

xylem



# e-SV Series

Stainless steel vertical  
multistage pumps



# Where efficiency meets performance

The e-SV fabricated vertical multistage pump is an energy saving, non-priming pump coupled to a standard premium-efficient motor. It's built to withstand a variety of mechanically aggressive and high temperature liquids, and is designed to extend uptime and help reduce lifecycle costs in a wide range of demanding applications. The e-SV range of pumps features 11 models, and each can be specially configured for a wide range of environments. What's more, in pre-programmed, pre-assembled packages, the e-SVE SMART and the e-SVX hydrovar® X, are complete systems, delivering market-leading efficiency and performance right out of the box.

Also, when an e-SV is paired with a AQUAVAR® IPC variable speed drive and hydrovar X+ Smart controller, it provides energy saving increases up to 70% vs. fixed speed, while reducing installation time and providing a more user-friendly HMI.



## Extra efficient

e-SV's hydraulics, combined with high-efficiency motor (single-phase IE2 and three-phase IE3, IE4 or IE5) deliver maximum efficiency.

## Energy saving

Pumps are among the largest users of industrial energy. Do your part to reduce CO<sub>2</sub> emissions and your impact on the environment - and improve your bottom line - by taking advantage of the e-SV's lower energy requirement. Use a e-SV hydrovar® X and a e-SV SMART and save even more energy.

## Easy to maintain

e-SV's design allows removal of the mechanical seal without having to remove the motor\*, reducing repair time by up to 50%. A standard mechanical seal, wearing components, service tools and standard IEC motors enable faster and easier maintenance and servicing.

\*as standard for e-SV 33-125 (all motor sizes) and e-SV 1-22 with motor sizes IEC132 and above. On request on e-SV 1-22 with motor sizes IEC90 to112.

# Applications

e-SV multistage pumps have a history of performance handling water and liquids such as glycol, oils/solvents, and more in the industrial, municipal, commercial building services and agricultural markets. Some of the many applications include:



