



water technology

# PRODUCT RANGE

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# PRODUCT RANGE

Submersible electric pumps and  
water treatment systems



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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 oxygenating 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 South East Asia

Zenit Europe: sales office for Europe



## 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.

# HISTORY

Zenit was established in the late 1950s. It was founded by Ugo Zeni to build and repair electric motors and hydraulic pumps. It was based in Modena. It served the Italian market.

In 1977 the company reins passed into the hands of the founder's daughter, Adriana, and her husband, Italo Bottan. The range of products Zenit designed and built was extended: centrifugal, self-priming, volumetric, submerged, submersible and surface electric pumps. The core market continued to be Italy.

In 1985 the company took the strategic decision to focus its production efforts on submersible pumps for soiled waste water.

1990 saw the start of Zenit's expansion on to export markets in Europe, Asia and South America. It was also the year when Davide Bottan, the owners' eldest son, joined the firm.

From 1990 to 1994 Zenit tripled its turnover and in 1995 it obtained UNI-EN-ISO 9001 certification.

In 1996 the company moved to the new plant at San Cesario, 10,000 m<sup>2</sup> in area. Lorenzo Bottan, Davide's brother, joined the company.

During 1998-2002 the company expanded onto new markets and expanded its range with products for wastewater treatment: mixers, aerators and oxygenators.

2001 was the year of foundation of APEX, a software firm which became a member of the Zenit group.

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

In 2006 it opened a new Regional Office in Singapore and in 2007 it inaugurated the new production and sales location in China, on a site of 16,500 m<sup>2</sup>, with buildings currently occupying 8,000 m<sup>2</sup> of this.

From 2006 to 2008 Zenit expanded its San Cesario plant to a total of 19,000 m<sup>2</sup>, and start work on one the construction of one of Europe's most complete test tanks.

In 2009 the new EMEA Regional Office (Europe, Middle East and Africa) in Luxembourg started operations: buildings of 3,000 m<sup>2</sup> on a site of 6,500.



# THE ZENIT LOGO



*Water technology at your service*



water technology

# 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 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, 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 physically 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.



# 1.0

## SUBMERSIBLE ELECTRIC PUMPS



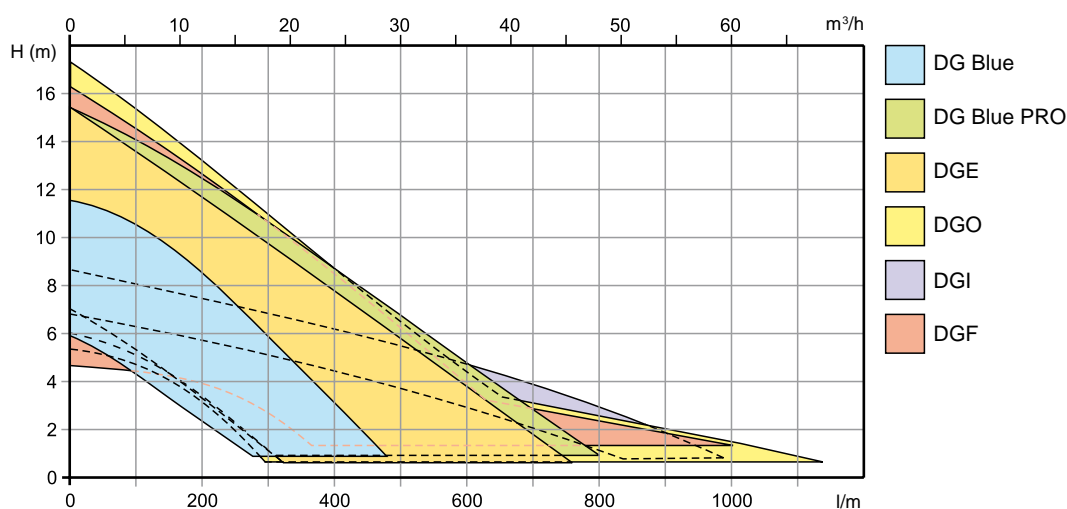
# 1.1 PUMPS WITH VORTEX IMPELLER

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



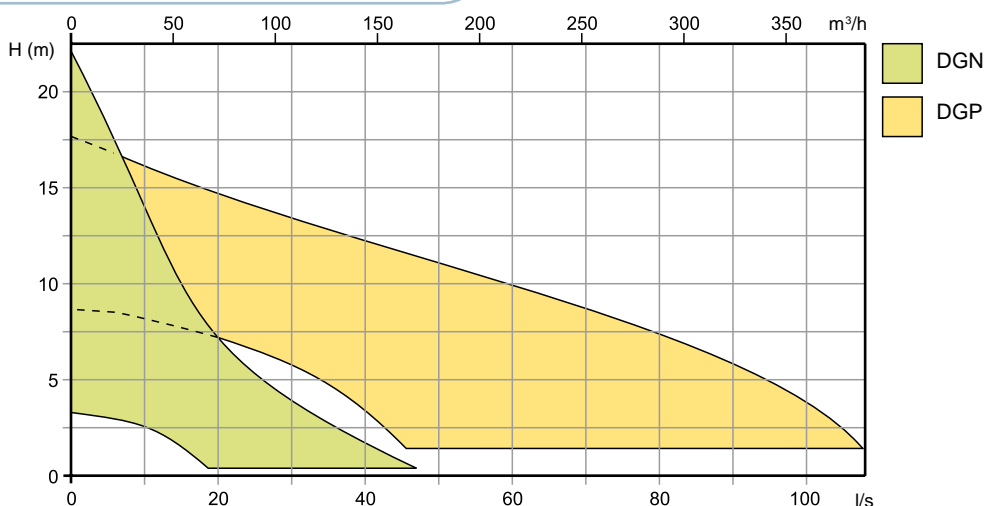
Thanks to the ample free passage, DG models with motors up to 1.5 kW are ideal for applications in industry, agriculture and livestock farming.



## 1.5 ÷ 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 Blue**

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**

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**

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**

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**

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, 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**

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.

1.5 ÷ 16.4 KW



**DGN**

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**

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.

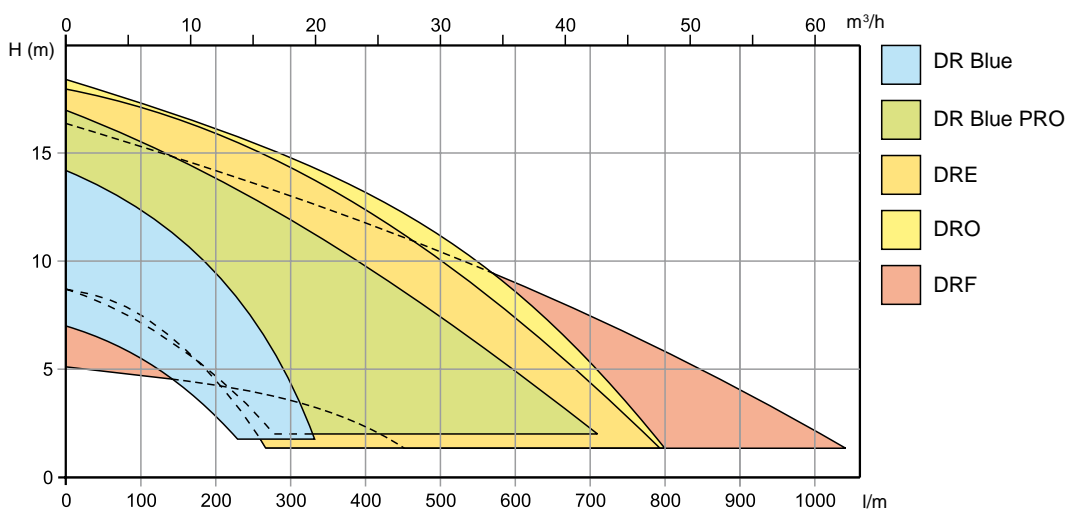
# 1.2 PUMPS WITH MULTI-CHANNEL OPEN IMPELLER

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



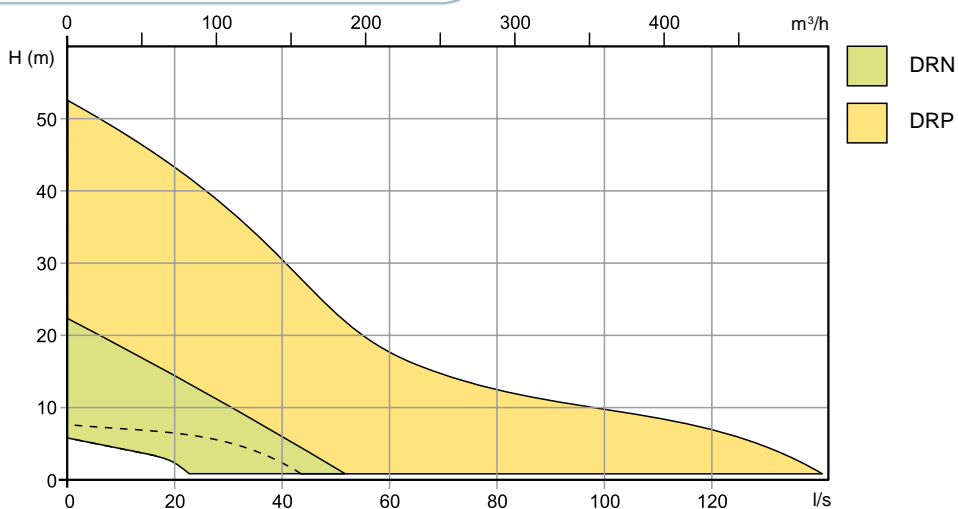
The DR impeller, fitted with motors rated up to 1.5 kW, is used for the treatment of mainly clean or only slightly soiled wastewaters. A steel strainer on the intake allows solids up to 15 mm in diameter to pass.



## 1.5 ÷ 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 Blue**

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**

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**

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**

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**

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.

1.5 ÷ 19.3 KW



**DRN**

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**

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.

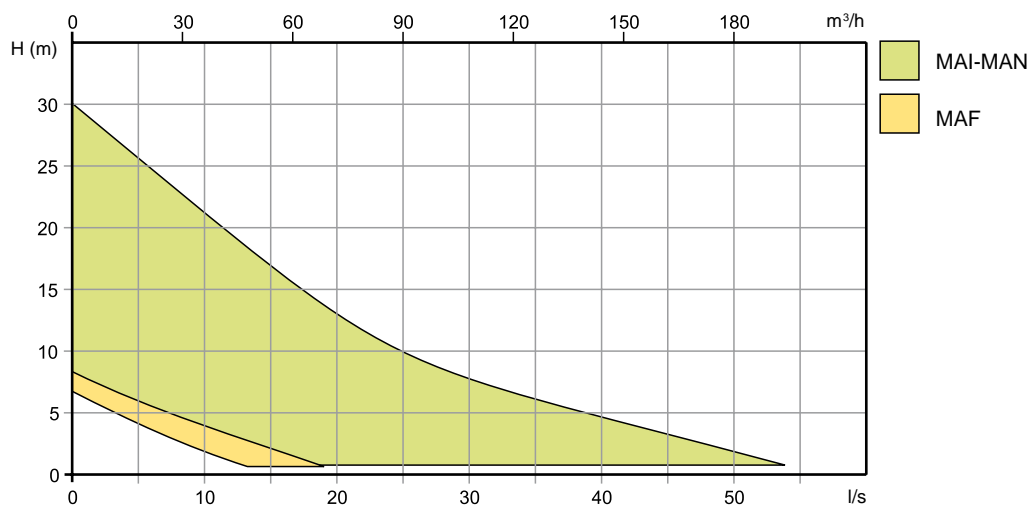
# 1.3 PUMPS WITH SINGLE-CHANNEL OPEN IMPELLER

The 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.





### MAI

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, 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

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

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.

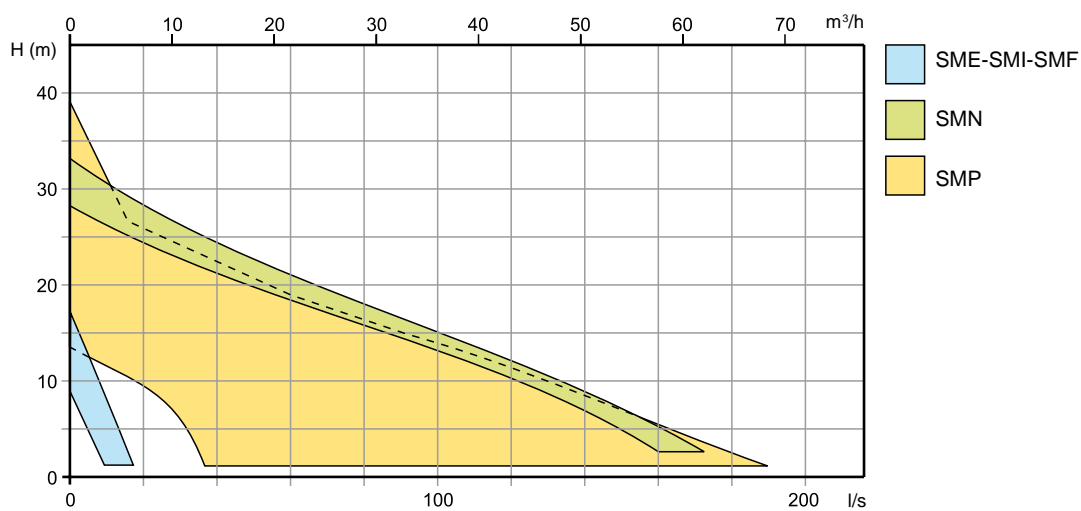
# 1.4 PUMPS WITH SINGLE- AND DUAL-CHANNEL CLOSED IMPELLER

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.

1.5 ÷ 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.

