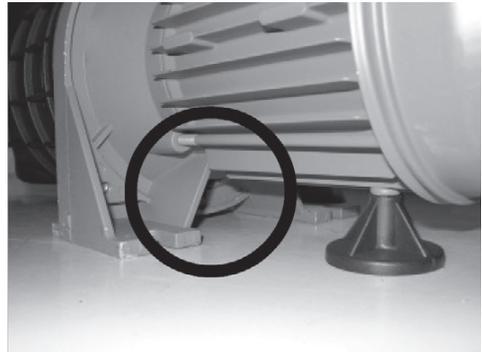


■ Compulsory check by starting up and functioning of the pump:



Prime the pump (if not risk of dry running). **WAR-RANTY LOSS!!!**



Regularly check the waterproofness! (A leak through a mechanical seal can cause important damages!)



Do not use any reduction at suction and drive mouths

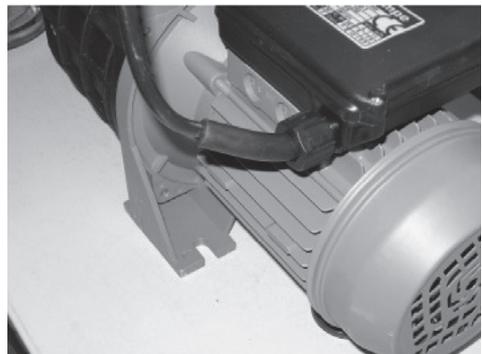


Starting up only with open valves

Pay attention on the cable position in order to prevent water seeping into the terminal box.



CORRECT! Prevent the entry of water through the electrical cable



INCORRECT!



Daily cleaning of the prefilter basket.



In order to avoid mechanical seal blocking, turn the shaft trough the motor fan before starting up or after extended unuse!

**Install the pump in a well ventilated room or protected from weather impacts.
Do not substitute the instruction manual enclosed!**

Carefully read the instructions before starting the installation process, which should be in accordance with local standards.

GB

1 Applications

MICRO model pumps are of centrifugal type with a horizontal construction.

Their main application is to rotate the water in the swimming pool and they are normally installed before the filtering unit. The pump is designed to decant chlorine-disinfected swimming pool water.

The MICRO pumps include a removable basket to filter small solids.

2 Technical information

2.1 Maximum environment temperature

+ 50°C

2.2 Water temperature

From 0°C to + 50°C.

2.3 Maximum working pressure allowed

2 bar. (possible water hammer must not be more than 3 Kg.)

2.4 Maximum input pressure

The input pressure when the pump is working against a closed valve must be lower than the maximum permitted working pressure.

2.5 Electrical details

Voltage: 1 x 220 / 230 V 50 Hz

See also the characteristics plate.

Protection: IP 55.

Isolation: Class F.

2.6 Dimensions

See the figure at the end of these instructions.

2.7 Noise level

The noise level of the pumps is under 70 dB.

