SAMSUNG

# EHS Technical Data Book

## EHS tank integrated Hydro Unit for Europe (Mono, R32, 50Hz, HP)

Model : Outdoor unit (AE***RXYD*G/EU, AE***BXYD*G/EU)
Hydro unit (AE***RNWM*G/EU, AE***CNWM*G/EU)

# History

| Version | Modification | Date | Remark |
|---|---|---|---|
| Ver.1.0 | Released EHS tank integrated Hydro Unit for Europe TDB (Mono, R32, 50Hz, HP), 1st Version) | 19. 02. 01 | |
| Ver.1.1 | Released EHS tank integrated Hydro Unit for Europe TDB (Mono, R32, 50Hz, HP) | 19. 05. 07 | |
| Ver.1.2 | Modified the Operation range | 19. 11. 14 | |
| Ver.2.0 | Updated some formats (Specification, Drawing) | 21. 08. 27 | |
| Ver.2.1 | Modified some contents | 21. 11. 12 | |
| Ver.3.0 | Updated the 2023 New Line up | 23. 03. 15 | |
| Ver.3.1 | Updated the 2023 New Line up (Full Spec) | 23. 06. 08 | |

# Nomenclature

## Outdoor Unit

### Model Name

| AE | 050 | R | X | Y | D | E | G | / | EU |
|---|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | | Buyer |

(1) Classification

| | |
|---|---|
| AC | CAC |
| AM | DVM |
| AJ | FJM (Free Joint Multi) |
| AE | EHS |

(2) Capacity

| |
|---|
| X 1/10 kW (3 digits) |

(3) Version

| | |
|---|---|
| R | 2019 |

(4) Product Type

| | |
|---|---|
| S | SET (NASA) |
| N | Indoor Unit (NASA) |
| X | Outdoor Unit (NASA) |
| A | SET (Non NASA) |
| B | Indoor Unit (Non NASA) |
| C | Outdoor Unit (Non NASA) |

(5) Feature 1

| | |
|---|---|
| E | Split |
| T | TDM |
| Y | MONO |

(6) Feature 2

| | |
|---|---|
| D | Deluxe |
| P | Premium |

(7) Rating Voltage

| | |
|---|---|
| A | 115V, 60hz, 1Φ |
| B | 220V, 60Hz, 1Φ |
| C | 208~230V, 60Hz, 1Φ |
| D | 200~220V, 50Hz, 1Φ |
| E | 220~240V, 50Hz, 1Φ |
| F | 208~230V, 60Hz, 3Φ |
| G | 380~415V, 50Hz, 3Φ |

(8) Mode

| | |
|---|---|
| G | Heat Pump (R32) |

# Nomenclature

## Tank integrated hydro unit

### Model Name

| AE | 200 | R | N | W | M | E | G | / | EU |
|---|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | | Buyer |

(1) Classification

| | |
|---|---|
| AC | CAC |
| AM | DVM |
| AJ | FJM (Free Joint Multi) |
| AE | EHS |

(2) Capacity

| |
|---|
| x Liter (3 digits) |

(3) Version

| | |
|---|---|
| R | 2019 |
| C | 2023 |

(4) Product Type

| | |
|---|---|
| S | SET (NASA) |
| N | Indoor Unit (NASA) |
| X | Outdoor Unit (NASA) |
| A | SET (Non NASA) |
| B | Indoor Unit (Non NASA) |
| C | Outdoor Unit (Non NASA) |

(5) Product Notation

| | |
|---|---|
| W | Tank integrated hydro unit |

(6) Feature

| | |
|---|---|
| S | Split |
| M | Mono |

(7) Rating Voltage

| | |
|---|---|
| A | 115V, 60hz, 1Φ |
| B | 220V, 60Hz, 1Φ |
| C | 208~230V, 60Hz, 1Φ |
| D | 200~220V, 50Hz, 1Φ |
| E | 220~240V, 50Hz, 1Φ |
| F | 208~230V, 60Hz, 3Φ |
| G | 380~415V, 50Hz, 3Φ |

(8) Mode

| | |
|---|---|
| G | Heat Pump (R32) |

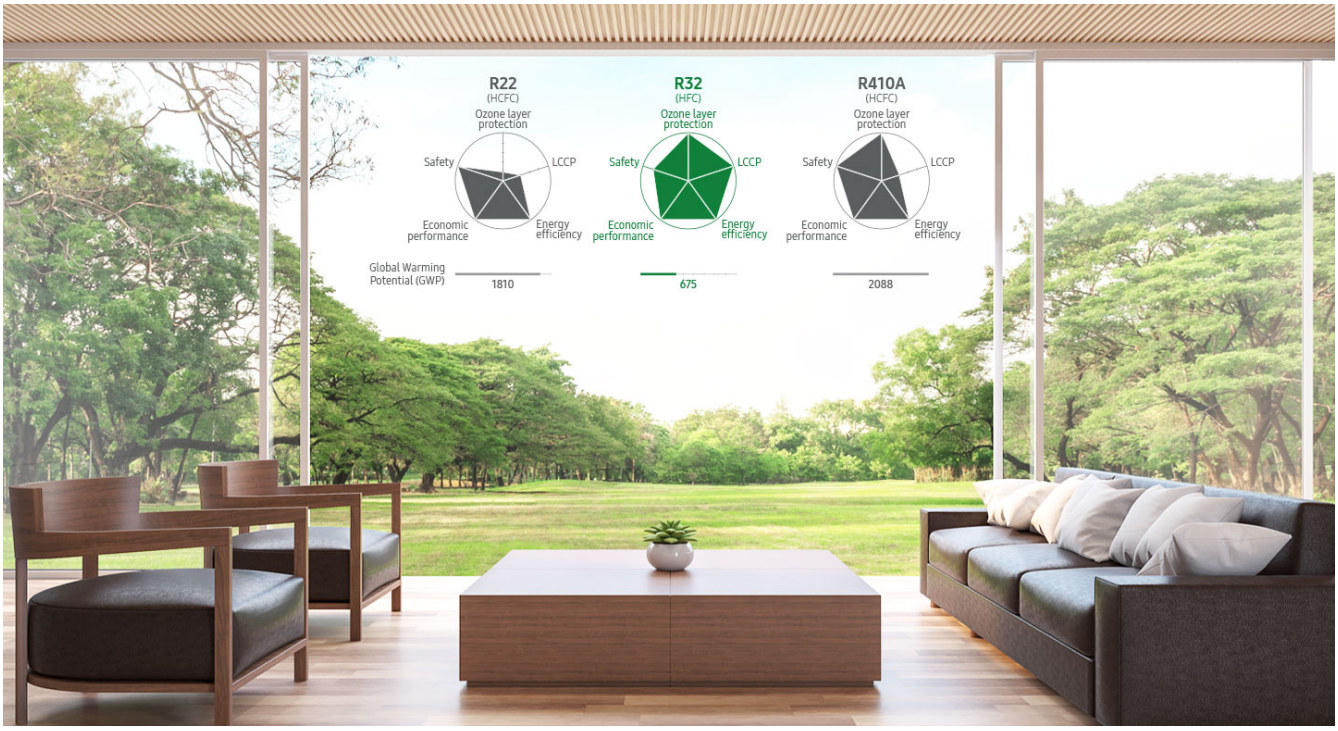
# Features & Benefits

## Tank integrated hydro unit

## Eco-friendly heating – zero ozone impact

### Eco-friendly Refrigerant R32

Reduce the impact on climate change with a Samsung EHS (Eco Heating System). The R32 refrigerant has an Ozone Depletion Potential (ODP) of zero and a lower Global Warming Potential (GWP) than conventional refrigerants*. It also reduces the amount of refrigerant needed and cuts CO2 emissions**.



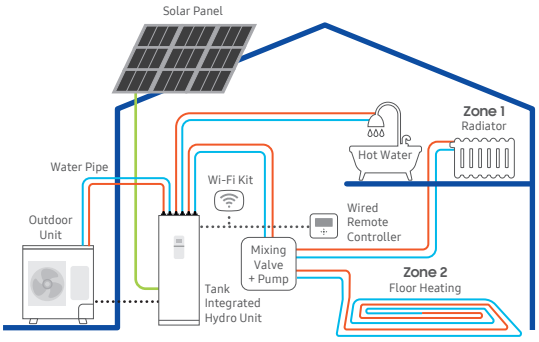

* GWP rating: R32 refrigerant = 675 vs. R410A refrigerant = 2088.
** The Samsung EHS MONO, SPLIT (R32) only requires 83% of the refrigerant used in a conventional heating system (R410A) of the same capacity. So the level of CO2 emissions of the EHS is 560 (675 x 0.83), which is 73% less than the 2088 produced by a conventional heating system.

## Mono

The Samsung EHS Mono's outdoor unit includes the hydraulic parts that provide hot water. It uses water pipes to connect it to an indoor unit. So, it can be easily installed instead of a conventional boiler system.

### ClimateHub Mono

Outdoor Unit + Tank Integrated Hydro Unit




Radiator | Floor heating | Hot water

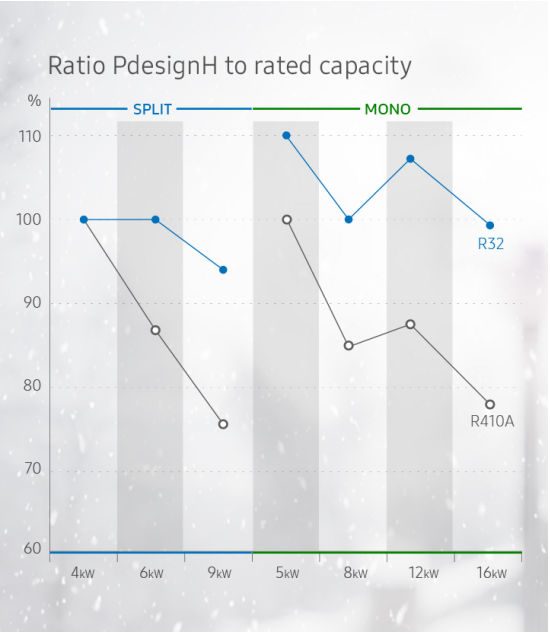
- Seasonal space heating efficiency: A+++ ~ A++ (on average)
- Leaving water temperature: Up to 65°C
- Capacities: 5, 8, 12, 16kW
- Refrigerant: R32
- Water piping from an outdoor unit
- Power supply: 1Φ 220~240V, 3Φ 380~415V

# Features & Benefits

## A+++ energy efficiency saves even more

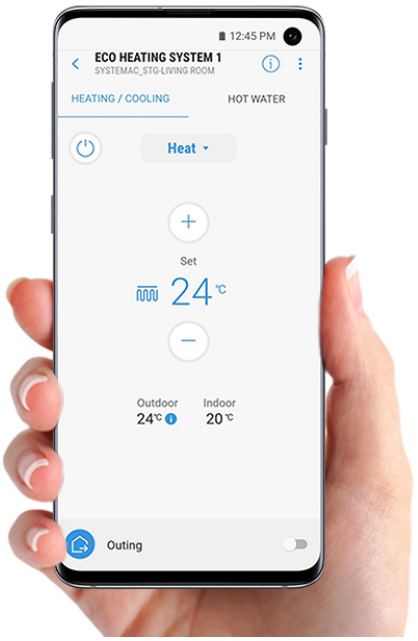
### Top Class Energy Efficiency - SCOP A+++

Worry less about the cost of your heating. It has the top class SCOP A+++ energy efficiency rating across the entire range of capacities*. So it is proven to operate with a high level of efficiency, achieving a good heating performance using R32 refrigerant, which has a high PdesignH (kW)**.




* Based on testing defined in EN14825.
** PdesignH is over 100% of the rated capacity, which ensures sufficient heating performance at low temperatures. Based on a standard of -10°C (rating: standard 7°C conditions).

## Easy remote control with a smartphone




### Smart Connectivity

Control your Samsung EHS on the go. Smart Connectivity lets you turn it on/off anytime and anywhere using the SmartThings App*. And, with the touch controller, you can control the mode and settings, schedule it to start/stop, monitor energy use, adjust summer time settings and identify errors.

