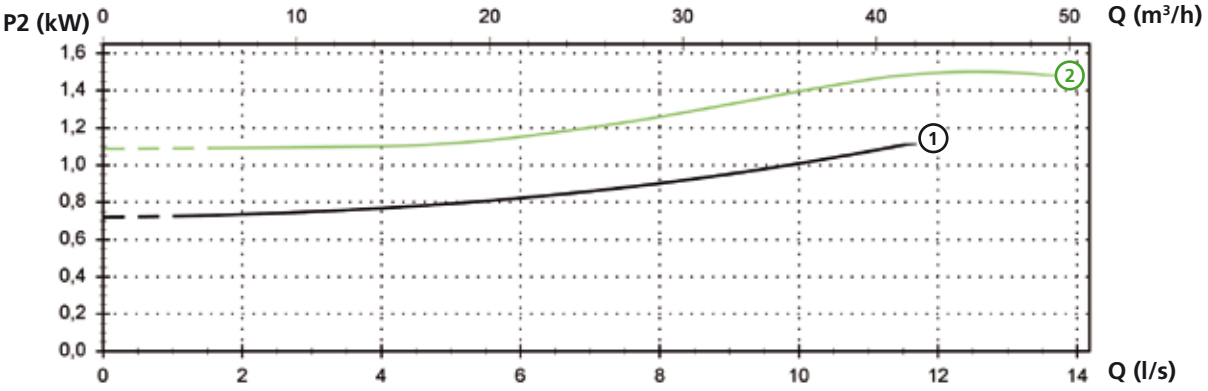
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DRF 150/2/G50V A1CT/50	400	3	1.7	1.1	2.9	2900	Dir	G 2"	10x30 mm
(2) DRF 200/2/G50V A1CT/50	400	3	2.1	1.5	3.7	2900	Dir	G 2"	10x30 mm

DRF

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

Performances





Technical data

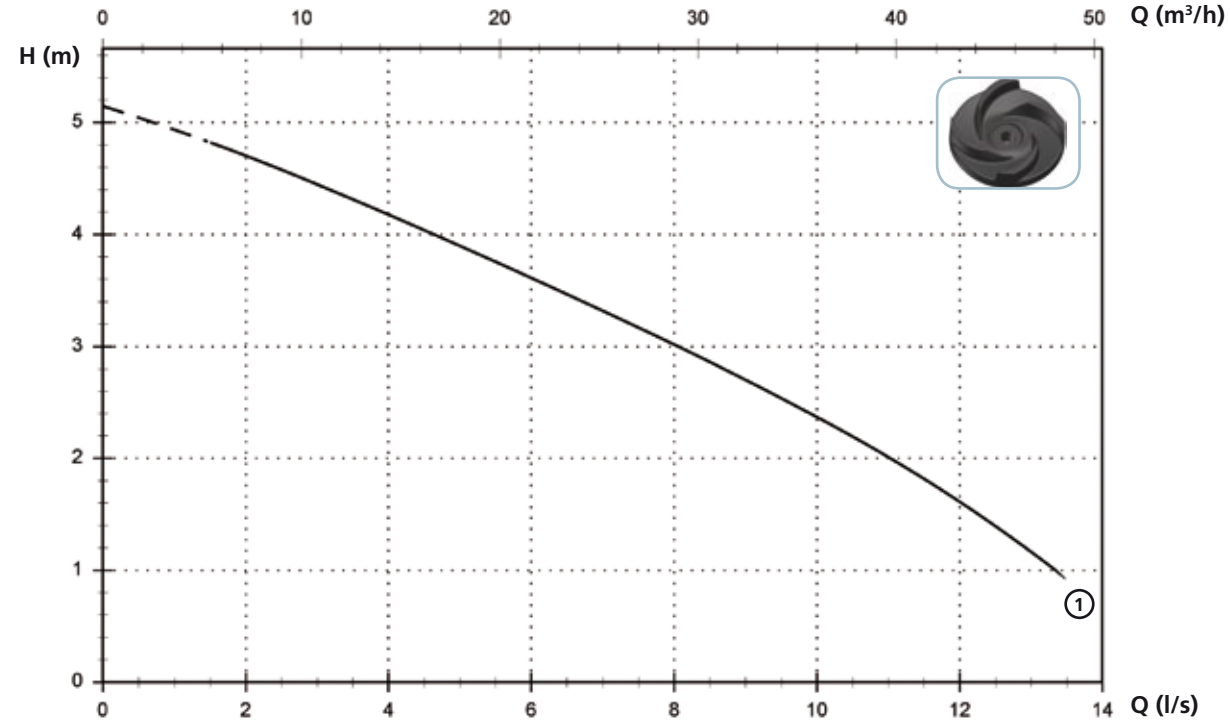
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRF 150/2/G50H A1CM/50	230	1	1.6	1.1	7.2	2900	Dir	G 2"- DN50 PN10-16	10x30 mm
2	DRF 200/2/G50H A1CM/50	230	1	2.2	1.5	9.8	2900	Dir	G 2"- DN50 PN10-16	10x30 mm

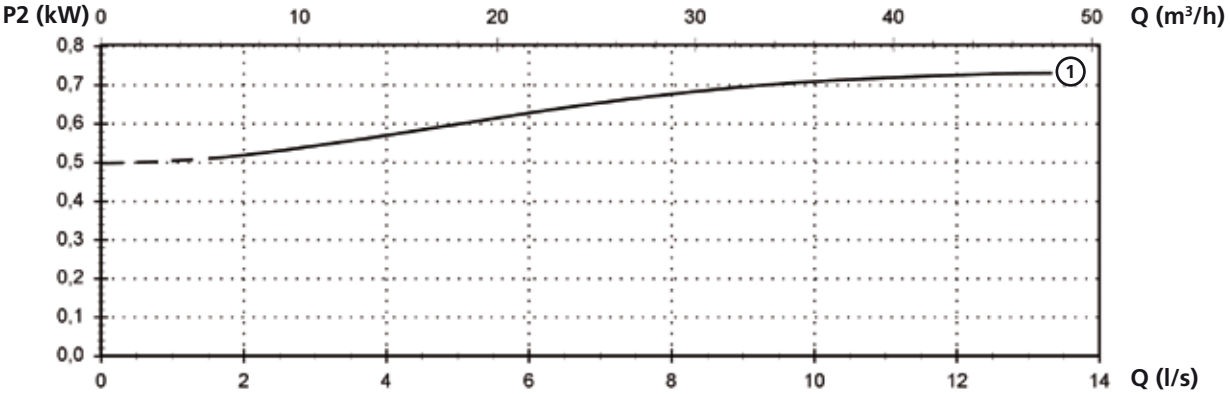
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRF 150/2/G50H A1CT/50	400	3	1.7	1.1	2.9	2900	Dir	G 2"- DN50 PN10-16	10x30 mm
2	DRF 200/2/G50H A1CT/50	400	3	2.1	1.5	3.7	2900	Dir	G 2"- DN50 PN10-16	10x30 mm

DRF

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

Performances



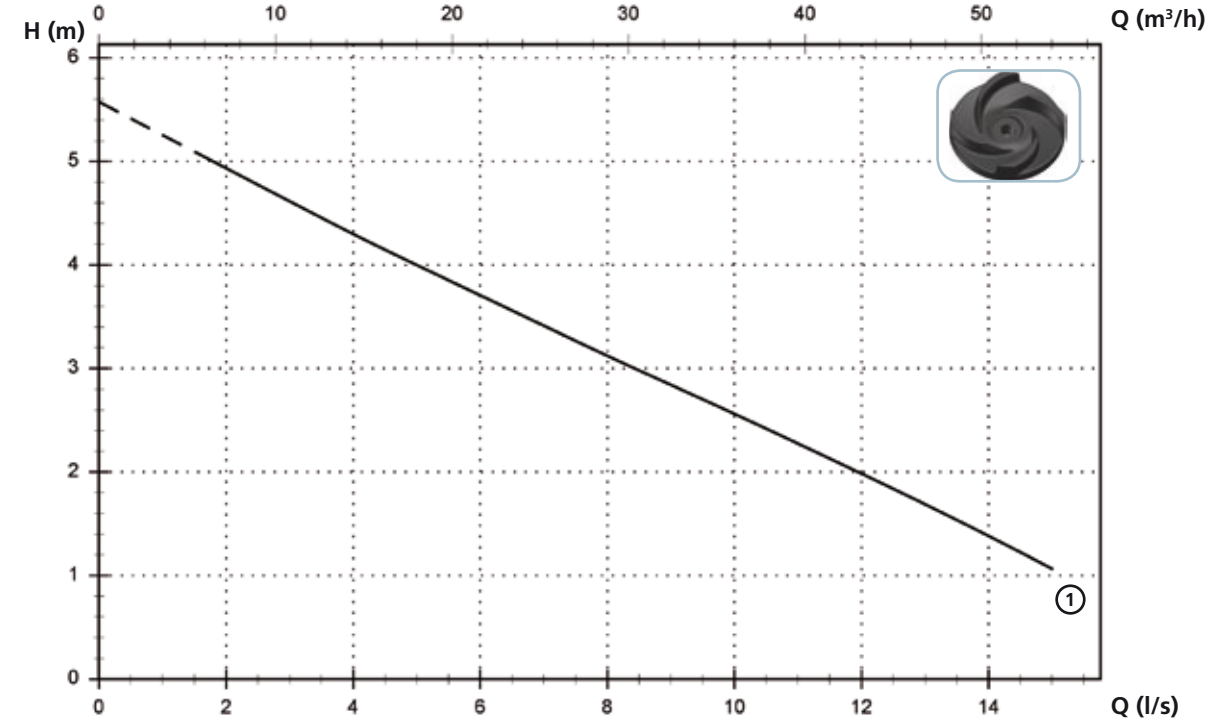


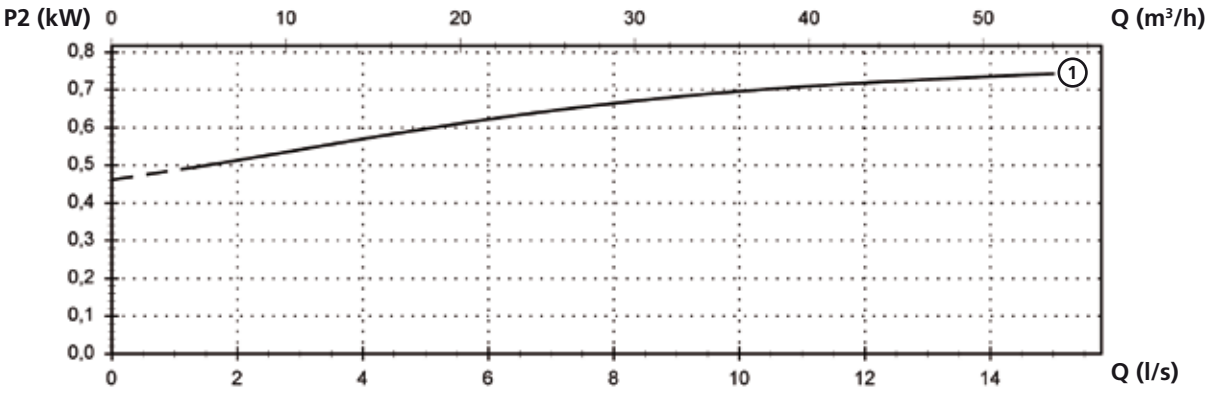
Technical data

		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

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

Performances





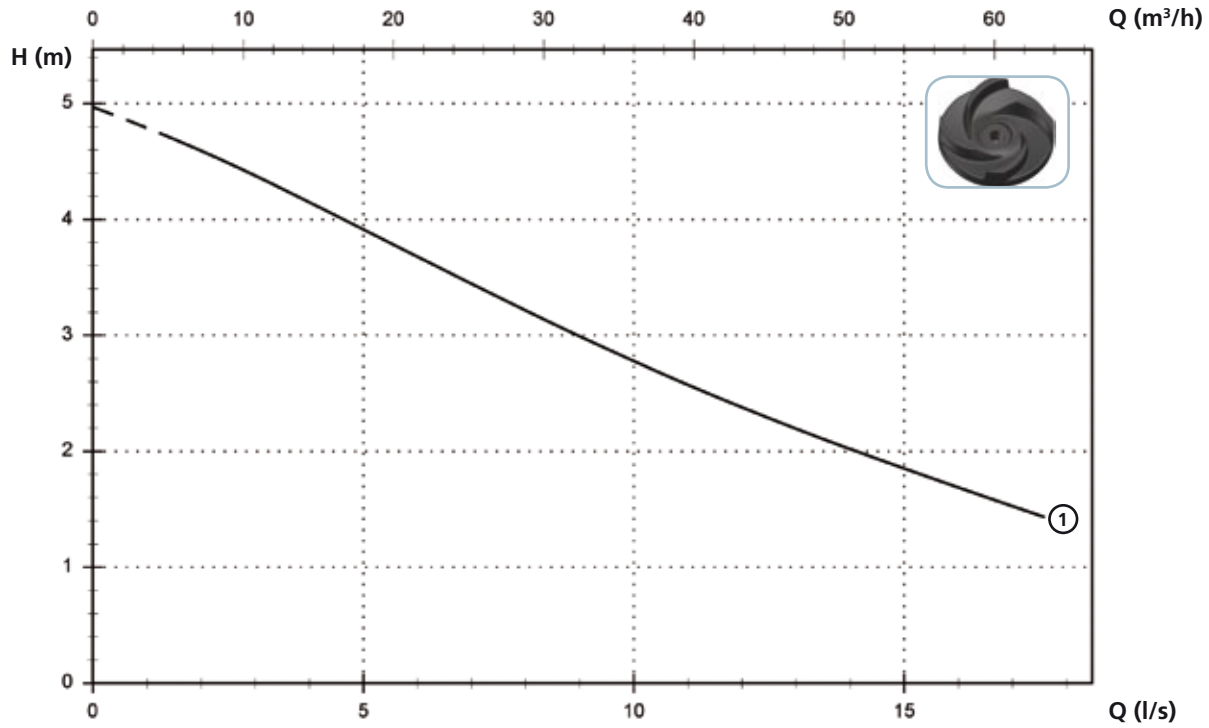
Technical data

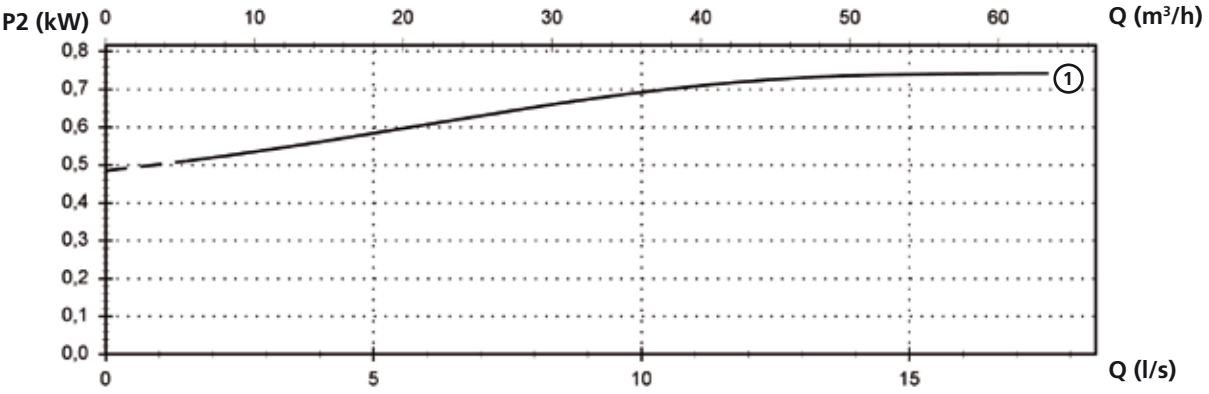
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DRF 100/4/80 A1CT/50	400	3	1.1	0.74	2.2	1450	Dir	DN80 PN10-16	50 mm

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

DRF

Versions available

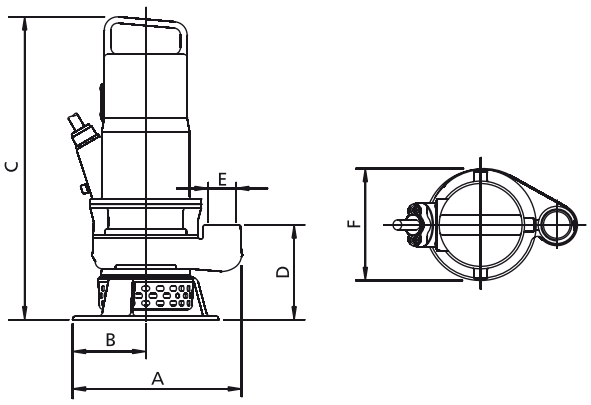
(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

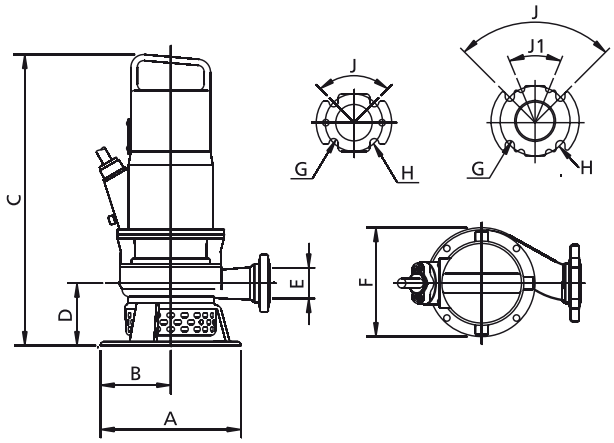


	A	B	C	D	E	F	kg
DRF 75/2/G40V A1CM(T)/50	225	80	455	145	G 1½"	170	27
DRF 100/2/G40V A1CM(T)/50	225	80	455	145	G 1½"	170	28
DRF 150/2/G50V A1CM(T)/50	265	100	465	165	G 2"	190	32
DRF 200/2/G50V A1CM(T)/50	265	100	465	165	G 2"	190	32

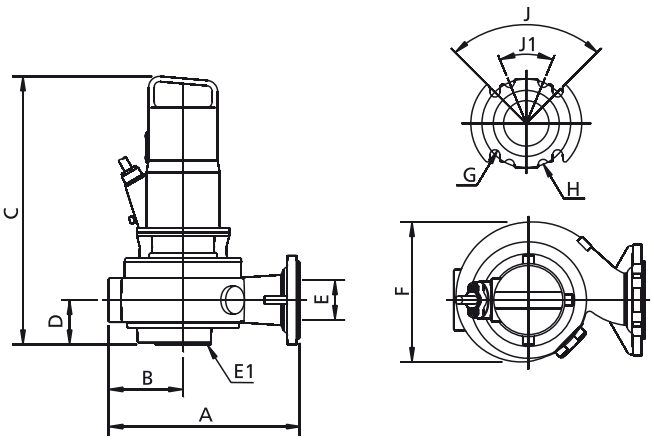
Dimensions in mm *All weights and dimensions are indicative only*

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

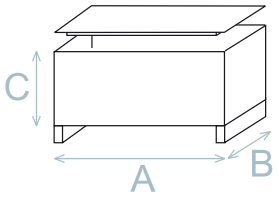
Dimensions in mm

All weights and dimensions are indicative only

(*) DN of the suction flange - PN6

Packaging dimension

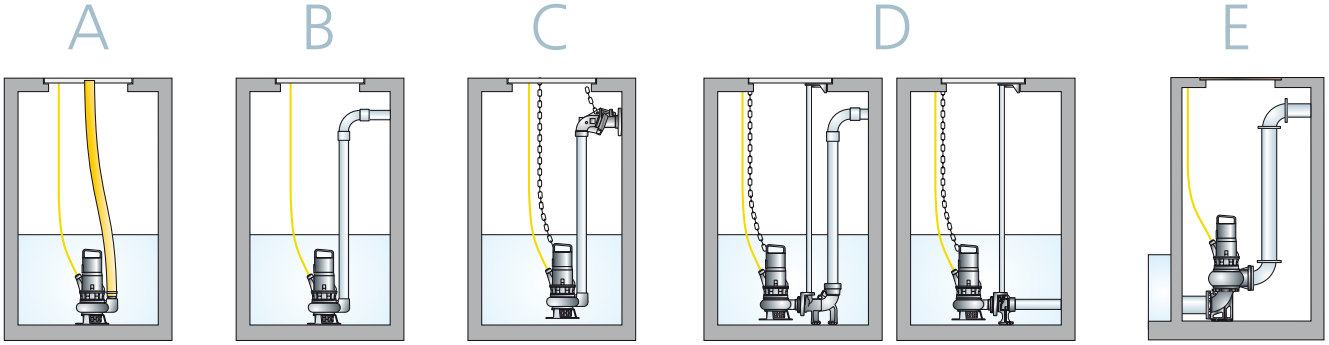
	A	B	C
DRF 75/2/G40V A1CM(T)/50	580	310	310
DRF 100/2/G40V A1CM(T)/50	580	310	310
DRF 150/2/G50V A1CM(T)/50	580	310	310
DRF 200/2/G50V A1CM(T)/50	580	310	310
DRF 75/2/G40H A1CM(T)/50	580	310	310
DRF 100/2/G40H A1CM(T)/50	580	310	310
DRF 150/2/G50H A1CM(T)/50	580	310	310
DRF 200/2/G50H A1CM(T)/50	580	310	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



All weights and dimensions are indicative only

Dimension in mm

Installations available



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



DRN



All product images are indicative only

Multi-channel open impeller

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.

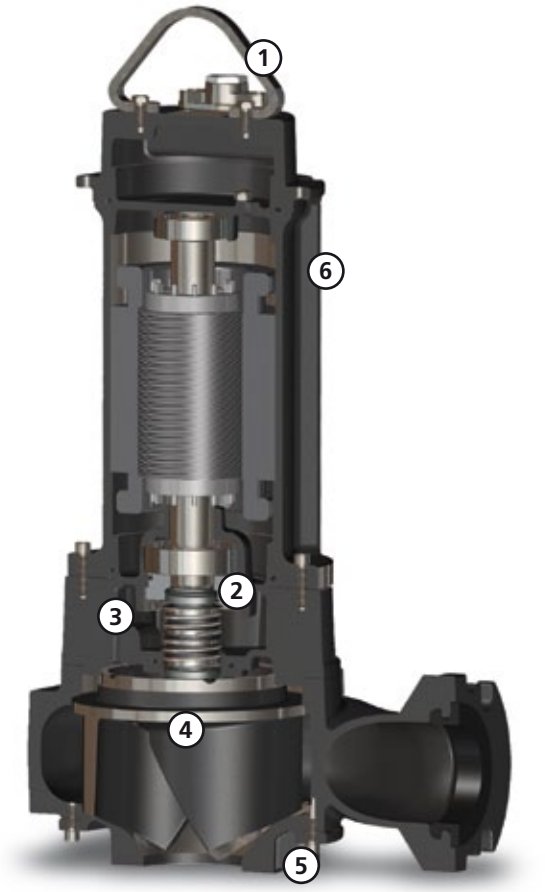
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

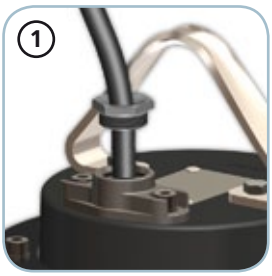
DRN





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.



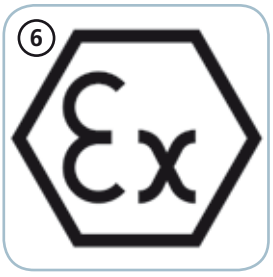
Drive shaft

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

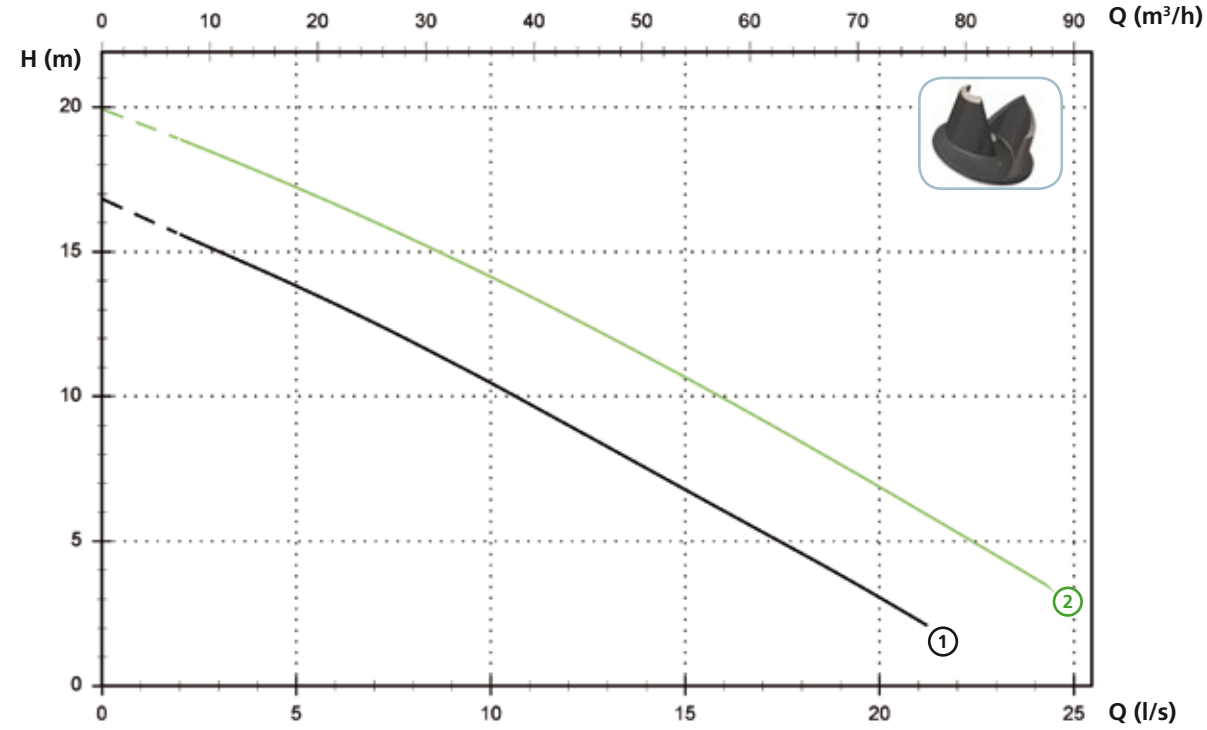
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

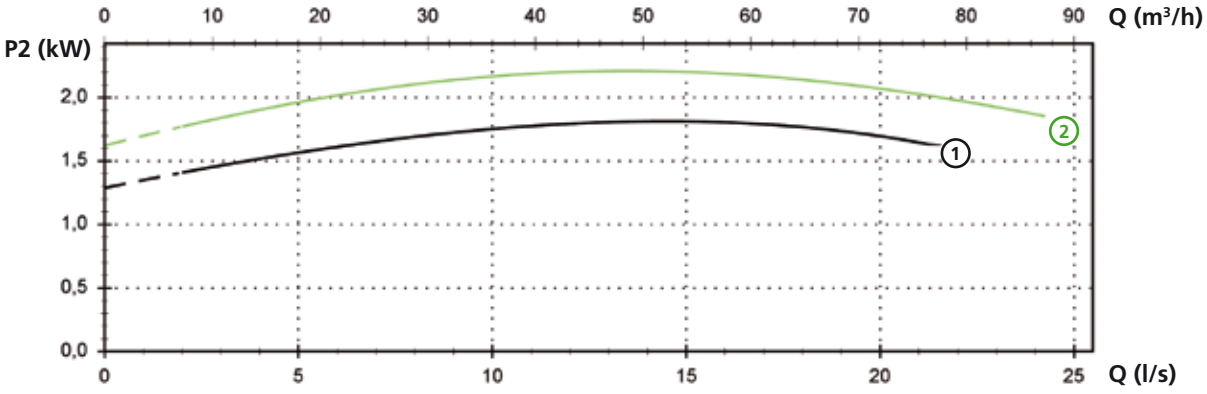
CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

DRN

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

Performances





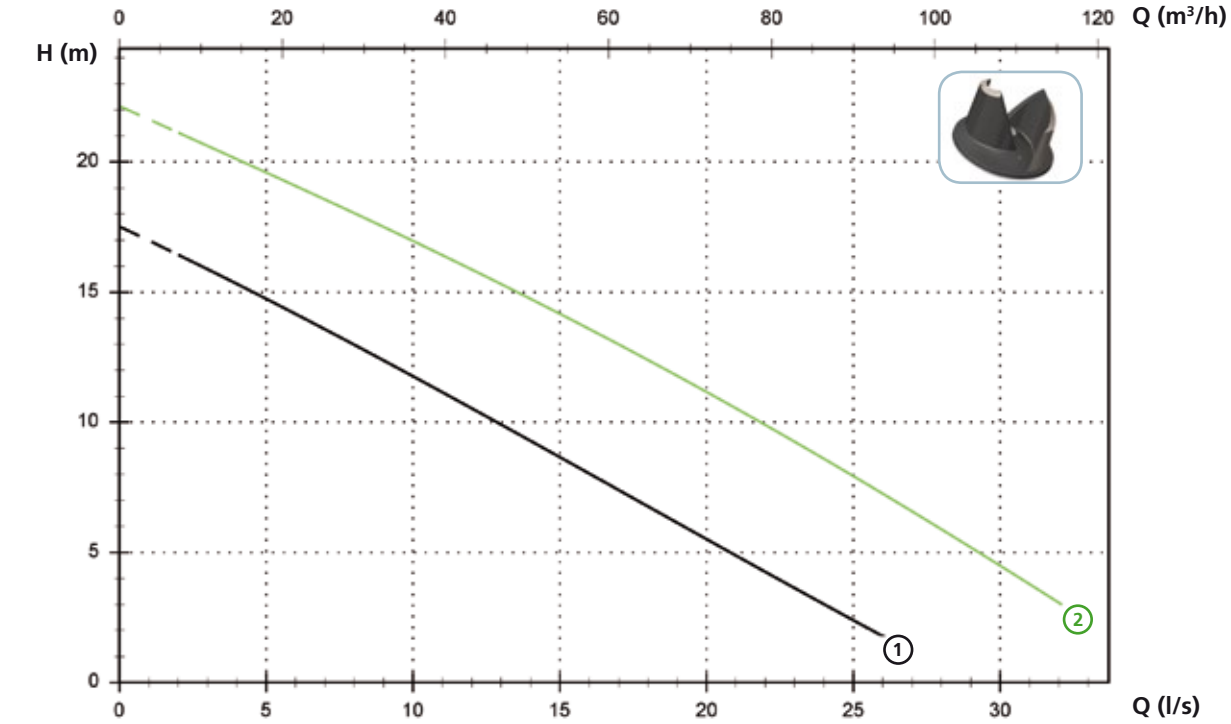
Technical data

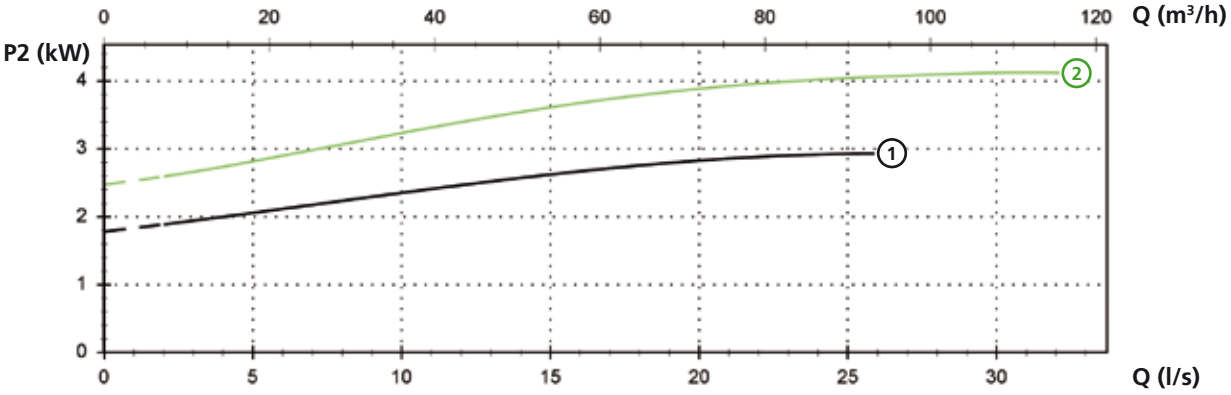
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRN 250/2/65 A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	DN65 PN10-16	40 mm

		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
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

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

Performances





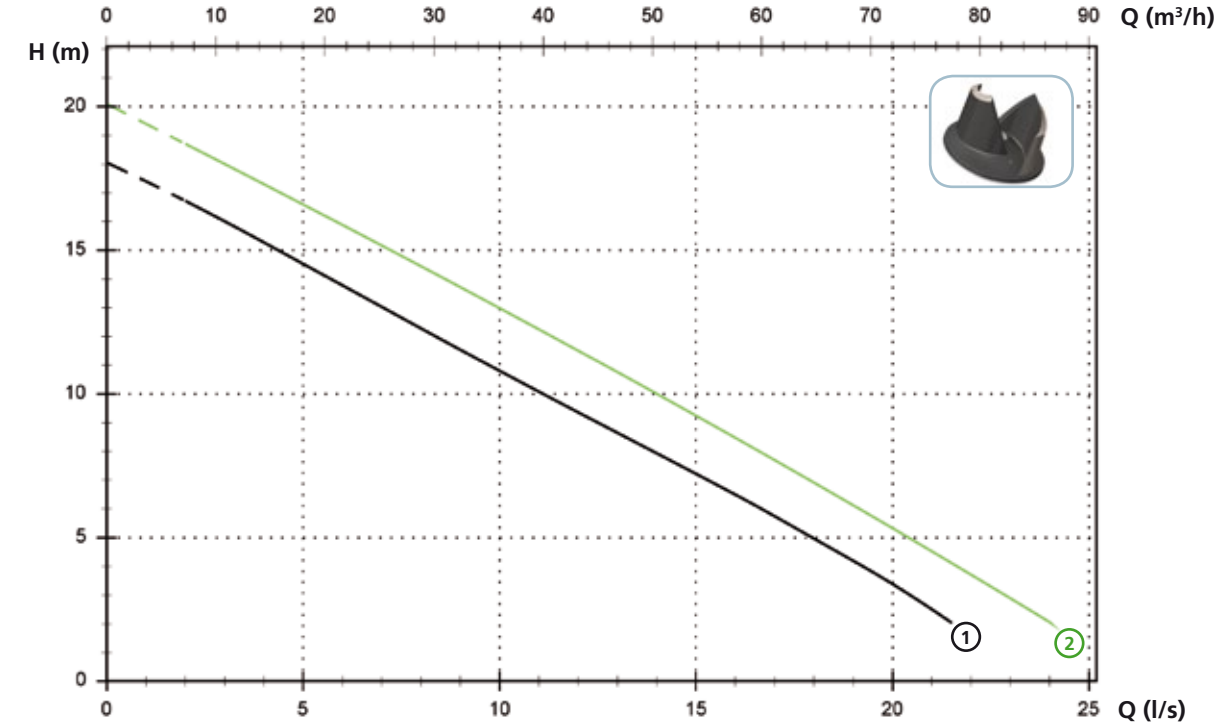
Technical data

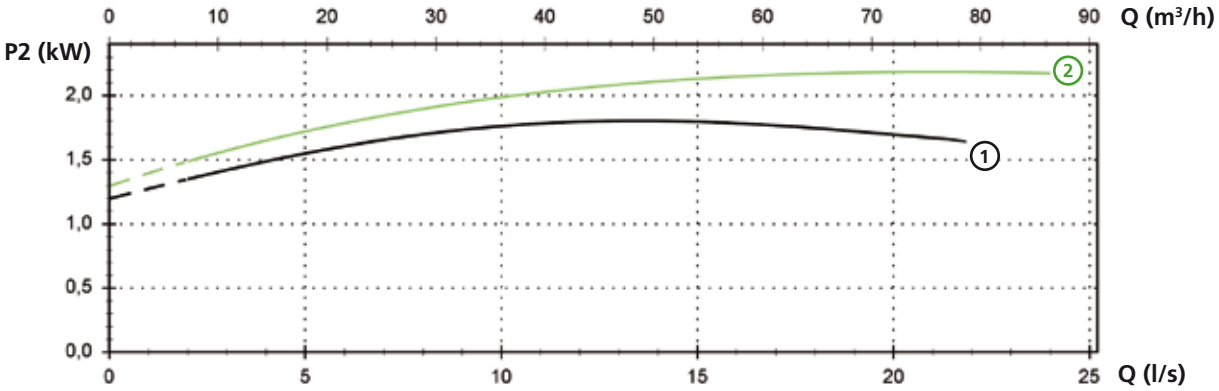
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DRN 400/2/65 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN65 PN10-16	50 mm
② DRN 550/2/65 A1FT/50	400	3	5.0	4.1	8.7	2900	Dir	DN65 PN10-16	50 mm

DRN

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

Performances





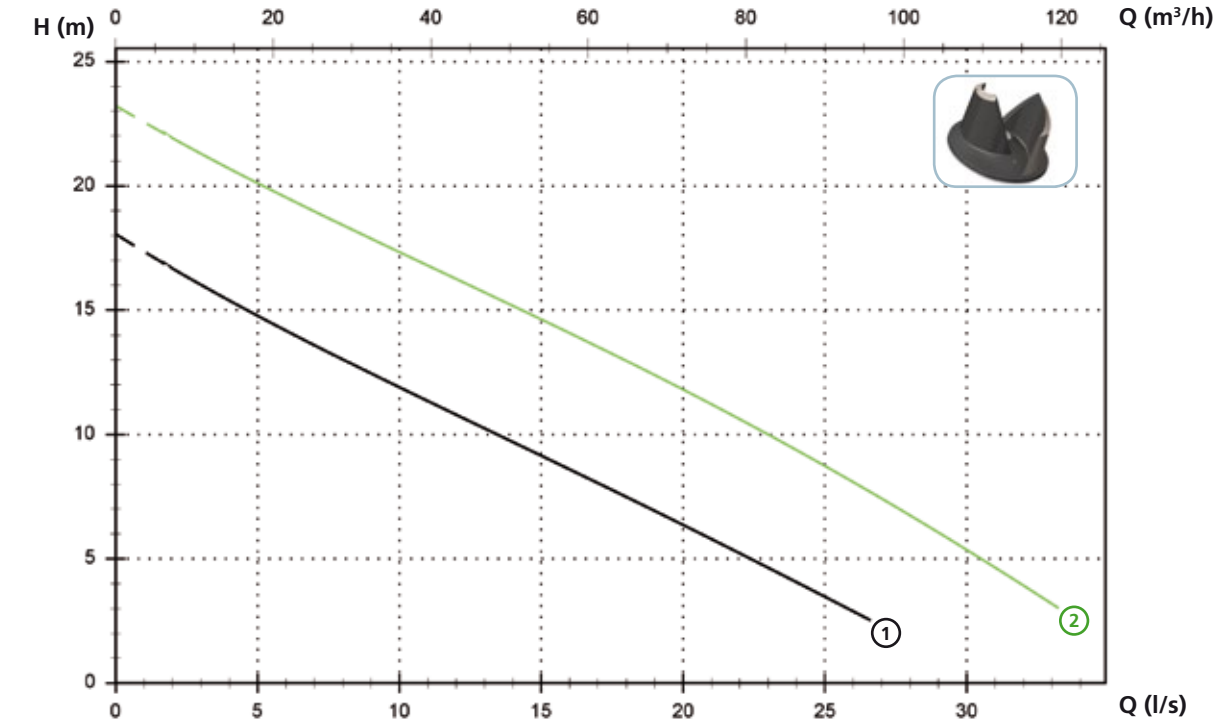
Technical data

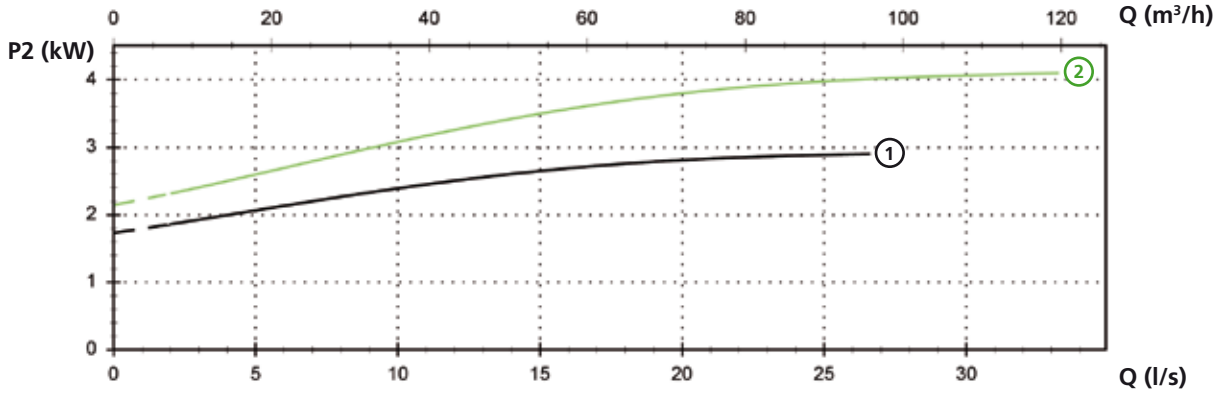
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1 DRN 250/2/80 A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	DN80 PN10-16	40 mm

	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





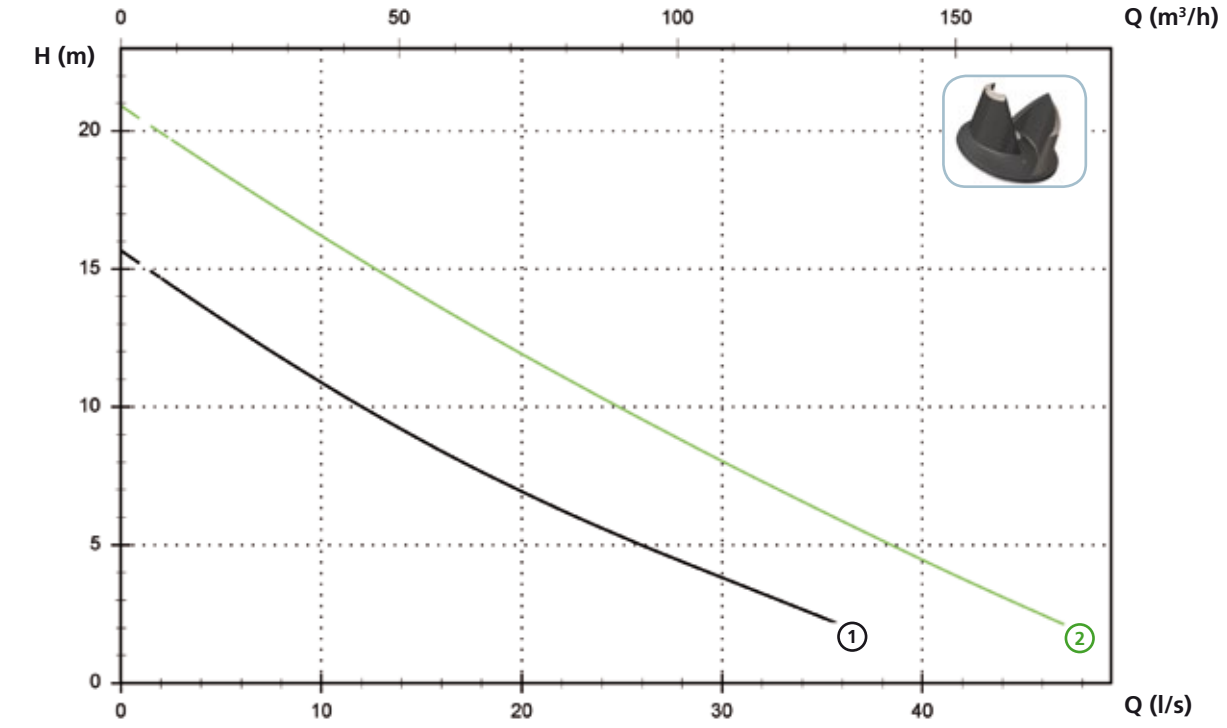
Technical data

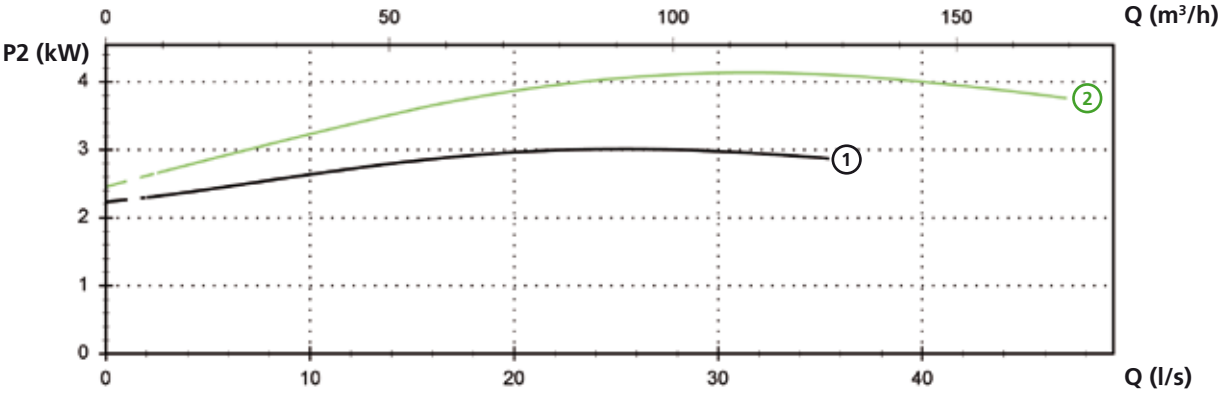
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRN 400/2/80 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN80 PN10-16	45 mm
2	DRN 550/2/80 A1FT/50	400	3	5.0	4.1	8.7	2900	Dir	DN80 PN10-16	45 mm

DRN

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

Performances



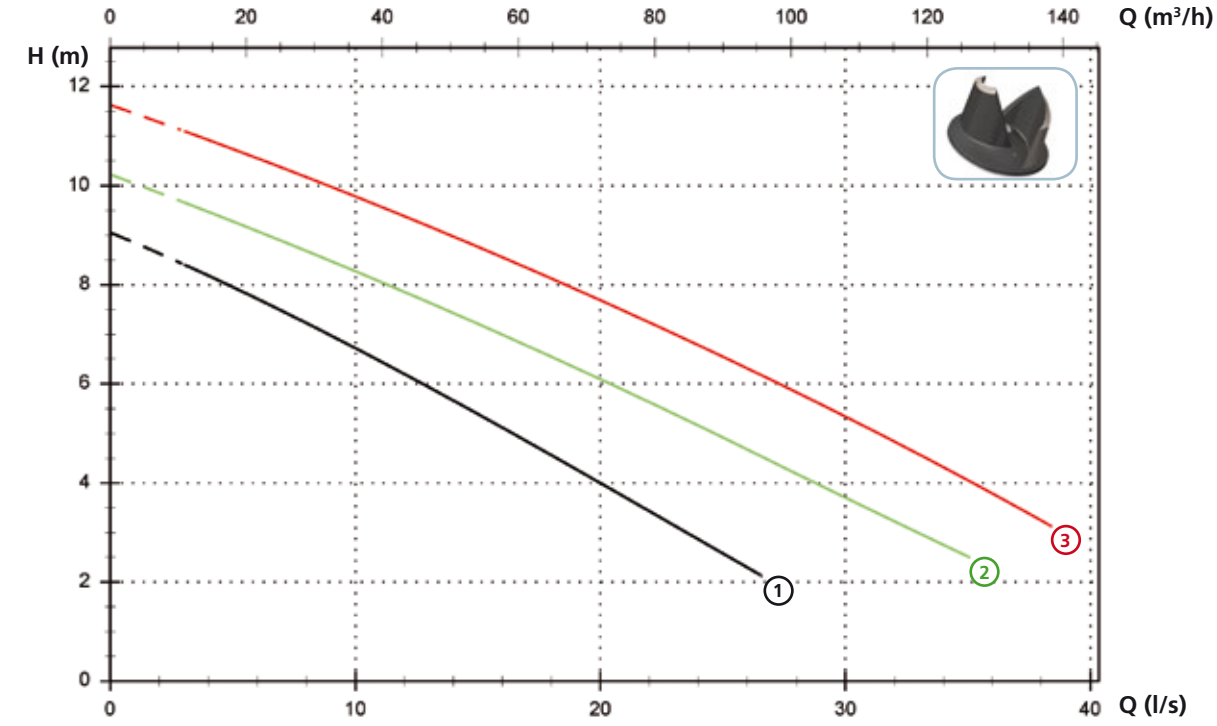


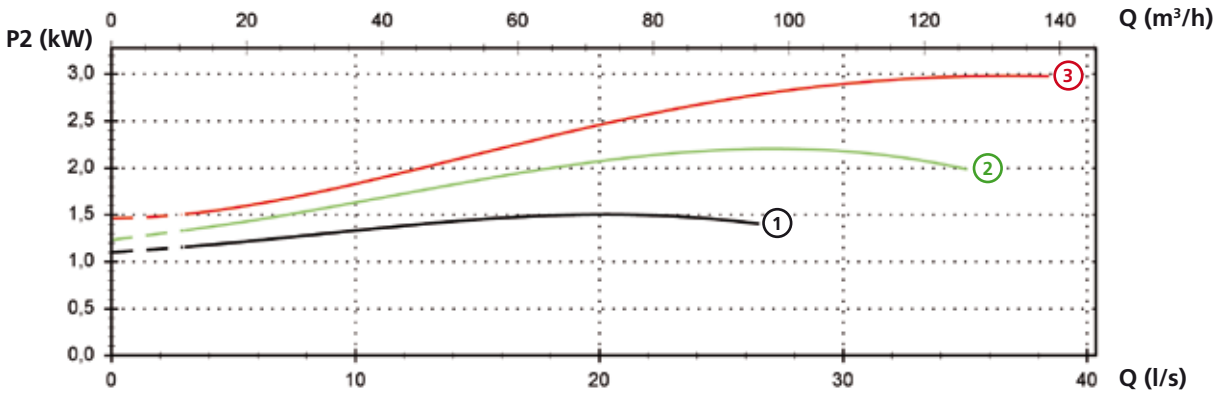
Technical data

	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





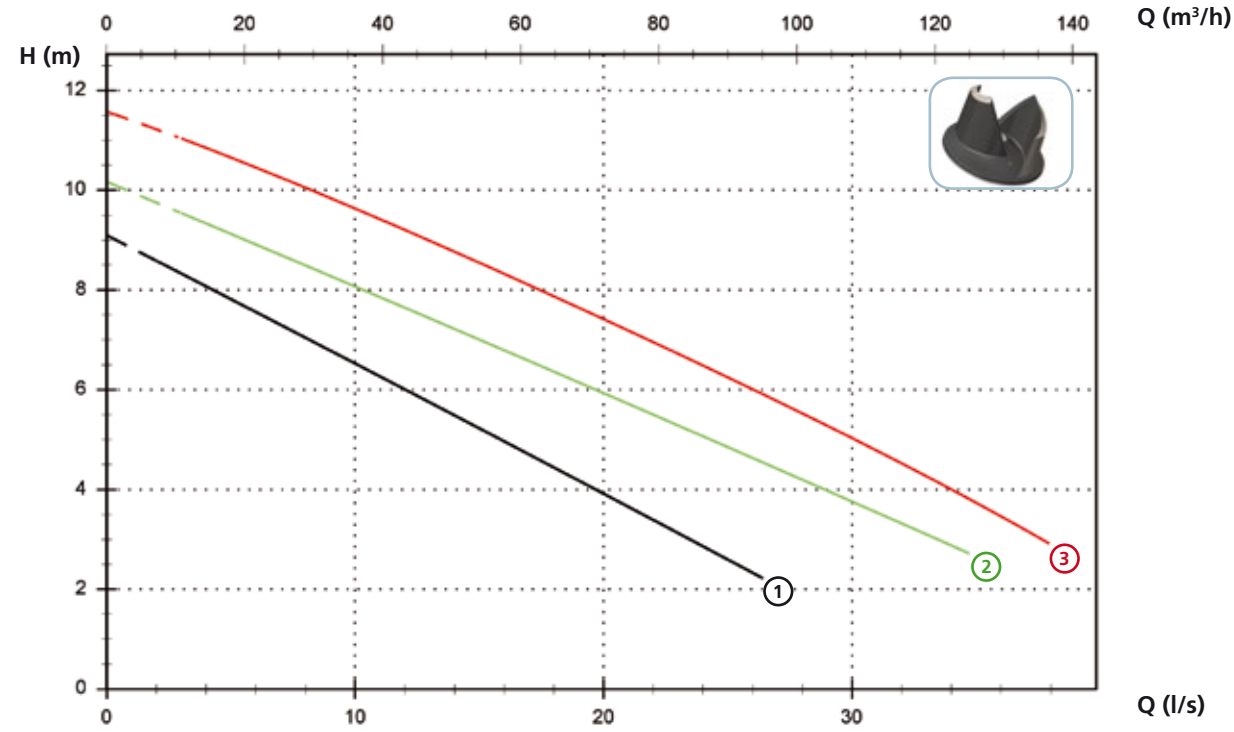
Technical data

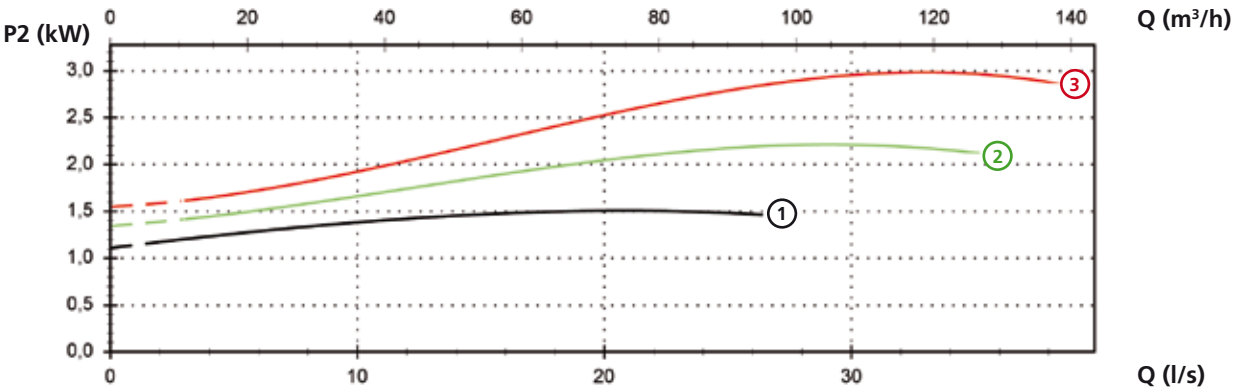
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRN 200/4/80 A1DT/50	400	3	2.0	1.5	4.1	1450	Dir	DN80 PN10-16	80 mm
2	DRN 300/4/80 A1FT/50	400	3	2.9	2.2	5.8	1450	Dir	DN80 PN10-16	80 mm
3	DRN 400/4/80 A1FT/50	400	3	3.7	3	7.3	1450	Dir	DN80 PN10-16	80 mm

DRN

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

Performances



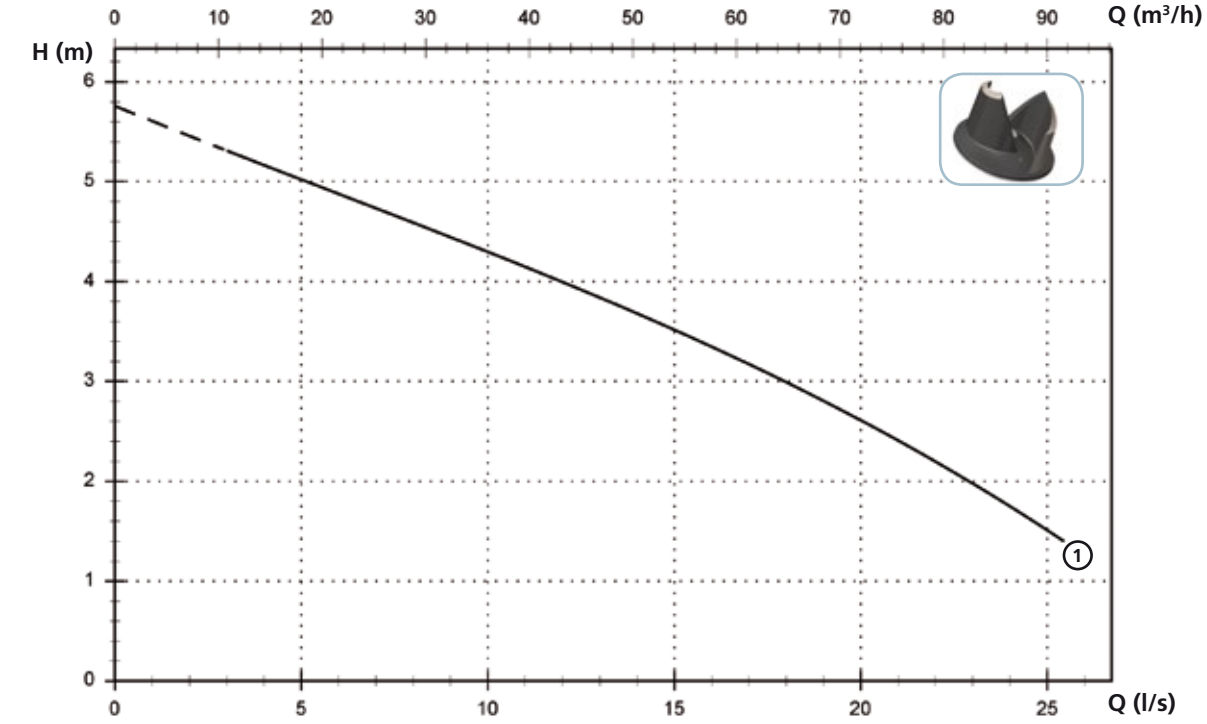


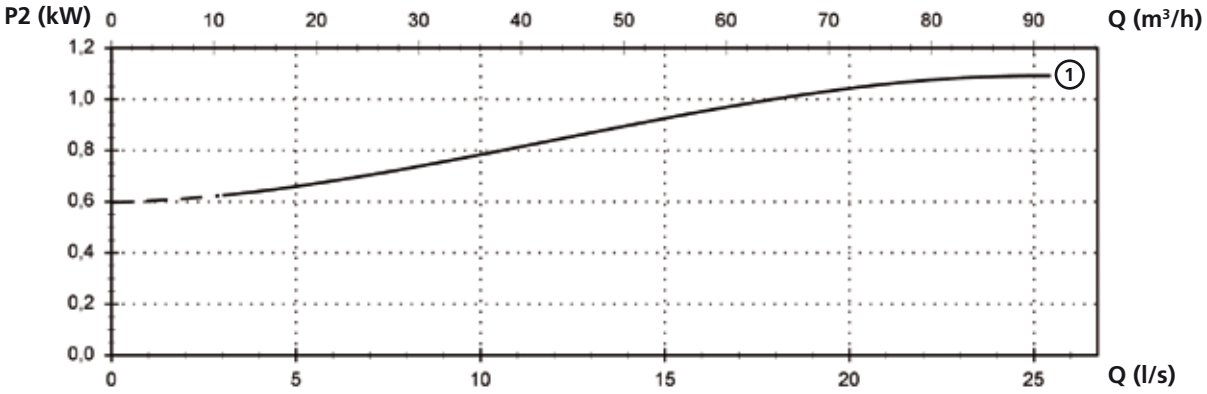
Technical data

	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

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

Performances





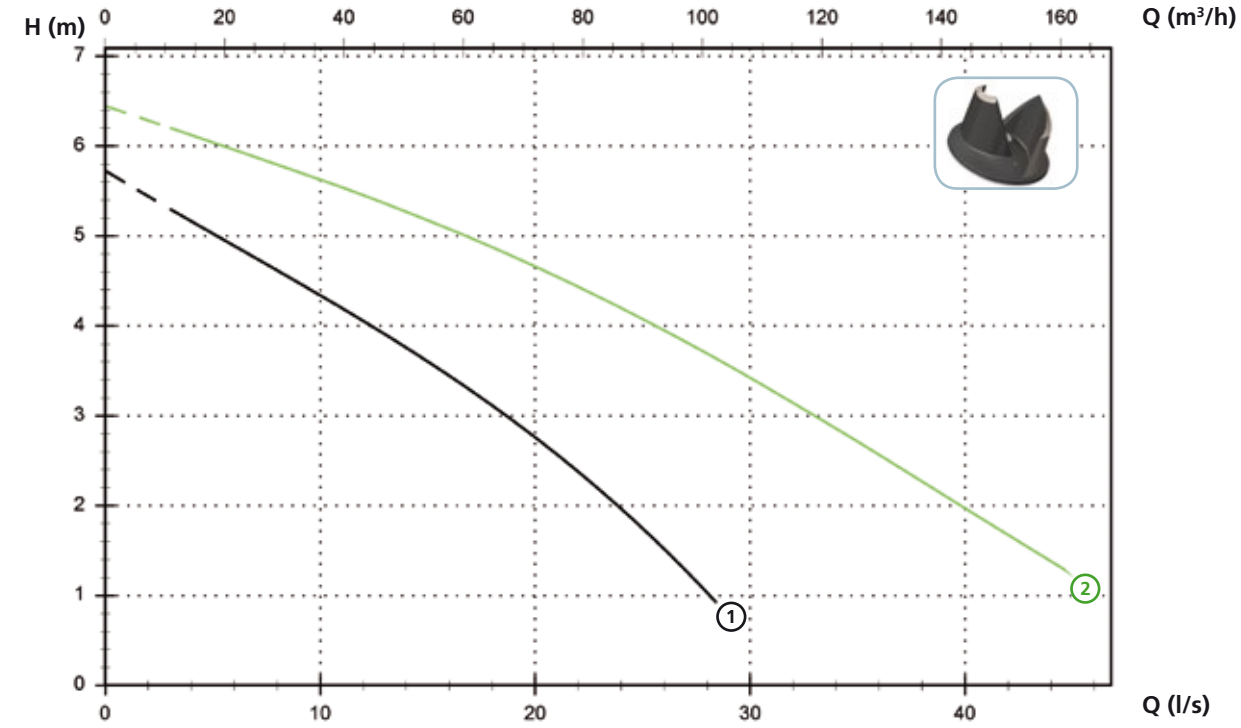
Technical data

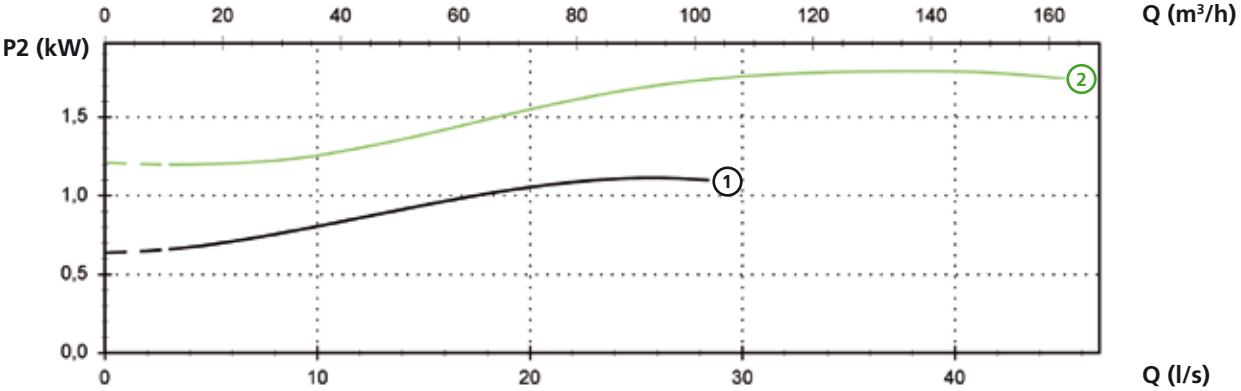
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DRN 150/6/80 A1DT/50	400	3	1.6	1.1	3.7	960	Dir	DN80 PN10-16	80 mm

DRN

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

Performances



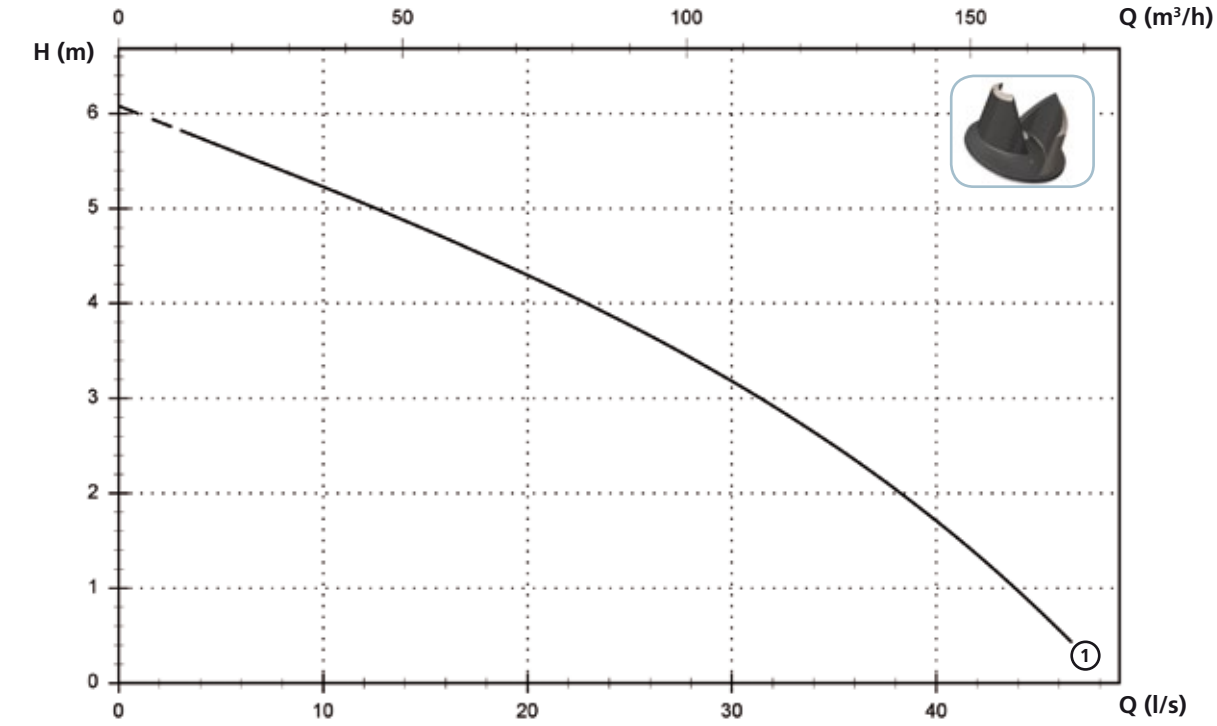


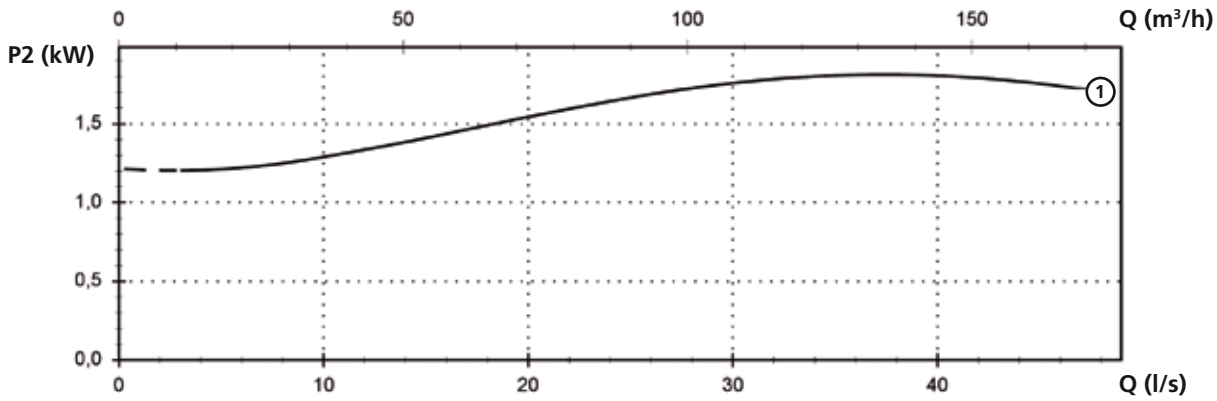
Technical data

	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

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			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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.

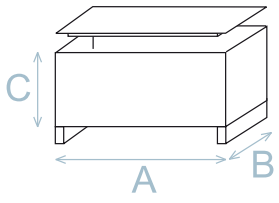
Packaging dimension

	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

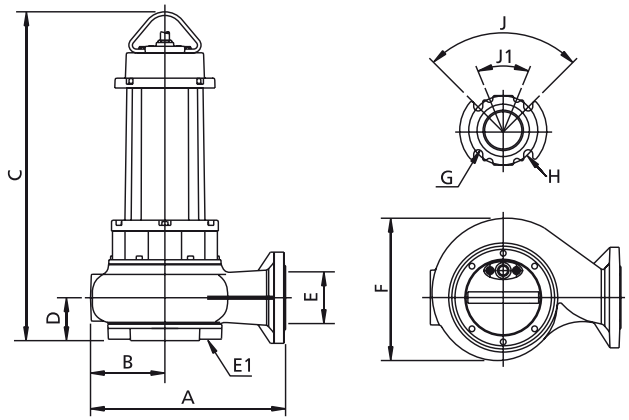
Dimension in mm

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

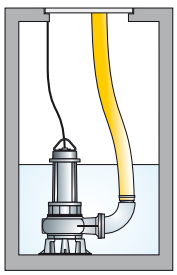
Dimensions in mm

All weights and dimensions are indicative only

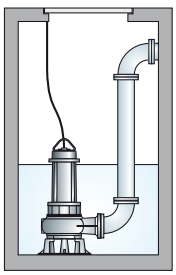
(*) DN of the suction flange - PN6

Installations available

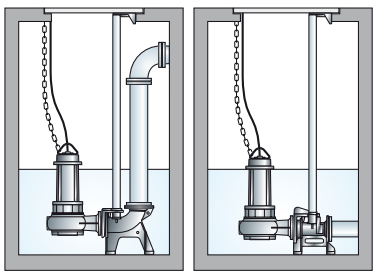
A



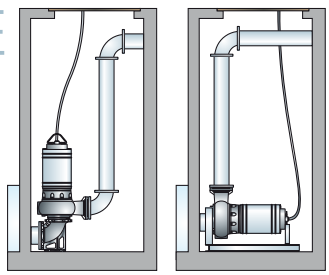
B



D



E



DRP



All product images are indicative only

Multi-channel open impeller

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.

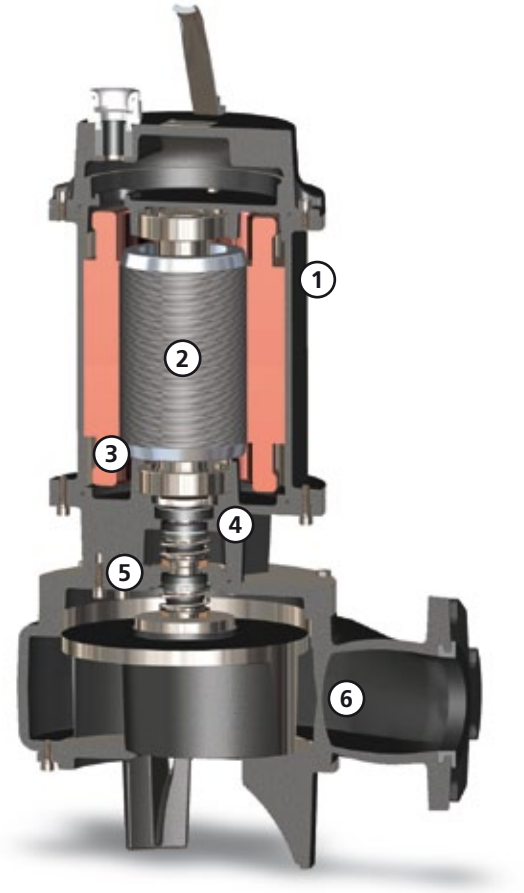
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

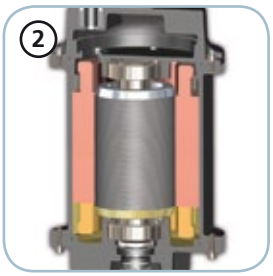
DRP





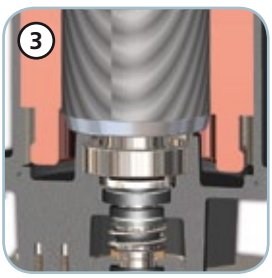
Structure

Constructed in GJL-250 cast iron.



Motor

Oil-bath motor with thermal protections.



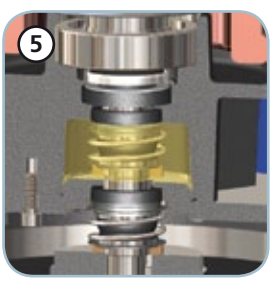
Bearings

Shielded ball bearings with lifetime autolubrication.



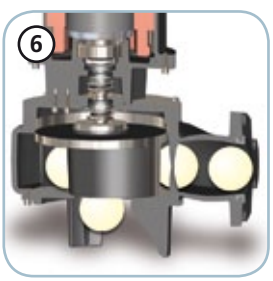
Mechanical seals

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.



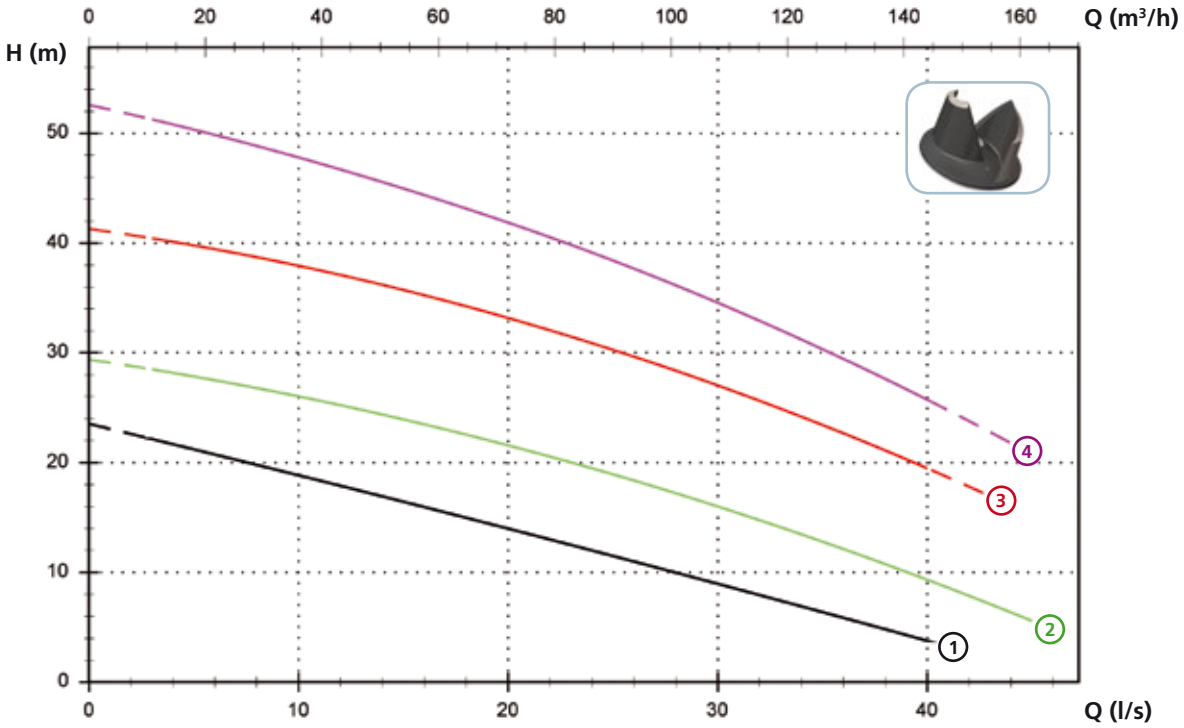
Free passage

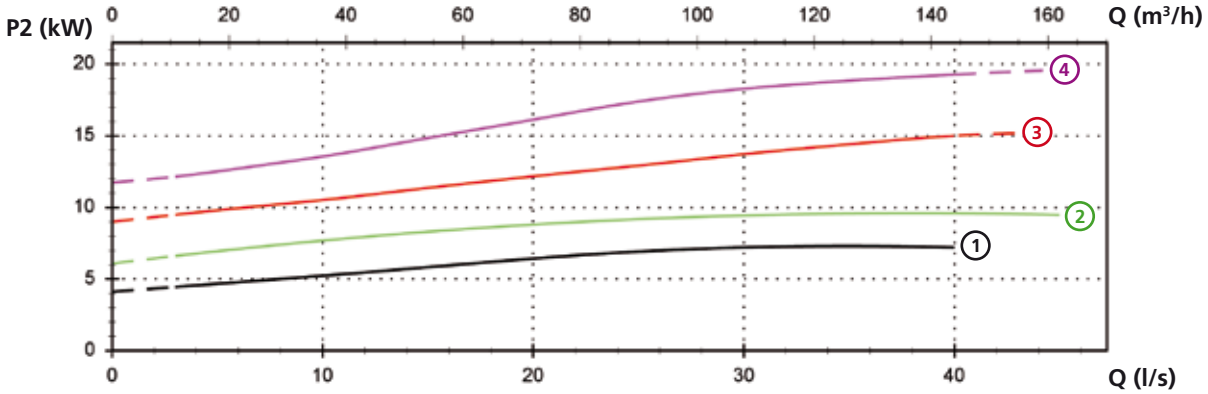
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

DRP

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

Performances



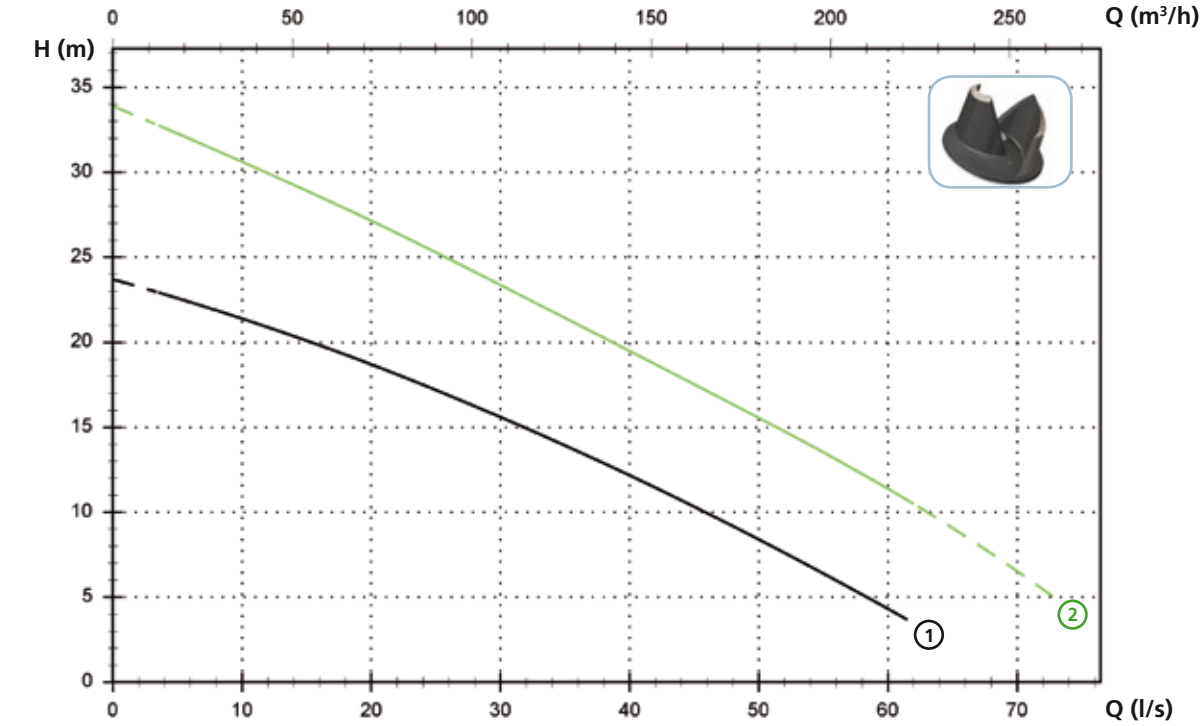


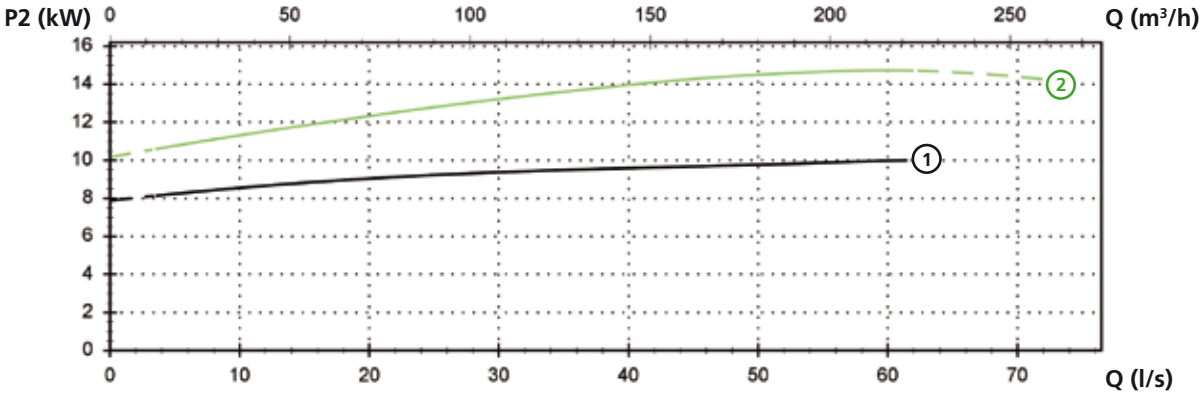
Technical data

		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





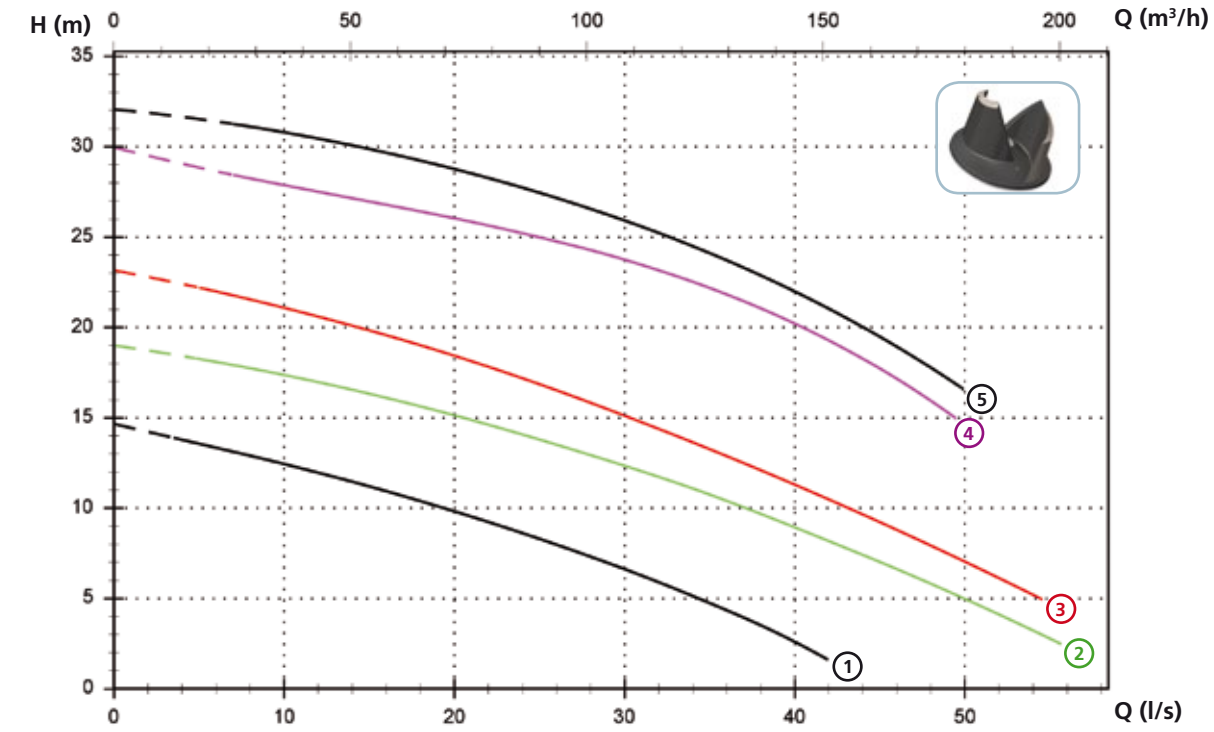
Technical data

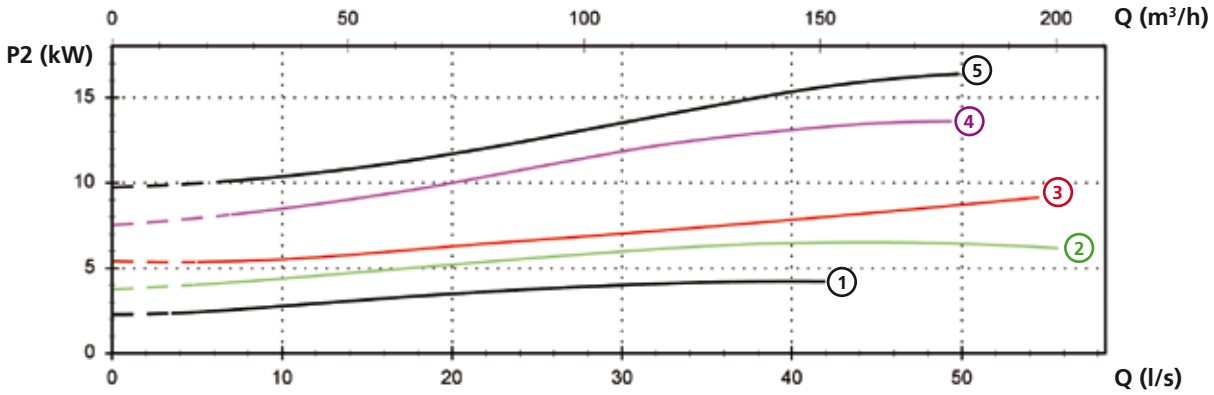
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRP 1000/2/100 A1HT/50	400	3	12.4	10	19.8	2900	Y Δ	DN100 PN10-16	75x80 mm
2	DRP 1500/2/100 A0HT/50	400	3	17.7	15	28.2	2900	Y Δ	DN100 PN10-16	70x80 mm

DRP

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

Performances



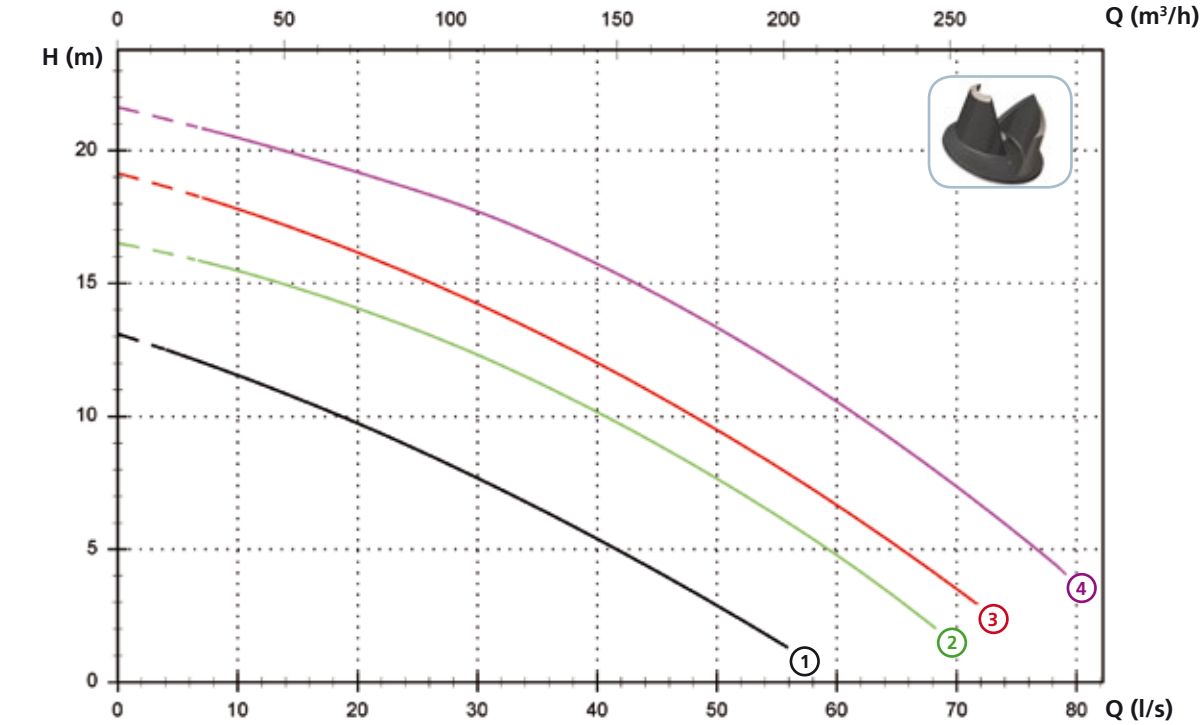


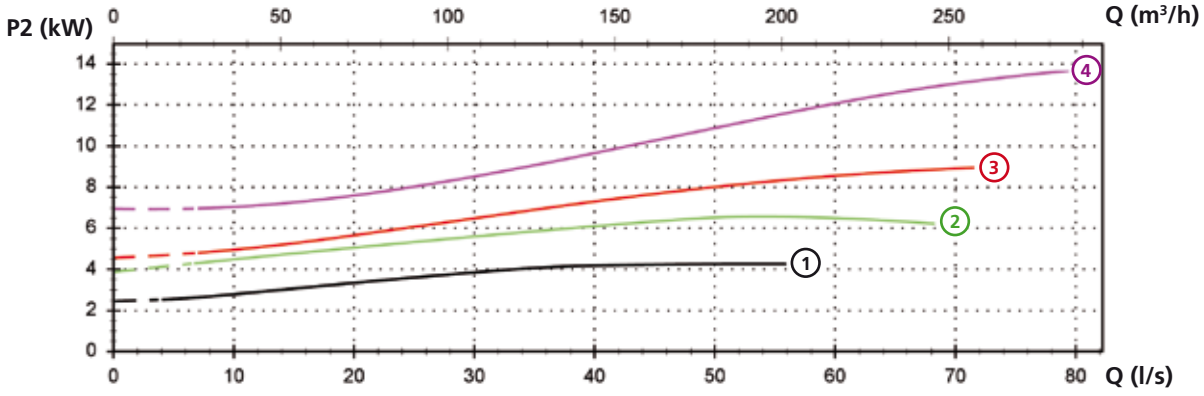
Technical data

		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





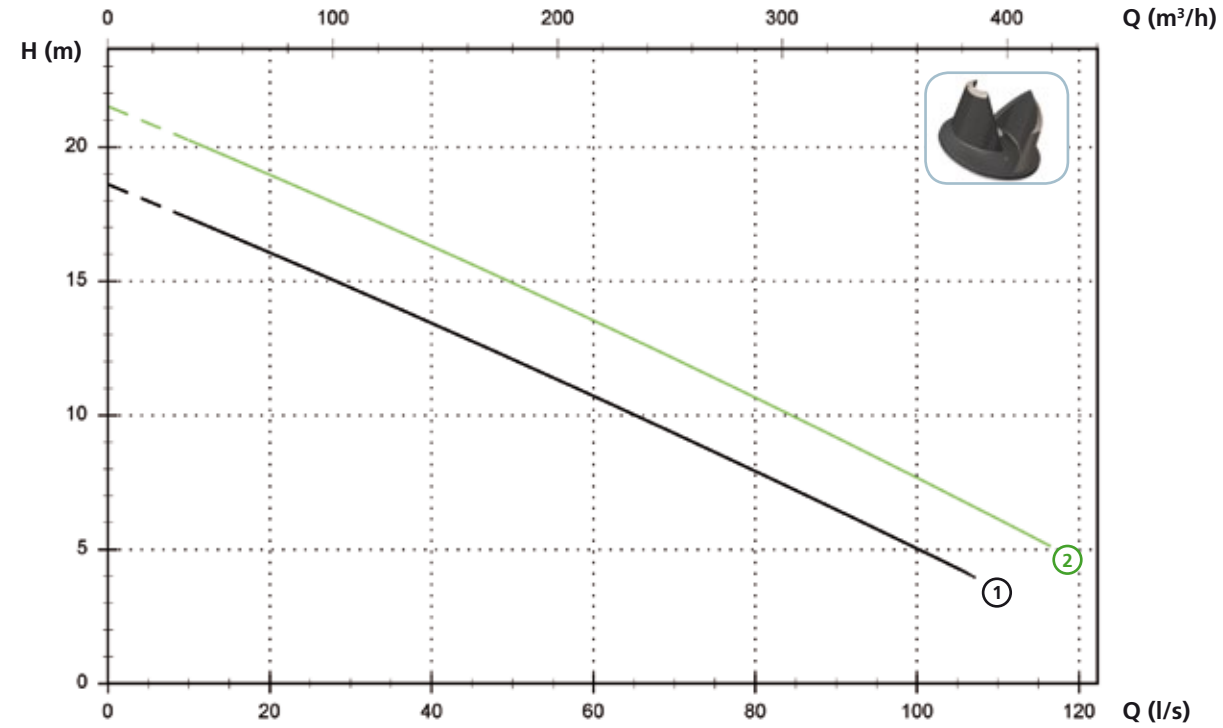
Technical data

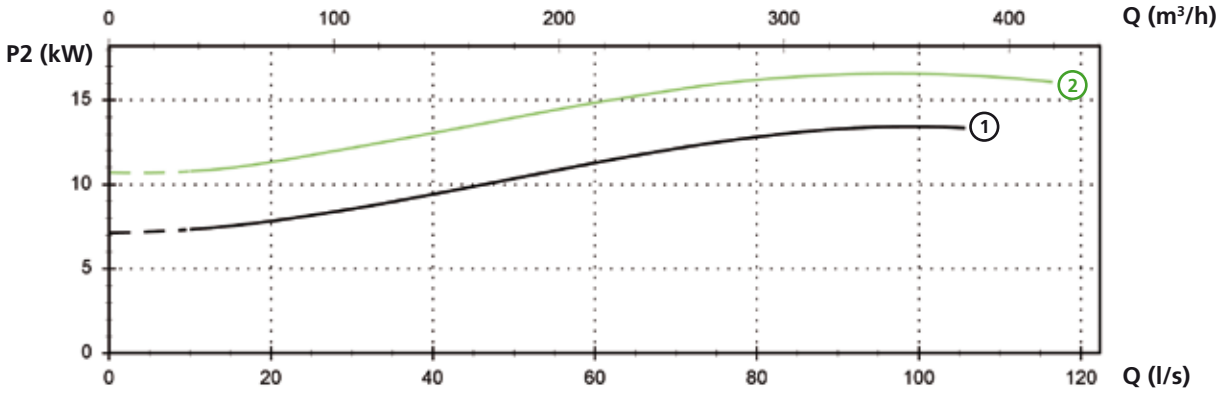
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRP 550/4/100 A0GT/50	400	3	5.9	4.6	10.1	1450	Dir	DN100 PN10-16	65x70 mm
2	DRP 750/4/100 A0HT/50	400	3	8.6	6.5	14.9	1450	Y Δ	DN100 PN10-16	85x95 mm
3	DRP 1000/4/100 A0HT/50	400	3	11.5	8.9	20	1450	Y Δ	DN100 PN10-16	80x95 mm
4	DRP 1500/4/100 A0IT/50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