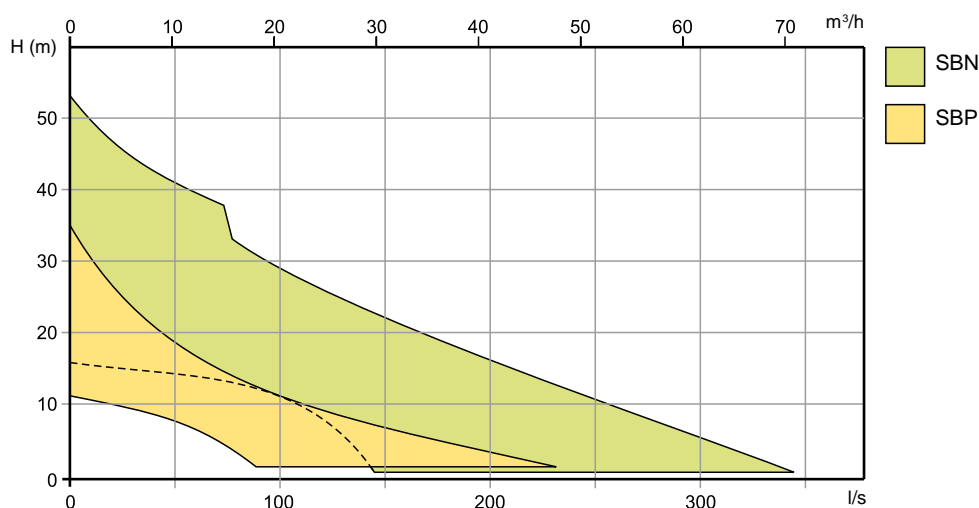


The SB (SYSTEM B) family consists of electric pumps with dual-channel closed impeller. The ample free passage and excellent performance are the two features that enable the SB family to operate with soiled liquids containing suspended solids.

6.5 ÷ 37.0 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

## Models with single-channel closed impeller



### SME

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

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, 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

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

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

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.

## Models with dual-channel closed impeller



### SBN

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

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.

# 1.5 GRINDER PUMPS

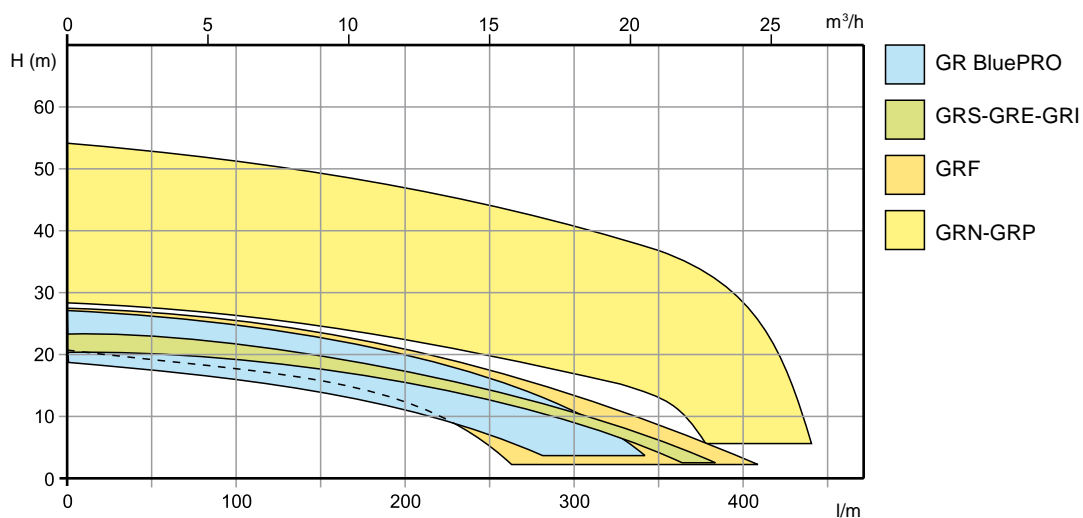
The GRINDER (GR) family consists of electric pumps with multi-channel open impeller with a grinding system .

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 ÷ 7.2 kW - 2 POLES



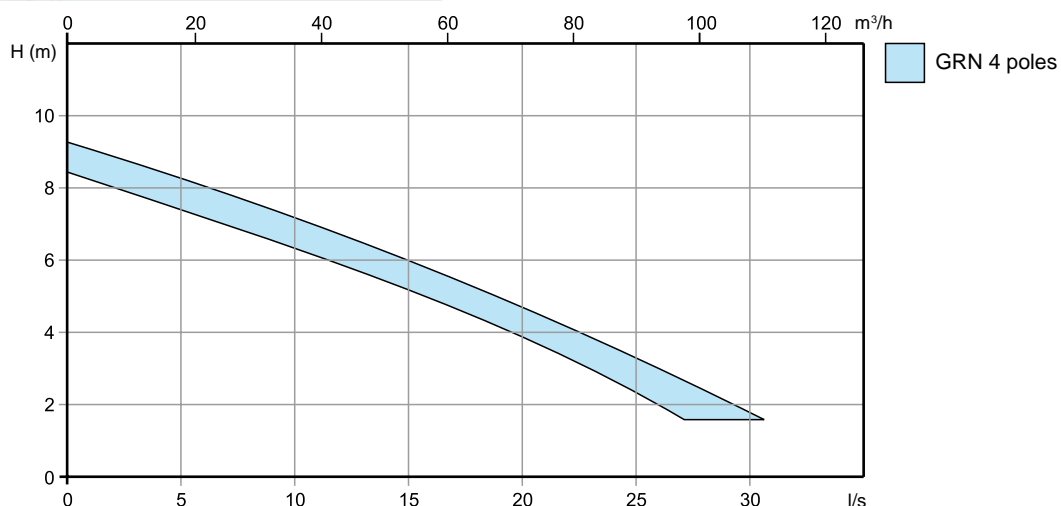
The GR impeller, designed to provide high heads and high efficiency, is applied to motors with power up to 7.2 kW, for use in the livestock farming, food and residential sectors and wherever grinding of the pumped liquid is required. The diffuser plate incorporates the Anti Clogging System (ACS), consisting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



## 2.2 ÷ 3.0 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.



## 0.74 ÷ 7.2 KW - 2 POLES



### GR BluePRO

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

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

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

Electromechanical assembly in EN-GJL-25 cast iron. 1 (one) silicon carbide mechanical seal and 1 (one) graphite alumina mechanical seal, 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

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.



### GRP

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.

## 2.2 ÷ 3.0 KW - 4 POLES



### GRN

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).

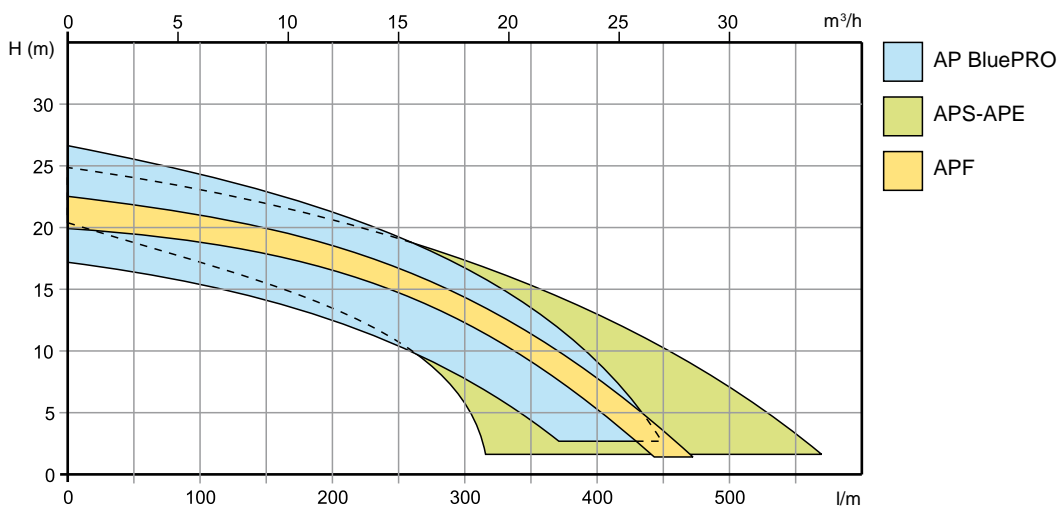
# 1.6 PUMPS WITH HIGH HEAD IMPELLER

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 ÷ 1.5 kW



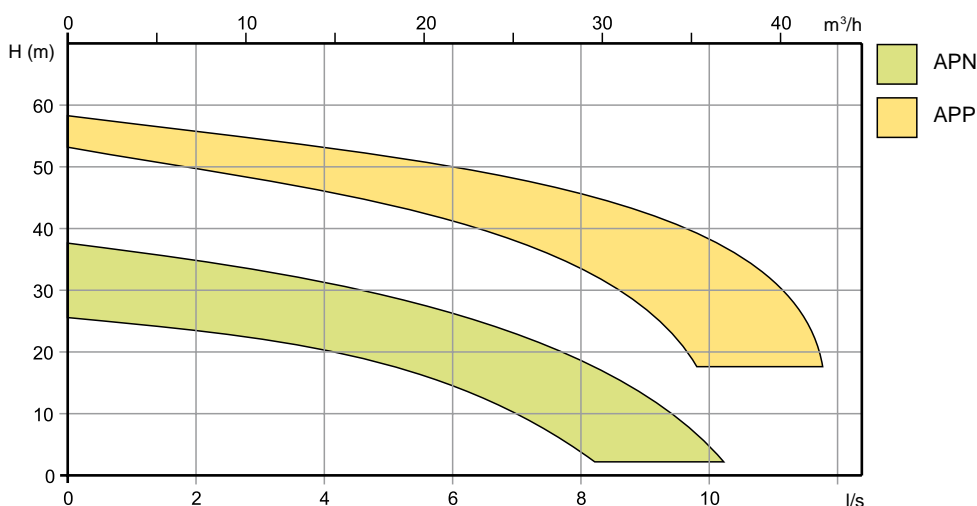
The AP impeller, fitted with motors rated up to 1.5 kW, is used for clear wastewaters. Intended for domestic or industrial use, with solid particles up to 7 mm.



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.





0.74 ÷ 1.5 KW



**AP BluePRO**

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.



**APS**

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**

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**

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**

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**

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.

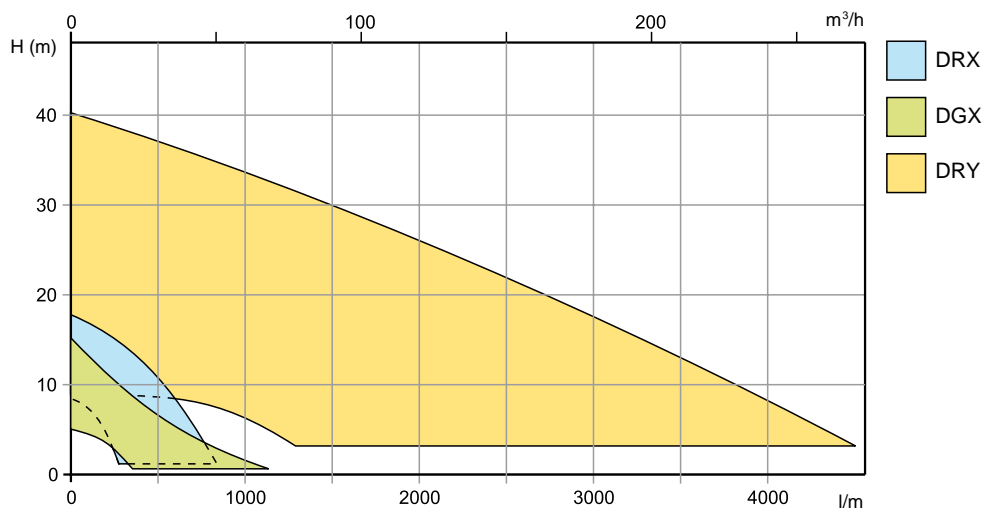
# 1.7 SPECIAL ALLOY PUMPS

## Stainless steel models (0.37 ÷ 15.0 kW)

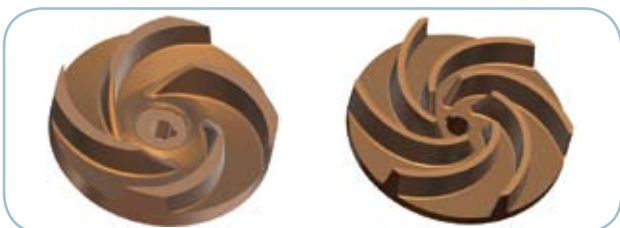


DRX, DRY and DGX pumps are constructed in CF8-M (AISI 316) stainless steel and have multi-channel open impeller suitable for wastewater containing solids (DRX and DRY) and vortex impeller for soiled wastewater (DGX).

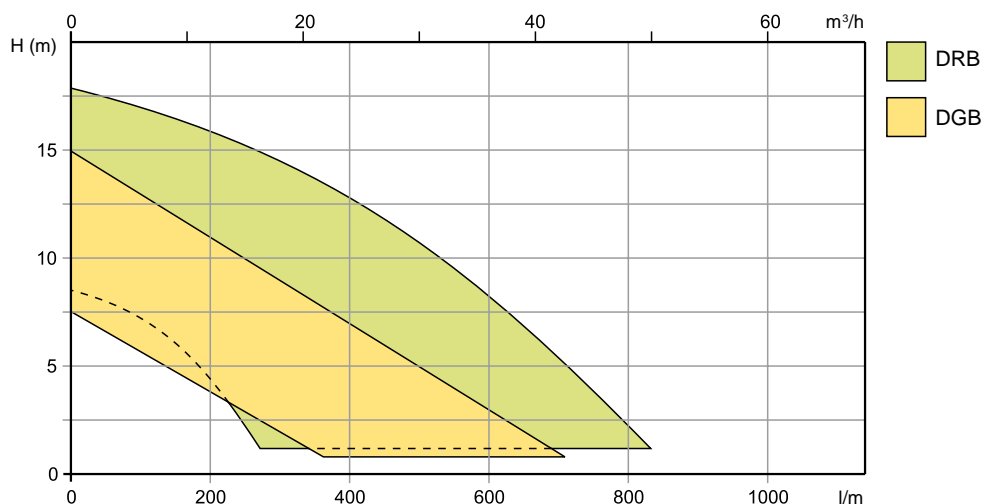
They are recommended for applications with corrosive and aggressive liquids, and can therefore be used for industrial plants in the chemical and pharmaceutical sector, or with seawater.



## 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.



## Stainless steel models



### DRX

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

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

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.

## Bronze models



### DRB

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

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.

