

PRODUCT SPECIFICATION

R32 Split



IDU
HN0916M NK4
ODU
HU051MR U44
HU071MR U44
HU091MR U44

Features

- High energy efficiency (SCOP 4.65/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) | | |
|---------------------------------------|--------------|--------------------------|-------------|-------------|
| | | 5.5 | 7.0 | 9.0 |
| 1 Phase Model 220 - 240V, 1Ø, 50Hz | Outdoor Unit | HU051MR U44 | HU071MR U44 | HU091MR U44 |
| | Indoor Unit | HN0916M NK4 | | |

Seasonal Energy

| Description | Outdoor Unit | | HU051MR U44 | HU071MR U44 | HU091MR U44 |
|--------------------------------------|---|---|-------------|-------------|-------------|
| | Indoor Unit | | HN0916M NK4 | | |
| Space Heating (according to EN14825) | Average Climate Water Outlet 35°C | SCOP | - | 4.65 | 4.65 |
| | | Seasonal Space Heating Efficiency (η _s) | % | 183 | 183 |
| | | Seasonal Space Heating Eff. Class (A+++ to D scale) | - | A+++ | A+++ |
| | Average Climate Water Outlet 55°C | SCOP | - | 3.23 | 3.23 |
| | Seasonal Space Heating Efficiency (η _s) | % | 126 | 126 | |
| | Seasonal Space Heating Eff. Class (A+++ to D scale) | - | A++ | A++ | |

Nominal Capacity and Nominal Power Input

| Description | OAT (DB) | LWT (DB) | Outdoor Unit Indoor Unit | HU051MR U44 | HU071MR U44 | HU091MR U44 |
|---------------------|-----------|----------|--------------------------|-------------|-------------|-------------|
| | | | | HN0916M NK4 | | |
| Nominal Capacity | Heating | 7°C 35°C | kW | 5.50 | 7.00 | 9.00 |
| | | 7°C 55°C | | 5.50 | 5.50 | 5.50 |
| | 2°C 35°C | 3.30 | | 4.20 | 5.40 | |
| | 35°C 18°C | 5.50 | | 7.00 | 9.00 | |
| Nominal Power Input | Cooling | 35°C 7°C | kW | 5.50 | 7.00 | 9.00 |
| | | 7°C 35°C | | 1.12 | 1.43 | 1.94 |
| | 7°C 55°C | 1.57 | | 1.57 | 1.57 | |
| | 2°C 35°C | 0.94 | | 1.20 | 1.54 | |
| COP | Heating | 7°C 35°C | W/W | 4.90 | 4.90 | 4.65 |
| | | 7°C 55°C | | 3.50 | 3.50 | 3.50 |
| | 2°C 35°C | 3.52 | | 3.51 | 3.50 | |
| | 35°C 18°C | 4.60 | | 4.50 | 4.20 | |
| EER | Cooling | 35°C 7°C | W/W | 2.80 | 2.70 | 2.60 |

Product Specification (Outdoor Unit)

| Technical Specification | | | Unit | HU051MR U44 | HU071MR U44 | HU091MR U44 |
|-------------------------------------|--|-------------|-------------------------|------------------------|-------------|-------------|
| Operation Range (outdoor temp.) | Heating | Min. - Max. | °CDB | -25 - 35 | | |
| | Cooling | | °C | 5 - 48 | | |
| Compressor | Quantity | | EA | 1 | | |
| | Type | | - | Hermetic Sealed Scroll | | |
| Refrigerant | Type | | - | R32 | | |
| | GWP (global warming potential) | | - | 675 | | |
| | Precharged Amount | | g | 1,500 | | |
| | t-CO ₂ eq | | - | 1,013 | | |
| Piping Connections | Outer Diameter | Gas | mm (inch) | Ø15.88 (5/8) | | |
| | | Liquid | mm (inch) | Ø9.52 (3/8) | | |
| | Length | Standard | m | 5 | | |
| | | Max. | m | 50 | | |
| | Level Difference | Max. | m | 30 | | |
| | Chargeless-Pipe Length | | m | 10 | | |
| Additional Charging Volume | | g/m | 30 | | | |
| Rated Water Flow Rate (at LWT 35°C) | | | LPM | 15.81 | 20.12 | 25.87 |
| Sound Power Level | Heating | Rated | dB(A) | 60 | | |
| | Heating | Rated | dB(A) | 52 | | |
| Dimensions | Unit | W x H x D | mm | 950 x 834 x 330 | | |
| Weight | Unit | | kg | 60.0 | | |
| Power Supply | Voltage, Phase, Frequency | | V, Ø, Hz | 220 - 240, 1, 50 | | |
| | Rated Running Current | Heating | A | 5.0 | 6.3 | 8.6 |
| | | Cooling | A | 5.3 | 6.9 | 9.5 |
| | Recommended Circuit Breaker | | A | 16 | 20 | 25 |
| Wiring Connections | Power Supply Cable (included earth, H07RN-F) | | mm ² x cores | 4.0 x 3C | | |

