

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



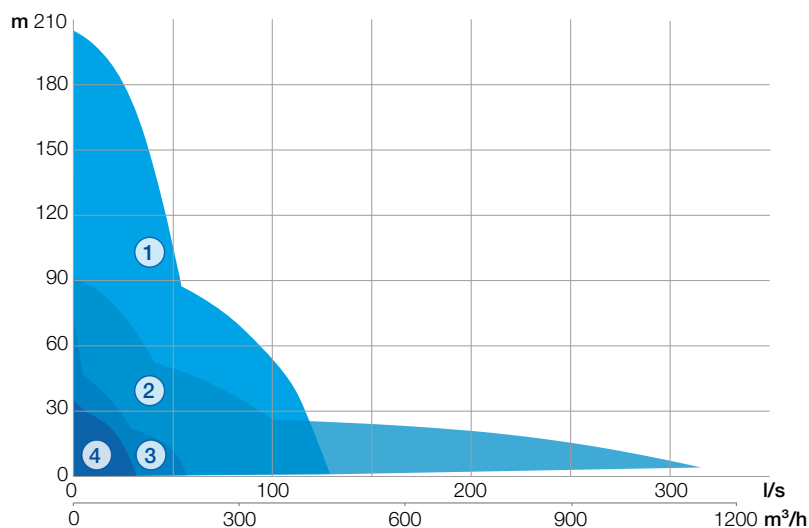
Dewatering solutions for the real world

This brochure is an overview of Sulzer's submersible dewatering pumps, which are the result of more than 50 years of technical and real-world experience. Each pump type is presented with its key features, as well as dimensions, performance curves and the most important technical data for specific pump models.

Whether you work in mining, tunneling or construction, the pumps here are your best insurance against water-related downtime. From purchasing to service, you can turn to us for dewatering solutions that make a difference in the real world.

Performance range 50 Hz

Sulzer's complete range of submersible dewatering pumps provides reliable solutions for all major dewatering needs.



- ① XJ 900
- ② J 205 - J 604
- ③ J 4 - J 7, J 12 - J 15, JC 34, XJ 25 - XJ 110, XJC 50 - XJC 110
- ④ JS 4 - JS 8, JS 12 - JS 15, XJS 25 - XJS 110

Submersible drainage pump J

Submersible drainage pump J is suitable for pumping water and dirty water mixed with light abrasives. The low weight and compact design makes for convenient transport, handling and installation.

1 Easy start

A built-in contactor connected to the thermal sensors in the stator windings protects the motor from overheating and features an automatic restart function.

J 4 and J 7 are lightweight pumps designed for applications with lower flows. They are available with or without level control. Pumps equipped with level control provide automatic start/stop and eliminate dry running.

