LG Business Solutions

# THERMA V™

R32 Monobloc

**LG** Business Solutions

Air Conditioning | Heating | Hotel TV | Lighting | Signage | Photovoltaic

# Our vision...

As a leading heating supplier, LG's product portfolio comprises a wide range of highly energy efficient renewable energy systems, providing the right heating solution for any application and requirement.

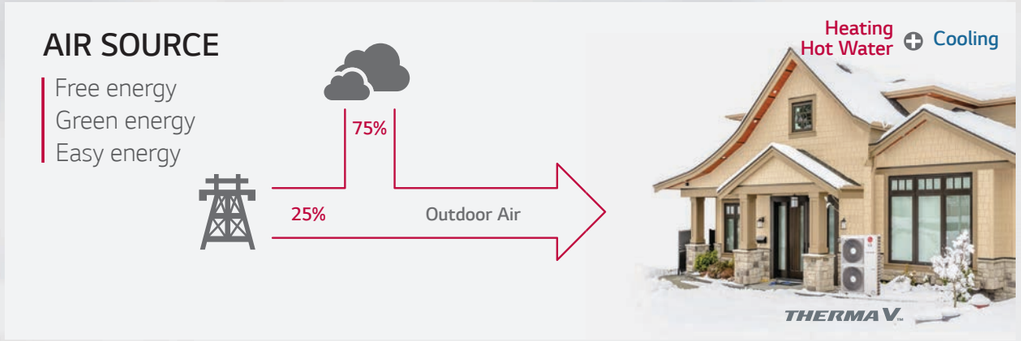
# What is LG THERMA V?

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 boiler system by absorbing energy from the outdoor environment.




## VARIOUS APPLICATION

# Why LG THERMA V ?

The LG THERMA V is designed to create customer values like energy saving, comforts, easy controls and services by applying the advanced technologies.

The LG Inverter Technology provides excellent energy efficiency with optimal components such as water pump, heat exchanger and fan motor.

Moreover, the pressure control technology provides stable heating capacity at low temperature and reaches target performance without difficulties.

Additionally, the differentiated structure like all-in-one type, black fin and users-oriented functions enhance professionals reputations as well as end-users happiness by experiencing the LG's full line-up from 5kW to 16kW in heating capacity.

**Note**

1. A+++ label is available from 26, Sep. 2019 and should be considered as A++ label until that time.

THERMA V R32

# MONOBLOC

## Excellent Performance

- High Energy Efficiency(SCOP4.45/A+++)
- Excellent Performance at Low Ambient Temperature(100%@-7'C)
- Wide operation Range
- Reduced Noise Level
- Revolutionary Scroll Compressor
- Flash Gas Injection

## User Convenience

- New Interface
- LG Wi-Fi Solution(Smart ThnQ)
- 2nd Heating Circuit
- Various Temperature Control Options

## Easy Installation & Maintenance

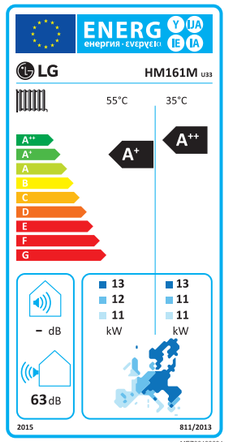
- All In One Concept (No Refrigerant Piping Work)
- Easy Commissioning by PC Tool (LG Heating Configurator)

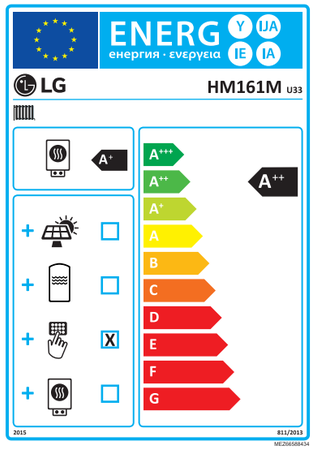
**Note**

1. A+++ label is available from 26, Sep. 2019 and should be considered as A++ label until that time.



## ENERGY LABELING




* 16kW 1Φ model

## MONOBLOC CONCEPT

THERMA V Monobloc is a fully packaged piece of equipment, where the indoor and outdoor unit are combined as one module. Therefore, there is no need for refrigerant piping work since Monobloc unit located outside is connected by only water piping.
Further, additional water side items such as PHE, Expansion Tank, Water Pump are included in the package.

