

INSTRUCTIONS FOR INSTALLATION AND MAINTENANCE

EBS



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1. SAFETY MEASURES

Before starting the pump, read this instruction booklet carefully and keep it in a safe place for future reference



For safety reasons, the pump must not be used by anyone who has not read these instructions.

The pump must not be used by anyone under 16 years of age or by anyone who has not read and understood the present instruction booklet. Keep children well away from the pump when in operation..



The power cord must never be used to carry or move the pump. Always use the pump's handle.



When handling the pump, while it is connected to the electric power supply, you should avoid all contact with water.



Never remove the plug by pulling on the power cord.



Before taking any action on the pump, always remove the plug from the power socket.



There should be no individuals present in the liquid that is being pumped while the pump is in use.



If the power supply cord has been damaged, it must be replaced by the manufacturer or his authorized customer support service in order to avoid all risks.



Overload protection. The pump has a thermal overload safety device. In the event of any overheating of the motor, this device automatically switches off the pump. The cooling time is roughly 15 to 20 minutes, then the pump automatically comes on again. If the overload cut-out is tripped, it is essential to identify and deal with the cause of the overheating. See Troubleshooting.

2. USE

Boosters with integrated electronics (EBS)

Characterised by their extremely silent running, and available with 2,3, 4 and 5 impellers.

- Including an electronic safety device to prevent the dry-running of the pump.
- Including a safety device for leaks on the delivery.
- Ideal for the irrigation of gardens and grounds, and domestic water supplies.
- Characterised by the constant pressure and flow-rate.



The temperature of the fluid being pumped must never exceed 95° C



The pump must not be used to pump salt water, sewage, flammable, corrosive or explosive liquids (e.g. petroleum oil, petrol, and thinners), grease, oils or foodstuffs.



Comply with the rules and regulations of the local water authority when using the pump for the supply of domestic water.

3. STARTING THE PUMP



Given the different provisions applicable to the safety of electric systems in different countries, make sure that the pump system, as concerns its intended use, is in accordance with current legislation.



Before starting the pump, make sure that:

- The voltage and frequency specified on the pump's nameplate coincide with those of the available power supply;
- there are no signs of damage to the pump or its power cord;
- The electric connection is made in a dry place, protected against any risk of flooding;
- The electric system is complete with a residual current circuit-breaker (30 mA) and an efficient earthing connection;
- Any extension cords must comply with the requirements for electric safety.



Fill the pump casing and suction hose with clean water before starting the pump for the first time. If the pump is installed above the water level, filling must be performed slowly until the water overflows; wait a few seconds to make sure that all the air has escaped and top up until the level has stabilised.

If the pump is installed below the water level (below head), bleed the air from the pump casing by opening the filler cap. The pump will fill with water independently.

Plug the pump into the socket, start the pump and wait for the water to exit. If water has not exited within 2-3 minutes from when the pump was switched on, turn the pump off and repeat the filling operation again.

Attaching the suction hose

- Fit the suction hose from the water source to the pump making sure that the pump is above the water level. Do not position the suction hose above the level of the pump (to avoid air bubbles forming in the suction hose).
- The suction hose should be mounted in such a way that it does not create any mechanical stress on the pump.
- The foot valve should be placed at least 12 inches below the minimum water level.
- The pump will draw water only when the suction hose is completely filled with water.
- The suction hose and the pump's suction inlet should be of the same diameter.

Attaching the delivery hose

- To get the best performance from the pump, it is recommended that the diameter of the delivery hose is at least 1"
- During the self-priming phase, all laps, valves, etc. on the delivery hose must be fully open in order to allow the air inside the hose to escape.

Before plugging in and starting the pump for the first time, it is necessary that the suction hose and the pump are completely filled with water in order for suction to take place. For use in wells or when the water level is lower than the pump, a suction hose must be used that is equipped with the foot valve, This will allow the suction hose to remain filled with water after the first time that it is filled and will prevent the emptying of the hose when the pump shuts off automatically, avoiding any problems when restarting.

Booster with integrated electronics Installation



The pump's inlet pressure should not exceed 28 psi.



The maximum suction depth should be less than 26 feet



The device will not pump liquid if the tap is more than 50 feet above the level of the pump.



Due to the non-return valve in this model, the suction hose cannot be filled through the filler cap on the pump.

Using the pump

Plug the electric cable into the socket. The pump will automatically begin to run.

If the suction phase is not activated within 120 seconds, the pump will shut-off automatically. The pump will then try 2 more attempts to sell prime for 120 seconds each.

The electric pump is equipped with an integrated electronic device that allows the unit to automatically intervene in the following ways:

- **Automatic operation of the pump**

The pump automatically starts when a tap is opened and shuts off approximately 10 seconds after it is closed.

- **Protection against repeated starting due to leaks in the delivery section of the system**

If there are traces of leaks on the delivery of the system, the pump will continue to turn on and off even if it is not drawing water. Even a small leak (a few gph) could be enough to cause a drop in pressure which would start the pump. If in this case the leak is not found and fixed, the pump will turn off and remain shut-off after 40 consecutive start-up attempts.

This is signalled by the red "Alarm" LED: 2 successive flashes followed by a pause. After having resolved the leak, the RESET must be pressed to restart the pump.

The pump automatically resets after having remained for 12 hours in alarm. The alarm is activated once again after 40 ON-OFF-ON cycles if the same condition should persist.

- **Dry- Run Protection**

If the pump senses that it is not drawing any water, it will automatically switch-off after approx. 45 seconds.