2 Wear resistance

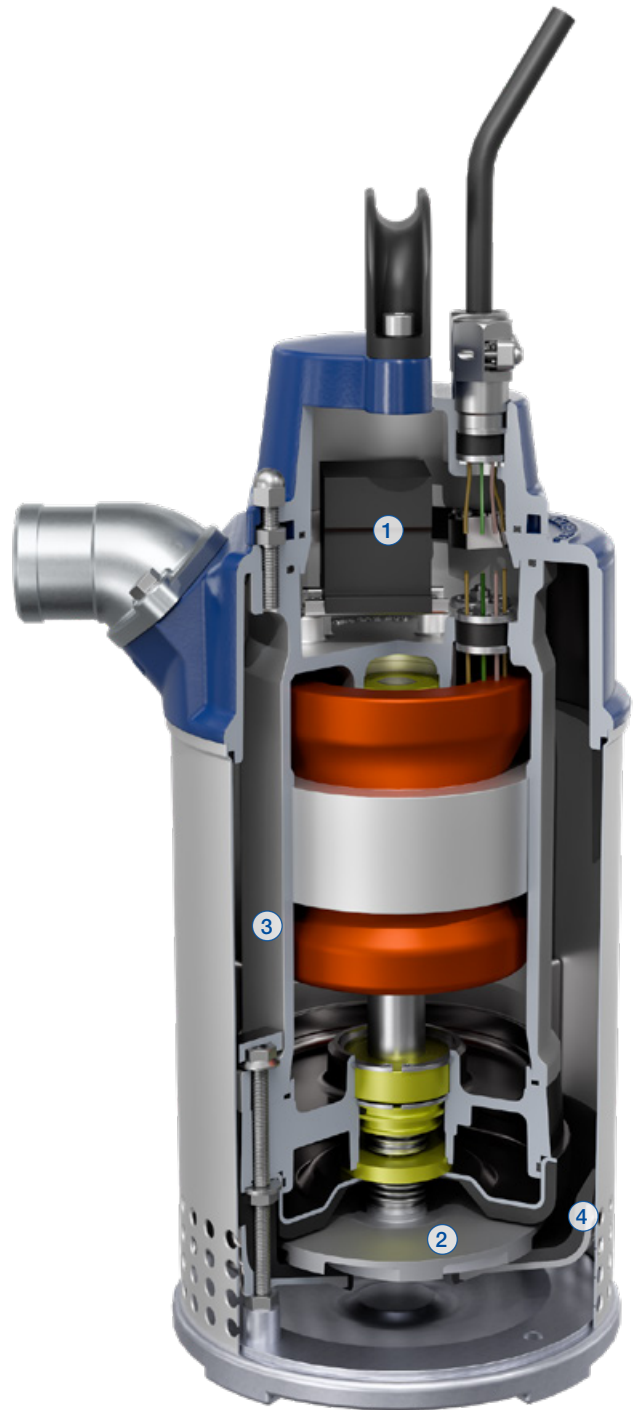
An impeller in white cast iron with a full upper shroud and adjustable wear parts coated in nitrile rubber ensure high abrasion resistance. J 4 and J 7 in ductile iron.

3 Reliable operation

A double mechanical shaft seal in an oil bath, with primary and secondary seal surfaces in silicon carbide, extends the life of the pump. A double outer casing and good heat convection enable the pump to operate continuously at low levels – or even run dry without damaging the motor.

4 Serviceability

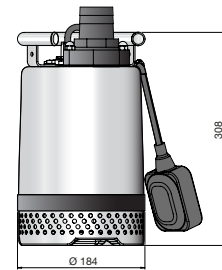
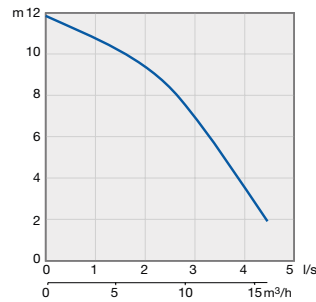
Due to the modular design, the same parts can be used for different pumps, which lowers the overall service costs. An adjustable diffuser ensures proper clearance throughout the impeller lifetime. By removing the top cover of the pump, the electrical junction area can easily be checked.



Submersible drainage pump J 4

J 4 W/J 4 WKS*

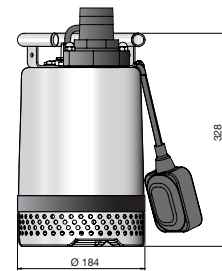
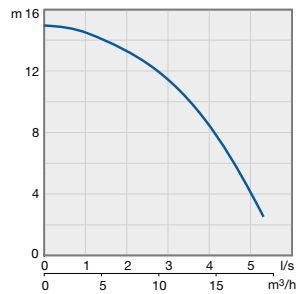
Motor rating P2	0.45 kW, 1~
Voltage (V)	230
Full load (A)	3
Speed	2'850 rpm
Strainer hole	6 mm
Discharge connections	Hose 2" Thread G/BSP 2" Storz C
Weight (excl. cable)	15.3 kg
Motor protection	Built-in
Electric cable	10 m



Submersible drainage pump J 7

J 7 W/J 7 WKS*

Motor rating P2	0.75 kW, 1~
Voltage (V)	230
Full load (A)	5
Speed	2'850 rpm
Strainer hole	6 mm
Discharge connections	Hose 2" Thread G/BSP 2" Storz C
Weight (excl. cable)	17.3 kg
Motor protection	Built-in
Electric cable	10 m