### Water side Items included in the Monobloc

PHE (Plate Heat Exchanger) | Expansion Tank | A-Class Water Pump

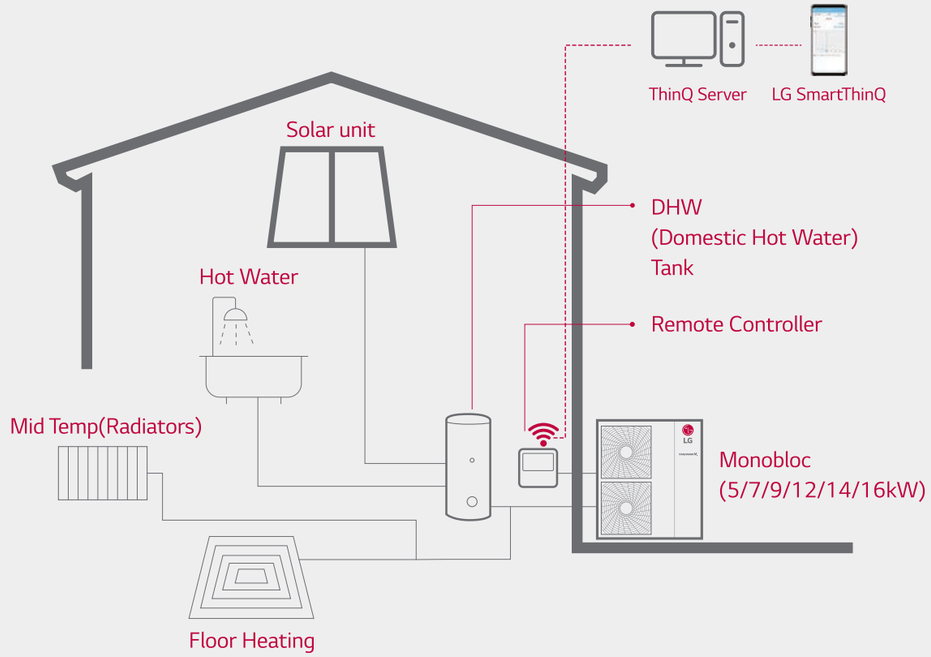
## LINE UP

| Capacity (kW) | Phase | 5 | 7 | 9 | 12 | 14 | 16 |
|---|---|---|---|---|---|---|---|
| THERMA V Monobloc | 1Φ | HM051M.U43 | HM071M.U43 | HM091M.U43 | HM121M.U33 | HM141M.U33 | HM161M.U33 |
| | 3Φ | | | | HM123M.U33 | HM143M.U33 | HM163M.U33 |

# LG Heating solution for the future buildings

Out heating products provide a greener and more energy efficient heating solution for your home and office through continuous research and development of green energy technologies such as R32 refrigerant AWHP and revolutionary scroll compressor.

LG's residential heating solution(Therma V) can cover space heating and Hot water demand of house at the same time. Compared to conventional boiler system, it is more efficient and reduces CO2 emission as it uses renewable energy from the outside air. Furthermore, these environmental friendly solutions can be connected with various smart control solutions such as ThinQ.




THERMA V™

(air to water heat pump)

LG's control system provides a variety of solutions that save operational costs and deliver efficient energy control. Standard III Remote Controller with relevant accessories offers not only simple interface to make it easier to control but also diverse information and management function.

- LG Mobile App. Control (ThinQ)
- Operation schedule
- Error Check

- 4.3" Color Display
- Easy interface
- Multi Language

- Interface for 3rd party thermostat
- On/Off and operation mode control
- Operation and error status monitor

- Annual operation schedule
- Operation history
- Easy commissioning

## Individual Control

- Power consumption check
- Produced heat energy check
- Yearly trend

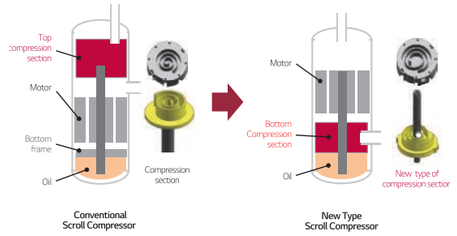
# Excellent Performance

## REVOLUTIONARY COMPRESSOR

The New Type Scroll Compressor is applied for high-efficiency and reliability. This type of compressor is more advanced compressor compared to the conventional scroll compressor, especially tilting motion of scroll has been improved. Further, compressor operation range is improved compared to previous model.

### Revolutionary Scroll Compressor

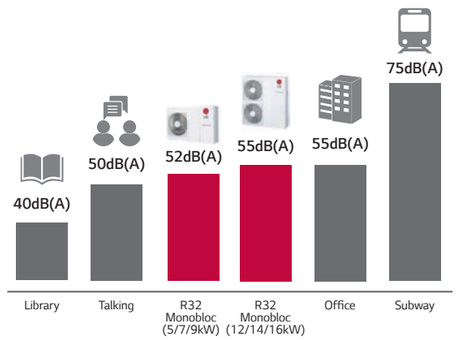
- Scroll compressor with simple structure
- High efficiency (low load at low speed / total efficiency)
- Low noise (high speed possible)
- Improved Tilting Motion of scroll
- 20% weight reduction (vs. conventional compressor)




## REDUCED NOISE LEVEL

The R32 Monobloc reduces noise level compared to previous models.