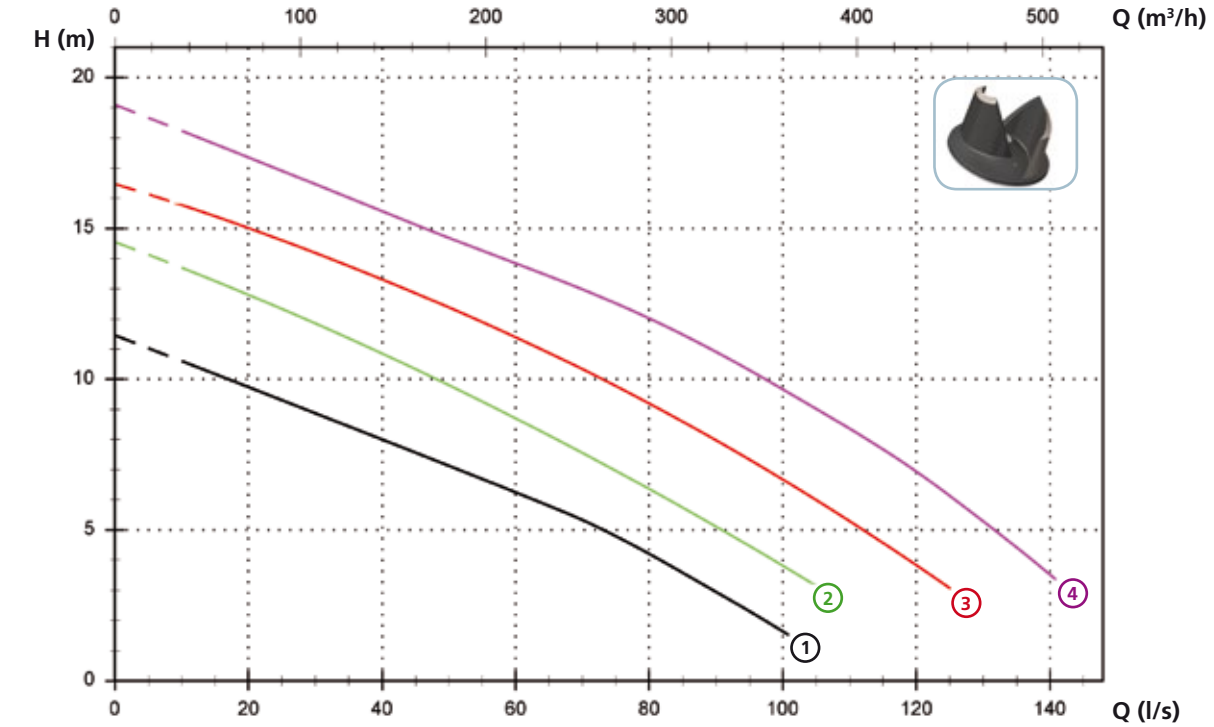
Technical data

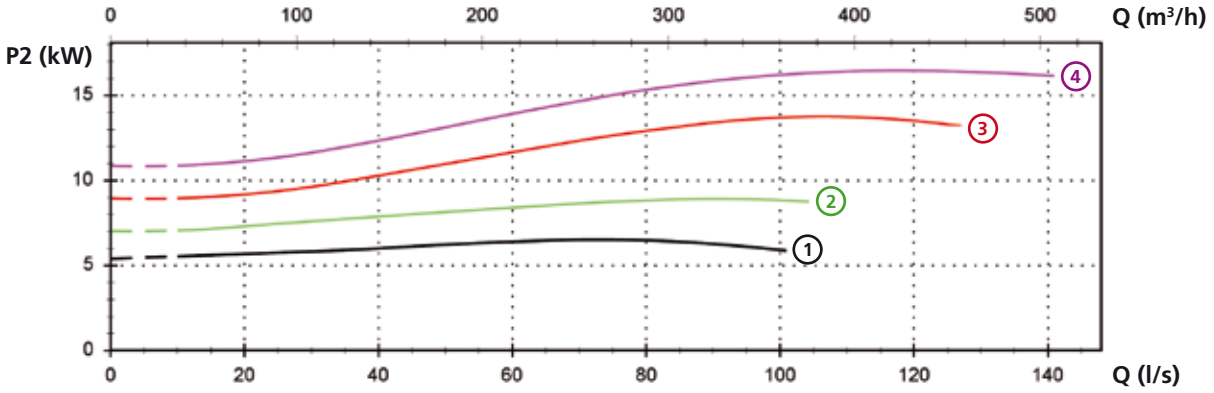
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DRP 1500/4/125 A0IT/50	400	3	15.8	13.6	28.2	1450	Y Δ	DN125 PN10	90x105 mm
(2) DRP 2000/4/125 A0IT/50	400	3	20.7	16.4	36	1450	Y Δ	DN125 PN10	90x105 mm

DRP

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

Performances





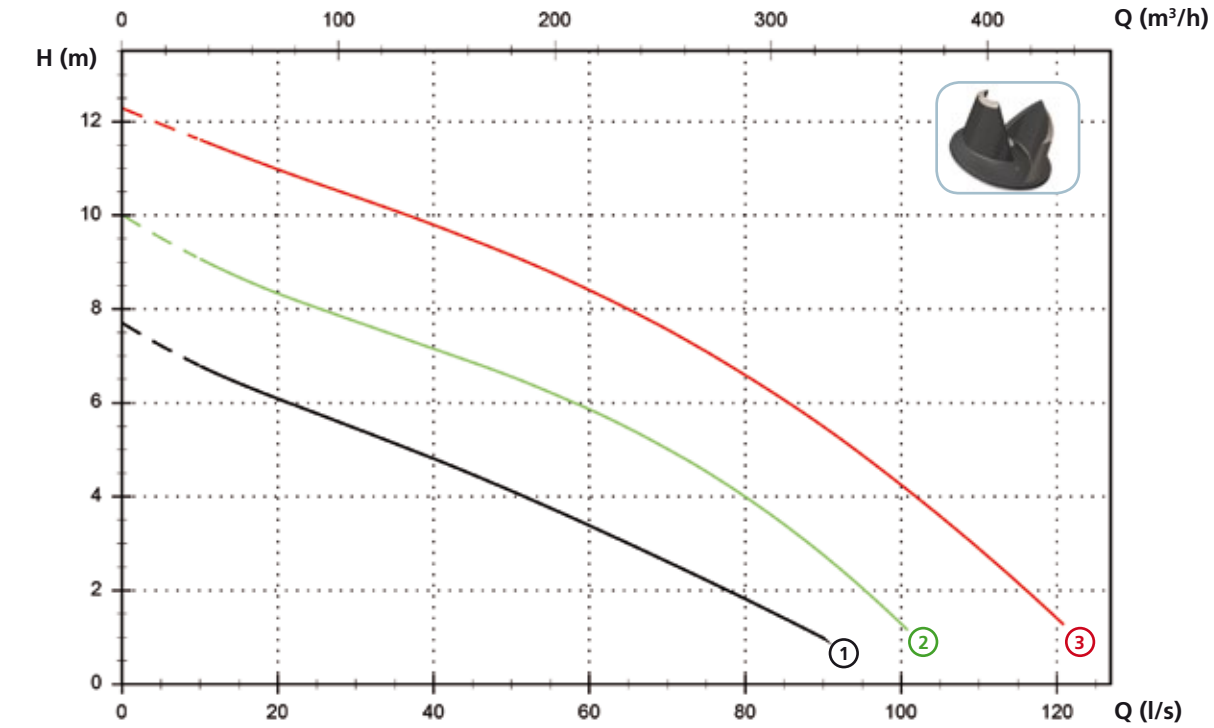
Technical data

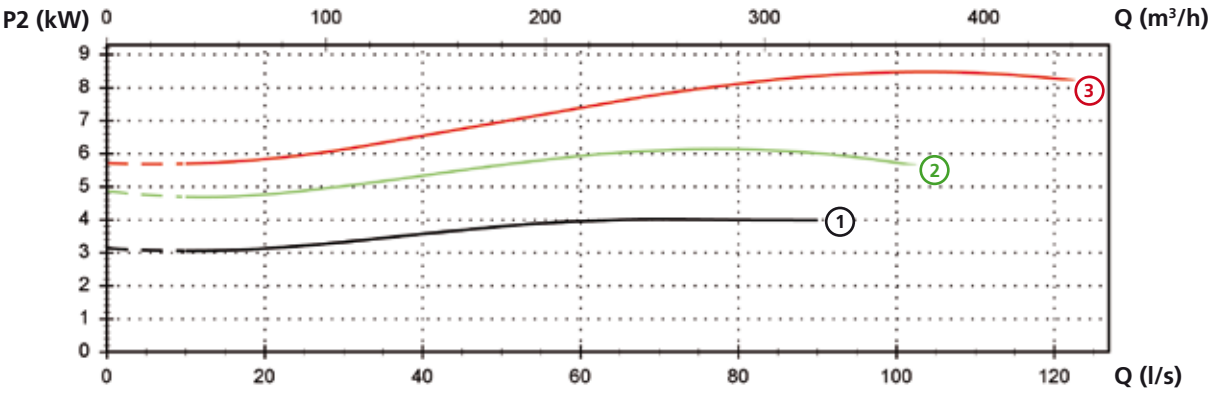
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRP 750/4/150 A0HT/50	400	3	8.6	6.5	14.9	1450	Y Δ	DN150 PN10-16	95 mm
2	DRP 1000/4/150 A0HT/50	400	3	11.5	8.9	20	1450	Y Δ	DN150 PN10-16	95 mm
3	DRP 1500/4/150 A0IT/50	400	3	15.8	13.6	28.2	1450	Y Δ	DN150 PN10-16	95x110 mm
4	DRP 2000/4/150 A0IT/50	400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

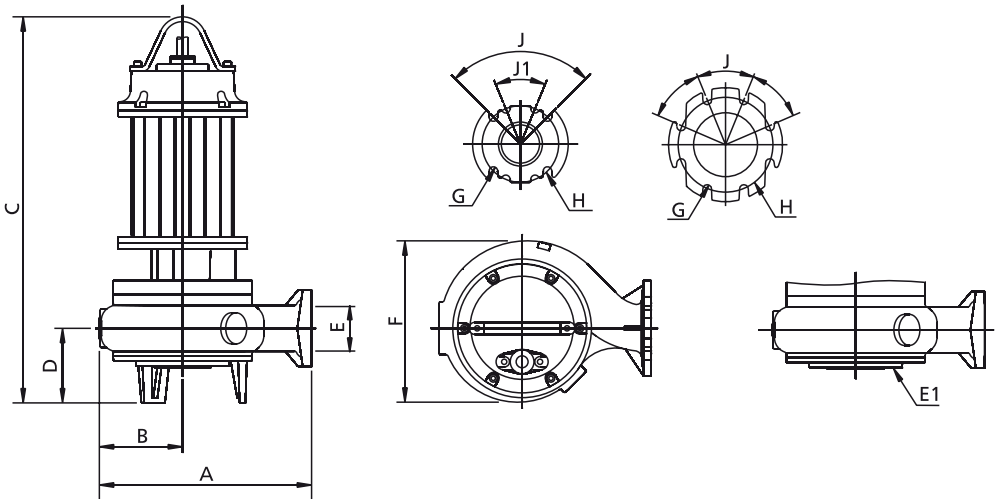
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



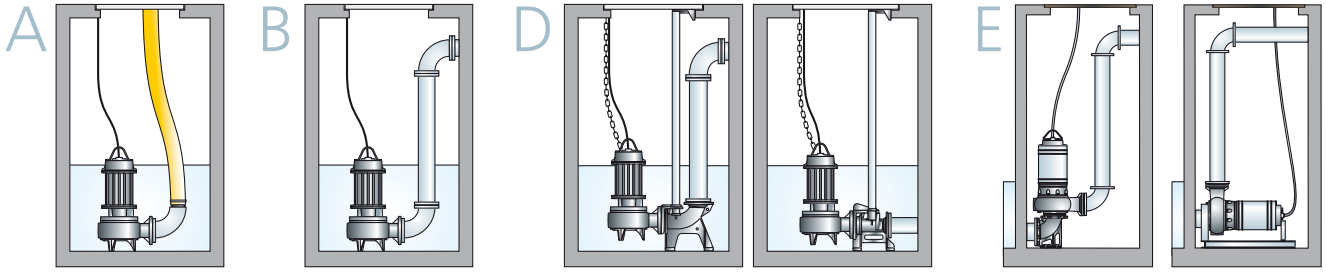
	A	B	C	D	E	E1 (*)	F	G	H	J	J1	kg
DRP 750/2/80 A0HT/50	390	150	770	150	80	-	295	18	160	90°	45°	100
DRP 1000/2/80 A1HT/50	390	150	770	150	80	-	295	18	160	90°	45°	105
DRP 1500/2/80 A0HT/50	390	150	770	150	80	-	295	18	160	90°	45°	128
DRP 2000/2/80 A0IT/50	390	150	935	150	80	DN80 PN6	310	18	160	90°	45°	158
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

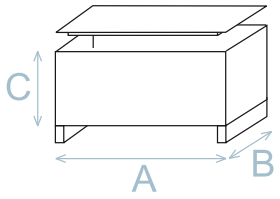
(*) Suction flange available upon request

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



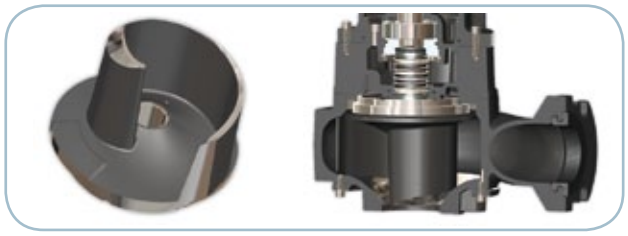
Dimension in mm

All weights and dimensions are indicative only

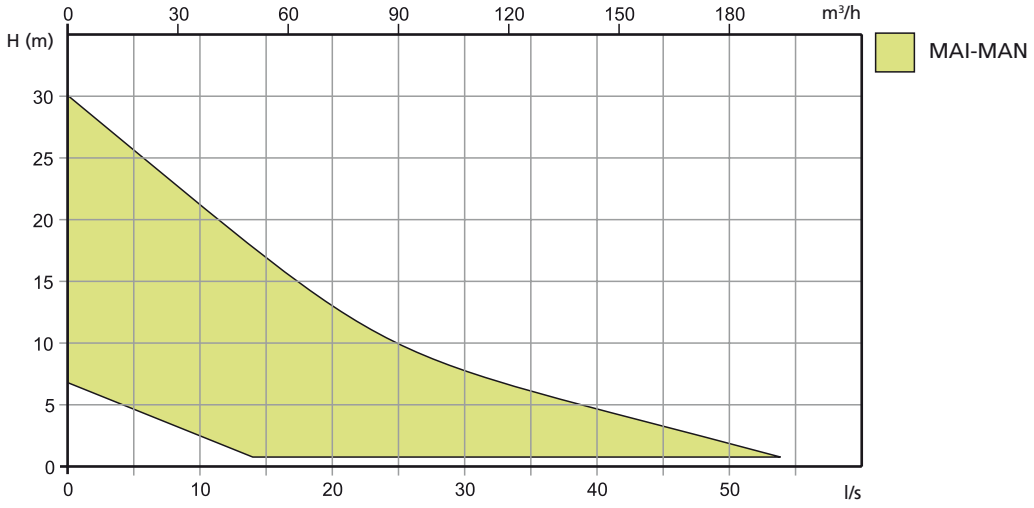
1.3 MA (MACS)
pumps with single-channel open impeller

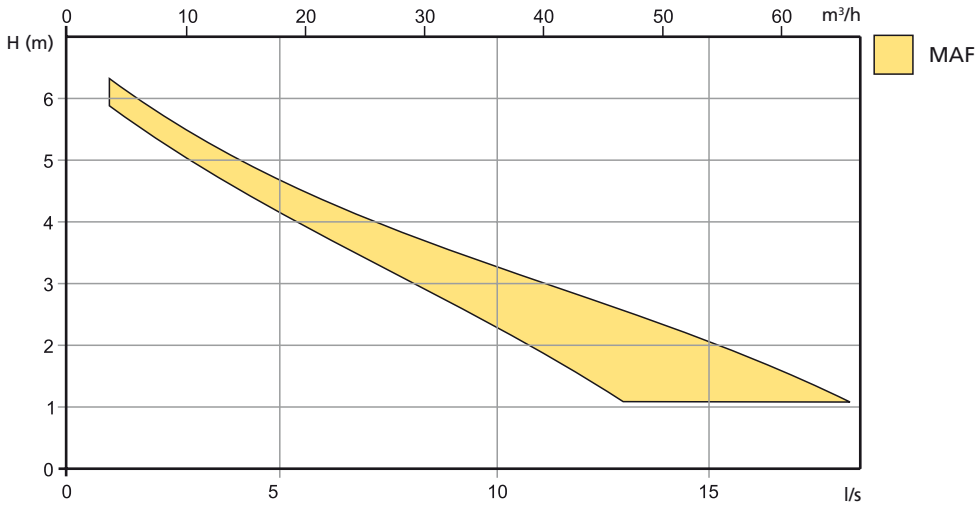
The **MACS (MA)** family consists of electric pumps with single-channel open impeller which allows very high performance and ample free passages, often entirely free passages, which reduce the risk of fouling. Units in this family can be used for lifting sewage, for wastewater treatment plants, and for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



All product images are indicative only

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

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.

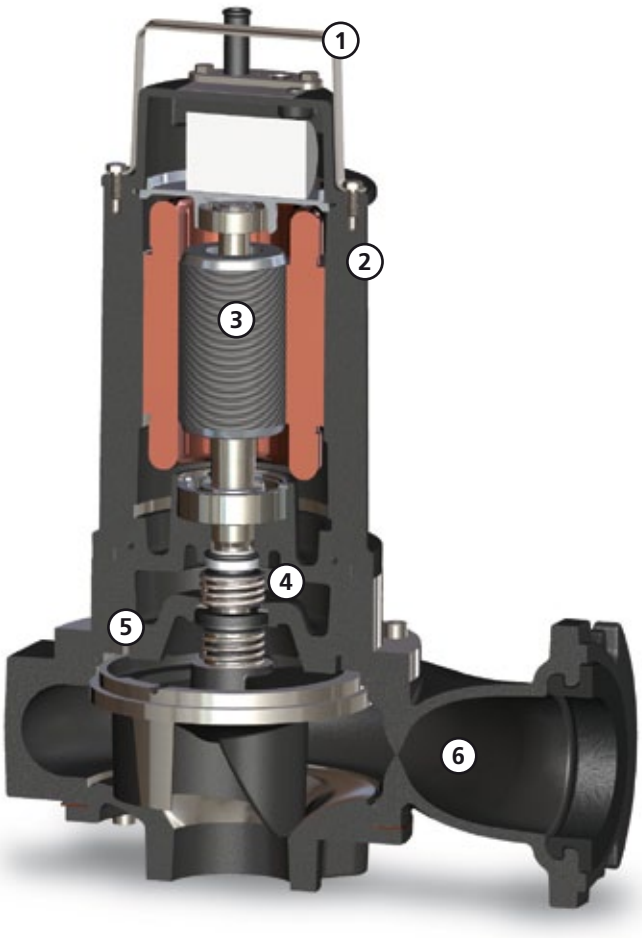
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

MAI





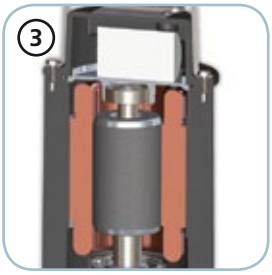
Handle

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.



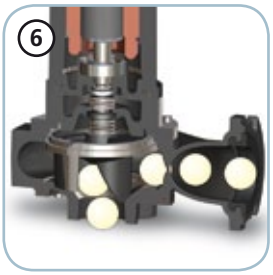
Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Free passage

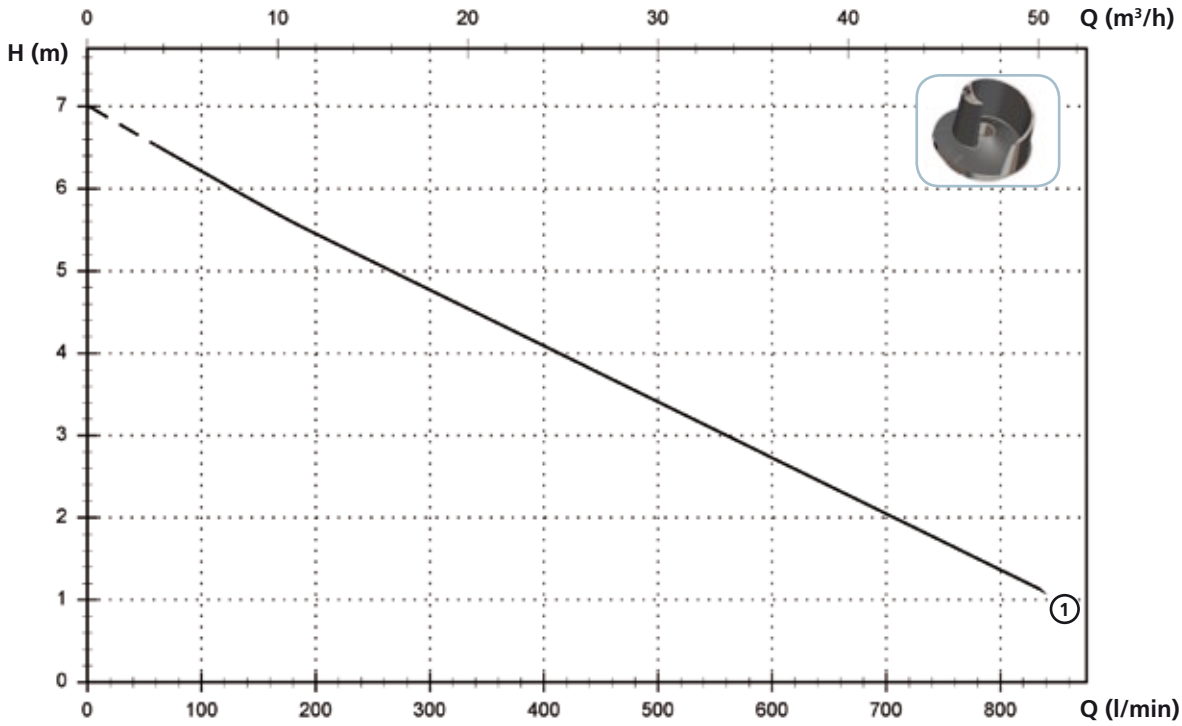
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

MAI

Models with horizontal DN80 PN10-16 flanged discharge - 4 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 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

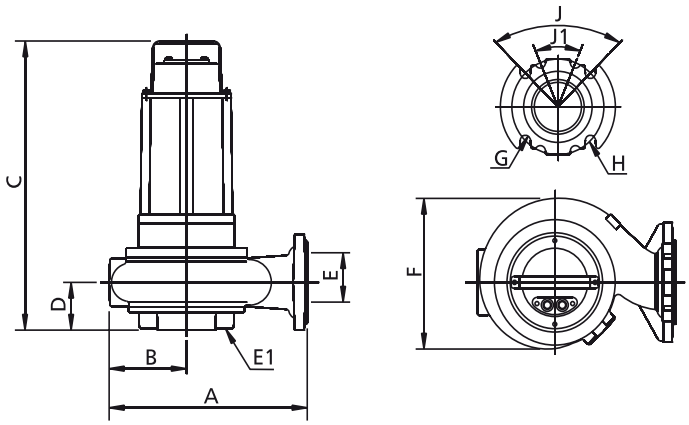
MAI

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

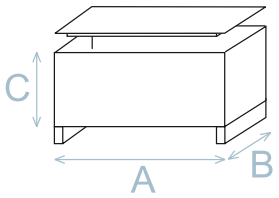
Dimensions in mm *All weights and dimensions are indicative only*

(*) DN of the suction flange - PN6

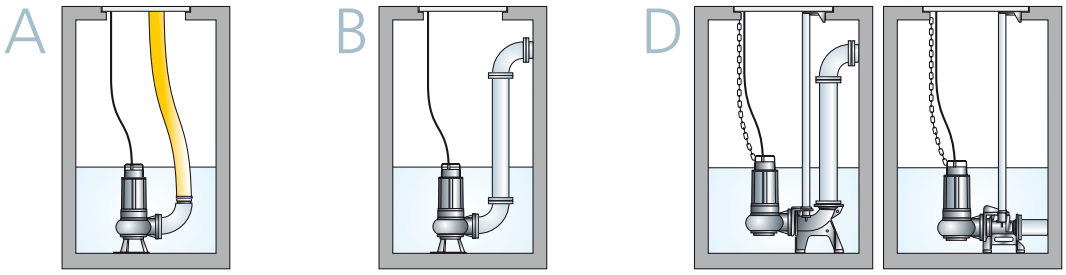
Packaging dimension

	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 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.

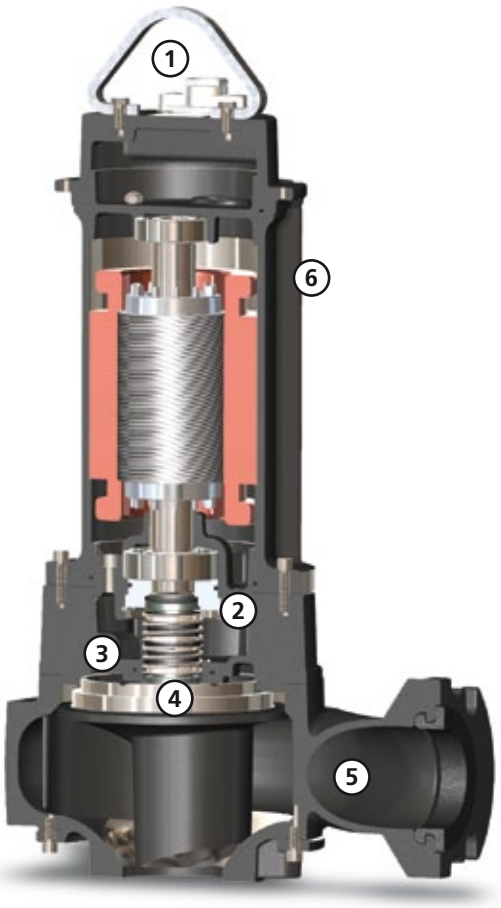
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

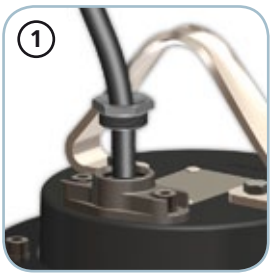
MAN





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 (SiC) mechanical seals in oil sump.



Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



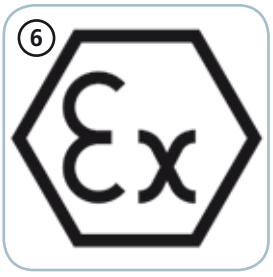
Drive shaft

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

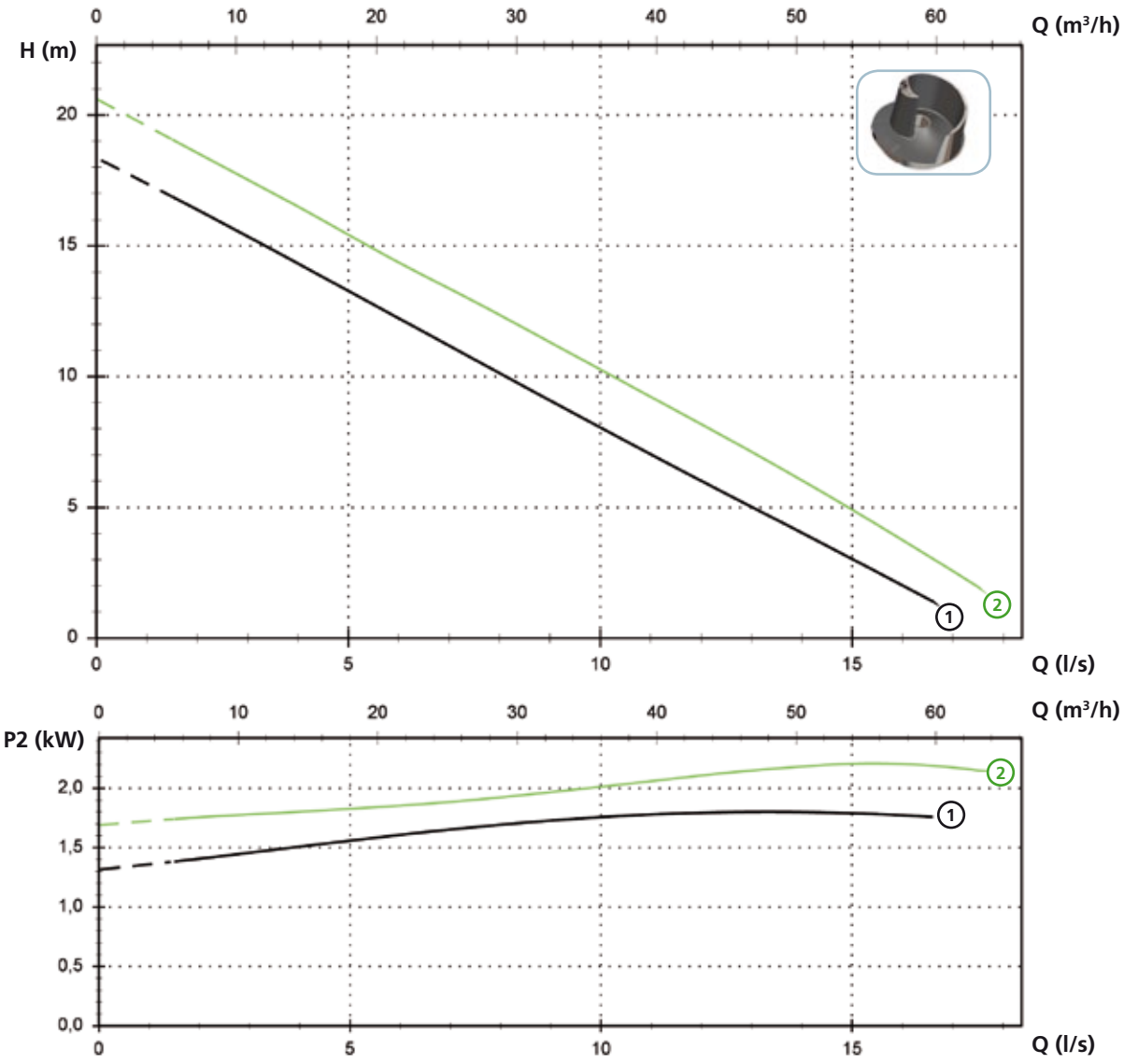
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

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



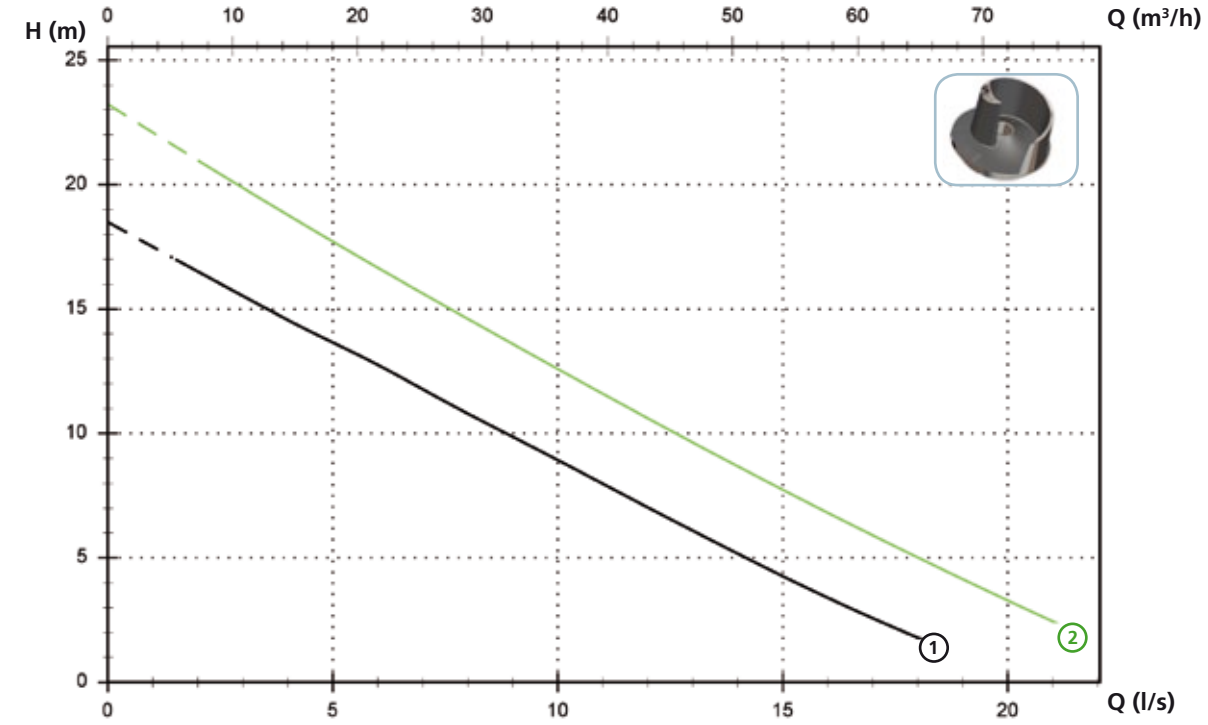
Technical data

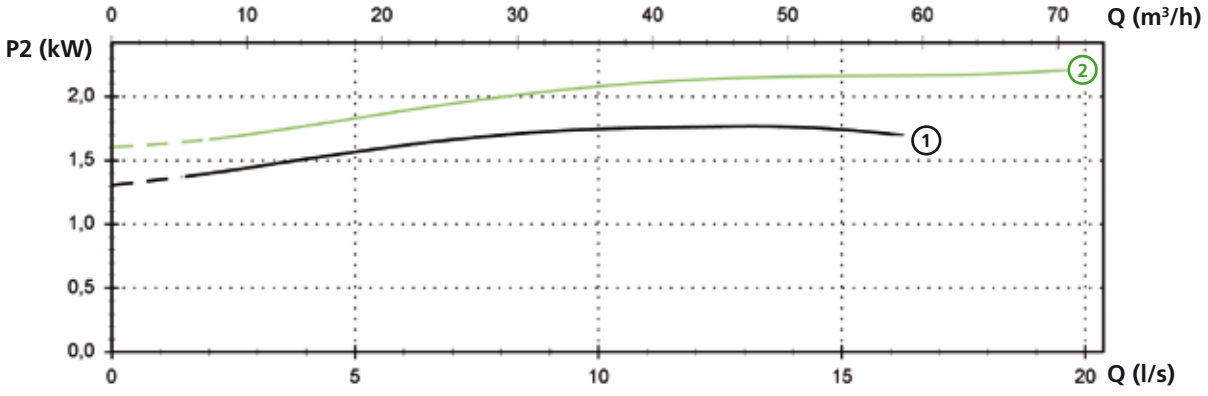
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① MAN 250/2/G65V A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	G 2½"	40 mm

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
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

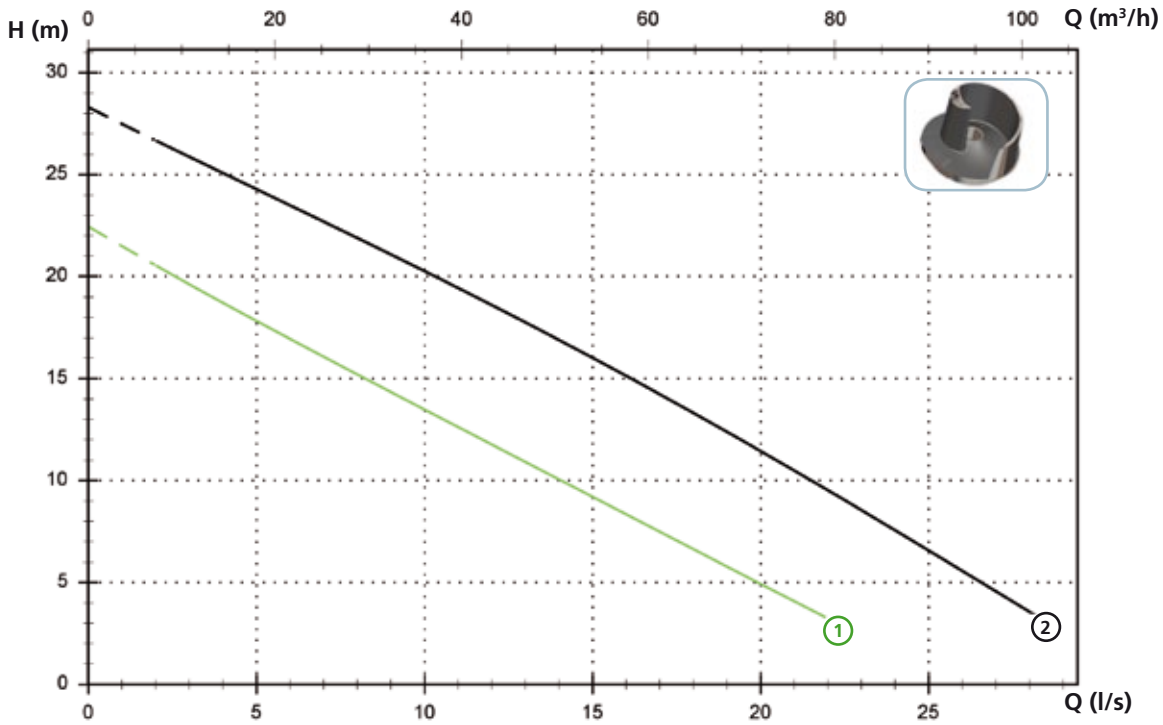
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) MAN 250/2/65 A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	DN65 PN10-16	40 mm

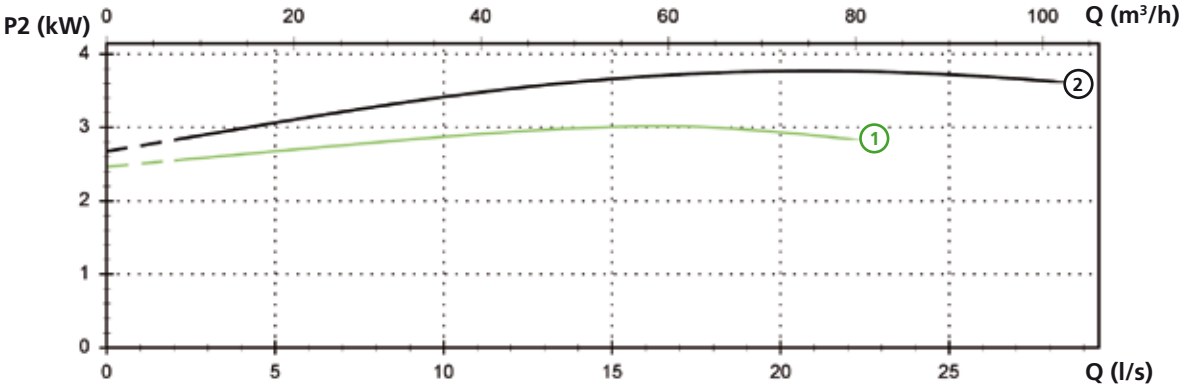
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) MAN 250/2/65 A1DT/50	400	3	2.3	1.8	4.3	2900	Dir	DN65 PN10-16	40 mm
(2) MAN 300/2/65 A1DT/50	400	3	2.9	2.2	5.1	2900	Dir	DN65 PN10-16	40 mm

MAN

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

Performances





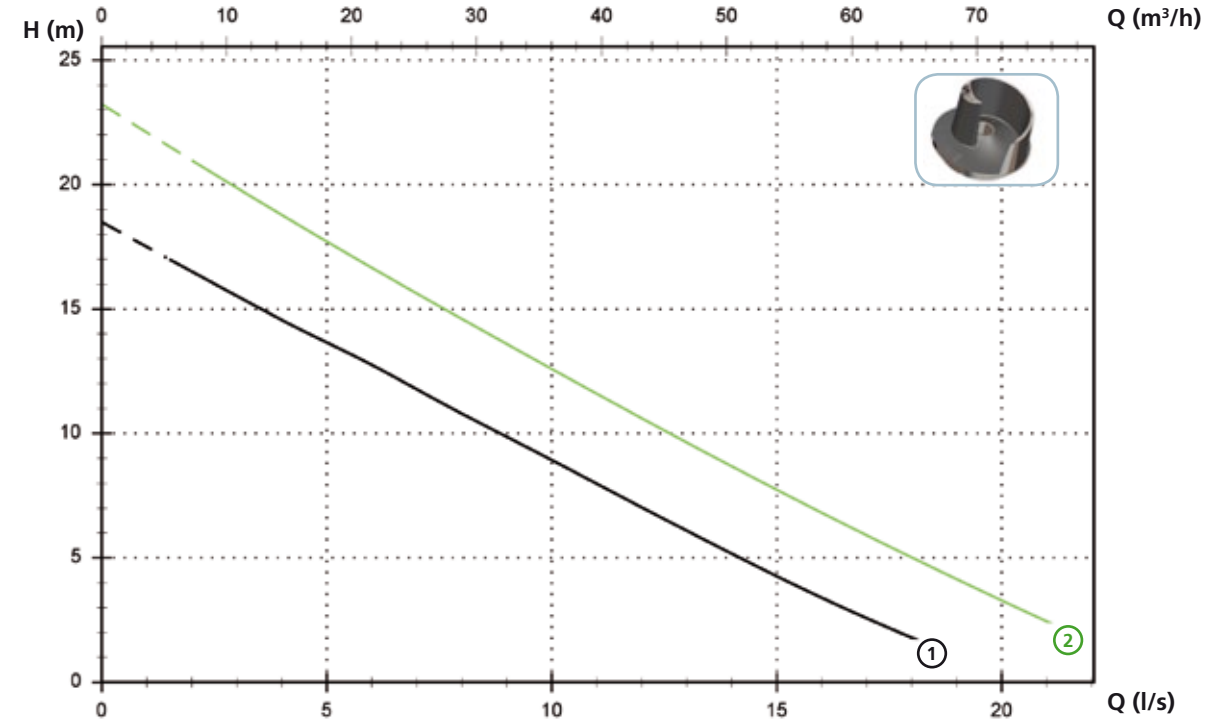
Technical data

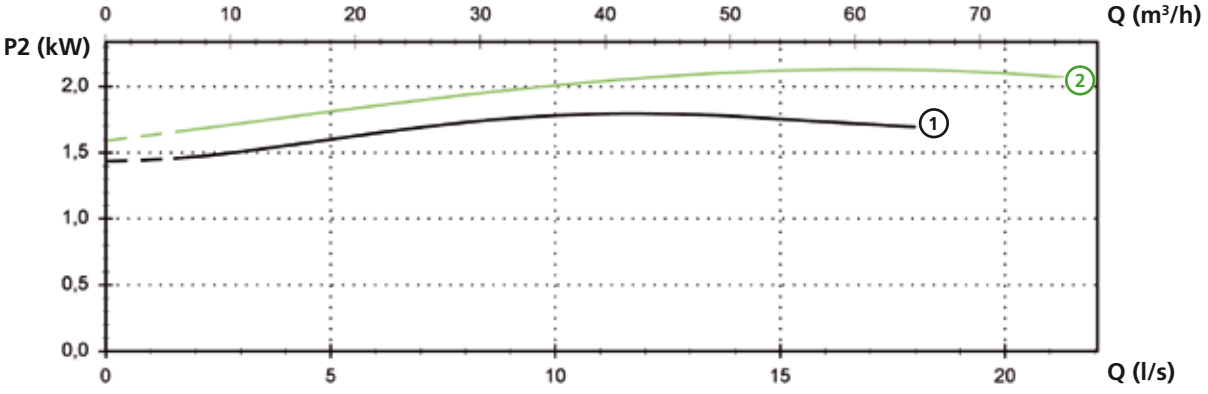
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) MAN 400/2/65 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN65 PN10-16	45 mm
(2) MAN 550/2/65 A1FT/50	400	3	5.0	4.1	8.7	2900	Dir	DN65 PN10-16	50 mm

MAN

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

Performances





Technical data

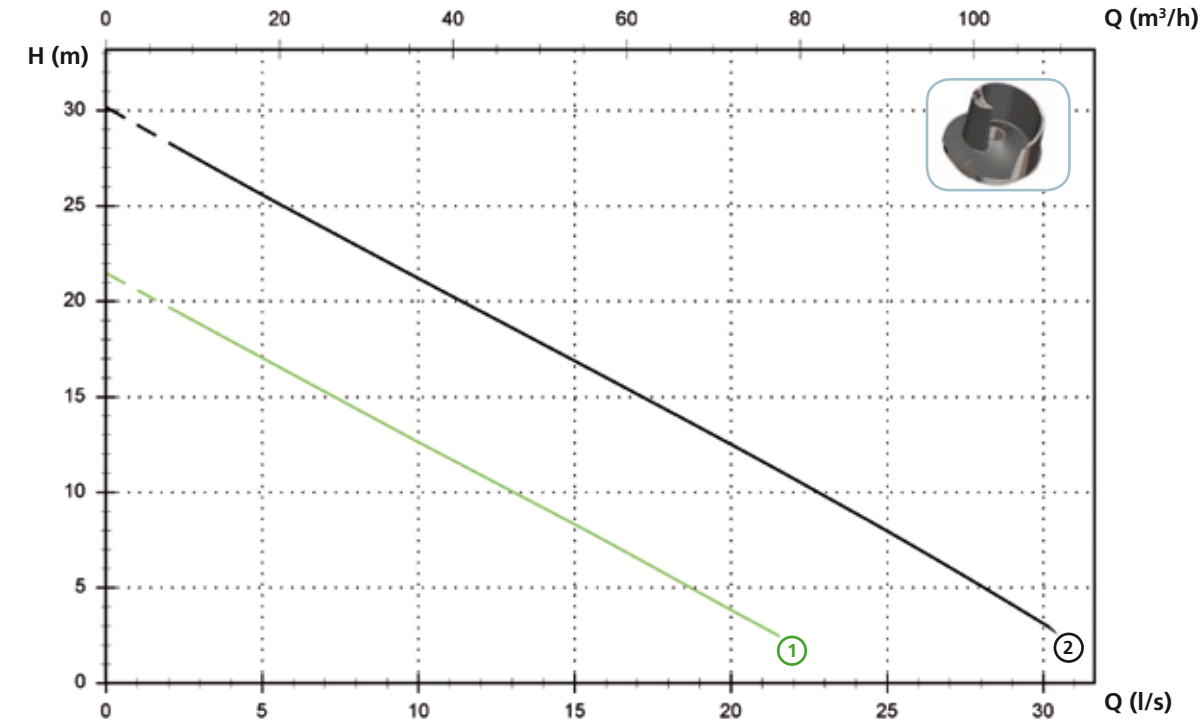
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① MAN 250/2/80 A1DM/50	230	1	2.8	1.8	12.5	2900	Dir	DN80 PN10-16	40 mm

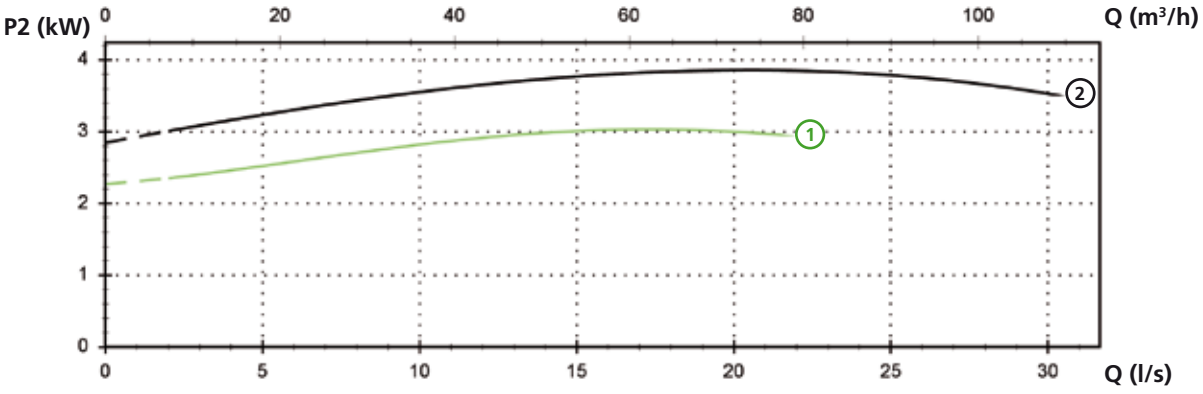
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① MAN 250/2/80 A1DT/50	400	3	2.5	1.8	4.3	2900	Dir	DN80 PN10-16	40 mm
② MAN 300/2/80 A1DT/50	400	3	2.9	2.2	5.1	2900	Dir	DN80 PN10-16	40 mm

MAN

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

Performances





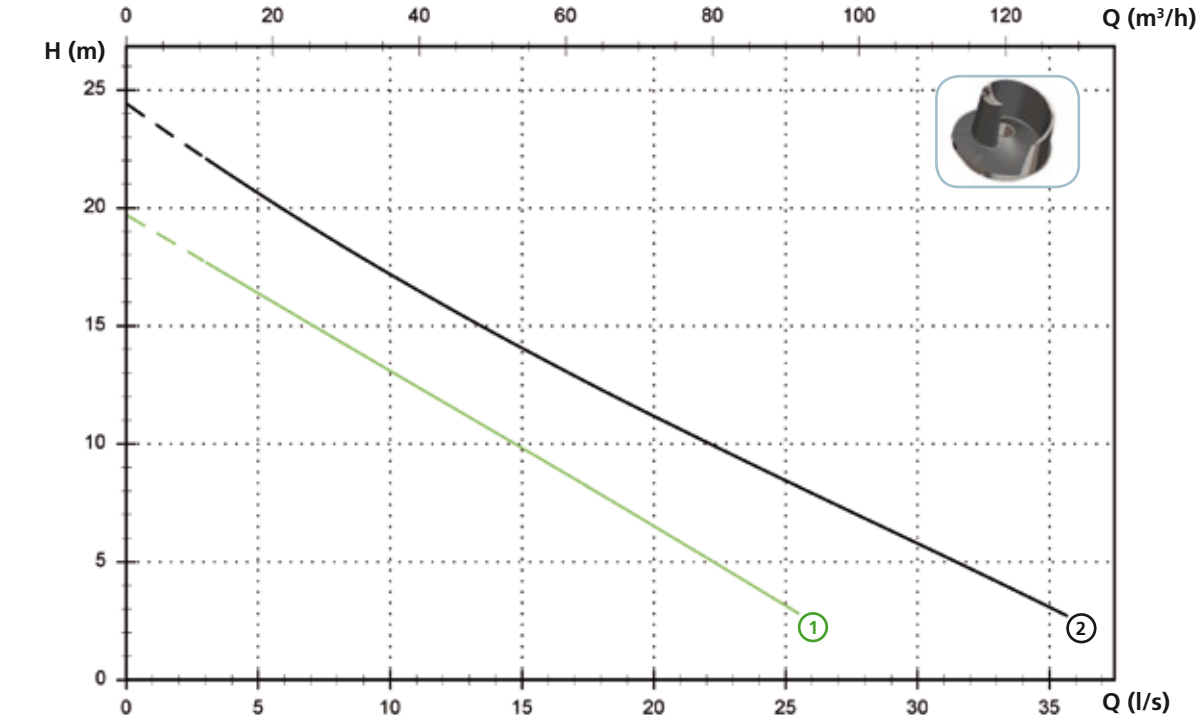
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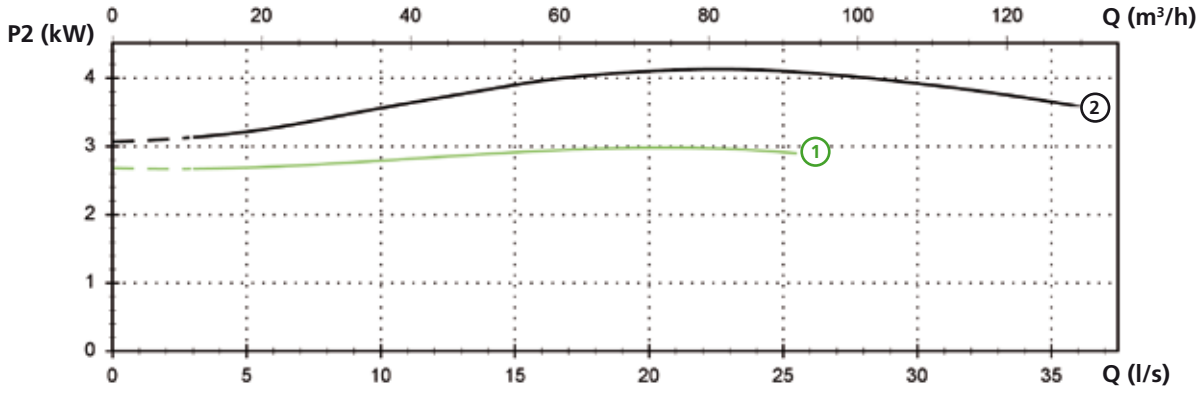
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	MAN 400/2/80 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN80 PN10-16	40 mm
2	MAN 550/2/80 A1FT/50	400	3	5.0	4.1	8.7	2900	Dir	DN80 PN10-16	45 mm

MAN

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

Performances





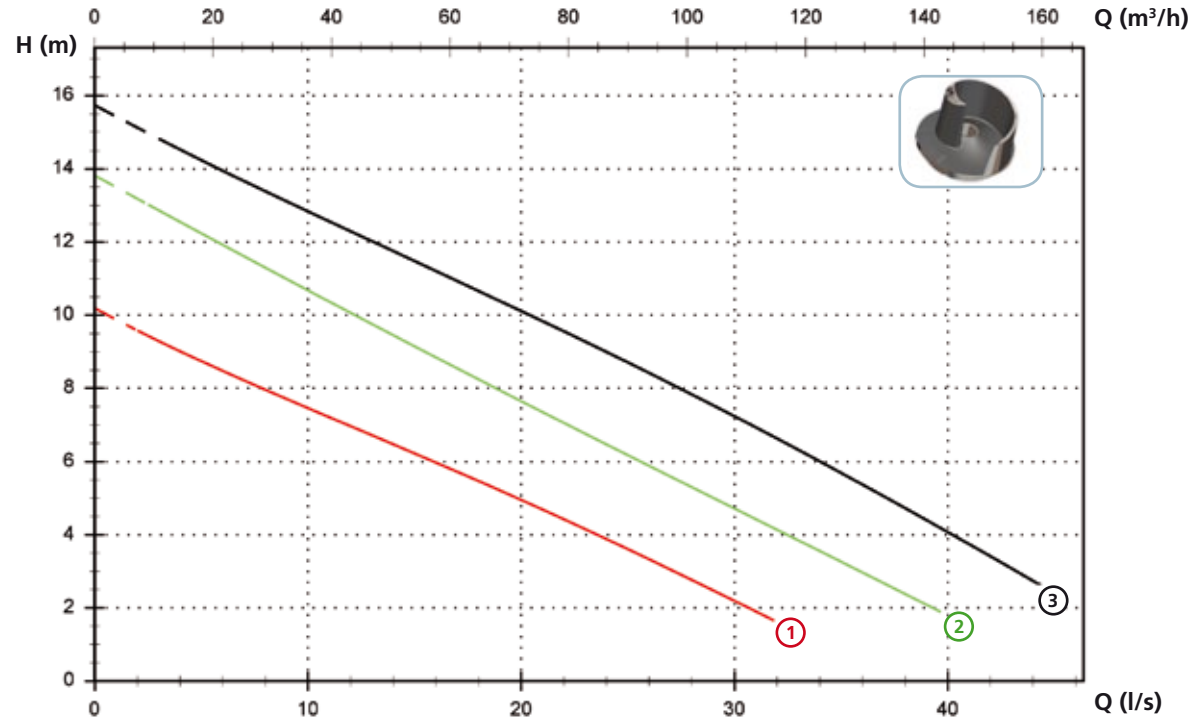
Technical data

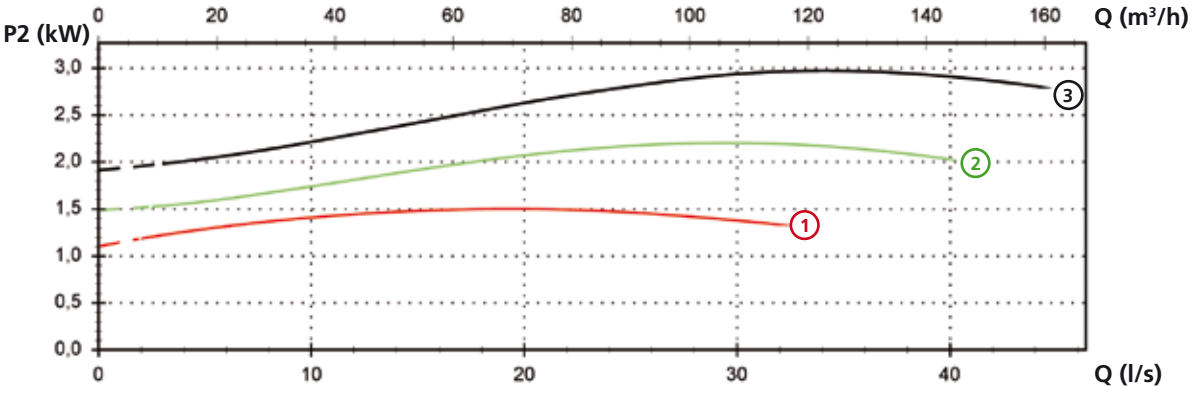
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	MAN 400/2/100 A1FT/50	400	3	4.0	3	6.7	2900	Dir	DN100 PN10-16	50 mm
2	MAN 550/2/100 A1FT/50	400	3	5.0	4.1	8.7	2900	Dir	DN100 PN10-16	50 mm

MAN

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

Performances



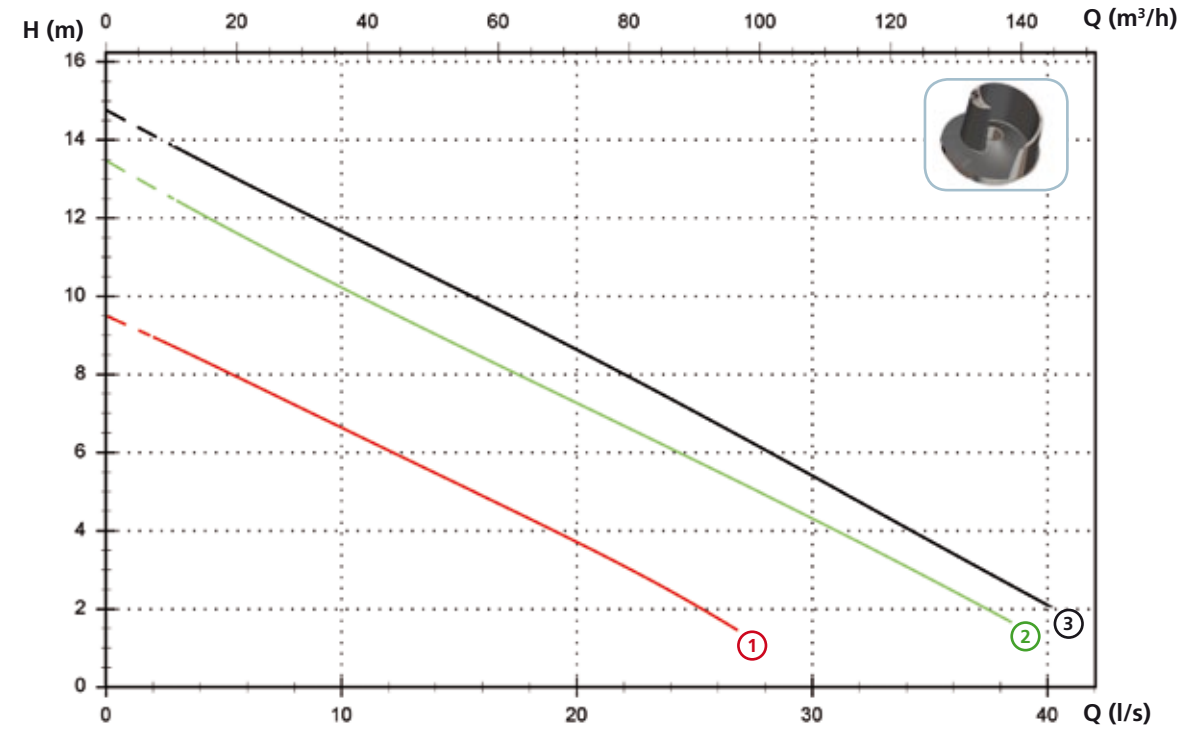


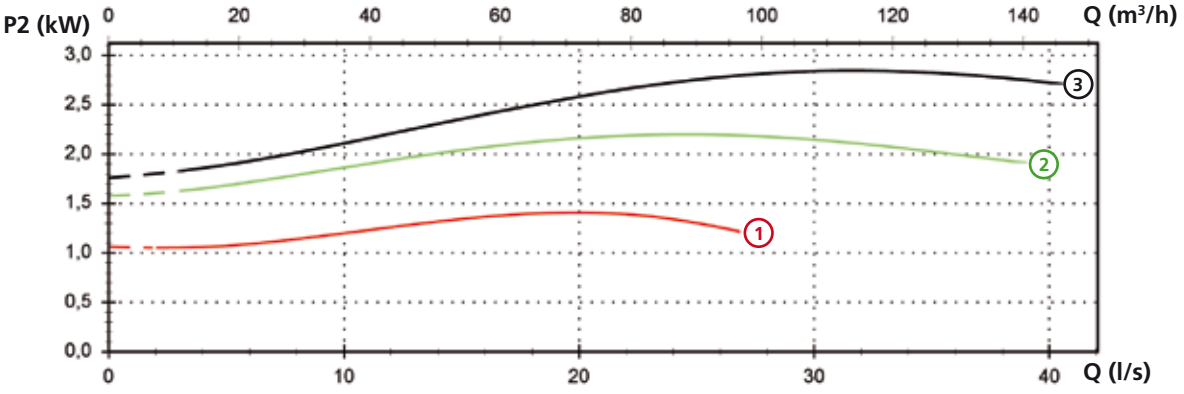
Technical data

		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





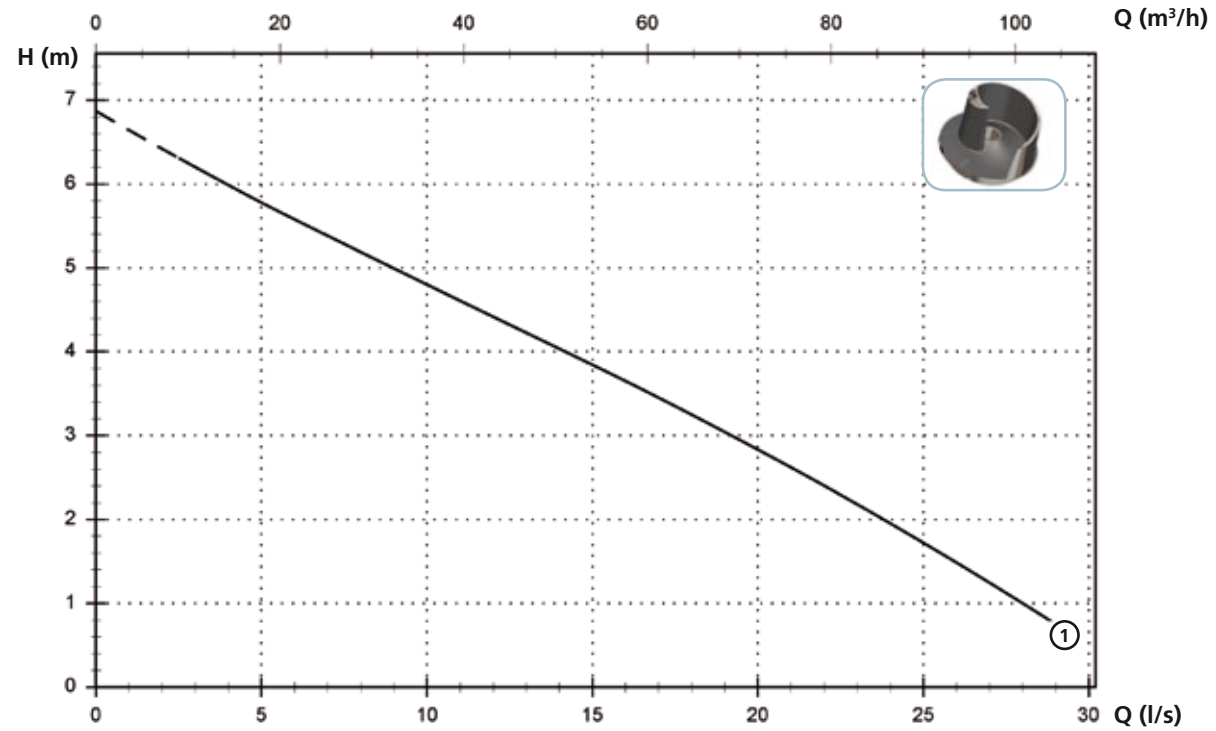
Technical data

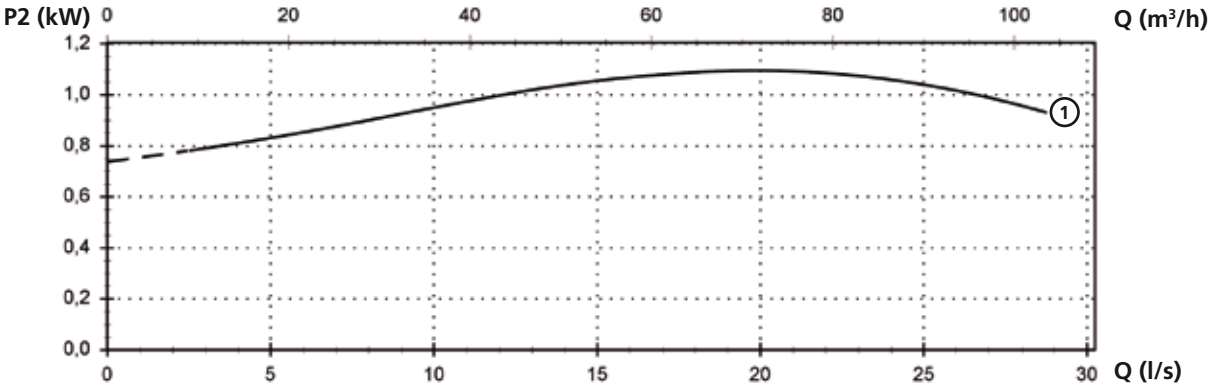
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	MAN 200/4/100 A1DT/50	400	3	2	1.5	4.1	1450	Dir	DN100 PN10-16	80 mm
2	MAN 300/4/100 A1FT/50	400	3	2.9	2.2	5.8	1450	Dir	DN100 PN10-16	80 mm
3	MAN 400/4/100 A1FT/50	400	3	3.7	3	7.3	1450	Dir	DN100 PN10-16	80 mm

MAN

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

Performances





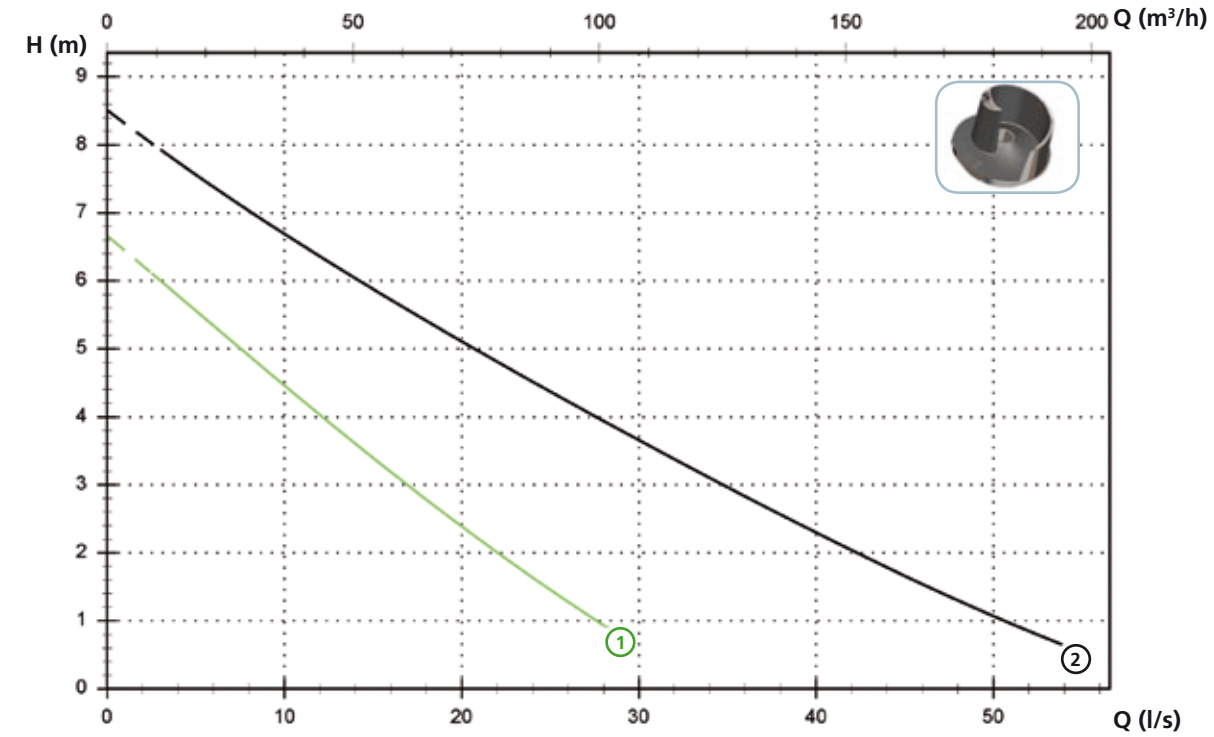
Technical data

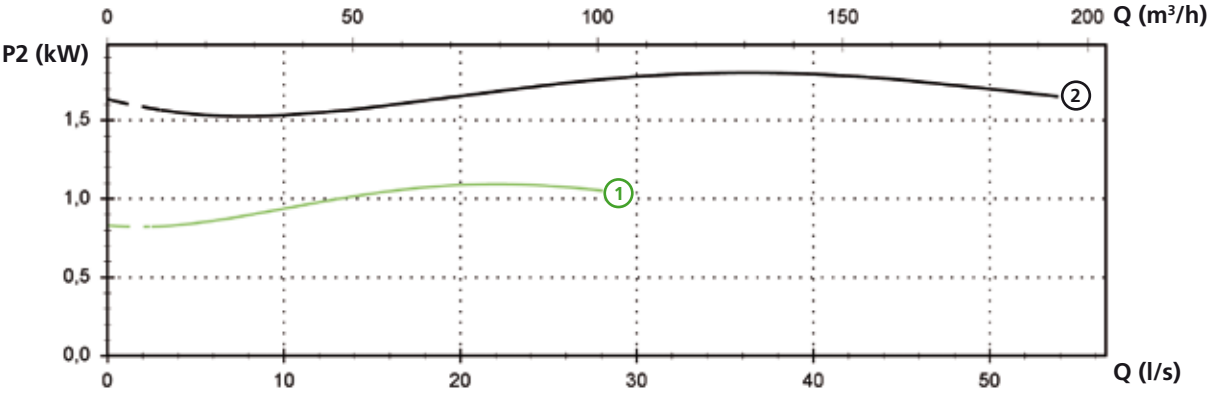
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) MAN 150/6/80 A1DT/50	400	3	1.6	1.1	3.7	960	Dir	DN80 PN10-16	80 mm

MAN

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

Performances





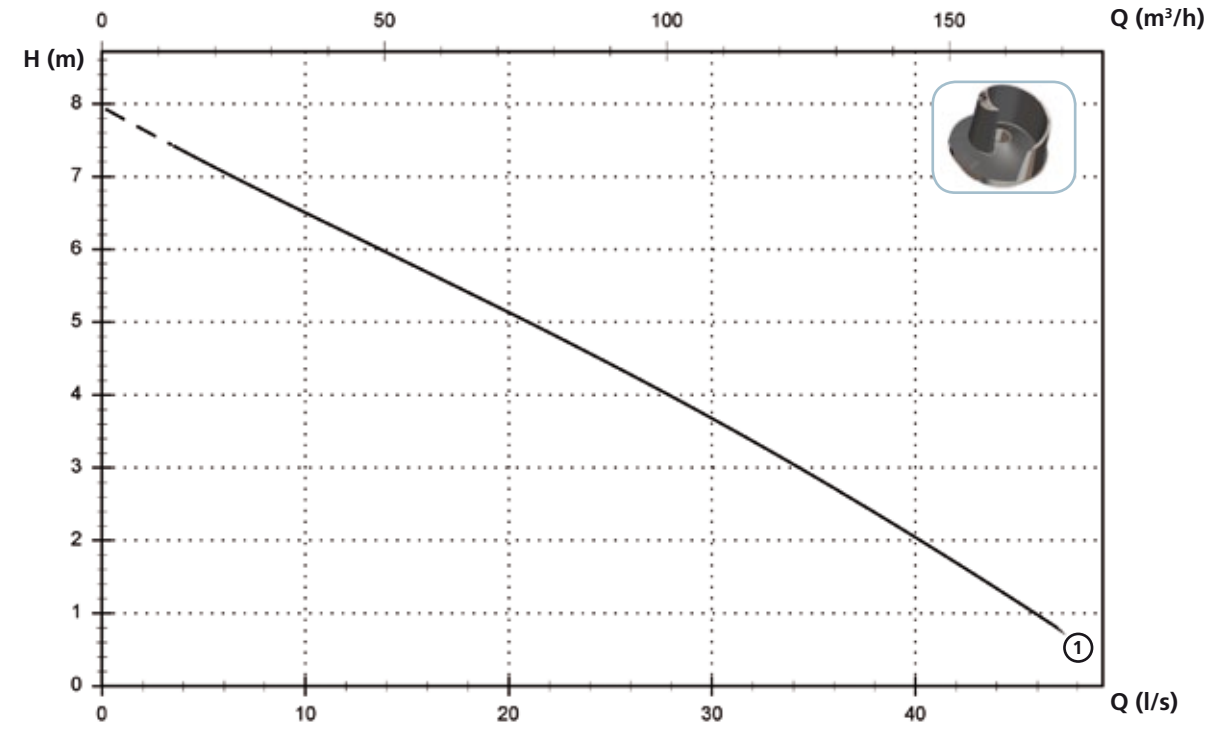
Technical data

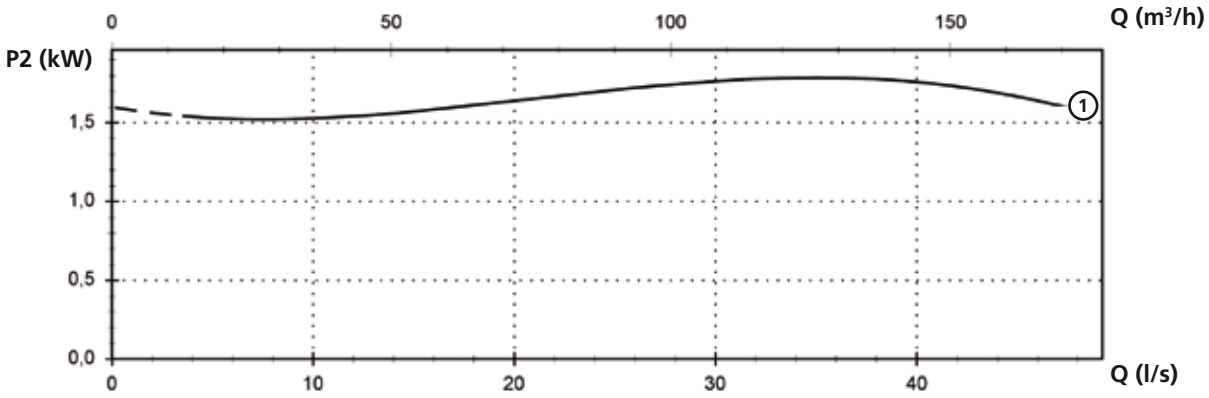
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	MAN 150/6/100 A1DT/50	400	3	1.6	1.1	3.7	960	Dir	DN100 PN10-16	80 mm
2	MAN 250/6/100 A1FT/50	400	3	2.6	1.8	5.7	960	Dir	DN100 PN10-16	100 mm

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

MAN

Versions available

(Key to versions on page 16)

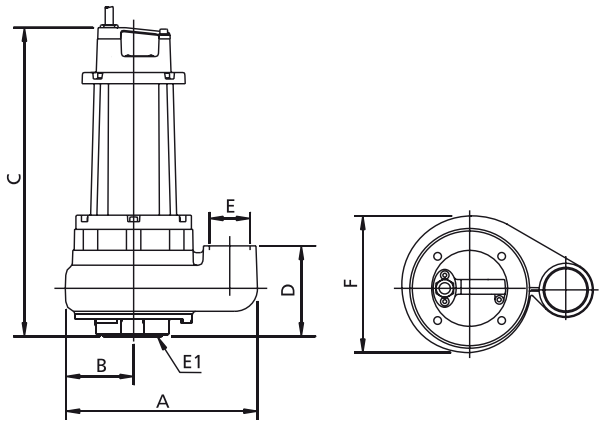
	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	2SIC	SICM	SICAL	2SICAL
MAN 250/2/G65V A1DM/50				●									●	●			●			
MAN 250/2/G65V A1DT/50		●								●			●	●			●			
MAN 300/2/G65V A1DT/50		●								●			●	●			●			
MAN 250/2/65 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



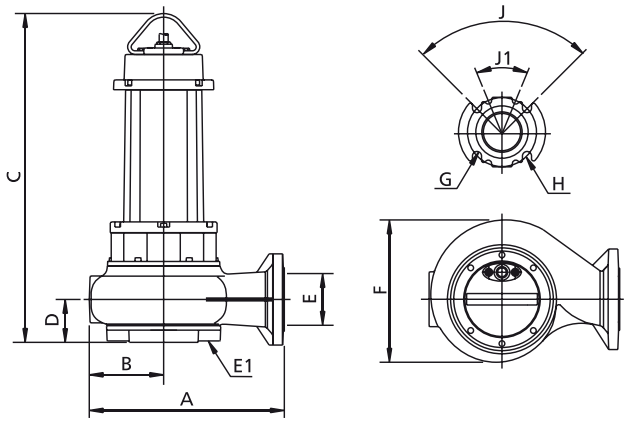
	A	B	C	D	E	E1 (*)	F	kg
MAN 250/2/G65V A1DM(T)/50	335	125	545	155	G 2½"	65	240	52
MAN 300/2/G65V A1DT/50	335	125	545	155	G 2½"	65	240	52

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

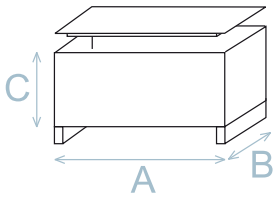
(*) DN of the suction flange - PN6

Dimensions in mm

All weights and dimensions are indicative only

Packaging dimension

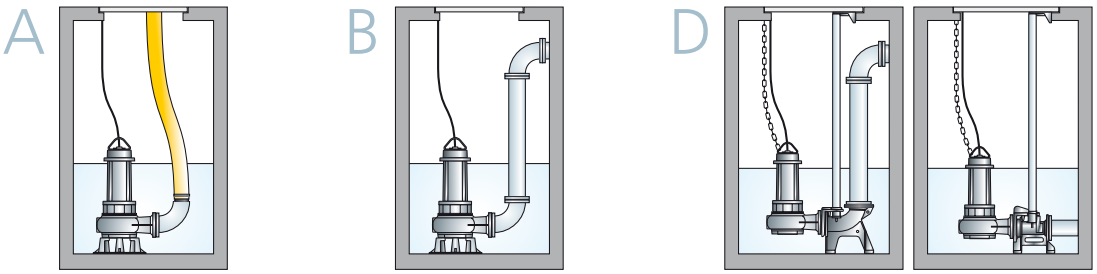
	A	B	C
MAN 250/2/G65V A1DM(T)/50	725	445	415
MAN 300/2/G65V A1DT/50	725	445	415
MAN 250/2/65 A1DM(T)/50	725	445	415
MAN 300/2/65 A1DT/50	725	445	415
MAN 400/2/65 A1FT/50	725	445	415
MAN 550/2/65 A1FT/50	725	445	415
MAN 250/2/80 A1DM(T)/50	725	445	415
MAN 300/2/80 A1DT/50	725	445	415
MAN 400/2/80 A1FT/50	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

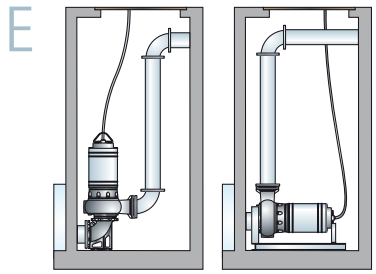


Dimension in mm

All weights and dimensions are indicative only

Installations available





MAF



All product images are indicative only

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

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.

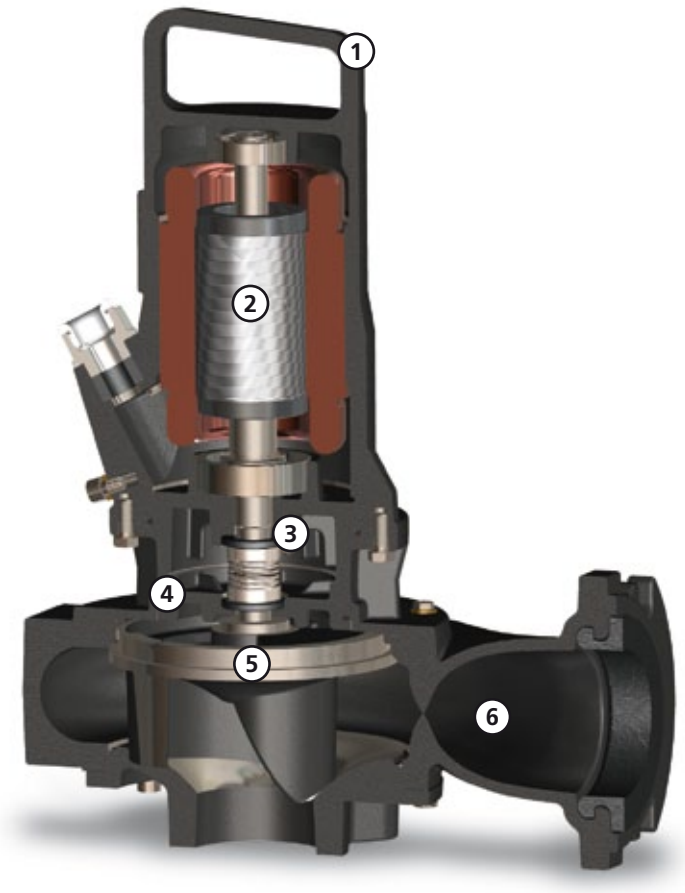
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

MAF



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

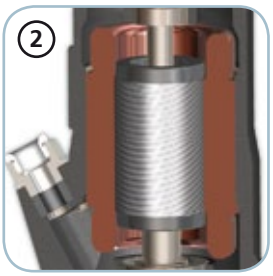






Handle/Cable gland

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.



Drive shaft

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



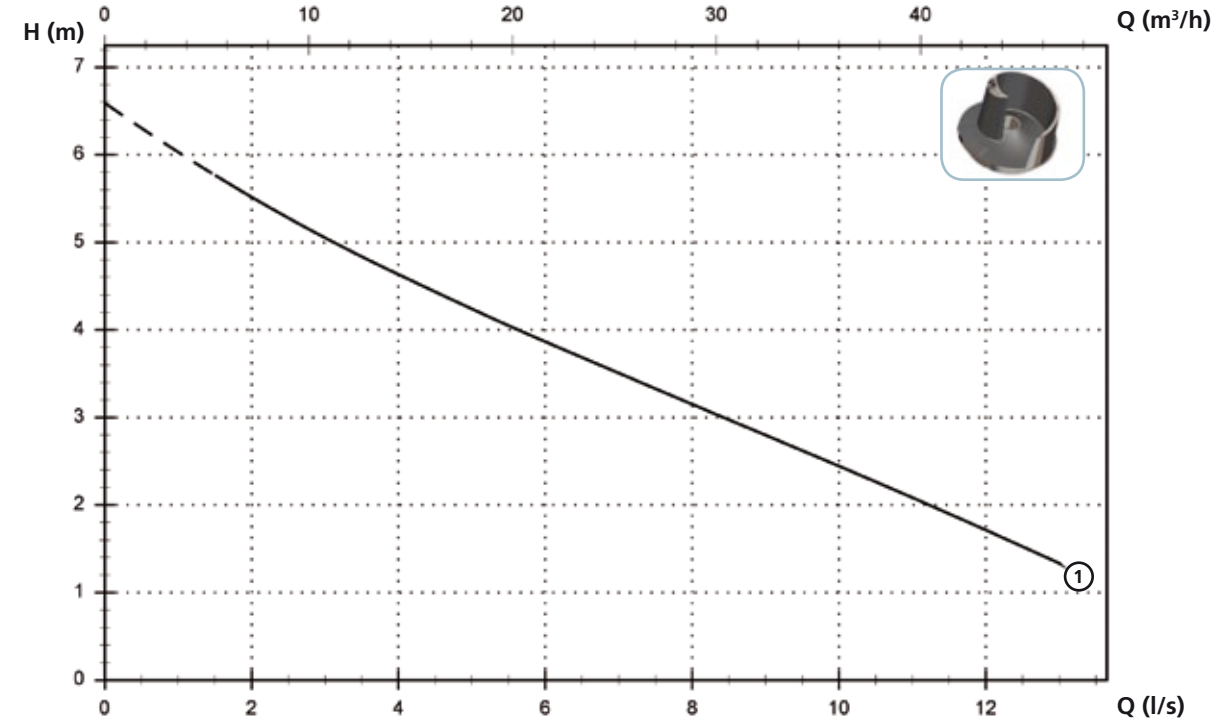
Free passage

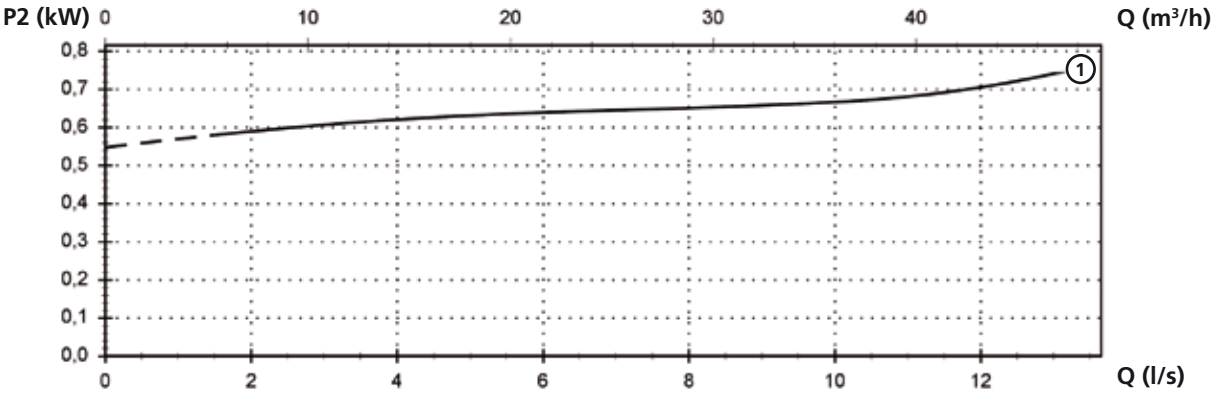
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

MAF

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

Performances





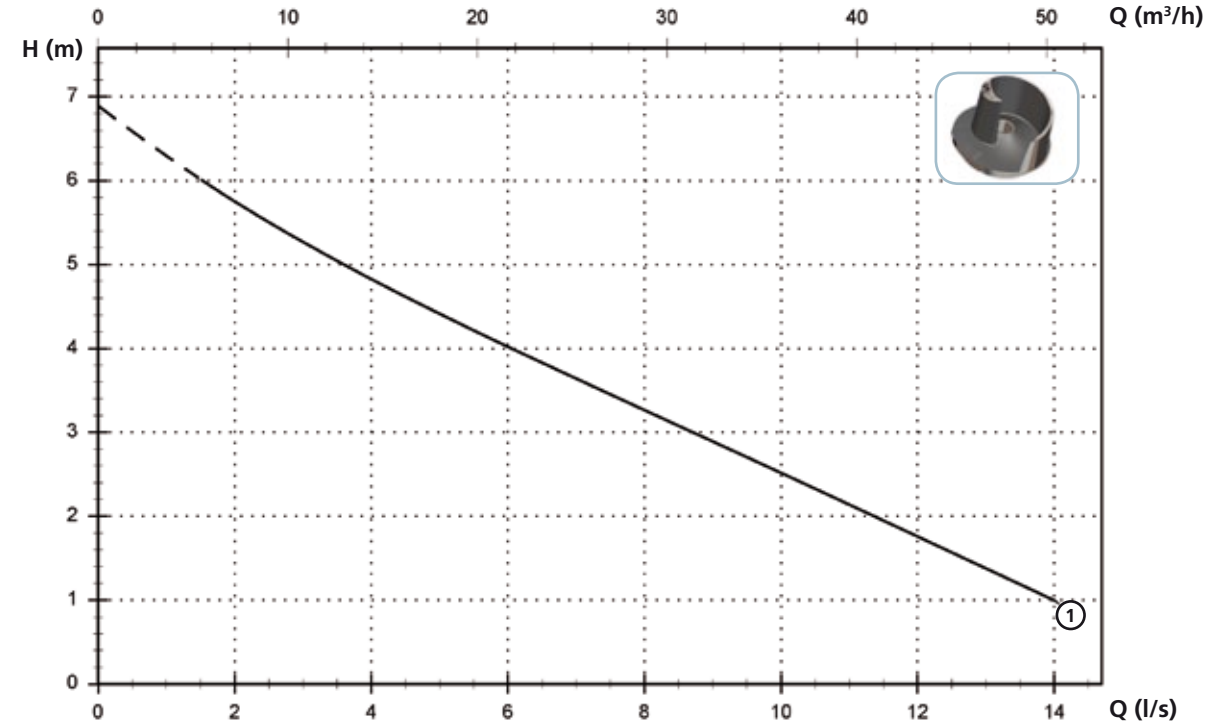
Technical data

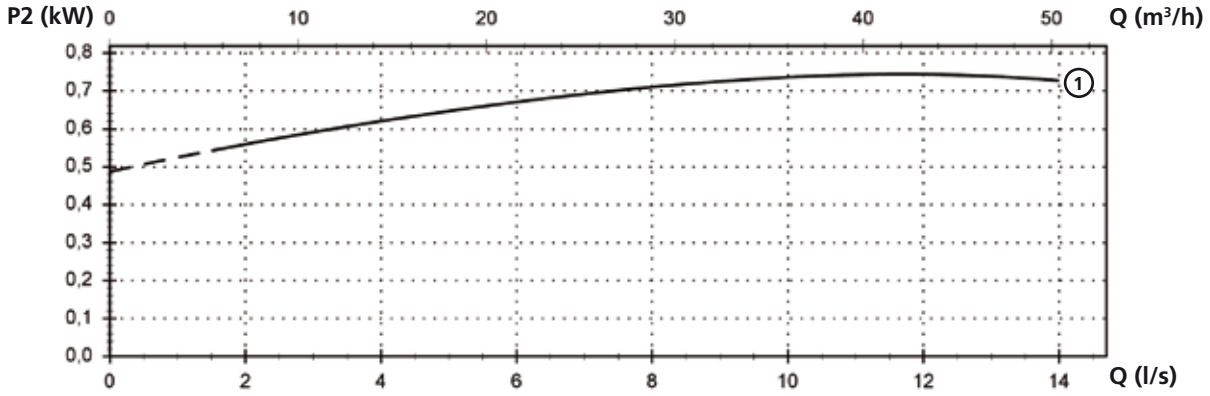
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① MAF 100/4/65 A1CT/50	400	3	1.1	0.74	2.2	1450	Dir	DN65 PN10-16	50 mm

MAF

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

Performances





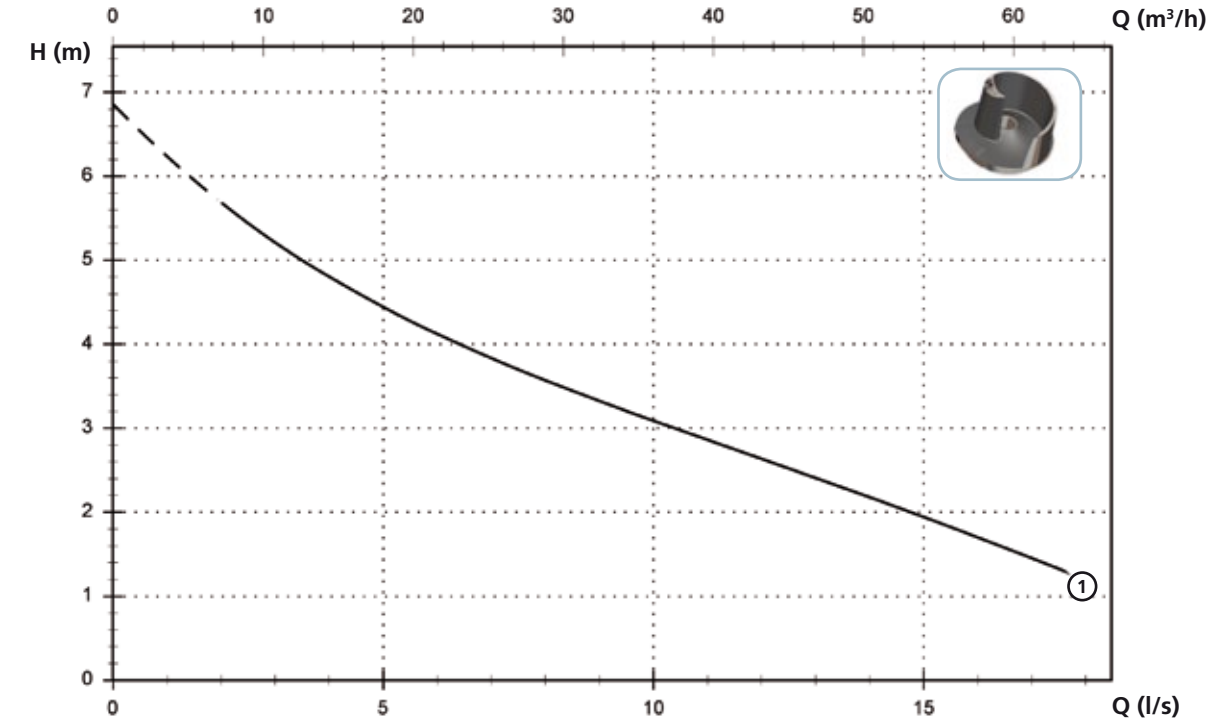
Technical data

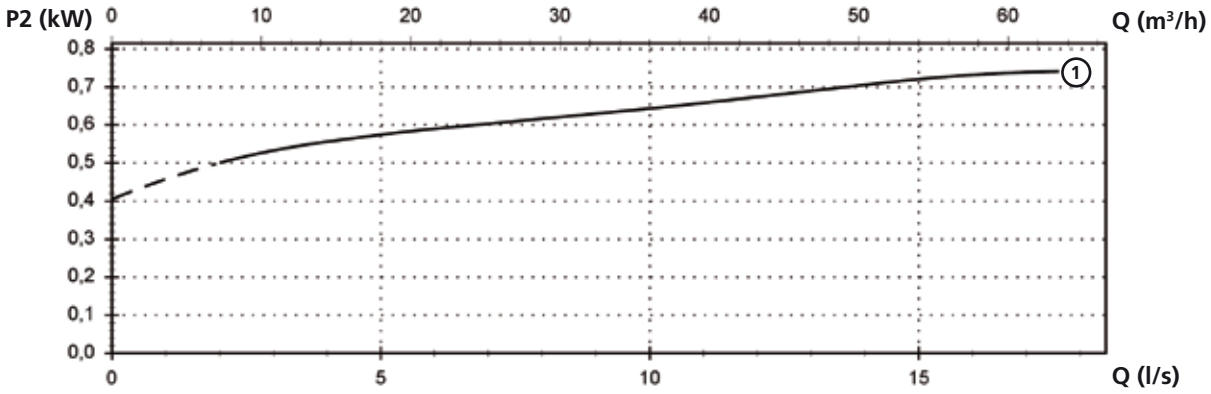
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① MAF 100/4/80 A1CT/50	400	3	1.1	0.74	2.2	1450	Dir	DN80 PN10-16	50 mm

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

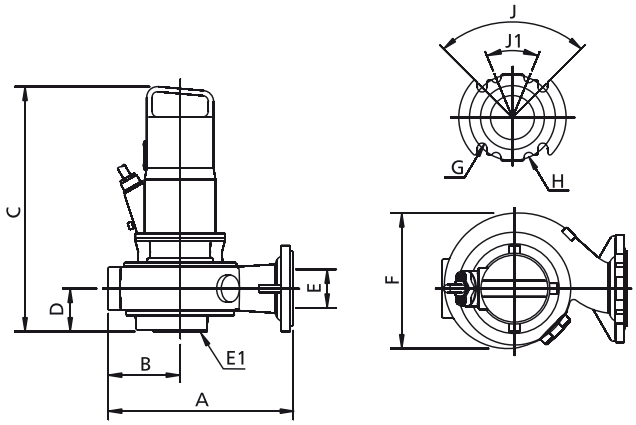
MAF

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

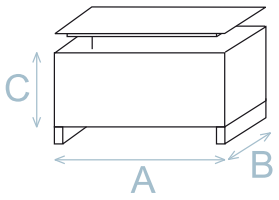
Dimensions in mm

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

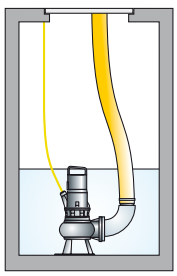


Dimension in mm

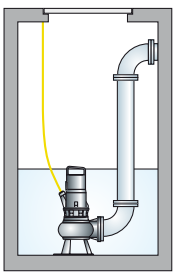
All weights and dimensions are indicative only

Installations available

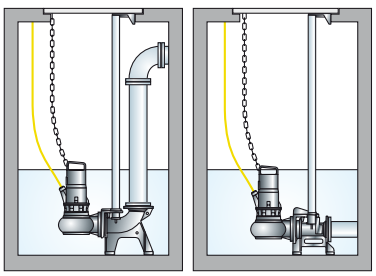
A



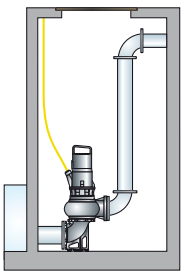
B



D



E



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

1.4 SM-SB (SYSTEM M-SYSTEM B)

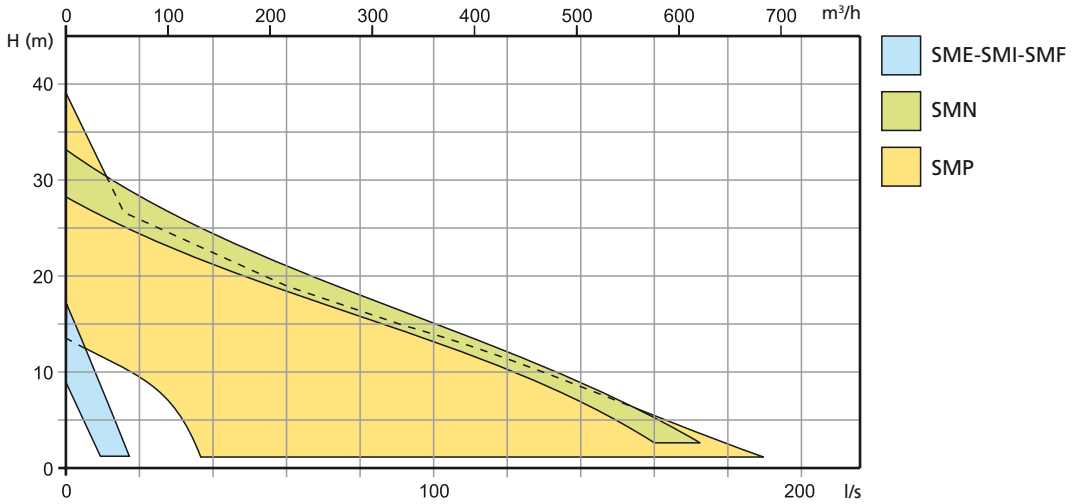
pumps with single- and dual-channel closed impeller

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.

