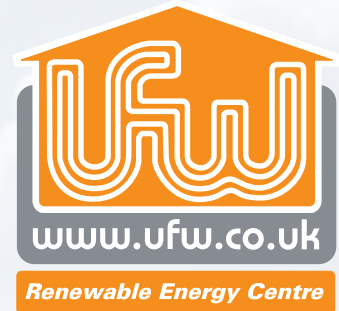


Simpleheat Product Guide

Airsource Heat Pumps



Airsource Heat Pumps

15% of the emission cuts planned by 2020 will be through domestic small-scale renewable energy. With forthcoming incentives from the UK Government – such as the Renewable Heat Incentive (RHI) - along with a VAT rate of 0% for new build and 5% in retro fit applications, this represents a great opportunity to update an existing heating system, or incorporate as part of a new installation. Suitable for both refurbishment projects and new installations, the Simpleheat family of heat pumps can be connected to all common radiators, underfloor heating systems, convectors and water heaters.

Simpleheat airsource heat pumps work by transforming energy from the outside air into heat, meaning every 1kW of electricity used to power the heat pump is capable of providing up to 4kW of energy in a well-insulated home – helping to reduce heating bills by up to 60% and cutting CO₂ emissions by 50% compared to traditional boiler-led systems.



The Benefits

For homeowners

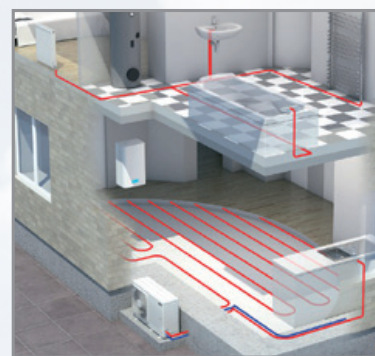
- Lower fuel bills
- Access Government incentives such as the forthcoming Renewable Heat Incentive
- Reduced carbon emissions
- Self-contained heating and hot water solution - just add a hot water tank
- Suitable for new build and renovation projects - can even be used with existing boiler
- 4 x more efficient than a traditional gas boiler
- Satisfy renewable energy planning requirements
- 5 year warranty.

For installers

- Simple and fast installation with no refrigeration handling required
- Inverter technology so heat output matches the heating load of the property
- MCS Approved
- High COPs
- Weather-compensation control
- World-renowned, highly-reliable Hitachi high pressure scroll compressor
- Outputs from 7kW to 12kW at -5°C external, 40/45°C water temperature
- From 800mm compact height options
- Integrate with other renewable technologies such as solar thermal
- 5 year warranty.

Features and Benefits

The Simpleheat Airsource Heat Pump range provides the ideal heating solution. They incorporate integrated features and controls which deliver all the functions of a fully-fledged heating system, making them the ideal replacement for a traditional, boiler-led, set up. This range has three models from 7kW to 12kW* which offer the following benefits:



- High COP's - COP of 4.28 is achievable
- Low Running Costs - Large savings over traditional heating methods
- DC Inverter Technology - Temperature control is regulated by DC Inverter technology
- Guaranteed Hot Water - Constant water production at 55°C, ensures hot water production for the bathroom at all times
- Ideal for Any Application - Ideal heating solution for retrofit or new-build applications
- Standard Controller - The programmable Wireless Controller is designed to control your heating system efficiently, providing comfortable temperatures when you are at home and energy savings when you are away
- Control Features
- Outside Temperature Compensated (OTC) Control
- Use of Auxiliary Heating
- Electric Heater Control
- Boiler Control
- DHW Control
- Summer Switch-Off
- Outdoor Temperature Limit
- System Frost Protection
- New Floor Screed-Drying Function
- Anti-Seize Function (pump/valve exercise)

Simpleheat		HRHUE/3AVHN	HRHUE/4AVHN	HRHUE/5AVHN	HRHUE/6AVHN
Rated Heat Output @7/35		7.5 (6.2~11.0)	9.5 (5.0~10.9)	12 (6.9~15.0)	14 (7.8~17.5)
COP @7/35		4.43	4.06	4.01	4.31
Power Supply	V/Ph	230/1	230/1	230/1	230/1
Recommended Fuse Size	(A)	25	25	32	40
Sound Pressure Level	dB(A)	49	49	51	52
Height	mm	800	1480		
Width	mm	1250	1250		
Depth	mm	444	444		
Weight	Kg	110	150	155	159

System Features	HRHUE/3AVHN	HRHUE/4AVHN	HRHUE/5AVHN	HRHUE/6AVHN
Hot Water Heating	✓	✓	✓	✓
Underfloor Heating	✓	✓	✓	✓
Radiator Heating	✓	✓	✓	✓
Floor Screed Drying Function	✓	✓	✓	✓
Frost Protection	✓	✓	✓	✓
Outside Temperature Compensation	✓	✓	✓	✓
Electric Heater Control	✓	✓	✓	✓
Anti Seize Function	✓	✓	✓	✓
Mono Valent Systems	✓	✓	✓	✓
Bi-Valent Systems	✓	✓	✓	✓
Remote Controller Type	Wireless			
Remote Control Timer	7 Day Weekly Timer			

* based on -5°C external and 40/45°C flow temperature

Sizing Guide

A heat pump that uses air as its heat source will perform better as the air temperature increases. To ensure optimum performance and to reduce electricity costs, it is typical to size the heat pump to meet the heating load of the property when the external temperature is -5°C with a flow temperature of 45°C (see table below).

Calculate the heat requirement for the property through a Standard Assessment Procedure (SAP) or individual room heat loss calculations and match the output of the heat pump (shown below) to the heat requirement. This is indicative guide only, please contact UFW for an exact quotation.