### Sound Pressure Level Comparison

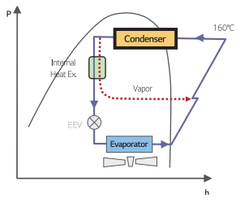



## FLASH GAS INJECTION

In case of R32 Refrigerant, it is very important to control discharge temperature of compressor properly. In the R32 Monobloc, Flash Gas Injection technology is applied to control discharge temperature of compressor efficiently. As a result of this technology, heating operation range is expanded and heating performance at low ambient temperature is enhanced.

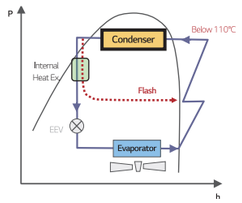
### Vapor Injection

- Discharge Temperature of Compressor is very high (160˚C)
- Failure of Injection Cycle and compressor operation under protection logic




### Flash Gas Injection

- Discharge Temperature of Compressor is below 110˚C
- Good Operation of Injection Cycle




## VARIOUS TEMPERATURE CONTROL OPTIONS

Various Temperature Control Options are possible for the User's comfort and convenience. Especially for European life style where thermal comfort is preferred, Simultaneous Control of Room Air and Water Temp. function is added.

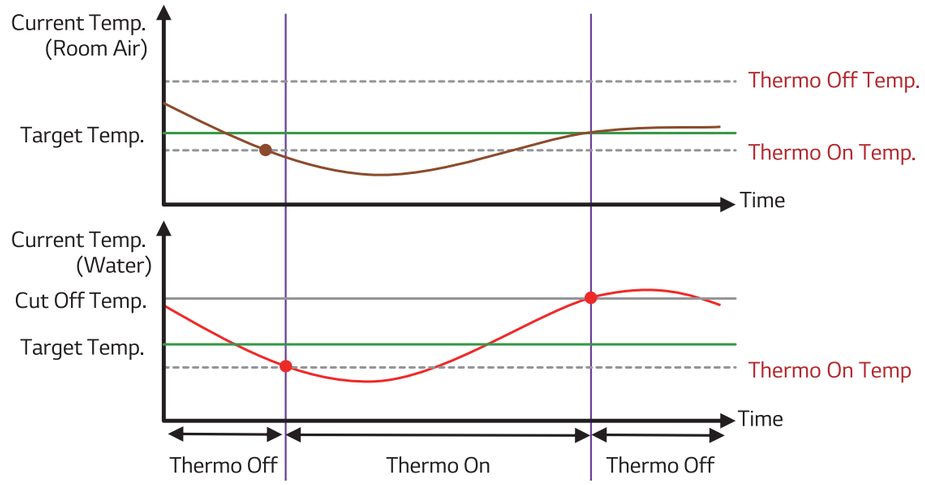
### ① Control of Leaving Water Temperature

### ② Control of Entering Water Temperature

### ③ Control of Room Air Temperature

### ④ Simultaneous Control of Room Air and Water Temp.

- Thermo On : When Satisfied both Room Air Temp. Condition and Water Temp. Condition
- Thermo Off : When Satisfied Room Air Temp. Condition or Water Temp. Condition




## WIDE OPERATION RANGE

Due to the LWT up to 65˚C, Mid Temperature Radiator range can be fully covered. As a result, R32 Monobloc has high competitiveness for replacement case as well as new case.

# User Convenience

## NEW REMOTE CONTROLLER

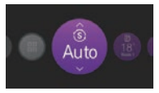
The R32 Monobloc system is upgraded with new standard remote controller.

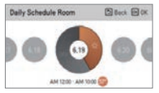
### Premium Design

New Modern design 4.3 inch color LCD display
Capacitive touch button (especially on/off button turn on LED)

### Intuitive Interface

Information displayed with simple graphic, icon & text
Navigation button, easy to use




### More energy contents

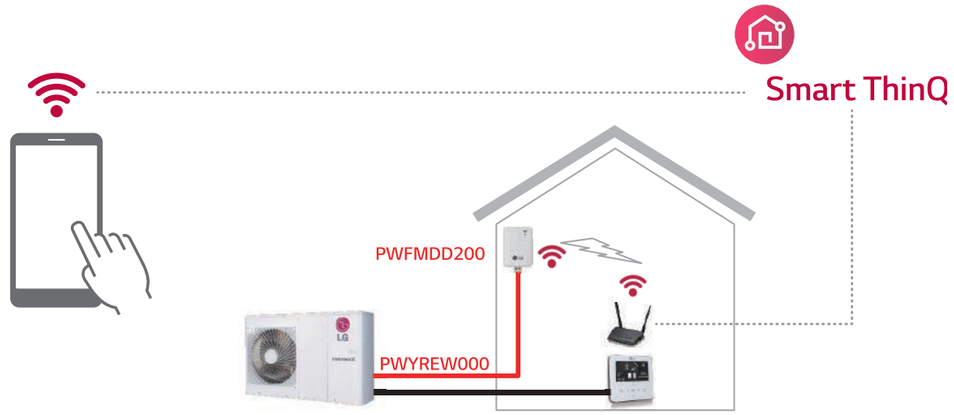
Auto controlled by weather and time

### Convenient Functions

Optimize schedule setting logic
• Set the period, date, on/off time, operation mode, target temp.
Easy installation setting ( as-is : numeric code , to-be : word)

## LG WI-FI SOLUTION

Access your THERMA V anytime from anywhere




※ Search “LG Smart ThinQ” on Google market or App store then download the app.

