Submersible electric Pumps

Product Catalogue
Our range of submersed pumps has been designed to meet all needs related to the pumping, treatment and movement of waste waters and clear waters, and in all situations in which the water used contains solid residues.
The different types of submersed pumps, linked to the wide range of accessories available, ensure high performance and versatility of use.
The emptying of wells, garages and cellars or the lifting of rain/waste waters, industrial applications and irrigation of gardens and orchards require different technical and construction characteristics. Our submersed pumps offer the most suitable technical solutions for different needs ensuring the best possible performance for the specific application and ensuring high reliability of operation.
The flexibility and manageability of the smaller models allows their use in fixed or mobile applications.
The vortex impellers, single or semi-open, those equipped with a cutter and those with a grinder-type shredder allows the treatment black water with the presence of solid or filamentous substances.
The accessories available for the different models, such as the magnetic float for clear water or the minimum suction device up to 3 mm allow completion of the functions of the pumps increasingly adapting to the demands of different uses.

We have simply thought of everything
Sectors and Areas of Application

• Emptying of wells, garages and cellars
  For the emptying of domestic premises subject to flooding or water infiltrations.
• Emptying of tanks and cisterns
  For aspiration from water recovery systems
• Handling of load liquids of solid or filamentous substances in suspension
  For the drainage of sludge with solid or filamentous particles
• Civil and industrial waste water evacuation
  For the drainage of discharges of residential or industrial uses
• Drainage of sublevel areas
  For the extraction of water from lower level areas
• Emptying of cesspools
  For the emptying residential and industrial sewage systems
• The lifting of rainwater
  For movement of the water contained in rainwater recovery tanks
• Irrigation of gardens and vegetable gardens
  For gardening and small-scale agriculture
Technology, performance, quality in two different forms: steel and cast iron

Technology, Performance, Quality: words that can take on different shapes and meanings. For EBARA they assume a precise meaning. They represent the characteristics that distinguish their products and that are also found in the wide range of submersed electric pumps: high technology used in production, performance of a very wide range that covers the most types of use, quality in the details and precision of the technical solutions adopted.

The submersed electric pumps summarise all this in two different families: steel submersibles and cast-iron submersibles. The steel range was also conceived and designed to offer high quality standards in the field of domestic applications.

The range of cast iron electric pumps, on the other hand, is ideal for residential and industrial uses and ensures high performance even in the most extreme situations.

The same quality, the same technology, the same EBARA imprint in two different forms: Steel and Cast iron.
STEEL

- Handle with double cable clamp
- Float: it allows adjustment of pump start/stop levels
- External casing completely in stainless steel
- Mechanical seal and lip ring in an oil chamber
- Stainless steel filter: it allows the passage of solid bodies of 10 mm maximum (20 mm for VOX version)
- Oil chamber: it significantly increases seal life lengthening the intervention intervals for maintenance
- Seal test plug. Each pump is subjected to a watertight test
- Head with cable clamp sleeves completely in stainless steel (technopolymer for OPTIMA)
- Upper and lower bearing support made of aluminium: it facilitates heat dissipation, extending the bearing life
- Shaft casing made of ceramic-coated stainless steel: it protects the shaft wear due to the action of the lip seal ring
- Open impeller in stainless steel (technopolymer for OPTIMA): thanks to small blades and a cover on the back it protects the sealing device from any solid parts contained in the treated fluid

Small domestic pumps or for large industrial plants, there is no difference. Our goal is to offer the product that best suits requirements, in every situation. For these reasons we offer our experience, gained in more than 100 years in the field of waste water treatment, both for industrial products and for domestic pumps.

The electric pumps are made of stainless steel AISI 304, to ensure maximum reliability and resistance. The technical solutions adopted, as well as the matching accessories, ensure this range of high performance and a variety of solutions that adapt to any need.

The OPTIMA, easy-to-use light-water electric pumps, are part of this range. The BEST ONES, also for clear waters that also feature the vortex type impeller option (BEST ONE VOX version). Following on, with similar constructive characteristics but offering greater performance, are the BEST 2 - 5. The two larger models complete the range of submerged steel pumps: the RIGHTS, suitable for waste water and the DW - DW VOX, used with sewage and also available with a vortex impeller.

