

**INSTRUCTION MANUAL REGARDING USE AND MAINTENANCE TO BE KEPT BY THE USER**

**1. INTRODUCTION**

This instruction manual contains general information regarding the pump that you have purchased. Follow the instructions given in this booklet in order to obtain optimum return and operation from the pump. If any other information is necessary, please contact the nearest authorised retailer

**THE REPRODUCTION, EVEN PARTIAL, OF THE ILLUSTRATIONS AND/ OR TEXT HEREIN IS FORBIDDEN.**

The following symbols are used throughout the instruction booklets:

**ATTENTION!** Risk of damaging the pump or the system



Risk of injuring people or damaging things



Risks of electrical nature

**2. CONTENTS**

1. INTRODUCTION	page 25
2. CONTENTS	page 25
3. MANUFACTURER IDENTIFICATION DATA	page 25
4. WARRANTY AND TECHNICAL ASSISTANCE	page 25
5. GENERAL SAFETY WARNINGS	page 25
6. TECHNICAL-PRODUCTION CHARACTERISTICS	page 26
7. DESCRIPTION AND USES	page 26
8. TECHNICAL DATA	page 26
9. INSTALLATION, DISMANTLING AND TRANSPORTATION	page 26
10. ELECTRICAL CONNECTION	page 29
11. AUXILIARY CONNECTION	page 29
12. USE AND STARTING	page 29
13. MAINTENANCE AND REPAIRS	page 30
14. DISPOSAL	page 30
15. DECLARATION OF CONFORMITY	page 213

**3. IDENTIFICATION DATA**

**3.1 MANUFACTURER DATA**

**EBARA PUMPS EUROPE S.p.A.**

**Registered office:**

Via Campo Sportivo, 30 - 38023 CLES (TN) ITALY  
Phone: 0463/660411 - Fax: 0463/422782

**Assistance Service:**

e-mail: tcs.epe@ebara.com  
Tel. +39 0444 706968

**3.2 ELECTRIC PUMP**

EBARA Pumps Europe S.p.A. Via Campo Sportivo, 30 38023 Cles (TN) Italy Phone +39 0444 706911 V.A. T. 01234860221		MADE IN ITALY 	
<b>TYPE</b>	HYDROSTATION		
<b>P/N*</b>		<b>T<sub>liquid</sub></b>	5-45°C
		<b>T<sub>ambient</sub></b>	5-50°C
<b>V</b>	-220-240	<b>P</b>	800 W
<b>Q</b>	5-95 l/min	<b>H</b>	5-60 m
<b>Phase</b>	1	<b>H<sub>min</sub></b>	1,1
		<b>H<sub>max</sub></b>	5 m
<b>IP</b>	65	<b>Cosφ</b>	0,8
		<b>Hz</b>	50/60
<b>Ins.C.</b>	S1	<b>A</b>	4,6
	<b>Kg</b>	<b>S/N*</b>	12,7

**4. GUARANTEE AND TECHNICAL ASSISTANCE**

THE GUARANTEE IS RENDERED NULL AND VOID IF THE INSTRUCTIONS GIVEN IN THIS BOOKLET ARE NOT ADHERED TO AND/OR IF ANYONE OTHER THAN PERSONNEL FROM OUR SERVICE CENTRES INTERVENES ON THE ELECTRIC PUMP. IN THESE CASES, THE MANUFACTURER IS RELIEVED FROM ALL RESPONSIBILITY REGARDING INJURY TO PEOPLE AND SUBSEQUENT DAMAGE TO ADJACENT ITEMS AND/OR THE ELECTROPUMP ITSELF.

Once you have received the electropump, make sure that the packaging is not broken or seriously damaged. If it is, immediately inform the person who delivered it. After extracting the electropump from its packaging, make sure that it was not damaged during transportation. If it has been, inform the retailer within 8 days from delivery. The following parts, being normally subject to wear, have a limited guarantee:

- bearings
- mechanical seals
- grommets
- suction and discharge fittings
- fill and drain plugs
- pressure sensor

If a fault that is not listed in the "TROUBLESHOOTING" table (chapter 13.1) occurs, please contact the nearest authorised retailer.

