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## AIR-TO-WATER HEAT PUMP **THERMAV™**

NATURAL HEATING MACHINE

Catalogue 2011



# LG Electronics' Eco-friendly Technology

LG Electronics' environmental policy is centered on its "Life's Good When it's Green" program. The program is divided into two areas: pre-production and post-production. LG Electronics' goal is to reduce greenhouse gases in the pre- and post-production stages by 150,000 tons and 30,000,000 tons, respectively, by 2020. This reduction of greenhouse gases emitted during a product's life cycle (including raw materials used in production, product distribution, product usage, and product disposal) will be carried out in stages.



Nature.....  
Human.....  
Comfort.....

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# THERMA V™ LINE-UP

## THERMA V Split Type (R410A) \_ 1Ø 230V / 3Ø 400V

Capacity _ kW	9.0	12.0	14.0	16.0
Split (R410A)	 1Ø	 1Ø / 3Ø	 1Ø / 3Ø	 1Ø / 3Ø

## THERMA V Split V2 Injection Type (R410A) \_ 1Ø 230V / 3Ø 400V



Capacity _ kW	12.0	14.0
Split V2 Injection (R410A)	 1Ø / 3Ø	 1Ø / 3Ø

\* Split V2 Injection available from August in the market

## THERMA V MONO Type (R407C) \_ 1Ø 230V / 3Ø 400V

Capacity _ kW	10.0	12.0	14.0
MONO (R407C)	 1Ø / 3Ø		

## SANITARY TANK

Volume_Liter	Single Coil, 200 liter	Single Coil, 300 liter	Double Coil, 200 liter	Double Coil, 300 liter
Sanitary Water Tank				

## LG Innovation Natural Heating Machine

### THERMA V, Natural Heating Machine, Aiming at all-in-one Solution

**Economical** : According to its innovative technology and advanced performance efficiency, THERMA V offers one of the highest cost-saving and payback with any heating system in the market!

**Flexible** : A solution that is easy to install and does not require constant house renovations.

**Natural** : THERMA V respects the environment by using two renewable energy sources, the air and the sun, and by reducing CO<sub>2</sub> emissions.

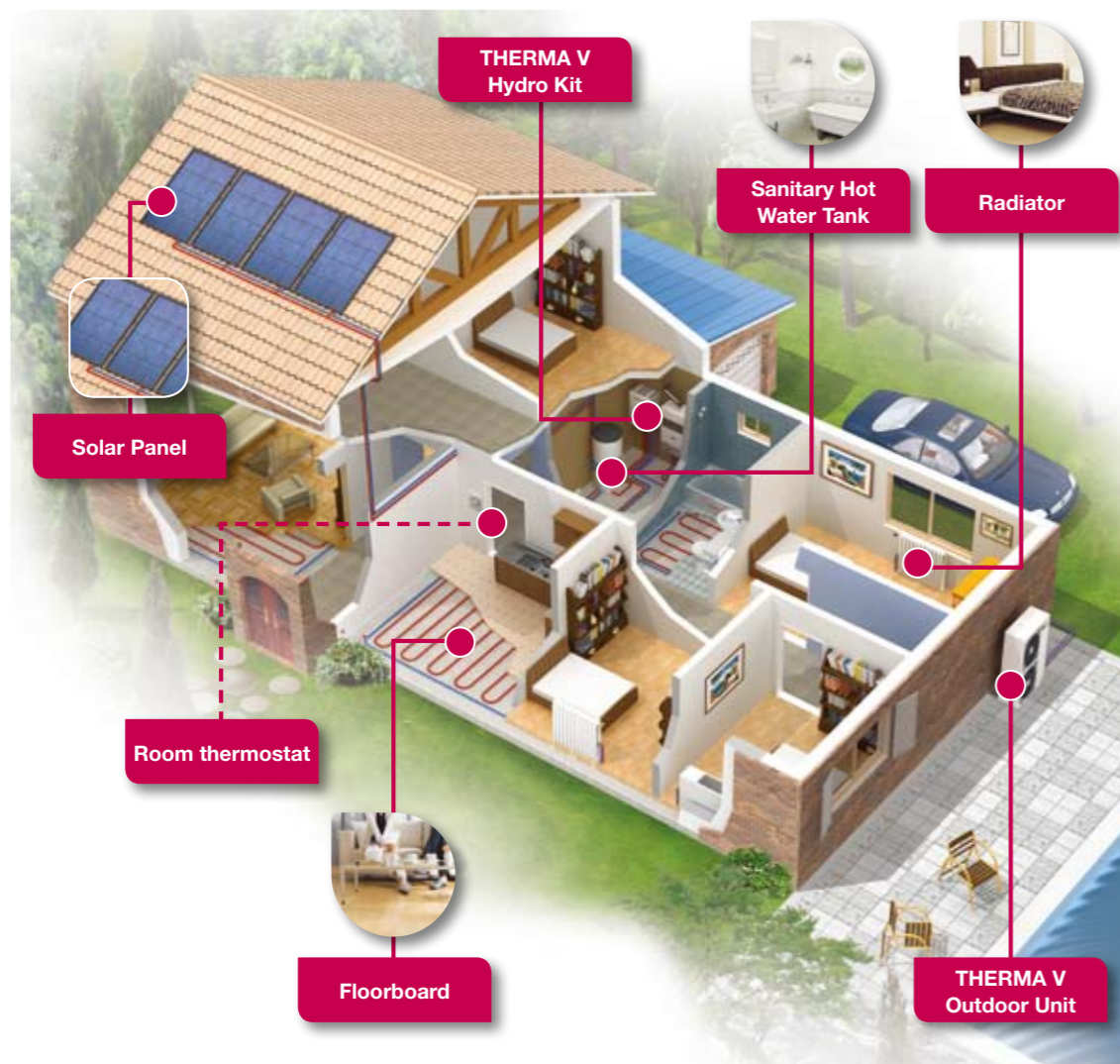
**Government Subsidy** : According to recent trends, the adoption of renewable energy, the heat pumps may enable consumers to obtain a government subsidy under certain conditions.



# What is THERMA V?

## The Solution for New Housing and Renovation

THERMA V was specially conceived to respond to the needs of the renovation market (to relieve or replace a boiler) and the new housing market. The product adapts perfectly to individual and collective residential applications. Moreover, this Air-to-Water heat pump makes up an eco-friendly product that uses two renewable energy sources – the air and the sun. Finally, it proves economics with coefficients of performances (COP) up to 4.5, among the most advanced on the market.



- Different heat transmitters :
  - > Heating Floorboard
  - > Radiators
  - > Fan Coil Unit
- Optional Accessories :
  - > Sanitary Hot Water Tank



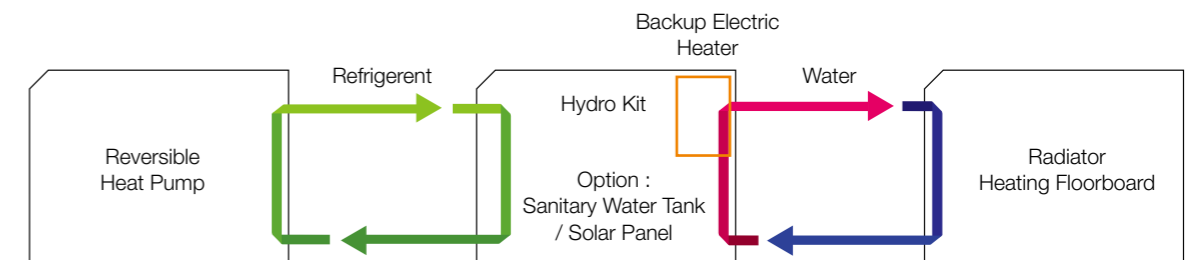
## A Natural Solution

- Economical system with advanced coefficient of performances: COP = 4.5.
- Utilization of two renewable energies: Air and sun.
- Reduced CO2 emissions compared to gas or fuel heating.

