BRITTHERM®

BRITTHERM BOOSTER AUTOMATIC PUMP

B2 series

(bronze volute pumps with 2 control programs)

GAS safe® REGISTER

636199

INSTALLATION AND OPERATION MANUAL

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WARNING SIGNS

General safety warning

Shock hazard

Injury hazard

Thermal hazard (burns)

General warnings or recommendations

PLEASE READ DETAILED INSTRUCTIONS.

Only qualified and licensed engineers should install the pump. If you do not have an engineer to install and operate the pump, we strongly recommend contacting the local engineer or visit us at **www.brittherm.co.uk** or call us on 0208 9044 832.

You should carefully read the instructions and specifications of the pump, purpose and recommendations for pump operation before changing the pump operation mode (speed). The best way is to contact the engineer who installed the pump for you and consult with him on the issues in which you are interested.

Once the installation has been completed and the pump has been commissioned, you have 30 calendar days to register your warranty at **https://www.brittherm.eo.uk/guarantees** by scanning the QR code that you see on the pump nameplate. To complete the warranty registration, you will need the following information: pump model, invoice number, purchase/installation date, name and email address of the owner, and address where the pump is fitted. Please see the last page for the warranty information.

In case of any anomalies that you observed in the pump operation, you should contact the engineer who installed the pump for you and consult with him. Do not try to disassemble and troubleshoot the pump yourself. This can be a life-threatening activity.

PRODUCT DESCRIPTION

The B2 Series Pump is a classic and time-tested with two operating modes, one of which is automatic with a bronze body designed for pumping cold and hot drinking water.

It is suitable for:

- Circulation of drinking cold and hot water
- Recirculation of drinking cold and hot water
- Cold and hot water supply

The pump design consists of a motor and a pump part. All components of the B2 Series Pumps that contact with drinking water comply with WRAS standards. The bronze pump body is a food bronze, the impeller is a composite material approved for drinking water, coupling nuts for connecting the pump to pipes are bronze and they come complete with the pump.

The electric glandless pump motor provides lubrication of bearings and cooling by the pumped fluid.

The power cable is connected using spring-loaded electrical clamps in the pump terminal box with IP44 level protection.

Three fixed pump speeds are manually selected using a mechanical switch, allowing the operator to use the entire pump power range.

A flat-head screwdriver plug is provided to unlock the pump rotor after a long period of inactivity, which gives access to the rotor to unlock it by turning with a suitable screwdriver.

The pump is mounted using coupling nuts.

PUMP OPERATION

Make sure that the system is filled and under the required pressure before turning on the pump. Pump operation without the pumped fluid can disable the pump. Warranties do not cover such breakdown.

Make sure that the pump is installed correctly, check the direction of the required fluid flow, check that there are no fluid leaks at the pump and pipe connections.

Check the correct connection of the electrical cable - phase, zero and ground.

Unscrew the pump plug from the back of the motor to remove air from the pump and unlock the rotor.

Water will flow out of the pump this is normal. Prepare a container to collect water.

- Do not unscrew the plug immediately after pump shutdown - the fluid is hot and can cause burns.
  Wait some time to bleed air from the pump.
- Turn the motor shaft with a suitable screwdriver.
- Screw on the plug.
- Make sure that the valves upstream and downstream of the pump are open.
- Energise the pump.

The pump operation and rotor rotation direction should be checked using special tools - rotation indicators, which the engineer must have. The pump should run quietly. Bleed air as described above if extraneous noises appear.

When doing this procedure, be sure to turn off the pump and make sure that no fluid comes into the electrical terminal box. Ideally, the air should leave the heating system through air vents on top of the system.

To change the pump speed, turn off the power and set the switch to one of the positions - 3 modes MANUAL, AUTO AND OFF (see Fig. 1).

Pump operation characteristics at each speed are given in Appendix 1 thereto.

Fig. 1

PACKAGE

- Pump assembly - 1 piece;
- Set of coupling nuts with gaskets - 1 set;
- Power cable, 1.3m long, with plug (UK) - 1 set;
- Installation and operation manual - 1 piece;
- Individual packaging - 1 piece.

Full specifications are given in Appendix 1 thereto.