The Vox type impellers available on a number of models, as well as the minimal suction device or the magnetic float, are accessories that best express the versatility of domestic pumps. Quality and technological innovation, distinctive signs of EBARA.
OPTIMA
Submersible pumps in AISI 304

Submersible electric pump for clear water with AISI 304 stainless steel hydraulics. Pump body, intake grille, seal holder disc and motor casing are in AISI 304. Impeller in PPE + PS reinforced with glass fibres, and shaft in AISI 303. The mechanical seal is standard (Ceramic/Carbon/NBR)
- MA version (fig.1) with float
- MS version (fig.3) with MS vertical magnetic float with reduced dimensions for clean water

Accessories
- 1 1/4" hose connector and relative hose clamp (optional)
- Minimum suction device up to 3 mm (fig. 2)

Practical and easy to use
Possibility of use in fixed and mobile installations
Resistant to corrosion

- Total head from 1.5 to 7.6 m
- Capacity from 1.2 to 9 m³/h
- Maximum immersion 5 m
- Maximum liquid temperature 50°C
- Maximum solid size passage 10 mm

Low suction device - It allows aspiration to 3 mm from the ground (only for M and MA version). Easily mountable with simple pressing

MS magnetic float (vertical) - It allows the use of floating pumps where space is limited (not compatible with low suction device)

Performance curve

50Hz

INSTALLATION
The OPTIMA electric pumps have a wide versatility of installation. The possibility of choosing between the vertical magnetic float (small) or the float switch allows choosing of the best option, also based on the space available to insert the pump. Furthermore, the choice of switch type also depends on the water level for which pump start is preferred.
BEST ONE - ONE VOX

Fully submersed electric pumps in AISI 304

- Possibility of use in fixed and mobile installations
- Resistant to corrosion
- Practical and easy to use

Submersible electric pump for clear water with AISI 304 stainless steel hydraulics. Outer casing, impeller, filter, motor cover, seal holder disc and motor case all in AISI 304, shaft in AISI 303. The mechanical seal is standard in Ceramic/Carbon/NBR. Provided with 5 m of power cable type H05 RN - F (single phase), H07 RN - F (three phase) for internal use, with or without float.

Special Versions
- Version MA (fig. 1) with float
- Version VORTEX (VOX) (fig. 2)
- Version MA (fig. 3) with magnetic float

MS vertical with reduced dimensions for clean water

Accessories
- 1 ¼" hose connector and relative hose clamp (optional)
- Minimum suction device up to 3 mm (fig. 4)

- Total head from 1.8 to 8.3 m for BEST ONE and from 1.5 to 6 m for BEST ONE VOX
- Capacity from 1.2 to 10.2 m³/h
- Maximum immersion 5 m
- Maximum liquid temperature 50°C
- Maximum solid size passage:
  - 10 mm
  - 20 mm for version VOX (VORTEX)

Low suction device
It allows aspiration to 3 mm from the ground (only for M and MA version). Easily mountable with simple pressing.

MS magnetic float (vertical)
It allows the use of floating pumps where space is limited (not compatible with low suction device)

Performance curve

50Hz

INSTALLATION
The BEST ONE electric pumps have a wide versatility of installation. The possibility of choosing between the vertical magnetic float (small) or the float switch allows choosing of the best option also based on the space available to insert the pump. Furthermore, the choice of switch type also depends on the water level for which pump start is preferred.
BEST 2-5

Submersible pumps in AISI 304

Submersible electric pump completely in AISI 304 stainless steel.
The pump body, the impeller, the suction grille, the motor cover, the seal holder disc and the motor case are in AISI 304.
The shaft is in AISI 303 (part in contact with the liquid). Double mechanical seal with oil chamber: the upper one in Carbon/Ceramic/NBR (motor side), the lower one in SiC/SiC/NBR (pump side).

