



MFCInternational

by RESPIREX

ENGINEERED INFLATABLE PRODUCT SOLUTIONS

Inlet Water Pump

Product **Manual**



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WARNING: Carefully read this manual before operating the Inlet Water Pump.

NOTICE: The manufacturer takes no responsibility for the consequences of actions not complying with the instructions given in this manual.

Technical Data	Inlet Water Pump
Product Code	DSA002
Delivery	Up to 4.2m ³ /h
Head	Up to 53m
Power Supply	Single-phase and three-phase 50 and 60Hz
Power	0.37kW to 1.1kW
Max. Operating Pressure	8 bar
Max. Total Lift	8m
Max. Ambient Temperature	40°C
Max. Number of Starts Per Hour	40
Temperature of Pumped Liquid	-10°C to +40°C
Insulation Class	F
Protection	IP55

Handling

The inlet water pump must be lifted and handled with care.

Applications

The inlet water pump is designed to handle clean non-aggressive water free of dissolved gases.

Typical applications: Domestic water supply, irrigation, pressure boosting, liquid transfer.

Screw the electric pump to a stable base using the slots in the foot of the motor.

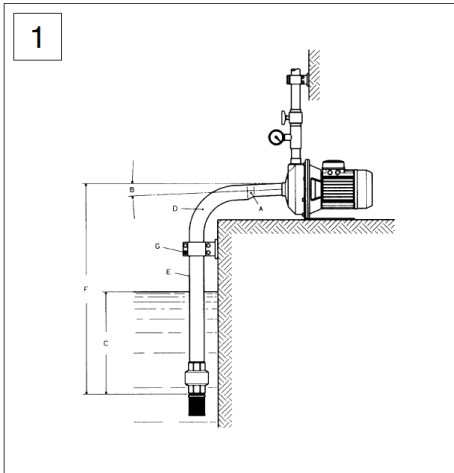


Fig. 1

Proper Installation (Fig. 1)

- A = Eccentric adapters
- B = Positive lift
- C = Good immersion
- D = Wide bends
- E = Suction pipe diameter > Pump port diameter
- F = Suction lift. Depends on pump and installation (*)
- G = Pipes must not exert stress on pump but on independent supports
- H = Foot valve (not necessary for this model)

(*) The suction lift is determined by liquid temperature, altitude, flow resistance and NPSH required by the pump. As a general rule, the suction lift is 7m for this model.

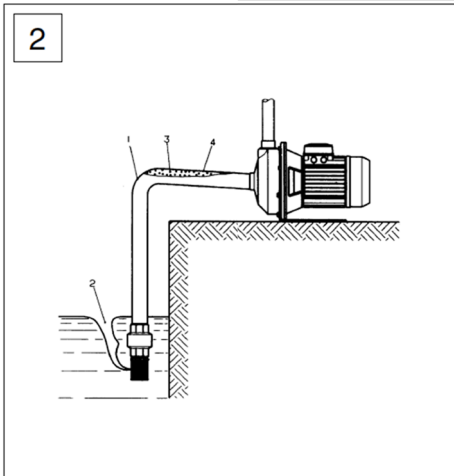


Fig. 2

Improper Installation (Fig. 2)

- 1 = Tight bends: high flow resistance
- 2 = Insufficient immersion: air suction
- 3 = Negative lift: air pockets
- 4 = Pipe diameter < pump port diameter: high flow resistance

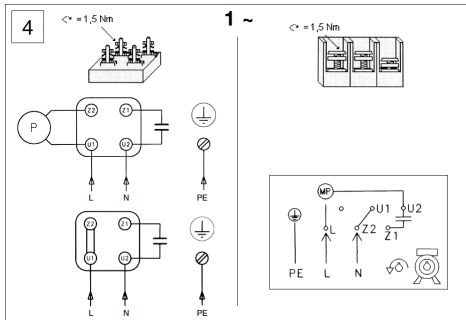


Fig. 4

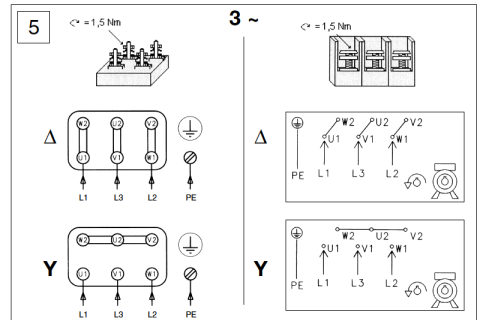


Fig. 5

To connect, proceed as shown on the back of the terminal board cover (anticlockwise rotation) and in **Fig. 4** for single-phase versions, **Fig. 5** for three-phase versions. Use standard 3-wire cables (2+ ground) for single-phase versions, 4-wire cables (3+ ground) for three-phase versions.

