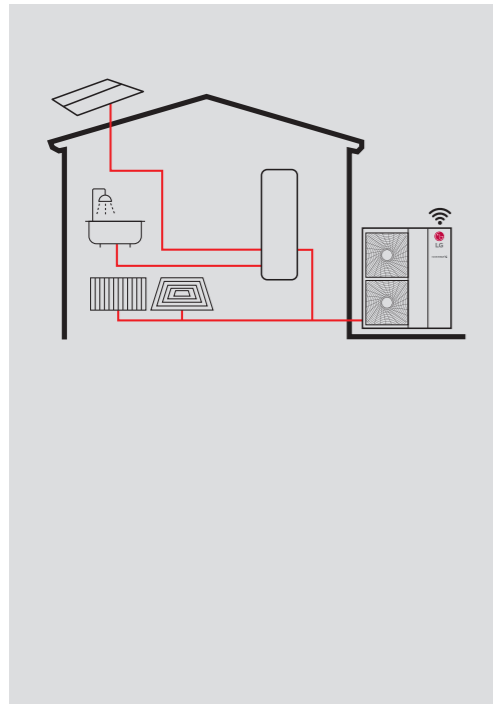# THERMA V™ R32
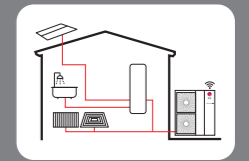
# R32 SILENT MONOBLOC

## Excellent Performance & Efficiency

| Very low noise level | R1 compressor | R32 refrigerant | Flash gas injection | Wide operation range | Black Fin heat exchanger | Solar thermal | Smart grid (energy state) |

## User Convenience
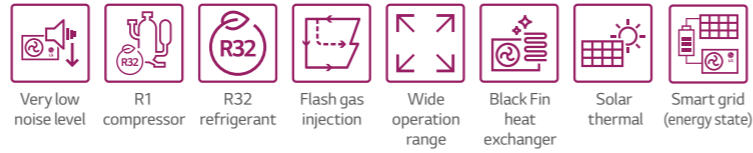
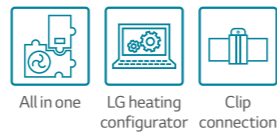| Intuitive interface | LG ThinQ | 2ⁿᵈ circuit | Various control options | 3ʳᵈ party boiler | Energy monitoring | Seasonal auto mode | Low noise mode |

## Easy Installation & Maintenance
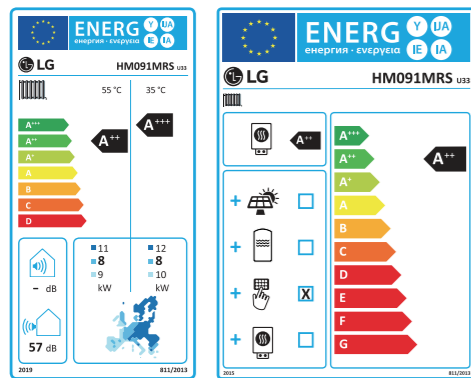
| All in one | LG heating configurator | Clip connection |

\* Detailed description for each function is presented on page 26 ~ 43.

## Energy Labeling



\* A+++ to D scale.

## Silent Monobloc Concept

The LG THERMA V R32 Silent Monobloc is designed for lower noise levels than conventional Monobloc series while retaining its previous advantages; All in one with eco-conscious R32 refrigerant and LG's powerful yet stable R1 compressor. Thanks to its low noise level corresponding with DACH region noise regulations, THERMA V R32 Silent Monobloc offers maximized installation flexibility which allows installing within minimum safety space as 5m from neighboring houses. Moreover, the energy efficiency of THERMA V R32 Silent Monobloc is remarkably enhanced compared to conventional Monobloc as so it is recognized as an ultra-high efficient model.
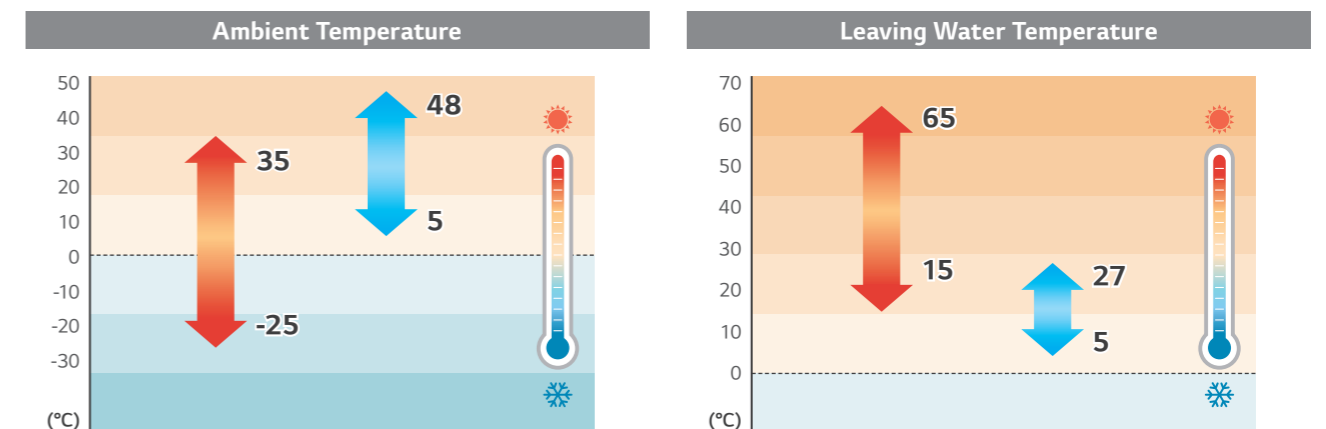
## Capacity Range (Heating & Cooling)

### R32 Silent Monobloc

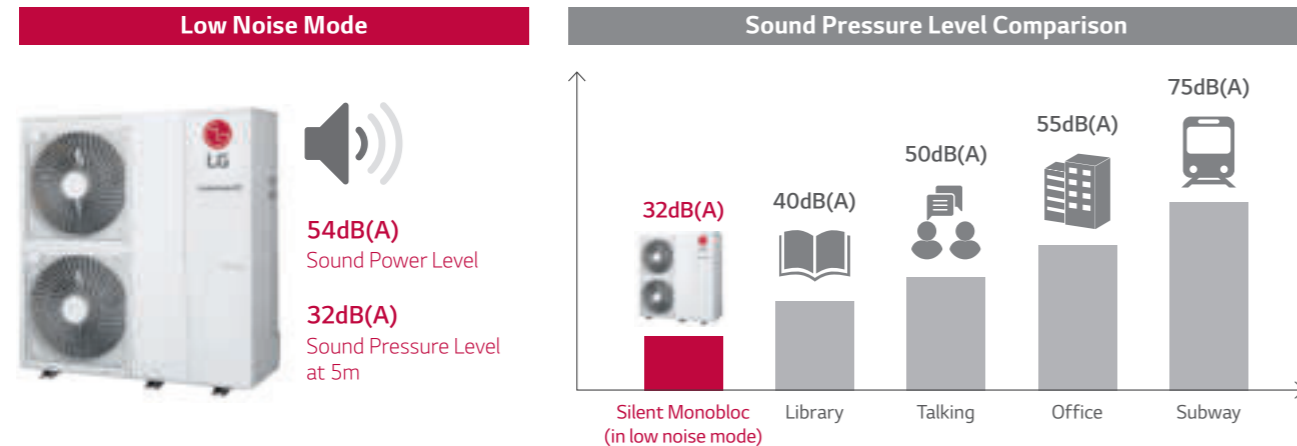| Capacity Range [kW] | 9 |
|---|---|
| Heating Capacity | ● (9.0) |
| Cooling Capacity | ● (9.0) |