### Simple operation for various functions

- On/Off
- Operation Mode Selection
- Current temperature
- Set temperature
- On/Off Reservation
- Energy Monitoring

Mandatory Accessory: PWFMDD200(LG Wi-Fi Modem) and PWYREW000 (10m extension connect cable in between THERMA V and Wi-Fi module)

# Easy Installation & Maintenance

## EASY INSTALLATION

### All-in-one Concept

- LG provides fully packaged THERMA V Monobloc that additional water side components are included in the package.
- No need to work refrigerant piping, easier and quicker installation.

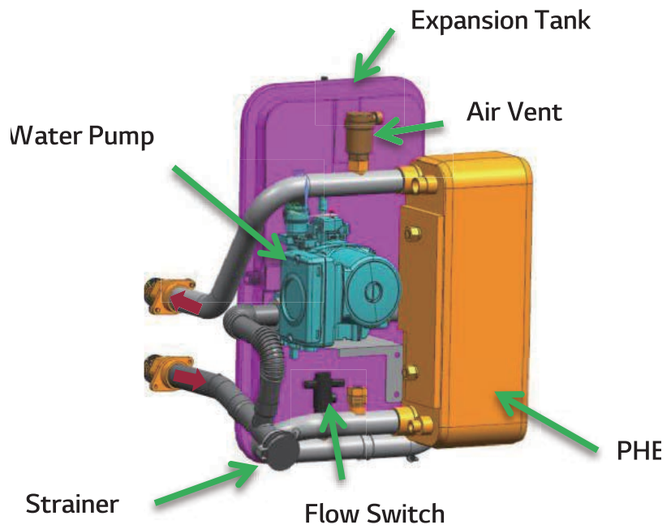
THERMA V R32 Monobloc

**Water side Items included in the Monobloc**

PHE
(Plate Heat Exchanger)

Expansion Tank

A-Class Water Pump




## EASY COMMISSIONING

### Pre-Installation Setting

- Based on installation site information, installers can prepare presetting with LG Heating Configurator and save data into memory card from office.
- At the site, then installers can simply insert memory card at the back of remote controller to activate configuration data.

## EASY & QUICK MAINTENANCE

### Data Logging

- The remote controller can store up to 50 history items, making it possible to easily identify cause of malfunctioning or faults using the history data and prompt solution

- Date and time
- Operation mode (Cooling, Heating, Hot Water, Auto)
- Setting temperature
- Inlet / Outlet temperature
- Room air temperature
- DHW (Operation status / Target temperature / current temperature)
- ODU operation status
- Error status & code

# MONOBLOC

HM051M.U43
HM071M.U43
HM091M.U43

011-1W0243

## Seasonal Energy

| Description | | | Unit | HM051M.U43 | HM071M.U43 | HM091M.U43 |
|---|---|---|---|---|---|---|
| Space Heating (According to EN14825) | Average Climate water outlet 35℃ | SCOP | | 4.45 | 4.45 | 4.45 |
| | | Rated heat output (Prated) | | 6 | 6 | 6 |
| | | Seasonal space heating efficiency (ηs) | % | 175 | 175 | 175 |
| | | Seasonal space heating eff. Class | | A+++[1)] | A+++[1)] | A+++[1)] |
| | | Annual energy consumption | kWh | 2,551 | 2,668 | 2,784 |
| | Average Climate water outlet 55℃ | SCOP | | 3.12 | 3.12 | 3.12 |
| | | Rated heat output (Prated) | | 6 | 6 | 6 |
| | | Seasonal space heating efficiency (ηs) | % | 122 | 122 | 122 |
| | | Seasonal space heating eff. Class | | A+ | A+ | A+ |
| | | Annual energy consumption | kWh | 3,638 | 3,638 | 3,638 |