The reference characteristics (voltage, frequency and input current) are shown on the pump rating plate. The single-phase pumps have built-in, automatic reset thermoamperometric protection; the three-phase pumps must always be supplied through a magneto-thermal overload cutout set to the rated current.

For ambient temperatures of 40 to 45°C, supply cables with temperature characteristics of at least 95°C and minimum wire gauge of 1.5mm² must be used.

Check the direction of the rotation (three-phase models only)

Clockwise rotation when looking at the pump from the motor side.

Check by looking at the fan or by observing the pump's performance.

The correct direction of rotation is the one that generates the highest Q/H performance. In the event of incorrect rotation, switch two supply wires.

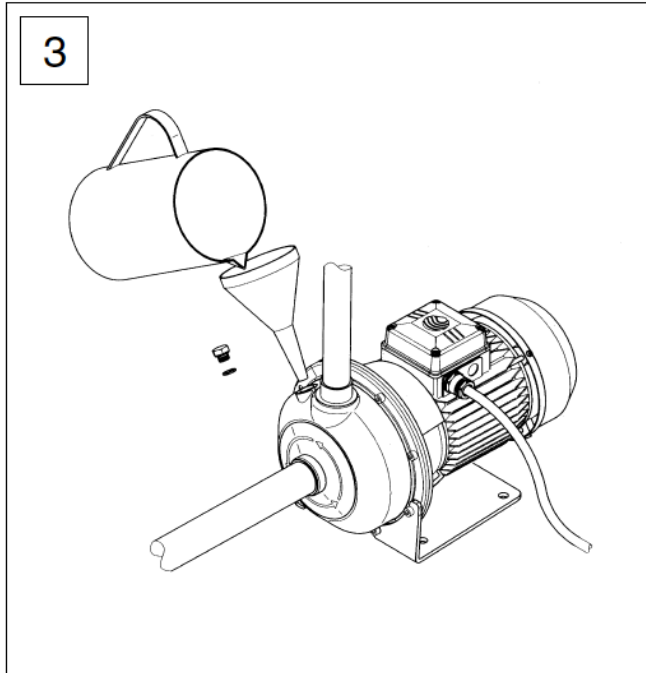


Fig. 3

Fill the pump body and suction pipe through the fill plug, bleeding off all the air. For this model, self-priming without the foot valve may require up to 3-4 minutes. We therefore recommend that you always use a foot valve.

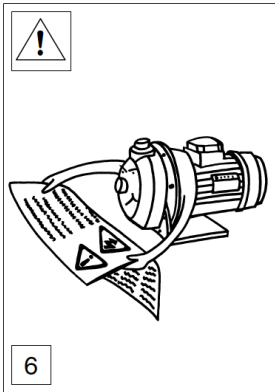


Fig. 6

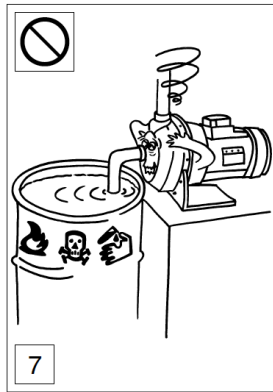


Fig. 7

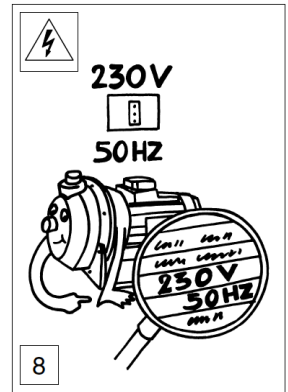


Fig. 8

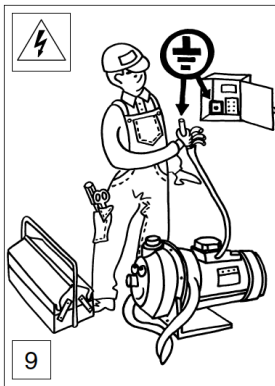


Fig. 9

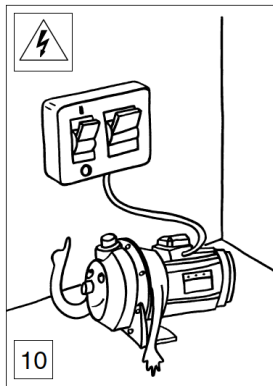


Fig. 10



Fig. 11

Fig. 6 - Pay attention to the working limits. Improper use may damage the pump, other property and also injure people.

Fig. 7 - The pump is not suitable for use with flammable or dangerous liquids.

Fig. 8 - Make sure that the rated voltage and the mains voltage are compatible.

Fig. 9 - The connections to the mains and grounding must be executed by qualified personnel (authorised electrician) in compliance with local installation standards.

Fig. 10 - Connect to the power mains using a multi-pole power switch with a switch-contact gap of at least 3mm. As additional protection from lethal electrical shock, install a high-sensitivity differential switch (0.03 A).

