Submersible dewatering pumps
Dewatering solutions for the real world

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.

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 Sulzer for dewatering solutions that make a difference in the real world.

Performance range 60 Hz

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

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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.

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.

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 12

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor Rating P2</th>
<th>Voltage (V)</th>
<th>Full Load (A)</th>
<th>Speed (rpm)</th>
<th>Strainer Hole</th>
<th>Discharge Connections</th>
<th>Weight (excl. cable)</th>
<th>Motor Protection</th>
<th>Electric Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>J 12 W/J 12 WKS*</td>
<td>1.1 kW, 1~</td>
<td>115 / 230</td>
<td>13.8 / 6.9</td>
<td>3360</td>
<td>6.5 x 22 mm</td>
<td>Hose 1½”, 2”, 2½”, 3”</td>
<td>19 kg (W), 18 kg (D)</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>J 12 D/J 12 DKS**</td>
<td>1.1 kW, 3~</td>
<td>230 / 380 / 460 / 575</td>
<td>4.3 / 2.6 / 2.1 / 1.7</td>
<td>3380</td>
<td>-</td>
<td>Thread G/BSP 2”, 2½”, 3”</td>
<td>-</td>
<td>Built-in</td>
<td>-</td>
</tr>
</tbody>
</table>

* Built-in float switch available as option.
** KS version not available in 575 V.

Submersible drainage pump J 15

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor Rating P2</th>
<th>Voltage (V)</th>
<th>Full Load (A)</th>
<th>Speed (rpm)</th>
<th>Strainer Hole</th>
<th>Discharge Connections</th>
<th>Weight (excl. cable)</th>
<th>Motor Protection</th>
<th>Electric Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>J 15 W/J 15 WKS*</td>
<td>1.5 kW, 1~</td>
<td>230</td>
<td>10.3</td>
<td>6.5 x 22 mm</td>
<td>Hose 1½”, 2”, 2½”, 3”</td>
<td>Thread G/BSP 2”, 2½”, 3”</td>
<td>21 kg (W), 19 kg (D)</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>J 15 D/J 15 DKS**</td>
<td>1.7 kW, 3~</td>
<td>230 / 380 / 460 / 575</td>
<td>6.2 / 3.8 / 3.1 / 2.5</td>
<td>3320</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Built-in</td>
<td>-</td>
</tr>
</tbody>
</table>

* Built-in float switch available as option.
** KS version not available in 575 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

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Strainer hole</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJ 25 ND*</td>
<td>Medium head</td>
<td>2.9 kW; 3– (4 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>9.8 / 5.9 / 4.9 / 3.9</td>
<td>3500 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 2½”, 3”, 4”</td>
<td>39 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJ 25 HD*</td>
<td>High head</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Thread G/BSP 2½”, 3”, 4”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HD

ND
Submersible drainage pump XJ 40

XJ 40 ND* Medium head
XJ 40 HD* High head
Motor rating P2 4.3 kW, 3~ (6 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 14.8 / 8.9 / 7.4 / 5.9
Speed 3470 rpm
Strainer hole 7.5 x 22 mm
Discharge connections Hose 2¼”, 3”, 4”
Thread G/BSP 2¼”, 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 6.7 kW, 3~ (9 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 22.4 / 13.6 / 11.2 / 9.0
Speed 3520 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 HD* High head
XJ 80 SD* High head
Motor rating P2 9.8 kW, 3~ (13 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 31.4 / 19.0 / 15.7 / 12.6
Speed 3520 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/HD), 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 13.5 kW, 3~ (18 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 42.8 / 25.9 / 21.4 / 17.1
Speed 3500 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 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
J 205 HD
Motor rating P2 26 kW, 3~ (35 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 82 / 50 / 41 / 33
Speed 3500 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
J 405 HD
Motor rating P2 43 kW, 3~ (57 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 136 / 82 / 68 / 54
Speed 3537 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
J 604 HD
Motor rating P2 70 kW, 3~ (94 hp)
Voltage (V) 230 / 380 / 460 / 575
Full load (A) 226 / 137 / 113 / 91
Speed 1730 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 half head double flow. 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 add 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.

