

Pumps and pumping systems

Submersible dewatering pumps

In the real world time is money, and worksites have no time for unwanted water. Sulzer has the solutions in a complete pump range for reliable dewatering. sulzer.com/dewatering



Dewatering pumps with built-in AquaTronic

Submersible dewatering pumps XJ 25 - XJ 110, XJC 50 - XJC 110 and XJS 25 - XJS 110 have several options for electronic supervision that make them even more reliable and easy to use. Most important is the AquaTronic unit, which ensures correct motor rotation, gives motor protection, allows the pump to start via a level sensor and gives you all the performance information in your PC, and much more.

Built-in AquaTronic

The contactor in the basic pump configuration can be replaced with an AquaTronic unit for built-in intelligence. The AquaTronic unit should be ordered when ordering the pump.

Ensures correct motor rotation

The AquaTronic unit automatically controls phase order and changes the motor connection to make sure the pump starts with the correct impeller rotation every time. This ensures that full capacity is obtained from the installed pump, it saves energy and reduces wear.

No control panels needed

The built-in pump electronics eliminate the need for traditional electrical control panels. This increases ease of handling.

Motor protection ensures safe running

The pump stops if there is a power overload at high amperage, a high temperature in the winding or a missing phase. In this way any crucial failures can be prevented.

Anti-clog function reduces unwanted stops

If the pump fails to start due to a heavy start or a locked rotor, the pump will attempt to free the blocked impeller with backspin and automatic restart.



The AquaTronic unit in the pump work in stand-alone mode, but when adding the electronic accessories below, more of the unit's functions can be accessed.

Dewatering pump with AquaTronic and level sensor

A level sensor connected to the AquaTronic makes sure the pump starts and stops at given water levels.

The pump can also be set to stop when the pump runs dry and start again at a specified level. This lowers the power consumption and minimizes wear.

Dewatering pump with AquaTronic and AquaPlug

When using an AquaPlug you will get access to additional features included in the AquaTronic unit. The pump can be set to energy save mode for automatic on/off functionality with level sensors.

AquaPlug provides flashing LED light alarms as well as indications of important parameters for easy and efficient handling, such as the service indication light that helps to easily spot alarms.

Another function is the automatic restart when power supply problems, such as unbalanced voltage or low/high voltage, are solved. You can easily stop and start the pump with the AquaPlug.

Built-in intelligence with service diagnostics program

Check the pump conditions without disassembly by simply connecting the pump to a PC via a USB cable for access to the service diagnostics program. The program will show the pump data saved in the pump's built-in memory such as:

- Pump status data
- Pump operating history
- Pump failure history
- Pump service/maintenance history
- Digital manual and spare parts documentation



Overview of electronic supervision features

AquaTronic

Key benefits of the AquaTronic unit include:

- Correction of motor rotation if phases are improperly connected
- Run mode - no control panels needed
- Integrated start equipment (direct or soft start depending on pump model)
- Motor protection against high temperature, high amperage and missing phase

If the pump is also equipped with an optional level sensor, AquaTronic provides:

- Precise level control
- Protection against dry running

AquaTronic service diagnostic program

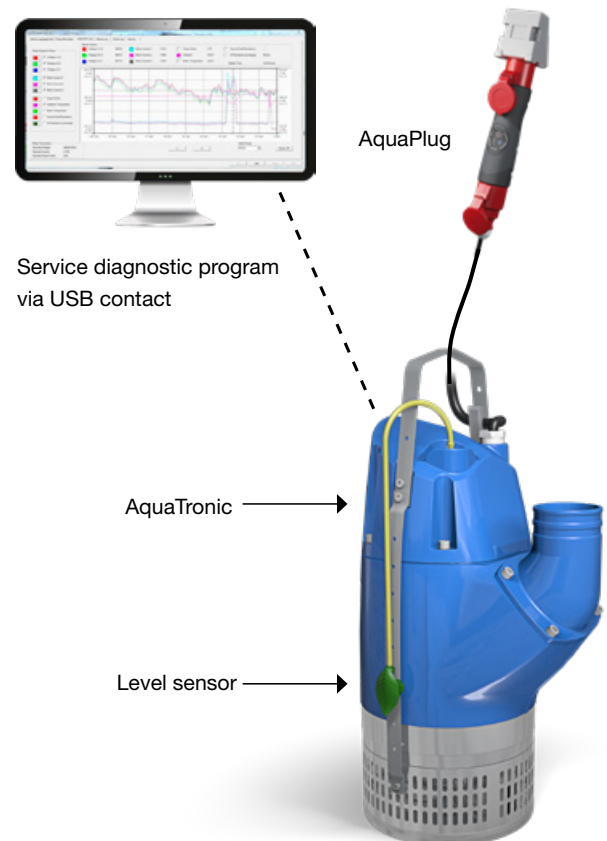
Connecting a PC to the AquaTronic unit via USB cable provides access to the service diagnostic program, which offers:

- Pump status data (temp, voltage, moisture, etc.)
- Pump operating history
- Pump failure history
- Pump service and maintenance history
- Digital manual and spare parts documentation

AquaPlug

AquaPlug is an option that combines with AquaTronic to provide additional alarm and start/stop functions, as well as indications for important parameters.

AquaPlug is incorporated into the power line via 16 A or 32 A sockets.



The table below shows the range of features available when the AquaTronic unit and other electronic supervision options are used with the submersible dewatering pumps XJ 25-110, XJC 50-110 and XJS 25-110.

Electronic supervision feature	Basic pump configuration with contactor	Pump with AquaTronic	Pump with AquaTronic + level sensor	Pump with AquaTronic + AquaPlug	Pump with AquaTronic + AquaPlug + level sensor
Run mode	●	●	●	●	●
Integrated start equipment	●	●	●	●	●
Automatic correction of rotation		●	●	●	●
Motor protection – high temp	●	●	●	●	●
Motor protection – high amp		●	●	●	●
Protection against missing phase		●	●	●	●
Level control			●		●
Protection against dry running			●		●
Automatic restart			●		●
Stop mode				●	●
E-mode (automatic stop/run)			●		●
Indication of water in oil				●	●
Indication of low motor insulation				●	●
Indication of high/low voltage				●	●
Indication of high temp				●	●
Indication of high amp				●	●
Indication of phase imbalance				●	●
USB cable connection		●	●	●	●

● = Fault indication when pump is automatically stopped to protect the motor

Pump options and accessories

SoftDrive

We offer a built-in SoftDrive concept on the J 205 pumps. It reduces starting current dramatically and provides smooth operation for both the power net and pump equipment. The pump can be started with a smaller-sized generator compared to a standard pump started directly on-line.

Flotation devices

We offer a flotation ring for pumps up to 45 kg. The ring is easy to install and can be used with dewatering pumps J 12 - J 15, XJ 25 - XJ 40.

An easy-to-install flotation system for pumps up to 1'300 kg can be used as a series installation with several pontoons. The system is mainly designed for J 205 - J 604 and XJ 900.

Zinc anode belts

Our submersible dewatering pumps can easily be fitted with zinc anode belts providing protection against galvanic corrosion. The cast parts of the pump can also be protectively coated, ensuring trouble-free operation when pumping salty or brackish water.

Polyurethane

We offer wear rings in polyurethane, which increases resistance when pumping fine sand and other abrasive mediums. Polyurethane-coated wear rings are available as an option on J 205 - J 604.

Series connections

With minimal effort, the standard Sulzer drainage pumps can be rebuilt to function in series for high head applications.

Bottom suction adapter

On pumps J 12 - J 15, the standard bottom plate may be replaced by a bottom suction adapter. A basement floor or a tank can be pumped practically dry with this adapter.

Repair kits

We offer repair kits for all submersible dewatering pumps. The repair kits include common parts required for a typical repair. Our modular pump design makes it possible to repair all drainage and sludge pumps with just a few repair kits.