## A Flexible Solution

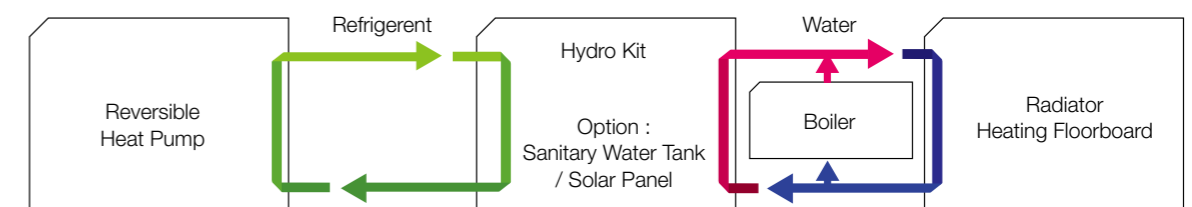
- Monovalent operation :  
A compact technology, THERMA V is capable of responding to all of your daily comfort & energy needs. In addition, if the outdoor temperature decreases below the seasonal temperature, a backup electric heater will come to guarantee your optimal well-being.

### Application : Replacing Coventional Boiler



- Alternative Bivalent Operation :  
THERMA V heat pump can also be integrated in the installation of existing boiler(gas or fuel). Boiler takes over space heating and sanitary hot water, in case of severe low ambient temperature.

### Application : Using Existing Boiler



- Simplicity of Installation :  
THERMA V includes a compact outdoor unit, plus an indoor unit that is easy to install. Only one refrigerating link is required to connect the two elements.

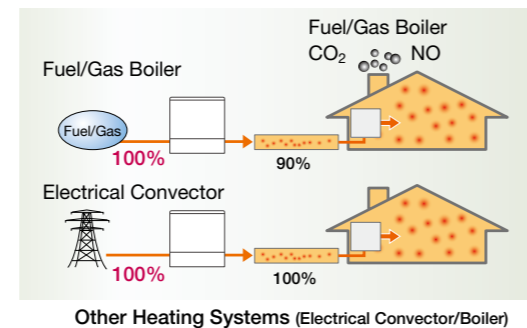
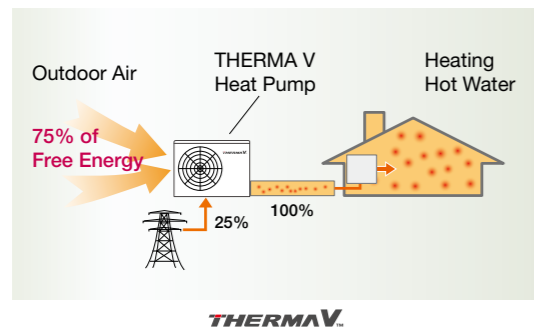
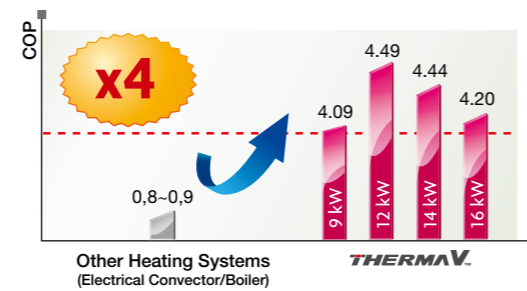


# Benefits of THERMA V

## Energy Performance

### Advanced Coefficients of Performance (COP) for More Energy Saving

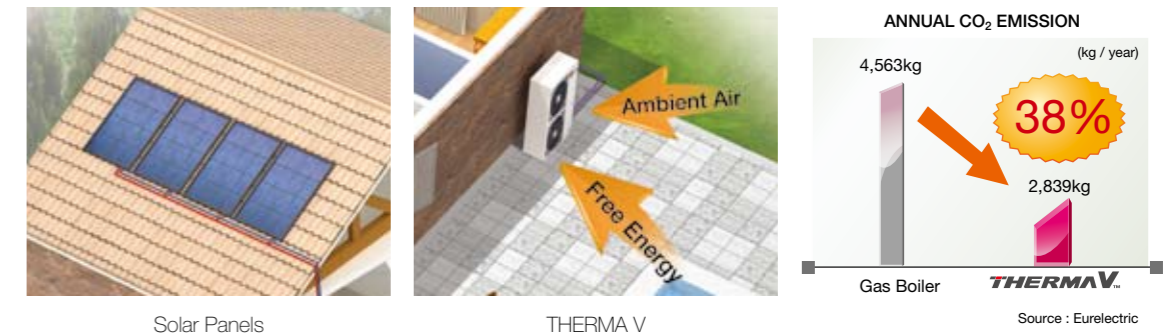
As generating free energy from outdoor air even in low temperature, THERMA V makes it possible to heat efficiently. With Inverter Technology of LGE, THERMA V can make higher efficiency level up to the range of 4.1 to 4.5. In other words, consuming 1kW of electric energy of an electrical network enables more than 4kW of heating energy.



## Respecting the Environment

### Reducing CO<sub>2</sub> Emissions

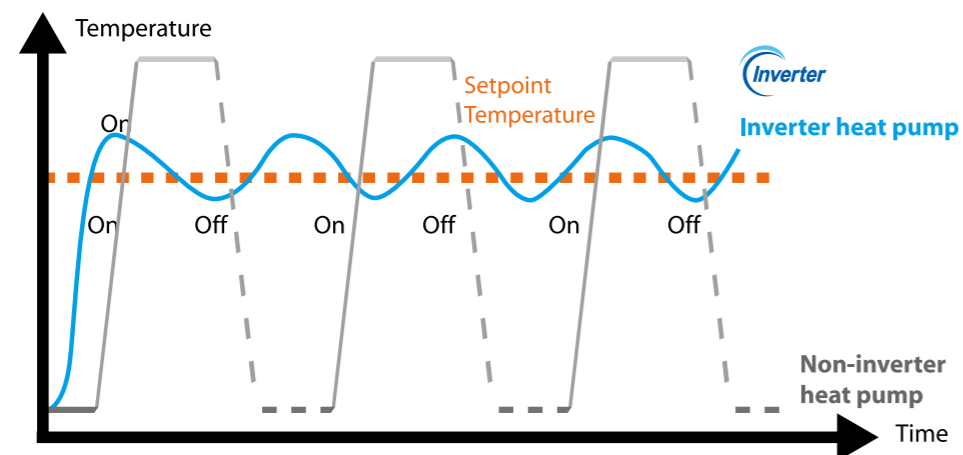
The THERMA V solution by LG adopts two renewable energies, the air and the sun. This eco-friendly system will decrease CO<sub>2</sub> emissions from heating systems on fossil energies such as gas and fuel.



### Inverter regulation, for more serenity



Once the desired temperature is achieved, unlike conventional air to water heat pump that turns the compressor on and off, LG inverter units adjust and constantly vary the compressor speed to maintain the desired temperature with minimal fluctuation to ensure that your comfort is not compromised.