INSTALLATION

Figures of pumps are given for understanding the installation rules and may differ from the actual products.

- Before the installation, please make sure all pipe system is well connected, and free of inclusions, welding spatter and dirt; electrical frequency 50Hz, voltage single phase 220V, voltage fluctuation between -10% - +6%.

- The pump should be installed in dry and ventilated place, in case any short circuit caused by moisture or water splash, and easy for maintenance and replacement afterwards.

- Protection cover required if installed in open air; if installed indoors, prevent from water splash in case any electric shock occurs, do not install in the bathroom, in case the vapour goes into the connection box and cause the leakage.

- Afer installation, connect the power and test run, switch to automatic mode and check up the starting.

- For convenience of maintenance, it is recommended to install independent shutoff valves at the inlet and outlet place.

- If long time по use, please shut off the inlet valve and cut off the electricity.

- Make sure the socket is grounding, and connect the grounder of the plug and the socket. Do not modify the grounding of the pump without approval.

- Use visible safety warning signs at the site in case any accident happens while the pump is working.

- Shut off the power if any adjustment of the location or any contact to the pump while the pump is working.

- Schedule inspection required, replace in time if there is any part out of order.
- Inspect the insulation resistance of the pump regularly, and make sure the cold state insulation resistance is по less than 50 MΩ.

- Use the proper cable or buy the proper assembly to replace if there is any cablebreakdown.

- When the temperature is below 0°C, please discharge all the water from the pipe to avoid frost crack of the pump body if the pump is not in use.

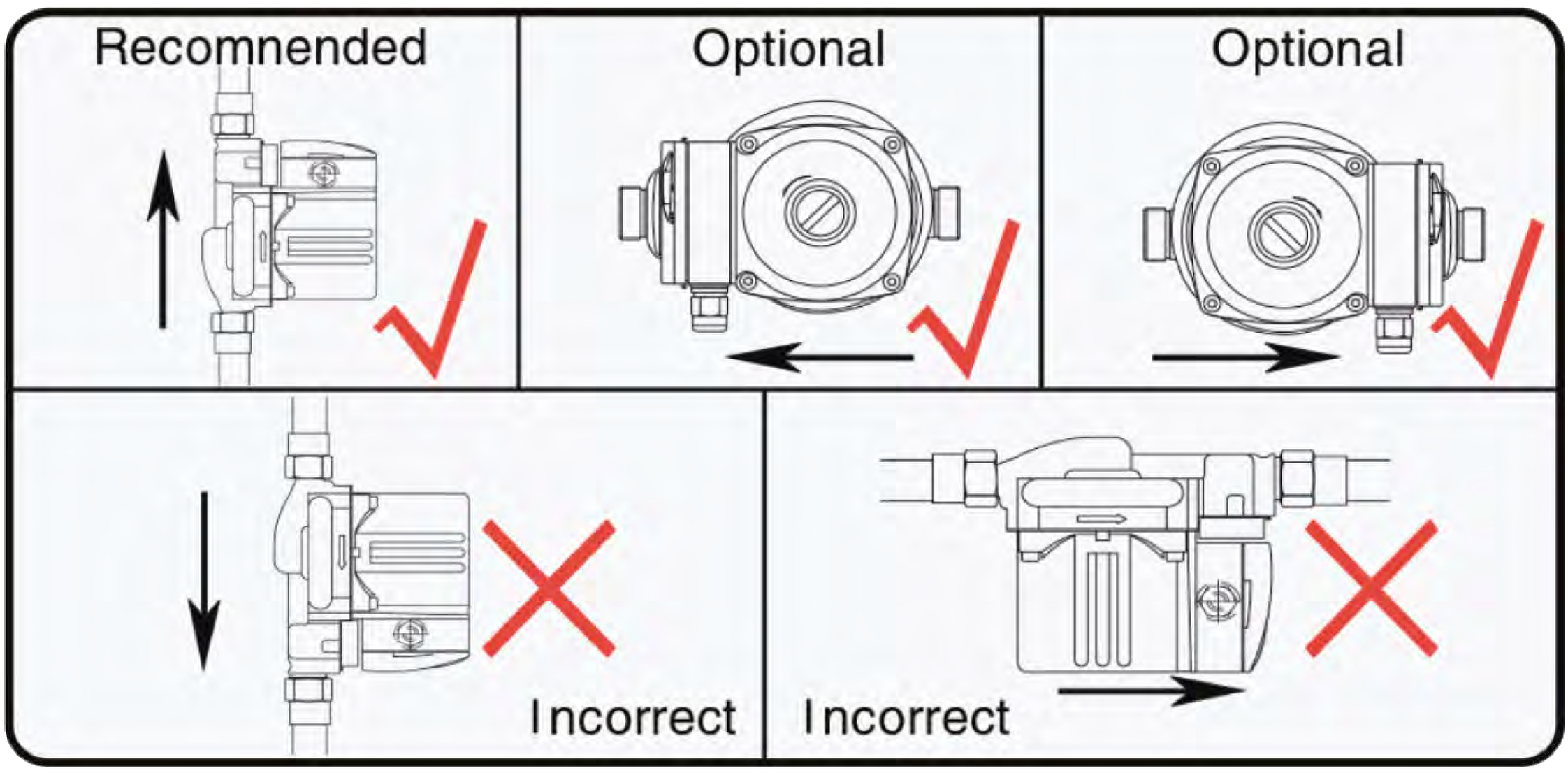
- The pump could be stopped automatically because of the water quality (like water incrustation, inclusion) or other causes. Please check up the motor and make sure it is not hot.

