



## 1. SAFETY MEASURES


 Before starting the pump, read this instruction booklet carefully.


For safety reasons, the pump must not be used by anyone who has not read these instructions. The pump must not be used by anyone under 16 years of age; keep children well away from the pump when in operation.

 The power cord and floating switch must never be used to carry or move the pump. Always use the pump's handle.

 When handling the pump, while it is connected to the electric power supply, you should avoid all contact with water.

 Never remove the plug by pulling on the power cord.

 Before taking any action on the pump, always remove the plug from the power socket.

 If the power supply cord has been damaged, it must be replaced by the manufacturer or his authorized customer support service in order to avoid all risks.

 **Overload protection**

The pump has a thermal overload safety device. In the event of any overheating of the motor, this device automatically switches off the pump. The cooling time is roughly 15 to 20 minutes, then the pump automatically comes on again. If the overload cutout is tripped, it is essential to identify and deal with the cause of the overheating. See Troubleshooting.


## 2. USE

**Basic submersible pumps:** ready for use pumps designed for the emptying of basements, garages and other flooded locations.

The pump must only be used in clean or slightly dirty water.

- Equipped with a floating switch for automatic stop and start
- Delivery with 3 different types of connection
- Suction filter.

These pumps are maintenance free.

 The submersible pumps – with float – are not suitable for continuous working.

**Multipurpose submersible pumps for drainage, emptying, transfer and for small-scale irrigation needs both in the clean water version as well as the dirty water version.**

Available both in the automatic version with floating switch to automatically switch the pump on and off, and in the manual version.

- **Submersible pumps suitable for pumping clean water** containing small solid particles with a maximum diameter of 5 mm.
- **Submersible pumps suitable for pumping dirty water** containing solid particles with a maximum diameter of 30 mm.
- **Powerful submersible pump suitable for pumping dirty water** containing solid particles with a maximum diameter of 38 mm.
- **The pumps have not been designed for continuous working**

**Submersible pumps for garden ponds to create water falls and fountains.** The pumps are designed to pump clean water or water containing solids with a diameter from 5 to 10 mm (depending on the regulation of the filter).

- Ideal for continuous use
- Designed for horizontal or vertical installation.

**Multi-impeller submersible pumps with 2, 3 or 4 impellers:** ideal for rain water and mains irrigation systems, for pumping water from tanks, ponds and wells and other applications that require high pressure. The multistage submersible pumps must only be used in clean water. The pump should ideally be completely

submersed for it to operate correctly, but can be used at a minimum suction height of 50 mm for very short periods.

Available both in the automatic version with floating switch to automatically switch the pump on and off, and in the manual version.

Characteristics:


- Optimum motor cooling that allows the pump to be used also when it is only partially submersed.
- Stainless steel anti-deposit filter
- Non-return valve and 4-way connector.


**Multipurpose submersible pumps designed specifically for use in salt water.**

Equipped with:


- anti-oxidation and anti-corrosion materials
- AISI 316 stainless steel motor casing, drive shaft and bolts.

 The temperature of the fluid being pumped must never exceed 35° C.

 The pump must not be used to pump salt water (unless specifically designed for the purpose), sewage (except for submersible pumps suitable for pumping dirty water with solid particles having a maximum diameter of 38 mm), flammable, corrosive or explosive liquids (e.g. petroleum oil, petrol, thinners), grease, oils or foodstuffs.

 Comply with the rules and regulations of the local water authority when using the pump for the supply of domestic water.

## 3. STARTING THE PUMP

 Before starting the pump, make sure that:

- the voltage and frequency specified on the pump's nameplate coincide with those of the available power supply;
- there are no signs of damage to the pump or its power cord;
- the electric connection is made in a dry place, protected against any risk of flooding;
- the electric system is complete with a residual current circuit-breaker (I<sub>Δn</sub> ≤ 30 mA) and an efficient earthing connection;
- Any extension cords must comply with the requirements of the DIN VDE standard 0620.

**Note:** given the different provisions applicable to the safety of electric systems in different countries, make sure that the pump system, as concerns its intended use, is in accordance with current legislation.