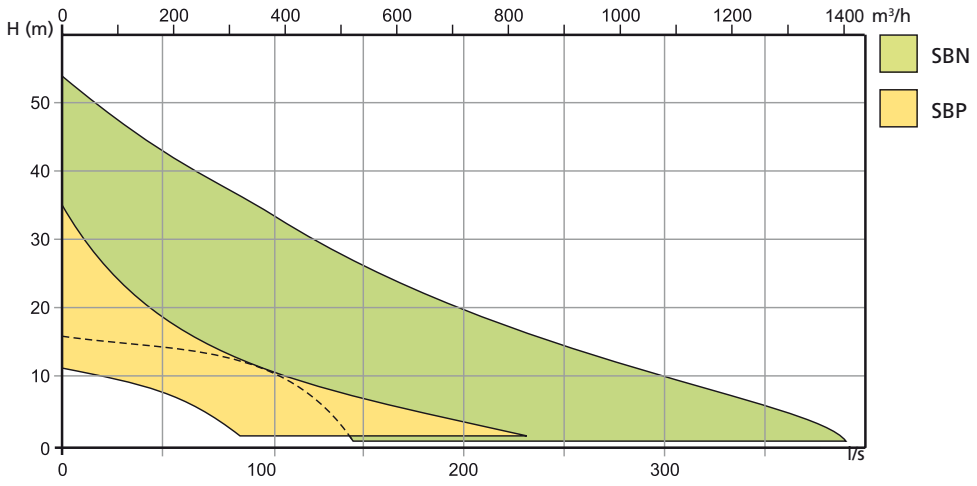


The SB (SYSTEM B) family consists of electric pumps with dual-channel closed impeller. The ample free passage and excellent performance are the two features that enable the SB family to operate with soiled liquids containing suspended solids.

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



All product images are indicative only

Single-channel closed impeller

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.

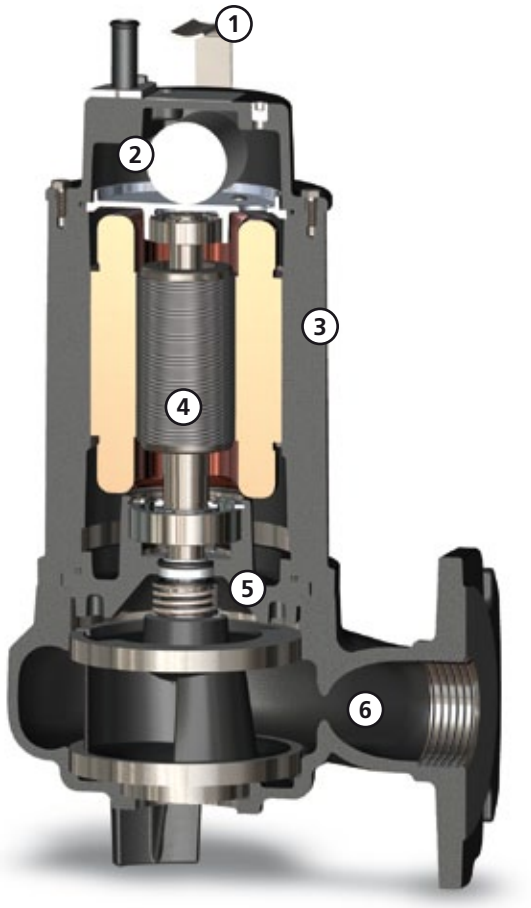
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

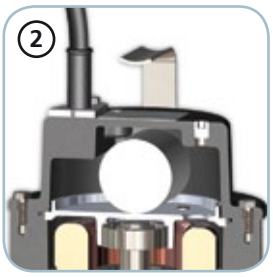
SME





Handle

AISI 304 stainless steel lifting and carrying handle.



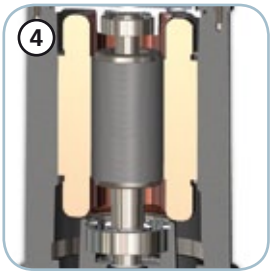
Capacitor/relay

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



Structure

Constructed in GJL-250 cast iron.



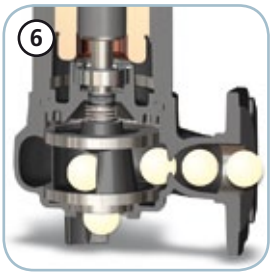
Motor

Ecological dry motor with thermal protections.



Mechanical seals

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



Free passage

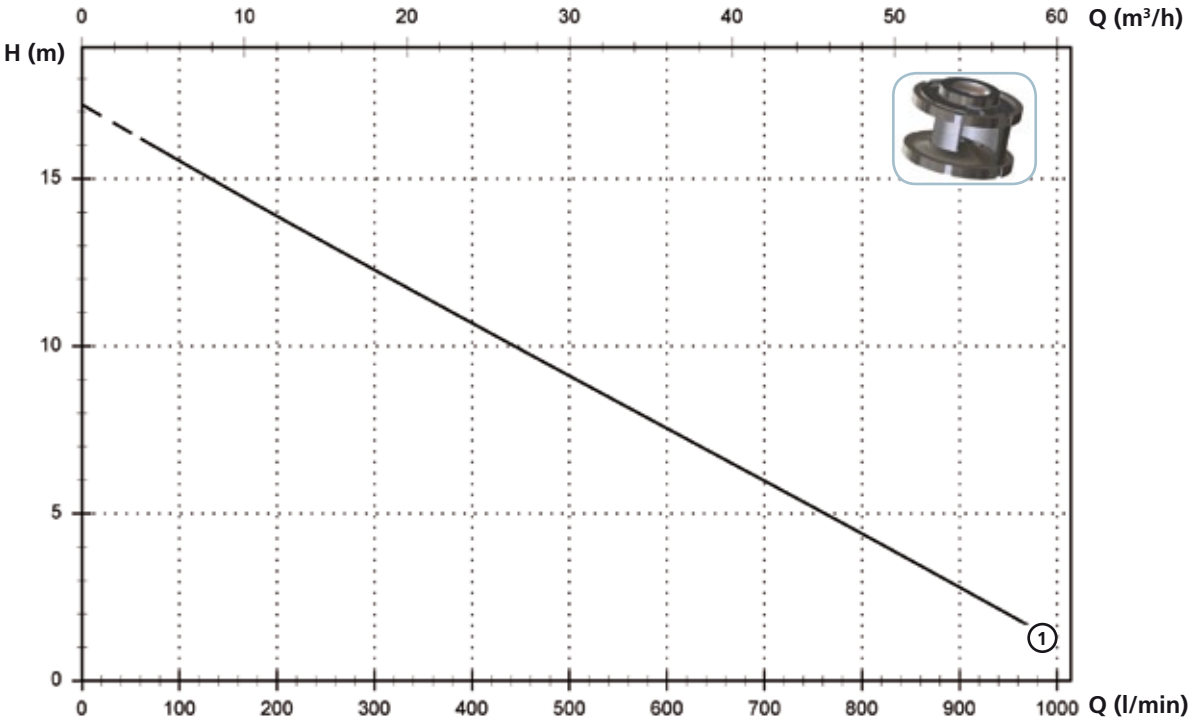
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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
	m³/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

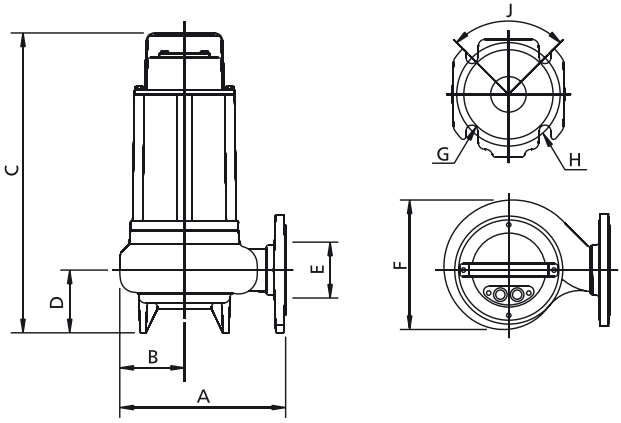
SME

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

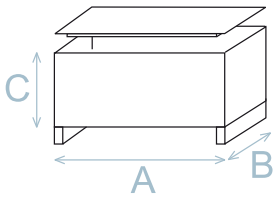
All weights and dimensions are indicative only

Packaging dimension

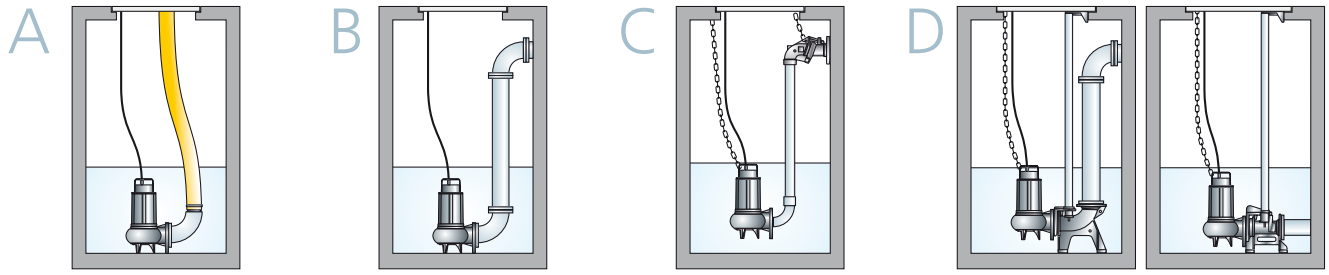
	A	B	C
SME 200/2/G50H A0CM(T)/50	725	445	415

Dimension in mm

All weights and dimensions are indicative only



Installations available



SMI



All product images are indicative only

Single-channel closed impeller

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.

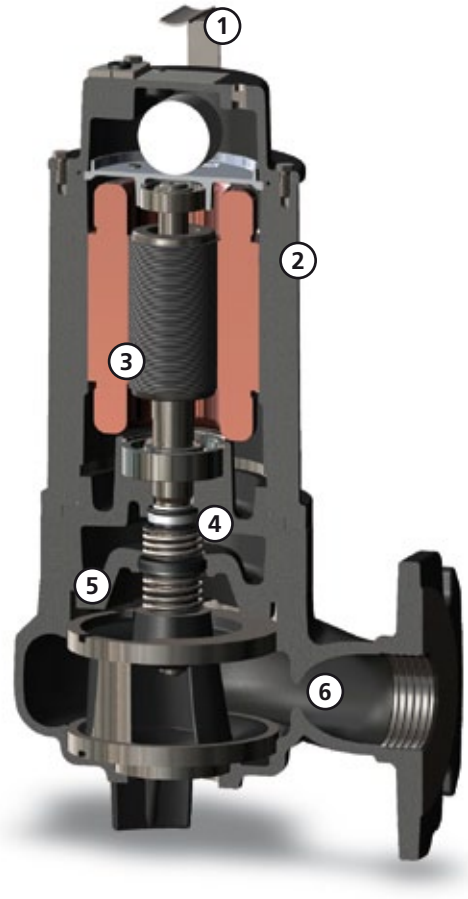
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

SMI





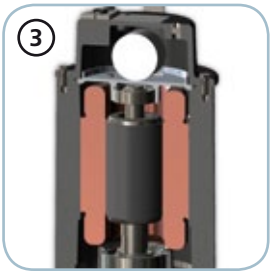
Handle

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.



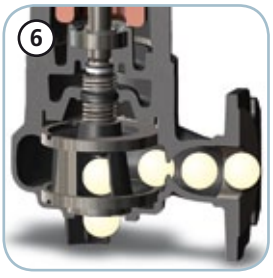
Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Free passage

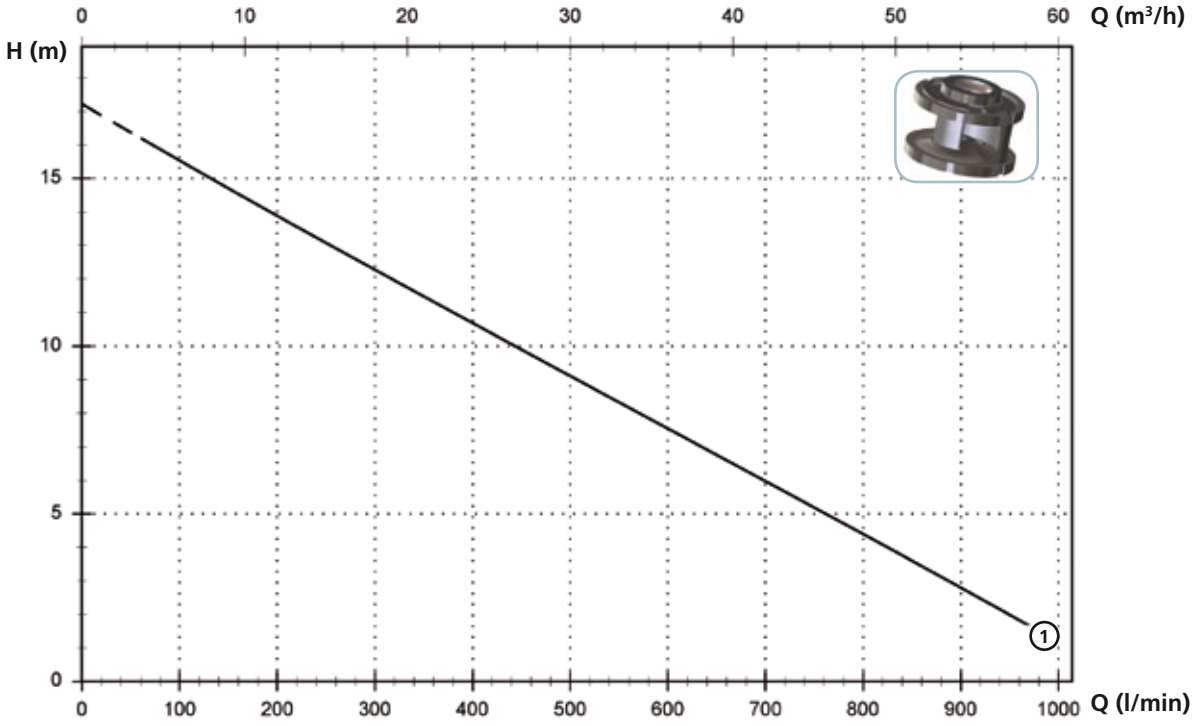
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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
	m³/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

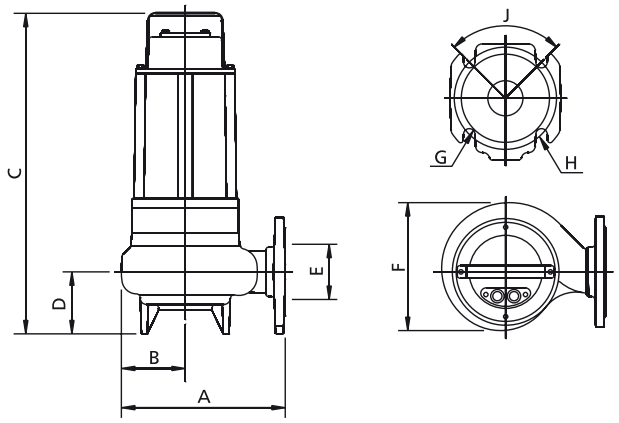
SMI

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

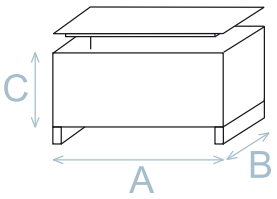
All weights and dimensions are indicative only

Packaging dimension

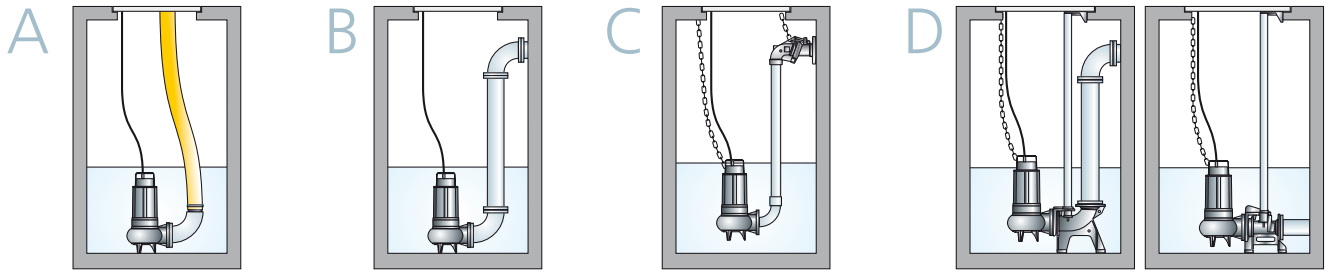
	A	B	C
SMI 200/2/G50H A0CM(T)/50	725	445	415

Dimension in mm

All weights and dimensions are indicative only



Installations available



SMN



All product images are indicative only

Single-channel closed impeller

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.

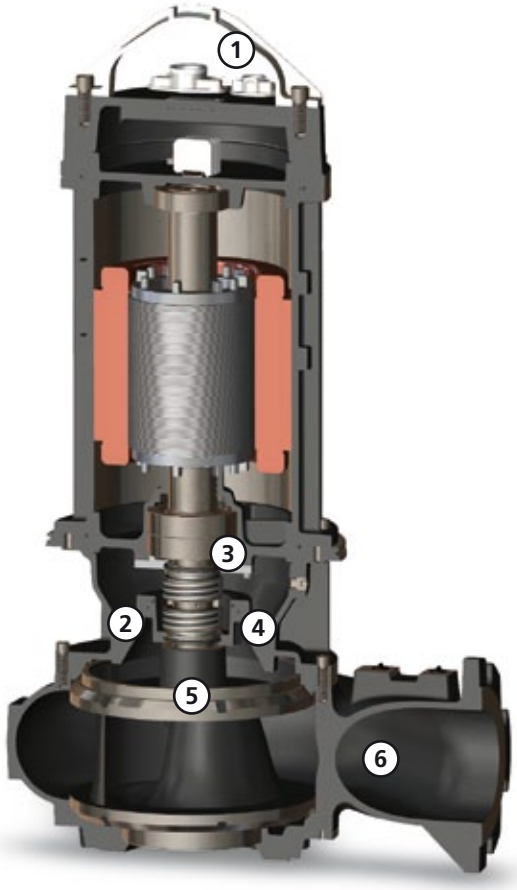
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

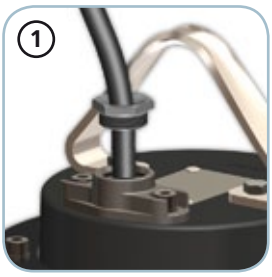
SMN





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.



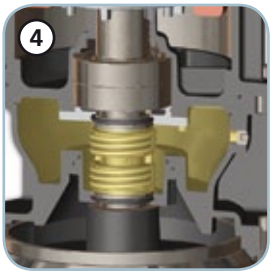
Sensor

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.



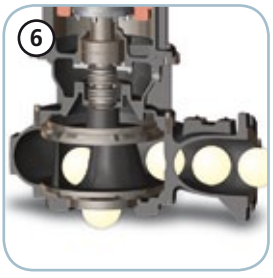
Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Drive shaft

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



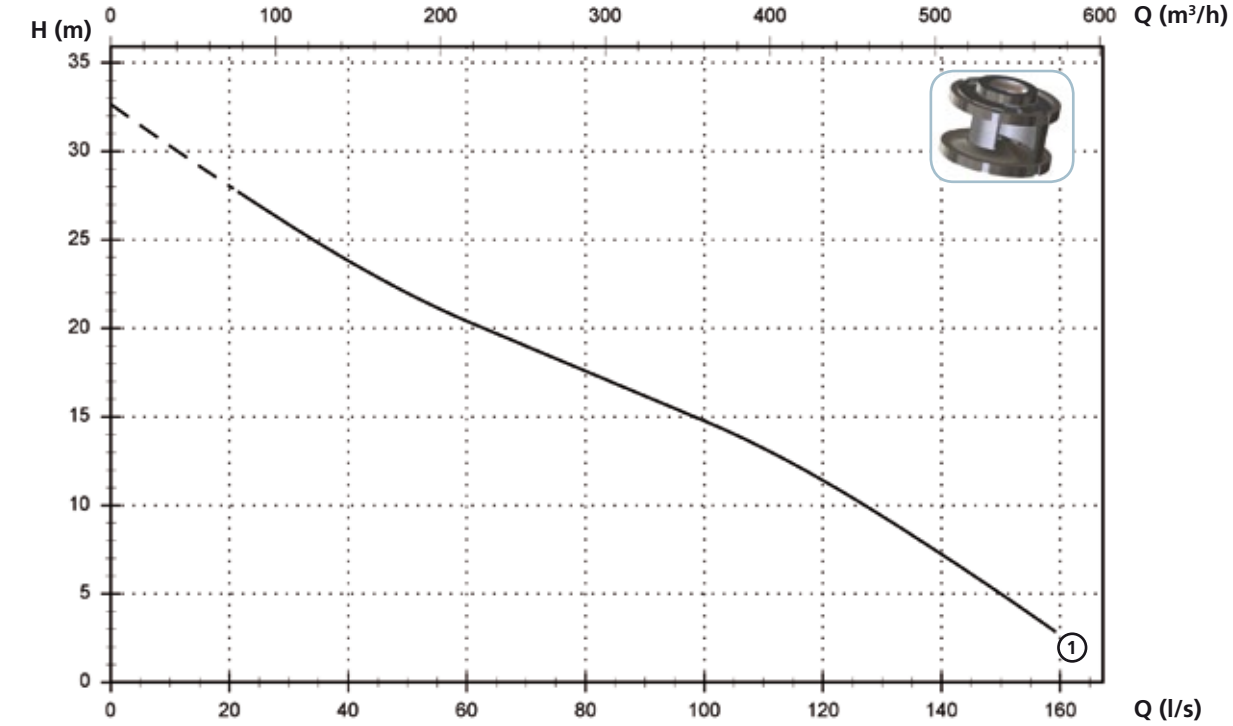
Free passage

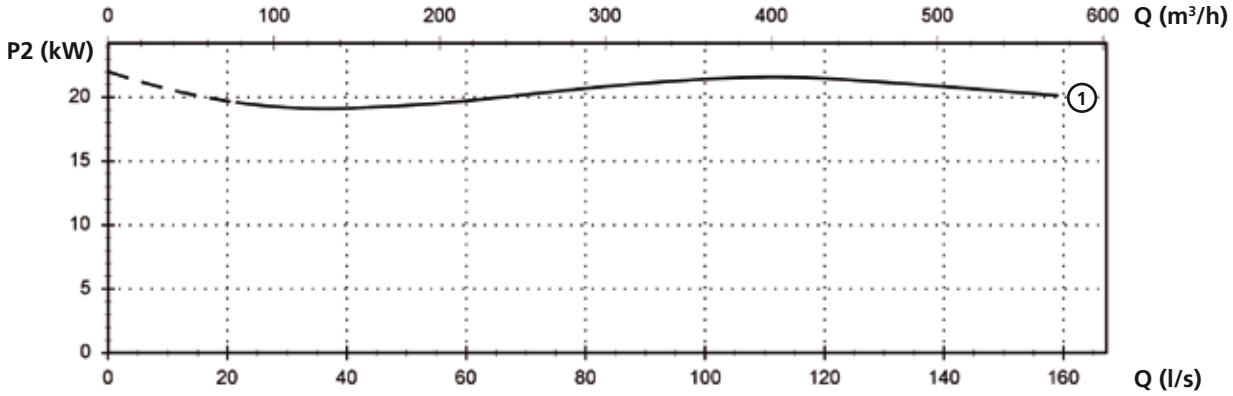
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

SMN

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

Performances



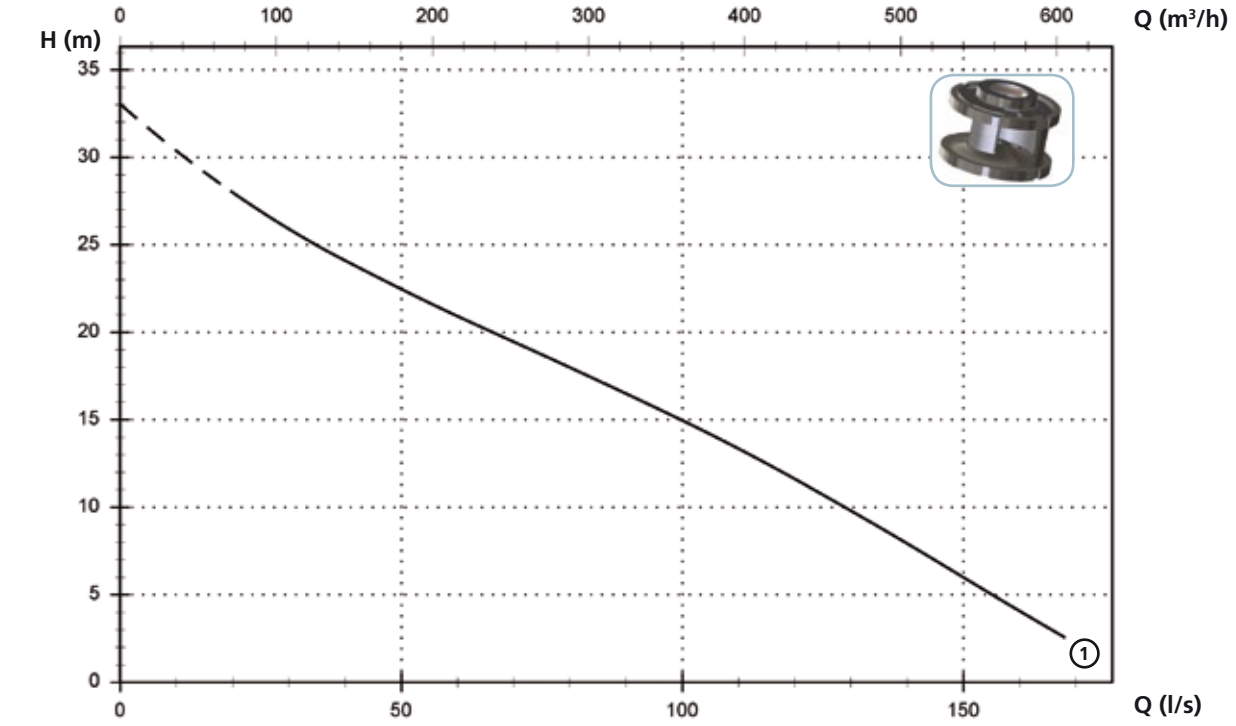


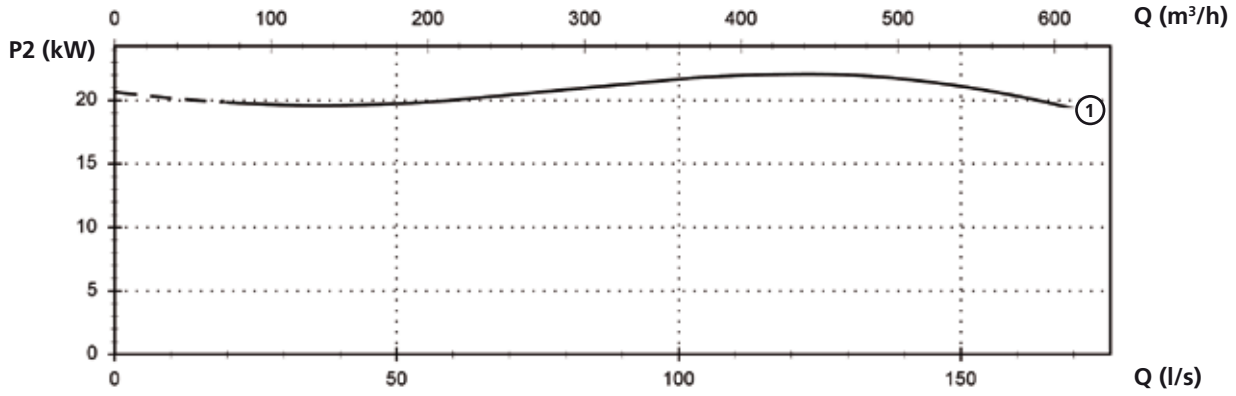
Technical data

	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

Models with horizontal DN200 PN10 flanged discharge - 4 poles

Performances





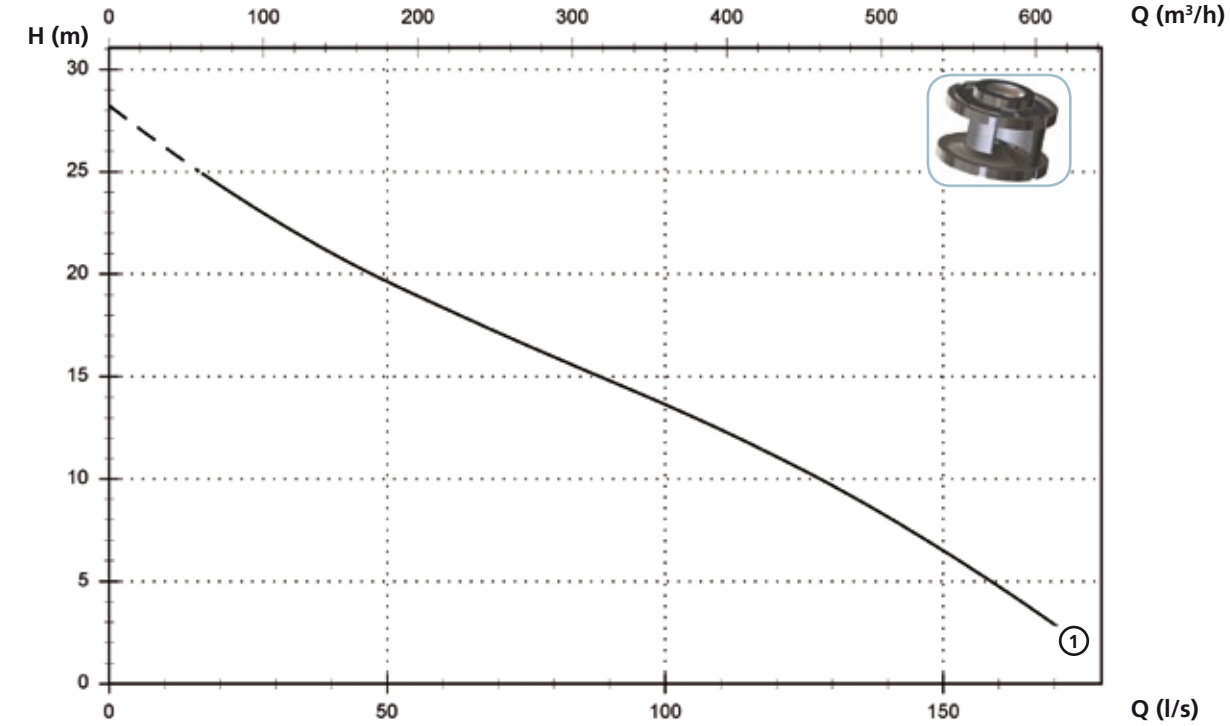
Technical data

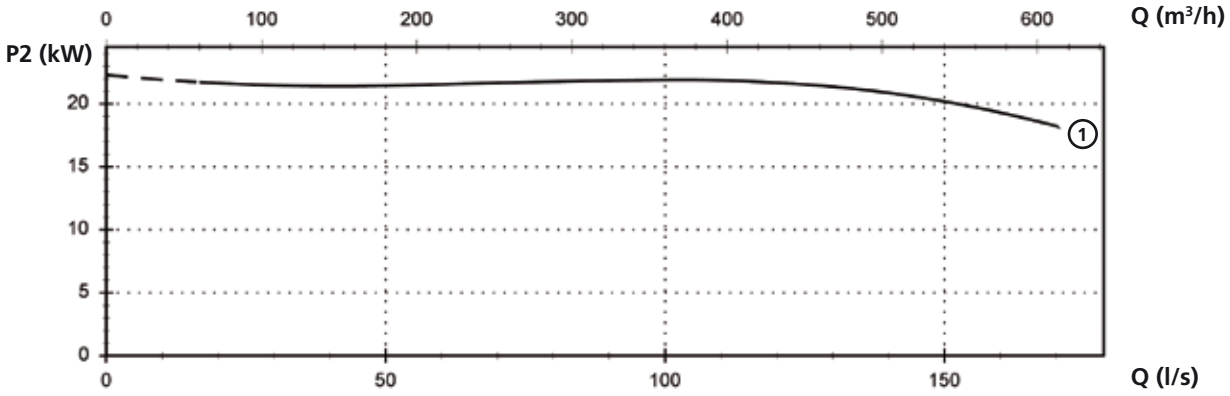
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① SMN 3000/4/200 A1LT/50	400	3	25.3	22	43.5	1450	Y Δ	DN200 PN10	100x130 mm

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

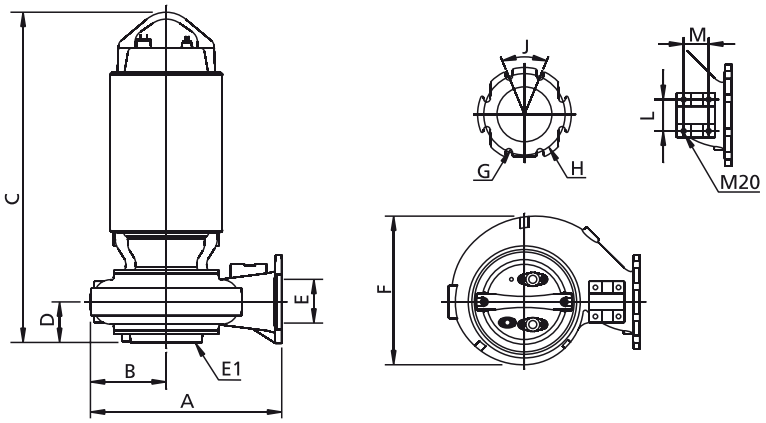
SMN

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

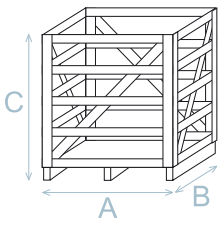
Dimensions in mm *All weights and dimensions are indicative only*

(*) DN of the suction flange - PN6

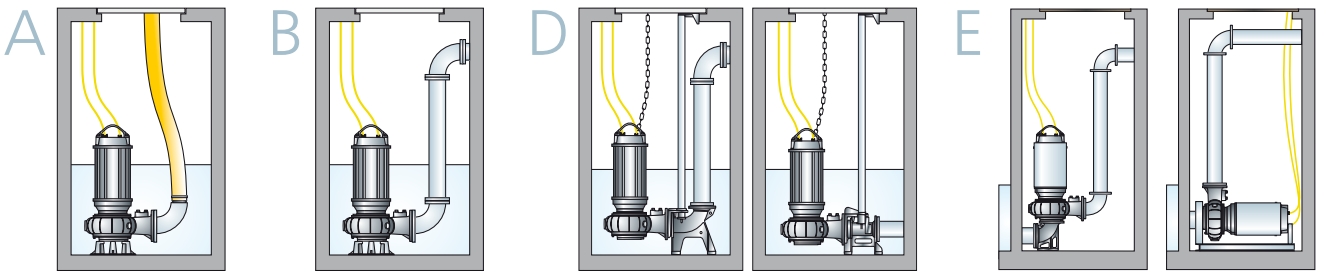
Packaging dimension

	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



All product images are indicative only

Single-channel closed impeller

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.

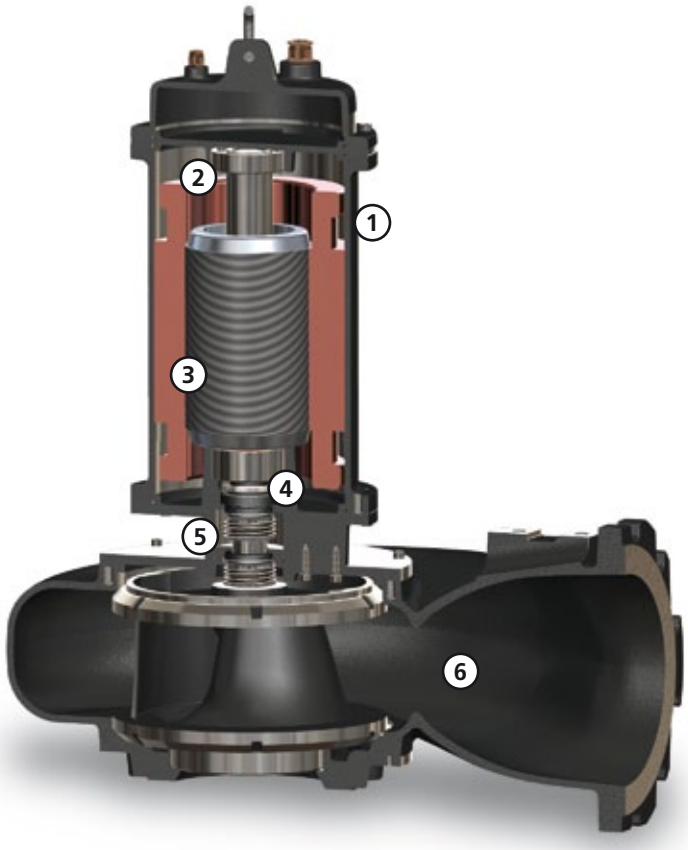
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

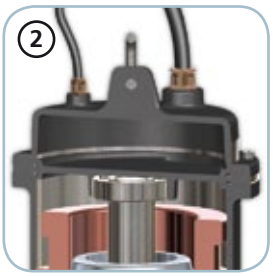
SMP





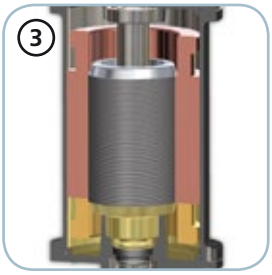
Structure

Constructed in GJL-250 cast iron.



Bearings

Shielded ball bearings with lifetime lubrication.



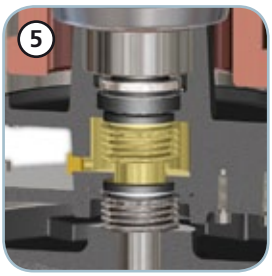
Motor

Oil-bath motor with thermal protections.



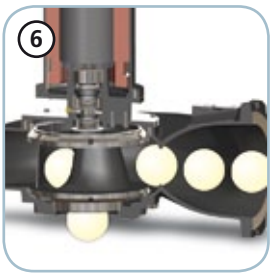
Mechanical seals

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.



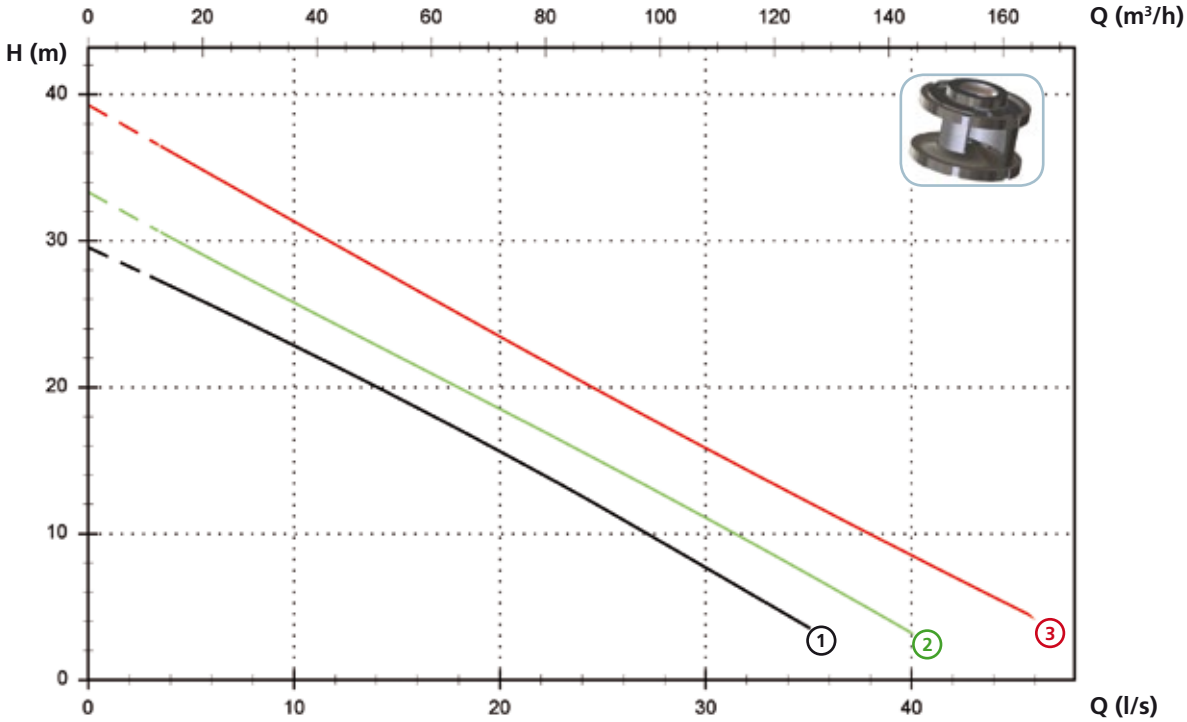
Free passage

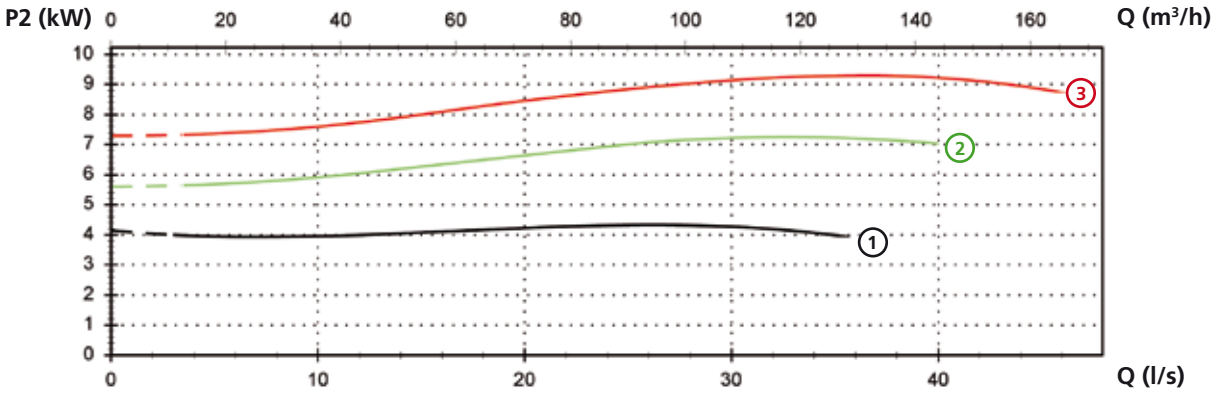
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

SMP

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

Performances



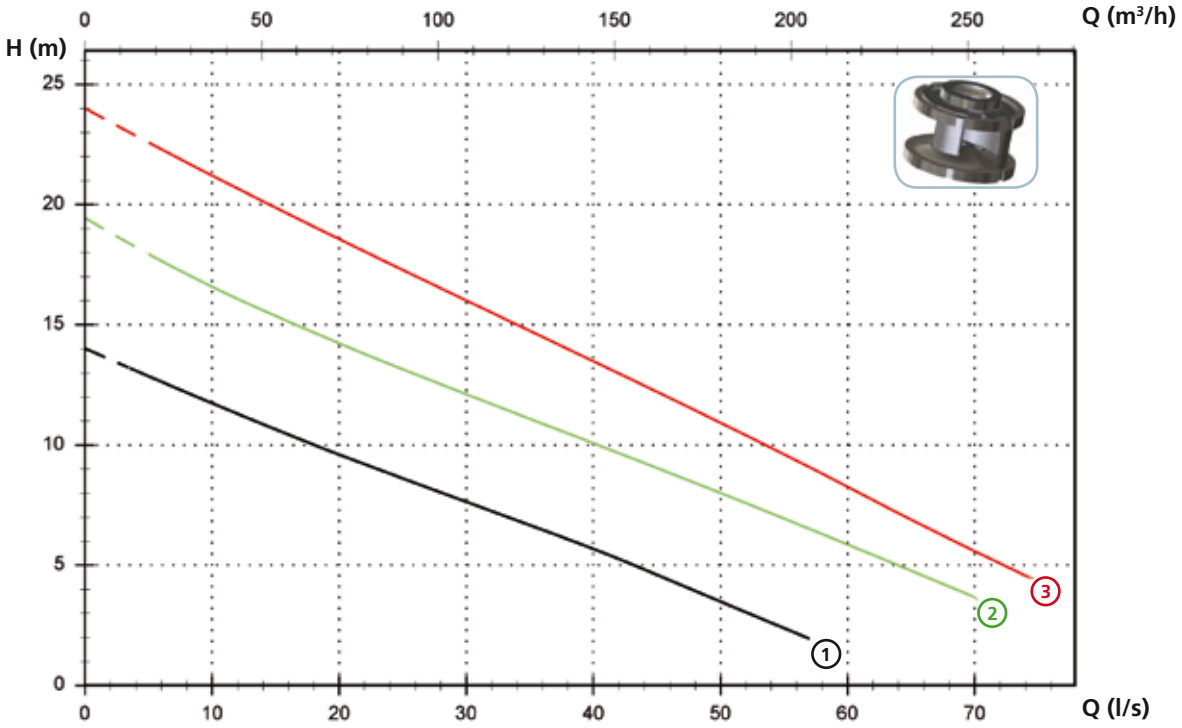


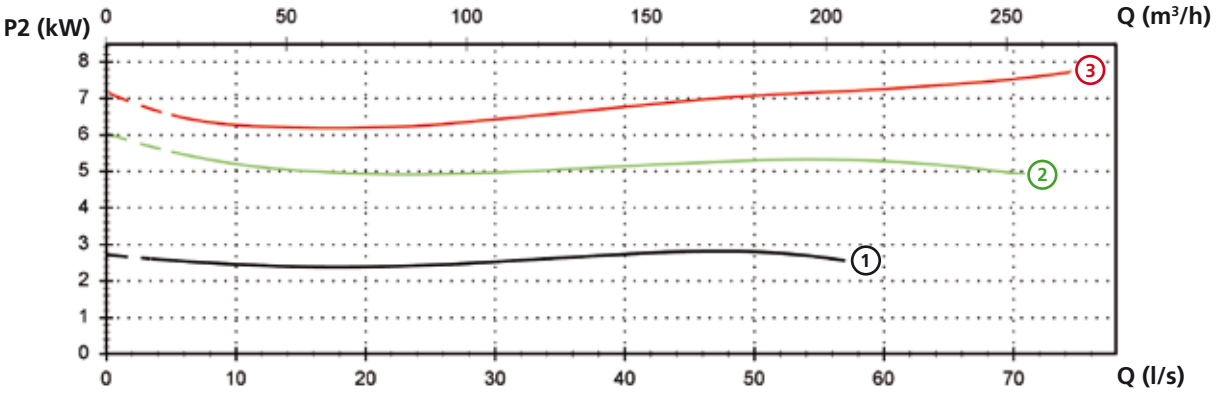
Technical data

	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





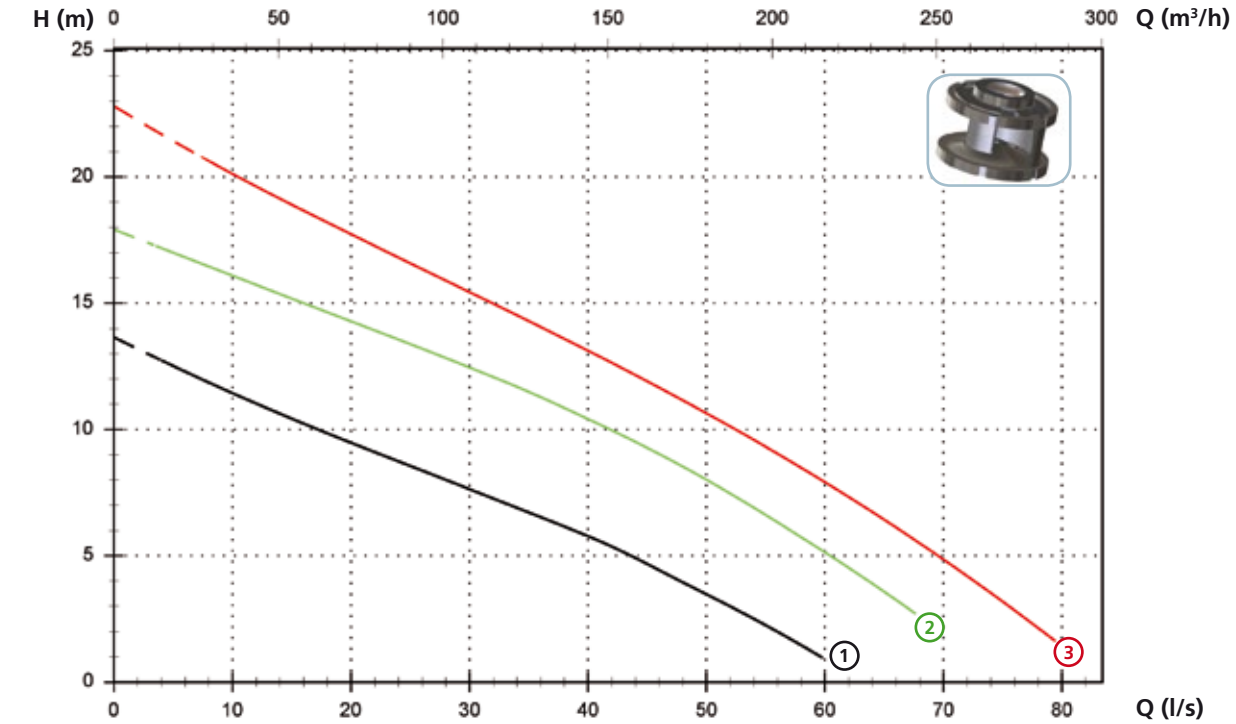
Technical data

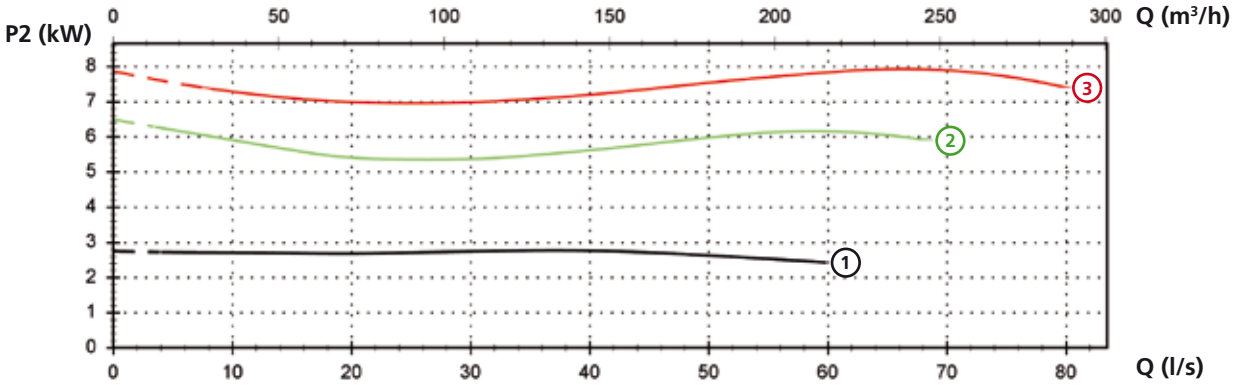
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) SMP 400/4/100 A0FT/50	400	3	4.1	3	7.9	1450	Dir	DN100 PN10-16	75x100 mm
(2) SMP 750/4/100 A0HT/50	400	3	8.6	6.5	14.9	1450	Y Δ	DN100 PN10-16	80x100 mm
(3) SMP 1000/4/100 A0HT/50	400	3	11.5	8.9	20	1450	Y Δ	DN100 PN10-16	80x100 mm

SMP

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

Performances



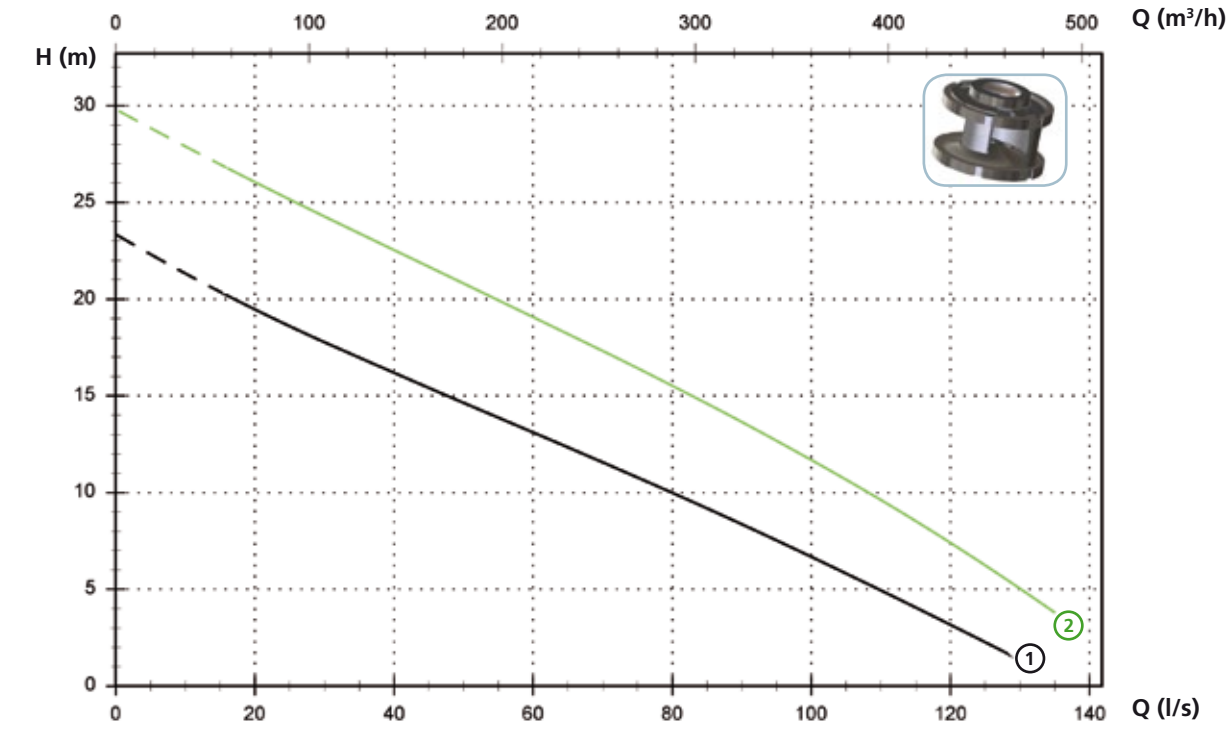


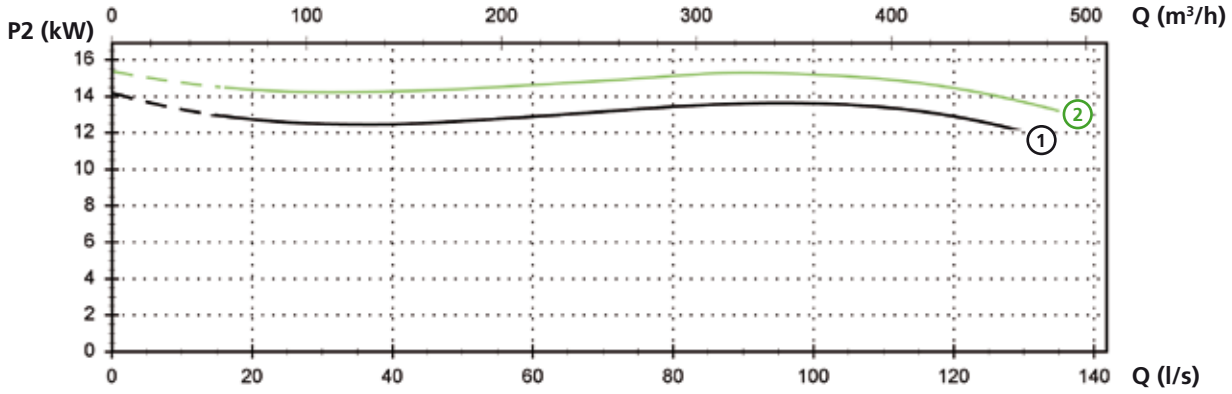
Technical data

	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





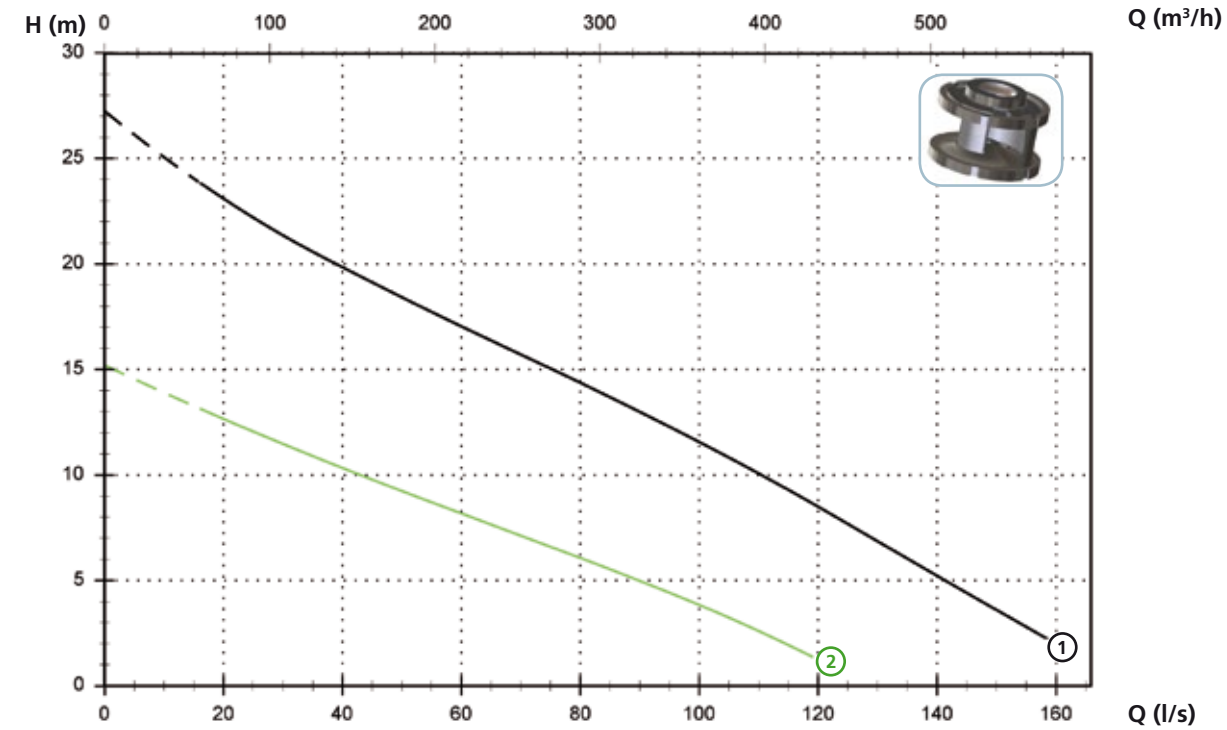
Technical data

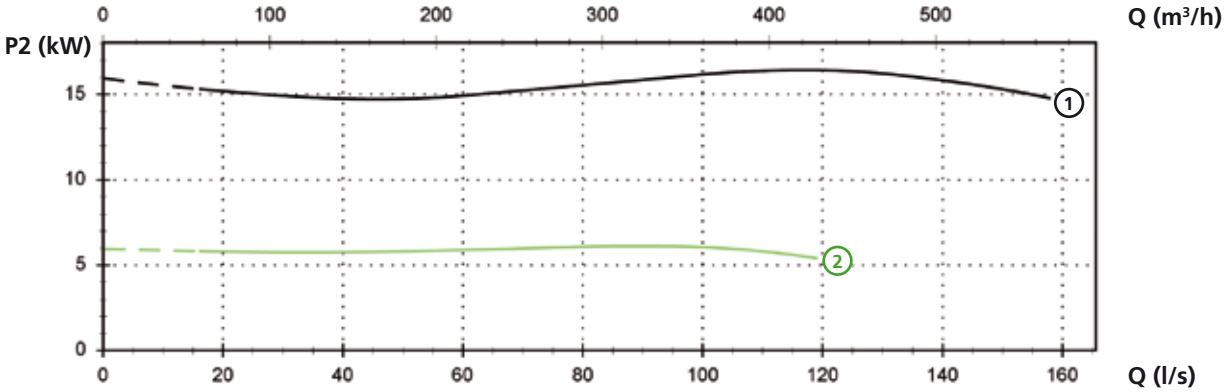
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) SMP 1500/4/150 A0IT/50	400	3	16.5	14.2	29.5	1450	Y Δ	DN150 PN10-16	95x110 mm
(2) SMP 2000/4/150 A0IT/50	400	3	20.7	16.4	36	1450	Y Δ	DN150 PN10-16	100x130 mm

SMP

Models with horizontal DN200 PN10 flanged discharge - 4/6 poles

Performances



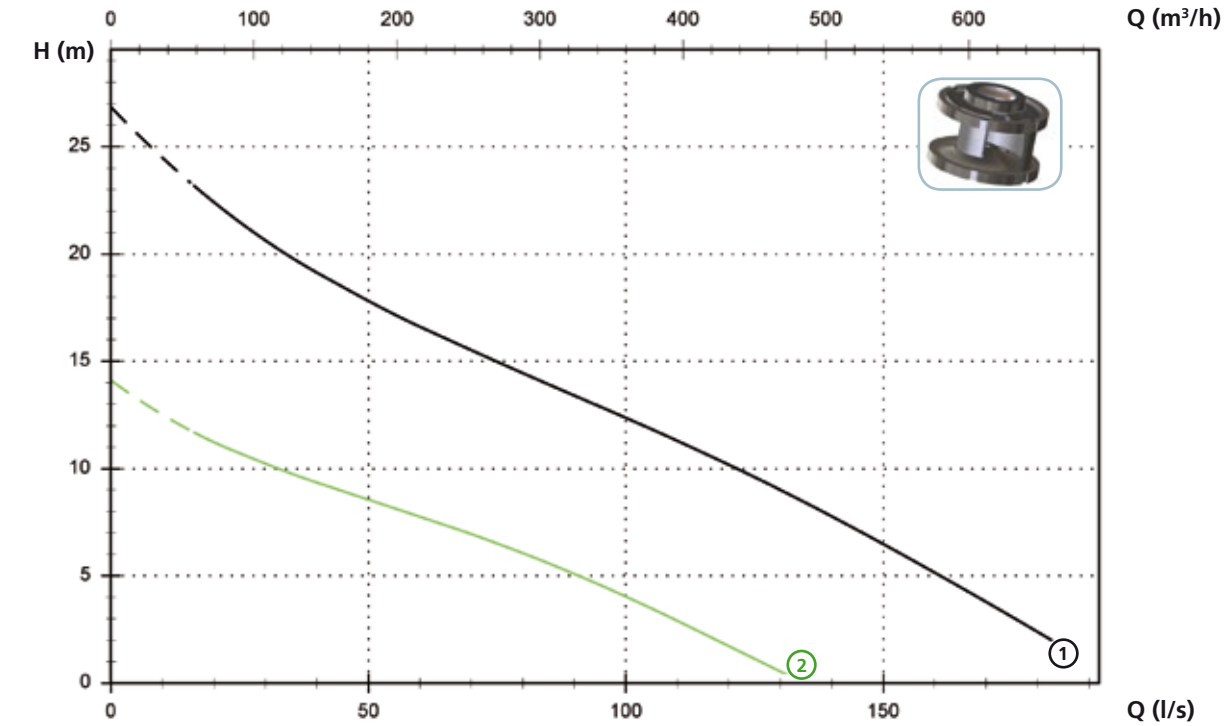


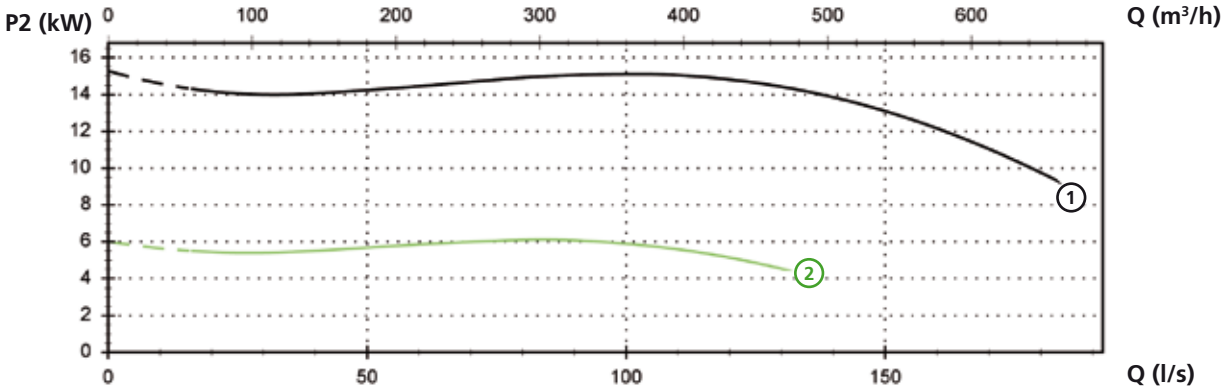
Technical data

	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

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

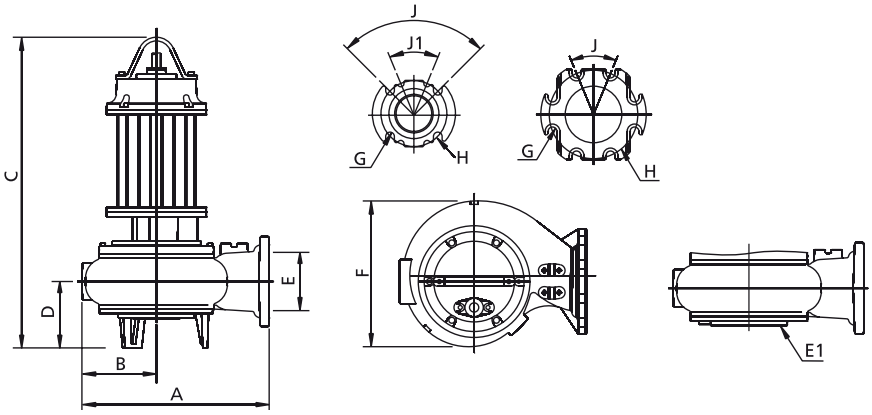
SMP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

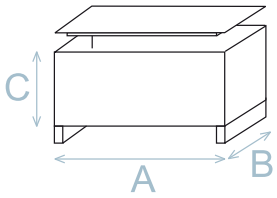
Dimensions in mm

Packaging dimension

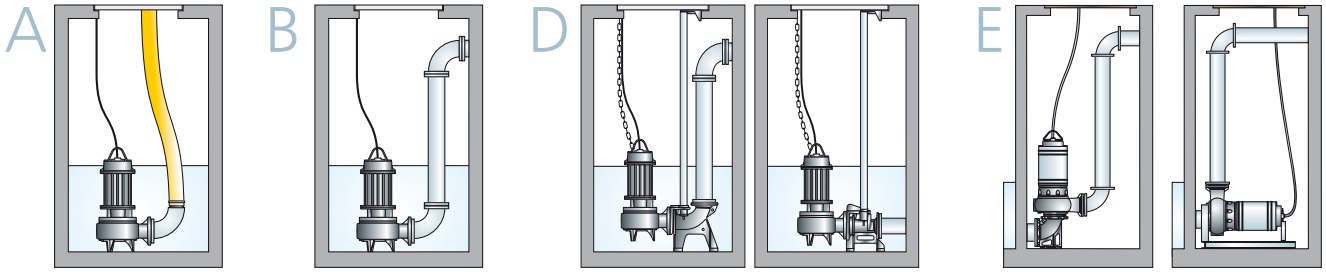
	A	B	C
SMP 550/2/80 A0GT/50	915	515	555
SMP 750/2/80 A0HT/50	915	515	555
SMP 1000/2/80 A0HT/50	915	515	555
SMP 400/4/100 A0FT/50	725	445	415
SMP 750/4/100 A0HT/50	915	515	555
SMP 1000/4/100 A0HT/50	915	515	555
SMP 400/4/150 A0FT/50	915	515	555
SMP 750/4/150 A0HT/50	915	515	555
SMP 1000/4/150 A0HT/50	915	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



All product images are indicative only

Single-channel closed impeller

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.

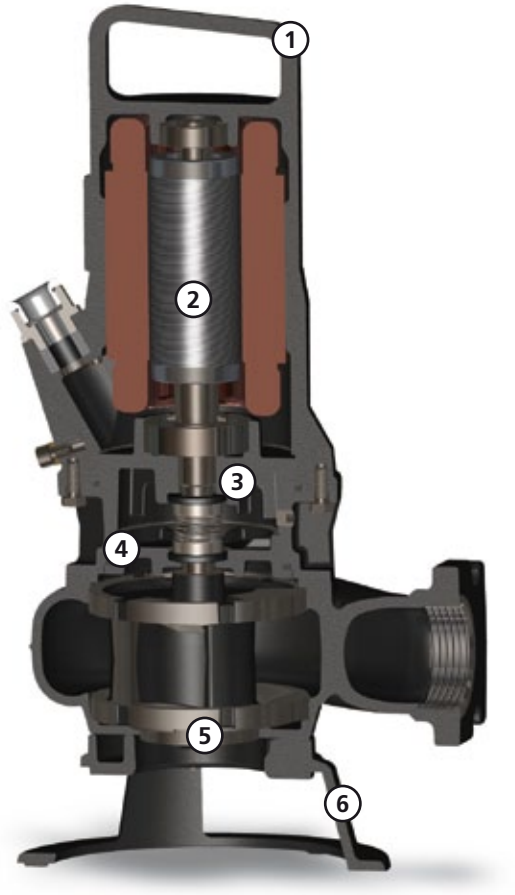
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

SMF



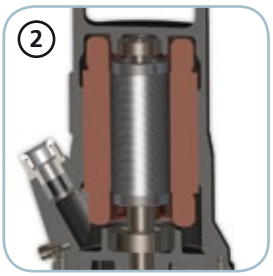
CE 0496 Ex II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

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.



Drive shaft

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



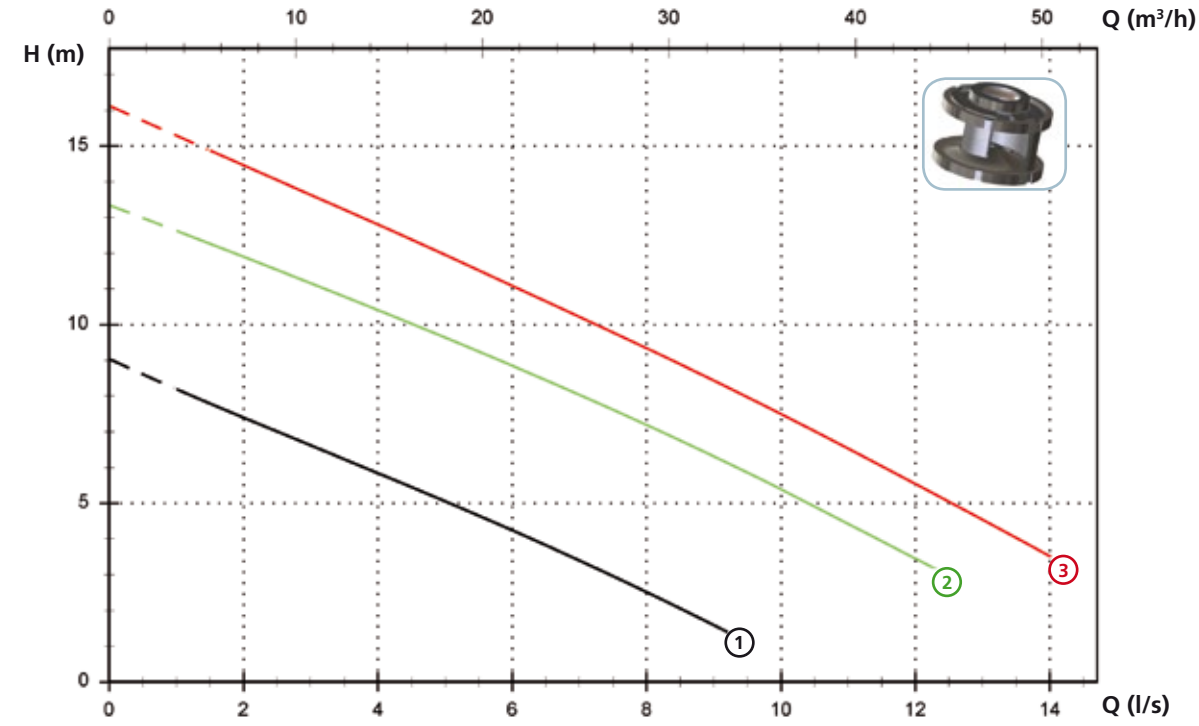
Discharge and foot

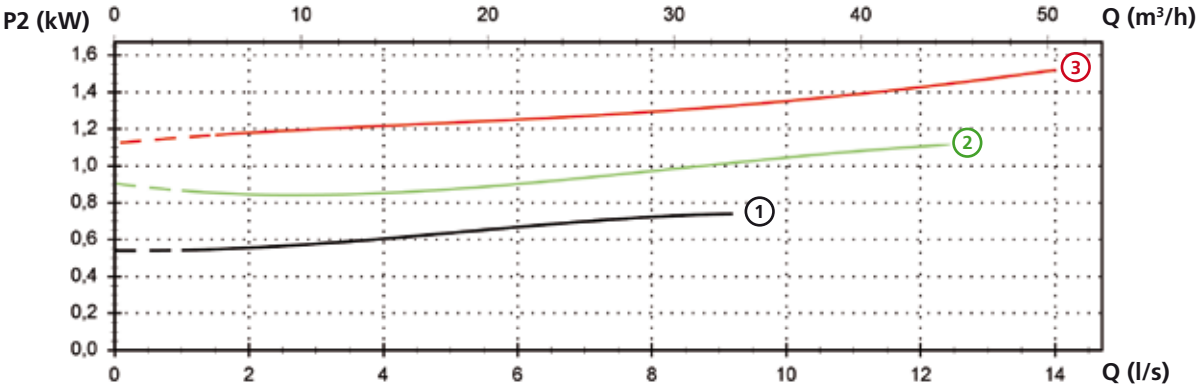
Threaded, flanged discharge for the maximum ease of installation. Cast iron foot.

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

SMF

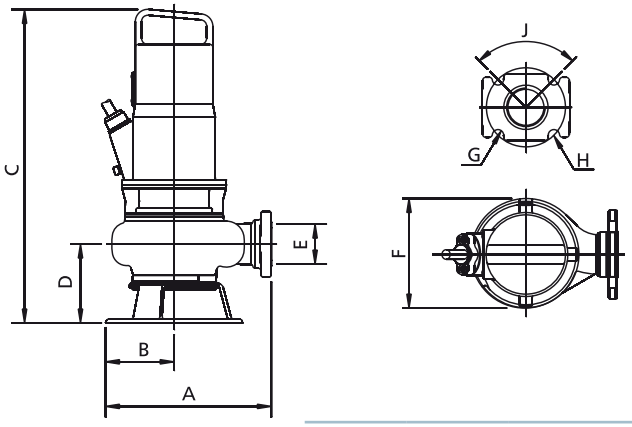
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

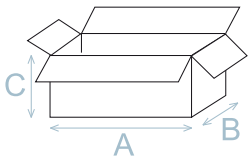
All weights and dimensions are indicative only

Packaging dimension

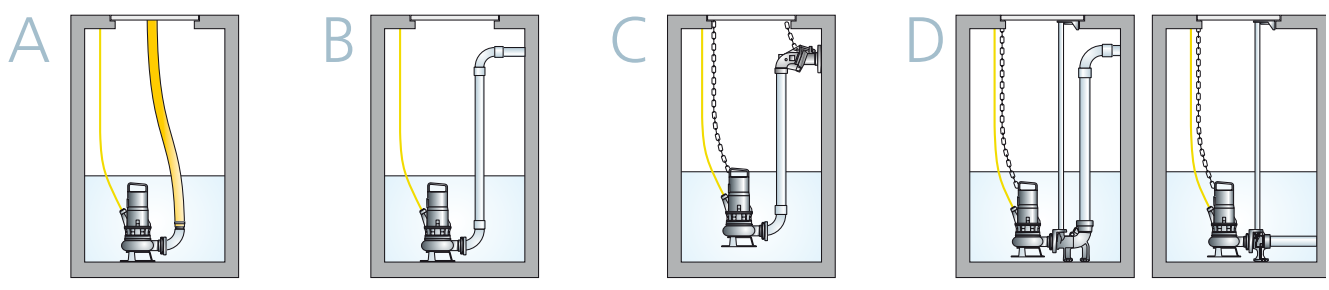
	A	B	C
SMF 100/2/G50H A1CM(T)/50	580	310	310
SMF 150/2/G50H A1CM(T)/50	580	310	310
SMF 200/2/G50H A1CM(T)/50	580	310	310

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

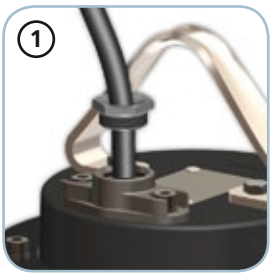
SBN





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.