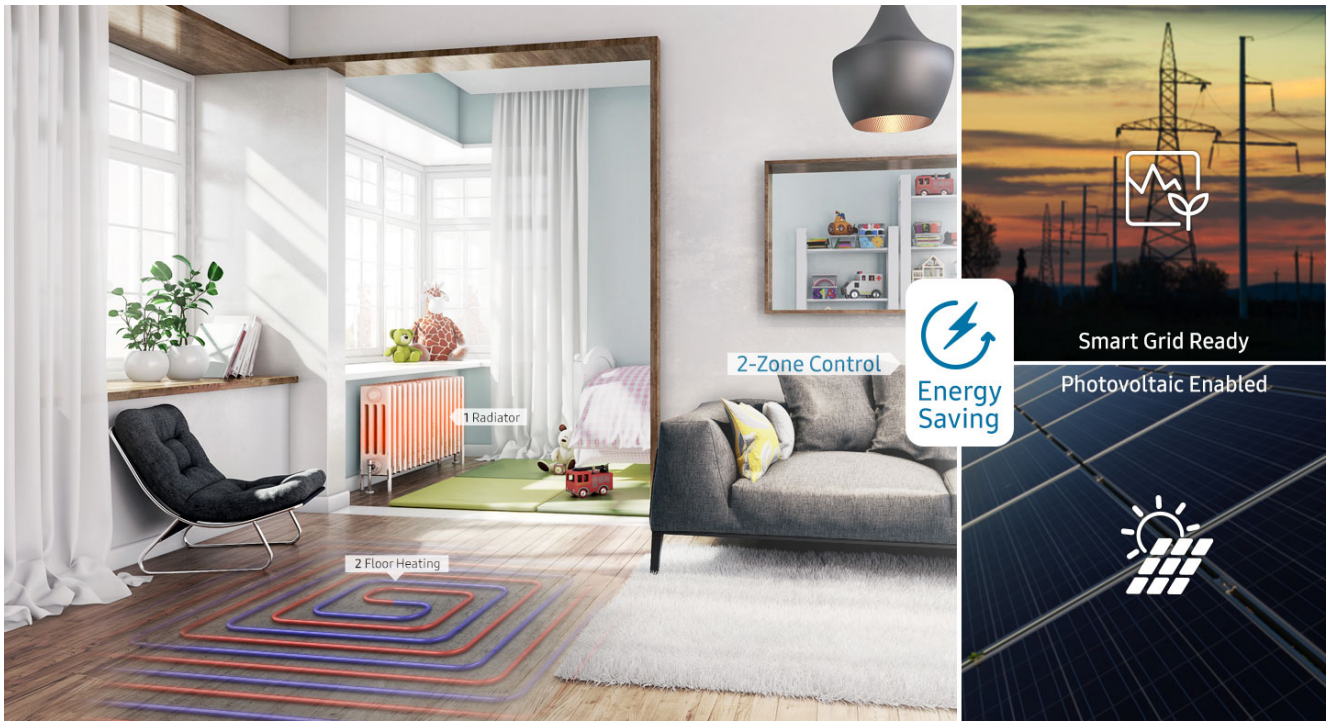
* Available on Android and iOS devices. A Wi-Fi connection, Samsung account and an optional Wi-Fi Kit (MIM-H04N) are required.

# Features & Benefits

## Reduce energy usage and save money

### Various Functions for Energy Saving

Save energy with advanced functions. The 2-Zone Control optimizes the temperature in two separate zones. The Photovoltaic Enabled feature checks the status of solar panels and reduces network electricity usage. And Smart Grid Ready helps you utilize economical and sustainable power options.



# Contents

# 1. Line-up

## 1-1. Outdoor Units

| Capacity | | 5.0 kW | 8.0 kW | 12.0 / 16.0 kW |
|---|---|---|---|---|
| Image | |  |  |  |
| Model | 1 phase | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU<br>AE160RXYDEG/EU |
| | 3 phase | - | AE080RXYDGG/EU | AE120RXYDGG/EU<br>AE160RXYDGG/EU |

## 1-2. Tank integrated hydro unit

| Capacity / Type | 200 L | 260 L |
|---|---|---|
| Model | AE200RNWMEG/EU<br>AE200CNWMEG/EU | AE260RNWM*G/EU<br>AE260CNWM*G/EU |
| Hydro unit |  | |

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200RNWMEG/EU | AE200RNWMEG/EU | AE200RNWMEG/EU |
|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Power Supply | | | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Mode | | | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| | Performance | Capacity | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 5,000 | 7,500 | 12,000 |
| | | | | | Btu/h | 17,100 | 25,600 | 40,900 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | W | 5,000 | 8,000 | 12,000 |
| | | | | | Btu/h | 17,100 | 27,300 | 40,900 |
| | | | | A2W condition #2 | W | 4,800 | 7,400 | 11,700 |
| | | | | A2W condition #3 | | 4,300 | 7,100 | 11,300 |
| | | | | A2/W35 [4]* | | 4,800 | 7,000 | 10,800 |
| | | | | A-7/W35 [4]* | | 5,100 | 7,350 | 12,000 |
| | Power | Power Input | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 1,140 | 1,900 | 2,770 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | | 1,030 | 1,770 | 2,650 |
| | | | | A2W condition #2 | | 1,300 | 2,120 | 3,180 |
| | | | | A2W condition #3 | | 1,520 | 2,530 | 3,730 |
| | | | | A2/W35 [4]* | | 1,450 | 2,350 | 3,300 |
| | | | | A-7/W35 [4]* | | 1,880 | 3,020 | 4,710 |
| | | Current Input | Cooling | A2W Condition #1. (A7/W35) [1]* | A | 5.4 | 9.1 | 13.2 |
| | | | Heating | | | 4.9 | 8.5 | 12.2 |
| | | Current | MCA | | A | 16.0 | 22.0 | 28.0 |
| | | | MFA | | A | 20.0 | 27.5 | 35.0 |
| System | Efficiency | EER (Nominal Cooling) | | | | 4.39 | 3.95 | 4.33 |
| | | COP (Nominal Heating) A2W condition #1 | | | | 4.85 | 4.52 | 4.53 |
| | | COP | | A2W condition #2 | W/W | 3.69 | 3.49 | 3.68 |
| | | | | A2W condition #3 | | 2.83 | 2.81 | 3.03 |
| | | | | A2/W35 [4]* | | 3.31 | 2.98 | 3.27 |
| | | | | A-7/W35 [4]* | | 2.71 | 2.43 | 2.55 |
| | | PdesignH | | LWT 35°C | | 5.5 | 8.0 | 13.0 |
| | | | | LWT 55°C | | 5.0 | 8.0 | 12.0 |
| | | SCOP | | 35°C | | 4.46 | 4.44 | 4.69 |
| | | | | 55°C | | 3.20 | 3.23 | 3.51 |
| | | SCOP Class | | 35°C | | A+++ | A+++ | A+++ |
| | | | | 55°C | | A++ | A++ | A++ |
| | | SEER | | | | 3.98 | 4.52 | 5.22 |
| | Water Connections | Water Flow Rate (Nominal) [H/C] | | | LPM | 14.4/14.4 | 23.1/21.6 | 34.6/34.6 |
| | | Water Flow Rate | | Min | LPM | 7.0 | 7.0 | 12.0 |
| | | | | Max | LPM | 48.0 | 48.0 | 58.0 |
| | | Water Pressure (Max) | | | bar | 3 | 3 | 3 |
| | | Water Pipe Type | threaded male | Inlet | Φ, mm | 28 | 28 | 28 |
| | | | | Outlet | Φ, mm | 28 | 28 | 28 |
| | | Leaving Water Temperature | min/max | Heating | °C | 15~65 | 15~65 | 15~65 |
| | | | | Cooling | °C | 5~25 | 5~25 | 5~25 |
| | Refrigerant | Type | | | - | R32 | R32 | R32 |
| | | Factory Charging | | | kg | 1.00 | 1.15 | 2.20 |
| | | | | | $tCO_2e$ | 0.68 | 0.78 | 1.49 |
| | | Control Method | | | - | EEV | EEV | EEV |
| Outdoor Unit | Compressor | Type | | | - | BLDC Twin Rotary | BLDC Twin Rotary | BLDC Twin Rotary |
| | | Model Name | | | - | UB4TN8200FE4SS | UB8TN8265FJWSG | UB5TN5450FJXSG |
| | | Oil | | Type | - | POE | POE | POE |
| | | | | Initial Charge | cc | 650 | 700 | 1,700 |
| | | Quantity | | | EA | 1 | 1 | 1 |
| | | Output | | | W | 1623 | 2078 | 3613 |
| | | Starting method | | | - | Inverter driven | Inverter driven | Inverter driven |

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200RNWMEG/EU | AE200RNWMEG/EU | AE200RNWMEG/EU |
|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Outdoor Unit | Heat exchanger | Length | | | mm | 730 | 850 | 950 |
| | | Rows | Quantity | | EA | 2 | 2 | 2 |
| | | Fin pitch | | | mm | 1.5 | 1.5 | 1.5 |
| | | Passes | Quantity | | EA | 6 | 8 | 10 |
| | | Face area | | | $m^2$ | 0.55 | 0.82 | 1.32 |
| | | Stages | Quantity | | EA | 36 | 46 | 66 |
| | | Tube type | | | - | Φ7 | Φ7 | Φ7.94 |
| | | Fin | Type | | - | Corrugate | Wide Louver | G-Fin |
| | | | Treatment | | - | NGS | Anti Salt | Anti Salt |
| | Fan | Type | | | - | Propeller Fan | Propeller Fan | Propeller Fan |
| | | Discharge direction | | | - | Horizontal | Horizontal | Horizontal |
| | | Air Flow Rate | | Heating | $m^3$/min | 51 | 66 | 99 |
| | | | | Cooling | $m^3$/min | 51 | 66 | 99 |
| | Fan motor | Quantity | | | EA | 1 | 1 | 2 |
| | | Model | | | - | Brushless DC motor | Brushless DC motor | Brushless DC motor |
| | | Output | | | W X EA | 98 | 125 | 125 X 2 |
| | | Drive | | | - | Direct drive | Direct drive | Direct drive |
| | | Speed | Heating | | rpm | 760 | 780 | 650 |
| | | | Cooling | | rpm | 760 | 780 | 650 |
| | Sound | Sound Pressure | | Heating | dB(A) | 45 | 48 | 50 |
| | | | | Cooling | dB(A) | 45 | 48 | 50 |
| | | Sound Power | | Heating | dB(A) | 61 | 63 | 64 |
| | | | | Cooling | dB(A) | 62 | 64 | 65 |
| | Connections | Water pipe | | inlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | | | | outlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | Casing | Color | | | - | Earth brown | Earth brown | Earth brown |
| | | Material | | | - | Poweder coated Galvanised steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| | Packing | Material | | | - | EPS/BOX | EPS/BOX | EPS/BOX |
| | | Weight | | | kg | 4.0 | 8.5 | 9.0 |
| | External Dimension | Net Weight | | | kg | 58.5 | 76.0 | 110.0 |
| | | Shipping Weight | | | kg | 62.5 | 84.5 | 119.0 |
| | | Net Dimensions (WxHxD) | | | mm | 880 x 798 x 310 | 940 x 998 x 330 | 940 x 1,420 x 330 |
| | | Shipping Dimensions (WxHxD) | | | mm | 1,023 x 904 x 413 | 995 x 1,178 x 426 | 995 x 1,598 x 426 |
| | Operating Temp. Range | Heating | | | ℃ | -25~35 | -25~35 | -25~35 |
| | | Cooling | | | ℃ | 10~46 | 10~46 | 10~46 |
| | | D.Hot Water | | | ℃ | -25~43 | -25~43 | -25~43 |

### NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB].
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB].
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB].
  4)* A2W Condition : (A2W35) Water In/Out -/35℃,
  Outdoor Air 2℃[DB]/1℃[WB]; (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted Sound power level
  - Reference power : 1pW
  - Measured according to ISO 3741
- These products contain R32 (GWP=675) which is fluorinated greenhouse gas.
- The system is operated in (-25°C ≤ Outdoor temp. < -20°C) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 °C < Outdoor temp. ≤ 43°C).

