





G FG THERMA



LG Electronics

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For continual product development, LG reserves the right to change specifications without notice.

Information on the complete range of LG Air Conditioning and Energy Solutions is available on our website. You can also download from PDF versions from our website. Whilst every care has been taken in the preparation of this catalogue, some changes may have occurred since publication. LG Electronics cannot accept responsibility for errors and omissions.

LG Electronics UK Limited have been working closely with their supplier's to reduce their environmental impact on the world.





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LG Heating SOLUTION

Focus on Energy and Environment

Energy Related Product (ErP)

European Eco design rules (the ErP rules) have become an effective tool to drive European consumers towards products with reduced environmental impact and increased energy performances. Air-to-water heat pumps are the new product category to meet strict criterias for efficiency, while our customers will also be able to make more informed choices thanks to the energy labeling that accompanies LG's THERMA V range.

From 26 September 2015, the ErP rules applied to heat pumps, which have to meet minimum requirements for energy efficiency and maximum sound power levels. Products that do not satisfy these rules will not reach the UK market anymore.

The energy class of the product indicated on the energy label reflects the seasonal space heating efficiency. The energy efficiency of heat pumps is based upon their Seasonal Coefficient of Performance, calculated by taking the annual heat demand of the building and dividing it by the annual energy consumption, while considering the consumption of back-up systems and the regional location of the heat pump. LG THERMA V products' efficiency is calculated according to the average climate zone of Strasbourg.

Last but not least, water-based heat pumps are relying on a renewable energy for their functioning and it is important to keep in mind that the increased use of renewable energy in Europe will also reduce our energy dependency.



Example ErP label

European Standards

LG Electronics is committed to product excellence, hence why we participate in different national and European certification schemes. Third party certification allows LG customers to compare our products' efficiency with other manufacturers on an equal footing, so as to make informed choices, based on the highest performance standards. In addition, LG THERMA V products that hold a third party performance certificate can often benefit from national bonus schemes that make the product more affordable for the customer.

In the UK, MCS certification on THERMA V allows its holders to benefit from the Renewable Heat Incentive payments. In France, NF PAC enables the implementation of THERMA V in new built projects, where the French building regulation (RT 2012) promotes the use of highly efficient products, certified by an independent organism. Additionally, the French tax bonus can only benefit to the holders of the NF PAC certificate for air-to-water heat pumps. Lastly, Eurovent heat pump certification grants recognition to THERMA V product performance across all European countries.

Certification benefit

- MCS (UK): RHI (Renewable Heat Incentive) tariff 7.63 Pence / kWh for 7 years - NF PAC (France): Promoted in the context of Thermal Regulation RT 2012.
 - Tax Refund (15%~25% of product cost)
- EUROVENT (EU) : Model registration at the EUROVENT website

LG Energy Lab

LG energyLab

LG THERMA V has passed through the severe testing condition at the Energy Lab which is located in northern France. It can prove LG THERMA V is designed to make sure the steady performance and reliability under European winter condition.

LG testLab

Korea





LG's 7 Years Warranty

LG and it's distributors provide various levels of technical support to cover model selection and quotations, installation and commissioning. LG's Therma V comes with a standard 3 years warranty for all parts and a contribution towards labour. For those who have attended and passed the Therma V technical product training course an Approved Installer Status is offered providing a 7 year warranty for all parts and labour contribution. This also ensures quality heat pump installations for the end users.



What is LG **THERMAN**?

THERMA V is LG's Air to Water Heat Pump system, especially designed for new housing and renovation by LG's advanced heating technology with energy saving. THERMA V can be used as various heating solution from floor heating to hot water supply with multiple heat sources.

Energy Efficient Application

THERMA V offers the best solution for home heating and hot water supply with LG's inverter technology. It is 4 times more energy efficient than a conventional boiler system by absorbing energy from the outdoor environment.





Various Application

Various kinds of application is possible with THERMA V units including new builds and renovations.

New Build

With low temp. monobloc and split model, heating and cooling can be done.





Optimal Application

Advanced model selection software enables designers to choose optimal THERMA V model based on the location and environmental factors.



MCS Software

This is a total solution MCS tool for installers, consisting of;

- Automatic completion of MCS Compliance certificate. .
- MCS 3005 heat pump calculations with heat loss tool compliant to BSEN12831. •

The program includes Therma V product database allowing you to automatically • select the LG heat pump and update the performance criteria.

- Includes customer CRM pages for recording basic customer communication • information.
- Documents section for installers to upload site photos and customer documentation. .
- Generate a site survey from to pdf prior to site visit based on telephone/desk survey. .
- Automatically create rooms from site survey. .



Renovation

THERMA V can be connected to an existing boiler system to optimise energy efficiency and heating capacity for renovation. V





CONTENTS

Why LG THERMA V?

