EMBRASS PEERLESS

ECLIPSE

Universal ErP Compliant
Variable Speed Heating Circulating Pump

Installation and Operating Instructions

3

ErP READY

P1

1 : 3

Contents

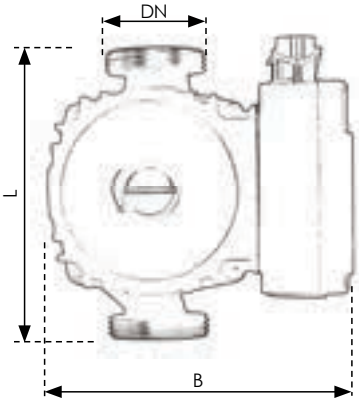
General information

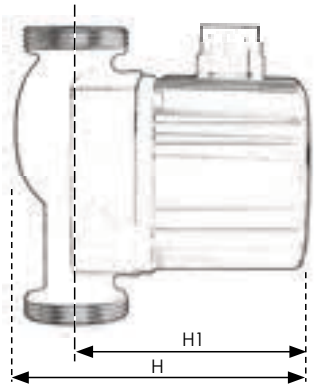
- Please read before installing your **Eclipse** pump.
- Pump is factory set to 5 metre.
- The pump must be installed by a competent person qualified to carry out the installation and ensure any building regulations are fully complied with.
- The electrical supply must be isolated prior to installation or any maintenance works carried out.
- Avoid positioning the pump in areas where high humidity or poor ventilation can cause potential damage to the electrical components.
- The pump should be fitted with means of isolation either side of the unit.
- The heating system will need the appropriate amount of corrosion inhibitor to protect the internals of the pump, failure to do this will invalidate the warranty.
- Before switching the system on, prime the pump by opening the valve allowing water to enter the pump. The pump should never be run dry, failure to do this will invalidate the warranty.
- To prolong the life of the pump when not in use for periods of time or where frost damage might be an issue, drain the water from the pump, close both isolating points and turn off from the electrical supply.
- The pump should always be fitted out of the reach of children and never connected to the drinking water system.

About your low energy circulating pump

- Designed to circulate water around hot water heating systems with variable flows and temperatures.
- Can be fitted where underfloor heating systems are installed with one or two pipe applications.
- The pump incorporates a permanent magnet motor and differential pressure monitor that adjusts the pumps performance to maximise energy efficiency.

Dimensions





Model	Size (mm)				Gross Weight (kg)	Fittings
	H	H1	L	B		DN
Eclipse 490920	**130**	**100**	**130**	**120**	**3.5**	**G1.1/2"**

Operating parameters

The **Eclipse** pump is suitable for the following installations and environment.

- Ambient temperature 0ºC to 40ºC
- Water temperature +1ºC to +110ºC
- Maximum pressure 10 bar
- IP44 rated

In order to prevent condensation damage within the control box the water temperature in the pump must always be kept higher than the ambient temperature in the vicinity.

The heating system must be clean and protected with a non-corrosive inhibitor and free from any solid debris.

Installation

Ensure the pump is fitted in the vertical or horizontal position with enough room to use isolation points either side of the unit and access to make the required electrical connections.

Make sure a water tight seal has been made between the pump and isolation points using the gaskets provided.

Type key

CFA-25-50-130

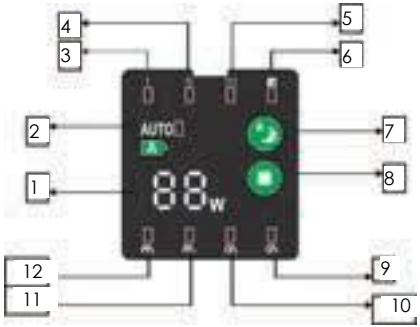
Screwed pipe pump
Nominal width (mm)

Typ 20(=1" pipe connection)
Typ 25(=1.1/2" pipe connection)
Typ 32(=2" pipe connection)