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200RNWMEG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU |
|---|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Power Supply | | | | | Φ, #, V, Hz | 1,2,220-240,50 | 3,4,380-415,50 | 3,4,380-415,50 | 3,4,380-415,50 |
| Mode | | | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| | Performance | Capacity | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 14,000 | 7,500 | 12,000 | 14,000 |
| | | | | | Btu/h | 47,800 | 25,600 | 40,900 | 47,800 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | W | 16,000 | 8,000 | 12,000 | 16,000 |
| | | | | | Btu/h | 54,600 | 27,300 | 40,900 | 54,600 |
| | | | | A2W condition #2 | W | 15,400 | 7,400 | 11,700 | 15,400 |
| | | | | A2W condition #3 | | 15,000 | 7,100 | 11,300 | 15,000 |
| | | | | A2/W35 [4]* | | 13,200 | 7,000 | 10,800 | 13,200 |
| | | | | A-7/W35 [4]* | | 14,600 | 7,350 | 12,000 | 14,600 |
| | Power | Power Input | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 3,280 | 1,900 | 2,770 | 3,280 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | | 3,620 | 1,770 | 2,650 | 3,620 |
| | | | | A2W condition #2 | | 4,490 | 2,120 | 3,180 | 4,490 |
| | | | | A2W condition #3 | | 5,180 | 2,530 | 3,730 | 5,180 |
| | | | | A2/W35 [4]* | | 4,400 | 2,350 | 3,300 | 4,400 |
| | | | | A-7/W35 [4]* | | 6,000 | 3,020 | 4,710 | 6,000 |
| | | Current Input | Cooling | A2W Condition #1. (A7/W35) [1]* | A | 15.7 | 3.0 | 4.4 | 5.3 |
| | | | Heating | | | 17.0 | 2.8 | 4.1 | 5.7 |
| | | Current | MCA | | A | 32.0 | 10.0 | 10.0 | 12.0 |
| | | | MFA | | A | 40.0 | 16.1 | 16.1 | 16.1 |
| System | Efficiency | EER (Nominal Cooling) | | | | 4.27 | 3.95 | 4.33 | 4.27 |
| | | COP (Nominal Heating) A2W condition #1 | | | | 4.42 | 4.52 | 4.53 | 4.42 |
| | | COP | | A2W condition #2 | W/W | 3.43 | 3.49 | 3.68 | 3.43 |
| | | | | A2W condition #3 | | 2.90 | 2.81 | 3.03 | 2.90 |
| | | | | A2/W35 [4]* | | 3.00 | 2.98 | 3.27 | 3.00 |
| | | | | A-7/W35 [4]* | | 2.43 | 2.43 | 2.55 | 2.43 |
| | | PdesignH | | LWT 35°C | | 16.0 | 8.0 | 13.0 | 16.0 |
| | | | | LWT 55°C | | 16.0 | 8.0 | 12.0 | 16.0 |
| | | SCOP | | 35°C | | 4.48 | 4.44 | 4.69 | 4.48 |
| | | | | 55°C | | 3.53 | 3.23 | 3.51 | 3.53 |
| | | SCOP Class | | 35°C | | A+++ | A+++ | A+++ | A+++ |
| | | | | 55°C | | A++ | A++ | A++ | A++ |
| | | SEER | | | | 5.31 | 4.52 | 5.22 | 5.31 |
| | Water Connections | Water Flow Rate (Nominal) [H/C] | | | LPM | 46.2/40.4 | 23.1/21.6 | 34.6/34.6 | 46.2/40.4 |
| | | Water Flow Rate | | Min | LPM | 12.0 | 7.0 | 12.0 | 12.0 |
| | | | | Max | LPM | 58.0 | 48.0 | 58.0 | 58.0 |
| | | Water Pressure (Max) | | | bar | 3 | 3 | 3 | 3 |
| | | Water Pipe Type | threaded male | Inlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | | | Outlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | Leaving Water Temperature | min/max | Heating | °C | 15~65 | 15~65 | 15~65 | 15~65 |
| | | | | Cooling | °C | 5~25 | 5~25 | 5~25 | 5~25 |
| | Refrigerant | Type | | | - | R32 | R32 | R32 | R32 |
| | | Factory Charging | | | kg | 2.20 | 1.15 | 2.20 | 2.20 |
| | | | | | $tCO_2e$ | 1.49 | 0.78 | 1.49 | 1.49 |
| | | Control Method | | | - | EEV | EEV | EEV | EEV |
| Outdoor Unit | Compressor | Type | | | - | BLDC Twin Rotary | BLDC Twin Rotary | BLDC Twin Rotary | BLDC Twin Rotary |
| | | Model Name | | | - | UB5TN5450FJXSG | UB8TN8265FJWSG | UB5TN5450FJXSG | UB5TN5450FJXSG |
| | | Oil | | Type | - | POE | POE | POE | POE |
| | | | | Initial Charge | cc | 1,700 | 700 | 1,700 | 1,700 |
| | | Quantity | | | EA | 1 | 1 | 1 | 1 |
| | | Output | | | W | 3613 | 2078 | 3613 | 3613 |
| | | Starting method | | | - | Inverter driven | Inverter driven | Inverter driven | Inverter driven |

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200RNWMEG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU |
|---|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Outdoor Unit | Heat exchanger | Length | | | mm | 950 | 850 | 950 | 950 |
| | | Rows | Quantity | | EA | 2 | 2 | 2 | 2 |
| | | Fin pitch | | | mm | 1.5 | 1.5 | 1.5 | 1.5 |
| | | Passes | Quantity | | EA | 10 | 8 | 10 | 10 |
| | | Face area | | | m² | 1.32 | 0.82 | 1.32 | 1.32 |
| | | Stages | Quantity | | EA | 66 | 46 | 66 | 66 |
| | | Tube type | | | - | Φ7.94 | Φ7 | Φ7.94 | Φ7.94 |
| | | Fin | Type | | - | G-Fin | Wide Louver | G-Fin | G-Fin |
| | | | Treatment | | - | Anti Salt | Anti Salt | Anti Salt | Anti Salt |
| | Fan | Type | | | - | Propeller Fan | Propeller Fan | Propeller Fan | Propeller Fan |
| | | Discharge direction | | | - | Horizontal | Horizontal | Horizontal | Horizontal |
| | | Air Flow Rate | | Heating | m³/min | 118 | 66 | 99 | 118 |
| | | | | Cooling | m³/min | 118 | 66 | 99 | 118 |
| | Fan motor | Quantity | | | EA | 2 | 1 | 2 | 2 |
| | | Model | | | - | Brushless DC motor | Brushless DC motor | Brushless DC motor | Brushless DC motor |
| | | Output | | | W X EA | 125 X 2 | 125 | 125 X 2 | 125 X 2 |
| | | Drive | | | - | Direct drive | Direct drive | Direct drive | Direct drive |
| | | Speed | Heating | | rpm | 750 | 780 | 650 | 750 |
| | | | Cooling | | rpm | 750 | 780 | 650 | 750 |
| | Sound | Sound Pressure | | Heating | dB(A) | 52 | 48 | 50 | 52 |
| | | | | Cooling | dB(A) | 54 | 48 | 50 | 54 |
| | | Sound Power | | Heating | dB(A) | 66 | 63 | 64 | 66 |
| | | | | Cooling | dB(A) | 68 | 64 | 65 | 68 |
| | Connections | Water pipe | | inlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | | | | outlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | Casing | Color | | | - | Earth brown | Earth brown | Earth brown | Earth brown |
| | | Material | | | - | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| | Packing | Material | | | - | EPS/BOX | EPS/BOX | EPS/BOX | EPS/BOX |
| | | Weight | | | kg | 9.0 | 8.5 | 9.0 | 9.0 |
| | External Dimension | Net Weight | | | kg | 110.0 | 75.0 | 111.0 | 111.0 |
| | | Shipping Weight | | | kg | 119.0 | 83.5 | 120.0 | 120.0 |
| | | Net Dimensions (WxHxD) | | | mm | 940 x 1,420 x 330 | 940 x 998 x 330 | 940 x 1,420 x 330 | 940 x 1,420 x 330 |
| | | Shipping Dimensions (WxHxD) | | | mm | 995 x 1,598 x 426 | 995 x 1,178 x 426 | 995 x 1,598 x 426 | 995 x 1,598 x 426 |
| | Operating Temp. Range | Heating | | | ℃ | -25~35 | -25~35 | -25~35 | -25~35 |
| | | Cooling | | | ℃ | 10~46 | 10~46 | 10~46 | 10~46 |
| | | D.Hot Water | | | ℃ | -25~43 | -25~43 | -25~43 | -25~43 |

### NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB].
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB].
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB].
  4)* A2W Condition : (A2W35) Water In/Out -/35℃,
  Outdoor Air 2℃[DB]/1℃[WB]; (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted Sound power level
  - Reference power : 1pW
  - Measured according to ISO 3741
- These products contain R32 (GWP=675) which is fluorinated greenhouse gas.
- The system is operated in (-25℃ ≤ Outdoor temp. < -20℃) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 ℃ < Outdoor temp. ≤ 43℃).

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200CNWMEG/EU | AE200CNWMEG/EU | AE200CNWMEG/EU |
|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Power Supply | | | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Mode | | | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| | Performance | Capacity | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 5,000 | 7,500 | 12,000 |
| | | | | | Btu/h | 17,100 | 25,600 | 40,900 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | W | 5,000 | 8,000 | 12,000 |
| | | | | | Btu/h | 17,100 | 27,300 | 40,900 |
| | | | | A2W condition #2 | W | 4,800 | 7,400 | 11,700 |
| | | | | A2W condition #3 | | 4,300 | 7,100 | 11,300 |
| | | | | A2/W35 [4]* | | 4,800 | 7,000 | 10,800 |
| | | | | A-7/W35 [4]* | | 5,100 | 7,350 | 12,000 |
| | Power | Power Input | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 1,140 | 1,900 | 2,770 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | | 1,030 | 1,770 | 2,650 |
| | | | | A2W condition #2 | | 1,300 | 2,120 | 3,180 |
| | | | | A2W condition #3 | | 1,520 | 2,530 | 3,730 |
| | | | | A2/W35 [4]* | | 1,450 | 2,350 | 3,300 |
| | | | | A-7/W35 [4]* | | 1,880 | 3,020 | 4,710 |
| | | Current Input | Cooling | A2W Condition #1. (A7/W35) [1]* | A | 5.4 | 9.1 | 13.2 |
| | | | Heating | | | 4.9 | 8.5 | 12.2 |
| | | Current | MCA | | A | 16.0 | 22.0 | 28.0 |
| | | | MFA | | A | 20.0 | 27.5 | 35.0 |
| System | Efficiency | EER (Nominal Cooling) | | | | 4.39 | 3.95 | 4.33 |
| | | COP (Nominal Heating) A2W condition #1 | | | | 4.85 | 4.52 | 4.53 |
| | | COP | | A2W condition #2 | W/W | 3.69 | 3.49 | 3.68 |
| | | | | A2W condition #3 | | 2.83 | 2.81 | 3.03 |
| | | | | A2/W35 [4]* | | 3.31 | 2.98 | 3.27 |
| | | | | A-7/W35 [4]* | | 2.71 | 2.43 | 2.55 |
| | | PdesignH | | LWT 35°C | | 5.5 | 8.0 | 13.0 |
| | | | | LWT 55°C | | 5.0 | 8.0 | 12.0 |
| | | SCOP | | 35°C | | 4.46 | 4.44 | 4.69 |
| | | | | 55°C | | 3.20 | 3.23 | 3.51 |
| | | SCOP Class | | 35°C | | A+++ | A+++ | A+++ |
| | | | | 55°C | | A++ | A++ | A++ |
| | | SEER | | | | 3.98 | 4.52 | 5.22 |
| | Water Connections | Water Flow Rate (Nominal) [H/C] | | | LPM | 14.4/14.4 | 23.1/21.6 | 34.6/34.6 |
| | | Water Flow Rate | | Min | LPM | 7.0 | 7.0 | 12.0 |
| | | | | Max | LPM | 48.0 | 48.0 | 58.0 |
| | | Water Pressure (Max) | | | bar | 3 | 3 | 3 |
| | | Water Pipe Type | threaded male | Inlet | Φ, mm | 28 | 28 | 28 |
| | | | | Outlet | Φ, mm | 28 | 28 | 28 |
| | | Leaving Water Temperature | min/max | Heating | °C | 15~65 | 15~65 | 15~65 |
| | | | | Cooling | °C | 5~25 | 5~25 | 5~25 |
| | Refrigerant | Type | | | - | R32 | R32 | R32 |
| | | Factory Charging | | | kg | 1.00 | 1.15 | 2.20 |
| | | | | | $tCO_2e$ | 0.68 | 0.78 | 1.49 |
| | | Control Method | | | - | EEV | EEV | EEV |
| Outdoor Unit | Compressor | Type | | | - | BLDC Twin Rotary | BLDC Twin Rotary | BLDC Twin Rotary |
| | | Model Name | | | - | UB4TN8200FE4SS | UB8TN8265FJWSG | UB5TN5450FJXSG |
| | | Oil | | Type | - | POE | POE | POE |
| | | | | Initial Charge | cc | 650 | 700 | 1,700 |
| | | Quantity | | | EA | 1 | 1 | 1 |
| | | Output | | | W | 1623 | 2078 | 3613 |
| | | Starting method | | | - | Inverter driven | Inverter driven | Inverter driven |