Submersible drainage pump XJ 900

<table>
<thead>
<tr>
<th>Submersible drainage pump XJ 900</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>XJ 900 ND</td>
<td>High flow</td>
</tr>
<tr>
<td>XJ 900 HD</td>
<td>High head</td>
</tr>
<tr>
<td>Motor rating P2</td>
<td>108 kW, 3~ (145 Hp)</td>
</tr>
<tr>
<td>Voltage (V)</td>
<td>380 / 480 / 575</td>
</tr>
<tr>
<td>Full load (A)</td>
<td>190 / 154 / 124</td>
</tr>
<tr>
<td>Speed</td>
<td>3560 rpm</td>
</tr>
<tr>
<td>Strainer hole</td>
<td>8 x 34 mm</td>
</tr>
<tr>
<td>Discharge connections</td>
<td>DN100/4” (standard HD)</td>
</tr>
<tr>
<td></td>
<td>DN150/6” (standard ND)</td>
</tr>
<tr>
<td>Flanged connections</td>
<td>Class 250 (standard HD)</td>
</tr>
<tr>
<td></td>
<td>Class 150 (standard ND)</td>
</tr>
<tr>
<td>Weight (excl. cable)</td>
<td>1200 kg</td>
</tr>
<tr>
<td>Motor protection</td>
<td>Built-in</td>
</tr>
<tr>
<td>Electric cable</td>
<td>30 m (longer cable on request)</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Model</th>
<th>Head</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Strainer hole</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>JC 34 ND</td>
<td>Medium head</td>
<td>4.3 kW, 3– (6 hp)</td>
<td>230 / 460 / 575</td>
<td>18 / 8 / 6.4</td>
<td>3400 rpm</td>
<td>8 x 33 mm</td>
<td>Hose 2&quot;, 3&quot;</td>
<td>31 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>JC 34 HD</td>
<td>High head</td>
<td>4.3 kW, 3– (6 hp)</td>
<td>230 / 460 / 575</td>
<td>18 / 8 / 6.4</td>
<td>3400 rpm</td>
<td>8 x 33 mm</td>
<td>Hose 2&quot;, 3&quot;</td>
<td>31 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
</tbody>
</table>

Submersible drainage center-line pump XJC 50

<table>
<thead>
<tr>
<th>Model</th>
<th>Head</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Strainer hole</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJC 50 ND*</td>
<td>Medium head</td>
<td>6.7 kW, 3– (9 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>22.4 / 13.6 / 11.2 / 9.0</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>59 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJC 50 LD*</td>
<td>High flow</td>
<td>6.7 kW, 3– (9 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>22.4 / 13.6 / 11.2 / 9.0</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>59 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJC 50 HD*</td>
<td>High head</td>
<td>6.7 kW, 3– (9 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>22.4 / 13.6 / 11.2 / 9.0</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>59 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
</tbody>
</table>

Submersible drainage center-line pump XJC 80

<table>
<thead>
<tr>
<th>Model</th>
<th>Head</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Strainer hole</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJC 80 ND*</td>
<td>Medium head</td>
<td>9.8 kW, 3– (13 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>31.4 / 19.0 / 15.7 / 12.6</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>63 kg (ND/LD/HD), 78 kg (SD)</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJC 80 LD*</td>
<td>High flow</td>
<td>9.8 kW, 3– (13 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>31.4 / 19.0 / 15.7 / 12.6</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>63 kg (ND/LD/HD), 78 kg (SD)</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJC 80 HD*</td>
<td>High head</td>
<td>9.8 kW, 3– (13 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>31.4 / 19.0 / 15.7 / 12.6</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>63 kg (ND/LD/HD), 78 kg (SD)</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJC 80 SD*</td>
<td>High head</td>
<td>9.8 kW, 3– (13 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>31.4 / 19.0 / 15.7 / 12.6</td>
<td>3520 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>63 kg (ND/LD/HD), 78 kg (SD)</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
</tbody>
</table>

Submersible drainage center-line pump XJC 110

<table>
<thead>
<tr>
<th>Model</th>
<th>Head</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Strainer hole</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJC 110 ND*</td>
<td>Medium head</td>
<td>13.5 kW, 3– (18 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>42.8 / 25.9 / 21.4 / 17.1</td>
<td>3500 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>80 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJC 110 HD*</td>
<td>High head</td>
<td>13.5 kW, 3– (18 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>42.8 / 25.9 / 21.4 / 17.1</td>
<td>3500 rpm</td>
<td>7.5 x 22 mm</td>
<td>Hose 3&quot;, 4&quot;, 6&quot;</td>
<td>80 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
</tbody>
</table>

* Option: AquaTronic, built-in electronic pump control.
Submersible sludge pump JS is excellent for pumping dirty water and water mixed with solids. The pump has a slim design and low weight, which makes it easy to move and easy to handle.

1. **Easy to 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.

2. **Clog-free pumping**  
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 and secondary seal surfaces in silicon carbide, extend the life of the pump.

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.
### Submersible sludge pump JS 12

<table>
<thead>
<tr>
<th>Model</th>
<th>Phase</th>
<th>Motor Rating</th>
<th>Voltage (V)</th>
<th>Full Load (A)</th>
<th>Speed</th>
<th>Free Passage</th>
<th>Discharge Connections</th>
<th>Weight (excl. cable)</th>
<th>Motor Protection</th>
<th>Electric Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>JS 12 W/WKS* -95</td>
<td>1-phase</td>
<td>1.1 kW</td>
<td>230 / 380 / 460 / 575</td>
<td>6.9</td>
<td>3360 rpm</td>
<td>Ø 40 mm</td>
<td>Hose 2&quot;, 2½&quot;, 3&quot;</td>
<td>20 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>JS 12 W/WKS* -104</td>
<td>1-phase</td>
<td>1.1 kW</td>
<td>230 / 380 / 460 / 575</td>
<td>4.3 / 2.6 / 2.1 / 1.7</td>
<td>3380 rpm</td>
<td></td>
<td>Thread G/BSP 2&quot;, 2½&quot;, 3&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS 12 D/DKS* -95</td>
<td>3-phase</td>
<td>1.1 kW</td>
<td>230 / 380 / 460 / 575</td>
<td>6.9</td>
<td>3360 rpm</td>
<td>Ø 40 mm</td>
<td>Hose 2&quot;, 2½&quot;, 3&quot;</td>
<td>20 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>JS 12 D/DKS* -104</td>
<td>3-phase</td>
<td>1.1 kW</td>
<td>230 / 380 / 460 / 575</td>
<td>4.3 / 2.6 / 2.1 / 1.7</td>
<td>3380 rpm</td>
<td></td>
<td>Thread G/BSP 2&quot;, 2½&quot;, 3&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Motor protection: Built-in