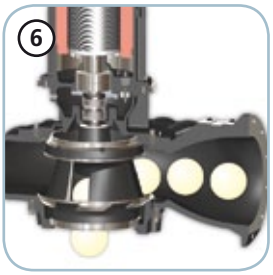
Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Drive shaft

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



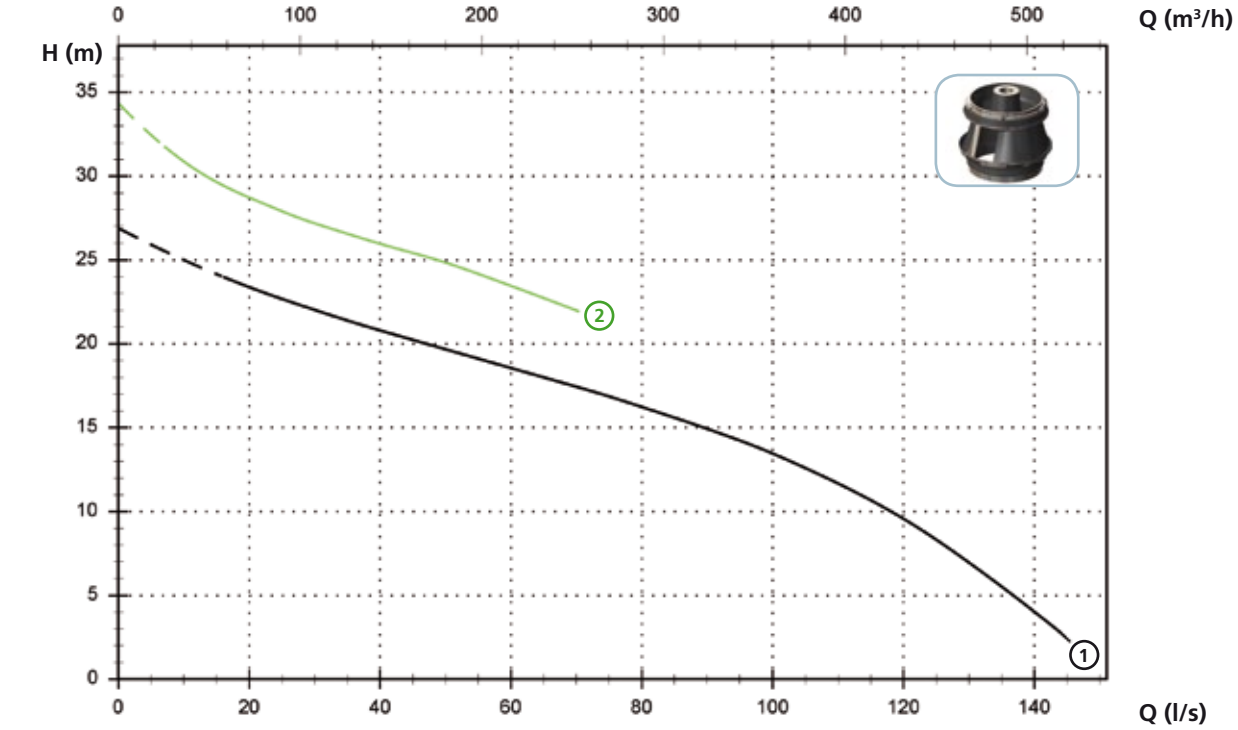
Free passage

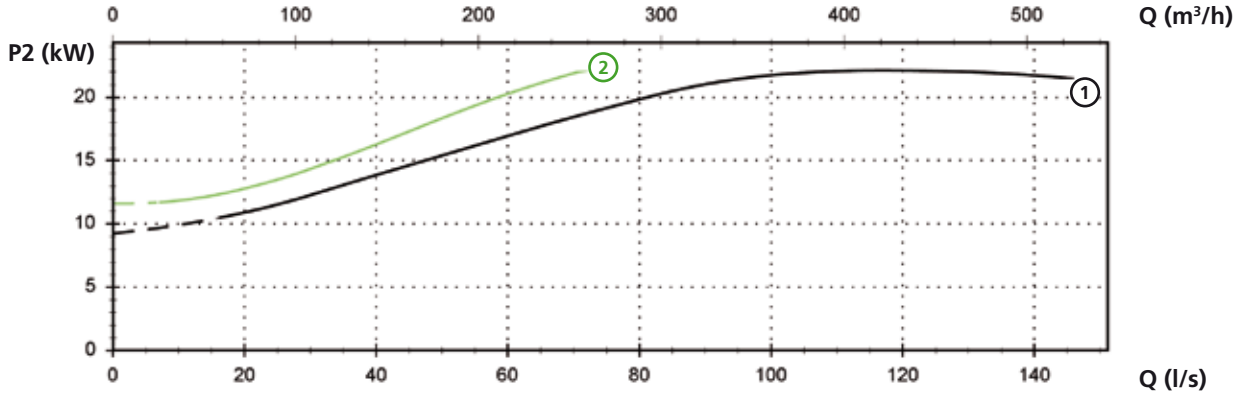
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

SBN

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

Performances





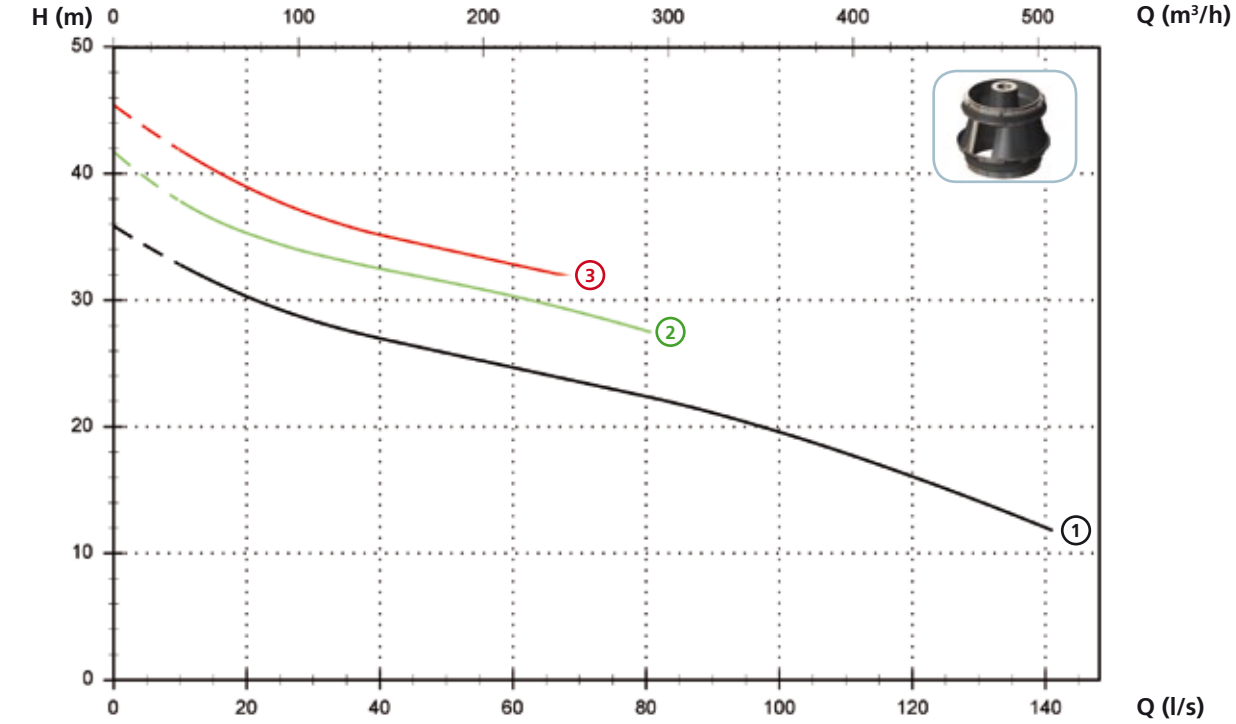
Technical data

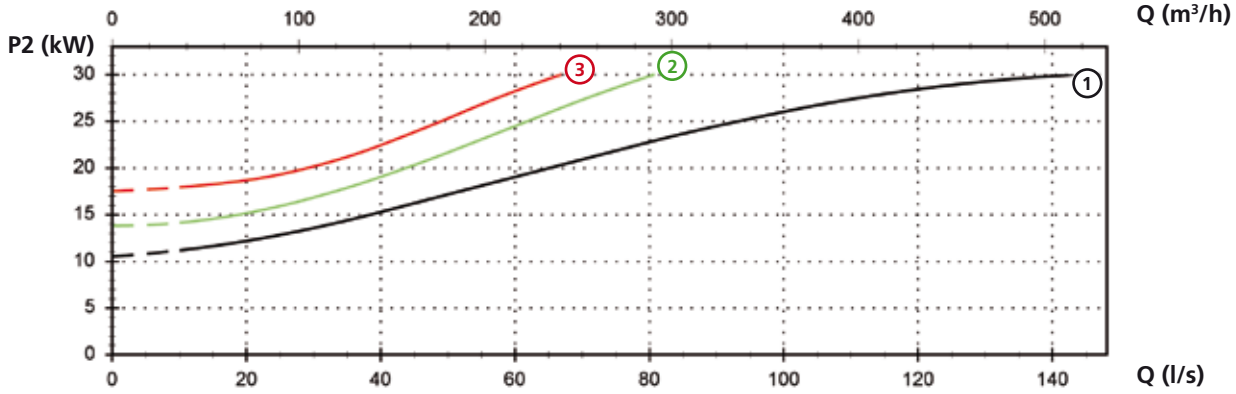
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) SBN 3000/4/150 A1LT/50	400	3	25.3	22	43.5	1450	Y Δ	DN150 PN10-16	90 mm
(2) SBN 3000/4/150 F1LT/50	400	3	25.3	22	43.5	1450	Y Δ	DN150 PN10-16	90 mm

SBN

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

Performances





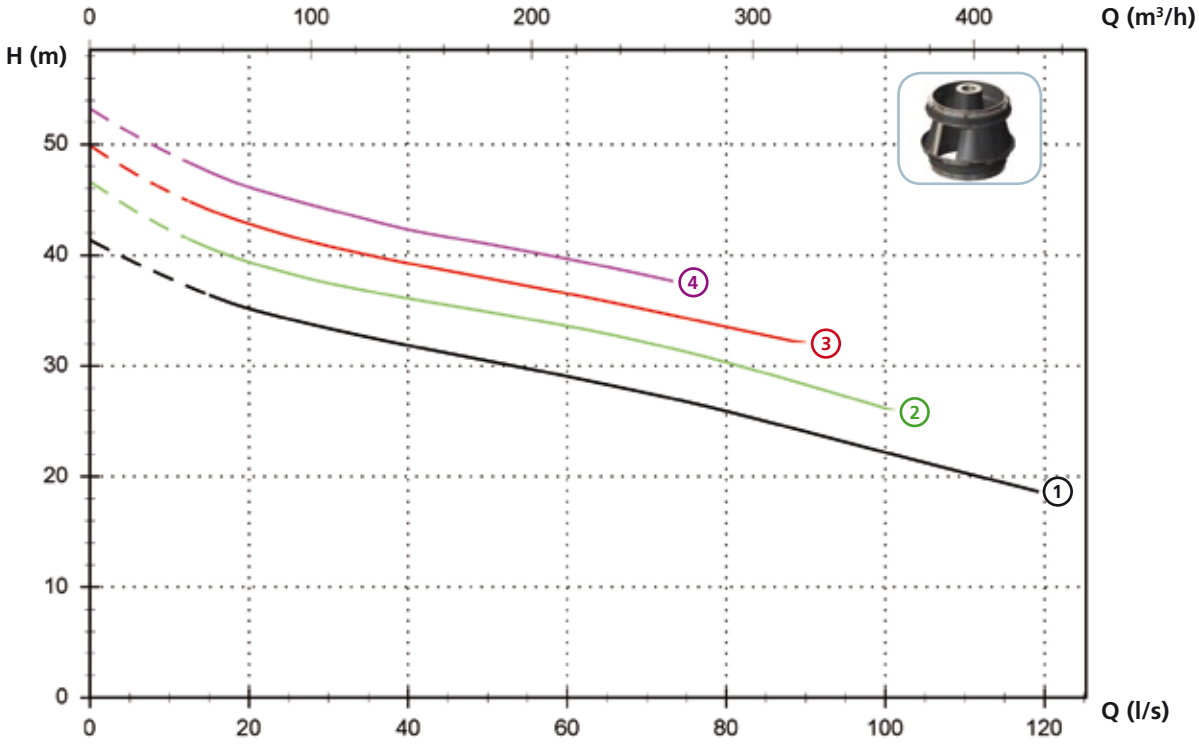
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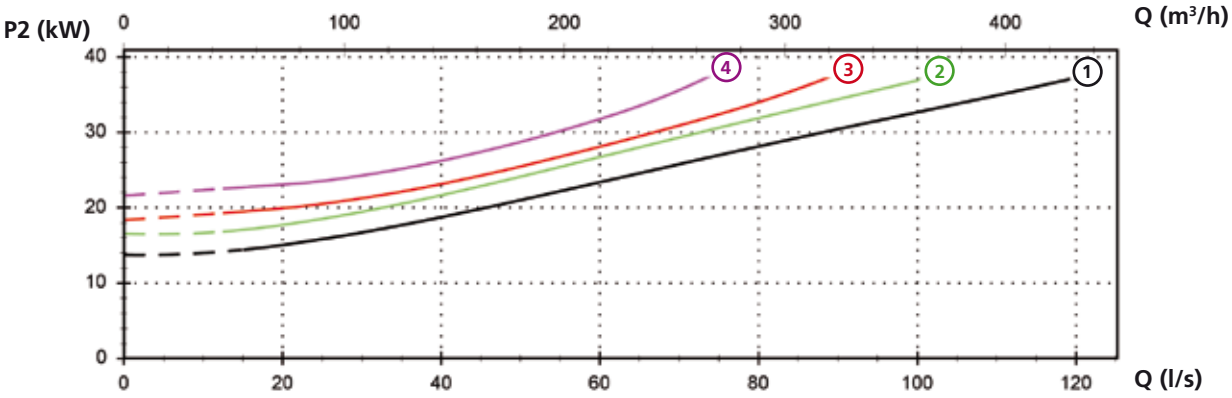
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) SBN 4000/4/150 A1LT/50	400	3	35.9	30	61	1450	Y Δ	DN150 PN10-16	90 mm
(2) SBN 4000/4/150 F1LT/50	400	3	35.9	30	61	1450	Y Δ	DN150 PN10-16	90 mm
(3) SBN 4000/4/150 G1LT/50	400	3	35.9	30	61	1450	Y Δ	DN150 PN10-16	90 mm

SBN

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

Performances



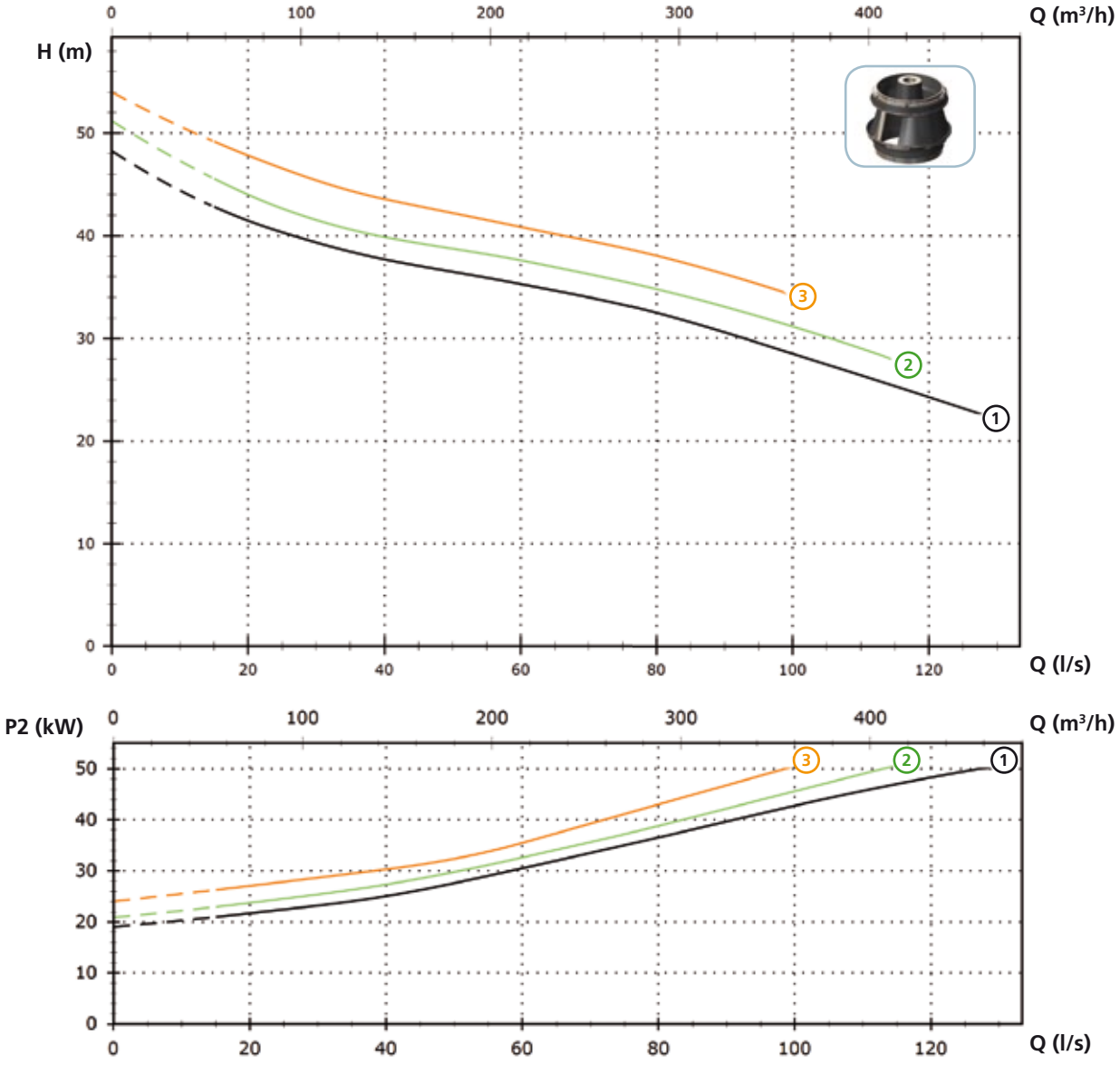


Technical data

	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

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

Performances



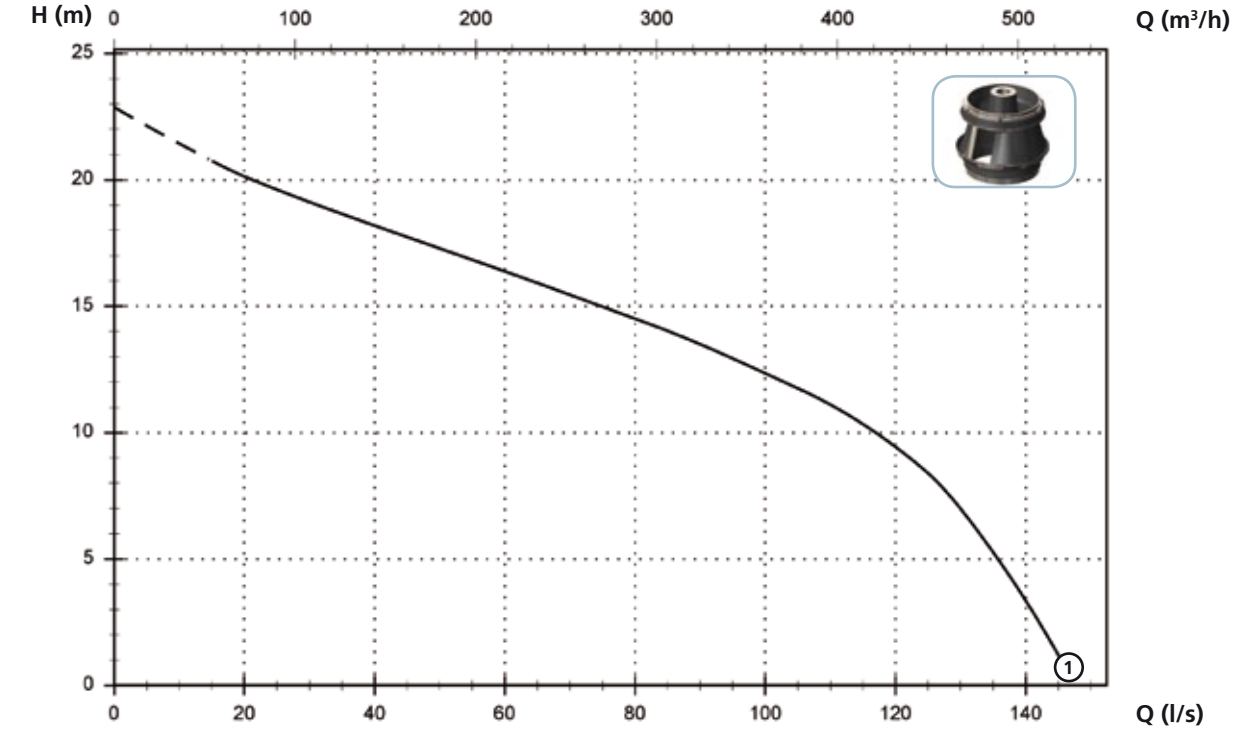
Technical data

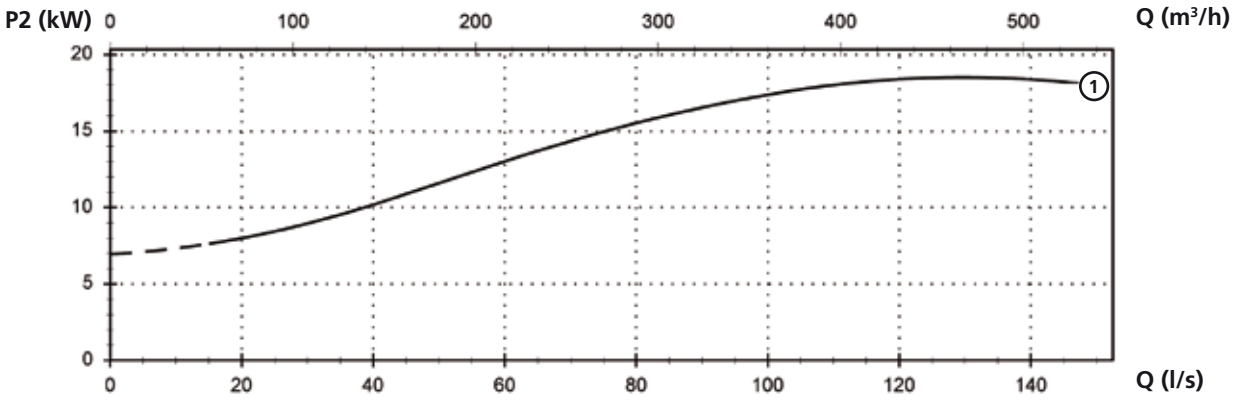
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) SBN 6500/4/150 A0MT/50	400	3	54.8	50	90	1450	Y Δ	DN150 PN10-16	90 mm
(2) SBN 6500/4/150 F0MT/50	400	3	54.8	50	90	1450	Y Δ	DN150 PN10-16	90 mm
(3) SBN 6500/4/150 G0MT/50	400	3	54.8	50	90	1450	Y Δ	DN150 PN10-16	90 mm

SBN

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

Performances



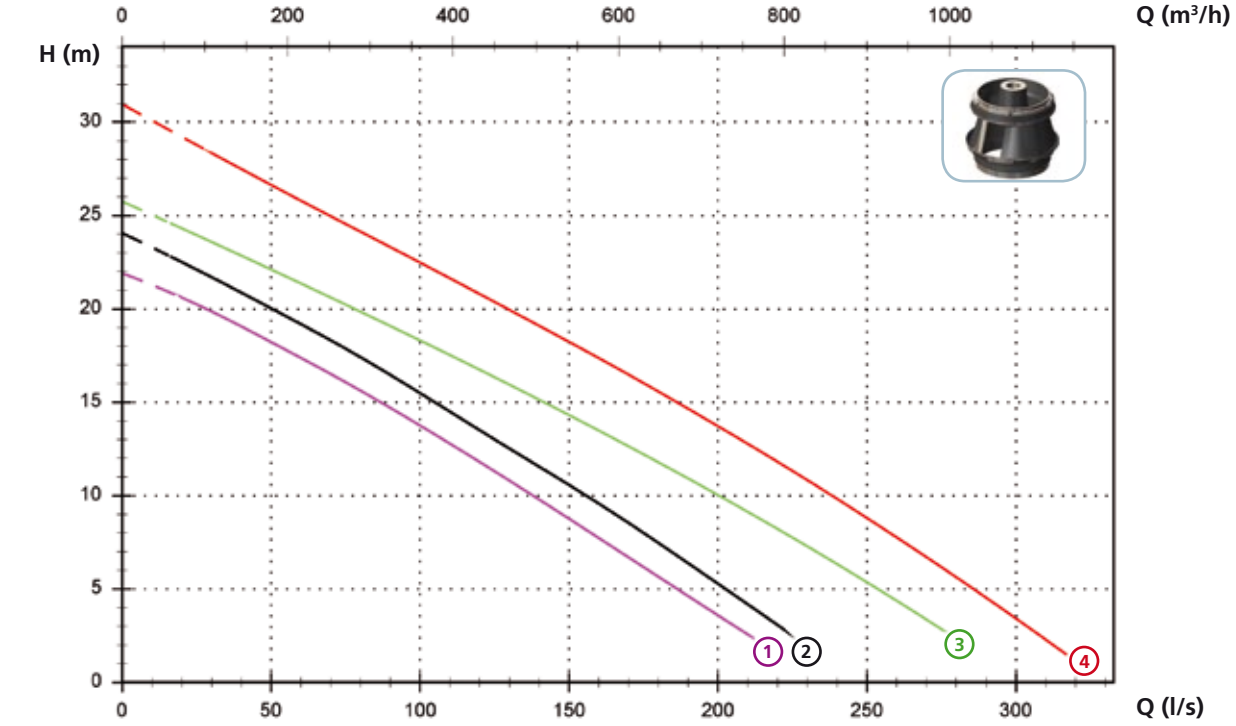


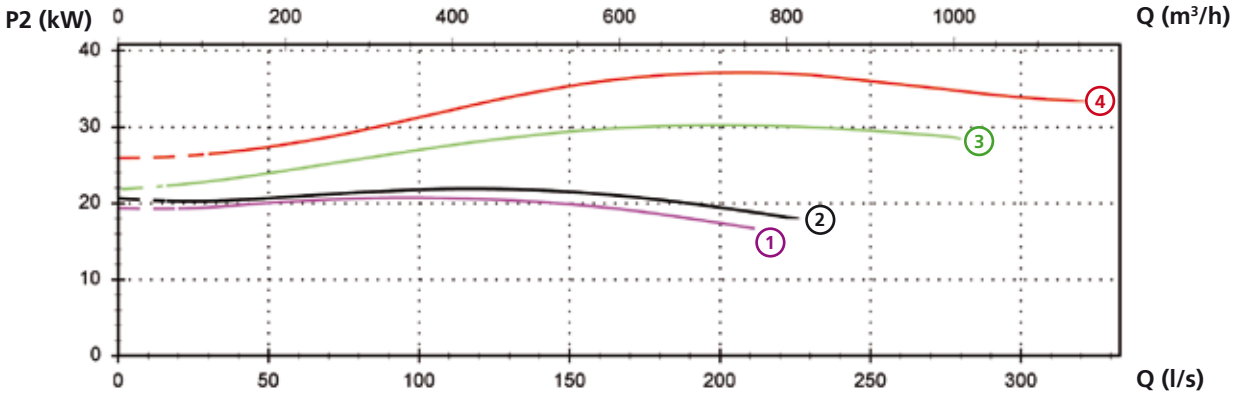
Technical data

	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

Models with horizontal DN200 PN10 flanged discharge - 4 poles

Performances





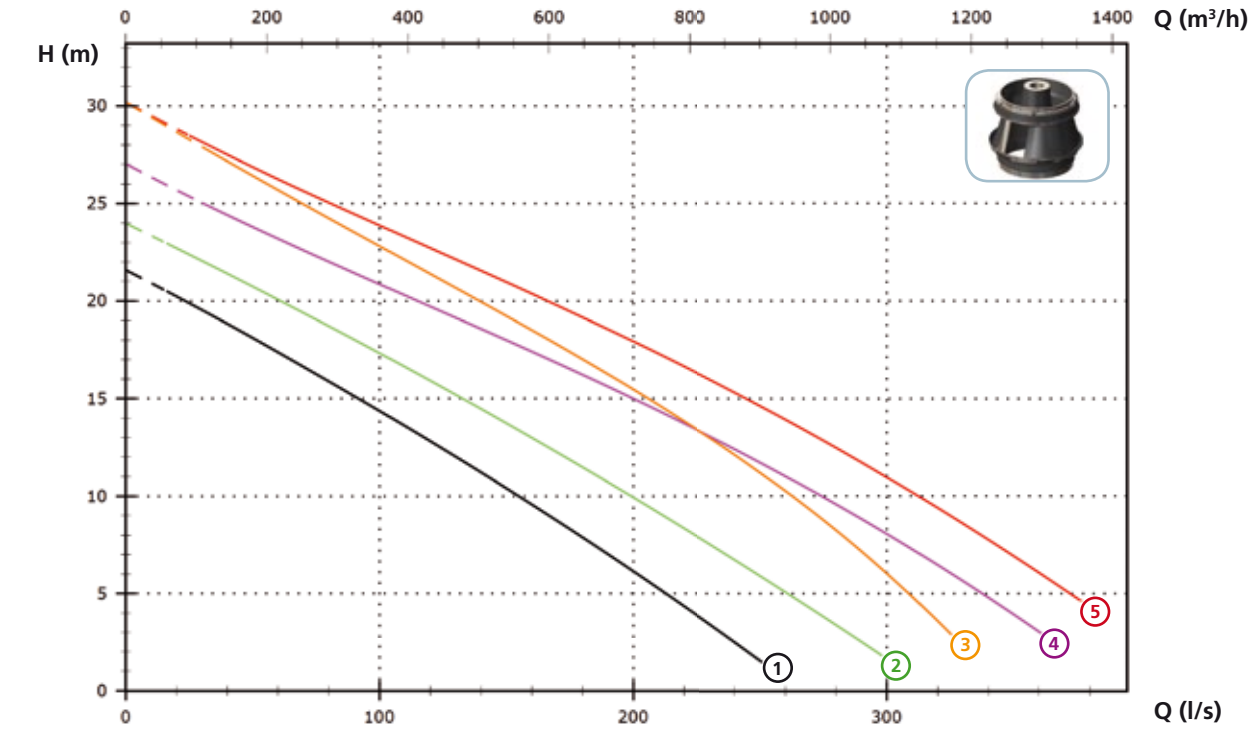
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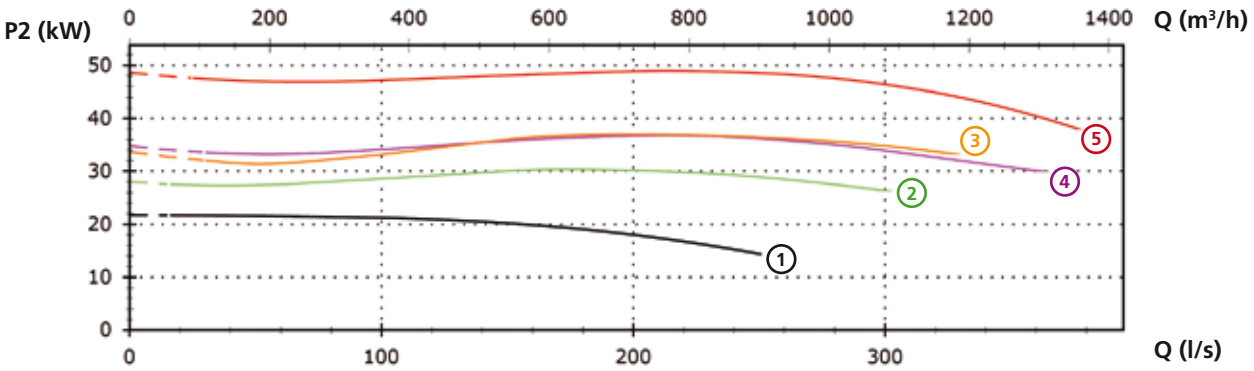
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) SBN 3000/4/200 B1LT/50	400	3	23.8	22	41	1450	Y Δ	DN200 PN10	105x140 mm
(2) SBN 3000/4/200 A1LT/50	400	3	25.3	22	43.5	1450	Y Δ	DN200 PN10	105x140 mm
(3) SBN 4000/4/200 A1LT/50	400	3	35.9	30	61	1450	Y Δ	DN200 PN10	105x140 mm
(4) SBN 5000/4/200 A1LT/50	400	3	45.8	37	76	1450	Y Δ	DN200 PN10	105x140 mm

SBN

Models with horizontal DN250 PN10 flanged discharge - 4 poles

Performances



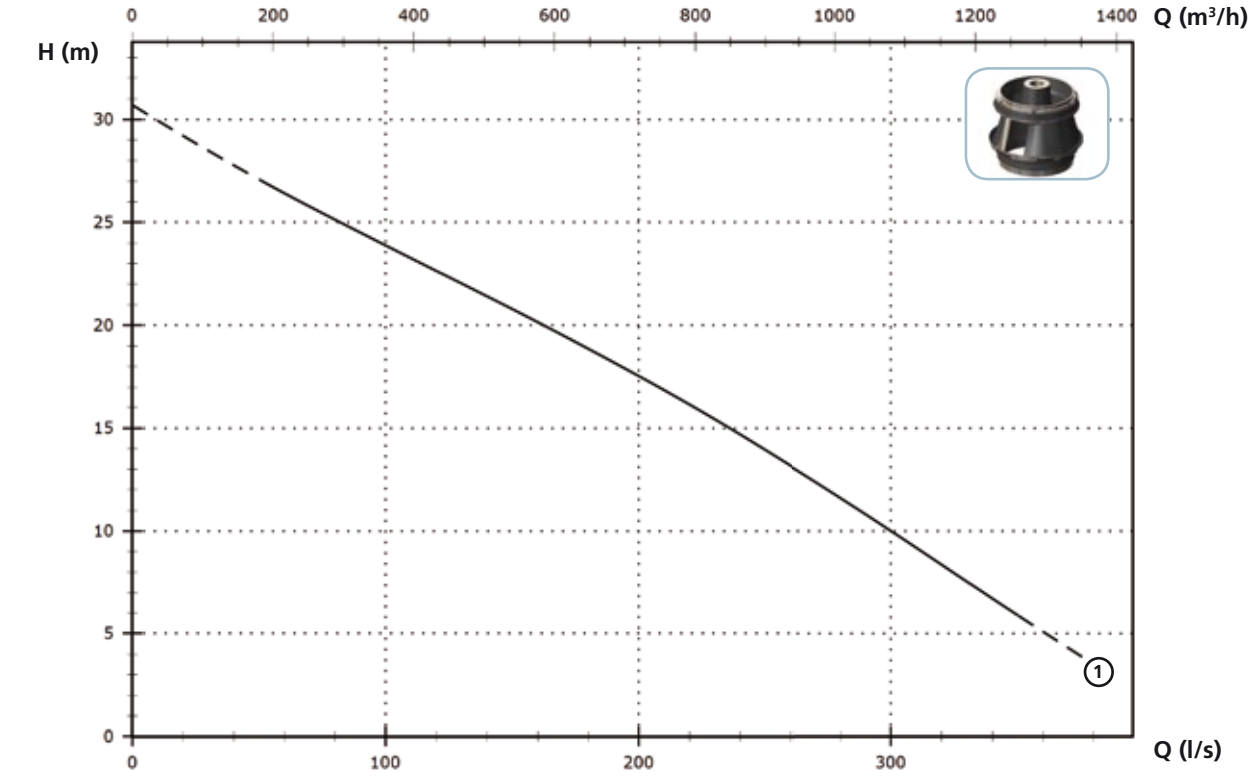


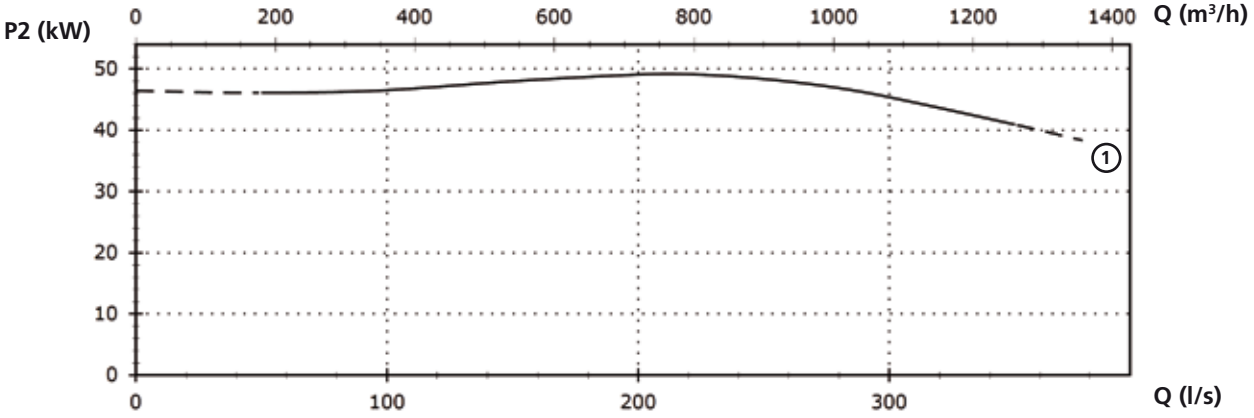
Technical data

	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

Models with horizontal DN300 PN10 flanged discharge - 4 poles

Performances





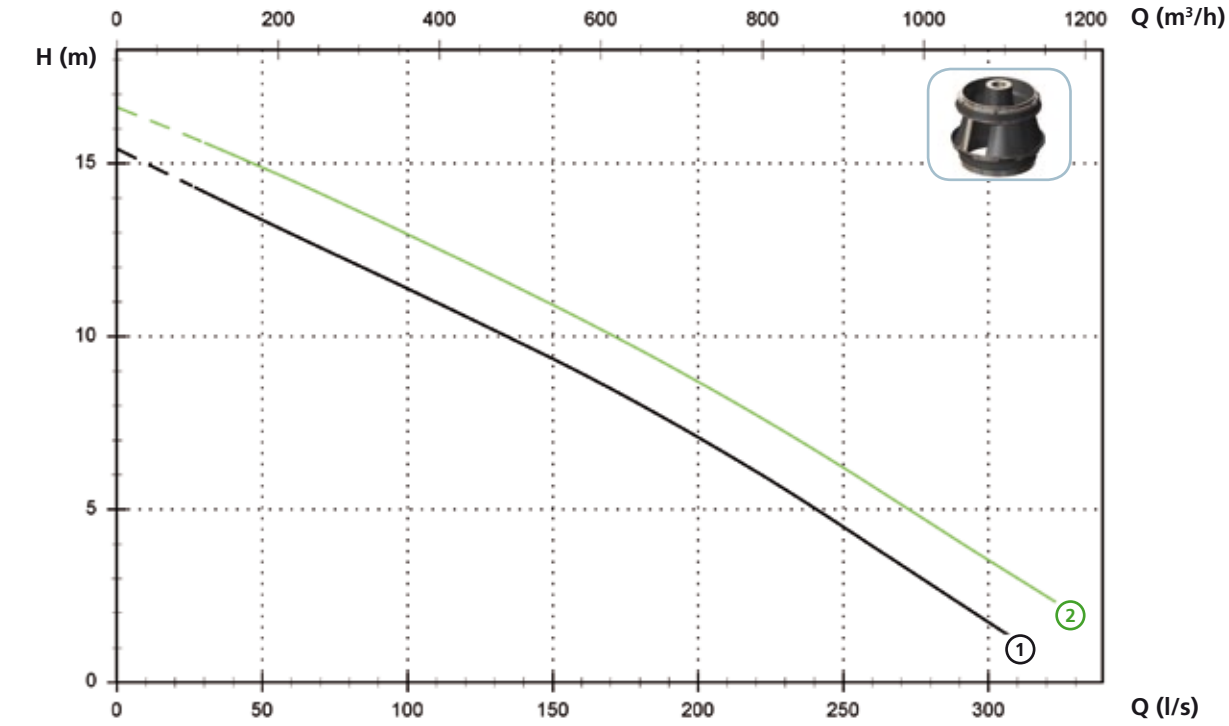
Technical data

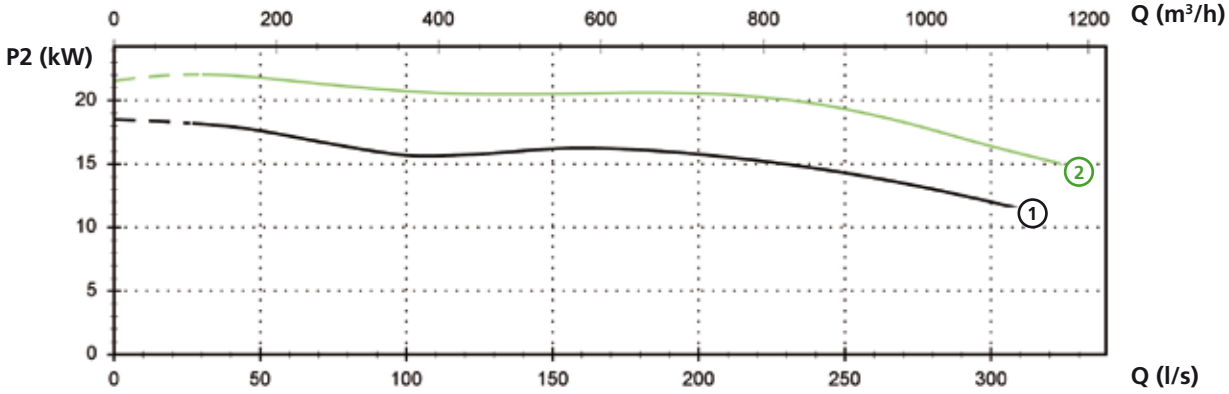
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① SBN 6500/4/300 A0MT/50	400	3	54.8	50	90	1450	Y Δ	DN300 PN10	110 mm

SBN

Models with horizontal DN250 PN10 flanged discharge - 6 poles

Performances



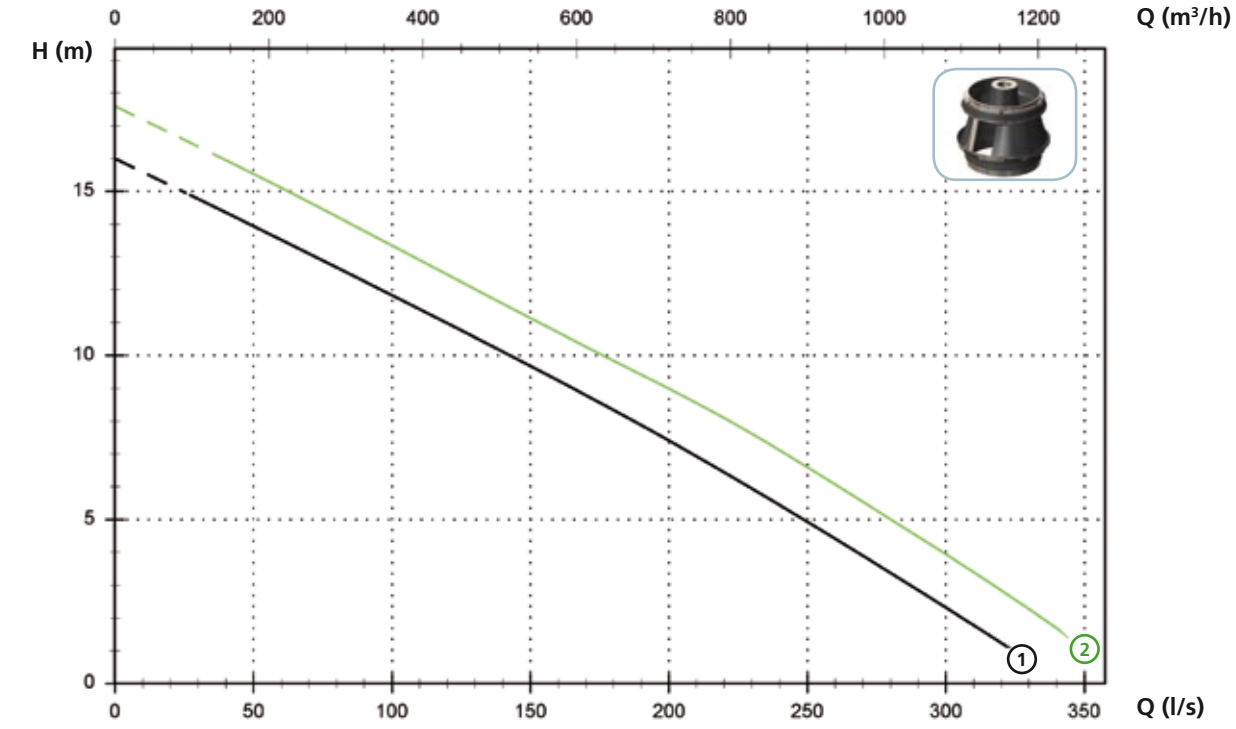


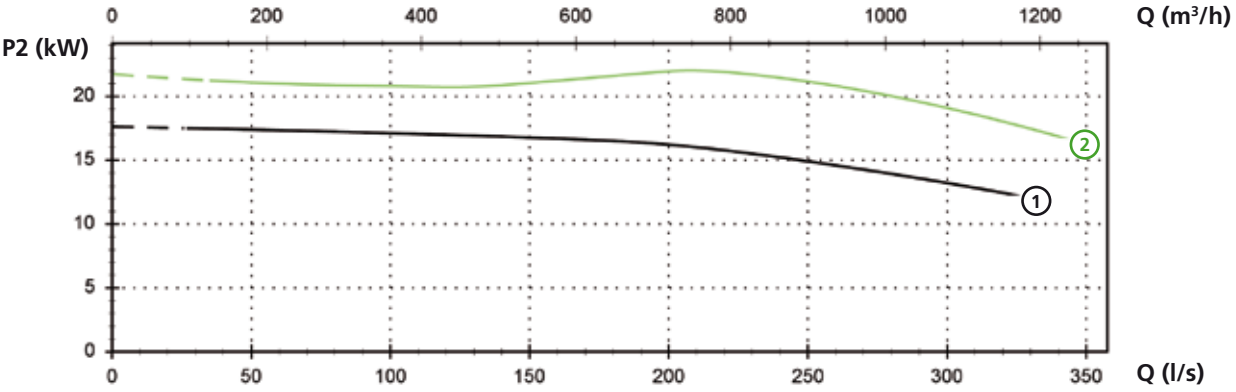
Technical data

	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

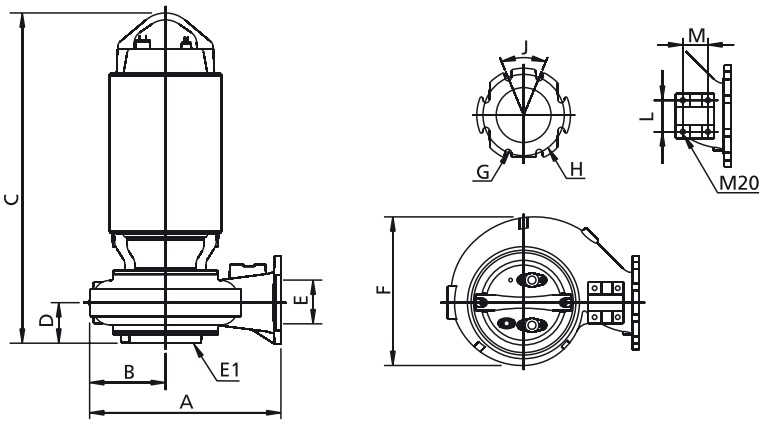
SBN

Versions available

(Key to versions on page 16)

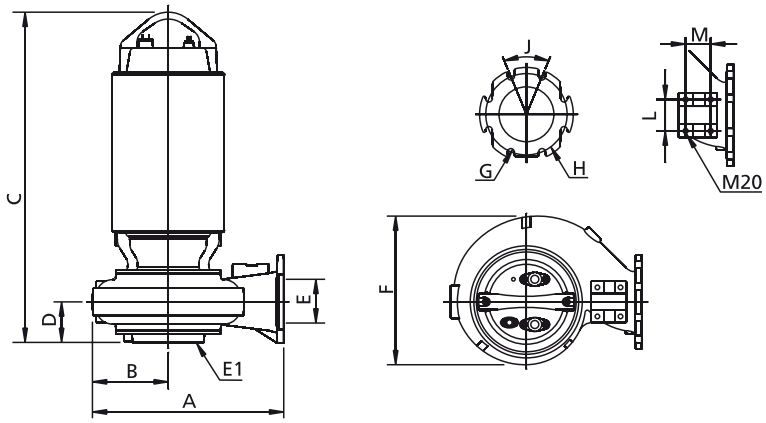
	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	2SIC	SICM	SICAL	2SICAL
SBN 3000/4/150 A(F)1LT/50										●			●	●			●			
SBN 4000/4/150 A(F)(G)1LT/50										●			●	●			●			
SBN 5000/4/150 A(F)(G)(H)1LT/50										●			●	●			●			
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

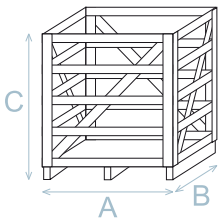
Dimensions in mm

All weights and dimensions are indicative only

(*) DN of the suction flange - PN6

Packaging dimension

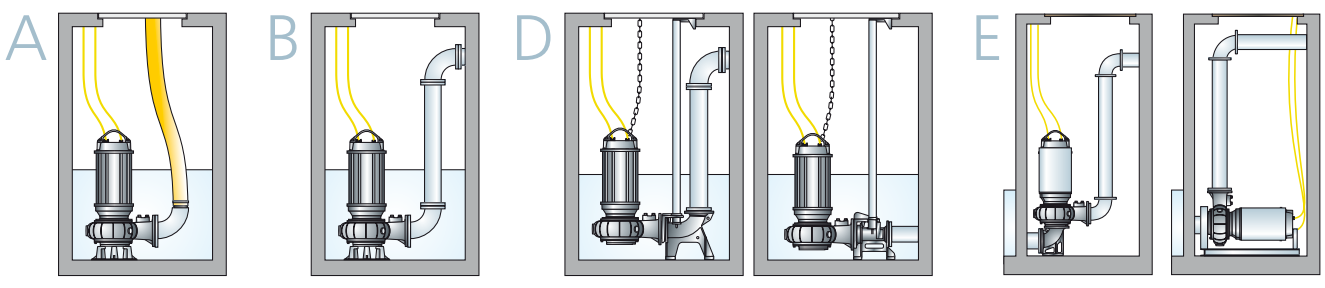
	A	B	C
SBN 3000/4/150 A(F)1LT/50	1080	1245	1135
SBN 4000/4/150 A(F)(G)1LT/50	1080	1245	1135
SBN 5000/4/150 A(F)(G)(H)1LT/50	1080	1245	1135
SBN 6500/4/150 A(F)(G)0MT/50	1080	1245	1135
SBN 2500/6/150 A1LT/50	1080	1245	1135
SBN 3000/4/200 A(B)1LT/50	1080	1245	1135
SBN 4000/4/200 A1LT/50	1080	1245	1135
SBN 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



All product images are indicative only

Dual-channel closed impeller

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.

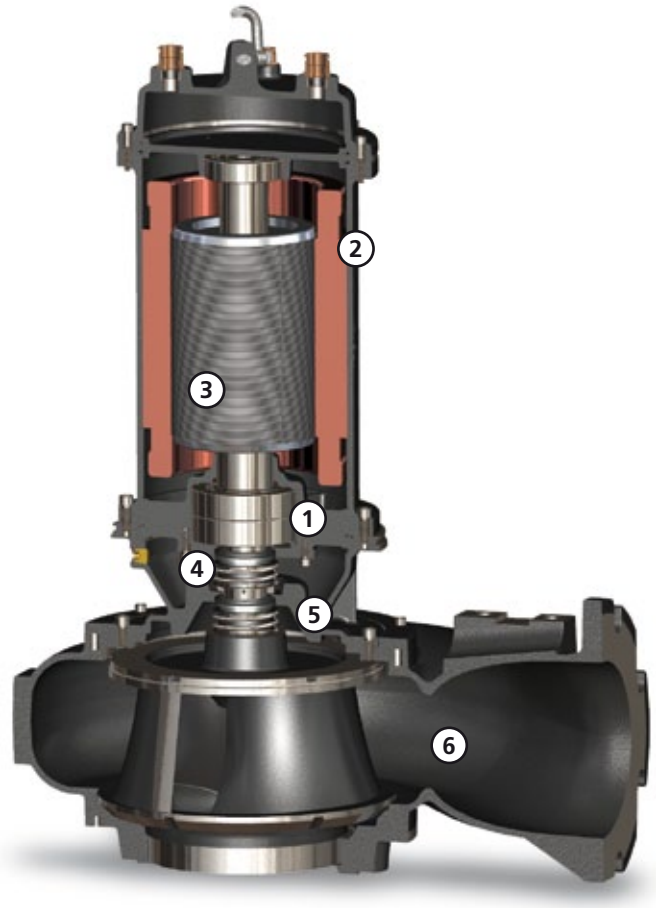
Construction materials

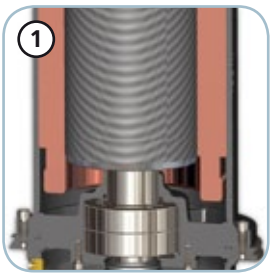
Case	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Cooling jacket	Carbon steel or stainless steel AISI 304
Paint type	Ecological bicomponent epoxy (medium thickness 150 µm)
Set of standard 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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

SBP





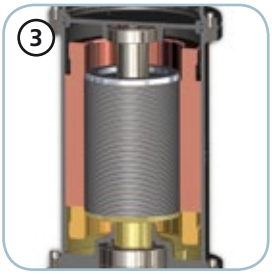
Bearings

Shielded ball bearings with lifetime lubrication.



Structure

Constructed in GJL-250 cast iron.



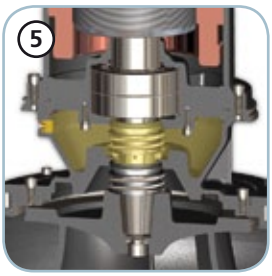
Motor

Oil-bath motor with thermal protections.



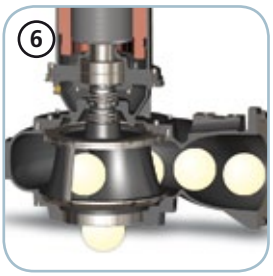
Mechanical seals

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.



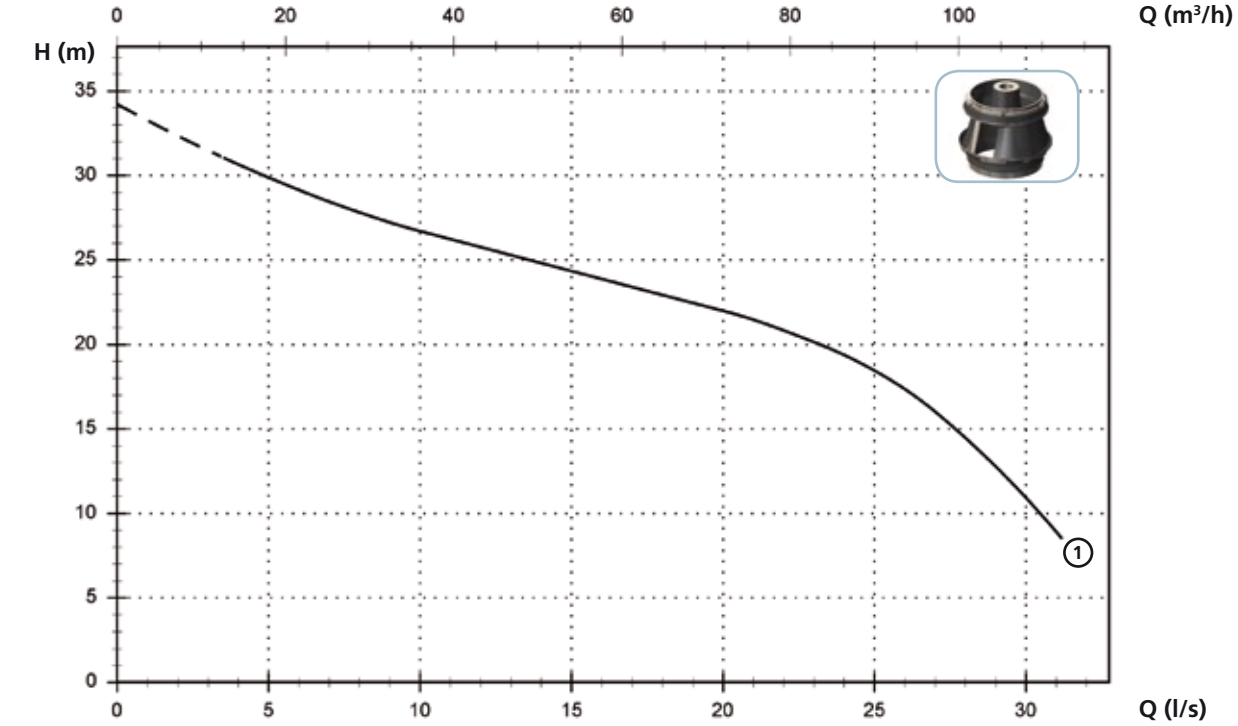
Free passage

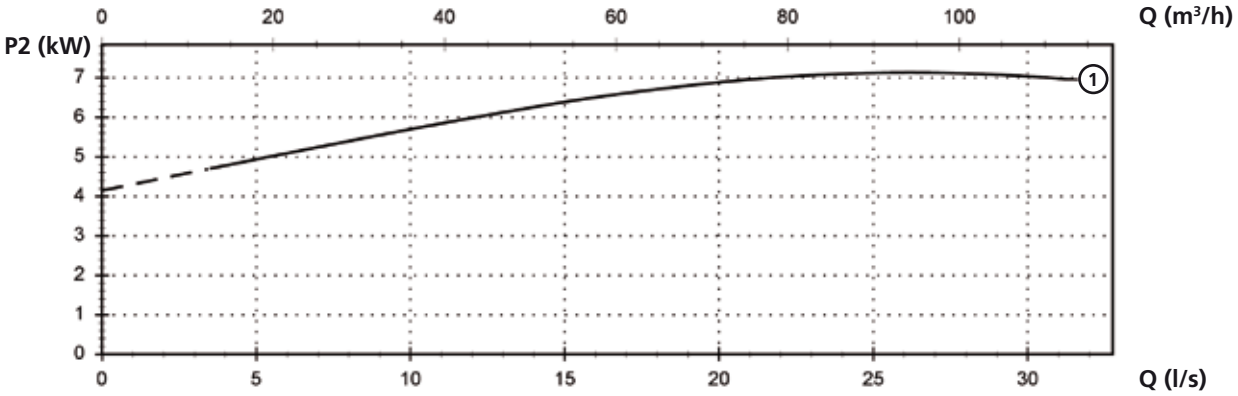
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

SBP

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

Performances



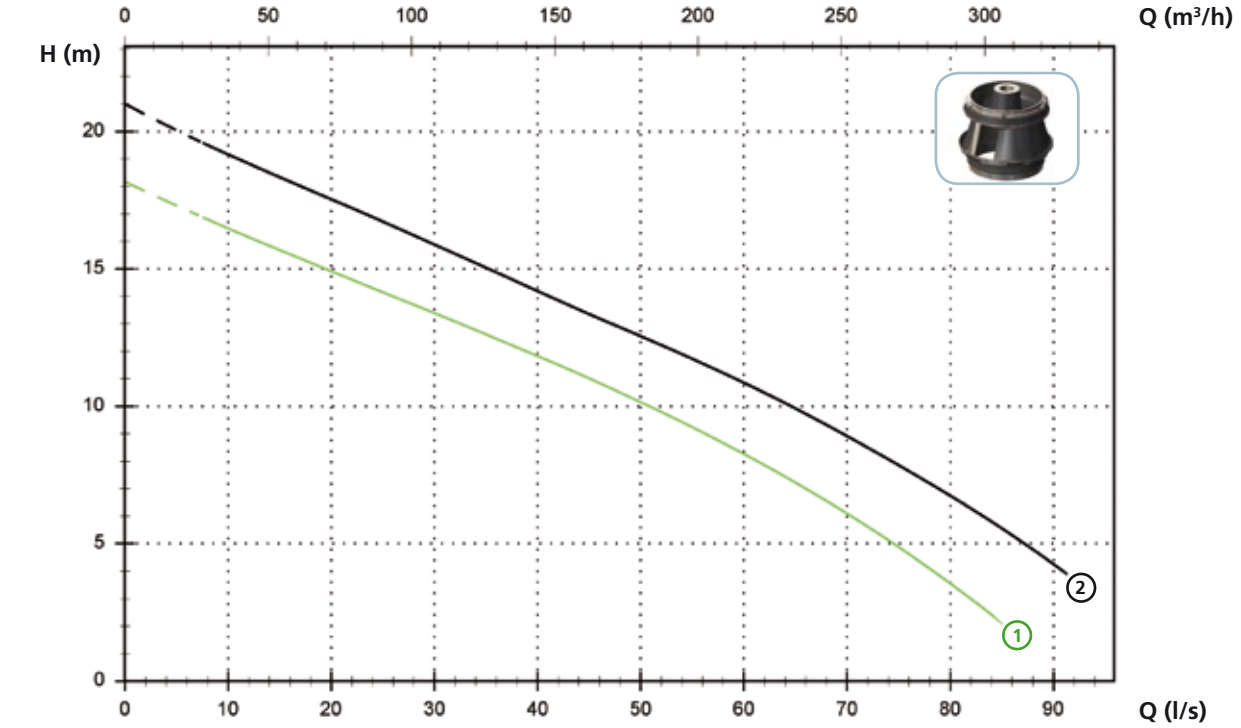


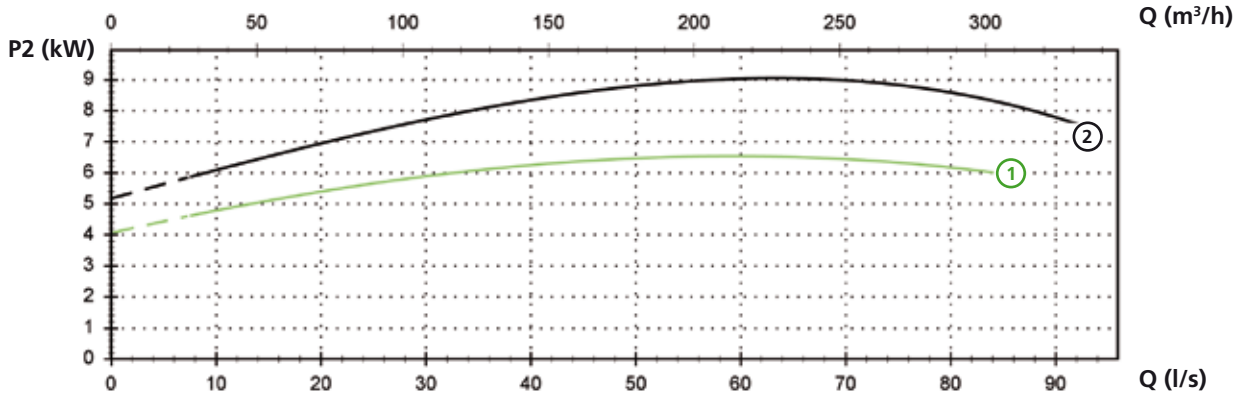
Technical data

	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





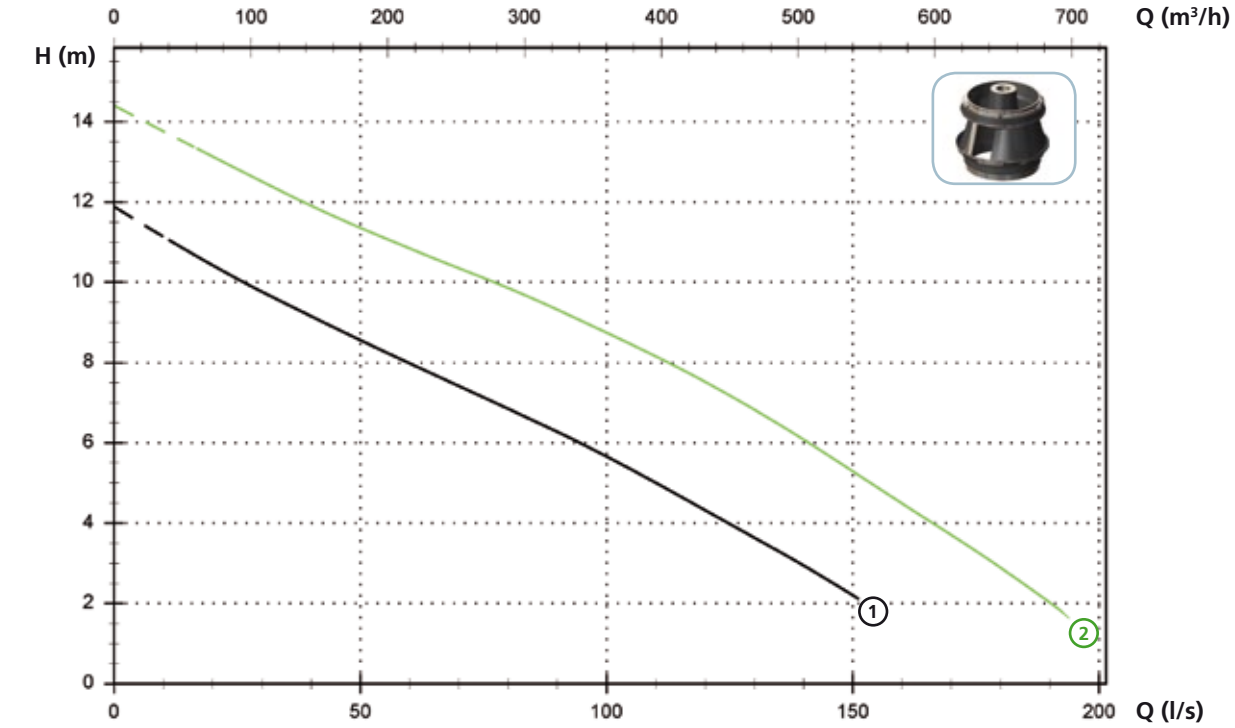
Technical data

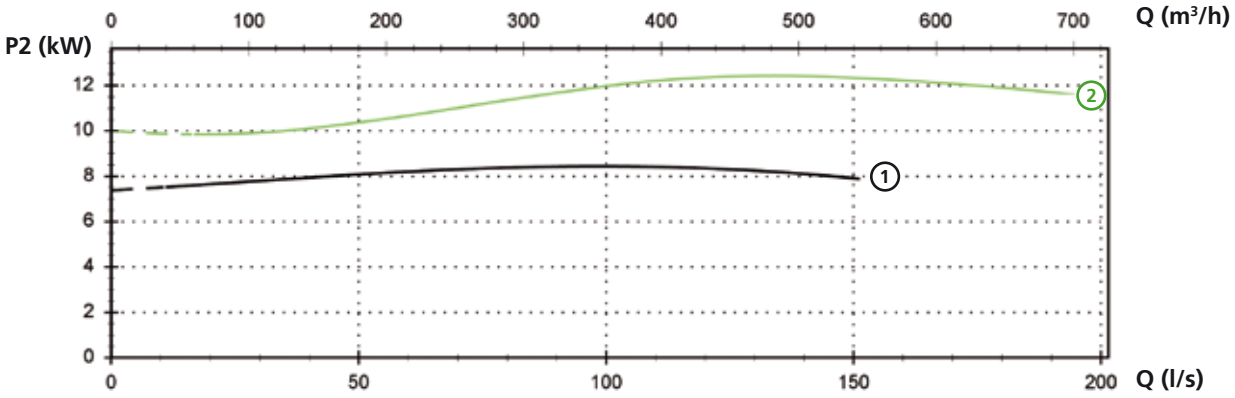
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① SBP 750/4/150 A0HT/50	400	3	8.6	6.5	14.9	1450	Y Δ	DN150 PN10-16	70 mm
② SBP 1000/4/150 A0HT/50	400	3	11.5	8.9	20	1450	Y Δ	DN150 PN10-16	70 mm

SBP

Models with horizontal DN200 PN10 flanged discharge - 6 poles

Performances



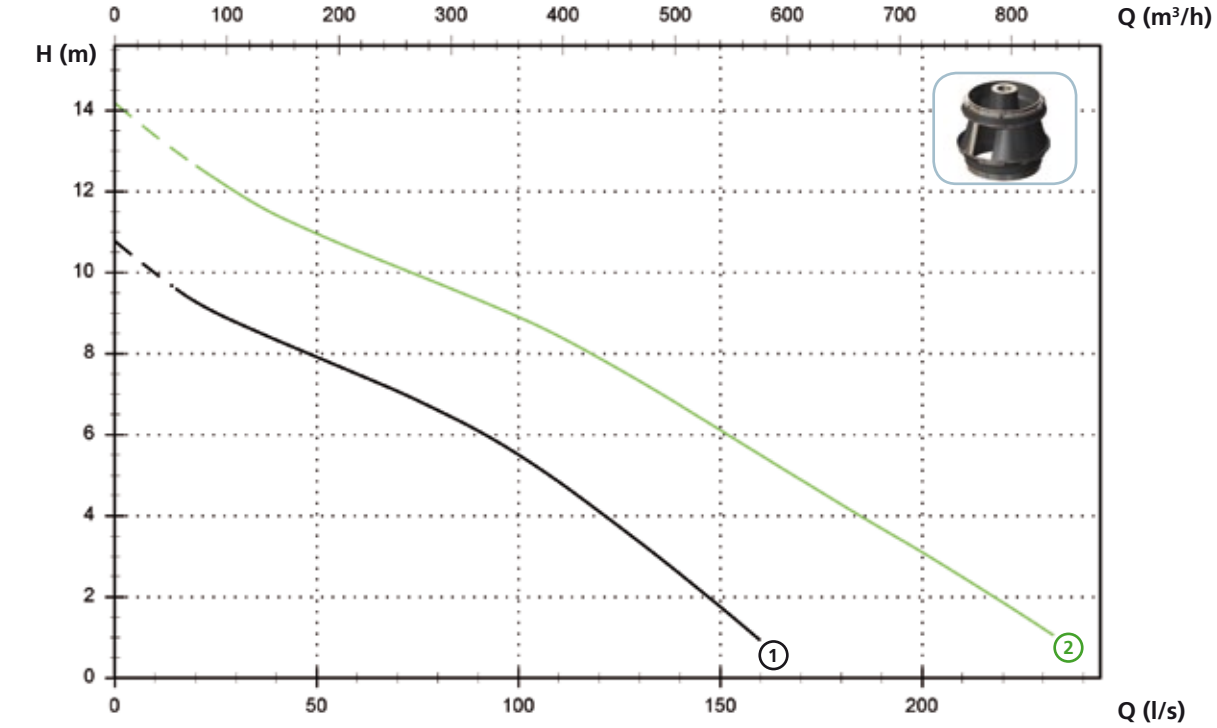


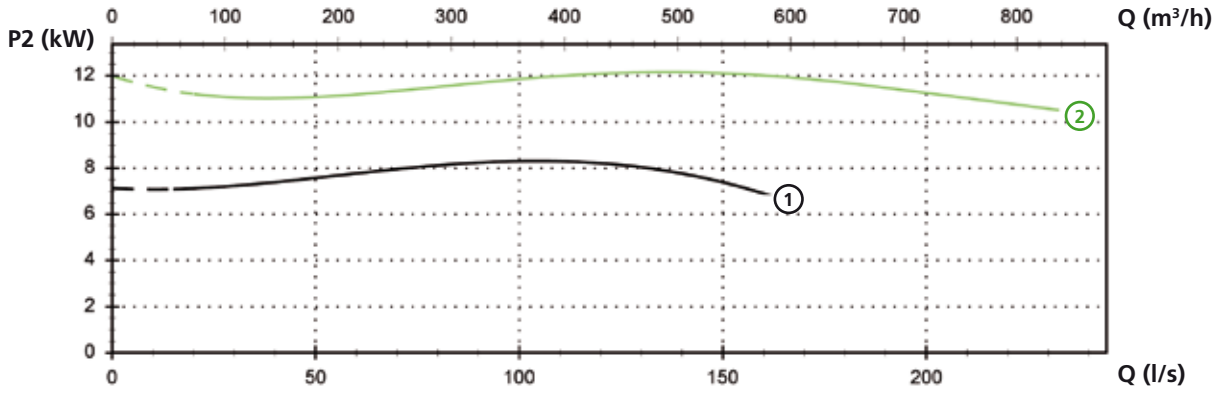
Technical data

	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	

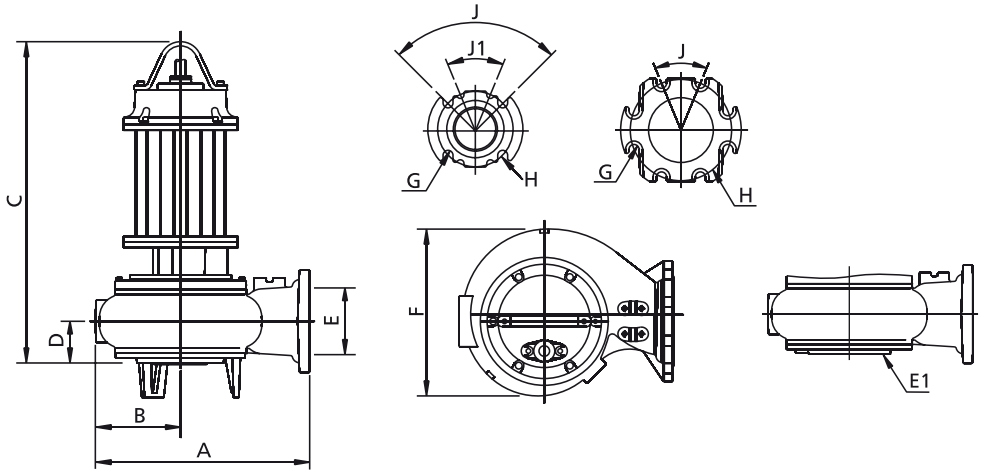
SBP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

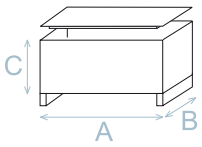
Dimensions in mm

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

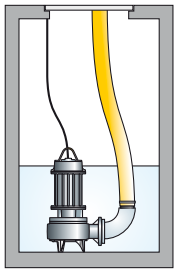


Dimension in mm

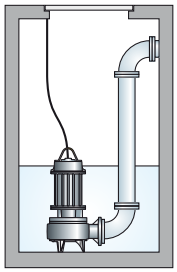
All weights and dimensions are indicative only

Installations available

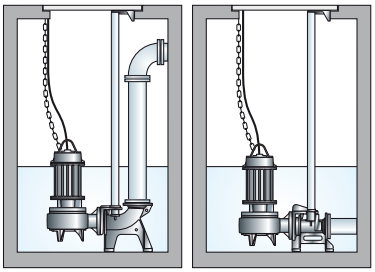
A



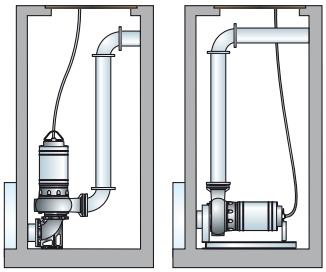
B



D



E



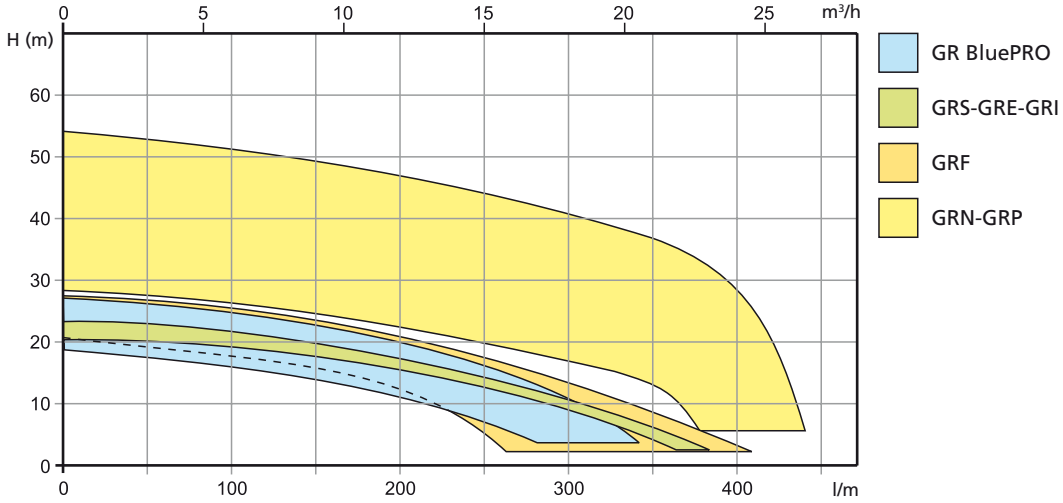
1.5 GR (GRINDER)
Grinder pumps

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



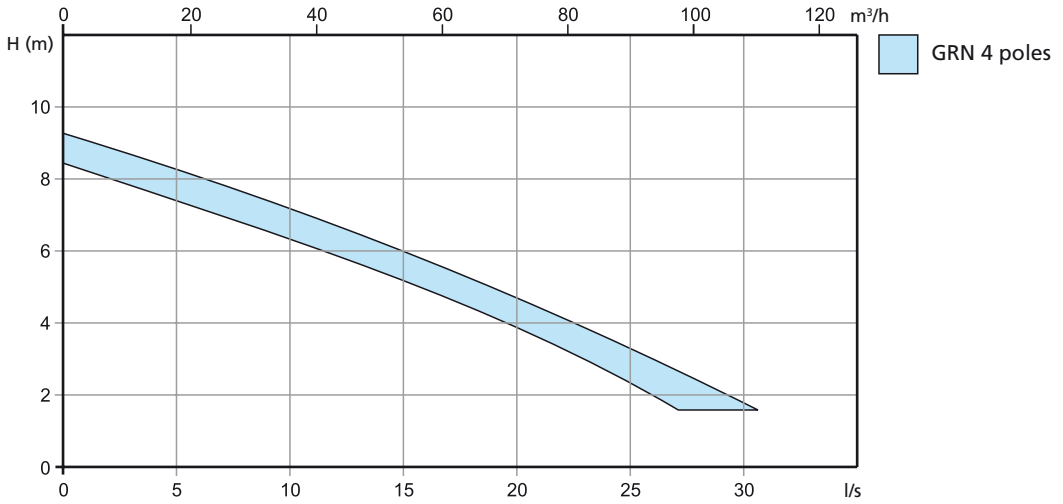
The GR impeller, designed to provide high heads and high efficiency, is applied to motors with power up to 7.2 kW, for use in the livestock farming, food and residential sectors and wherever grinding of the pumped liquid is required. The diffuser plate incorporates the Anti Clogging System (ACS), consisting 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



All product images are indicative only

Impeller with grinder system

DESIGN BY pininfarina

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

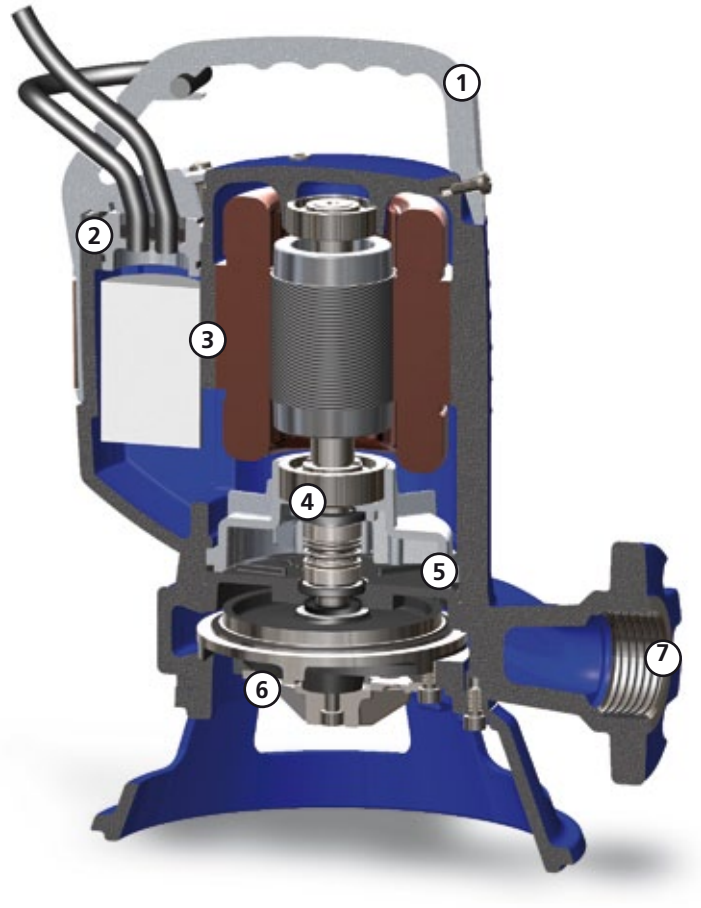
Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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







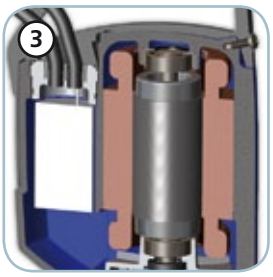
Lifting handle

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

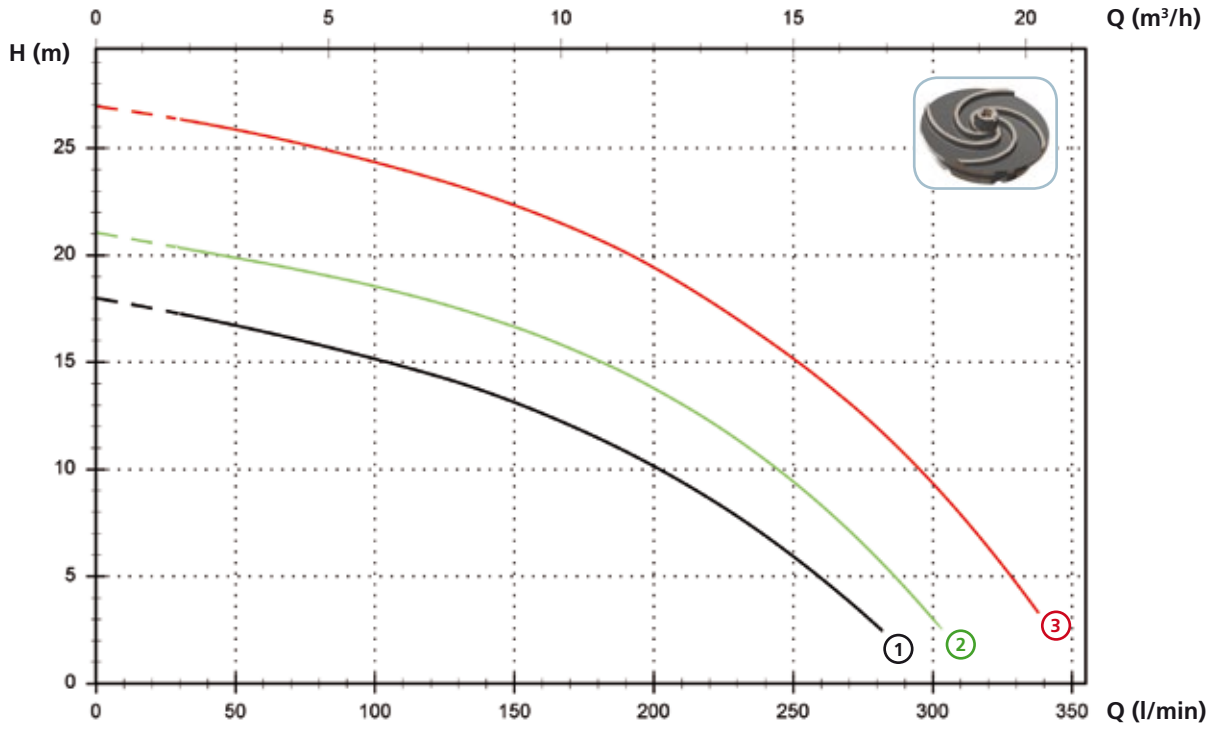
Threaded, flanged discharge for the maximum ease of installation. Cast iron foot.

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	-

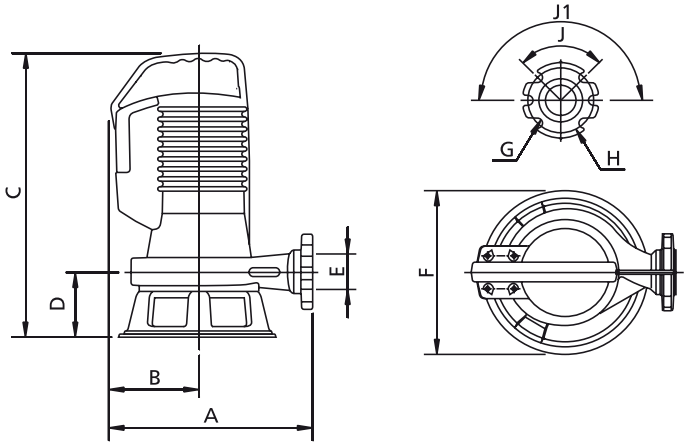
GR BluePRO

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

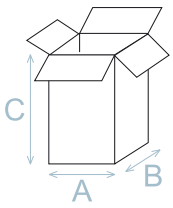
Dimensions in mm

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



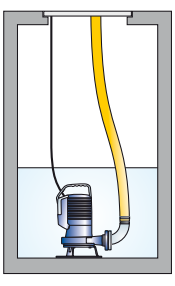
All weights and dimensions are indicative only

No. pieces per pallet

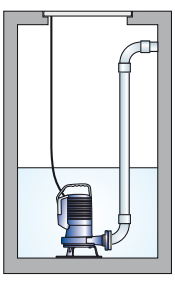
For GR BluePRO models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

Installations available

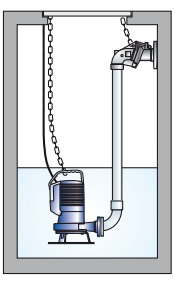
A



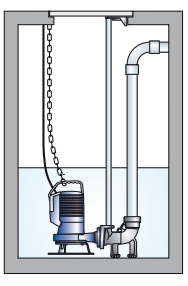
B



C



D



GRS



All product images are indicative only

Impeller with grinder system

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.

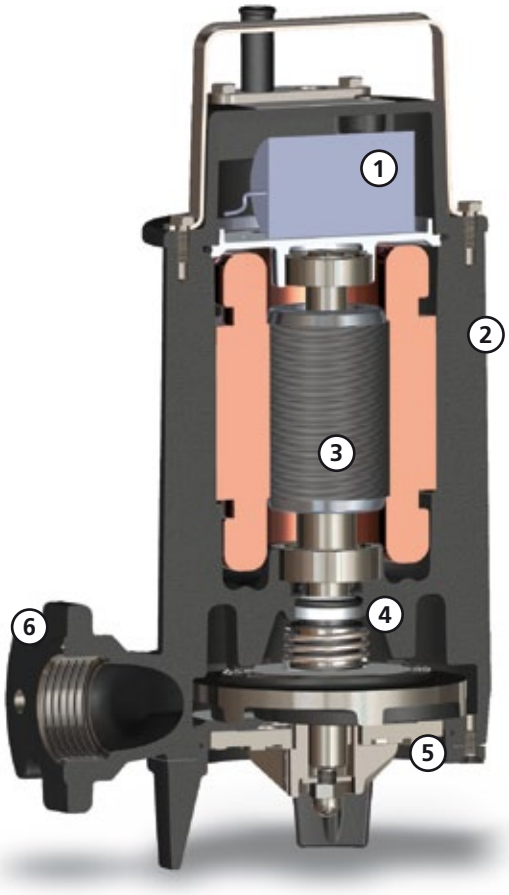
Construction materials

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

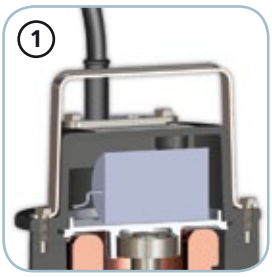
Operating limits

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

GRS

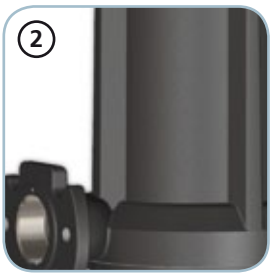






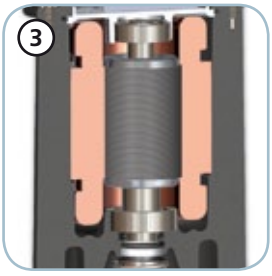
Capacitor/relay

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

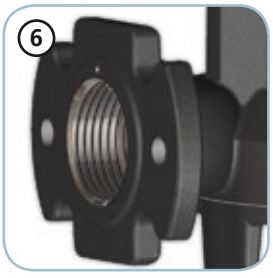
One mechanical seal in silicon carbide (SiC) and one lip seal.



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

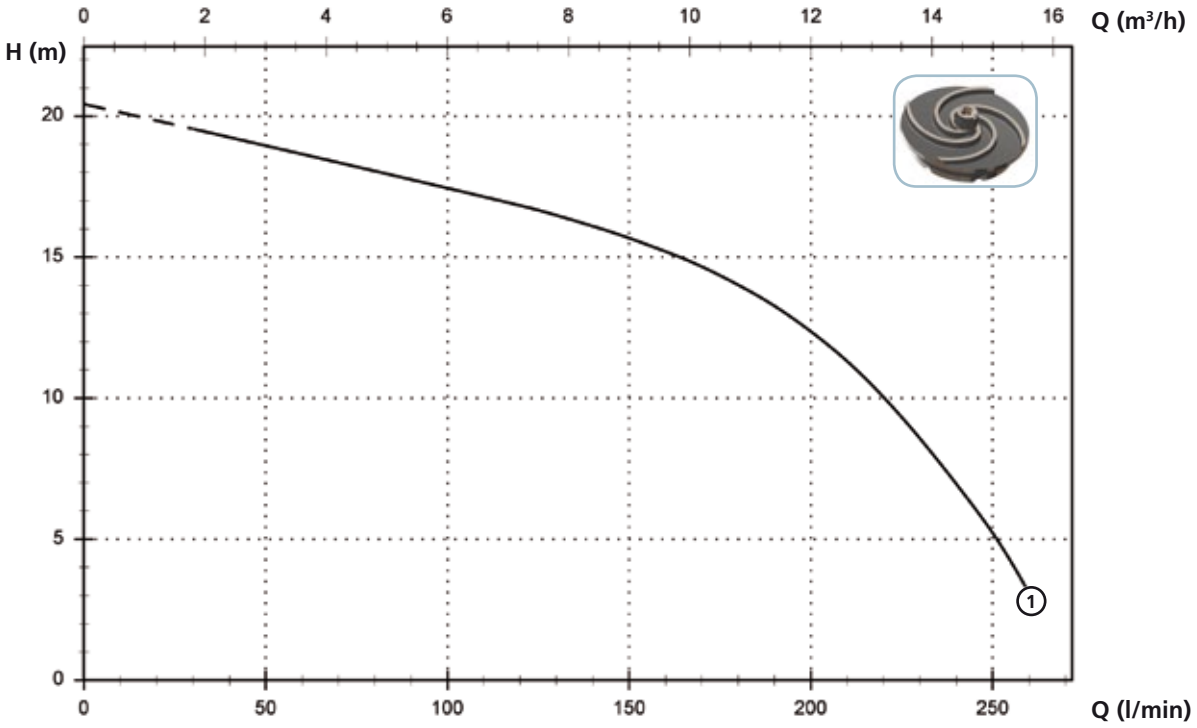
Threaded, flanged discharge for the maximum ease of installation.

GRS

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

Performances

	l/s	0	1	2	3	4
	l/min	0	60	120	180	240
	m³/h	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	-

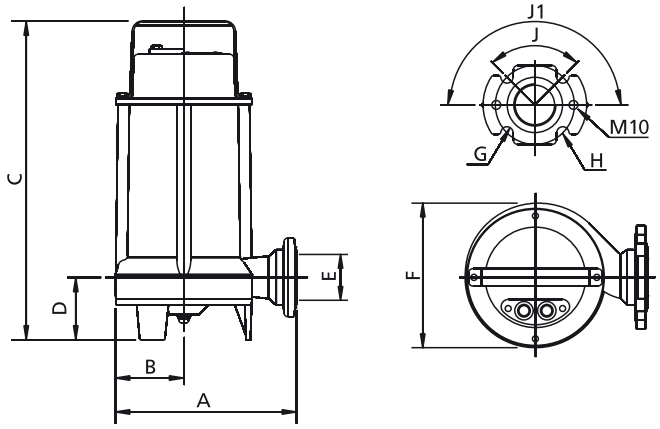
GRS

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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 1½"	165	14	90	90°	180°	21

Dimensions in mm

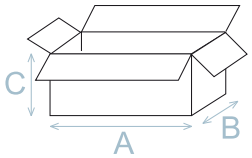
All weights and dimensions are indicative only

Packaging dimension

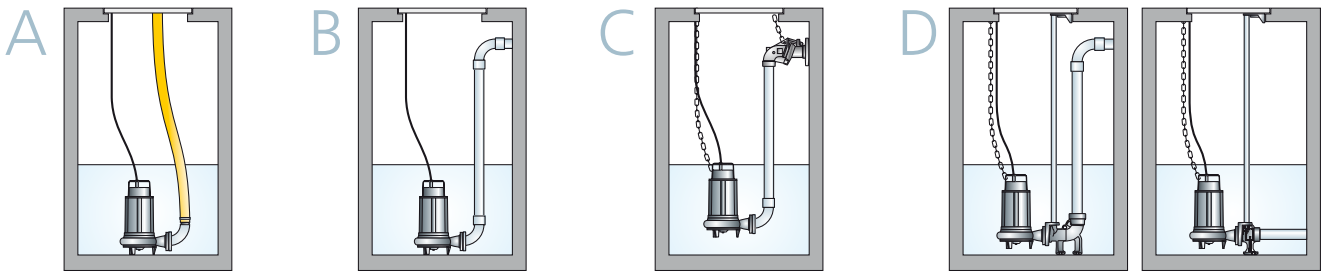
	A	B	C
GRS 100/2/G40H A0CM(T)/50	385	225	245

Dimension in mm

All weights and dimensions are indicative only



Installations available



GRE



All product images are indicative only

Impeller with grinder system

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.

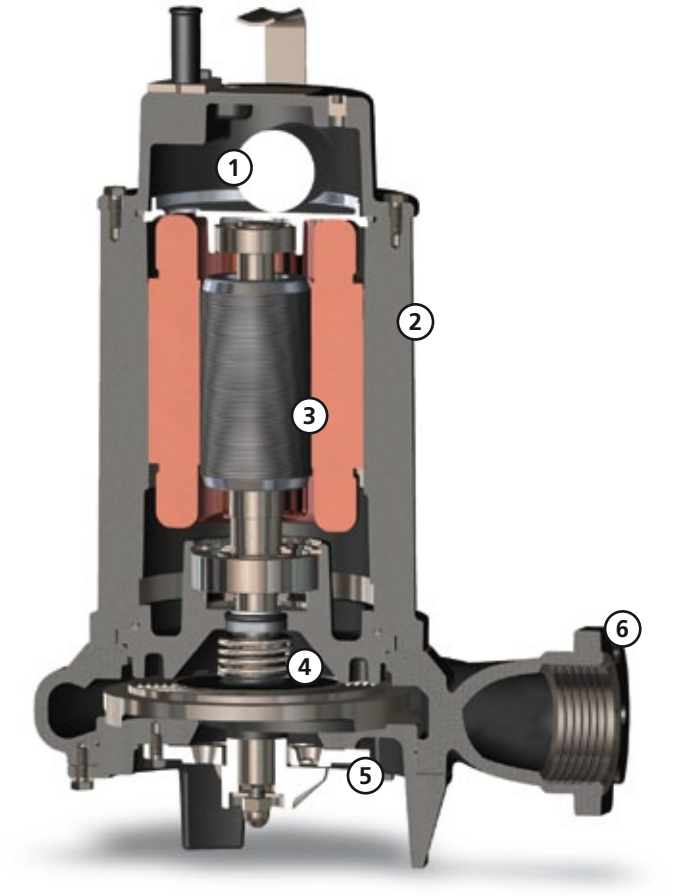
Construction materials

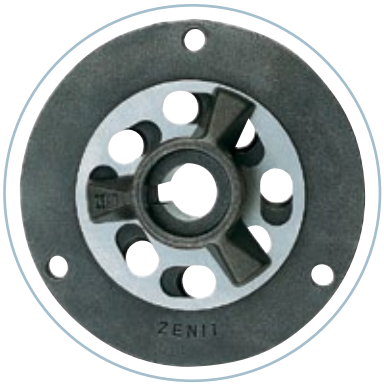
Case	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Cutter material	Chromium steel - X102 CrMo17 KU
Cutting disk material	Chromium steel - X102 CrMo17 KU
Shaft	Stainless steel - AISI 420
Paint type	Ecological bicomponent epoxy (medium thickness 80 µm)
Set of standard mechanical seals	One silicon carbide mechanical seal (SiC) and one lip seal

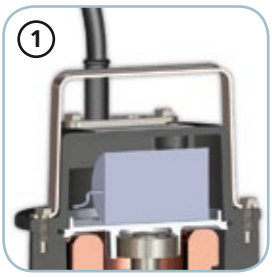
Operating limits

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

GRE







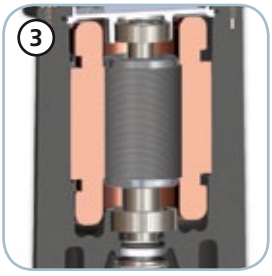
Capacitor/relay

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

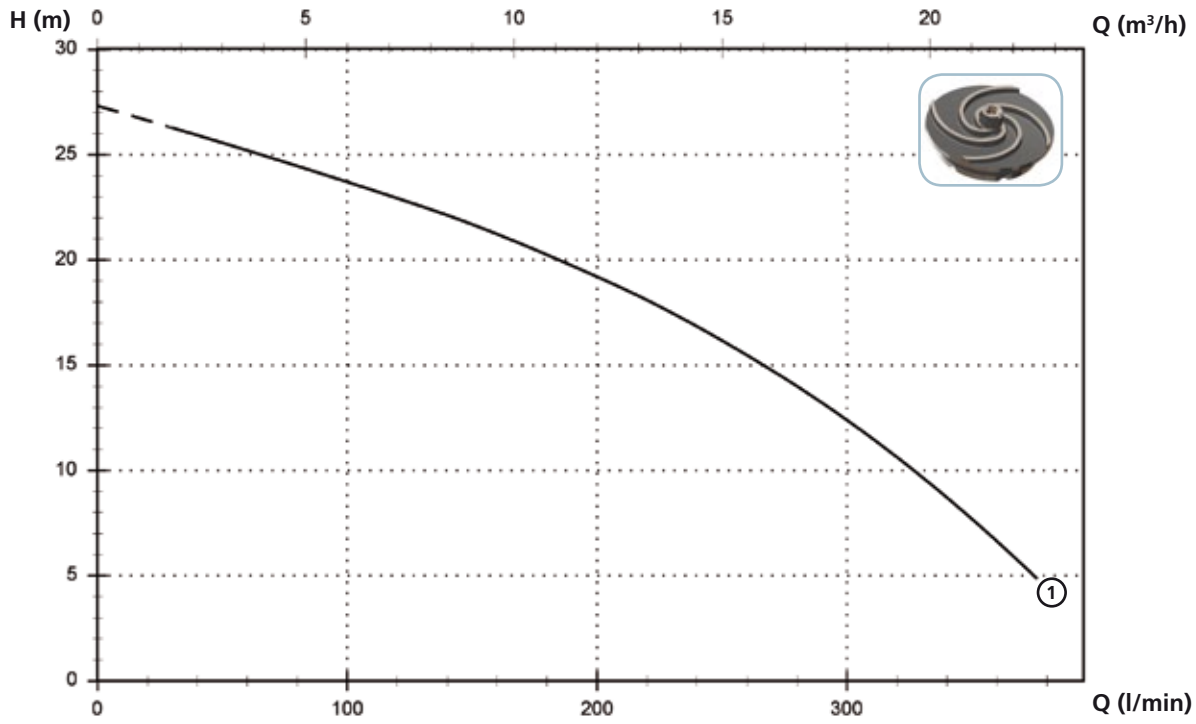
Threaded, flanged discharge for the maximum ease of installation.

GRE

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

Performances

	l/s	0	1	2	3	4	5	6
	l/min	0	60	120	180	240	300	360
	m^3/h	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	-

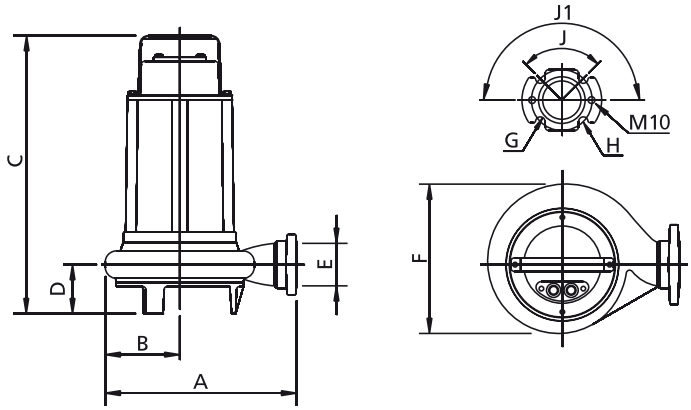
GRE

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

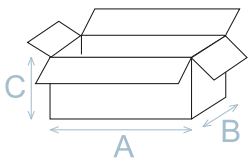
All weights and dimensions are indicative only

Packaging dimension

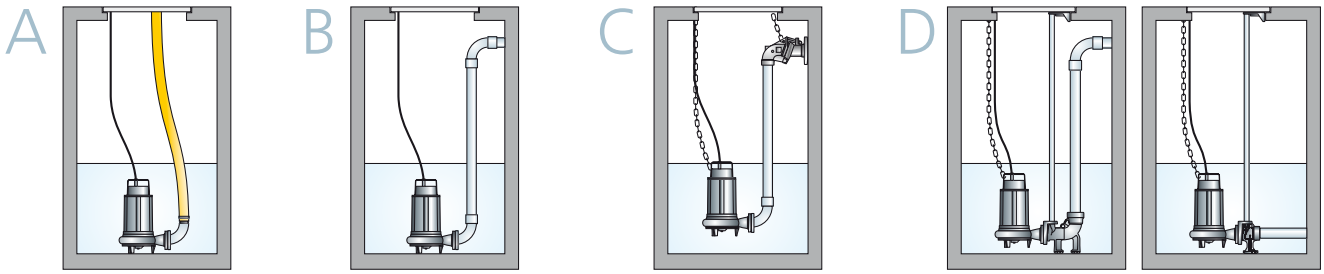
	A	B	C
GRE 200/2/G50H A0CM(T)/50	475	285	235

Dimension in mm

All weights and dimensions are indicative only



Installations available



GRI



All product images are indicative only

Impeller with grinder system

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.

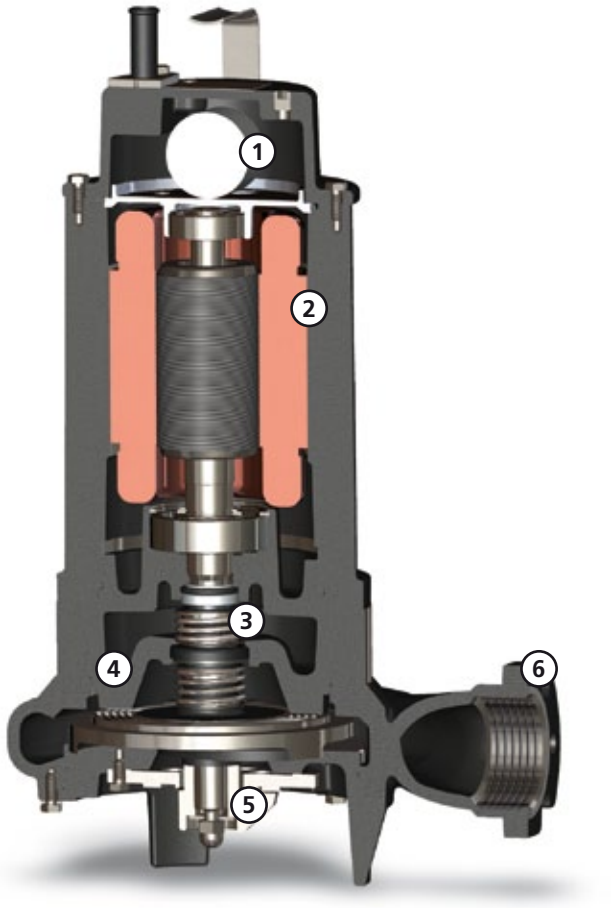
Construction materials

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)

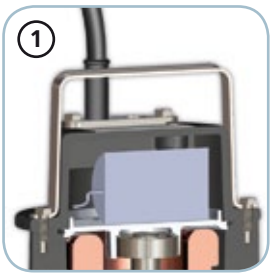
Operating limits

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

GRI

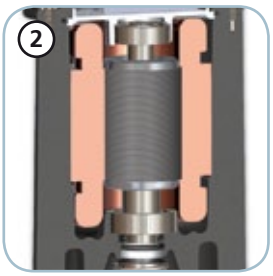






Capacitor/relay

Single-phase models with internal capacitor and control cabinet with circuit breaker capacitor and overload protection. Three-phase models with motor protection relay.



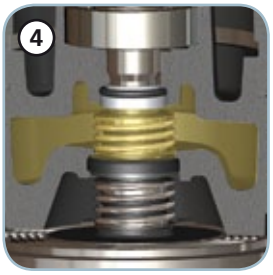
Structure and motor

Constructed in GJL-250 cast iron. Ecological dry motor with thermal protections.



Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Oil sump

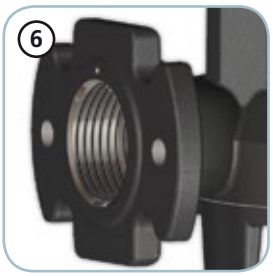
Large oil sump to guarantee longer mechanical seal lifetime.