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200CNWMEG/EU | AE200CNWMEG/EU | AE200CNWMEG/EU |
|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Outdoor Unit | Heat exchanger | Length | | | mm | 730 | 850 | 950 |
| | | Rows | Quantity | | EA | 2 | 2 | 2 |
| | | Fin pitch | | | mm | 1.5 | 1.5 | 1.5 |
| | | Passes | Quantity | | EA | 6 | 8 | 10 |
| | | Face area | | | $m^2$ | 0.55 | 0.82 | 1.32 |
| | | Stages | Quantity | | EA | 36 | 46 | 66 |
| | | Tube type | | | - | Φ7 | Φ7 | Φ7.94 |
| | | Fin | Type | | - | Corrugate | Wide Louver | G-Fin |
| | | | Treatment | | - | NGS | Anti Salt | Anti Salt |
| | Fan | Type | | | - | Propeller Fan | Propeller Fan | Propeller Fan |
| | | Discharge direction | | | - | Horizontal | Horizontal | Horizontal |
| | | Air Flow Rate | | Heating | $m^3$/min | 51 | 66 | 99 |
| | | | | Cooling | $m^3$/min | 51 | 66 | 99 |
| | Fan motor | Quantity | | | EA | 1 | 1 | 2 |
| | | Model | | | - | Brushless DC motor | Brushless DC motor | Brushless DC motor |
| | | Output | | | W X EA | 98 | 125 | 125 X 2 |
| | | Drive | | | - | Direct drive | Direct drive | Direct drive |
| | | Speed | Heating | | rpm | 760 | 780 | 650 |
| | | | Cooling | | rpm | 760 | 780 | 650 |
| | Sound | Sound Pressure | | Heating | dB(A) | 45 | 48 | 50 |
| | | | | Cooling | dB(A) | 45 | 48 | 50 |
| | | Sound Power | | Heating | dB(A) | 61 | 63 | 64 |
| | | | | Cooling | dB(A) | 62 | 64 | 65 |
| | Connections | Water pipe | | inlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | | | | outlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | Casing | Color | | | - | Earth brown | Earth brown | Earth brown |
| | | Material | | | - | Poweder coated Galvanised steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| | Packing | Material | | | - | EPS/BOX | EPS/BOX | EPS/BOX |
| | | Weight | | | kg | 4.0 | 8.5 | 9.0 |
| | External Dimension | Net Weight | | | kg | 58.5 | 76.0 | 110.0 |
| | | Shipping Weight | | | kg | 62.5 | 84.5 | 119.0 |
| | | Net Dimensions (WxHxD) | | | mm | 880 x 798 x 310 | 940 x 998 x 330 | 940 x 1,420 x 330 |
| | | Shipping Dimensions (WxHxD) | | | mm | 1,023 x 904 x 413 | 995 x 1,178 x 426 | 995 x 1,598 x 426 |
| | Operating Temp. Range | Heating | | | ℃ | -25~35 | -25~35 | -25~35 |
| | | Cooling | | | ℃ | 10~46 | 10~46 | 10~46 |
| | | D.Hot Water | | | ℃ | -25~43 | -25~43 | -25~43 |

### NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB].
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB].
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB].
  4)* A2W Condition : (A2W35) Water In/Out -/35℃,
  Outdoor Air 2℃[DB]/1℃[WB]; (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted Sound power level
  - Reference power : 1pW
  - Measured according to ISO 3741
- These products contain R32 (GWP=675) which is fluorinated greenhouse gas.
- The system is operated in (-25°C ≤ Outdoor temp. < -20°C) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 °C < Outdoor temp. ≤ 43°C).

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200CNWMEG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU |
|---|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Power Supply | | | | | Φ, #, V, Hz | 1,2,220-240,50 | 3,4,380-415,50 | 3,4,380-415,50 | 3,4,380-415,50 |
| Mode | | | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Outdoor Unit | Performance | Capacity | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 14,000 | 7,500 | 12,000 | 14,000 |
| | | | | | Btu/h | 47,800 | 25,600 | 40,900 | 47,800 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | W | 16,000 | 8,000 | 12,000 | 16,000 |
| | | | | | Btu/h | 54,600 | 27,300 | 40,900 | 54,600 |
| | | | | A2W condition #2 | W | 15,400 | 7,400 | 11,700 | 15,400 |
| | | | | A2W condition #3 | | 15,000 | 7,100 | 11,300 | 15,000 |
| | | | | A2/W35 [4]* | | 13,200 | 7,000 | 10,800 | 13,200 |
| | | | | A-7/W35 [4]* | | 14,600 | 7,350 | 12,000 | 14,600 |
| | Power | Power Input | Cooling | A2W Condition #1. (A7/W35) [1]* | W | 3,280 | 1,900 | 2,770 | 3,280 |
| | | | Heating | A2W Condition #1. (A7/W35) [1]* | | 3,620 | 1,770 | 2,650 | 3,620 |
| | | | | A2W condition #2 | | 4,490 | 2,120 | 3,180 | 4,490 |
| | | | | A2W condition #3 | | 5,180 | 2,530 | 3,730 | 5,180 |
| | | | | A2/W35 [4]* | | 4,400 | 2,350 | 3,300 | 4,400 |
| | | | | A-7/W35 [4]* | | 6,000 | 3,020 | 4,710 | 6,000 |
| | | Current Input | Cooling | A2W Condition #1. (A7/W35) [1]* | A | 15.7 | 3.0 | 4.4 | 5.3 |
| | | | Heating | | | 17.0 | 2.8 | 4.1 | 5.7 |
| | | Current | MCA | | A | 32.0 | 10.0 | 10.0 | 12.0 |
| | | | MFA | | A | 40.0 | 16.1 | 16.1 | 16.1 |
| System | Efficiency | EER (Nominal Cooling) | | | | 4.27 | 3.95 | 4.33 | 4.27 |
| | | COP (Nominal Heating) A2W condition #1 | | | | 4.42 | 4.52 | 4.53 | 4.42 |
| | | COP | | A2W condition #2 | W/W | 3.43 | 3.49 | 3.68 | 3.43 |
| | | | | A2W condition #3 | | 2.90 | 2.81 | 3.03 | 2.90 |
| | | | | A2/W35 [4]* | | 3.00 | 2.98 | 3.27 | 3.00 |
| | | | | A-7/W35 [4]* | | 2.43 | 2.43 | 2.55 | 2.43 |
| | | PdesignH | | LWT 35°C | | 16.0 | 8.0 | 13.0 | 16.0 |
| | | | | LWT 55°C | | 16.0 | 8.0 | 12.0 | 16.0 |
| | | SCOP | | 35°C | | 4.48 | 4.44 | 4.69 | 4.48 |
| | | | | 55°C | | 3.53 | 3.23 | 3.51 | 3.53 |
| | | SCOP Class | | 35°C | | A+++ | A+++ | A+++ | A+++ |
| | | | | 55°C | | A++ | A++ | A++ | A++ |
| | | SEER | | | | 5.31 | 4.52 | 5.22 | 5.31 |
| | Water Connections | Water Flow Rate (Nominal) [H/C] | | | LPM | 46.2/40.4 | 23.1/21.6 | 34.6/34.6 | 46.2/40.4 |
| | | Water Flow Rate | | Min | LPM | 12.0 | 7.0 | 12.0 | 12.0 |
| | | | | Max | LPM | 58.0 | 48.0 | 58.0 | 58.0 |
| | | Water Pressure (Max) | | | bar | 3 | 3 | 3 | 3 |
| | | Water Pipe Type | threaded male | Inlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | | | Outlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | Leaving Water Temperature | min/max | Heating | °C | 15~65 | 15~65 | 15~65 | 15~65 |
| | | | | Cooling | °C | 5~25 | 5~25 | 5~25 | 5~25 |
| | Refrigerant | Type | | | - | R32 | R32 | R32 | R32 |
| | | Factory Charging | | | kg | 2.20 | 1.15 | 2.20 | 2.20 |
| | | | | | $tCO_2e$ | 1.49 | 0.78 | 1.49 | 1.49 |
| | | Control Method | | | - | EEV | EEV | EEV | EEV |
| | Compressor | Type | | | - | BLDC Twin Rotary | BLDC Twin Rotary | BLDC Twin Rotary | BLDC Twin Rotary |
| | | Model Name | | | - | UB5TN5450FJXSG | UB8TN8265FJWSG | UB5TN5450FJXSG | UB5TN5450FJXSG |
| | | Oil | | Type | - | POE | POE | POE | POE |
| | | | | Initial Charge | cc | 1,700 | 700 | 1,700 | 1,700 |
| | | Quantity | | | EA | 1 | 1 | 1 | 1 |
| | | Output | | | W | 3613 | 2078 | 3613 | 3613 |
| | | Starting method | | | - | Inverter driven | Inverter driven | Inverter driven | Inverter driven |

# 2. Outdoor Units

## 2-1. Specifications

| Model Name | | Indoor Unit | | | | AE200CNWMEG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU |
|---|---|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Outdoor Unit | Heat exchanger | Length | | | mm | 950 | 850 | 950 | 950 |
| | | Rows | Quantity | | EA | 2 | 2 | 2 | 2 |
| | | Fin pitch | | | mm | 1.5 | 1.5 | 1.5 | 1.5 |
| | | Passes | Quantity | | EA | 10 | 8 | 10 | 10 |
| | | Face area | | | m² | 1.32 | 0.82 | 1.32 | 1.32 |
| | | Stages | Quantity | | EA | 66 | 46 | 66 | 66 |
| | | Tube type | | | - | Φ7.94 | Φ7 | Φ7.94 | Φ7.94 |
| | | Fin | Type | | - | G-Fin | Wide Louver | G-Fin | G-Fin |
| | | | Treatment | | - | Anti Salt | Anti Salt | Anti Salt | Anti Salt |
| | Fan | Type | | | - | Propeller Fan | Propeller Fan | Propeller Fan | Propeller Fan |
| | | Discharge direction | | | - | Horizontal | Horizontal | Horizontal | Horizontal |
| | | Air Flow Rate | | Heating | m³/min | 118 | 66 | 99 | 118 |
| | | | | Cooling | m³/min | 118 | 66 | 99 | 118 |
| | Fan motor | Quantity | | | EA | 2 | 1 | 2 | 2 |
| | | Model | | | - | Brushless DC motor | Brushless DC motor | Brushless DC motor | Brushless DC motor |
| | | Output | | | W X EA | 125 X 2 | 125 | 125 X 2 | 125 X 2 |
| | | Drive | | | - | Direct drive | Direct drive | Direct drive | Direct drive |
| | | Speed | Heating | | rpm | 750 | 780 | 650 | 750 |
| | | | Cooling | | rpm | 750 | 780 | 650 | 750 |
| | Sound | Sound Pressure | | Heating | dB(A) | 52 | 48 | 50 | 52 |
| | | | | Cooling | dB(A) | 54 | 48 | 50 | 54 |
| | | Sound Power | | Heating | dB(A) | 66 | 63 | 64 | 66 |
| | | | | Cooling | dB(A) | 68 | 64 | 65 | 68 |
| | Connections | Water pipe | | inlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | | | | outlet | - | BSPP male 1" | BSPP male 1" | BSPP male 1" | BSPP male 1" |
| | Casing | Color | | | - | Earth brown | Earth brown | Earth brown | Earth brown |
| | | Material | | | - | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| | Packing | Material | | | - | EPS/BOX | EPS/BOX | EPS/BOX | EPS/BOX |
| | | Weight | | | kg | 9.0 | 8.5 | 9.0 | 9.0 |
| | External Dimension | Net Weight | | | kg | 110.0 | 75.0 | 111.0 | 111.0 |
| | | Shipping Weight | | | kg | 119.0 | 83.5 | 120.0 | 120.0 |
| | | Net Dimensions (WxHxD) | | | mm | 940 x 1,420 x 330 | 940 x 998 x 330 | 940 x 1,420 x 330 | 940 x 1,420 x 330 |
| | | Shipping Dimensions (WxHxD) | | | mm | 995 x 1,598 x 426 | 995 x 1,178 x 426 | 995 x 1,598 x 426 | 995 x 1,598 x 426 |
| | Operating Temp. Range | Heating | | | ℃ | -25~35 | -25~35 | -25~35 | -25~35 |
| | | Cooling | | | ℃ | 10~46 | 10~46 | 10~46 | 10~46 |
| | | D.Hot Water | | | ℃ | -25~43 | -25~43 | -25~43 | -25~43 |

### NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB].
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃,
  Outdoor Air 7℃[DB]/6℃[WB]; (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB].
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB].
  4)* A2W Condition : (A2W35) Water In/Out -/35℃,
  Outdoor Air 2℃[DB]/1℃[WB]; (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted Sound power level
  - Reference power : 1pW
  - Measured according to ISO 3741
- These products contain R32 (GWP=675) which is fluorinated greenhouse gas.
- The system is operated in (-25℃ ≤ Outdoor temp. < -20℃) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 ℃ < Outdoor temp. ≤ 43℃).

# 2. Outdoor Units

## 2-2. Electrical characteristics

| Capacity [kW] | Model | Power Supply | | | | Voltage Range [V] | | Nominal Running Current [A] | | Current [A] | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Φ | # | Hz | Voltage | Min. (-10%) | Max. (+10%) | Cooling | Heating | MCA | MFA |
| 5.0 | AE050RXYDEG/EU | 1 | 2 | 50 | 220~240 | 198 | 264 | 5.4 | 4.9 | 16.0 | 20.0 |
| 8.0 | AE080RXYDEG/EU | 1 | 2 | 50 | 220~240 | 198 | 264 | 9.1 | 8.5 | 22.0 | 27.5 |
| 12.0 | AE120RXYDEG/EU | 1 | 2 | 50 | 220~240 | 198 | 264 | 13.2 | 12.2 | 28.0 | 35.0 |
| 16.0 | AE160RXYDEG/EU | 1 | 2 | 50 | 220~240 | 198 | 264 | 15.7 | 17.0 | 32.0 | 40.0 |
| 8.0 | AE080RXYDGG/EU | 3 | 4 | 50 | 380~415 | 342 | 456 | 3.0 | 2.8 | 10.0 | 16.1 |
| 12.0 | AE120RXYDGG/EU | 3 | 4 | 50 | 380~415 | 342 | 456 | 4.4 | 4.1 | 10.0 | 16.1 |
| 16.0 | AE160RXYDGG/EU | 3 | 4 | 50 | 380~415 | 342 | 456 | 5.3 | 5.7 | 12.0 | 16.1 |

**NOTE**

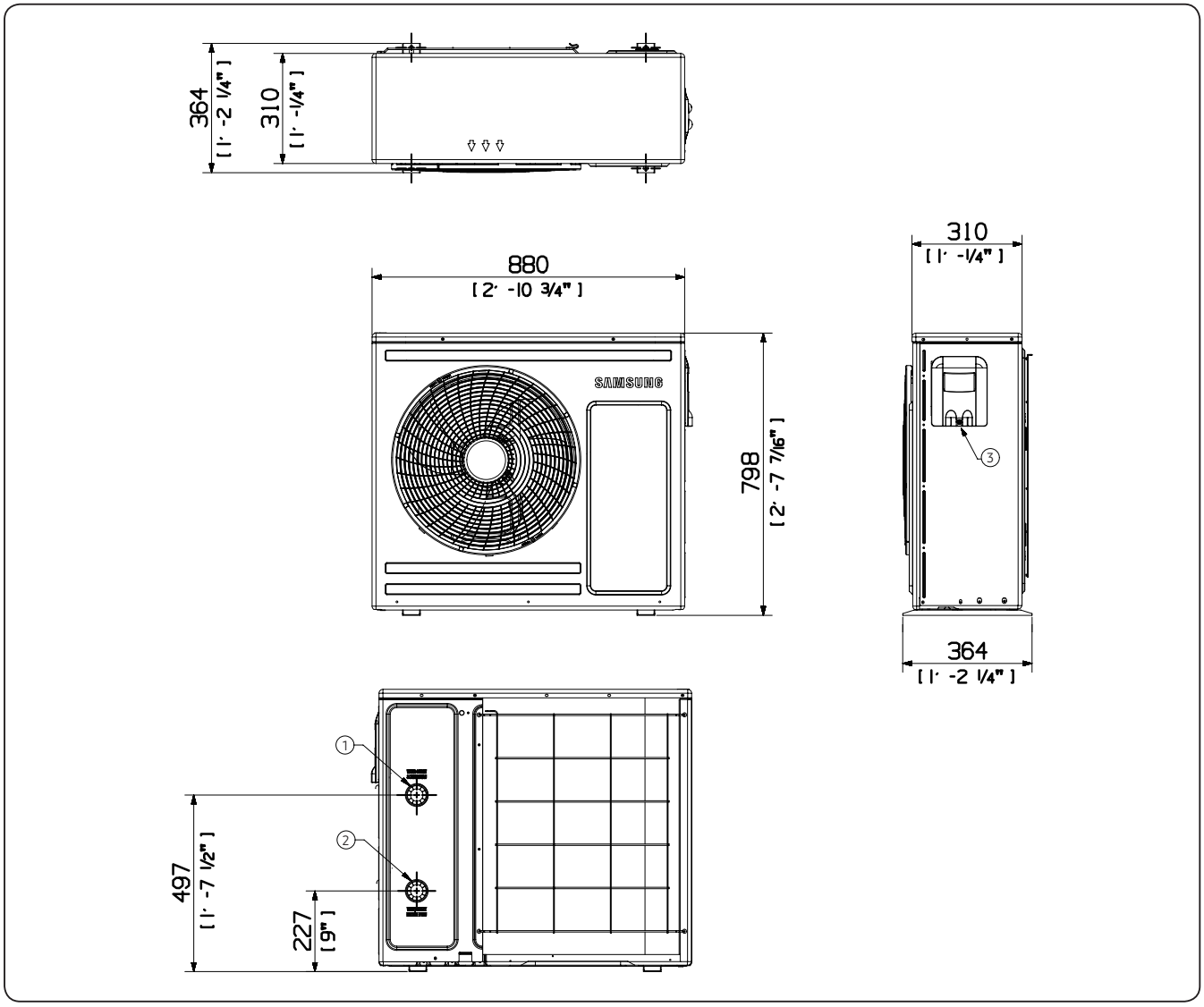
- MCA : Mimium circuit amperes
- MFA : Maximum fuse amperes
- Select wire size based on the value of MCA

# 2. Outdoor Units

## 2-3. Dimensional drawing

### AE050RXYDEG/EU

Units : mm [inches]



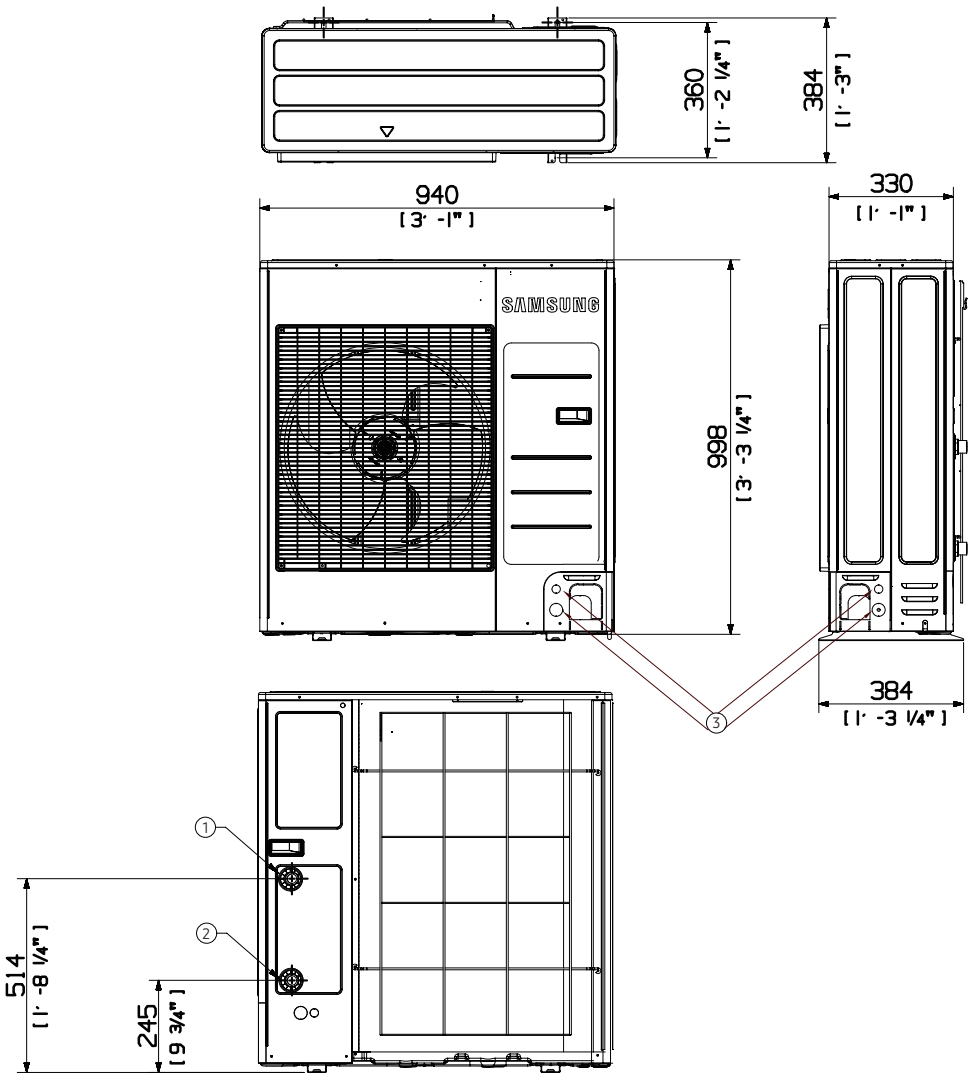

| NO | Descriotion |
|---|---|
| 1 | Water Pipe(Out) |
| 2 | Water Pipe(In) |
| 3 | Power & Communication Wiring Conduit Holes |

# 2. Outdoor Units

## 2-3. Dimensional drawing

### AE080RXYD*G/EU

Units : mm [inches]