Commercial building services



Agriculture



Water utilities



OEM



Power generation



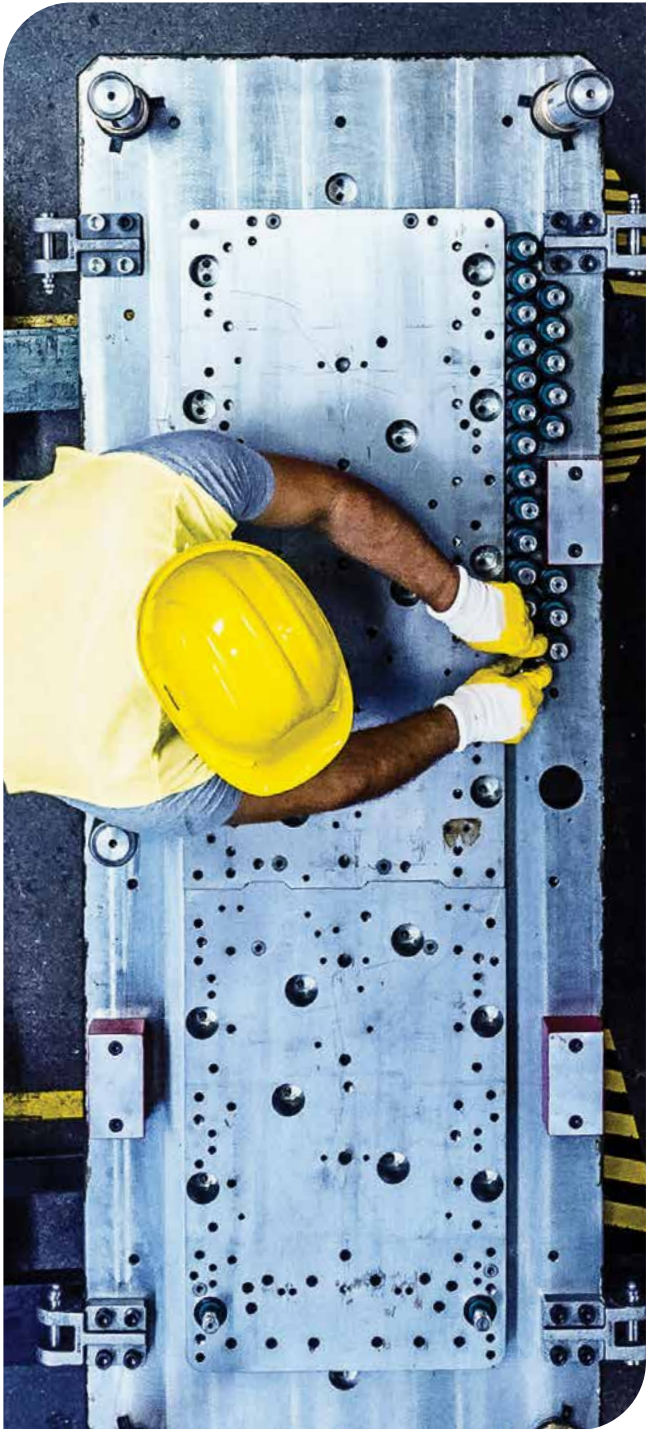
General industry



## And more

- Ultra-filtration systems
- Reverse osmosis systems
- Purification
- Water softeners and de-mineralization
- Distillation systems
- Booster systems
- Water transport/treatment systems
- Cooling and heating systems
- Potable water
- Firefighting system
- Commercial washers
- Washing and cleaning systems
- Process cooling and heating
- Machine tool cooling
- Electronics cooling
- Industrial fluid transfer and transport
- Heat transfer fluids
- Sprinkler systems
- Boiler feed
- Humidifiers

Broad range of solutions  
delivering market-leading  
efficiency and performance



e-SV X  
e-SV hydrovar® X+

e-SVE  
e-SV SMART

e-SV



AQUAVAR IPC



# The e-SV pump

The e-SV pump, the product at the heart of the e-SV Series, is one of the highest efficiency multistage pumps on the market today. This fabricated vertical multistage pump is also easy to install and economical to maintain. When it comes to efficiency, the e-SV delivers.

## Benefits

- The expanded hydraulic coverage of an e-SV pump combined with a high-efficient motor delivers maximum performance
- The extended e-SV portfolio allows you to select a pump aligned with your application's optimum duty point
- A variable speed version such as e-SV hydrovar® X, e-SV SMART increases an e-SV's energy savings up to 70% vs. fixed speed while reducing installation time
- Standard models offer low NPSH, with even lower NPSH models available
- e-SV pumps are available in horizontal and vertical configurations
- You can choose the flange type to meet your piping needs
- The mechanical seal can be replaced quickly and easily, reducing repair time by up to 50%
- The pump can be easily repaired right in the piping.
- The O-ring seat is designed to allow easy outer sleeve disassembly
- The standard mechanical seal, wearing components, service tools and IEC motors enable faster, easier maintenance and servicing
- To simplify maintenance, a repair stack assembly is available for quick and efficient installation and repair

- **Temperature of pumped liquid**  
-30°C to +120°C standard version
- **Protection: IP55**
- **Variable speed (on pumps and Booster Packages):**  
Smart version with IE5 permanent magnet motor and embedded drive; e-SV X version with IE5 assistance reluctance motor and embedded drive

## Special versions

- Low NPSH
- High Pressure up to 40 bars
- High Temperature up to 150 and 180°C
- Passivated and Electropolished
- Horizontal installation
- Space saving
- Round flanges, discharge port above suction

