



**Instruction manual of submersible pumps
WQ PROFESSIONAL, SWQ**



CAUTION Read the instruction manual before use. For safety reasons only persons knowing precisely the instruction manual may operate the pump.



CAUTION Instruction manual is a basic element of sale and purchase contract. Failure of the user to comply with recommendations included in the instruction manual is a non-compliance with the contract and excludes any claims resulting from possible breakdown of the machine, being the result of use inconsistent with recommendations.

APPLICATION:

Pumps which are the subject of this manual are designed for pumping clean and dirty water. WQ professional pumps can be used in households at emptying cesspools, in farm, pumping water out of flooded rooms, emptying of swimming pools, etc.

Contaminants in water must not have a diameter larger than acceptable for a given type of pump (see technical data) and must not be of abrasive nature, like e.g. sand, gravel. The content of solid elements in water cannot be greater than 10%.

The pump is designed for pumping of water without the solid and grinding elements.



Pumping of water containing sand will lead to quick wear of the pump and as a consequence, to a breakdown. In this case repair will be possible only upon payment.



The pump is not suitable for pumping caustic substances, flammable, with damaging or explosive properties (e.g. gasoline, nitro, petroleum, etc.), food products, salt water. Breakdowns caused by pumping of this type of liquids are not subject to guarantee repairs.

Maximum temperature of the pumped water is 35° C.



The pump is not suitable for pumping of water containing excessive quantity of mineral components causing sedimentation on pumping elements. The use pump under such conditions will lead to premature wear of working elements. In this case repair of the pump will be possible only upon payment.



The pump cannot pump water containing oils and petrol derivatives. Operation of the pump in such water will lead to damages to rubber elements e.g. cable or sealings, and as a result, to leakage of the pump and engine breakdown. In this case repair of the pump will be possible only upon payment.



Pumped water must not contain long-fibre contaminants whose longest size is greater than the maximum diameter of contaminants specified in technical data for a given type of pump.

The pump is not suitable for continuous work. Maximum time of continuous operation should not be longer than 3 hours. After this time a 3-hour break is required. For this reason, the pump is not fit for work in ponds where continuous working time is longer.

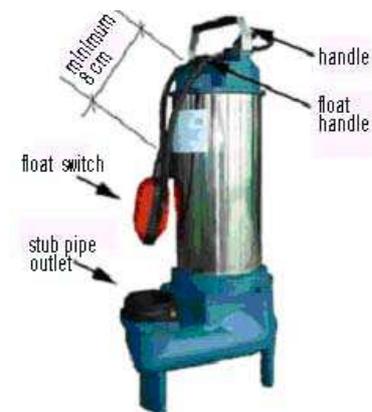
PUMP INSTALLATION:

Pumps which are the subject of this manual are immersible pumps i.e. they work in the pumped water. The minimum level of immersion of the pump during operation is 25 cm. The pump may pump at smaller immersion however, in this case the user should directly supervise the operation of the pump. In the event of any interruptions in its work, power supply of the pump should be immediately turned off.



The pump cannot work "dry" without water. "Dry" work will lead to destruction of the machine. In this case repair will be possible only upon payment.

Pumps can be equipped with a float switch – an electric controller automatically turning the pump on and off, depending on the level of water.



When the water level increases the float switch, empty inside, goes up along with the water level. After reaching the level of turning on, the ball inside the float drops, joining electric contacts, as a result of which the motor of the pump starts to work. During pumping water out the level of water goes down and so does the float. After reaching the level of turning off, the falling ball inside the float disconnects the contacts thus turning off the motor of the pump. The level of turning on and off can be changed by the user by adjusting cable length between the float handle and the float switch.



The minimum cable length between the float handle and the float switch must be more than 8 cm. Failure to comply with this recommendation will lead to damage of the float cable insulation. In this case repair of the pump will be possible only upon payment. See fig.

Minimum dimensions of the emptied tank should make it possible for the float to move freely in the pumped liquid, without knocking against the tank walls. In the case when the float switch is suspended on the tank wall, the pump should work under direct supervision of the user in order not to lead to a breakdown related to possible "dry" work.

