EN

Attention !
Before proceeding
to operate
read the instructions

Omnigena
POMPY

CE

ORIGINAL OPERATING MANUAL

FOR SUBMERSIBLE PUMPS

WQ PREMIUM SERIES

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EC DECLARATION OF CONFORMITY 01/2020
PRODUCER
declares in all responsibility that the product:

Submersible pump type:			
50 WQ 0.37-2P PREMIUM WQ 0.75INOX PRO PREMIUM WQ 1.1 INOX PRO CW PREMIUM WQ 1.1 INOX PRO PREMIUM WQ 100-3.5-2.2 PREMIUM WQ 10-10-0.55 PREMIUM WQ 10-10-0.55 Economic PREMIUM WQ 10-10-0.55 SEPTIC PREMIUM WQ 10-10-0.75 PREMIUM WQ 15-7-1.1 SEPTIC PREMIUM	WQ 15-14-1.1 PREMIUM WQ 15-15-2.2 PREMIUM WQ 15-30-4 PREMIUM WQ 15-7-0.55 PREMIUM WQ 15-7-1.1 PREMIUM WQ 15-7-1.1 PREMIUM WQ 20-40-7.5 PREMIUM WQ 2-16-0.25 PREMIUM WQ 25-10-2.2 PREMIUM WQ 35-7-2.2 PREMIUM	WQ 15-7-1,1 PREMIUM with shredder WQ PGPP2022 PREMIUM with shredder WQ 15-7-1,1 PREMIUM with shredder WQ 12-30-2.2 PREMIUM with shredder WQ 18-10-1.1 SEPTIC PREMIUM with shredder WQ 10-10-0.75 PREMIUM with shredder	WQ 40-6-1.1 PREMIUM WQ 50-10-4 PREMIUM WQ 6-14-0.55 PREMIUM WQ 6-25-1.1 PREMIUM WQ 65-5-1.5 PREMIUM WQ 6-7-0.25 PREMIUM WQ 75-5-2.2 PREMIUM WQ 9-22-2.2 PREMIUM WQ 3-13-0.25 PREMIUM WQ 3-18-0.55 PREMIUM WQ 3-24-0.75 PREMIUM

- **is in conformity with the manufacturer's documentation**
- **meets the essential safety requirements of the Directives:**

  - Machinery Directive 2006/42/EC
  - Electromagnetic compatibility 2014/30/EU
  - Low voltage 2014/35/EU
  - Hazardous substances in appliances EEE 2011/65/EU
  - Regulation of the Minister of Economy of 17 December 2010 on conformity assessment procedures of energy-using products and their labelling, Directives 2009/125/EC and 2005/32/EC of the European Parliament and the Council

The product complies with harmonised standards:

PN-EN 809+A1:2009; PN-EN 12723:2004; PN-EN 60335-2-41:2005/A2:2010, PN-EN 60335-2-51:2005/A2:2012, PN-EN 61000-6-1:2008; PN-EN 61000-6-2:2008, PN-EN 61000-6-3:2008, PN-EN 61000-6-4:2008/A1:2012,PN-EN 16297-1:2013-04, PN-EN 16297-2:2013-04, EN 61800-5-1, EN 61800-3+A1:2012, PN-EN 60335-1:2012, PN-EN 60529:2003; PN-EN ISO 12100:2012, PN-EN 61000-6-3:2008/A1:2012; PN-EN 55014-1:2017-06; PN-EN 61000-3-2:2014-10 PN-EN 61000-3-3:2013-10; PN-EN 60204-1:2018-12;PN-EN 61000-6-3:2008/A1:2012

Any modifications to the product invalidates this declaration.

Person responsible for the preparation and storage of
technical documentation at the company's headquarters: Katarzyna Kochanowska

Device model.....
(to be filled in by the dealer)

Serial number.....
(to be filled in by the vendor)

Manufacturer:

Michał Kochanowski

Swiecice, 22.01.2020.

INTRODUCTION

Thank you for choosing an OMNIGENA unit. We hope that by reading this manual you will be familiar with its use, safety regulations during operation, and technical parameters.

The manual describes the construction, pump parameters, operating procedures, transport, lubrication, maintenance, inspection, and adjustment. It will help the operator to use the unit efficiently, economically and error-free.
Before starting work, you must be thoroughly familiar with the correct way to operate the pump. To do so, read these operating instructions carefully. Failure to do so may result in personal injury or damage to the unit.

NOTE **THIS OPERATING MANUAL is an integral part of the unit and should be handed over with the pump at the time of sale. In order to identify a particular model of pump, the dealer is obliged to include in the declaration of conformity and the warranty card the model and the serial number which can be found on the name plate of the unit. The serial number of the unit includes the year of manufacture of the pump.**
The service life of the unit, as well as efficient and reliable operation, depends to a large extent on the handling and method of operation. Therefore, before starting up the pump, read the instructions and follow the recommended instructions carefully.
The unit must be maintained as described in this manual. If the unit is misused or modified to change parameters to deviate from the original factory specifications, the warranty will no longer apply.

NOTE **Failure to follow the instructions in the manual or using the machine contrary to its intended use, may result in the warranty being revoked.**
The warranty will not cover faults caused by unauthorised adjustments, personal modifications not agreed with the manufacturer, or misuse.

CONTENTS:

1. SAFETY

1.1 The information marked with the symbols specified below is very important for user safety, installation, operation, and maintenance of the pump:

- General danger symbol. This symbol is accompanied by warnings which, if not adhered to, may pose a risk to health or life.

- Electric shock warning symbol. Failure to observe may result in electric shock causing injury or death .
Before carrying out the operations marked with this symbol, the plug of the unit's power cord must be disconnected from the electrical supply or the main switch must be locked in the zero position.

