

## SULZER SUBMERSIBLE DEWATERING PUMPS (XJS)

# Submersible Sludge Pump XJS

Submersible sludge pump XJS is excellent for pumping dirty water and water mixed with solids. The slim design makes the pump easy to move and easy to handle.

### 1 Easy and fail-safe starting

Instead of a built-in contactor, an optional AquaTronic unit can be used. The AquaTronic unit compensates for incorrect phase order, which ensures correct motor rotation every time. (Additional AquaTronic functions for electronic supervision are explained on pages 16-17.)

### 2 Wear resistance

A free-flow vortex impeller and pump volute make the pump ideal for pumping solids. The impeller is available in different sizes to meet specific requirements.

### 3 Reliable operation

Both the impeller and volute are made from heavy-duty ductile iron for maximum durability. Double mechanical shaft seals in an oil bath, with primary seal surfaces in silicon carbide and secondary seal surfaces in silicon carbide on carbon, extend the life of the pump. A double cable-entry seal system increases the protection against moisture entering the electrical junction area.

### 4 Convenient handling

The top cover and motor housing are made of lightweight aluminum, which creates a pump that is very easy to handle and install.

### 5 Serviceability

Due to the modular design, the same parts can be used for different pumps, which lowers the overall service costs. External inspection ports for the oil and motor chambers enable quick and easy evaluation of the shaft seal during service. By removing the top cover of the pump, the electrical junction area can easily be checked.

### 6 Less energy and environmental impact

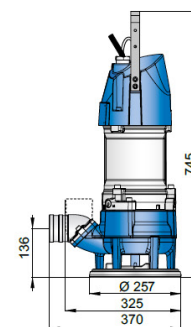
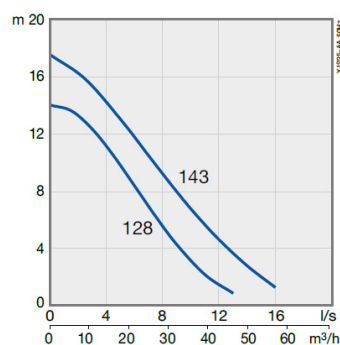
The high-efficiency motor and hydraulics combine with low-friction bearings to reduce power losses. The result is low total energy costs and minimized carbon footprint.



### SUBMERSIBLE SLUDGE PUMP XJS 25

XJS 25 D\* -128  
XJS 25 D\* -143

Motor rating P2	2.5 kW, 3-
Voltage (V)	230 / 400 / 500-550 / 690 / 1000
Full load (A)	8.8 / 5.1 / 4.3 / 2.9 / 2.0
Speed	2920 rpm
Free passage	45 x 55 mm
Discharge connections	Hose 2½", 3", 4" Thread G/BSP 2½", 3", 4"
Weight (excl. cable)	39 kg
Motor protection	Built-in
Electric cable	20 m

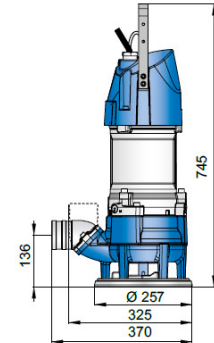
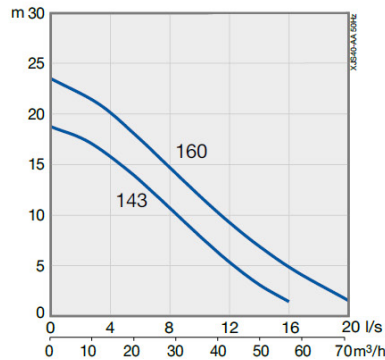


## SULZER SUBMERSIBLE DEWATERING PUMPS (XJS)

### SUBMERSIBLE SLUDGE PUMP XJS 40

**XJS 40 D\* -143**  
**XJS 40 D\* -160**

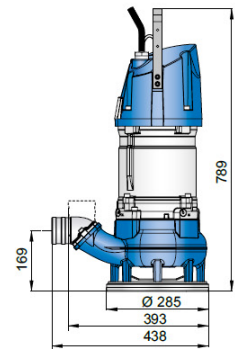
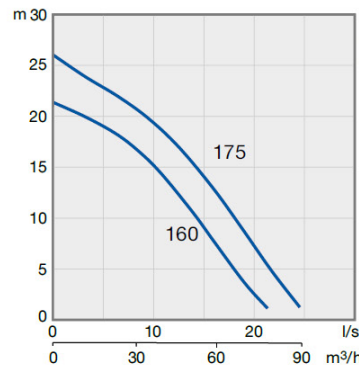
Motor rating P2	3.7 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1000
Full load (A)	13.2 / 7.6 / 6.1 / 4.4 / 3.0
Speed	2860 rpm
Free passage	45 x 55 mm
Discharge connections	Hose 2½", 3", 4" Thread G/BSP 2½", 3", 4"
Weight (excl. cable)	41 kg
Motor protection	Built-in
Electric cable	20 m



