



High Efficiency 6M Circulating Pump

Installation and Operation Instructions



EEL ≤ 0.23



General Notes - ErP (Ecological Design) Directive

- The benchmark for the most efficient circulators is $EEL \leq 0.20$
- Information on recycling/disposal: this product should be disposed of separately from household waste in line with local laws and regulations. When this product reaches its end of life, dispose of it at your local waste collection point/recycling centre.
- The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment



Warning Prior to installation, read these installation and operating instructions. Installation must comply with local regulations and accepted codes of practice.



General Information

These operating instructions explain the functions, operational features and installation instructions for this product.

This circulating pump is designed for the circulation of water in heating systems.

For use in the following installations:

- Underfloor Heating Systems
- One-pipe Systems
- Two-pipe Systems

Circulating Pumps incorporate a permanent-magnet motor and variable-pressure control, enabling continuous adjustment of the pumps performance to the actual requirements.

Advantages of installing an Intertrade Circulating Pump

Easy Installation & Start-up - As the pump is already pre-set to factory settings, it can normally be started without making any adjustments.

High Degree of Comfort - Minimum noise from valves etc.

Low Energy Consumption - When compared to conventional circulating pumps.

Pump Liquids

Clean, non-aggressive and non-explosive liquids, not containing solid particles, fibres or mineral oil. In heating systems, the water must meet the requirements of accepted standards for water quality in a heating system.

Product Components (See Page 7, Fig. 1)

1. Inlet
2. Directional Flow
3. Pump Housing
4. Motor Housing
5. Data Plate
6. Vent Screw
7. Control Panel

Product Code Definition	RS	25	6	EA	180
Screwed Pipe Pump	_____	_____	_____	_____	_____
Nominal Width - 25mm (1 1/2")	_____	_____	_____	_____	_____
Maximum Head (Metre)	_____	_____	_____	_____	_____
Electrical Auto	_____	_____	_____	_____	_____
Port To Port Length (mm)	_____	_____	_____	_____	_____

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Control Panel

Elements on the control panel

Fig. 2

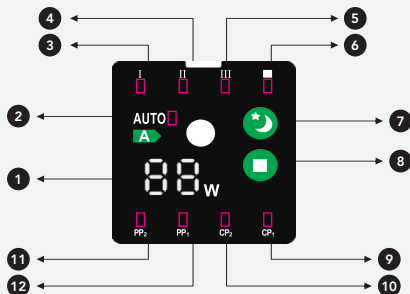


Table 1

Ref.	Description
1	Screen to show actual working wattage
2	Light field indicating auto mode
3	Min speed for manual button
4	Mid speed for manual button
5	Max speed for manual button
6	Light field indicating night mode
7	Push button to select night mode
8	Push button for selecting pump setting
9	CP1 indicating minimum constant pressure curve
10	CP2 indicating maximum constant pressure curve
11	PP1 indicating minimum proportion pressure curve
12	PP2 indicating maximum proportion pressure curve



Light fields indicating the pump setting

See Page 3, Fig. 2, Ref 3, 4, 5, 9, 10, 11, 12

The Intertrade Circulating Pump has seven optional settings which can be selected with the push-button.

Push-button when selecting pump setting

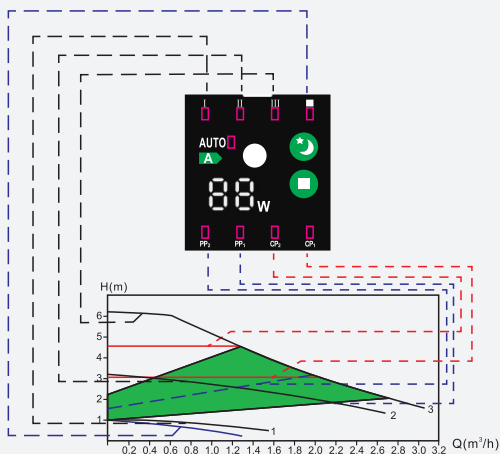
See Page 3, Fig. 2, Ref 8

Every time the push button is pressed, the pump setting is changed.

A cycle is seven button presses.