Special Versions
- MA Version with float

Possibility of use in fixed and mobile installations
Practical and easy to use

- Total head from 2.9 to 18.4 m
- Capacity from 1.2 to 21.6 m³/h
- Maximum immersion 7 m
- Maximum liquid temperature 35°C
- Maximum solid size passage 10 mm

Performance curve

50Hz

INSTALLATION
The BEST 2-5 electric pumps are also available with a float switch, thus increasing the versatility of use. The choice of the use of the float switch requires the respecting of minimum installation spaces to guarantee correct operation of the pump itself.
**RIGHT**

Submersible electric pumps for waste water in AISI 304

Submersible electric pump for waste water in AISI 304 stainless steel. Pump body, impeller, motor cover, seal holder disc and motor case in AISI 304. Shaft in AISI 303 (part in contact with the liquid). Present the double mechanical seal with oil chamber: the upper one in Carbon/Ceramic/NBR (motor side) and the lower one in SiC/SiC/NBR (pump side).

**Special Versions**
- MA Version with float
- Version with 10 m of cable

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**Accessories**
Adapter for use of the DW descent kit with RIGHT pumps

- Total head from 2 to 9.5 m
- Capacity from 2.4 to 18 m³/h
- Maximum immersion 7 m
- Maximum liquid temperature 50°C
- Maximum solid size passage 35 mm
- Provided with 5 m of power cable type H07 RN - F (on request 10 m of power cable)

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**Performance curve**

Performance curve for the RIGHT electric pumps at 50Hz.

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**INSTALLATION**
The RIGHT electric pumps are also available with a float switch, thus increasing the versatility of use. The choice of the use of the float switch requires the respecting of minimum installation spaces to guarantee correct operation of the pump itself.
DW – DW VOX
Submersible electric pumps for waste water in AISI 304

Submersible electric pumps in stainless steel AISI 304 for sewage. They have a pump body, impeller, motor cover, seal holder disc and motor case in AISI 304, while the shaft is in AISI 303. Double mechanical seal with interposed oil chamber: the upper one in carbon/ceramic/NBR (motor side), the lower one in SiC/SiC/NBR (pump side).

G20 cast iron spacer (only for DW – DW VOX 300).
Available single-phase versions with or without float.

Special Versions
- Single-channel impeller version (DW)
- Vortex type impeller version (DW VOX)
- Flanged version (DWF/DW VOXF)

Accessories
Descend device kit
- Guide hook DW - DW VOX in cast iron
- Fixed hook DW - DW VOX in cast iron
- On request version with special seal of Tungsten Carbide/Tungsten Carbide + FPM O-Ring

Performance curve
50Hz

Possibility of use in fixed and mobile installations

INSTALLATION
The DW - DW VOX electric pumps are also available with a float switch, thus increasing the versatility of use. The choice of the use of the float switch requires the respecting of minimum installation spaces to guarantee correct operation of the pump itself.
CAST IRON - Advanced technical solutions and high-level performance in a single name: D Series

It is the name of the EBARA submersed pumps series designed for large applications and heavy use such as sewers or large residential/industrial complexes.

Specifically conceived and designed for use with clear, meteoric or charge water, they allow the pumping of water with solid and filamentous bodies. They are distinguished by high strength and durability, and are equipped with special construction features, the true strength of the range.

The D Series name includes a wide and differentiated range of products, each of which has a very specific feature.

The DS - DSF are electric pumps with semi-open impeller used for clear or meteoric waters that can also have fibrous bodies (up to 50 mm); the DVS electric pumps, on the other hand, are used in applications with waste water thanks to the semi-vortex cast iron impeller. Also included in this range are the DL - DL W/C available in two versions, with a semi-open anti-clogging impeller (DL) and a single-channel impeller with cutting action (DL W/C). Lastly, there are the pumps suitable for waste water and with suspended solids: the DML (F) with a single-channel impeller with cutting action and the DMLV (F) which instead have a vortex impeller; DRS - DRD with two types of impellers available, the grinder type version for DRS and the multi-channel versions for the DRD electric pumps.
**We offer multiple solutions**