## Operation Range (Heating & Cooling)

| Ambient Temperature | Leaving Water Temperature |
|---|---|

Ambient Temperature (°C): 48, 35, 5, -25

Leaving Water Temperature (°C): 65, 15, 27, 5

**THERMA V** ™ R32 **SILENT MONOBLOC**
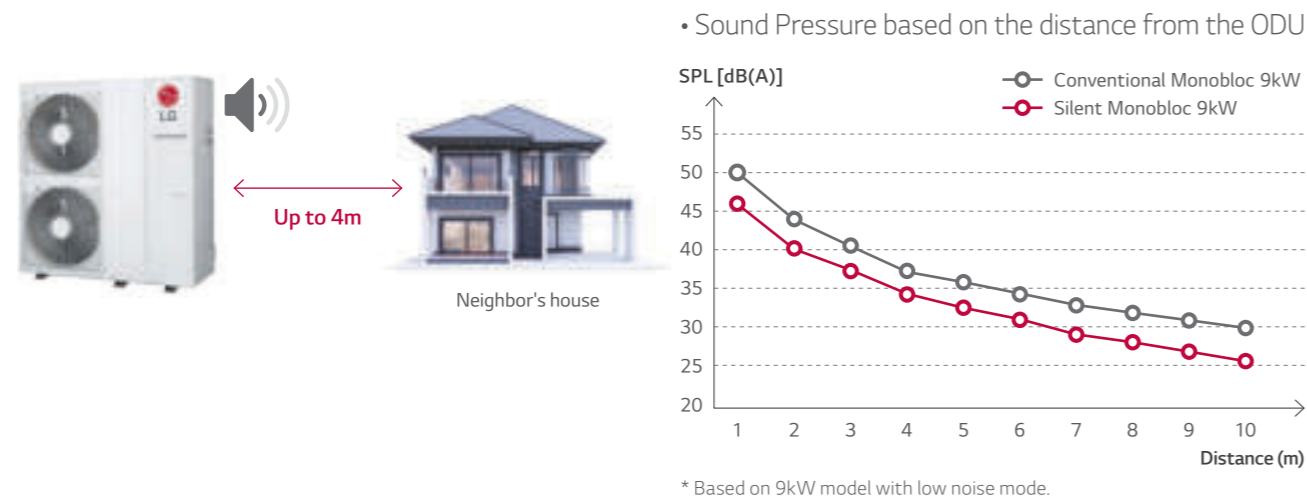
# PRODUCT FEATURES

## Very Low Sound Level

With a sound level that is quieter than a library, THERMA V Silent Monobloc operates at 32dB(A) in Low noise mode, creating a tranquil environment indoors and outdoors.

### Low Noise Mode

**54dB(A)**
Sound Power Level

**32dB(A)**
Sound Pressure Level
at 5m

### Sound Pressure Level Comparison

75dB(A)

55dB(A)

50dB(A)

40dB(A)

**32dB(A)**

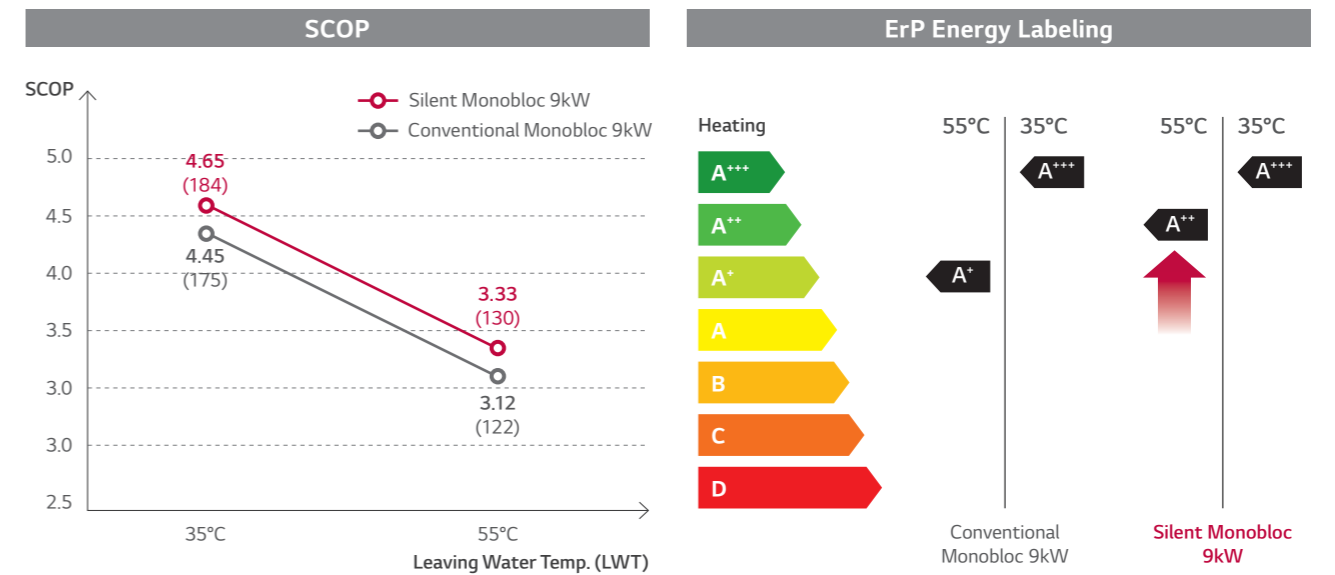| Silent Monobloc (in low noise mode) | Library | Talking | Office | Subway |

## Installation Flexibility

THERMA V Silent Monobloc can be installed up to 4m (in low noise mode) from neighboring houses while complying with noise regulations.

Up to 4m

Neighbor's house

• Sound Pressure based on the distance from the ODU

SPL [dB(A)]

— Conventional Monobloc 9kW
— Silent Monobloc 9kW

55
50
45
40
35
30
25
20

1  2  3  4  5  6  7  8  9  10
Distance (m)

\* Based on 9kW model with low noise mode.