Water from the pump flows out through a pressure stub pipe (See fig.). Pressure hose should be put on the pressure stub pipe. One should fix it to the stub pipe with a steel trim. When selecting a pressure hose, one should remember that final efficiency of the machine depends on the diameter and length of the hose. The smaller the hose diameter, and the greater the length, the smaller the efficiency at the end of the hose .

The same principle applies to the difference between water level in the tank we pump from, and the level we pump to. The greater the difference in levels, the more reduced the pump efficiency. Parameter specified as maximum lift height given in the specified technical data determines the maximum pressure generated by the pump. At this pressure the pump efficiency will be zero.

At plunging the pump in the emptied tank, one should lower it on a string fixed to the pump handle.



Caution!!! It is not allowed to lift and lower the pump with the use of power supply cable or the float switch. Lifting or lowering the pump with the use of cable or float will lead to damage of cables at best, in the worst case scenario, it may result in an electric shock. Guarantor and manufacturer are exempt from any and all liability in the event of non-observance of this requirement. Repair of the damaged cable is possible only upon payment, not under the guarantee.

If there is sand or stones on the bottom of the emptied tank, which may damage the rotor, or impeller the pump should be immediately suspended on a string at least 0.5 m over the bottom, in order not to suck in the sand or stones.



Caution The lubricant used in the pump is oil. Unsealing may lead to oil leakage which may contaminate the pumped water.



Caution!!! It is not allowed to put hands into the pressure and suction stub pipes of the working pump!

ELECTRIC INSTALLATION:

The pump should be supplied by 230-240V/50Hz with earthing.

Electric network the pump is to be supplied by should have nominal data compliant with the data contained on the rating plate of the pump.



The plug of the pump must be connected to a socket with active earthing. The manufacturer and guarantor are exempt from any liability for damage to people or things, resulting from the lack of relevant earthing.

Yellow and green conductor of the connection cable is the earthing.

Electric network supplying the pump should be equipped with an installation overcurrent - motor switch, protecting the engine against overload. In order to the switch to effectively protect the engine against overload, it should be adjusted to the current of winding given in the data specified on the rating plate.

The pump may work without such protection however, in case of a breakdown caused by overload, costs of repair shall be borne by the user.



Power supply installation must be equipped with a residual current device (RCD) having a residual operating current of I_n not exceeding 30mA. The manufacturer and guarantor are exempt from any liability for damage to people or things, resulting from the power supply of the device without relevant switch.



The presence of people or animals in the water where the pump is working is not allowed.



In the event of damage of power supply cable insulation or the float cable insulation it is not allowed to use the pump. In such a situation the guarantor should be consulted for replacement of the cable. Mechanical damage is not subject to guarantee free repairs. The use of the pump with damaged cable insulation at best will lead to flooding of engine with water, while in the worst case scenario, it may result in an electric shock.

If the pump works at a large distance from buildings and power supply is provided with the use of an extension cord whose length is greater than 20 m, one should unconditionally check voltage at the end of the extension cord before starting the pump. One should remember that with the increasing cable length power supply voltage at its end decreases.



Pumps cannot be used at voltage drop below 210 V. The use of the pump under such conditions will lead to overload of the motor and to its breakdown. In this case repair will be possible only upon payment.

MAINTENANCE:



Disconnect power supply of the pump before performing any maintenance activities.

In case when the impeller of the pump is blocked with impurities, servicing activities performed by the user should include cleaning of the impeller chamber.

After each use, the pump should be taken out of the tank and rinsed with clean water.

STORAGE:

Cleaned pump should be stored in a dry room.



One should ensure that the pump is not set on a power supply cable. At quite considerable weight of the pump and a long period of storage cable insulation can be damaged.

TECHNICAL DATA:

TYPE:	Engine power [W]	Current of winding [A]	Power supply voltage [V]	Maximum capacity [l/min]	Maximum pressure. [mt]	Maximum diameter of contaminants [mm]	Pressure stub pipe [mm]
WQ450 professional	450	2.35	230-240	180	11	25	40
WQ550 professional	550	4,07	230-240	340	8.5	30	50
WQ750 professional	750	5,24	230-240	400	10.5	30	50
WQ1100 professional	1100	7,02	230-240	420	12.5	30	50
WQ1500 professional	1500	9,44	230-240	700	16.5	30	50

UTILIZATION OF THE MACHINE:**Do not dispose of worn-out units through the household garbage!**

The appliance, its packaging and accessories are all produced from recyclable materials and must be disposed of accordingly.

