

SM Hydromassage

Self-Priming Centrifugal Pumps for Swimming Pools,
Counter Current Systems & SPAS





Please read carefully the instruction manual before starting the installation process. The installation should be in accordance to the local standards.

1. APPLICATIONS

The swimming pool pump model SM Hydromassage has a horizontal centrifugal construction.

Its main application is to circulate the swimming pool pump water and normally it is installed before the filtration equipment. The pump is designed to move about the incoming and the outgoing water from the chlorine disinfected swimming pool. The SM Hydromassage pumps have a removable basket for filtering of 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 permitted:
2 Bar

Note: The ram crash to be lower than 3 kgs.

2.4 Maximum entrance pressure:
When the pump works with a closed valve the entrance pressure should be lower than the maximum working pressure permitted always.

2.5 Minimum entrance pressure:

TYPE	Maximum Suction	Maximum Autosuction
SM Hydromassage	5 m	4 m

2.6 Self-priming: The SM Hydromassage pumps are self-priming up to 4 m height.

2.7 Electrical details:

TYPE	Voltage
SM Hydromassage -50M SM Hydromassage -75M SM Hydromassage -100M SM Hydromassage -150M SM Hydromassage -200M SM Hydromassage -300M SM Hydromassage -350M	1 x 220 / 230 V 50 Hz
SM Hydromassage -75T SM Hydromassage -100T SM Hydromassage -150T SM Hydromassage -200T SM Hydromassage -300T SM Hydromassage -350T	3 x 230 / 400 V 3 x 220 / 380 V 50 Hz

See also the characteristics plate.

Waterproof type: IP55

Isolation class: F

2.8 Dimensions: See the drawing on the final of this manual.

2.9 Sound level: The sound pressure level of the pump is lower than 70 dB.

2.10 Weights:

SM Hydromassage Series	Weight (kg)
SM Hydromassage -50M	13,700
SM Hydromassage -75M	14,500
SM Hydromassage -100M	15,300
SM Hydromassage -150M	18,250
SM Hydromassage -200M	20,050
SM Hydromassage -300M	20,050
SM Hydromassage -350M	24,200
SM Hydromassage -75T	14,000
SM Hydromassage -100T	14,800
SM Hydromassage -150T	17,250
SM Hydromassage -200T	18,000
SM Hydromassage -300T	18,000
SM Hydromassage -350T	22,000

3. INSTALLATION

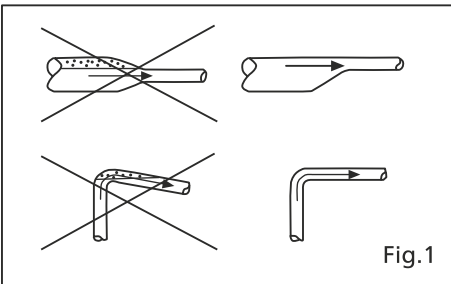
Normally the SM Hydromassage swimming pool pumps are installed between the skimmer/balance tank and the swimming pool filter.

The pump should be placed on a flat, solid foundation, with the shaft in horizontal position and the prefilter cover uppermost. It must be possible to remove the transparent cover so that the prefilter basket can be removed for cleaning.

The suction pipe must have as minimum the same diameter as the pump suction line with continuous slope in order to avoid long priming times. If the suction line exceeds the 10 meters the extra pressure loss should be considered.

The pipes should be installed to avoid any air leaks in its interior.

The following drawing shows a correctly fitted piping.



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

If the piping is very long and/or high support the pump in front and behind. It is recommendable to put a retention or check valve at the outlet.



The plastic pipes and connections should be screwed carefully.

In case of using a suction hose, it must be non-compressible (with are inforcement spiral).

The suction pipe/hose should be the shortest possible in order to assure optimum working conditions.

It's recommendable to install shutting valves in the both sides in order to isolate the pump.

