



Submersible drainage pump

Instruction Manual



ESSW

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1. Applications

The ESSW series submersible wastewater pumps are suitable for buildings, hospitals, residential districts, municipal engineering, road traffic and construction, factory wastewater, wastewater treatment and other occasions.

2. Operating conditions

Voltage and frequency: refer to nameplate data;

Maximum temperature of pumped liquid: 40°C

Liquid pH range: 4-10

Maximum liquid density: 1200kg/m³

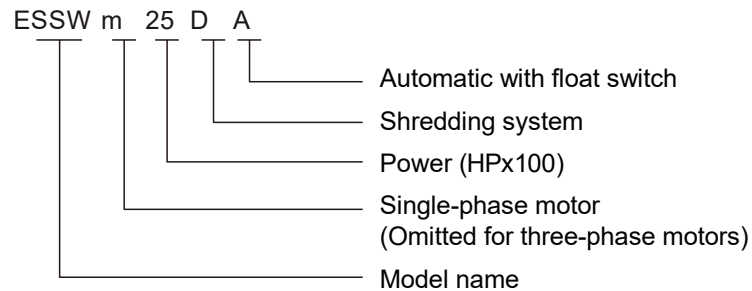
The volume ratio of solid impurities in the liquid must not exceed 2%.

IP Rating: IPX8

Cannot be used with highly corrosive fluids and highly abrasive particles.









The particle size must not exceed the maximum diameter allowed for passage.

3. Identification codes



7. Maintenance

- 1). Regularly check the insulation resistance between the electric pump winding and the casing. Near the operating temperature, the insulation resistance must be higher than 50MΩ (megaohm); otherwise, measures must be taken to meet the requirements before use.
- 2). Maintenance of the electric pump must be carried out according to the following steps:

| | | | |
|---|---|--|---|
|  <p>1). Disassemble the pump body.</p> |  <p>2). Unscrew the screw on the impeller and check whether the impeller ring is worn.</p> |  <p>3). Remove the impeller.</p> |  <p>4). Remove the oil chamber cover, pour in the oil and check the oil for water stains.</p> |
|  <p>5). Remove and replace the mechanical seal with a new one;</p> |  <p>6). Install the oil chamber cover and secure it with screws.</p> |  <p>7). Perform the air pressure test on the oil chamber with an air pressure of 0.3 MPa (3 bar), for a duration of 3 minutes</p> |  <p>8). Add oil to the oil chamber, then retighten the screw (taking care not to lose the O-ring).</p> |

- 3). If the pump is not used for a long time, it must be cleaned and stored in a dry and ventilated place.

8. Problem solving



Before any work on the pump, cut off the power supply

| Problem | Cause of the problem | Solution |
|---------------------|---|--|
| Difficult start-up. | <ol style="list-style-type: none"> 1. Low mains voltage; 2. Missing phase (only for three-phase); 3. Impeller is impeded; 4. High voltage drop due to cable; 5. Damaged stator winding. | <ol style="list-style-type: none"> 1. Voltage must be the nameplate voltage $\pm 6\%$; 2. Check electrical connections ; 3. Remove impurities from the impeller; 4. Use appropriate cable diameter; 5. Take the pump to a technical service. |
| Low flow rate. | <ol style="list-style-type: none"> 1. The required pressure is too high; 2. Pump suction clogged; 3. Damaged impeller; 4. Pump is not well immersed in liquid; 5. Impeller has the direction of rotation reversed. | <ol style="list-style-type: none"> 1. Check pump performance and reduce pressure; 2. Clean the suction; 3. Replace the impeller; 4. Check that the immersion depth is greater than 0.5 m); 5. Incorrect phase connection (three-phase models only). |
| The pump stops. | <ol style="list-style-type: none"> 1. Thermal protection tripped or fuse blown ; 2. Blocked impeller; 3. Damaged stator winding. | <ol style="list-style-type: none"> 1. Check mains voltage; 2. Remove cause of blockage; 3. Take the pump to a technical service. |

This appliance must not be used by children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.

It must only be installed and maintained by qualified personnel who have been adequately trained in the dangers involved in the installation of electrical equipment, using suitable PPE and following the instructions on the use of the appliance.