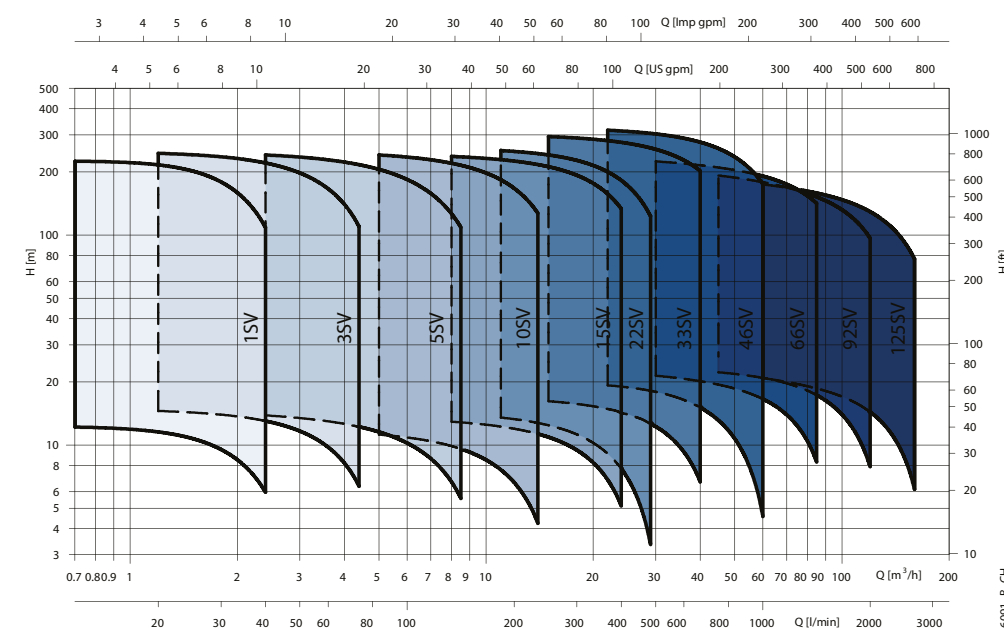


## Specifications

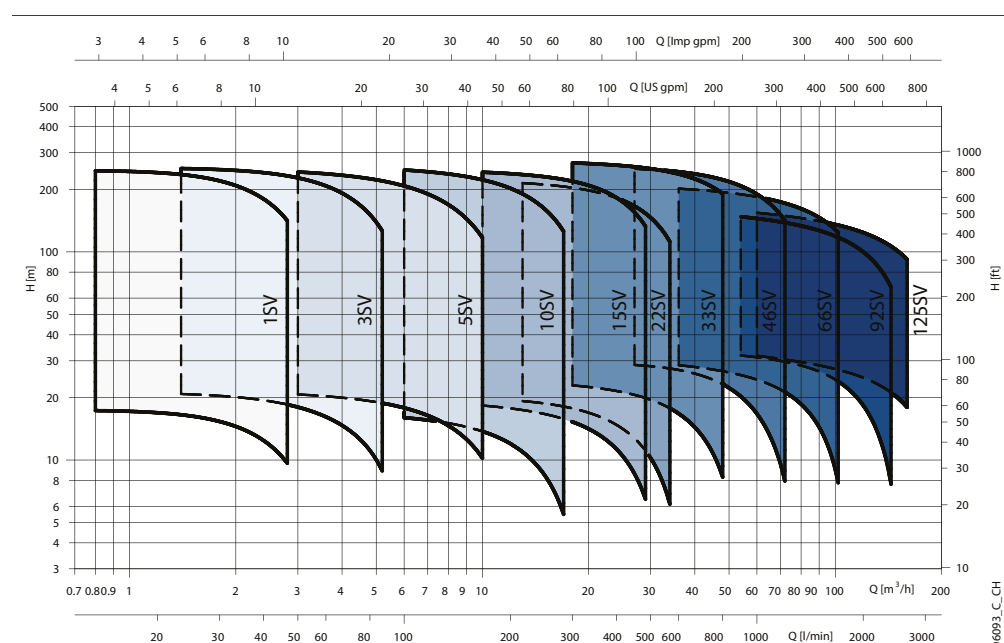
- **Delivery:** up to 160 m³/h
- **Head:** up to 330 m
- **Power supply:** three-phase and single-phase 50 and 60 Hz
- **Power:** standard motors from 0.37 kW to 45 kW
- **Maximum operating pressure:**  
PN25-40 for sizes 1-22SV; PN16, PN25, PN40 for sizes 33-125

