

wondrwall®

INTELLIGENT LIVING



Air Source Heat Pump



WDR-HP-006-UK
WDR-HP-008-UK

REV 181224

PRODUCT OVERVIEW



The Wondrwall Air Source Heat Pump is an intelligent renewable energy system designed to provide homes with both heating and cooling technology. With its eco-friendly design, this air source heat pump can reduce carbon emissions while lowering homeowners' energy bills by utilising renewable energy from the air. The system's cutting-edge technology is fully realised when paired with the Wondrwall Home Energy Management System and Sensors, allowing for more intelligent control of the heat pump, improving efficiency, reducing carbon emissions, and, most importantly, lowering running costs.

Key features include quiet operation, compatibility with various home heating systems, and smart thermostat integration for easy control. Ideal for sustainable living, the heat pump represents a long-term investment in comfort and energy efficiency.

FEATURES

Reduces Energy Consumption

- Occupancy-based controls reduces wasting energy heating empty homes
- Intelligent adaptive start and stop to ensure the home is warm and comfortable when occupied

Reduces Running Costs

- Integrates with solar PV to maximise the use of free solar generation
- Shifts demand to use the cheapest energy with support for multiple smart Time-Of-Use tariffs
- Advanced hot water heating uses the hot water cylinder as a thermal store with or without a residential storage battery

Improve COP (Coefficient of Performance)

- Auto-tunes to building heat loss (Automatically adapts to actual building heat losses)
- Predictive weather compensation (Advanced and predictive weather compensation based on weather patterns)
- Adjust flow temperature to maximise efficiency (Flow temperature control for optimal performance)

Delivers Grid Flexibility

- Increase or decrease energy demand to match grid needs without impacting occupant comfort

Reduce Downtime

- Remotely monitor the home/heat pump for performance and potential failures
- Advanced metrics for monitoring energy consumption and system health

Environmentally Friendly

- R290 refrigerant boosts Seasonal Coefficient of Performance (SCOP), offering higher efficiency than other refrigerants
- High temperature heat pump up to 75oC, matching gas boiler warmth faster than standard heat pumps
- Operates effectively in temperatures as low as -25oC
- R290's low Global Warming Potential (GWP) makes it environmentally friendly

Technical Insights

- Heat pump efficiency decreases by 3% per degree increase in flow temperature
- Higher operating temperatures may be needed in cold weather, during low-cost energy periods, or with higher occupancy
- Heat pumps should be sized to match building heat loss; greater losses require more power

TECHNICAL SPECIFICATION



WDR-HP-006-UK



WDR-HP-008-UK

Wondrwall Air Source Heat Pump

Dimensions (W x H x D) 1187mm x 808mm x 438mm 1287mm x 908mm x 458mm

Power Supply 220-240-/50Hz

Test Standard: EN14511 Ambient Temperature: 7°C/6°C (DB/WB), Water Inlet/Outlet: 30°C/35°C

Heating Capacity Min/Max	2.92-9.10kW	4.10-12.10kW
Power Input Min/Max	0.61-2.11kW	0.79-2.85kW
Rated Heating Capacity	6.23kW	8.24kW
COP	4.77	4.96

Test Standard: EN14511 Ambient Temperature: 7°C/6°C (DB/WB), Water Inlet/Outlet: 47°C/55°C

Heating Capacity Min/Max	2.99-8.16kW	4.05-12.15kW
Power Input Min/Max	1.03-2.92kW	1.38-4.06kW
Rated Heating Capacity	6.12kW	8.13kW
COP	3.06	3.12

Test Standard: EN14511 Ambient Temperature: 35°C/24°C (DB/WB), Water Inlet/Outlet: 12°C/7°C

Heating Capacity Min/Max	1.38-5.7kW	3.65-8.59kW
Power Input Min/Max	0.67-2.44kW	1.12-3.31kW
Rated Heating Capacity	4.56kW	7.55kW
EER	2.67	3.08

Test Standard: EN14511 Ambient Temperature: 35°C/24°C (DB/WB), Water Inlet/Outlet: 23°C/18°C

Heating Capacity Min/Max	1.85-7.41kW	4.56-10.14kW
Power Input Min/Max	0.56-2.68kW	1.44-4.80kW
Rated Heating Capacity	5.9kW	8.11kW
EER	3.16	3.61

Operation Mode: Heating

Operating Range -25-35°C

Water Outlet Temp Range 20-75°C

TECHNICAL SPECIFICATION

Operation Mode: Cooling

Operating Range	15~45°C
Water Outlet Temp Range	5~25°C

Operation Mode: DHW

Operating Range	25~45°C
Water Outlet Temp Range	20~65°C

Test Standard: EN12102-2022 Ambient Temperature: 7°C, Water Outlet: 35°C

Sound Pressure Level	46 dB(A)	43 dB(A)
Sound Power Level	60 dB(A)	58 dB(A)

Test Standard: EN12102-2022 Ambient Temperature: 7°C, Water Outlet: 55°C

Sound Pressure Level	46 dB(A)	43 dB(A)
Sound Power Level	60 dB(A)	58 dB(A)
Power Input Max	3.5kW	5.4kW
Current Input Max	15A	25A
Refrigerant Type	R290	
Operation Pressure (Low Pressure Side)	0.8 MPa	
Operation Pressure (High Pressure Side)	3.9 MPa	
Maximum Allowable Pressure	3.2 MPa	
Water Piping Connections	G1" Inch	
Expansion Tank	6L	
Water Pressure Drop	20 kPa	
Water Pressure Min/Max	0.1/0.3 MPa	
Water Flow Rated	1 m3/h	1.4 m3/h
Net Weight	110Kg	134Kg

Notes

Parameters are subject to change without prior notice.
Please refer to the unit nameplate.
Images are indicative only.