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

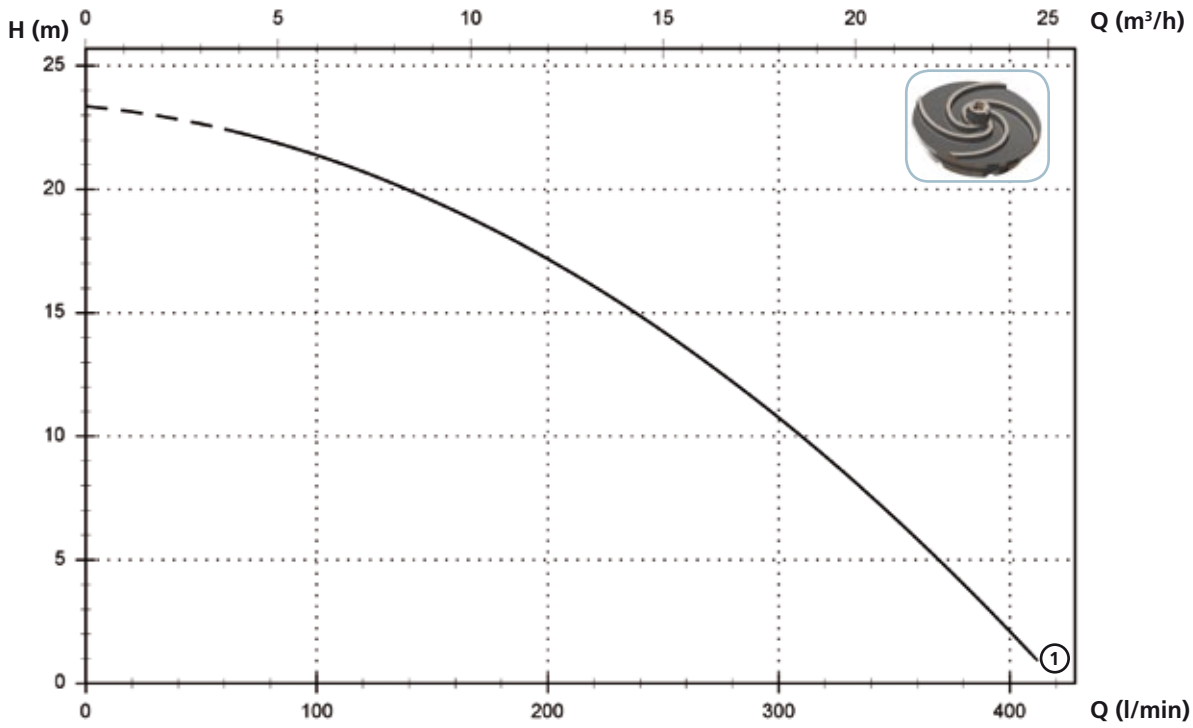
Threaded, flanged discharge for the maximum ease of installation.

GRI

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

Performances

	l/s	0	1	2	3	4	5	6
	l/min	0	60	120	180	240	300	360
	m^3/h	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	-

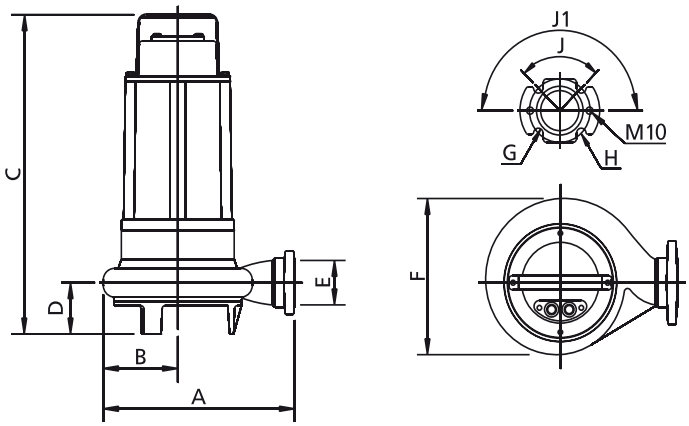
GRI

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

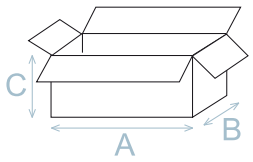
All weights and dimensions are indicative only

Packaging dimension

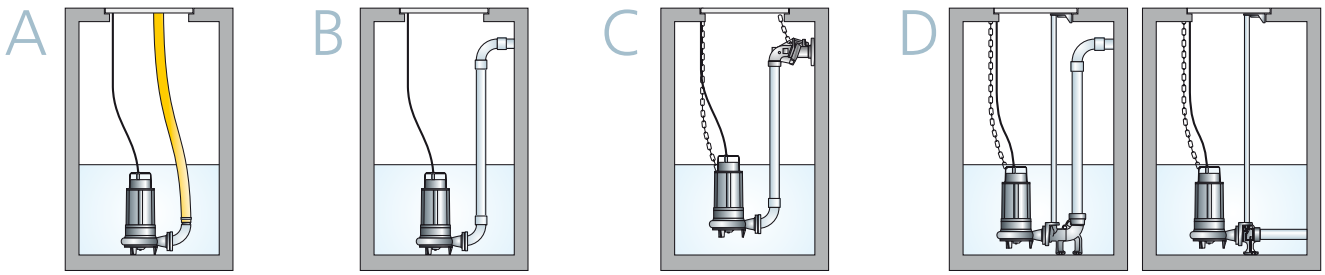
	A	B	C
GRI 200/2/G50H A0CM(T)/50	580	310	310

Dimension in mm

All weights and dimensions are indicative only



Installations available



GRF



All product images are indicative only

Impeller with grinder system

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.

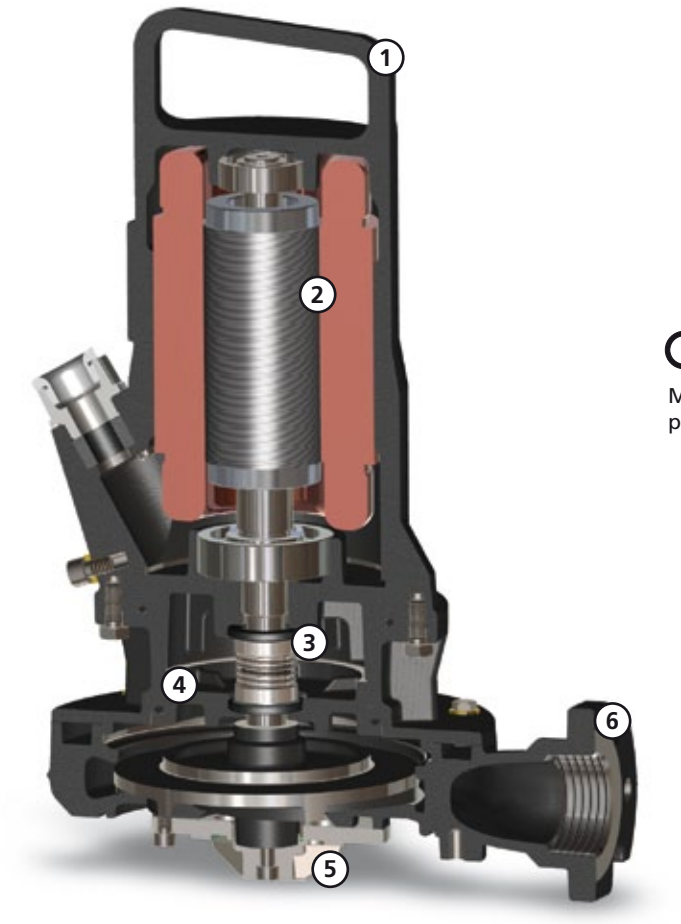
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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

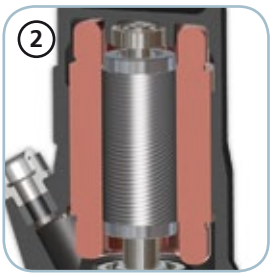
Models with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids





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.



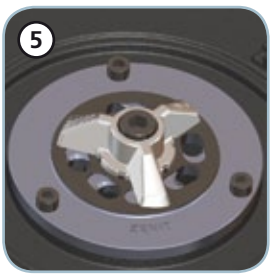
Mechanical seals

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



Oil sump

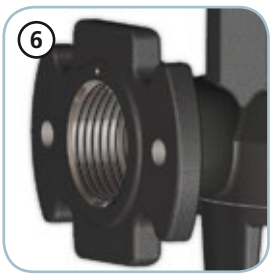
Large oil sump to guarantee longer mechanical seal lifetime.



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



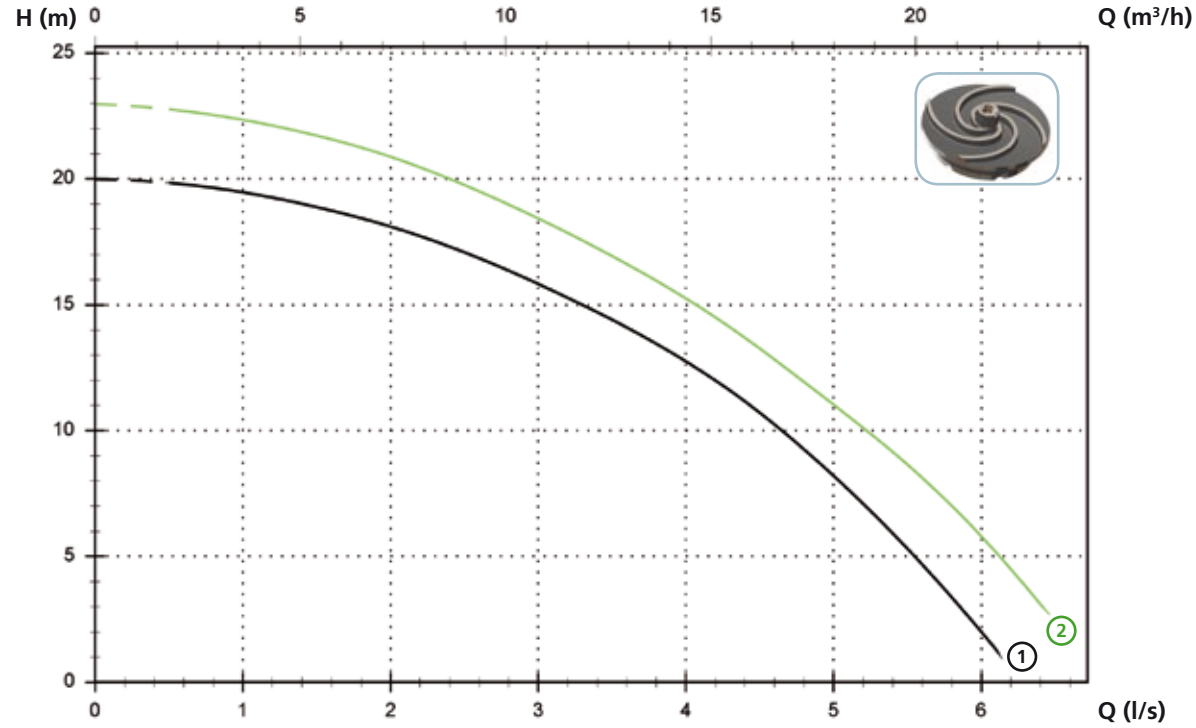
Discharge

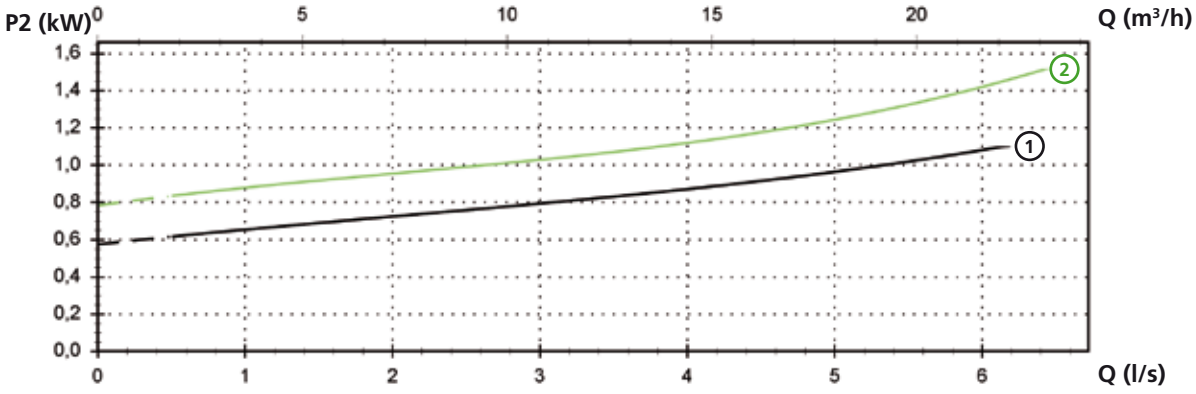
Threaded, flanged discharge for the maximum ease of installation.

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	-

GRF

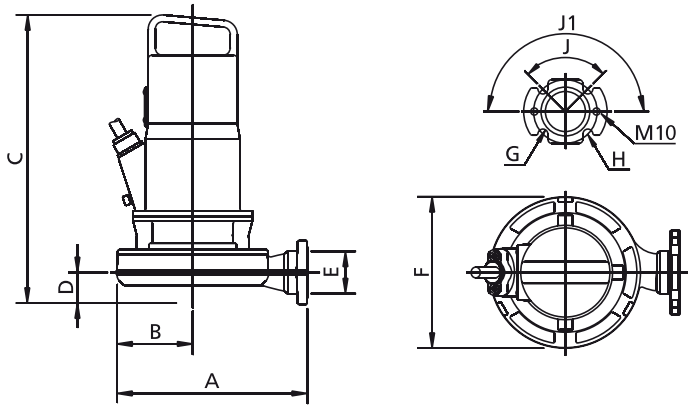
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC	FT	CGFT	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



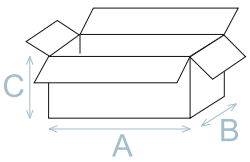
	A	B	C	D	E	F	G	H	J	J1	kg
GRF 150/2/G40H A1CM(T)/50	265	105	405	45	G 1½"	215	14	90	90°	180°	32
GRF 200/2/G40H A1CM(T)/50	265	105	405	45	G 1½"	215	14	90	90°	180°	34

Dimensions in mm *All weights and dimensions are indicative only*

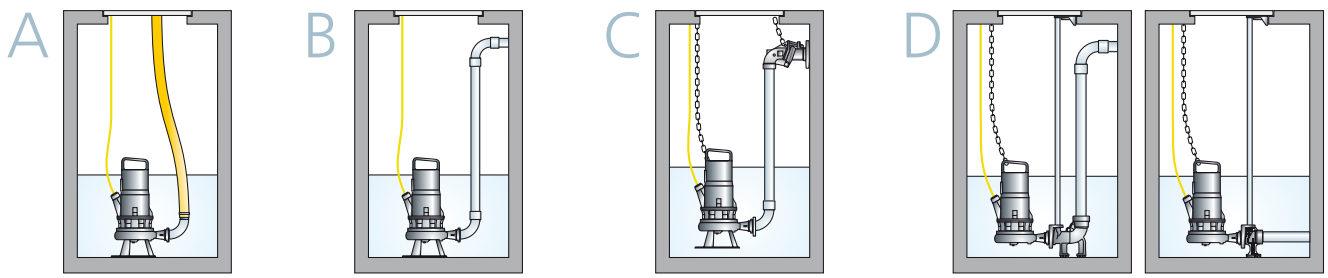
Packaging dimension

	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 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.

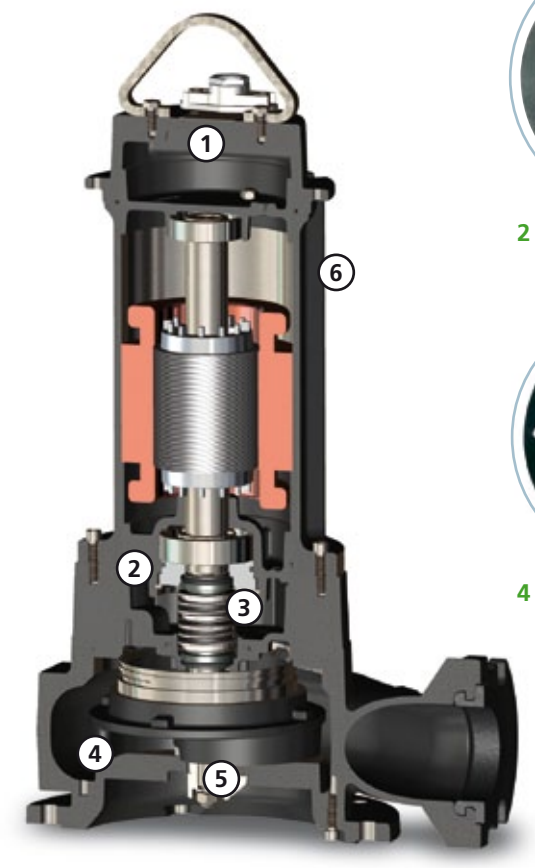
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

GRN





2 poles motor models

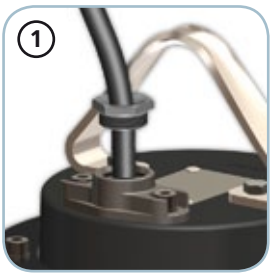


4 poles motor models



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.



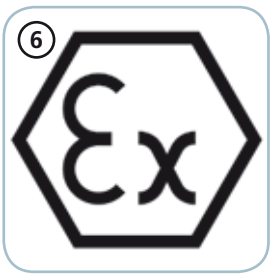
Anti-clogging system

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

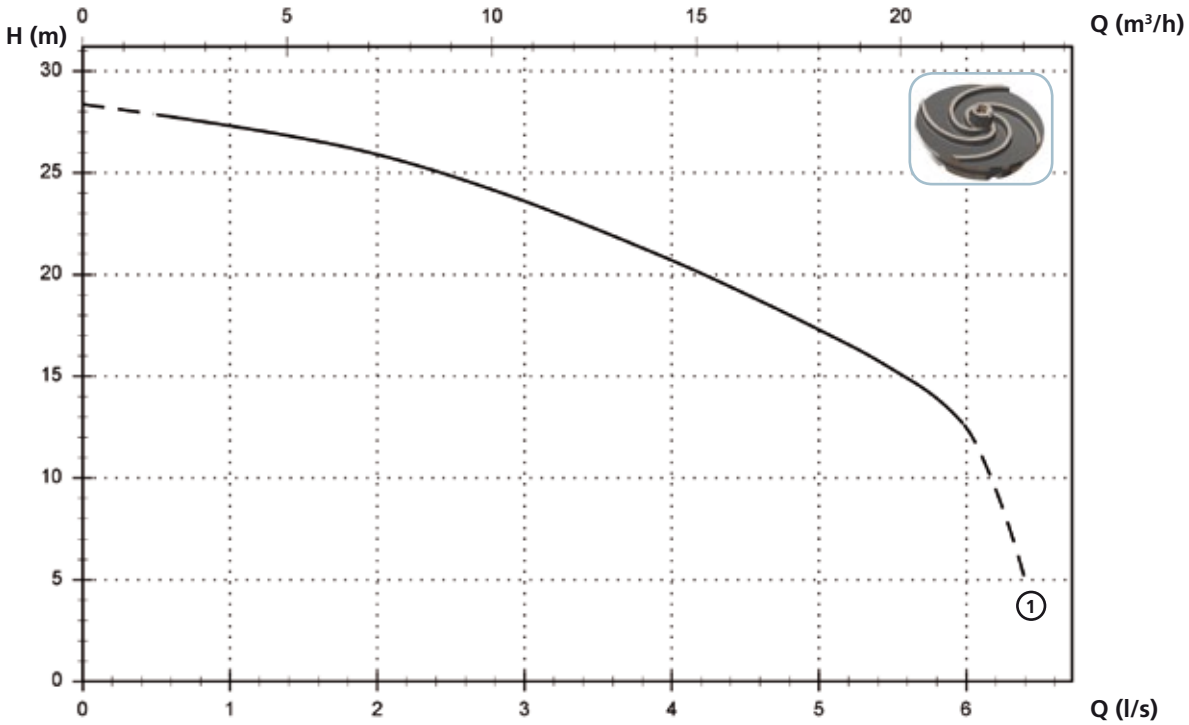
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

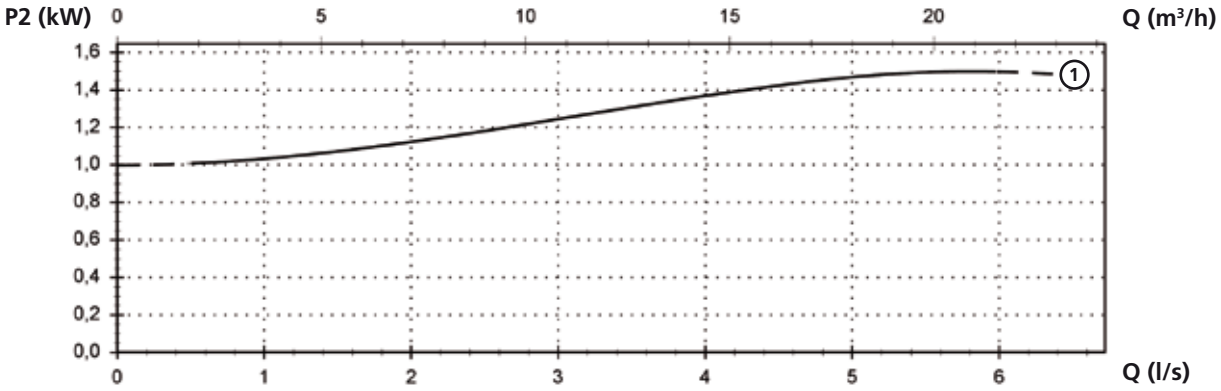
CE 0496 Ex GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

GRN

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

Performances





Technical data

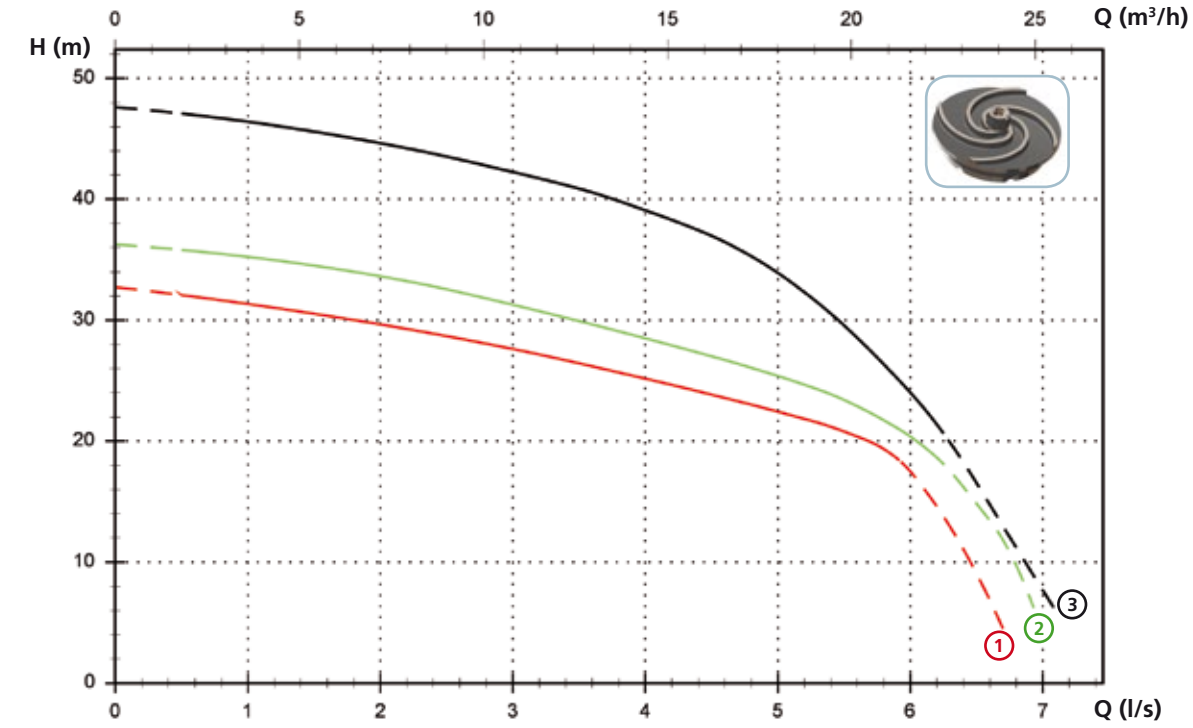
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① GRN 250/2/G40H A1DM/50	230	1	2.7	1.8	12.5	2900	Dir	G 1½"- DN32 PN6	-

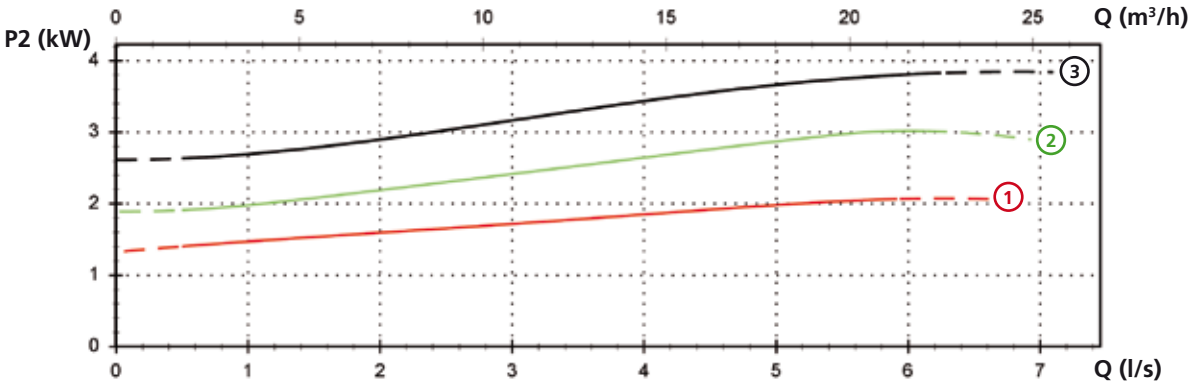
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① GRN 250/2/G40H A1DT/50	400	3	2.3	1.8	3.9	2900	Dir	G 1½"- DN32 PN6	-

GRN

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

Performances





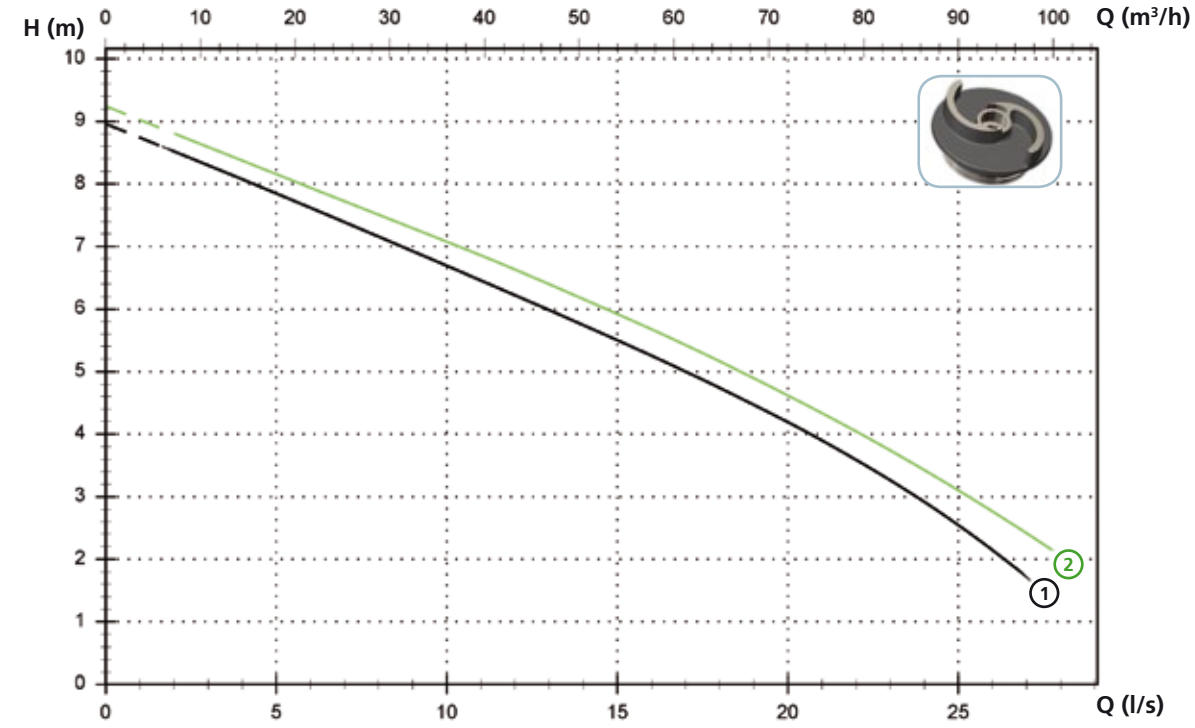
Technical data

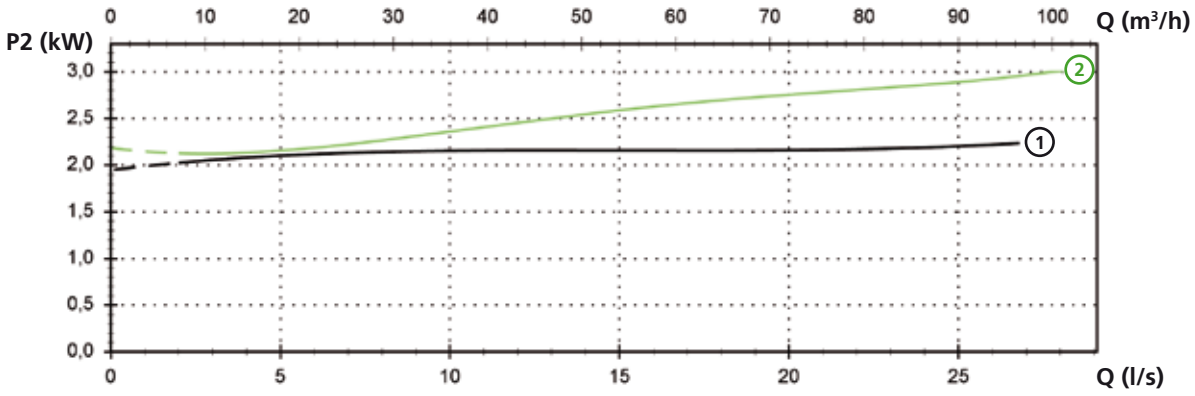
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① GRN 300/2/G50H A1DT/50	400	3	2.9	2.2	5.1	2900	Dir	G 2"-DN32 PN6	-
② GRN 400/2/G50H A1FT/50	400	3	4.0	3	6.7	2900	Dir	G 2"-DN32 PN6	-
③ GRN 550/2/G50H A1FT/50	400	3	5.0	4.1	8.7	2900	Dir	G 2"-DN32 PN6	-

GRN

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

Performances



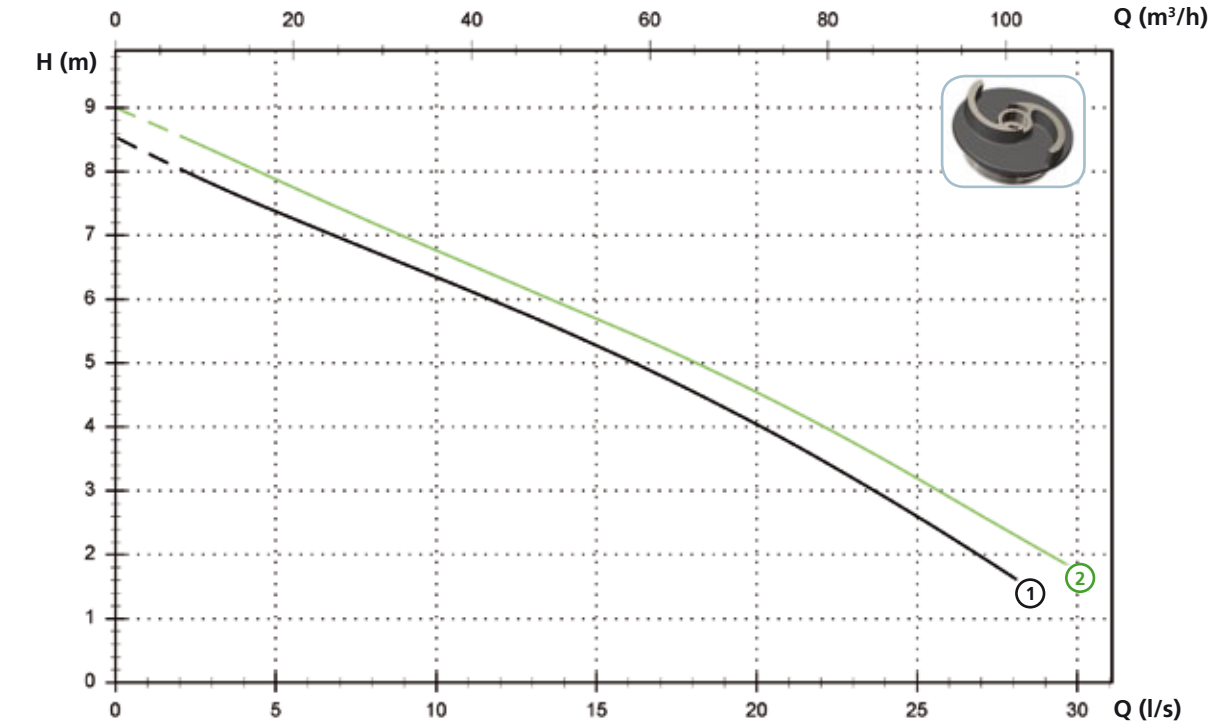


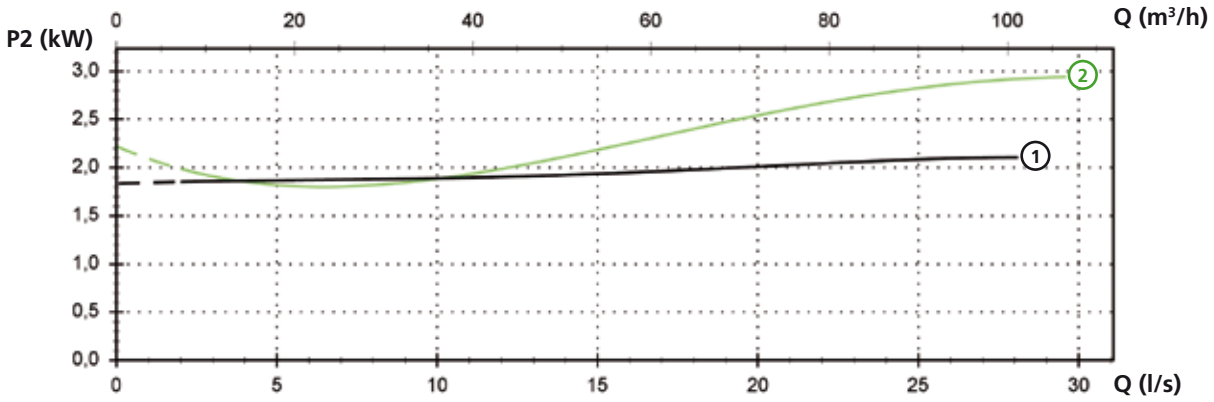
Technical data

	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

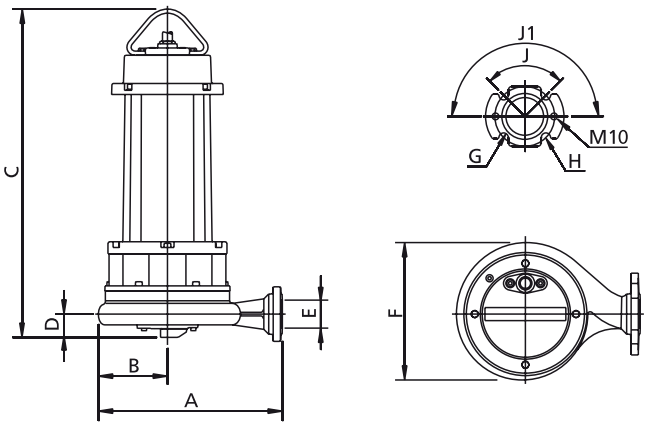
(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



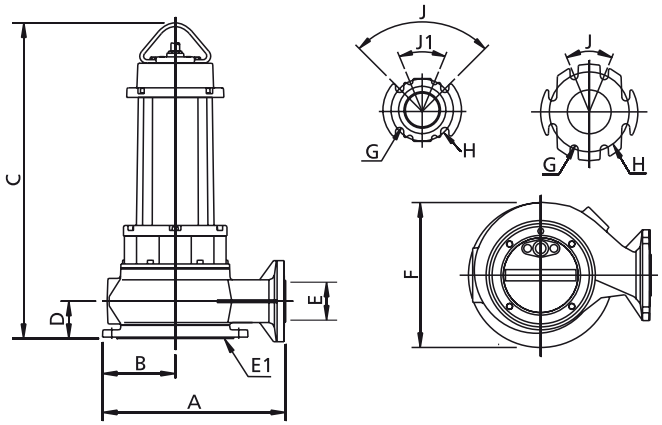
	A	B	C	D	E	F	G	H	J	J1	kg
GRN 250/2/G40H A1DM/50	265	105	495	45	G 1½"	215	14	90	90°	180°	44
GRN 250/2/G40H A1DT/50	265	105	495	45	G 1½"	215	14	90	90°	180°	44
GRN 300/2/G50H A1DT/50	305	110	500	45	G 2"	225	14	90	90°	180°	44
GRN 400/2/G50H A1FT/50	350	130	630	45	G 2"	265	14	90	90°	180°	69
GRN 550/2/G50H A1FT/50	350	130	630	45	G 2"	265	14	90	90°	180°	72

Dimensions in mm

All weights and dimensions are indicative only

GRN

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

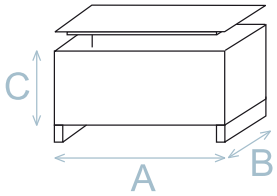
Dimensions in mm

All weights and dimensions are indicative only

(*) DN of the suction flange - PN6

Packaging dimension

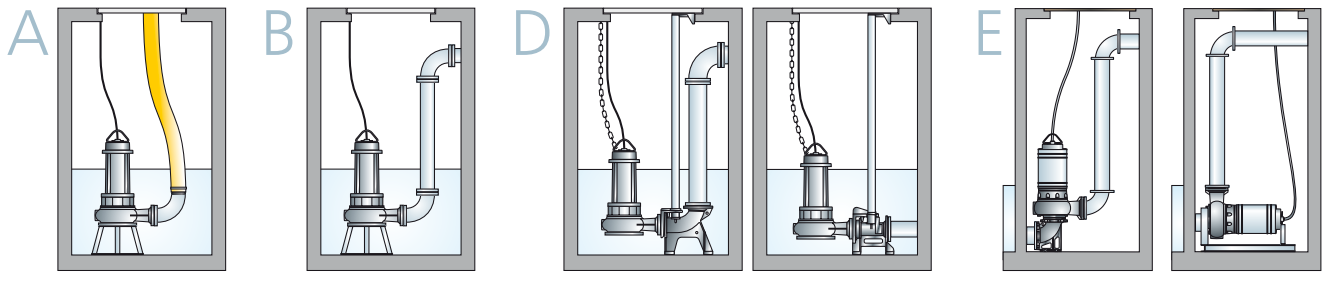
	A	B	C
GRN 250/2/G40H A1DM(T)/50	725	445	415
GRN 300/2/G50H A1DT/50	725	445	415
GRN 400/2/G50H A1FT/50	725	445	415
GRN 550/2/G50H A1FT/50	725	445	415
GRN 300/4/80 A1FT/50	725	445	415
GRN 400/4/80 A1FT/50	725	445	415
GRN 300/4/100 A1FT/50	725	445	415
GRN 400/4/100 A1FT/50	725	445	415



Dimension in mm

All weights and dimensions are indicative only

Installations available



4 poles motor models

GRP



All product images are indicative only

Impeller with grinder system

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.

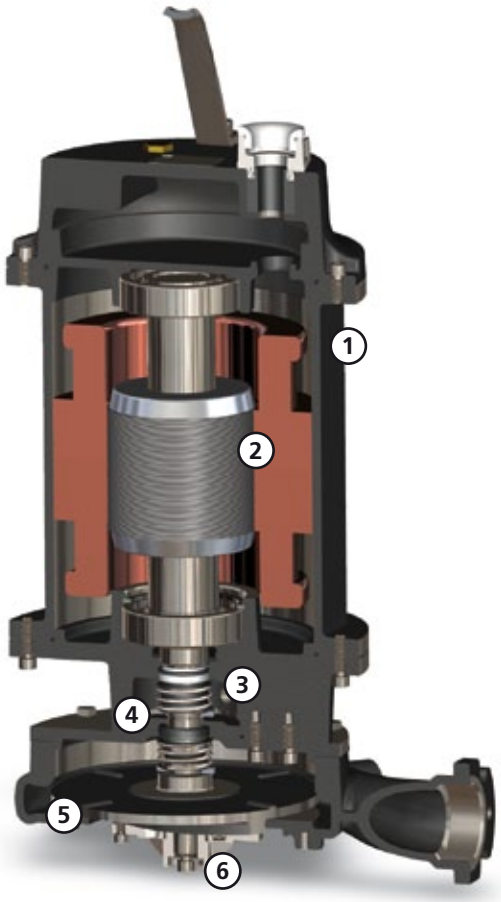
Construction materials

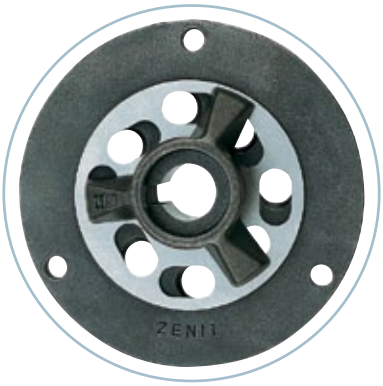
Case	Cast iron - EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Cutter material	Chromium steel - X102 CrMo17 KU
Cutting disk material	Chromium steel - X102 CrMo17 KU
Shaft	Stainless steel - AISI 420
Paint type	Ecological bicomponent 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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

GRP

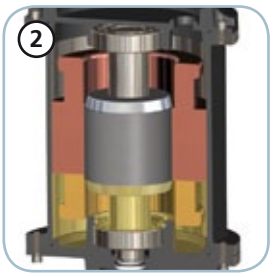






Structure

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.



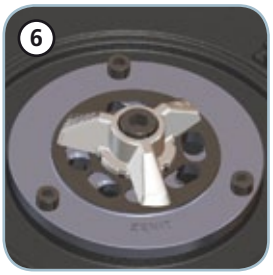
Oil sump

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

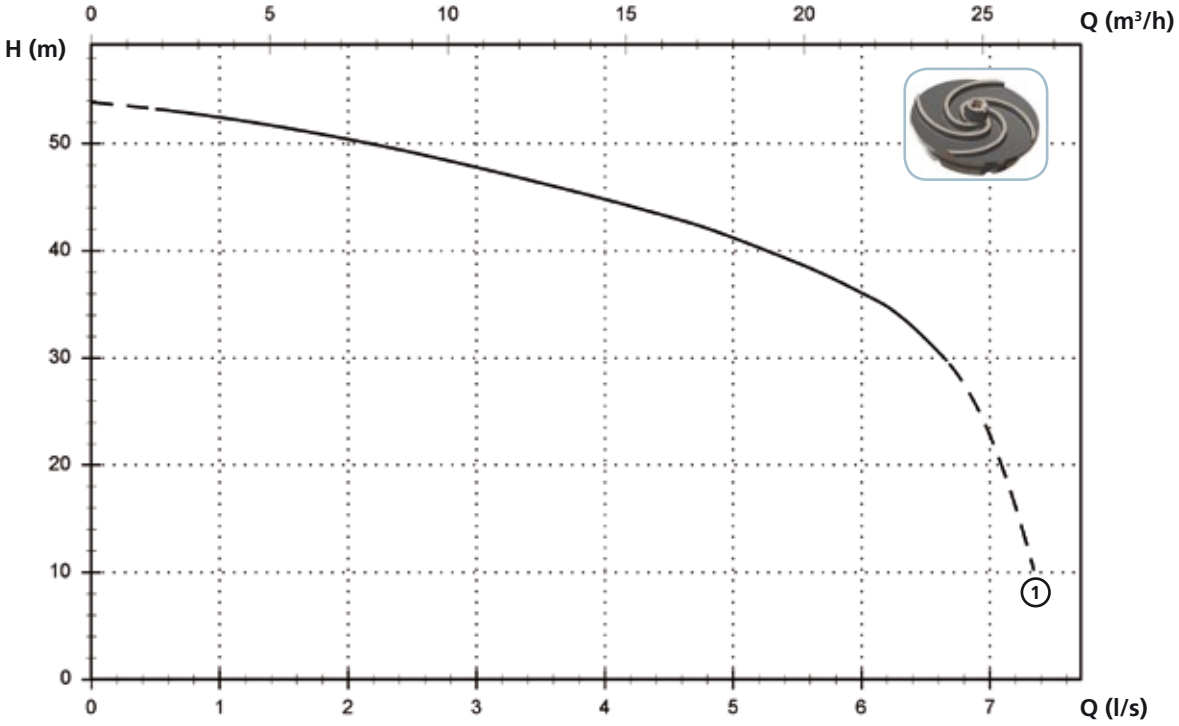
Grinder system comprising a revolving cutter and a plate with holes with sharpened edges that fine-chops filaments, preventing fouling of the impeller.

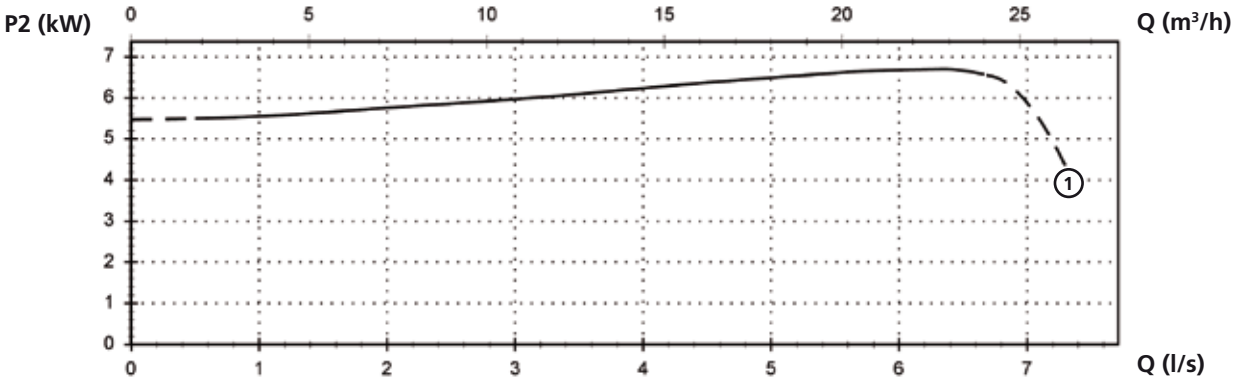
Up to 69.000 cuts per minute

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	-

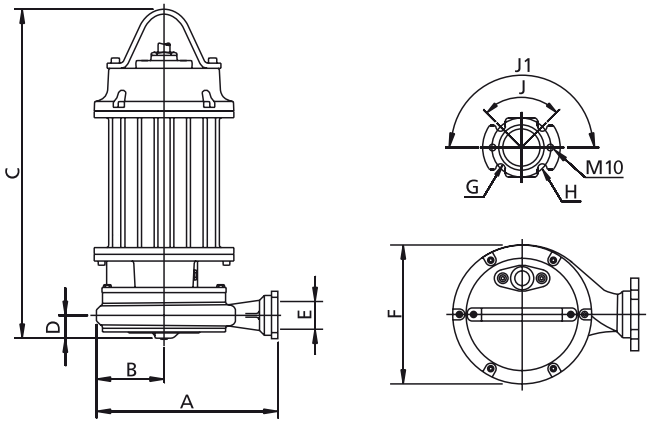
GRP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

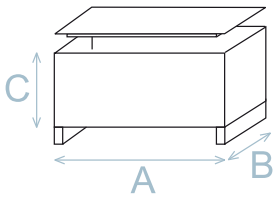
All weights and dimensions are indicative only

Packaging dimension

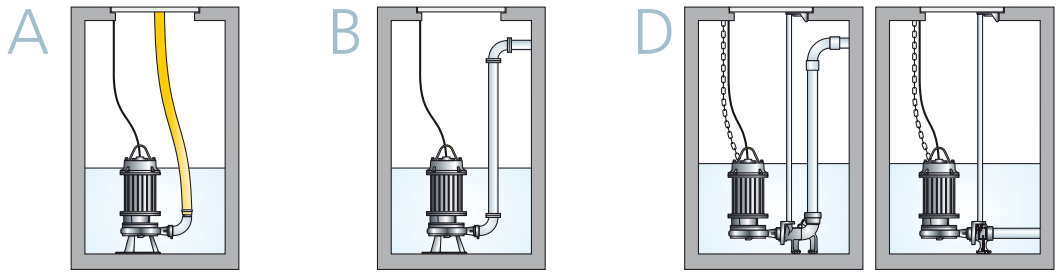
	A	B	C
GRP 750/2/G50H A0HT/50	725	445	415

Dimension in mm

All weights and dimensions are indicative only



Installations available



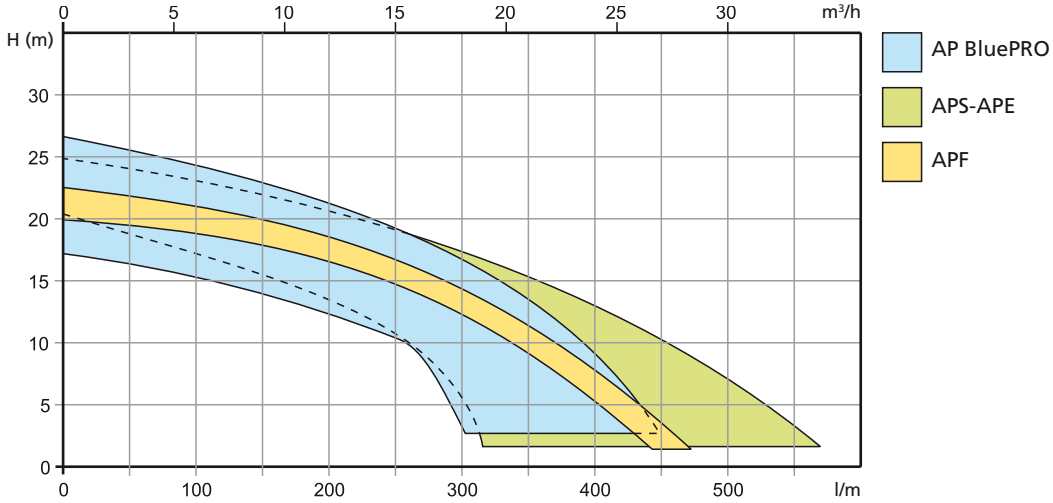
1.6 AP (ALTA PREVALENZA)
Pumps with high head impeller

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



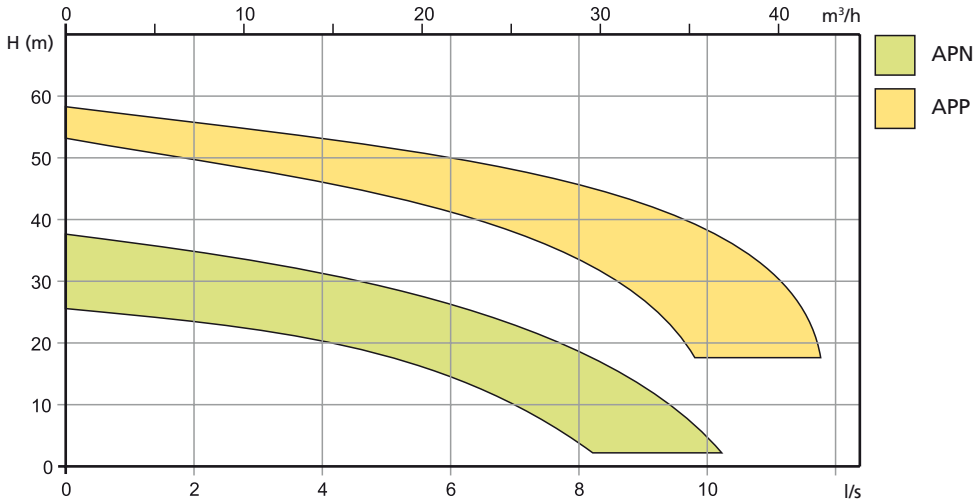
The AP impeller, fitted with motors rated up to 1.5 kW, is used for clear wastewaters. Intended for domestic or industrial use, with solid particles up to 7 mm.



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



All product images are indicative only

High head impeller

DESIGN BY pininfarina

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

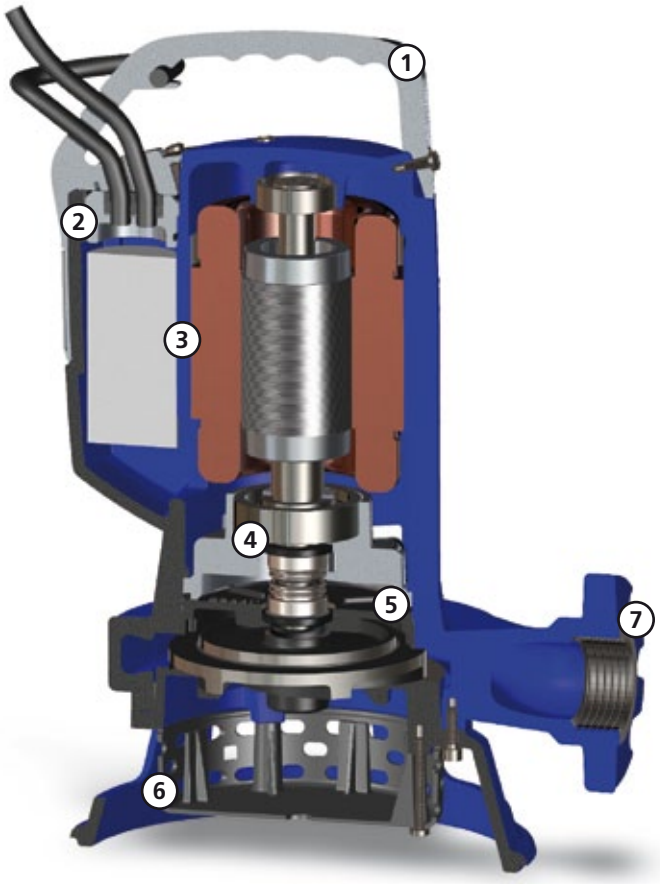
Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
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





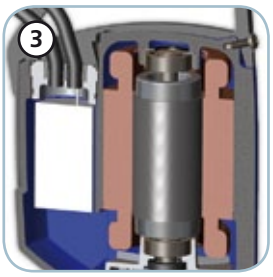
Lifting handle

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.



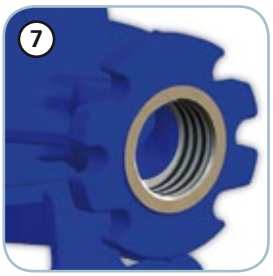
Oil sump

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

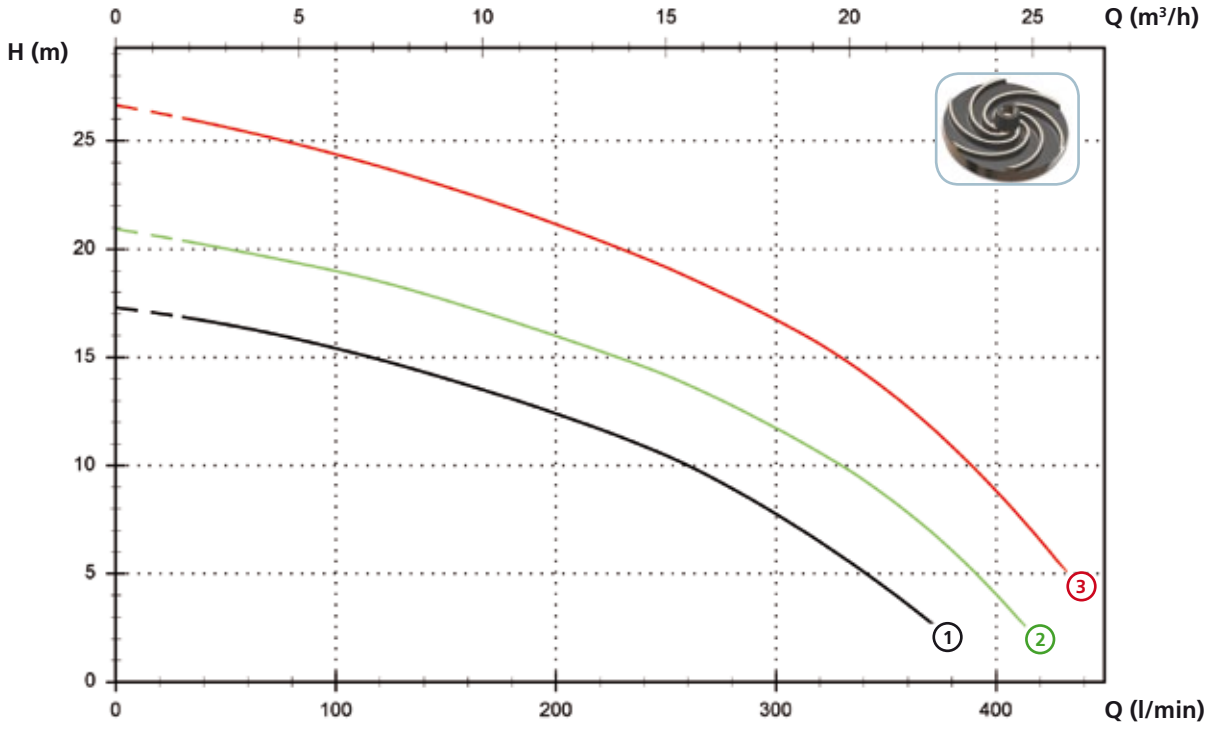
Threaded, flanged discharge for the maximum ease of installation.

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

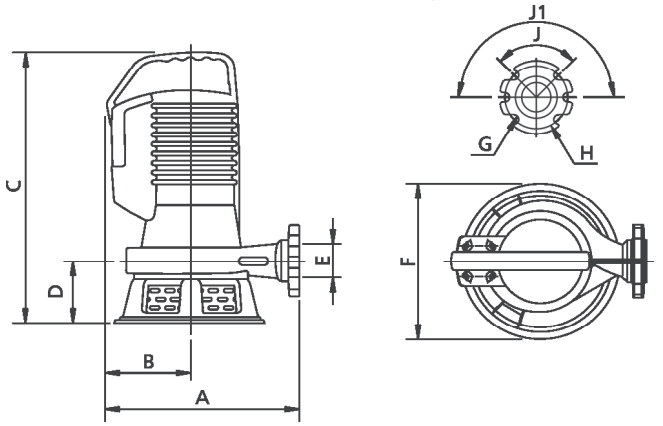
AP BLUEPRO

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	2SIC	SICM	SICAL	2SICAL
AP BluePRO 100/2/G40H A1CM/50			●				●						●				●			
AP BluePRO 100/2/G40H A1CT/50											●	●	●				●			
AP BluePRO 150/2/G40H A1CM/50			●				●						●				●			
AP BluePRO 150/2/G40H A1CT/50											●	●	●				●			
AP BluePRO 200/2/G40H A1CM/50			●				●						●				●			
AP BluePRO 200/2/G40H A1CT/50											●	●	●				●			

Overall dimensions and weights



	A	B	C	D	E	F	G	H	J	J1	kg
AP BluePRO 100/2/G40H A1CM(T)/50	270	130	365	95	G 1½"	220	14	90	90°	180°	19
AP BluePRO 150/2/G40H A1CM(T)/50	285	125	410	100	G 1½"	230	14	90	90°	180°	24
AP BluePRO 200/2/G40H A1CM(T)/50	285	125	410	100	G 1½"	230	14	90	90°	180°	26

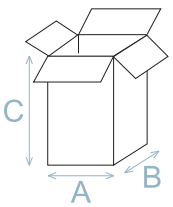
Dimensions in mm

All weights and dimensions are indicative only

Packaging dimension

	A	B	C
AP BluePRO 100/2/G40H A1CM(T)/50	300	250	400
AP BluePRO 150/2/G40H A1CM(T)/50	300	250	440
AP BluePRO 200/2/G40H A1CM(T)/50	300	250	440

Dimension in mm



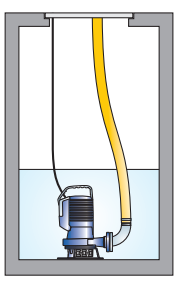
All weights and dimensions are indicative only

No. pieces per pallet

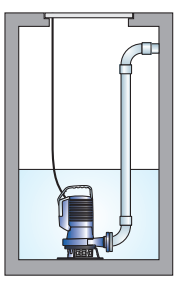
For AP BluePRO models each pallet (EUR 1000X1200 mm) is able to take 32 pieces.

Installations available

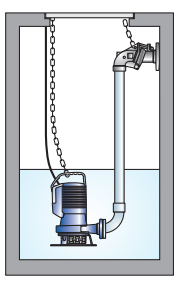
A



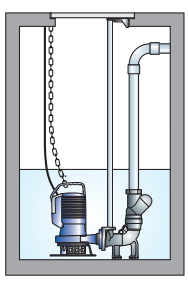
B



C



D



AP BluePRO HP



All product images are indicative only

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

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.

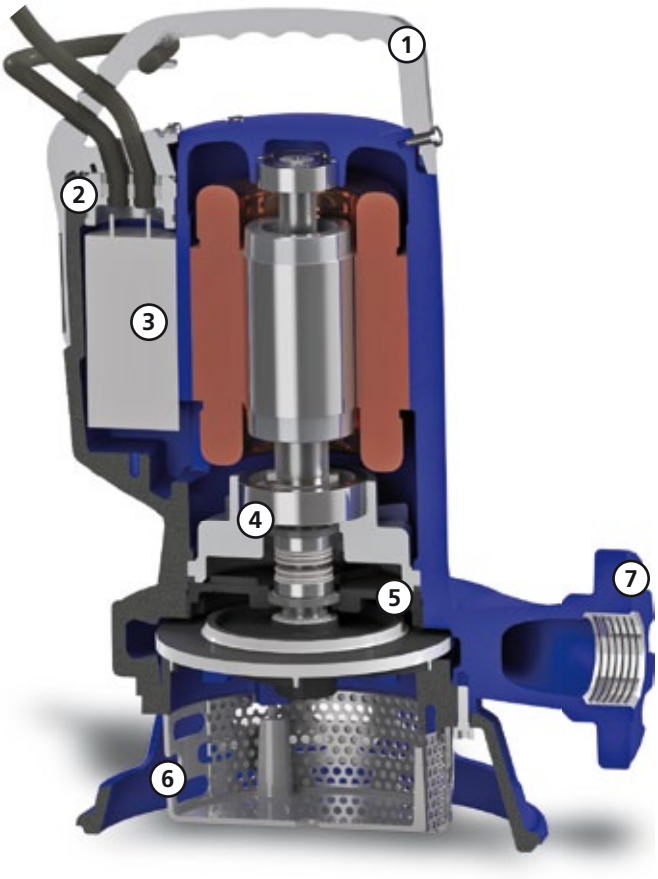
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
Max starts per hour	30

AP BluePRO HP





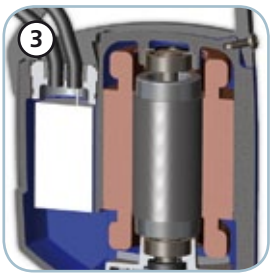
Lifting handle

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.



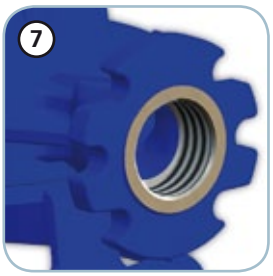
Oil sump

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

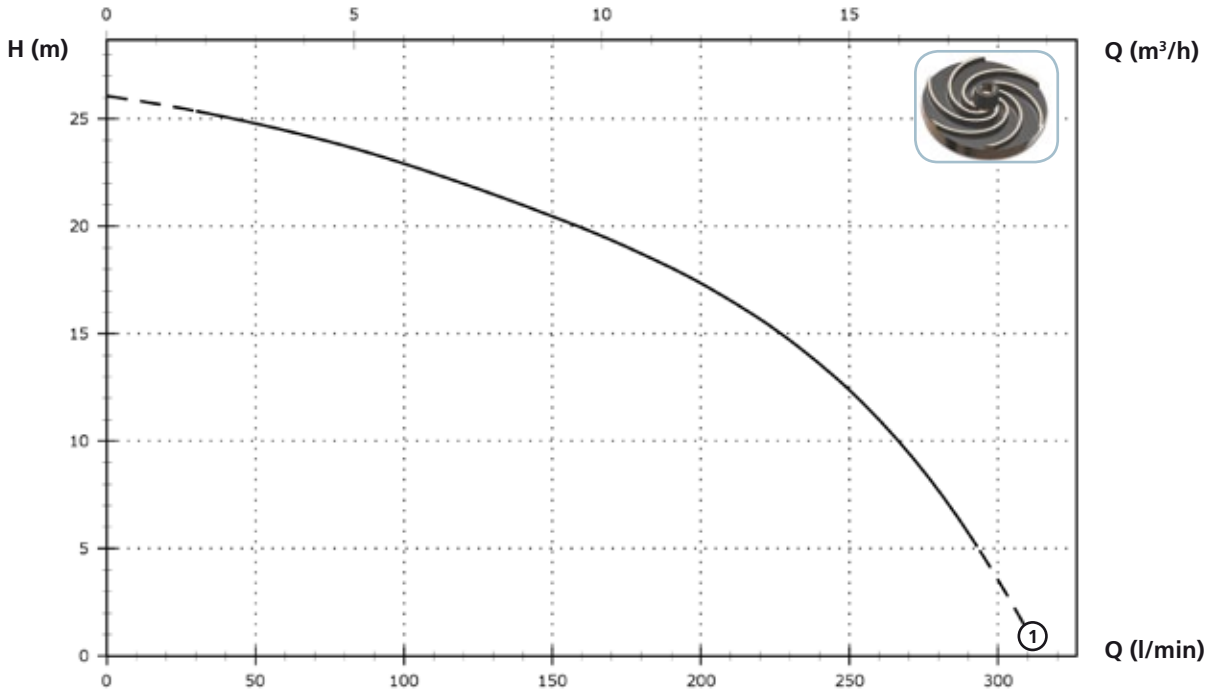
Threaded, flanged discharge for the maximum ease of installation.

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

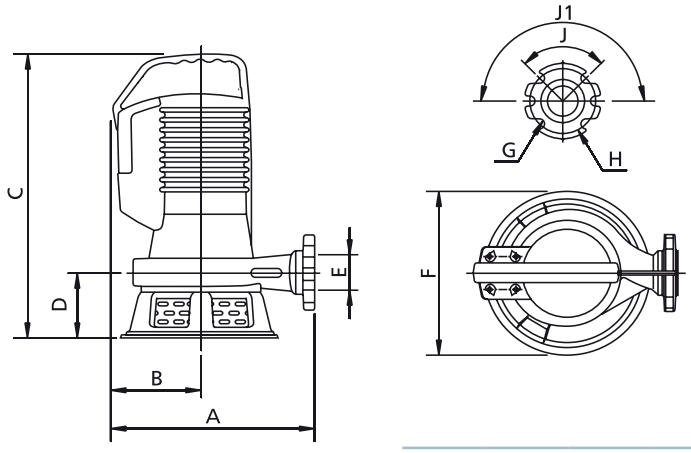
AP BluePRO HP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

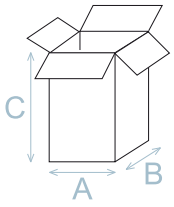
All weights and dimensions are indicative only

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

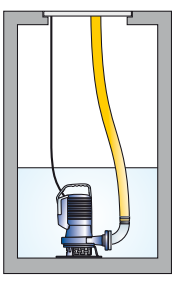


No. pieces per pallet

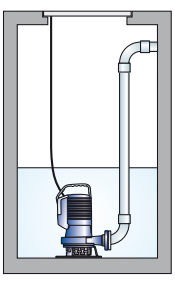
For AP BluePRO HP models each pallet (EUR 1000x1200 mm) is able to take 32 pieces.

Installations available

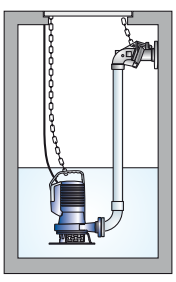
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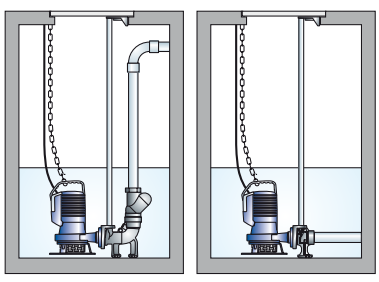
B



C



D



APS



All product images are indicative only

High head impeller

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.

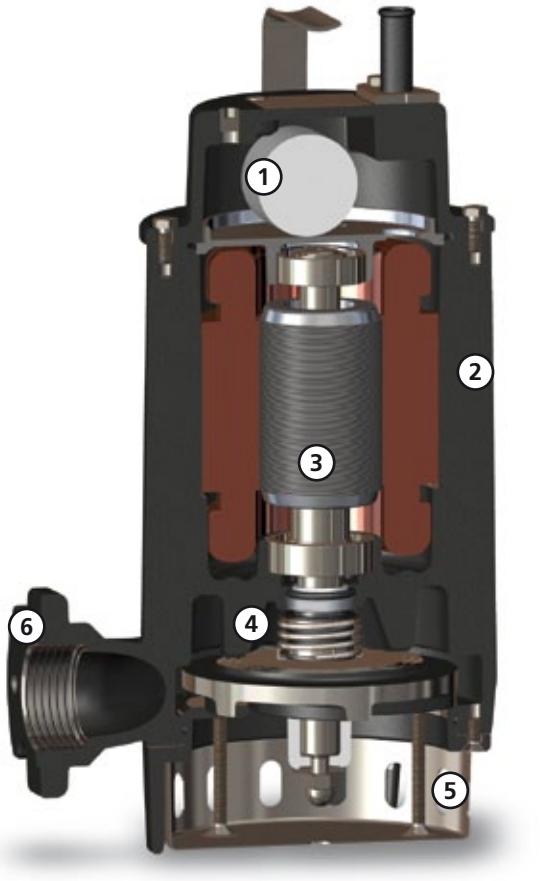
Construction materials

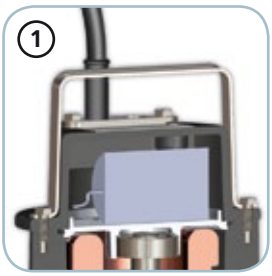
Case	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Paint type	Ecological bicomponent epoxy (medium thickness 80 µm)
Set of standard mechanical seals	One silicon carbide mechanical seal (SiC)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

Operating limits

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

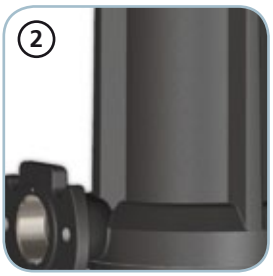
APS





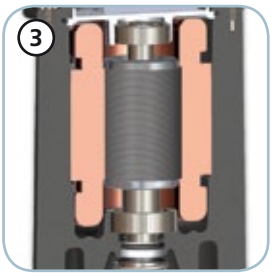
Capacitor/relay

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.



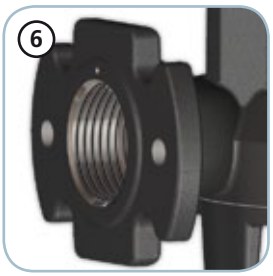
Mechanical seals

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



Intake strainer

Intake strainer in stainless steel.



Discharge

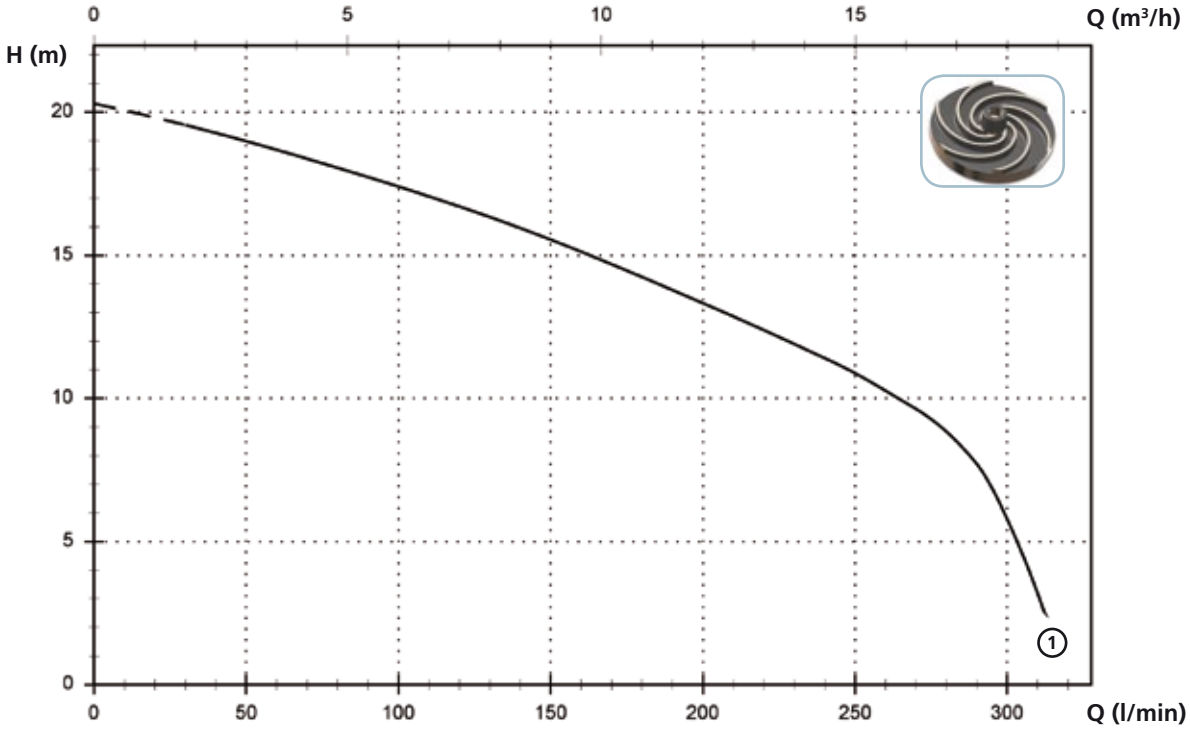
Threaded, flanged discharge for the maximum ease of installation.

APS

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

Performances

	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 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

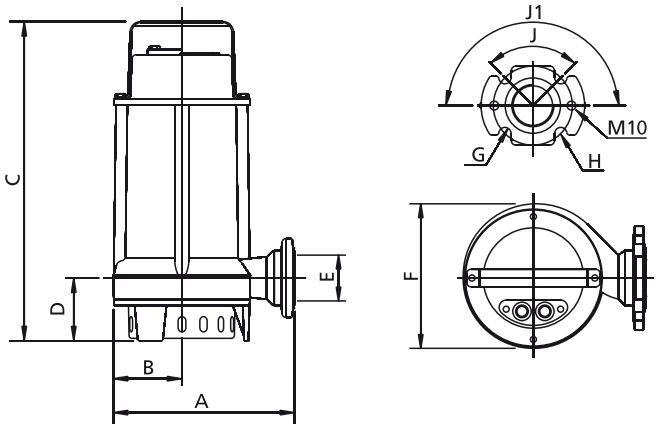
APS

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

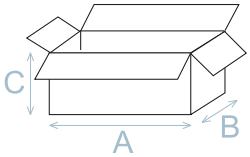
All weights and dimensions are indicative only

Packaging dimension

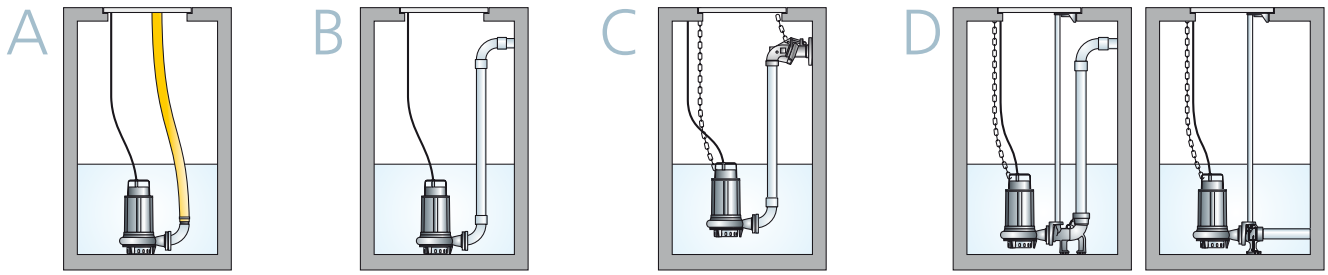
	A	B	C
APS 100/2/G40H A0CM(T)/50	385	225	245

Dimension in mm

All weights and dimensions are indicative only



Installations available



APE



All product images are indicative only

High head impeller

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.

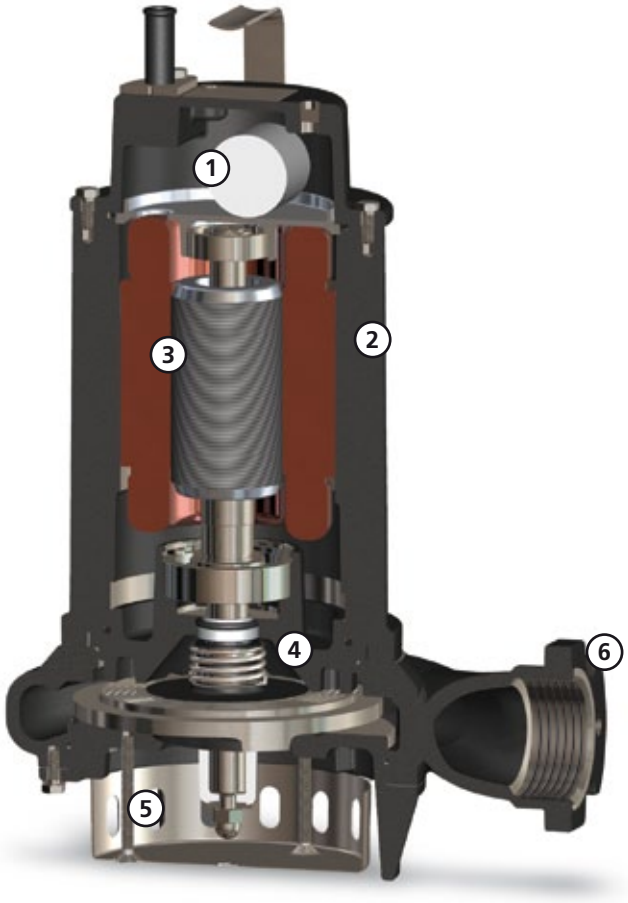
Construction materials

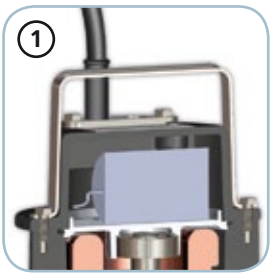
Case	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Paint type	Ecological bicomponent epoxy (medium thickness 80 µm)
Set of standard mechanical seals	One silicon carbide mechanical seal (SiC)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

Operating limits

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

APE





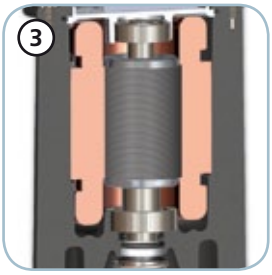
Capacitor/relay

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.



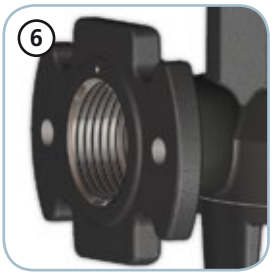
Mechanical seals

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



Intake strainer

Intake strainer in stainless steel.



Discharge

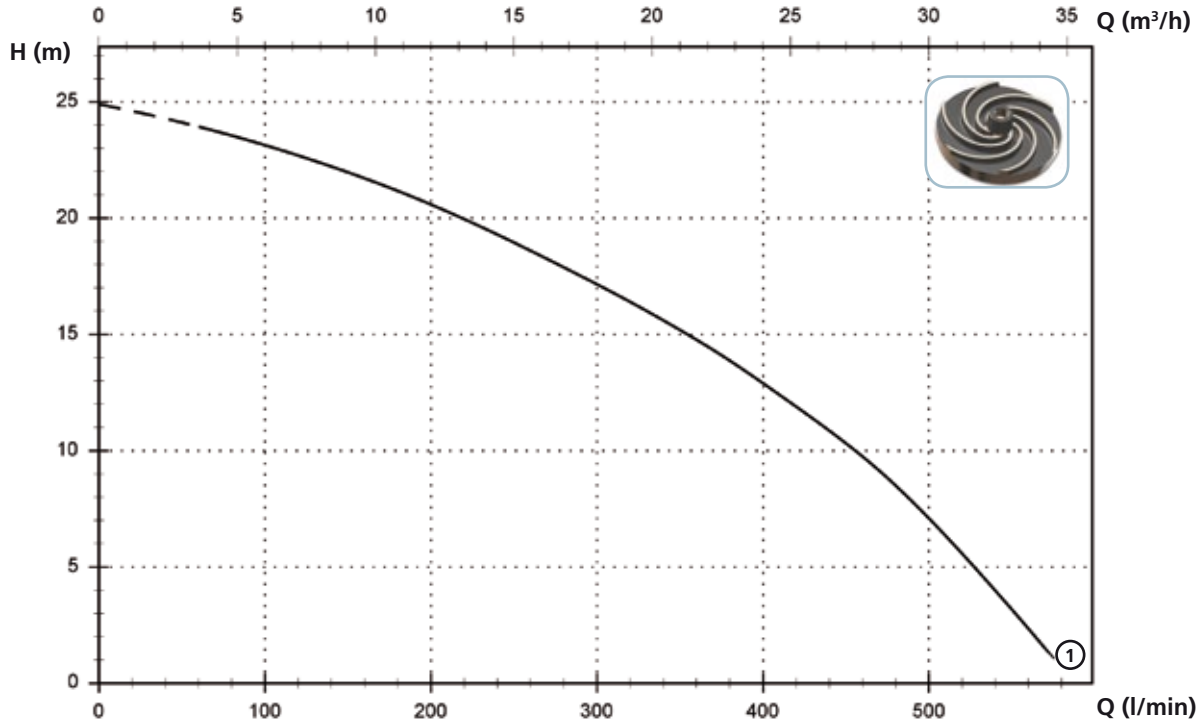
Threaded, flanged discharge for the maximum ease of installation.

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^3/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

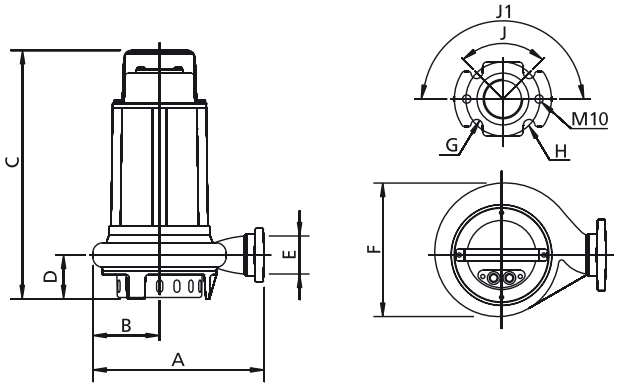
APE

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

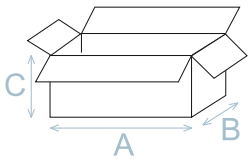
All weights and dimensions are indicative only

Packaging dimension

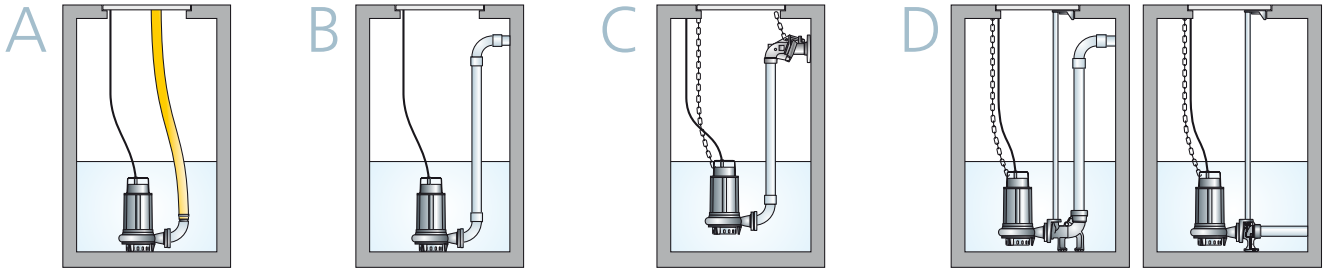
	A	B	C
APE 200/2/G50H A0CM(T)/50	475	285	235

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.

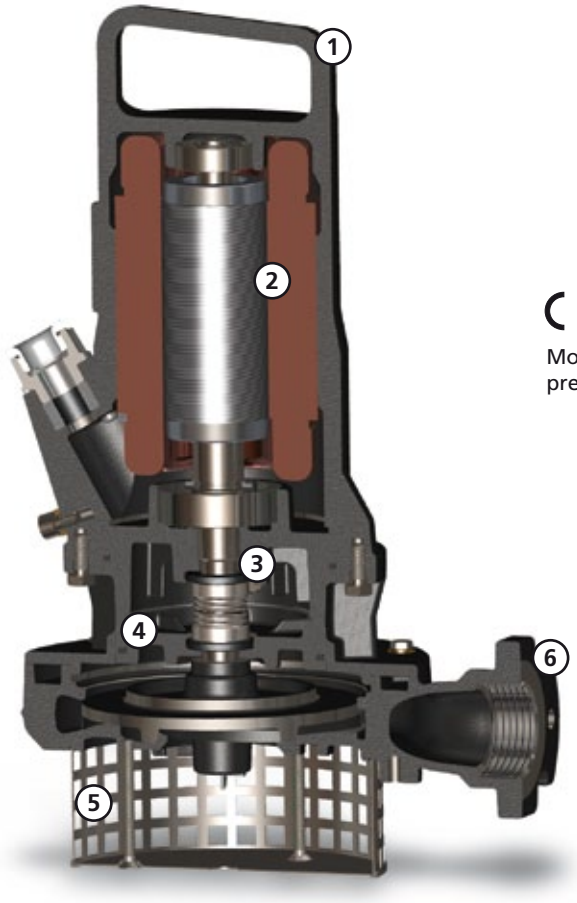
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

APF



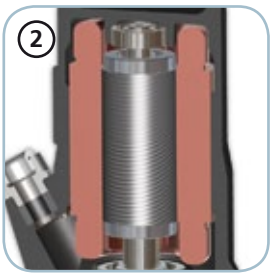
CE 0496 Ex II 2GD Ex db k c IIB T4 Ex tb IIIC T135°C IP68

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.



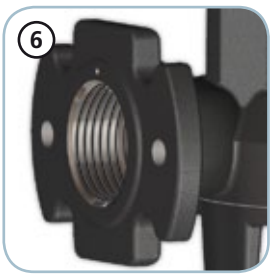
Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Intake strainer

Intake strainer in stainless steel.



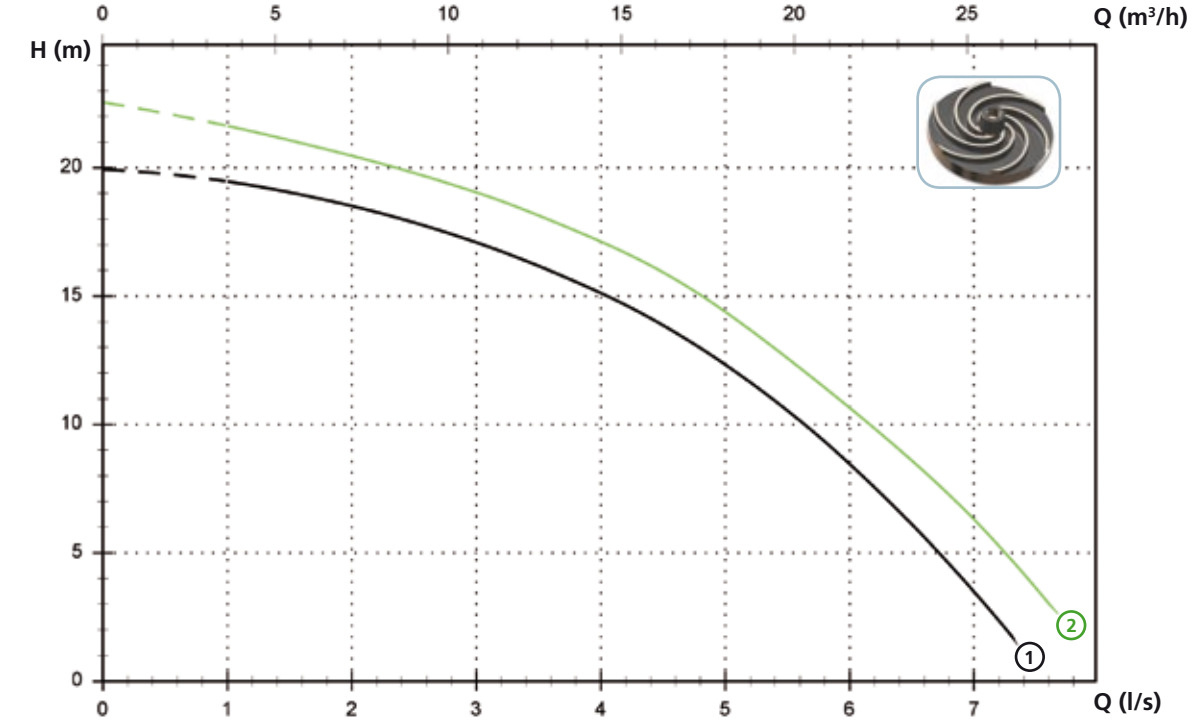
Discharge

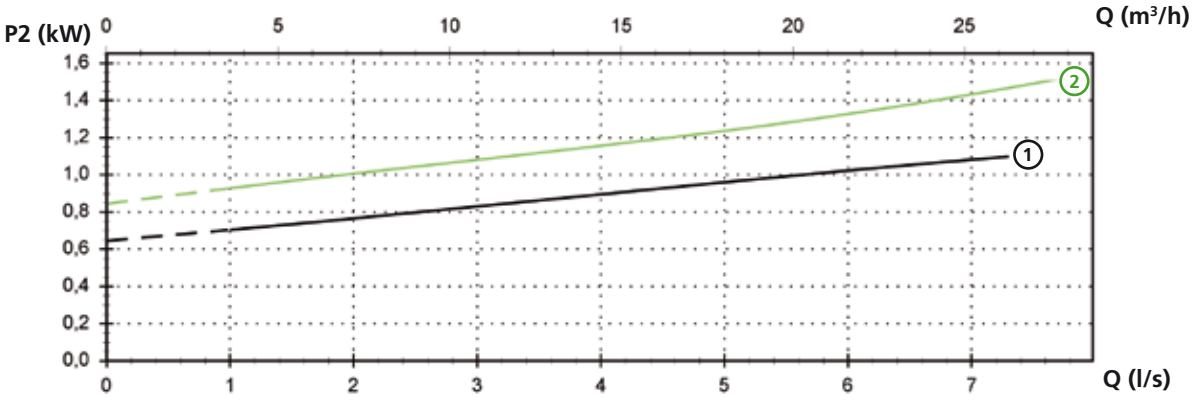
Threaded, flanged discharge for the maximum ease of installation.

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

APF

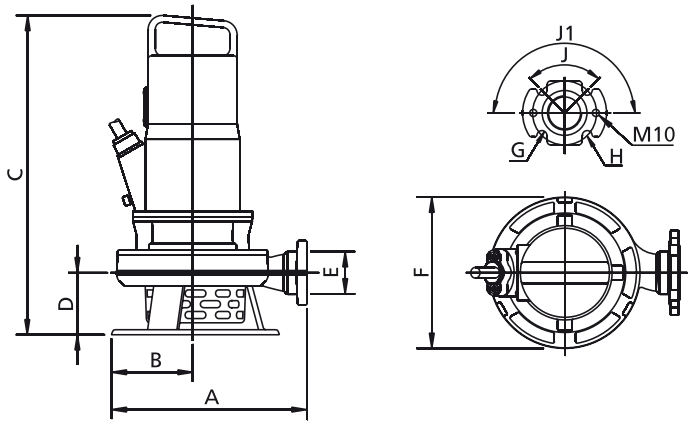
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

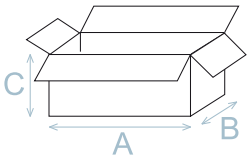


	A	B	C	D	E	F	G	H	J	J1	kg
APF 150/2/G40H A1CM(T)/50	265	105	440	80	G 1½"	215	14	90	90°	180°	32
APF 200/2/G40H A1CM(T)/50	265	105	440	80	G 1½"	215	14	90	90°	180°	34

Dimensions in mm *All weights and dimensions are indicative only*

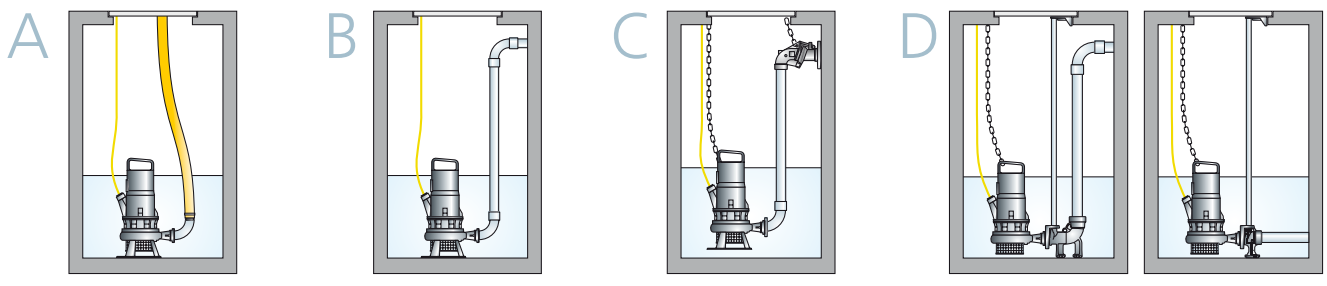
Packaging dimension

	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



All product images are indicative only

High head impeller

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.