**5. GENERAL SAFETY WARNINGS**

Before starting the electropump, the user must follow the operations indicated in this manual, and apply them each time the electropump is used or when maintenance is carried out on it.

**5.1 PREVENTIVE MEASURES TO BE TAKEN BY THE USER**



Electropump without indication that they are protected against the effect of freezing shall not be left outside during freezing weather conditions



Users must observe the accident prevention regulations that are in force in their countries at the time. They must also pay attention to the electropump characteristics. Always wear protective gloves when handling the pump or performing maintenance.



While repairing or carrying out maintenance on the electropump, disconnect the electric supply. Doing this avoids accidental starting, which could injure people and/or cause damage.



The device can be used by children aged above 8 years and by persons with reduced physical, sensory or mental abilities, or who lack adequate experience and knowledge of the product, provided that they are supervised or have been adequately instructed on its safe use and the relevant risks involved. Children must not play with the device. Cleaning and maintenance to be carried out by the user must not be effected by unsupervised children.

Any maintenance, installation or handling carried out on the electropump while it is still being powered can seriously injure, or even kill, people.

When starting the electropump, users must ensure that their feet are not bare or, worse, immersed in water. They must also ensure that their hands are not wet.

Users must not operate or carry out any work on the electropump that is not permitted in this manual.



Stop operation in case pump is in failure. Operation of broken pumps can cause injury or damage property.

Do not touch the pump when the liquid handled is hot water. Burns may result from high temperatures.

Do not touch the motor. The motor's surfaces will be hot, and you could get burned if you touch them.

Do not touch the rotating parts while the pump is running. Since these parts rotate at high speed, doing so could result in injury.

Do not touch the live parts when the power is on. There is a risk of electric shock.



The electric pump is designed in such a way that all moving parts are made safe by using guards. The manufacturer declines any responsibility in the event of damages caused by the removal of said protections.



Each conductor or powered part is electrically insulated with regards to earth. Extra security is also added by connecting the accessible conducting parts to an earth conductor. This ensures that accessible parts cannot become dangerous should the main insulation become faulty.

## 5.2 RESIDUAL RISKS FOR SURFACE PUMPS

Residual risks include the following:

- The possibility of coming into contact (even if not accidentally) with the motor's cooling fan by inserting thin objects (e.g. screwdrivers, sticks and similar) through the fan cover holes.
- Possible start-up without notice due to automatic rearm of the motor protection device, following the latter's intervention due to motor overheating.

## 6. TECHNICAL-PRODUCTION CHARACTERISTICS

The electropump you have purchased has been designed and manufactured in compliance with the following directives:

- EU DIRECTIVE for the safety of electric pumps**
  - IEC 60335-2-41:2012 in congiunzione con IEC 60335-1:2010, AMD1:2013, AMD2:2016,
  - EN IEC 60335-2-41:2021 + A11:2021 in congiunzione con EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A2:2019 + A14:2019 + A15:2021 dev. Europa, Australia, NZS, Qatar, Arabia Saudita
- EU DIRECTIVE Electromagnetic Compatibility**
  - CISPR 14-1:2020 equivalente EN IEC 55014-1:2021
  - CISPR 14-2:2020 equivalente EN IEC 55014-2:2021
- EU DIRECTIVE Limits for harmonic current emissions**
  - EN IEC 61000-3-2:2019 + A1:2021
  - EN IEC 61000-3-2:2018 + A1:2020
  - EN IEC 61000-3-3:2013 + A1:2019 + A2:2021
  - IEC 61000-3-3:2013 + A1:2017 + A2:2021

## 7. ELECTROPUMP DESCRIPTION AND USE

### 7.1 DESCRIPTION

Description: SURFACE ELECTROPUMP WITH BUILT-IN ELECTRONIC DEVICE

Type: SELF-PRIMING (ELECTRONIC EXCLUDED)

Model: HYDROSTATION

### 7.2 USE FOR WHICH PUMPS ARE DESIGNED

Domestic water boosting, small-scale garden watering, treatment of clean water in general, handling of drinking water.