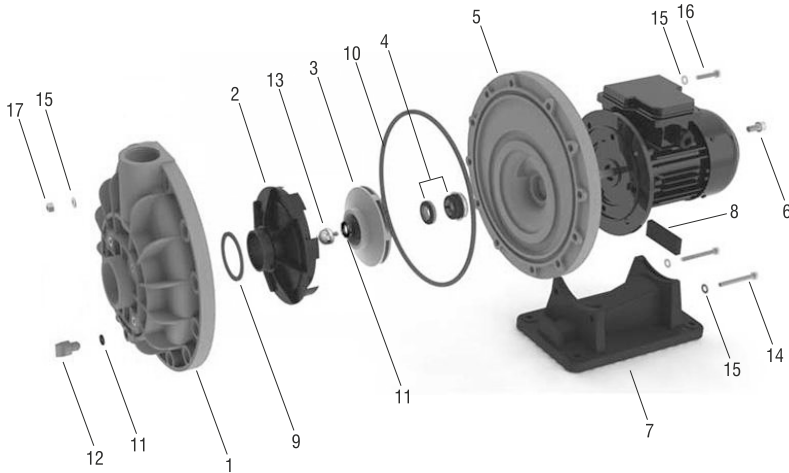
Note: The pump does not allow work with closed discharge valve as it may cause an increase of the temperature and steam formation which can damage the pump.

If there is any possibility of operating the pump with discharge valve closed, it's necessary to connect one bypass/mud valve on the discharge pipe in order to assure a minimum liquid flow through the pump.

It's recommendable to install an antivibrator at the inlet and outlets and between the base plate and the pump in order to minimize a possible noise.

SM Hydromassage Series	Suction Pipe Size
SM Hydromassage -50	1 1/2" (Ø50 mm)
SM Hydromassage -75	1 1/2" (Ø50 mm)
SM Hydromassage -100	2" (Ø63 mm)
SM Hydromassage -150	2" (Ø63 mm)
SM Hydromassage -200	2 1/2" (Ø75 mm)
SM Hydromassage -300	3" (Ø90 mm)
SM Hydromassage -350	3" (Ø90 mm)

SM Hydromassage Pumps



ID.	CODE	DESCRIPTION
1	0111PX10	SM Hydromassage - Front pump body
2	0111PX14	SM Hydromassage - Diffuser
3	0111PX1604	SM Hydromassage - Impeiler (2 HP)
4	0111PX17	SM Hydromassage - Mechanical seal complete
5	0111PX18	SM Hydromassage - Rear body pump
6	0111PX24	Impus screw M10x20
7	0111PX25	SM Hydromassage - Pump leg
8	0111PX26	rubber foot pump support for
9	0111PXE01	SM Hydromassage - Diffuser gasket (Viton) 70x6
10	0111PXE02	SM Hydromassage - Body o-ring (Viton) 264x250x7
11	0111STR02	Drain plug
12	0111STR03	O-ring for drain plug
13	0111STR37N	Counter screw inox
14	032011	M8x70 inox screw
15	03202	Washer inox M8
16	0352014	M8x40 inox screw
17	8500073	M8 Hexagon head brass nut 934



According to the IEC N° 364 publication, the pump must be installed at minimum 2 meters from the swimming pool edge.

3.1 Ventilation: The pump's motor is cooled by fan, placed in the back side. You should install the pump in a well ventilated place (free from possible freezing), preferably in a room.

- a) If the pump is installed outdoors, it must be protected with suitable cover.
- b) If the pump is installed in a buried or semiburied "case", it is necessary to assure a sufficient air entrance in order the motor ventilation not to be damaged (the inside temperature should not exceed the 50°C).

4. ELECTRICAL CONNECTIONS



Please make sure that the electrical supply is interrupted before removing the connection case cover or before any moving or disassembling of the pump.