Maximum head (m)

Port to Port length (mm)

Control panel



Pos	Description
1	Screen to show actual working power
2	Light fields indicating AUTO mode
3	Min speed for manual button
4	Mid speed for manual button
5	Max speed for manual button
6	Light fields indicating night mode

Pos	Description
7	Push-button to select night mode
8	Push-button for selection of pump setting
9	CP1 indicating Min constant pressure curve
10	CP2 indicating Max constant pressure curve
11	PP1 indicating Min proportion pressure curve
12	PP2 indicating Max proportion pressure curve

1 Once all connections have been established and the pump has been primed, switch off the pump and disconnect the electrical connector; this performs a factory reset.

2 Re-connect the electrical connector, ensure correct orientation and switch on the electrical supply.

3 Press and hold buttons 7 and 8 simultaneously.

4 Display Shows -1 = 4 metre head
Display Shows -2 = 5 metre head
Display Shows -0 = 6 metre head

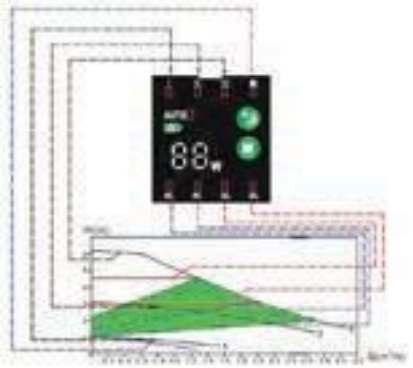
5 Press '8' to cycle up through the options
Press '7' to cycle down through the options

6 When the pump is being changed from factory set header height to the required one, the visual display shows the number with the - (minus) symbol in front.

7 When the desired number has been obtained for the correct header height switch off from the electrical supply.

Correct orientation of electrical connector

Pump Settings and performance



Setting	Pump Curve	Function
PP1	Lowest proportional pressure curve	The duty point of the pump will move up or down the lowest proportional pressure curve, depending on 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 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 constant pressure curve, depending on 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 constant pressure curve, depending on heating demand. The head (pressure) is kept constant irrespective of the heating demand.

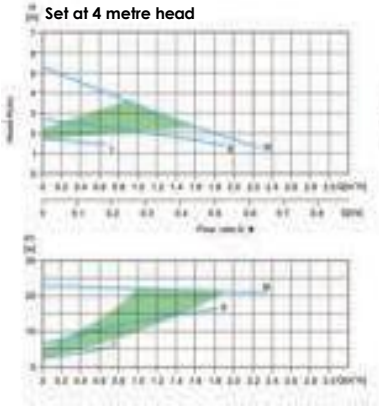
Pump Settings and performance

Setting		Function
III	Speed III	Pump runs at a constant speed and 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 a short period.
II	Speed II	Pump runs at a constant speed and 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 and 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 Settings		Under 'AUTO' mode, the power of pump automatically be up or down according to flow of system in certain conditions.
	Night mode	Pump runs select to night mode, after hour the power automatically down, after two hours it will be down lowest between 5-10 watts. After seven hours the pump auto eliminate and recovery to original position.