### SUBMERSIBLE SLUDGE PUMP XJS 50

**XJS 50 D\* -160**  
**XJS 50 D\* -175**

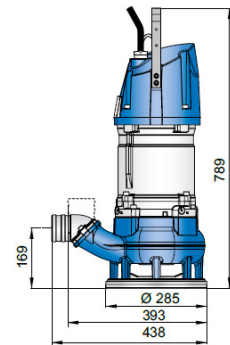
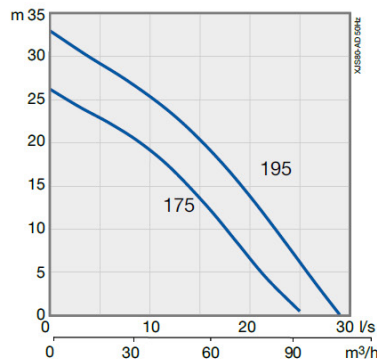
Motor rating P2	5.6 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1000
Full load (A)	19.7 / 11.3 / 9.0 / 6.6 / 4.5
Speed	2930 rpm
Free passage	48 x 60 mm
Discharge connections	Hose 2½", 3", 4" Thread G/BSP 2½", 3", 4"
Weight (excl. cable)	59 kg
Motor protection	Built-in
Electric cable	20 m



### SUBMERSIBLE SLUDGE PUMP XJS 80

**XJS 80 D\* -175**  
**XJS 80 D\* -195**

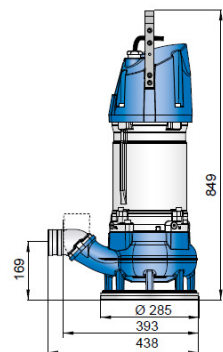
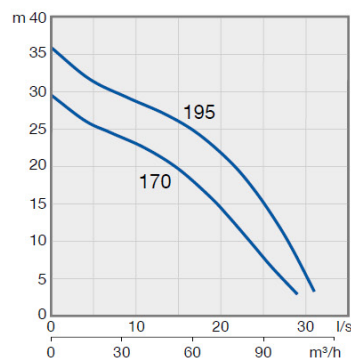
Motor rating P2	8.3 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1000
Full load (A)	27.8 / 16 / 12.8 / 9.3 / 6.4
Speed	2920 rpm
Free passage	48 x 60 mm
Discharge connections	Hose 2½", 3", 4" Thread G/BSP 2½", 3", 4"
Weight (excl. cable)	64 kg
Motor protection	Built-in
Electric cable	20 m



### SUBMERSIBLE SLUDGE PUMP XJS 110

**XJS 110 D\* -170**  
**XJS 110 D\* -195**

Motor rating P2	11.8 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1000
Full load (A)	37.4 / 21.5 / 17.2 / 12.5 / 8.6
Speed	2920 rpm
Free passage	48 x 60 mm
Discharge connections	Hose 2½", 3", 4" Thread G/BSP 2½", 3", 4"
Weight (excl. cable)	80 kg
Motor protection	Built-in
Electric cable	20 m



## SULZER SUBMERSIBLE DEWATERING PUMPS (XJS)

# AquaTronic and Other Supervision Options

Submersible dewatering pumps XJ, XJC and XJS 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 every time.

### AquaTronic

The AquaTronic unit replaces the built-in contactor in the basic pump configurations and ensures that the motor always rotates correctly, no matter how the phases are connected. Key benefits of the AquaTronic unit include:

- Correction of motor rotation if phases are improperly connected
- Run mode
- 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

