strada®

DHWB
Domestic Hot Water Circulation Pump
Installation and Operational Manual

Notes

1. Read the installation manual carefully before installation and use.
2. The manufacturer will not be liable for any personal injury, pump damage or any property damage due to failure to comply with contents specified in the safety warning.
3. The installers and operators must comply with local safety regulations.
4. This product must only be installed and maintained by a qualified professional.
5. The pump should not be installed in a damp environment.
6. To provide convenient access for maintenance, isolating valves should be installed on both sides of the pump.
7. The power supply of the pump should be isolated before installation and maintenance.
8. In hard water areas heat supply pipelines should be adequately protected to avoid a build up of lime scale in the circulating water which may block the impeller.
9. Do not run the pump without liquid.
10. This model is suitable for drinking water **only**.
11. The liquid circulating through the pump may be at high temperature and high pressure therefore, the system must be completely drained down or the isolating valves on both sides of the pump closed before removal and maintenance is carried out.
12. Adequate ventilation must be ensured in high ambient temperature periods to avoid condensation that could cause electrical malfunctions.
13. If the ambient temperature drops below 0°C the pump system will not operate. Under these conditions the liquid in the system should be completely drained to avoid damage of the pump body.
14. If the pump is left unused for an extended period of time, the isolating valves should be closed on both sides of the pump and the power supply disconnected.
15. If the power supply cable is damaged, it must be replaced by a qualified professional.
16. If the pump overheats, the isolating valves must be closed off on both sides and the power supply to the pump cut off immediately.
17. This product should be stored in a dry, well-ventilated location under room temperature.

The DHWB series of circulation pumps have been designed for use in conjunction with domestic/ drinking water service systems.

They are, by material selection and design, corrosion proofed against any residual parts that are intended for use in domestic hot water and domestic heating systems.

The pump consists of a hydraulic system, a glandless pump motor with terminal box. All the rotating parts in the glandless pump are in contact with the fluid, this is also true for the motor rotor. The fluid lubricates the slide bearings and cools the bearing and the rotor.

Motor protection is not necessary, even the maximum load current cannot damage the motor.

Variable Speed Control

The DHWB comes equipped with a rotary switch inside the terminal box, to enable manual 3-speed control (1-2-3).

At minimum speed (1) the maximum speed of the pump is reduced to approx 40 -50%, the power input is reduced to approximately 50%.

At moderate speed (2) the maximum speed of the pump is reduced to approx 70%, the power input is reduced to approximately 60-70%.

At maximum speed (3) the maximum speed of the pump is reduced to approx 90-100%, the power input is reduced to approximately 90-100%.

Warning

Before installation, please carefully read the installation and operation manual. Installation and use of the equipment must comply with local regulation and applicable operation standards.

Signs

Warning

Failure to comply with this safety instruction may lead to personal injury!

CAUTION **Caution**

Failure to comply with this safety instruction may lead to equipment malfunction or damage!