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 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. Sound pressure level is converted values from sound power level as per distance.
4. Performances are based on the following conditions (It is according to EN14511):
Interconnected pipe length is standard length and difference of elevation (outdoor - indoor unit) is 0m.
5. This product contains fluorinated greenhouse gases.

Product Specification (Indoor Unit)

| Technical Specification | | | Unit | HN0916M NK4 |
|--|---|-------------------------|-------------------------|--------------------------------|
| Operation Range (leaving water) | Heating | Min. - Max. | °CDB | 15 - 65 |
| | Cooling | | | 5 - 27 (16 - 27) ²⁾ |
| Flow Sensor | DHW ¹⁾ | | | 15 - 80 |
| | Type | | - | Vortex |
| Piping Connections | Water Circuit | Measuring Range | Min. - Max. | Ø/min |
| | | Flow (trigger point) | Min. | Ø/min |
| Sound Power Level | Heating | Inlet | mm (inch) | Male PT 25.4 (1) |
| | | Outlet | mm (inch) | Male PT 25.4 (1) |
| | Refrigerant Circuit | Gas | mm (inch) | Ø15.88 (5/8) |
| | | Liquid | mm (inch) | Ø9.52 (3/8) |
| Dimensions | Unit | W x H x D | mm | 490 x 850 x 315 |
| Weight | Unit | | kg | 40.5 |
| Electrical Specification | | | Unit | HN0916M NK4 |
| Wiring Connections | Power and Communication Cable (included earth, H07RN-F) | | mm ² x cores | 0.75 x 4C |
| | Type | | - | Sheath |
| Back up Heater | Number of Heating Coil | | EA | 2 |
| | Capacity Combination | | kW | 3.0 + 3.0 |
| | Operation | | - | Automatic |
| | Heating Steps | | Step | 2 |
| | Power Supply | | V, Ø, Hz | 220 - 240, 1, 50 |
| | Rated Current | | A | 25.0 |
| 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.

PRODUCT SPECIFICATION

Performance Table for Heating Operation

Maximum Heating Capacity (Including Defrost Effect)

HU051MR U44 + HN0916M NK4

| 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 | 4.02 | 3.90 | 3.78 | 3.66 | - | - | - | - |
| -20°C DB | 4.64 | 4.51 | 4.38 | 4.26 | 4.13 | - | - | - |
| -15°C DB | 5.26 | 5.12 | 4.99 | 4.85 | 4.72 | 4.58 | - | - |
| -7°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | - |
| -4°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | - |
| -2°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | - |
| 2°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 7°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 10°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 15°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 18°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 20°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 35°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |

HU071MR U44 + HN0916M NK4

| 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 | 5.00 | 4.85 | 4.71 | 4.56 | - | - | - | - |
| -20°C DB | 5.58 | 5.43 | 5.27 | 5.11 | 4.95 | - | - | - |
| -15°C DB | 6.17 | 6.00 | 5.83 | 5.66 | 5.49 | 5.32 | - | - |
| -7°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | - |
| -4°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | - |
| -2°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | - |
| 2°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 7°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 10°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 15°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 18°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 20°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 35°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |

HU091MR U44 + HN0916M NK4

| 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 | 6.40 | 6.20 | 6.00 | 5.80 | - | - | - | - |
| -20°C DB | 7.23 | 7.00 | 6.77 | 6.54 | 6.31 | - | - | - |
| -15°C DB | 8.06 | 7.80 | 7.54 | 7.28 | 7.02 | 6.76 | - | - |
| -7°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | - |
| -4°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | - |
| -2°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | - |
| 2°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 7°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 10°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 15°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 18°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 20°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 35°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |

- Note
- DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C), LPM: Liters Per Minute (l/min), TC: Total Capacity (kW)
 - Direct interpolation is permissible. Do not extrapolate.
 - 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.
 - The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum Cooling Capacity

HU051MR U44 + HN0916M NK4

| 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 | 6.42 | 6.95 | 7.49 | 7.85 | 8.39 | 8.75 | 9.11 |
| 20°C DB | 6.05 | 6.37 | 6.70 | 6.91 | 7.23 | 7.45 | 7.66 |
| 30°C DB | 5.68 | 5.79 | 5.90 | 5.97 | 6.08 | 6.15 | 6.22 |
| 35°C DB | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 | 5.50 |
| 40°C DB | 5.32 | 5.34 | 5.35 | 5.37 | 5.38 | 5.40 | 5.41 |
| 45°C DB | 5.13 | 5.17 | 5.21 | 5.23 | 5.27 | 5.29 | 5.32 |

HU071MR U44 + HN0916M NK4

| 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 | 8.17 | 8.85 | 9.54 | 9.99 | 10.68 | 11.13 | 11.59 |
| 20°C DB | 7.70 | 8.11 | 8.52 | 8.80 | 9.21 | 9.48 | 9.75 |
| 30°C DB | 7.23 | 7.37 | 7.51 | 7.60 | 7.74 | 7.83 | 7.92 |
| 35°C DB | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 40°C DB | 6.77 | 6.79 | 6.81 | 6.83 | 6.85 | 6.87 | 6.88 |
| 45°C DB | 6.53 | 6.58 | 6.63 | 6.66 | 6.70 | 6.74 | 6.77 |

HU091MR U44 + HN0916M NK4

| 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 | 10.50 | 11.38 | 12.26 | 12.85 | 13.73 | 14.31 | 14.90 |
| 20°C DB | 9.90 | 10.43 | 10.96 | 11.31 | 11.84 | 12.19 | 12.54 |
| 30°C DB | 9.30 | 9.48 | 9.65 | 9.77 | 9.95 | 10.06 | 10.18 |
| 35°C DB | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| 40°C DB | 8.70 | 8.73 | 8.76 | 8.78 | 8.81 | 8.83 | 8.85 |
| 45°C DB | 8.40 | 8.46 | 8.52 | 8.56 | 8.62 | 8.66 | 8.70 |

- Note
- DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C), LPM: Liters Per Minute (l/min), TC: Total Capacity (kW)
 - Direct interpolation is permissible. Do not extrapolate.
 - 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.