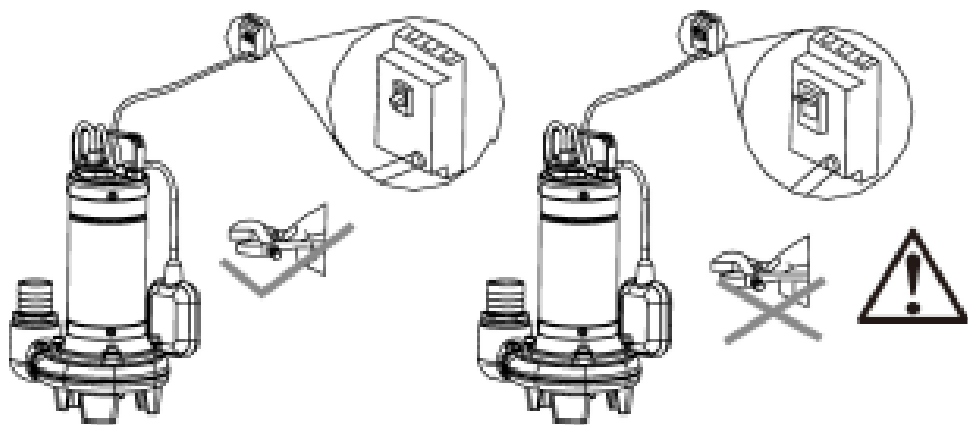
Pay Attention!

If the device or one of its parts is damaged, it must be repaired by the manufacturer, an authorised service centre or a professionally qualified person.



End-of-life disposal: the product should be disposed of as RAEE according to current regulations. Please contact us for more information.

- 11). The engine is a dry construction and therefore no oil or water is allowed to seep into it.
- 12). The oil chamber of the electric pump is filled with oil to ensure effective lubrication and cooling of the mechanical seal. In the event of damage or product failure, leakage may occur. In cultivation, animal husbandry or drinking water transport and processing environments, leaking oil can cause damage to plants, the crop or drinking water, etc. The environment of use and the consequences must be assessed before choosing this product. To check whether the product is suitable for use, please seek confirmation from professionals if necessary. In case of oil leakage, discontinue use immediately and dispose of it properly.
- 13). When the pump is in operation, if the pump position needs to be adjusted or if the pump needs to be touched, the power supply must always be cut off first to avoid accidents.



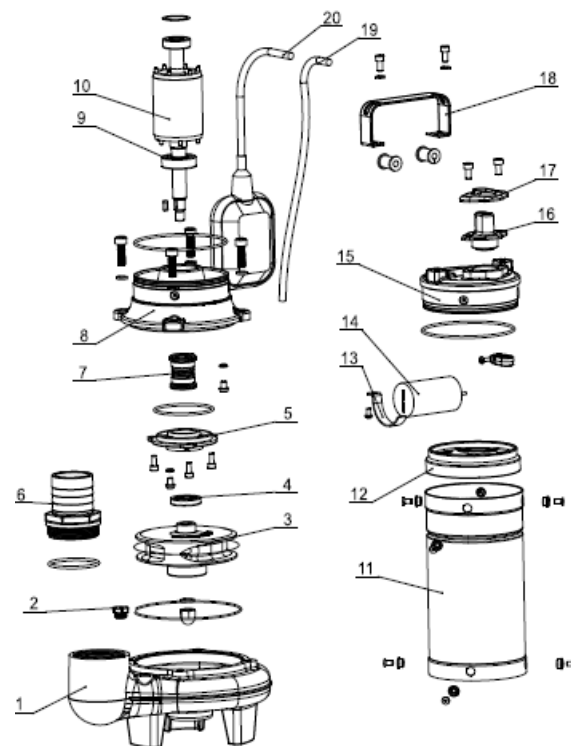
Before any work on the pump, cut off the power supply

- 14). When the electric pump is in operation, it is strictly forbidden to immerse the cable connector or socket wire in water. If it is necessary to extend the cable, the splice must be strictly sealed to prevent water seepage and electrical leakage.
- 15). After switching off the pump, wait before lifting it out of the water until the motor cools down to room temperature to ensure safety.