# Performance curves

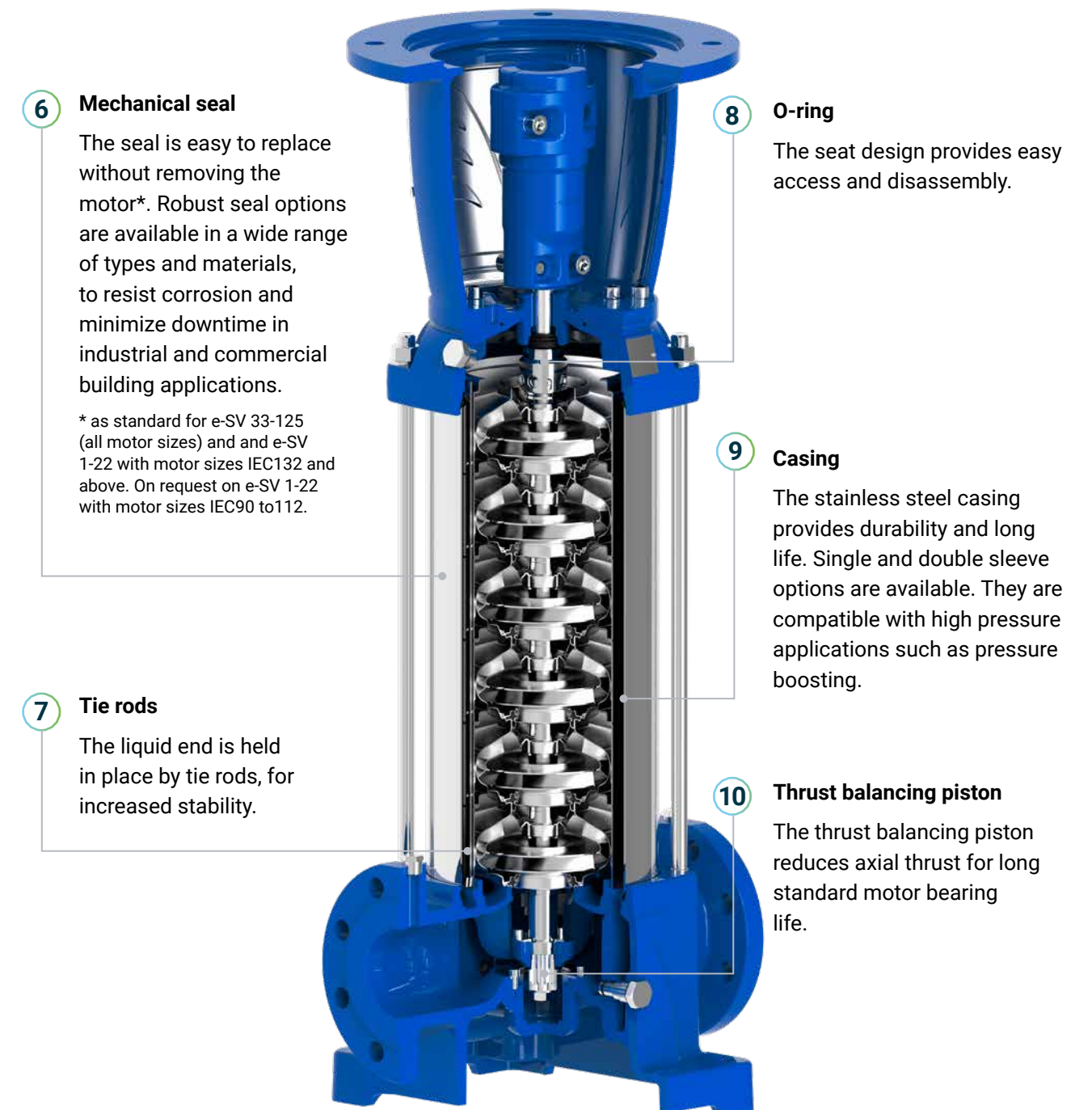