2.8 Weights

Type	Weight (Kg.)
MICRO 25	6,4
MICRO 33	7,35
MICRO 50	8

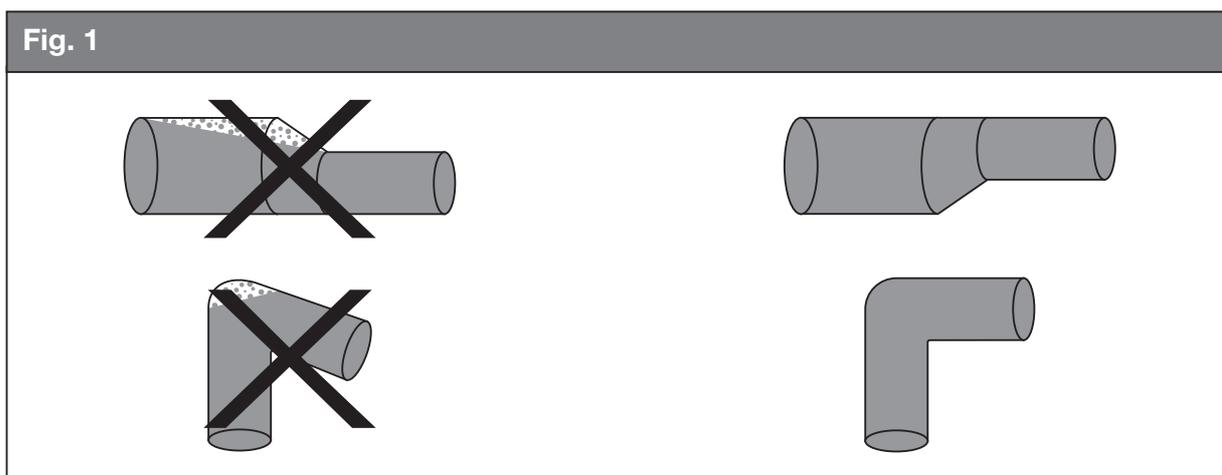
3 Installation

Normally the MICRO pumps are installed between the skimmer and the swimming pool filter.

The pumps should be placed on a solid foundation, with the shaft in horizontal position and the pre-filter cover on the top. It must be possible to remove the transparent cover to take out the pre-filter basket for cleaning. The suction pipe must have at least the same diameter as the pump suction inlet diameter. If the suction line is over 10 meters long, the pressure losses must be taken into consideration. Install the pipes to avoid any air pockets

in its interior, especially in the intake pipe.

The following drawing shows a correctly fitted pipe.



The pipes should be fitted in such a way that any pressure variation caused by temperature changes do not to affect the pump.

If the piping is very long, it must be suitably supported in front of and behind the pump and it is best to place a retention or anti-hydraulic ram valve in the drive.

⚠ The plastic pipes and connections should be screwed carefully.

If a hose is used in suction, it must be non-compressible (with a reinforcement spiral).

The suction pipe/hose must be as short as possible to assure optimum working conditions.

It is recommended to install close valves on either side to isolate the pump.

Note: The pump does not allow work with a closed discharge valve as it may cause an increase in the temperature and steam formation which can damage the pump.

If there is any danger of the pump working against a closed discharge valve, a by-pass/purging valve must be connected in a discharge pipe to ensure minimum liquid flow through the pump.

To minimise possible noise from the pump, it is recommendable to install an anti-vibrator in the suction and drive inlets and between the base plate and the pump.

⚠ According to the IEC no. 364 publication, the pump must be installed at least 2 m from the swimming pool edge.

3.1 Ventilation

The pump motor is cooled by the fan on the rear. We will therefore preferably place the pump in a WELL VENTILATED place (protected from possible freezing), preferably in a room.

- a) If the pump is installed OUTDOORS, it must be protected from the rain and the elements with a suitable cover.
- b) If the pump is installed in an underground or semi buried plant housing, a SUFFICIENT AIR ENTRY must be assured for the motor ventilation in order to not be damaged (the inside temperature should not exceed 50°C).
- c) In order to assure efficient cooling, the minimum distance between fan cover and the wall or another obstacle situated at the back side of the motor must be more than 2,5 times than the fan diameter.

4 Electrical connections

⚠ Make sure that the electrical supply is turned off before removing the connection box cover or before any moving or disassembling of the pump.

The electrical connections must be performed by an authorised electrician and according to the local standards.

The pump must be connected to an external switch.

The voltage and the frequency are marked on the characteristics plate. Make sure that the motor is suitable for the electrical supply in use.

The motor must be connected to the electrical supply as shown in the drawing, using an approved, watertight cable and in accordance with local standards.