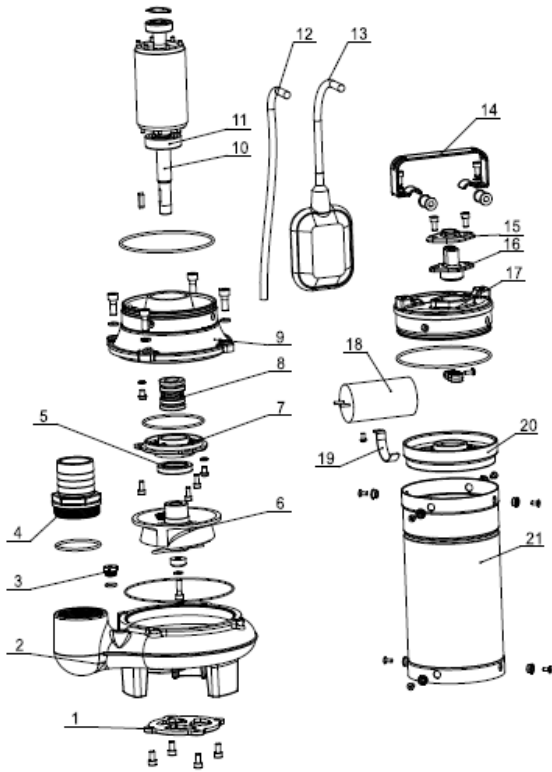
4. Technical data

| Model | Power (Kw) | Max.Flow rate (m ³ /h) | Max. head (m) | Max. solid diameter (mm) | Pipe dimension |
|------------|------------|-----------------------------------|---------------|--------------------------|----------------|
| ESSWm25A | 0.18 | 11.5 | 8.5 | 15 | G1.5 |
| ESSWm30A | 0.25 | 13 | 9.5 | 15 | G1.5 |
| ESSWm50A | 0.37 | 13.5 | 11 | 20 | G1.5 |
| ESSWm75A | 0.55 | 16.5 | 14 | 25 | G2 |
| ESSWm100A | 0.75 | 20 | 18 | 25 | G2 |
| ESSWm150A | 1.1 | 27 | 14.5 | 30 | G2 |
| ESSWm200A | 1.5 | 40 | 15 | 30 | G2 |
| ESSWm100DA | 0.75 | 15 | 13 | | G2 |
| ESSWm150DA | 1.1 | 26.5 | 15 | | G2 |
| ESSWm200DA | 1.5 | 21 | 19.5 | | G2 |

5. Product structure and dimensions



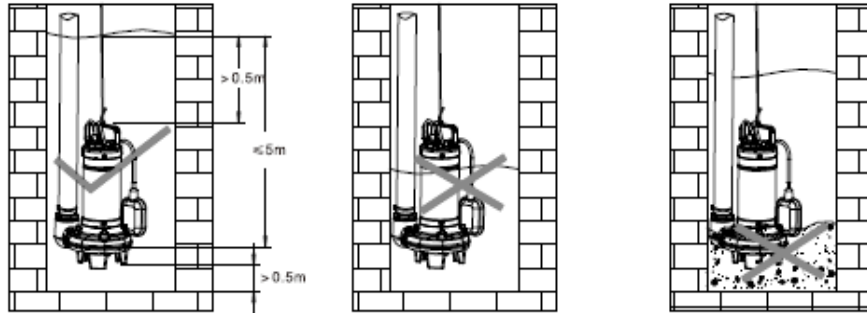
| POS. | PARTE |
|------|----------------------|
| 1 | Pump body |
| 2 | Discharge valve |
| 3 | Impeller |
| 4 | Oil chamber gasket |
| 5 | Oil chamber cover |
| 6 | Discharge connection |
| 7 | Mechanical seal |
| 8 | Oil chamber |
| 9 | Bearing |
| 10 | Rotor |
| 11 | Stator |
| 12 | Upper cover |
| 13 | Att. capacitor |
| 14 | Capacitor |
| 15 | Upper cover |
| 16 | Cable sheat |
| 17 | Cable retainer |
| 18 | Handle |
| 19 | Power cable |
| 20 | Floater |



