Multistage, multiuse, multifunction

Multistage electric pumps are an excellent solution to guarantee high performances: the stages that make up the hydraulic unit allow the reaching of very high pressures. Our range is divided into two different types: vertical multistage and horizontal multistage. Each with its own peculiarities, specific features to better adapt to a specific application area or system, allowing it to cover a truly vast area of applications.

Domestic pressurisation and the supply of drinking water, industrial washing systems and pressure increases, as well as heating or cooling and rainwater recovery, are all situations that find the right product in this range.

Our pumps ensure, in all these uses, reliability, high performance and energy efficiency thanks to innovative and cutting-edge technical solutions. The efficiency and reliability of the multistage pumps are further improved by the possibility of using the inverter technology systems, to be chosen between E-drive and E-power, for an energy and economic saving of the entire system and an improvement of environmental sustainability.
Sectors and Areas of application

The wide choice of multistage electric pumps allows EBARA to adapt to the most disparate uses and applications and to respond, thanks to the versatility, to the needs of a large area of residential and industrial applications.

- **Pressurisation**
  For the pressurisation of water in residential, commercial, industrial and agricultural contexts.

- **Fire-fighting**
  For the creation of fire-fighting sets compliant with the European standard UNI EN 12845.

- **Irrigation**
  To make available the water necessary for crops.

- **Washing**
  For the creation of washing systems used in industry (car washing machines, dishwashers, cleaning in place, sterilising in place, etc.).

- **Air-conditioning**
  For the circulation of water in air conditioning systems.

- **Heating**
  For the circulation of water in air conditioning systems.

- **Movement in general**
  Industrial liquid handling in process applications.

- **Swimming pools**
  For water recirculation of swimming pools or of sports facilities.

- **Refrigeration towers**
  For the circulation of water required in refrigeration towers.

- **Emptying/Filling**
  For the emptying/filling of tanks.
Vertical multistage electric pumps

EBARA vertical multistage means high pressure, innovation and advanced technical solutions. The pumps of this line fully comply with these aspects.

Among the multistage vertical pumps stand out the EVMS that, thanks to the exclusive technical solutions adopted and the unmistakably EBARA design, represent the most innovative series on the market.

Industrial applications represent their best field of use.

Following the MULTIGO range: the only one of the EBARA multistage in which the motor cooling takes place thanks to the pumped liquid that makes them suitable for both in-tank and surface applications.

Completing the series are the CVM models featuring glass fibre reinforced technopolymer stages and cast iron base.

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**CONFIGURATIONS**

**"IN-LINE" TYPE**
Suction and discharge are positioned on the same axis

**"C" TYPE**
Suction located at the bottom, discharge positioned above overlying the aspiration

**"L" TYPE**
Suction located at the bottom, discharge positioned above radial to the aspiration

### Model | Materials | Impeller | Technical data
---|---|---|---
EVMS | EVMS: AISI 304 EVMSG: cast iron EVMSL: AISI 316 | • Total head up to 300 m • Capacity up to 120 m³/h • Maximum operating pressure: 16 - 25 - 35 bar
MULTIGO | AISI 304 | Technopolymer reinforced with fibre glass | • Total head up to 75.7 m • Capacity up to 7.2 m³/h • Maximum operating pressure: 11 bar
CVM | Cast iron | Technopolymer reinforced with fibre glass | • Total head up to 98.5 m • Capacity up to 7.2 m³/h • Maximum operating pressure: 11 bar
**EVMS**

The EVMS feature a range of technical solutions that offer a revolutionary product on the market. And here’s why:

**Technical data**
- Total head up to 300 m
- Capacity up to 120 m³/h
- Hydraulic efficiency index MEI > 0.7
- IE3 high efficiency motors starting from 0.75 kW
- EBARA ETM electric motors from 0.75 to 11 kW
- Liquid temperature range: -30°C + 140°C
- Maximum working pressure 16, 25 or 35 bar

**The Shurricane impeller**, patented by EBARA in AISI 316 steel, with its innovative shape, ensures a reduction of the axial load that usually rests on the bearings, ensuring maximum efficiency on the market and also allowing the use of any standardised motor on the market.

**The cartridge-type mechanical seal** allows easy maintenance. Its replacement involves a simple operation without having to disassemble the motor support. The seals used are in compliance with EN12756 and easily available on the market if required.

**The wide variety of connections available** that meet all the needs depending on the application, the pumped liquid, the system on which they are to be installed: DIN round flanges, DIN mobile flanges, oval flanges, Victaulic and Clamp joint.

**MULTIGO**

MULTIGO is a vertical multistage centrifugal electric pump with an outer casing, a motor cover and a seal holder disc in AISI 304.

- The components of the hydraulics, i.e. impeller, diffuser and spacer, are made of polypropylene and polystyrene (PPE + PS) reinforced with glass fibres.
- Constructively it presents a double mechanical seal in an oil chamber, to ensure continuous lubrication and maximum reliability. Both seals, on the motor side and on the pump side, are made of Carbon/Ceramic/EPDM.
- Cooling of the motor is guaranteed by the passage of the pumped fluid, so that this pump can be used both in the surface and in the submerged configuration. It is precisely this feature that makes it suitable for different applications.
- All the MULTIGO models are supplied with 5 meters of H07RN-F cable.

**Technical data**
- Total head from 75.7 to 13.4 m
- Capacity from 1.2 to 7.2 m³/h
- Hydraulic efficiency index MEI > 0.4
- Liquid temperature up to +40°C
- Maximum suction depth: 6 m
- IP 68 protection degree

**CVM**

The EBARA CVM electric pump is a vertical multistage for residential use.