Relation between pump setting and pump performance

Fig. 3



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Table 2

Setting	Pump Curve	Function
PP1	Lowest proportional pressure curve	The duty point of the pump will move up or down on the lowest proportional pressure curve, depending on the heating demand. The head (pressure) is reduced at falling heating demand and increased at rising heating demand.
PP2	Highest proportional pressure curve	The duty point of the pump will move up or down on the highest proportional pressure curve, depending on the heating demand. The head (pressure) is reduced at falling heating demand and increased at rising heating demand.
CP1	Lowest constant pressure curve	The duty point of the pump will move out or in on the constant pressure curve, depending on the heating demand. The head (pressure) is kept constant, irrespective of the heating demand.
CP2	Highest constant pressure curve	The duty point of the pump will move out or in on the constant pressure curve, depending on the heating demand. The head (pressure) is kept constant, irrespective of the heating demand.
III	Speed III	Pump runs at a constant speed consequently on a constant curve. In speed III, the pump is set to run on the maximum curve under all operating conditions. Quick venting of the pump can be obtained by setting the pump to speed III for short period.
II	Speed II	Pump runs at a constant speed consequently on a constant curve. In speed II, the pump is set to run on the medium curve under all operating conditions.
I	Speed I	Pump runs at a constant speed consequently on a constant curve. In speed I, the pump is set to run on the minimum curve under all operating conditions.
Auto	Ex Factory Setting	The Auto Mode allows the pump speed to automatically respond to system demands.
	Night Mode	Under 'Night Mode' the power of the pump automatically alters after a period of time, After two hours, it will be down to its lowest speed of between 5-10 watt. After seven hours the pump moves from night mode to its original setting.



Fault Identification and Troubleshooting Chart



Warning

Before starting any work on the pump, make sure that the electricity supply has been switched off and that it cannot be accidentally switched on.

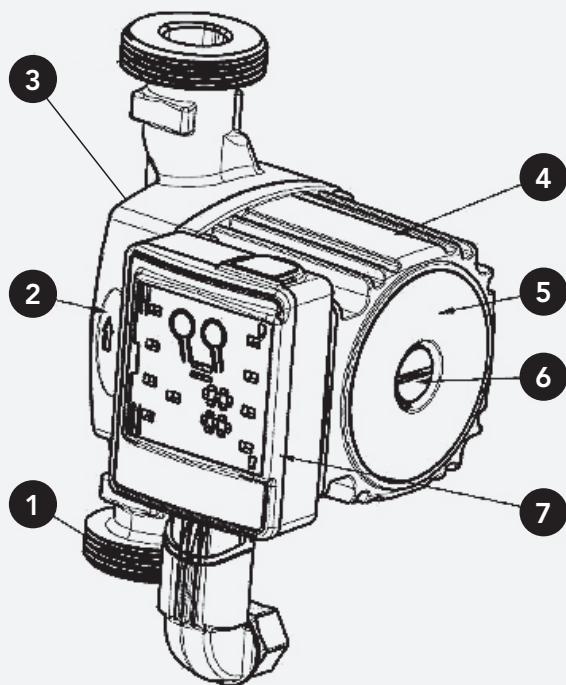
Table 3

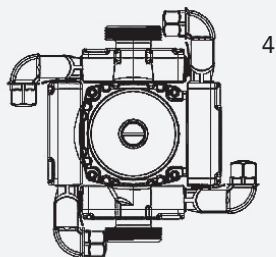
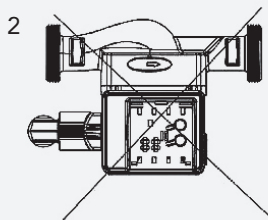
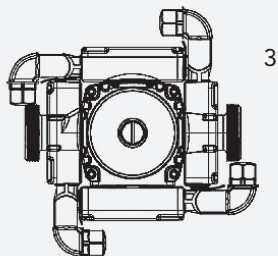
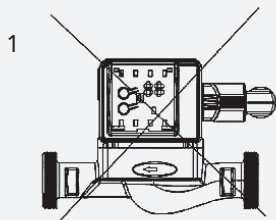
Fault	Control Panel	Cause	Remedy
1. The pump does not run	Light Off	a) One fuse in the installation is blown b) The current operated or voltage operated circuit breaker has tripped out c) The pump is defective	a) Replace the fuse b) Reset the circuit breaker c) Replace the pump
	Only Shows Power	a) Electricity supply failure, or the electrical supply may be reduced b) The pump is blocked	a) Check that the electricity supply falls within the specified range b) Remove the impurities
2. Noise in the system	Shows power and light field for pump setting is on	a) Air in the pump b) The flow is too high	a) Vent the system b) Reduce the suction head
3. Noise in the pump	Shows power and light field for pump setting is on	a) Air in the pump b) The inlet pressure is too low	a) Let the pump run. It vents itself over time b) Increase the inlet pressure, check the charge pressure in the expansion vessel
4. Under-performance	Shows power and light field for pump setting is on	a) The pump performance is too low	a) Increase the suction head