Use the electropumps based on their technical specifications.

### 7.3 USE FOR WHICH PUMPS ARE NOT DESIGNED

The pumps cannot be used to handle:

- dirty water or water with solids in suspension;
- water containing acids or bases, and corrosive liquids in general;
- water with a temperature over the temperature limit given in table (see Chapter 8.1);
- seawater;
- flammable liquids and hazardous liquids in general.

The electropumps must never be made to work without liquid.

## 8. TECHNICAL DATA

### 8.1 HYDROSTATION TECHNICAL DATA

Processed liquid [type]		Clean water
Temperature [C°]	Liquid	+5 +45
	Ambient	+5 +50 (+55° SA version)
Max working pressure [Mpa]		1
Nominal flow [m³/h]		5,6
Threaded connection compliant to UNI ISO 228	Suction	GF 1"
	Discharge	GF 1"
Voltage [Vac]		~220-240
Accepted voltage fluctuation		± 15%
Max current [A]		4,6
Nominal power	[kW]	0,8
	[HP]	1
Expected Cosφ		0,8
Motor efficiency		95%
Protection degree		IP65
Efficiency class		IE5
Noise level [dBA]		<43*
Max start per hour		60
Applicable test standard		ISO 9906:2012 – Grade 3B

The table gives maximum sound emission values for the electropump.

\* Sound pressure level - Average value of measurements taken one metre from the pump. Tolerance ± 2.5 dB.

## 9. INSTALLATION AND DISMANTLING, TRANSPORT AND STORAGE

### ATTENTION!



INSTALLATION MUST BE CARRIED OUT BY A QUALIFIED ENGINEER.

### ATTENTION!

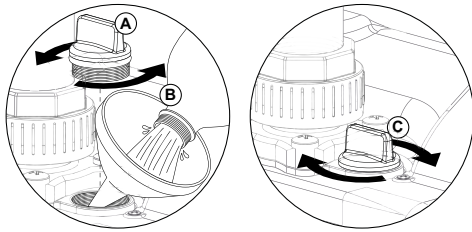
USE THE HANDLE TO LIFT OR MOVE THE ELECTROPUMP, IF IT HAS ONE, OR HOLD IT IN YOUR HANDS: NEVER USE THE POWER CABLE.

### 9.1 FILLING THE PUMP

#### ATTENTION!

OPERATION TO BE PERFORMED WITH UNPLUGGED CABLE

- Unscrew the cap located on the top of the pump casing;
- With the aid of a funnel, fill the pump with water to overflowing
- Screw the cap back on until it is locked tight to prevent air getting in



## 9.2 GENERAL INSTALLATION PRECAUTIONS

- Use metal piping with a flat-ended thread to prevent it from that they may fail under the vacuum created in the suction or made of material, plastic with some degree of stiffness;
- support and align pipes so that they do not put any stress on the pump;
- Avoid, the use of suction hoses in order to avoid bottlenecks. The use of any flexible hoses is allowed only on the discharge side taking care that any bends do not cause constrictions or bottlenecks;
- Seal any pipe connections: air seepage in the suction pipe will adversely affect the operation of the pump; (suggested use of PP-R type tubing with inserts threaded brass or solder, avoid compression fittings);
- On the suction and discharge pipe, it is advisable to mount a gate valve near the pump;
- fix the piping to the reservoir or to any fixed parts so that it is not supported by the pump;
- do not use a lot of bends (goosenecks) and valves;
- If the pump is installed over head, the suction pipe should be fitted with a foot valve and filter in order to prevent foreign bodies from entering and its end should be immersed at a depth that is at least twice the diameter of the pipe; its distance from the bottom of the reservoir should also be one and a half times its diameter. For suctions longer than 4 metres use an oversized pipe (1/4" wider at suction for improved efficiency);
- For flexible (plastic piping) or particularly large systems, the installation of an expansion tank is suggested, as a water reserve, to meet small demands or any leaks or drips that could result in a high number of pump restarts;
- HYDROSTATION pumps are not intended for transportable uses and outdoors except where indicated;
- For Twin installations, installation of the overhead type is not recommended.