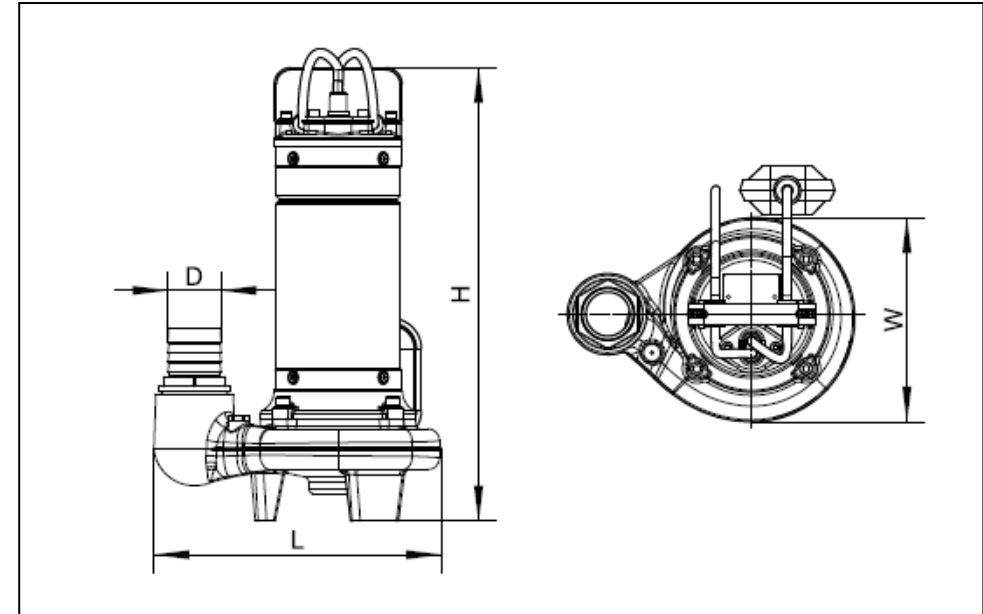
| POS. | PART |
|------|--------------------|
| 1 | Shredder |
| 2 | Pump body |
| 3 | Discharge valve |
| 4 | Outlet connection |
| 5 | Oil chamber gasket |
| 6 | Impeller |
| 7 | Oil chamber cover |
| 8 | Mechanical seal |
| 9 | Oil chamber |
| 10 | Rotor |
| 11 | Bearing |
| 12 | Power cable |
| 13 | Float |
| 14 | Handle |
| 15 | Cable fixing |
| 16 | Cable sheath |
| 17 | Top cover |
| 18 | Capacitor |
| 19 | Att.capacitor |
| 20 | Upper cover |
| 21 | Stator |

| Power kW | Voltage V | | Recommended max. cable length (m) | | |
|-------------|--------------|---|--------------------------------------|---|------|
| | | | 50 | 100 | 200 |
| 0.25 | 220 | Minimum cable cross section mm ² | 0.75 | 1 | 1.5 |
| 0.37 | | | 0.75 | 1 | 1.5 |
| 0.55 | | | 1.0 | 1.5 | 4 |
| 0.75 | | | 1.5 | 2.5 | 6 |
| 1.1 | | | 1.5 | 2.5 | |
| 1.5 | | | 2.5 | 4 | |
| 2.2 | | | 2.5 | | |
| 0.25 | | | 380 | Minimum cable cross section mm ² | 0.75 |
| 0.37 | 0.75 | 0.75 | | | 0.75 |
| 0.55 | 0.75 | 0.75 | | | 0.75 |
| 0.75 | 0.75 | 0.75 | | | 0.75 |
| 1.1 | 0.75 | 0.75 | | | 1 |
| 2.2 | 1 | 1 | | | 1 |
| 3 | 1.5 | 1.5 | | | 2.5 |
| 4 | 2.5 | 2.5 | | | 2.5 |
| 5.5 | 2.5 | 2.5 | | | 4 |
| 7.5 | 4 | 4 | | | |

- 7). When the electric pump is immersed in water, the immersion depth may be no less than 0.5 m and no more than 5 m, and it may not be immersed in mud. During the working process, the water level must be checked frequently and the electric pump must not be allowed to work above the water surface.