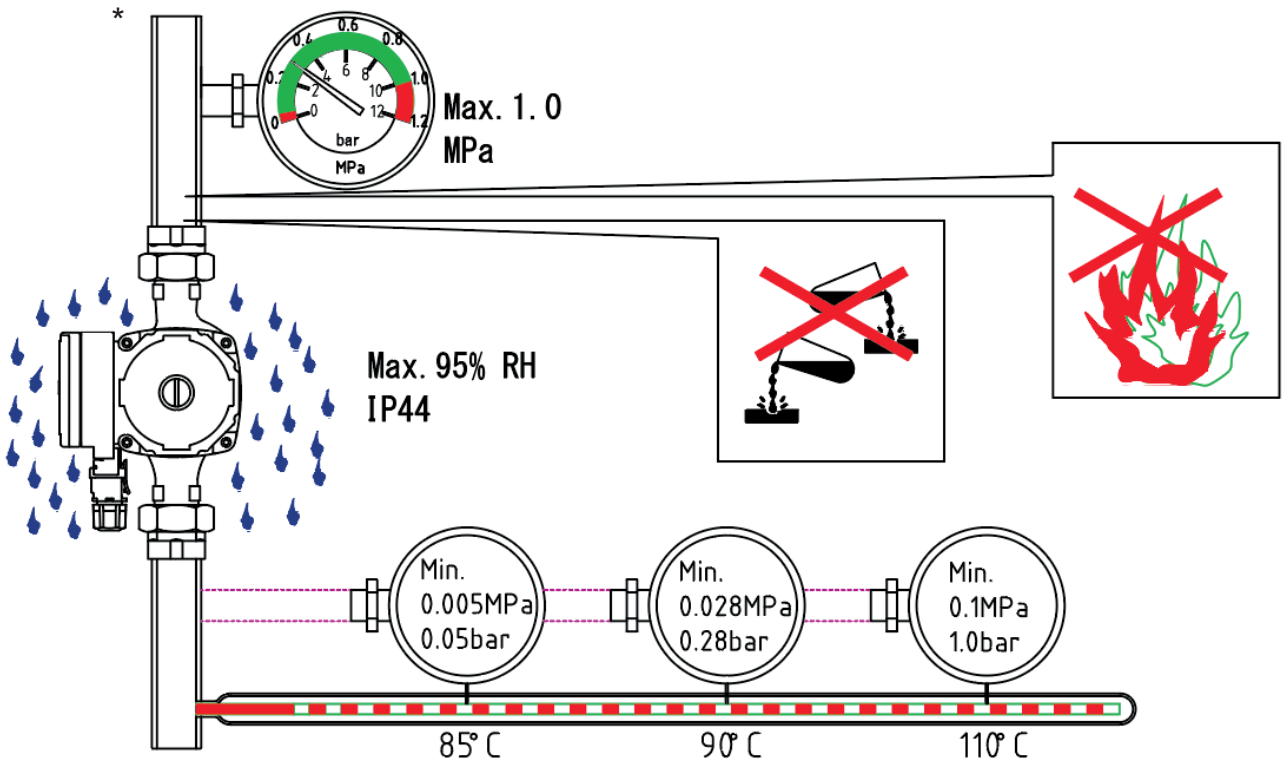
Operating Conditions	
Ambient Temperature	0~+ 40°C
Relative Humidity (RH)	Max. Humidity 95%
Medium (Liquid Delivery) Temperature *	+2°C - 110°C
System Pressure	Maximum Pressure 1.0 mPa (10 bar)
Degree of Protection	IP44

** To avoid condensation in the control box and the stator, the temperature of liquid being pumped must always be higher than the ambient temperature.*

Liquid Temperature	<85°C	90°C	110°C
Inlet Pressure	0.05 bar	0.28 bar	1 bar
	0.5m head	2.8m head	10m head