## 9.3 INSTALLATION

### Single version

- Place the pump on a flat surface as close as possible to the water source while leaving sufficient clearance around it to allow safe operation and maintenance operations. In any case, leave a clearance of at least 100 mm in front of the motor fan;
- Check the presence of the Oring gasket on the intake fitting;
- Connect the plant suction pipe to the pump (use piping with a diameter of not less than 1" and not more than PN25, see point c of chapter 9.2, having an internal diameter at least equal to suction diameter) (in case of overhead installation, refer to reference point h of chapter 9.2);
- Tighten the pump suction connection with moderate force (no tools or wrenches needed, just tighten by hand);
- Check for the presence of the Oring gasket on the discharge connection;
- Connect the system discharge pipe to the pump (see point c of Chapter 9.2);
- Tighten the pump discharge connection with moderate force (no tools or wrenches needed, just tighten by hand);

### TWIN Version (manifold kit and 2 Hydrostation)

- Place the pump on a flat surface as close as possible to the

- water source while leaving sufficient clearance around it to allow safe operation and maintenance operations. In any case, leave a clearance of at least 100 mm in front of the motor fan;
- Remove the fittings present on the suction and delivery side by acting on the 4 screws present;
- Place the manifolds on the discharge and intake side taking care to verify the presence of the O-ring gasket;
- Attach the manifolds to the pumps using the retaining screws removed previously;
- Place the intake side manifold support up to the plane of the support;
- Connect the plant suction pipe to the manifold (use piping with a diameter of not less than 1" and not exceeding PN25, see point c of chapter 9.2, having an internal diameter at least equal to intake manifold diameter);
- Plug the intake manifold end that is not connected to the system;
- Connect the system discharge pipe to the discharge manifold (see point c of chapter 9.2);
- Plug the discharge manifold end that is not connected to the system;
- Remove the terminal cover of both pumps;
- Connect the communication cable between the 2 units;
- Close the terminal cover again.

P.S. The operations from point j) are only for communication of 2 Hydrostation via cable, for connection via Bluetooth it is not needed to carry out these operations.

\* Manifolds are prepared with connections for possible installation of pressure gauge or minimum pressure switch

## 9.4 COMMISSIONING

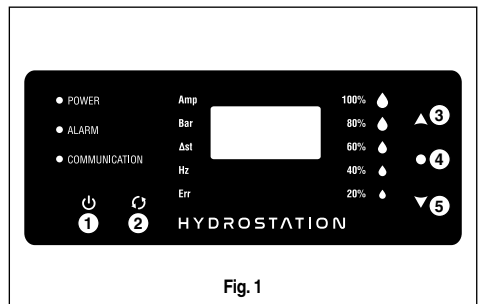


Fig. 1

N.	Function
1	On/ off operation
2	Reset
3	Up arrow / +
4	Confirmation
5	Down arrow / -

### Single version

- Unscrew the filler cap located on the top of the pump;
- Carry out an initial filling of the pump;
- Close the filler cap;
- Ensure that the intake side valve (if any) is open;
- Ensure that the discharge side valve (if any) is open;
- If overhead installation, turn the self-priming knob located on the lower part of the pump, to position 1;
- If sub-bottom installation, make sure that the self-priming knob located on the lower part of the pump, is in position 0;
- Plug it into the mains;