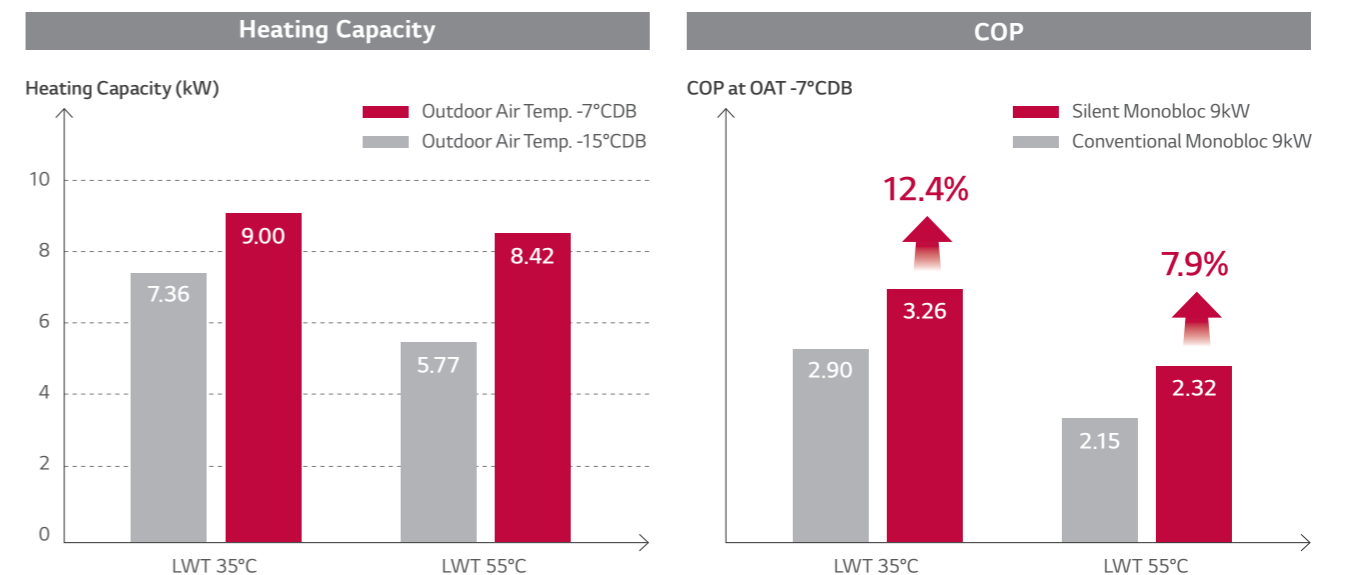| Noise Regulation | Germany (TA Lärm) | | Austria (ÖNORM S 5021) | |
|---|---|---|---|---|
| In Residential Area (rest area) | Day (06 ~ 22) | 50dB(A) | Day (06 ~ 19) | 45dB(A) |
| | | | Evening (19 ~ 22) | 40dB(A) |
| | Night (22 ~ 06) | 35dB(A) | Night (22 ~ 06) | 35dB(A) |

## High Energy Efficiency

The energy label directive is a key factor of selecting heating device in Europe heating market.
THERMA V Silent Monobloc has an energy label rating A+++ for low temperature application and A++ for medium temperature application in ErP energy labeling regulation.

### SCOP

SCOP

— Silent Monobloc 9kW
— Conventional Monobloc 9kW

5.0
4.5
4.0
3.5
3.0
2.5

4.65 (184)
4.45 (175)
3.33 (130)
3.12 (122)

35°C          55°C
Leaving Water Temp. (LWT)

### ErP Energy Labeling

Heating

A+++
A++
A+
A
B
C
D

| | 55°C | 35°C | 55°C | 35°C |
|---|---|---|---|---|
| | | A+++ | | A+++ |
| | | | A++ | |
| | A+ | | | |

Conventional Monobloc 9kW

Silent Monobloc 9kW

## High Heating Performance even at Low Temperature

THERMA V Silent Monobloc provides excellent heating performance – especially at low ambient temperature. Heating Capacity at OAT -7°CDB & LWT 35°C is same as normal capacity[1] and Heating Capacity at OAT -15°CDB & LWT 35°C is more than 80% of normal capacity.

### Heating Capacity

Heating Capacity (kW)

■ Outdoor Air Temp. -7°CDB
■ Outdoor Air Temp. -15°CDB

10
8
6
4
2
0

7.36   9.00
5.77   8.42

LWT 35°C        LWT 55°C

### COP

COP at OAT -7°CDB

■ Silent Monobloc 9kW
■ Conventional Monobloc 9kW

12.4%
2.90   3.26

7.9%
2.15   2.32

LWT 35°C        LWT 55°C

1) Normal : Outdoor air temperature 7°CDB / 6°CWB, Water outlet temperature 35°C

**THERMA V** ♺R32 **SILENT MONOBLOC**

# PRODUCT SPECIFICATION

## R32 Silent Monobloc

### HM091MRS U33



011-1W0191   EHPA for Austria, Switzerland and Germany

R32 | 65°C | A+++ | **R1**Compressor™ | **Black Fin** | LG ThinQ

## Features

- Very Low Sound Level (32dB(A) at 5m in low noise mode)
- High energy efficiency (SCOP 4.68/A+++)
- Excellent performance at low ambient temperature (100% @ -7°C)
- Wide operation range (ambient : -25 ~ 35°C/water side : 15 ~ 65°C)
- R32 refrigerant with low GWP
- R1 scroll compressor
- Black Fin heat exchanger
- LG ThinQ
- KEYMARK/EHPA certification/MCS/Eurovent certification

## Model Line-up

| Category | Unit | Model Name |
|---|---|---|
| | | Capacity (kW) |
| | | 9.0 |
| 1 Phase Model 220 ~ 240V, 1Ø, 50Hz | Monobloc Unit | HM091MRS U33 |

## Seasonal Energy

| Description | | | Unit | HM091MRS U33 |
|---|---|---|---|---|
| Space Heating (according to EN14825) | Average Climate Water Outlet 35°C | SCOP | W/W | 4.68 |
| | | Seasonal Space Heating Efficiency (η$_s$) | % | 184 |
| | | Seasonal Space Heating Eff. Class (A+++ to D scale) | - | A+++ |
| | Average Climate Water Outlet 55°C | SCOP | - | 3.33 |
| | | Seasonal Space Heating Efficiency (η$_s$) | % | 130 |
| | | Seasonal Space Heating Eff. Class (A+++ to D scale) | - | A++ |