NOTE - The symbol can be found in those areas of the manual where there are indications for the correct operation of the pump in order to avoid damage to the pump it self.

1.2 Safety recommendations.

Under no circumstances must the pump be connected to the mains in any way whatsoever if it is not installed in the tank or any work is going to be carried out on the pump, as there is a risk of the pump impeller rotating.

Before starting any operation with the pump, read the information in this manual carefully. Particular attention should be paid to those sections marked with symbols which speak of hazards to persons and damage to property.

1.3 Staff.
The pump must not be used by children or persons whose physical or mental state does not permit it. Personnel carrying out the installation, use, and maintenance of the pump must be properly qualified in both electrical and mechanical matters.

1.4 Safety when working with the pump.
Any works on the pump may only be carried out after ensuring that the electrical supply to the pump has been effectively disconnected. The user may carry out those maintenance and cleaning works on the pump, the execution of which can be found in pt. 6 of the manual. When working with the pump, in addition to the instructions in this manual, the general safety and accident prevention regulations and any other safety regulations must be observed. Failure to comply with the safety regulations may endanger persons, the environment and may cause damage to the pump itself.

1.5 Repairs and modifications to the pump design.
During the warranty period for the quality of the product, all repairs and modifications to the construction may only be carried out by the workshop indicated on the guarantee card enclosed with this manual. After this period, it is recommended that repairs be carried out by specialised workshops. The addresses of some of these businesses can be found at www.omnigena.pl. The user should ensure that all maintenance and cleaning works are carried out by suitably qualified personnel who are thoroughly familiar with this manual.

1.6 Unauthorised operation.
Prohibited working media are: air, flammable and explosive media. Liquids polluted with inorganic compounds such as paints, oils, etc. The pump may only be operated within the parameters that comply with the specified characteristics and taking into account the warnings and recommendations contained in this manual and on the name plate.

2. TRANSPORT AND STORAGE

2.1 Transporting the pump.
It should be carried out by means appropriate to the weight and dimension of the specific pump type and with appropriate precautions. Pumps may be transported and stored in an upright position. The pump without packaging should be carried by the handle. Never pull on the connection cable or the float.

2.2 Storage.
The pump in its original packaging can be stored at ambient temperatures, but with protection from precipitation. A used pump should be stored in its original packaging or in an upright position. If sub-zero temperatures are possible, the pump must be emptied of water. After storage for more than a few days, the pump impeller must be checked for free rotation before start-up. Method of checking according to para. 6.4 of the manual.

3. GENERAL INFORMATION

The WQ series PREMIUM submersible pumps are made from the best materials available on the market and to the highest standards for the type. By choosing a pump from the right sub-category, it can be successfully used to pump the right medium.
Pumps for:

- ➢ clean and slightly polluted water, which have a relatively high capacity and head. The maximum size of contaminants with substances and organic compounds in the pumped water is 5mm.

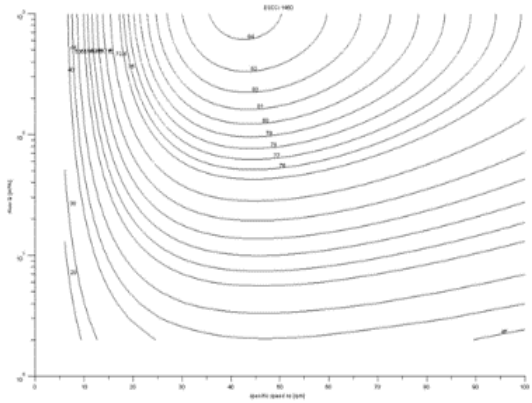
- ➢ The pumps are designed for use with waste water and heavily polluted water due to the design of the hydraulic part, with the possibility of pumping dirty water with various solids from 5 mm upwards. If the water is likely to contain fibrous solids, a pump with a grinder should be used.
- ➢ polluted, dirty, waste water pumps with shredder are designed for water polluted with organic products. Thanks to the use of a cutting knife for the contaminants contained in the water, these pumps have a much wider range of applications compared to pumps without a cutting knife. Pumps with a grinder cut the solids into smaller pieces so that the raw sewage can be transported through relatively smaller pipelines.

The design of the submersible pumps means that they operate completely submerged in the pumped medium and that it is very easy to change their place of operation. In addition to the variety of hydraulic parameters and the ability to select the type of WQ unit to suit the medium to be pumped, the user has the opportunity to use it in various areas of application. When used for pumping water polluted with organic particles and municipal wastewater, they will prove successful on farms and in businesses, but can also be used in households. The advantage of sewage pumps is that they can also be used as drainage pumps. For example, for users who need this type of pump in emergency cases such as flooded cellars, garages or for emptying tanks. Pumps with 230V motors are equipped with float switches (hereafter referred to as float switches), which control the pump depending on the level of the liquid being pumped.

Product information on the water pump (MEI)
Minimum Efficiency Index (MEI) means a dimensionless unit of scale for the efficiency of a hydraulic pump at best efficiency point (BEP), part load (PL) and overload (OL). Commission Regulation (EU) sets energy efficiency requirementsfor MEI> 0.1 from 1 January 2013 and MEI> 0.4 from 1 January 2015. An indicative benchmark for the best performance for water pumps available on the market from 1 January 2013 is set out in the regulation.

- The benchmark value for water pumps with the highest efficiency is MEI ≥ 0,70
- The efficiency of a pump with a reduced impeller diameter is usually lower than that of a pump with a full-sized impeller. Reducing the impeller diameter will adapt the pump to a fixed operating point and therefore reduce energy consumption. The minimum energy intensity index (MEI) is given based on full impeller diameter
- The operation of this pump with variable operating points could be more efficient and economical if control is used, e.g. with a variable speed drive that adapts the pump output to the system.
- Water pump efficiency with reduced impeller diameter [0.6].