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Fig. 1



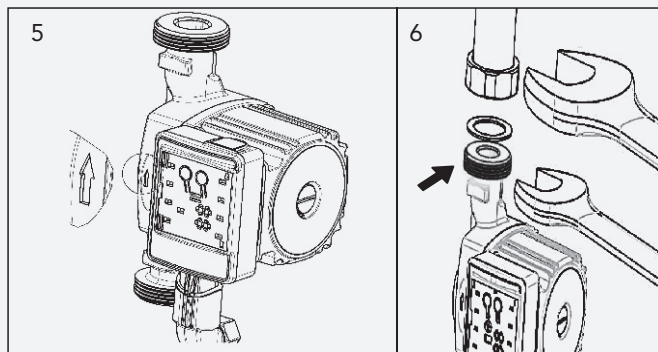


ATTENTION: Always install the pump with the motor shaft in the horizontal position as illustrated in diagram 3 & 4.

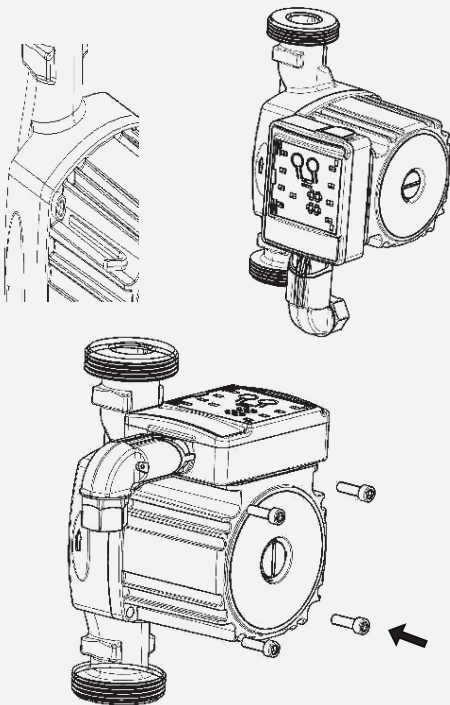
Never install the pump with the motor shaft in the vertical position as illustrated in figure 1 & 2

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Before installation note the direction of the flow indicator symbol on the body of the Pump as illustrated in diagram 5, also always ensure to insert the rubber gaskets supplied with the Intertrade Pump on the pump flanges during installation as illustrated in figure 6.