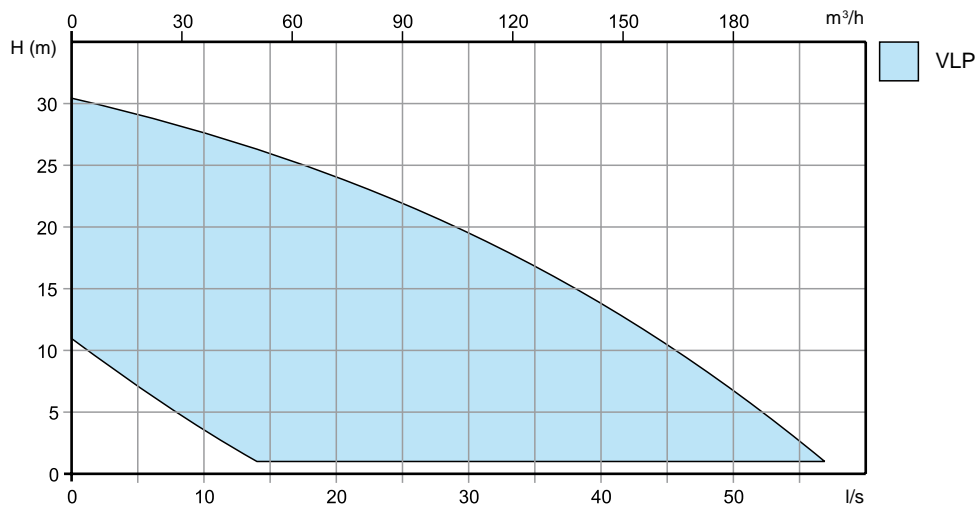
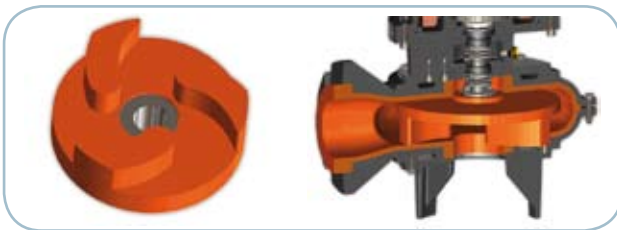
Suitable for lifting chemically aggressive soiled liquids, dyes and seawater. Therefore ideal for applications in the tanning industry, the paper industry and the shipping sector.

# 1.8 PUMPS FOR ABRASIVE LIQUIDS

# VL

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

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.



# HYDRAULIC PERFORMANCE DATA

For quick, easy reference



## PUMPS WITH VORTEX IMPELLER

### DG Blue

	P2 (kW)	Free passage (mm)	l/s								
			0	1	2	3	4	5	6	7	
			l/min	60	120	180	240	300	360	420	
			m <sup>3</sup> /h								
			0	3.6	7.2	10.8	14.4	18	21.6	25.2	
DG Blue 40/2/G40V A1BM	0.3	40	6.0	5.2	4.0	2.8	1.7				
DG Blue 50/2/G40V A1BM	0.37	40	7.6	6.7	5.5	4.2	2.9	1.6			
DG Blue 75/2/G40V A1BM	0.55	40	10.2	9.5	8.5	7.2	5.7	4.2	2.7		
DG Blue 100/2/G40V A1BM	0.74	40	11.6	11.2	10.2	9.1	7.6	6.0	4.3	2.7	

### DG BluePRO

	P2 (kW)	Free passage (mm)	l/s							
			0	2	4	6	8	10	12	
			l/min	120	240	360	480	600	720	
			m <sup>3</sup> /h							
			0	7.2	14.4	21.6	28.8	36	43.2	
DG BluePRO 50/2/G40V A1BM(T)	0.37	40	7.0	4.9	2.4					
DG BluePRO 75/2/G40V A1BM(T)	0.55	40	10.2	8.0	5.5	2.6				
DG BluePRO 100/2/G40V A1BM(T)	0.74	40	11.4	9.8	7.4	4.4				
DG BluePRO 150/2/G50V A1CM(T)	1.1	50	12.3	10.7	8.8	6.5	4.4	2.4		
DG BluePRO 200/2/G50V A1CM(T)	1.5	50	15.4	13.7	11.7	9.4	7.1	4.7	2.5	

### DGO

	P2 (kW)	Free passage (mm)	l/s											
			0	2	4	6	8	10	12	14	16	18		
			l/min	120	240	360	480	600	720	840	960	1080		
			m <sup>3</sup> /h											
			0	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6	64.8		
DGO 100/2/G40V B0CT	0.88	40	13,5	11,3	8,6	4,4								
DGO 150/2/G40V B0CT	1.1	40	16,0	13,6	10,7	6,8								
DGO 200/2/G40V B0CT	1.5	40	17,1	14,6	11,7	7,7	2,1							
DGO 50/2/G50V B0CM(T)	0.37	40	6.0	4.5	2.3									
DGO 75/2/G50V B0CM(T)	0.55	40	8.6	7.2	5.1	2.3								
DGO 100/2/G50V B0CM(T)	0.88	50	12.2	10.1	7.9	5.8	3.6							
DGO 150/2/G50V B0CM(T)	1.1	50	14.2	11.8	9.6	7.3	5.1	2.7						
DGO 200/2/G50V B0CM(T)	1.5	50	15.8	13.6	11.2	8.9	6.6	4.4						
DGO 150/2/G65V A1CM(T)	1.1	65	8.0	7.2	6.1	4.7	3.0							
DGO 200/2/G65V A1CM(T)	1.5	65	9.7	8.8	7.7	6.3	4.7	3.0						
DGO 50/2/G50H A1CM(T)	0.37	40	7.8	5.6	3.3	1.0								
DGO 75/2/G50H A1CM(T)	0.55	40	9.0	6.9	4.7	2.6								
DGO 100/2/G50H A0CM(T)	0.88	50	12.7	10.6	8.2	5.7	3.1							
DGO 150/2/G50H A0CM(T)	1.1	50	14.4	12.1	9.7	7.3	4.8	2.2						
DGO 200/2/G50H A0CM(T)	1.5	50	15.3	13.0	10.6	8.2	5.6	3.0						
DGO 100/4/G50V B0CM(T)	0.7	33	5.4	4.8	4.0	3.0	1.8							
DGO 100/4/G50H A0CM(T)	0.7	45	5.2	4.7	4.1	3.3	1.6							
DGO 150/2/65 A1CM(T)	1.1	65	7.9	7.0	5.9	4.8	3.5	2.3						
DGO 200/2/65 A1CM(T)	1.5	65	9.9	9.4	8.8	7.9	6.9	5.6	4.2	2.5				
DGO 200/2/80 A1CM(T)	1.5	80	8.4	7.9	7.2	6.4	5.5	4.5	3.6	2.6	1.7			
DGO 150/4/65 A0CM(T)	0.9	45	5.9	5.5	5.1	4.6	3.9	3.0	1.9					
DGO 150/4/80 A0CM(T)	0.9	60	5.4	5.1	4.7	4.3	3.9	3.4	2.8	2.3	1.7	1.1		

### DGI

	P2 (kW)	Free passage (mm)	l/s							
			0	2	4	6	8	10	12	14
			l/min	120	240	360	480	600	720	840
			m <sup>3</sup> /h							
			0	7.2	14.4	21.6	28.8	36	43.2	50.4
DGI 200/2/80 A0CM	1.5	47	8.4	7.7	7.0	6.1	5.3	4.4	3.5	2.7
DGI 100/4/80 A0CM	0.74	50	6.7	6.1	5.5	4.8	4.0	3.0	2.0	

DGE

	P2 (kW)	Free passage (mm)	l/s						
			0	2	4	6	8	10	
			l/min	0	120	240	360	480	600
			m <sup>3</sup> /h						
			0	7.2	14.4	21.6	28.8	36	
DGE 50/2/G50V B0BM(T)	0.37	40	6.1	4.9	2.6				
DGE 75/2/G50V B0BM(T)	0.55	40	8.1	6.7	4.7	2.0			
DGE 100/2/G50V B0CM(T)	0.88	50	12.0	10.1	7.9	5.6	3.4		
DGE 150/2/G50V B0CM(T)	1.1	50	13.9	11.9	9.6	7.2	4.8	2.4	
DGE 200/2/G50V B0CM(T)	1.5	50	15.7	13.6	11.2	8.8	6.3	3.9	
DGE 50/2/G50H A1BM(T)	0.55	40	6.7	5.3	3.4	1.0			
DGE 75/2/G50H A1BM(T)	0.37	40	8.3	6.3	4.3	2.2			
DGE 100/2/G50H A0CM(T)	0.88	50	12.6	10.2	7.8	5.3	2.8		
DGE 150/2/G50H A0CM(T)	1.1	50	13.9	11.9	9.8	7.5	5.1	2.7	
DGE 200/2/G50H A0CM(T)	1.5	50	15.5	13.2	10.8	8.4	6.0	3.7	

DGN

	P2 (kW)	Free passage (mm)	l/s													
			0	4	8	12	16	20	24	28	32	36	40	44		
			l/min	0	240	480	720	960	1200	1440	1680	1920	2160	2400	2640	
			m <sup>3</sup> /h													
			0	14.4	28.8	43.2	57.6	72	86.4	100.8	115.2	129.6	144	158.4		
DGN 250/2/G65V A1DM(T)	1.8	65	11.6	8.4	5.2	2.2										
DGN 300/2/G65V A1DT	2.2	65	16.1	11.7	7.4	3.8										
DGN 250/2/65 A1DM(T)	1.8	65	14.1	10.2	6.9	4.0										
DGN 300/2/65 A1DT	2.2	65	15.9	12.5	8.6	4.8	1.9									
DGN 400/2/65 A1FT	3	65	17.5	14.2	10.2	6.4	2.8									
DGN 550/2/65 A1FT	4.1	65	22.3	19.0	15.0	10.9	7.1	4.0								
DGN 250/2/80 A1DM(T)	1.8	80	8.0	6.4	4.9	3.5	2.3									
DGN 300/2/80 A1DT	2.2	80	10.8	8.8	6.8	5.1	3.5	2.0								
DGN 400/2/80 A1FT	3	80	14.8	11.6	8.5	6.0	3.9									
DGN 550/2/80 A1FT	4.1	80	18.9	16.0	13.0	9.9	7.3	5.3								
DGN 200/4/65 A1DT	1.5	65	10.6	9.4	7.5	5.1	2.1									
DGN 300/4/65 A1FT	2.2	65	12.7	11.6	10.1	7.9	5.3	2.0								
DGN 400/4/65 A1FT	3	65	11.8	10.5	9.2	7.9	6.3	4.2								
DGN 200/4/80 A1DT	1.5	80	10.1	8.9	7.4	5.5	3.5									
DGN 300/4/80 A1FT	2.2	80	11.9	10.8	9.5	8.0	6.2	4.3	2.2							
DGN 400/4/80 A1FT	3	80	11.0	10.0	8.9	7.7	6.4	5.1	3.8	2.4						
DGN 200/4/100 A1DT	1.5	100	8.6	7.1	5.8	4.5	3.3	2.2	1.2							
DGN 300/4/100 A1FT	2.2	100	10.5	9.4	8.2	6.9	5.6	4.3	3.2	2.1						
DGN 400/4/100 A1FT	3	100	9.7	9.1	8.3	7.4	6.4	5.4	4.4	3.3	2.1					
DGN 150/6/65 A1DT	1.1	65	5.7	4.9	3.8	2.6	1.2									
DGN 150/6/80 A1DT	1.1	80	5.3	4.6	3.9	3.1	2.3	1.5	0.6							
DGN 150/6/100 A1DT	1.1	100	4.6	4.0	3.4	2.8	2.1	1.4	0.7							
DGN 250/6/100 A1FT	1.8	100	6.3	5.7	5.0	4.2	3.4	2.6	1.7	0.8						
DGN 250/6/150 A1FT	1.8	150	3.3	3.1	2.9	2.7	2.5	2.2	2.0	1.7	1.5	1.2	0.9	0.59		

DGP

	P2 (kW)	Free passage (mm)														
			l/s	0	8	16	24	32	40	48	56	64	72	80	88	96
			l/min	0	480	960	1440	1920	2400	2880	3360	3840	4320	4800	5280	5760
			m <sup>3</sup> /h	0	28.8	57.6	86.4	115.2	144	172.8	201.6	230.4	259.2	288	316.8	345.6
DGP 550/4/80 A0GT	4.6	60		12.5	11.0	9.6	8.1	6.1	3.6							
DGP 750/4/80 A0HT	6.5	60		15.0	14.1	12.4	10.3	7.7	4.7							
DGP 1000/4/80 A0HT	8.9	60		17.9	16.7	15.2	13.2	10.9	7.8	3.6						
DGP 550/4/100 A0GT	4.6	80		8.9	8.4	7.6	6.7	5.6	4.2	2.4						
DGP 750/4/100 A0HT	6.5	85		10.6	10.1	9.2	8.0	6.6	5.1	3.4						
DGP 1000/4/100 A0HT	8.9	85		14.0	13.2	12.1	10.9	9.5	7.8	5.9	3.8					
DGP 1500/4/100 A0IT	13.6	80		16.8	16.2	15.4	14.3	13.1	11.7	10.1	8.2	5.7				
DGP 1500/4/125 A0IT	13.6	102		11.1	11.0	10.8	10.4	9.8	9.2	8.4	7.7	6.8	5.9	5.0	4.0	
DGP 2000/4/125 A0IT	16.4	102		14.1	13.8	13.5	13.0	12.5	11.8	11.1	10.2	9.3	8.3	7.2	6.0	4.7