Example of a benchmark efficiency graph



Information on benchmark efficiency can be found at www.omnigena.pl.

Legend TABLES 1a, 1b, 1c
For technical data:

Max. flow - Q_{max}, Max. Head - H_{max}, Rated motor power - P_N,
Max. current - I_{max}, Discharge nozzle/hose - KT/W, Max. dirt diameter - SZ_{max},

- designation for user-accessible controls

Oil cap in the housing and the possibility of topping up or changing the oil - KO
Removing the sieve or the suction hopper - DSS
Dismantling the rotor housing - DOW
Dismantling the shredder - DR

SUBCATEGORY TECHNICAL DATA:

Media pumped - cold, fresh, clean water, slightly polluted with organic solids. Without grinding elements
Degree of protection - IP68
Insulation class - B
Liquid temperature from 0°C to +35°C

TABLE 1a

TYPE	Q_{max} [l/min]	H_{max} [m]	P_N [kW]	I_{max} [A]	KT/W [inch/mm]	SZ_{max} [mm]	KO	DSS	DOW
Supply voltage 230V									
WQ 2-16-0,25 PREMIUM	100	16,5	0,25	3,8	1"/25	5	✓	✓	✓
WQ 3-18-0,55 PREMIUM	100	23	0,55	4,6	1"/25	5	✓	✓	-
WQ 3-13-0,25 PREMIUM	120	15,5	0,25	3,8	1"/25	5	✓	✓	✓
WQ 3-24-0,75 PREMIUM	120	28	0,75	5,5	1"/25	5	✓	✓	✓
WQ 6-14-0,55 PREMIUM	200	16	0,55	4,6	1½"/40	5	✓	✓	-
WQ 6-7-0,25 PREMIUM	250	8,5	0,25	2,4	1½"/50	5	✓	✓	✓
WQ 10-10-0,55 PREMIUM	300	12	0,55	4,6	1½"/50	5	✓	✓	-
WQ 15-7-0,55 PREMIUM	380	10	0,55	4,6	2"/65	5	✓	✓	-
Supply voltage 400V									
WQ 6-25-1,1 PREMIUM	200	28	1,1	2,4	1½"/40	5	✓	✓	✓
WQ 15-14-1,1 PREMIUM	350	17	1,1	2,4	2"/65	5	✓	✓	✓
WQ 40-6-1,1 PREMIUM	966	9	1,1	2,4	3"/75	5	✓	✓	-

SUBCATEGORY TECHNICAL DATA:

Media to be pumped - Cold water, fresh water, water polluted with organic solids, dirty water, waste water. Without grinding elements
Degree of protection - IP68
Insulation class - B
Liquid temperature: 0°C to +35°C
(*for CW pumps up to 70°C)

TABLE 1b

TYPE	Q_{max} [l/min]	H_{max} [m]	P_N [kW]	I_{max} [A]	KT/W [inch/mm]	SZ_{max} [mm]	KO	DSS	DOW
Supply voltage 230V									
WQ 10-10-0,55 SEPTIC PREMIUM	250	8	0,55	4,6	1½"/40	25	-	🔧	🔧
WQ 10-10-0,75 PREMIUM	250	12	0,75	6	2"/50	25	🔧	🔧	-
WQ 0,75 INOX Pro PREMIUM	250	11	0,75	5,2	2"/50	30	-	🔧	-
WQ 10-10-0,55 PREMIUM ECONOMIC	315	8,5	0,55	4,6	2"/50	25	🔧	🔧	🔧
WQ 1,1 INOX Pro PREMIUM	320	13	1,1	7,2	2"/50	30	-	🔧	-
WQ 1,1 INOX Pro CW* PREMIUM	320	13	1,1	7,2	2"/50	30	-	🔧	-
WQ 15-7-1,1 SEPTIC PREMIUM	330	9	1,1	5	2"/65	25	-	-	🔧
WQ 15-7-1,1 PREMIUM	380	10	1,1	6	2"/50	25	🔧	🔧	🔧
50 WQ 0,37 - 2P PREMIUM	400	7,5	0,37	4,6	2"/50	40	-	-	🔧
Supply voltage 400V									
WQ 9-22-2,2 PREMIUM	366	24	2,2	4,8	1½"/50	25	🔧	🔧	-
WQ 15-7-1,1 PREMIUM	380	10	1,1	2,5	1½"/50	25	🔧	🔧	🔧
WQ 15-15-2,2 PREMIUM	380	17	2,2	4,6	1½"/65	25	🔧	🔧	-
WQ 15-30-4 PREMIUM	380	36	4	8,2	1½"/50	25	🔧	🔧	🔧
WQ 25-10-2,2 PREMIUM	600	14	2,2	4,6	2"/65	30	🔧	🔧	-
WQ 20-40-7,5 PREMIUM	660	54	7,5	13	2½"/65	15	🔧	🔧	🔧
WQ 35-7-2,2 PREMIUM	900	12	2,2	4,6	3"/75	25	🔧	🔧	-
WQ 50-10-4 PREMIUM	1080	17	4	8,2	3"/75	35	🔧	🔧	🔧
WQ 65-5-1,5 PREMIUM	1188	11	1,5	3,5	4"/100	25	🔧	🔧	-
WQ 75-5-2,2 PREMIUM	1356	14	2,2	4,6	4"/100	25	🔧	🔧	-
WQ 100-3,5-2,2 PREMIUM	2250	11	2,2	4,6	5"/125	25	🔧	🔧	-
WQ 145-10-7,5 PREMIUM	3700	19	7,5	13	6"/150	80	🔧	🔧	-