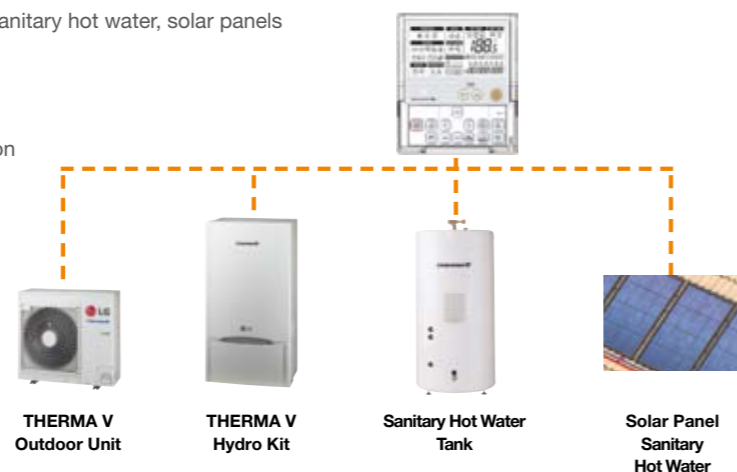


# Benefits of THERMA V

## Convenient Control

### Control of Energy Installation

- Control of the generation of heating, sanitary hot water, solar panels
- Control of weekly scheduling
- Control of operating modes
- Control of the water temperature
- Control of heating emergency operation



### Heating Emergency Operation

Heating is essential during winter. THERMA V is equipped with an emergency operation that allows the maintenance of heating in case of possible failure.

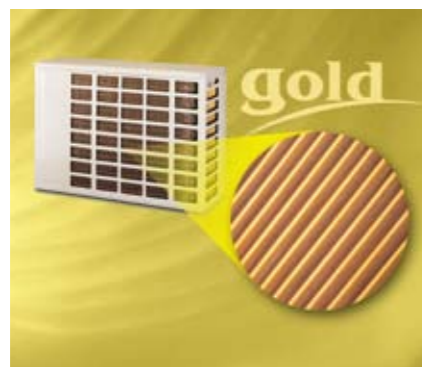
The heating security mode consist of two levels the indoor:

- Level 1 : When indoor unit malfunctions, the outdoor unit operates under a pre-defined emergency operation mode.
- Level 2 : When outdoor unit malfunctions, electronic heater of the indoor unit operates under a pre-defined emergency operation mode.

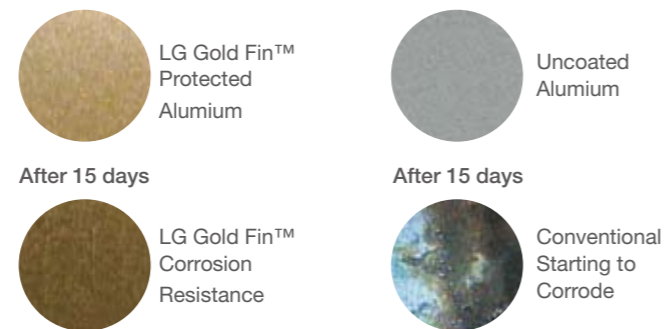


## Anti-Corrosion Gold Fin™

The exchangers of our outdoor unit are treated against corrosion and pollution. This treatment guarantees the durability of the systems and high-level performance.

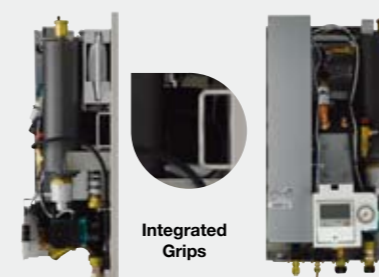


### > Salt Spray Test for 15 Days

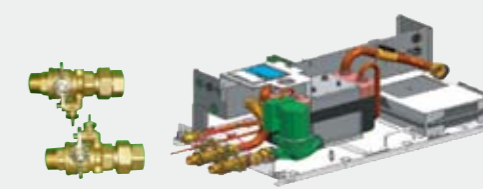


## Easy Installation

### Hydrokit

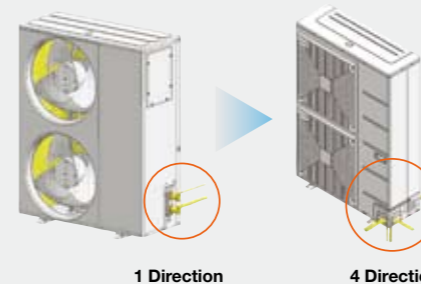


### Separated Shut-off valves



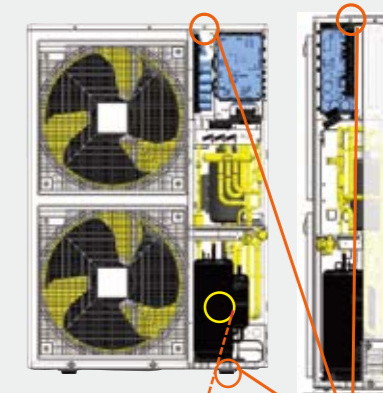
### Outdoor Unit \_ Split, MONO

- Refrigerating connection is possible in four directions



### Facilitated maintenance

- Access to vital parts of the machine thanks to the new removable front panel fixed with three screws.



### Jacking-up Grips

- Easy to manipulate thanks to the integrated grips



# Benefits of THERMA V

V2 Injection technology-adopted THERMA V Split offers you most comfortable atmosphere in extreme cold weather condition by providing 100% heating performance at -15°C without an auxiliary heater or boiler. Therefore, it saves users electricity cost greatly (Peak data result with heating steady-state without defrost effect at the test condition of A\*/W35)

**100% performance at -15°C without electric heaters**

**A Compelling Reason to Use LG V2 Injection**

100% stable & constant heating down to -15°C  
(Therma V provides 100% comfort at any outside condition even down to -15°C without an auxiliary heater)

70% heating performance at -20°C

**V2 Injection**

Save electricity consumption and save electricity bill

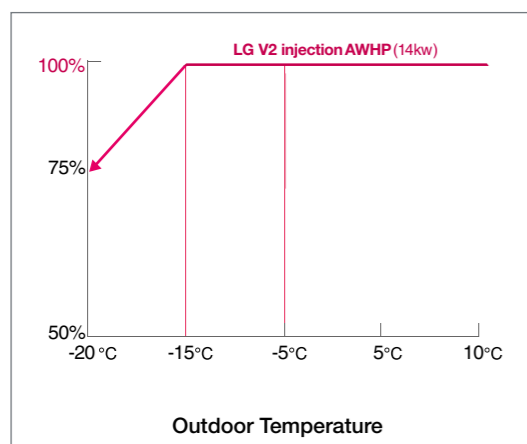
Eco-friendliness

Inverter technology offers Ultimate comfortable environment

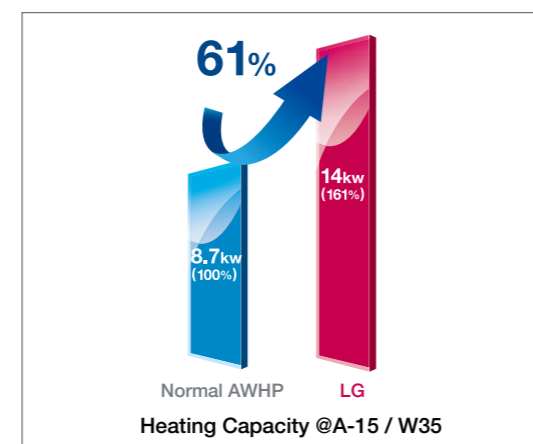
## Constant Heating - V2 Injection Technology