DECLARATION OF CONFORMITY (Module A)

PHU DAMBAT

address of the plant: Gawartowa Wola 38, 05-085 KAMPINOS, Poland

We declare with full liability that the pumps from the series:

WQ450 PROFESSIONAL, WQ550 PROFESSIONAL, WQ750 PROFESSIONAL,

WQ1100 PROFESSIONAL, WQ1500 PROFESSIONAL

which this declaration applies to, are compliant with the following directives of the European Parliament and the Council that relate to:

1) MD 98/37/EC (applied standard PN-EN292-1:1991, PN-EN292-2-1991/A1:1995, PN-EN 809:1999/AC:2004)

2) EMC 89/336/EEG (applied standard PN-EN 55014-1:2004, PN-EN 61000-3-2:2004)

3) LVD 73/23/EEG (applied standard PN-EN 60335-1:2004, PN-EN 60335-2-41:2005)

Adam Jastrzębski

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POSSIBLE PROBLEMS AT OPERATION AND THEIR SOLUTION:

Symptom:	Possible cause:	Solution of the problem:
The pump does not work	Float switch is in the "off" position	Wait, until the quantity of water in the pumping well will be sufficient for automatic turning on of the pump with the use of float switch.
	Insufficient quantity of water in the pumping well for rising of the float switch into the "on" position	
The pump does not work	The float switch has caught against something and cannot change its position to "on"	Check whether the float switch can move freely.
	No electric power supply	Check whether electric plug of the pump is properly put into the electric socket

		<p>Check "fuses" in the electric plug and next in the house and any kinds of installation fuses that may turn off the flow of current from the network</p> <p>Check whether there is power supply in the area of your house – power supply may be disconnected by the power company on a larger area</p>
	The pump is blocked	Disconnect electrical supply from the pump. After taking out the pump from the tank, unblock the impeller of the pump. Before putting the pump to the tank again, check whether the impeller rotates without problems.
The pump works but does not feed water	Pressure stub pipe of the pump or the pressure pipeline (hose) is blocked	Disconnect electrical supply from the pump. After taking out the pump from the tank, unblock the pressure stub pipe. Check and possibly clear the pressure pipeline (hose).
	Too large resistance at the flow through the pressure pipeline (hose).	Check whether the maximum pressure for a given type of pump is not exceeded. Pressure must be created by the pump is influenced by the difference between the water level in tank with we pump form and the level we pump to, the length of the pressure pipeline (hose) and its diameter. If resistance is too large for a given type of pump, replace the pump with another one with greater pressure.
	Not enough water in the pumping well	Check whether the float switch is not suspended on a tank wall preventing automatic turning off. Unblock the float switch.
The pump does not shut down in spite of pumping out the water	The float switch is suspended on the tank wall or on the pressure pipeline (hose)	Check whether the float switch is not suspended on a tank wall preventing automatic turning off. Unblock the float switch
	The float switch is blocked in "on" position	Replace the float switch in an authorised service point
Operation of the pump interrupted. Thermal switch	The pump is not completely submerged in water	Check water level in the pumping well. Unblock the suspended float switch

<p>Thermal switch installed inside the pump interrupts the supply of power.</p>	<p>Temperature of the pumped water is too high.</p>	<p>Check whether water temperature is not too high for a given type of pump.</p>
<p>The pump often turns on and off</p>	<p>Return valve not installed on the pressure stub pipe. When the pump pumps out water to the level at which the float switch turns off the pump, water from the pressure pipeline (hose) flows back to the well. After flowing in the sufficient quantity of water, the float switch turns on the pump. The cycle is constantly repeated</p>	<p>Install a return valve on the pressure stub pipe of the pump thus preventing return of water to the pump well.</p>