TABELA 1c

TYPE	Q_{max} [l/min]	H_{max} [m]	P_N [kW]	I_{max} [A]	KT/W [inch/mm]	SZ_{max}	KO	DR
Supply voltage 230V								
WQ 18-10-1,1 SEPTIC PREMIUM	300	10	1,1	7,2	1½"/40/50	**shredder**	–	
WQ 10-10-0,75 PREMIUM	320	12	0,75	4,6	2"/65	**shredder**	–	
WQ 12-30-2,2 PREMIUM	180	30	2,2	14	2"/65	**shredder**	–	
WQ 15-7-1,1 PREMIUM	340	18	1,1	6,5	2"/65	**shredder**		
Supply voltage 400V								
WQ 12-30-2,2 PREMIUM	180	30	2,2	5,5	2"/65	**shredder**	–	
WQ PGPP 2022 PREMIUM	250	21,5	1,5	4,2	1½"	**shredder**	–	
WQ 15-7-1,1 PREMIUM	380	18	1,1	2,5	2"/65	**shredder**		

NOTE The above parameters are obtained at the pump outlet, without taking into account the resistance of the discharge system! All discharge hoses that can be rolled up (fire-fighting hoses or similar) considerably reduce the hydraulic parameters of the pump, i.e. capacity and delivery head! Verification of the product parameters was carried out on a selected batch. Depending on the production batch, these parameters may vary. Before purchasing the product, check the parameters of the specific unit on the name plate. The parameters of the unit were obtained under laboratory conditions. Under operating conditions there may be a difference of +/- 10 % from that given on the name plate of the specific unit. The maximum motor power indicated on the name plate is the power given out at the motor shaft.

4. INSTALLATION IN A WATER TANK

Under no circumstances should the pump be connected to the mains in any way whatsoever if it is not installed in the tank or if any work is carried out on the pump, as there is a risk of the pump rotor or the pump cutting knife rotating

4.1 Mechanical connection.

When a pump is installed in a previously used tank, toxic and harmful substances may be present.

For safety reasons, work in a manhole should be supervised by a person outside the manhole. For this reason, the person working in the manhole should also wear suitable protective equipment. Depending on the weight of the pump, suitable lifting equipment may have to be used for installation. The pump can be installed in two ways:

- By hanging it from a suitable chain or rope, one end of which will be attached to the pump handle and the other end is fixed to the top edge of the sump or tank. The fixing of the top should ensure that the pump is positioned at the correct distance from the walls. If the pump is fitted with a float, consideration must be given to the float's freedom of movement associated with changing water levels. It is important that the float does not hang against the walls of the tank.
- By placing it on the bottom. This is not the preferred method, as there is a danger of the pump tipping over and the hydraulic part being blocked by solid debris collecting at the bottom of the tank.

However, if it is permissible to place the pump on the bottom, it should be secured against overturning. It should also be taken into account that the pump tends to rotate around its own axis every time it is switched on. The substrate on which the pump will be placed must be sufficiently firm, and ideally the pump should not be placed directly on the bottom of the tank because of the possibility of blockages caused by solids.

Pumping a medium with sand or other grinding elements in excess of 50 mg/l

NOTE will result in much faster wear and consequently in the destruction of the pump. If there are grinding solids in the water, e.g. sand or dust, the pump must be suspended on a rope 0.5m above the bottom of the tank to be emptied.

Damage to the pump caused by pumping mineral debris is not subject to warranty repairs.

4.2 Connecting the hydraulic part.

The pumps are factory-fitted for use with flexible hoses. The pump can also be hydraulically connected via a rigid pipe using a threaded hole into which a discharge nozzle is screwed.

NOTE **The discharge hose should be routed so that there are no kinks or bends along its length. The use of a smaller diameter hose and of significant length will result in a significant reduction in performance pumps.**

NOTE **The pump must not run dry! That is, without pumping water.**

NOTE **For single-phase pumps (230V), it is forbidden for the float cable to be shorter than 8cm when adjusted. This refers to the distance between the float, and the handle. Failure to observe this condition will result in the breaking of the wires in the float cable and will not be subject to warranty repair.**

The design of the *WQ 0.75 INOX Pro PREMIUM, WQ 1.1 INOX Pro PREMIUM and WQ 1.1 INOX Pro PREMIUM* allows them to operate even when the level of the pumped medium is only 1 cm above the top edge of the suction basket.

Pumps not listed above should operate at full immersion. Short-term (max. 5 min.) operation with incomplete immersion for final emptying of the tank is permissible.

It is not permitted to pump liquids at a temperature greater than 35^0 C (*except for the CW version).

4.3 Electrical connection.


The electrical connection should be carried out by suitably qualified persons in accordance with the relevant regulations.


The pump must only be connected to a mains with a working earth connection.


The green-yellow insulated conductor of the cable is the grounding conductor. The manufacturer is relieved of any responsibility for damage to people or property resulting from a lack of earthing.


The network to which the pump motor is connected must be protected with a motor protective circuit breaker with rated residual current not more than 30mA

NOTE Once the pump has been mechanically installed, the cable supplying it with electricity must be fixed in such a way that it is free on the one hand, i.e. so that there is no tension in the cable, and on the other hand so that an overhanging cable is not mechanically damaged by, for example, being pulled in by the suction.


It is forbidden to lift or lower the pump by the connection cable, as this will damage the cable and the pump. The pump should be lowered on a rope or chain and the cable should be free.