## Nominal Capacity and Nominal Power Input

| Description | | OAT (DB) | LWT (DB) | Unit | HM091MRS U33 |
|---|---|---|---|---|---|
| Nominal Capacity | Heating | 7°C | 35°C | kW | 9.00 |
| | | 7°C | 55°C | | 6.00 |
| | | 2°C | 35°C | | 8.00 |
| | Cooling | 35°C | 18°C | | 9.00 |
| | | 35°C | 7°C | | 9.00 |
| Nominal Power Input | Heating | 7°C | 35°C | kW | 1.76 |
| | | 7°C | 55°C | | 2.14 |
| | | 2°C | 35°C | | 2.16 |
| | Cooling | 35°C | 18°C | | 1.80 |
| | | 35°C | 7°C | | 3.00 |
| COP | Heating | 7°C | 35°C | W/W | 5.10 |
| | | 7°C | 55°C | | 2.80 |
| | | 2°C | 35°C | | 3.70 |
| EER | Cooling | 35°C | 18°C | W/W | 5.00 |
| | | 35°C | 7°C | | 3.00 |

## Product Specification

| Technical Specification | | | | Unit | HM091MRS U33 |
|---|---|---|---|---|---|
| Water Side | Operation Range (leaving water temperature) | Heating | Min. ~ Max. | °CDB | 15 ~ 65 |
| | | Cooling | | | 5 ~ 27 (16 ~ 27)[2)] |
| | | DHW[1)] | | | 15 ~ 80 |
| | Piping Connections | Water Circuit | Inlet | mm (inch) | Male PT 25.4 (1) |
| | | | Outlet | mm (inch) | Male PT 25.4 (1) |
| | Rated Water Flow Rate at LWT 35°C | | | LPM | 25.87 |
| Refrigerant Side | Operation Range (outdoor temp.) | Heating | Min. ~ Max. | °CDB | -25 ~ 35 |
| | | Cooling | | | 5 ~ 48 |
| | Compressor | Quantity | | EA | 1 |
| | | Type | | - | Hermetic Sealed Scroll |
| | Refrigerant | Type | | - | R32 |
| | | GWP (global warming potential) | | - | 675 |
| | | Precharged Amount | | g | 2,100 |
| | | t-CO$_2$ eq | | - | 1.418 |
| Sound Power Level | Heating | Rated | | dB(A) | 57 |
| | | Low noise | | | 54 |
| Sound Pressure Level (at 5m) | Heating | Rated | | dB(A) | 35 |
| | | Low noise | | | 32 |
| Dimensions | Unit | W x H x D | | mm | 1,239 x 1,380 x 330 |
| Weight | Unit | | | kg | 115.5 |
| Power Supply | Voltage, Phase, Frequency | | | V, Ø, Hz | 220 ~ 240, 1, 50 |
| | Rated Running Current | Heating | | A | 7.83 |
| | | Cooling | | A | 7.99 |
| | Recommended Circuit Breaker | | | A | 16 |
| Wiring Connections | Power Supply Cable (included earth, H07RN-F) | | | mm$^2$ x cores | 4.0 x 3C |

1) DHW 58 ~ 80°C operating is available only when the booster heater is operating.
2) When fan coil unit not used.

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 pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
   Sound power level is measured on the rated condition in the reverberation rooms by ISO 9614 standard.
   Therefore, these values can be increased owing to ambient conditions during operation.
4. Performances are accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation.
   For max. capacities, refer to performance data.
   • Rated running current : outdoor temp. 7°CDB / 6°CWB, LWT 35°C
5. This product contains fluorinated greenhouse gases.

# PRODUCT SPECIFICATION

## Performance Table for Heating Operaion

Maximum Heating Capacity (Including Defrost Effect)

### HM091MRS U33

| Outdoor Temperature | LWT 30°C | LWT 35°C | LWT 40°C | LWT 45°C | LWT 50°C | LWT 55°C | LWT 60°C | LWT 65°C |
|---|---|---|---|---|---|---|---|---|
| | TC | TC | TC | TC | TC | TC | TC | TC |
| -25°C DB | 5.66 | 5.09 | 4.57 | 4.02 | - | - | - | - |
| -20°C DB | 6.61 | 6.50 | 5.61 | 4.89 | 4.32 | - | - | - |
| -15°C DB | 7.33 | 7.36 | 7.25 | 6.99 | 6.35 | 5.77 | - | - |
| -7°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 8.42 | - | - |
| -4°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 6.87 | - |
| -2°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 7.09 | - |
| 2°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 7.48 | - |
| 7°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 7.87 | 7.14 |
| 10°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 8.06 | 7.34 |
| 15°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 8.28 | 7.58 |
| 18°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 8.36 | 7.68 |
| 20°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 8.40 | 7.72 |
| 35°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 8.45 | 7.80 |

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
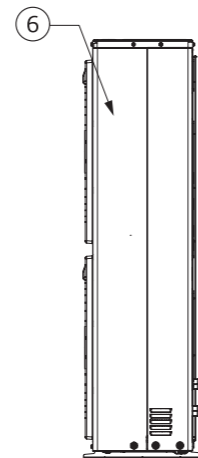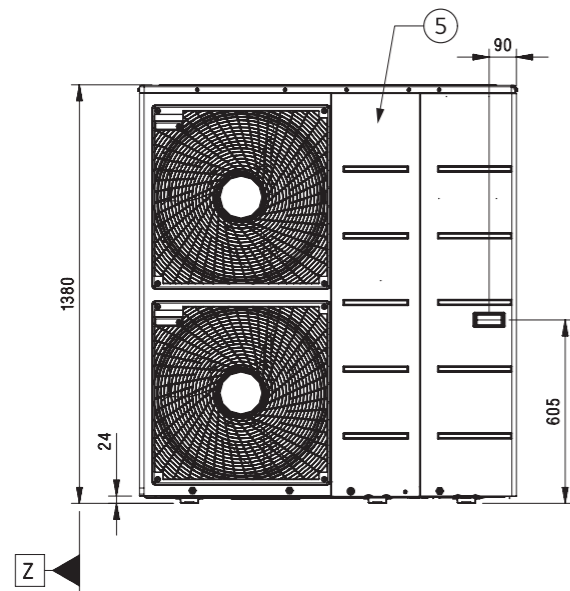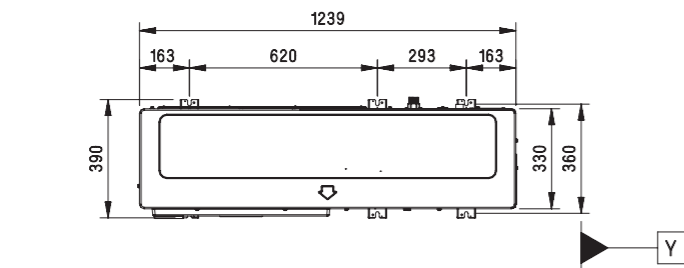   • In accordance with the test standard (or nations), the rating will vary slightly.