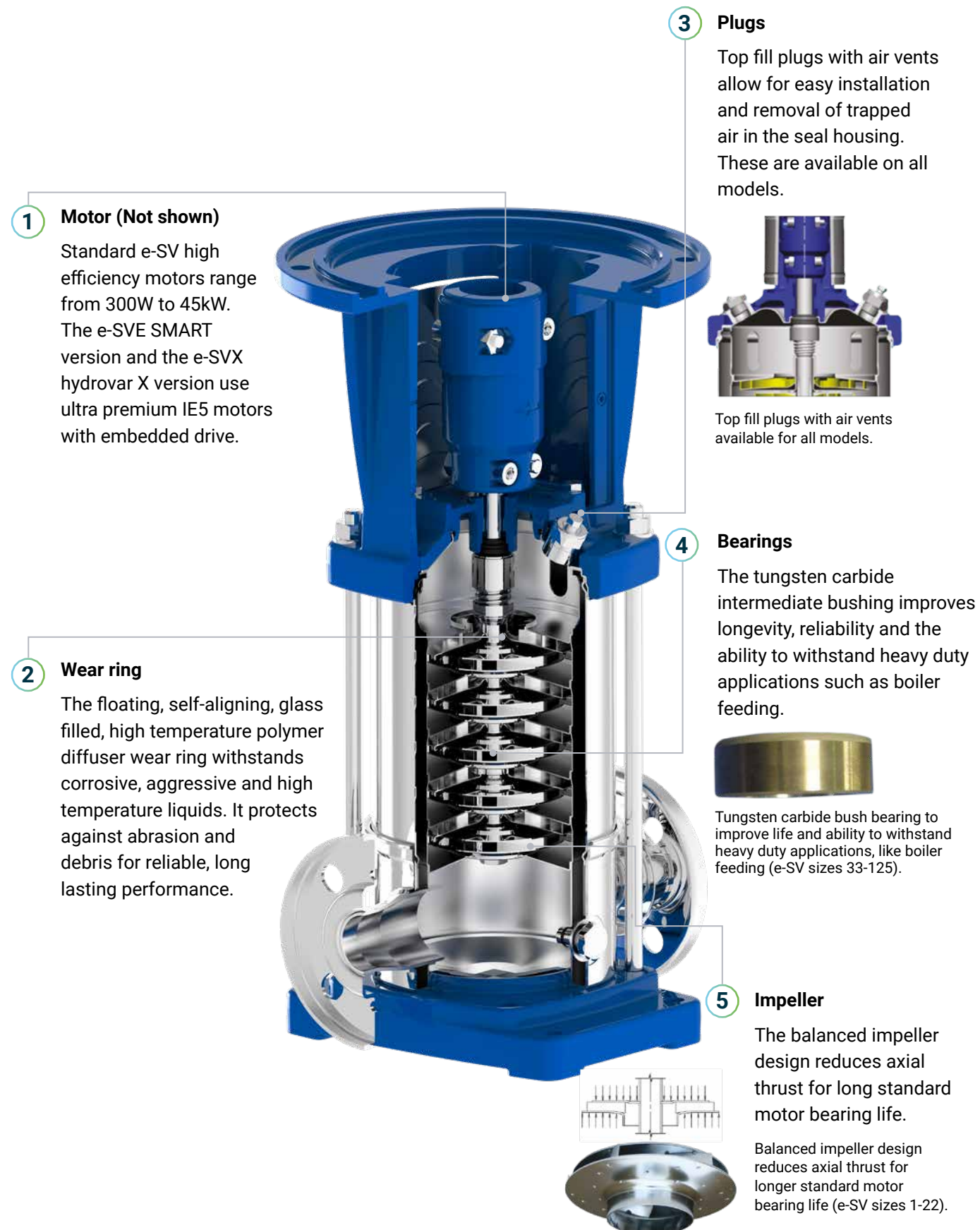
## e-SV 50 Hz fixed speed performance curves