Outdoor Temperature	HRHUE/3AVHN	HRHUE/4AVHN	HRHUE/5AVHN	HRHUE/6AVHN
45°C Flow				
7°C External Temperature				
KW	9.7	10.4	15	16.6
CoP	3.34	3.05	3.01	3.35
-5°C External Temperature				
KW	7	8	10	12
CoP	2.95	2.22	2.28	2.21

*Maximum capacities

It is important that the design of the heat emitter - whether for underfloor heating or radiators - is done correctly to ensure best performance for the heat pump. These tables show the approximate property size for each Simpleheat heat pump, based on a flow temperature of 45°C and an external temperature of -5°C:

Year Property Built	HRHUE/3AVHN	HRHUE/4AVHN	HRHUE/5AVHN	HRHUE/6AVHN
2010	175m	200m	250m	300m
2005 - 2010	140m	160m	200m	240m
1995 - 2005	87.5m	100m	125m	150m
1970 - 1995	70m	80m	100m	120m
Pre 1970	59m	68m	85m	102m

Simpleheat Pack Contents

To complement the Simpleheat airsource heat pumps UFW offer a range of heating and hot water packs for easy installation and connection to the heating and hotwater system.



SIMHPK1 & SIMHPK2



SIMHPK3

SIMHPK1 - Heating Only

Description	Code	Pack Qty
Y Strainer	SIMHYS28	1
Flexible Hose connection	SIMHFH500	2
Isolation Valve (Blue)	SIMGBVALV1B	1
Isolation Valve (red)	SIMGBVALV1	1
Anti Vibration feet x 3	SIMHFF-600-S	3
Flow Meter	SIMGFLOWM	1
Bypass Valve	SIMBPV100	1

SIMHPK2 - Hot Water Only (inc. DHW Sensor)

Description	Code	Pack Qty
Y Strainer	SIMHYS28	1
Flexible Hose connection	SIMHFH500	2
Isolation Valve (Blue)	SIMGBVALV1B	1
Isolation Valve (red)	SIMGBVALV1	1
Anti Vibration feet x 3	SIMHFF-600-S	3
Flow Meter	SIMGFLOWM	1
Bypass Valve	SIMBPV100	1

SIMHPK3 - Heating & Hot water (Inc. 3 port valve & DHW Sensor)

Description	Code	Pack Qty
3-Port Diverting valve	SIMV4044C1569U	1
Y Strainer	SIMHYS28	1
Flexible Hose connection	SIMHFH500	2
Isolation Valves (Blue)	SIMGBVALV1B	1
Isolation Valves (Red)	SIMGBVALV1	1
Anti Vibration feet	SIMHFF-600-S	3
Flow Meter	SIMGFLOWM	1
Bypass Valve	SIMBPV100	1

Heat Pump Cylinders

Simpleheat heat pump cylinders are designed to operate seamlessly with heat pumps to provide an efficient and environmentally friendly way of supplying domestic hot water. Employing a large surface area heat exchanger, these heat pump cylinders maximise the transfer of heat generated from renewable energy to the stored water, optimising heat pump efficiency and reducing running costs. Simpleheat heat pump cylinders are available in capacities from 150 to 300 litres to serve most domestic hot water demands.

- Models from 150 to 300 litres
- Optimally sized, high surface area heat exchangers for heat pump operation
- Tough, easy to clean outer casing – made from recycled materials
- Immersion for sterilisation
- 60mm of CFC-free foam injected insulation for excellent heat retention – minimising heat loss and energy consumption domestic hot water demands.



Heat Pump Cylinder Dimensions

Dimensions								
Model	Height (mm)	Diameter (mm)	T&P Valve (mm)	Secondary return (mm)	Heat Pump Return (mm)	Heat Pump Flow (mm)	Immersion (mm)	Thermostat (mm)
ECS150HP	1130	580	900	-	190	845	208	545
ECS210HP	1505	580	1275	967	190	895	208	732
ECS250HP	1780	580	1550	1105	190	895	208	870
ECS300HP	2080	580	1850	1255	190	930	208	1020

All measurements are from the bottom of the cylinder to the centre of the component.

Combined Heat Pump Cylinder and Buffer

Simpleheat combined cylinder and buffer vessels are an ideal solution for when cylinder space is at a premium where there is no space for a separate buffer vessel. The cylinders are available in three sizes from 125 to 210 litres with a 75 litre buffer tank mounted above that is wrapped in 60mm insulation and a tough outer casing. The solution comes complete with two 3kw Immersion heaters for back up.

- Models from 125 to 210 Litres
- Optimally sized, high surface area heat exchangers for heat pump operation
- Tough, easy to clean outer casing – made from recycled materials
- Immersion for sterilisation and back up heating
- 60mm of cfc free foam injected insulation for excellent heat retention – minimising heat loss and energy consumption domestic hot water demands.



Heat Pump Cylinder with Buffer Performance

Performance										
Model	Capacity (Litres)	Buffer capacity (litres)	Weight Empty (kg)	Weight Full (kg)	Number of immersions	Expansion Vessel (l)	Heat Pump Coil Size (kW)	Heat Pump Coil Surface area (m ²)	Reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECS125HP75-580	125	75	tbc	tbc	2	12	tbc	2.2	tbc	tbc
ECS150HP75-580	150	75	tbc	tbc	2	12	tbc	2.8	tbc	tbc
ECS210HP75-580	210	75	tbc	tbc	2	19	tbc	3.0	tbc	tbc