DGF

	P2 (kW)	Free passage (mm)														
			l/s	0	2	4	6	8	10	12	14	16				
			l/min	0	120	240	360	480	600	720	840	960				
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6				
DGF 75/2/G40V A1CM(T)	0.55	40		8.0	6.9	4.4										
DGF 100/2/G40V A1CM(T)	0.74	40		9.6	8.5	6.0	2.8									
DGF 150/2/G40V A1CM(T)	1.1	40		14.4	12.2	9.8	6.1									
DGF 200/2/G40V A1CM(T)	1.5	40		16.4	14.3	11.9	8.4	3.1								
DGF 150/2/G50V A1CM(T)	1.1	50		12.9	10.9	8.7	6.3	4.0	1.9							
DGF 200/2/G50V A1CM(T)	1.5	50		14.3	12.5	10.4	8.1	5.9	3.8							
DGF 150/2/G65V A1CM(T)	1.1	65		7.4	6.5	5.3	3.9	2.4								
DGF 200/2/G65V A1CM(T)	1.5	65		9.7	8.6	7.5	6.1	4.5	2.7							
DGF 150/2/G40H A1CM(T)	1.1	40		15.7	13.9	11.2	7.2	2.4								
DGF 200/2/G40H A1CM(T)	1.5	40		17.5	15.9	13.4	9.6	4.6								
DGF 75/2/G50H A1CM(T)	0.55	50		6.6	5.7	4.1	2.5	0.9								
DGF 100/2/G50H A1CM(T)	0.74	50		8.6	7.7	5.9	3.9	1.9								
DGF 150/2/G50H A1CM(T)	1.1	50		12.6	12.0	10.1	7.6	4.9	2.1							
DGF 200/2/G50H A1CM(T)	1.5	50		14.4	13.6	12.1	9.8	7.0	4.2							
DGF 150/2/65 A1CM(T)	1.1	65		6.9	6.2	5.2	4.2	2.9	1.6							
DGF 200/2/65 A1CM(T)	1.5	65		9.2	8.4	7.4	6.1	4.8	3.3	1.9						
DGF 150/2/80 A1CM(T)	1.1	80		4.7	4.4	3.8	3.1	2.5	1.8							
DGF 200/2/80 A1CM(T)	1.5	80		6.2	5.9	5.3	4.6	3.8	3.0	2.2						
DGF 100/4/65 A1CT	0.74	50		7.7	7.1	6.4	5.5	4.5	3.5	2.5	1.7					
DGF 100/4/80 A1CT	0.74	65		6.4	5.9	5.2	4.5	3.8	3.1	2.5	2.0	1.5				

## PUMPS WITH MULTI-CHANNEL OPEN IMPELLER

DR Blue	P2 (kW)	Passaggio libero (mm)	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
DR Blue 40/2/G32V A1BM	0.3	7	<b>7.0</b>	6.3	5.2	3.6			
DR Blue 50/2/G32V A1BM	0.55	7	<b>9.5</b>	8.5	7.0	5.1	2.7		
DR Blue 75/2/G32V A1BM	0.37	7	<b>12.0</b>	10.8	9.3	7.3	5.0		
DR Blue 100/2/G32V A1BM	0.74	7	<b>14.2</b>	13.3	11.9	10.3	8.0	4.5	

DR BluePRO	P2 (kW)	Free passage (mm)	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
DR BluePRO 50/2/G32V A1BM(T)	0.37	15	<b>8.7</b>	6.8	3.4				
DR BluePRO 75/2/G32V A1BM(T)	0.55	15	<b>12.3</b>	10.0	5.3				
DR BluePRO 100/2/G32V A1BM(T)	0.74	15	<b>14.6</b>	12.1	7.4				
DR BluePRO 150/2/G50V A1CM(T)	1.1	10x30	<b>14.4</b>	12.6	10.9	8.9	6.5	3.2	
DR BluePRO 200/2/G50V A1CM(T)	1.5	10x30	<b>17.0</b>	15.3	13.3	10.9	8.2	5.1	

DRE	P2 (kW)	Free passage (mm)	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	43.2
DRE 50/2/G32V A0BM(T)	0.37	15	<b>8.7</b>	7.1	2.8					
DRE 75/2/G32V A0BM(T)	0.55	15	<b>12.2</b>	10.6	6.9	1.1				
DRE 100/2/G50V(H) A0CM(T)	0.88	15	<b>12.5</b>	11.6	10.0	7.8	4.9			
DRE 150/2/G50V(H) A0CM(T)	1.1	15	<b>14.5</b>	13.7	12.1	9.9	7.0	3.4		
DRE 200/2/G50V(H) A0CM(T)	1.5	15	<b>18.0</b>	17.0	15.4	13.3	10.7	7.6	3.9	

DRO	P2 (kW)	Free passage (mm)	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	43.2
DRO 50/2/G32V A0CM(T)	0.37	15	<b>8.8</b>	6.9	2.7					
DRO 75/2/G32V A0CM(T)	0.55	15	<b>12.1</b>	10.8	6.9	0.9				
DRO 100/2/G50V(H) A0CM(T)	0.88	15	<b>12.4</b>	11.5	10.0	7.9	5.0	1.1		
DRO 150/2/G50V(H) A0CM(T)	1.1	15	<b>16.3</b>	15.2	13.8	11.9	9.3	6.1	2.1	
DRO 200/2/G50V(H) A0CM(T)	1.5	15	<b>18.4</b>	17.1	15.6	13.9	11.7	8.6	4.5	

DRF	P2 (kW)	Free passage (mm)	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	43.2	50.4	57.6
DRF 75/2/G40V(H) A1CM(T)	0.55	10x30	<b>10.6</b>	8.8	5.9	2.6						
DRF 100/2/G40V(H) A1CM(T)	0.74	10x30	<b>13.0</b>	10.9	8.2	4.8						
DRF 150/2/G50V(H) A1CM(T)	1.1	10x30	<b>12.5</b>	11.3	10.1	8.8	7.0	4.7				
DRF 200/2/G50V(H) A1CM(T)	1.5	10x30	<b>16.5</b>	15.2	13.8	12.3	10.6	8.5	5.7			
DRF 100/4/65 A1CT	0.74	50	<b>5.2</b>	4.7	4.2	3.6	3.0	2.4	1.6			
DRF 100/4/80 A1CT	0.74	50	<b>5.6</b>	4.9	4.3	3.7	3.1	2.6	2.0	1.4		
DRF 100/4/100 A1CT	0.74	50	<b>5.0</b>	4.6	4.2	3.7	3.2	2.8	2.4	2.0	1.7	



DRN	P2 (kW)	Free passage (mm)														
			l/s	0	4	8	12	16	20	24	28	32	36	40	44	
			l/min	0	240	480	720	960	1200	1440	1680	1920	2160	2400	2640	
m <sup>3</sup> /h	0	14.4	28.8	43.2	57.6	72	86.4	100.8	115.2	129.6	144	158.4				
DRN 250/2/65 A1DM(T)	1.8	40	16.8	14.5	11.9	9.1	6.2	3.1								
DRN 300/2/65 A1DT	2.2	40	19.9	17.8	15.4	12.8	9.9	6.9	3.7							
DRN 400/2/65 A1FT	3	50	17.5	15.3	13.0	10.5	8.0	5.5	3.0							
DRN 550/2/65 A1FT	4.1	50	22.1	20.1	18.0	15.9	13.6	11.2	8.6	5.9	3.1					
DRN 250/2/80 A1DM(T)	1.8	40	18.1	15.2	12.2	9.4	6.4	3.3								
DRN 300/2/80 A1DT	2.2	40	20.1	17.3	14.5	11.5	8.5	5.3	2.1							
DRN 400/2/80 A1FT	3	45	18.0	15.4	13.0	10.8	8.6	6.4	4.1							
DRN 550/2/80 A1FT	4.1	45	23.2	20.7	18.4	16.3	14.1	11.8	9.4	6.8	3.9					
DRN 400/2/100 A1FT	3	50	15.7	13.7	11.8	10.0	8.4	6.9	5.6	4.4	3.3					
DRN 550/2/100 A1FT	4.1	50	21.0	19.0	17.1	15.3	13.6	11.9	10.3	8.8	7.3	5.9	4.5	3.1		
DRN 200/4/80 A1DT	1.5	80	9.0	8.2	7.2	6.2	5.1	4.0	2.9							
DRN 300/4/80 A1FT	2.2	80	10.2	9.5	8.7	7.9	7.0	6.1	5.2	4.2	3.2					
DRN 400/4/80 A1FT	3	80	11.6	10.9	10.2	9.4	8.6	7.7	6.8	5.8	4.8	3.8				
DRN 200/4/100 A1DT	1.5	80	9.1	8.1	7.1	6.0	5.0	3.9	2.9							
DRN 300/4/100 A1FT	2.2	80	10.2	9.3	8.5	7.7	6.8	5.9	5.1	4.2	3.3					
DRN 400/4/100 A1FT	3	80	11.6	10.9	10.1	9.2	8.3	7.4	6.5	5.5	4.5	3.5				
DRN 150/6/80 A1DT	1.1	80	5.8	5.2	4.6	4.0	3.4	2.6	1.8							
DRN 150/6/100 A1DT	1.1	80	5.7	5.2	4.6	4.1	3.4	2.8	2.0	1.0						
DRN 250/6/150 A1FT	1.8	100	6.0	5.7	5.4	5.1	4.7	4.3	3.9	3.4	2.9	2.4	1.7	1.0		
DRN 250/6/100 A1FT	1.8	100	6.4	6.1	5.8	5.5	5.1	4.7	4.2	3.7	3.1	2.6	2.0	1.4		

DRP	P2 (kW)	Free passage (mm)																
			l/s	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
			l/min	0	600	1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	8400
m <sup>3</sup> /h	0	36	72	108	144	180	216	252	288	324	360	396	432	468	504			
DRP 750/2/80 A0HT	7.2	55x65	23.5	18.9	14.0	9.0	3.8											
DRP 1000/2/80 A1HT	10	55x65	29.4	26.0	21.6	16.0	9.3											
DRP 1500/2/80 A0HT	15	50x60	41.3	37.9	33.2	27.0	19.5											
DRP 2000/2/80 A0IT	19.3	35x60	52.6	47.8	41.9	34.6	25.7											
DRP 1000/2/100 A1HT	10	75x80	23.7	21.4	18.7	15.6	12.2	8.4	4.3									
DRP 1500/2/100 A0HT	15	70x80	33.9	30.6	27.2	23.4	19.5	15.6	11.4	6.5								
DRP 550/4/80 A0GT	4.6	60x70	14.7	12.4	9.8	6.6	2.6											
DRP 750/4/80 A0HT	6.5	60x70	19.0	17.4	15.1	12.3	8.9	5.0										
DRP 1000/4/80 A0HT	8.9	60x70	23.2	21.1	18.4	15.1	11.3	7.0										
DRP 1500/4/80 A0IT	13.6	50x70	30.0	27.9	26.0	23.8	20.2											
DRP 2000/4/80 A0IT	16.4	50x70	32.1	30.8	28.8	25.9	22.0											
DRP 550/4/100 A0GT	4.6	65x70	13.1	11.9	9.7	8.1	5.4	3.4										
DRP 750/4/100 A0HT	6.5	85x95	16.5	15.5	14.1	12.3	10.2	7.7	4.8									
DRP 1000/4/100 A0HT	8.9	80x95	19.2	17.8	16.2	14.2	12.0	9.5	6.7	3.5								
DRP 1500/4/100 A0IT	13.6	70x95	21.6	20.5	19.2	17.7	15.7	13.3	10.6	7.4								
DRP 1500/4/125 A0IT	13.6	90x105	18.6	17.4	16.1	14.8	13.4	12.1	10.7	9.3	7.9	6.5	5.0					
DRP 2000/4/125 A0IT	16.4	90x105	21.5	20.3	19.0	17.7	16.3	14.9	13.5	12.1	10.7	9.2	7.7	6.1				
DRP 750/4/150 A0HT	6.5	95	11.5	10.6	9.7	8.9	8.0	7.1	6.3	5.3	4.2	3.0	1.6					
DRP 1000/4/150 A0HT	8.9	95	14.6	13.7	12.8	11.9	10.9	9.8	8.7	7.6	6.4	5.1	3.8					
DRP 1500/4/150 A0IT	13.6	95x110	16.5	15.8	15.0	14.2	13.3	12.4	11.4	10.3	9.2	8.0	6.7	5.3	3.8			
DRP 2000/4/150 A0IT	16.4	95x115	19.1	18.2	17.4	16.5	15.6	14.7	13.8	13.0	12.0	10.9	9.7	8.4	6.9	5.3	3.5	
DRP 550/6/150 A0HT	4.1	115	7.7	6.8	6.1	5.5	4.8	4.1	3.4	2.6	1.8	1.0						
DRP 750/6/150 A0HT	6.1	110x125	10.0	9.1	8.3	7.7	7.2	6.6	5.9	5.0	4.0	2.8	1.3					
DRP 1000/6/150 A0IT	8.4	95x115	12.3	11.6	11.0	10.4	9.8	9.1	8.4	7.6	6.6	5.5	4.3	2.9	1.4			

## PUMPS WITH SINGLE-CHANNEL OPEN IMPELLER

### MAI

	P2 (kW)	Free passage (mm)	l/s							
			0	2	4	6	8	10	12	
			l/min	0	120	240	360	480	600	720
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2
MAI 100/4/80 A0CM (T)	0.74	50		7.0	6.1	5.2	4.4	3.6	2.7	1.9

### MAN

	P2 (kW)	Free passage (mm)	l/s														
			0	4	8	12	16	20	24	28	32	36	40	44	48	52	
			l/min	0	240	480	720	960	1200	1440	1680	1920	2160	2400	2640	2880	3120
			m <sup>3</sup> /h	0	14.4	28.8	43.2	57.6	72	86.4	100.8	115.2	129.6	144	158.4	172.8	187.2
MAN 250/2/G65V A1DM(T)	1.8	40		18.5	14.4	10.3	6.2	2.2									
MAN 300/2/G65V A1DT	2.2	40		20.6	16.5	12.4	8.2	3.8									
MAN 250/2/65 A1DM(T)	1.8	40		18.0	14.4	10.6	6.9	3.3									
MAN 250/2/80 A1DM(T)	1.8	40		18.8	14.6	10.7	7.0	3.6									
MAN 300/2/65 A1DT	2.2	40		21.8	17.9	13.8	9.8	6.0									
MAN 300/2/80 A1DT	2.2	40		23.2	18.8	14.6	10.6	6.8	3.3								
MAN 400/2/65 A1FT	3	45		22.5	18.7	15.2	11.8	8.4	4.9								
MAN 400/2/80 A1FT	3	45		21.5	17.9	14.4	10.9	7.4	3.8								
MAN 400/2/100 A1FT	3	50		19.7	17.1	14.4	11.8	9.2	6.5	3.8							
MAN 550/2/65 A1FT	4.1	50		28.3	25.1	21.9	18.6	15.1	11.5	7.6	3.6						
MAN 550/2/80 A1FT	4.1	45		30.2	26.5	23.0	19.5	16.0	12.5	8.9	5.1						
MAN 550/2/100 A1FT	4.1	50		24.4	21.4	18.5	15.9	13.5	11.2	9.0	6.9	4.7					
MAN 200/4/80 A1DT	1.5	80		10.2	9.0	8.0	7.0	6.0	5.0	3.9	2.8						
MAN 200/4/100 A1DT	1.5	80		9.5	8.4	7.2	6.1	4.9	3.7	2.5							
MAN 300/4/80 A1FT	2.2	80		13.8	12.6	11.3	10.1	8.9	7.7	6.5	5.3	4.1	3.0				
MAN 300/4/100 A1FT	2.2	80		13.5	12.1	10.8	9.6	8.4	7.3	6.1	4.9	3.7	2.5				
MAN 400/4/80 A1FT	3	80		15.7	14.5	13.4	12.3	11.2	10.1	9.0	7.8	6.6	5.4	4.1	2.7		
MAN 400/4/100 A1FT	3	80		14.8	13.5	12.3	11.1	9.9	8.6	7.4	6.1	4.8	3.4	2.1			
MAN 150/6/80 A1DT	1.1	80		8.7	6.0	5.2	4.4	3.7	2.8	2.0	1.0						
MAN 150/6/100 A1DT	1.1	80		6.7	5.8	4.9	4.0	3.2	2.4	1.6	0.9						
MAN 250/6/100 A1FT	1.8	100		8.4	7.8	7.0	6.4	5.7	5.1	4.5	3.9	3.4	2.8	2.3	1.8	1.3	0.9
MAN 250/6/150A1FT	1.8	100		7.4	6.8	6.2	5.7	5.1	4.6	4.0	3.4	2.7	2.0	1.3			