## Performance Table for Cooling Operation

Maximum Cooling Capacity

### HM091MRS U33

| Outdoor Temperature | LWT 7°C | LWT 10°C | LWT 13°C | LWT 15°C | LWT 18°C | LWT 20°C | LWT 22°C |
|---|---|---|---|---|---|---|---|
| | TC | TC | TC | TC | TC | TC | TC |
| 10°C DB | 8.50 | 9.31 | 10.12 | 10.66 | 11.47 | 12.00 | 12.54 |
| 20°C DB | 8.70 | 9.19 | 9.67 | 9.99 | 10.48 | 10.80 | 11.13 |
| 30°C DB | 8.90 | 9.06 | 9.22 | 9.33 | 9.49 | 9.60 | 9.71 |
| 35°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 40°C DB | 9.10 | 9.02 | 8.94 | 8.89 | 8.81 | 8.76 | 8.71 |
| 45°C DB | 9.20 | 9.04 | 8.89 | 8.78 | 8.63 | 8.52 | 8.42 |

Note
1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
   • Rated values are based on standard conditions and it can be found on specifications.
   • Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
   • In accordance with the test standard (or nations), the rating will vary slightly.

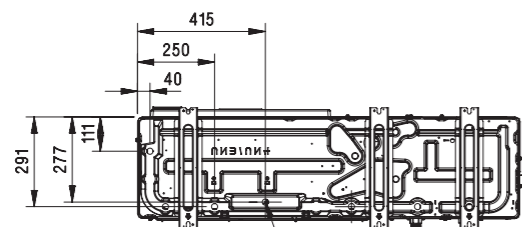*THERMA V* R32 **SILENT MONOBLOC**

# PRODUCT SPECIFICATION

## Drawings

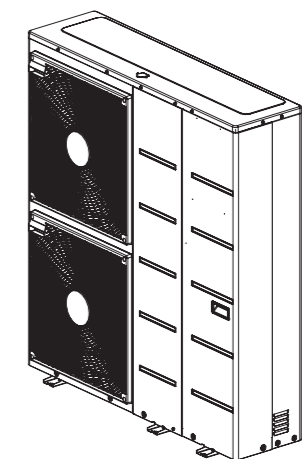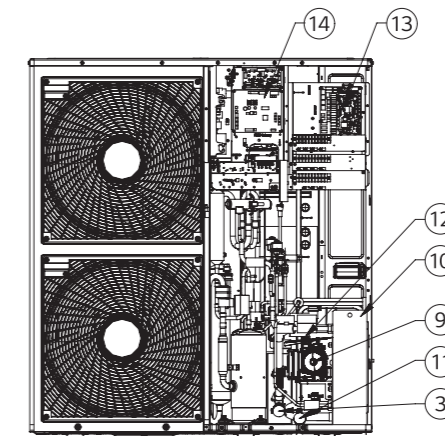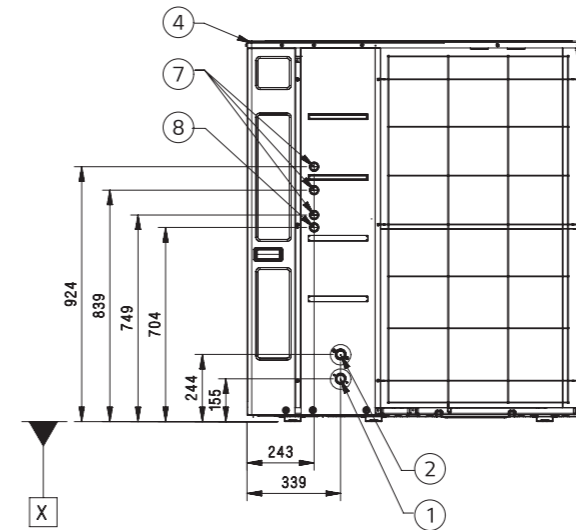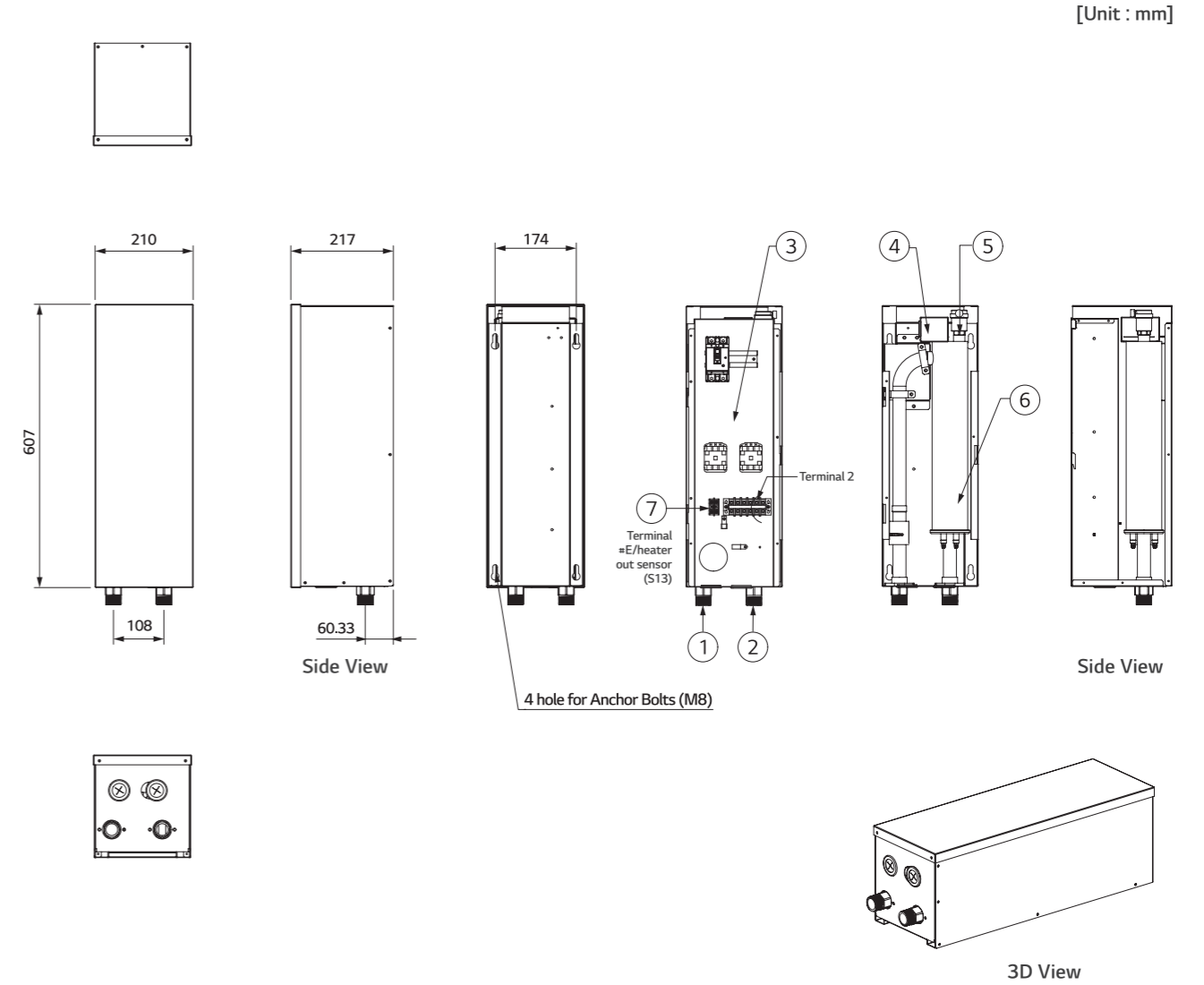| Category | Unit | Model Name |
|---|---|---|
| | | Capacity (kW) |
| | | 9.0 |
| 1 Phase Model 220 ~ 240V, 1Ø, 50Hz | Monobloc Unit | HM091MRS U33 |