- i) Press keys (3) or (5) to the BAR value;
- j) Press button (4) to enter the programming mode (the display will start flashing);
- k) Use keys (3) or (5) to select the desired pressure value (default value 3.5 bar);
- l) Press button (4) to confirm the selected value;
- m) Press keys (3) or (5) to the Δst value;
- n) Press button (4) to enter the programming mode (the display will start flashing);
- o) Use keys (3) or (5) to select the desired differential pressure value (default value 1.5 bar);
- p) Press button (4) to confirm the selected value;
- q) Open at least 1 tap so that any air present in the system (if the taps are placed on several levels, prefer to the opening of the highest placed tap);
- r) Start the pump pressing button (1) ;
- s) If necessary, and especially in case of overhead installation, force dry running protection exclusion by holding down the button (2) for up to 5 minutes or until the pump is fully primed pump (check for water leakage free of air presence, from the previously opened tap);
- t) In case of failure to prime after 5 minutes, release the (2), disconnect the power supply, wait 10 minutes, repeat the operations from (a) to (c) of this chapter and restart the pump by repeating the operations indicated from step m).

#### TWIN Version (manifold kit and 2 Hydrostation communication via cable)

- a) Unscrew the filler cap located on the top of the both pumps;
- b) Carry out an initial filling of the both pumps;
- c) Close the filler caps;
- d) Ensure that the intake side valve (if any) is open;
- e) Ensure that the discharge side valve (if any) is open;
- f) Ensure that the self-priming knob located on the bottom of the pumps, is in position 0;
- g) Plug it into the mains of both pumps (The first pump to be programmed will automatically be recognized as MASTER);
- h) Press keys (3) and (5) simultaneously to access the menu hidden;
- i) Scroll with keys (3) and (5) to the CTR parameter;
- j) Press buttons (4) to enter the programming mode;
- k) With keys (3) or (5), select the desired control mode (ASS = alternating startup and operation of both pump under high demands; S1b = alternating startup, 1 pump running only);
- l) Press button (4) to confirm;
- m) Press keys (3) and (5) simultaneously to exit the hidden menu;
- n) Press, on MASTER pump, key (5) to the BAR value;
- o) Press button (4) to enter the programming mode (the display will start flashing);
- p) Use keys (3) or (5) to select the desired pressure value (default value 3.5 bar);
- q) Press button (4) to confirm the selected value
- r) Press on MASTER pump button (5) to the value Δst
- s) Press button (4) to enter the programming mode (the display will start flashing)
- t) Use keys (3) or (5) to select the desired differential pressure value (default value 1.5 bar\*)
- u) Press button (4) to confirm the selected value;
- v) Open at least 1 tap so that any air present in the system (if the taps are placed on several levels, prefer to the opening of the highest placed tap);
- w) Start both pumps by pressing button (1);
- x) If necessary, and especially in case of overhead installation, force dry running protection exclusion by holding down the button (2) for up to 5 minutes or until the pump is fully primed pump (check for water leakage free of air presence, from the previously opened tap);
- y) In case of failure to prime after 5 minutes, release the (2), disconnect the power supply, wait 10 minutes, repeat the operations from (a) to (c) of this chapter and restart the pump by repeating the

operations indicated from step a).

#### TWIN Version (manifold kit and 2 Hydrostation communication via BLUETOOTH)

- a) Unscrew the filler cap located on the top of the both pumps;
- b) Carry out an initial filling of the both pumps;
- c) Close the filler caps;
- d) Ensure that the intake side valve (if any) is open;
- e) Ensure that the discharge side valve (if any) is open;
- f) Ensure that the self-priming knob located on the bottom of the pumps, is in position 0;
- g) Plug it into the mains of both pumps;