### MAF

	P2 (kW)	Free passage (mm)	l/s									
			0	2	4	6	8	10	12	14	16	
			l/min	0	120	240	360	480	600	720	840	960
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6
MAF 100/4/65 A1CT	0.74	50		6.6	5.5	4.6	3.9	3.2	2.4	1.7		
MAF 100/4/80 A1CT	0.74	50		6.9	5.8	4.8	4.0	3.3	2.5	1.8	1.0	
MAF 100/4/100 A1CT	0.74	55		6.9	5.7	4.8	4.1	3.6	3.1	2.6	2.2	1.7

## PUMPS WITH SINGLE- AND DUAL-CHANNEL CLOSED IMPELLER

SMI	P2 (kW)	Free passage (mm)	l/s	0	2	4	6	8	10	12	14	16
			l/min	0	120	240	360	480	600	720	840	960
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6
SMI 200/2/G50H A0CM(T)	1.5	50	17.2	15.2	13.2	11.3	9.4	7.5	5.7	3.8	1.8	

SME	P2 (kW)	Free passage (mm)	l/s	0	2	4	6	8	10	12	14	16
			l/min	0	120	240	360	480	600	720	840	960
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6
SME 200/2/G50H A0CM(T)	1.5	50	17.2	15.2	13.2	11.3	9.4	7.5	5.7	3.8	1.8	

SMN	P2 (kW)	Free passage (mm)	l/s	0	13	26	39	52	65	78	91	104	117	130	143	156	169
			l/min	0	780	1560	2340	3120	3900	4680	5460	6240	7020	7800	8580	9360	10140
			m <sup>3</sup> /h	0	46.8	93.6	140.4	187.2	234	280.8	327.6	374.4	421.2	468	514.8	561.6	608.4
SMN 3000/4/150 A1LT	22	100x130	32.7	29.6	26.7	24.0	21.7	19.7	17.9	16.0	14.2	12.0	9.4	6.6	3.6		
SMN 3000/4/200 A1LT	22	100x130	33.0	29.6	26.7	24.3	22.2	20.2	18.3	16.4	14.3	12.2	9.8	7.4	4.9		
SMN 3000/4/250 A1LT	22	100x130	28.2	25.6	23.3	21.2	19.4	17.8	16.2	14.7	13.2	11.5	9.7	7.7	5.5	3.1	

SMF	P2 (kW)	Free passage (mm)	l/s	0	2	4	6	8	10	12	14
			l/min	0	120	240	360	480	600	720	840
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2	50.4
SMF 100/2/G50H A1CM(T)	0.74	50	9.0	7.4	5.8	4.2	2.5				
SMF 150/2/G50H A1CM(T)	1.1	50	13.4	11.9	10.4	8.9	7.2	5.4	3.5		
SMF 200/2/G50H A1CM(T)	1.5	50	16.1	14.5	12.8	11.1	9.3	7.5	5.5	3.5	

SMP	P2 (kW)	Free passage (mm)	l/s	0	13	26	39	52	65	78	91	104	117	130	143	156	169	182
			l/min	0	780	1560	2340	3120	3900	4680	5460	6240	7020	7800	8580	9360	10140	10920
			m <sup>3</sup> /h	0	46.8	93.6	140.4	187.2	234	280.8	327.6	374.4	421.2	468	514.8	561.6	608.4	655.2
SMP 550/2/80 A0GT	5.5	53	29.6	20.8	10.9													
SMP 750/2/80 A0HT	7.2	55x65	33.3	23.6	14.1	4.0												
SMP 1000/2/80 A0HT	10	55x65	39.3	29.0	18.9	9.2												
SMP 400/4/100 A0FT	3	75x100	14.0	11.1	8.4	5.9	3.1											
SMP 400/4/150 A0FT	3	75x100	13.6	10.8	8.4	6.0	3.0											
SMP 750/4/100 A0HT	6.5	80x100	19.5	15.8	12.9	10.3	7.6	4.8										
SMP 750/4/150 A0HT	6.5	80x100	17.9	15.6	13.2	10.6	7.5	3.6										
SMP 1000/4/100 A0HT	8.9	80	24.0	20.4	17.0	13.7	10.4	6.9										
SMP 1000/4/150 A0HT	8.9	80	22.8	19.4	16.4	13.4	10.1	6.4	2.1									
SMP 1500/4/150 A0IT	14.2	100x130	23.4	20.8	18.4	16.4	14.3	12.3	10.3	8.2	6.0	3.7						
SMP 2000/4/150 A0IT	16.4	100x130	29.7	27.3	25.0	22.7	20.5	18.2	15.9	13.5	10.9	8.1	5.0					
SMP 2000/4/200 A0IT	16.4	100x130	27.3	24.5	22.0	20.0	18.1	16.4	14.6	12.9	11.0	9.0	6.9	4.7	2.6			
SMP 2000/4/250 A0IT	16.4	100x130	26.8	23.8	21.3	19.3	17.6	16.1	14.7	13.3	11.9	10.5	9.0	7.4	5.7	3.9	2.1	
SMP 750/6/200 A0HT	6.1	100x130	15.2	13.5	11.9	10.5	9.0	7.7	6.3	4.9	3.4	1.7						
SMP 750/6/250 A0HT	6.1	100x130	14.0	12.1	10.6	9.4	8.4	7.4	6.3	5.0	3.6	2.1	0.6					

PRODUCT RANGE

SBN	P2 (kW)	Free passage (mm)	l/s	0	26	52	78	104	130	156	182	208	234	260	286	312	338
			l/min	0	1560	3120	4680	6240	7800	9360	10920	12480	14040	15600	17160	18720	20280
			m³/h	0	93.6	187.2	280.8	374.4	468	561.6	655.2	748.8	842.4	936	1029.6	1123.2	1216.8
SBN 3000/4/150 F1LT	22	90	34.4	27.8	24.6												
SBN 3000/4/150 A1LT	22	90	26.9	22.6	19.5	16.5	12.8	7.0									
SBN 4000/4/150 G1LT	30	90	45.4	37.5	33.8												
SBN 4000/4/150 F1LT	30	90	41.8	34.3	31.2	27.9											
SBN 4000/4/150 A1LT	30	90	35.9	29.1	25.6	22.6	18.9	14.1									
SBN 5000/4/150 H1LT	37	90	53.2	44.9	40.7												
SBN 5000/4/150 G1LT	37	90	49.9	41.5	37.6	33.9											
SBN 5000/4/150 F1LT	37	90	46.7	38.2	34.6	30.7											
SBN 5000/4/150 A1LT	37	90	41.4	34.1	30.2	26.3	21.4										
SBN 2500/6/150 A1LT	18.5	90	22.9	19.5	17.1	14.7	11.9	7.0									
SBN 3000/4/200 B1LT	22	105x140	21.9	20.2	18.1	15.8	13.4	10.8	8.2	5.5	2.8						
SBN 3000/4/200 A1LT	22	105x140	24.1	22.0	19.9	17.6	15.1	12.5	10.0	7.3	4.4						
SBN 3000/4/250 A1LT	22	105x140	21.6	19.8	18.0	16.1	14.0	12.0	9.9	7.7	5.5						
SBN 4000/4/200 A1LT	30	105x140	25.7	23.9	22.0	20.0	18.0	15.9	13.8	11.6	9.3	6.9	4.4				
SBN 4000/4/250 A1LT	30	105x140	24.0	22.3	20.6	18.9	17.1	15.2	13.3	11.3	9.3	7.3	5.1	2.8			
SBN 5000/4/200 A1LT	37	105x140	31.0	28.7	26.5	24.3	22.1	20.0	17.7	15.4	13.0	10.4	7.8	5.0	2.1		
SBN 5000/4/250 A1LT	37	105x140	30.7	27.9	25.6	23.8	22.1	20.4	18.7	16.8	14.7	12.5	10.1	7.5	4.6		
SBN 5000/4/250 B1LT	37	135	27.0	25.2	23.3	21.7	20.3	19.0	17.6	16.1	14.5	12.8	11.0	9.1	7.1	5.0	
SBN 2500/6/250 A2LT	18.5	130	15.4	14.4	13.3	12.3	11.2	10.2	9.1	7.9	6.7	5.4	3.9	2.5			
SBN 2500/6/300 A1LT	18.5	130	16.0	14.9	13.9	12.8	11.7	10.6	9.4	8.2	7.0	5.7	4.4	3.1	1.7		
SBN 3000/6/250 A2LT	22	130	16.6	15.8	14.8	13.8	12.8	11.7	10.7	9.5	8.3	7.0	5.7	4.3	2.9		
SBN 3000/6/300 A1LT	22	130	17.6	16.5	15.5	14.3	13.2	12.0	10.9	9.8	8.6	7.4	6.1	4.7	3.3	1.8	

SBP	P2 (kW)	Free passage (mm)	l/s	0	17	34	51	68	85	102	119	136	153	170	187	204	221
			l/min	0	1020	2040	3060	4080	5100	6120	7140	8160	9180	10200	11220	12240	13260
			m³/h	0	61.2	122.4	183.6	244.8	306	367.2	428.4	489.6	550.8	612	673.2	734.4	795.6
SBP 750/2/80 A0HT	7.2	36	34.2	23.4													
SBP 750/4/150 A0HT	6.5	70	18.2	15.3	12.6	10.0	6.6										
SBP 1000/4/150 A0HT	8.9	70	21.0	18.0	15.2	12.4	9.3	5.6									
SBP 1000/6/200 A0IT	8.4	100	11.9	10.6	9.5	8.5	7.5	6.6	5.5	4.4	3.2						
SBP 1000/6/250 A0IT	8.4	100	10.8	9.5	8.6	7.9	7.2	6.4	5.4	4.2	2.9	1.5					
SBP 1500/6/200 A1IT	12.3	105x140	14.4	13.3	12.3	11.3	10.4	9.6	8.6	7.6	6.4	5.0	3.7	2.3			
SBP 1500/6/250 A1IT	12.3	105x140	14.2	12.9	11.7	10.9	10.2	9.5	8.8	7.9	7.0	5.9	4.9	3.9	2.9	1.8	



## GRINDER PUMPS

### GR BluePRO

	P2 (kW)	Free passage (mm)	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
GR BluePRO 100/2/G40H A1CM(T)	0.74	-	<b>18.0</b>	16.4	14.4	11.5	6.9		
GR BluePRO 150/2/G40H A1CM(T)	1.1	-	<b>21.1</b>	19.6	17.9	15.1	10.4	3.0	
GR BluePRO 200/2/G40H A1CM(T)	1.5	-	<b>27.0</b>	25.6	23.6	20.8	16.1	9.4	

### GRS

	P2 (kW)	Free passage (mm)	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
GRS 100/2/G40H A0CM(T)	0.9	-	<b>20.4</b>	18.7	16.8	14.0	7.0	

### GRE

	P2 (kW)	Free passage (mm)	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
GRE 200/2/G50H A0CM(T)50	0.9	-	<b>27,3</b>	25,2	22,9	20,2	16,8	12,4	6,6	

### GRI

	P2 (kW)	Free passage (mm)	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	21.6
GRI 200/2/G50H A0CM(T)	1.7	-	<b>23.4</b>	22.5	20.7	18.2	14.9	10.8	5.8	

### GRN 2 poles

	P2 (kW)	Free passage (mm)	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	21,6
GRN 250/2/G40H A1DM(T)	1.8	-	<b>28,4</b>	27,3	25,9	23,6	20,7	17,3	12,5	
GRN 300/2/G50H A1DT	2.2	-	<b>32,7</b>	31,4	29,7	27,6	25,2	22,5	17,5	
GRN 400/2/G50H A1FT	3	-	<b>36,3</b>	35,3	33,6	31,3	28,5	25,4	20,4	
GRN 550/2/G50H A1FT	4.1	-	<b>47,6</b>	46,4	44,6	42,3	39,1	33,9	24,0	

### GRN 4 poles

	P2 (kW)	Free passage (mm)	l/s	0	3	6	9	12	15	18	21	24	27
			l/min	0	180	360	540	720	900	1080	1260	1440	1620
			m³/h	0	10.8	21.6	32.4	43.2	54	64.8	75.6	86.4	97.2
GRN 300/4/80 A1FT	2.2	-	<b>9.0</b>	8.3	7.6	6.9	6.2	5.5	4.7	3.9	2.9		
GRN 400/4/80 A1FT	3	-	<b>9.2</b>	8.6	7.9	7.3	6.6	5.9	5.2	4.3	3.4	2.4	
GRN 300/4/100 A1FT	2.2	-	<b>8.5</b>	7.8	7.2	6.6	5.9	5.3	4.6	3.8	2.9	2.0	
GRN 400/4/100 A1FT	3	-	<b>9.0</b>	8.3	7.7	7.0	6.3	5.7	5.0	4.3	3.5	2.6	

### GRP

	P2 (kW)	Free passage (mm)	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	21.6	25.2
GRP 750/2/G50H A0HT	7.2	-	<b>53.9</b>	52.5	50.4	47.8	44.8	41.2	36.1	22.8	

### GRF

	P2 (kW)	Free passage (mm)	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	21.6
GRF 150/2/G40H A1CM(T)	1.1	-	<b>20.0</b>	19.5	18.1	15.8	12.8	8.2	2.0	
GRF 200/2/G40H A1CM(T)	1.5	-	<b>23.0</b>	22.4	20.9	18.4	15.3	11.0	5.8	