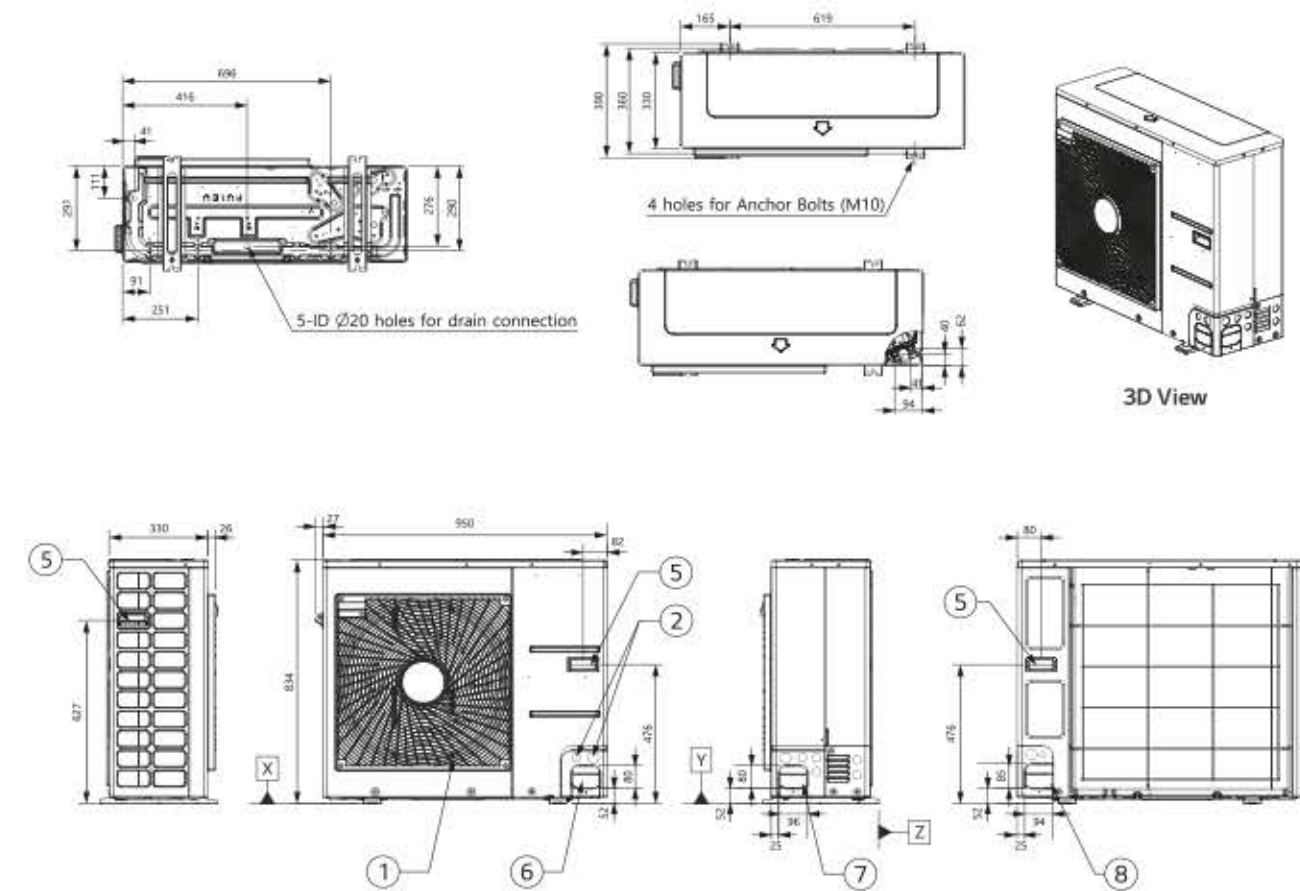
PRODUCT SPECIFICATION

Drawings

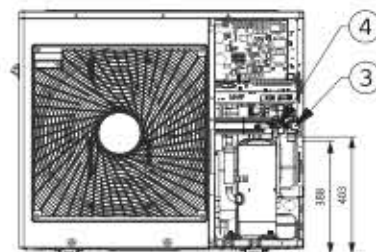
| Category | Unit | Model Name | | |
|---------------------------------------|--------------|---------------|-------------|-------------|
| | | Capacity (kW) | | |
| | | 5.5 | 7.0 | 9.0 |
| 1 Phase Model 220 - 240V, 1Ø, 50Hz | Outdoor Unit | HU051MR U44 | HU071MR U44 | HU091MR U44 |
| | Indoor Unit | HN0916M NK4 | | |

HU051MR U44 / HU071MR U44 / HU091MR U44

[Unit : mm]