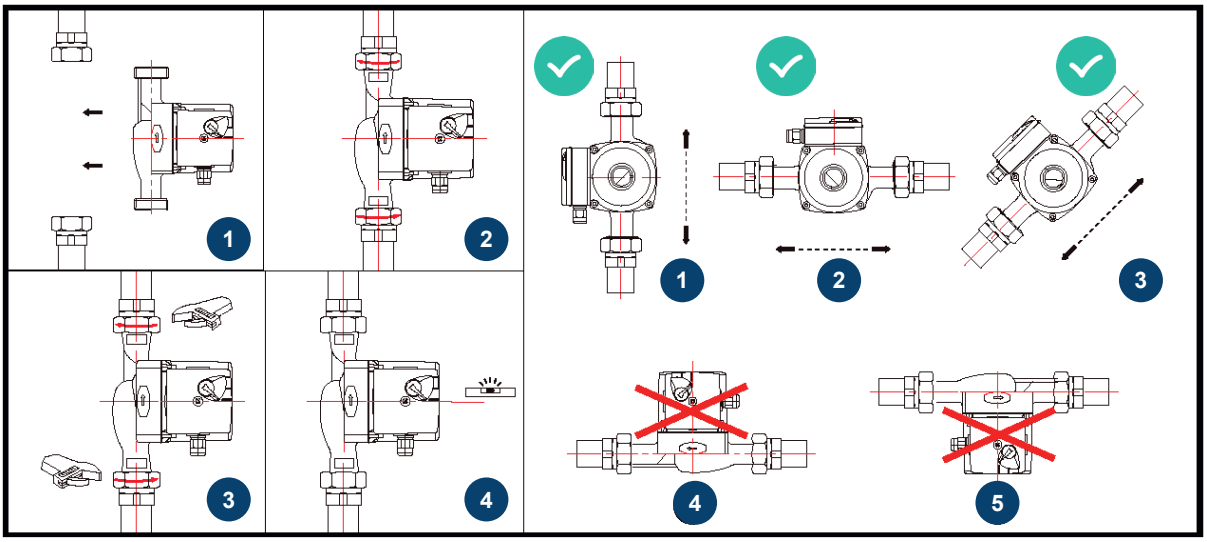
Pumping Liquid

The pumping liquid must include only thin, clean, non-corrosive and non-explosive liquid which shall not contain any solid particles, fibre or mineral oil, and the pump must not be used to pump flammable liquids such as rapeseed oil and petrol.

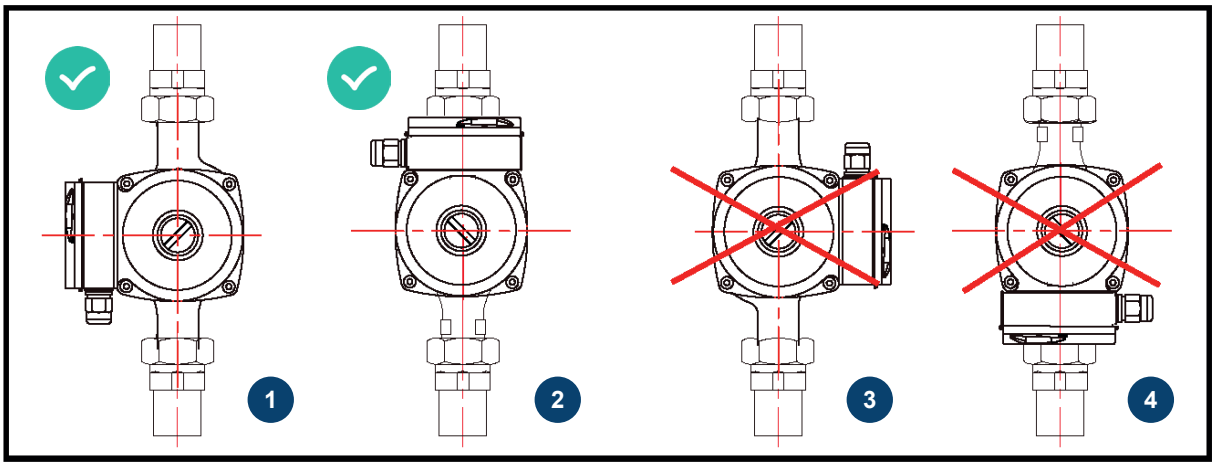


*Picture for illustration purpose only

When installing the DHWB circulation pump, the arrow on the pump case indicates the direction of flow of the liquid through the pump. When installing the circulation pump, the two supplied gaskets must be installed on the inlet and outlet. During the installation, the motor shaft of the pump must be fitted in a horizontal position.