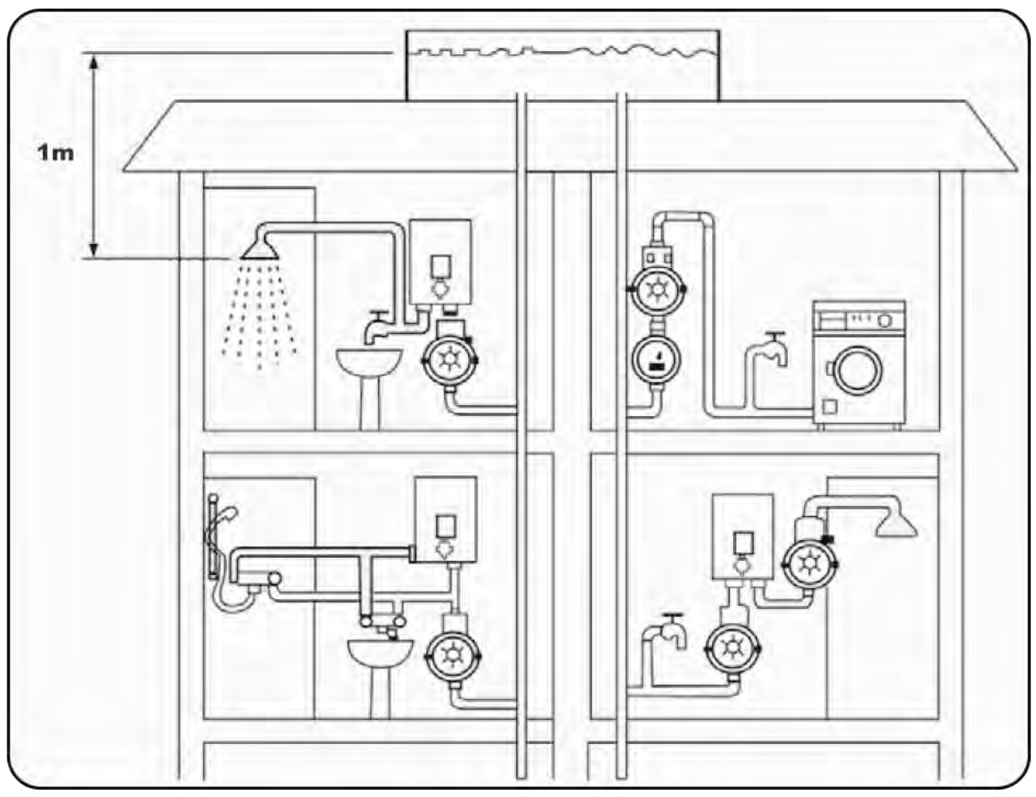
- Do not install the faucet at the pump suction side, or it may cause water backflow or air inflow into the pipe work, that are bad for pump performance.