#### SLAVE PUMP

- h<sup>1)</sup>) Press keys (3) and (5) simultaneously to access the menu hidden;
- i<sup>1)</sup>) Scroll with keys (3) or (5) to the bt parameter;
- j<sup>1)</sup>) Press button (4) to enter the programming mode;
- k<sup>1)</sup>) Scroll with keys (3) or (5) to the ADr parameter;
- l<sup>1)</sup>) Press button (4) to enter and take note of address code;
- m<sup>1)</sup>) Press keys (3) and (5) simultaneously to exit the hidden menu;

#### POMPA MASTER

- h<sup>2)</sup>) Press keys (3) and (5) simultaneously to access the menu hidden;
- i<sup>2)</sup>) Scroll with keys (3) or (5) to the bt parameter;
- j<sup>2)</sup>) Press button (4) to enter the programming mode;
- k<sup>2)</sup>) Scroll with keys (3) or (5) to the Cts parameter;
- l<sup>2)</sup>) Press button (4) to start the BLUETOOTH research;
- m<sup>2)</sup>) Once the search is completed, press button (4) to select the previously noted address by pressing button (3) or (5), confirm with button (4);
- n<sup>2)</sup>) Once communication has been made, the 'COMMUNICATION' LEDs will light up;
- o<sup>2)</sup>) Start the SLAVE pump and then the MASTER pump;

- p) Press, on MASTER pump, key (5) to the BAR value;
- q) Press button (4) to enter the programming mode (the display will start flashing);
- r) Use keys (3) or (5) to select the desired pressure value (default value 3.5 bar);
- s) Press button (4) to confirm the selected value;
- t) Press on MASTER pump button (5) to the value Δst;
- u) Press button (4) to enter the programming mode (the display will start flashing);
- v) Use keys (3) or (5) to select the desired differential pressure value (default value 1.5 bar\*);
- w) Press button (4) to confirm the selected value;
- x) Open at least 1 tap so that any air present in the system (if the taps are placed on several levels, prefer to the opening of the highest placed tap);
- y) Start both pumps by pressing button (1) ;

- aa) If necessary, and especially in case of overhead installation, force dry running protection exclusion by holding down the button (2) for up to 5 minutes or until the pump is fully primed pump (check for water leakage free of air presence, from the previously opened tap);
- bb) In case of failure to prime after 5 minutes, release the (2), disconnect the power supply, wait 10 minutes, repeat the operations from (a) a punto (c) of this chapter and restart the pump by repeating the operations indicated from step (o<sup>2)</sup>).

\* Too low a value of restart pressure differential, could result in excessive pump restarts until the maximum allowed hourly restarts resulting in pump shutdown

#### 9.5 STOP AND DISINSTALLATION

To stop, move or uninstall the electric pump, it is necessary to:

- a) stop the pump by pressing button (1);
- b) cut off the power supply;

- c) open any utility to relieve residual pressure (if needed);
- d) close the valves located on the suction and discharge side to section off the pump from the system;
- e) remove the drain plug located on the pass part of the pump (pay attention to any residual pressure in the pump);
- f) disconnect supply and suction hoses (where present) if too long or bulky;
- g) unscrew the screws that secure the electric pump to the supporting surface (if present);
- h) lift the electric pump by suitable means;
- i) for possible disposal refer to chapter 14.

## 9.6 TRANSPORTATION

The electropump is packed in a carton box, in any case, the transport does not present any particular problems.

## 9.7 STORAGE

- a) The product must be stored in a covered and dry place, far away from heat sources and protected against dirt and vibrations.
- b) Protect the product against damp conditions, heat sources and mechanical damage.
- c) Do not place heavy objects on the packaging.
- d) The product must be stored at an ambient temperature between +5°C and +50°C (41°F – 122°F) with a relative humidity of 60%

## 10. ELECTRICAL CONNECTION

IT IS ADVISABLE TO INSTALL A HIGH INTENSITY DIFFERENTIAL SWITCH (0.03 A)

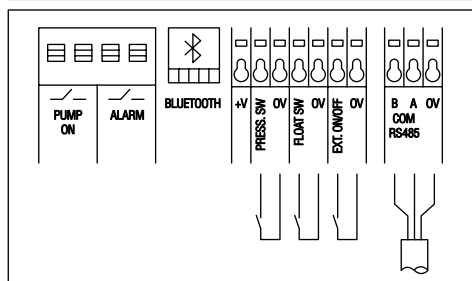
### ATTENTION!



