MULTISTAGE VERTICAL PUMPS

Read the manual prior to commencement of use. For safety reasons, the device can only be operated by persons well-familiarised with the manual.

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Any use of the device, other than the intended use, is a foreseeable misuse of the device.

SAFETY!!!

Before use, read the instruction manual.

For safety reasons, only people who know the operating instructions are allowed to operate the pump.

the "danger" symbol used for comments whose non-observance may cause danger to life or health.

the "danger" symbol used in the case of non-observance may cause danger to life or health of the electrical system. Before proceeding to the activities marked with this symbol, the power supply cable of the pump must be disconnected from the power supply.

CAUTION the symbol used for the observations of which non-observance may cause a risk of damage to the device and danger to life or health.

CAUTION the instruction manual is the main element of the purchase and sale agreement. Non-compliance by the user with its recommendations constitutes non-compliance with the contract and excludes any claims resulting from a possible failure of the device and damages related to failure of the device as a result of non-compliant use. Failure to follow the instructions in the operating instructions may result in personal injury or damage to the device.

CAUTION Pump life depends largely on the selection, type, power and parameters of the pump, adequately to the capacity of the source to which it will be connected. Therefore, before connecting the pump, it is recommended to check thoroughly whether the water source's efficiency, eg well, is sufficient. This is particularly important when installing multi-stage pumps whose capacity according to the nameplate is from 100 l / min. In the case of an inefficient well, the water column may break and the pump may operate without water. In the absence of protection, the pumps have been destroyed in connection with the above will not be covered by the guarantee. Installation of this type of pumps is recommended only to high-efficiency new wells.

SAFETY

CAUTION Before operating, read the instruction manual carefully and follow its instructions, otherwise you may endanger your health, life, environmental damage or damage to the device. Fault-free and correct operation depends mainly on the selection of the device for the prevailing conditions and compliance with the recommendations contained in the operating instructions. Failure to follow the instructions for use may result in failure to recognize the warranty, as in the case of any construction changes or changes that may affect the trouble-free operation of the device. In addition, you must comply with common health and safety regulations.

CAUTION The person who will mount, adjust, use, maintain and disassemble must have appropriate mechanical and electrical qualifications.

CAUTION This equipment is not intended for use by persons (including children) with limited physical, sensory or mental ability, or persons who have no experience in this type of equipment or knowledge of the equipment, unless it is supervised by persons certifying their safety and in accordance with the instructions for use of the equipment.
Children should not play with the device.

CAUTION All work on the pump can only be carried out after disconnecting the electrical supply.

APPLICATION

CAUTION The pumps and hydrophores described in this manual are dedicated for domestic water supply and irrigation.
In addition, pumps from the series: CPM, 2CPM, F-CPM, PMC, SMCI, MCI for the transfer of industrial liquids, water, soft mineral water, other non-aggressive industrial liquids. Main application areas: cooling of aggregates, water treatment process, car washes, industrial heating and cooling processes, air-conditioning systems, fertilization and dosing systems. The pumps can also be used to raise the pressure in water supplysystems, while maintaining that the pressure under which the water is pumped into the pump(from the suction side) will not exceed 2.5bar. Exceeding the pressure of 2.5 bar can lead todestruction of the pump and the entire installation. If there is a risk that the pressure mayexceed 2.5bar, a pressure reducer must be installed before entering the pump (suction side).In addition, the system should be equipped with a non-return valve to prevent return of thepumped water to the sewage system.

CAUTION The pumps and hydrophores have a maximum suction capacity of 8m water column. However, it should be remembered that the section called the water column consists of the distance from the water level to the pump, both vertical and horizontal. In addition, the diameter of the pipe is also important.

- Every 1 meter vertically is counted as 1m water column.

- Every 1 meter horizontally at the pipe with a diameter of 1 "should be counted as 0,15m water column (**It should be remembered that in periods when rain falls rarely and also during summer periods, water mirrors tend to fall**).

Example:
The booster set is set at the distance of 10 m from the well where the depth to the water level is 5 m. A suction pipe with 1” diameter was used in assembly. The negative pressure connected with the depth is 5 m. The negative pressure connected with the length and diameter of the suction pipe is (5vertical section+10horizontal section) x 0.15for diameter 1” = 2.25 m In total, the negative pressure is 5_2.25 = 7.25 m. In this example the negative pressure of 8 m is not exceeded and the booster pump should operate without problems. If the negative pressure of 8 m is exceeded during operation (e.g. when the water level decreases during pumping), the booster pump can be damaged due to operation without water flow. This type of failure is not subject to warranty repair. Bearing the aforementioned in mind, if it is possible that the water level will decrease, e.g. during droughts or intensive plant watering, the booster set must be installed in such a manner that a possibly high negative pressure reserve is preserved. For this purpose, it is preferable to install the booster set or pump at a short distance from the well and the recommended cross-section of the water pipe to use is $1^{1}/_{4}$”.