## e-SV 60 Hz fixed speed performance curves



# Built to perform



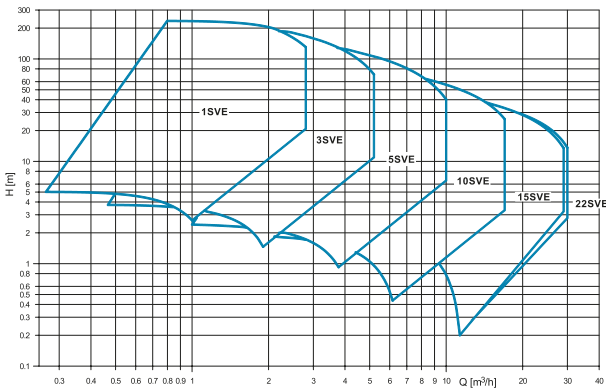
# e-SVE: e-SV with integrated Xylem Smart Motor

Smart high-efficiency hydraulics yield the lowest possible operating costs for a variety of applications, including residential and light commercial, OEM applications and HVAC. Six ranges offer multiple construction designs, with special versions available.

- IES2 drive with permanent magnet motor for top efficiency
- More compact than the fixed-speed version, meeting the same duty points with precision and consistency
- A variety of connections (threaded, round, clam and oval flanges, Victaulic) configured vertically; ports can be on the same side to save space
- Designed for fast, easy maintenance with a balanced mechanical seal, an O-ring seat design and a replaceable diffuser wear ring
- Reduced impeller axial thrust for longer standard motor bearing life
- Certified for drinking water use (WRAS and ACS)
- Options include high-temperature seals, low NPSH design, high pressure design, and passivated and electropolished versions



Performance curves



### Specifications

- Delivery up to 30m³/h
- Head up to 235m
- Liquid temperature up to 120°C
- Operating pressure PN25
- Power range 0.37-2.2 kW

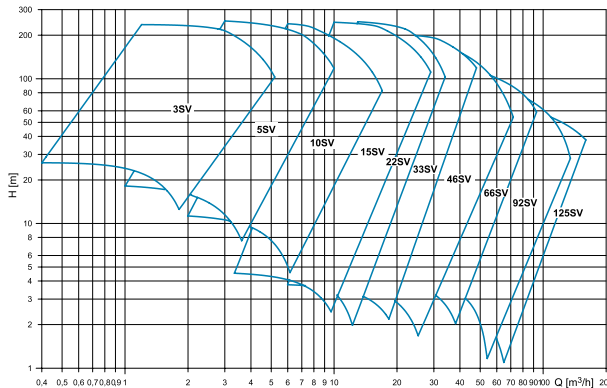
# e-SVX: e-SV with hydrovar® X

Take the efficiency and low lifetime costs of e-SV multistage pumps to new levels with hydrovar® X – first-class pump management that optimises connectivity, sustainability and performance. hydrovar® X brings the best energy efficiency performances with its frequency converter coupled with the ultimate synchronous motor, manufactured by Xylem integrating decades of expertise and know-how in pumping solutions. It's the right combination of motors, variable speed drive and pump ensuring great performance, maximum savings and a rapid return on investment.

- IE5 Permanent magnet assisted reluctance motor equipped with advance control for the highest efficiency level and to extend the lifetime of the motor
- Multipump capability up to 8 pumps as standard with no single failure point
- Easy set-up thanks to graphic color display
- Different control modes available: pressure, flow, temperature and level
- Extended analog and digital inputs and outputs available
- Remote control and management via app



Performance curves



### e-SVIX specifications

- Delivery: up to 160 m³/h
- Head: up to 260 m
- Liquid temperature: up to +120°C
- Operating pressure PN16, PN25, PN40
- Environment temperature: -20° C to +50° C with no performance derating

# hydrovar® X

hydrovar® X is an integrated IE5 PM-assisted synchronous reluctance motor and VSD solution developed to connect and optimize Xylem hydraulic pumps. It enables users across a wide range of applications to enhance pump performance while reducing energy footprint and lifecycle costs. With extended I/O, IoT, wireless and wired connectivity, hydrovar® X has a smart interface for easy set up and commissioning.

### Applications

- Deep well water pumping
- Surface water pumping
- Water transfer
- Filtration pumping and backwashing (air or water)
- Membrane/RO system pressure boosting
- Water storage and distribution
- Network pressure boosting
- Fire hydrant supply
- District heating water pumping
- General plant services

### Benefits

- Ultra premium efficiency motor providing full range from 3 to 22 kW
- Graphical color display
- IE5 motor equipped with advance control for the highest efficiency level and to extend the lifetime of the motor
- Multipump capability as standard with no single failure point

### hydrovar® X

Voltage: three phase 400V  
Power: up to 22kW  
Multipump capability: up to 8 units  
Power supply: 50/60Hz  
Comms: BACnet & Modbus standard in single pumps  
IES2 package with IE5 motors  
Enclosure rate: IP55  
Ambient temperature: -20°C / +50°C full power

- Communication protocols available soon
- Remote control and management via app
- Preset from factory
- Guided commissioning via Genie
- Complete set of languages



### hydrovar® X and Xylem Vue Secure Connect, better together!

hydrovar® X can communicate with Xylem Vue Secure Connect IoT platform enabling to have a complete overview of all connected assets, anytime, anywhere. Xylem Vue Secure Connect collects historical data to analyze trends and generate alerts preventing failures and equipment downtime. You get the right insights to make smarter decisions with the remote and on-site support from Xylem and our partners.