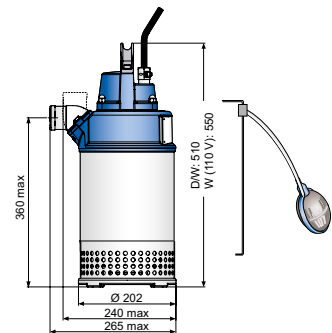
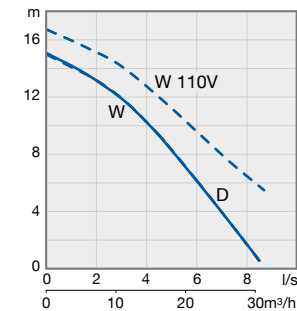


Submersible drainage pump J 12

J 12 W/J 12 WKS*

J 12 D/J 12 DKS**

Motor rating P2	230 V	0.9 kW, 1~	0.9 kW, 3~
	110 V	1.4 kW, 1~	
Voltage (V)		110 / 230	230 / 400 / 500
Full load (A)		12.7 / 5.9	3.8 / 2.2 / 1.8
Speed	230 V	2'770 rpm	2'770 rpm
	110 V	2'825 rpm	
Strainer hole		8.5 mm	
Discharge connections		Hose 1½", 2", 2½", 3" Thread G/BSP 2", 2½", 3"	
Weight (excl. cable)		19 kg (W), 18 kg (D)	
Motor protection		Built-in	
Electric cable		20 m	

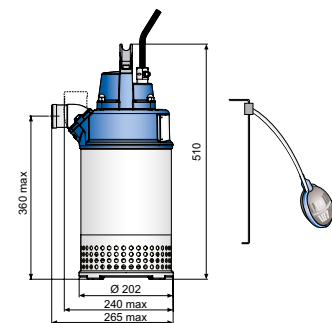
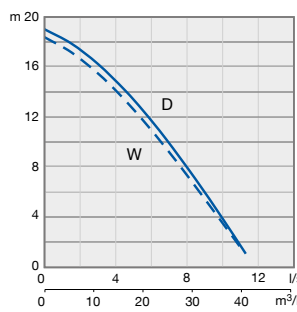


Submersible drainage pump J 15

J 15 W/J 15 WKS*

J 15 D/J 15 DKS**

Motor rating P2	1.4 kW, 1~	1.4 kW, 3~
Voltage (V)	230	230 / 400 / 500
Full load (A)	9.4	5.2 / 3.1 / 2.4
Speed	2'720 rpm	2'800 rpm
Strainer hole	8.5 mm	
Discharge connections	Hose 1½", 2", 2½", 3" Thread G/BSP 2", 2½", 3"	
Weight (excl. cable)	21 kg (W), 19 kg (D)	
Motor protection	Built-in	
Electric cable	20 m	



* Built-in float switch available as option.

** KS version not available in 500 V.

Submersible drainage pump XJ

Submersible drainage pump XJ is excellent for pumping water and dirty water mixed with light abrasives. 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 18-21.)

2 Wear resistance

An impeller and wear ring in white cast iron, as well as diffusers coated in oil-resistant nitrile rubber, provide high abrasion resistance.

3 Reliable operation

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. A double outer casing and good heat convection enable the pump to operate continuously at low levels – or even run dry without damaging the motor.

4 Serviceability

Due to the modular design, the same parts can be used for different pumps, which lowers the overall service costs. The adjustable wear ring ensures proper clearance throughout the impeller lifetime. 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.

5 Less energy and environmental impact

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

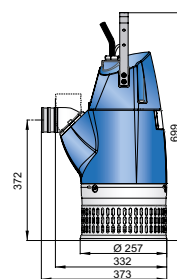
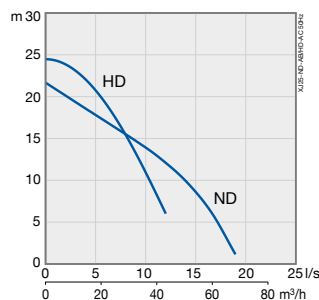
6 Flexibility

Conversion between high-volume and high-head hydraulics is managed with only a few parts, ensuring the right performance for the application.