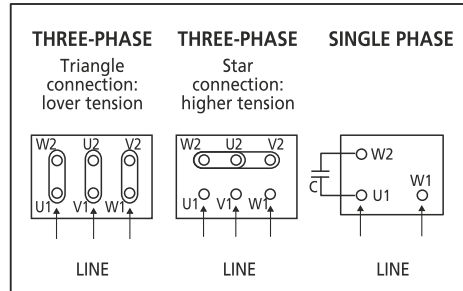
The electrical connections must be done by a professional and according to the local standards.

The pump must be connected to an external switch.

The voltage and the frequency are marked on the characteristics plate. Please make sure that the motor is suitable to the electrical supply in the network. The motor should be connected to the electrical supply as shown in the drawing, using a suitable cable (watertight approved) and in accordance to the local standards.

4.1 Motor protection: All versions must be connected to an external motor protector.

The pump must be connected to the outlet mass and the electrical installation must have a differential circuit.



5. STARTING

Note: Do not start the pumps during its priming or purging.

The pump is correctly primed when the water is situated under the transparent lid.

The arrows on the pump housing indicate the correct rotation.

In order to create a maximum suction capacity during the starting, close the discharge valve, start the pump and open slowly the discharge valve. If the pump does not work correctly 5 minutes later, stop the pump, check the water level in both the suction pipe and in the pump prefilter.

5.1

With the pump placed under the water level, fill the pump by slowly opening the suction valve, Keep the outlet valve open simultaneous.

With the pumps above the water level, from the supply side, by opening the suction valve, until the suction pipe and pump body will be completely full.

6. PREFILTER BASKET CLEANING



Please make sure that the electrical supply is interrupted and it is not possible to be connected accidentally before to start working with the pump.

The filter basket must be checked daily and cleaned if necessary. **Before opening the prefilter cover, please close the suction and discharge valves.**



After the filter basket cleaning, clean also the filter cover gasket and put it in its place. Then check if the pump housing is full of water and if so, put the filter cover and fix the cover nuts similarly. **Open the charge and discharge valves** and start the pump.

Note: High pressure cleaning is not allowed.

7. WINTERIZING

If the pump will not be used during the winter, remove all plugs and drain the pump and all piping. To drain the pump, please take off the drain plug (7) from the pump housing.

Do not put the drainage screw up till the pump will be used again.

8. MAINTENANCE

Please make sure that the electrical supply is interrupted and it is not possible to be accidentally connected before the pump to start working.

The pump is designed to operate maintenance under normal working conditions. The motor bearings are permanently lubricated.

8.1 ATTENTION! -

If the pump is switched off for long periods of time, should there be a danger of frost, the pump casing (no 5) should be emptied, by loosening the two emptying outlets (14) along with their O-ring seals.

Before starting the pump, replace the outlets (14) and their o-ring seals. Fill the pump chamber with water and check with a screwdriver that the motor is not jammed. If the shaft has seized up, call a qualified technician. In case of the motor flooding, do not start it. Call an electrician who will dismantle the motor in order to dry it.

9. TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE
The pump works, but does not prime.	<ol style="list-style-type: none">1. No water in the strainer pot.2. Pump not purged.3. Filtration in the piping / suction hose.4. Incorrect closing of the transparent lid.<ul style="list-style-type: none">- Check the prefilter basket- Tight well the lid screws5. Too high suction head<ul style="list-style-type: none">- Maximum suction head permitted is 3 meters.6. The suction line sucks air through connections.7. Mechanical seal leaking.
The pump does not work satisfactory.	<ol style="list-style-type: none">1. Incorrect direction of rotating (only in case of 3-phase pumps)<ul style="list-style-type: none">- Change the rotating direction2. The prefilter basket or the skimmer are dirty or blocked.<ul style="list-style-type: none">- Clean the prefilter basket3. 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 capacity4. The piping / hose is partially blocked by impurities<ul style="list-style-type: none">- Clean the piping / suction hose.

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