- Do not install the pump at the boiler discharging side. Hot water is bad for booster pump life.

- Keep the inlet pressure higher than 0.01 MPa but lower than 0.6MPa.

Keep the motor shaft horizontally during installation; the flow direction should follow the arrow direction marked оп the pump body.





PUMP MAINTENANCE

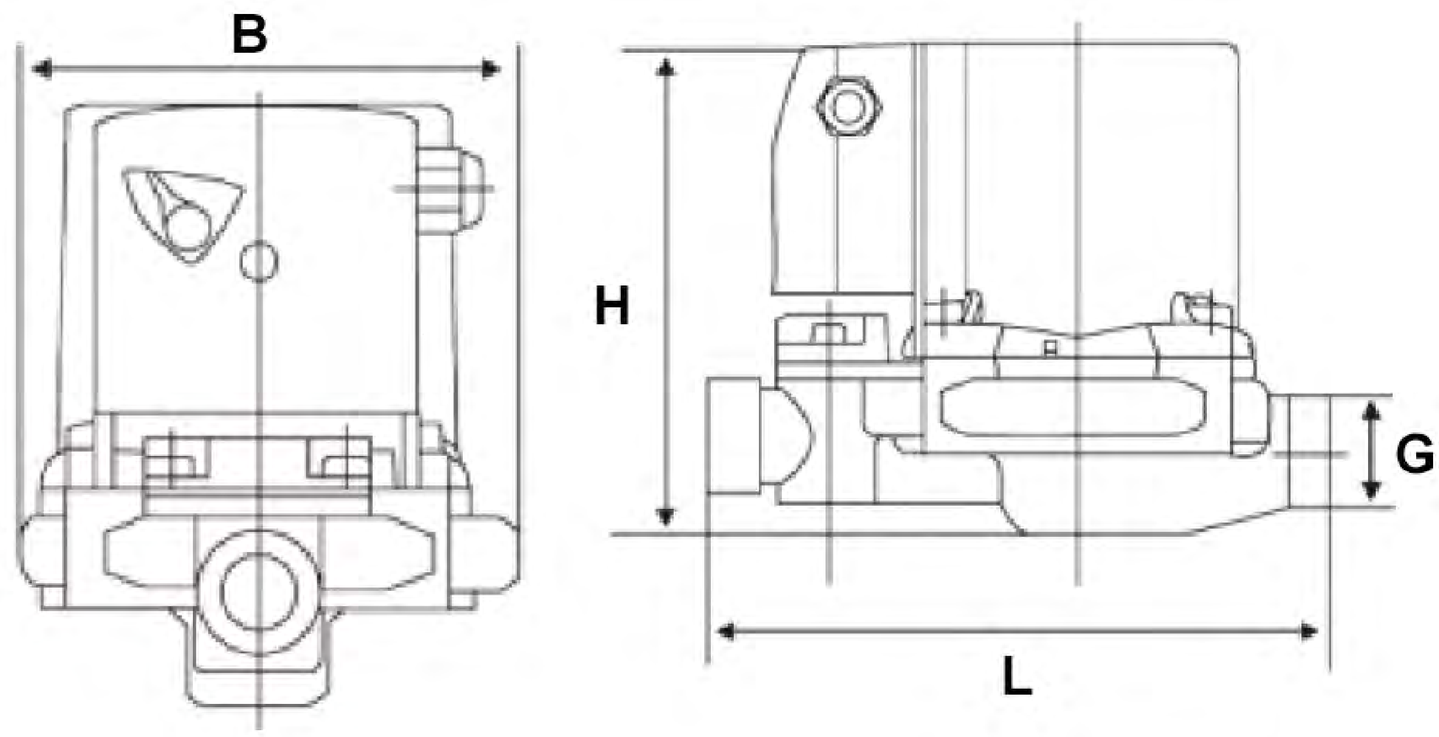
The pump structure is designed in such a way that it does not require special maintenance throughout the entire period of its operation.