Effects of V2 Injection compressor

Expansion of AWHP operating range

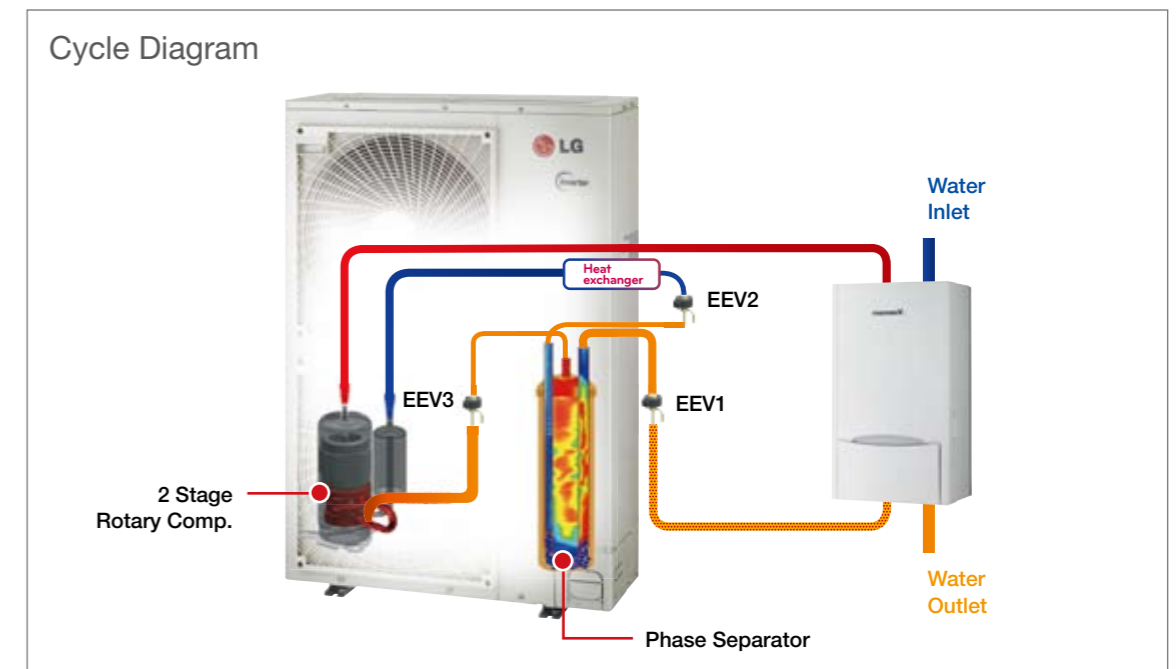


Heating capacity increase



## Split V2 Injection - Logic

Heating capacity Increase V2 Injection Rotary compressor



LG go through a real field test in Finland to secure reliability at the severe low temperature.





# THERMA V SPLIT Hydrokit

## Hydrokit (1ø, 3ø)



## HYDROKIT

- HN0916. NK1
- HN0926. NK1
- HN0936. NK1
- HN0914. NK1

Up to 9kW

- HN1616. NK1
- HN1626. NK1
- HN1636. NK1
- HN1629. NK1
- HN1639. NK1

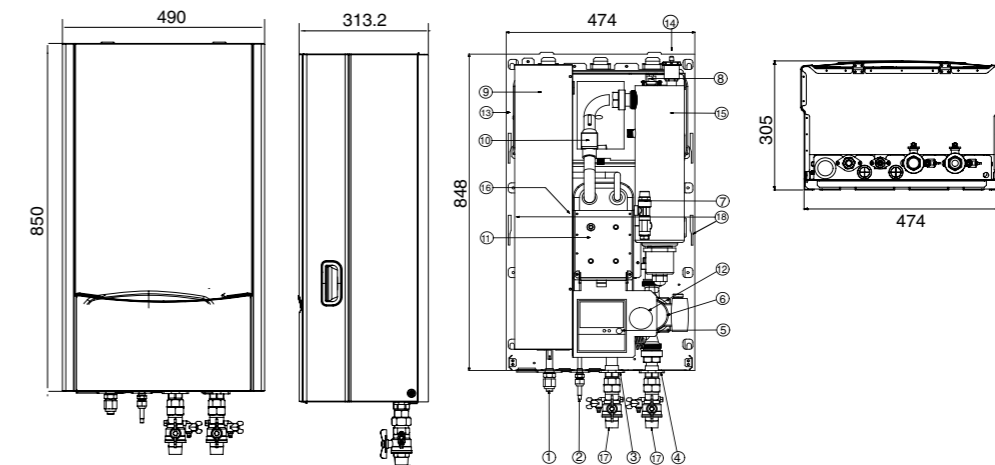
Up to 16kW



## Specifications

Hydrokit _ Indoor Unit	*HN0916. NK1	*HN0926. NK1	*HN0936. NK1	HN0914. NK1	HN1616. NK1	HN1626. NK1	HN1636. NK1	*HN1629. NK1	HN1639. NK1
Combined Outdoor Unit	HU091.U41 - 1ø 230V				HU121.U31 - 1ø 230V HU141.U31 - 1ø 230V HU161.U31 - 1ø 230V		HUV121.U31 - 1ø 230V HUV141.U31 - 1ø 230V		
					HU123.U31 - 3ø 400V HU143.U31 - 3ø 400V HU163.U31 - 3ø 400V		HUV123.U31 - 3ø 400V HUV143.U31 - 3ø 400V		
Electric Power Supply	1ø/220-240V/50Hz	3ø/220V/50Hz	3ø/380-415V/50Hz	1ø/220-240V/50Hz	1ø/220-240V/50Hz	3ø/220V/50Hz	3ø/380-415V/50Hz	3ø/220V/50Hz	3ø/380-415V/50Hz
Heater Capacity	6			4	6			9	
Dimension W*H*D	490*850*313				490*850*313				
Weight	52				55				
Noise Level at 1 meter	28				28				
Leaving Water Heating	15-55				15-55				
Temperature Cooling	6-30				6-30				
Water Pump Max. Power Input	135				205				
Max. Head	6.4				7				
Expansion Tank	8				8				

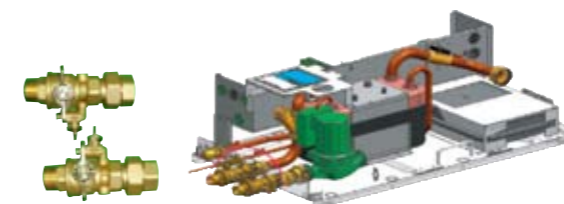
\* Available from June of 2011



N°	ITEM
1	Refrigerating Pipe - Gas
2	Refrigerating Pipe - Liquid
3	Water Connection - Entry - 1 inch
4	Water Connection - Exit - 1 inch
5	Control Panel
6	Water Pump
7	Discharge Gate - Open when pressed > 3 bars
8	Thermostat
9	Control Box
10	Water Flow Switch

N°	ITEM
11	Plate Heat Exchanger
12	Hydraulic Pressure Manometer
13	Expansion Vessel
14	Air-vent
15	Electric Heater
16	Strainer
17	Shut-off Valve
18	Grip

