Menu

SEA LAND ELECTRIC PUMPS

User Manual

CHAP. 1 DESCRIPTION OF THE MACHINE

1.1 General description

The electric pumps are quite similar to each other as regards function and construction; the differences are:

Voltage = V…(ref. 1), Power = HP or KW…(ref. 2), Input power = [W]…(ref. 4), Capacitor = µF…(ref. 3), Input current = A…(ref. 1), Rate of flow = l/1'…(ref. 5),
Head = H m…(ref. 5), Weight and dimensions = kg & DNA-DNM…(ref.7),
Insulation Class = …(ref. 8), Protected to = IP…(ref. 9)

For your electric pump data, see plate on the pump & enclosure (A), following the refinement number.

1.2 Motor construction features

Closed self-ventilated two-pole motor. Single-phase version with incorporated motor protector and permanently connected capacitor (single-phase version 110/220 V, 60 Hz and three-phase version do not incorporate overload protection, therefore the protection must be provided by the user).
Continuous duty. Max start per hour 50 times.

⚠ CHAP. 2 GENERAL SAFETY WARNINGS

The manufacturer declines all liability for accidents to persons or animals or damage to property or the electric pump if the warnings do not comply with or if the electric pump is tampered with. The above will also render the guarantee invalid.

2.1 Preventive measures

The user must comply with all accident prevention regulations in force and must scrupulously follow the instructions contained in the following chapters.

A) Always remember to remove the plug from the socket before carrying out any operations on the electric pump;
B) Do not move the electric pump while it is working;
C) Before using the electric pump, always check that the power cable and all the electric devices are in perfect conditions;
D) Never start the electric pump in your bare feet, with wet hands or with your feet in the water;
E) The electric pumps are built so that all moving parts are protected with covers. When the electric pump is working, do not remove these parts;
F) The main switch to which the electric pump is connected must be out of reach of jets of water, rain, other liquids or atmospheric agents in general.

CHAP. 3 CORRECT AND INCORRECT USE

3.1 Correct use

The electric pumps has been designed to pump clean water up to 4m. max suction deep, the self priming centrifugal version sucks water from wells, either mixed with gas, up to 8/9 m. deep (50 m. for pumps having ejector). They can be used for small & medium irrigation, to increase water supply pressure, to fill or empty tanks, in washing, in cooling and conditioning systems, in fire fighting systems. The pumps can be assembled in booster sets that will optimise the water reserves, limiting the number of start ups and, above all, always maintaining the correct pressure in the system.

⚠ Important: The following conditions must be observed when using the electric pump:
A) Max. water temperature: * (ref.10);
B) Max. ambient temperature: 40 °C;
C) Max. operating pressure: * (ref.6);
D) Voltage variation allowed: more or less 5%.*
*See plate on the pump & enclosure (A), following the refinement number.

⚠ **3.2** Incorrect use

All uses not mentioned in paragraph 4.1 are generally forbidden; the electric pump should especially not be used for the following:
A) Pumping sea-water, dirty water or water holding suspended solid bodies, sand, abrasive or corrosive substances in general;
B) Pumping water or other liquid at temperatures higher than the maximum value;
C) Pumping explosive, inflammable and other dangerous liquids.

CHAP. 4 HANDLING & TRANSPORT

4.1 Unpacking

If the packing is not in good condition, after removing the electric pump make sure it has not been damaged during transport or handling. Any breakages or faults should be reported to the dealer within and not after 8 days from delivery.

⚠ **ATTENTION:** before installing and using the electric pump, check the rating plate to make sure the model and its characteristics correspond to your order.

4.2 Handling, uninstalling and transport

Proceed as follows before transporting the pump:
A) Warning, the motor body may reach 70°, after working don't touch it;
B) Never move the electric pump without first removing the plug from the socket or disconnecting mains power;
C) Unscrew and remove the delivery and suction hoses;
D) Unscrew the bolts or screws anchoring the electric pump;
E) Roll up the electric power cable and hold it in your hand;
F) Do not transport or drag the electric pump with the power cable.