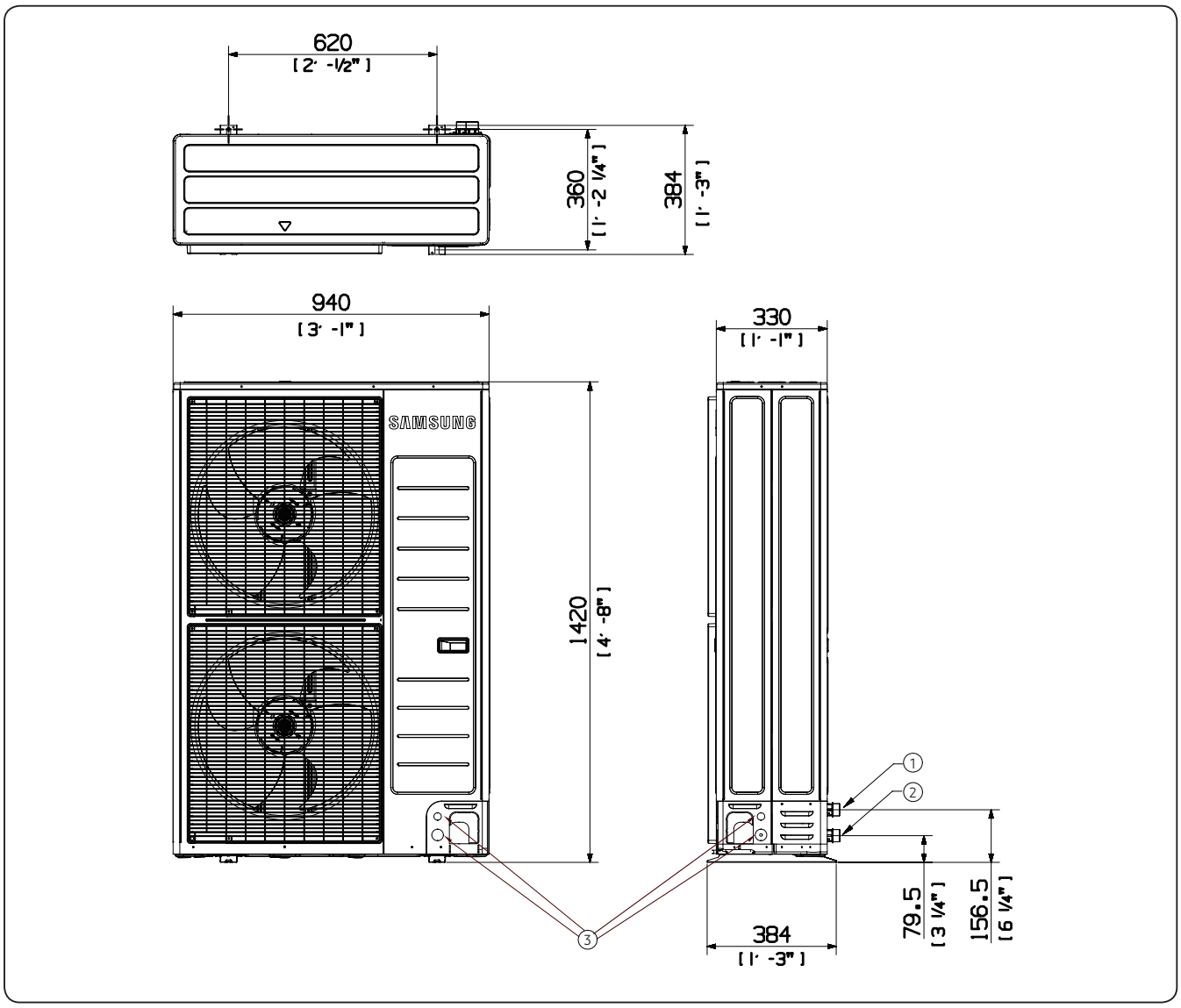

| NO | Description |
|---|---|
| 1 | Water Pipe(Out) |
| 2 | Water Pipe(In) |
| 3 | Power & Communication Wiring Conduit Holes |

# 2. Outdoor Units

## 2-3. Dimensional drawing

### AE120/160RXYD*G/EU

Units : mm [inches]

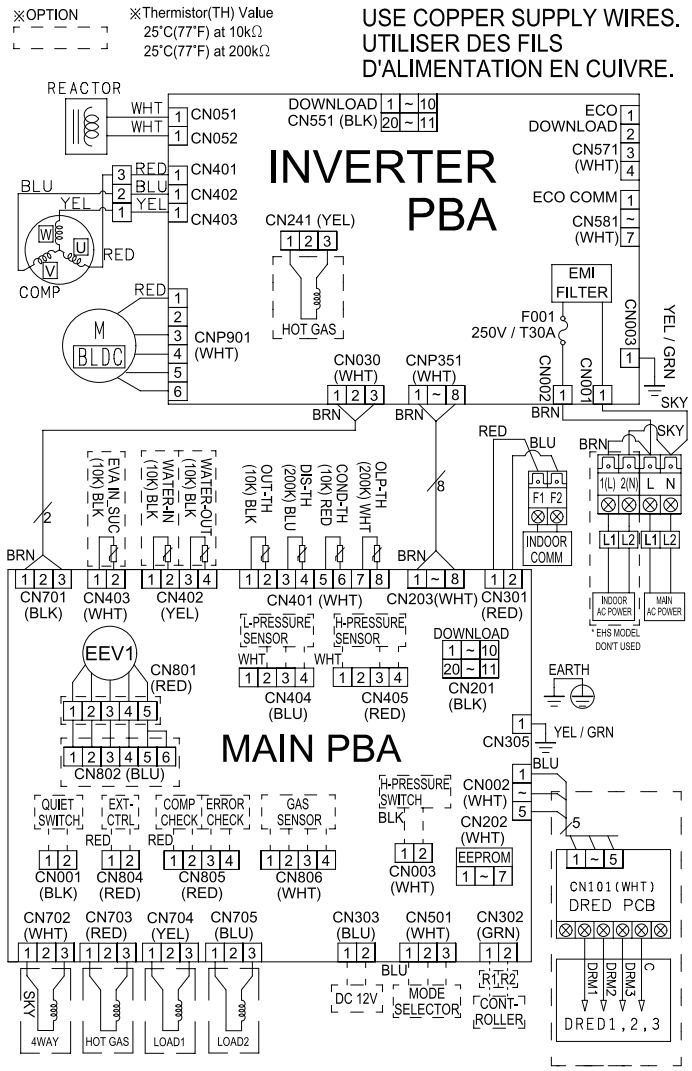



| NO | Description |
|---|---|
| 1 | Water Pipe(Out) |
| 2 | Water Pipe(In) |
| 3 | Power & Communication Wiring Conduit Holes |

# 2. Outdoor Units

## 2-4. Electrical wiring diagram

### AE050RXYDEG/EU




| | | | |
|---|---|---|---|
| M BLDC | BLDC FAN MOTOR | COMP | COMPRESSOR |
| OUT-TH | Thermistor OUT(10K) | DIS-TH | Thermistor DISCHARGE(200K) |
| COND-TH | Thermistor COND(10K) | OLP-TH | Thermistor OLP(200K) |

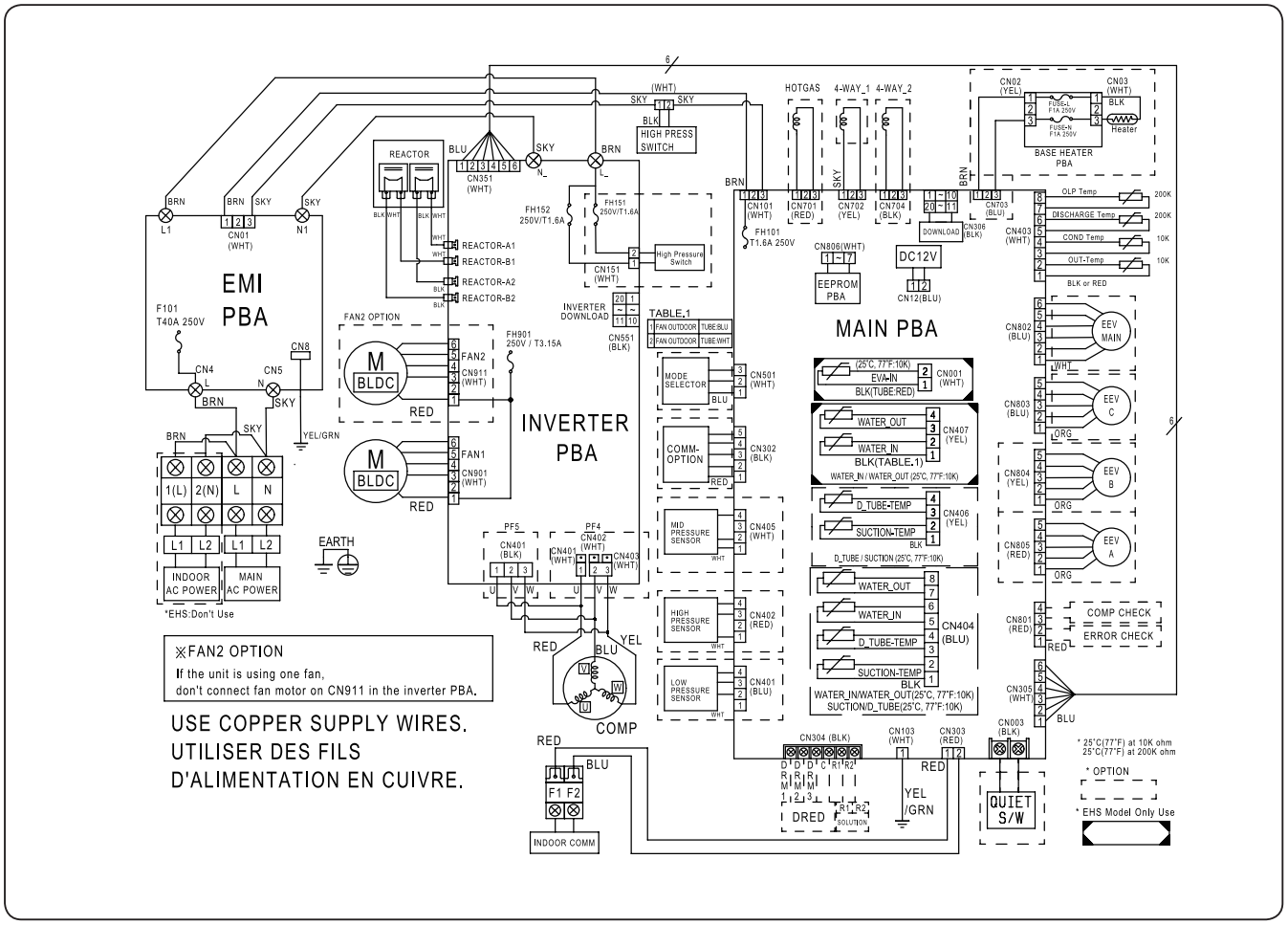
### NOTES

1. This wiring diagram applies only to the Outdoor unit.
2. Symbols show as follow :
   blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
3. For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
4. ⏚ Protective earth(SCREW)

# 2. Outdoor Units

## 2-4. Electrical wiring diagram

### AE080/120/160RXYDEG/EU




| | | | |
|---|---|---|---|
| M BLDC | BLDC FAN MOTOR | COMP | COMPRESSOR |
| Comm | Communication | OUT-Temp | Thermistor OUT(10K) |
| COND-Temp | Thermistor COND(10K) | DISCHARGE-Temp | Thermistor DISCHARGE(200K) |
| OLP-Temp | Thermistor OLP(200K) | SUCTION-TEMP | Thermistor SUCTION(10K) |