**Note**

1. A+++ label is available from 26, Sep. 2019 and should be considered as A++ label until that time.

## Product Specification

| Description | | | Unit | HM051M.U43 | HM071M.U43 | HM091M.U43 |
|---|---|---|---|---|---|---|
| Nominal Capacity | Heating | LWT 35℃ at OAT 7℃ | kW | 5.50 | 7.00 | 9.00 |
| | | LWT 55℃at OAT 7℃ | kW | 5.50 | 5.50 | 5.50 |
| | | LWT 35℃ at OAT 2℃ | kW | 3.30 | 4.20 | 5.40 |
| | Cooling | LWT 18℃ at OAT 35℃ | kW | 5.50 | 7.00 | 9.00 |
| | | LWT 7℃ at OAT 35℃ | kW | 5.50 | 7.00 | 9.00 |
| Nominal Power Input | Heating | LWT 35℃ at OAT 7℃ | kW | 1.22 | 1.56 | 2.15 |
| | | LWT 55℃ at OAT 7℃ | kW | 2.04 | 2.04 | 2.04 |
| | | LWT 35℃ at OAT 2℃ | kW | 0.94 | 1.20 | 1.54 |
| | Cooling | LWT 18℃ at OAT 35℃ | kW | 1.20 | 1.56 | 2.14 |
| | | LWT 7℃ at OAT 35℃ | kW | 1.96 | 2.59 | 3.46 |
| COP | Heating | LWT 35℃ at OAT 7℃ | | 4.50 | 4.50 | 4.18 |
| | | LWT 55℃ at OAT 7℃ | | 2.70 | 2.70 | 2.70 |
| | | LWT 35℃ at OAT 2℃ | | 3.52 | 3.51 | 3.50 |
| EER | Cooling | LWT 18℃ at OAT 35℃ | | 4.60 | 4.50 | 4.20 |
| | | LWT 7℃ at OAT 35℃ | | 2.80 | 2.70 | 2.60 |
| Operation range | Heating | Water Side (LWT) | ℃ | 15 ~ 65 | | |
| | | Air Side | ℃ | -25 ~ 35 | | |
| | Cooling | Water Side (LWT) | ℃ | 5 ~ 27 | | |
| | | Air Side | ℃ | 5 ~ 48 | | |
| | Domestic Hot Water | Water Side (LWT) | ℃ | 15 ~ 80 | | |
| Refrigerant | Type | | | R32 | | |
| | GWP (Global Warming Potential) | | | 675 | | |
| | Charge | | kg | 1.4 | | |
| | | | TCO2eq | 0.95 | | |
| Compressor | Quantity | | EA | 1 | | |
| | Type | | | Scroll | | |
| Water Flow Rate | Rated | | LPM | 14.4 | 20.1 | 25.9 |
| Piping Connections | Water Circuit | Inlet | mm (in) | Male PT 25(1) | | |
| | | Outlet | mm (in) | Male PT 25(1) | | |
| Dimensions | Unit | W x H x D | mm | 1,239 × 907 × 404 | | |
| Net Weight | Unit | | kg | 96 | | |
| Sound power level | Heating | Rated | dBA | 60 | | |
| Power supply | Phase / Frequency / Voltage | | Φ / Hz / V | 1 / 50 / 220-240 | | |
| | Maximum Running Current | | A | 23 | | |

**Note**

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Performances are accordance with EN14511.
5. This product contains Fluorinated greenhouse gases.
6. LWT : Leaving Water Temperature, OAT : Outdoor Air Temperature

# MONOBLOC

HM121M.U33 HM123M.U33
HM141M.U33 HM143M.U33
HM161M.U33 HM163M.U33

011-1W0244

## Seasonal Energy

| Description | | | Unit | HM121M.U33 HM123M.U33 | HM141M.U33 HM143M.U33 | HM161M.U33 HM163M.U33 |
|---|---|---|---|---|---|---|
| Space Heating (According to EN14825) | Average Climate water outlet 35℃ | SCOP | | 4.45 | 4.45 | 4.45 |
| | | Rated heat output (Prated) | | 10 | 11 | 11 |
| | | Seasonal space heating efficiency (ηs) | % | 175 | 175 | 175 |
| | | Seasonal space heating eff. Class | | A+++[1)] | A+++[1)] | A+++[1)] |
| | | Annual energy consumption | kWh | 4,642 | 4,875 | 5,103 |
| | Average Climate water outlet 55℃ | SCOP | | 3.18 | 3.18 | 3.18 |
| | | Rated heat output (Prated) | | 12 | 12 | 12 |
| | | Seasonal space heating efficiency (ηs) | % | 124 | 124 | 124 |
| | | Seasonal space heating eff. Class | | A+ | A+ | A+ |
| | | Annual energy consumption | kWh | 7,795 | 7,795 | 7,795 |