CHAP. 5 PREPARATION FOR USE

⚠ **5.1** Electric wiring diagram

If the electric pump is not supplied with a cable and plug, The connections to the mains and grounding must be exe-
cuted by qualified technicians following the diagram (see fig. 1) and in compliance with local installation standards. Important: the cable must be IEC compatible and of a suitable section, bearing in mind the installed power and the length; the plug must have an earth contact.

5.2 Electrical connections

Before connecting the electric pump to the mains power supply, check that it is sufficient to cope with motor consumption See plate on the pump & enclosure "A" (ref.3). It is also very important for the mains supply to be fitted with a high-sensitivity differential switch (30mA as DIN standards). The electric pumps that are already supplied with a cable and plug must be connected to a mains socket suitable for a SCHUKO plug, with a double earth connection. The plug must not cut and/or replaced, adapters for this kind of plug are easy to find in the shops.

5.3 Operating checks

Before installing the electric pump, perform a no-load test on the motor. Make sure that all the electrical contacts are well sealed, start the electric pump and observe the cooling fan located at the back of the motor to check it turns in the right direction (fig. 2).

CHAP. 6 INSTALLATION

(fig.)

CHAP. 7 USE AND START UP

7.1 Start up

A) First of all, make sure that the electric connections are well sealed and that the power cable has not been damaged during installation; then close the delivery gate valve;
B) Fill the pump through the relative filling hole (remove the cap, fig. 4). When the pump body and the suction hose are completely filled, close the filling hole (fig. 4);
C) Insert the plug in the socket or turn on the main switch. Before starting this operation, pay attention to the contents of chapter 3, paragraph 1;
D) When the electric pump starts working, gradually open the ball valve on the delivery hose.

7.2 Important warnings

A) Do not use the pump when it is dry (no water inside the pump body);
B) Prolonged use of the electric pump with the gate valve on the delivery hose closed may cause serious damage;
C) Remove the plug from the socket or turn off the main switch in case of a power failure.

7.3 Stopping

A) Close the gate valve on the delivery line before switching off the pump (this will prevent any hammering); then turn off the switch (if the electric pump is fitted with a Jolly or Export autoclave assembly, it will automatically stop when the valve or the circuit is closed);
B) If the electric pump is due to remain inactive for a long period of time, all the water in the pump body should be emptied and, if possible, rinsed with clean water.

ATTENTION: the pump must be emptied when there is a risk of frost caused by temperatures close to 0 °C.

⚠ CHAP. 8 ASSEMBLY AND DISMANTLING

The electric pump has no separate accessories so that no assembly is required. The eventual dismantled, feeding cable installation or substitution must be executed at service centres or by qualified technicians.

CHAP. 9 MAINTENANCE AND REPAIRS

9.1 Maintenance

Before carrying out any maintenance operations, remove the plug. The inner part of the plug does not require special maintenance, so it is not necessary to dismantle it. It is very important, however, that the suction and delivery parts are always kept perfectly clean and free from obstructions.

9.2 Troubleshooting

FAULTS	REASONS	REMEDIES
The pump does not work.	1) No mains voltage. 2) Shaft blocked.	1) Check the socket is powered and that the plug is fitted well. 2) Remove the plug from the socket; fit a screwdriver into the motor shaft (on the fan side) and turn to release.
The pump works but it does not deliver water.	1) The air in the pump body has not been totally vented. 2) The pump sucks air from the suction pipe.	1) Unscrew the filling cap while the pump is working and vent all the air from the pump body, then put the cap back on. 2) Check that the suction pipe is tightly fixed and sealed to the pump and that it is completely immersed in water and that there are no obstructions or traps. Pay attention to the max. suction height.
The thermal overload protector switches off the pump due to overheating.	1) The voltage does not correspond to the rated value of the motor. 2) A solid object has blocked the impeller. 3) The pump has run dry or the delivery valve has been closed for more than 15 minutes.	1) Check voltage. 2) Disconnect the suction hose and remove the object. 3) Cool the pump and then start it up again making sure that the mechanical seal has not been damaged.

Before using the pump again after a period of inactivity, make sure the motor shaft rotates freely by fitting a screwdriver into the slot on the shaft (fig. 2).