HM091MRS U33 [Unit : mm]

[Unit : mm]

Side View

3D View

| No. | Part Name | Description |
|---|---|---|
| 1 | Entering Water Pipe | Male PT 1 inch |
| 2 | Leaving Water Pipe | Male PT 1 inch |
| 3 | Strainer | Filtering and stacking particles inside circulating water |
| 4 | Top Cover | - |
| 5 | Front Panel | - |
| 6 | Side Panel | - |
| 7 | Low Voltage | Accessory kit cables |
| 8 | UNIT Power | Outdoor entry power cable |
| 9 | Water Pump | - |
| 10 | Plate Heat Exchanger | Heat exchange between refrigerant and water |
| 11 | Pressure Gauge | Indicates circulating water pressure |
| 12 | Safety Valve | Open at water pressure 3bar |
| 13 | Indoor Control Box | Indoor PCB and terminal blocks |
| 14 | Outdoor Control Box | Outdoor PCB and terminal blocks |

3-ID ⌀ 20 holes for drain connection

# THERMA V™ R32 SILENT MONOBLOC
# PRODUCT SPECIFICATION

## Electric Back up Heater

HA031M E1
HA061M E1

[Unit : mm]



210    217    174

607

108    60.33

**Side View**

4 hole for Anchor Bolts (M8)

Terminal 2

Terminal =E/heater out sensor (S13)

**Side View**

**3D View**

## Product Specification

| Electrical Specification | | Unit | HA031M E1 | HA061M E1 |
|---|---|---|---|---|
| Back up Heater | Type | - | Sheath | |
| | Number of Heating Coil | EA | 1 | 2 |
| | Capacity Combination | kW | 3.0 | 3.0 + 3.0 |
| | Operation | - | Automatic | |
| | Heating Steps | Step | 1 | 2 |
| | Power Supply | V, Ø, Hz | 220 ~ 240, 1, 50 | |
| | Dimensions (W x H x D) | mm | 210 x 607 x 217 | |
| | Net Weight (unit) | kg | 13.0 | 13.8 |
| Wiring Connections | Power Supply Cable (included earth, H07RN-F) | mm² x cores | 1.5 x 3C | 4.0 x 3C |
| | Communication Cable (H07RN-F) | mm² x cores | 0.75 x 2C | 0.75 x 4C |

| No. | Part Name | Description |
|---|---|---|
| 1 | Leaving Water Pipe | Male PT 1 inch |
| 2 | Entering Water Pipe | Male PT 1 inch |
| 3 | Control Box | Circuit breaker, Magnetic switch, Terminal blocks |
| 4 | Thermal Switch | Cut-off power input to E/heater at 90°C |
| 5 | Air Vent | Air purging when charging water |
| 6 | Electric Heater | Refer the related information |
| 7 | Back up Heater Outlet Sensor (S13) | Connect to unit (heat pump) |
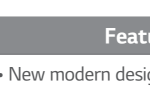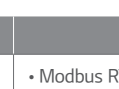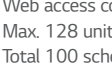
Note
1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
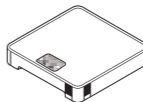
THERMA V™
ACCESSORIES

# ACCESSORIES

## Accessories Provided by LG

| Category | Model Name | Model Number | Figure | Applicable Product | Relevant Function | Purpose | Feature |
|---|---|---|---|---|---|---|---|
| Sensors | Room Temperature Sensor | PQRSTA0 |  | All except for R410A IWT | Room Temperature Based Control | To detect room air temperature for room temperature based control | • Max. wire length : 15m |
| | 2nd Circuit Thermistor | PRSTAT5K10 |  | All except for R410A IWT and High temp. | 2nd Circuit (mixing circuit) | To detect 2nd circuit temperature when using 2nd circuit function | • 5kΩ thermistor, 10m |
| | Domestic Hot Water Sensor | PHRSTA0 |  | All except for IWT and High temp. models | Domestic Hot Water Heating | To detect DHW tank temperature | • Included in PHLTA kit |
| Valves | 3 Way Valve | OSHA-3V |  | All except for IWT models | Domestic Hot Water Heating | To divert water flow between space heating and DHW heating | • Size : DN 20 G 1" connection, male threaded |
| | Thermostatic Mixing Valve | OSHA-MV |  | Regardless of model | Domestic Hot Water Supply | To blend hot water with cold water for ensuring constant, safe shower and bath outlet temp. | • Size : 3/4" DN20 male threaded |
| | | OSHA-MV1 | | | | | • Size : 1" DN25 male threaded |
| DHW Tanks | Domestic Hot Water Tank (single coil) | OSHW-200F |  | All except for IWT models | Domestic Hot Water Heating | To generate and store domestic hot water | • Storage volume : 200L, 300L, 500L • Type : Internal double coil • Material : Stainless steel • Capacity of booster heater : 2.4kW |
| | | OSHW-300F | | | | | |
| | | OSHW-500F | | | | | |
| | Domestic Hot Water Tank (double coil) | OSHW-300FD |  | All except for IWT and High temp. models | | | • Storage volume : 300L • Type : Internal double coil • Material : Stainless steel • Capacity of booster heater : 2.4kW |
| Installation Kits | Domestic Hot Water Tank Kit | PHLTA (1Ø, split) |  | All except for IWT and High temp. models | Domestic Hot Water Heating | To operate with DHW tank | • Parts included : DHW tank sensor (thermistor), Circuit breaker, Relay |
| | | PHLTC (3Ø, split) | | | | | |
| | | PHLTB (monobloc) |  | | | | • Parts included : DHW tank sensor (thermistor), Circuit breaker, Relay, Multi harness |
| | Solar Thermal Kit | PHLLA |  | All except for IWT, Hydrosplit and High temp. models | Solar Thermal Heat Utilization | To operate with solar thermal system | • Length of thermistor : 12m • Size of tube connector (W x H x D) : 110 x 55 x 22 |