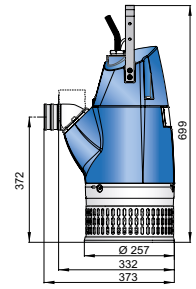
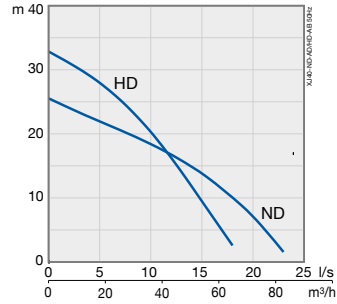
Submersible drainage pump XJ 25

XJ 25 ND*	Medium head
XJ 25 HD*	High head
Motor rating P2	2.5 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	8.8 / 5.1 / 4.3 / 2.9 / 2.0
Speed	2'920 rpm
Strainer hole	7.5 x 22 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



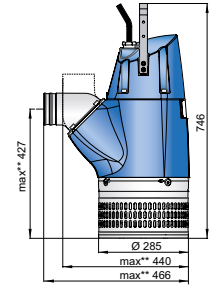
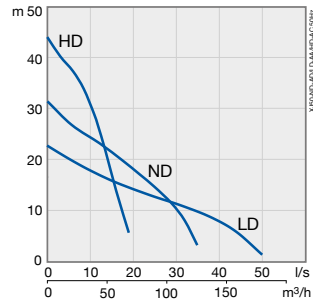
Submersible drainage pump XJ 40

XJ 40 ND*	Medium head
XJ 40 HD*	High head
Motor rating P2	3.7 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	13.2 / 7.6 / 6.1 / 4.4 / 3.0
Speed	2'860 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 2½", 3", 4" Thread G/BSP 2½", 3", 4"
Weight (excl. cable)	42 kg
Motor protection	Built-in
Electric cable	20 m



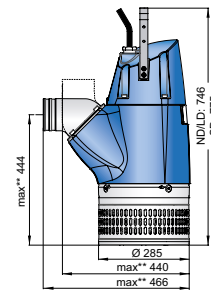
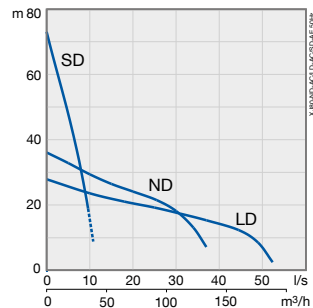
Submersible drainage pump XJ 50

XJ 50 ND*	Medium head
XJ 50 LD*	High flow
XJ 50 HD*	High head
Motor rating P2	5.6 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	19.7 / 11.3 / 9.0-10.8 / 6.6 / 4.5
Speed	2'930 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 3", 4", 6" Thread G/BSP 3", 4", 6"
Weight (excl. cable)	59 kg
Motor protection	Built-in
Electric cable	20 m



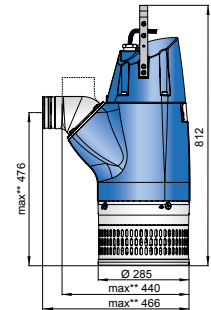
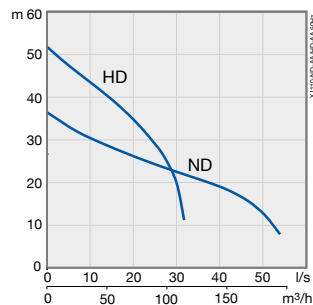
Submersible drainage pump XJ 80

XJ 80 ND*	Medium head
XJ 80 LD*	High flow
XJ 80 SD*	High head
Motor rating P2	8.3 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	27.8 / 16 / 13.8 / 9.3 / 6.4
Speed	2'920 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 3", 4", 6" Thread G/BSP 3", 4", 6"
Weight (excl. cable)	63 kg (ND/LD), 78 kg (SD)
Motor protection	Built-in
Electric cable	20 m