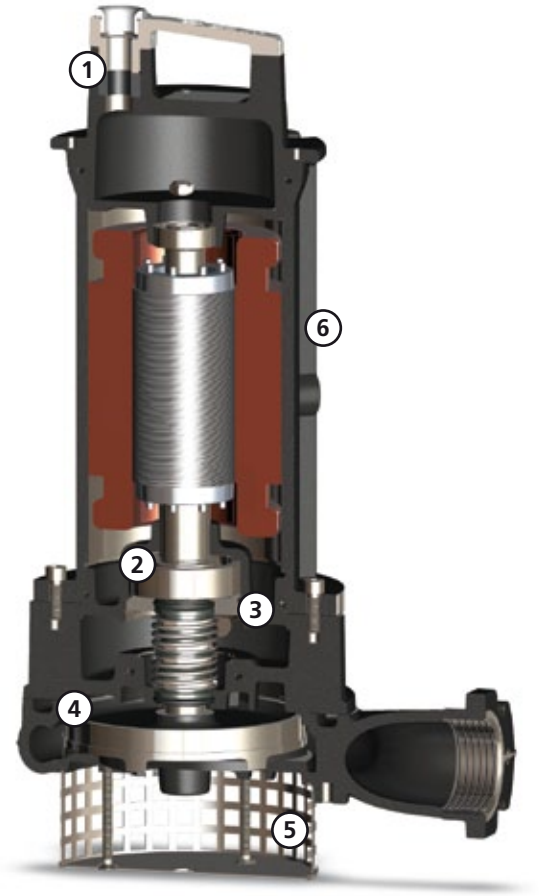
Construction materials

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 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

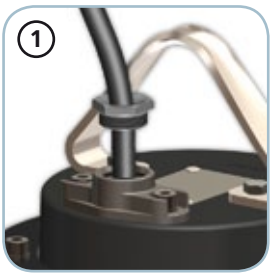
APN





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.



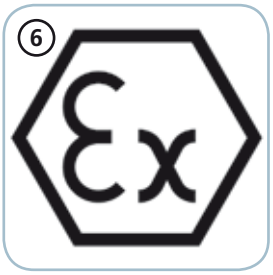
Anti-clogging system

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

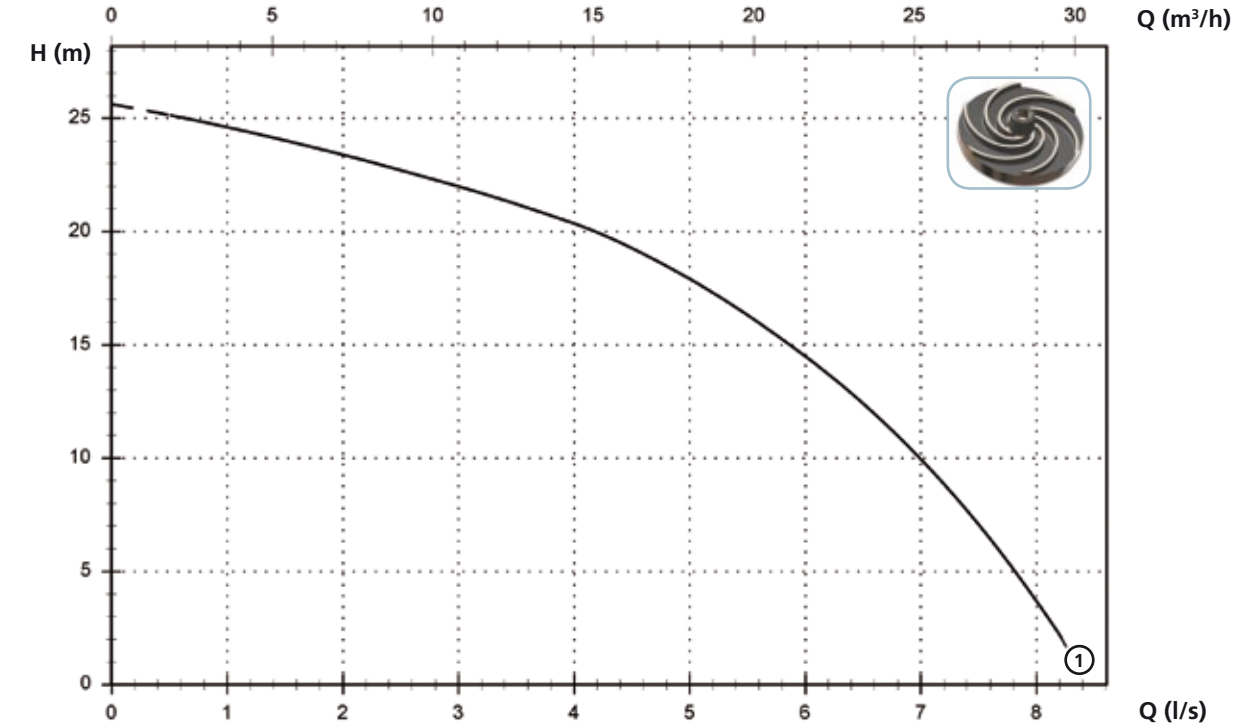
Models available on request with ATEX certification, suitable for installation in the presence of potentially explosive gases, powders and liquids.

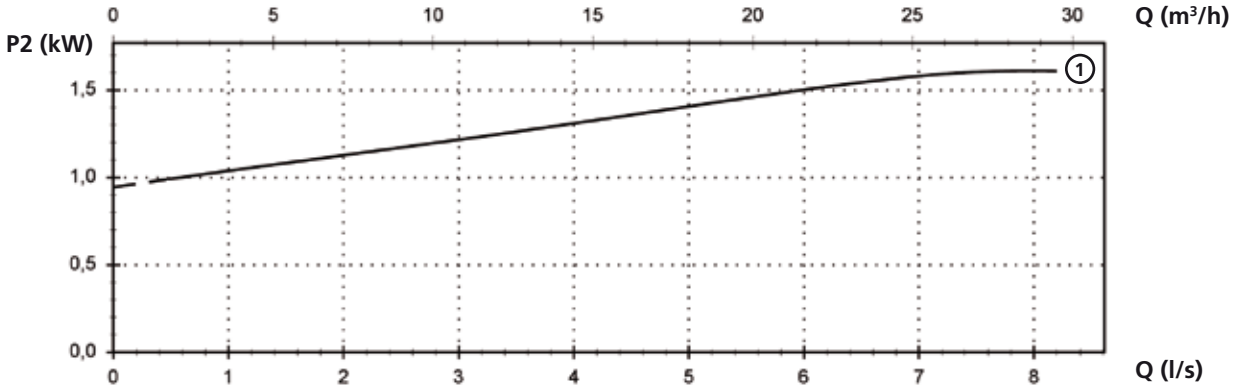
CE 0496 Ex II 2GD Ex db k c IIB T5 Ex tb IIIC T100°C IP68

APN

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

Performances





Technical data

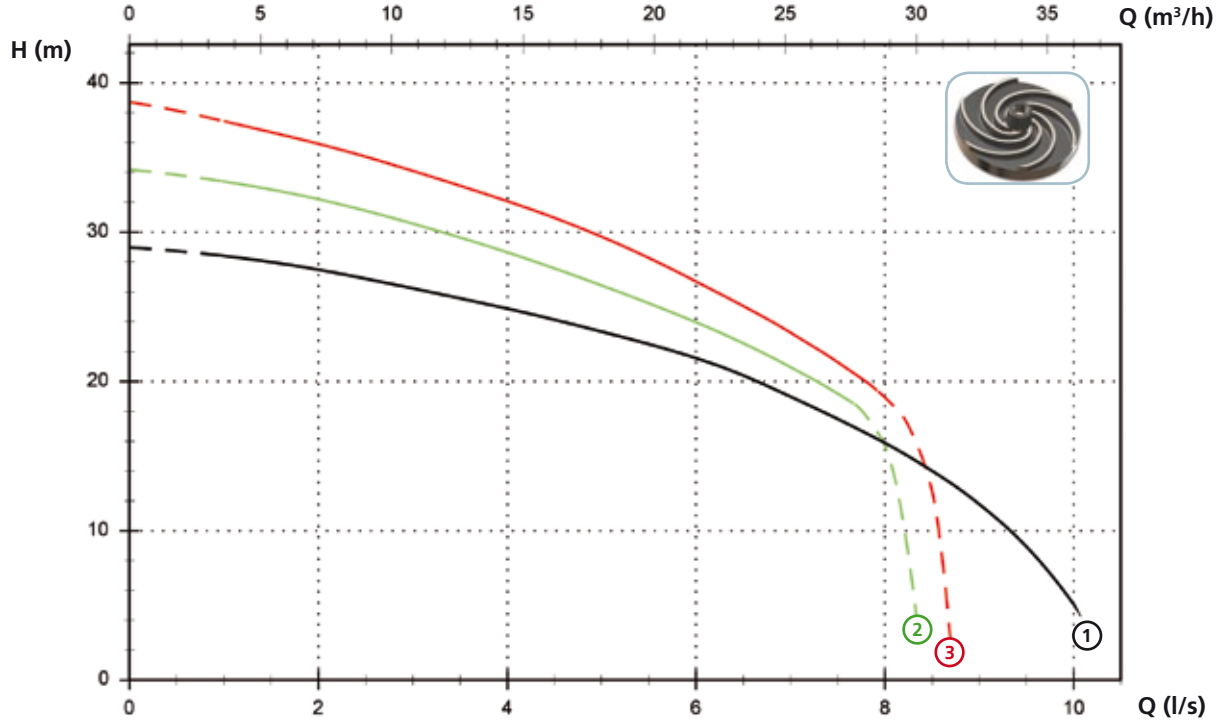
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) APN 250/2/G40H A1DM/50	230	1	2.7	1.8	12.5	2900	Dir	G 1½"-DN32 PN6	10 mm

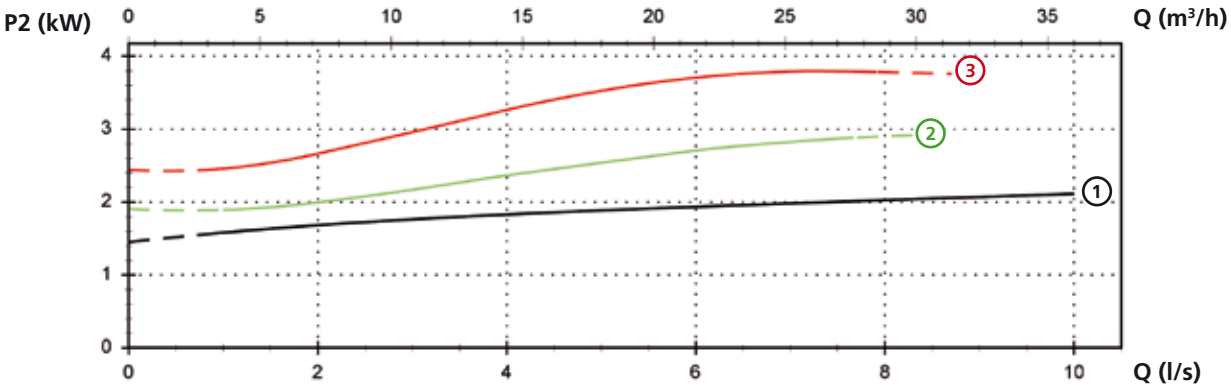
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) APN 250/2/G40H A1DT/50	400	3	2.5	1.8	4.3	2900	Dir	G 1½"-DN32 PN6	10 mm

APN

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

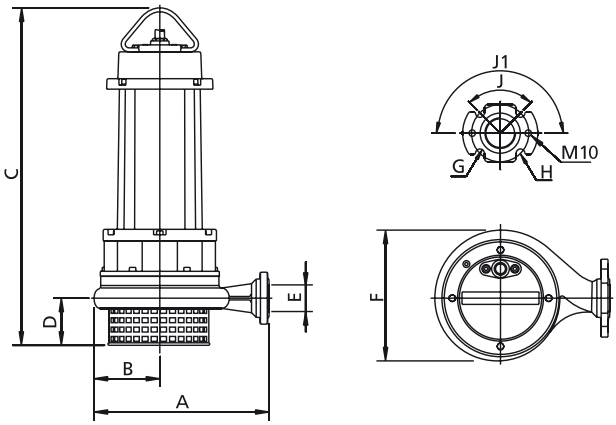
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



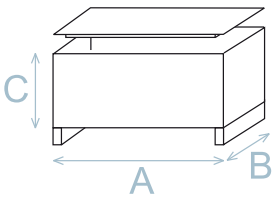
	A	B	C	D	E	F	G	H	J	J1	kg
APN 250/2/G40H A1DM(T)/50	265	105	530	80	G 1½"	215	14	90	90°	180°	43
APN 300/2/G50H A1DT/50	305	110	530	80	G 2"	225	14	90	90°	180°	46
APN 400/2/G50H A1FT/50	350	130	660	80	G 2"	265	14	90	90°	180°	68
APN 550/2/G50H A1FT/50	350	130	660	80	G 2"	265	14	90	90°	180°	71

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

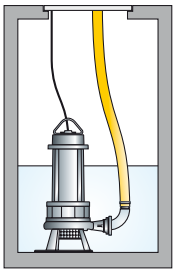


Dimension in mm

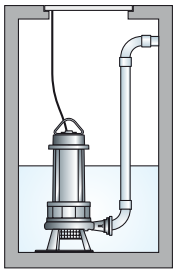
All weights and dimensions are indicative only

Installations available

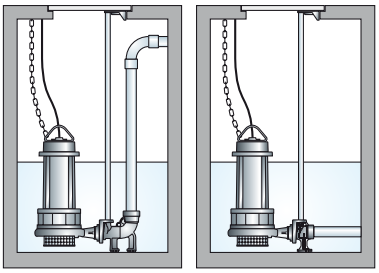
A



B



D



APP



All product images are indicative only

High head impeller

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.

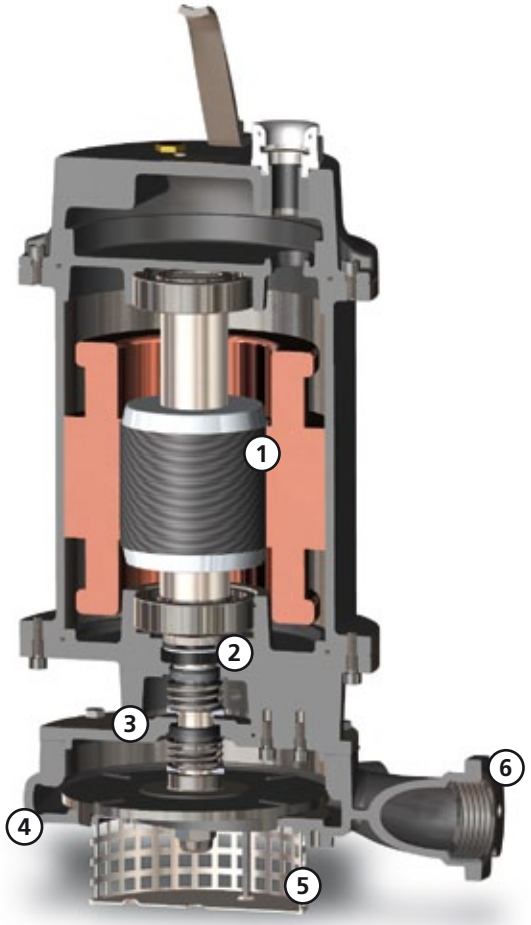
Construction materials

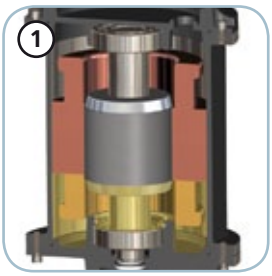
Case	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Cooling jacket	Carbon steel or stainless steel AISI 304
Paint type	Ecological bicomponent epoxy (medium thickness 150 µm)
Set of standard 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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

APP





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.



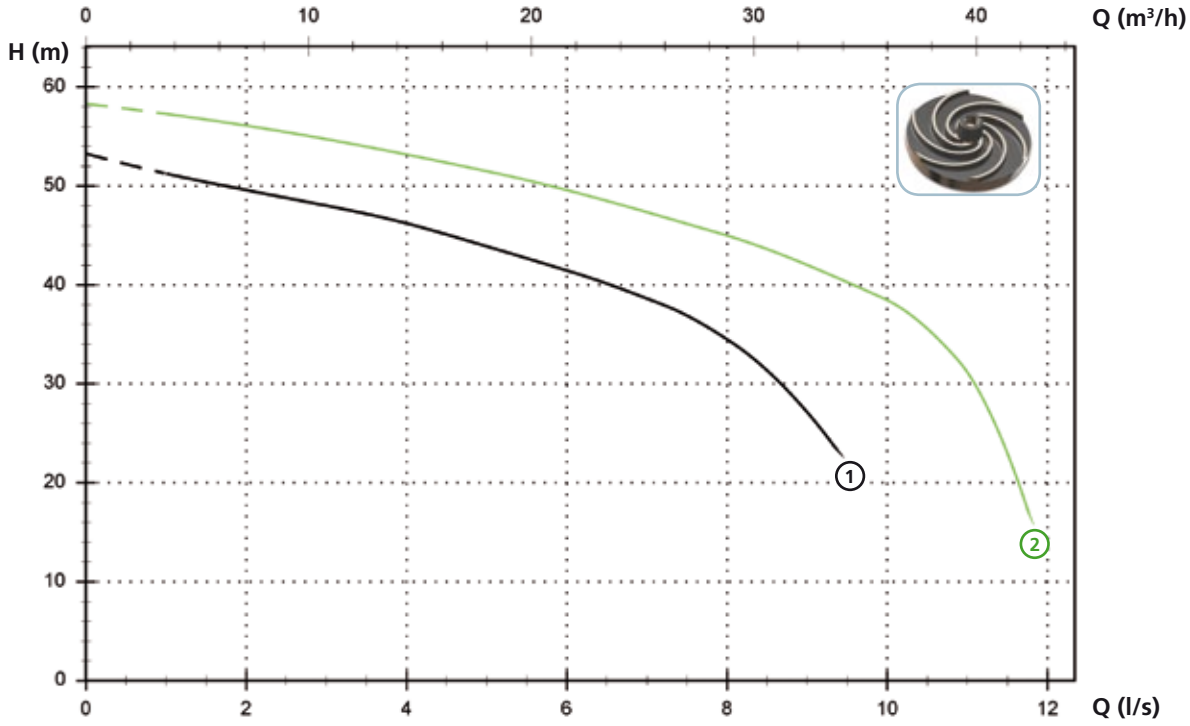
Discharge

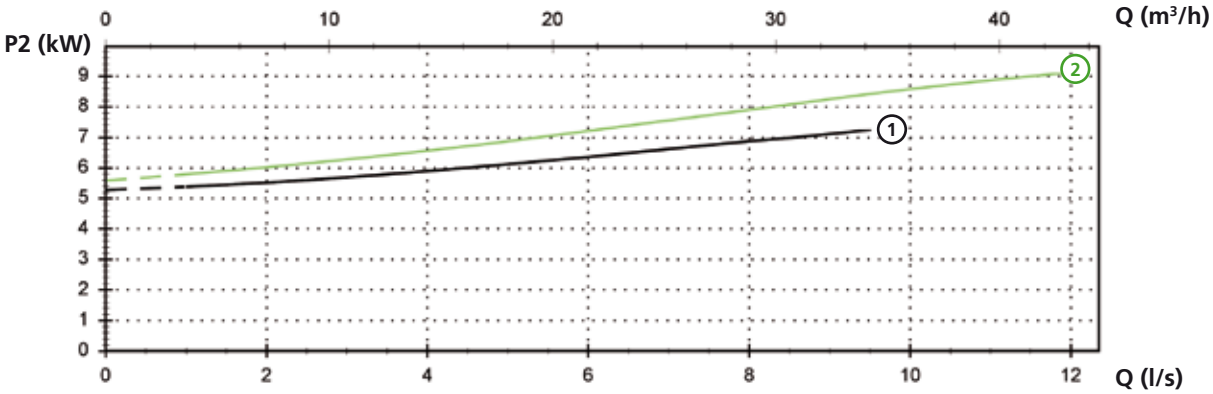
Threaded, flanged discharge for the maximum ease of installation.

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

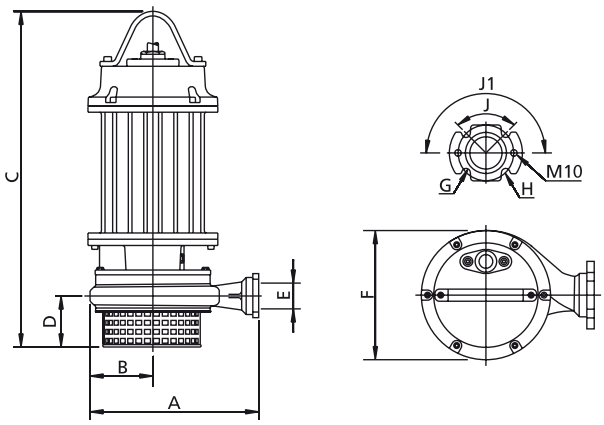
APP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

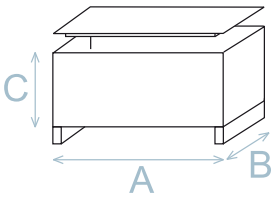
All weights and dimensions are indicative only

Packaging dimension

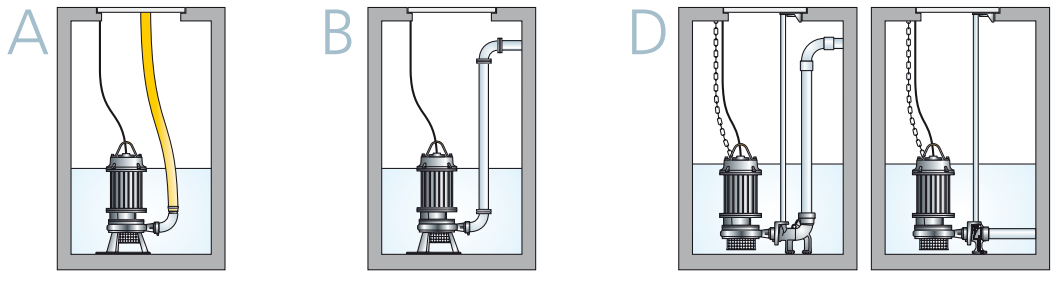
	A	B	C
APP 750/2/G50H A0HT/50	725	445	415
APP 1000/2/G50H A1HT/50	725	445	415

Dimension in mm

All weights and dimensions are indicative only



Installations available

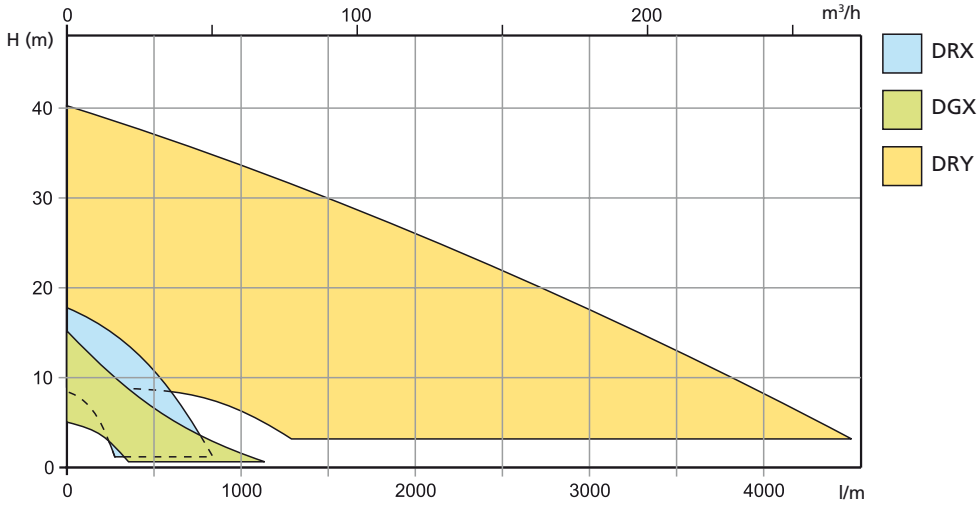


1.7 Special alloy pumps

AISI 316 stainless steel models - 0.37 ÷ 15.0 kW



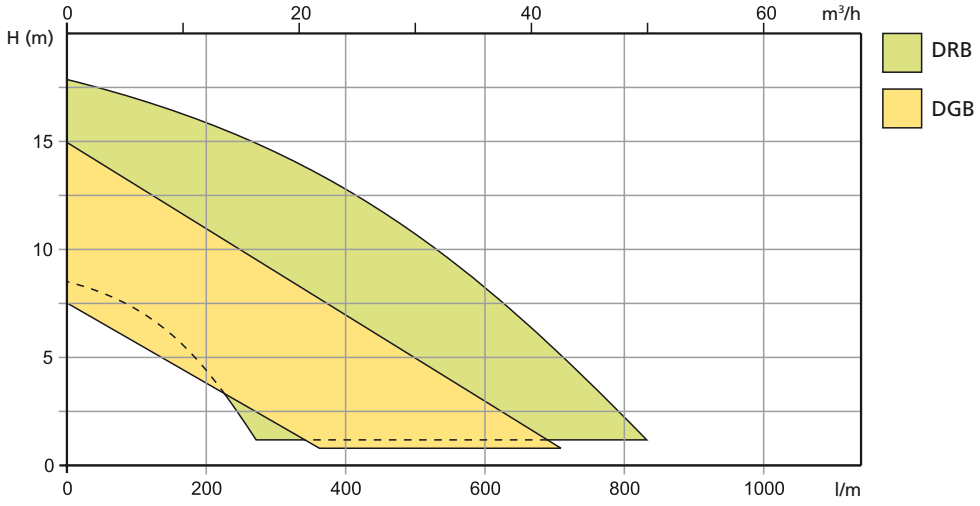
DRX, DRY and DGX pumps are constructed in CF8-M (AISI 316) stainless steel and have multi-channel open impeller suitable for wastewater containing solids (DRX and DRY) and vortex impeller for soiled wastewater (DGX).
They are recommended for applications with corrosive and aggressive liquids, and can 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



All product images are indicative only

Special alloy pumps

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.

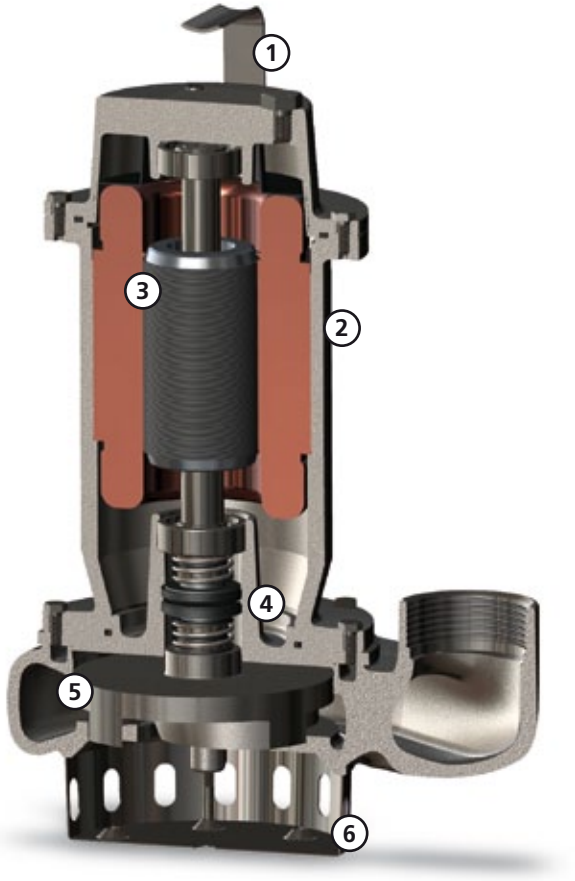
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DRX





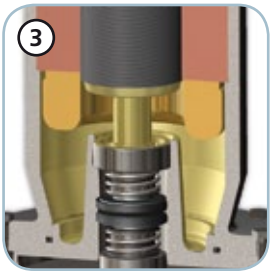
Handle and cable gland

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

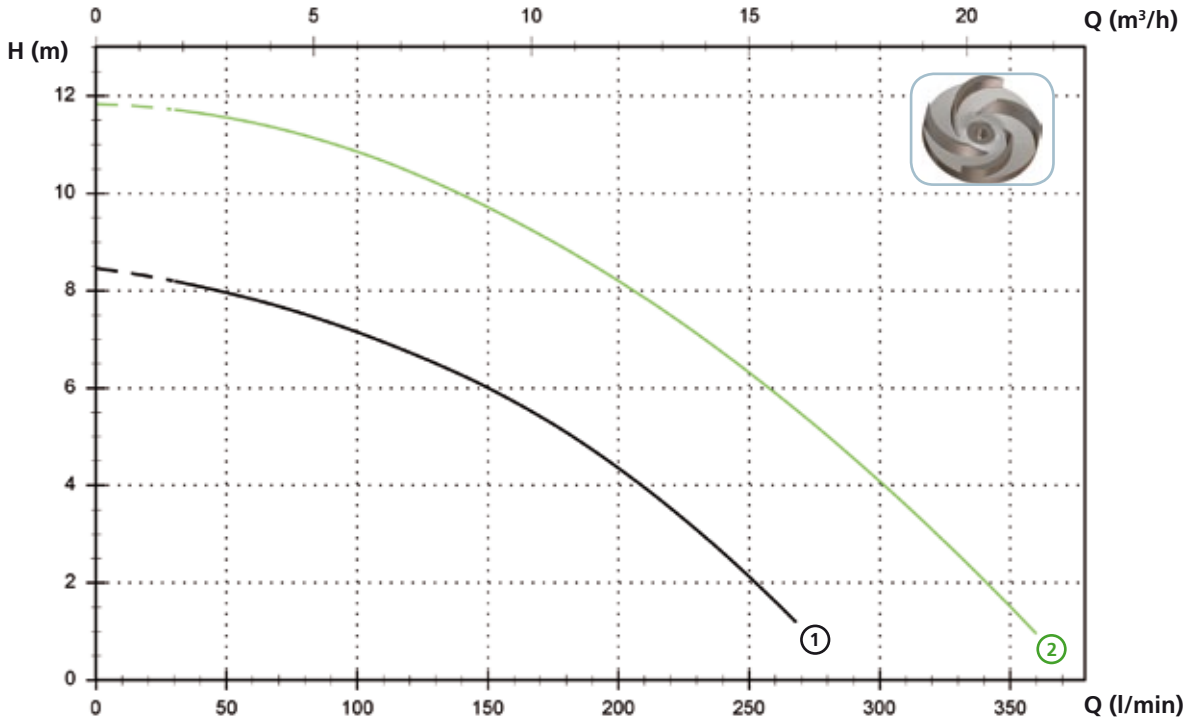
Intake strainer in stainless steel (AISI 316).

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

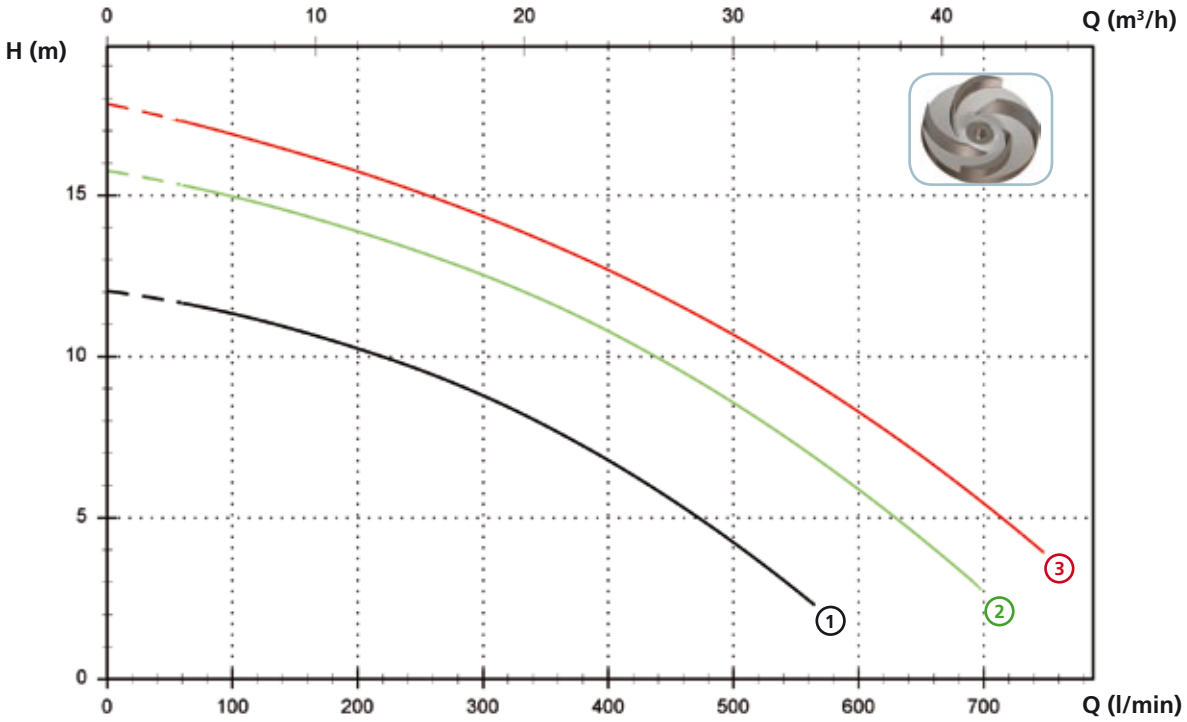
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DRX 50/2/G32V A0CM/50	230	1	-	0.37	2.9	2900	Dir	G 1¼"	15 mm
② DRX 75/2/G32V A0CM/50	230	1	-	0.55	3.9	2900	Dir	G 1¼"	15 mm

	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

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

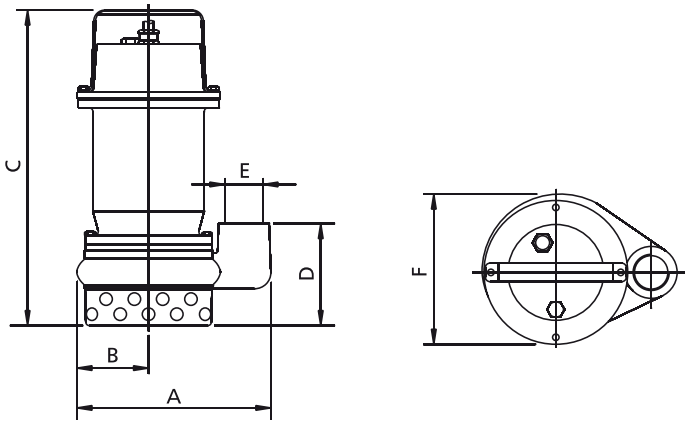
DRX

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



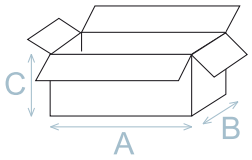
	A	B	C	D	E	F	kg
DRX 50/2/G32V A0CM(T)/50	210	75	340	110	G 1¼"	160	17
DRX 75/2/G32V A0CM(T)/50	210	75	340	110	G 1¼"	160	17
DRX 100/2/G50V A0CM(T)/50	265	100	390	125	G 2"	190	21
DRX 150/2/G50V A0CM(T)/50	265	100	390	125	G 2"	190	23
DRX 200/2/G50V A0CM(T)/50	265	100	390	125	G 2"	190	23

Dimensions in mm

All weights and dimensions are indicative only

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

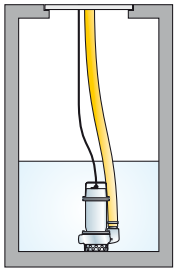


Dimension in mm

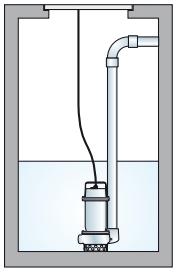
All weights and dimensions are indicative only

Installations available

A



B



DGX



All product images are indicative only

Special alloy pumps

General characteristics

Special alloy pump	
motor power	0,37 ÷ 1,5 kW
poles	2 / 4
discharge	GAS 2" vertical 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.

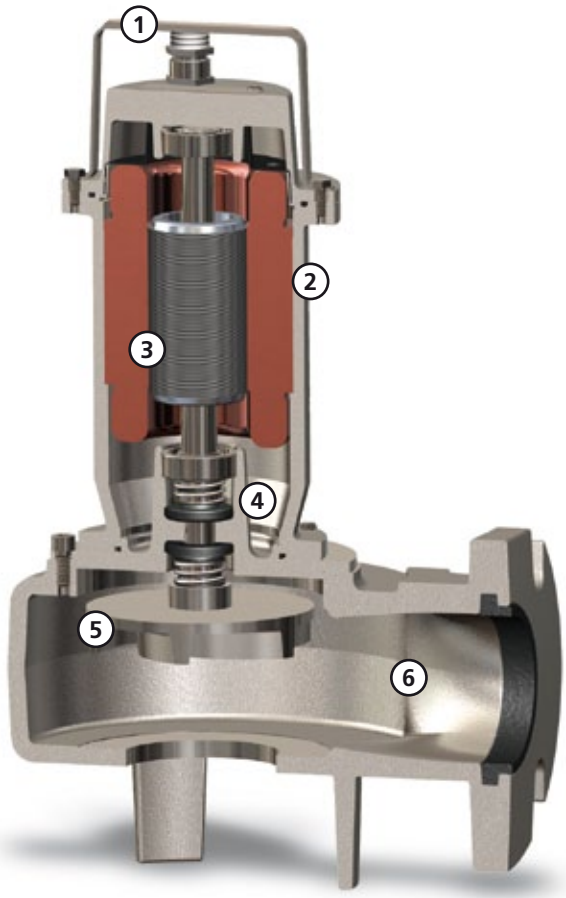
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DGX





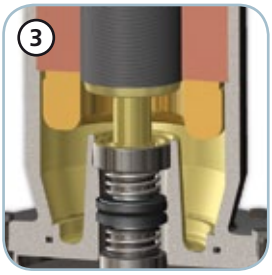
Handle and cable gland

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.



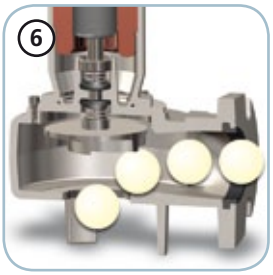
Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Impeller

Vortex impeller in CF-8M steel.



Free passage

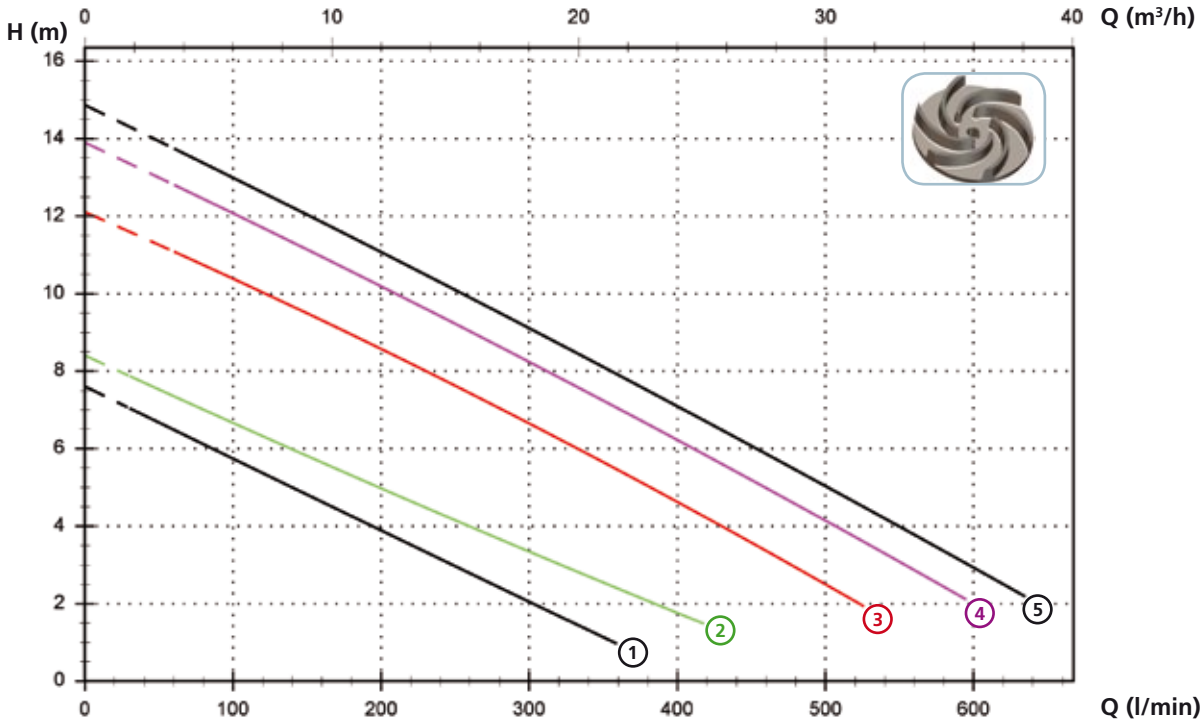
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

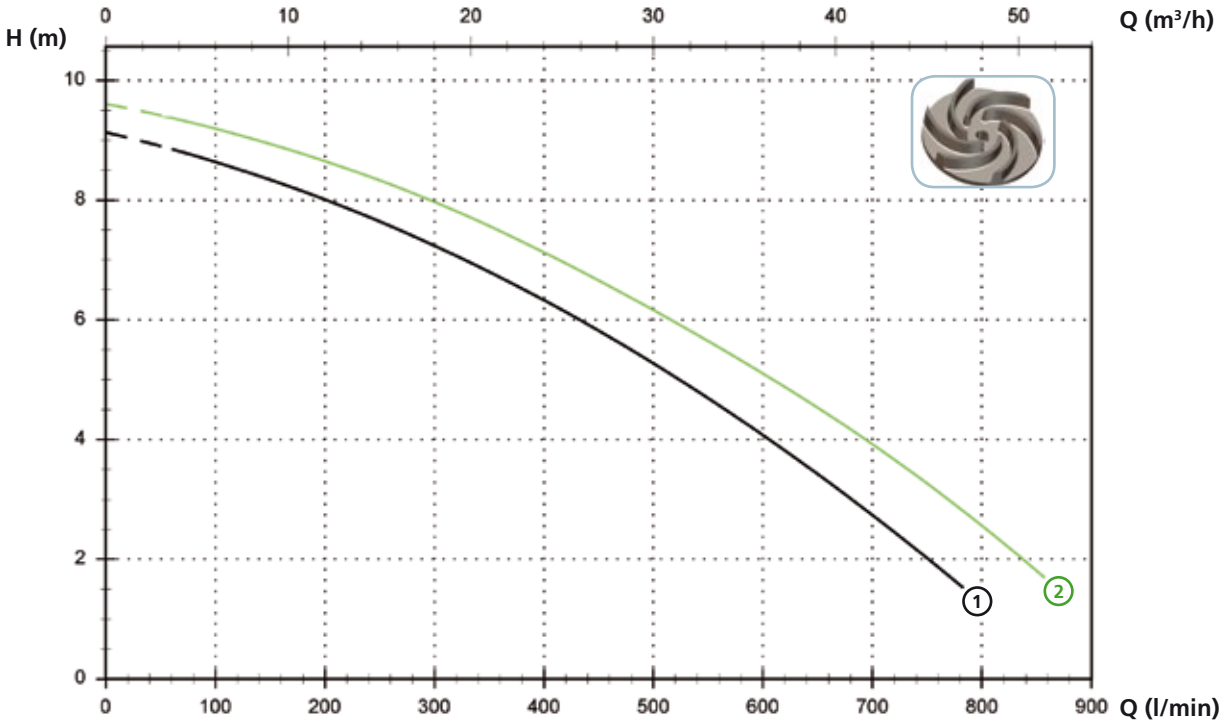
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DGX 50/2/G50V A0CM/50	230	1	-	0.37	2.9	2900	Dir	G 2"	38 mm
2	DGX 75/2/G50V A0CM/50	230	1	-	0.55	3.9	2900	Dir	G 2"	38 mm
3	DGX 100/2/G50V A0CM/50	230	1	-	0.88	6.5	2900	Dir	G 2"	38 mm
4	DGX 150/2/G50V A0CM/50	230	1	-	1.1	8.2	2900	Dir	G 2"	38 mm
5	DGX 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

	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 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

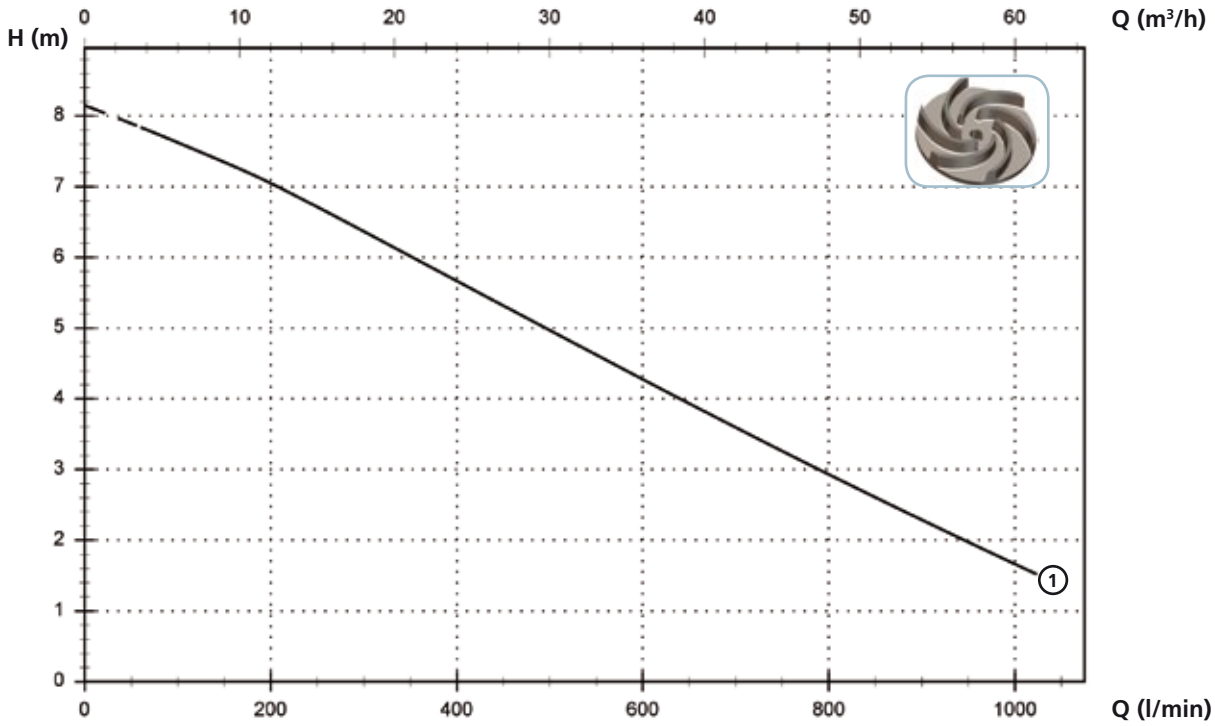
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGX 150/2/65 A0CT/50	400	3	-	1.1	2.7	2900	Dir	DN65 PN10-16	50 mm
② DGX 200/2/65 A0CT/50	400	3	-	1.5	3.5	2900	Dir	DN65 PN10-16	50 mm

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
	m³/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

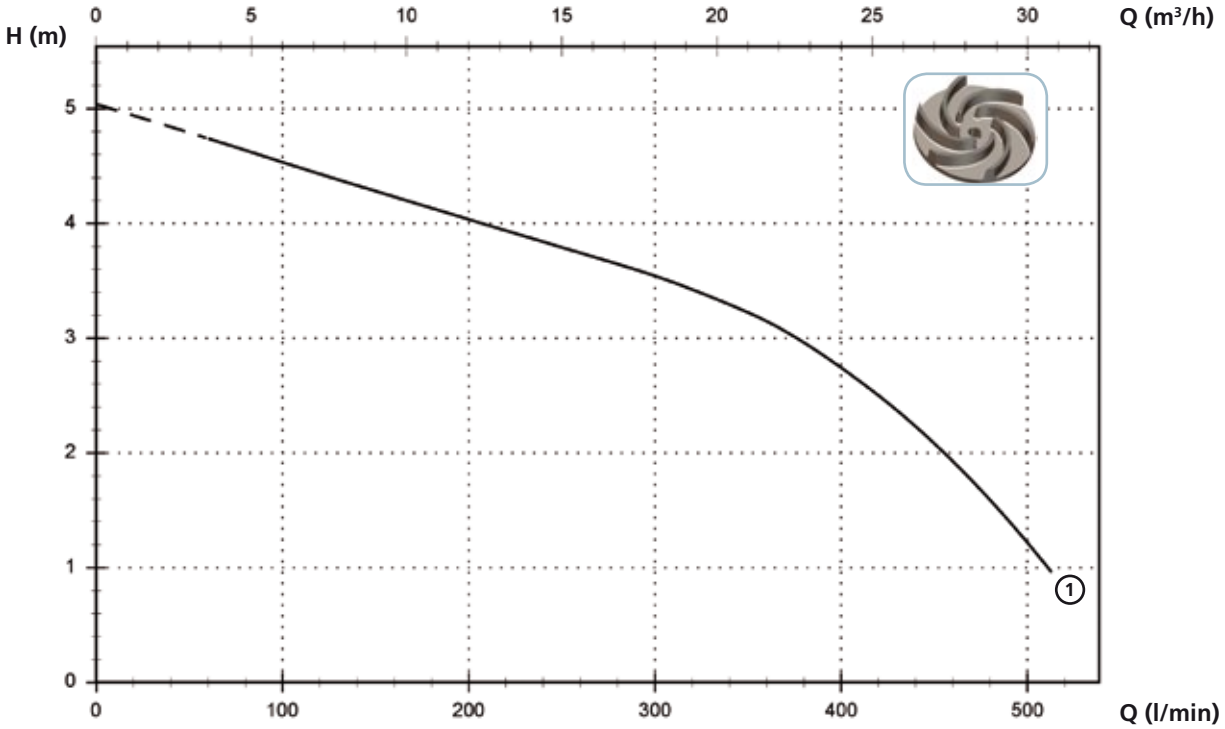
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DGX 200/2/80 A0CM/50	230	1	-	1.5	9.3	2900	Dir	DN80 PN10	60 mm

	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^3/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

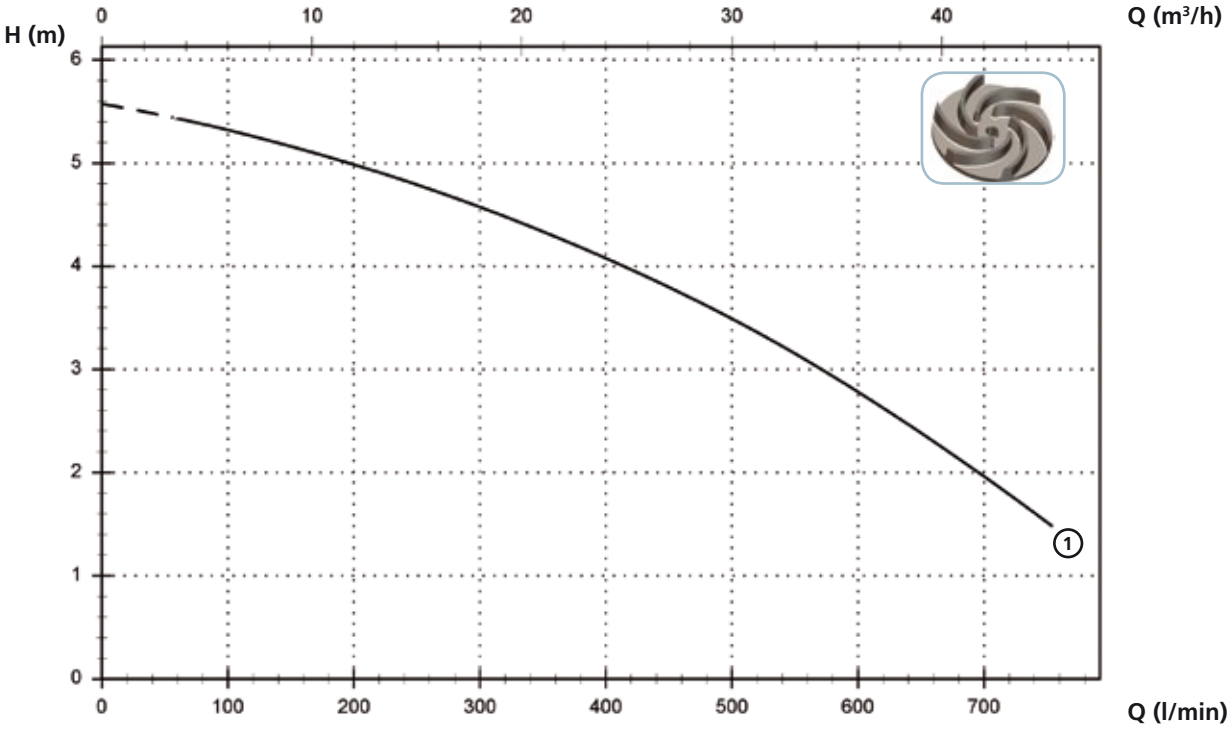
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
①	DGX 100/4/G50V A0CT/50	400	3	-	0.63	1.85	1450	Dir	G 2"	20 mm

DGX

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

Performances

	l/s	0	2	4	6	8	10	12
	l/min	0	120	240	360	480	600	720
	m^3/h	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

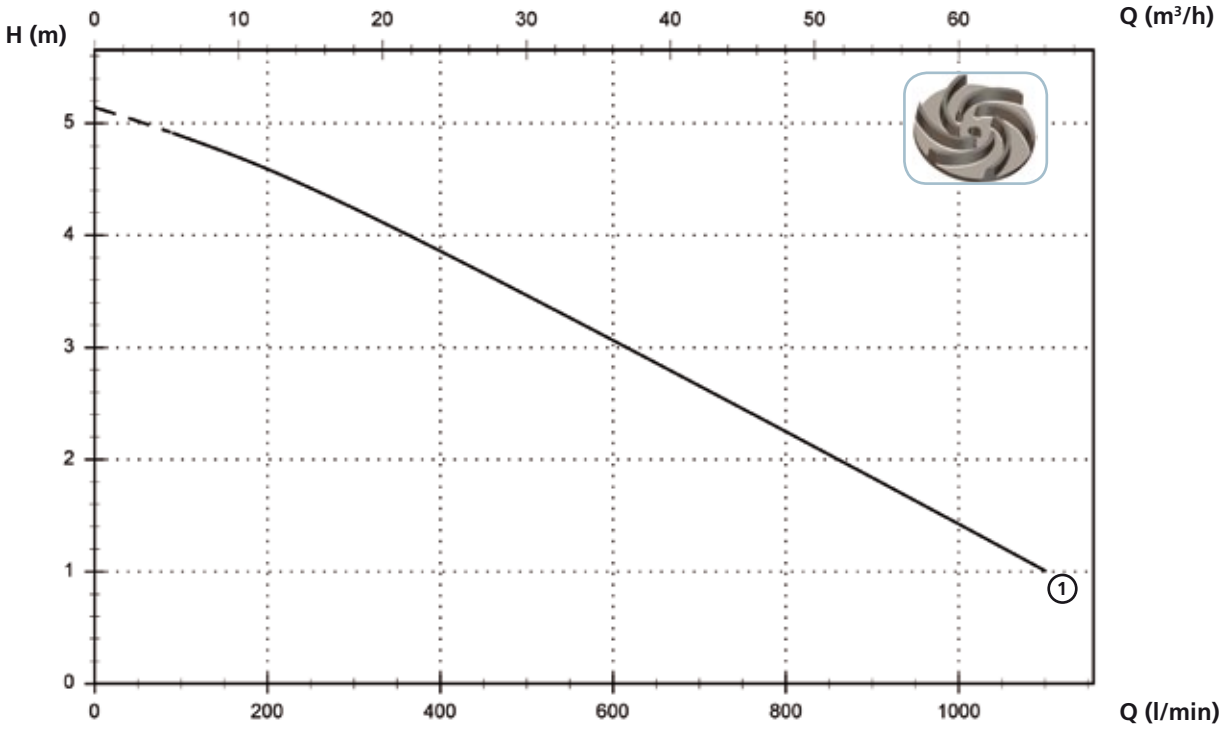
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) DGX 150/4/65 A0CM/50	230	1	-	0.9	6.3	1450	Dir	DN65 PN10-16	45 mm

	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

	l/s	0	2	4	6	8	10	12	14	16	18
	l/min	0	120	240	360	480	600	720	840	960	1080
	m^3/h	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

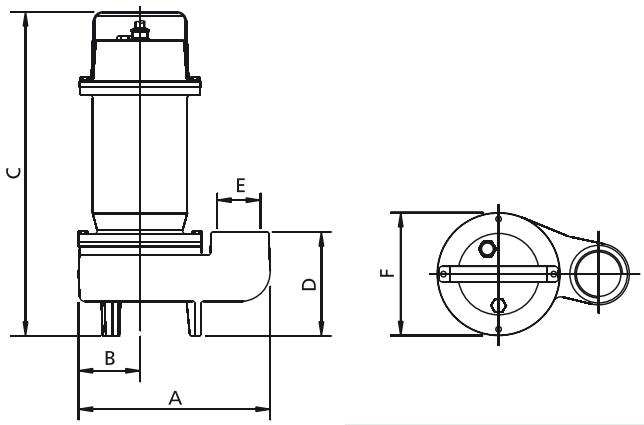
Versions available

(Key to versions on page 16)

	Electrical variants											Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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



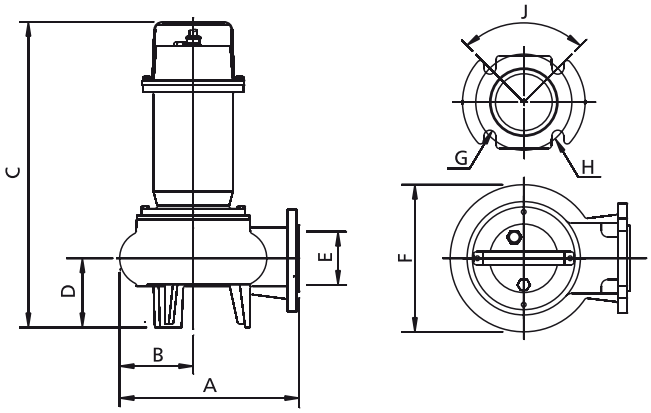
	A	B	C	D	E	F	kg
DGX 50/2/G50V A0CM(T)/50	225	75	360	120	G 2"	155	18
DGX 75/2/G50V A0CM(T)/50	225	75	360	120	G 2"	155	18
DGX 100/2/G50V A0CM (T)/50	245	80	410	130	G 2"	155	22
DGX 150/2/G50V A0CM (T)/50	245	80	410	130	G 2"	155	23
DGX 200/2/G50V A0CM (T)/50	245	80	410	130	G 2"	155	22
DGX 100/4/G50V A0CM (T)/50	245	80	410	130	G 2"	155	22

Dimensions in mm

All weights and dimensions are indicative only

Overall dimensions and weights

Models with horizontal discharge



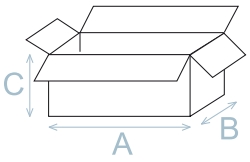
	A	B	C	D	E	F	G	H	J	kg
DGX 150/2/65 A0CM(T)/50	270	110	460	105	65	220	18	145	90°	28
DGX 200/2/65 A0CM(T)/50	270	110	460	105	65	220	18	145	90°	29
DGX 200/2/80 A0CM(T)/50	270	110	460	105	80	220	18	160	90°	33.5
DGX 150/4/65 A0CM(T)/50	270	110	460	105	65	220	18	145	90°	29
DGX 150/4/80 A0CM(T)/50	295	120	470	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

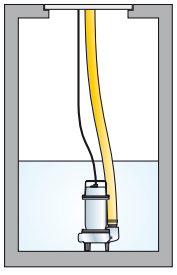


Dimension in mm

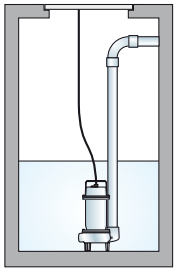
All weights and dimensions are indicative only

Installations available

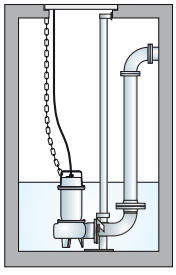
A



B



D



DRY



All product images are indicative only

Special alloy pumps

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.

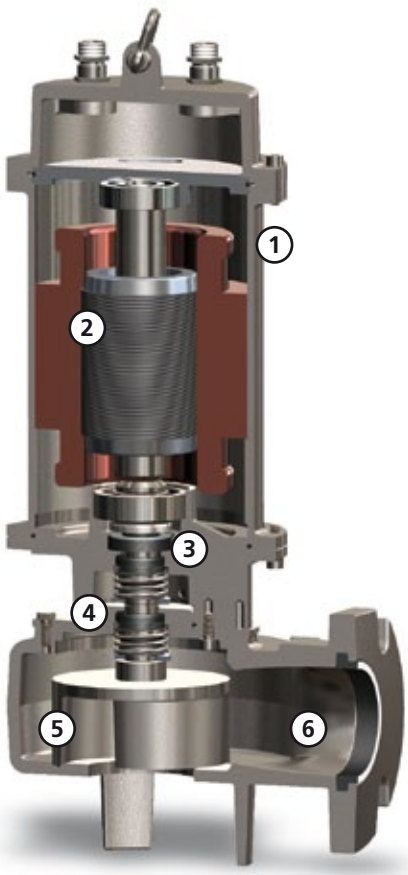
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

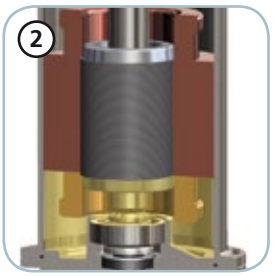
DRY





Structure

CF-8M steel construction which makes the pump suitable for use in saline environments.



Motor

Oil-bath motor with thermal protections.



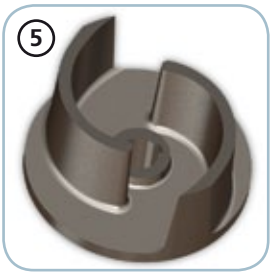
Mechanical seals

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



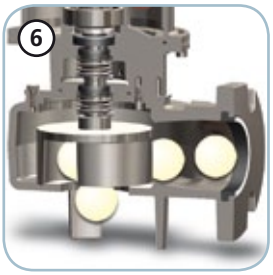
Oil sump

Large oil sump to guarantee longer mechanical seal lifetime.



Impeller

Multichannel open impeller in CF-8M steel.



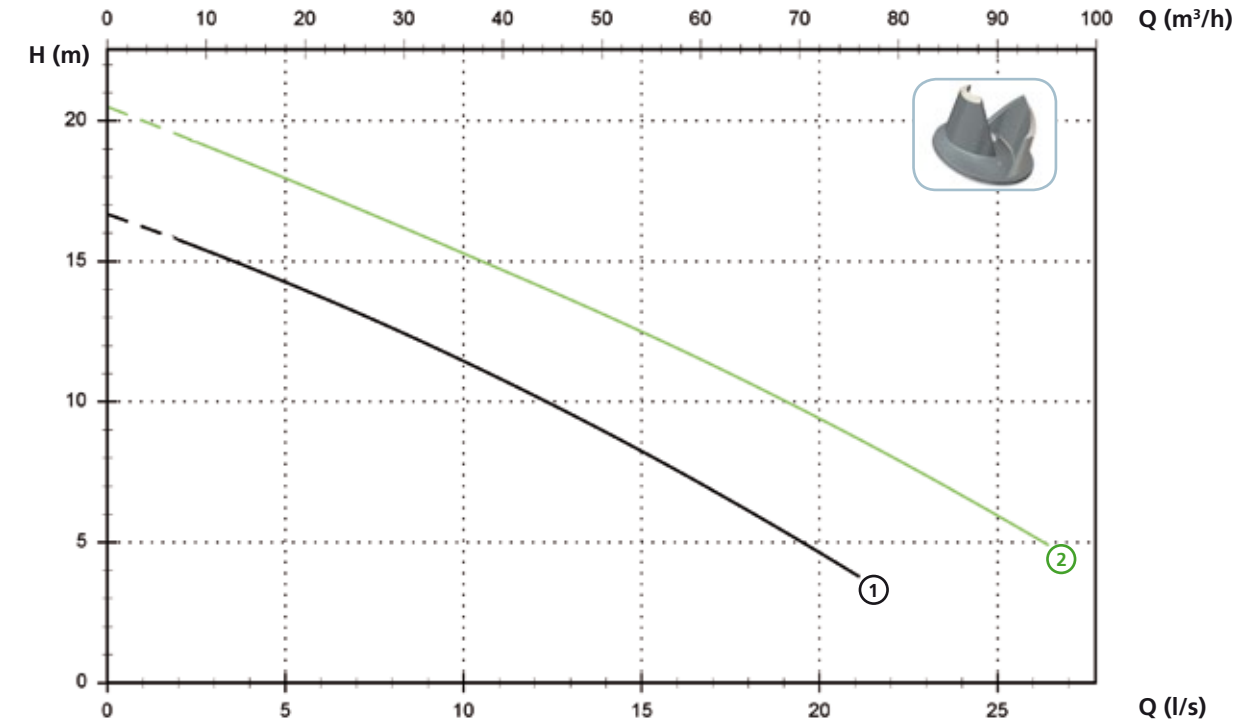
Free passage

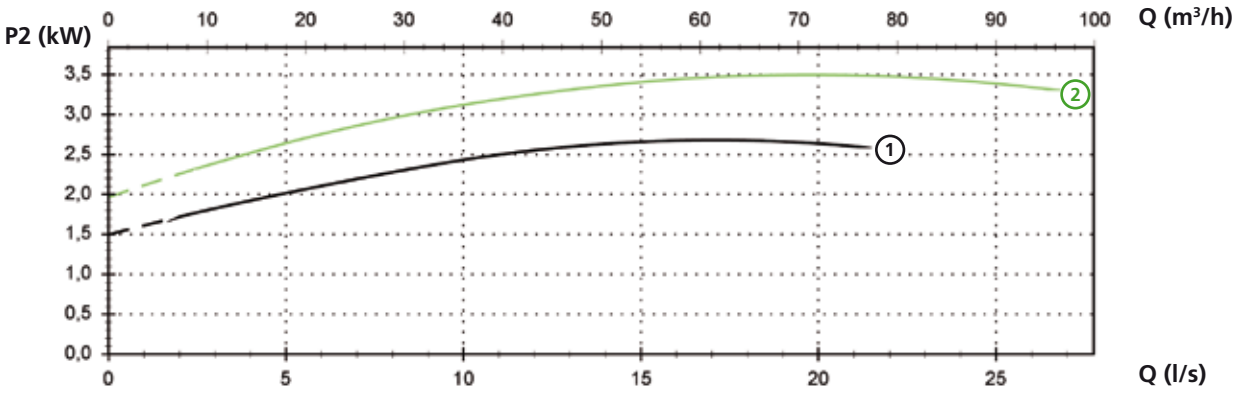
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

DRY

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

Performances



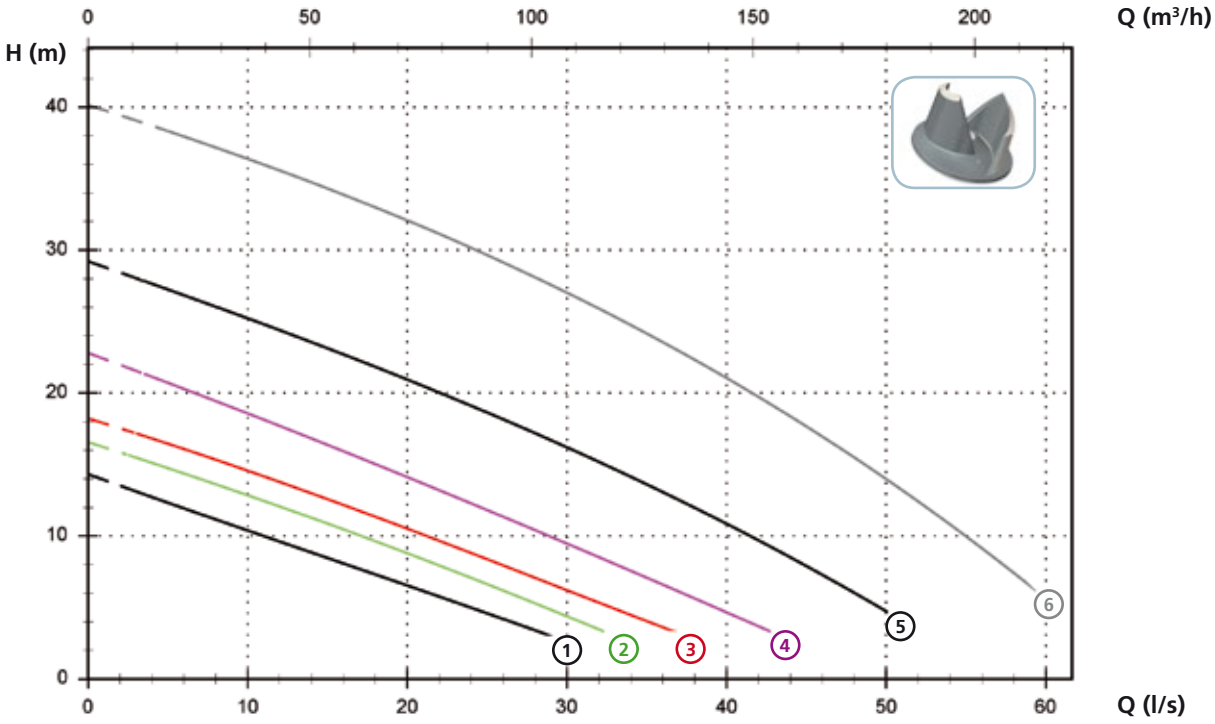


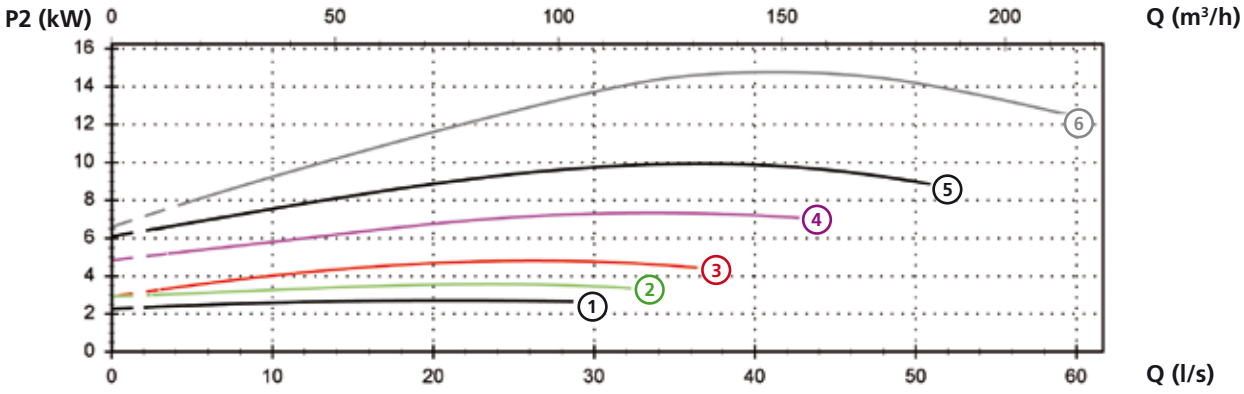
Technical data

	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

Models with horizontal DN80 PN10 flanged discharge - 2 poles

Performances





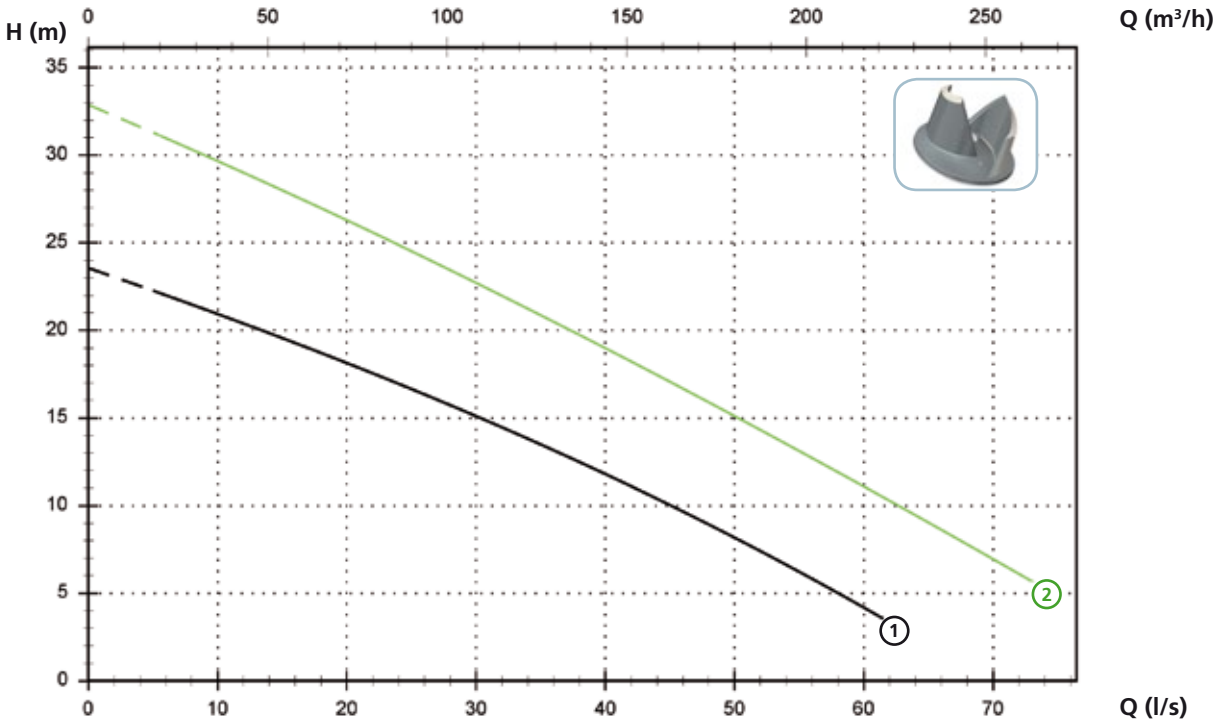
Technical data

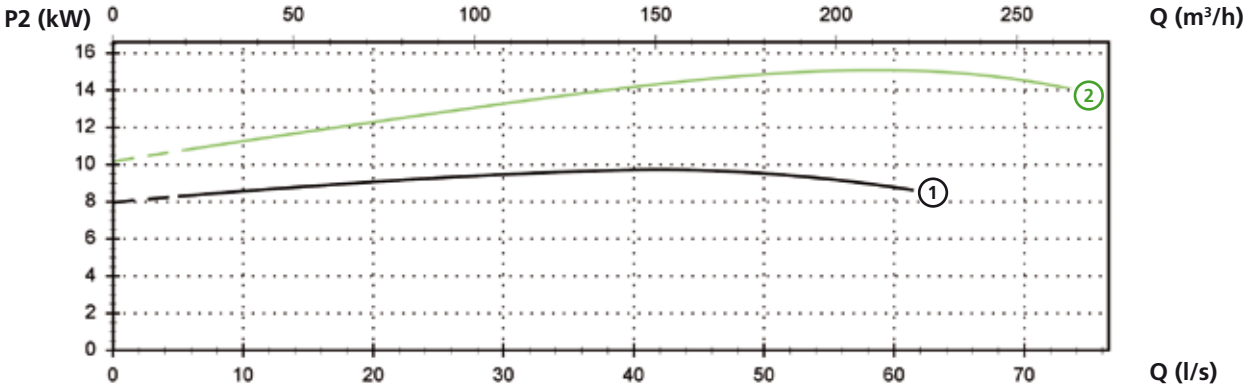
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRY 300/2/80 A0ET/50	400	3	3.7	2.7	6	2900	Dir	DN80 PN10	56 mm
2	DRY 400/2/80 A0FT/50	400	3	4.7	3.6	8	2900	Dir	DN80 PN10	56 mm
3	DRY 550/2/80 A0GT/50	400	3	5.9	4.9	10.1	2900	Dir	DN80 PN10	56 mm
4	DRY 750/2/80 A0HT/50	400	3	8.8	7.2	14.5	2900	Y Δ	DN80 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



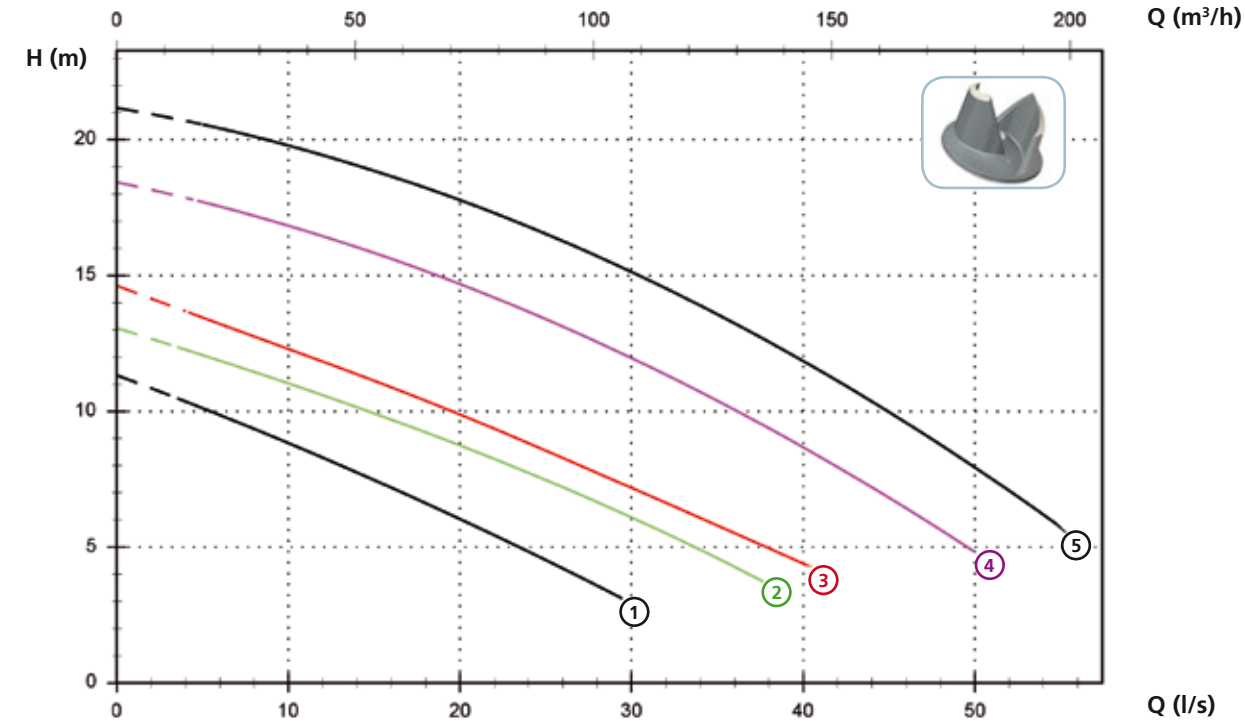


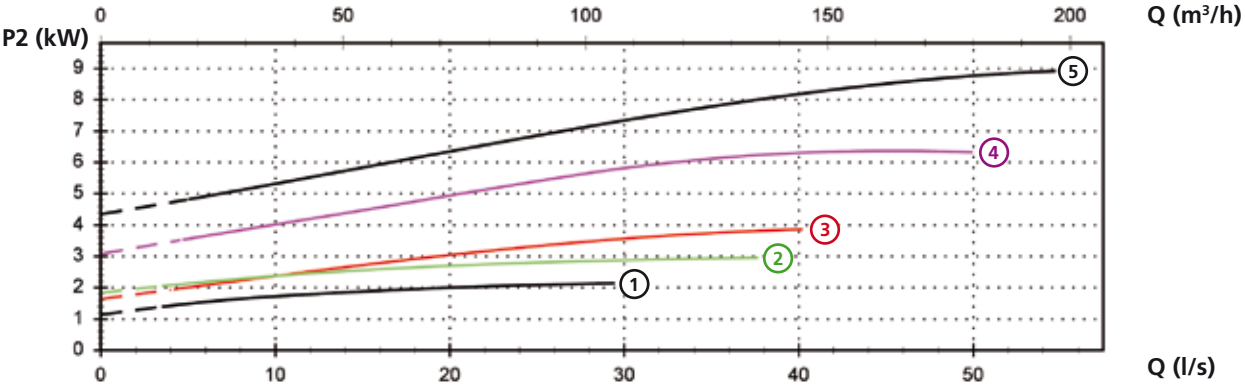
Technical data

		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

Models with horizontal DN80 PN10 flanged discharge - 4 poles

Performances





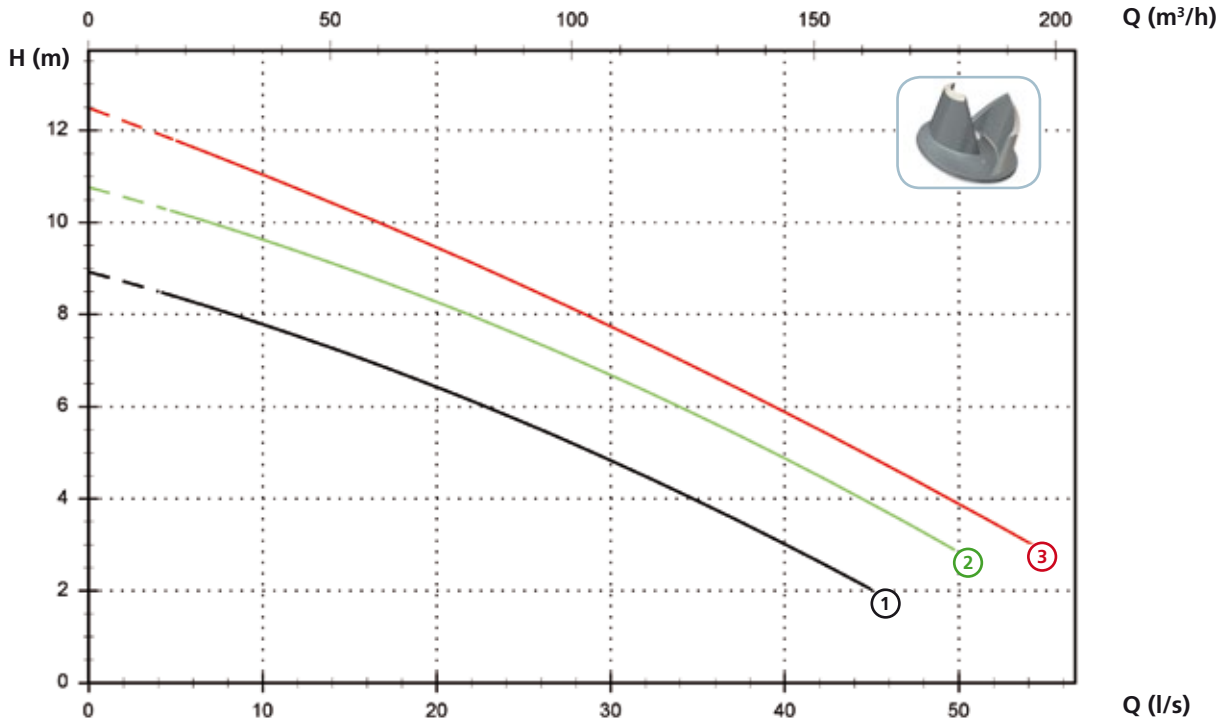
Technical data

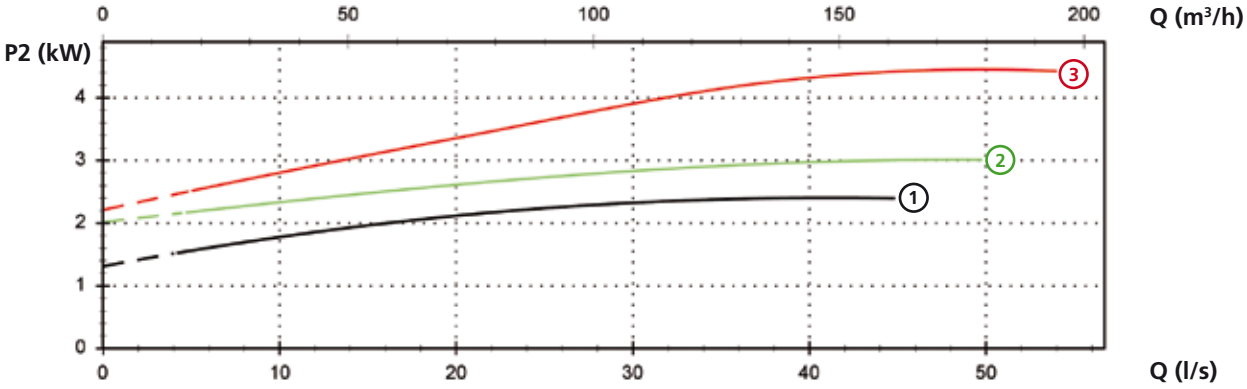
		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
1	DRY 300/4/80 A0FT/50	400	3	3.1	2.4	6.1	1450	Dir	DN80 PN10	67 mm
2	DRY 400/4/80 A0FT/50	400	3	4.1	3	7.9	1450	Dir	DN80 PN10	67 mm
3	DRY 550/4/80 A0GT/50	400	3	5.9	4.6	10.1	1450	Dir	DN80 PN10	67 mm
4	DRY 750/4/80 A0HT/50	400	3	8.6	6.5	14.9	1450	Y Δ	DN80 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

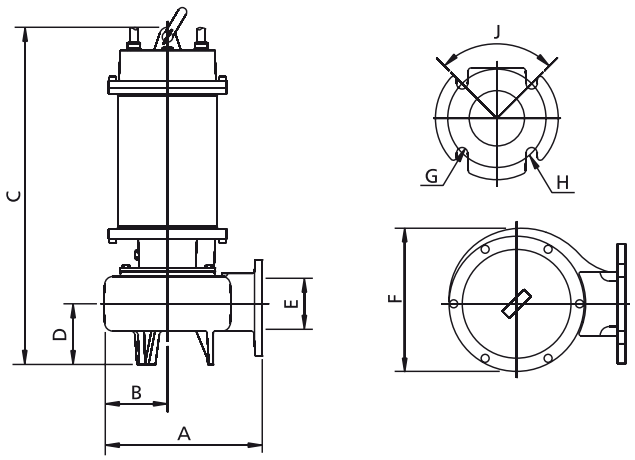
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

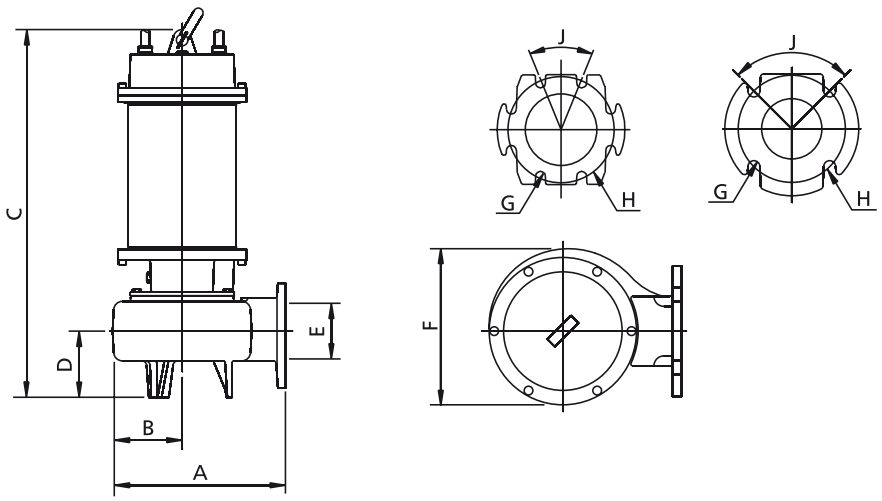
Dimensions in mm

All weights and dimensions are indicative only

DRY

Overall dimensions and weights

4 poles motor models



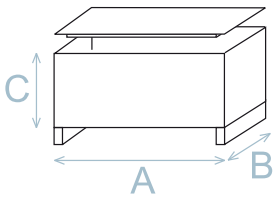
	A	B	C	D	E	F	G	H	J	kg
DRY 300/4/80 A0FT/50	390	150	710	150	80	290	18	160	90°	73
DRY 400/4/80 A0FT/50	390	150	710	150	80	290	18	160	90°	81
DRY 550/4/80 A0GT/50	390	150	720	150	80	290	18	160	90°	87
DRY 750/4/80 A0HT/50	440	170	775	155	80	340	18	160	90°	120
DRY 1000/4/80 A0HT/50	440	170	775	155	80	340	18	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

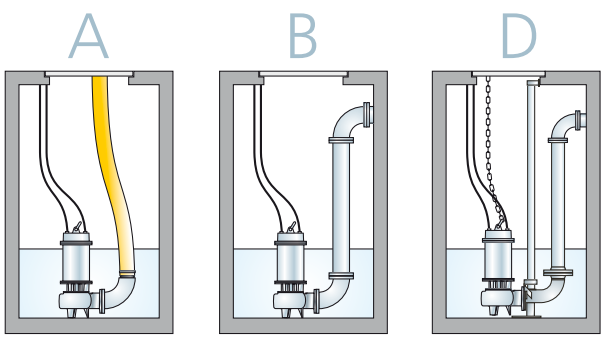
	A	B	C
DRY 300/2/65 A0ET/50	725	445	415
DRY 400/2/65 A0FT/50	725	445	415
DRY 300/2/80 A0ET/50	725	445	415
DRY 400/2/80 A0FT/50	725	445	415
DRY 550/2/80 A0GT/50	725	445	415
DRY 750/2/80 A0HT/50	915	515	555
DRY 1000/2/80 A0HT/50	915	515	555
DRY 1500/2/80 A0HT/50	915	515	555
DRY 1000/2/100 A0HT/50	915	515	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




ZENIT

DRB



All product images are indicative only

Special alloy pumps

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.

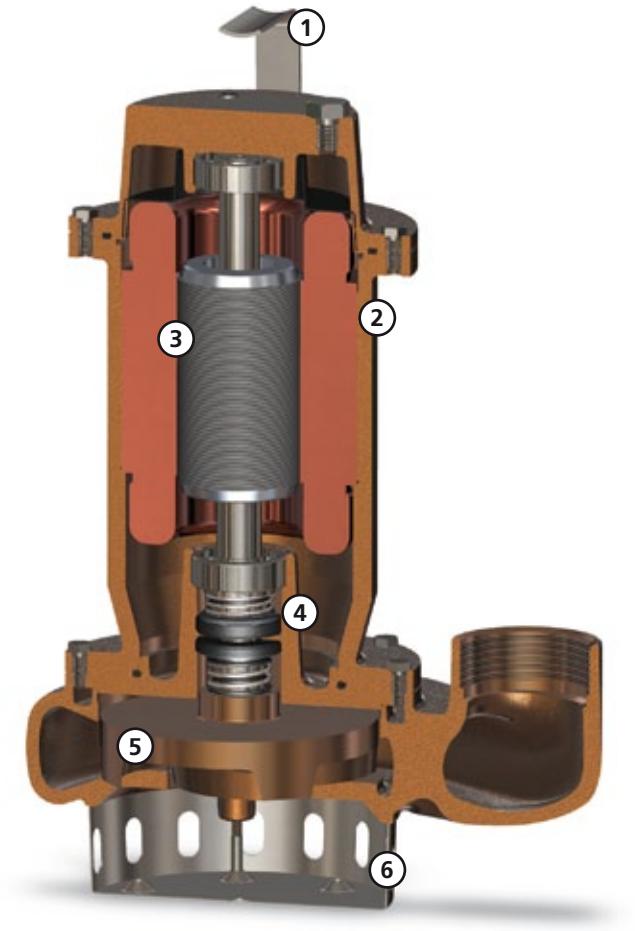
Construction materials

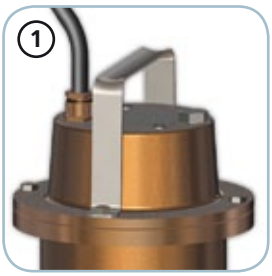
Case	Bronze B10
Impeller	Bronze B10
Nuts and bolts	Stainless steel - Class A4
Standard gasket	Rubber - VITON
Shaft	Stainless steel - AISI 316
Set of standard mechanical seals	Two silicon carbide mechanical seals (2SiC)

Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	5 ÷ 11
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DRB





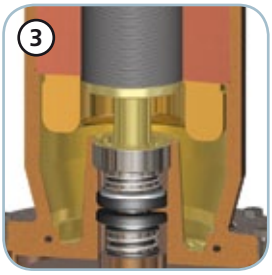
Handle

AISI 316 stainless steel lifting and carrying handle.



Structure

B10 bronze construction which makes the pump suitable for use with chemically aggressive liquids.



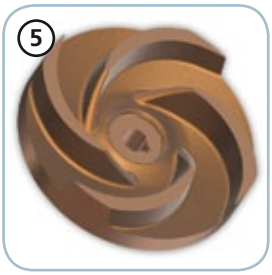
Motor

Oil-bath motor with thermal protections.



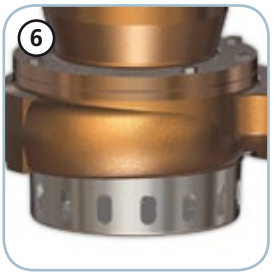
Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Impeller

Multichannel open impeller in B10 bronze.



Intake strainer

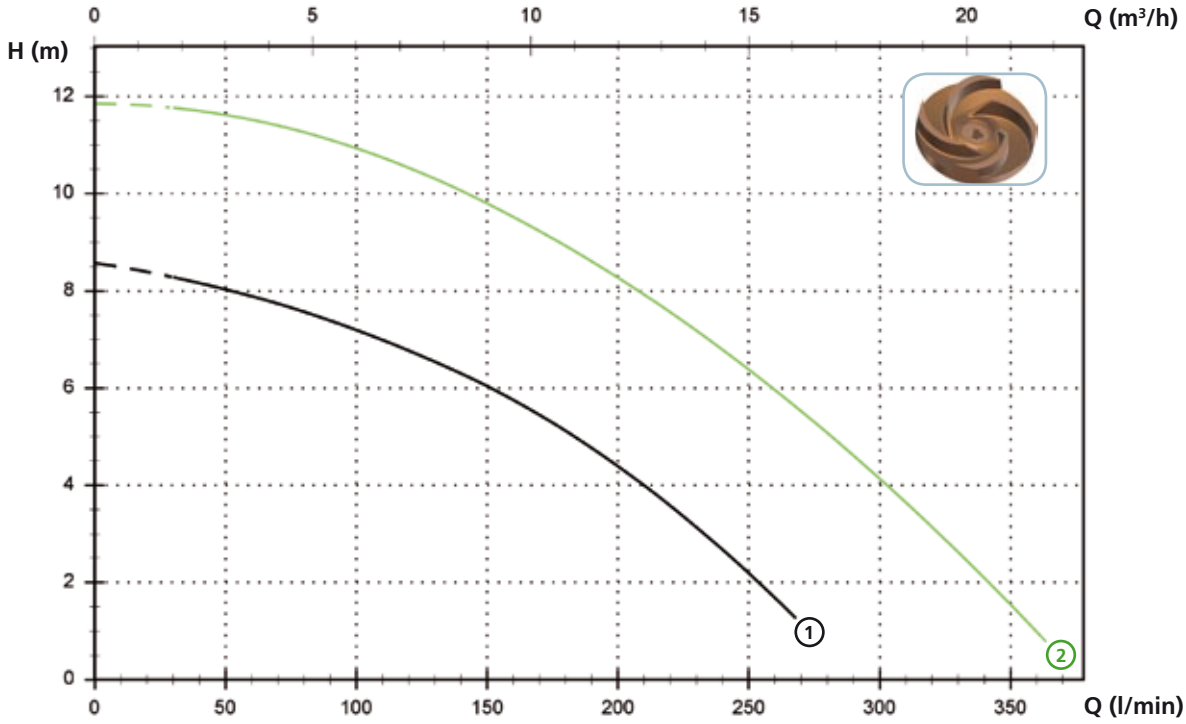
Intake strainer in stainless steel.