## Separated Shut-off valves





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

**THERMA V™**

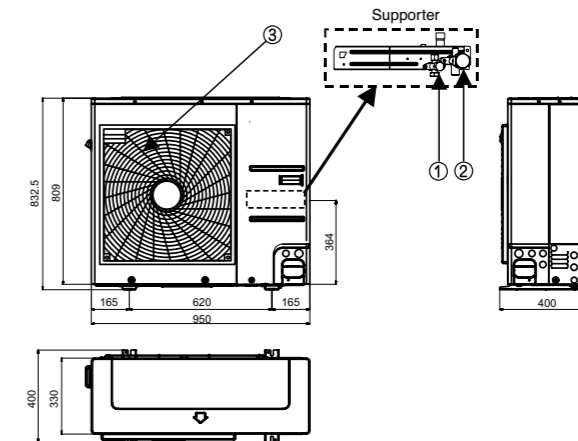


THERMA V  
SPLIT \_ 1ø



OUTDOOR UNIT

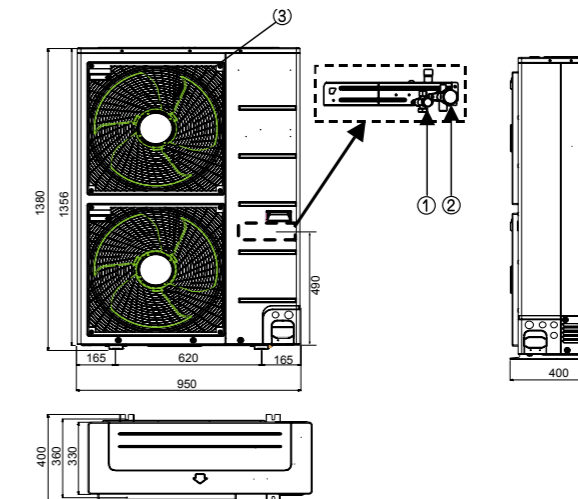
HU091. U41 9kW



N°	ITEM
1	Refrigerating Pipe - Liquid
2	Refrigerant Pipe - Gas
3	Air Discharge Grille

OUTDOOR UNIT

HU121. U31 12kW  
HU141. U31 14kW  
HU161. U31 16kW



N°	ITEM
1	Refrigerating Pipe - Liquid
2	Refrigerant Pipe - Gas
3	Air Discharge Grille

Specifications

Outdoor Unit	HU091. U41	HU121. U31	HU141. U31	HU161. U31	
Combined Hydrokit	HN0916. NK1 HN0926. NK1 HN0936. NK1 HN0914. NK1		HN1616. NK1 HN1626. NK1 HN1636. NK1 HN1629. NK1 HN1639. NK1		
Power Supply	ø / V / Hz 1ø / 220-240V / 50Hz				
Nominal Capacity	Heating(A10/W35) kW	9.71	13.32	14.94	16.93
	Heating(A7/W35) kW	9	12	14	16
	Heating(A2/W35) kW	6.87	9.4	10.69	11.9
	Heating(A-7/W35) kW	8.61	11.48	13.11	14.8
Nominal Input	Cooling(A35/W18) kW	9.00	14.00	14.00	14.00
	Heating(A10/W35) kW	2.2	2.99	3.39	3.87
	Heating(A7/W35) kW	2.2	2.67	3.15	3.81
	Heating(A2/W35) kW	2.07	2.8	3.22	3.62
COP	Heating(A-7/W35) kW	3.19	4.16	4.85	5.61
	Cooling(A35/W18) kW	2.65	4.40	4.40	4.40
	Heating(A10/W35) W/W	4.41	4.45	4.41	4.37
	Heating(A7/W35) W/W	4.09	4.49	4.44	4.20
EER	Heating(A2/W35) W/W	3.32	3.36	3.32	3.29
	Heating(A-7/W35) W/W	2.70	2.76	2.70	2.64
Sound pressure level	Cooling(A35/W18) W/W	3.40	3.18	3.18	3.18
	Heating dBA	52		53	
Dimension	Cooling dBA	52		54	
	W*H*D	950*834*330		950*1,380*330	
Weight	kg	64		105	
	Refrigerant (R410A)	Pre-charged amount g	1,90		2,980
	Pipe Diameter(Liquid/Gas) inch			3/8, 5/8	

Outdoor Unit (3ø 400V)  
Maximum 55°C Water Temperature

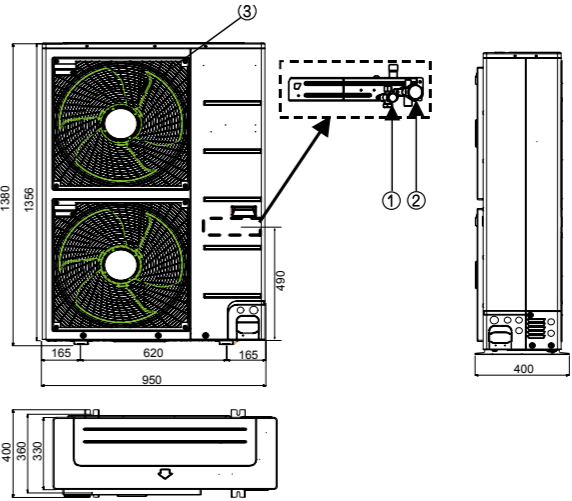


THERMA V  
SPLIT \_ 3ø



OUTDOOR UNIT

- HU123. U31 12kW
- HU143. U31 14kW
- HU163. U31 16kW



N°	ITEM
1	Refrigerating Pipe - Liquid
2	Refrigerant Pipe - Gas
3	Air Discharge Grille

Specifications

Outdoor Unit		HU123. U31	HU143. U31	HU163. U31	
Combined Hydrokit		HN1616. NK1 HN1626. NK1 HN1636. NK1 HN1629. NK1 HN1639. NK1			
Power Supply	ø / V / Hz	3ø / 380-415V / 50Hz			
Nominal Capacity	Heating(A10/W35)	kW	13.25	15.06	17.34
	Heating(A7/W35)	kW	12	14	16
	Heating(A2/W35)	kW	9.46	10.89	12.22
	Heating(A-7/W35)	kW	11.66	12.72	14.92
	Cooling(A35/W18)	kW	14.60	15.50	16.80
Nominal Input	Heating(A10/W35)	kW	3.02	3.49	4.1
	Heating(A7/W35)	kW	2.72	3.24	3.81
	Heating(A2/W35)	kW	2.83	3.28	3.82
	Heating(A-7/W35)	kW	4.31	4.98	5.95
	Cooling(A35/W18)	kW	4.02	4.65	5.09
COP	Heating(A10/W35)	W/W	4.39	4.32	4.23
	Heating(A7/W35)	W/W	4.41	4.32	4.20
	Heating(A2/W35)	W/W	3.34	3.32	3.20
	Heating(A-7/W35)	W/W	2.71	2.55	2.51
EER	Cooling(A35/W18)	W/W	3.63	3.33	3.30
Sound pressure level	Heating	dBA	53		
	Cooling	dBA	54		
Dimension	W*H*D	950*1,380*330			
Weight	kg	105			
Refrigerant (R410A)	Pre-charged amount	g	2,980		
	Pipe Diameter(Liquid/Gas)	inch	3/8, 5/8		