The LG THERMA V is designed to create incomparable customer values

The LG Inverter Technology provides excellent energy efficiency with Moreover, the pressure control technology provides stable heating

Additionally, the differentiated structure like the 'true' all-in-one type,





ENERGY EFFICIENCY 80

EASY INSTALLATION **AND SERVICE**



10

17

14

Highly Efficient Inverter Compressor

Savings From Energy Efficient Water Pump

Energy Efficiency at -2°C

RELIABILITY

Stable Heating Capacity With Refrigerant Pressure Control

Reliability at low temperature

Optimised Components

CONVENIENCE

Weather Dependent Opertion

Low Operating Noise

Convenient Control for End-Users

Compact Size and Light Weight for Easy Installation

All-In-One Type for Quick And Reliable Installation

Improved Structure for Easy Service



BLDC (Brushless Direct Current Motor) Compressor

THERMA V is equipped with a BLDC* compressor that uses a strong neodymium magnet. The compressor has improved efficiency compared to standard AC inverter product and it is optimised for seasonal efficiency.



New

Concentrated Winding



 Minimized oil circulation • High efficiency motor Optimised compression • Optimised vibration, noise High reliability

Energy Efficiency at -2°C

Energy efficiency is higher than others. (Condition : Ambient temp. -2°C / Leaving water temp. 55°C)

Heat Exchanger Improvement

Efficiency and performance are improved by increased heat exchange rate of wide louver fin and new optimal distributor design applied to the heat exchanger.



Conventional Unequal Distribution

New Equal Distribution

Inverter BLDC Fan Motor

LG BLDC fan motor offers additional energy savings up to 40% at low speed and 20% at high speed compared to an AC motor.

High Efficient Water Pump

Conventional

Distributed Winding

THERMA V is equipped with a high efficiency A-Class water pump. The pump pressure is adjustable, to suit design conditions.



3/5/7/9kW



12/14/16 kW



* Condition : 12 hours x 30 days x 5 month (estimated value)





* Peak value / Monobloc models.





Reliability at Low Temperature

Pressure control reinforces heating performance by operating in stable condition at low ambient temperature.



Pressure Control

This ensures to reach target performance point without failing to Pressur keep a reliable operation. Sensor

Heating Capacity at Low Temperature

J

High and stable performance at low temperatures.



Temperature Control



This algorithm is more likely to be affected by temperature change and it takes more time to calculate proper operation range of compressor to target point

Stable Operation

High and stable heating performance at low temperatures.



Corrosion Resistant Heat Exchanger

LG's Outdoor Heat Exchanger is coated with a gold-colored anti-corrosive epoxy treatment on the aluminum coil, to prevent corrosion. This maintains excellent heat transfer properties of the coil for an extended time, whereas non-Gold Fin™ coils progressively lose efficiency due to surface corrosion. Gold Fin™ fin is perfect for areas with high pollution or locations exposed to saltwater spray from the sea.







Anti-Legionella Function

By setting Anti-legionella operation mode on, THERMA V heats the whole water tank automatically once a week until water temperature reaches up to 80°C to de-sanitise.







Weather Dependent Operation

If users choose this mode, setting temperature will follow outdoor temperature automatically. If outdoor temperature decreases, heating capacity for the house will increase automatically in order to keep comfortable heating performance according to weather.



Improved Fan for Low Noise

The New Axial Fan has a narrow hub blade and mogul trailing edge, this provides a high efficiency, low noise as well as improving the air flow rate.



Emergency Operation

Even in case of sudden product error, THERMA V ensures stable heating operation by applying 2 steps of emergency control.



Conventional

Silent Mode and Scheduler

Silent mode operation can reduce the noise level specially during the setting time by remote controller and users can set the weekly on/off schedule also.

Heating Capacity	Heating Sound Pressure (dBA)					
(kW)	Normal	Silent Mode				
3	47	43				
5	51	48				
7	52	48				
9	52	48				
12	53	50				
14	53	50				
16	53	50				





EASY INSTALLATION AND SERVICE

All in One Concept

LG will provide fully packaged monobloc with 4 main component. (except 3kW monobloc) basically. No need to work refrigerant piping, easier and quicker installation.



LG LATS THERMA V

THERMA V Selection Program

LATS THERMA V simulates quick and easy result of THERMA V's economic benefits. By specifying a number of parameters, this program shows annual energy cost compared with conventional heating system and CO₂ annual amount, monthly energy amount and cost, total amount of thermal energy in kWh as the outside temperature.







Compact and Slim

Therma V is shaped to minimize the size and weight in order to help easy and efficient work condition for installation.





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Thema'v Model Selection Vecject Information Generate Report	el Selection Heat load & capacity Therr System Information System Name : System 3 Country : Austra City : Wen	a V Brengy simulation 1 Therm C Area : C C Sing C C C C C C C C C C C C C C C C C C C	a V Energy simulation 2 System systems Height : 25 6750	em Comparison 2
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Close Project Sel	Domestic hot water : 0.0 lacted Model : HM141M	kw • CO2 eme	sion factor : 10.3	2330 kg/kt/h Run simulation
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		9.6	10.8	
		5.4	4.2	
		64	72.2	
		36	27.8	
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	P Total	0	0	









Low Maximum Current Level

LG High Temperature THERMA V can be easily installed without any additional electric connection cost.