NOTE Any damage to the outer insulation of the supply cable or the float cable will result in the need for repair or replacement of the cable at a specialised workshop. Otherwise water will enter the pump motor and damage the pump.

Failure to carry out the above repairs and the lack of earth leakage protection may result in electric shocks

The user may use electrical controls according to his own functional requirements, but in compliance with the relevant safety standards and regulations.

In some pump types, which have motor overcurrent protection in cable-mounted boxes, it is absolutely necessary to disconnect the power supply before opening the box.

The overcurrent protection device and the cable plug must not be located in a damp environment. If the protection is installed in a manhole, for example, it may be damaged by moisture.

The parameters of the electric motor can be found on the name plate located on each pump. The electrical voltage tolerance must not exceed -8% / +6%.

NOTE A shutdown of the pump as a result of tripping the overload protection indicates that the operating conditions have exceeded the limits.

Before restarting, the reason for deactivating the protection must be verified.

Persistent repeated activation of the protection and switching off of the pump may damage the protection itself as well as the motor. In the electrical installation of pumps with three-phase power supply and in single-phase pumps without overload protection, the motor should be connected via a suitable overcurrent protection device, whereby the circuit breaker should be set to +10% of the current specified on the pump type's name plate.

Operation of the pumps without overcurrent protection is possible, however, in the event of motor failure due to overload, any repair costs will be borne by the user. When extending the connection cable, it should be noted that as the length of the extension cable increases, the electrical parameters decrease. Therefore, if it is necessary to use an extension cable, this should be consulted with a qualified electrician so that the correct cross-section of the extension cable is ensured.

The connection of the cable proper to the extension cable and if the connector can be exposed to moisture must be airtight, so it may only be made by persons with the appropriate qualifications.

TABLE 2. SELECTION OF THE CABLE SECTION

Motor supply voltage	Power engine [kW]	Maximum cable length in relation to its cross-section						
		1mm^2	1,5mm^2	2,5mm^2	4mm^2	6mm^2	10mm^2	16mm^2
230V	0,37	50 m	75 m	125 m				
	0,55	38 m	57 m	95 m	152 m			
	0,75	30 m	45 m	75 m	120 m	174 m		
	1,1	22 m	33 m	53 m	85 m	127 m	210 m	
	1,5		23 m	38 m	63 m	92 m	154 mm	246 m
	2,2			28 m	45 m	67 m	112 m	180 m
400V	0,37	240 m						
	0,55	164 m	246 m					
	1,1	97 m	146 m	244 m	390 m			
	1,5	72 m	109 m	180 m	290 m	435 m		
	2,2	51 m	78 m	130 m	207 m	310 m	516 m	
	3	41 m	62 m	104 m	167 m	250 m	416 m	
	4	31 m	46 m	77 m	124 m	186 m	310 m	496 m
	5,5		33 m	56 m	90 m	135 m	225 m	360 m
	7,5			25 m	66 m	100 m	165 m	270 m

5. START THE PUMP. OPERATION. SHUTTING DOWN THE PUMP

Before any start-up operation, ensure that the pump is disconnected from the electricity supply and protected against accidental switching on.

5.1 Before commissioning, the following steps must be carried out:

- ✓ Check that the pump impeller and, for pumps with a cutting knife, the cutting blade, rotate freely. The check must be carried out in accordance with para. 6.4 of this manual.
- ✓ On pump types that have the option of the user checking the oil level, this must be done prior to first start-up. This is done in accordance with para. 6.2 of the manual.
- ✓ Adjust the float switch (if fitted on the type) by fitting its cable in such a way as to obtain the desired cut-in and cut-out level of the pump depending on the level of the pumped medium. The difference in switch-on and switch-off levels can be adjusted by lengthening or shortening the free part of the float tube in the holder. The float pearl is kept on the surface of the liquid. When the liquid level rises and is high enough, the float, pointing upwards, causes the pump to switch on. When the liquid is drained, the descending float will switch off the pump.
  The pump must be installed so that the float cannot hang against the walls of the tank, for example.
- ✓ Check that the mechanical assembly of the pump and the hydraulic connection are correct.
- ✓ Check the direction of rotation. This applies only to pumps with three-phase motors.

When checking the direction of rotation, maintain a safe distance from the rotor chamber or from the cutting blade.

Do not insert any objects into the hydraulic chamber of the pump.

NOTE The arrow on the body of the three-phase pumps shows the correct rotation.

The direction of rotation of the pump should be clockwise when viewed from above. To ensure that the direction of rotation is correct, the pump can also be suspended on a hoist and the motor switched on briefly (max. 5 sec.). If the pump tends to turn anticlockwise during the test, the rotation is correct. If the direction of rotation is incorrect, the two phase wires of the cable must be swapped with each other, see Fig.1. Once the above-mentioned steps have been completed, the pump can be submerged in liquid. As a rule, the pump does not need to be bled. However, if the discharge hose does not allow the air to escape from the impeller chamber of the pump by itself (due to flattening or kinking of the hose), the hose must be arranged so that the air can flow out of the impeller chamber. The same applies to the hydraulic connection with a rigid pipe. In this case, care must be taken to ensure that a shut-off valve or non-return valve allows the pump to be vented. Once the above steps and checks have been completed, the pump can be switched on to the electrical supply.

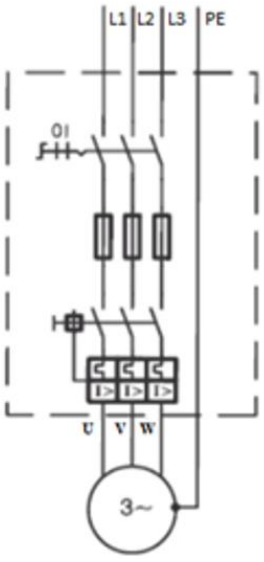


Fig. 1 Electrical diagram for connecting 3-phase pumps

5.2 Usage warnings.

The pump should not be used for media to which the materials used in the pump are not resistant, e.g. inorganic compounds.