Insert the plug of the power cable into a suitable power socket.

**Automatic operation:**

The floating switch starts and stops the pump automatically.

The water level that prompts the starting and stopping of the pump can be adjusted by changing the length of cable of the float between the holder and the float.

N.B. The length of the float cable must never be shorter than 10 cm.

**Manual operation:**

- a) The floating switch must be lifted in order to start pumps with a float.
- b) For pumps without a float, insert the plug.

## 4. RECOMMENDATIONS

To ensure the proper operation of the pump, it is important to comply with the following recommendations:

- **The pump must never be allowed to run dry.**
- Never leave the pump in operation when the delivery pipe is clogged.
- The pump must only be used when it is immersed in water. If the water runs out, the pump must be stopped immediately by removing the plug from the power supply.
- Pay careful attention when the pump is operated in manual mode.
- The pump must be placed in a stable position inside a trap or in the lowest part of the place where it is installed.
- The float must be able to move freely while the pump is running therefore the advised dimensions of the trap are 40x40 cm.

- Periodically, it is advisable to make sure that no dirt (leaves, sand, etc.) has accumulated in the collection trap.

#### MAINTENANCE AND CLEANING

It is absolutely essential to prevent any risk of the pump freezing. In the event of freezing temperatures, remove the pump from the liquid, empty it and keep it in a place where it cannot freeze. The pump must be disconnected from the mains power supply before any cleaning operation is performed. The pump is maintenance free.

#### 5. TROUBLESHOOTING



Before taking any troubleshooting action, disconnect the pump from the power supply (i.e. remove the plug from the socket). If there is any damage to the power cable or pump, any necessary repairs or replacements must be performed by the manufacturer or his authorized customer support service, or by an equally-qualified party, in order to prevent all risks.

Fault	Possible causes	Solutions
The motor does not start or makes no noise.	A) Make sure the motor is powered. B) The pump is not enabled by the float.	B) - Make sure the float can move freely. - Increase the depth of the pit.
The pump delivers no water.	A) The suction grid or piping are clogged. B) The impeller is worn or stuck. C) The required head is too high for the characteristics of the pump. D) Water level under the suction minimum.	A) Remove the obstruction. B) Replace the impeller or remove the obstruction.
The pump does not stop.	A) The pump is not disabled by the float.	A) Make sure the float can move freely.
The flow rate is too low.	A) Make sure the suction grid is not partially clogged. B) Make sure the impeller or delivery pipe are not partially clogged or fouled.	A) Remove any obstructions. B) Remove any obstructions.
The pump stops running (possible intervention of the thermal overload switch).	- Make sure the fluid being pumped is not too dense, causing the motor to overheat. - Make sure the temperature of the water is not too high. - Make sure there is no solid body obstructing the impeller. - Power supply doesn't comply with the nameplate's data.	Disconnect the power cord, correct the reason for overheating; then wait until the pump is cooled, plug the cord and resume operation.

#### 6. DISPOSAL

This product or its parts must be disposed of in accordance with the laws regarding the environment. Use the local, public or private, refuse collection services.

#### 7. GUARANTEE

Any material or manufacturing defects will be corrected during the guarantee period established by current law in the country where the product is purchased. It is up to the manufacturer to decide whether to repair or replace any faulty parts.

The manufacturer's guarantee covers all substantial defects attributable to manufacturing or material defects, providing the product has been used correctly and in compliance with the instructions.

The guarantee becomes null and void in the event of the following:

- unauthorized attempts to repair the appliance;
- unauthorized technical changes to the appliance;
- use of non-original spare parts;
- manhandling;
- inappropriate use, e.g. for industrial purposes.

The guarantee does not cover:

- parts liable to rapid wear and tear.

For any action under guarantee, contact an authorized customer support service, presenting your receipt for the purchase of the product.

The manufacturer accepts no liability for any inaccuracies in the present booklet due to printing or copying errors. The manufacturer reserves the right to make any changes to the product he deems necessary or useful, without affecting its essential features.