Enhanced Efficiency and Performance

THERMA V high temp. can produce Max. 80°C hot water with high efficiency (Max. COP 4.06 at 24°C ODT and 40/45 EWT/LWT) through cascade 2 stage compression technology.



*Condition for HT model : Outdoor air temp. 18°C, entering water temp. 70°C *Condition for LT model : Outdoor air temp. 18°C, entering water temp. 50°C

Cascade 2 Stage Compression Technology

Max. 80°C hot water can be generated through Cascade R410A to R134a BLDC compressor technology and applicable for existing old boiler heating system which demands hot water supply.



Quick Defrosting

Through R134A compressor controlling technology, necessary time for defrost operation has been minimized effectively. (LG Patent)

As compared to normal reverse cycle defrost, 25% reduction in defrost time, and 10% increase of integrated heating capacity is achieved using hybrid defrosting.



Low Noise Level

Through cutting edge technology for DC inverter compressor, operating noise level of indoor and outdoor unit has been reduced and serves more comfort.

Higher Energy Efficiency

By applying efficient compressor and optimally designed structure, the more energy saving, the lower operating cost make sooner return on initial investment.



Heating COP at 7°C Outdoor Temperature









Heating COP at -7°C Outdoor Temperature



Accessories Provided by LG

Accessory	Feature
Domestic Hot Water Tank Kit	 PHLTA (10, Split) PHLTC (30, Split) PHLTB (Monobloc) Features Easy to install the domestic hot water for monobloc. There is a MCCB to protect the product. Dimension(mm) (HxWxD): 250x170x110 Weight(kg): 2.1 * The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank. • The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank.
Remote Temperature Sensor	 • PQRSTAO Features It can help to detect the exact room temperature. Applied to ceiling cassette, ceiling concealed duct, AWHP and Hydro Kit. Parts Included Remote temperature sensor / Extension cable (15m) / Manual
Solar Thermal Kit	 • PHLLA Features To interface solar-thermal system with THERMA V and double coil Domestic tank. Installed at the water pipe, between Domestic tank and solar-thermal system. Dimension(mm) (HxWxD): 110x55x22
Dry Contact	• PQDSA / PDRYCB000 Features For connection with boiler(Bivalent scene)
Drain Pan	PHDPA Features Collects condensate water (when dropping to the base is not possible) and drains the water to a pipe

Optional Accessories Supplied in the Fields

No.	Accessory	Picture	Purpose	Specification
1	Domestic Hot Water Tank		Store and provide hot water for sanitation	Volume : 200-400 l Enameld or stainless-steel tank / Insulating foam (e.g. PUR - polyurethane) heat-exchanger surface \geq 3 m ²
2	3-Way-Valve		Switch between heating and domestic hot water circuit	230V AC SPDT (Single Pole Double Throw) / opening time 30-90 sec / final position switch Internal leakage rate < 0,1%
3	Electrical Tank Heater		Supports heating of domestic hot water, when heat pump is blocked or capacity is limited	2-6 kW Connector dimension suitable for DHW tank
4	Buffer Tank		Prevents cycling, when water volume is low and/ or heating demand is low; secures enough heat for defrosting cycle	Insulating foam (e.g. PUR - polyurethane) Volume : 100-200 l (installation in series with heat pump) 500-1,000 l (installation in parallel with heat pump)
5	Bypass Valve	F	Ensures minimum water flow rate, when flow through heating circuits is limited due to closed valves	Dimensioning according manufacturer adjustable opening pressure
6	2-Way-Valve		Blocks heating circuits, that are not suitable for cooling during cooling operation	230V AC NO or NC type final position switch
7	Expansion Vessel		Absorption of pressure differences in the heating circuits due to temperature increase/decrease of the water	Dimensioning on-site required
8	Strainer		Protects plate-heat-exchanger from blocking particles	1inch / 25.4mm, Mesh size ~ 1x1mm for HM03M1.U42 only (other models are included)
9	Heating Cable	\bigcirc	Prevents the condensate pan and the drainage pipe from icing	Thermostatic control depending on outdoor temperature
10	Antifreeze		Prevents the heating water from freezing, when heat pump is out of order	Monoethyleneglycole Concentration according to lowest possible outdoor temperature
11	Noise Damper	(Hung)	Prevents that structure-born noise is transported via the water piping	EPDM; Operating temperature according climate region (at least -10 ~ +90°C)
12	Anti-Noise Sockets		Prevents that structure-born noise is transported to the base or to the brackets	Dimensioning on-site required
13	Thermostat		When thermostatic room temperature control is preferred by costumer	230V AC When heat pumps operates in heating and cooling mode: thermostat with mode selection
14	Refrigerant Tubes	Ó	Pre-fabricated double-pipe to connect split indoor and outdoor unit	Diameter: Please refer to Specification
15	Water Tubes		Pre-fabricated double-pipe to connect monobloc outdoor unit with heating system	When heat pump is used for cooling: diffusion-resistant tubes
16	Bushing Sleeve	\bigcirc	Protecting the building against pressing water coming through the duct of the heating tubes	Dimensioning on-site required
17	Insulation Material		Mandatory when heat pump is used for cooling; prevents condensate water on cold pipes and assemblies	Diffusion-resistant