**Note**

1. A+++ label is available from 26, Sep. 2019 and should be considered as A++ label until that time.

## Product Specification

| Description | | | Unit | HM121M.U33 | HM141M.U33 | HM161M.U33 |
|---|---|---|---|---|---|---|
| Nominal Capacity | Heating | LWT 35℃ at OAT 7℃ | kW | 12.00 | 14.00 | 16.00 |
| | | LWT 55℃at OAT 7℃ | kW | 12.00 | 12.00 | 12.00 |
| | | LWT 35℃ at OAT 2℃ | kW | 11.00 | 12.00 | 13.80 |
| | Cooling | LWT 18℃ at OAT 35℃ | kW | 14.00 | 14.00 | 16.00 |
| | | LWT 7℃ at OAT 35℃ | kW | 14.00 | 14.00 | 16.00 |
| Nominal Power Input | Heating | LWT 35℃ at OAT 7℃ | kW | 2.61 | 3.11 | 4.00 |
| | | LWT 55℃ at OAT 7℃ | kW | 4.29 | 4.29 | 4.29 |
| | | LWT 35℃ at OAT 2℃ | kW | 3.13 | 3.42 | 3.94 |
| | Cooling | LWT 18℃ at OAT 35℃ | kW | 3.04 | 3.26 | 4.00 |
| | | LWT 7℃ at OAT 35℃ | kW | 5.19 | 5.38 | 6.40 |
| COP | Heating | LWT 35℃ at OAT 7℃ | | 4.60 | 4.50 | 4.00 |
| | | LWT 55℃ at OAT 7℃ | | 2.80 | 2.80 | 2.80 |
| | | LWT 35℃ at OAT 2℃ | | 3.52 | 3.51 | 3.50 |
| EER | Cooling | LWT 18℃ at OAT 35℃ | | 4.60 | 4.30 | 4.00 |
| | | LWT 7℃ at OAT 35℃ | | 2.70 | 2.60 | 2.50 |
| Operation range | Heating | Water Side (LWT) | ℃ | 15 ~ 65 | | |
| | | Air Side | ℃ | -25 ~ 35 | | |
| | Cooling | Water Side (LWT) | ℃ | 5 ~ 27 | | |
| | | Air Side | ℃ | 5 ~ 48 | | |
| | Domestic Hot Water | Water Side (LWT) | ℃ | 15 ~ 80 | | |
| Refrigerant | Type | | | R32 | | |
| | GWP (Global Warming Potential) | | | 675 | | |
| | Charge | | kg | 2.4 | | |
| | | | TCO2eq | 1.62 | | |
| Compressor | Quantity | | EA | 1 | | |
| | Type | | | Scroll | | |
| Water Flow Rate | Rated | | LPM | 34.5 | 40.3 | 46.0 |
| Piping Connections | Water Circuit | Inlet | mm (in) | Male PT 25(1) | | |
| | | Outlet | mm (in) | Male PT 25(1) | | |
| Dimensions | Unit | W x H x D | mm | 1,239 × 1,450 × 404 | | |
| Net Weight | Unit | | kg | 130 | | |
| Sound power level | Heating | Rated | dBA | 63 | | |
| Power supply | Phase / Frequency / Voltage | | Φ / Hz / V | 1 / 50 / 220-240 | | |
| | Maximum Running Current | | A | 35 | | |

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3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Performances are accordance with EN14511.
5. This product contains Fluorinated greenhouse gases.
6. LWT : Leaving Water Temperature, OAT : Outdoor Air Temperature

## Product Specification

| Description | | | Unit | HM123M.U33 | HM143M.U33 | HM163M.U33 |
|---|---|---|---|---|---|---|
| Nominal Capacity | Heating | LWT 35℃ at OAT 7℃ | kW | 12.00 | 14.00 | 16.00 |
| | | LWT 55℃at OAT 7℃ | kW | 12.00 | 12.00 | 12.00 |
| | | LWT 35℃ at OAT 2℃ | kW | 11.00 | 12.00 | 13.80 |
| | Cooling | LWT 18℃ at OAT 35℃ | kW | 14.00 | 14.00 | 16.00 |
| | | LWT 7℃ at OAT 35℃ | kW | 14.00 | 14.00 | 16.00 |
| Nominal Power Input | Heating | LWT 35℃ at OAT 7℃ | kW | 2.61 | 3.11 | 4.00 |
| | | LWT 55℃ at OAT 7℃ | kW | 4.29 | 4.29 | 4.29 |
| | | LWT 35℃ at OAT 2℃ | kW | 3.13 | 3.42 | 3.94 |
| | Cooling | LWT 18℃ at OAT 35℃ | kW | 3.04 | 3.26 | 4.00 |
| | | LWT 7℃ at OAT 35℃ | kW | 5.19 | 5.38 | 6.40 |
| COP | Heating | LWT 35℃ at OAT 7℃ | | 4.60 | 4.50 | 4.00 |
| | | LWT 55℃ at OAT 7℃ | | 2.80 | 2.80 | 2.80 |
| | | LWT 35℃ at OAT 2℃ | | 3.52 | 3.51 | 3.50 |
| EER | Cooling | LWT 18℃ at OAT 35℃ | | 4.60 | 4.30 | 4.00 |
| | | LWT 7℃ at OAT 35℃ | | 2.70 | 2.60 | 2.50 |
| Operation range | Heating | Water Side (LWT) | ℃ | 15 ~ 65 | | |
| | | Air Side | ℃ | -25 ~ 35 | | |
| | Cooling | Water Side (LWT) | ℃ | 5 ~ 27 | | |
| | | Air Side | ℃ | 5 ~ 48 | | |
| | Domestic Hot Water | Water Side (LWT) | ℃ | 15 ~ 80 | | |
| Refrigerant | Type | | | R32 | | |
| | GWP (Global Warming Potential) | | | 675 | | |
| | Charge | | kg | 2.4 | | |
| | | | TCO2eq | 1.62 | | |
| Compressor | Quantity | | EA | 1 | | |
| | Type | | | Scroll | | |
| Water Flow Rate | Rated | | LPM | 34.5 | 40.3 | 46.0 |
| Piping Connections | Water Circuit | Inlet | mm (in) | Male PT 25(1) | | |
| | | Outlet | mm (in) | Male PT 25(1) | | |
| Dimensions | Unit | W x H x D | mm | 1,239 × 1,450 × 404 | | |
| Net Weight | Unit | | kg | 130 | | |
| Sound power level | Heating | Rated | dBA | 63 | | |
| Power supply | Phase / Frequency / Voltage | | Φ / Hz / V | 3 / 50 / 380-415 | | |
| | Maximum Running Current | | A | 15 | | |