<table>
<thead>
<tr>
<th>Model</th>
<th>DS/DSF</th>
<th>DVS</th>
<th>DRS</th>
<th>65DL 51,5 80DL 51,5-53,7 100DL 53,7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of poles</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Nature of liquid</td>
<td>Clear waters and rainwater</td>
<td>Filled water with suspended solids</td>
<td>Filled water with solid and filamentous bodies in suspension</td>
<td>Filled water with solid and filamentous bodies in suspension</td>
</tr>
<tr>
<td>rpm</td>
<td>2850</td>
<td>2850</td>
<td>2850</td>
<td>1450</td>
</tr>
<tr>
<td>Impeller</td>
<td>Adjustment semi-open</td>
<td>Anti clogging semi-vortex</td>
<td>Grinder type aspiration shredder device open impeller</td>
<td>Open bi-channel</td>
</tr>
<tr>
<td>Max diameter free passages</td>
<td>From 5 to 10 mm</td>
<td>From 21 to 41 mm</td>
<td>From 6 to 7 mm</td>
<td>From 46 to 57 mm</td>
</tr>
</tbody>
</table>

**EBARA Pumps Europe**

<table>
<thead>
<tr>
<th>DL W/C (with cutter)</th>
<th>DML/OMLF</th>
<th>DMLV/OMLVF</th>
<th>DRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>100DL 55,5-18,5 150DL 55,5-22 200DL 55,5-22 250DL 57,5-22 300DL 511-22 100DLB W/C 5,5-7,5</td>
<td>4</td>
<td>4</td>
<td>2, 4, 6</td>
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<tr>
<td>Filled water with solid and filamentous bodies in suspension</td>
<td>Load water with solids in suspension</td>
<td>Filled water with suspended solids</td>
<td>Filled water with suspended solids</td>
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<tr>
<td>rpm</td>
<td>1450</td>
<td>1450</td>
<td>1450 (DML) 2850 (DMLF) 950, 1450, 2850</td>
</tr>
<tr>
<td>Impeller</td>
<td>Semi-open anti-clogging</td>
<td>Open single-channel impeller with cutting action</td>
<td>Single-channel impeller</td>
</tr>
<tr>
<td>Max diameter free passages</td>
<td>From 46 to 88 mm</td>
<td>From 46 to 60 mm</td>
<td>76 mm (DML) 30 mm (DMLF 1.1kW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>40 mm (DMLF)</td>
</tr>
</tbody>
</table>
DS – DSF
Submersible electric pumps with semi-open impeller

Submersible electric pumps with semi-open impeller for clear water and rainwater in cast iron. Pump body, semi-open impeller, cast iron (bend) elbow. Shaft in AISI 403 (DS) and AISI 420B (DSF).

The mechanical seal is:
- SiC/SiC/NBR (impeller side)
- Carbon/Ceramic/NBR (motor side) (from 6 kW and higher for DSF)
- Upper and lower sealing ring for DS

Possibility of use in fixed and mobile installations

Filter anti-clogging.

Adjustment semi-open impeller

High efficiency impeller!

- Total head from 0.8 to 43 m
- Flow rate 5 to 84 m³/h
- Maximum liquid temperature 40°C
- Maximum solid size passage:
  - 5 mm (50DS) (40DSF 1.1, 1.8 kW)
  - 6 mm (65DS) (40DSF 6 kW)
  - 8 mm (10DS)
- Maximum length of 50mm fibrous bodies (all DS models)

Installation
The versatility of use of DS - DSF electric pumps makes them installable in different applications: drainage tanks, rainwater lifting, emptying of basins or clear water lifting even with small parts in suspension thanks to the use of the high efficiency semi-open impeller. Moreover, among the features that make these electric pumps adaptable to the various uses, there is also the possibility of use in both fixed and mobile installations.
**DVS**

Submersible electric pumps for semi-vortex load waters

Submersible electric pump for load waters Semi-Vortex cast iron.
With pump body, semi-vortex impeller and cast iron (bend) elbow. The shaft is in AISI 403.
Mechanical seal:
- SiC/SiC/NBR (impeller side)
- Carbon/Ceramic/NBR (motor side)
Only available in three-phase version.