The plug must be connected to the mains in an indoor ambient far from sprays, water jets or rain and it must be accessible.

The mains must be reliably earthed, according to the electrical regulations in force in the user's country: this is the installer's responsibility.

## 11. AUXILIARY CONNECTION



Bluetooth	Optional Bluetooth plug-in position
+V	+12Vcc main contact
Press SW / OV	External pressure switch input
Float SW / OV	Float switch input
Ext On/Off / OV	ON/Off remote input
COM RS485	Communication input between devices

## 12. USE AND STARTING

**NEVER ALLOW THE PUMP TO OPERATE WITHOUT WATER. DOING SO CAN SERIOUSLY DAMAGE THE INTERNAL COMPONENTS.**

### 12.1 GENERAL WARNINGS

- a) Our surface pumps are designed to operate at a temperature no higher than 50°C and a sea level no higher than 1000 metres;
- b) The pump cannot be used in swimming pools or similar plants;
- c) Prolonged pump operation with the delivery pipe closed can cause damage for overheating;
- d) Avoid switching the pump on and off more than 50,000 times a year. If the pump operates on and off for more than 50,000 times per year, the pump life may be shortened and there is a risk of premature failure. Regarding the maximum number per hour, please refer also Chapter 8;
- e) During power cuts, it is advisable to disconnect the power to the pump;

## 13. MAINTENANCE AND REPAIRS

We recommend periodically checking that the pump is working correctly; pay particular attention to any abnormal noise or vibration and, any mechanical seal leaks.

When the pump remains inactive for a long period, it should be emptied completely, removing the discharge and filling caps.

### 13.1 TROUBLESHOOTING

DISPLAYED FAULT	CAUSE	REMEDY
<b>THE PUMP DOES NOT WORK The motor doesn't turns</b>	No electricity	Check the electrical supply meter
	Plug not inserted	Check the connection to the power supply
	Float sticking	Check that the float reaches the level ON
<b>THE PUMP DOES NOT WORK The motor turns</b>	Thermal protection activated	It reactivates automatically
	Decrease in the line voltage	Wait for voltage to return to normal
	Suction filter / hole blocked	Clean the filter / hole
	Foot valve blocked	Clean the valve and check its operation
<b>THE PUMP WORKS with a reduced flow rate</b>	Pump not primed	Prime the pump Check any delivery non-return valves Check the liquid level
	System undersized	Re-examine the system
	System dirty	Clean the piping, valves, filters
<b>THE PUMP STOPS AFTER WORKING FOR BRIEF PERIODS Thermal protection intervention</b>	Leaks from piping	Check the joints
	Pressure too high	Recheck the system
	Water level too low	Switch off the pump or immerse the foot valve
<b>THE PUMP STOPS AFTER WORKING FOR BRIEF PERIODS Thermal protection intervention</b>	Liquid temperature too high	The temperature exceeds the technical limits of the pump
	Internal fault	Contact the nearest retailer

DISPLAYED FAULT	CAUSE	REMEDY
<b>THE PUMP VIBRATES Or is too noisy du - ring operation</b>	Flow rate too high	Reduce the flow rate
	Cavitation	Contact the nearest retailer
	Irregular piping	Fix in a better way
	Incorrect priming	Bleed the pump and/or fill it again
<b>THE PUMP VIBRATES Or is too noisy du - ring operation</b>	Foreign bodies sliding along the motor fan	Remove the foreign bodies