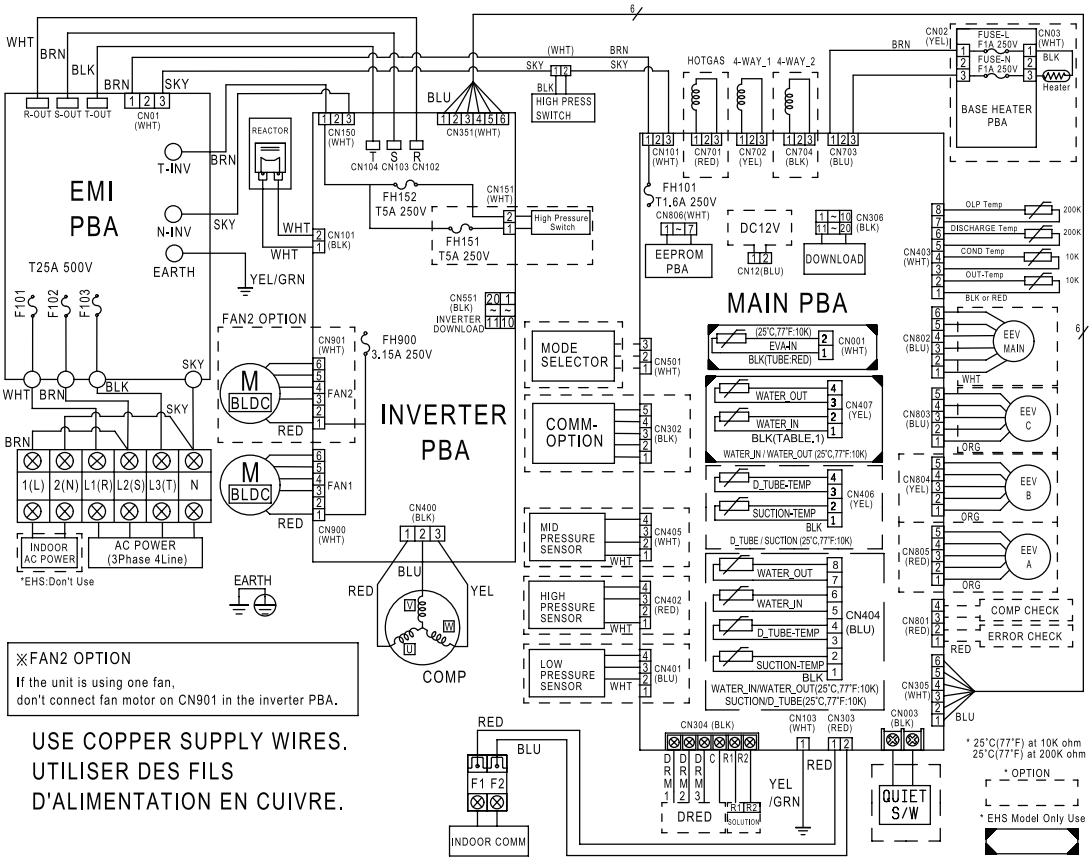
### NOTES

1. This wiring diagram applies only to the Outdoor unit.
2. Symbols show as follow :
   blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
3. For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
4. ⏚ Protective earth(SCREW)

# 2. Outdoor Units

## 2-4. Electrical wiring diagram

### AE080/120/160RXYDGG/EU




| | | | |
|---|---|---|---|
| M BLDC | BLDC FAN MOTOR | COMP | COMPRESSOR |
| Comm | Communication | OUT-Temp | Thermistor OUT(10K) |
| COND-Temp | Thermistor COND(10K) | DISCHARGE-Temp | Thermistor DISCHARGE(200K) |
| OLP-Temp | Thermistor OLP(200K) | SUCTION-TEMP | Thermistor SUCTION(10K) |

### NOTES

1. This wiring diagram applies only to the Outdoor unit.
2. Symbols show as follow :
   blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
3. For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
4. ⏚ Protective earth(SCREW)

# 2. Outdoor Units

## 2-5. Sound data

### Summary

| Capacity (kW) | Model | Sound Pressure dB(A) | | Sound Power dB(A) |
|---|---|---|---|---|
| | | Cooling | Heating | Heating |
| 5.0 | AE050RXYDEG/EU | 45 | 45 | 61 |
| 8.0 | AE080RXYDEG/EU | 48 | 48 | 63 |
| 12.0 | AE120RXYDEG/EU | 50 | 50 | 64 |
| 16.0 | AE160RXYDEG/EU | 54 | 52 | 66 |
| 8.0 | AE080RXYDGG/EU | 48 | 48 | 63 |
| 12.0 | AE120RXYDGG/EU | 50 | 50 | 64 |
| 16.0 | AE160RXYDGG/EU | 54 | 52 | 66 |

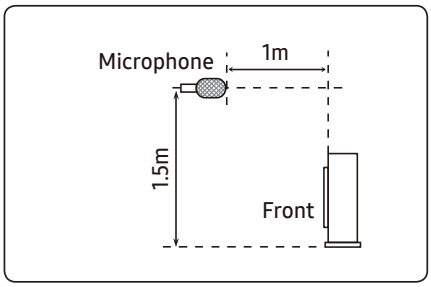
**NOTE**

- Specifications may be subject to change without prior notice.
- Sound Pressure Level
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa
- Sound Power Level
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

# 2. Outdoor Units

## 2-5. Sound data

### Sound Pressure level

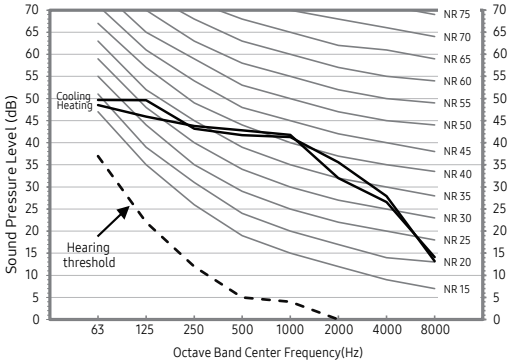



Unit: dB(A)

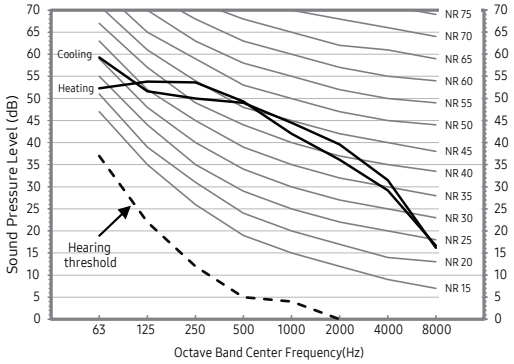
| Model | Cooling | Heating |
|---|---|---|
| AE050RXYDEG/EU | 45 | 45 |
| AE080RXYDEG/EU | 48 | 48 |
| AE120RXYDEG/EU | 50 | 50 |
| AE160RXYDEG/EU | 54 | 52 |

- NR Curve

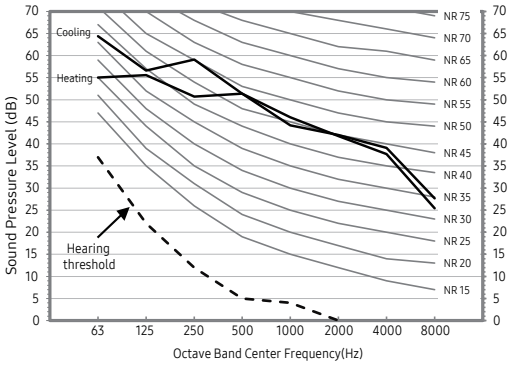
1) AE050RXYDEG/EU



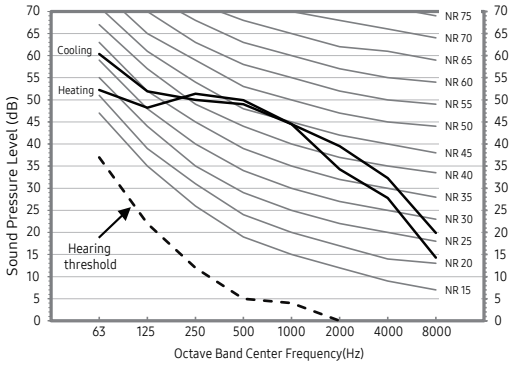

2) AE080RXYDEG/EU




3) AE120RXYDEG/EU



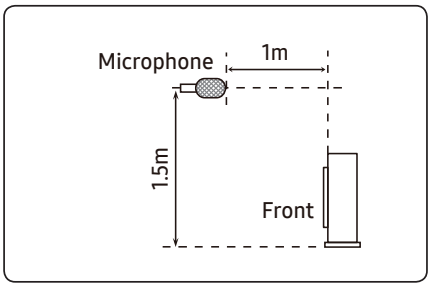

4) AE160RXYDEG/EU



# 2. Outdoor Units

## 2-5. Sound data

### Sound Pressure level

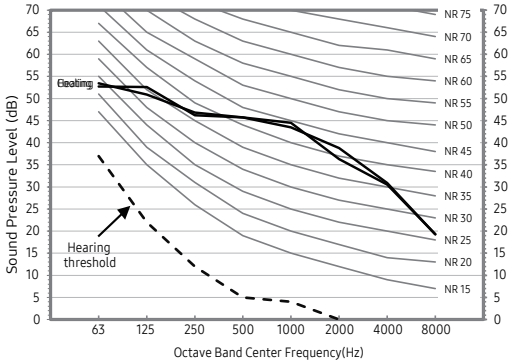



Unit: dB(A)

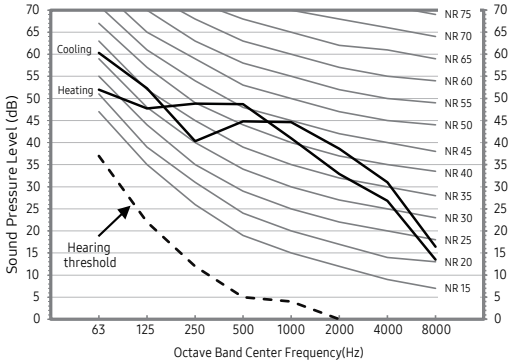
| Model | Cooling | Heating |
|---|---|---|
| AE080RXYDGG/EU | 48 | 48 |
| AE120RXYDGG/EU | 50 | 50 |
| AE160RXYDGG/EU | 54 | 52 |

- NR Curve

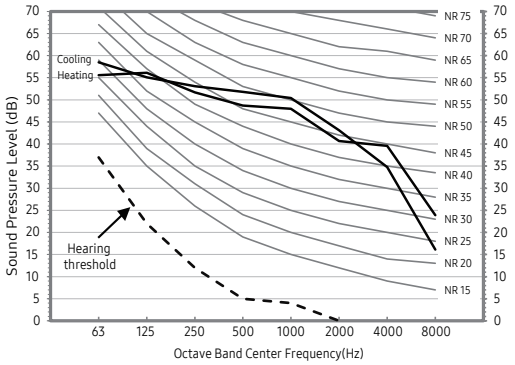
5) AE080RXYDGG/EU




6) AE120RXYDGG/EU




7) AE160RXYDGG/EU



# 2. Outdoor Units

## 2-5. Sound data

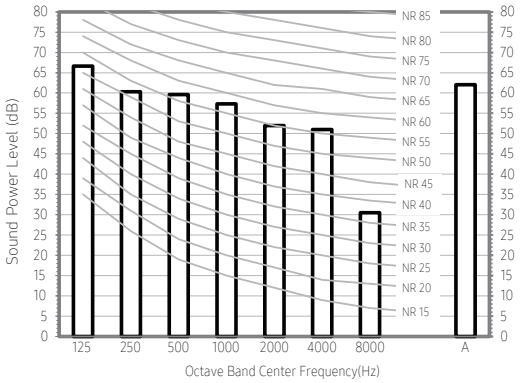
### Sound Power level

**NOTE**

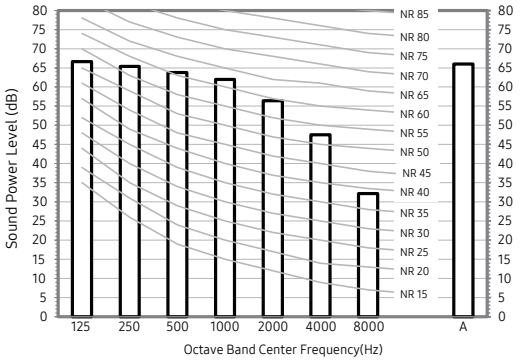
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

| Model | Power (dBA) |
|---|---|
| AE050RXYDEG/EU | 61 |
| AE080RXYDEG/EU | 63 |
| AE120RXYDEG/EU | 64 |
| AE160RXYDEG/EU | 66 |