- The hydraulic components are made of glass fibre reinforced plastic, while the mechanical seal is made of Ceramic/Carbon/NBR.
- The MEI hydraulic efficiency index > 0.4 and the 0.75 kW IE3 motors make them compliant with the relevant European Directives.
- To provide an even more complete product, the CVM models are also available as standard already combined with the E-drive inverter, which allows the optimal setting and operation according to requirement, ensuring the reduction of operating costs.

**Technical data**
- Total head from 98.5 to 6.4 m
- Capacity from 1.2 to 7.2 m³/h
- Hydraulic efficiency index MEI > 0.4
- IE3 high efficiency motors starting from 0.75 kW
- Liquid temperature up to +40°C
- Protection with automatic re-set incorporated for the single phase models

**The vent cap**, conceived and designed to avoid the problem of dry running: it is in fact positioned specifically above the level of the mechanical seal, to ensure the bleeding of any air bubbles.

**Standard connection for pressure sensor** available for quick connection, in case of presence of inverter or other control systems. 3/8" loading and unloading plugs as standard or suitable for connecting a pressure gauge.

**Shurricane**

The Shurricane impeller, patented by EBARA in AISI 316 steel, with its innovative shape, ensures a reduction of the axial load that usually rests on the bearings, ensuring maximum efficiency on the market and also allowing the use of any standardised motor on the market.
Horizontal multistage electric pumps

Horizontal multistage electric pumps: the ideal solution for industrial and residential applications where performance and reliability are required. Two series of electric pumps are part of this line: MATRIX and COMPACT.

The MATRIX electric pumps, made of AISI 304 stainless steel, are suitable for multiple uses in both the industrial and residential sectors. They have various certifications including the WRAS and TIFQ which make them suitable for drinking water. Thanks to the high operating pressure (10 bar) and the renowned robustness, they are ideal for industrial applications such as washing systems or in chillers and hydronic groups.

The COMPACT series, instead, is made of cast iron and with a technopolymer impeller and is widely used in the residential sector, in domestic pressurisation and clean water handling. This is thanks to its constructive characteristics: compactness, lightness and extraordinary quietness.

<table>
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<tr>
<th>Model</th>
<th>Pump body</th>
<th>Impeller</th>
<th>Technical data</th>
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</table>
| MATRIX | AISI 304   | AISI 304          | • Total head up to 97 m  
• Capacity up to 27 m³/h  
• Maximum operating pressure 10 bar |
| COMPACT | Cast iron | Technopolymer reinforced with fibre glass | • Total head up to 79 m  
• Capacity from 1.2 to 7.2 m³/h  
• Maximum operating pressure 10 bar |
Horizontal multistage centrifugal electric pumps characterised by a sturdy and compact construction. Available in various versions and models and suitable for many applications: pressure groups, water distribution and treatment, heating and air conditioning, cooling and chiller, irrigation and rainwater recovery, industrial washing and industrial systems.

- Body, impellers, intermediate stages, seal holder disc and shaft (part in contact with the liquid) in AISI 304.
- The standard mechanical seal is in Ceramic/Carbon/EPDM; then there is the possibility of using different types of special seals to reach a temperature range from -15°C to +110°C.
- WRAS-certified for standard models up to 85°C.
- It is possible to combine these pumps with 2 poles, self-ventilated, high efficiency asynchronous motors.

### Technical Data
- Total head up to 97 m
- Capacity up to 27 m³/h
- IE3 high efficiency motors starting from 0.75 kW
- Maximum liquid temperature from -15°C to +85°C (standard) from -15°C to +110°C (TE version for high temperatures)

Matrix

Extremely silent horizontal multistage centrifugal electric pumps. Suitable for pressure increases in general, domestic pressurisation, small garden irrigation, vehicle washing and clean water handling.

- High silence
- The pumps are equipped with 2-pole energy efficient asynchronous motors.

### Technical Data
- Total head from 6 to 79 m
- Capacity from 1.2 to 7.2 m³/h
- Maximum operating pressure 10 bar
- Maximum liquid temperature 40°C
- The pump body and the support are in cast iron, the outer jacket is in AISI 304. The impeller and diffuser are made of PPE + PS reinforced with glass fibres and PTFE. The shaft is in AISI 416.
- The mechanical seal is in Ceramic/Carbon/NBR

Compact
Pressure or temperature variations, as well as the variation in the demand for water itself, are situations that commonly occur in water systems, whether this relates to heating systems or in general to distribution and pressurization, irrigation or industrial uses. Responding promptly to these variations means improving the efficiency and reliability of the entire system. How does this work? EBARA provides a system that meets these needs, increases the versatility of the plant and offers certain advantages:

**E-drive**

Combined with high efficiency motors and thanks to the design and construction of the pump hydraulics EBARA guarantees high overall efficiency.

**Flexible and versatile** solution depending on the system. It is possible to set the inverter with control on the differential pressure, differential temperature and differential flow according to the actual requirement.

Remote operation control, either using the ModBus communication protocol, or via the analogue 0-10V and digital analog inputs provided as standard. This makes it a product that is compatible with the most modern and cutting-edge systems, in which the interconnection of the various devices is frequently requested.

**SOFT START** and **SOFT STOP**: ensures starting and stopping controlled by the motor, increasing reliability and efficiency.

It offers a multitude of standard controls, which protect the entire electric pump system: protection against dry running, overcurrent, overvoltage, undervoltage, $P_{\text{max}}$ protection, $P_{\text{min}}$ protection, etc.

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**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 duty point, 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.

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