CAUTION Using suction pipes with diameter lower than 1” is prohibited. In such a case, the booste pump will not start pumping water, and if it starts - it may be damaged due to lack of water flow. This type of failure is not subject to warranty repair.

CAUTION Any leakage in the suction system will cause the pump's ability to suck in water, which can lead to "dry running" and destruction of the pump.

CAUTION You should additionally keep in mind:
- The higher the efficiency of the pump, the greater the losses.
- All valves, elbows, reductions, flow meters, tees, nipples increase losses on both suction and discharge.

CAUTION The pump and pressure booster system should be selected so that the number of on / off cycles does not exceed 16 times per hour.

CAUTION The pump is dedicated to pumping clean water with a maximum temperature of 35 ° C.

CAUTION The pump is not suitable for pumping substances such as: acids, solvents, alkalis, oils, petrol, petroleum and other explosive substances and caustic solutions that may damage the device. Damage resulting from pumping of the above-mentioned substances will void the warranty.

CAUTION The pump is not suitable for pumping water with an excessive amount of minerals that can cause scale buildup on the pump's hydraulic components. Pumping water or substances containing sand or abrasive elements may lead to faster pump wear or damage to the device. In this case, the repair can not take place under warranty.

CAUTION The use of deifferent then well filters may reduce the flow of the installation as a consequence of breaking the water column, dry running and damage to the pump. In this situation, the repair can only take place in paid mode.

INSTALLATION OF PUMPS AND HYDROPHORIES

CAUTION It should be remembered that all connections coming out of the device and entering the device are tight because any leakage on the installation: pipes and connections will lead to the air pump sucking in through the pump. In this case, the pump will not get the declared parameters or it will work without water, which may lead to its destruction. In addition, leaks may cause engine flooding and malfunction.

CAUTION The device must be installed in a closed ventilated room, on levelled horizontal plane. The room must be selected in such a manner, so that the device is not exposed to high levels of humidity or frost where the temperature does not drop below 0°C. The pump should be placed on a flat and level surface. The use of a pump or a hydrophore in the conditions described above (frost, rain, snow) will damage the pump or pressure switch and its repair will only be possible in paid the mode.

CAUTION 230V / 50Hz power supply must be connected to the pump with earthing.
In the case of drilled wells, it is necessary to install a non-return valve directly above the well filter. In the case of vertebral wells it is necessary to use a hose ending with a suction basket with a non-return valve. The basket should not be mounted lower than 30cm above the bottom of the well and should be mounted at least 30cm below the lowest water level to which the mirror falls. The basket can not be mounted at such a height, at which there is a risk of it coming out of the water, which will cause the pump to run dry and damage it. Repair resulting from this type of event will be possible only in paid mode.

CAUTION The suction pipe must have a drop in the direction of the shot so that there is no siphon at any point preventing complete and accurate filling of the system with water.

CAUTION Before starting the pump or the hydrophore, the pump should be primed and the suction pipe should be primed with water. Water can be filled through the priming hole after removing the priming screw on the suction body or over the discharge port. After priming the pump, screw off the filling screw and then connect the pump with the pressure system. Not filled with the pump or the hydrophore and the pipeline before commissioning will lead to the seizure of hydraulic components and may lead to the destruction of the pmpy engine. In both cases, the repair can only take place in paid mode.

CAUTION to connect the pump to the suction installation, do not use anti-vibration hoses because of the possibility of jamming the inside of the hose and blocking the water flow, which can cause dry running and destruction of the pump or the hydrophore.

CAUTION All connections should be sealed with Teflon. Do not use when tightening the pipes with a high force due to the possibility of damage to the spigots and suction connectors.

ELECTRICAL INSTALLATION

CAUTION All work on the pump can only be carried out after disconnecting the electrical supply. The electrical network must have the same rating as on the nameplate.

CAUTION The pump must be connected to the electrical installation by means of a plug with a socket that has an earthing connection (the yellow and green wire is connected to earth). The Producer and Guarantor are exempt from any liability for any damage caused to people or things resulting from the lack of proper grounding or protection.

CAUTION Electrical installation supplying the pump should absolutely be equipped with a residual current device with a rated inrush current of no more than 30 mA.
The manufacturer and guarantor are exempt from any liability for damage caused to people or things resulting from the pump's power supply, bypassing the appropriate switch.