Submersible drainage pump XJ 110

XJ 110 ND*	Medium head
XJ 110 HD*	High head
Motor rating P2	11.8 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	37.4 / 21.5 / 17.2 / 12.5 / 8.6
Speed	2'920 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 3", 4", 6" Thread G/BSP 3", 4", 6"
Weight (excl. cable)	81 kg
Motor protection	Built-in
Electric cable	20 m



* Option: AquaTronic, built-in electronic pump control.

** Max measurement based on largest discharge size.

Submersible drainage pump J

Submersible drainage pump J is suitable for pumping water and dirty water mixed with light abrasives. The pump design enables convenient transport, handling and installation.

1 Easy to start

Pump J 205 has a built-in contactor connected to the thermal sensors in the stator windings, which protects the motor from overheating and features an automatic restart function. Pumps J 405 and J 604 have thermal sensors in the stator windings that protect the motor from overheating by means of an external control panel.

2 Wear resistance

Abrasive-resistant impellers, combined with diffusers and wear rings coated in oil-resistant nitrile rubber, provide extended pump life in tough applications.

3 Reliable operation

Double mechanical shaft seals in an oil bath, with primary seal surfaces in silicon carbide, extend the life of the pump. In pumps J 205 and J 405, the primary and secondary seals comprise an easy-to-replace seal cartridge. A double outer casing and good heat convection enable the pump to operate continuously at low levels – or even run dry without damaging the motor.

4 Serviceability

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. The adjustable wear ring ensures proper clearance throughout the impeller lifetime.

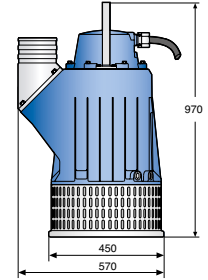
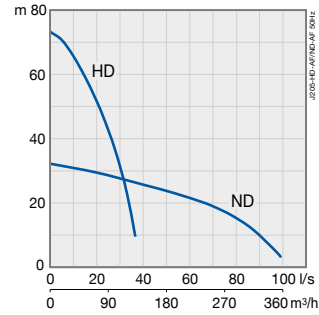
5 Flexibility

Conversion between high-volume and high-head hydraulics is managed with only a few parts, ensuring the right performance for the application.



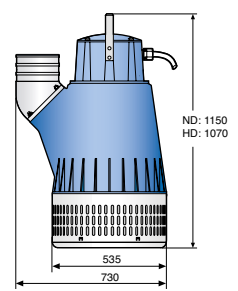
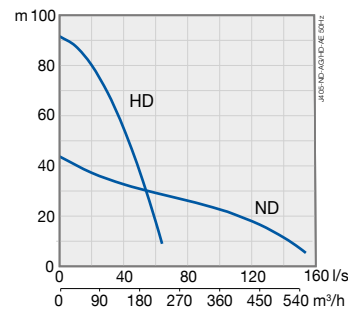
Submersible drainage pump J 205

J 205 ND	Medium head
J 205 HD	High head
Motor rating P2	21 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	68 / 39 / 31.2 / 23 / 16
Speed	2'910 rpm
Strainer hole	8 x 34 mm
Discharge connections	Hose 4", 6", 8" Thread G/BSP 4", 6", 8"
Weight (excl. cable)	155 kg
Motor protection	Built-in
Electric cable	20 m



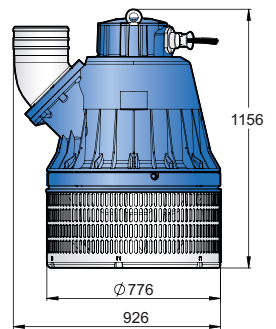
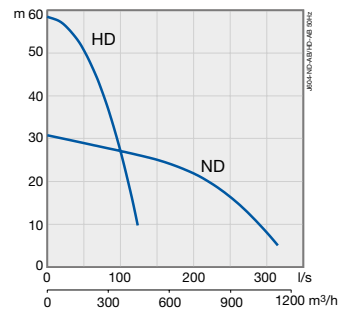
Submersible drainage pump J 405