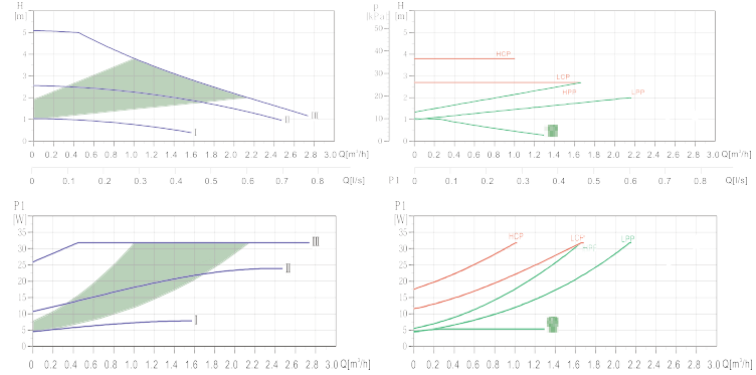
Technical data

IP	IP44
EEI	<20
Noise	<43 Db(A)
PW	5w - 45w (6mtr) 5w - 32w (5mtr) 5w - 22w (4mtr)
IN	0.08A - 0.38A (6mtr) 0.08A - 0.26A (5mtr) 0.08A - 019A (4mtr)
Cable connector	Plug connector
Max head	6.3mtr
Flow	0.3 - 3m3/h (6mtr) 0.3 - 2.8m3/h (5mtr) 0.3 - 2.2m3/h (4mtr)
Working pressure	10bar
Mains connection	230V 50Hz
Ambient temperature	0°C to +40°C (+55°C in closed areas)
Insulation class	F
Liquid temperature	2°C to +95°C

Set at 4 metre head



Set at 5 metre head



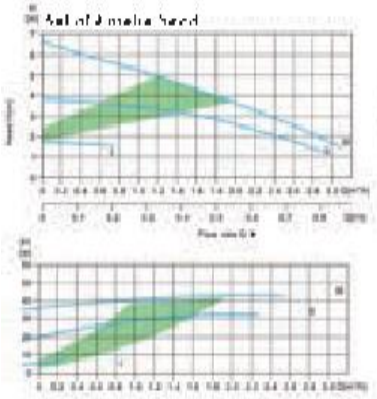
LCP=CP Lowest Constant Pressure Curve

LPP=PP1 Lowest Proportional Pressure Curve

HCP=CP Highest Constant Pressure Curve

HPP=PP2 Highest Proportional Pressure Curve

Technical data



LCP=CP Lowest Constant Pressure Curve

LPP=PP1 Lowest Proportional Pressure Curve

HCP=CP Highest Constant Pressure Curve

HPP=PP2 Highest Proportional Pressure Curve

Code	Description	Solution
E0	IBUS fault	Circuit board error - replace pump
E1	Pump in lock mode	Disconnect pump from system and clean debris from impeller chamber
E2	Electrical phase	Wiring fault - check terminal connections and inspect cable
E3	Thermal protection	Voltage has exceeded 6% of required current
E4	Three-phase short circuit	Check wiring continuity at fuse board
E5	Low voltage protection mode	Insufficient voltage to pump - check wiring
E6	High voltage protection mode	Increase in voltage supply - check wiring and environment around pump housing
E7	Overload	Power surge - check electrical supply
E-	ERROR_ID_PUMP_DRIVER_FAILURE	Pump has errored 5 times in 5 minutes. Disconnect and leave for 10 minutes before reconnecting. If error persists seek professional assistance

Troubleshooting

Fault	Control Panel	Cause	Solution
1. Pump does not run	(i) Power light off	a) Check wiring	Make sure all wires are correctly connected
		b) Check fuse in plug / board	Replace fuse or reset trip
		c) Defective pump	Replace fitting
	(ii) Power light on	a) insufficient electrical current	Check supply to the pump is within the specified range
		b) The pump is blocked	Remove the impurities
2. Noise in the system	(i) Power light on	a) Air lock	Vent entire system
		b) Incorrect header height setting	See manual to reset pump header height
		c) The flow is too high	Reduce the suction head
3. Noise in pump	(i) Power light on	a) Air in pump casing	Run pump normal, it may take several hours to correct
		b) Inlet pressure too low	Increase inlet pressure to the pump. Check all valves are in the fully opened position

Electrical work to be carried out by competent qualified licensed electricians in strict conformity to ruling national conditions and local regulations.

Embrass Peerless, Units 2-5 Monkspath Business Park, Shirley, West Midlands, B90 4NY
tel: 0121 744 3900 email: technical@embrasspeerless.co.uk
www.embrasspeerless.co.uk