Fig. 11 - Make sure that unauthorized people do not have access to the pump.

Safety Instructions

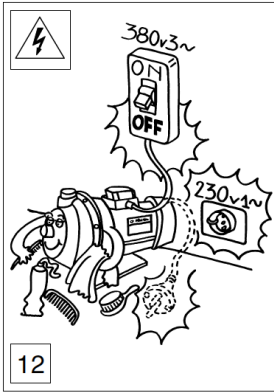


Fig. 12

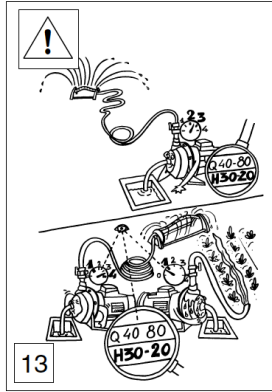


Fig. 13

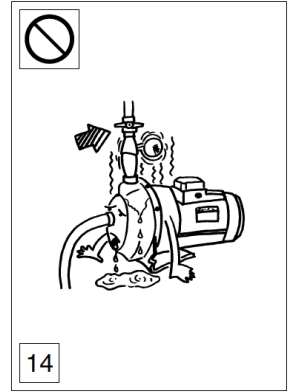


Fig. 14

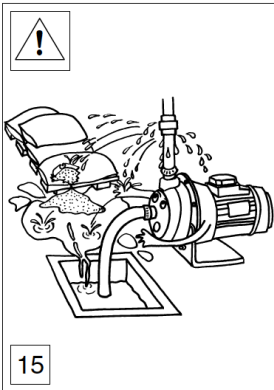


Fig. 15

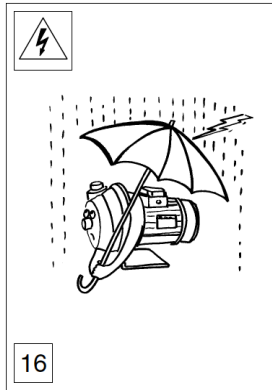


Fig. 16

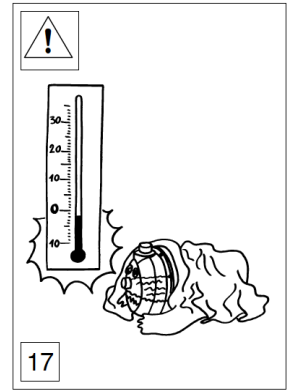


Fig. 17

Fig. 12 - Disconnect the power supply to the electric pump or unplug the machine before carrying out any maintenance, cleaning or handling operations. If the power cord is damaged it must be replaced by qualified personnel to ensure against hazards.

Fig. 13 - Use the pump only within the limits specified on the rating plate.

Fig. 14 - Do not run the pump with the port closed.

Fig. 15 - Be alert to hazardous situations caused by accidental power failure.

Fig. 16 - Protect the pump from the weather.

Fig. 17 - Caution! Avoid icing.

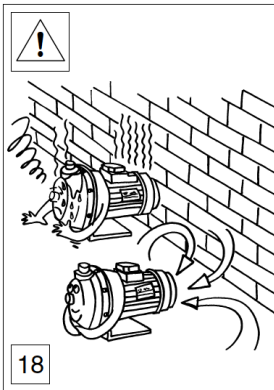


Fig. 18

Fig. 18 - Make sure the motor is properly ventilated.

WARNING: The motor can reach a temperature of 70°C.

Fault	Problems/Solutions
The pump does not start	Check the power supply. Reset the ground fault interrupter or circuit breaker if it has triggered. The thermo-amperometric protection incorporated in the single-phase versions may have activated: it will reset automatically once the motor has cooled.
The motor starts but the pump does not deliver	The pump is sucking in air: check the liquid level, the tightness of the suction pump and the operation of the foot valve.
The pump's delivery is reduced	Check for throttling and direction of rotation in three-phase models.
The pump stops occasionally	Triggering of thermoamperometric protection (single-phase version) or of temperature relay due to excessive current input: contact the MFC department on +44 (0)1443 433 075.

Maintenance

After each use it is necessary to wipe the dirt off the water inlet pump.

On normal working conditions it is necessary to check the water inlet pump completely and its functionality.

The inlet water pump must be stored in a dry (not dusty) place.

The inlet water pump should be serviced by qualified personnel only, after having been disconnected from the power mains.

If you have any queries regarding the maintenance of the inlet water pump, please contact MFC International on +44 (0)1443 433075.

Repairs

As a general rule, repairs/damaged products will need to be assessed in two categories:

a) that which is repairable at the base, or b) serious damage that will need to be repaired by MFC International.

If in doubt as to the extent of the damage and the level of repairs necessary, please contact the MFC service department on +44 (0)1443 433 075.

WARNING: Repairs may only be carried out by the manufacturer, or people certified by MFC International Ltd.



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