CHAP. 10 MECHANICAL RISKS

⚠ ATTENTION: The above spare parts may only be replaced by qualified technicians or at service centres, and only original spare parts may be used.

10.1 Risks due to extreme temperatures

A) The liquid inside the electric pump may freeze at low temperatures (under 0 °C). This is very dangerous for all the parts of the electric pump and may cause serious damage to it;
B) A temperature of over 40 °C may be dangerous for the motor if it is not suitably protected from the sun and well ventilated. In these cases, check that the components covering the motor (terminal board cover and fan cover) have not dilated or yielded.

CHAP. 11 INFORMATION ON AIR-BORNE NOISE

The weighted sound pressure level A produced by the electric pump working with liquids inside the pump body does not exceed 70 dB (A) established by the 98/037/EEC.

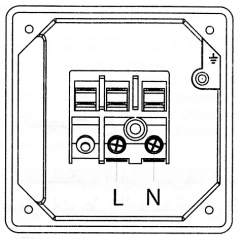
DECLARATION CE OF CONFORMITY

We, SEA-LAND S.R.L., declare under our own responsibility that our products here included, comply with the directives 98/37/CE, 89/336/CE, 73/23/CE, EN 292-1, EN 292-2, EN 60335-, EN 60335-2-41, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3, EN ISO 3744.