- Total head from 5.3 to 23 m
- Capacity from 6 to 60 m³/h
- Maximum liquid temperature 40°C
- Maximum solid size passage:
  - 21 mm (50DVS)
  - 33 mm (65DVS and 80DVS 1.5 kW)
  - 41 mm (65DVS and 80DVS 2.2, 3.7 kW)
- Maximum length of fibrous bodies:
  - 100 mm (50 DVS)
  - 200 mm (65DVS and 80DVS 1.5 kW)
  - 245 mm (65DVS and 80DVS 2.2, 3.7 kW)

The anti-clogging semi vortex impeller of the DVS allows the pumping foreign bodies with dimensions up to 70% of the outlet diameter of the outlet opening.

**INSTALLATION**

The high technical characteristics of the DVS electric pumps make it installable in applications with waste water such as, for example, sewage collection tanks, clear or grey water lifting containing soft or fibrous solids, use in septic tanks or grey water lifting with suspended parts. All this thanks to the use of the anti-clogging semi vortex impeller. Moreover, non-secondary aspect, they are electric pumps that do not require demanding maintenance or frequent checks.
**DL – DL W/C**

Submersible electric pumps for sewage (DL) with cutter (DL W/C)

Submersible electric pump for waste water in cast iron. Version with cutter (DL W/C).

- Pump body, impeller, cast iron elbow (curve). Shaft in AISI 403.
- Mechanical seal:
  - SiC/SiC/NBR (impeller side)
  - Carbon/Ceramic/NBR (motor side)
- Only available in three-phase version.
- Wide range available with diameter of 300 mm and from 65 to 300 mm and power up to 45 kW (DL)

- Possibility of use in fixed and mobile installations
- Open bi-channel impeller
- Open single-channel with cutting action
- Semi-open anti-clogging impeller

- Total head from 3 to 37.7 m for DL and from 3.2 a 20.2 m for DL W/C
- Capacity from 5 to 780 m³/h for DL and from 6 a 150 m³/h for DL W/C
- Maximum solid size passage:
  - 35 mm (65DL)
  - 50 mm (80DL, all DLC)
  - 60 mm (100DL, 100DLB)
  - 70 mm (150DL up to 22kW)
  - 76 mm (200DL up to 22kW)
  - 76 mm (all 30÷44 kW)
  - 82 mm (250DL up to 22kW)
  - 90 mm (300DL up to 22kW)
- Maximum liquid temperature 40°C
- Maximum length of fibrous bodies:
  - 195 mm (65DL)
  - 240 mm (80DL, all DLC)
  - 300 mm (100DL, 100DLB)
  - 400 mm (150DL up to 22kW)
  - 500 mm (200DL up to 22kW)
  - 500 mm (all 30÷44 kW)
  - 550 mm (250DL up to 22kW)
  - 600 mm (300DL up to 22kW)
DML(F) - DMLV(F)

Submersible electric pumps with single-channel impeller (DML-DMLF) or with vortex impeller (DMLV-DMLVF) cast iron, for sewage.

- Pump body, single-channel impeller, cast iron (bend) elbow.
- The shaft is in AISI 403 for DML-DMLV and in AISI 420B for DMLF-DMLVF.
- Mechanical seal:
  - SiC/SiC/NBR (pump side) for DML and DMLF
  - Carbon/Ceramic/NBR (motor side) for DML
  - SiC/SiC/NBR (pump side) for DMLV
  - Carbon/Ceramic/NBR (motor side) for DMLVF
  - Carbon/Ceramic/NBR (motor side) for 40DMLVF
  - SiC/SiC/NBR (pump side) for DMLVF excluding model 40DMLVF
  - Carbon/Ceramic/NBR (motor side) for DMLVF from 4.9 kW and above

- Possibility of use in fixed and mobile installations
- Semi-open anti-clogging impeller
- Open single-channel impeller with cutting action
- Impeller vortex
- Possibility of use in fixed and mobile installations