J 405 ND	Medium head
J 405 HD	High head
Motor rating P2	35 kW, 3~
Voltage (V)	400 / 500 / 690 / 1'000
Full load (A)	66.5 / 53 / 39 / 27
Speed	2'941 rpm
Strainer hole	8 x 34 mm
Discharge connections	Hose 4", 6", 8" Thread G/BSP 4", 6", 8"
Weight (excl. cable)	270 kg
Motor protection	Thermal overload sensors
Electric cable	20 m



Submersible drainage pump J 604

J 604 ND	Medium head
J 604 HD	High head
Motor rating P2	56 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	184 / 106 / 84 / 61 / 42
Speed	1'450 rpm
Strainer hole	12 x 60 mm
Discharge connections	Hose 6", 8", 10" Thread G/BSP 6", 8"
Weight (excl. cable)	525 kg
Motor protection	Thermal overload sensors
Electric cable	20 m



Submersible drainage pump XJ 900

Submersible drainage pump XJ is designed for difficult application environments with abrasives and small solids. The innovative design allows for easy conversion from high head to high flow.

1 Easy conversion from ND to HD

The pump is fitted with impellers and diffusers for both HD and ND versions. When connected in series they give high head and when connected in parallel they give high volume. This gives fewer parts and a simplified conversion from ND to HD.

2 Wear resistance for long life

Impellers and flow elbows in white cast iron together with rubber coated volutes ensure a long lifetime and high efficiency. The impellers are built back to back together with double exit volutes which gives low axial forces and secures long bearing life.

3 Reliable operation

Strong cast iron construction with outer casing gives good cooling and enables the pump to run all the way until the water level reaches the strainer. Double mechanical seals with silicon carbide surface give extended service life.

4 Built-in motor protection

Bimetal thermal switches or Pt100 sensors in stator windings are used to protect the motor from overheating. Moisture sensors are used in the oil chamber, the motor chamber and in the connection chamber to signal the ingress of moisture into the motor. An additional monitoring option for Pt100 sensors in bearings for temperature measurement provides an added level of protection.

5 Serviceability

External inspection ports for the oil and the motor chambers enable quick and easy evaluation of the shaft seal during service. The electrical installation can be easily checked by removing the inspection cover of the pump.



6 Reduced environmental impact

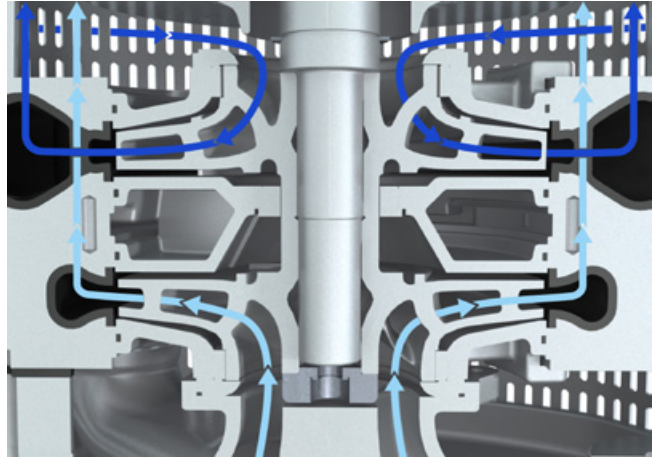
The high-efficiency IE3 motor and the new hydraulics combined with low-friction bearings reduce power losses and extend stator life. The result is low total energy costs and minimized carbon footprint.