# THERMA V V2 Injection 1ø, 3ø

## Outdoor Unit (1ø 230V)



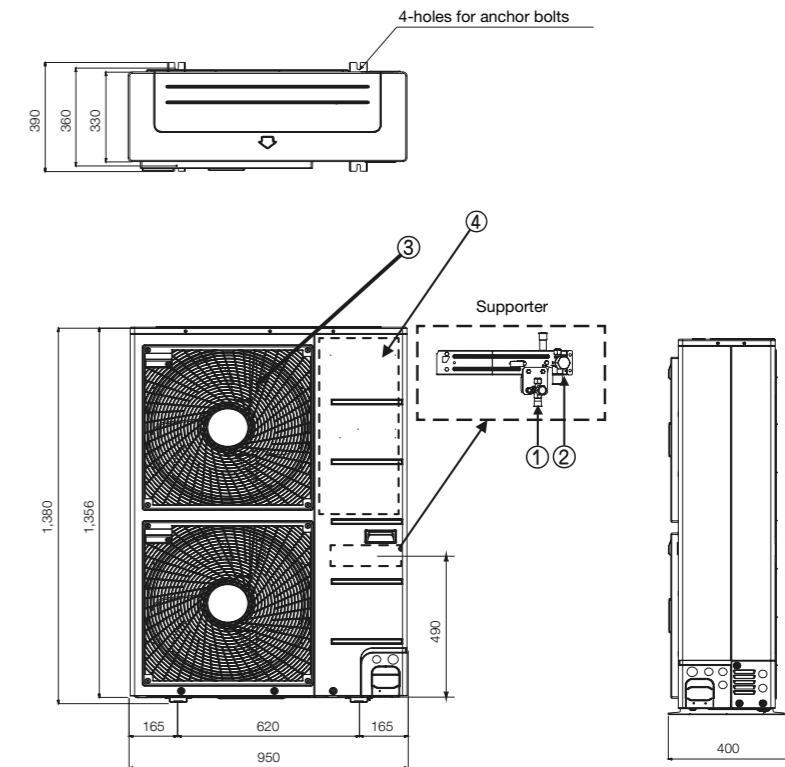
### OUTDOOR UNIT

HUV121. U31	12kW
HUV141. U31	14kW
HUV123. U31	12kW
HUV143. U31	14kW

### Specifications

Outdoor Unit		HUV121. U31 (*)	HUV141. U31	HUV123. U31	HUV143. U31	
Combined Hydrokit		HN1616.NK1 HN1626.NK1 HN1636.NK1 HN1629.NK1 HN1639.NK1				
Power Supply	ø / V / Hz	1ø / 220-240V / 50Hz		3ø / 380-415V / 50Hz		
Nominal Capacity	Heating(A10/W35)	kW	13.10	14.69	13.10	14.69
	Heating(A7/W35)	kW	12.00	14.00	12.00	14.00
	Heating(A2/W35)	kW	9.85	11.05	9.85	11.05
	Heating(A-2/W35)	kW	12.11	13.58	12.11	13.58
	Cooling(A35/W18)	kW	12.00	14.00	12.00	14.00
Nominal Input	Heating(A10/W35)	kW	3.05	3.34	3.05	3.34
	Heating(A7/W35)	kW	2.82	3.32	2.82	3.32
	Heating(A2/W35)	kW	3.14	3.44	3.14	3.44
	Heating(A-2/W35)	kW	5.16	5.71	5.16	5.71
	Cooling(A35/W18)	kW	3.33	3.88	3.33	3.88
COP	Heating(A10/W35)	W/W	4.30	4.40	4.30	4.40
	Heating(A7/W35)	W/W	4.26	4.22	4.26	4.22
	Heating(A2/W35)	W/W	3.14	3.21	3.14	3.21
	Heating(A-2/W35)	W/W	2.35	2.38	2.35	2.38
EER	Cooling(A35/W18)	W/W	3.60	3.61	3.60	3.61
	Peak Data at A-15/W35 (**)	Heating Capacity	kW	12.28	13.78	12.28
	COP	W/W	2.32	2.35	2.32	2.35
Sound pressure level	Heating	dBA	54			
	Cooling	dBA	53			
Dimension	W*H*D	950*1,380*330				
Weight(Net)	kg	105				
Refrigerant (R410A)	Pre-charged amount	g	3,400			
	Pipe Diameter(Liquid/Gas)	incl	(3/8)/(5/8)			

(\*) : Specification will be fixed when this model is completely developed  
 (\*\*): Heating steady-state performance without defrost effect



N°	ITEM
1	Liquid side service valve(mm)
2	Gas side service valve(mm)
3	Air discharge grill
4	Control Cover

Outdoor Unit (1ø 230V)



THERMA V  
MONO \_ 1ø

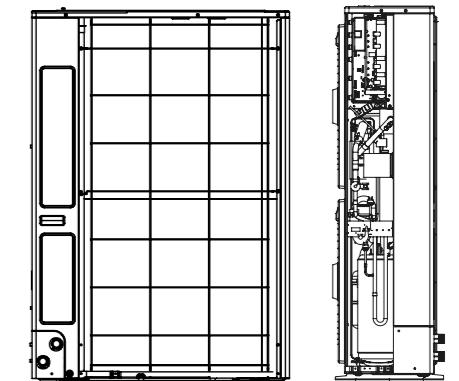
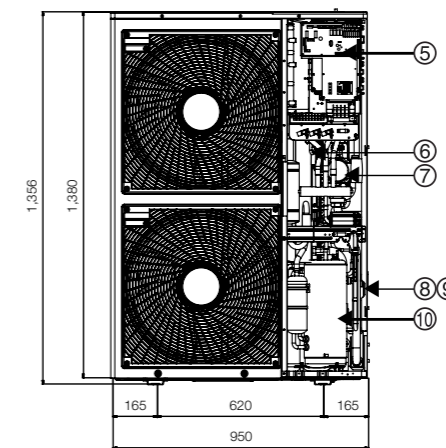
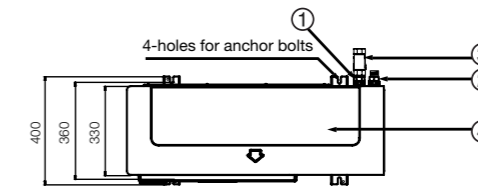


OUTDOOR UNIT

HM091M. U31	9kW
HM121M. U31	12kW
HM141M. U31	14kW

Specifications

Outdoor Unit			HM091M. U31	HM121M. U31	HM141M. U31
Power Supply	ø / V / Hz		1ø / 220-240V / 50Hz		
Nominal Capacity	Heating(A10/W35)	kW	10.58	12.7	14.68
	Heating(A7/W35)	kW	10	12	14
Nominal Input	Heating(A2/W35)	kW	5.67	6.83	8.57
	Heating(A-7/W35)	kW	7.40	9.0	11.05
	Cooling(A35/W18)	kW	10.00	12.00	14.00
COP	Heating(A10/W35)	W/W	2.39	2.91	3.43
	Heating(A7/W35)	W/W	2.35	2.86	3.38
	Heating(A2/W35)	W/W	2.19	2.57	2.99
	Heating(A-7/W35)	W/W	3.02	3.62	4.23
EER	Cooling(A35/W18)	W/W	2.74	3.33	4.01
	Heating(A10/W35)	W/W	4.43	4.36	4.28
Sound pressure level	Heating(A7/W35)	W/W	4.26	4.20	4.14
	Heating(A2/W35)	W/W	2.59	2.66	2.87
Dimension	Heating(A-7/W35)	W/W	2.45	2.49	2.61
	Cooling(A35/W18)	W/W	3.65	3.60	3.49
Weight	kg	53	53	54	
Refrigerant(R407C)	Pre-charged amount	g	53	53	54
Leaving Water Temperature	Heating	°C	20-65		
	Cooling	°C	6-25		
Water Pump	Maximum Power Input	W		205	
	Maximum Head	m		7	
	Minimum Water Flow Rate	LPM		12	



N°	ITEM
1	Energy Water Pipe
2	Leaving Water Pipe
3	Strainer
4	Top Cover
5	Control Box
6	Plate Heat Exchanger
7	Water Pump
8	Pressure Gage
9	Safety Valve
10	Compressor



Outdoor Unit (3ø 400V)



