

AIR-TO-WATER HEAT PUMP  
**THERMA V**™

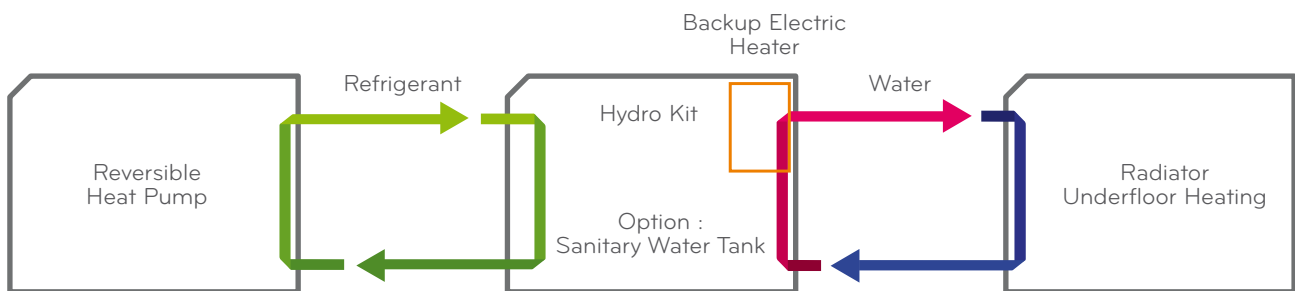
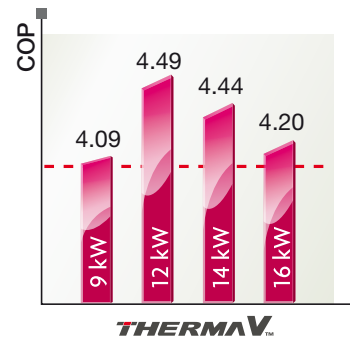
Uses the energy in the air outside to heat your home.

## Environmentally friendly solution to central heating

### What is Therma-V

Therma-V provides an economical, environmentally friendly solution to central heating. It works on the heat pump principle. The outdoor unit removes heat from the air outside and transfers it to the indoor unit, where it is used to generate hot water. This hot water can then be used for under-floor heating, radiators and in a hot water tank.

Up to 4.5 kW of heat can be produced for every kW of electricity consumed. The amount of kW of heating provided per kW of electricity is called the Coefficient of Performance, or COP



### Indoor units

HU091 U41, HU121 U31, HU141 U31 and HU161 U31 models are MCS approved products.

Optimum efficiencies are obtained at low water temperatures, so the system is ideally suited for under-floor heating.

The Therma-V continues to operate even when the outside temperature drops to -20°C

Four models are available, rated at 9, 12, 14, and 16 kW.

The indoor unit works in the same way as a conventional central heating boiler, except that it uses heat recovered from the outdoor air instead of gas or oil.

Therma V may be used as an independent system. It can also work in conjunction with solar heating, electric heating or a conventional boiler.



Hydrokit (1ø, 3ø)



Outdoor Unit (1ø 230V)  
 Maximum 55°C Water Temperature



# Domestic hot water

## Hot water supply

Therma-V is designed to provide hot water, in addition to central heating in domestic applications.

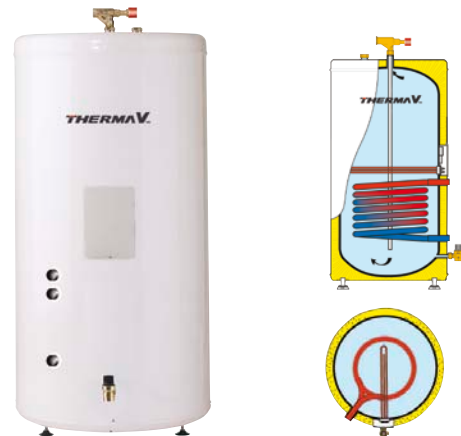
Therma-V can heat the water in the tank to 48 °C without using electric heaters. There is provision to program an automatic weekly sterilisation process at a higher temperature, using electric heating.

It is possible to combine Therma V with solar heating, taking advantage of free heating when it is available. A tank with twin coils is used in this process.