When you first turn on or after a long period of inactivity of the pump, it is necessary to remove air from its body, as well as unlock the pump rotor shaft. To do this, unscrew the plug on the back of the pump, turn the shaft with a suitable size screwdriver one half turn. At the same time, do not forget to prepare a container to collect a small amount of water that will be under the plug at the moment of its removing. If shut-off valves were used on both sides of the pump when installing the pump, close them before starting to unblock the pump and the amount of coolant that can out from under the plug will not be more than 100/200 ml.

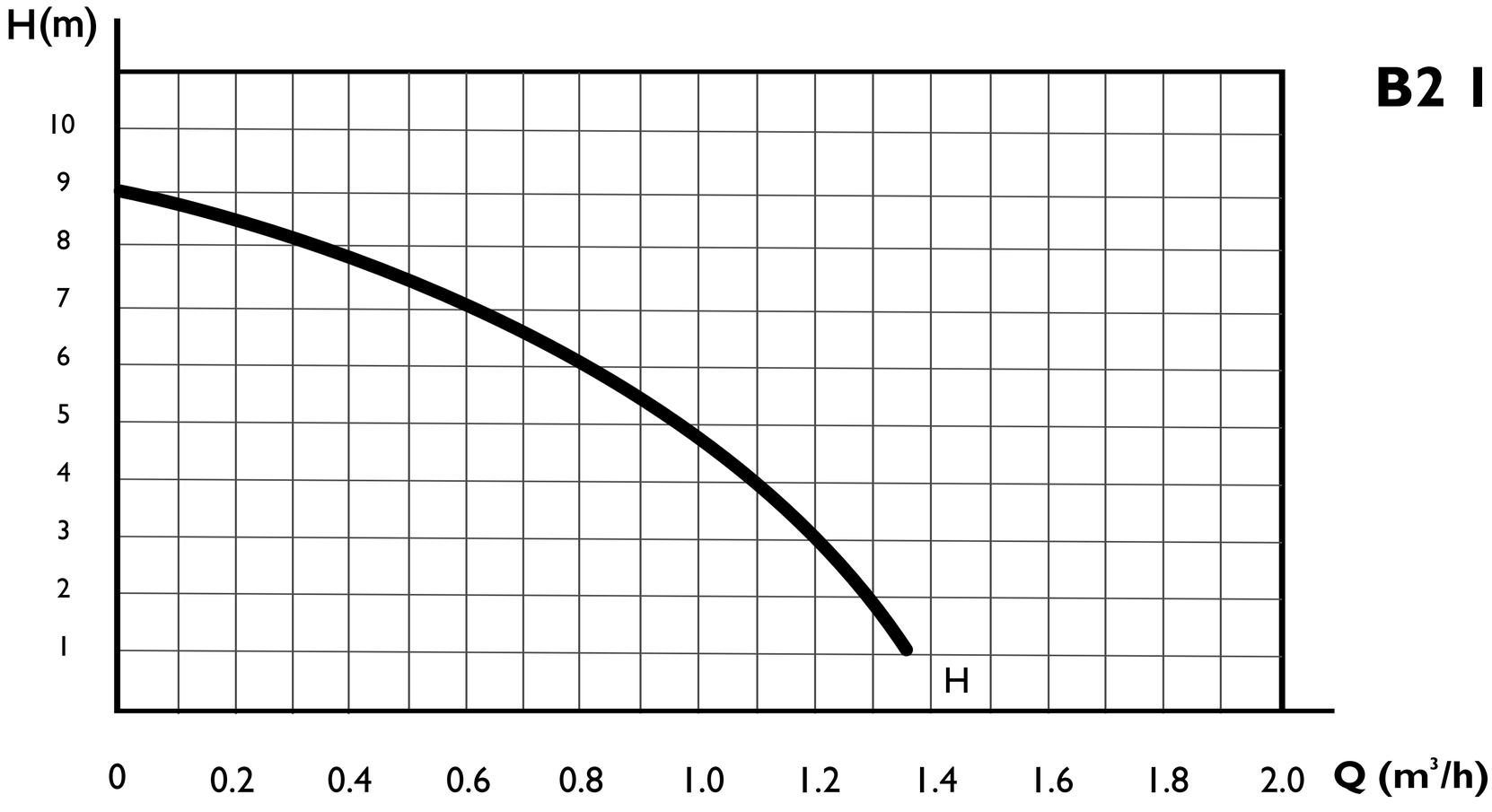
The pump structure is designed in such a way that it does not require special maintenance throughout the entire period of its operation.