CAUTION The pump should be connected to the mains supply equipped with over current protection, eg M611, which will protect the pump motor against possible overloading.
The switch should be set to the maximum winding current indicated on the nameplate.
If the user does not use such protection in the event of motor damage resulting from overloading, the user will have to bear the repair costs.

CAUTION Mechanical damage is not subject to warranty repairs free of charge. In the event of damage to the cable insulation, do not use the pump, immediately contact the guarantor to replace the cable.

CAUTION The pump must not be used when the voltage drops below 210V, because of possible overloading and destruction of the pump motor.

START-UP AND OPERATION

CAUTION Before the first start-up or after a long period of non-use of the pump, make sure that both the pump and the suction installation are flooded with water.

CAUTION the pump is not equipped with dry-running protection.

CAUTION Before first starting the pump or the hydrophore, make sure that all taps or valves are unscrewed in order to allow the air to get out of the system.
Commissioning should take place after connecting the power plug to the mains. If the pump is not working (the motor is buzzing but the fan is not spinning), make sure that the rotor or hydraulics are not blocked, turn off the pump and insert the screwdriver through the fan casing and try to move the fan.

If the fan turns freely and the pump still does not work, please contact your dealer.

CAUTION If the pump is running and water does not come out of taps, there is a suspicion that the installation is leaking, to make sure you put a piece of hose on the tap or place a tap outlet in a bowl of water and check for air bubbles. If so, it means a leak in the suction unit.
Pump operation in this case, i.e. without water flow, can lead to its destruction. Repairs of this type will take place in paid form. If the pump does not start normally after a few minutes, check that the suction system is primed and that there are no leaks in the system through which the pump will suck in air instead of sucking water. After the air has been pumped out (the system is vented when there is no more air coming out of the water), the taps and valves can be closed to regulate the pressure switch. If the installation is tight, the pump will shut down after filling the tank. To check the setting of the pressure switch:

1. Turn off the tap - then the water from the tank will feed the tap and the pressure will drop, observing the pressure gauge the pressure at which the pump will start is the switching pressure.

2. After closing the tap, observe the manometer - the pump will turn on and the system pressure will start to rise. The pressure at which the pump will turn off means the cut-out pressure.

CAUTION the minimum difference between turn-off pressure and turn on is 1.5 bar.
By default, the switching pressure is set to 1.5bar and switched off to 4 bar.
Depending on the needs, it is possible to regulate the pressure
(in the range allowed for the pump, pressure switch and tank).
Pressure regulation:

- make sure that the pump is effectively disconnected from the power supply.
- remove the cover of the pressure switch by unscrewing the screw on the housing.
- to set the turn-off pressure, turn the small screw to increase the turn-off pressure turn in a clockwise direction
- in order to set the turn-on pressure, rotate the large screw with the coupled one, in order to increase the switching pressure, turn in a direction worthy of clockwise

PUMP /HYDROPHOR MAINTENANCE

CAUTION All work on the pump may only be carried out after disconnecting the electrical supply.

VMH series vertical multi stage centrifugal pump:impeller and diffuser are made of high reinforce engineering plastic; outer sleeve is SUS304; inlet and outlet are cast iron. Adopt optimization design, the performance reaches the advanced level of similar product. With the characteristics of beautiful appearance, corrosion resistance, high head, high efficiency, durability, etc. VMH series pump motor has class F insulation, IP55 protection. Using high-temperature resistance bearing, UL or VDE approval capacitor, super mechanical seal,thermal protector for single phase motor. VMH Series pumps is non-self-priming centrifugal pumps, axial inlet and radial outlet, attached with long shaft electric motor. VM series pumps widely apply to air-conditioning,cooling system, industrial washing, fire fighting system, water treatment (water purification), high building boosting, garden sprinkler, water supply,boiler feed, aquaculture and other uses.

2.OPERATION CONDITIONS

VM pump is suitable for non-flammable, non- ex-plosive clean liquids which must not attack the high reinforce engineering plastic. Liquid temperature: 0 OC~+ 70 OC.