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
	m^3/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

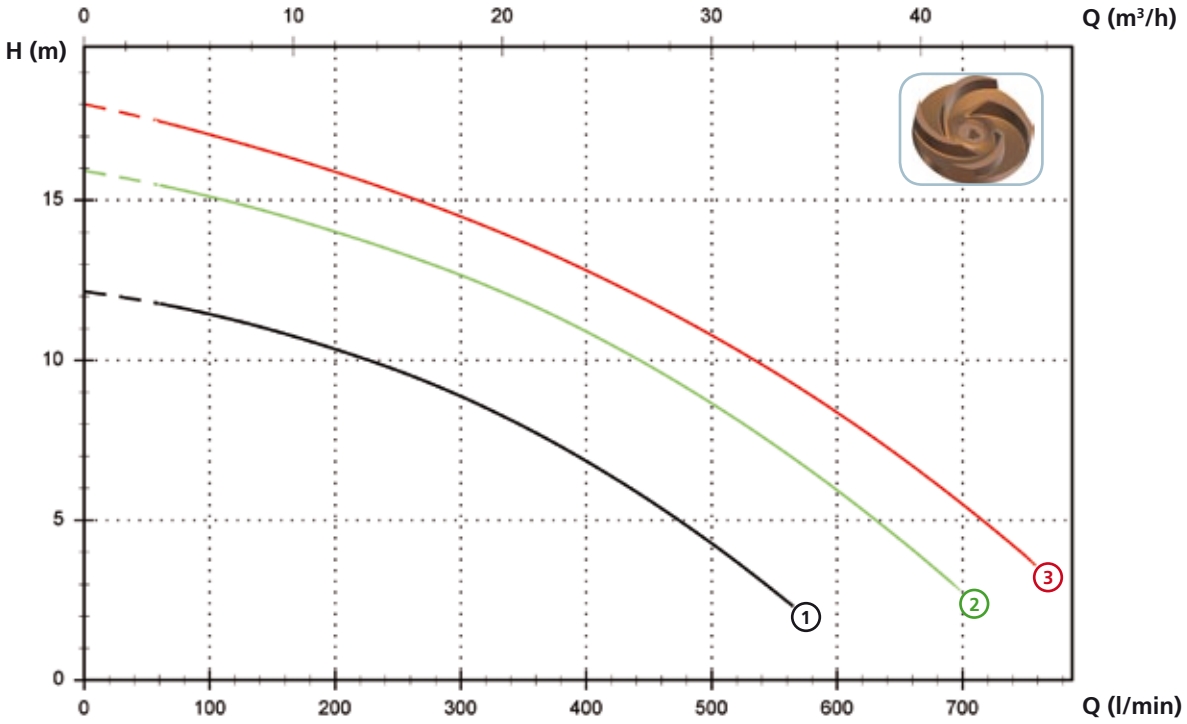
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
① DRB 50/2/G32V A0CM/50	230	1	-	0.37	2.9	2900	Dir	G 1¼"	15 mm
② DRB 75/2/G32V A0CM/50	230	1	-	0.55	3.9	2900	Dir	G 1¼"	15 mm

	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
	m³/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

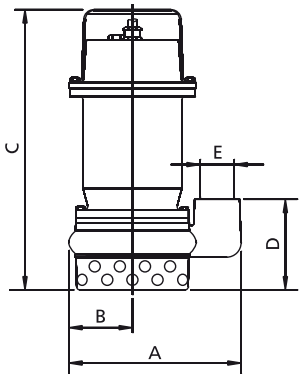
DRB

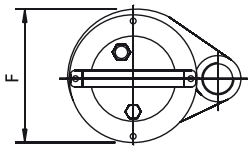
Versions available

(Key to versions on page 16)

	Electrical variants											Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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





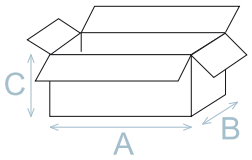
	A	B	C	D	E	F	kg
DRB 50/2/G32V A0CM(T)/50	210	75	340	110	G 1¼"	160	17
DRB 75/2/G32V A0CM (T)/50	210	75	340	110	G 1¼"	160	17
DRB 100/2/G50V A0CM (T)/50	265	100	390	125	G 2"	190	21
DRB 150/2/G50V A0CM (T)/50	265	100	390	125	G 2"	190	23
DRB 200/2/G50V A0CM (T)/50	265	100	390	125	G 2"	190	23

Dimensions in mm

All weights and dimensions are indicative only

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

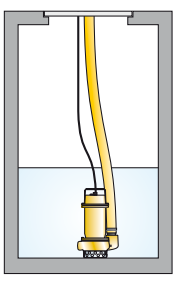


Dimension in mm

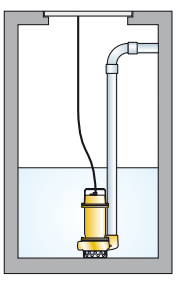
All weights and dimensions are indicative only

Installations available

A



B





DGB



All product images are indicative only

Special alloy pumps

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.

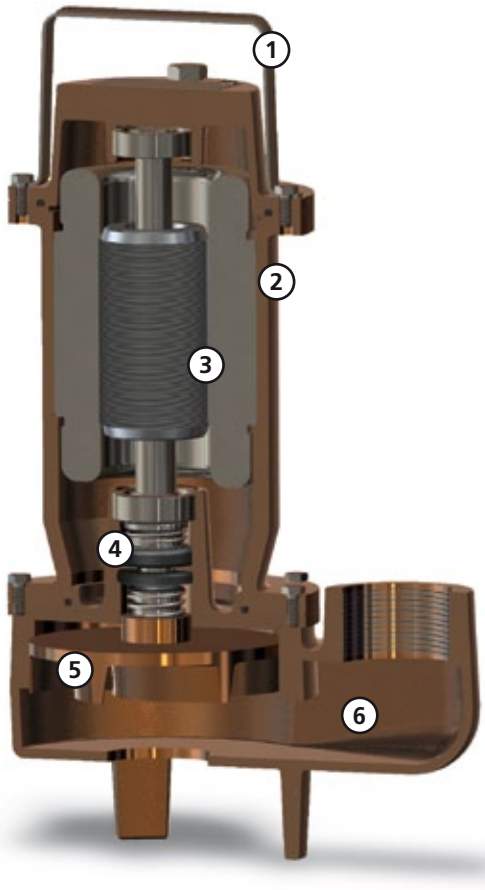
Construction materials

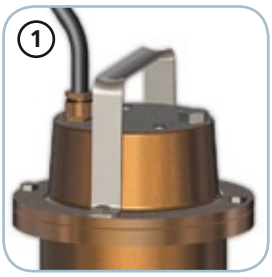
Case	Bronze B10
Impeller	Bronze B10
Nuts and bolts	Stainless steel - Class A4
Standard gasket	Rubber - VITON
Shaft	Stainless steel - AISI 316
Set of standard mechanical seals	Two silicon carbide mechanical seals (2SiC)

Operating limits

Maximum operating temperature	40 °C
PH of treated fluid	5 ÷ 11
Viscosity of treated fluid	1 mm^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	30

DGB





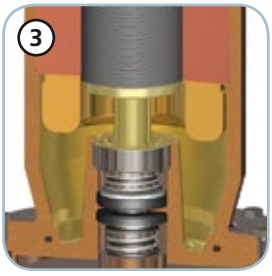
Handle

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.



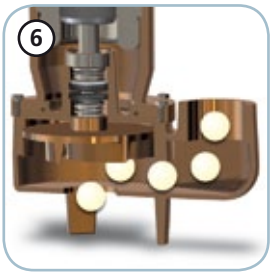
Mechanical seals

Two mechanical seals in silicon carbide (2SiC).



Impeller

Vortex impeller in B10 bronze.



Free passage

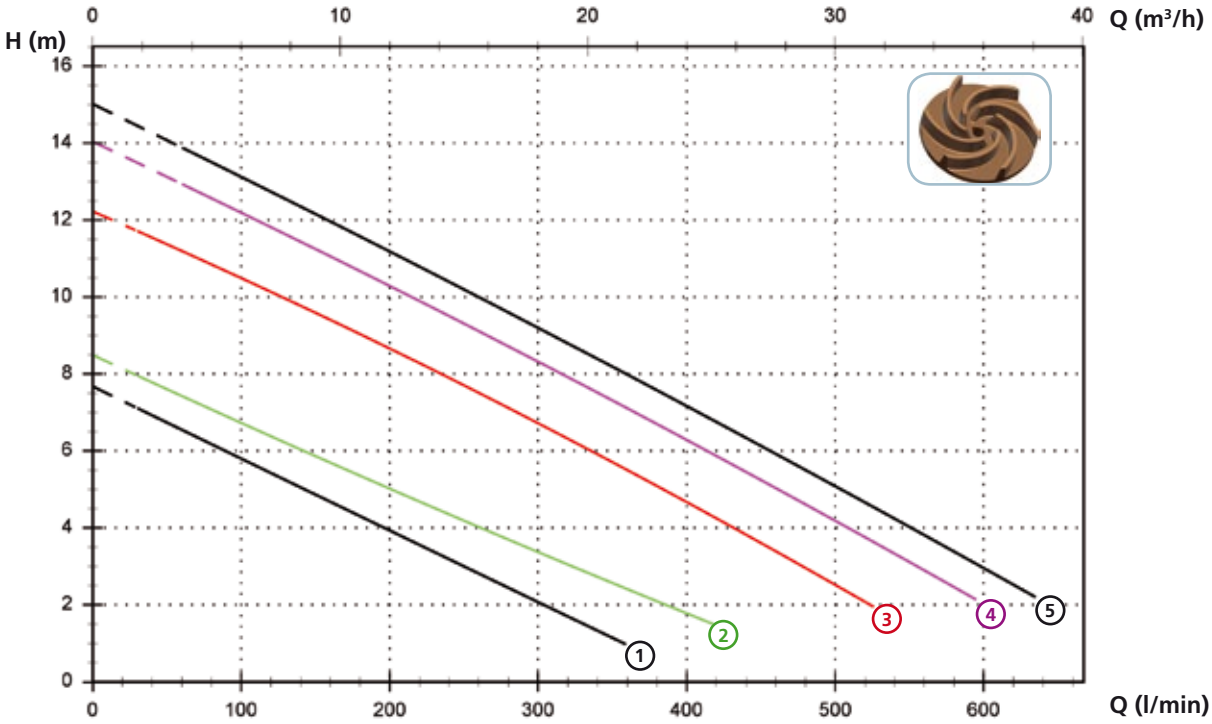
Wide free passage allowing the expulsion of solids and preventing fouling of the impeller.

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

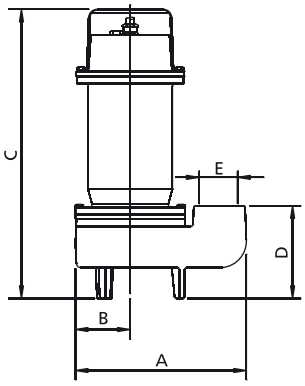
DGB

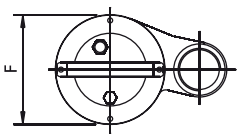
Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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





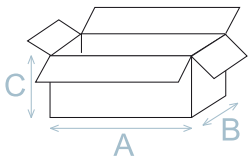
	A	B	C	D	E	F	kg
DGB 50/2/G50V A0CM(T)/50	225	75	360	120	G 2"	155	16.5
DGB 75/2/G50V A0CM(T)/50	225	75	360	120	G 2"	155	18
DGB 100/2/G50V A0CM(T)/50	245	80	410	130	G 2"	155	22
DGB 150/2/G50V A0CM(T)/50	245	80	410	130	G 2"	155	23
DGB 200/2/G50V A0CM(T)/50	245	80	410	130	G 2"	155	26

Dimensions in mm

All weights and dimensions are indicative only

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

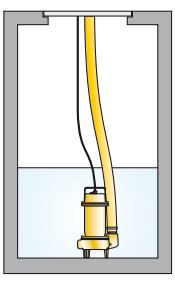


Dimension in mm

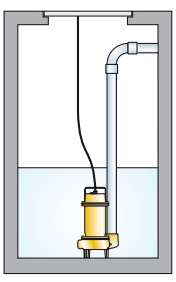
All weights and dimensions are indicative only

Installations available

A



B

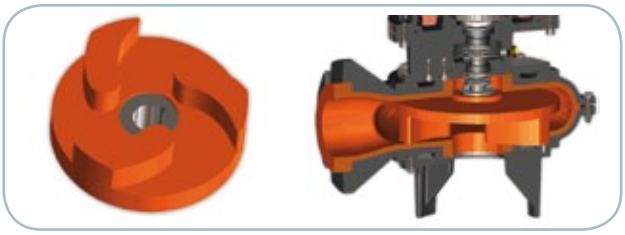


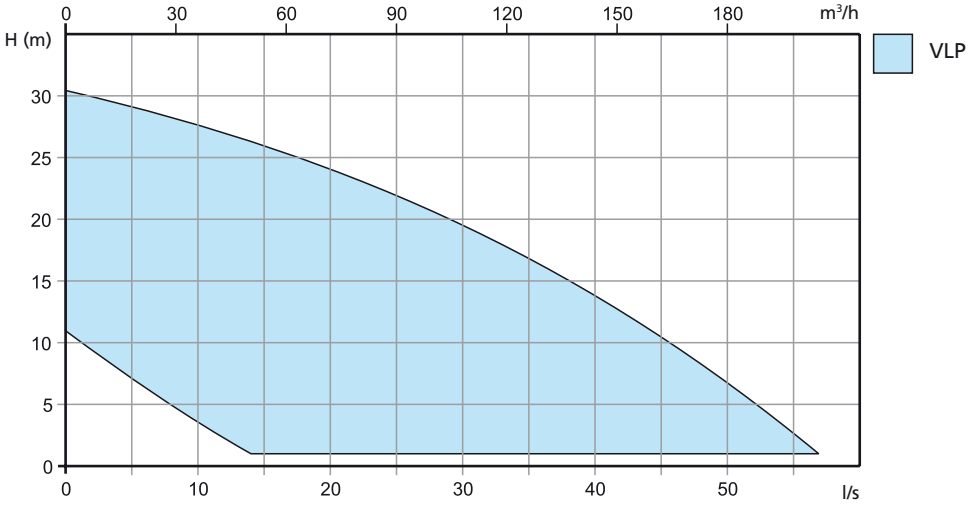
1.8 VL (VULCO)

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







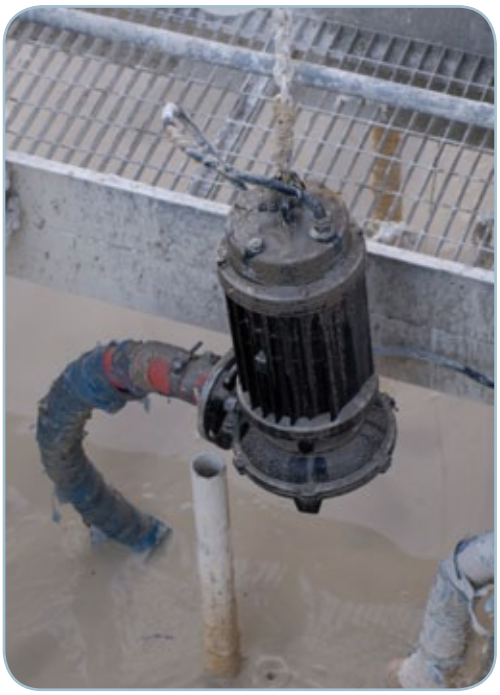
VLP

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 a 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.

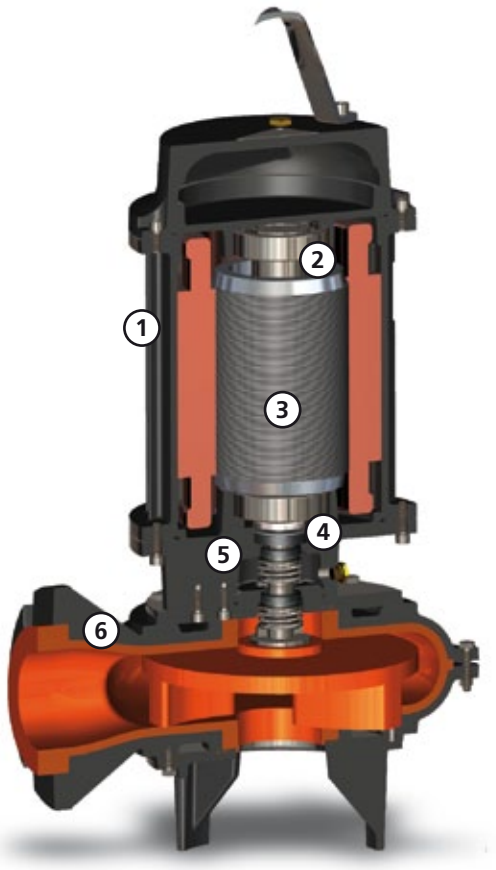
Construction materials

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^2/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm^3
Maximum acoustic pressure	70 dB
max starts per hour	20

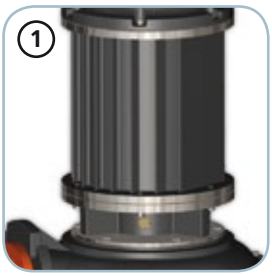
VLP





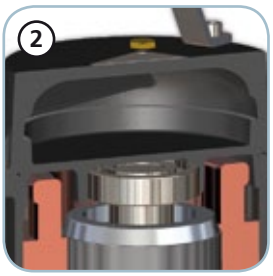
Cooling system

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.



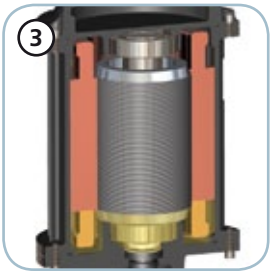
Structure

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.



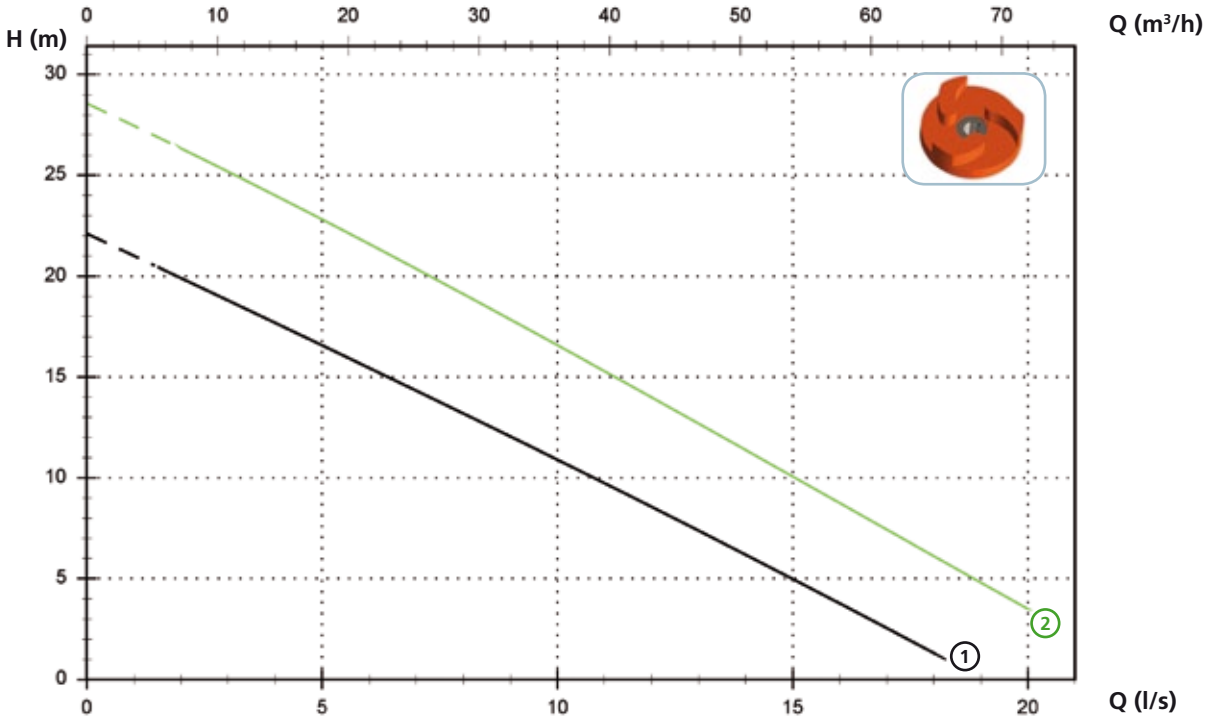
Pump body

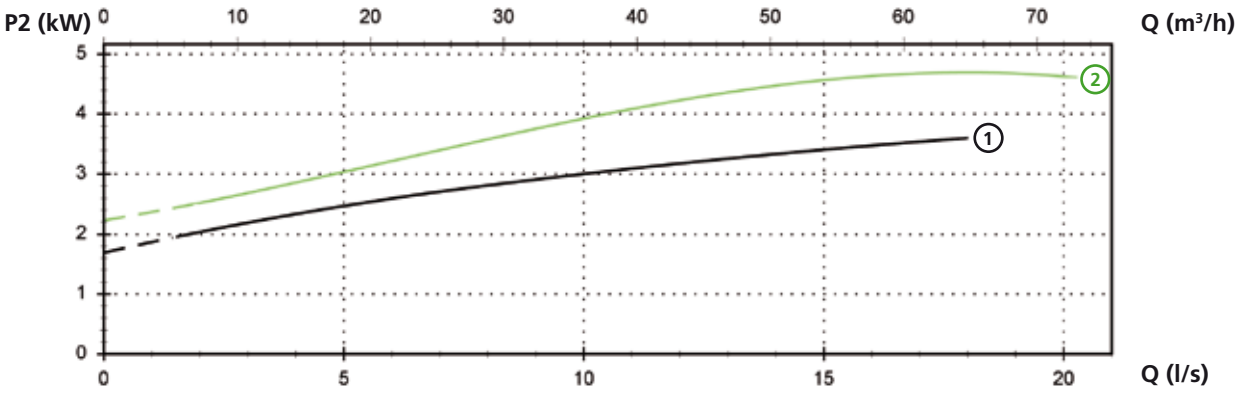
Impeller and pump body in GJL-250 cast iron coated with abrasion-resistant polyurethane (Vulkollan).

VLP

Models with horizontal DN50 PN10-16 flanged discharge - 2 poles

Performances



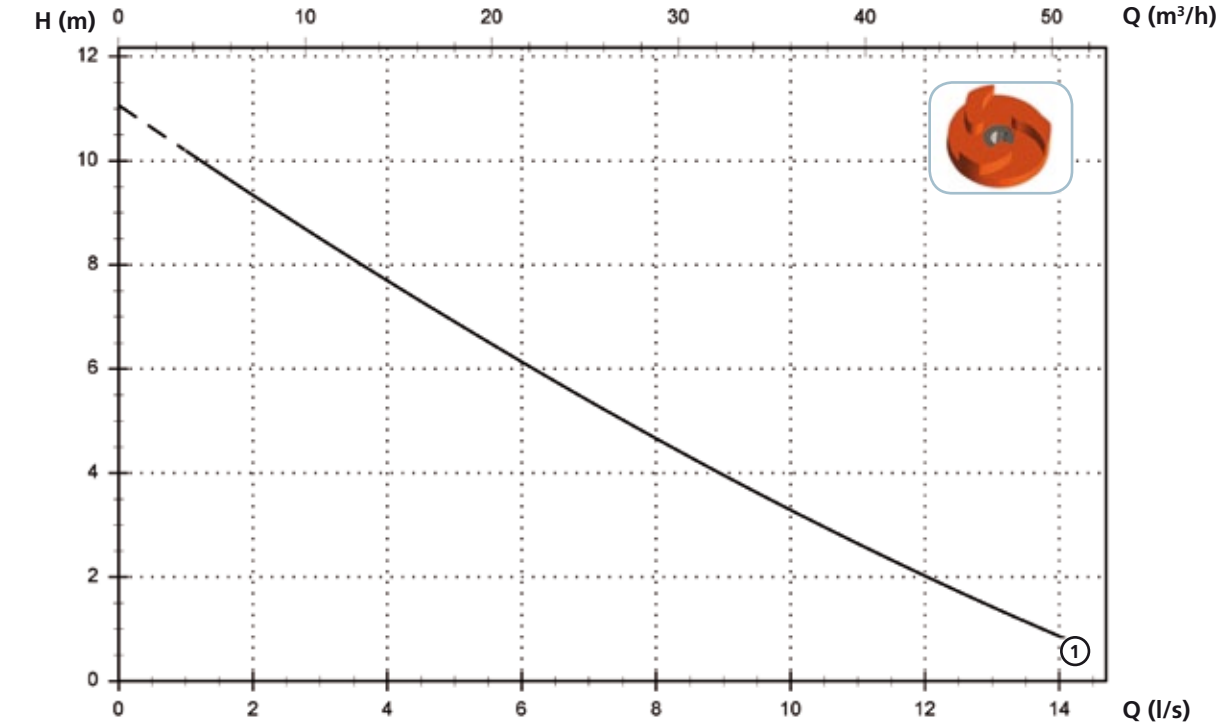


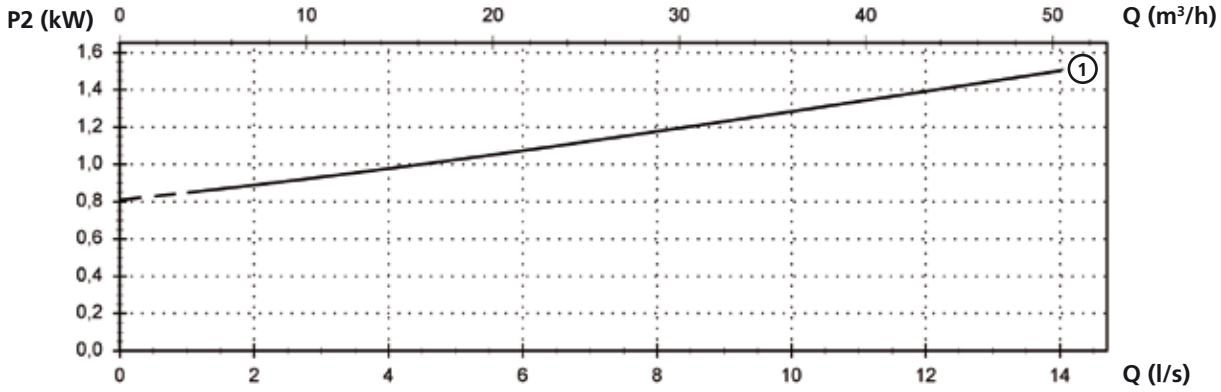
Technical data

	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





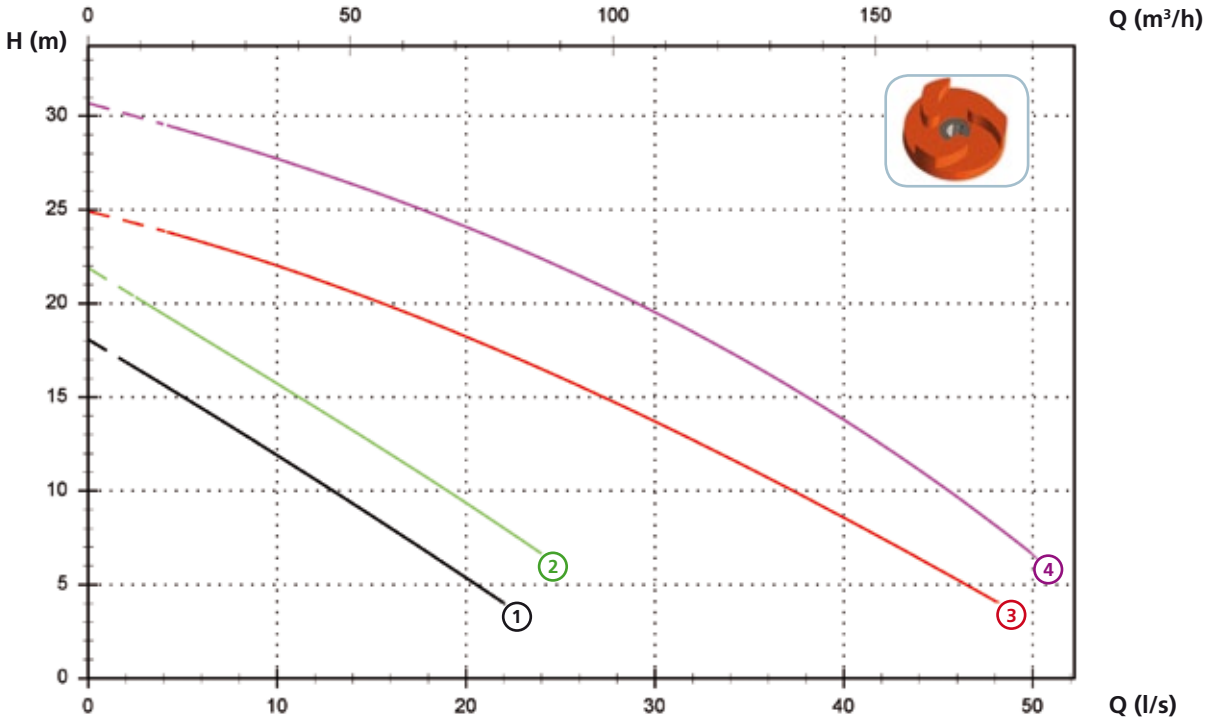
Technical data

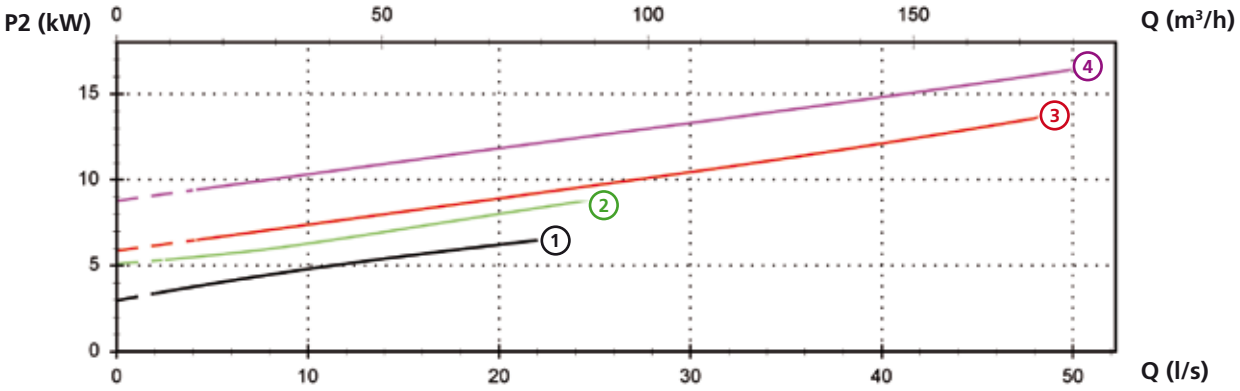
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Ø	Free passage
(1) VLP 200/4/50 A0ET/50	400	3	2.1	1.5	4.1	1450	Dir	DN50 PN10-16	28 mm

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

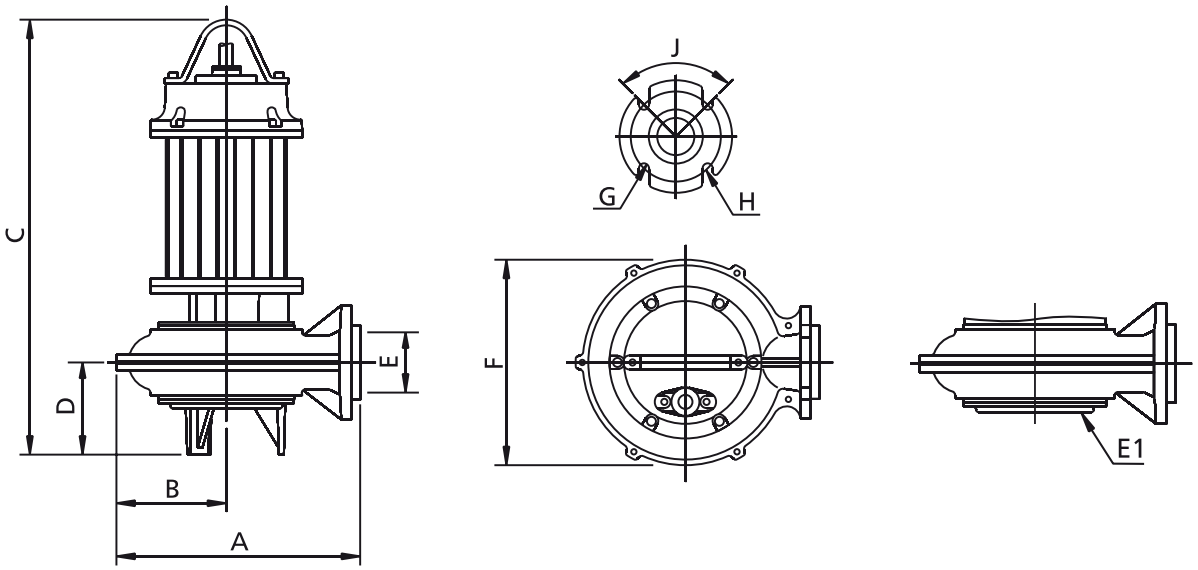
VLP

Versions available

(Key to versions on page 16)

	Electrical variants												Cooling				Mechanical seals			
	NAE	T	TC	TCD	TCDT	TCDGT	TCG	TCST	TCSGT	TS	TR	TRG	N	CC CCE	FT	CGFT	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

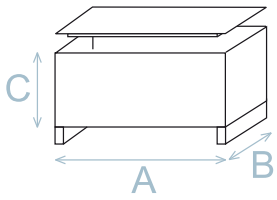
All weights and dimensions are indicative only

(*) 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

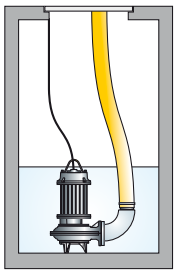


Dimension in mm

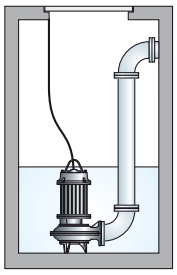
All weights and dimensions are indicative only

Installations available

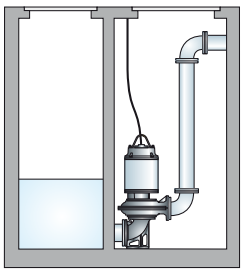
A



B



E





All product images are indicative only

1.9 Zenit **UNIQA®** {ZU}

High performance series

UNIQA

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

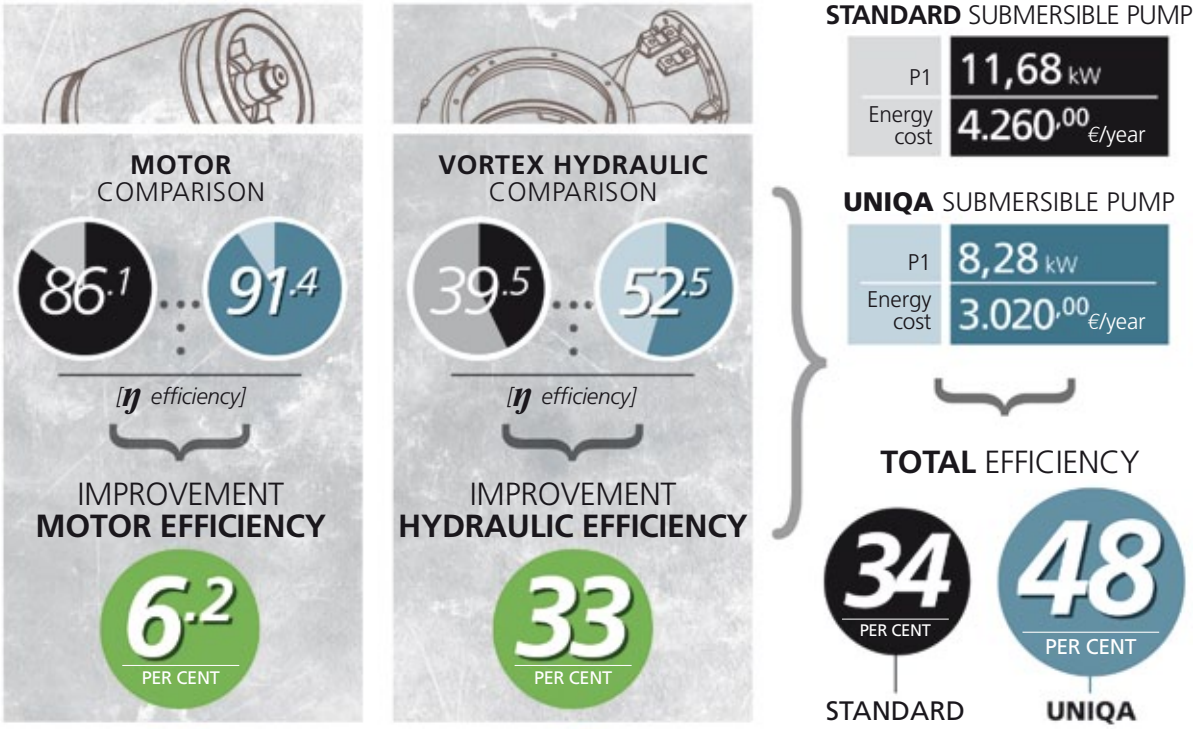
The combination of **efficient motors, high hydraulic performance and reliability** give UNIQA a particularly high global efficiency rating, capable of ensuring a good return on investment over time.

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.

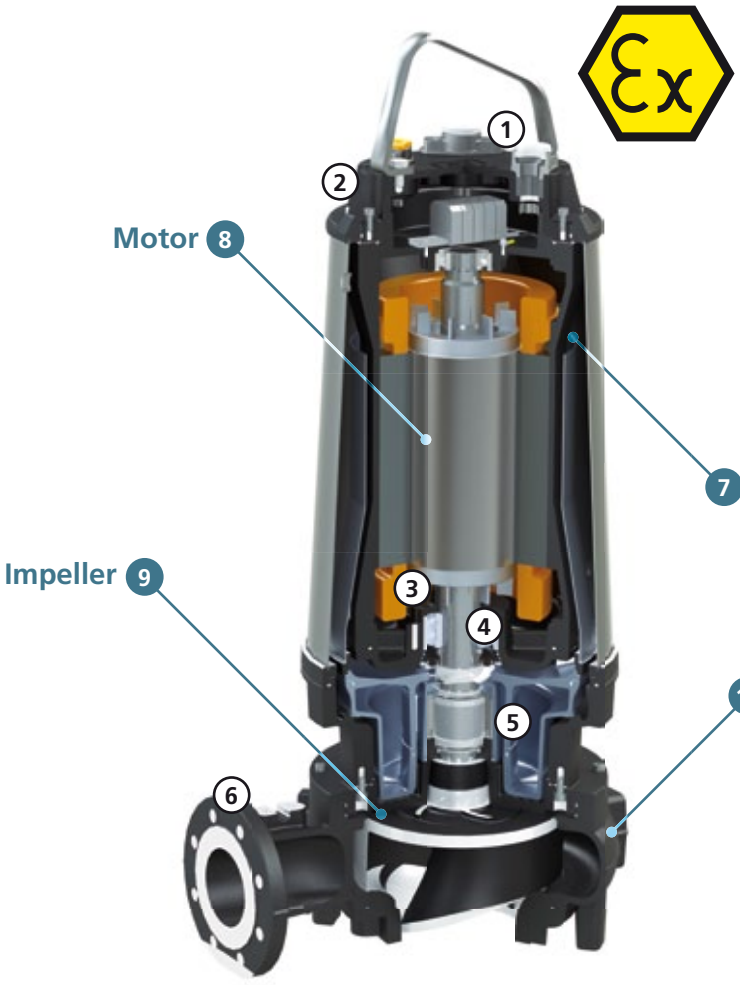
THE VALUE OF UNIQA
Let's compare the performance at the duty point indicated above of a UNIQA submersible pump with **"efficiency class Premium IE3 and high efficiency hydraulics" (in blue)** with that of an electric pump with **standard motor and conventional hydraulics (in black)**.



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.

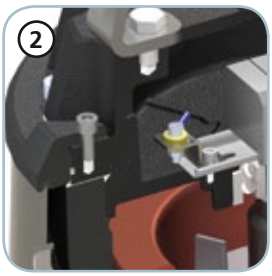


All product images are indicative only



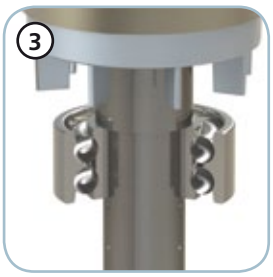
Cable gland

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.



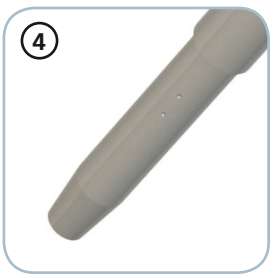
Motor compartment

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.



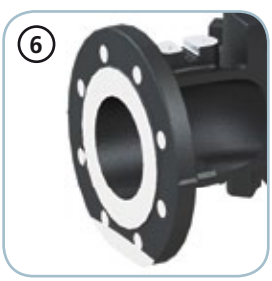
Motor shaft

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 isulation 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.

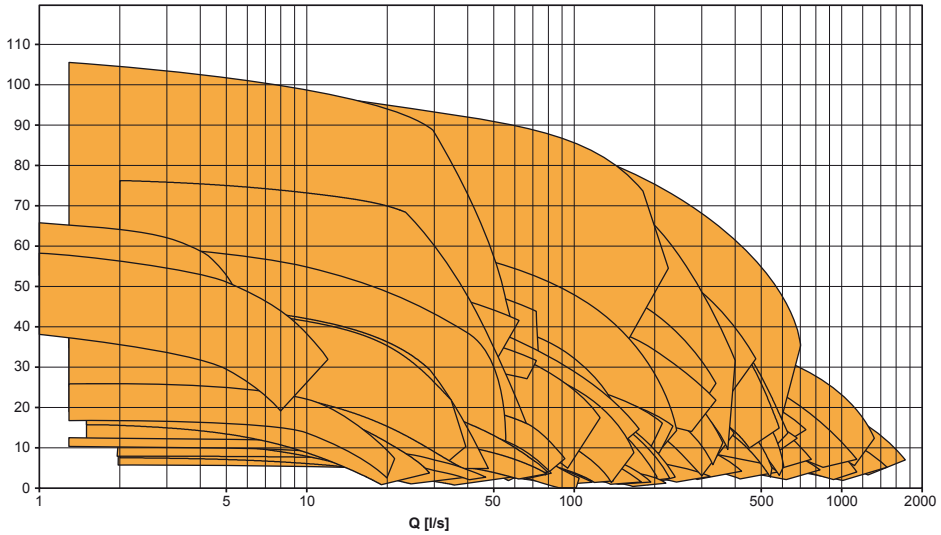


Clogging-proof hydraulics

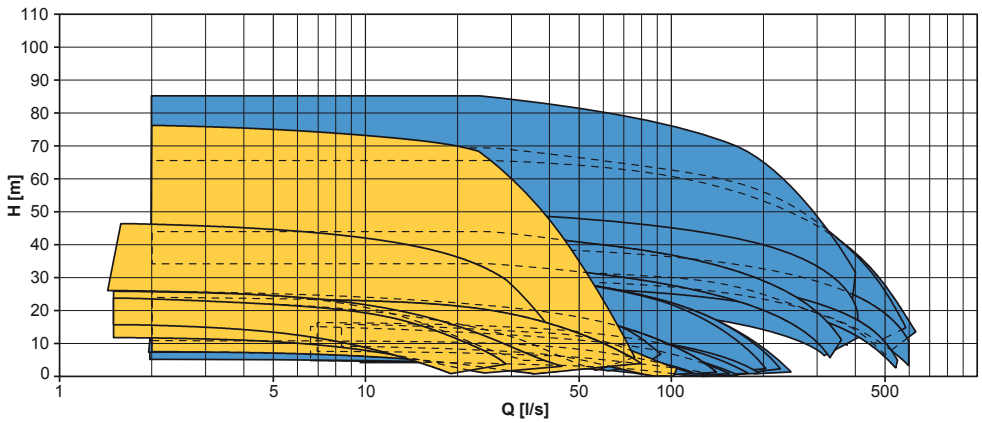
All hydraulic components are designed to provide highest efficiency and best performance combined with wide free passage. The Anti-Clogging-System (ACS) prevents blocking the impeller even in heavy-duty conditions.

UNIQA

Overview of operating ranges



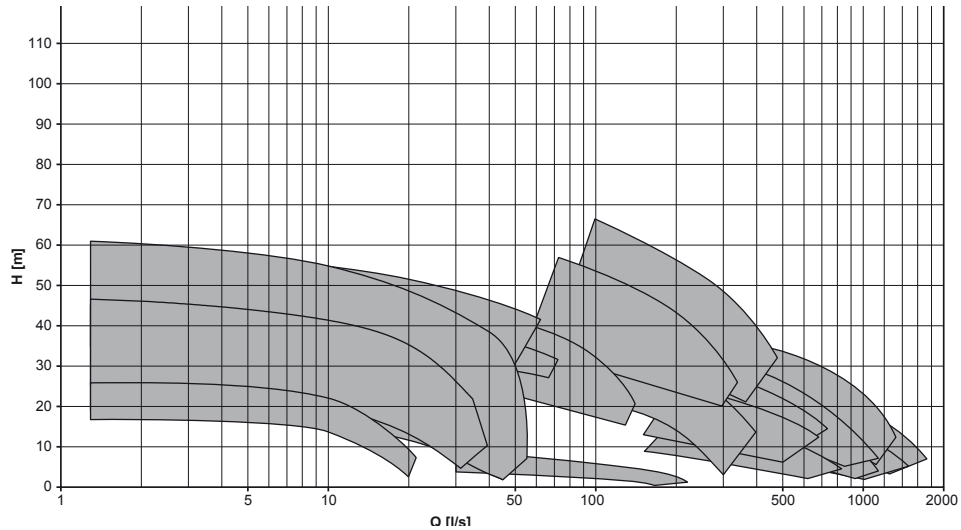
Currently available operating ranges



ZUG V (vortex)

ZUG OC (channels)

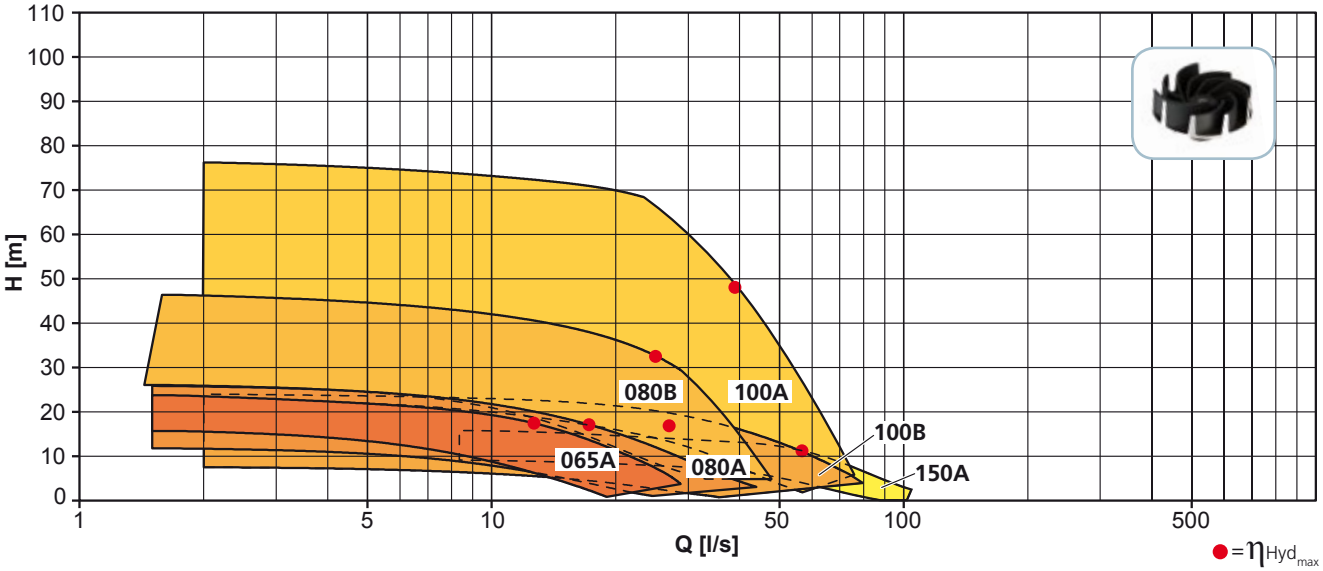
Operating ranges scheduled for issue in 2016



The documentation for the UNIQA series as well as the catalogue, technical data sheets and user manuals are available at www.zenit.com or from Customer Service.

ZENIT

Currently available operating ranges (VORTEX)

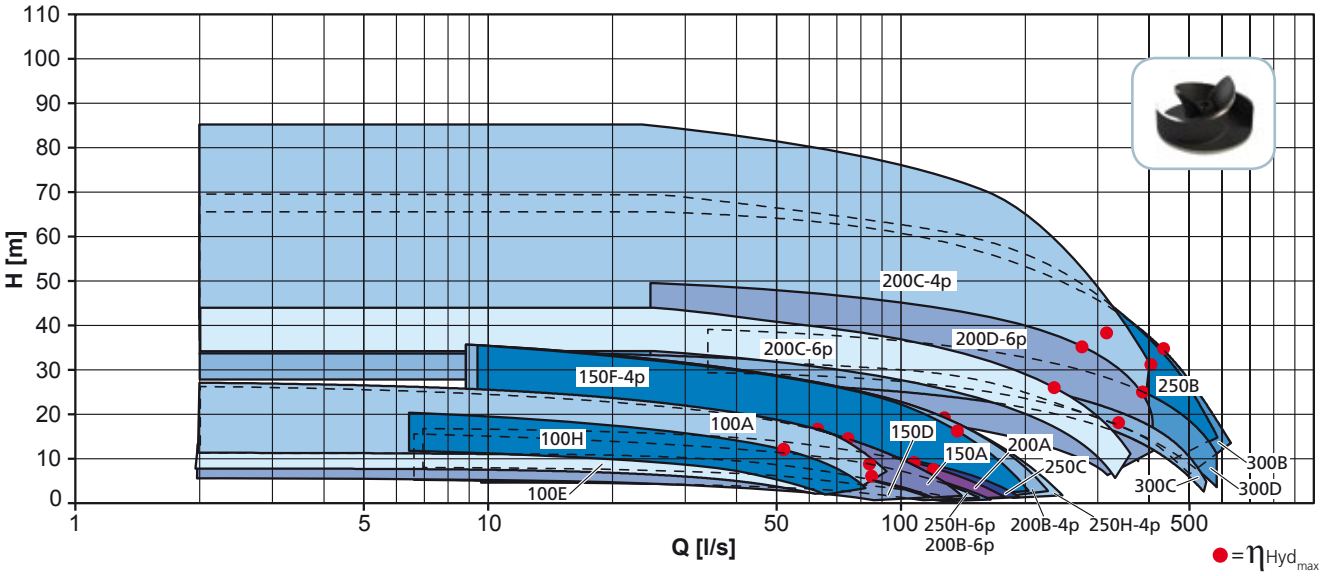




ZUG V [VORTEX]

Vortex impeller		**Power**	da 4 kW a 37 kW
Discharge	from DN65 to DN150	**Poles**	2 - 4

Currently available operating ranges (CHANNELS)





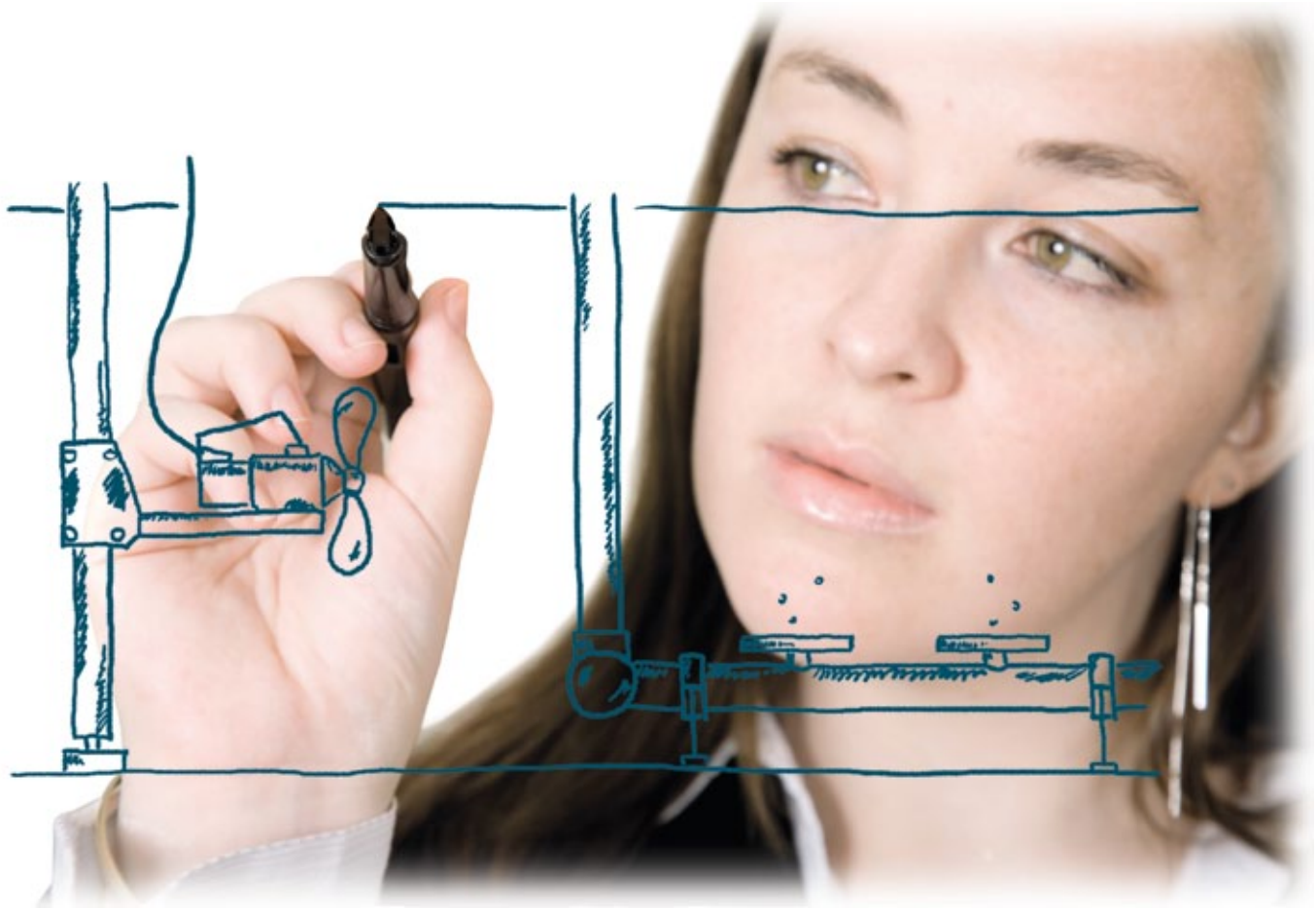
ZUG OC [CHANNELS]

Channles impeller		**Power**	from 4 kW to 200 kW
Discharge	from DN100 to DN300	**Poles**	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 m3 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

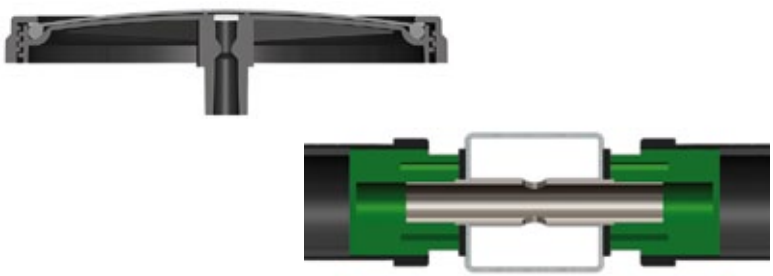





The Zenit range includes both disc and tube membrane air diffusers. Both models are fitted with high-quality membranes with perforation ensuring high oxygen transfer with low headloss, minimizing the relative energy consumption. Disc diffusers can be fitted with ball check valves.
Zenit is able to design 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



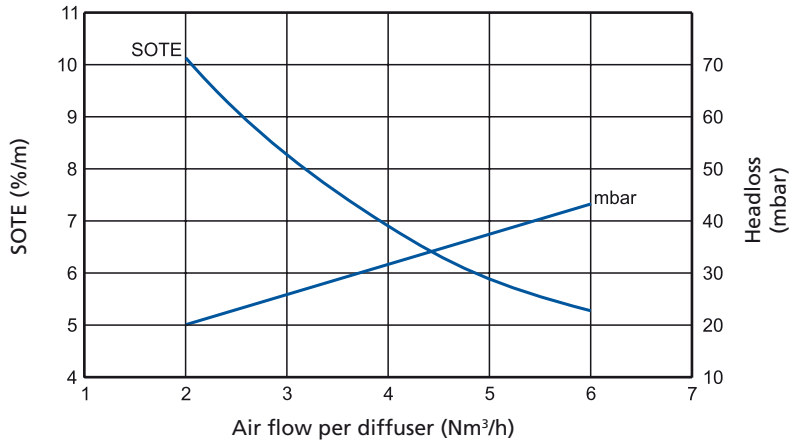
All product images are indicative only

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.

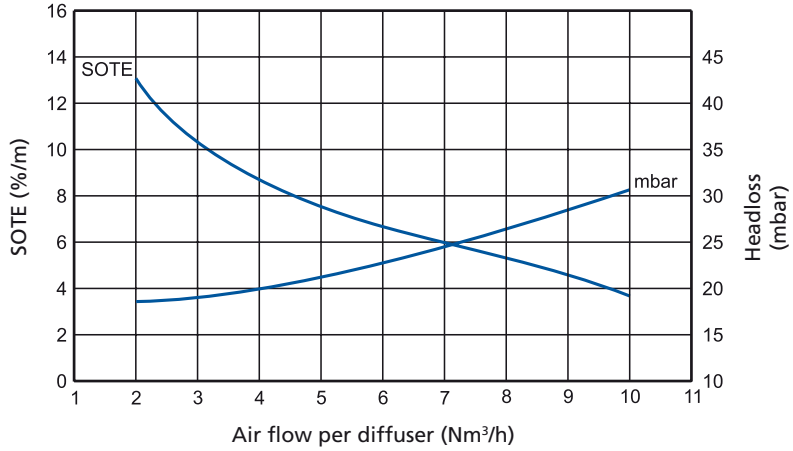
Performance

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

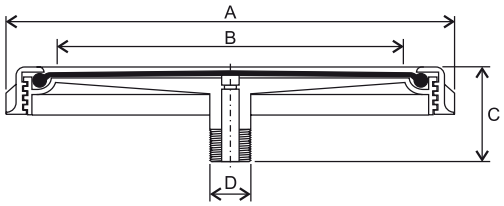
	OXYPLATE 9"	OXYPLATE 12"
Diffuser body	PP GF 30	PP GF 30
Ring-nut	PP GF 30	PP GF 30
Membrane	EPDM LP / SILICONE	EPDM LP

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

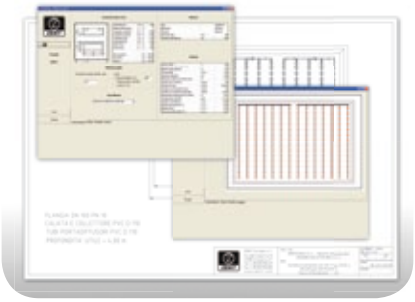
ZENIT is able to design and build complete aeration systems including disc-shaped diffusers and preassembled PVC air distribution networks.

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.

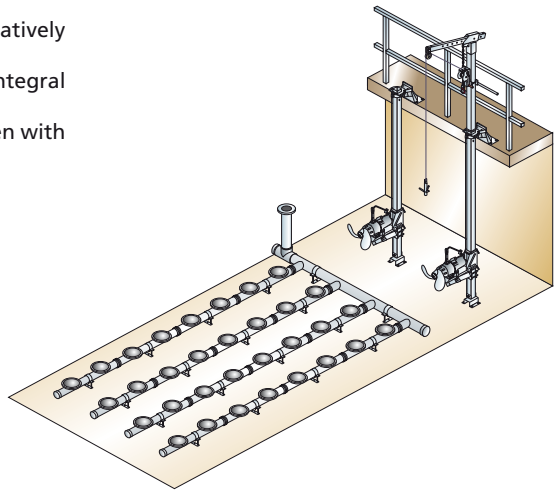


The use of dedicated software packages makes system design a quick operation, from the process to the optimal layout, through to cost analysis and generation of the bill of materials.

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

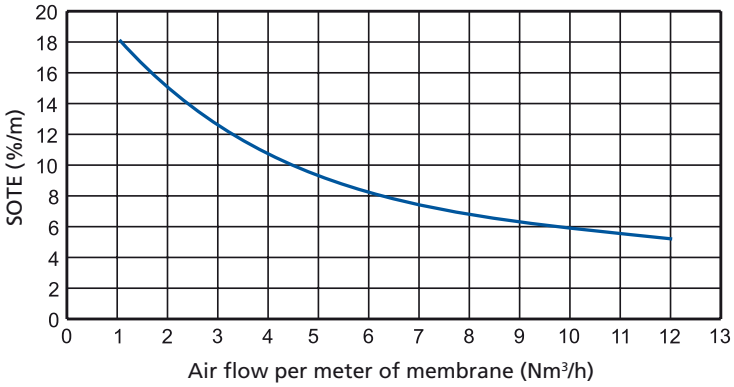


All product images are indicative only

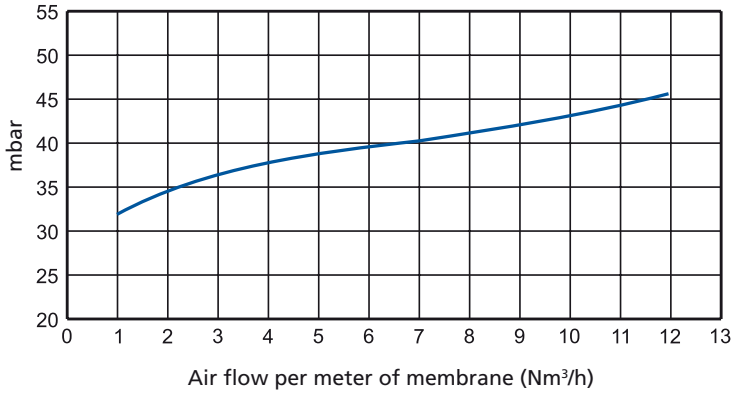
Description and applications

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.

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

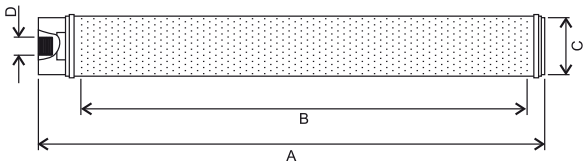
Membrane	EPDM LP / SILICONE
Support	PP
Head	PP GF 30
Band clamps	V2A (stainless steel 1.4301 – AISI 304)
Gasket	EPDM th. 4 mm
Connector	V2A (stainless steel 1.4301 – AISI 304)

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

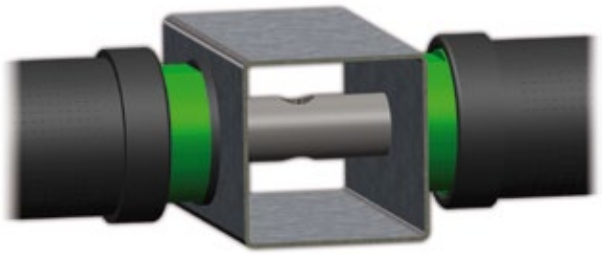


Accessories and components

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.

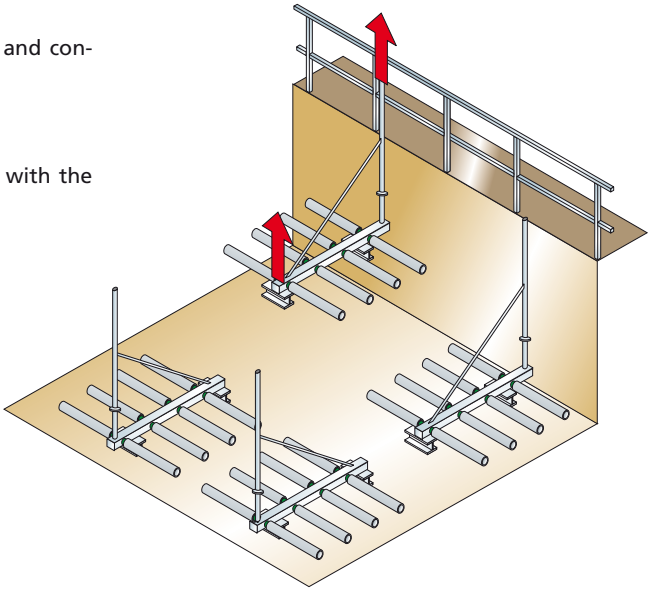
Lifting systems

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 assembles are therefore easy to remove and install with the tank full and in operation.



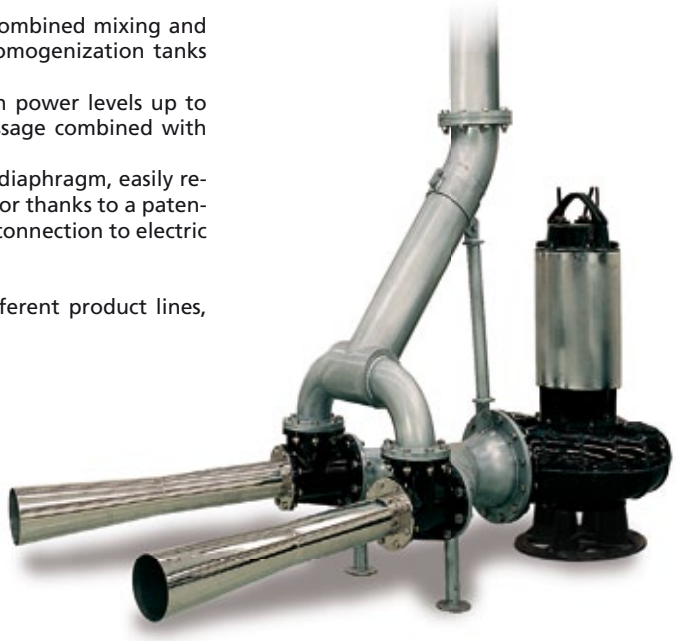


2.2 SUBMERGED AERATORS

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.

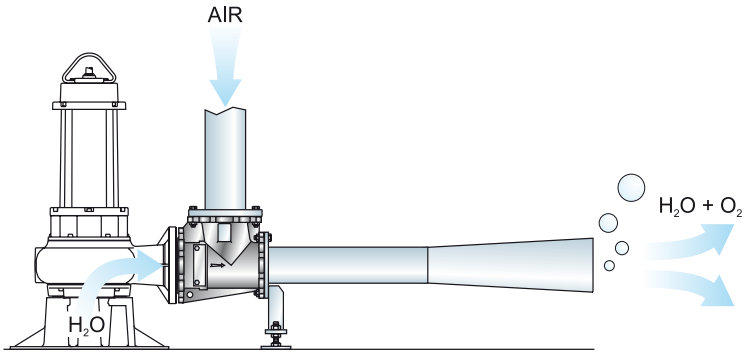


All product images are indicative only

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.



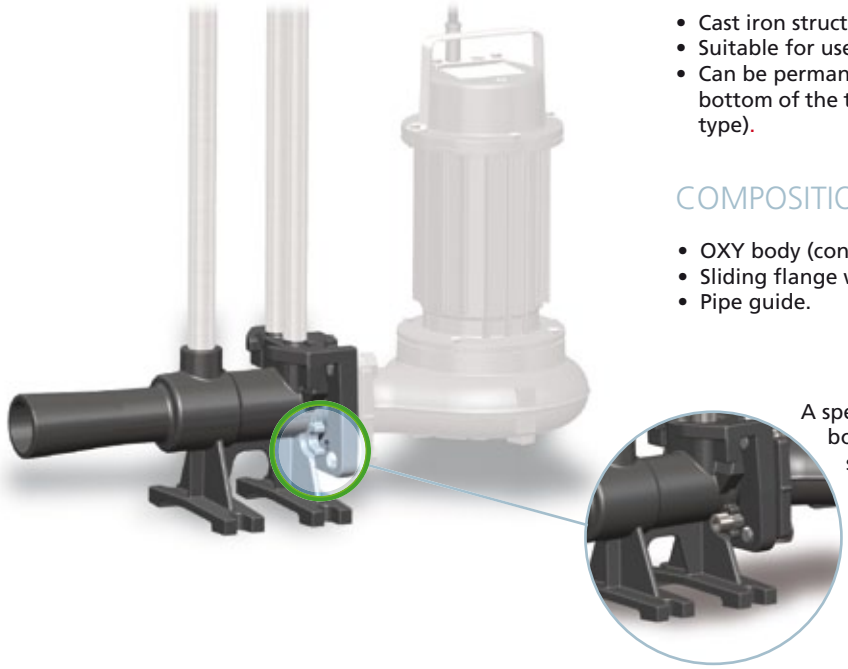
2.2.1 OXY

Key to product codes

OXY 8055

- Product family
- Flange size
- Diaphragm diameter

OXY 50



CHARACTERISTICS

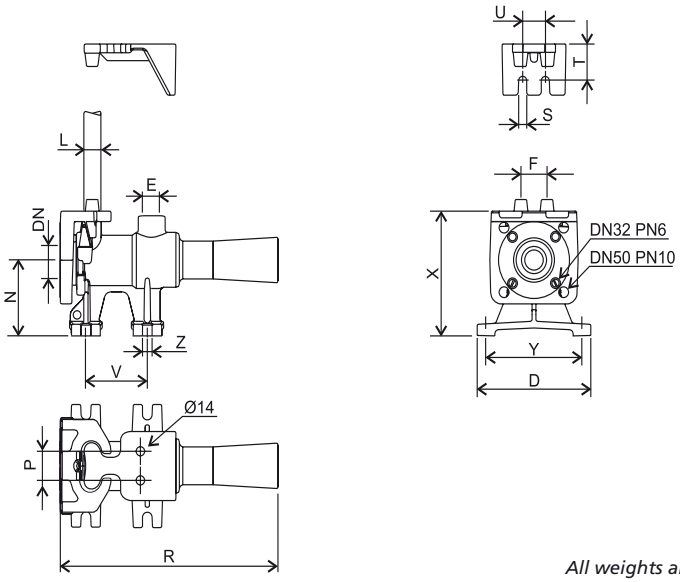
- Cast iron structure (GJL-250);
- Suitable for use with DRO and DGO pumps;
- Can be permanently coupled to the pump or mounted on the bottom of the tank using the automatic coupling system (DAC type).

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

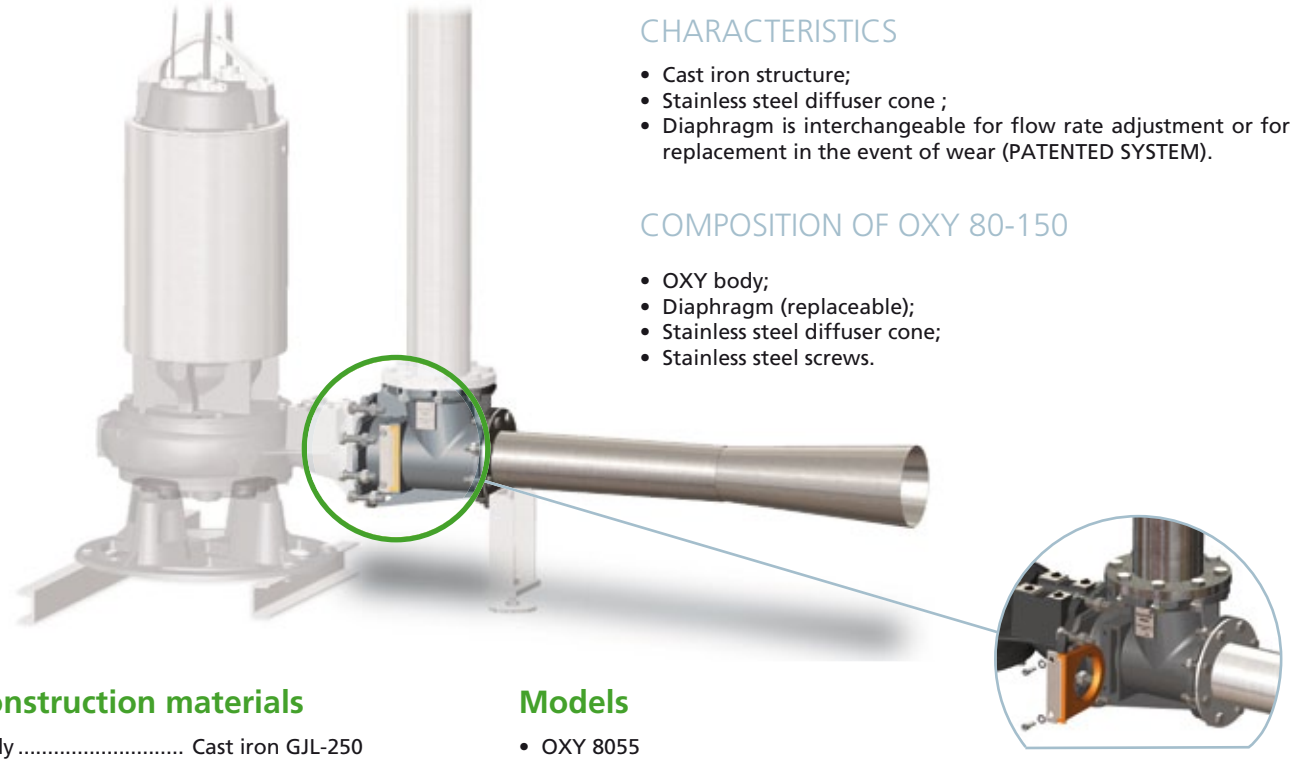
Models

- 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

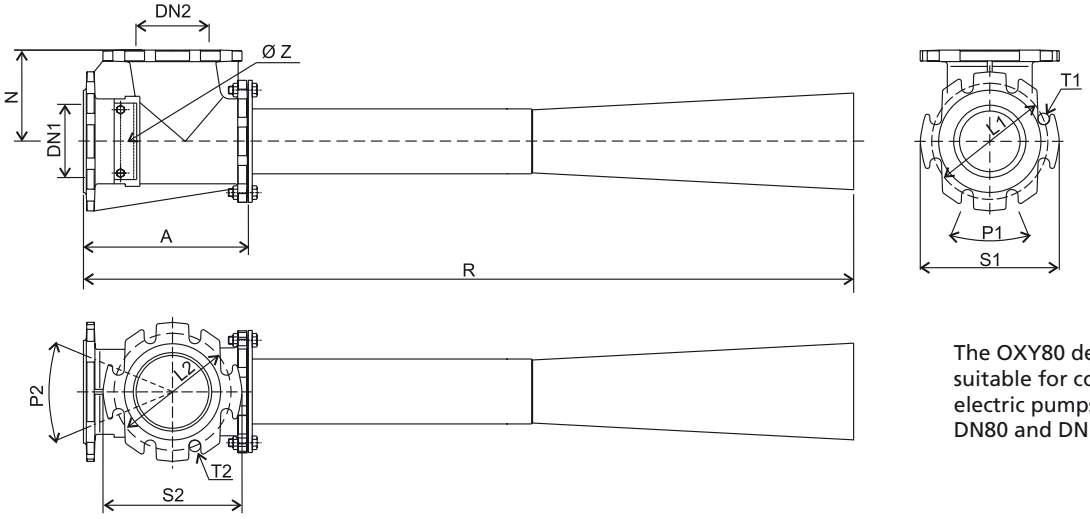
Body	Cast iron GJL-250
Diffuser cone	AISI 304 Stainless Steel
Diaphragm	Vulkollan
Nuts and bolts	A2 steel
Paintwork	Environment-friendly epoxy-vinyl

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.

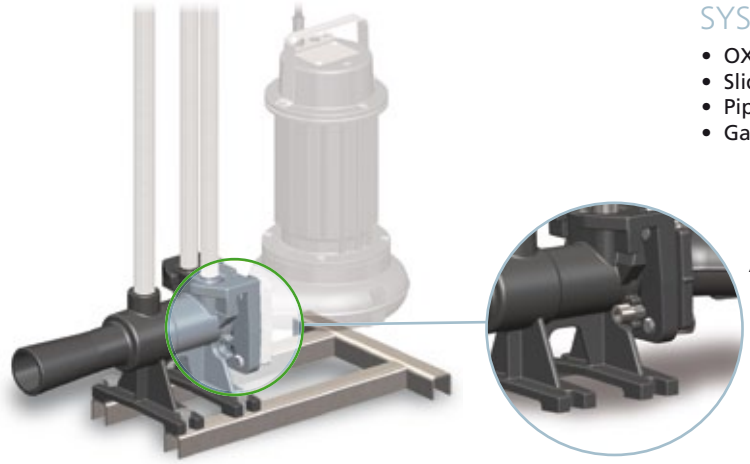
	Z	A	DN1	DN2	L1	L2	N	P1	P2	R	S1	S2	T1	T2	Kg
OXY 8055	55	250	80-100	100	160-180	180	145	45°-90°	45°	1000	200	220	17	20	19
OXY 8063	63	250	80-100	100	160-180	180	145	45°-90°	45°	1000	200	220	17	20	19
OXY 15080	80	340	150	150	240	240	190	45°	45°	1500	285	285	24	24	48
OXY 15095	95	340	150	150	240	240	190	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.

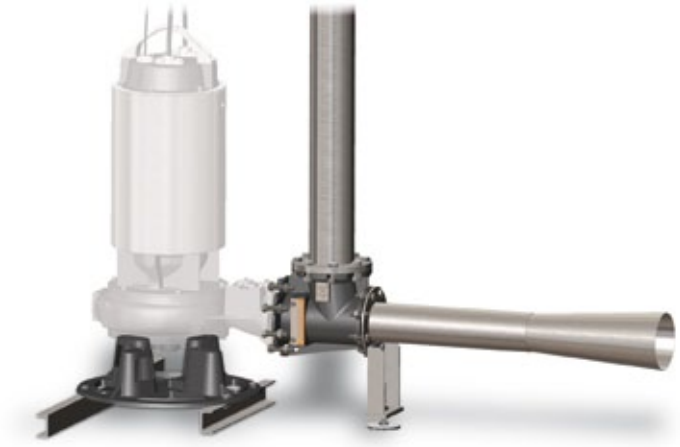
A special technical detail on the OXY body allows mechanical fixing (using screws) between the ejector output flange and the sliding flange connected to the pump, creating a rigid system even suitable for mobile installation.

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

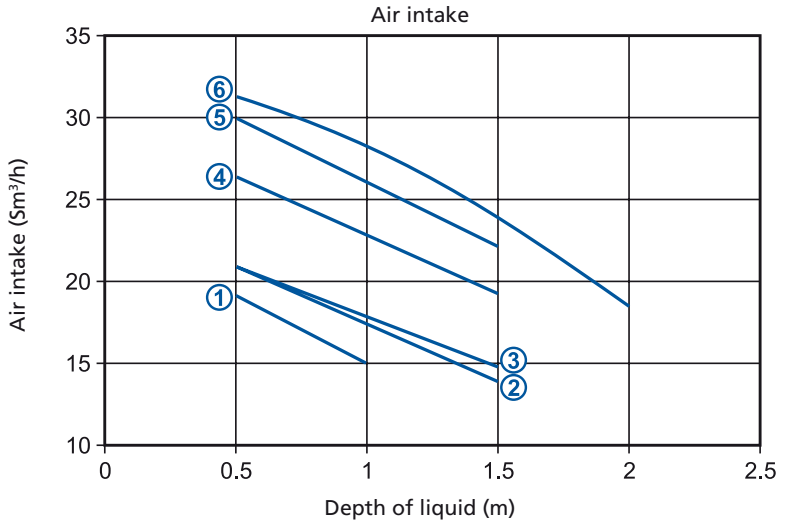


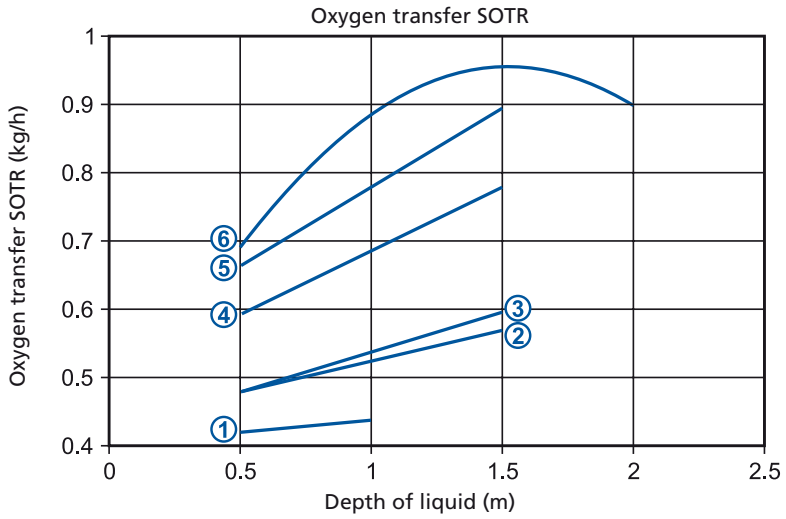
JETOXY 50 SYSTEMS include a Venturi-type ejector coupled to a submersible electric pump rated from 0.37 to 1.5 kW with open multi-channel or vortex impeller.
JETOXY SYSTEM models can be selected on the basis of the performance curve best suited to requirements, optimizing consumption.

Application

Fish farms, small water treatment tanks, holding pits.

Performance of models with DG hydraulic units for sewage liquids

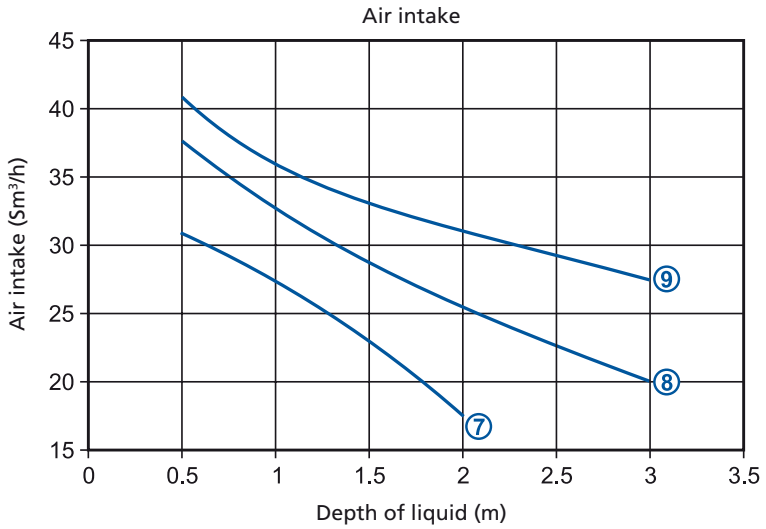


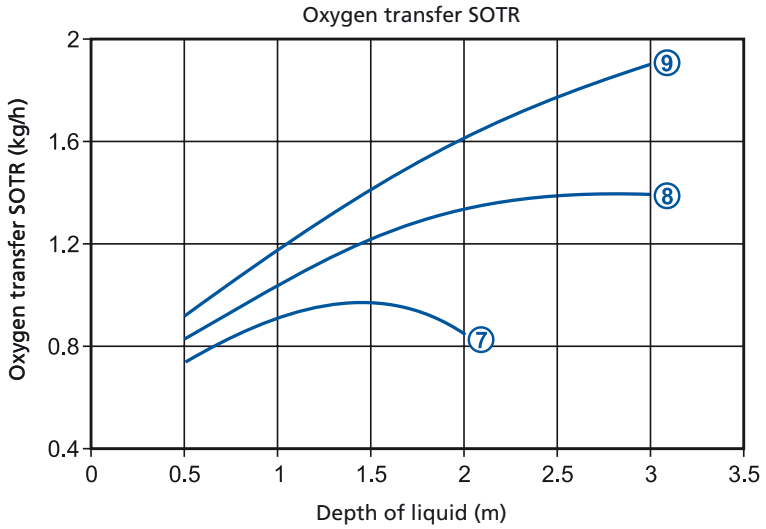


Curve	Model	Ejector			Electric pump			
		No.	Type	ø diaphragm (mm)	Model	kW	A	Poles
1	J-OXY 1 DGO 50/2	1	5027	27	DGO 50/2/G50H A	0.37	0.94	2
2	J-OXY 1 DGO 75/2	1	5027	27	DGO 75/2/G50H A	0.55	1.4	2
3	J-OXY 1 DGO 100/4	1	5027	27	DGO 100/4/G50H A	0.63	1.9	4
4	J-OXY 1 DGO 100/2	1	5027	27	DGO 100/2/G50H A	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

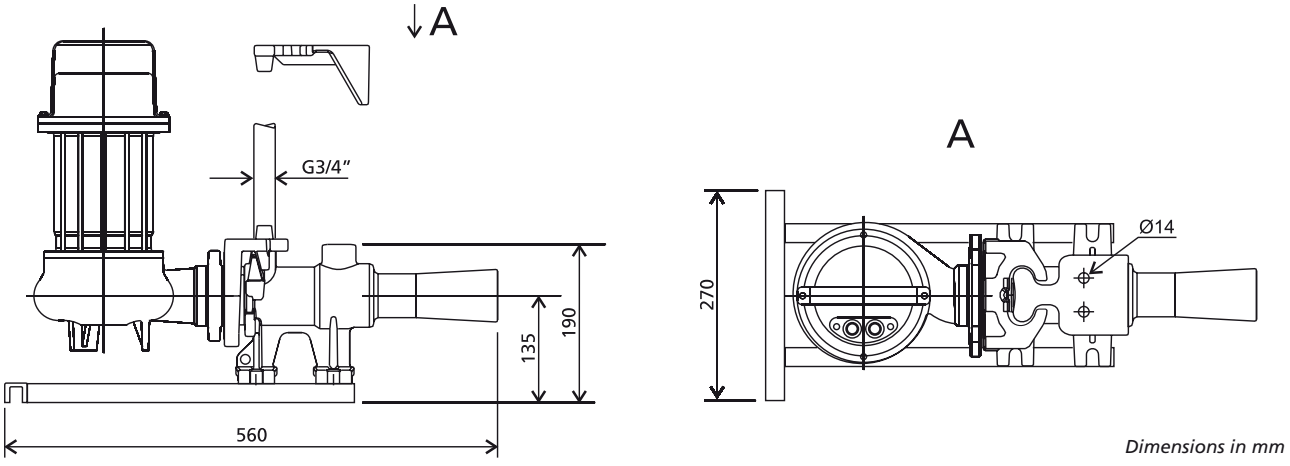




Curve	Model	Ejector			Electric pump			
		No.	Type	Ø diaphragm (mm)	Model	kW	A	Poles
7	J-OXY 1 DRO 100/2	1	5027	27	DRO 100/2/G50H A	0.88	2.3	2
8	J-OXY 1 DRO 150/2	1	5027	27	DRO 150/2/G50H A	1.1	2.7	2
9	J-OXY 1 DRO 200/2	1	5027	27	DRO 200/2/G50H A	1.5	3.6	2

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.

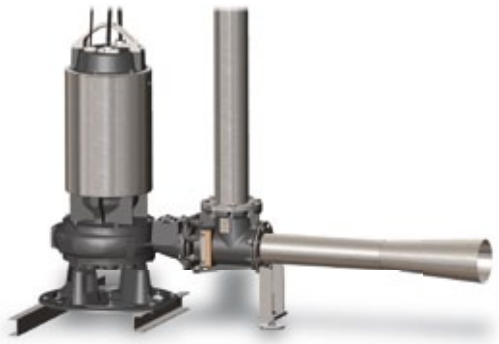
Overall dimensions



Dimensions in mm

JETOXY 80÷300

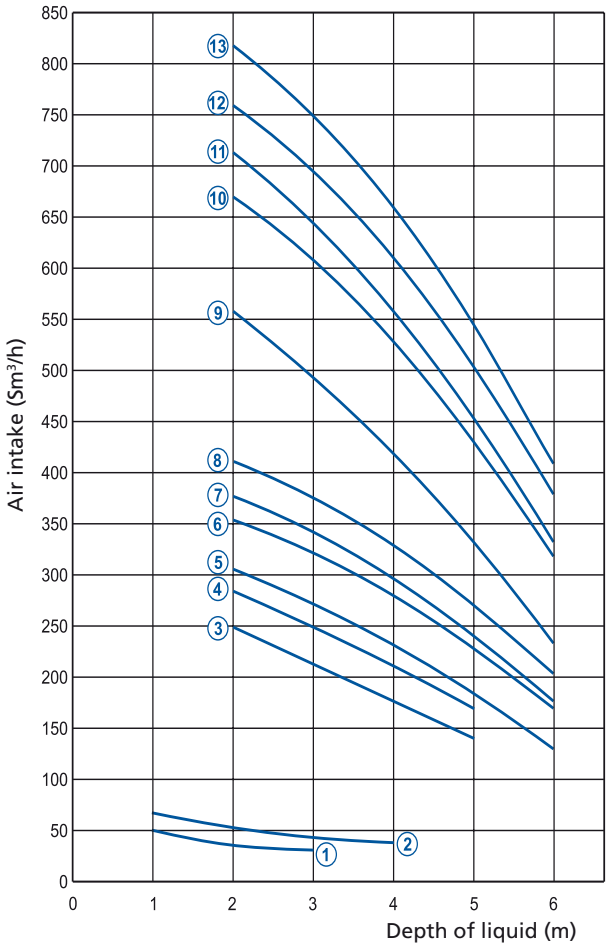
JETOXY 80÷300 units include one or more Venturi-type ejectors with replaceable diaphragm coupled to a submersible electric pump rated from 2.2 to 30 kW . Open multi-channel, open single-channel, and closed single or dual-channel impellers may be used depending on the type of liquid to be processed.



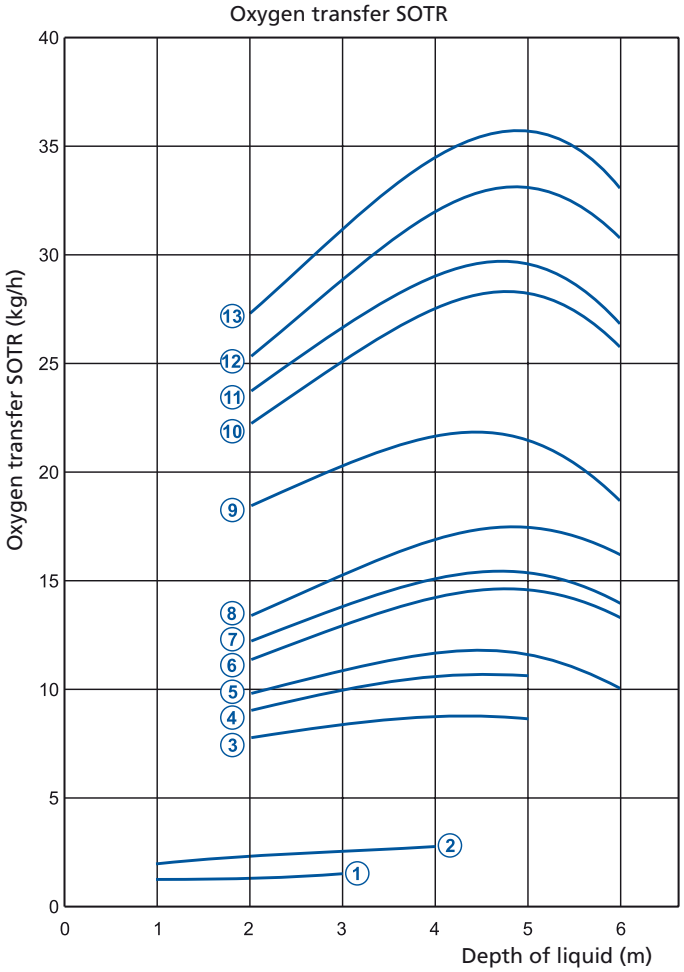
Application

Holding, homogenization and stabilization tanks, storm water retention tanks, oxidation tanks.