Scan for more about remote monitoring

# hydrovar® X+ Smart Controller

Designed to extend the capabilities of hydrovar® X+ to larger systems, the hydrovar® X+ Smart Controller is an intelligent solution designed especially for applications above 22kW. It offers the same trusted design and functionalities of hydrovar® X+, now with greater versatility, providing users with a scalable option without adding any complexity.

### Benefits

- Graphical color display
- Multi-pump capability as standard with no single failure point
- Communication protocols available
- Remote control and management via app
- Preset from factory
- Guided commissioning via Genie
- Complete set of languages



# Acquavar IPC

Aquavar IPC is an Intelligent Pump Controller, designed for precise control of speed, pressure, flow and level over a wide range of submersible and surface applications. Wall mounted, with power up to 90 kW. It is generally coupled to hydrovar® X+ Smart controller.



# Smart pump range

The Lowara Smart Pump range incorporates state-of-the-art technology to optimize performance, communicate with other building systems and help you achieve your goals. Choose preprogrammed packages for easy, cost-effective installation - and benefit from this system's power, intelligence and performance. The range is available for horizontal and vertical multistage pumps, in-line pumps, and booster sets.



# e-SV Special versions

Xylem has developed a wide range of special versions to give an appropriate and dedicated solution to special applications and installations in the industry or in the building services market:

## High pressure

e-SV High Pressure is available in two different configurations: single pump solution or tandem pump solution (two pumps in series). If the inlet pressure value is already high, the Lowara portfolio delivers a single pump able to withstand the high inlet pressure and deliver up to 40 bar pressure at the outlet. The specific balanced mechanical seal, the particular design of the sleeve, the balanced design of the impeller and the hard material intermediate bush bearing allow e-SV withstanding up to 40 bar without stressing the motor and the pump components, with a direct consequence on the reduction of the life cycle cost.

e-SV High Pressure in tandem system is composed of two identical standard e-SV High Pressure pumps, making replacement easy and cost-effective.

## Low NPSH

In industrial applications, often pumps are exposed to heavy duty installations and conditions, such as pumping high temperature liquids (boiler-feed), poor inlet pressure conditions or high flow rate applications.

In these cases, constant and durable pump operation is often compromised by cavitation.

The special design of the first initial stage, together with a specific impeller design, allows e-SV Low NPSH versions to improve its suction capacity and even in critical suction conditions, the pump is able to deliver consistent and constant operation on the whole application range without any tank or additional accessories on the suction side.

This specific design saves the pump of the cavitation: the components in the pump are not submitted to stress, decreasing the need of repetitive maintenance and reducing the life cycle cost of the pump.

## 150°C

Thanks to the special design of its housing, the normalized seal is protected from the stress caused by high temperatures by means of a “natural” lubrication process which is triggered by the pumped liquid itself.

Furthermore, the balanced mechanical seal and the high quality of the elastomers assure excellent long-term performance, even in the harshest operating conditions. e-SV 150°C pumps are hardwearing thanks to the hard metal bush supports which can withstand high temperature applications up to 150°C d pressure values up to 25 bar. e-SV 150°C pumps use a standard balanced mechanical seal (EN12756) which makes it cheap and easy to replace.

## 180°C

Thanks to the special design of its housing, the seal is protected from the stress caused by high temperatures by means of a “natural” lubrication process which is triggered by the pumped liquid itself, and a cooling system which uses the air in the room. A degasser is also installed at the top of the pump in order to automatically eliminate the air in the seal area. The temperature decreased to 100°C in the mechanical seal area, together with the balanced mechanical seal, pump body and upper chamber in cast AISI 316, hard metal bush supports, double outer jacket and the high quality of the elastomers of the e-SV 180°C pump, assure excellent long-term performance, even in the harshest operating conditions.

e-SV 180°C pumps are designed to operate in any application at temperatures up to 180°C and pressures up to 25 bar.