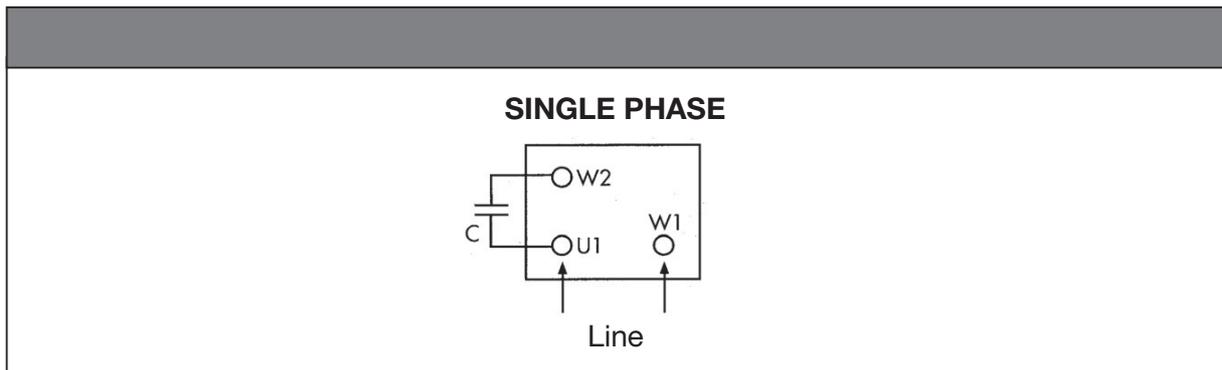
4.1 Motor protection

All single phase versions have a motor protector and do not need any additional protection.

Note: If the motor is overloaded, it will turn off automatically and will start to work again when the temperature falls to a normal level.

All three-phase versions must be connected to an external motor protector.

The pump must be connected to the ground socket and the electrical installation must have a differential circuit.



5 Starting

Note: Do not start the pump until it has been primed and purged.

The pump is correctly primed when the water is just below the transparent cover.

The arrows on the pump housing indicate the correct rotation.

In order to create maximum suction capacity when starting, close the discharge valve, start the pump and slowly open the discharge valve.

If the pump does not work correctly after 5 minutes, stop the pump, check the water level in the suction pipe and in the pump.

6 Pre-filter basket cleaning

⚠ Make sure that the electrical power supply is turned off and can not be connected accidentally before starting work with the pump.

The pre-filter basket included in the pump must be checked every day and cleaned if necessary. Before opening the pre-filter cover, close the charging and discharge valves.

⚠ After the cleaning, prime the pump again and close the pre-filter cover. The pump can start work again.

Note: High pressure cleaning is not allowed.

7 Protection from ice

If the pump is not going to be used during the winter, it must be drained to avoid damage caused by icing. To drain the pump, remove the pump drain plug (69) from the pump housing. Do not refit the draining screw until the pump is used again.

8 Maintenance

Under normal working conditions the pump needs no any specific maintenance.

9 Trouble shooting guide

Trouble	Cause
The pump works, but does not prime	<ol style="list-style-type: none"> 1) The pump has not been filled with water 2) The pump has not been purged 3) Filtration in the suction pipe / hose 4) Incorrect closing of the transparent lid <ul style="list-style-type: none"> - Check the pre-filter basket - Tighten thumb screws of the lid equally 5) The suction is too high <ul style="list-style-type: none"> - The maximum height allowed is 3m 6) The sum of the load losses from the installation exceeds the pumping capacity <ul style="list-style-type: none"> - Recalculate the pressure required 7) Mechanical seal leaking
The pump does not work satisfactorily	<ol style="list-style-type: none"> 1) Incorrect rotation direction (only three-phase pumps) <ul style="list-style-type: none"> - Change the rotating direction 2) The pre-filter basket or the skimmer are dirty or blocked <ul style="list-style-type: none"> - Clean the pre-filter basket 3) The water level in the swimming pool is too low <ul style="list-style-type: none"> - Increase the water level up to the 1/2 of the pool capacity 4) The suction pipe/hose is partially blocked by impurities <ul style="list-style-type: none"> - Clean the suction pipe/hose