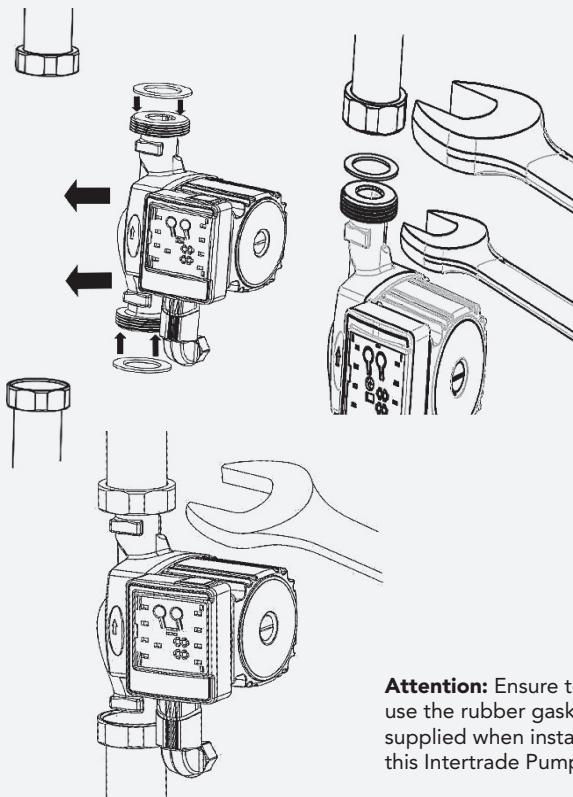


Warning

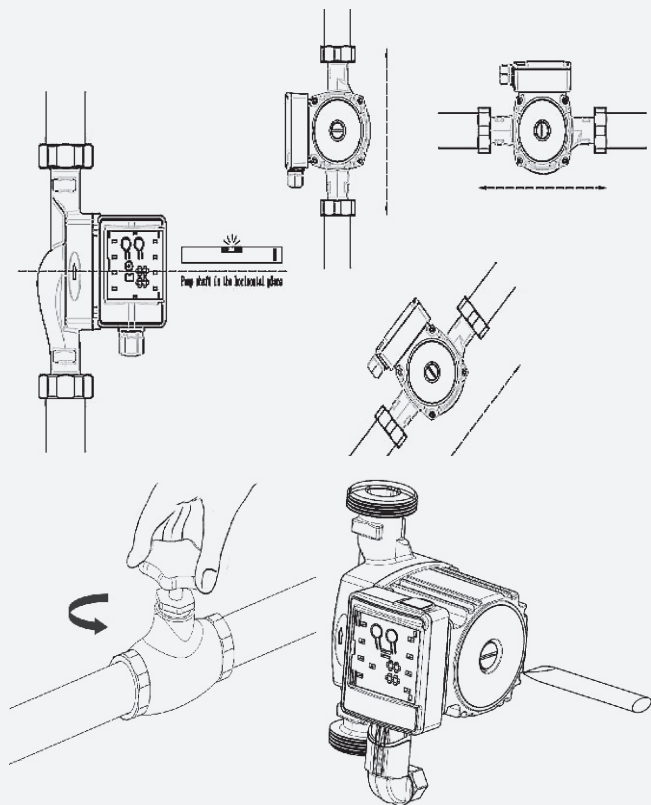
Always close the pump valves if replacing a pump. Be aware that the system liquid may be scalding and under high pressure.

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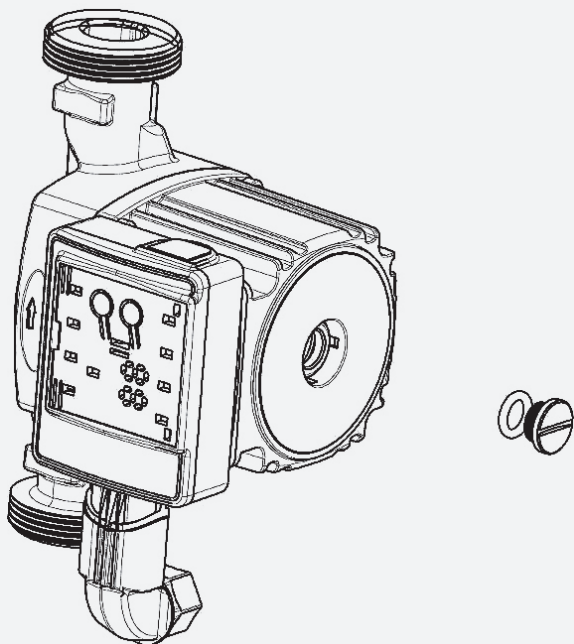


Attention: Ensure to use the rubber gaskets supplied when installing this Intertrade Pump.



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Warning

During Venting of the Circulating Pump, be aware vapour and liquid will escape via the vent orifice as illustrated. **The Pump Must Not run dry.**



Warning

Due to the operational nature of solid fuel burners, stoves or any uncontrolled heat source, the Intertrade Pump speed **MUST** be set to the 1, 2 or 3 speed setting. **ADDITIONALLY DO NOT SET THE PUMP TO AUTO!**

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Circulating Pump Error Chart

Code	Error	Possible Causes	Possible Solutions
E-1	Motor Rotor Locked	Foreign bodies, impurities in the central heating system. Sludge build up, No Y-Strainer or filter on heating system fill.	Rotor jammed, check that the impeller can spin freely. To check that it can rotate freely. Remove air vent screw and turn shaft manually with flat head screw driver, clock-wise. If jammed check impellor for foreign bodies.
E-2	Motor Phase Missing	Check electrical connection.	Check with qualified installer.
E-3	High Temperature	Installation error, too close to an uncontrolled heat source or pump ran dry.	Check the install location, check that the heating system is full of water and air has been vented. Check heat source near or around the pump.
E-4	IPM Error, Hardware Fault	PCB damage, water ingress, seals cooked from overheating.	Check for water ingress, Check for heat sources, contact manufacture.
E-5	Software Over current	Electrical current fluxing, too much current being drawn.	Check electrical supply, check with manufacturer.
E-6	Accumulated Errors	Multiply errors present in 5 minutes.	Check the Error code, By powering off the unit and restarting. Take note of the first Error code shown and proceed to diagnose with Error chart. Proceed with solution. Contact manufacturer.



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