### Note

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2. Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
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6. LWT : Leaving Water Temperature, OAT : Outdoor Air Temperature



# ELECTRIC BACK UP HEATER

HA031M.E1
HA061M.E1

## Product Specification

| Electrical Specification | | | HM031M.E1 | HA061M.E1 |
|---|---|---|---|---|
| Backup Heater | Type | | Sheath | Sheath |
| | Number of Heating Coil | EA | 1 | 2 |
| | Capacity Combination | kW | 3.0 | 3.0 + 3.0 |
| | Operation | | Automatic | Automatic |
| | Heating Steps | Step | 1 | 2 |
| | Power Supply | V, Φ, Hz | 220-240, 1, 50 | 220-240,1,50 |
| | Maximum Current | A | 12.0 | 24.0 |
| Wiring Connections | Power Cable (included Earth, H07RN-F) | No. x mm2 | 3 x 1.5 | 3 x 4.0 |
| | Communication Cable (H07RN-F) | No. x mm2 | 4 x 0.75 | 4 x 0.75 |

# LG Wi-Fi MODEM

PWFMDD200.ENCXLEU

Access LG THERMA V anytime and from anywhere with Wi-Fi equipped device
LG's exclusive Home Appliances control app (Smart ThinQ) is available
Simple operation for various functions

- On/Off
- Operation Mode Selection
- Current Temperature
- Set Temperature
- On/Off Reservation
- Energy Monitoring

| Model Name | PWFMDD200 |
|---|---|
| Size (mm) | 46 x 68 x 14 |
| Interfaceable Products | THERMA V Split & Monobloc |
| Connection Type | Indoor Unit 1:1 |
| Communication Frequency | 2.4GHz |
| Wireless Standards | IEEE 802.11b/g/n |
| Mobile Application | LG Smart ThinQ (Android v4.1(Jellybean) or higher, iPhone iOS 9.0 or higher) |
| Optional Extension Cable | PWYREW000 (10m extension) |

* Functionality may be different according to each Indoor model (Split and Monobloc available)
* User interface of application shall be revised for its design and contents improvement
* Application is optimized for smartphone use, so it may not be well functioning with tablet devices.
  1) Vane Control may not be possible according to the type of indoor unit
  2) For the compatibility with indoor unit, please contact regional office

# DOMESTIC HOT WATER TANK

OSHW-200F.AEU
OSHW-300F.AEU
OSHW-500F.AEU
OSHW-300FD.AEU

Double Coil

Single Coil

| DOMESTIC HOT WATER TANK | | | OSHW-200F | OSHW-300F | OSHW-500F | OSHW-300FD |
|---|---|---|---|---|---|---|
| General Characteristics | Water Volume | L | 200 | 300 | 500 | 300 |
| | Diameter | mm | 640 | 640 | 810 | 640 |
| | Height | mm | 1,350 | „850 | 1,900 | 1,350 |
| | Empty Weight | Kg | 61 | 100 | 146 | 106 |
| | Tank Materials | | F18 STEEL | F18 STEEL | F18 STEEL | F18 STEEL |
| | Color | | Grey | Grey | Grey | Grey |
| Characteristics of Electrical Back-up | Additional Electric Heater | W | 2,400 | 2,400 | 2,400 | 2,400 |
| | Power Supply | Φ/ V / Hz | 1/ 230W / 50- 60Hz | 1/ 230W / 50- 60Hz | 1/ 230W / 50- 60Hz | 1/ 230W / 50- 60Hz |
| | Adjustable Thermostat | ℃ | 0-90 | 0-90 | 0-90 | 0-90 |
| Characteristics of Exchanger | Exchanger Type | | Single | Single | Single | Double |
| | Material Exchanger | | F18 STEEL | F18 STEEL | F18 STEEL | F18 STEEL |
| | Maximum Water Temp | ℃ | 90 | 90 | 90 | 90 |
| | Coil Surface | mm | 2.3 | 3.1 | 4.8 | 3.1/0.97 |
| Hydraulic Connections - Heat Pump | Inlet | mm | 1" | 1" | 11/4 " | 1" (Sup ¾") |
| | Outlet | mm | 1" | 1" | 11/4 " | 1" (Sup ¾") |
| Hydraulic Connections - Domestic Hot Water Tank | Domestic hot water inlet | mm | ¾" | ¾" | 1" | ¾" |
| | Domestic hot water outlet | mm | ¾" | 1" | 1" | 1" |
| Energy Efficiency Class | | | B | B | B | B |
| Standing Heat Loss | | W | 61 | 70 | 83 | 70 |