| Category | Model Name | Model Number | Figure | Applicable Product | Relevant Function | Purpose | Feature |
|---|---|---|---|---|---|---|---|
| Installation Kits | Electric Back Up Heater | HA031M E1 |  | R32 Monobloc and R32 Silent Monobloc (HA063M E1 is not applicable for R32 Silent Monobloc) | Capacity Back Up & Emergency Operation | To supplement insufficient capacity | • Heater capacity : 3kW • Number of heating coil : 1EA (3.0kW) • Size (W x H x D) : 210 x 607 x 217 • Power : 220 ~ 240V, 1Ø |
| | | HA061M E1 | | | | | • Heater capacity : 6kW • Number of heating coil : 2EA (3.0 + 3.0kW) • Size (W x H x D) : 210 x 607 x 217 • Power : 220 ~ 240V, 1Ø |
| | | HA063M E1 | | | | | • Heater capacity : 6kW • Number of heating coil : 3EA (2.0 + 2.0 + 2.0kW) • Size (W x H x D) : 210 x 607 x 217 • Power : 380 ~ 415V, 3Ø |
| Vessel | Buffer Tank for Space Heating | OSHB-40KT |  | R32 IWT | - | To provide the buffer volume of water to the heating circuit | • Volume : 40L • Size (W x H x D) : 518 x 560 x 175 |
| | Expansion Vessel for DHW | OSHE-12KT |  | R32 IWT | - | To absorb the volume changes by temperature of water for the DHW circuit | • Volume : 8L • Connection : 3/4" • Max. pressure : 10 bar • Size (W x H x D) : 416 x 238 x 502 |
| ETC | Extension Wire for Wire Remote Controller | PZCWRC1 |  | All except for R410A IWT | - | To extend wire between wired remote controller and indoor unit | • Length : 10m |
| | Extension Cable for Wi-Fi Modem | PWYREW000 |  | All except for R410A IWT | Wi-Fi Control via LG ThinQ | To extend wire between WI-Fi modem and indoor unit | • Length : 10m |
| | 2 Remote Control Wire | PZCWRC2 |  | All except for R410A IWT model | 2 Remote Control | To connect two remote controller on the one indoor unit | • Length : 0.25m |
| | Drain Pan | PHDPB |  | R32 Split, R410A Split | Cooling Operation | To collect condensed water in indoor unit when cooling operation | - |
| | | PHDPC |  | R32 Hydrosplit | | | - |
| | Cover Plate | PDC-HK10 |  | R32 Hydrosplit, R32 Split, R32 IWT, R410A Split | - | To fill the blank space of the indoor unit front panel when the remote controller is relocated indoors. | - |

# THERMA V™
# ACCESSORIES

## Accessories Provided by LG

| Category | Model Name | Model Number | Figure | Applicable Product | Relevant Function | Purpose | Feature |
|---|---|---|---|---|---|---|---|
| Remote Controller | Wired Remote Controller | PREMTW101 | | All except for R410A IWT model | 2 Remote Control | To control AWHP using two remote controller (additional remote controller) | • New modern design 4.3 inch color LCD display<br>• Information displayed with simple graphic, icon & text<br>• Built-in temperature sensor<br>• Size (W x H x D) : 120 x 120 x 16<br>• Extension cable (PZCWRC1, 10m) and 2 remote cable (PZCWRC2, 0.25m) are included |
| Central Controller | AC Ez Touch | PACEZA000 | | All except for R410A IWT model | Centralized Control | To control AWHP using LG central controller | • 5 inch color display<br>• User-friendly control with iconographic interface (touch screen)<br>• Max. 32 unit control<br>• Total 200 schedule events (weekly / monthly / yearly / exception day)<br>• Operation history<br>• Remote controller lock (all, temp, mode)<br>• PC access supported (IPv6 supported)<br>• DI 1EA (emergency stop only)<br>• Size (W x H x D) : 137 x 121 x 25 |
| | AC Smart 5 | PACS4B000 (Smart 4) PACS5A000 (Smart 5) | | | | | • 10.2 inch color display<br>• User-friendly control with iconographic interface (touch screen)<br>• (Smart 4)_Max. IDU 32, (Smart 5)_Max. IDU 64<br>• Total 100 schedule events (weekly / monthly / yearly / exception day)<br>• History / operation trend<br>• Interlock with 3rd party equipment (ACS IO, ACU IO module is needed)<br>• Error alarm by e-mail<br>• Remote controller lock (all, temp, mode)<br>• Map view (visual navigation)<br>• Web access supported with HTML5 (PC, smartphone, tablet)<br>• DI 2EA, DO 2EA<br>• BACnet IP / modbus TCP protocol support<br>• Size (W x H x D) : 253.2 x 167.7 x 28.9 |
| | ACP 5 | PACP4B000 (ACP4) PACP5A000 (ACP5) | | | | | • Web access controller<br>• Max. 128 unit control<br>• Total 100 schedule events (weekly / monthly / yearly / exception day)<br>• History / operation trend<br>• Interlock with 3rd party equipment (ACS IO, ACU IO module is needed)<br>• Error alarm by e-mail<br>• Remote controller lock (all, temp, mode)<br>• Map view (visual navigation)<br>• DI 10EA, DO 4EA<br>• BACnet IP / modbus TCP protocol support<br>• Size (W x H x D) : 270 x 155 x 65 |
| Gateway | ACP Lonworks | PLNWKB000 | | All except for R410A IWT model | Centralized Control | To link with AWHP and other existing building control system | • Web access controller<br>• Max. 64 unit control<br>• ACP function included<br>• Lonworks protocol support<br>• Size (W x H x D) : 270 x 155 x 65 |

| Category | Model Name | Model Number | Figure | Applicable Product | Relevant Function | Purpose | Feature |
|---|---|---|---|---|---|---|---|
| Gateway | Modbus RTU Gateway | PMBUSB00A | | All except for R410A IWT model | Centralized Control | To communicate and control through the central controller (providing modbus RTU connection between AWHP and BMS) | • Modbus RTU slave (RS485) / 9,600 bps<br>• Size (W x H x D) : 53.6 x 89.7 x 60.7<br>• Max. 16 IDUs with single module / Max. 64 IDUs with 4 modules<br>• Power : DC 12V |
| | PI485 Gateway | PMNFP14A1 | | All except for R410A IWT model | | To communicate and control through the central controller (converting LG protocol to RS485 protocol) | • 1 for each outdoor unit<br>• Power : Supplied by outdoor unit |
| | PI485 Gateway | PP485B00K | | R410A IWT | | To communicate between outdoor unit and IWT type indoor unit | • 1 for each outdoor unit<br>• Power : Supplied by outdoor unit |
| Dry Contact | Simple Dry Contact | PDRYCB000 | | All except for R410A IWT model | - | To connect between the AWHP and external devices to control various functions | • 1 Set per 1 unit<br>• 1 Input contact for turning on/off<br>• Input power : 220 ~ 240V<br>• 2 output contacts<br> - Operation status - Error status |
| | Dry Contact for Thermostat | PDRYCB320 | | | | | • 1 Set per 1 unit<br>• Non voltage or 12 ~ 24V<br>• 8 digital input contacts for thermostat<br> - On/off, operation mode, DHW heating<br> - Emergency mode, silent mode<br>• 2 Output contacts<br> - Operation status - Error status |
| ETC | LG Wi-Fi Modem | PWFMDD200 | | All except for R410A IWT model | Wi-Fi Control via LG ThinQ | To control AWHP via smartphone | • Basic control function<br> - On/off, operation mode, set temp<br> - DHW heating and set temp<br>• Weekly on/off schedule<br>• Error status check<br>• Frequency : 2.4GHz<br>• IEEE 802.11b/g/n supported |
| | Meter Interface | PENKTH000 | | All except for R410A IWT model | Energy Monitoring | To measure production / consumption power | • Energy meter interface to monitor Electricity and Heat energy<br> - Max. 3 watt - Hour meter<br> - Max. 1 heat meter<br> - Pulse width : 40ms ~ 100ms<br>• Modbus RTU comm. with THERMA V<br> - 2 wire RS485 / 9600bps<br>• Power : DC 12V<br>• Size (W x H x D) : 54 x 90 x 61 |
| | 2 Zone Valve Controller | PZNVVB200 | | All except for R410A IWT model | Zone Valve Control | To control individual zone valves with room temperature sensor or room thermostat | • Individual temperature setting possible. (to be set through wired remote control in room temperature input mode)<br>• Room temperature detection (AI : 2 ports)<br>• 3rd Party thermostat interlock input. (DI : 2 port)<br>• Can read one DI or AI for each zone.<br>• Maximum number of connections : Max. 4EA (expandable up to 8-zone)<br>• Size (W x H x D) : 53.6 x 89.7 x 60.7<br>• Power : DC12V for module, AC24V for valve |