NOTE Pumping water with sand or other grinding elements in it will cause the pump to wear out much more quickly and eventually destroy it. If there are grinding solids in the water, e.g. sand, dust, the pump should absolutely be suspended on a rope 0.5 m above the bottom of the tank to be emptied. Pumping a medium that causes sedimentation can result in much faster wear of the mechanical seal, as well as overheating and destruction of the motor.

NOTE WQ pumps must not be operated in closed water circuits (e.g. a pond), where the water circulation creates a slurry with fine grinding elements that lead to damage to the pump.

The pumps can operate at a maximum switching frequency of no more than 15 times per hour.

The maximum density of the pumped liquid must not exceed 1.1 kg/l

5.3 Switching on the pump.

Switching on takes place by inserting the plug of the power cable into the socket.
For three-phase pumps, connect the cable to the control box and switch on the power supply.

5.4 Switching off the pump:

- ✓ Single-phase operation pumps are switched off by removing the plug from the socket.
- ✓ Three-phase pumps: by disconnecting the electrical supply in the control box

Depending on the medium in which the pump is operating, it should be properly flushed in clean water and, to dry the pump, it is sufficient to leave it in a dry place for some time.

6. OPERATION AND MAINTENANCE OF THE PUMP

⚠ The pump must be thoroughly rinsed with clean water before maintenance operations so as not to endanger people or the environment.

NOTE The pump should be cleaned regularly of any deposits that are found in the pumped liquid. The frequency of such operations depends on the type of medium with which the pump is working. This is particularly the case with sticky deposits which may adhere to the outside of the motor and can cause the motor to overheat and deteriorate. The same applies to the hydraulic chamber. In this case, excessive deposits reduce hydraulic

performance and can lead to blockages in the pump. Also, depending on the type of medium, the user should decide on the length of time after which a non-operating pump should be removed and rinsed. A good solution to avoid blockages caused by downtime is to switch the pump on periodically.

6.1 Checking activities.
Regular checks should be made on the insulation condition of the supply cable and, in the case of single-phase pumps, additionally on the cable and the float itself.
In the event of any damage, these components have to be replaced by professional personnel.

6.2 Checking, changing oil.
In pumps (marked "🔧" in Tables 1a,b,c column KO), the condition and quality of the oil in the oil chamber must be checked every 200 hours of operation. In new pumps, first check after 50 hours.

⚠ There may be pressure in the oil chamber especially if the pump is heated. For this reason, the plug must be removed with the necessary care.

To check the oil, place the pump in a horizontal position with the plug on top (Photo 2).

After unscrewing the plug, turn the pump about 90 degrees in circumference. If the oil starts to flow, the oil condition is correct. If oil does not appear at the edge of the bore, the oil level should be topped up with automotive engine oil.
If the colour and consistency of the oil (the oil is white-grey in colour) indicates an abnormality, this indicates that water has entered the oil chamber. In such a condition, the used oil should be replaced in its entirety with new oil. If, after 10 hours of operation, the oil again shows an abnormal colour, this indicates a leak in the oil chamber, e.g. a damaged or worn mechanical stuffing box. In this situation the pump should be sent to a repair shop. Continued operation of the pump without repair will cause serious damage. Oil should be changed every 2000 operating hours or once a year.
In pumps without the plug shown in Photo 2,
(Tables 1a,b,c column KO "-"), access to the oil chamber is via the rotor chamber and the oil check must only be carried out by an expert.

Photo 2

6.3 Maintenance operations.
Maintenance also includes checking the wear of hydraulic components of the pump, i.e. the pump rotor and chopping unit, if any. To carry out these operations, proceed as specified in para. 6.4 of the manual. Significant wear of the pump impeller is indicated by a drop in hydraulic performance. Excessive wear of the cutting knife is evidenced by clogging of the suction chamber at the pump inlet.

6.4 To check the condition of the hydraulic chamber of the pump and to clean it if necessary, and to check that the impeller can be rotated:

- ➔ For pumps without a cutting knife, marked "🔧" in Tables 1a, b, carry out the steps described below to enable this check.
- ➔ Remove the suction cage, but only for the pump type marked "🔧" in Tables 1a,b of the DSS column (CHAPTER 3)
- ➔ Alternatively, disassemble the impeller housing, but only for the pump type marked "🔧" in Tables 1a,b of the DOW column (SECTION 3) **and only to the extent that this will not require disassembly of the pump impeller.**

Examples of measures (for illustration purposes) to be taken when dismantling the suction hopper of pumps without grinder

To check and clean the hydraulic chamber, it is necessary to remove the pump suction basket - photo 3. To do this:

- ✓ lay the pump flat
- ✓ Using a suitable spanner or screwdriver, unscrew the visible number of bolts securing the suction basket - photo3a,
- ✓ then check and clean the hydraulic chamber through the exposed suction opening.

Photo 3

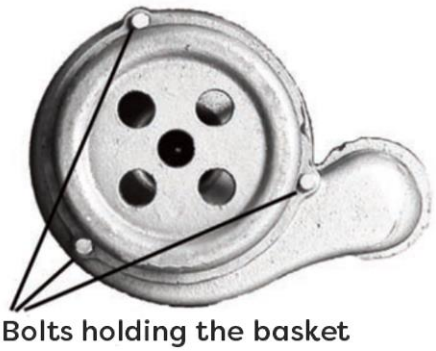


Photo 3a

Assembly is carried out in reverse order.