Air intake



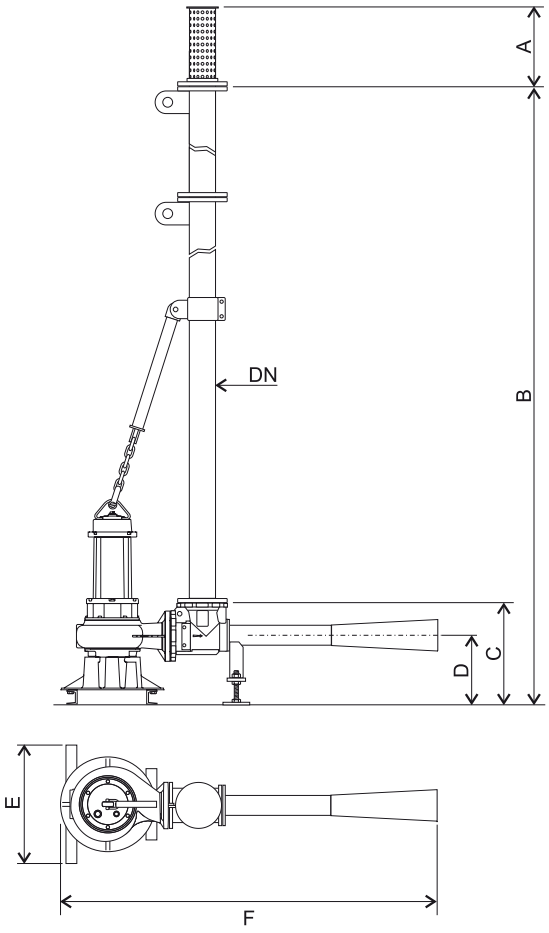
Oxygen transfer SOTR

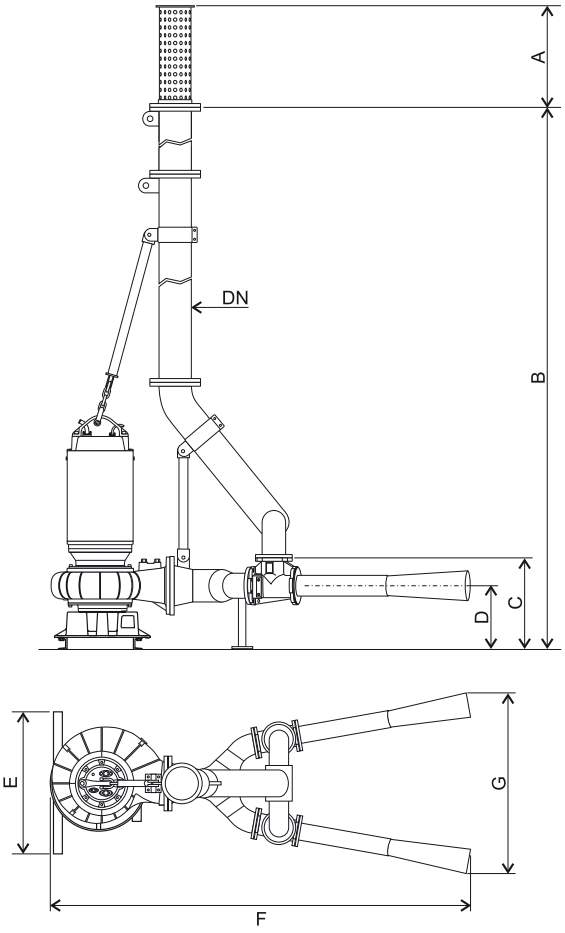


Curve	Model	Ejector			Electric pump					Air intake pipe		Power **
		No.	Type	Ø diaphragm	Model	P1 (kW)	P2 (kW)	A	Poles	max L. (m)*	DN (mm)	P1 (kW)
1	J-OXY 1/35 MAN 300/4	1	8055	55	MAN 300/4/80 A	2.9	2.2	5.8	4	3.5	100	2.8
2	J-OXY 1/35 MAN 400/4	1	8055	55	MAN 400/4/80 A	3.8	3.0	7.3	4	3.5	100	3.3
3	J-OXY 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	
	A	C	D	E	F	G	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	
	A	C	D	E	F	G	DN	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:

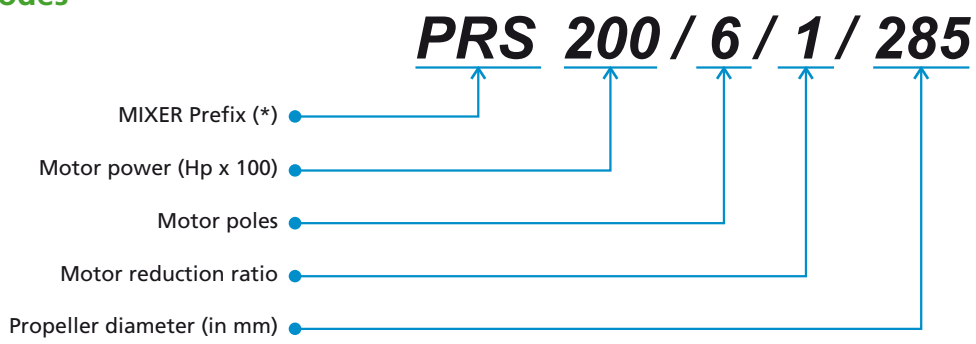
- shape, size and geometry of the tank;
- material and friction level of tank walls;
- items generating resistance inside the tank (pipelines, aerators, etc.);
- distance between the mixer propeller and the walls of the tank;
- the type of liquid for treatment and its specific weight;
- distance between 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

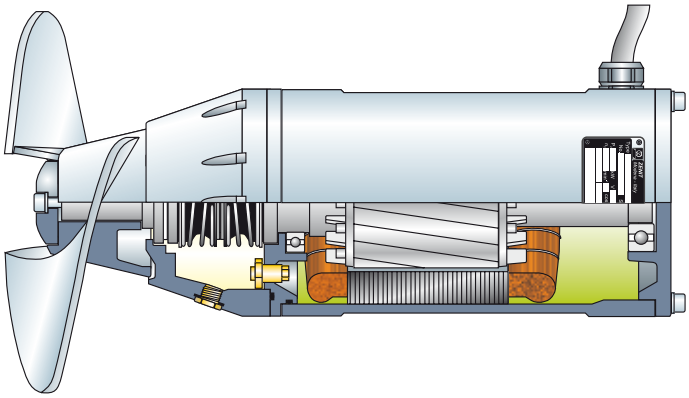
Submerged mixers



All product images are indicative only

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.

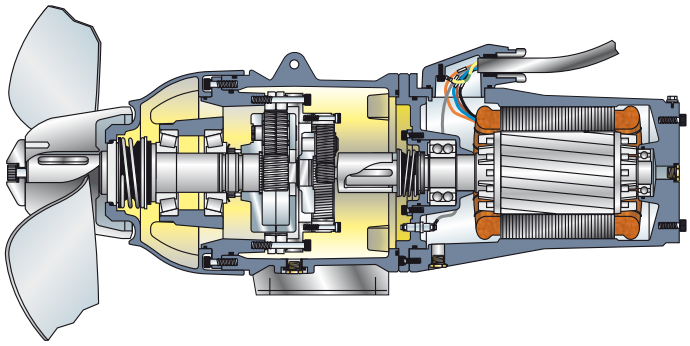


PRS

- 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.



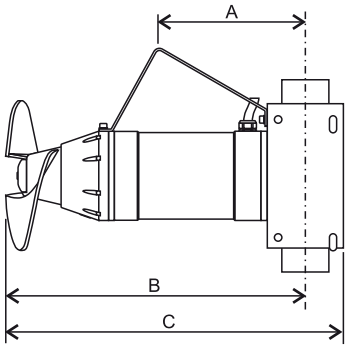
PRO

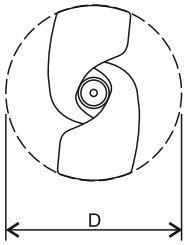
- Cast iron structure;
- Propeller in Fe 510 iron (AISI 316 stainless steel optional);
- Motors from 1.1 to 15 kW, with 4 poles;
- From 222 to 350 rpm, transmission with reduction gear;
- Suitable for applications with max 12% solid content.

Technical characteristics

	P1	P2	current						propeller			
	(kW)	(kW)	operating	startup	poles	start	cable	rpm	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



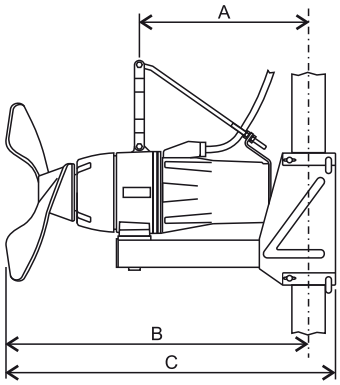


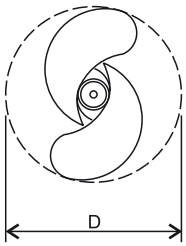
	A	B	C	D	Kg
PRS 200/6/1/285	260	585	670	285	59
PRS 300/6/1/325	260	585	670	325	59
PRS 400/6/1/360	260	585	670	360	59
PRS 200/8/1/380	250	577	660	380	66
PRS 350/8/1/440	250	577	660	440	67

	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

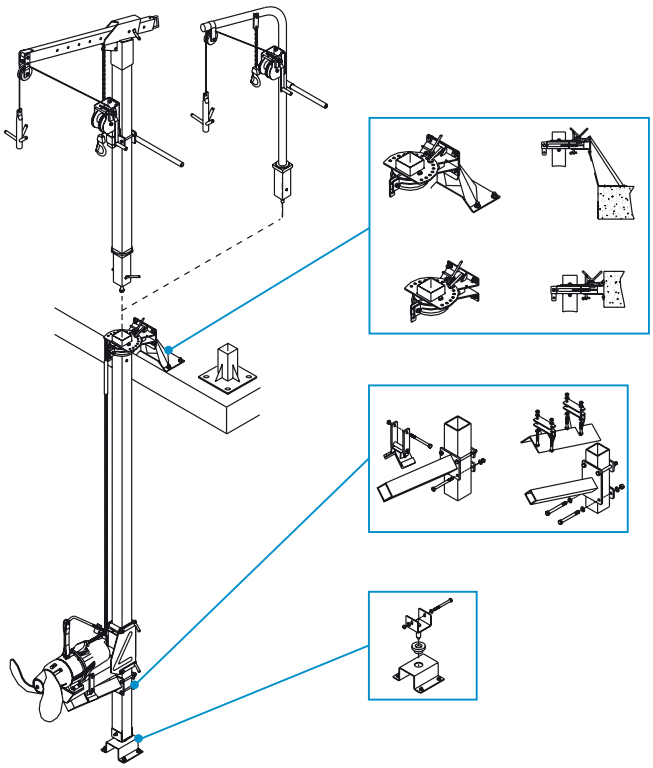
All weights and dimensions are indicative only

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

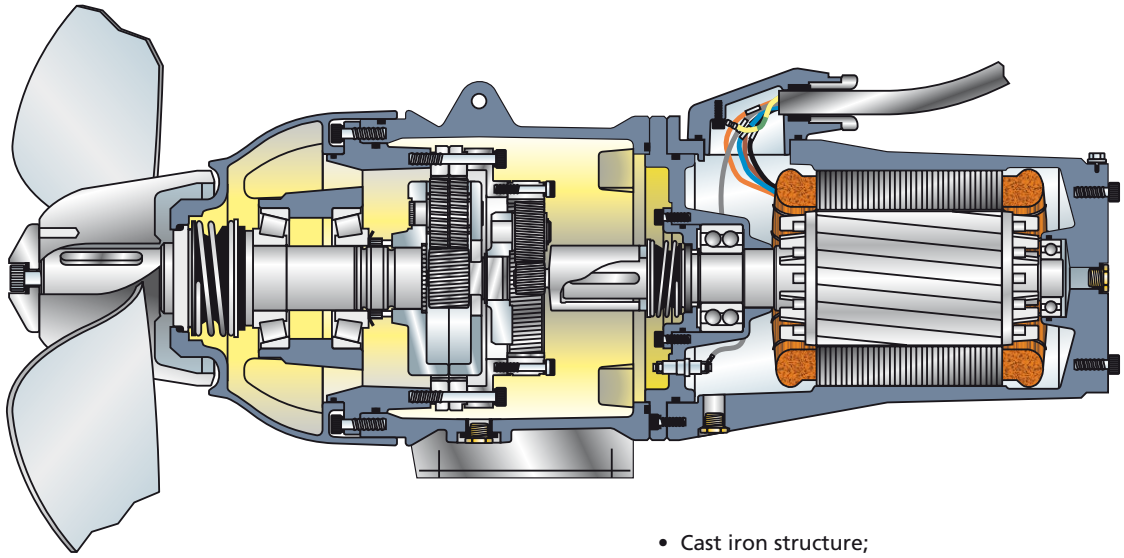
Flow-maker



All product images are indicative only

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.

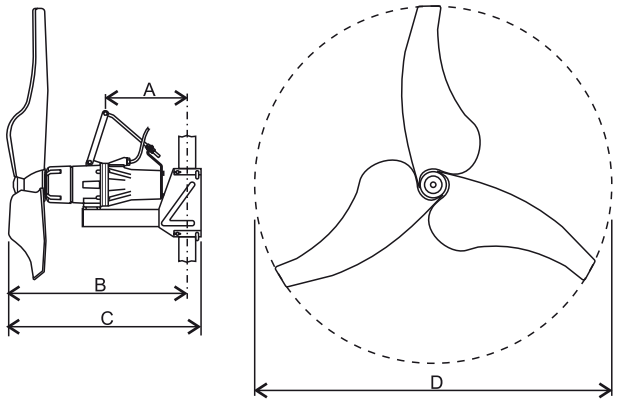


- Cast iron structure;
- Propeller in AISI 316;
- Motors from 0.8 to 5.5 kW, with 4-6 poles;
- From 27 to 148 rpm, transmission with reduction gear;
- Suitable for applications with max 1 or 3% solid content.

Technical characteristics

	P1	P2	current						propeller			
	(kW)	(kW)	operating	startup	poles	start	cable	rpm	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



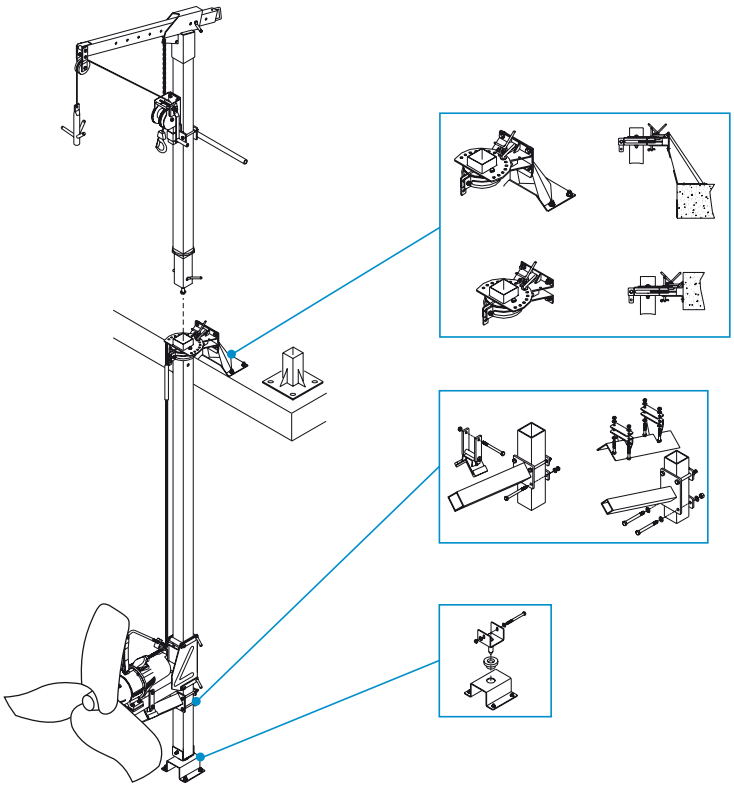
	A	B	C	D	Kg
PRO 100/6/7/620	460	893	975	620	137
PRO 150/6/7/660	460	893	975	660	137
PRO 200/6/7/700	460	893	975	700	139
PRO 300/6/7/750	460	908	990	750	139
PRO 400/6/7/800	410	923	1005	800	143
PRO 150/4/46/1900	600	1144	1241	1900	206
PRO 200/4/46/2000	600	1144	1241	2000	207
PRO 200/6/38/1700	630	1107	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.

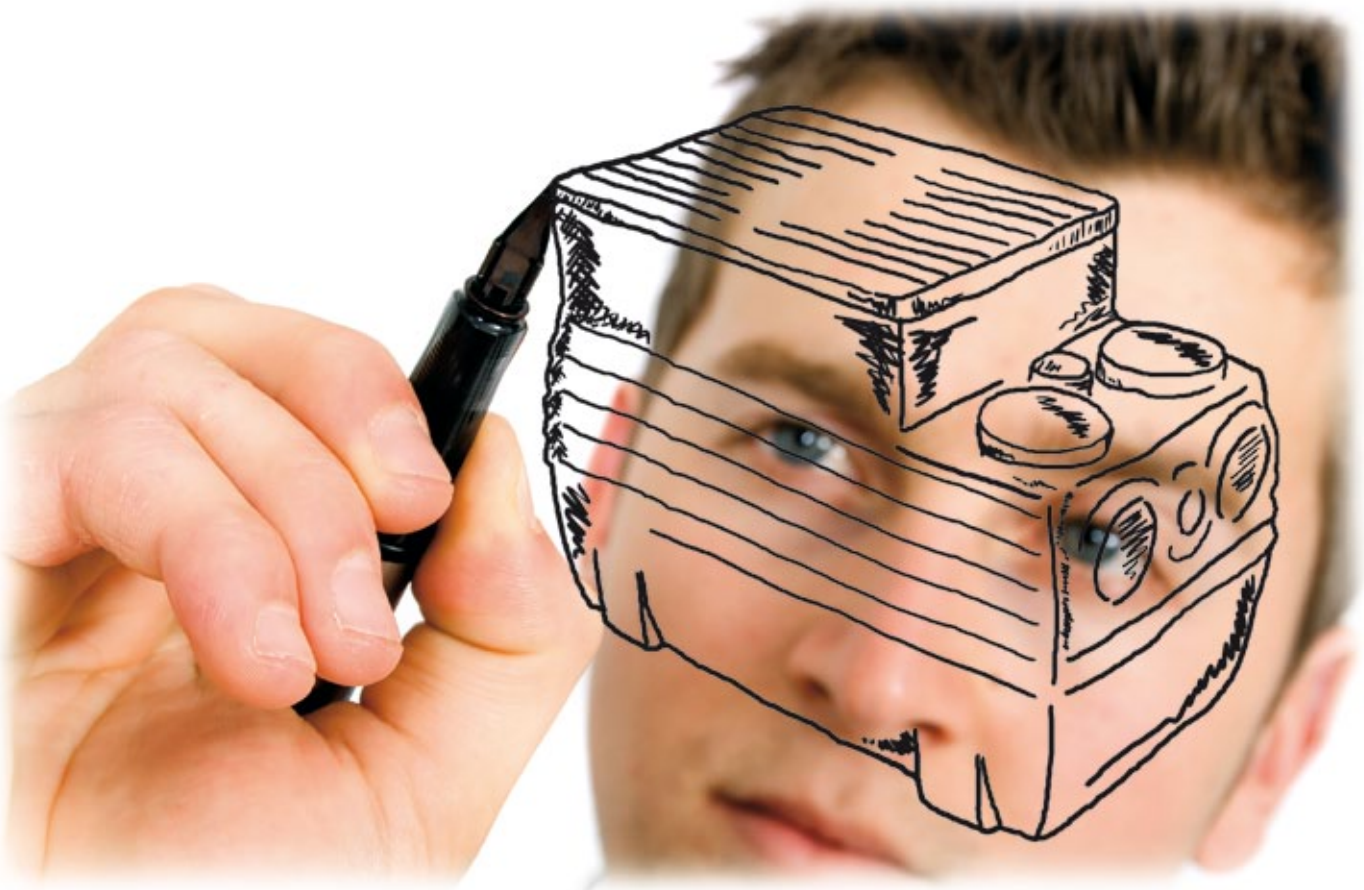




All lifting systems are built with a rugged structure to guarantee efficiency and durability.
An additional advantage comes from full dismantlability into individual pieces, allowing the system to be assembled even without lifting equipment.
Thanks to a special connection on the top, all Zenit posts 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



All product images are indicative only

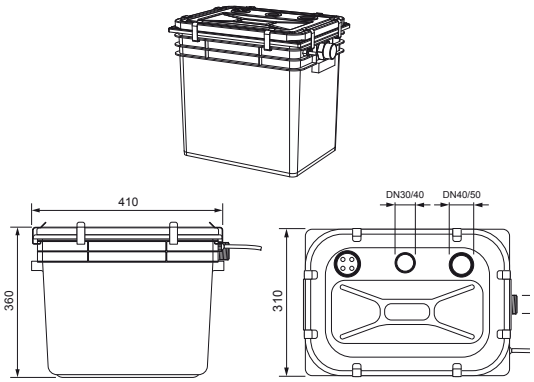
nanoBOX is a high quality polyethylene tank intended for collecting water exclusively from domestic drains, including washing machines, showers and sinks (not suited for WC's). The tank has a 33 L maximum capacity and is supplied with a Zenit Steel series submersible pump already installed.
Thanks to 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).

Features

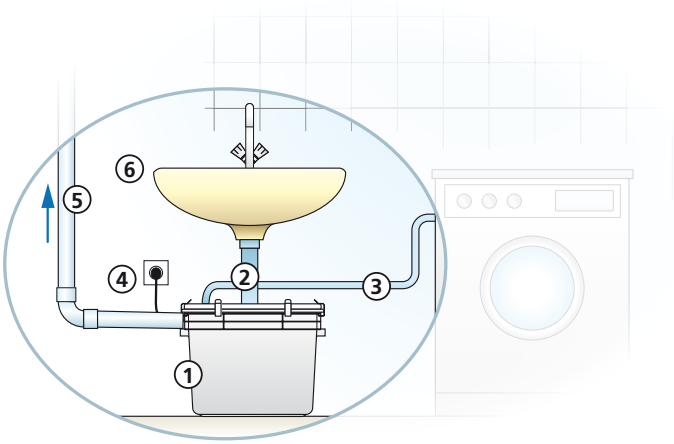
Capacity (L)*	33
Weight (Kg)	8 (Dr-Steel 25/2) - 8.7 (DR-Steel 37/2)
Nr. of pumps	1
Voltage	220/240V ~1,50Hz
Protection	IP68
Inlet/Outlet	1 x DN30, 1 x DN40 / DN32 (male thread)
Start	Automatic with floatswitch
C° max water	35°C (for short periods up to 75°C)
Free passage	10 mm



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 (kW)	A	Rpm	Ø	Free 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

**For more information, see the Steel section in this catalog.

	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 (m)	*8.5*	7.0	5.7	4.0	1.3	
	13.6	11.6	9.5	7.0	4.5	1.9

blueBOX



All product images are indicative only

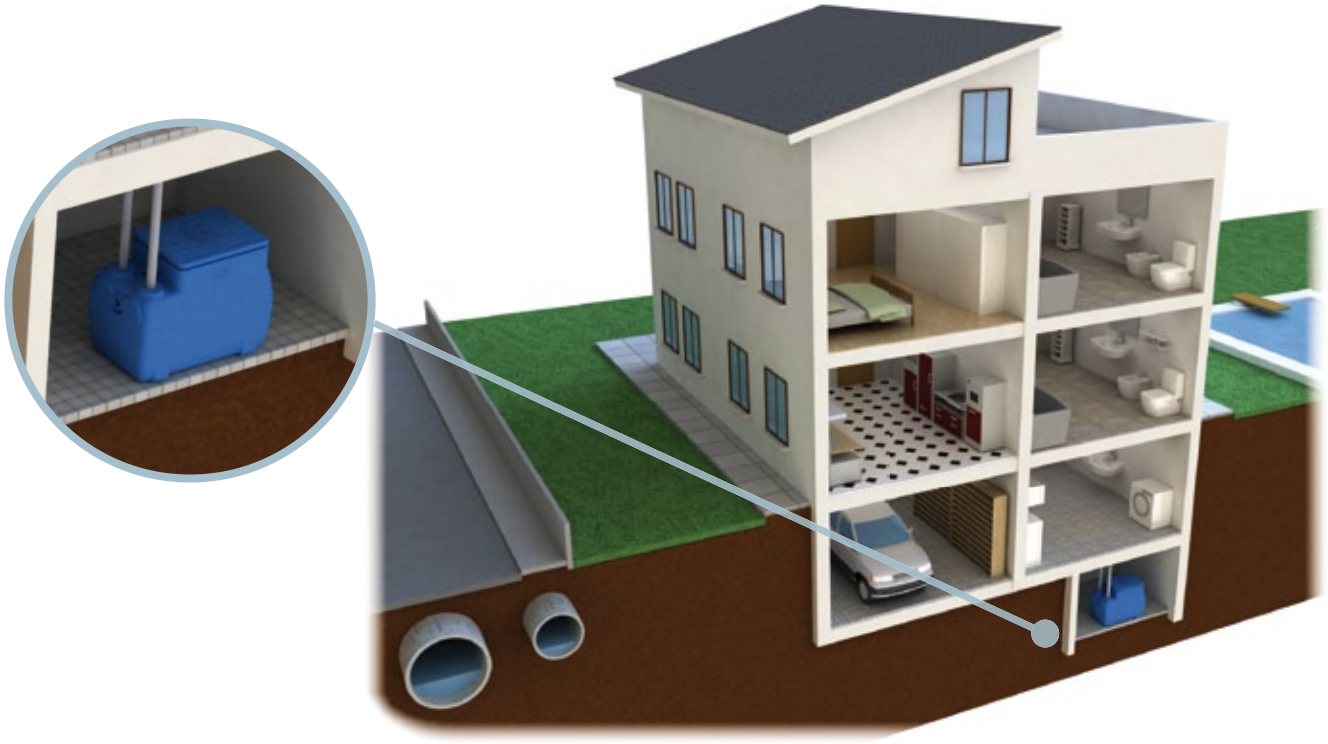
The **BlueBOX** series consists of high quality rotary moulded polyethylene tanks for collecting white and black waste water.

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.

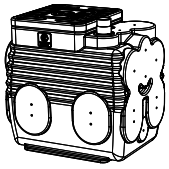
Operation and Use

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*

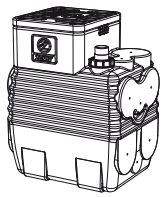
BluBOX stations are suitable for collecting and lifting clear, rain and waste water from washing machines, sinks and WCs in systems installed at a lower level than the sewer, in locations such as garages or basements. The 60, 90 and 150 litre models are compact and easy to install, making them ideal 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)

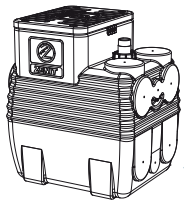
Including: cable gland, PVC delivery pipe** Ø 1½", emergency draining connector, gasket kit for inlet pipe 1xØ110, 1x75, 1x50 mm, nr.1 special support to reduce the float switch level. Overflow alarm level OPTIONAL.



90L

Capacity (l)	90
Dimensions (mm)	480x370x610
Nr. of pumps	1
Operation temperature	40°C (90°C short time)
Recommended pumps	DG Blue, GRBluePRO

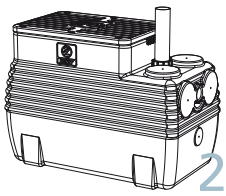
Including: cable gland, PVC delivery pipe** Ø 1½", emergency draining connector, gasket kit for inlet pipe 1xØ110, 1x75, 1x50 mm, nr.1 special support to reduce the float switch level. Overflow alarm level OPTIONAL.



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

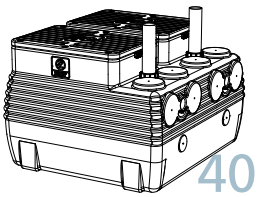
Including: cable gland, PVC delivery pipe** Ø 1½", emergency draining connector, gasket kit for inlet pipes 2xØ110, 1xØ75 and 1xØ50 mm, nr.1 special support to reduce the float switch level. Overflow alarm level OPTIONAL.



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.

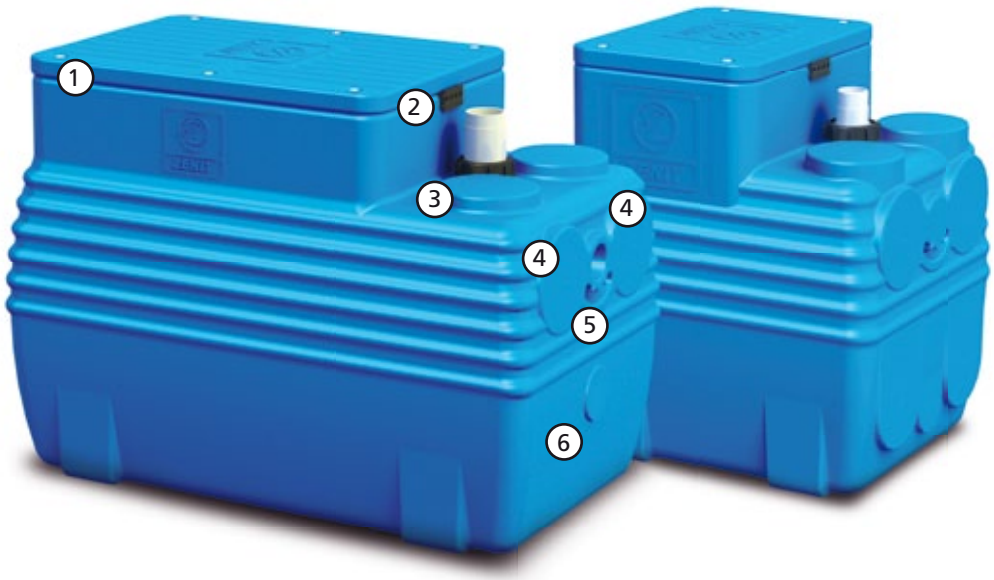
* *Dimension in mm - Data without pump and accessories - All weights and dimensions are indicative only - The capacity is guideline and refers to the maximum volume capacity before the contents overflow from the tank.*

** *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



Sturdy walk-over cover
The large top opening allows a backup pump to be used for emergency emptying, ensuring operations are simple and hygienic.



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).



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.



Wastewater pipeline inlet ports also provided on sides.



Two integral handles for lifting and transport, for easy transfer even by hand.



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" DN32 PN6	-	•	•	•	•	•
GR BluePRO 150/2/G40H A1CM/50	230	1	1.1	7.5	2900	G 1½" DN32 PN6	-				•	•
GR BluePRO 200/2/G40H A1CM/50	230	1	1.5	10.0	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 A1CT/50	400	3	1.1	3.2	2900	G 1½" DN32 PN6	-				•	•
GR BluePRO 200/2/G40H A1CT/50	400	3	1.5	4.3	2900	G 1½" 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
	m^3/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					

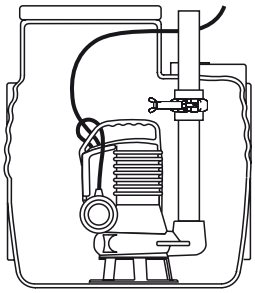
Types of installation

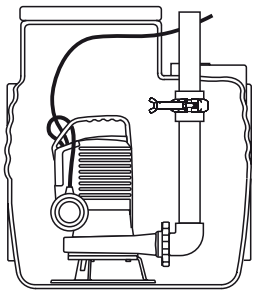
BlueBOX lifting stations can be installed on-floor or in-floor. They are prefitted for use with Zenit pumps with vortex impeller or with grinding systems, which must be ordered separately depending on the customer's specific requirements.
The large number of intake and outlet pipeline fittings allow optimal installation even on existing plants. What's more the many hydraulic and electric accessories make **BlueBOX** lifting stations convenient to install and use.

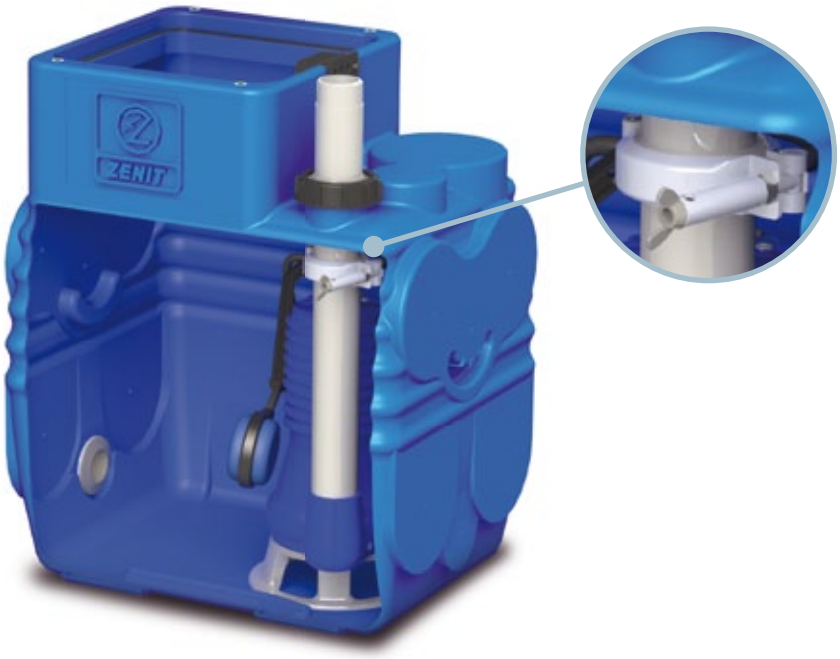
BlueBOX 60 - 90 - 150

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.



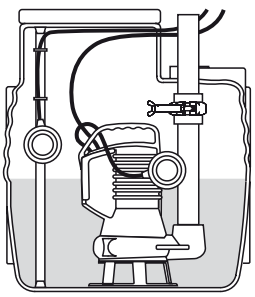


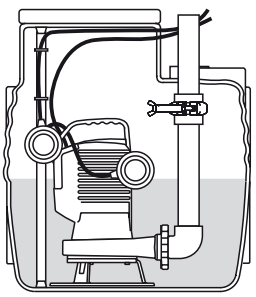


All product images are indicative only

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.



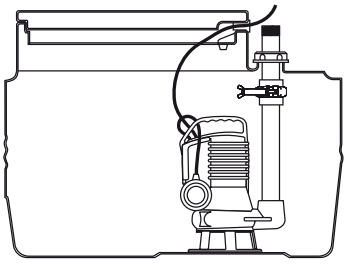


BlueBOX 250 - 400

Installations

Fixed installation

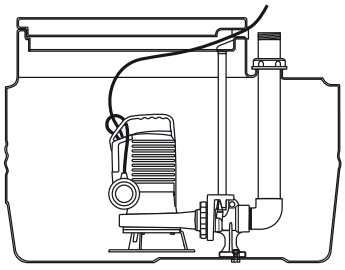
Ideal installation for pump with vertical delivery outlet up to 2½". The pump rests on the bottom of the tank. The specially shaped bottom keeps the pump in the correct position.
A ball check valve and/or a gate valve can be connected to the end of the delivery pipeline.
Permanent installation is definitely the simplest and most economical.

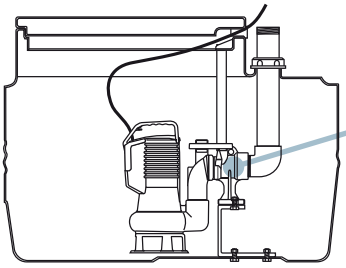


Installation with bottom coupling device (DAC)

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.

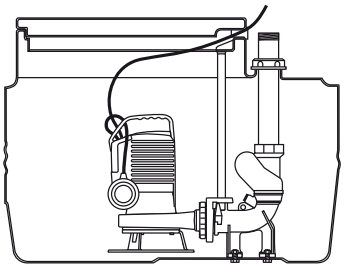






Installation with bottom coupling device (DAC) and ball valve (VAP)

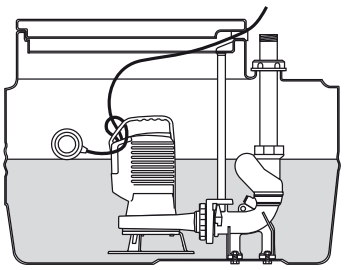
This special, compact accessory provides all the benefits of an ordinary DAC, and also, thanks to an integral venting valve, it prevents air pockets from forming inside the pump body if the unit runs dry.
Thanks to this feature, a special ball check valve can be directly connected to the outlet of the DAC inside the **BlueBOX**, ensuring compact size and removing installation constraints.



Electrical accessories

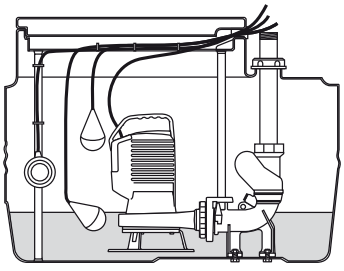
With integral float switch

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

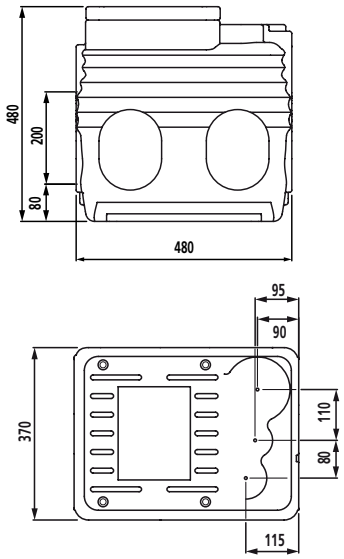
In the event of use of pumps without float switch, the **BlueBOX** lifting station must be equipped with minimum and maximum level float switches, and alarm float switch if required.
The electrical panel complete with all features required for operation of one or two pumps (**BlueBOX** 400L) and accessories such as alternating control device or alarm with buzzer and light is available on request.



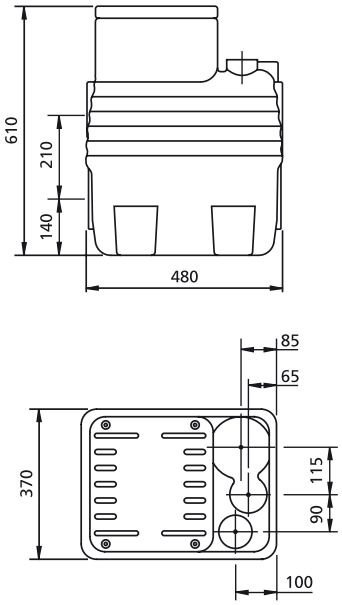
Overall dimensions and weights*

	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

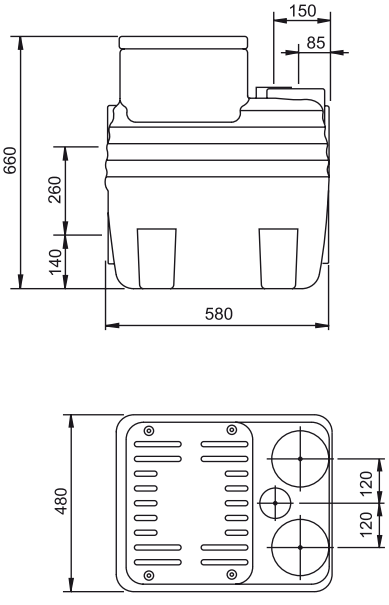
BlueBOX 60L



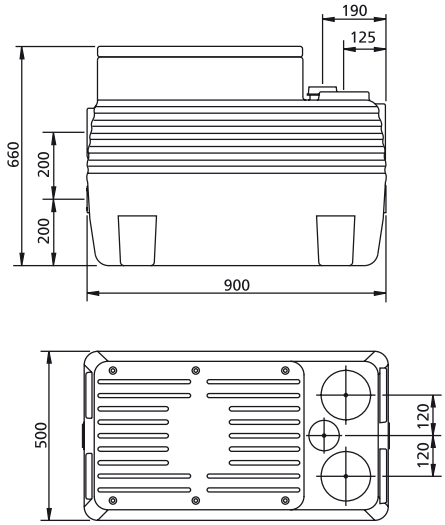
BlueBOX 90L



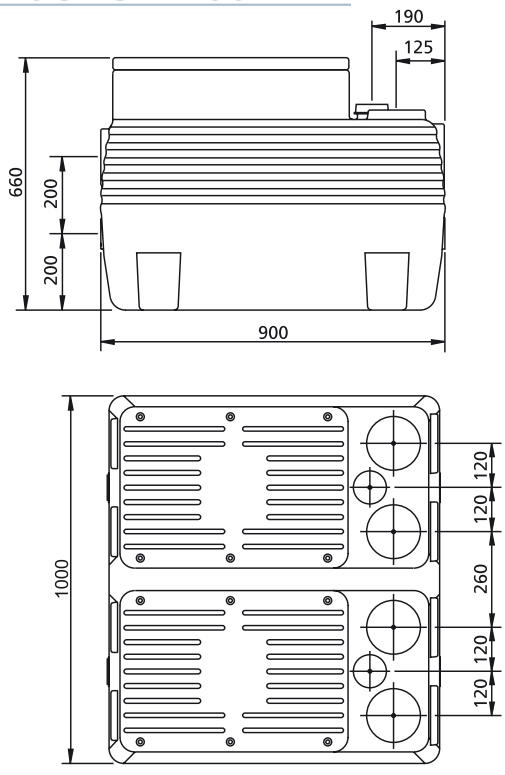
BlueBOX 150L



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.

Hygenically 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.

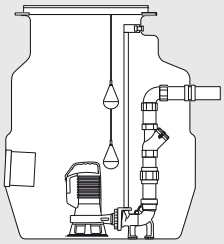
BOX PRO lifting stations can house either one or two submersible pumps with vortex, channel or grinding impellers.
The pumps must be installed with a bottom coupling system which enables them to be recovered quickly and easily, even without draining the tank.



All product images are indicative only

BlueBOX M

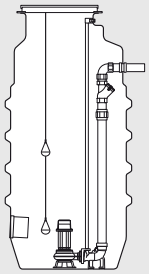
The ideal solution for small capacities from a single residence and where the available excavation depth is limited. Equipped for operation with one or two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer operation. Gate valve optional.



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

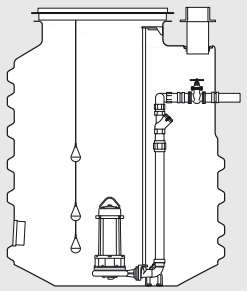
Every station has 3 inlet connections for the entry of the waste water, there are also 2 high level cable inlet connections for pump and float cables. A metal access cover are provide to suite pedestrian or highway applications.
The operation can be automated thanks to the control system using floats 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

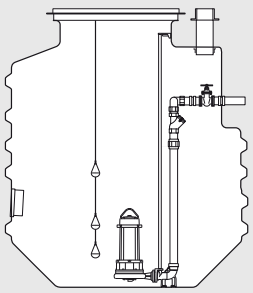
Ideal for small industrial/commercial facilities, restaurants, small hotels, retirement homes, camp sites. Larger capacities are available to special order. Equipped for operation with two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer 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

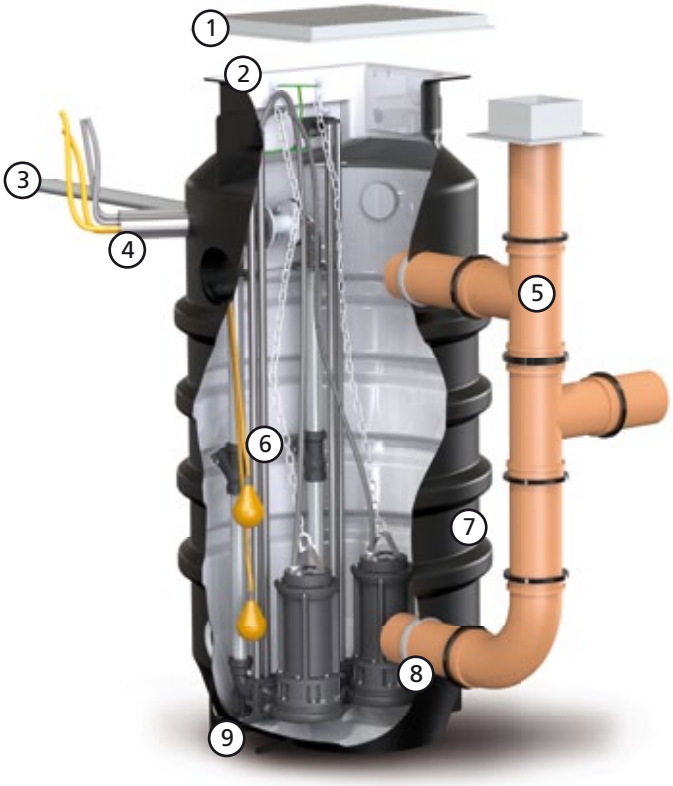
Recommended for use in large capacity applications such as hotels, hospitals and wastewater treatment plants. Equipped for operation with two Zenit submersible pumps. Operation can be automated with float switches, including overflow alarm for even safer operation.



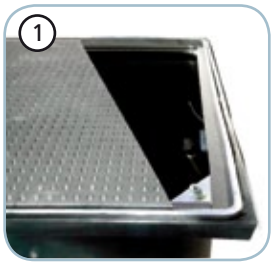
Capacity (liters)	10.000 ÷ 18.000
Dimensions (mm)	Ø2.246 - h2.520, 3.500, 4.500
Nr. of pumps	2
Operation temperature	40°C (90°C short time)
Recommended pumps	DRO, DGO, DGN, DGP, MAN, GRBluePRO, GRI, GRE, GRP, GRN, APN, APP, SMP

** 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.*

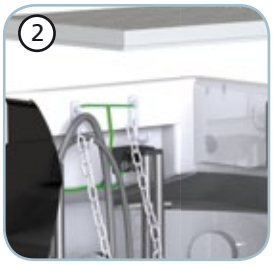
How it's made



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.



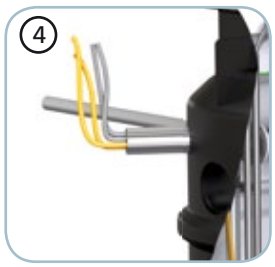
Double non-return valve (only on dual stations).



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



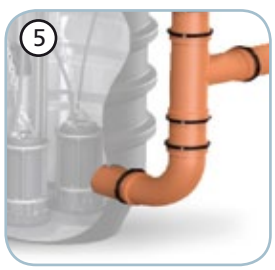
Made in "medium density" polyethylene with enhanced thickness, more resistant for construction site and low temperatures. Totally recyclable.



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.



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.



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.



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 (kW)	P2 (kW)	A	Rpm	Ø	Free 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 CHANNEL IMPELLER	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free 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 CHANNEL IMPELLER	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free 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 CHANNEL IMPELLER	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free 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 CHANNEL IMPELLER	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free 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			●	●

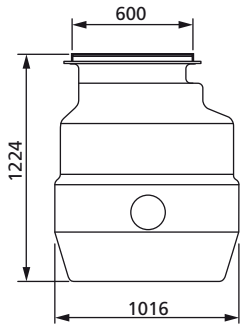
GRINDERS	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free passage	Suitable for BOX PRO			
									M	V	S	J
GR BluePRO 100/2/G40H A1CM/50	230	1	-	0.74	5.5	2900	G 1½"-DN32 PN6	-	●	●	●	●
GR BluePRO 100/2/G40H A1CT/50	400	3	-	0.74	2.7	2900	G 1½"-DN32 PN6	-	●	●	●	●
GR BluePRO 150/2/G40H A1CM/50	230	1	-	1.1	7.5	2900	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	-			●	●

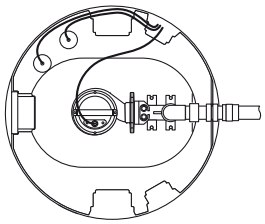
HIGH HEAD IMPELLER	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free passage	Suitable for BOX PRO			
									M	V	S	J
APN 250/2/G40H A1DM/50	230	1	2.7	1.8	12.5	2900	G 1½"-DN32 PN6	10 mm			●	●
APN 250/2/G40H A1DT/50	400	3	2.5	1.8	4.3	2900	G 1½"-DN32 PN6	10 mm			●	●

HIGH HEAD IMPELLER	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Ø	Free 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)

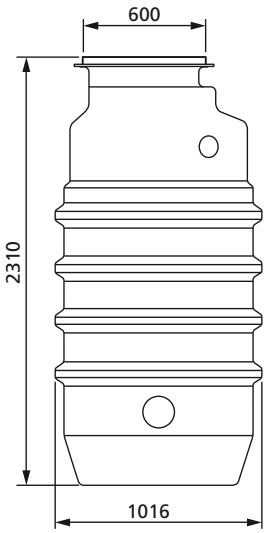
Outlet

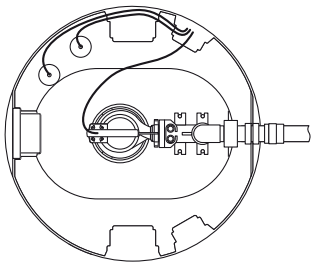
1-2 x DN50÷150

Weight

85÷175 Kg

V Type





Inlet

3 x Ø 160

2 x Ø 110 (cables)

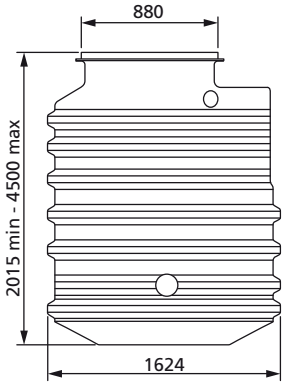
Outlet

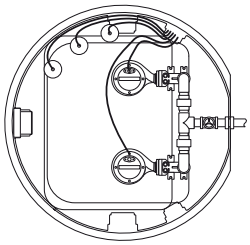
1-2 x DN50÷150

Weight

134÷235 Kg

S Type





Inlet

3 x Ø 160

2 x Ø 110 (cables)

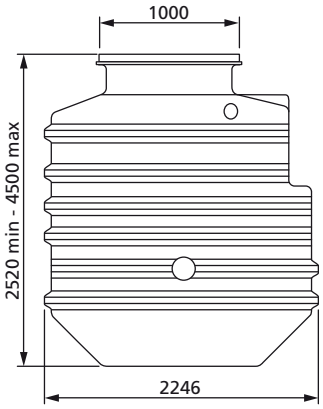
Outlet

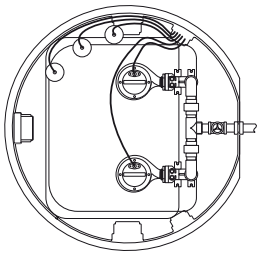
1-2 x DN50÷150

Weight

242÷839 Kg

J Type





Inlet

3 x Ø 160

2 x Ø 110 (cables)

Outlet

1-2 x DN50÷150

Weight

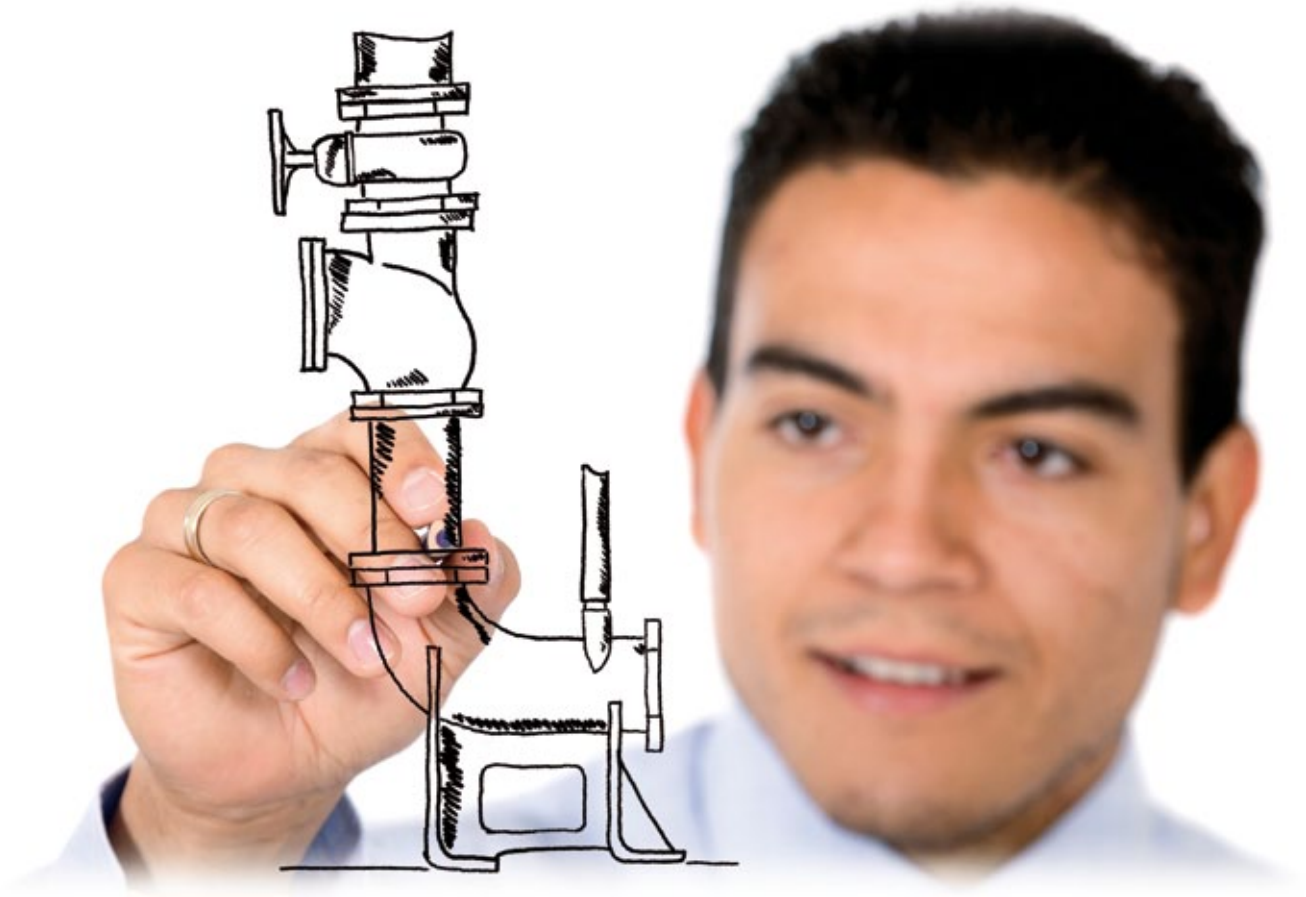
422÷1508 Kg

** 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.*


ZENIT

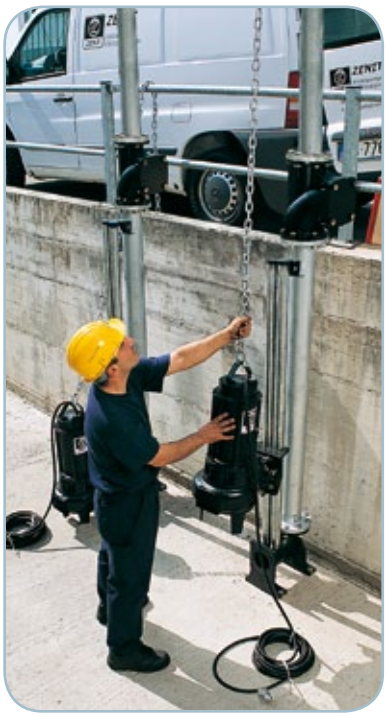
4.0

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.

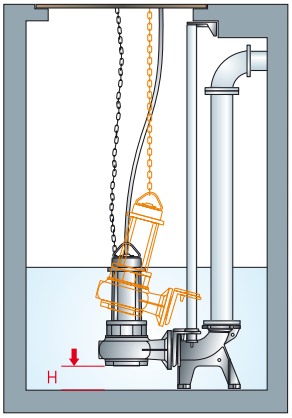


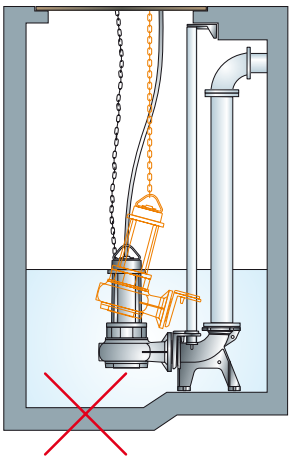
The external coupling device (DAC E), the only accessory of its type, can also be applied and used on existing plants. The unusual shape of the accessory allows the unpleasant and laborious task of tank draining to be avoided even during the installation stages.

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")

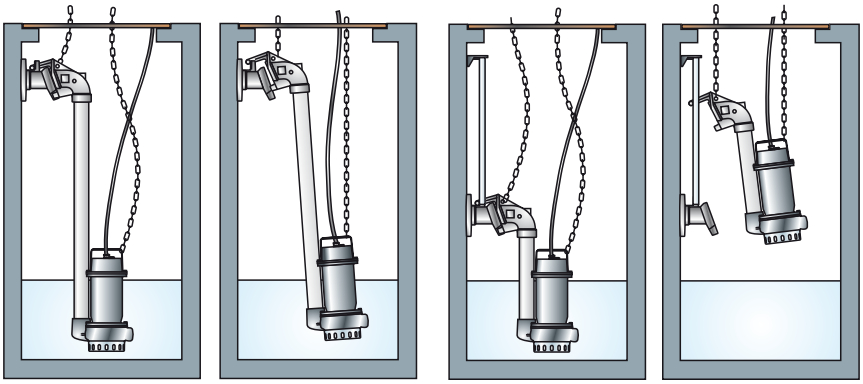
External coupling devices



All product images are indicative only

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.

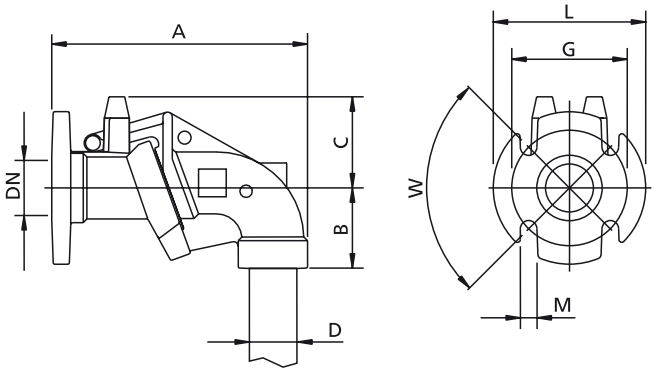


In installations in which the DAC-E needs to be fastened far from the well cover, two guide pipes (¾") may be used, which are helpful for accompanying the electric pump until it is perfectly coupled.

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

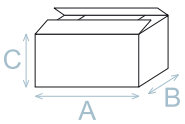
All weights and dimensions are indicative only

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.

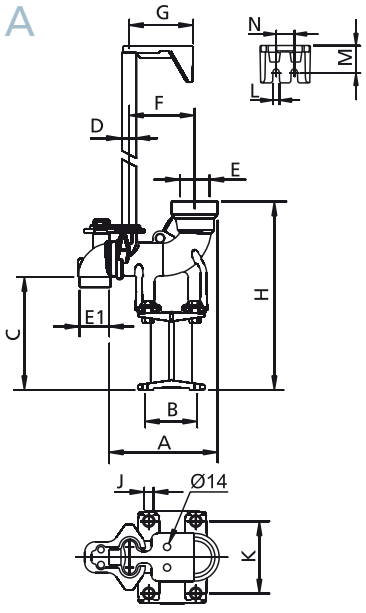
DAC-N 32-50/G50-65V..... Inlet DN32 PN6 and DN50 PN10, outlet GAS 2" and GAS 2 ½"
The accessory comes supplied with a fitting for a PE 63 (GTP) tube.

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.

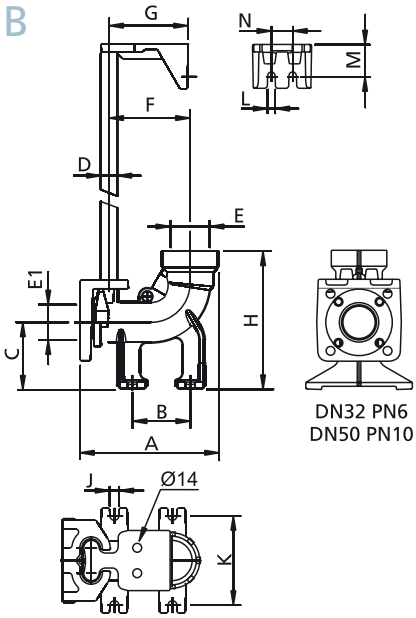
For correct operation, the DAC structure must have an automatic air release valve.

Overall dimensions and weights

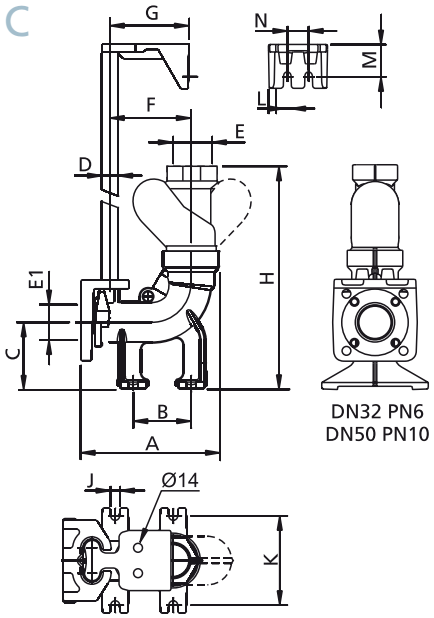
A



B



C



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

ZENIT water technology

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.

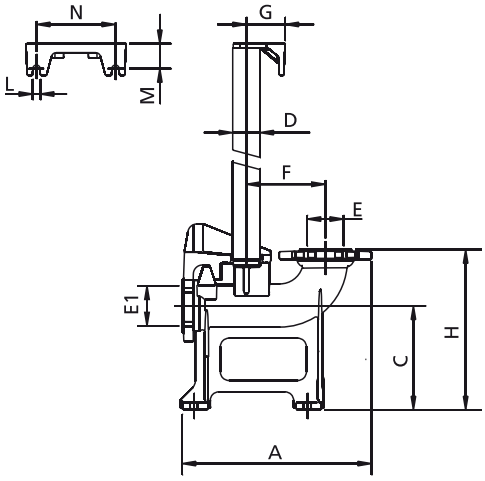


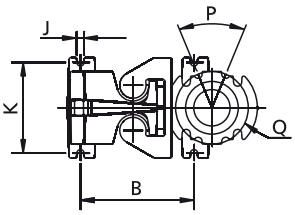
All product images are indicative only

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

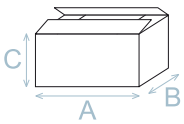
Overall dimensions and weights





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.



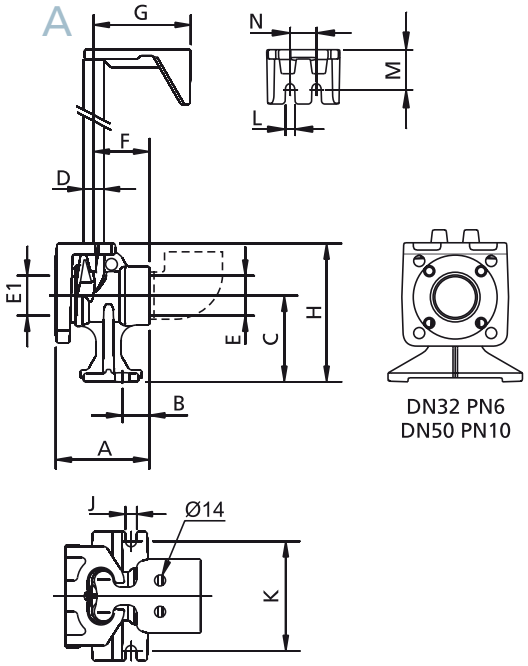
All product images are indicative only

Models

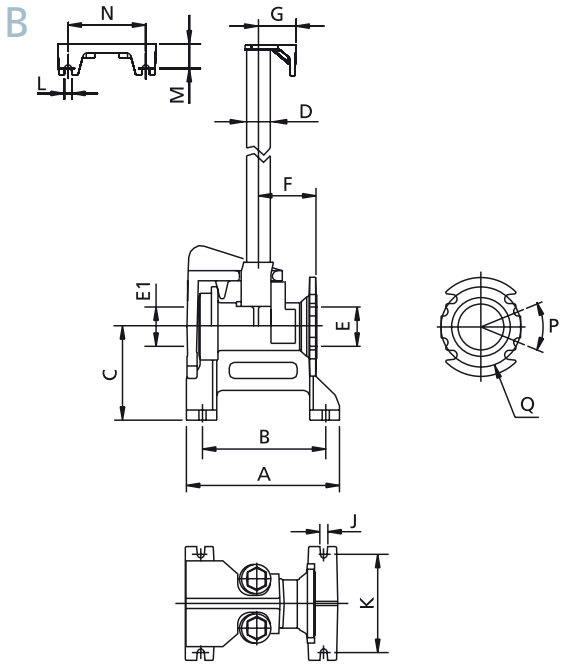
DAC-N-N 32-50/G50H ... Inlet DN32 PN6 and DN50 PN10, horizontal outlet GAS 2"
DAC-N-N 65/65H ..... Inlet DN65 PN10-16, outlet DN65 PN10-16
DAC-N-N 80/80H ..... Inlet DN80 PN10, outlet DN80 PN10-16
DAC-N-N 100/100H ..... Inlet DN100 PN10-16, outlet DN100 PN10-16
DAC-N-N 150/150H ..... Inlet DN150 PN10-16, 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



B



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

ZENIT water technology

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.



All product images are indicative only

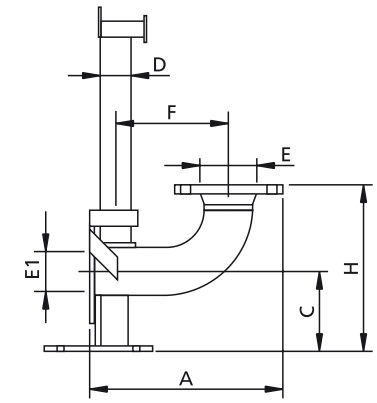
Models

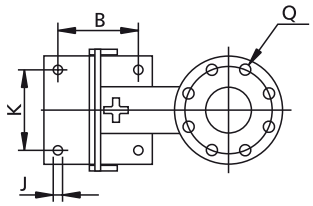
DACX-N 65/65V.....Inlet DN65 PN10, outlet DN65 PN10-16
DACX-N 80/80V.....Inlet DN80 PN10, outlet DN80 PN10-16
DACX-N 100/100V.....Inlet DN100 PN10, outlet DN100 PN10-16



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.

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

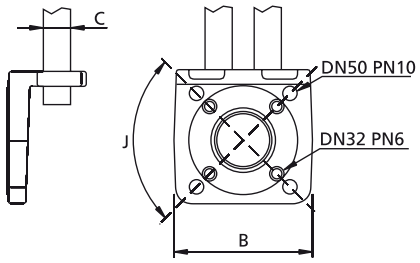
Accessories for coupling devices

A wide range of accessories for coupling devices allow any type of plant to be optimized and reduce installation times.

KAF

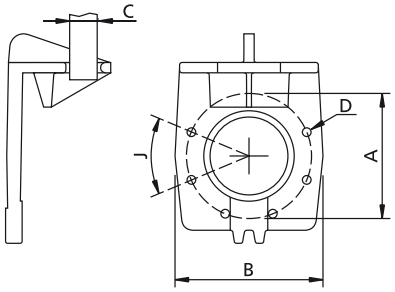
Sliding flange for:
- OXY50 (KAF 32-50);
- DAC H (check the dimensions of KAF for correct coupling);
- DAC V (check the dimensions of KAF for correct coupling).

This accessory can be coupled to Flygt devices.
(pay special attention to the diameter of the guide pipes, letter C in the table)

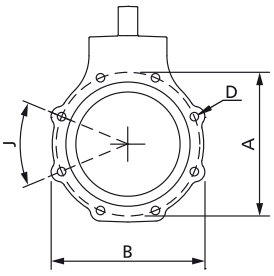


	Flange	B	C	D	J
KAF 32-50	32 PN6-50 PN10	130	¾"	M12-M16	90°

Dimensions in mm



KAF 65 - 80 - 100



KAF 150 - 200 - 250

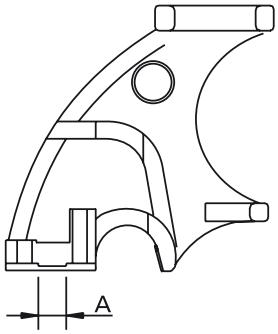
	A	B	C	D	J
KAF 65	145	160	2"	M16	90°
KAF 80	160	160	2"	M16	90°
KAF 100	180	210	2"	M16	45°
KAF 150	240	260	2"	M20	45°
KAF 200	295	315	2"	M20	45°
KAF 250	350	390	2"	M20	30°

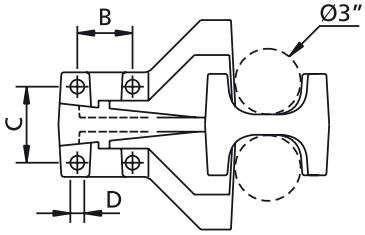
Dimensions in mm *All weights and dimensions are indicative only*

- 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*

ZENIT water technology

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.

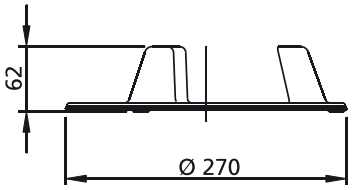
CAST IRON BASE PLATES

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





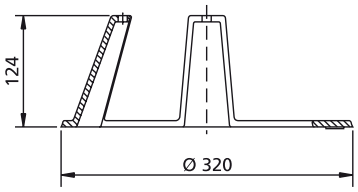
All product images are indicative only

9024.006

Cast iron 3 spoke base plate for free installation. Suitable for the following models:

- DGI 100/4/80
- DGF 100/4/65-80
- DGN 250-300/2/G65V-65-80
- DGN 300-400-550/2/65-80
- DRN 250-300/2/65-80
- MAI 100/4/80
- MAN 250-300/2/G65V-65-80
- MAF 100/4/65-80
- GRF 150-200/2/G40H
- GRN 250/2/G40H
- GRN 300-400-550/2/G50H
- GRP 750/2/G50H
- APF 150-200/2/G40H
- APN 250/2/G40H
- APN 300-400-550/2/G50H
- APP 750-1000/2/G50H





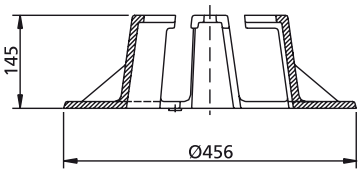
All product images are indicative only

9024.007

Cast iron 4 spoke base plate for free installation. Suitable for the following models:

- DGN 200-300-400/4/65-80-100
- DGN 150/6/65-80-100
- DGN 250/6/80-100-150
- DRN 400-550/2/65-80-100; 200-300-400/4/80-100; 150/6/80-100; 250/6/100-150
- DRF 100/4/65-80-100
- DRN 200-300-400/4/80-100
- DRN 150/6/80-100
- DRN 250/6/100-150
- MAN 400-550/2/100
- MAN 200-300-400/4/80-100
- MAN 400-550/2/65-80
- MAN 150/6/80-100
- MAN 250/6/80-100-150
- MAF 100/4/100





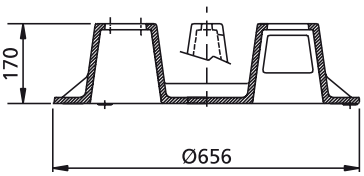
All product images are indicative only

9024.009

Cast iron 4 spoke base plate for free installation. Suitable for the following models:

- SMN 3000/4/150-200-250
- SMP 750/6/200-250
- SMP 2000/4/200-250
- SBN 3000/4/150-200-250
- SBN 4000/4/150-200-250
- SBN 5000/4/150-200-250
- SBN 2500/6/150-250-300
- SBN 3000/6/250-300
- SBP 1000-1500/6/200-250





All product images are indicative only

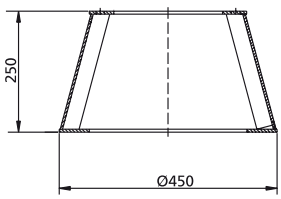
GALVANISED IRON BASE PLATES

9024.008

Hot-galvanised steel base plate. Suitable for the following models:

- GRN 300-400/4/80-100





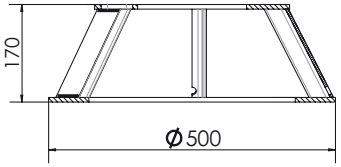
All product images are indicative only

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



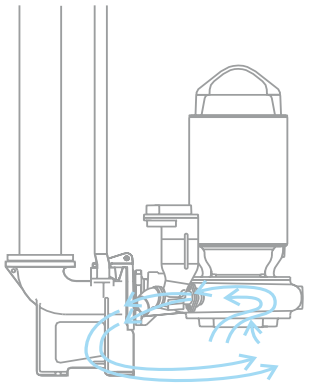


All product images are indicative only

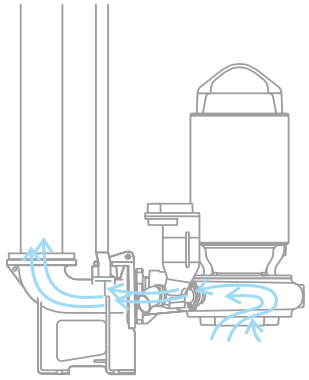
4.2 Flushing valve

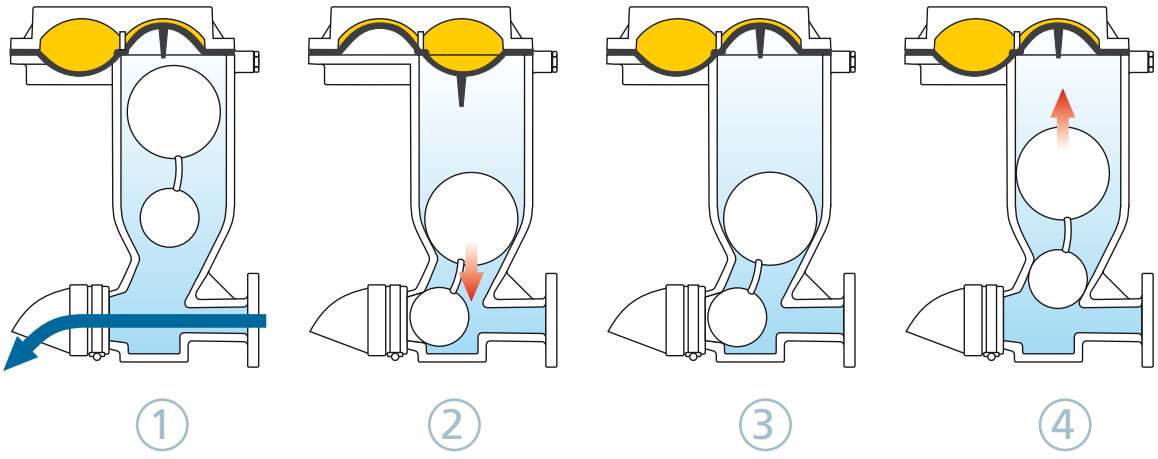
Sediments often form in lifting stations which collect the wastewater from drain systems. Over time, the solids tend to compact on the bottom and sides of the tank, reducing its volume, and when they break away they very often foul the pump. A specific operation, involving a lengthy, expensive system 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



All product images are indicative only

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 ..... Nitryl 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

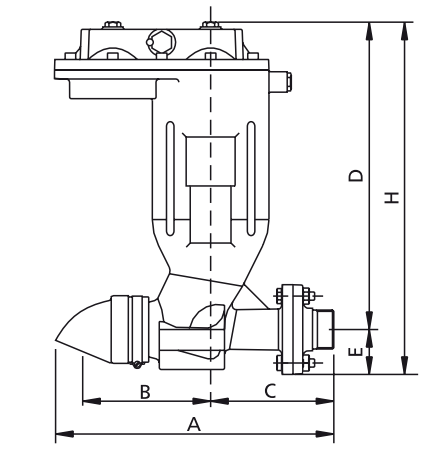
Maximum permitted delivery rate range .....750÷17000 l/min
Pump minimum weight .....70 kg

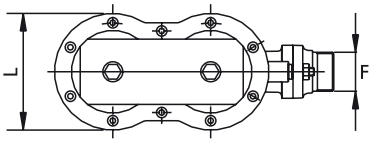
Modified valves can be supplied for applications outside the permitted working range.
Note: *the operating limits refer to the valve connected to the pump volute.*



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.

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*

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



All product images are indicative only

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 1¼" thread
VAP/G40.....GAS 1½" 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.....DN1125 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

Advantages

The entire range of ball valves have "rubber on rubber" coupling (rubber ball; seal on rubber gaskets).

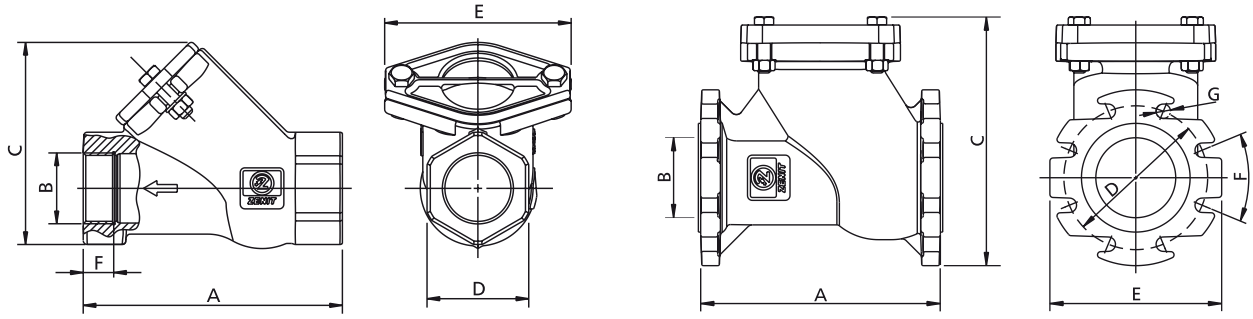
- Lower noise level;
- Possibility of easily restoring the coupling between ball and lip closure;
- There is no need to purchase commercial gaskets for between the flanges.

Operating limits

- Ambient temperature and treated liquid: 0 to +40°c;
- Ph of treated liquid: 6÷11;
- Density of treated liquid: 1 kg/dm^3.

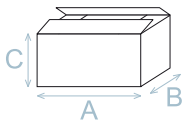
Contact Zenit if you have requirements that are outside the usage limits

Overall dimensions and weights



	A	B	C	D	E	F	G	kg	Packaging dimensions A	B	C
VAP/G32	155	1¼"	120	60	110	20°	-	2	200	135	160
VAP/G40	155	1½"	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			



The indication PN refers to the flange and not to the maximum operating pressure.

Dimensions in mm

All weights and dimensions are indicative only

VAC
Clapet check valves



All product images are indicative only

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.

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

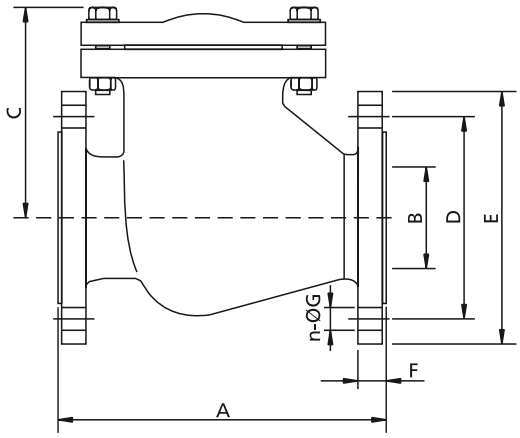
Operating limits

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



All product images are indicative only

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

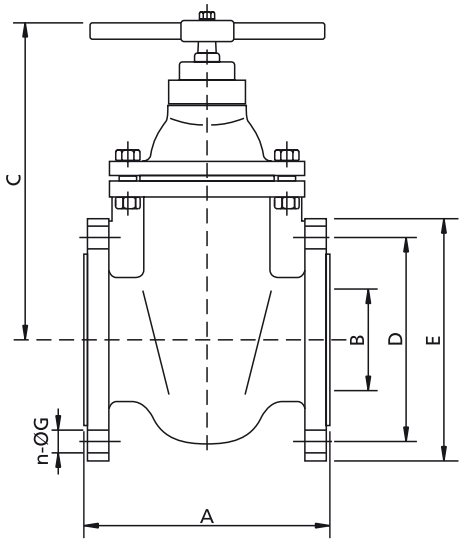
Operating limits

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

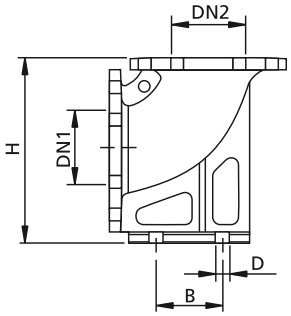


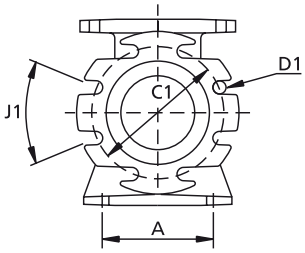


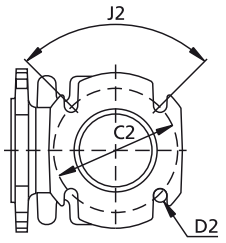
All product images are indicative only

General characteristics

- Structure made of GJL-250 cast iron or galvanized steel;
- Epoxy paint;
- Seal in NBR.

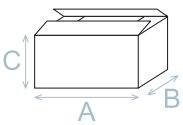






Packaging dimension

	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

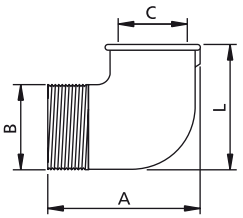
ZENIT water technology

KCR
Outlet bends

MALE-FEMALE THREAD (GAS 2")

General characteristics

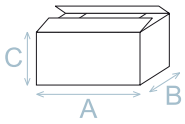
- Structure in stainless steel.





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

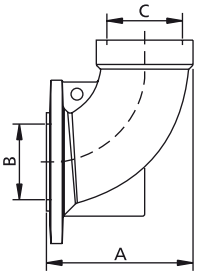


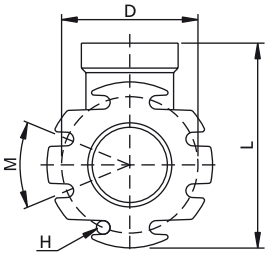
Dimensions in mm *All weights and dimensions are indicative only*

FLANGE-THREAD (DN80-DN100)

General characteristics

- Structure in GJL-250 cast iron;
- Epoxy paint;
- Seal in NBR.

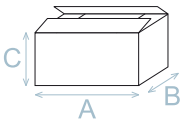






All product images are indicative only

	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

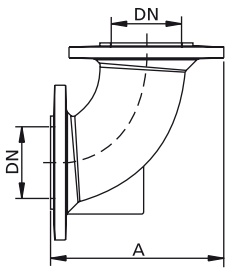


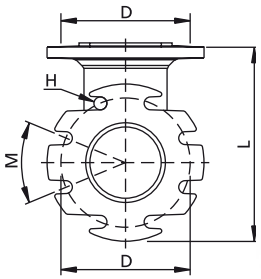
Dimensions in mm *All weights and dimensions are indicative only*

FLANGE-FLANGE (DN65 PN10-16÷DN250 PN10)

General characteristics

- Structure made of GJL-250 cast iron or galvanized steel;
- Epoxy paint;
- Seal in NBR.

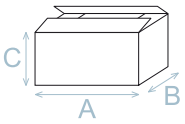






All product images are indicative only

	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*

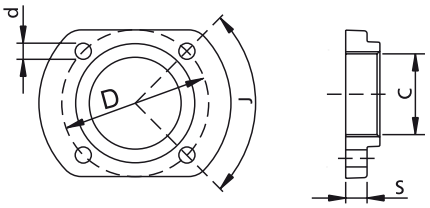
4.5 Flanges and chains

KFL
Flange



All product images are indicative only

General characteristics
Flange in GJL-250 cast iron painted with epoxy coating.



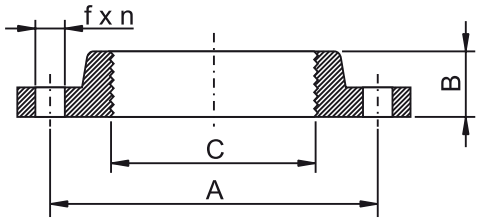
Cast iron flange to transform the delivery port from GAS 1½" to GAS 2".
Designed to be coupled to electric pumps with DN32 PN6 outlet flange.

	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

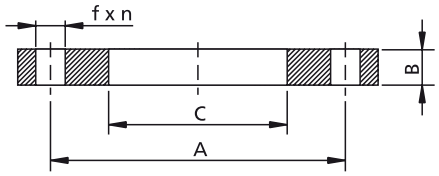
General characteristics
Threaded and welded flanges PN6 and PN 10-16 in accordance with standard EN 1092-1.



	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

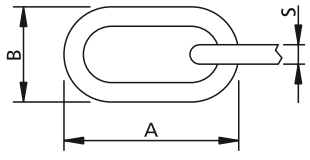
All weights and dimensions are indicative only

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	max load (*)
	D	d	s	(gr/m)	(kg)
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

ZENIT water technology

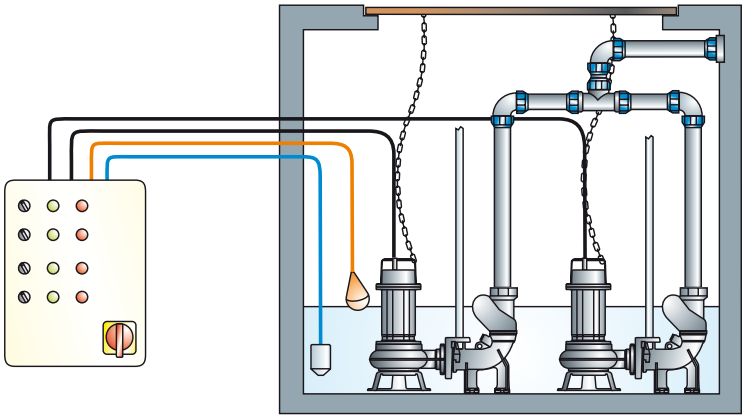
5.0

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 in 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

All product images are indicative only

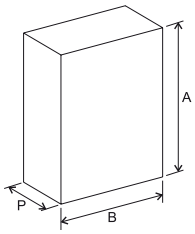


General characteristics

- Input voltage 1 ~ 50/60 Hz 230V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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 µF wired capacitor kit;
- 30 µF wired capacitor kit;
- 40 µF wired capacitor kit;
- 50 µF wired capacitor kit;
- 70 µF 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

All product images are indicative only

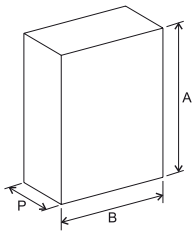


General characteristics

- Input voltage 1 ~ 50/60 Hz 230V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

All product images are indicative only



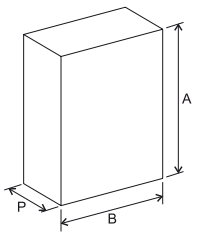
General characteristics

- Input voltage 1 ~ 50/60 Hz 230V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

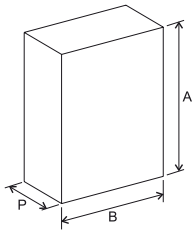


General characteristics

- Input voltage 3 ~ 50/60 Hz 400V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

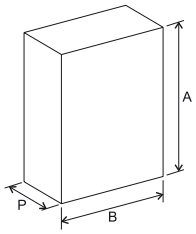


General characteristics

- Input voltage 3 ~ 50/60 Hz 400V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

All product images are indicative only

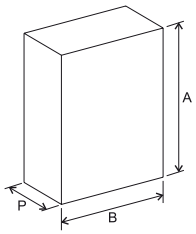


General characteristics

- Input voltage 3 ~ 50/60 Hz 400V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

All product images are indicative only

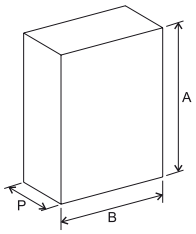


General characteristics

- Input voltage 3 ~ 50/60 Hz 400V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

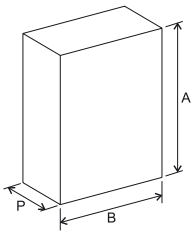


General characteristics

- Input voltage 3 ~ 50/60 Hz 400V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

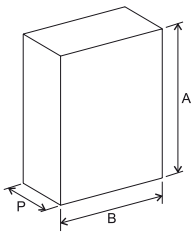


General characteristics

- Input voltage 3 ~ 50/60 Hz 400V ± 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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

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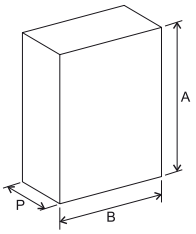
General characteristics

- 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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



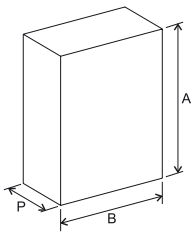
General characteristics

- 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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



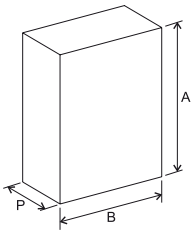
General characteristics

- 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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



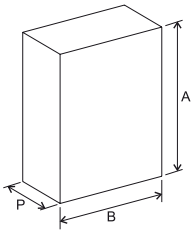
General characteristics

- 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	dimensions			weight
	kW	HP	rating (A)	A	B	P	Kg
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



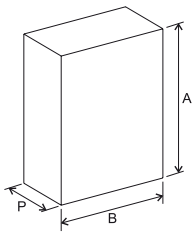
General characteristics

- 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 batteries	acoustic pressure	dimensions A	B	P	weight Kg
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.

MAC

Technical characteristics

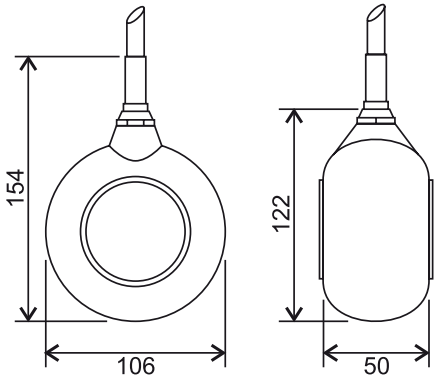
Current	Cable		
	Type	Wires	Length (m)
10A / 250V	H07RN-F	3G1	0.50
10A / 250V	H07RN-F	3G1	5
10A / 250V	H07RN-F	3G1	10

Used ONLY for draining

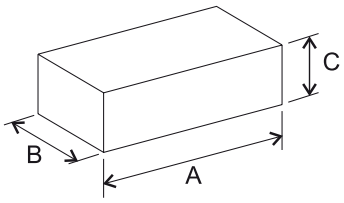


All product images are indicative only

Overall dimensions



Packaging dimensions



A	B	C
225	120	160

All weights and dimensions are indicative only

LEVEL

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

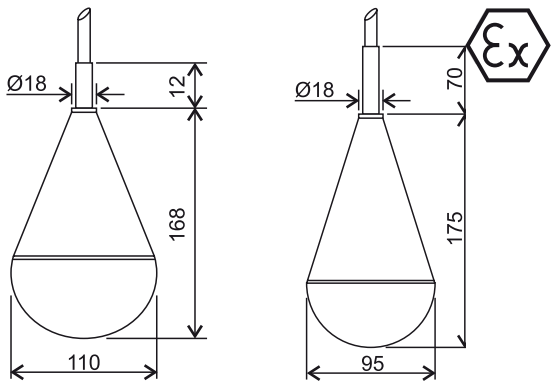
Suitable for draining and filling



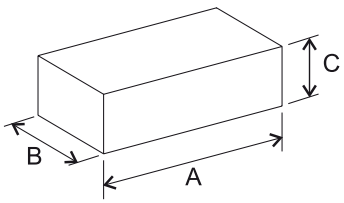


All product images are indicative only

Overall dimensions



Packaging dimensions



A	B	C
225	120	160

All weights and dimensions are indicative only

5.4 Remote Control Systems

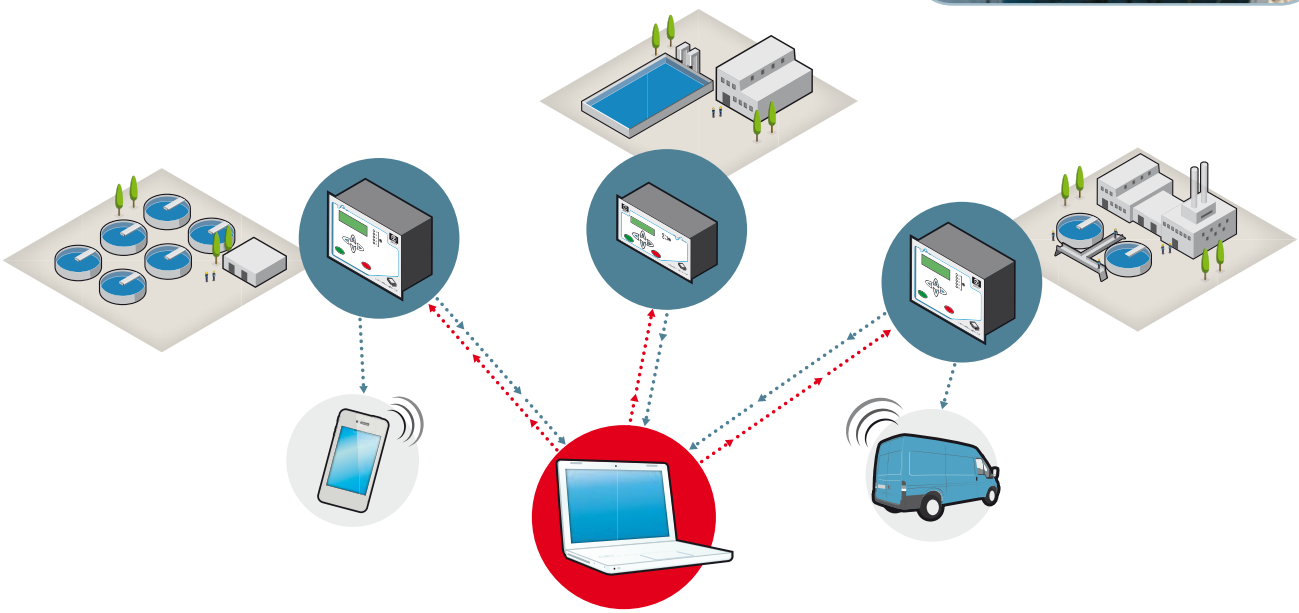
Nowadays, microprocessor remote control systems are an essential tool for the managing of water treatment plants.

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



All product images are indicative only

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.

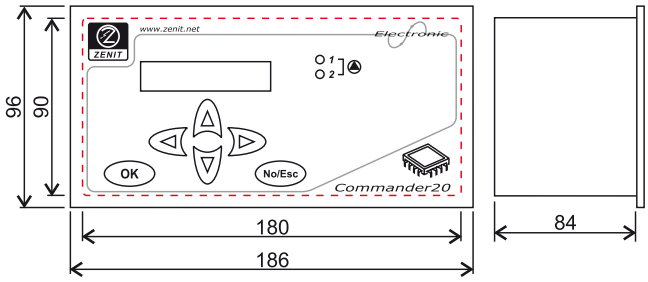
Technical characteristics

	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		

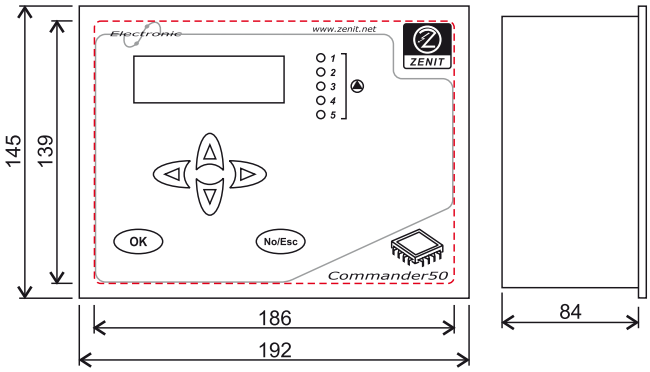
● Standard ● Optional ● Not available

Overall dimensions

Commander20



Commander50



All weights and dimensions are indicative only

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).



ZENIT water technology

Notes

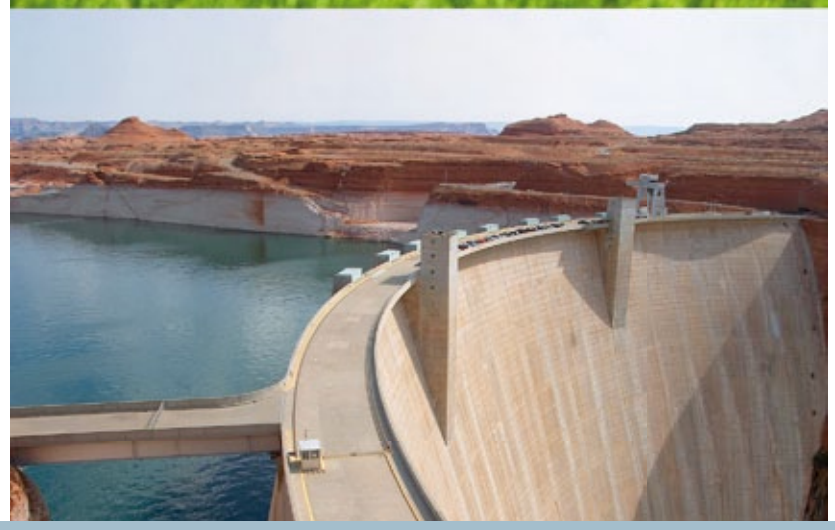
Notes

Notes









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

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