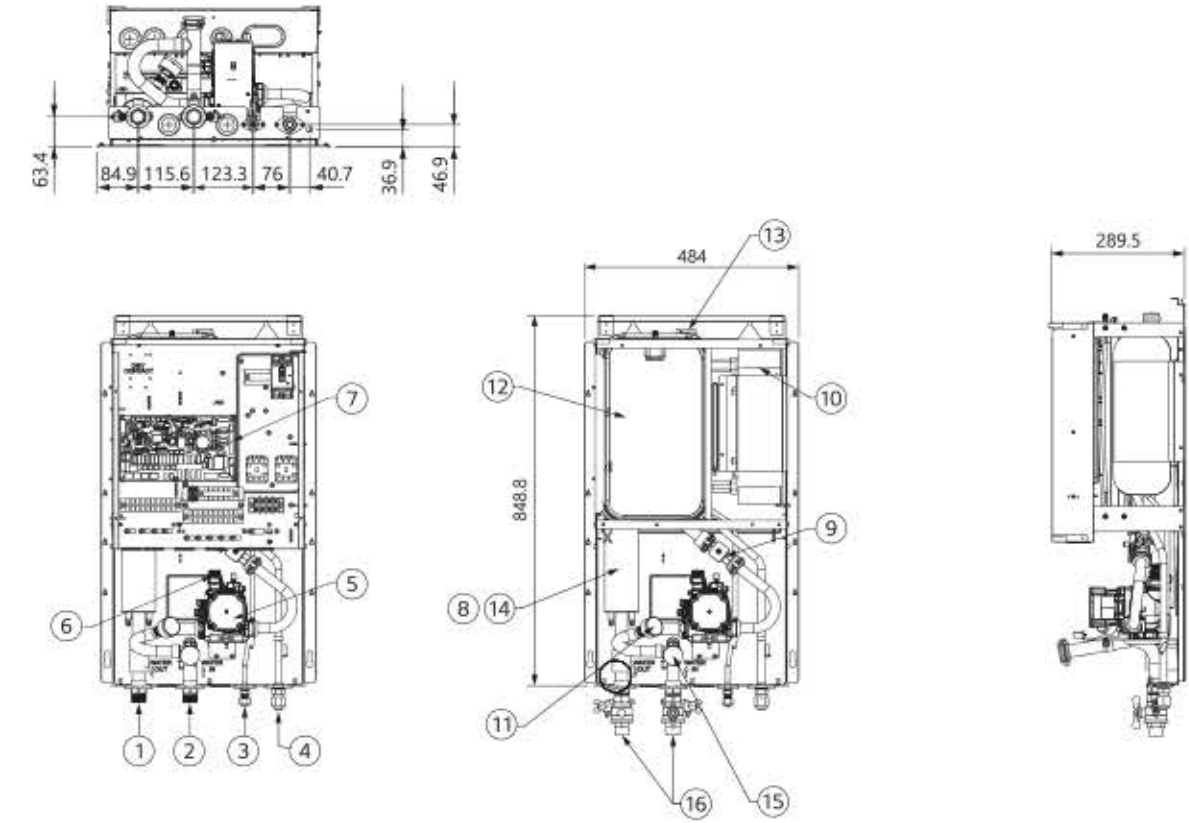
| No. | Part Name | Description |
|-----|------------------------------------|-------------|
| 1 | Air Outlet | - |
| 2 | Power and Communication Cable Hole | - |
| 3 | Gas Pipe Connection | Flare joint |
| 4 | Liquid Pipe Connection | Flare joint |
| 5 | Handle | - |
| 6 | Pipe Routing Hole (front) | - |
| 7 | Pipe Routing Hole (side) | - |
| 8 | Pipe Routing Hole (back) | - |



Piping Connection Port

HN0916M NK4

[Unit : mm]



| No. | Part Name | Description |
|-----|----------------------|--|
| 1 | Leaving Water Pipe | Male PT 1 inch |
| 2 | Entering Water Pipe | Male PT 1 inch |
| 3 | Refrigerant Pipe | Ø9.52 (mm) |
| 4 | Refrigerant Pipe | Ø15.88 (mm) |
| 5 | Water Pump | GROUNDFOS UPM3K 20-75 CHBL |
| 6 | Safety Valve | Open at water pressure 3bar |
| 7 | Control Box | PCB and terminal blocks |
| 8 | Thermal Switch | Cut-off power input to electric heater at 90°C (manual return at 55°C) |
| 9 | Flow Sensor | SIKA VVX20 5-80LPM |
| 10 | Plate Heat Exchanger | Heat exchange between refrigerant and water |
| 11 | Pressure Gage | Indicates circulating water pressure |
| 12 | Expansion Tank | Absorbing volume change of heated water |
| 13 | Air Vent | Air purging when charging water |
| 14 | Electric Heater | 6kW |
| 15 | Strainer | Filtering and stacking particles inside circulating water |
| 16 | Shut-off Valve | To drain or to block water, when pipe connecting |