2016-2017 LG AWHP Line-up

			Performance								
/pe	Canacity	ф	Product	A7 / W35		A-2/	W55	Heating Operating Range		BLDC	
	cupucity	Ψ	Troduct	СОР	Capac- ity	СОР	Capacity	Outdoor Temp.	Leaving Water Temp.	Inverter Compressor	
	3kW	1Ф		4.10	3.00	2.08	2.17		20°C ~ 57°C		
5k 7k 9k 121	5kW	1Φ		4.42	4.99	2.20	3.44	-20°C ~ 35°C	LG Tv Rota 15°C ~ 57°C		
	7kW	1Φ		4.30	7.00	2.14	4.81			LG Twin Rotary	
	9kW	1Ф		4.09	9.00	2.16	6.19				
	12144	1Ф		4.49	12.00	2.17	8.25				
	I 2KVV	12kW 3Φ		4.49	12.00	2.17	8.35				
	1.41204	1Ф	0	4.44	14.00	2.19	9.90				
	14кvv ЗФ	3Ф		4.44	14.00	2.17	9.63				
	16400	1Ф	0	4.20	16.00	2.22	11.00				
	ΙΟΚΥΥ	3ф	0	4.20	16.00	2.14	11.00				

Reliability						Convenience				
Control	Emboddod	\\/atar	Heat	Electric Heater			-	Dry	Weather	PHEX An-
Sensor	Component	Pump	Exchanger Coating	Size	Capacity Control	Timer	Operation	Connecta- bility	Dependant Operation	ti-Freez- ing Control
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THERMAV