- 8). When the electric pump is in operation, safety warning signs must be posted at the place of use to avoid accidents.
- 9). When the electric pump is working normally, the built-in protector should not act. If it happens to act frequently, the power supply must be interrupted and the reason investigated. Always check that the pump's absorption, added to other uses, does not exceed the capacity of the mains meter.
- 10). If the point of use is far from the power supply, refer to the table below to choose the power cable according to distance.



| Model | D mm | L mm | W mm | H mm |
|------------|---------|---------|---------|---------|
| ESSWm25A | G1.5/40 | 221 | 158 | 362 |
| ESSWm30A | G1.5/40 | 221 | 158 | 362 |
| ESSWm50A | G1.5/40 | 221 | 158 | 372 |
| ESSWm75A | G2/50 | 260 | 185 | 410 |
| ESSWm100A | G2/50 | 260 | 185 | 410 |
| ESSWm150A | G2/50 | 269 | 186 | 426 |
| ESSWm200A | G2/50 | 269 | 186 | 426 |
| ESSWm100DA | G2/50 | 245 | 165 | 416 |
| ESSWm150DA | G2/50 | 269 | 186 | 426 |
| ESSWm200DA | G2/50 | 269 | 186 | 426 |

6. Safety Precautions

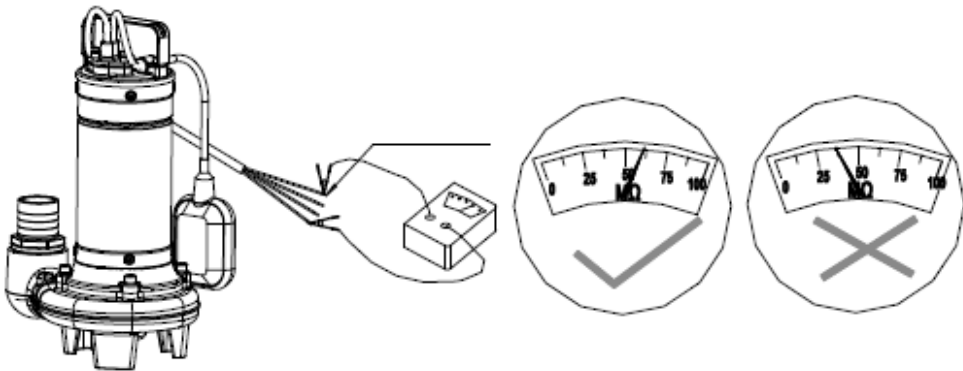


Refer to this manual for product installation by qualified personnel.

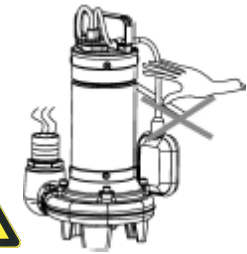


Always carry out installation and wiring to the power supply panel if the power supply is interrupted.
The pump must be connected to an earthed installation and must be fitted with a specific circuit breaker.
If the pump is used outdoors, all components (cable, power switchboard, cable joints) must be protected against moisture.

- 1). Before installation and use, carefully check whether the electric pump has not been damaged during transport and/or storage and whether the power supply and float switch cables are intact. If there is any damage, do not install the pump: repair it or, if under warranty, replace it with a new one.
- 2). Before starting up the pump, check that the insulation resistance is greater than $50M\Omega$.

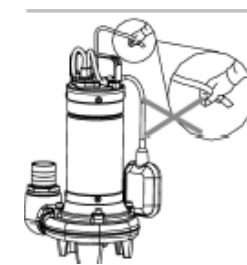
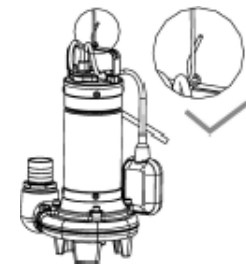


- 3). The pump must be connected to an earthed system and must be equipped with a specific circuit breaker.
- 4). Note: Before installing the three-phase submersible pump, the direction of rotation of the motor must be checked (see diagram). If the direction of rotation is wrong, the connection of two wires must be reversed.



- a. If the wiring is correct, after switching on, a strong current of air can be heard from the delivery port.
- b. If the motor rotation is reversed, the air current is very low or even absent.
- c. Do not touch the pump while it is running!

- 5). When connecting the hose to the delivery hose connection, it must be secured with a clamp.
- 6). Never use a power cable or float switch to move the electric pump.



- a. Before immersing the electric pump, tie the handle with a rope and use it to lift and position the pump in its working position.
- b. When handling the electric pump, never use the power cable or the float switch as to hold it up or move it.