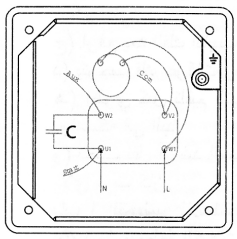
1

Single - Phase

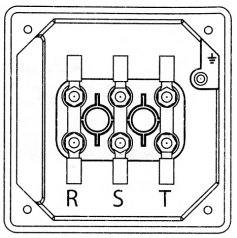
MEC 63 - 71

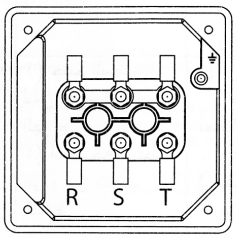


MEC 80 - 90 - 100



three - phase

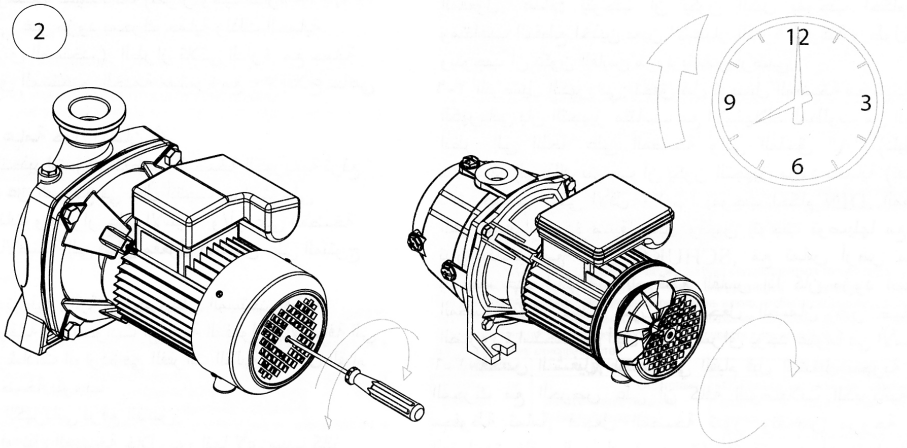


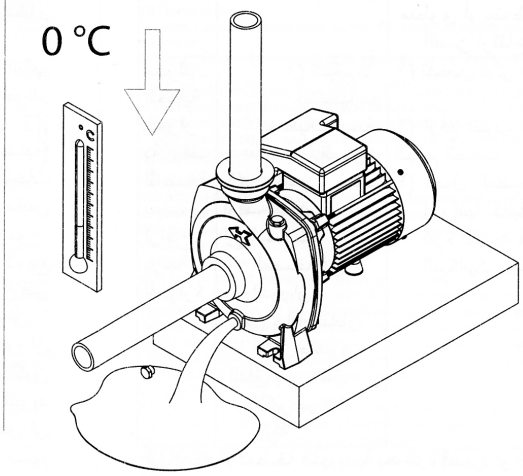


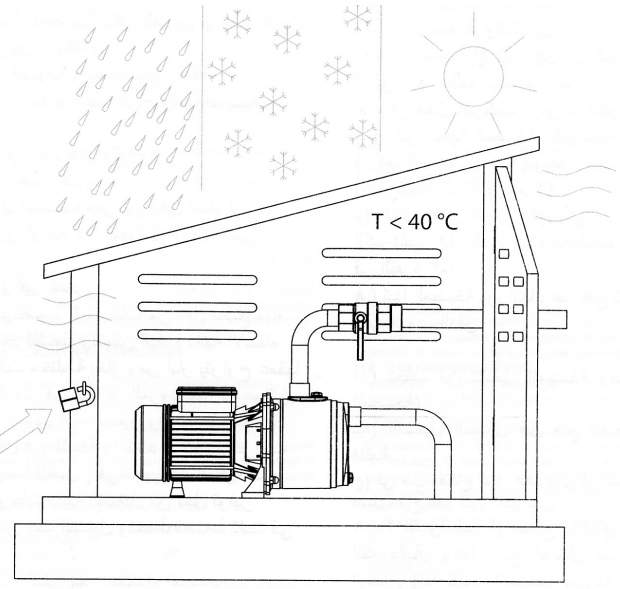
△ = low voltage

Y = high voltage

2







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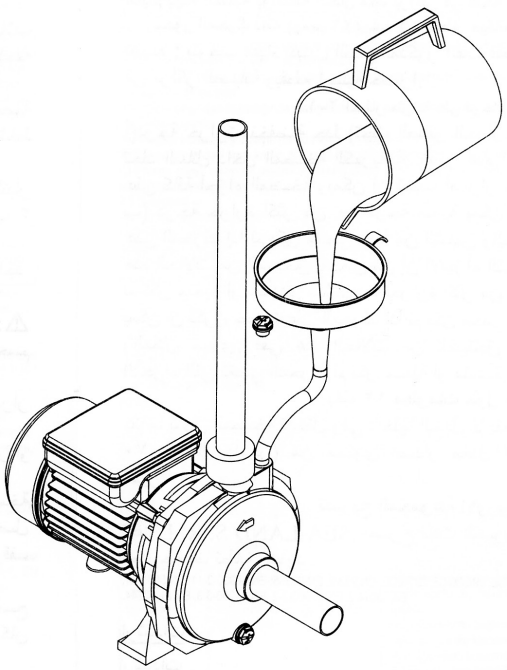

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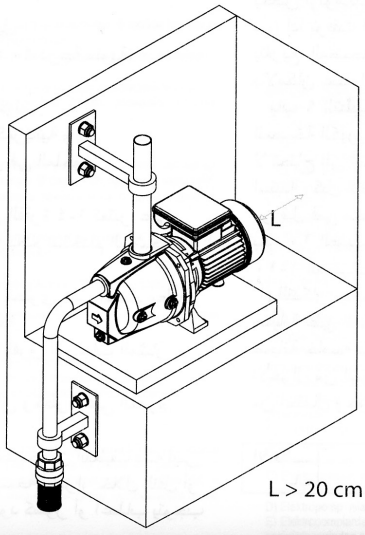

SEA LAND ELECTRIC PUMPS

SEA - LAND S.r.l.
www.sea - land.it

CE MADE IN ITALY

Type									
H	(rif.5)		**m**	**Q**		(rif.5)		**l/1'**	
Hmin	(rif.11)	**m**	**Hmax**	(rif.6)	**m**	**P1**	(rif.4)		**W**
○	(rif.2)	**HP**	(rif.2)	**kW**		(rif.1)		○	**A**
	~ (rif.1)	**V**		**Hz**					**Rpm**
	µF	(rif.3)	**V**	**IP**	(rif.9)		(rif.7)		**kg**
S/N						**Ins.Cl.** (rif.8)			**m**
Servizio continuo						Continuous duty			