The red "Alarm" LED on the electronic display will begin to flash. After having restored the flow of water to the pump, press the RESET pad to restart the pump,

If the alarm persists, or rather the user does not re-establish the flow of water and reset the pump, the automatic reset will attempt to restart the pump after 1 hour, 5 hours and 20 hours, and then once every 24 hours. The electronic display continues to signal the lack of water from the first intervention of the dry run protection up until the pump starts to operate correctly; flashing red LED with one flash and one pause. After having re-established the flow of water, press the RESET button to restart the pump.

- **Electronic display signals**

Green Led (Power) on.

The pump is connected to the main power and is ready to supply water (as soon as a tap is opened).

Yellow Led (Pump on) on.

The pump is supplying water.

Red Led (Alarm) with 1 flash cycles.

The pump is not functioning due to lack of water on the suction side: the dry running protection program is activated.

Red Led (Alarm) with 2 flash cycles.

The pump signals a leak in the system's delivery section.

4. RECOMMENDATIONS

To ensure the proper operation of the pump, it is important to comply with the following recommendations:



The pump should not operate with the delivery tap completely closed (except for electronically controlled pumps).



The pump must never be allowed to run dry.

- The diameter of the suction and delivery hoses must not be less than the relative inlet or outlet of the pump. (1")
A hose with a greater diameter should ideally be fitted to the suction inlet when the suction height exceeds 12 feet. Do not use metal connectors on the pump's threads.
- Connect the suction hose including a foot valve avoiding counterslopes, traps, goosenecks and kinks in the hose.
- Place the pump in a level, stable and dry place, and away from inflammable or explosive substances. Never expose the pump to the rain or direct jets of water.
- Make sure that the mains power connections are not subjectable to flooding, avoid that the pump is exposed to direct jets of water and do not immerse the pump in water.
- For boosters with tank: make sure that the preloading pressure of the tank corresponds to the data indicated on the pump's rating plate. If necessary, fill the tank with air to the preloading pressure through the valve after having discharged the air from the delivery side (disconnect from the mains and open the tap closest to the pump until there is no longer a discharge of water).

MAINTENANCE AND CLEANING

It is absolutely essential to prevent any risk of the pump freezing. In the event of freezing temperatures, remove the pump from the liquid, empty it and keep it in a place where it cannot freeze.

The pump must be disconnected from the mains before performing any cleaning operation.

The pump is maintenance free.

5. TROUBLESHOOTING



Before taking any troubleshooting action, disconnect the pump from the power supply. If there is any damage to the power cord or pump, any necessary repairs or replacements must be handled by the manufacturer or his authorized customer support service, or by an equally qualified party, in order to prevent all risks.

Based on the combinations of LED's the cause of the pump malfunction can normally be identified.

FAULT	LED	CAUSE	SOLUTION
The pump does not work	Power is off Pump on is off Alarm is off	No power Faulty Card.	Check that the mains power supply is sufficient. Check the electrical line and connections Contact an authorised service centre.
	Power is on Pumps on is off Alarm is off	The delivery hose is blocked Incorrect installation discharge is above 50 Feet	Check the hydraulic system
	Power is on Pumps on is on Alarm is on	Faulty card	Contact an authorised service centre.
	Power is on Pumps on is off Alarm is flashing	Lack of water no more than 26 hours ago.	Check that the suction hose has been fitted correctly
		Impeller blocked (thermal cut-out tripped)	Clean and free the pump and let the motor cool down.
Power is on Pumps on is off Alarm is on	Lack of water for more than 26 hours	Check that the suction pipe has been fitted correctly	
	Impeller blocked (thermal cut-out tripped)	Clean and free the pump and let the motor cool down.	
Insufficient delivery		Excessive suction depth	Check the suction depth
		Foot valve blocked	Clean the foot valve
		Performance of the pump is reduced due to foreign objects.	Clean the pump
The pump continuously stops and starts		The are leaks in the system The pump has sucked in foreign materials. The non-return valve is leaking	Check the system and the pump connections. Clean the pump Clean the Non-Return Valve
		The water level drops rapidly below foot valve	Position foot valve lower (not below 26 Feet)

ELECTRICAL DATA

Model	P1 Watt	P1 Hp	Max Flow GPM	Voltage Volt	Frequency Hz	Head Max Ft
EBS 800 115V	800	3/4	22	115	60	116
EBS 800 230V	800	3/4	22	230	60	116
EBS 1000 115V	1000	3/4	23.5	115	60	152
EBS 1000 230V	1000	3/4	23.5	230	60	152
EBS 1250 115V	1250	1	23.5	115	60	174
EBS 1250 230V	1250	1	23.5	230	60	174
EBS 1400 230V	1400	1.2	25.5	230	60	196

6. DISPOSAL

This product or its parts must be disposed of in accordance with the laws regarding the environment; Use the local, public or private, refuse collection services.

7. GUARANTEE

Any material or manufacturing defects will be corrected during the guarantee period established by current law in the country where the product is purchased. It is up to the manufacturer to decide whether to repair or replace any faulty parts.

The manufacturers guarantee covers all substantial defects attributable to manufacturing or material defects, providing the product has been used correctly and in compliance with the instructions.

The guarantee becomes null and void in the event of the following:

- unauthorized attempts to repair the appliance;
- unauthorized technical changes to the appliance;
- use of non-original spare parts;
- mishandling;
- inappropriate use. e.g. for industrial purposes.

The guarantee does not cover:

- parts liable to rapid wear and tear.

For any action under guarantee, contact an authorized customer support service, presenting your receipt for the purchase of the product.

The manufacturer accepts no liability for any inaccuracies in the present booklet due to printing or copying errors. The manufacturer reserves the right to make any changes to the product he deems necessary or useful, without affecting its essential features.

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