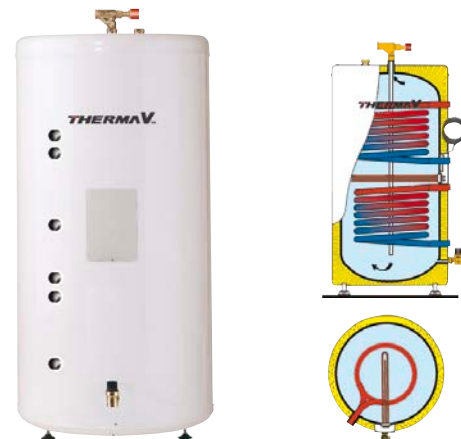
The LG tank kit (Part no: PHLTA) is required when a hot water tank is fitted. It includes a thermistor to monitor and control the hot water temperature.

A suitable water tank should have the following features:

- Be designed for heat pump applications, meaning that the internal coil should have sufficient surface area to heat the tank using water at 55°C.
- A twin coil tank is required if solar heating is added.
- The tank should have an immersion heater with a variable thermostat (in addition to the safety cut-out).
- There should be a suitable pocket to insert the LG thermistor.
- The LG tank kit is used to measure and control the tank water temperature.



Sanitary Water Tank – Single Coil



Sanitary Water Tank – Double Coil  
(heat pumps and solar)

## Solar panels for a double coil tank

For better performance and energy saving, it is possible to combine the THERMA V heat pump with solar panels.

Model		HU091 U41	HU121 U31	HU141 U31	HU161 U31
Power supply (single phase)		220-240V 50Hz	220-240V 50Hz	220-240V 50Hz	220-240V 50Hz
Nominal capacity - kW	Heating <sup>1</sup>	9.0	12.0	14.0	16.0
	Cooling <sup>2</sup>	9.0	14.5	15.5	16.1
Nominal input - kW	Heating	2.20	2.67	3.15	3.81
	Cooling	2.65	4.00	4.69	5.07
COP	Heating	4.09	4.49	4.44	4.20
EER		3.40	3.63	3.30	3.18
Sound pressure level - dBA	Heating	52	53	53	53
	Cooling	52	54	54	54
Dimensions (W x H x D) - mm		950x834x330	950x1380x330	950x1380x330	950x1380x330
Weight - kg		64	105	105	105
Outdoor temperature range - °C	Heating	-20 to +30	-20 to +30	-20 to +30	-20 to +30
	Cooling	5 to 48	5 to 48	5 to 48	5 to 48
Refrigerant pipes -in		3/8, 5/8	3/8, 5/8	3/8, 5/8	3/8, 5/8
Max. pipe length/height difference between indoor & Outdoor units - m		50/30	50/30	50/30	50/30
Factory charge (R410A) - g		1900	2850	2850	2850
Charged to (m)		7.5	7.5	7.5	7.5
Additional charge - g/m		30	60	60	60

Indoor Unit		HN0914 NK1	HN1616 NK1		
Weight - kg		48	55.5	54.5	54.5
Dimensions (WxHxD) mm		490x850x315	490x850x315	490x850x315	490x850x315
Noise level at 1m - dBA		28	28	28	28
Water flow temperature °C	Heating	15 - 55	15 - 55	15 - 55	15 - 55
	Cooling	6 - 30	6 - 30	6 - 30	6 - 30
Electric heaters	Power supply	220-240V 50Hz	220-240V 50Hz	220-240V 50Hz	220-240V 50Hz
	Capacity - kW	4	6	6	6
Minimum water flow - l/min		12	15	15	15
Pump head at minimum flow - m		6.2	7	7	7
Expansion tank capacity - litres		8	8	8	8

Accessories	
Remote room temperature sensor	PQRSTAO
Dry contact (remote switching and monitoring)	PQDSA
Hot water tank heater controls kit	PHLTA

Note:

- 1 - Heating conditions - Indoor Water Temperature 30°C/35°C;  
Outdoor Air Temperature 7°CDB/6°CWB
- 2 - Cooling conditions - Indoor Water Temperature 23°C/18°C;  
Outdoor Air Temperature 35°CDB/24°CWB