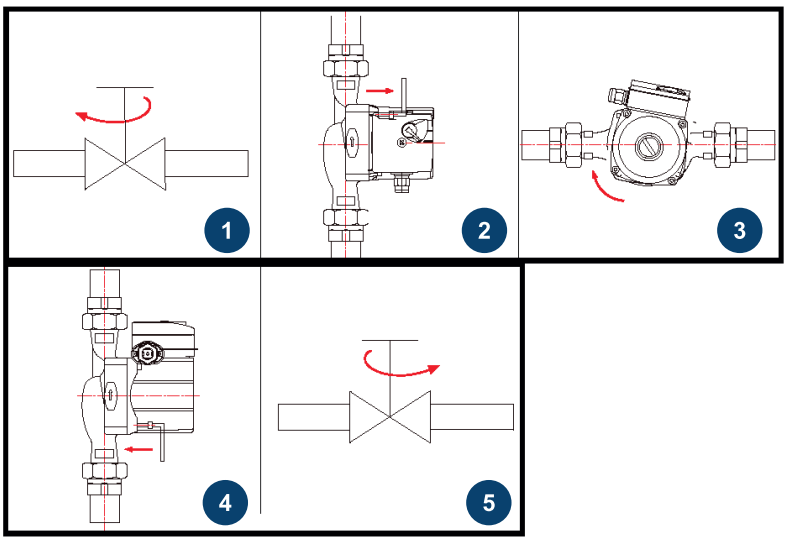
Positioning of the Junction Box



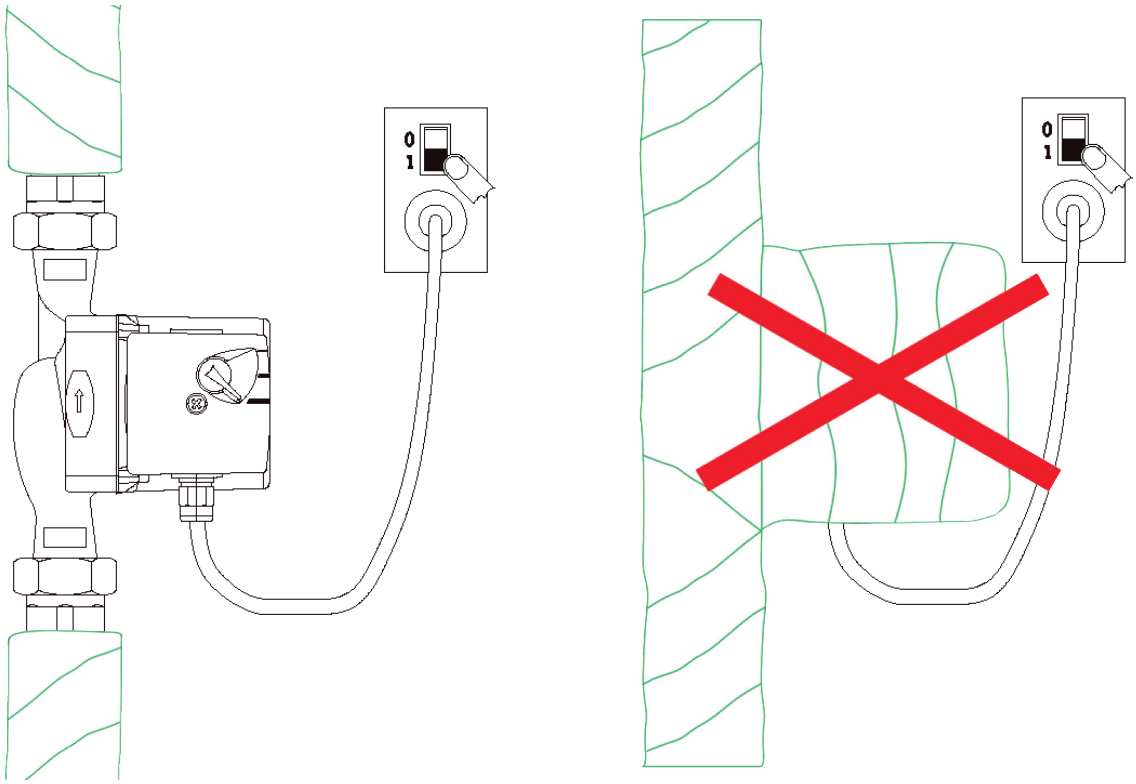
Changing Position of the Junction Box

The junction box can be rotated in a step of 90°. The procedures for changing the position of junction box are as follows.