Note
1. PI485 Gateway (PMNFP14A1) should be installed on outdoor unit to use central controller.

# ACCESSORIES

## 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 (LG ThinQ) is available.
Simple operation for various functions.

• On/off
• Operation mode selection
• Current temperature
• Set temperature
• On/off reservation scheduling
• Energy monitoring
• ESS monitoring
• Silent mode reservation
• Holiday mode
• Quick DHW heating

| Model Name | PWFMDD200 |
|---|---|
| Size (mm) | 46 x 68 x 14 |
| Interfaceable Products | All THERMA V Line-ups except for R410A IWT |
| Connection Type | Indoor Unit 1 : 1 |
| Communication Frequency | 2.4GHz |
| Wireless Standards | IEEE 802.11b/g/n |
| Mobile Application | LG ThinQ (Android v4.1 (Jellybean) or higher, iPhone iOS 9.0 or higher) |
| Optional Extension Cable | PWYREW000 (10m extension) |

Note
1. Functionality may be different according to each Indoor model.
2. User interface of application shall be revised for its design and contents improvement.
3. Application is optimized for smartphone use, so it may not be well functioning with tablet devices.
   - 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 | | Unit | OSHW-200F | OSHW-300F | OSHW-500F | OSHW-300FD |
|---|---|---|---|---|---|---|
| General Characteristics | Water Volume | ℓ | 200 | 300 | 500 | 300 |
| | Diameter | mm | 640 | 640 | 640 | 640 |
| | Height | mm | 1,350 | 1,850 | 1,900 | 1,850 |
| | Empty Weight | Kg | 61 | 100 | 146 | 106 |
| | Tank Materials | - | STS : F18 | STS : F18 | STS : F18 | STS : F18 |
| | Color | - | Grey | Grey | Grey | Grey |
| Specification of Electric Back up | Additional Electric Heater | W | 2,400 | 2,400 | 2,400 | 2,400 |
| | Power Supply | V, Ø, Hz | 230, 1, 50 (60) | 230, 1, 50 (60) | 230, 1, 50 (60) | 230, 1, 50 (60) |
| | Adjustable Thermostat | °C | 0 ~ 90 | 0 ~ 90 | 0 ~ 90 | 0 ~ 90 |
| Specification of Heat Exchanger | Exchanger Type | - | Single | Single | Single | Double |
| | Material Exchanger | - | STS : F18 | STS : F18 | STS : F18 | STS : F18 |
| | Maximum Water Temp. | °C | 90 | 90 | 90 | 90 |
| | Coil Surface | m² | 2.3 | 3.1 | 4.8 | 3.1 + 0.97 |
| Water Connections | Heat Pump Inlet | inch | 1 BSP female | 1 BSP female | 1 ¼ BSP female | ¾ BSP female (upper coil) |
| | Heat Pump Outlet | inch | 1 BSP female | 1 BSP female | 1 ¼ BSP female | ¾ BSP female (upper coil) |
| | Solar Inlet | inch | - | - | - | 1 BSP Female (lower coil) |
| | Solar Outlet | inch | - | - | - | 1 BSP Female (lower coil) |
| | City Water Inlet | inch | ¾ BSP male | ¾ BSP male | 1 BSP male | ¾ BSP male |
| | Hot Water Outlet | inch | ¾ BSP female | 1 BSP female | 1 BSP female | 1 BSP female |
| Energy Efficiency Class (A+ to F scale) | | - | B | B | B | B |
| Standing Heat Loss | | W | 61 | 70 | 83 | 70 |

| Mandatory Optional Accessories | |
|---|---|
| Domestic Hot Water Tank Installation Kit | PHLTA (1Ø, split), PHLTB (monobloc), PHLTC (3Ø, split) |
| Optional Accessories | |
| Thermostatic Mixing Valve (3/4" DN20) | OSHA-MV |
| Thermostatic Mixing Valve (1" DN25) | OSHA-MV1 |
| 3 Way Valve | OSHA-3V |

# ACCESSORIES

## Combined Test with DHW Tank

LG has conducted a combination test of THERMA V with DHW tanks in accordance with EN16147 and obtained an ErP label for packages in order to cope with European nZEB regulations.

- R32 Monobloc (5, 7, 9kW) + OSHW-200F
- R32 Monobloc (12, 14, 16kW) + OSHW-200F
- R32 Monobloc (5, 7, 9kW) + OSHW-300F
- R32 Split Hydro Box (5, 7, 9kW) + OSHW-200F

| Model | AWHP | R32 Split (5, 7, 9kW) | R32 Monobloc (5, 7, 9kW) | R32 Monobloc (12, 14, 16kW) | R32 Monobloc (5, 7, 9kW) |
|---|---|---|---|---|---|
| | IDU | HN0916M NK4 | HM051M U43 HM071M U43 HM091M U43 | HM121M U33 HM141M U33 HM161M U33 | HM051M U43 HM071M U43 HM091M U43 |
| | ODU | HU051MR U44 HU071MR U44 HU091MR U44 | | | |
| | Tank | OSHW-200F AEU | OSHW-200F AEU | OSHW-200F AEU | OSHW-300F AEU |
| Declared Load Profile | | L | L | L | XL |
| Average Climate | Grade | A+ | A+ | A | A+ |
| | Efficiency | 118% | 122% | 109% | 134% |
| | Annual Energy Consumption | 865kWh | 839kWh | 940kWh | 1,254kWh |
| Energy Label | |  |  |  |  |