### Submersible sludge pump JS 15

<table>
<thead>
<tr>
<th>Model</th>
<th>Phase</th>
<th>Motor Rating</th>
<th>Voltage (V)</th>
<th>Full Load (A)</th>
<th>Speed</th>
<th>Free Passage</th>
<th>Discharge Connections</th>
<th>Weight (excl. cable)</th>
<th>Motor Protection</th>
<th>Electric Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>JS 15D/DKS* -104</td>
<td>3-phase</td>
<td>1.7 kW</td>
<td>230 / 380 / 460 / 575</td>
<td>6.2 / 3.8 / 3.1 / 2.5</td>
<td>3320 rpm</td>
<td>Ø 40 mm</td>
<td>Hose 2&quot;, 2½&quot;, 3&quot;</td>
<td>20 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>JS 15D/DKS* -114</td>
<td>3-phase</td>
<td>1.7 kW</td>
<td>230 / 380 / 460 / 575</td>
<td>3.8 / 2.6 / 2.1 / 1.7</td>
<td>3320 rpm</td>
<td></td>
<td>Thread G/BSP 2&quot;, 2½&quot;, 3&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Built-in float switch available as option. KS version not available in 575 V.
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 18-21.)

2. Clog-free pumping
   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

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Free passage</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJS 25 D* -118</td>
<td>2.9 kW, 3~ (4 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>9.8 / 5.9 / 4.9 / 3.9</td>
<td>3500 rpm</td>
<td>45 x 55 mm</td>
<td>Hose 2½”, 3”, 4” Thread G/BSP 2½”, 3”, 4”</td>
<td>39 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJS 25 D* -128</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
</tbody>
</table>
Submersible sludge pump XJS 40

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Free passage</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJS 40 D* -128</td>
<td>4.3 kW, 3~ (6 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>14.8 / 8.9 / 7.4 / 5.9</td>
<td>3470 rpm</td>
<td>45 x 55 mm</td>
<td>Hose 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td>41 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJS 40 D* -143</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Thread G/BSP 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submersible sludge pump XJS 50

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Free passage</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJS 50 D* -143</td>
<td>6.7 kW, 3~ (9 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>22.4 / 13.6 / 11.2 / 9.0</td>
<td>3520 rpm</td>
<td>48 x 60 mm</td>
<td>Hose 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td>59 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJS 50 D* -160</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Thread G/BSP 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submersible sludge pump XJS 80

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Free passage</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJS 80 D* -160</td>
<td>9.8 kW, 3~ (13 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>31.4 / 19.0 / 15.7 / 12.6</td>
<td>3520 rpm</td>
<td>48 x 60 mm</td>
<td>Hose 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td>64 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJS 80 D* -175</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Thread G/BSP 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submersible sludge pump XJS 110

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor rating P2</th>
<th>Voltage (V)</th>
<th>Full load (A)</th>
<th>Speed</th>
<th>Free passage</th>
<th>Discharge connections</th>
<th>Weight (excl. cable)</th>
<th>Motor protection</th>
<th>Electric cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJS 110 D* -155</td>
<td>13.5 kW, 3~ (18 hp)</td>
<td>230 / 380 / 460 / 575</td>
<td>42.8 / 25.9 / 21.4 / 17.1</td>
<td>3500 rpm</td>
<td>48 x 60 mm</td>
<td>Hose 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td>80 kg</td>
<td>Built-in</td>
<td>20 m</td>
</tr>
<tr>
<td>XJS 110 D* -166</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Thread G/BSP 2(\frac{1}{2})^&quot;, 3&quot;, 4&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Submersible dewatering pumps XJ 25-110, XJC 50-110 and XJS 25-110 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 or float switch**
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/AquaTronic control panel**
When using an AquaPlug/AquaTronic control panel 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.

Both units provide 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 and AquaTronic control panel.

**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 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 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.

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

✓ = Fault indication when pump is automatically stopped to protect the motor
Pump options and accessories

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-amperage, 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 should be ordered when ordering the pump.

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 16 A or 32 A 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 flotation 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 flotation system is available, covering pumps from 59 to 600 kg. The modular flotation system is easy to build and used with dewatering pumps XJ 50-110, XJS 50-110, J 205-604.
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.
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