1. Close the isolation valves at the inlet and outlet and release the pressure.
2. Unscrew and remove the four socket head screws that fasten the pump body.
3. Rotate the motor to the expected position and align the four screw holes.
4. Install the four socket head screws again and fasten them clockwise.
5. Open the isolation valves at the inlet and outlet.

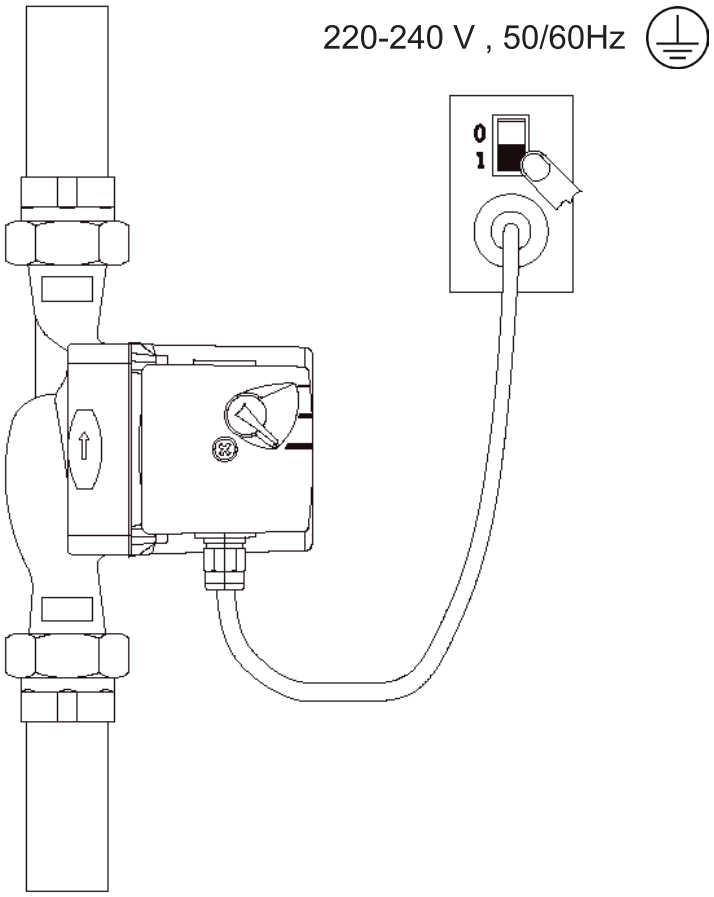


Pumping liquid may be high temperature and high pressure, therefore the liquid in the system must be completely drained or the valves on both sides of the pump must be closed off before removing the socket head screws.



NOTE To limit heat loss the pump body and pipeline should be thermally insulated.

CAUTION Do not isolate or cover the junction box and control panel.



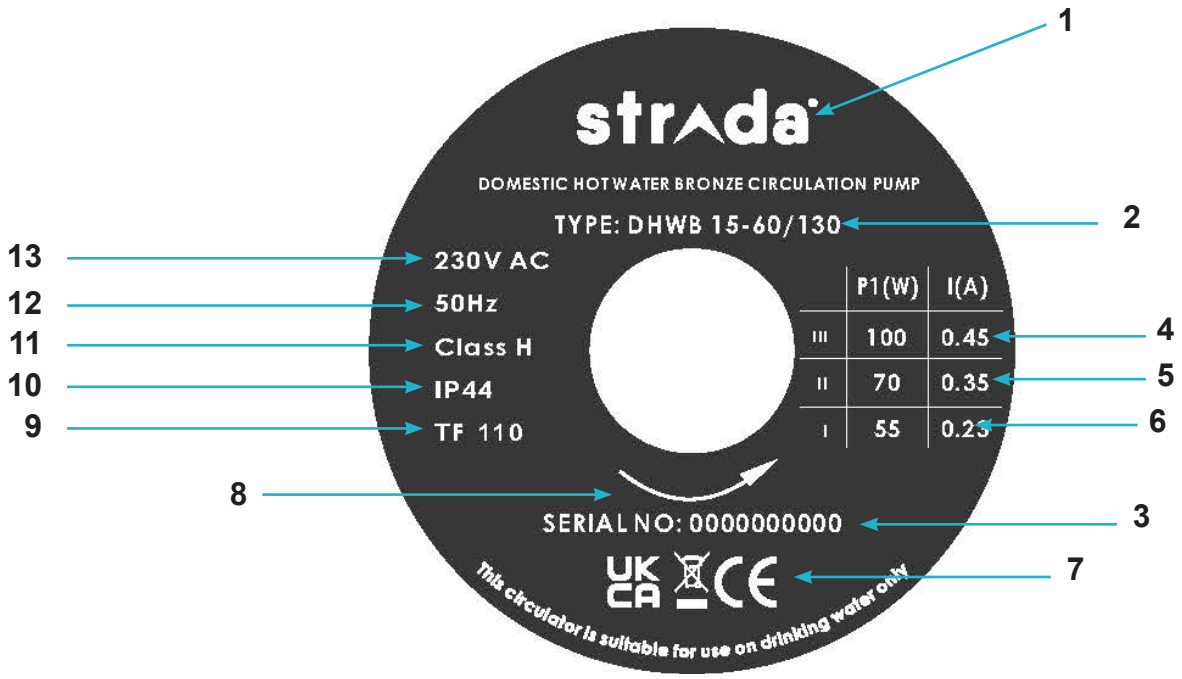
All electrical connections must be carried out by a qualified professional in accordance with local regulations.