State of the art design

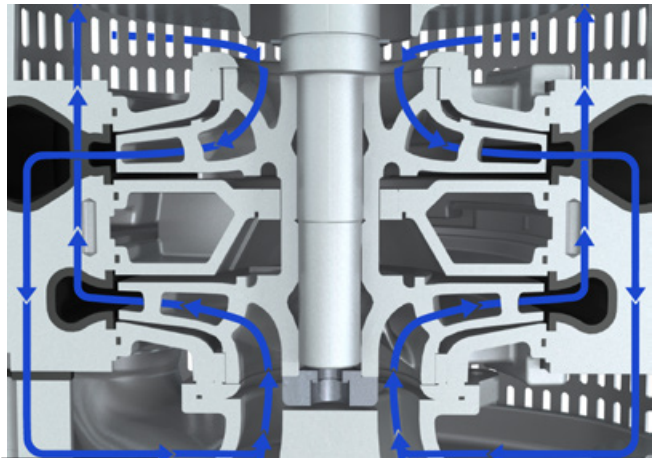
The innovative design with dual impellers allows for a quick and simple conversion between hydraulic performance options, reducing the need to addition inventory to cover the range. Both high head and high flow versions use the same two impellers.

In the HD version, the water circulates from the first impeller to the second impeller, connecting the impellers in series, creating higher pressure.

For the ND version, the impellers are connected in parallel. The water flows into both impellers simultaneously, creating higher flow.



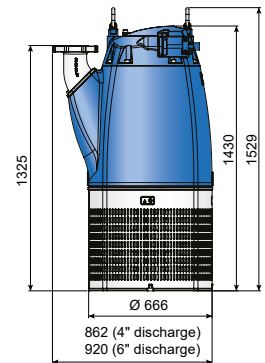
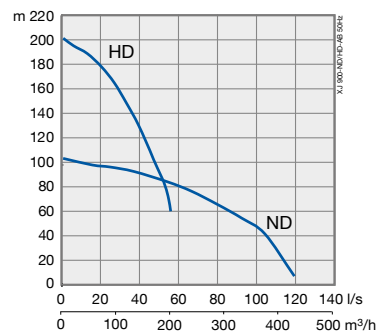
XJ 900 ND



XJ 900 HD

Submersible drainage pump XJ 900

XJ 900 ND	High flow
XJ 900 HD	High head
Motor rating P2	90 kW, 3~
Voltage (V)	400 / 500-550 / 690 / 1'000
Full load (A)	155 / 124 / 90 / 62
Speed	2'970 rpm
Strainer hole	8 x 34 mm
Discharge connections	DN 100/4" (standard HD) DN 150/6" (standard ND)
Flange connections	Class 250 (standard HD) Class 150 (standard ND)
Weight (excl. cable)	1'200 kg
Motor protection	Built-in
Electric cable	20 m (longer cable on request)



Submersible drainage center-line pumps JC and XJC

Submersible drainage center-line pumps JC and XJC are excellent for pumping water and dirty water mixed with light abrasives. The slim design makes them easy to move and easy to handle, and they are perfect for applications with limited installation space.

1 Easy and fail-safe starting

In XJC pump models, an optional AquaTronic unit can be used instead of a built-in contactor. 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 18-21.) In JC pump models, a built-in contactor with an automatic restart function protects the motor.

2 Wear resistance

An impeller and wear ring in white cast iron, as well as diffusers coated in oil-resistant nitrile rubber, provide high abrasion resistance.

3 Reliable operation

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. Pumps XJC 50 - XJC 110 have a double cable-entry seal system that increases the protection against moisture entering the electrical junction area. A double outer casing and good heat convection enable the pump to operate continuously at low levels – or even run dry without damaging the motor.

4 Serviceability

Due to the modular design, the same parts can be used for different pumps, which lowers the overall service costs. The adjustable wear ring ensures proper clearance throughout the impeller lifetime. 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.

5 Less energy and environmental impact

Pumps XJC 50 - XJC 110 are equipped with high-efficiency motors and new hydraulics, which combine with low-friction bearings to reduce power losses. The result is low total energy costs and minimized carbon footprint.