<u>Examples of work steps (for illustration purposes) to be carried out to dismantle the suction hopper of a grinder pump, e.g.: WQ 10-10-0.75 Premium</u>

- ✓ Lay the pump flat
- ✓ With a 14mm open-ended spanner unscrew the 3 bolts securing the suction basket and pump suction lid - Photo 4

- ✓ Using a locksmith screwdriver with a thin blade separate the lid suction in the place indicated Photo 4a

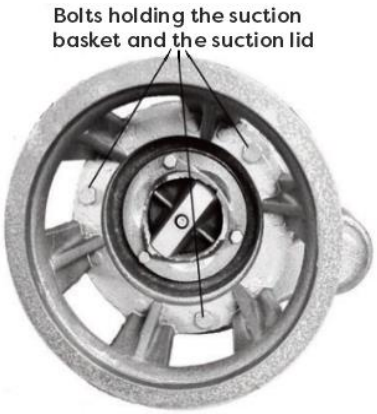


Photo 4

Photo 4a

- ✓ After removing the lid, proceed to checking and cleaning hydraulic chamber

Assembly should be done in reverse order

Examples of steps (illustrative) to be carried out for dismantling e.g.:
WQ 18-10-1,1 SEPTIC PREMIUM with shredder

- ✓ Lay the pump flat.
- ✓ Using a locksmith screwdriver, insert it into the hole of the fixed part of the knife, and lock the movable cutting knife and using an Allen key of 4 mm unscrew the screw fixing the cutting knife - photo 5 and 5a
- ✓ Using a locksmith screwdriver, insert it into the hole of the fixed part of the knife, and lock the movable cutting knife and using an Allen key of 4 mm unscrew the screw fixing the cutting knife - photo 5 and 5a

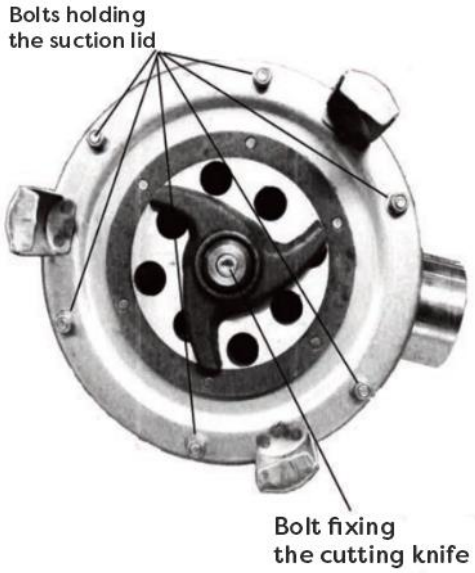


Photo 5

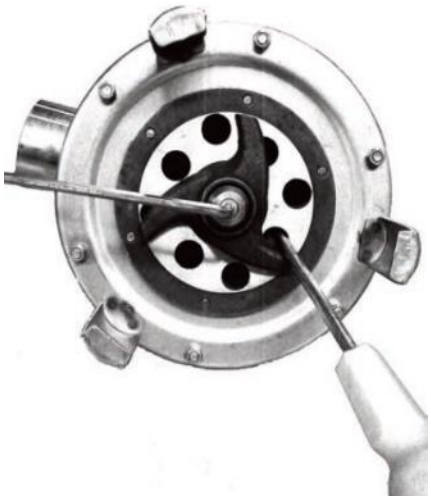


Photo 5a

- ✓ With two flat-bladed screwdrivers, remove the movable knife from the shaft - photo 5b
- ✓ After dismantling the blade, use an 8 mm socket spanner to unscrew the 6 bolts holding the suction lid of the pump
- ✓ Once the lid has been removed, proceed to check and clean the hydraulic chamber.

Photo 5b

Assembly should be done in reverse order.

Examples of work steps (illustrative) to be carried out for dismantling the suction hopper of a pump with grinder, e.g.: WQ 15-7-1.1 PREMIUM

- ✓ Lay the pump flat.
- ✓ Using a 10 mm open-ended spanner, unscrew the 3 bolts holding the suction cage of the pump - photo 6

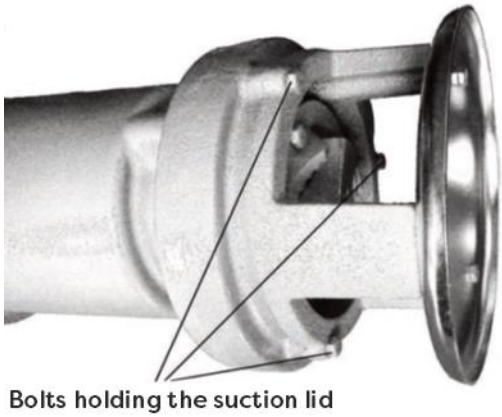


Photo 6

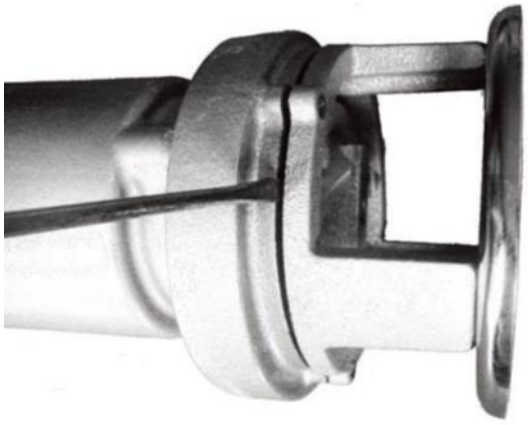


Photo 6a

- ✓ Using a thin-bladed locksmith screwdriver, separate the suction basket at the point shown in photo 6a
- ✓ Once the lid has been removed, proceed to check and clean the hydraulic chamber.