- Total head from 4 to 38.5 m for DML
  - from 2.4 to 16.5 m for DMLF
  - from 1.4 to 41.3 m for DMLVF
- Capacity from 12 to 330 m³/h for DML
  - from 7 to 45 m³/h for DMLF
  - from 12 to 200 m³/h for DMLVF
- Maximum liquid temperature 40°C
- Maximum solid size passage:
  - 76 mm (DML)
  - 30 mm (DMLF up to 1.4 kW)
  - 40 mm (DMLF)
  - 80 ÷ 100 mm for DMLVF
  - 30 ÷ 80 mm for DMLVF
- Maximum length of fibrous bodies 400 mm for 80DMLVF, 500 mm for 100DMLVF and 40 mm for DMLVF
**DRS - DRD**

**Submersible electric pump for sewage with grinder type impeller (DRS) or multi-channel impeller (DRD)**

- Pump body, impeller, motor case, volute bottom and cast iron top cover. Grinding device in AISI 304 for DRS, with multi-channel cast iron impeller for DRD. Shaft in AISI 420B.
- Mechanical seal:
  - SiC/SiC/NBR (pump side)
  - Carbon/Ceramic/NBR (motor side)

**Grinder type shredder adjustment open impeller**

**Impeller multi-channel DRD**

**Possibility of use in fixed and mobile installations**

- Total head from 0.6 to 72 m for DRS from 0.8 to 47 m for DRD
- Capacity from 4.5 to 60 m³/h for DRS from 12 to 1800 m³/h for DRD
- Maximum liquid temperature 40°C
- Maximum passage of solids 6 ÷ 7 mm for DRS 40, 8 ÷ 10 mm for DRS 65, 30 ÷ 140 mm for DRD

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**Performance curve**

50Hz
D-TANK
Waste water collection tanks
Waste water collection tanks characterised by a sturdy construction, ease of installation and equipped with a fast passage curve. Polyethylene tank of 100, 200 and 600 litres complete with cover with expanded EPDM gasket and stainless steel AISI 304 bolts. Available in the basic version and in the “E” version.

BEST BOX
Lifting stations
Lifting stations characterised by a robust construction, ease of installation, available with or without electric pump.
BEST BOX L: ideal for lifting water for domestic and bathroom use (sink, dishwasher, washing machine)
BEST BOX D: particularly suitable for shower water, it does not need to be buried thanks to the tank inlet positioned 90 mm from the bottom and to a non-return device
BEST BOX G: rainwater lifting, from washing areas, garage descent, etc.

Accessories
EBARA not only provides electric pumps, but aims to be a complete partner for anyone using pumping systems. Being full partners means providing not only electric pumps but also a range of complementary products for installation. This takes on even more significance for the D Series submerged pumps range, where the installation requires special accessories. Among those that EBARA offers are the descent slide kit (QDC), the adapters for JIS/DIN flanges, the guide hook and the descent slide adapter 2 guide tubes.

Furthermore, EBAMIX, submersed mixers, complete the range. These mixers are used for the mixing, homogenization and agitation of heavy sludge and liquids containing solid particles and for the removal of background deposits.
EZ-finder, more than just a simple selector

**EZ-finder**, a way to look for a model of electric pump? Much more.

It is the ultimate tool to find and select the right product for your needs. Thanks to the logic of the selector, it is possible to search for a product in various ways: according to the point of work, by entering the model name or by selecting the application type. Simple, the right product in seconds.

EZ-finder is the ideal tool available to the installer, the designer or the engineer.

Discover it at the link [https://ezfinder.ebara.com](https://ezfinder.ebara.com)

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Everything that you need just a click away

Visit our website [www.ebaraeurope.com](http://www.ebaraeurope.com)

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**Data book**

Complete technical documentation to be consulted to obtain all the data related to the pumps

**Instruction manual**

The manual with all the information needed for correct installation of our pumps

**Kensaku**

A system for the selection of spare parts

**Ez-finder**

The correct pump selection software for every need
[https://ezfinder.ebara.com](https://ezfinder.ebara.com)

**Service**

A team of professionals at your disposal to advise you in your choice of pump and to offer post sale assistance