It is recommended at least once every 6 months to check for fluid leaks at connections, for damage of the supply cable.
The pump should always run with a full system. Bearings are lubricated and pump is cooled by the pumped liquid.

APPENDIX I
B2 SERIES PUMPS SPECIFICATIONS



№	Type	Model	Max. Head (meter)	Flow in speed (meter³/hour)	Power (watt)	Current in speed (ampere)	Pump volute length (mm)	Inlet/Outlet Thread (inch)	Pipe connection (inch)	Weight (kg)
1	661996801	B2 12/9-160	9.0	1.38	105	~0.48	160	3/4"	1/2"	n/a
2	661996802	B2 12/10-162	10.0	1.80	150	~0.68	162	3/4"	1/2"	n/a



B2 12/9-160

B2 12/10-162

APPENDIX 2

MALFUNCTIONS

The pump is an engineering equipment in which the electrical part (motor) and the pumping part, where the fluid is pumped, are combined. Therefore, when performing any work, it is necessary to follow the rules of electrical safety. Be sure to turn off the power before doing any work. Make sure that fluid does not enter inside the terminal box and electrical cables, plugs, sockets, etc.

If you find any malfunctions or failures, we recommend you to contact the engineer who installed the pump first and then Brittherm Limited by 0208 9044 832 or email info@brittherm.co.uk

Possible malfunctions and elimination methods:

MALFUNCTION	CAUSE	ELIMINATION METHOD
The pump is not working	No power supply	Check power supply, cable, switch. Replace defective components
	Rotor blocked	Unscrew the plug, unlock the pump shaft by turning it with a screwdriver. IMPORTANT: water will flow out from under the plug
Operation noise	Air in the system	Bleed air from the system and pump. IMPORTANT: water will flow out from under the plug
	High flow rate	Set lower speed
	Contamination, foreign objects in the impeller	Disassemble the pump, remove the blockage. Flush the system, install filters if necessary
Poor performance	Valves not fully open, system contamination	Open the valves, clean the filter, ensure good circulation
	Set speed is low	Set higher speed

WARRANTY

B2 SERIES PUMP WARRANTY INFORMATION

Your B2 Series Pump comes with a 6-year warranty against manufacturing defects.
This warranty ensures peace of mind and protection for your investment, provided the following conditions are met:

CORRECT INSTALLATION: The pump must be installed by a qualified engineer according to BritTherm's installation manual.
PROPER MAINTENANCE: The system must be maintained in line with BritTherm maintenance guidelines.
WARRANTY REGISTRATION: The warranty must be registered within 30 days of purchase at www.brittherm.co.uk/guarantees. Incorrect or incomplete registration will void the warranty.

WARRANTY CLAIMS PROCEDURE

In the unlikely event of a manufacturing fault, you can make a warranty claim.
Please provide the following information:

- The unique warranty registration code received during registration.
- A copy of the pump purchase invoice.
- Additional evidence such as photos or videos may be requested to facilitate the claim process.

Send all claims to warehouse@brittherm.co.uk. Once your claim is validated, BritTherm will provide a replacement pump free of charge.
Please note, BritTherm does not offer repairs under this warranty.

EXCLUSIONS AND LIMITATIONS

The warranty does not cover:

- Malfunctions due to incorrect installation, inadequate maintenance, or the use of inappropriate liquids (e.g., those containing solid particles, fibres, or mineral oil).
- Damage caused by improper use, storage, or maintenance.
- Labour costs for pump removal or reinstallation.
- For full terms and conditions, visit our website at www.brittherm.co.uk/guarantees.

BRITTHERM™ IS PROUD TO SUPPLY THE UK'S LONGEST-LASTING CENTRAL HEATING PUMPS, WITH FAST DELIVERY AND COMPETITIVE PRICING.

THANK YOU FOR CHOOSING BRITTHERM!