

Greensource Air to water heat pump

Fact sheet



Available Worcester products

Product Description	Part Number
6 kW Greensource	7 716 150 008
7 kW Greensource	7 716 150 009
9.5 kW Greensource	7 716 150 010
100 litre Primary Store	7 716 192 418
120 litre Primary Store	7 716 192 638

Please refer to the schematic diagram for details of a typical system layout.

Electrical supply

A 230V single phase fused supply is required. The outdoor heat pump and indoor Hot Water Distribution Unit (HWDU) require separate fused supplies and isolators.

Fuse Ratings:

Outdoor unit: 6 kW = 16A
7 & 9.5 kW = 25A
HWDU: 6, 7 & 9.5 kW = 25A

A residual current device (RCD) $\Delta I=300$ mA should also be fitted.

Heat emitters

For a heat pump to perform to its highest energy-efficiency, the central heating emitter circuit should be designed so that the flow temperature is as low as possible.

As a guide, the system should be designed using the following maximum flow temperatures;

Underfloor heating: 35-40°C
Radiators: 45-50°C
Skirting heating: 45-50°C

If underfloor heating is being installed, it is important to remember to inform the underfloor system designer that the heat source will be from an air source heat pump. It is also important to remember that radiators and skirting heating must be sized to work effectively with lower flow temperatures.

Further guidance is available in Worcester Technical Bulletin No. TB 0029 available to download from the Worcester website.

Dependant on the design of the heat emitter circuit and the controls installed, a primary store buffer tank may be required.

Flow and return pipe work

We recommend that the flow and return pipe work from the outdoor unit to the indoor HWDU should be 28mm diameter and insulated using 19 millimetre thick class 'O' insulation.

The pipe work length should be kept to a minimum to reduce heat loss. A maximum of 15 metres from the property to the outdoor unit is allowable. If buried, pipe work should be insulated using class 'o' insulation and encased in plastic or suitably ducted.

Suggested suppliers

Suitable pre-insulated pipe is available from Uponor

Tel: 01455 550355.

Suitable insulation can be purchased from Armacell UK Ltd. Tel: 0161 287 7100.

Suitable inhibitor should be added to the heating system water. The addition of antifreeze should be considered in areas where there is a risk of freezing.

Suggested suppliers

Suitable products are available from Sentinel Tel: 01928 588330 or Fernox Tel: 0870 601 5000.

Communication cable

CANbus communication cable is required between the indoor and outdoor units. The cable should be CAT 5 E FTP 2 x 2 x 0.5 i.e. consists of 2 pairs of twisted wires, screened and earthed, with a cross sectional area of 0.5mm². The individual wires are for 12 V, Ground, CANbus H and CANbus L (4 wires in total + earth).

Communication cable must be separated from power cables by 100mm to avoid interference. Please note that this cable is not supplied by Worcester, Bosch Group.

Suggested suppliers

Suitable cabling can be obtained from any major electrical merchants.

Commissioning

Worcester, Bosch Group offer a commissioning service to set up the operating parameters of the heat pump, the charge for this work is currently £160 - £220*.

Purchase

Prices for heat pumps and associated equipment can be obtained through your nearest major merchant.

Suggested suppliers

Worcester products can be purchased from major merchants including: Plumb Center, PTS, City Plumbing, Graham Group and Plumbase Limited.

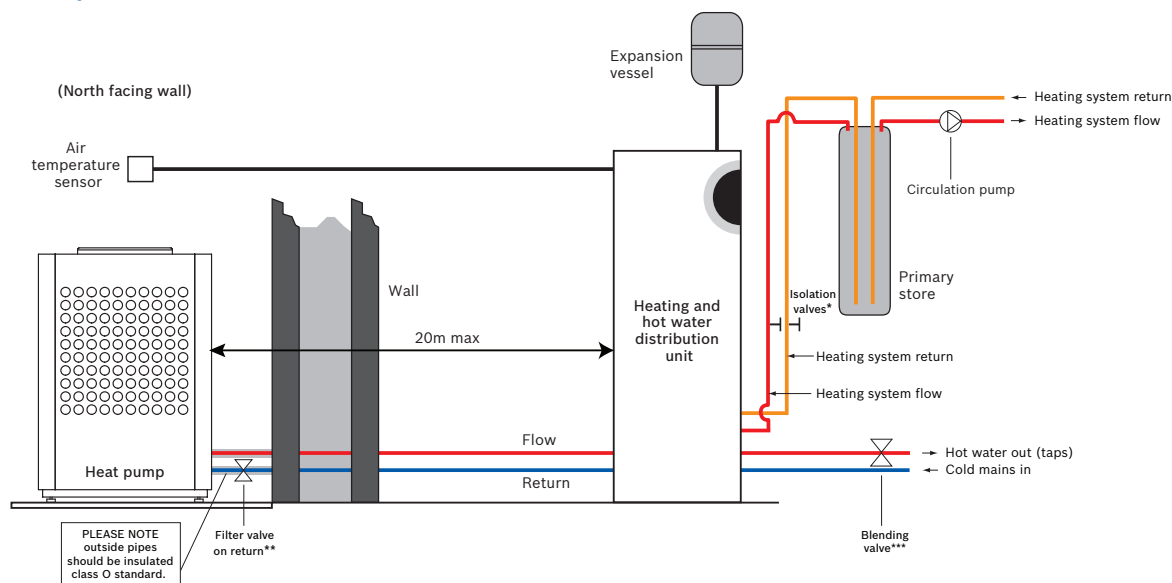
*Subject to terms and conditions

Please note: Heat pumps should be installed in accordance with the installation instructions and in conjunction with good practice guides and applicable legislation.

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Worcester Greensource air source heat pump with primary storage vessel Typical system layout



*Recommended isolation valve

**Filter valve fitted on return (supplied by Worcester, Bosch Group)

***Blending valve fitted to DHW pipe (supplied by Worcester, Bosch Group)

Specification sheet

Product Description	Part Number	Quantity
6 kW Greensource	7 716 150 008	
7 kW Greensource	7 716 150 009	
9.5 kW Greensource	7 716 150 010	
100 litre primary buffer storage tank	7 716 192 418	
120 litre primary buffer storage tank	7 716 192 638	
#Pre-insulated 28mm pipe (as required, between indoor and outdoor unit)		metres
#19 millimetre thickness Class 'O' insulation (As required)		metres
#CAT 5 E FTP 2 x 2 x 0.5 CANbus communication cable (As required)		metres
#Heating emitters (radiators / underfloor / skirting heating), controls, expansion vessel, isolation valves etc. (As required, sized correctly to work with low temperature heat pump system)		
#Central heating 'shunt' pump (Required if primary buffer tank is fitted, sized to suit system e.g. Grundfos 15/60)		
Worcester commissioning service required		Yes / No

#Not available from Worcester, Bosch Group.

Please Note: The Specification sheet above provides a typical equipment list for an air source heat pump installation. The information is not exhaustive and is provided to indicate the major components for consideration. The heat pump should be fitted in accordance with the Installation and Service Manual available to download via the website link detailed below or by contacting the literature line on 0844 892 9800.

<http://www.worcester-bosch.co.uk/installer/literature/air-source-heat-pumps-literature>

This document is accurate at the date of issue but may be superseded and should be disregarded if information and/or appearances are changed in the interest of continued improvement. The statutory rights of the consumer are not affected. SD 02 (2011/04)