Submersible drainage pump
XJ 80

Specification
Electric submersible pump.
Maximum submergence: 20 m. Protection class IP 68.
Max temperature of pumped medium at max power input and continuous duty 40 ºC.
Max medium density 1100 kg/m³. pH of the pumped medium 5-8.
Strainer hole: 7.5 x 22 mm. Max number of starts 30/hour.

XJ 80 ND Medium head, 3-phase
XJ 80 ND AT* Medium head, 3-phase
XJ 80 LD High flow, 3-phase
XJ 80 LD AT* High flow, 3-phase
XJ 80 SD High head, 3-phase
XJ 80 SD AT* High head, 3-phase

*AquaTronic: Built-in electronic pump control.

Electric motor
3-phase squirrel-cage induction motor, 50 Hz.
Service factor 1.1. Class F insulation.
Motor rating P₂: 8.3 kW. 2 pol. Speed: 2920 rpm.
η: 89.9 (50 %), 90.6 (75 %), 89.6 (100 % load)

<table>
<thead>
<tr>
<th>Voltage, V</th>
<th>230</th>
<th>400</th>
<th>500-550</th>
<th>690</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal current, A</td>
<td>27.8</td>
<td>16</td>
<td>13.8</td>
<td>9.3</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Starting method and motor protection
XJ 80 AT: Direct on line start (DOL 500-550 V) with built in AquaTronic unit, which automatically adjusts phase order by dual contactors, ensuring correct motor rotation. Soft start (230-400 V) is built in with the AquaTronic unit, where three thyristors reduces start current to three times the nominal current. Here two relays ensures correct motor rotation.
The AquaTronic unit monitors motor temperature, by use of NTC thermistors built into stator windings, and stops the motor at high temperature. It will also stop the motor at high amperage or if a phase is missing.
XJ 80: Direct on line start with built in contactor. Pumps to be used with VFD or 1000 V must have terminal block instead of contactor. Thermal switches (140 ºC, ±5) built into the stator windings are connected to the contactor and stop the pump at high temperature.

Power cable
20 m type H07RN8-F (standard cable):
4 x 4 sq.mm. (230 V)
4 x 2.5 sq.mm. (400-550 V)
4 x 1.5 sq.mm. (690 V)

20 m type NSSHÖU,.../3E (heavy duty cable):
3x2.5+3x2.5/3E+3x1.5 (3 control cables included) (1000 V or terminal block)
3x6+3x6/3E+3x1.5 (230 V)
3x2.5+3x2.5/3E (400-550 V)
3x1.5+3x1.5/3E (690 V)

Shaft seal
Double mechanical seal in oil bath.
Primary seal: Silicon carbide on silicon carbide.
Secondary seal: Silicon carbide on carbon.

Bearings
Upper bearing: Single-row deep groove ball bearing.
Lower bearing: Double angular contact ball bearing.

Discharge connections
3" (standard SD), 4" (standard ND), 6" (standard LD)
hose connections.
3", 4", 6" G/B.S.P. threaded connections.

Weight
ND/LD: 63 kg, SD: 78 kg (without cable)

Options and accessories
AquaPlug, AquaTronic control panel. Level sensor. Service data kit.
Zinc anodes. Surface protection coating. Series connection.
Flotation system. Discharge connection accessories and hose.
## Materials

<table>
<thead>
<tr>
<th>Description</th>
<th>Material</th>
<th>EN</th>
<th>ASTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castings</td>
<td>Aluminium</td>
<td>EN 1706:AC-43100</td>
<td>ASTM A1510mg</td>
</tr>
<tr>
<td>Strainer / Handle</td>
<td>Stainless steel</td>
<td>10088:X5CrNi18-10 (1.4301)</td>
<td>AISI 304</td>
</tr>
<tr>
<td>Rotor shaft</td>
<td>Stainless steel</td>
<td>10088:X20Cr13 (1.4021)</td>
<td>AISI 420</td>
</tr>
<tr>
<td>Impeller / Wear ring</td>
<td>White cast iron</td>
<td>EN-GJN-HV600(XCr23)</td>
<td>ASTM A532; Alloy III A</td>
</tr>
<tr>
<td>Fasteners</td>
<td>Stainless steel</td>
<td>10088:X5CrNiMo 17122 (1.4401)</td>
<td>AISI 316</td>
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<tr>
<td>Wear parts / O-rings</td>
<td>Nitrile rubber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coating</td>
<td>2 component epoxy paint 120 µm</td>
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<td></td>
</tr>
</tbody>
</table>

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