MONOBLOC TYPE

HM031M.U42 / HM051M.U42 HM071M.U42 / HM091M.U42





$ \begin{array}{ $	Monobloc (Outdoor Unit)		Capacity	3kW 1Ø	5kW 1Ø	7kW 1Ø	9kW 1Ø		
hermin Advance Hermin Advance<			Reference	HM031M.U42	HM051M.U42	HM071M.U42	HM091M.U42		
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Naminal Power partHeading (A7/M93)MW0.0731.131.632.20Hading (A2/M93)W0.0931.1632.1632.85Hading (A2/M93)W0.0981.522.1632.78Hading (A7/M33)W0.0981.632.232.29Hading (A7/M33)W0.0951.632.232.65Hading (A7/M35)W0.0951.632.232.25Hading (A7/M35)V2.242.232.252.25Hading (A7/M35)V2.242.242.232.23Hading (A2/M35)V2.242.232.232.23Hading (A2/M35)V2.242.232.232.33ERCong (A5/M3)V2.230.233.403.40Minding Lange (Mage)Minding (Mage)2.233.233.403.40Sondroetrue (Mater)Minding (Mage)2.233.403.403.40Mating Lange (Mage)Minding (Mage)1.23×907.301.23×907.301.23×907.301.23×907.30Sondroetrue (Mater)Minding (Mage)Minding (Mage)1.23×907.301.23×907.301.23×907.301.23×907.30Guade MateriaMinding (Mage)Minding (Mage)Minding (Mage)Minding (Mage)1.23×907.301.23×907.301.23×907.30Guade MateriaSondroetrueMinding (Mage)Minding (Mage)Minding (Mage)Minding (Mage)Minding (Mage)Guade MateriaSondroetrueMinding (Mage) <th></th> <th>Cooling (A35 / W18)</th> <th>kW</th> <th>-</th> <th>4.99</th> <th>7.00</th> <th>9.00</th>		Cooling (A35 / W18)	kW	-	4.99	7.00	9.00		
Namina Power pairsHearing (A2 /VMSO)KVM0.0931.162.152.265Haring (A2 /VMSO)KVM0.0951.522.162.77Haring (A7 /VMSO)KVM0.0951.632.302.90Zong (A3 /VMSO)KVM0.014.424.293.95Haring (A7 /VMSO)V2.312.232.232.23Lating (A7 /VMSO)V2.242.322.232.23Lating (A7 /VMSO)V2.242.332.232.23Lating (A7 /VMSO)V2.242.232.232.23Lating (A7 /VMSO)V2.242.232.232.23Lating (A7 /VMSO)V2.242.232.232.23Lating (A7 /VMSO)V2.242.232.232.23Lating (A7 /VMSO)V2.242.232.232.23Lating (A7 /VMSO)V2.242.232.232.23Lating (A7 /VMSO)VV3.643.643.64Marcing (Marcing		Heating (A7 / W35)	kW	0.73	1.13	1.63	2.20		
Nominal Power pageHeating (A-7, WSO)KW0.0981.522.162.162.78Heating (A-7, WSO)KW0.0981.632.0302.0302.030Comp (A-3)KW0.091.632.0302.0302.030Attag (A-7, WSO)V4.014.424.2302.0302.030Comp (A-1)V2.1414.424.2302.352.035Comp (A-1)Main (A-1)2.1414.424.2302.352.35Attag (A-7, WSO)V2.1414.424.2302.352.35Comp (A-1)Main (A-1)2.1414.424.2302.352.35Attag (A-1)Main (A-1)2.1414.2302.352.352.35Attag (A-1)Main (A-1)Main (A-1)Main (A-1)Main (A-1)Main (A-1)Main (A-1)Attag (A-1)Main (A-1)Main (A-1)Main (A-1)Main (A-1)Main (A-1)Main (A-1)<		Heating (A2 / W50)	kW	0.93	1.46	2.15	2.85		
<table-container>Index InspaceIns</table-container>	Nominal Power Input	Heating (A-2 / W50)	kW	0.98	1.52	2.16	2.78		
IndexInstanceInstanceInstanceInstanceInstanceInstanceHatting (A7 /W35) <td< th=""><th></th><th>Heating (A-7 / W35)</th><th>kW</th><th>0.95</th><th>1.63</th><th>2.33</th><th>2.99</th></td<>		Heating (A-7 / W35)	kW	0.95	1.63	2.33	2.99		
Heating (A2 / WS3)4.114.424.293.95Heating (A2 / WS3)2.342.492.362.17Heating (A2 / WS0)2.192.362.322.32Heating (A2 / WS3)2.452.452.372.332.33ERColing (A35 / W18)13.623.503.40DimensionW H A Dmm950 × 834 × 3301.239 × 907 × 3901.239 × 907 × 3901.239 × 907 × 390Sourd Power Level (HeatingdB (A)5766666666Outdoor Air Operation Range62 B-20 ~ 30-20 ~ 35-20 ~ 35-20 ~ 35Outdoor Air Operation Range% CDB-20 ~ 30-20 ~ 35-20 ~ 35-20 ~ 35Outdoor Air Operation Range% CDB-20 ~ 30-20 ~ 35-20 ~ 35-20 ~ 35Meating Accession Range% CDB-20 ~ 30-20 ~ 35-20 ~ 35-20 ~ 35Meating Accession Range% CDB-20 ~ 30-20 ~ 35-20 ~ 35-20 ~ 35Meating Accession Range% CDB-20 ~ 30-20 ~ 35-20 ~ 35-20 ~ 35Meating Accession Range% Min Accession Range-20 ~ 35-20 ~ 35-20 ~ 35Meating Accession RangeA16-20 ~ 35-20 ~ 35Meating Accession Range		Cooling (A35 / W18)	kW	-	1.38	2.00	2.65		