### 13.2 ALARM CODES

ALL.	DESCR.	CAUSE	REMEDY
E01	Overtemperature alarm	The pump works in temperature conditions Higher than the maximum declared	Verify that the conditions of installation and temperature environment are comply with the stated limits. The pump will restart automatically the moment the temperature drops below the stated limits
E02	Low Voltage alarm	The supply voltage is lower than the minimum limit declared	Verify that the power supply mains supply complies to the stated minimum limits. The pump restarts automatically the moment the voltage mains voltage falls within the declared limits
E02	Overvoltage alarm	The supply voltage is higher the minimum limit declared	Verify that the power supply power supply complies with the stated maximum limits. The pump restarts automatically the moment the voltage mains voltage falls within the declared limits
E03	Overcurrent alarm	Excessive absorption due to pump blocked or operation at conditions of excessive strain	Check for presence of any foreign bodies. Check the good condition of the bearings. The pump makes 3 attempts automatic resets, at the 4 intervention requires a manual reset.
E04	Short circuit between phases		Contact the technical assistance
E06	Pressure sensor fault	Pressure sensor, faulty or obstructed	Check whether the sensor is obstructed by excessive scale. Provide cleaning or replacing of the sensor
H01	Dry march or working pressure $\leq$ a 0,5 BAR	The pump works out of maximum curve. Excessive demand. Suction-side obstruction. Foot valve bottom or clogged filter. Suction piping nonconforming.	Reduce the pressure value, reduce the demand for water, check the correct priming of the pump. The pump makes automatic reset attempts for a maximum time of about 3h.

ALL.	DESCR.	CAUSE	REMEDY
H01	Lack of water on the suction side	Suction difficulty. Obstructed or mismatched piping. Clogged foot valve or filter.	Verify that the piping is in accordance with the directions in the manual, verify proper operation of the foot valve (if any), verify that there are no obstructions, verify proper priming. The pump makes automatic reset attempts for a maximum time of about 3h.
H02	Hourly restarts over the limit	The pump has reached the maximum allowable hourly startup limit	Check that the $\Delta$ t value is not too low, in case increase value. Check for leaks in the system, in case repair the leaks. If necessary for the system configuration, check the presence and/or correct precharge of the water reserve expansion tank.
C01	Communication error between devices	The pumps, in Twin mode, do not detect the communication	Check the correct connection and integrity of the communication cable. Verify the correct setting for Twin communication.

### 14. DISPOSAL



This product falls within the scope of Directive 2012/19/EU regarding the management of electrical and electronic equipment waste (WEEE). Electronic-electrical equipment must not be disposed of with domestic waste as it is made of various materials that can be recycled at the appropriate facilities. Inquiries should be made through the municipal authorities regarding the location of the ecological platforms that receive products for disposal and their subsequent correct recycling. Furthermore, it is worth remembering that, upon purchase of an equivalent appliance, shops are obliged to collect the product for disposal free of charge. This product is not potentially dangerous for human health and the environment, since it does not contain harmful substances as per Directive 2011/65/ EU (RoHS), yet if abandoned in the environment it has a negative impact on the ecosystem. Read the instructions carefully before using the appliance for the first time. It is recommended that you do not use this product for any purpose other than that for which it was intended; there is danger of electric shock if used improperly. The crossed-out bin symbol found on the appliance label indicates the compliance of this product with the regulations regarding electrical and electronic equipment waste. Abandoning the appliance in the environment or its illegal disposal is punishable by law. Specific cases are, however, indicated in the "DISPOSAL" chapter in PART 2. This symbol on the pump means that it cannot be disposed of with household waste. According to Article 9(1)(i) of the Waste Framework Directive 2008/98/EC and to the 1907/2006 REACH regulation, all EBARA products have been notified to the European Chemicals Agency (ECHA). To consult the SCIP Number with related information on the safe use of the product see section "Company Certifications" on the website [www.ebara-europe.com](http://www.ebara-europe.com)