| Mandatory Optional Accessories | | | | |
|---|---|---|---|---|
| Domestic Hot Water Tank Installation Kit | PHLTB | PHLTB | PHLTB | PHLTB |
| **Optional Accessories** | | | | |
| Mixing Valve (3/4" dn20) | OSHA-MV | OSHA-MV | OSHA-MV | OSHA-MV |
| Mixing Valve (1" dn25) | OSHA-MV1 | OSHA-MV1 | OSHA-MV1 | OSHA-MV1 |
| 3-Way Valve | OSHA-3V | OSHA-3V | OSHA-3V | OSHA-3V |

# ACCESSORIES PROVIDED BY LG

| Accessory | Feature |
|---|---|
| **Domestic Hot Water Tank** | OSHW-200F 200 LITRES OSHW-300F 300 LITRES OSHW-500F 500 LITRES<br>Single Coil<br> OSHW-300FD 300 LITRES<br>Double Coil<br> OSHA-3V<br>3-Way Valve<br> OSHA-MV OSHA-MV1<br>Mixing Valve |
| **Domestic Hot Water Tank Kit** | • **PHLTB (Monobloc)**<br>**Features**<br>Easy to install the domestic hot water for monobloc.<br>There is a MCCB to protect the product.<br>Dimension (mm) (H x W x D) : 250 x 170 x 110<br>Weight (kg) : 2.1<br>To extend THERMA V functionality in generating domestic hot water.<br>* The sensor (PHRSTA0) can be purchased separately in case of using other brand's Domestic tank.<br> <br>PHLTB |
| **Remote Temperature Sensor** | • **PQRSTA0**<br>**Features**<br>It can help to detect the exact room temperature.<br>Applied to ceiling cassette, ceiling concealed duct, AWHP and Hydro Kit.<br>**Parts Included**<br>Remote temperature sensor / Extension cable (15m) / Manual<br> |
| **Solar Thermal Kit** | • **PHLLA**<br>**Features**<br>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.<br>Dimension (mm) (H x W x D) : 110 x 55 x 22<br> |
| **Dry Contact** | • **PDRYCB000 / PDRYCB300**<br>**Features**<br>For connection with boiler (Bivalent scene)<br> |



# RECOMMENDED OPTIONAL ACCESSORIES

| No. | Accessory | Picture | Purpose | Specification |
|---|---|---|---|---|
| 1 | Domestic Hot Water Tank | | Store and provide hot water for sanitation | Volume : 200 • 400 l<br>Enameld or stainless-steel tank / Insulating foam<br>(e.g. PUR • polyurethane) heat-exchanger surface ≥ 3 m² |
| 2 | 3-Way-Valve | | Switch between heating and domestic hot water circuit | 230V AC SPDT (Single Pole Double Throw) / opening time<br>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<br>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)<br>Volume : 100 • 200 l (Installation in series with heat pump)<br>500 ~ 1,000 l (Installation in parallel with heat pump) |
| 5 | Bypass Valve | | 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 ~ 1 x 1mm<br>for HM03M1.U42 only (other models are included) |
| 9 | Heating Cable | | Prevents the condensate pan and the drainage pipe from icing | Thermostatic control depending on outdoor temperature<br>All models do have electric heating cable for prevent frost from condensing water at the condensing pan except 3kW capacity. |
| 10 | Antifreeze | | Prevents the heating water from freezing, when heat pump is out of order | Monoethyleneglycole<br>Concentration according to lowest possible outdoor temperature |
| 11 | Noise Damper | | Prevents that structure-born noise is transported via the water piping | EPDM; Operating temperature according climate region<br>(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<br>When heat pumps operates in heating and cooling mode : thermostat with mode selection |
| 14 | Refrigerant Tubes | | Pre-fabricated double-pipe to connect split indoor and outdoor unit | Diameter :<br>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 | | 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 |

## MEMO

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«Τα χαρακτηριστικά των προϊόντων που περιγράφονται στον κατάλογο ενδέχεται να αλλάξουν χωρίς προειδοποίηση στην προσπάθειά μας για συνεχή βελτίωση. Η εταιρεία δεν φέρει ουδεμία ευθύνη για τυχόν τυπογραφικά λάθη.»

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