PCPHeating (A2 / WSO) ···2.342.492.362.17Heating (A-2 / WSO) ···2.192.362.322.32Heating (A-2 / WSO) ···2.192.362.322.33Heating (A-7 / WSO) ···2.452.372.333.30DimensionW k A /nmm950 × 834 × 3301,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 390DimensionW k A /nMm950 × 834 × 3301,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 390Outdoor Air Operation RangeHeating ···950 × 834 × 3301,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 390Outdoor Air Operation RangeHeating ···950 × 834 × 3301,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 390390Outdoor Air Operation RangeHeating ···950 × 834 × 3301,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 3901,239 × 907 × 390Outdoor Air Operation RangeHeating ···950 × 600960 ···970980 ···991Outdoor Air Operation RangePick ···970 ···970 ···970 ···970 ···970 ···Mean Part Portenation Part Portenation RangePick ···Pick ···970 ···970 ···970 ···Mean Part Portenation RangePick ···Pick ···Pick ···970 ···970 ···970 ···Mean Part Portenation RangePick ···Pick ···Pick ···Pick ···970 ···970 ···Mean Part Portenation Range<		Heating (A7 / W35)		4.11	4.42	4.29	3.95		
$\begin{tabular}{ c $	COD	Heating (A2 / W50)		2.34	2.49	2.36	2.17		
Heating (A-7 / W35) 2.45 2.37 2.33 2.33 EER Coding (A35 / W18) In 3.62 3.50 3.40 Dimension W H x D mm 950 x 83 x 330 1.239 x 907 x 390 1.239 x 907 x 390 1.239 x 907 x 390 Weight kg 61 97 98 99 Sound Power Level (Heating) Kg C B8 -200 - 30 -200 - 35 -200 - 35 Outdoor Air Operation Range Heating C D8 -200 - 30 -200 - 35 -200 - 35 Outdoor Air Operation Range Heating C D8 -200 - 30 -5 - 748 -200 - 30 Leaving Water Temp. Range Heating C D 200 - 5 - 5 - 748 -200 - 5 - 5 - 748 -200 - 5 - 5 - 748 Leaving Water Temp. Range Indit mn (nch) -200 - 5 - 5 - 75 - 75 -200 - 5 - 5 - 75 - 75 -200 - 5 - 5 - 75 - 75 Beatric Heater Piv Y Hz Gand Gand -200 - 5 - 5 - 75 -200 - 5 - 5 - 5 - 75 Max. Water Head Pi V / Hz Gand Gand Gand -200 - 5	COP	Heating (A-2 / W50)		2.19	2.36	2.32	2.32		
ERColing (A35 / W18)ImageImageImageImageImageImageImageImageImageImageDimensionW K H X Dmm950 x 83 x 3301,239 x 907 x 3901,239 x 907 x 3901,239 x 907 x 3901,239 x 907 x 3901,239 x 907 x 390WeightVM G979899999899Sound Power Level (Hatting)Hating°C B0.666666666666Outdoor Air Operation RangeMeding°C B0.02 vor 3007.02 vor 3		Heating (A-7 / W35)		2.45	2.37	2.33	2.33		
Dimension Wx Hx D mm 995x 834 x330 1,239 x907 x390 1,239 x907 x390 1,239 x907 x390 Weight Kg G G 97 98 99 Source Level (Heating) Kg G G 97 98 99 Outgoor Air Operation Range Refinition C DB Source Constraints G 66 66 66 Outgoor Air Operation Range Refinition C DB Source Constraints Source Constraints <th>EER</th> <th>Cooling (A35 / W18)</th> <th></th> <th>-</th> <th>3.62</th> <th>3.50</th> <th>3.40</th>	EER	Cooling (A35 / W18)		-	3.62	3.50	3.40		
Veightkg61979899Sound Power Level (Heating) MB (A) 57 666 66 66 Outgoor Air Open (Origination Range)Hating CDB $-20-30$ $-20-35$ Heating CDB $-20-30$ $-20-35$ $-20-35$ Leaving Water Tem ParageHating CDB $20-57$ $5-48$ Mater Pipe Conne (Cited Target Pipe Conne (Dimension	WxHxD	mm	950 x 834 x 330	1,239 x 907 x 390	1,239 x 907 x 390	1,239 x 907 x 390		
Sound Power Level (Heating)dB (A)57666666Outdoor Air Operation RangeHeating°C DB-20-30 $-20-35$ $-20-35$ Heating°C DB-0 $5-48$ $5-48$ Heating°C20-57 $5-48$ $-5-48$ Heating°C20-57 $5-48$ $-5-48$ Heating°C20-57 $-5-48$ $-5-48$ Heating°C20-57 $-5-48$ $-5-48$ Mather Pipe Connection°C $-20-57$ $-5-48$ Matter Pipe Connectionmm (inch) $-5-48$ $-5-48$ Matter Pipe Connectionmm (inch) $-5-57$ $-5-57$ Matter Pipe Connectionmm (inch) $-5-57$ $-5-57$ Matter Flowrate Limitmm (inch) $-5-57$ $-1/220-240/50$ Matter Flowrate LimitIPM $-5-57$ $-5-57$ Max Water HeadNN $-20-57$ $-5-57$ Max Water HeadMN $-5-57$ $-5-57$ Max Water Head -70 $-5-57$ $-5-57$ Recommender FlowrAAAPive Jup Leve	Weight		kg	61	97	98	99		
$\begin{tabular}{ c c c } \hline Perform Part of the product of the pr$	Sound Power Level (Heating)		dB (A)	57	66	66	66		
$\begin{tabular}{ c c c } \hline \begin{tabular}{ c c c } \hline \begin{tabular}{ c c } \hline \hline \begin{tabular}{ c c } \hline \hline tabu$	Outdoor Air Heating		°C DB	-20 ~ 30 -20 ~ 35					