The pump must be earthed ⏚.
The pump must be connected to an external power switch, and the minimum space between all the electrodes is 3mm.

The DHWB circulation pump needs no secondary protection.

Check if the supply voltage and frequency are the same as the parameters indicated on the nameplate of the pump. Connect the pump power supply with the electrical gland adaptor supplied together with the pump. After power is supplied, the indicator lamp on the control panel is ON.

Data Plate Information

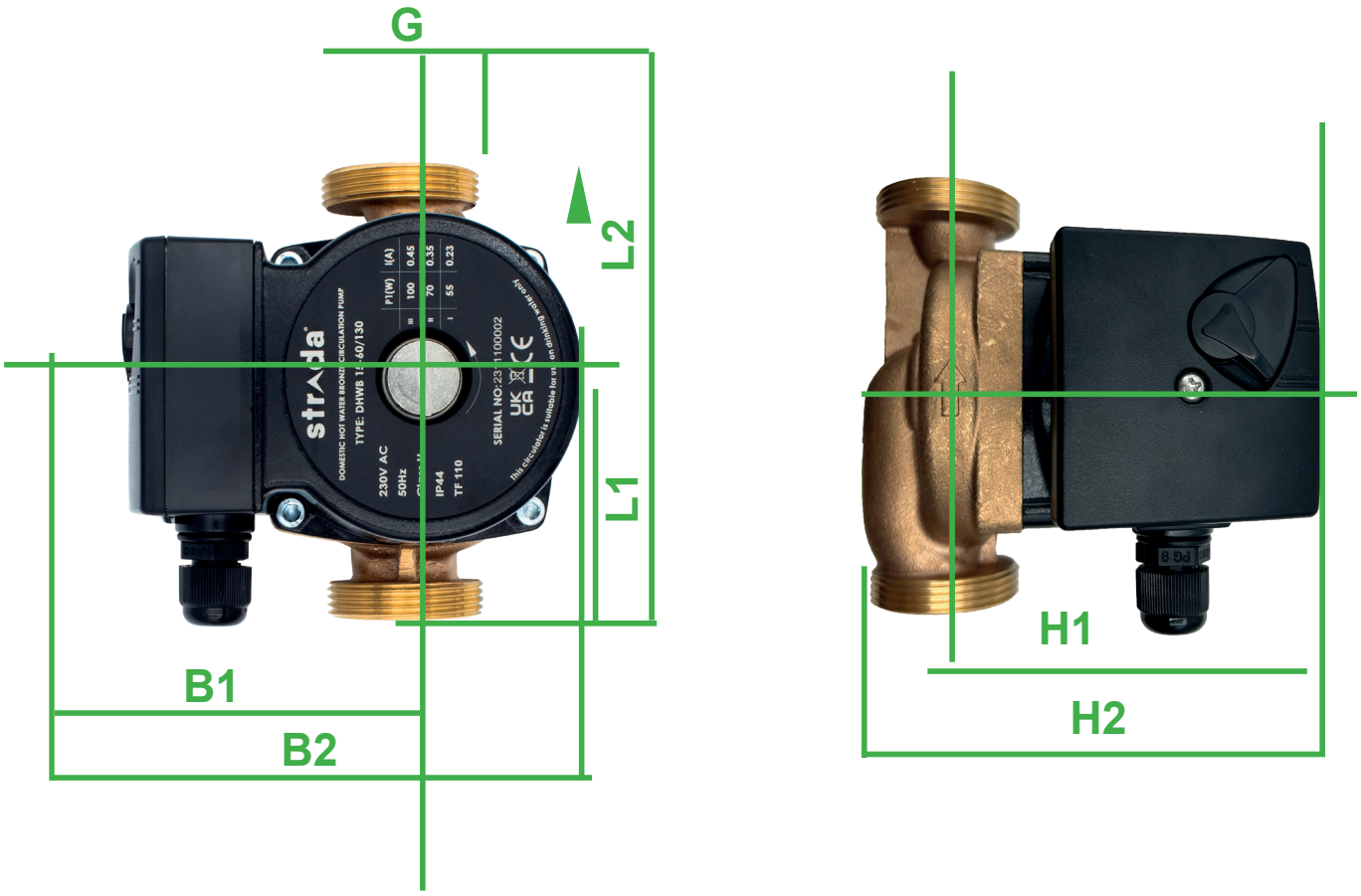


No.	Descriptions
1	Manufacturer Name
2	Product Model
3	Serial Number
4	Power Rating (P1)
5	Current (Amp)
6	Maximum System Pressure (mPa)
7	Authentication marks
8	Direction of rotation
9	Temperature Class
10	Degree of protection
11	Insulation Class
12	Frequency (Hz)
13	Voltage (V)

Technical Parameters and Installation Dimensions		
Power Supply Voltage	220V-240V,50/60Hz,PE	
Motor Protection	The pump does not require any secondary protection	
Degree of Protection	IP44	
Insulation Class	H	
Relative Humidity (RH)	Max. 95%	
System Load Bearing	1.0 mPa	
Suction Port Pressure	Liquid Temperature	Minimum Inlet Pressure
	≤+85°C	0.005 mPa
	≤+90°C	0.028 mPa
	≤+110°C	0.100 mPa
EMC Standard	EN61000-3-2 and EN61000-3-3EN55014-1 and EN55014-2	