## PUMPS WITH HIGH HEAD IMPELLER

AP BluePRO	P2 (kW)	Free passage (mm)	l/s	0	1	2	3	4	5	6	7
			l/min	0	60	120	180	240	300	360	420
			m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18	21.6	25.2
AP BluePRO 100/2/G40H A1CM(T)	0.74	6	17.3	16.3	14.9	13.1	10.9	7.8	3.6		
AP BluePRO 150/2/G40H A1CM(T)	1.1	6	20.9	19.8	18.5	16.7	14.6	11.7	7.8		
AP BluePRO 200/2/G40H A1CM(T)	1.5	6	26.6	25.4	23.8	21.9	19.6	16.7	12.7	6.6	

APS	P2 (kW)	Free passage (mm)	l/s	0	1	2	3	4	5
			l/min	0	60	120	180	240	300
			m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18
APS 100/2/G40H A0CM(T)	0.9	7	20.3	18.7	16.7	14.2	11.4	5.8	

APE	P2 (kW)	Free passage (mm)	l/s	0	1	2	3	4	5	6	7	8	9
			l/min	0	60	120	180	240	300	360	420	480	540
			m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4
APE 200/2/G50H A0CM(T)	1.7	7.5	24.9	23.9	22.7	21.2	19.3	17.2	14.8	11.9	8.5	4.0	

APF	P2 (kW)	Free passage (mm)	l/s	0	1	2	3	4	5	6	7
			l/min	0	60	120	180	240	300	360	420
			m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18	21.6	25.2
APF 150/2/G40H A1CM(T)	1.1	7.5	19.9	19.5	18.5	17.1	15.1	12.3	8.5	3.5	
APF 200/2/G40H A1CM(T)	1.5	7.5	22.6	21.6	20.5	19.0	17.1	14.4	10.7	6.3	

APP	P2 (kW)	Free passage (mm)	l/s	0	2	4	6	8	10
			l/min	0	120	240	360	480	600
			m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36
APP 750/2/G50H A0HT	7.2	10	53.3	49.6	46.2	41.5	34.5		
APP 1000/2/G50H A1HT	10	10	58.3	56.1	53.2	49.6	45.0	38.5	

APN	P2 (kW)	Free passage (mm)	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
			m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4	36
APN 250/2/G40H A1DM(T)	1.8	10	25.6	24.6	23.4	22.0	20.4	17.9	14.5	10.0	3.7			
APN 300/2/G50H A1DT	2.2	10	29.0	28.4	27.5	26.3	24.9	23.3	21.6	19.0	15.9	11.8	5.1	
APN 400/2/G50H A1FT	3	10	34.2	33.4	32.2	30.6	28.7	26.4	24.0	21.0	15.7			
APN 550/2/G50H A1FT	4.1	10	38.7	37.4	35.9	34.1	32.1	29.7	26.7	23.3	18.9			

## SPECIAL ALLOY PUMPS

### DRB

	P2 (kW)	Free passage (mm)	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	43.2
DRB 50/2/G32V A0CM(T)	0.37	15	<b>8.6</b>	6.8	2.7					
DRB 75/2/G32V A0CM(T)	0.55	15	<b>11.9</b>	10.5	6.8	1.0				
DRB 100/2/G50V A0CM(T)	0.88	15	<b>12.2</b>	11.3	9.8	7.7	4.8			
DRB 150/2/G50V A0CM(T)	1.1	15	<b>15.9</b>	14.9	13.5	11.7	9.1	5.9		
DRB 200/2/G50V A0CM(T)	1.5	15	<b>18.0</b>	16.8	15.4	13.5	11.2	8.4	4.9	

### DRX

	P2 (kW)	Free passage (mm)	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	43.2
DRX 50/2/G32V A0CM(T)	0.37	15	<b>8.5</b>	6.7	2.6					
DRX 75/2/G32V A0CM(T)	0.55	15	<b>11.8</b>	10.5	6.7	1.0				
DRX 100/2/G50V A0CM(T)	0.88	15	<b>12.0</b>	11.1	9.7	7.7	4.8			
DRX 150/2/G50V A0CM(T)	1.1	15	<b>15.8</b>	14.8	13.4	11.5	9.0	5.9		
DRX 200/2/G50V A0CM(T)	1.5	15	<b>17.8</b>	16.7	15.2	13.4	11.1	8.3	4.8	

### DRY

	P2 (kW)	Free passage (mm)	l/s	0	6	12	18	24	30	36	42	48	54	60	66	72
			l/min	0	360	720	1080	1440	1800	2160	2520	2880	3240	3600	3960	4320
			m³/h	0	21.6	43.2	64.8	86.4	108	129.6	151.2	172.8	194.4	216	237.6	259.2
DRY 300/2/65 A0ET	2.7	43	<b>16.7</b>	13.7	10.2	6.1										
DRY 400/2/65 A0FT	3.6	43	<b>20.5</b>	17.4	14.2	10.7	6.7									
DRY 300/2/80 A0ET	2.7	56	<b>14.3</b>	11.9	9.6	7.3	5.0									
DRY 400/2/80 A0FT	3.6	56	<b>16.6</b>	14.4	12.1	9.6	7.1	4.4								
DRY 550/2/80 A0GT	4.9	56	<b>18.2</b>	16.1	13.8	11.4	8.8	6.2	3.6							
DRY 750/2/80 A0HT	7.2	63	<b>22.8</b>	20.3	17.7	15.0	12.3	9.5	6.6	3.7						
DRY 1000/2/80 A0HT	10	65	<b>29.2</b>	26.9	24.4	21.8	19.1	16.2	13.1	9.7	6.0					
DRY 1500/2/80 A0HT	15	60	<b>40.2</b>	38.0	35.6	33.0	30.2	27.0	23.6	19.7	15.5	10.8				
DRY 1000/2/100 A0HT	10	80	<b>23.6</b>	22.0	20.4	18.7	17.0	15.1	13.2	11.1	8.9	6.6	4.2			
DRY 1500/2/100 A0HT	15	80	<b>32.9</b>	31.0	29.0	27.0	24.9	22.7	20.5	18.2	15.9	13.5	11.1	8.6	6.1	
DRY 300/4/80 A0FT	2.4	67	<b>11.3</b>	9.9	8.3	6.6	4.8									
DRY 400/4/80 A0FT	3	67	<b>13.1</b>	11.9	10.6	9.2	7.7	6.1	4.3							
DRY 550/4/80 A0GT	4.6	67	<b>14.6</b>	13.2	11.8	10.4	8.8	7.2	5.5							
DRY 750/4/80 A0HT	6.5	70	<b>18.4</b>	17.6	16.5	15.2	13.7	12.0	10.1	8.0	5.6					
DRY 1000/4/80 AHFT	8.9	70	<b>21.2</b>	20.4	19.4	18.2	16.8	15.1	13.2	11.1	8.8	6.2				
DRY 300/4/100 A0FT	2.4	76	<b>8.9</b>	8.3	7.5	6.7	5.8	4.8	3.8	2.6						
DRY 400/4/100 A0FT	3	76	<b>10.8</b>	10.1	9.4	8.6	7.7	6.7	5.6	4.5	3.3					
DRY 550/4/100 A0GT	4.6	76	<b>12.5</b>	11.6	10.7	9.8	8.8	7.7	6.6	5.5	4.3	3.1				

DGX

	P2 (kW)	Free passage (mm)	Flow Rates										
			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 <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6	64.8
DGX 50/2/G50V A0CM(T)	0.37	38		7.6	5.4	3.2							
DGX 75/2/G50V A0CM(T)	0.55	38		8.4	6.3	4.3	2.4						
DGX 100/2/G50V A0CM(T)	0.88	38		12.1	10.0	7.8	5.5	2.9					
DGX 150/2/G50V A0CM(T)	1.1	38		13.9	11.7	9.4	7.0	4.6					
DGX 200/2/G50V A0CM(T)	1.5	38		14.9	12.6	10.3	7.9	5.5	2.9				
DGX 100/4/G50V A0CM(T)	0.63	20		5.0	4.4	3.8	3.2	1.6					
DGX 150/2/65 A0CM(T)	1.1	50		9.1	8.5	7.7	6.7	5.5	4.1	2.5			
DGX 200/2/65 A0CM(T)	1.5	50		9.6	9.1	8.4	7.5	6.4	5.1	3.7	2.0		
DGX 200/2/80 A0CM(T)	1.5	60		8.2	7.5	6.8	6.0	5.1	4.3	3.5	2.7	1.9	
DGX 150/4/65 A0CM(T)	0.9	45		5.6	5.3	4.8	4.3	3.6	2.8	1.8			
DGX 150/4/80 A0CM(T)	0.9	60		5.1	4.8	4.5	4.0	3.6	3.1	2.6	2.1	1.6	1.1

DGB

	P2 (kW)	Free passage (mm)	Flow Rates											
			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
			m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4	36
DGB 50/2/G50V A0CM(T)	0.37	38		7.7	6.6	5.4	4.3	3.2	2.1					
DGB 75/2/G50V A0CM(T)	0.55	38		8.5	7.4	6.4	5.4	4.4	3.4	2.4				
DGB 100/2/G50V A0CM(T)	0.88	38		12.2	11.2	10.1	9.0	7.9	6.7	5.5	4.3	3.0		
DGB 150/2/G50V A0CM(T)	1.1	38		14.0	12.9	11.8	10.7	9.5	8.3	7.1	5.9	4.6	3.3	
DGB 200/2/G50V A0CM(T)	1.5	38		15.0	13.9	12.7	11.6	10.4	9.2	8.0	6.8	5.5	4.2	3.0

PUMPS FOR ABRASIVE LIQUIDS

VLP

	P2 (kW)	Free passage (mm)	Flow Rates													
			l/s	0	4	8	12	16	20	24	28	32	36	40	44	48
			l/min	0	240	480	720	960	1200	1440	1680	1920	2160	2400	2640	2880
			m <sup>3</sup> /h	0	14.4	28.8	43.2	57.6	72	86.4	100.8	115.2	129.6	144	158.4	172.8
VLP 200/2/50 A0ET	1.5	28		11.1	7.7	4.7	2.0									
VLP 400/2/50 A0FT	3.6	25		22.1	17.7	13.2	8.6	3.8								
VLP 550/2/50 A0GT	4.9	25		28.6	24.0	19.1	14.0	8.8	3.5							
VLP 750/4/80 A0HT	6.5	45		18.1	15.7	13.2	10.6	8.0	5.4							
VLP 1000/4/80 A0HT	8.9	45		21.9	19.4	17.0	14.5	12.0	9.4	6.7						
VLP 1500/4/80 A0IT	13.6	54		24.9	23.9	22.7	21.3	19.9	18.2	16.5	14.7	12.7	10.7	8.6	6.4	4.1
VLP 2000/4/80 A0IT	16.4	54		30.7	29.6	28.4	27.1	25.6	24.1	22.4	20.5	18.5	16.3	13.8	11.1	8.2

# KEY TO PRODUCTCODE

# DRO 50/2/G32V A0BM-E

①

②

③

(A)

(B)

(C)

④

⑤

⑥

⑦

⑧

⑨

## ① Family

- DG = DRAGA  
Vortex impeller with full free passage

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- DR = DRENO  
Multi-channel open impeller

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- MA = MACS  
Single-channel open impeller

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- SM = SYSTEM M  
Single-channel closed impeller

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- SB = SYSTEM B  
Dual-channel closed impeller

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- GR = GRINDER  
Impeller with grinder system

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- AP = HIGH HEAD  
High head impeller

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- VL = VULCO  
Impeller with Vulkollan coating

## ③ Power

(HPx100) / motor poles

## ④ Delivery rate

(A) TYPE

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

(B) DIAMETER

32 = 1 1/4"	40 = 1 1/2"	
50 = 2"	65 = 2 1/2"	

(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 Explosion-proof version

-E = non explosion-proof

-EX = explosion-proof



## ② Series

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

---

- BluePRO = Cast iron structure, 2 (two) mechanical seals in oil bath.  
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

---

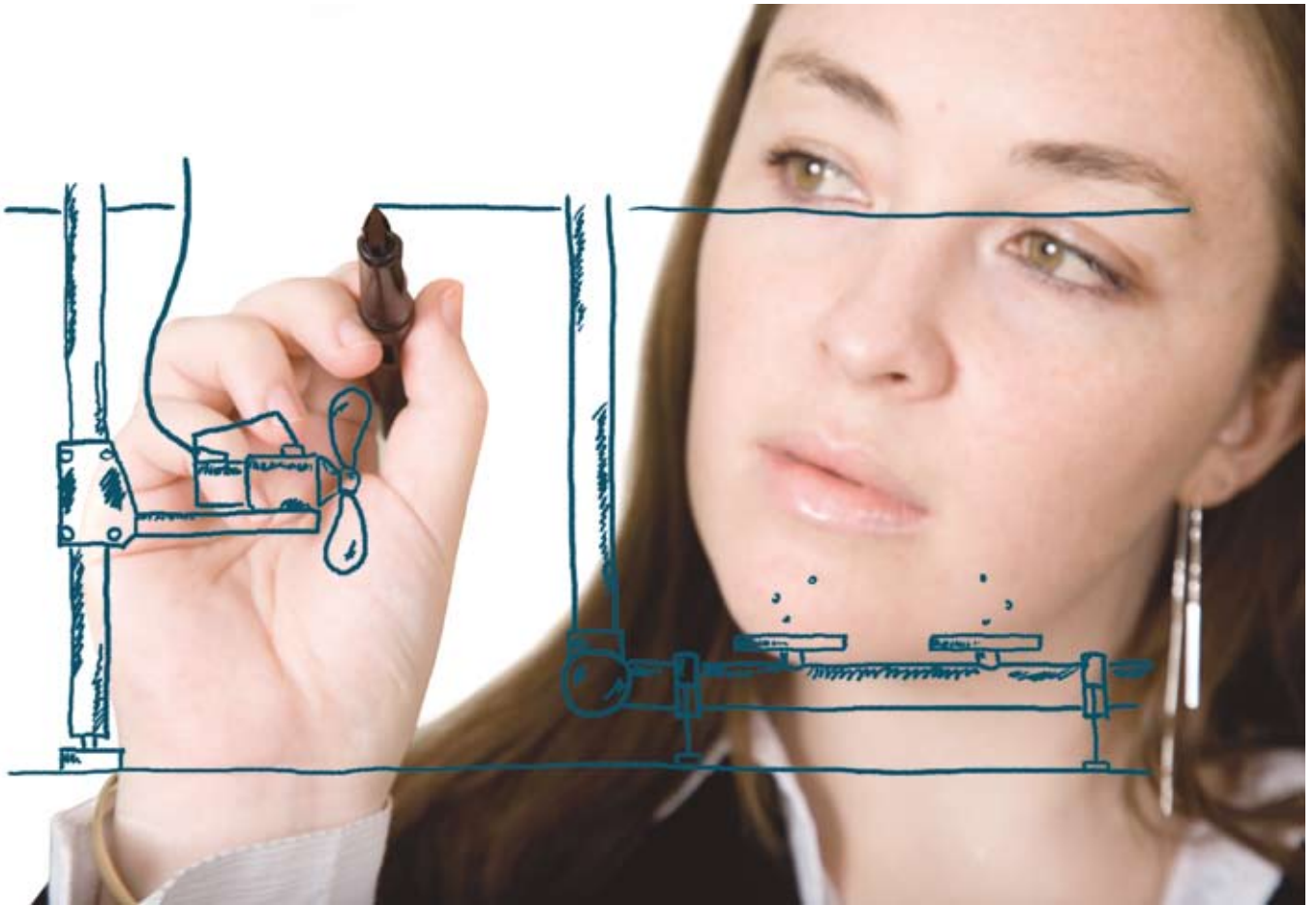
- P = Cast iron structure, 3 (three) mechanical seals in oil bath.  
Dry motor

---

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

# 2.0

## AERATION AND MIXING SYSTEMS





# AERATION AND MIXING SYSTEMS

As well as its vast range of submersible electric pumps, Zenit offers a line of aeration and mixing products for the highly specialised civil and industrial wastewater treatment sector.