Leaving Water Temp. RangeHeating°C $20-57$ $15-57$ Range°C $20-57$ $15-57$ Cooling°C $ -$ Water Pipe ConnectionInletmm (inch) $-$ Dutletmm (inch) $ -$ Power SupplyP/V/Hz $ -$ Power SupplyP/V/Hz $ -$ Max. Water HeadMmMm $ -$ Power SupplyLPM $ -$ Max. Water Headmm $ -$ Power SupplyP/V/Hz $ -$ Power SupplyP/V/Hz $ -$ Power SupplyP/V/Hz $ -$ Recommended FuseA $ -$ Seasonal space heating energy efficiency (average) $3°C/55°C$ $\%$ $A++/A$ $A++/A+$ $A++/A+$ Seasonal space heating energy efficiency (average) $3°C/55°C$ $\%$ $35'C/35°C$ $\%$ $153/97$ $159/108$ $154/111$ $161/114$	Operation Range	Cooling	°C DB	-					
Temp. RangeCooling°C-6 - 30Water Pipe ConnectionInletmm (inch)Female 25.4 (1)Utelmm (inch)Female 25.4 (1)Electric HeaterPower SupplyP / V / Hz-Power SupplyP/ V / Hz-1 / 220-240 / 50Kater Flowrate LimitLPM-4Max. Water Headmm-Power SupplyrMMax. Water HeadmmPower SupplyP / V / Hz-1 / 220-240 / 50Recommended FuseA16Seasonal space heating energy efficiency (average)S°C / 55°CA++ / AA++ / A+A++ / A+Seasonal space heating energy efficiency (average)S°C / 55°C%153 / 97159 / 108154 / 111161 / 114	Leaving Water	Heating	°C	20 ~ 57 15 ~ 57					
$\begin{tabular}{ c c c } \hline Part Pipe Connection $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$	Temp. Range	Cooling	°C	- 6 ~ 30					
Number of the connectionOutletmm (inch)Female 25.4 (1)Electric HeaterPower SupplyP / V / Hz- $1/220-240/50$ GapacityKW- 4 Water Flowrate LimitLPM $ 4$ Max. Water Headm 6 7 Power SupplyP / V / Hz $ 1/220-240/50$ Power SupplyP / V / Hz $ 1/220-240/50$ Recommended FuseA16 20 Seasonal space heating energy efficiency class $35^{\circ}C/55^{\circ}C$ $A++/A$ $A++/A+$ $A++/A+$ $A++/A+$ Seasonal space heating energy efficiency (average) $35^{\circ}C/55^{\circ}C$ $\%$ $153/97$ $159/108$ $154/111$ $161/114$	Water Pine Connection	Inlet	mm (inch)						
$\begin{tabular}{ c c c c } \hline P & V & V & - & I & I & I & I & I & I & I & I & I$	water ripe connection	Outlet	mm (inch)		Female 2	25.4 (1)			
$\begin{tabular}{ c c c c c } \hline lack line & \hline lack line &$	Flectric Heater	Power Supply	P/V/Hz	- 1/220-240/50					
Water Flowrate Limit LPM Min.15 Max. Water Head m G T Power Supply P / V / Hz T / 220-240 / 50 T Recommended Fuse A 16 20 Seasonal space heating energy efficiency class So ^o / 55 ^o C A++ / A A++ / A+ A++ / A+ A++ / A+ Seasonal space heating energy efficiency (average) So ^o / 55 ^o C % 153 / 97 159 / 108 154 / 111 161 / 114	Lieune neater	Capacity	kW	- 4					
Max. Water Head m 6 7 Power Supply P / V / Hz 1 / 220-240 / 50 Recommended Fuse A 16 20 Seasonal space heating energy efficiency class 35°C / 55°C A++ / A A++ / A+ A++ / A+ Seasonal space heating energy efficiency (average) 35°C / 55°C % 153 / 97 159 / 108 154 / 111 161 / 114	Water Flowrate Limit		LPM		Min	.15			
Power Supply P / V / Hz 1 / 220-240 / 50 Recommended Fuse A 16 20 Seasonal space heating energy efficiency class 35°C / 55°C A++ / A A++ / A+ A++ / A+ A++ / A+ Seasonal space heating energy efficiency (average) 35°C / 55°C % 153 / 97 159 / 108 154 / 111 161 / 114	Max. Water Head		m	(6 7				
Recommended Fuse A 16 20 Seasonal space heating energy efficiency class 35°C / 55°C A++ / A A++ / A+ A++ / A+ Seasonal space heating energy efficiency (average) energy efficiency (average) 35°C / 55°C % 153 / 97 159 / 108 154 / 111 161 / 114	Power Supply P / V /			1 / 220-240 / 50					
Seasonal space heating energy efficiency class 35°C / 55°C A++ / A A++ / A+ A++ / A+ A++ / A+ Seasonal space heating energy efficiency (average) 35°C / 55°C % 153 / 97 159 / 108 154 / 111 161 / 114	Recommended Fuse	Itecommended Fuse A 16 20			20				
Seasonal space heating energy efficiency (average) 35°C / 55°C % 153 / 97 159 / 108 154 / 111 161 / 114	Seasonal space heating energy efficiency class	35°C / 55°C		A++ / A	A++ / A+	A++ / A+	A++ / A+		
	Seasonal space heating energy efficiency (average)	35°C / 55°C	%	153/97	159 / 108	154 / 111	161 / 114		
Rated heat output (average) 35°C / 55°C kW 3/2 6/5 7/6 7/7	Rated heat output (average)	35°C / 55°C	kW	3/2	6/5 7/6		7/7		
Annual energy consumption (average) 35°C / 55°C kWh 1,541 / 1,969 3,140 / 3,757 3,652 / 4,691 3,759 / 4,636	Annual energy consumption (average)	35°C / 55°C	kWh	1,541 / 1,969	3,140 / 3,757	3,652 / 4,691	3,759 / 4,636		
Water pump EEI ≤ 0.20 0.20 0.20 0.20	Water pump EEI \leq			0.20	0.20	0.20	0.20		