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions (mm)			Weight (kg)
							L1	H	H1	
VMH 1500/5	66	125	1500	230	9,2	1 x 1	140	490	201	20
VMH 1500/6	80	125	1500	230	9,2	1 x 1	140	514	225	23
VMH 1500/8	106	125	2200	230	14	1 x 1	140	562	273	26
VMH2200/6	90	200	2200	230	14	1½ x 1¼	116	555	239	20
VMH2200/8	120	200	3000	400	10,5/6	1½ x 1¼	142	668	288	30
VMH2200/10	148	200	4000	400	15,9/9,2	1½ x 1¼	142	718	337	32
VMH4000/7	74	400	4000	400	13,6/7,8	1½ x 1¼	148	720	350	32
VMH4000/8	85	400	4700	400	15,9/9,2	1½ x 1¼	148	760	410	33

STORAGE

CAUTION, PLEASE NOTE THAT IF THE PUMP WILL NOT BE USED FOR A LONGER PERIOD THAN ONE DAY SHOULD BE DEEMBED FROM THE ELECTRICAL SUPPLY. Otherwise, if there is a leak in the system, the pump can start automatically, which can lead to flooding of the house or flooding the pump. All costs associated with the repair of damage related to such events will have to be borne by the user.

CAUTION IF THE PUMP / HYDROFOR WILL NOT BE USED FOR A LONGER PERIOD, WATER COMPLETELY COMPLY WITH THIS WATER.

CAUTION If the hydrophore / pump is to be used in winter, it must be protected against freezing. All repairs resulting from damage to the pump by the action of frost will take place in paid mode. If, however, the hydrophore / pump will not be used during the period when the temperatures may drop below 0 ° C, the water should be drained from it. The easiest way is to unscrew the drain screw and incline the pump, which will facilitate emptying the pump's hydraulic chamber. In the case of a hydrophore, unscrew the anti-vibration hose from the tank's flask and tilt it to empty the water. It should be remembered that remaining water in the tank or pump may cause damage, which is not covered by the warranty.

CAUTION All work on the pump may only be carried out after disconnecting the electrical supply.

POSSIBLE CONSUMER PROBLEMS AND THEIR SOLUTION:

SYMPTOMS	POSSIBLE CAUSE:	SOLUTION:
Pump and pump motor do not work	No power supply	Check that the electric plug of the pump is properly inserted into the socket. Check the "plugs" at home and all kinds of installation fuses that can turn off the power supply from the network
		Check if electricity is provided near your home - electricity can be disconnected by a power company in a larger area
	he switch-on pressure is set too low	Set the higher switching pressure using the screw in the pressure switch
The pump does not pump water even though the pump motor is on	The pump is blocked (Pump shaft)	Disconnect the pump from the power supply. Insert a screwdriver through the fan casing and try to move the fan.
	The water table is too low	Place the suction hose in the water, if after joining the sections the water column is up to 8 m
	Leaks on the installation	Seal the suction installation
	Lock of the check valve	Check that the non-return valve has not been blocked
	The pump is not completely immersed in water	Check the water level in the pump sump.
	The temperature of the water being pumped is too high.	Check that the water temperature is not too high for the type of pump.
The pump switches on and off every now and then	Ambient temperature too high	Lower the temperature, for example by ventilating the room
	Tank pressure too low or too high	Pump or drain the air to / from the tank using the valve
	Leaking of the discharge installation	Seal the installation
	Leaking check valve	Replace the check valve

DISPOSAL OF THE DEVICE

The above symbol indicates that the disposal of used equipment together with other waste is prohibited. Detailed information on this subject can be found in municipal waste treatment plants, city offices, municipal offices. The used device is obliged to be disposed of as waste only in separate collection of waste organized by the Network of Municipal Electric and Electronic Waste Points. The consumer is entitled to a free return of waste electrical and electronic equipment (WEEE) in the network of the equipment distributor, warehouse or store where he bought the goods, provided that the returned device is of the proper type and fulfills the same function as the newly purchased device.

CE Date of marked CE.....
(check on the name plate)

DECLARATION OF CONFORMITY

EC / EC DECLARATION OF CONFORMITY UE/WE (Module A):

1. Pumps: VMH

2. Dambat Jastrzębski S.K.A., Adamów 50, 05-825 Grodzisk Mazowiecki, POLAND, e-mail: biuro@dambat.pl

3. This declaration of conformity is issued under the sole responsibility of the manufacturer.

4. Surface pumps and hydrophores from the series of types included in point 1.

5. We declare with full responsibility that the pumps to which this declaration relates are made in accordance with the following Directives and references to harmonized standards contained therein:

   - Directive MD No. 2006/42 / EC Applied standards: EN 809: 1998 + A1: 2009

   - LVD Directive Nr. 2014/35 / EU Applied standards: EN 60335-1: 2012 + AC: 2014, EN 60335-2-41: 2003 + A1: 2004 + A2: 2010

   - EMC Directive No. 2014/30 / EU Applied standards: EN 55014-1: 2006 + A1: 2009 + A2: 2011, EN 61000-3-2: 2014

Adam Jastrzębski
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