The Zenit product mix comprises:

- ‡ 9" and 12" disc-shaped and 2" tubular 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 storing water from the first rainfall.
- ‡ Mixers and flow-makers with self-cleaning propellers from 285 mm to 2100 mm in 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.



## AIR DIFFUSERS

The Zenit range includes both disc-shaped and tubular membrane air diffusers.

Both models are fitted with high-quality membranes with perforation ensuring high oxygen transfer with low pressure drop, minimising the relative energy consumption.

Disc-shaped 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 plans.

## OXYPLATE 9-12

Disc-shaped diffusers having elastomer membrane with tiny holes for application in 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-pressure drop balance.



## OXYTUBE 2

Especially recommended for the construction of removable 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.



# SUBMERGED AERATORS

Venturi-type submerged aerators ensure an efficient combined mixing and aeration action and they are especially suitable for homogenization tanks and storing water from the first rainfall. They are made by connecting submersible pumps with power levels up to 30 kW to hydraulic units with large free passage and "OXY" series ejector devices.

## OXY 50



- † 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)

## OXY 80-150



- † Cast iron structure
- † Stainless steel diffuser cone
- † Diaphragm is interchangeable for flow rate adjustment or for replacement in the event of wear (PATENTED SYSTEM)

# SYSTEM OXY 50÷300

## SYSTEM OXY 50



- † OXY body (cone + integral diaphragm)
- † Sliding flange with gasket and stainless steel screws
- † Pipe guide
- † Galvanised steel base

## SYSTEM OXY 80÷300



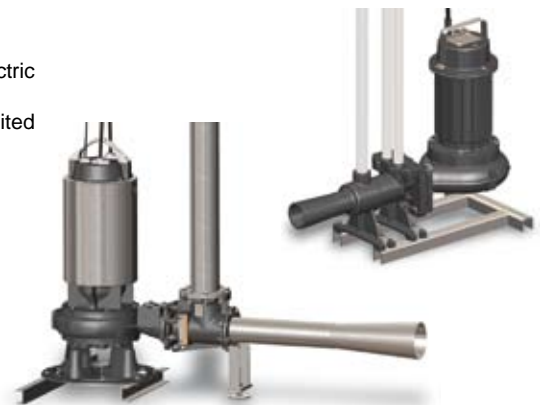
- † OXY body
- † Diaphragm (interchangeable)
- † Stainless steel diffuser cone
- † Stainless steel screws
- † Air intake line with flue filter and galvanised steel lifting hook
- † Connecting tie-rod between pump and intake pipeline
- † Galvanised steel/spheroidal cast iron base

## JET OXY 50

JETOXY 50 SYSTEMS comprise 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, optimising consumption.

## JET OXY 80÷300

JETOXY 80-300 units comprise one or more Venturi-type ejector 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.

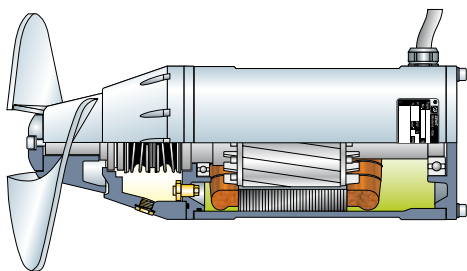


# MIXERS AND FLOW-MAKERS

Nowadays, submerged mixers are the key components of modern water treatment systems. They are mainly used in equalisation, homogenisation and denitrification processes, for phosphate extraction and where liquids have to be mixed or stirred to reduce sedimentation.

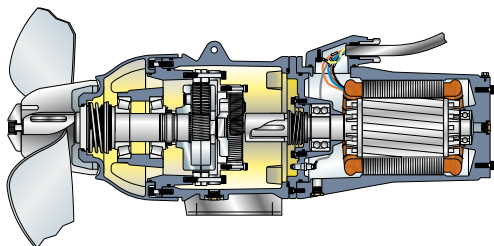
## PRS-PRX-PRO Submerged mixers

Zenit PRS, PRX and PRO series mixers are built in cast iron or AISI 316 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 galvanised 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
- † 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

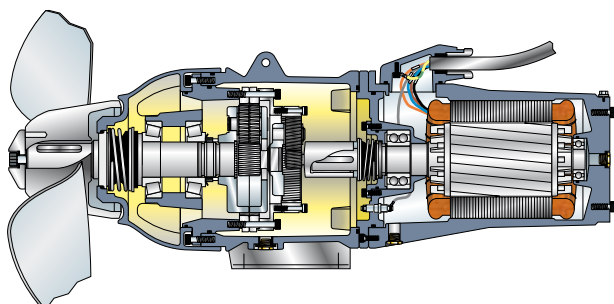
- † Cast iron structure
- † Propeller in Fe 510 iron
- † Motors from 1.1 to 15 kW, with 4 poles
- † From 222 to 350 rpm, transmission with reduction gear
- † Suitable for applications with max 12% solid content

## PRO Flow-maker

Zenit PRO series flow-makers are built in cast iron with stainless steel propeller. 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.

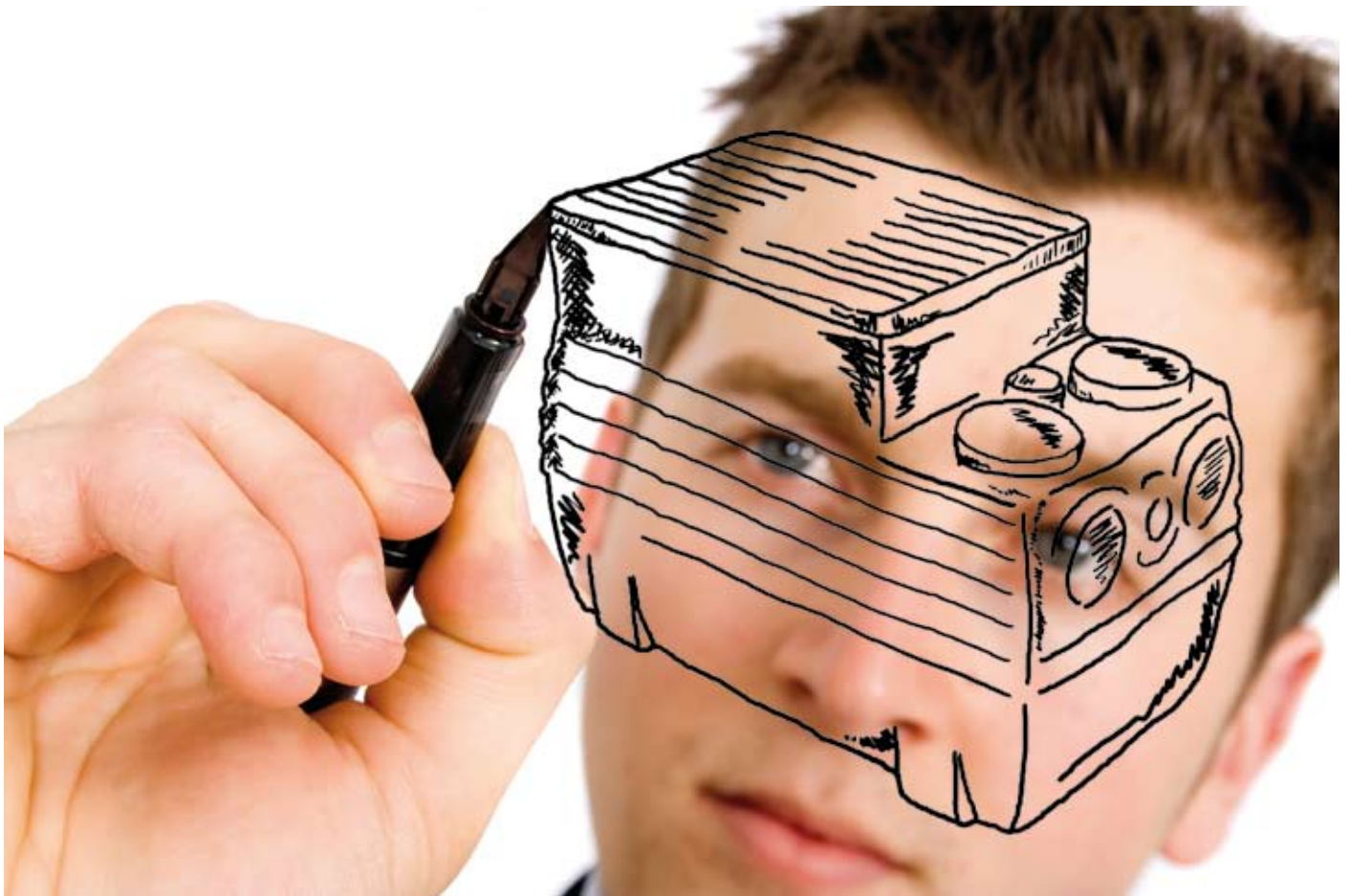
They are mainly used in oxidation and denitrification tanks and in all installations where the formation of sediment on the bottom of the tank has to be prevented.



- † 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

# 3.0

## LIFTING SYSTEMS





# LIFTING SYSTEMS



Prefabricated lifting systems are an effective, economical solution for collecting household wastewater and transferring it to a sewer where gravity-driven drainage is not possible. The BlueBOX series consists of rotary moulded polyethylene tanks of 250 or 400 litres, fitted to take one or two pumps respectively. The special shape is inspired by the Pininfarina design of the Blue Series pumps. Their construction characteristics make BlueBOX systems extremely versatile and easy to install.



The holding tank receives the household wastewater from the drains. The pump installed inside the tank refluxes the wastewater into the sewer. The cover and pipe joints are fitted with seals to ensure airtight connections. BlueBOX units are designed to allow a large number of intake, delivery and ventilation pipeline connection options. They are used mainly as holding tanks for household wastewater or rainwater and as lifting systems.

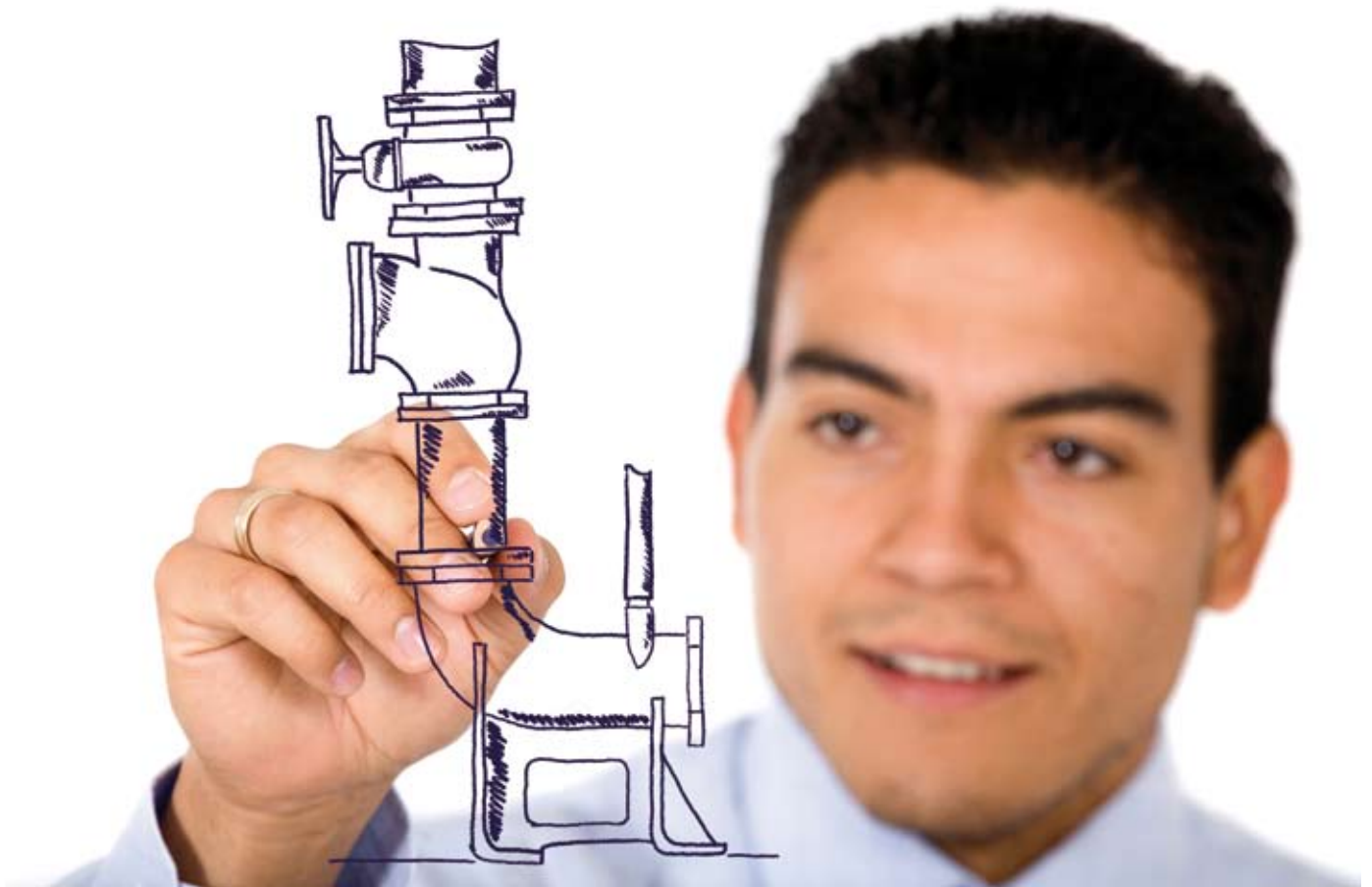
## BlueBOX 250 - 400



- ± 250 litre version for one pump and 400 litre version for two pumps
- ± can be installed directly coupled or with coupling device
- ± walk-over cover
- ± O-ring seal between tank and cover
- ± simplified intake pipeline installation with seal
- ± airtight cable gland seals
- ± integral lifting handle
- ± fitted for emergency emptying using a tap or auxiliary pump
- ± PATENTED cable gland allowing easy pump removal for any maintenance work

# 4.0

## HYDRAULIC ACCESSORIES





# COUPLING DEVICES

Coupling devices are essential accessories for making a reversible hydraulic connection between the pump and the delivery pipeline. This system allows the pump to be brought to the surface and then reconnected quickly, 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.

