



USER GUIDE

General

Heating **BWarm** heat pumps are designed to provide space heating to buildings insulated to the latest specifications. They do not operate at high enough water temperatures to provide full domestic hot water heating. The heat pump uses refrigerants to remove heat from the outside air at temperatures as low as -15°C and produces up to 4 times as much heat energy as the electrical energy put in to drive it. This results in an efficient low cost heating system.

Running the unit

When setting time clocks and controls allow extra time for the heat pump to raise the water temperature when first switching on, as it does take longer than a traditional boiler to reach the full operating temperature. Heat pumps are most efficient when allowed to run for long periods. The unit will automatically switch on and off as required to control the water temperature.

Radiator temperatures

Heat pumps are designed to operate with water temperatures of about 50°C . The radiators will feel cooler than those associated with a gas or oil boiler traditionally supplying water at 70°C . Radiators on a heat pump system will be larger than a traditional system to compensate for the lower temperature.

Noise

The heat pump is fitted with a fan to draw air across the heat exchanger. When the unit is operating there will be some noise from the fan but this is not dissimilar to the noise produced by the flue of a gas condensing boiler.

Frosting

When the heat pump is drawing cold air across the heat exchanger some of the moisture is removed from the air and this can freeze onto the heat exchanger. This is a normal part of the heat pump operation. The heat pump controls sense the build up of frost and periodically switch the heat pump into defrost mode. When in defrost the fan will stop and water vapour may be seen rising from the heat exchanger, this is normal and is not a cause for concern.

Some ice may be seen forming on the case of the heat pump, particularly at the bottom. This is not a problem and will not affect the performance of the unit.

Safety

DO NOT STAND ON THE HEAT PUMP FOR ANY REASON

1. **Fan:** the fan is protected by a metal guard to prevent accidental contact. Do not allow children to poke sticks or other objects into the fan as this could damage the fan and cause accidental harm to the child.
2. **Case:** the heat pump has a number of sharp corners and care should be taken when walking past the unit.
3. **Heat exchanger:** the heat exchanger at the side and back of the heat pump is covered with thin aluminium fins. These fins can cause cuts and grazes and where children may be playing near the heat pump it is advisable to have coil guards fitted to prevent accidental contact.

Outer panels should never be removed from the unit unless by a qualified Service Engineer about to work on the unit.

Servicing

It is not necessary to carry out regular servicing on the heat pump.

Each year before the start of the heating season, check that there are no blockages around the heat pump such as paper or leaves building up on the heat exchanger.

Switch the heat pump on prior to the start of the heating season to ensure that it starts correctly. If the unit does not start;

1. Check the time clock is on and the thermostat is turned up high to call for heating.
2. Check the main MCB (in the distribution board) and the isolator are switched on.
3. If the unit still does not operate check the water pressure at the gauge in the house (normally attached to the expansion tank). If the unit has been turned off at the mains during the summer it will be necessary to raise the water pressure above 1.8bar before the unit will start.
4. Finally, call the installer if the unit does not operate.

KEEP THE AREA AROUND THE HEAT PUMP CLEAR. Do not stack objects next to or on top of the unit that may obstruct the air passage through the unit.

Disposal

The BWarm heat pumps contain a number of components that, by law, must be disposed of under controlled conditions. Under no circumstances should this appliance be disposed of at a Local Authority refuse site without first identifying the special components to the site Management/Operatives.

Special components:

1. **R407C refrigerant:** this must be correctly recovered and disposed of before disposing of the heat pump.
2. **Polyolester oil:** This will be contained in all of the internal refrigerant components and should not be burnt.
3. **Electronic components:** To be disposed of in accordance with WEEE directives.
4. **PVC sheathed cable:** not to be burnt except under controlled conditions.

DO NOT ATTEMPT TO CRUSH OR BURN THIS APPLIANCE

If in doubt contact the installer, Local Authority or the Manufacturer before attempting to dispose of the heat pump.



Heatking **BWarm** heat pumps have been designed, tested and approved in accordance with BS EN 14511 2004.

All **BWarm** Heatking air source heatpumps are fully tested before leaving the factory and comply with all current EC directives.

Relevant EC Council Directives: Machinery Directive (98/37/EC)

EMC Directive (89/336/EEC in the versions 93/68/EEC)

Low Voltage Directive (73/23/EEC in the version 93/68/EEC)

Applied harmonised standards:

EN 292-1:1991, EN 292-2:1991, EN 294:1992, EN 349:1993, EN 55014-1:2000, EN 55014-2:1997, EN 60335-1:2002, EN 60335-2-40:2003, EN 61000-3:1995
BS EN 14511-Pts 1 to 4:2004, EN378:2000, BS848-5:1999

Basis of self attestation:

BS EN ISO 9001:2000 BSI registered firm certificate no. FM671