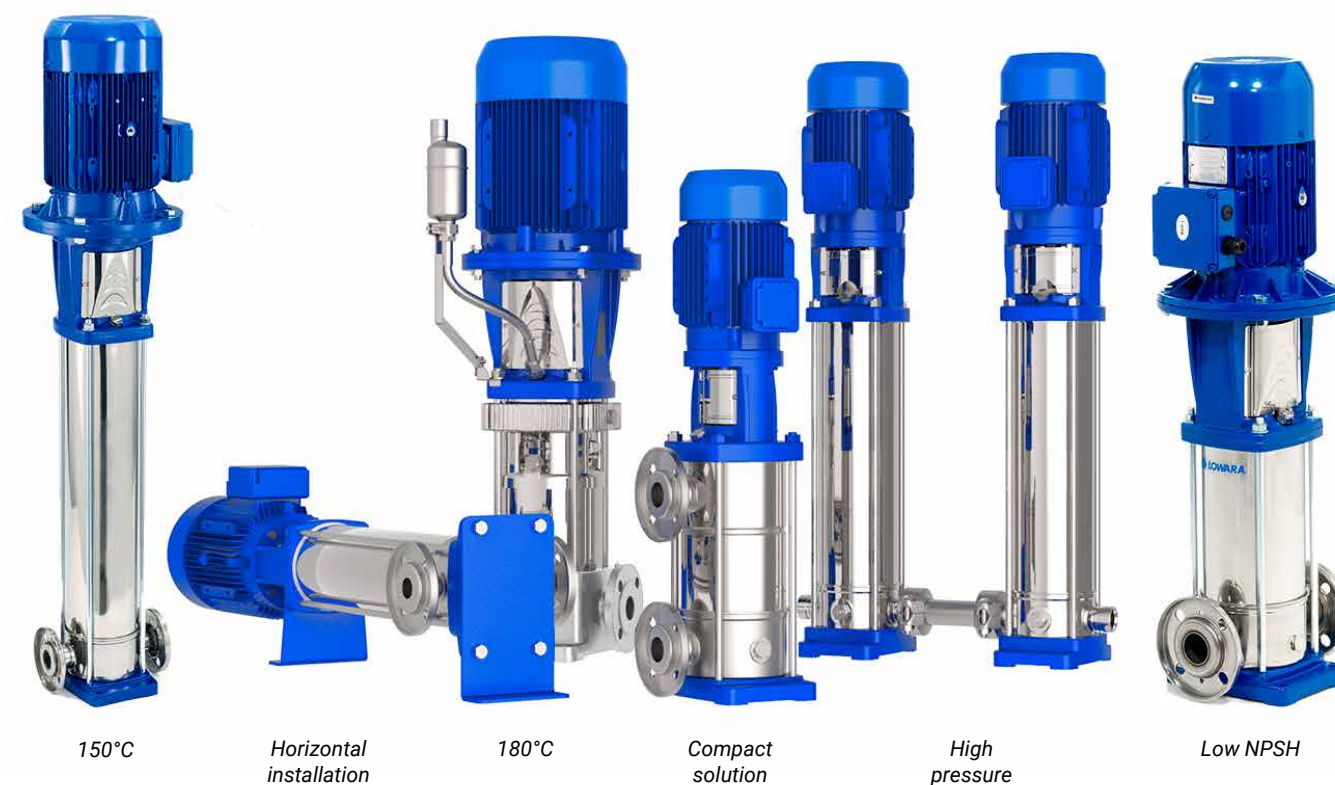
## Compact solution

e-SV Reduced dimensions offers up to 50% saving in the plant room dedicated usually for a traditional vertical multistage pump with suction and discharge ports designed inline. This specific design of the pump allows installing e-SV Reduced dimensions everywhere, even at a close proximity to a wall.

e-SV Reduced dimensions offers many different configurations with the delivery port above the suction port with 4 adjustable positions. e-SV Reduced dimensions is available with round flanges up to PN25.

## Horizontal installation

In some applications where room is reduced vertically, it is mandatory to have some pumps systems able to deliver high pressure performances together with a limited occupied vertical space. Any e-SV pumps can be installed in a horizontal position thanks to a specific range of accessories developed by Lowara.



# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

Xylem is a leading global water solutions company dedicated to advancing sustainable impact and empowering the people who make water work every day. Xylem connects diverse capabilities and innovative technologies to provide tailored solutions across the entire water cycle. From moving, treating and measuring water to optimizing and maintaining water systems, Xylem collaborates with customers to solve their most critical challenges. Together, through partnerships with utilities, industrial manufacturers, building operators, and communities, we are building a more water-secure world.

For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)

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Let's Solve Water