Sound Pressure Class	The sound pressure level of pump is lower than 42dB (A)	
Ambient Temperature	0 ~ +40°C	
Temperature Grade	TF110	
Surface Temperature	The maximum surface temperature is not higher than +125°C	
Liquid Temperature	+2~110°C	

To avoid condensation in the control box and the stator, the temperature of liquid being pumped must always be higher than the ambient temperature.

Ambient Temperature	Liquid Temperature	
	Min. (°C)	Max. (°C)
0	2	110
10	10	110
20	20	110
30	30	110
35	35	90
40	40	70



Product Model	Dimension (mm)						
	L1	L2	B1	B2	H1	H2	G
DHWB	65	130	82	130	103	130	1 1/2”

Before conducting any maintenance and repair of the pump, ensure that the power supply has been disconnected.

Problem Type	Cause	Corrective Action
N/A	Stuck bearing	Run the pump at its highest speed for a short period of time (10 mins minimum). Loosen the rotor at the end of the shaft
N/A	Air trapped in the system	Vent the system. Install an automatic air vent if one not present
Noisy Pump	Air in the pump	Allow the pump to run, it will vent itself over time
Noisy Pump	Inlet pressure is to low	Increase the inlet pressure until the noise stops (do not increase the pressure more than the recommended maximum)

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