THERMA V  
MONO \_ 3ø

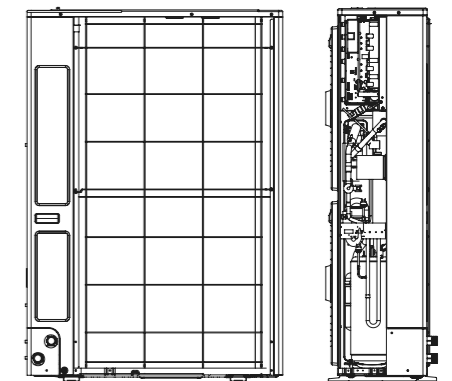
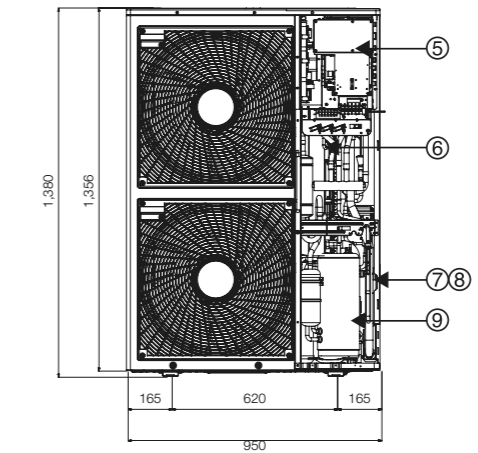
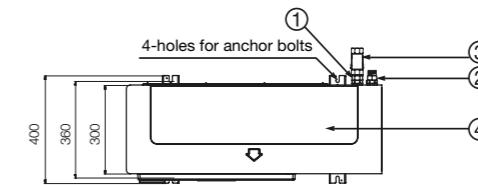


OUTDOOR UNIT

HM103M. U31	9kW
HM123M. U31	12kW
HM143M. U31	14kW

Specifications

Outdoor Unit		HM103M. U31	HM123M. U31	HM143M. U31
Power Supply	ø / V / Hz	3ø / 380-415V / 50Hz		
Nominal Capacity	Heating(A10/W35)	10.79	12.70	14.81
	Heating(A7/W35)	10.00	12.00	14.00
Nominal Input	Heating(A2/W35)	7.36	8.04	8.45
	Heating(A-7/W35)	9.29	10.83	11.65
	Heating(A10/W35)	2.45	2.90	3.40
COP	Heating(A7/W35)	2.35	2.86	3.38
	Heating(A2/W35)	2.59	2.83	3.06
	Heating(A-7/W35)	3.37	4.01	4.42
Sound pressure level	Heating(A10/W35)	4.40	4.38	4.36
	Heating(A7/W35)	4.26	4.20	4.14
	Heating(A2/W35)	2.84	2.84	2.76
	Heating(A-7/W35)	2.76	2.70	2.64
Dimension	W*H*D	950*1,380*330		
Weight	kg	128		
Refrigerant(R407C)	g	3,550		
Leaving Water Temperature	Heating °C	20-65		



N°	ITEM
1	Energy Water Pipe
2	Leaving Water Pipe
3	Strainer
4	Top Cover
5	Control Box
6	Plate Heat Exchanger
7	Pressure Gauge
8	Safety Valve
9	Compressor

## An Indoor Box for MONOBLOC 3ø

# THERMA V Indoor Box



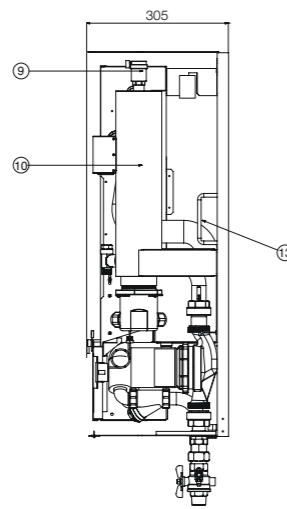
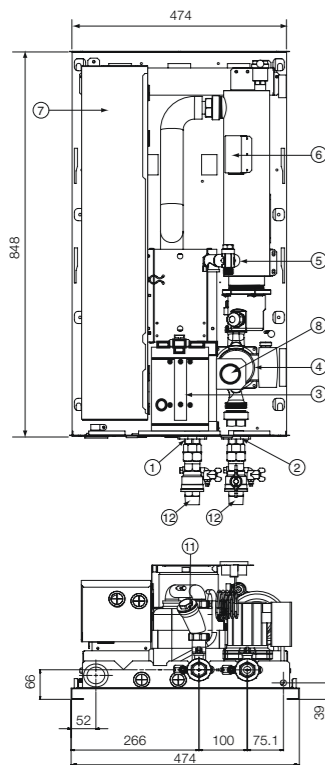
The indoor box contains an electric backup heater and a water pump.

The traditional MONOBLOC includes an electrical back-up heater and a water pump in the outside unit but LG's '3-phase' MONOBLOC puts the water pump in the indoor box so that it keeps the water pump from being frozen as it is installed inside the building separately. It also generate additional heat energy with an electrical back-up Heater.

## Specifications

Outdoor Unit			CHN1426. NK1	CHN1436. NK1	CHN1429. NK1	CHN1429. NK1
Electric Heater	Power Supply	ø/V/Hz	3ø / 220V / 50Hz	3ø / 380-415V / 50Hz	3ø / 220V / 50Hz	3ø / 380-415V / 50Hz
	Capacity	Kw	6	6	9	9
Water Pump	Maximum Power Input	W	205	205	205	205
	Maximum Head	m	7	7	7	7
	Minimum Water Flow Rate	LPM	15	15	15	15
Dimension	W*H*D		490*850*315	490*850*315	490*850*315	490*850*315
Weight	kg		38	38	38	38
Water Connections	Entry / Leaving	mm	25 / 25	25 / 25	25 / 25	25 / 25
Safety Valve	Relief Pressure	Bar	3	3	3	3

## INDOOR BOX



N°	ITEM
1	Energy Water Pipe
2	Leaving Water Pipe
3	Control Panel
4	Water Pump
5	Safety Valve
6	Thermal Switch
7	Control Box
8	Pressure Gage
9	Air Vent
10	Electronic Heater
11	Strainer
12	Shut-off Valve
13	Carrying Handle



AIR-TO-WATER HEAT PUMP  
**THERMA V**<sup>TM</sup>  
NATURAL HEATING MACHINE

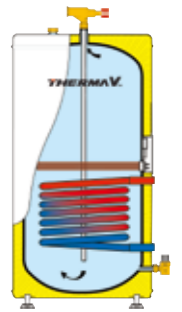


# THERMA V Sanitary Water



## SANITARY WATER TANK – SINGLE COIL

LGRTV200E	198 LITERS
LGRTV300E	287 LITERS



## SANITARY WATER TANK – DOUBLE COIL

LGRTV200VE	198 LITERS
LGRTV300VE	287 LITERS



## SANITARY WATER TANK – SINGLE COIL

SANITARY WATER TANK		LGRTV200VE	LGRTV300VE
<b>GENERAL CHARACTERISTICS</b>			
Water Volume	L	198	287
Diameter	mm	580	580
Height	mm	1230	1680
Empty Weight	kg	45	59
Tank – Materials		Stainless steel	Stainless steel
Outer Skin – Materials		Paint Epoxy	Paint Epoxy
Color – White RAL		White NC	White NC
<b>CHARACTERISTICS OF ELECTRICAL BACK-UP</b>			
Additional Electric Heater	kW	3	3
Adjustable Thermostat	°C	60 – 90	60 – 90
<b>CHARACTERISTICS OF EXCHANGER</b>			
Exchanger Type		Single	Single
Material Exchanger		LDX 2101 – Stainless steel	LDX 2101 – Stainless steel
Maximum Water Temperature	°C	80	80
<b>HYDRAULIC CONNECTIONS – HEAT PUMP</b>			
THERMA V Entry	mm	25	25
THERMA V Exit	mm	25	25
<b>HYDRAULIC CONNECTIONS – SANITARY WATER</b>			
City Water Entry	mm	22	22
Hot water Exit	mm	22	22
<b>ELECTRIC CONNECTION</b>			
Supply	ø/V/Hz	1ø/220-240V 50Hz	1ø/220-240V 50Hz
<b>MANDATORY OPTIONAL ACCESSORIES</b>			
Sanitary Tank Installation Kit		PHLTA	PHLTA