Assembly should be done in reverse order.

Examples of steps (illustrative) to be carried out for dismantling e.g.: PGPP 2022 PREMIUM with shredder

- ✓ Lay the pump flat.
- ✓ Use a locking screwdriver to lock the movable part of the cutting knife - photo 7
- ✓ Using a 5 mm Allen spanner, unscrew the fixing screw for movable cutting blade - photo 7

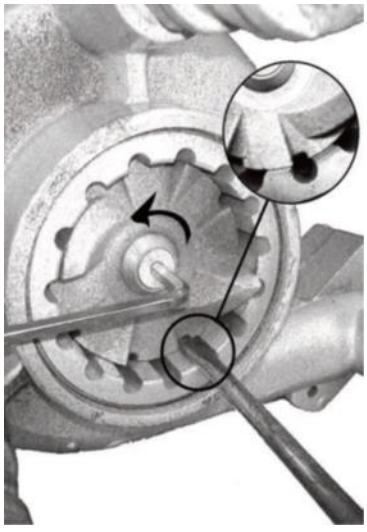


Photo 7

- ✓ Using a screwdriver, twist the shaft of the pump to the right in order to unscrew the movable cutting knife - photo 7a
- ✓ Using a 13 mm open-ended spanner, unscrew the four bolts securing the suction lid of the pumps - photo 7b
- ✓ After that, the thin-bladed screwdriver should be at the place indicated in photo 7c. Separate pump suction lid.
- ✓ Once the lid has been removed, proceed to check and clean the hydraulic chamber.

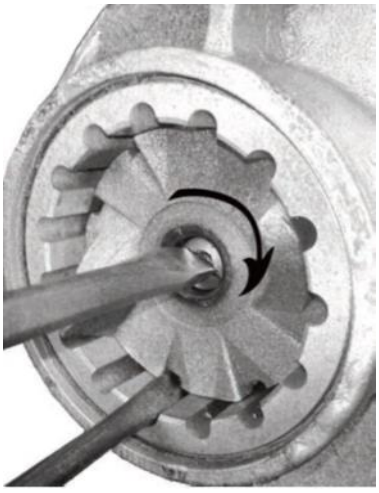


Photo 7a

Photo 7b

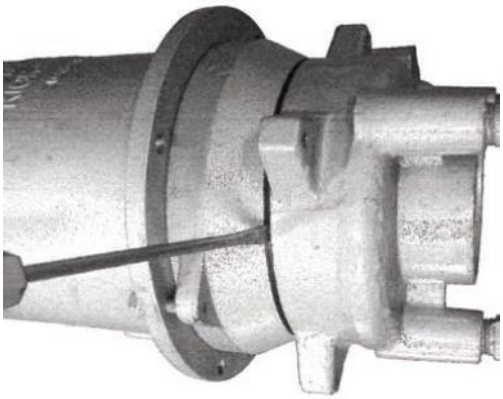


Photo 7c

Assembly should be done in reverse order.

6.5 If the hydraulic part rotates without jamming, but you can still hear the pump shaft making unnatural noises, this may be an indication of excessive bearing wear. In this situation the pump should be taken to a qualified pump repair shop for inspection and possible repair.

6.6 In addition to the above-mentioned inspection and maintenance works, due to the design of the pumps, only qualified personnel may carry out further work and repairs.

7. DISRUPTIONS IN OPERATION, CAUSES, REMEDIES.

Before any action is taken with the pump, the electrical supply must be disconnected and the unit must be secured against self-activation. Moving parts must be stopped.

PROBLEM	CAUSE	METHOD OF SOLVING THE PROBLEM
Pump motor not running	(a) No electrical supply	Check that there is power, check that the plug is properly connected to the socket
	b) Overload protection has tripped	After checking the cause, activate the overload protection
	(c) Damaged supply cable or motor	Submit for repair
	d) Incorrectly adjusted float (applies to single-phase pumps)	Adjust the length of the float cable
The pump is running but not pumping water or pumping with reduced performance.	a) Clogged suction hopper	Carry out cleaning
	(b) Worn hydraulic components	Replace worn parts
	d) Wrong direction of rotation (applies to three-phase motors)	Swap the phase sequence in accordance with point. 5.1 of the instructions
Pump starts but overload protection shuts down motor	a)The hydraulic part of the pump motor is overloaded with dirt	Carry out cleaning (point 6.4) or hand over to a repair facility
	b)Overload protection set too low	Set the correct protection level
	(c) Electricity voltage too low	Eliminate the cause of the undervoltage
	(d) Defective engine	Submit for repair
The inlet to the pump often becomes clogged (cutting knife pumps	(a) Worn parts of the cutting blade	Replace worn parts or have them repaired

8. NOISE LEVEL

The noise level emitted by the running pump does not exceed 70 dB (A).

9. DISPOSAL

Marking this unit with the crossed-out container symbol indicates that it is prohibited to dispose of the used equipment together with other waste. For detailed information on how to recycle this product, please contact your municipality, your municipal waste disposal service or the place where you purchased the product. This product and its parts must be disposed of in an environmentally sound manner. If it is not economically viable to repair a worn-out pump, the pump should be dismantled by separating the cast iron, steel, copper, plastic and rubber parts. Dispose of the parts obtained at specialised facilities for the treatment and management of industrial waste and used equipment. Use local public or private waste disposal facilities. Taking used equipment to recovery and reuse facilities contributes to avoiding the impact on the environment and human health of the harmful components present in the unit. In this respect, each user has a fundamental role.

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In case of any problems please contact our local representative or dealer in your country.

Seller's details / stamp