BBA

Monobloc (Outdoor Unit)		Capacity	12kW 1Ø	14kW 1Ø	16kW 1Ø	12kW 3Ø	14kW 3Ø	16kW 3Ø			
		Reference	HM121M.U32	HM141M.U32	HM161M.U32	HM123M.U32	HM143M.U32	HM163M.U32			
	Heating (A7 / W35)	kW	12.00	14.00	16.00	12.00	14.00	16.00			
	Heating (A2 / W50)	kW	8.76	10.41	11.58	8.94	10.43	12.21			
Nominal Capacity	Heating (A-2 / W50)	kW	8.63	10.33	11.45	8.84	10.31	12.07			
	Heating (A-7 / W35)	kW	9.31	11.03	12.36	9.33	10.84	12.60			
	Cooling (A35 / W18)	kW	14.50	15.50	16.10	14.50	15.50	16.10			
	Heating (A7 / W35)	kW	2.67	3.15	3.81	2.67	3.15	3.81			
	Heating (A2 / W50)	kW	3.51	4.26	4.83	3.65	4.32	5.12			
Nominal Power Input	Heating (A-2 / W50)	kW	3.57	4.45	5.05	3.75	4.45	5.25			
	Heating (A-7 / W35)	kW	3.37	4.09	5.08	3.38	4.01	5.29			
	Cooling (A35 / W18)	kW	4.00	4.69	5.07	4.00	4.69	5.07			
	Heating (A7 / W35)		4.49	4.44	4.20	4.49	4.44	4.20			
COD	Heating (A2 / W50)		2.50	2.44	2.40	2.45	2.41	2.38			
COP	Heating (A-2 / W50)		2.42	2.32	2.27	2.36	2.32	2.30			
	Heating (A-7 / W35)		2.76	2.70	2.43	2.76	2.70	2.38			
EER	Cooling (A35 / W18)		3.63	3.30	3.18	3.63	3.30	3.17			
Dimension	W x H x D	mm	1,239 x 1,450 x 390								
Weight k			141 145								
Sound Power Level (Heating) d			68								
Outdoor Air	°C DB	-20 ~ 35									
Operation Range	Cooling	°C DB			5 ~	48					
Leaving Water	Heating	°C	15 ~ 57								
Temp. Range	Cooling	°C	6 ~ 35								
Water Pipe Connection	Inlet	mm (inch)	Female 25.4 (1)								
···· F····	Outlet	mm (inch)	Female 25.4 (1)								
Electric Heater	Power Supply	P/V/Hz	1 / 220-240 / 50 3 / 380~415 / 50								
	Capacity	kW	6								
Water Flowrate Limit		LPM			Min	.15					
Max. Water Head m			8								
Power Supply P / V /			1/220-240/50 3/380-415/50								
Recommended Fuse A			32 20								
Seasonal space heating energy efficiency class	35°C / 55°C		A++ / A+ A++ / A+ A++ / A+ A++ / A+		A++ / A+	A++ / A+					
Seasonal space heating energy efficiency (average)	35°C / 55°C	%	168 / 121	168 / 121	165 / 121	173 / 124	163 / 124	162/124			
Rated heat output (average)	35°C / 55°C	kW	11/10	12/10	12/10	11/11	12/11	11/13			
Annual energy consumption (average)	35°C / 55°C	kWh	5,478 / 6,698	5,763 / 6,698	6,038 / 6,698	5,193 / 7,078	5,942 / 7,078	6,256 / 7,078			
Water pump EEI \leq			0.23	0.23	0.23	0.23	0.23	0.23			

This product contains fluorinated greenhouse gases. (R410A) All models do have electric heating cable for prevent frost from condensing water at the condensing pan except 3kW capacity. Above table values does include humidification effect in the outdoor temperature below zero. All specification in based on EN14511 and EN14825.

This product contains fluorinated greenhouse gases. (R410A) All models do have electric heating cable for prevent frost from condensing water at the condensing pan except 3kW capacity. Above table values does include humidification effect in the outdoor temperature below zero. All specification in based on EN14511 and EN14825.

HM121M.U32 / HM141M.U32 / HM161M.U32 HM123M.U32 / HM143M.U32 / HM163M.U32



Up to 57°C

Monobloc Type

Training and CPD Seminars

All of LG's CPD seminars are under an hour long and can be scheduled at a date/time to suit your company,

Register your interest to **HVAC.marketing@lge.com**



THERMAY

SEMINAR NAME:

Effect of AWHP system design on running costs and emissions

COURSE CODE: CPD-AWHP DURATION: 1 hour

SEMINAR SYNOPSIS:

Demonstrates how emissions and running costs for air to water heat pumps compare with conventional heating systems as well as how to calculate emissions and running cost savings. Understand the design criteria that are important for potential savings to be realised.

SEMINAR NAME: TM44 Energy inspections to save costs

COURSE CODE: CPD-TM44

SEMINAR SYNOPSIS:

Identifies who is legally responsible for air conditioning inspections and introduces some of the legal requirements for A/C energy inspections. Gain an overview of current reporting methods and report content as well as understanding what happens to a report on completion..

SEMINAR NAME:

Heat recovery ventilation
COURSE CODE: CPD-HRV

DURATION: 1 hour

SEMINAR SYNOPSIS:

Explains how to assess the ventilation design requirements and estimate the heat loss due to ventilation with or without heat recovery.

TRAINING COURSE NAME: Therma V Technical Product Course

COURSE CODE: THV1

DURATION: 1 day

DURATION: 1 hour

COURSE SYNOPSIS:

Therma V is the trade name given to LG's air-to-water heat pump range. The course is ideal for consultants, sales and maintenance engineers or installers, whi are interested in the design and specification of air-to-water heat pumps.



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