## DAC E (GAS 2")

### External coupling devices

- † fixed structure in GJL-250 stainless steel - movable structure in GJS-600-3
- † epoxy-vinyl paint
- † seals in NBR rubber
- † full free passage
- † fixing to tank side by means of DN50 PN10 flange or GAS 2" thread
- † the accessory can also be used with pumps having delivery port of GAS 1 1/4" and GAS 1 1/2" with a suitable male/female reducing adapter



## DAC V (DN32 PN6 - DN50 PN10)

### Coupling devices from bottom to vertical threaded delivery port

- † structure in GJL-250 cast iron
- † seal in NBR rubber
- † epoxy-vinyl paint
- † full free passage
- † complete with union for connection to polyethylene pipe (diameter 63 mm)
- † threaded delivery port GAS 2" and GAS 2 1/2"
- † 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 is supplied with integral breather for air venting



## DAC V (DN65 PN10 ÷ DN300 PN10)

### Coupling devices from bottom to vertical angled delivery port

- † 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



## DAC H (DN32 PN6 - DN50 PN10)

### Coupling devices from bottom to horizontal threaded delivery port

- † structure in GJL-250 cast iron
- † seal in NBR rubber
- † epoxy-vinyl paint
- † full free passage
- † complete with pipe guide, sliding flange (including stainless steel fasteners) and GAS 2" threaded bend in stainless steel



## DAC H (DN65 PN10 ÷ DN300 PN10)

### Coupling devices from bottom to horizontal angled delivery port

- † 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
- † a PATENTED system simplifies pump release and reduces the mechanical stresses on the guide pipes (from DN65 to DN250)



# DAC X (DN65 PN10 ÷ DN100 PN10)

## Stainless steel bottom coupling devices

- ⊥ structure and flange in AISI 316 stainless steel
- ⊥ seal in NBR
- ⊥ full free passage
- ⊥ recommended for installations with corrosive or saline liquids



# 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. They are made from GJS-600-3 spheroidal cast iron or galvanised iron. Complete with screws.

## CAST IRON BASE PLATES

With 3 or 4 spokes, for free installation



## GALVANISED IRON BASE PLATES



Hot-galvanised steel base plate.

# BEND UNIONS

Zenit bend unions are made from GFL-250 cast iron and have UNI standard flanges to guarantee complete interchangeability.

## KBC Inlet bends

Inlet bend unions allow the hydraulic connection to be made to pumps for dry chamber installations. In this case the pump is physically separated from the liquid for pumping and must be equipped with a cooling system.



## KCR Outlet bends

Outlet bends are used for changing the delivery direction by 90°. They may be flange-flange or flange-thread type, for maximum versatility. They provide full free passage.



# CHECK VALVES AND GATE VALVES

Zenit check valves are designed for use even with soiled liquids and provide full guarantees of operation even with heavy-duty working conditions.

## VAP Ball check valve (GAS 1" ¼ - DN350 PN10)

- † structure in GJL-250 cast iron with rubber seals included
- † plunge ball shutter in NBR rubber
- † sealing ensured by rubber on rubber contact
- † stainless steel metal fasteners
- † epoxy-vinyl paint resistant to aggressive liquids
- † full free passage
- † cover easily removable for valve inspection
- † can be installed horizontal or vertical



## VAC Clapet check valves (DN100 PN10 - DN350 PN10)

- † structure and clapet in GJL-250 cast iron
- † epoxy-vinyl paint
- † can be installed horizontal or vertical



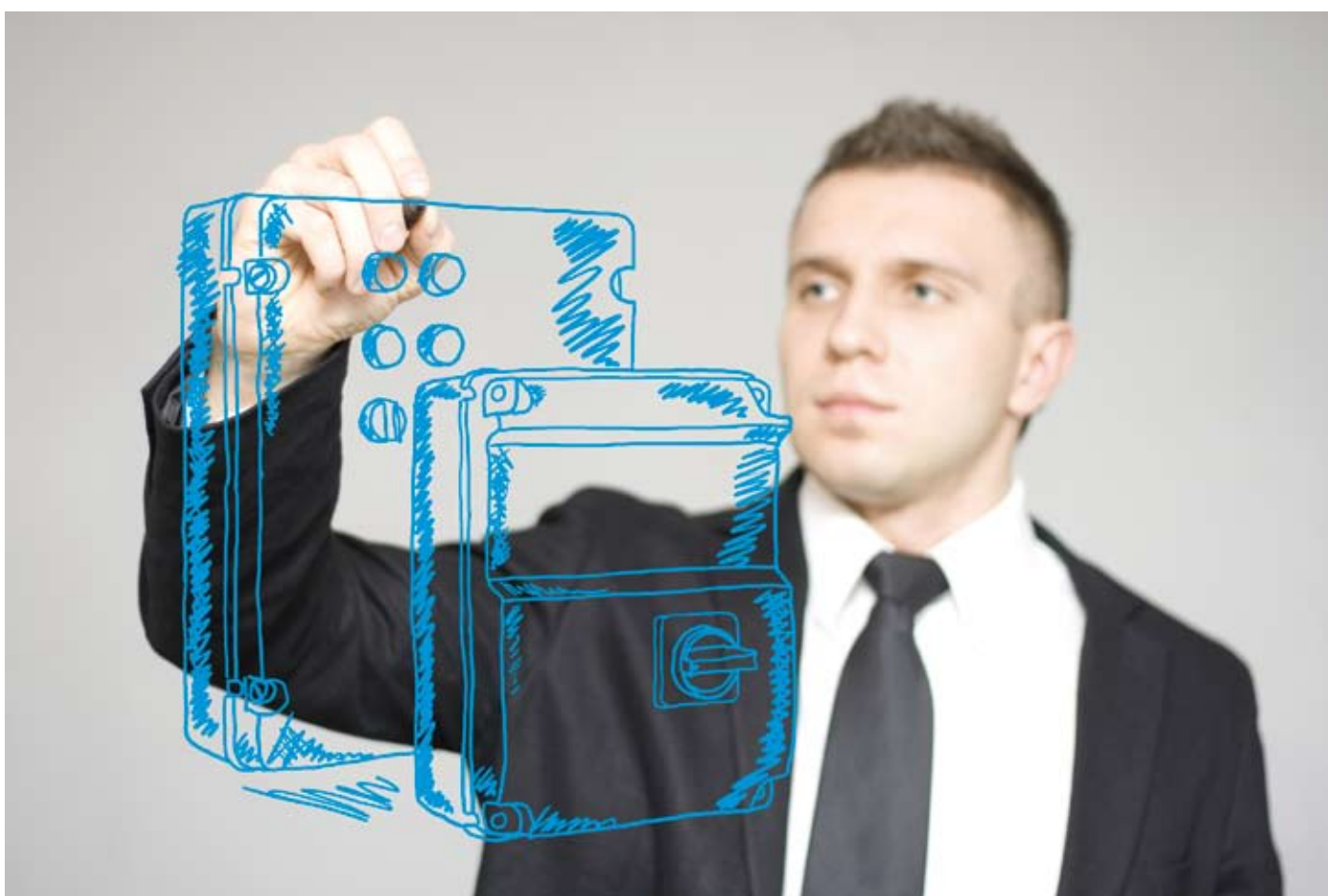
## SRP Gate valves (DN50 PN10 - DN350 PN10)

- † structure in GJL-250 cast iron
- † stainless steel shaft with O-ring seal
- † bronze seats
- † epoxy-vinyl paint
- † can be installed horizontal or vertical
- † integral free passage when fully open



# 5.0

## ELECTRIC AND ELECTRONIC ACCESSORIES



# 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, three-phase or star/delta. 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.



## ELECTROMECHANICAL AND

The range includes electromechanical panels for the control of one, two or three pumps, single-phase, three-phase or with star/delta starting.



## ELECTRONIC CONTROL PANELS

Electronic panels for the control of one or two single-phase or three-phase pumps are also available.



## 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.





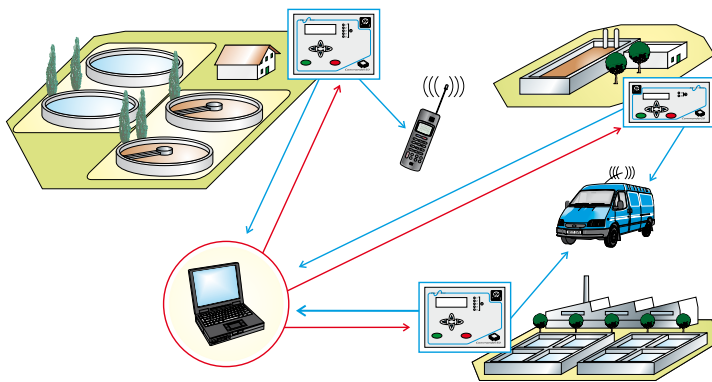
# REMOTE CONTROL SYSTEMS

Nowadays, microprocessor remote control systems are an essential tool for the operation 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 from and to 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 services and inspections.

What's more, the uniform distribution of the workload across the various machines installed optimises wear of rotary components, reducing expenditure 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.



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, crossing of level thresholds, dry operation 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 parameters set, ensuring absolutely safe operation.

## COMMANDER 20-50

The COMMANDER is a microprocessor unit for integration in the electrical control panel, capable of managing plant operation.

The 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 in the setting and selection of the various functions step by step.

The user is provided with a liquid crystal display showing plant data and a keypad for setting the operating parameters.





# REFERENCES

CUSTOMER	STATE	PRODUCTS	Q.TY
Consorzio Garda 1	Peschiera - VR (Italy)	DRP 1000/4/150 pump with OXY oxygenation system	24



CUSTOMER	STATE	PRODUCTS	Q.TY
META S.p.A.	Modena (Italy)	DGN 150/6/80 pump	3
		SBN 5000/4/200 pump	4
		MAN 400/4/100 pump	8
		PRO 750/4/4/600 mixer	3



CUSTOMER	STATE	PRODUCTS	Q.TY
Pacifico	Latina (Italy)	DRP 550/4/100 pump	4



CUSTOMER	STATE	PRODUCTS	Q.TY
TAV	Bologna (Italy)	SBN 5000/4/150 pump	2
		APP 1000/2/G50H pump	3



CUSTOMER	STATE	PRODUCTS	Q.TY
KIA Motors Slovakia	Zilina (Slovakia)	SBN 5000/4/200 pump	3



CUSTOMER	STATE	PRODUCTS	Q.TY
ASM S.p.A.	Brescia (Italy)	OXYTUBE 2-750 Tubular diffusers	880



PRODUCT RANGE

CUSTOMER	STATE	PRODUCTS	Q.TY
EPS	Church Town (Ireland)	DGN 300/4/80 pump	4



CUSTOMER	STATE	PRODUCTS	Q.TY
TT Pumps	Manchester (United Kingdom)	DRN 400/4/80 pump	8
		SMP 1000/4/100 pump	4



CUSTOMER	STATE	PRODUCTS	Q.TY
France Turbot	Tredarzec (France)	SBP 1500/6/200 pump	15
		SBP 1000/6/200 pump	5



CUSTOMER	STATE	PRODUCTS	Q.TY
Brodarstvo	Kovin (Serbia)	MAN 400/4/100 pump	1



CUSTOMER	STATE	PRODUCTS	Q.TY
Moping	Lago Srebro (Serbia)	SBN 5000/4/200 pump	1



CUSTOMER	STATE	PRODUCTS	Q.TY
Srednji Banat	Zrenjanin (Serbia)	SBN 2500/6/300 pump	1



CUSTOMER	STATE	PRODUCTS	Q.TY
Olympic Stadium	Athens (Greece)	GRN 400/2/G50H pump	10
		DRP 750/4/150 pump	2
		DRP 300/4/100 pump	1



CUSTOMER	STATE	PRODUCTS	Q.TY
Olympic Centre	Athens (Greece)	DRP 400/2/80 pump	2
		DRE 200/2/G50V pump	2
		DRN 250/2/65 pump	18



CUSTOMER	STATE	PRODUCTS	Q.TY
Marina barrage	Singapore	SBN 4000/4/250 pump	2
		DRY 400/2/80 pump	2
		DGX 50/2/G50V pump	4
		DRN 200/2/80 pump	2
		DRB 200/2/G50V pump	1



CUSTOMER	STATE	PRODUCTS	Q.TY
City of Kiato	Kiato (Greece)	SMP 750/4/150 pump	2
		MAN 300/4/100 pump	2



CUSTOMER	STATE	PRODUCTS	Q.TY
SM City Center	Xiamen (China)	GR Blue PRO 100 pump	4
		GRE 200/2/G40H pump	4



CUSTOMER	STATE	PRODUCTS	Q.TY
Idrica SpA	Rome (Italy)	OXYPLATE 9" Disc-shaped diffusers	2943





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