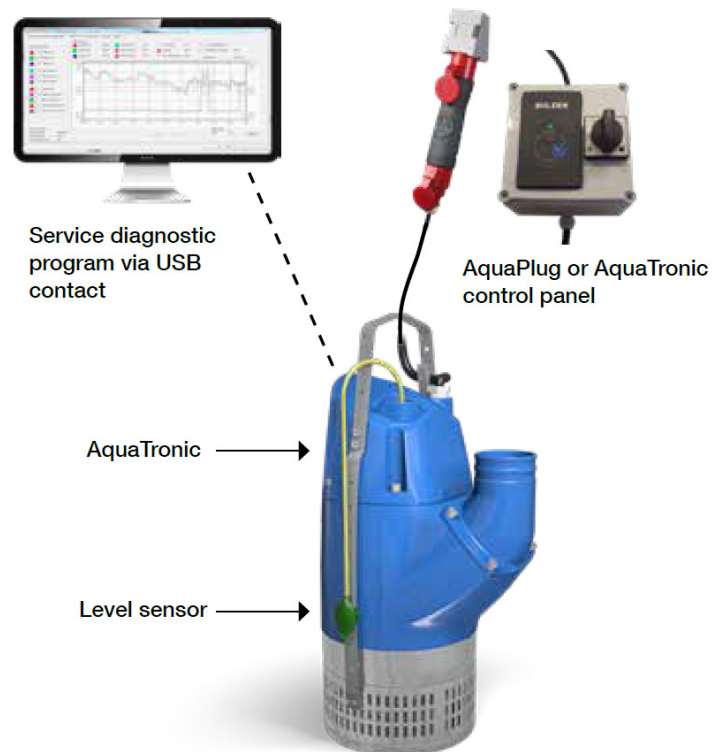
### AquaTronic service diagnostic program

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 and AquaTronic control panel

AquaPlug and AquaTronic control panel are options that combine 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 16A or 32A sockets.



## SULZER SUBMERSIBLE DEWATERING PUMPS (XJS)

# Overview of Electronic Supervision Features

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, XJC and XJS.

Electronic supervision feature	Basic pump configuration with contactor	Pump with AquaTronic	Pump with AquaTronic + level sensor	Pump with AquaTronic + AquaPlug/ AquaTronic control panel	Pump with AquaTronic + AquaPlug/ AquaTronic control panel + 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





**SULZER SUBMERSIBLE DEWATERING PUMPS (XJS)**

## Overview of Electronic Supervision Features

### AQUATRONIC UNIT FOR CORRECT MOTOR ROTATION

Our built-in AquaTronic unit integrates electronic intelligence into the pump, ensuring correct motor rotation by automatically adjusting for incorrect phase order. It also protects the motor by stopping the pump in the event of over-ampereage, overheating, low or high voltage or missing phase. Another feature of the AquaTronic unit is the internal software that allows pump performance and service diagnostics data to be viewed on a PC via USB link, enabling accurate evaluation of service and maintenance needs. The workshop manual and spare parts list, readily available in the AquaTronic unit, can be viewed via the link as well. The AquaTronic unit must be ordered when ordering the pump. Retrofitting is not possible.



### AQUAPLUG AND AQUATRONIC CONTROL PANEL

AquaPlug and AquaTronic control panel are options that combine 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 16A or 32A sockets.



### LEVEL SENSOR FOR PRECISE AND COST EFFECTIVE WATER LEVEL CONTROL

Together with AquaTronic, the level sensor provides precise and cost-effective water level control, and helps lower power consumption.



### SOFTDRIVE FOR COST EFFECTIVE OPERATION

Sulzer offers 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.



### QUICK AND EASY INSTALLATION WITH FLOATATION RING

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



### FLOATATION SYSTEM TO PREVENT UNNECESSARY WEAR

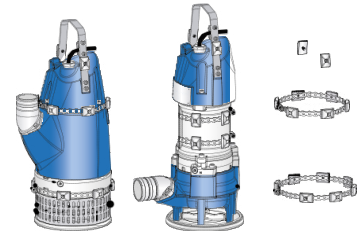
A modular floatation system is available, covering pumps from 59 to 600 kg. The modular floatation system is easy to build and used with dewatering pumps XJ 50-110, XJS 50-110, J 205-604.



## SULZER SUBMERSIBLE DEWATERING PUMPS (XJS)

### PROTECTIVE BELTS FOR MORE DURABLE OPERATION

Sulzer 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.



### STAINLESS STEEL IMPELLERS FOR TOUGH APPLICATIONS

Submersible dewatering pumps J 205HD and J 405HD can be fitted with stainless steel impellers to give an extra corrosive and abrasive resistance when pumping in harsh environments.



### POLYURETHANE FOR PROLONGED DRAINAGE PUMP LIFE

Sulzer offers 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 205-604.



### SERIES CONNECTIONS FOR PUMPING HIGH HEADS

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



### BOTTOM SUCTION ADAPTER FOR TOTAL WATER REMOVAL

On pumps J 12-15, 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 THAT SAVE TIME AND MONEY

Sulzer offers 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.