## SANITARY WATER TANK – DOUBLE COIL

SANITARY WATER TANK		LGRTV200E	LGRTV300E
<b>GENERAL CHARACTERISTICS</b>			
Water Volume	L	198	287
Diameter	mm	580	580
Height	mm	1230	1680
Empty Weight	kg	50	64
Tank – Materials		Stainless steel	Stainless steel
Outer Skin – Materials		Paint Epoxy	Paint Epoxy
Color – White RAL		White NC	White NC
<b>CHARACTERISTICS OF ELECTRICAL BACK-UP</b>			
Additional Electric Heater	kW	3	3
Adjustable Thermostat	°C	60 – 90	60 – 90
<b>CHARACTERISTICS OF EXCHANGER</b>			
Exchanger Type		Double	Double
Material Exchanger		LDX 2101 – Stainless steel	LDX 2101 – Stainless steel
Maximum Water Temperature	°C	80 (With an Heat Pump)	80 (With an Heat Pump)
<b>HYDRAULIC CONNECTIONS – HEAT PUMP</b>			
THERMA V Entry	mm	25	25
THERMA V Exit	mm	25	25
<b>HYDRAULIC CONNECTIONS – SANITARY WATER</b>			
City Water Entry	mm	22	22
Hot water Exit	mm	22	22
<b>ELECTRIC CONNECTION</b>			
Supply	ø/V/Hz	1ø/220-240V 50Hz	1ø/220-240V 50Hz
<b>MANDATORY OPTIONAL ACCESSORIES</b>			
Sanitary Tank Installation Kit		PHLTA	PHLTA

## SOLAR PANELS FOR DOUBLE COIL TANK

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



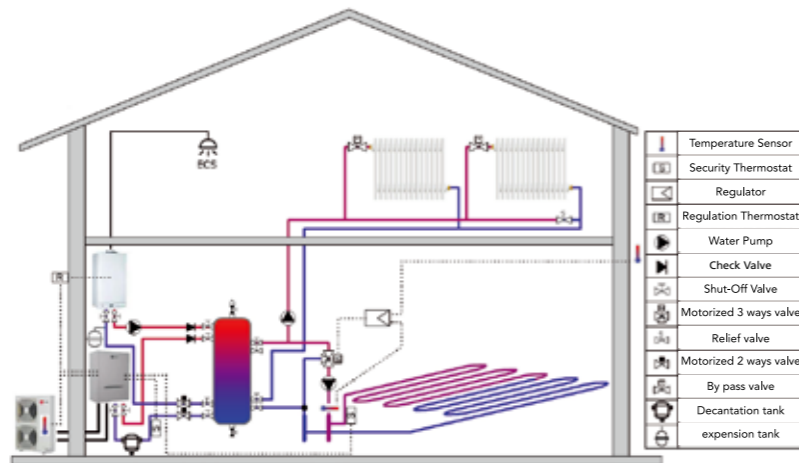
# Flexible Application

## Application for New Housing 1

> Monovalent operation mode

> Functions :

- Heating Floorboard • Low Temperature Radiators
- Generation of Sanitary Hot Water: Heat pump + Additional Electric Tank

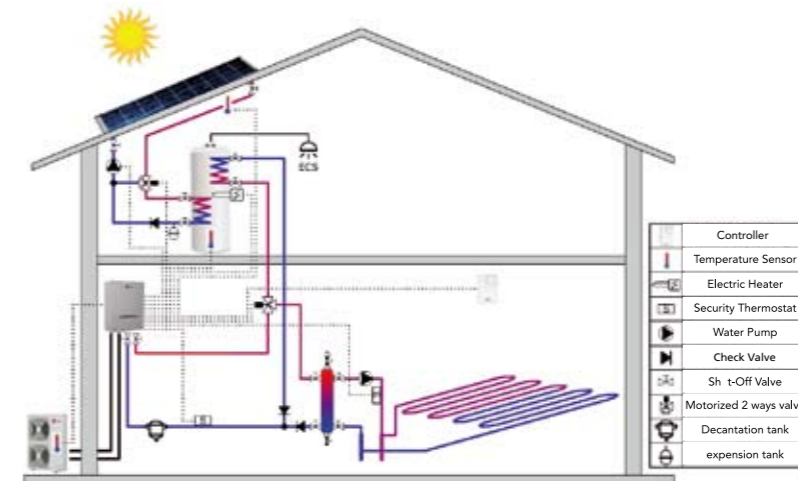


## Application for New Housing 3

> Monovalent operation mode

> Functions :

- Heating Floorboard

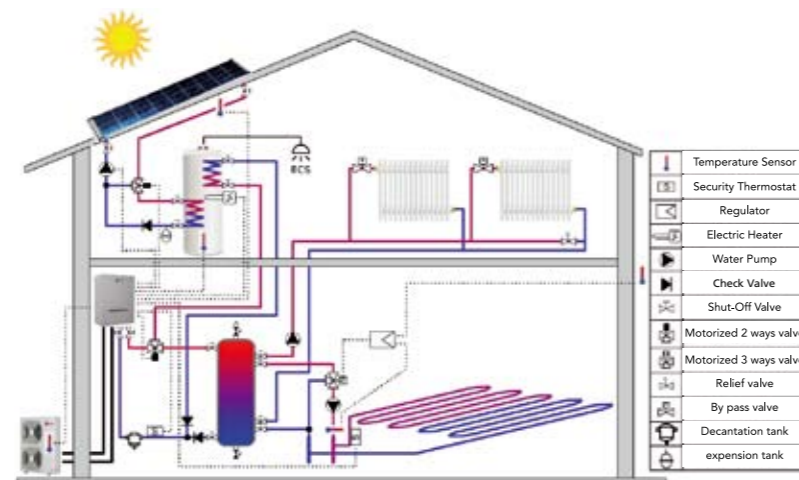


## Application for New Housing 2

> Monovalent operation mode

> Functions :

- Heating Floorboard • Low Temperature Radiators
- Generation of Sanitary Hot Water: Heat pump + Additional Electric Tank + Solar Panels

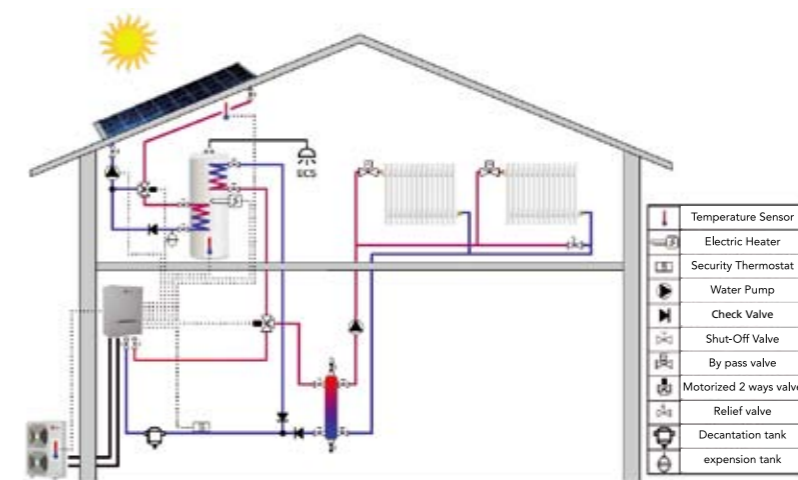


## Application for New Housing 4

> Monovalent operation mode

> Functions :

- Low Temperature Radiators



### Warning :

The recommended installation schemes are provided as a rough guide and are not a substitute for thorough hydraulic research performed by a professional based on the house's characteristics. LG is not responsible for damage resulting from not following this warning.

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