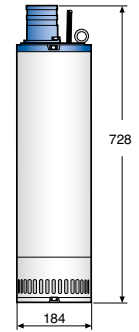
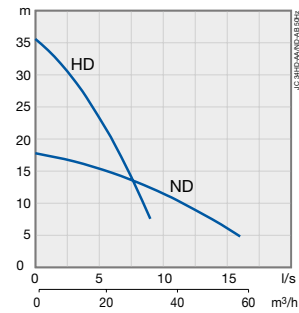
6 Flexibility

Pumps XJC 50 - XJC 110 allow conversion between high-volume and high-head hydraulics with only a few parts, ensuring the right performance for the application.



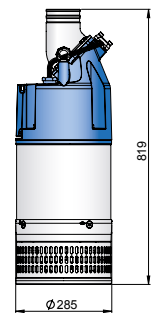
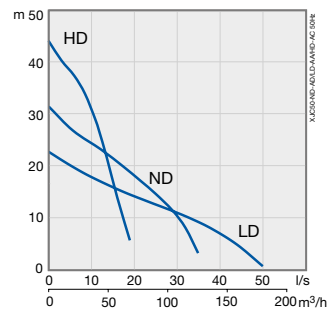
Submersible drainage center-line pump JC 34

JC 34 ND	Medium head
JC 34 HD	High head
Motor rating P2	3 kW, 3~
Voltage (V)	230 / 400 / 500
Full load (A)	12.7 / 7.3 / 5.5
Speed	2'850 rpm
Strainer hole	8 x 33 mm
Discharge connections	Hose 2", 3" Thread G/BSP 2", 3"
Weight (excl. cable)	31 kg
Motor protection	Built-in
Electric cable	20 m



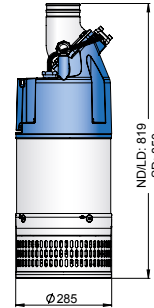
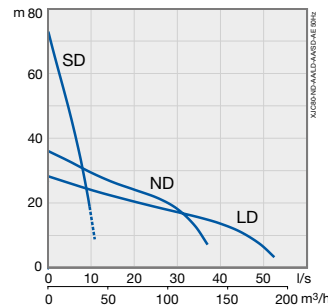
Submersible drainage center-line pump XJC 50

XJC 50 ND*	Medium head
XJC 50 LD*	High flow
XJC 50 HD*	High head
Motor rating P2	5.6 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	19.7 / 11.3 / 9.0-10.8 / 6.6 / 4.5
Speed	2'930 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 3", 4", 6" Thread G/BSP 3", 4", 6"
Weight (excl. cable)	59 kg
Motor protection	Built-in
Electric cable	20 m



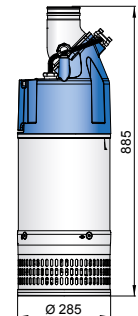
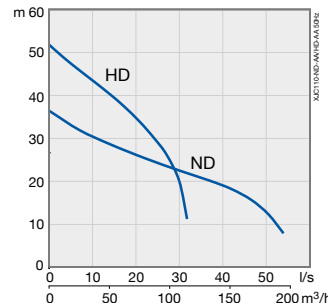
Submersible drainage center-line pump XJC 80

XJC 80 ND*	Medium head
XJC 80 LD*	High flow
XJC 80 SD*	High head
Motor rating P2	8.3 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	27.8 / 16 / 13.8 / 9.3 / 6.4
Speed	2'920 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 3", 4", 6" Thread G/BSP 3", 4", 6"
Weight (excl. cable)	63 kg (ND/LD), 78 kg (SD)
Motor protection	Built-in
Electric cable	20 m



Submersible drainage center-line pump XJC 110

XJC 110 ND*	Medium head
XJC 110 HD*	High head
Motor rating P2	11.8 kW, 3~
Voltage (V)	230 / 400 / 500-550 / 690 / 1'000
Full load (A)	37.4 / 21.5 / 17.2 / 12.5 / 8.6
Speed	2'920 rpm
Strainer hole	7.5 x 22 mm
Discharge connections	Hose 3", 4", 6" Thread G/BSP 3", 4", 6"
Weight (excl. cable)	80 kg
Motor protection	Built-in
Electric cable	20 m



* Option: AquaTronic, built-in electronic pump control.