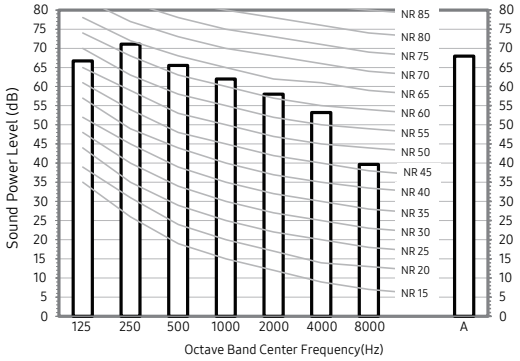
1) AE050RXYDEG/EU



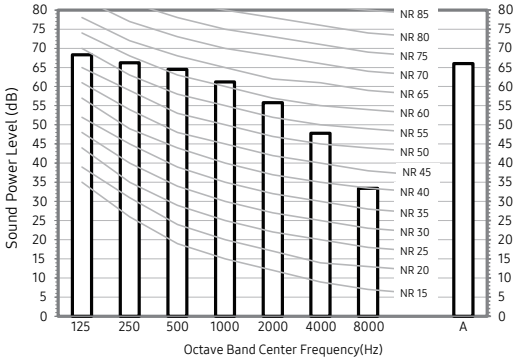

2) AE080RXYDEG/EU




3) AE120RXYDEG/EU




4) AE160RXYDEG/EU



# 2. Outdoor Units

## 2-5. Sound data

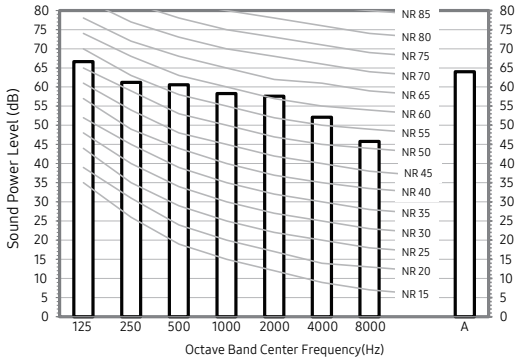
### Sound Power level

**NOTE**

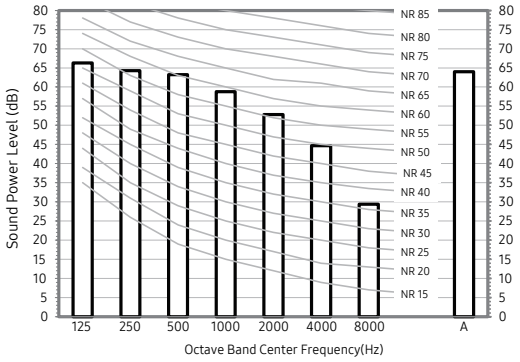
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

| Model | Power (dBA) |
|---|---|
| AE080RXYDGG/EU | 63 |
| AE120RXYDGG/EU | 64 |
| AE160RXYDGG/EU | 66 |

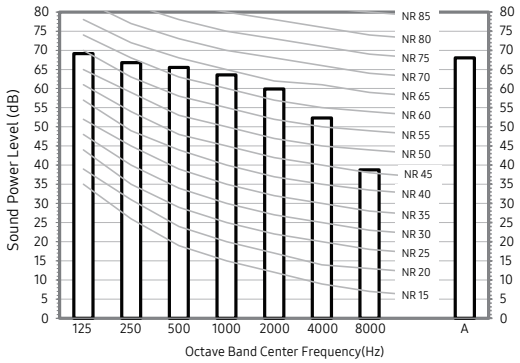
5) AE080RXYDGG/EU




6) AE120RXYDGG/EU



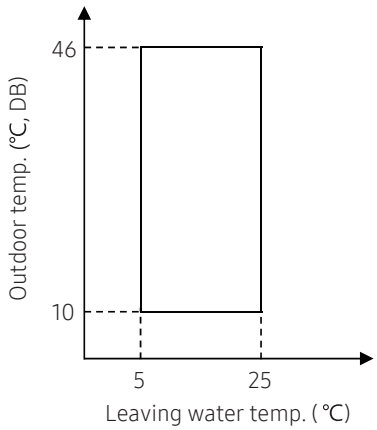

7) AE160RXYDGG/EU



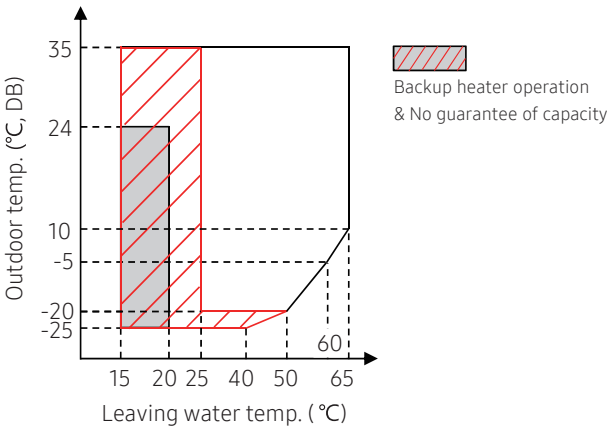
# 2. Outdoor Units

## 2-6. Operation range

### 1) Cooling




### 2) Heating




| MONO Outdoor Unit | | Water Temp. (℃) | | | Water Flow Rates (LPM) | | | Air Temp. (℃, DB/WB) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Min | Std | Max | Min | Std | Max | Min | Std | Max |
| Controller | Cooling | 5 | - | 25 | | | | | | |
| | Heating | 15 | - | 65 | | | | | | |
| Cooling | Inlet | - | 23 (12*2) | 30 | 12 (7*1) | Δ 5℃ | 58 (48*1) | 10/- | 35/24 | 46/28 |
| | Outlet | 5 | 18 (7*2) | 25 | | | | | | |
| Heating | Inlet | 5 | 30 (40*2) | - | | | | -25/- | 7/6 | 35/24 |
| | Outlet | 25 (15*3) | 35 (45*2) | 65 | | | | | | |

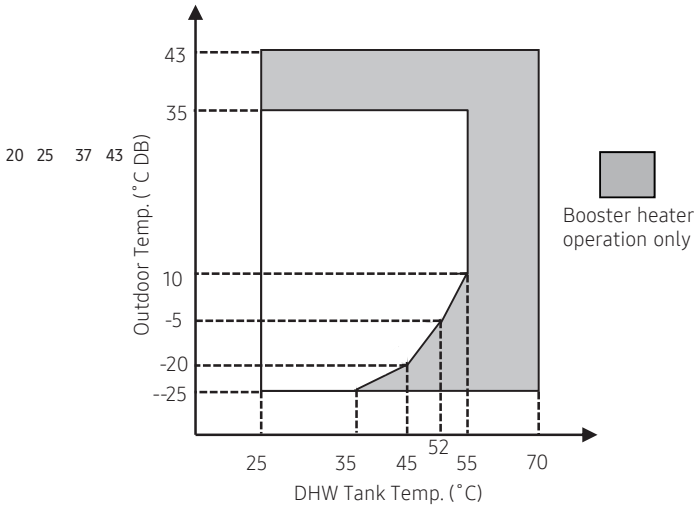
*1) Model : AE050RXYDEG
AE080RXYDEG
AE080RXYDGG

*2) Eurovent Test Condition #2

*3) Back up heater operation.

※ Operation of outdoor unit possible, but no guarantee of capacity in this condition.
( -25℃ < Outdoor temp <-20℃))

### 3) DHW (Domestic Hot Water Tank)

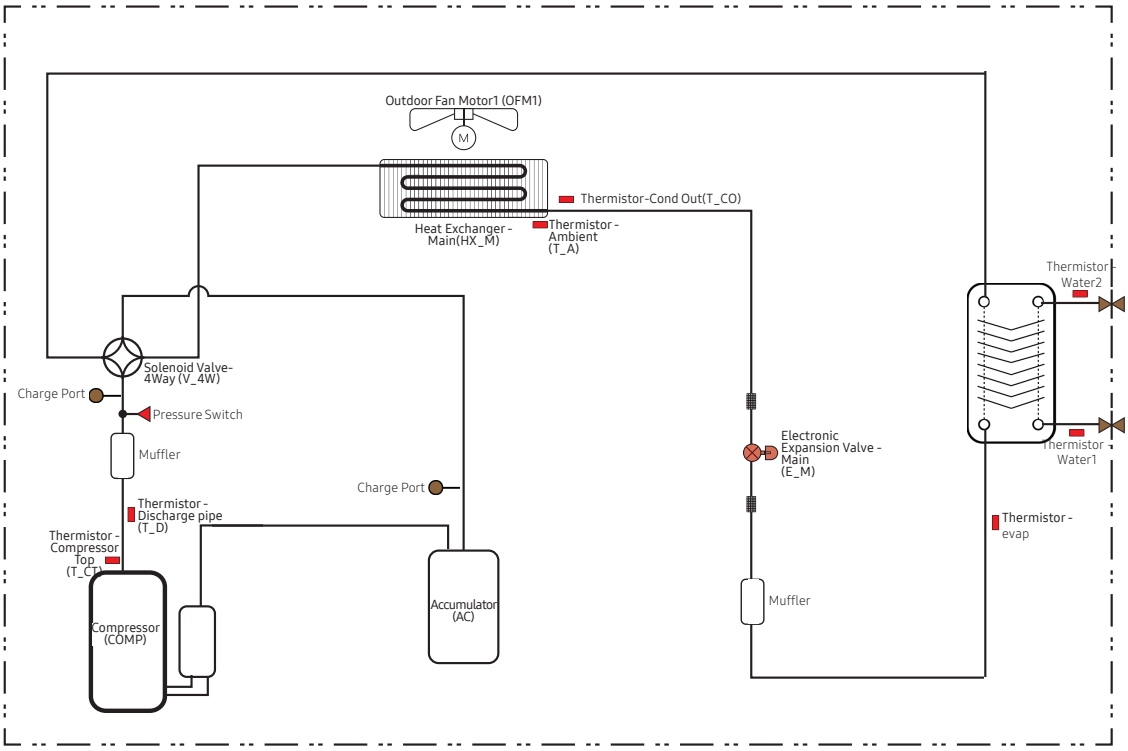



※ Special condition( 35℃ < Outdoor temp. ≤ 43℃) is operated by only Booster Heater.
SAMSUNG doesn't supply DHW for EHS Split.
Since it is a reference data, you have to check DHW operation range for yours.

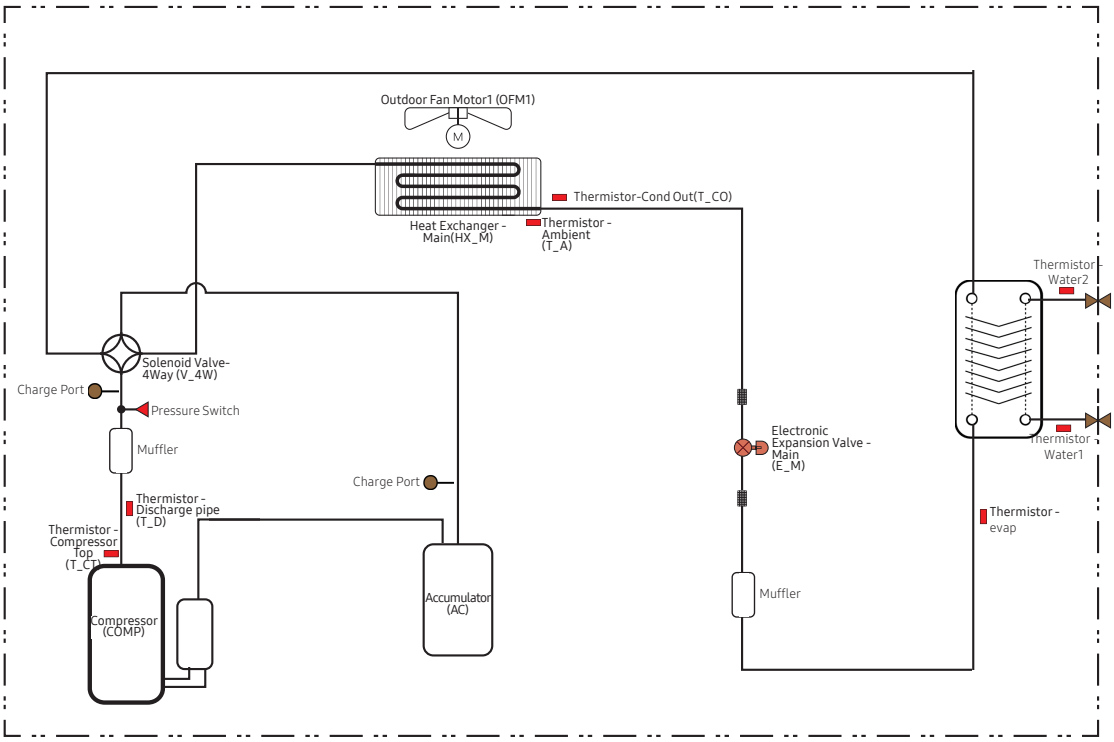
# 2. Outdoor Units

## 2-7. Piping diagram

### AE050/080RXYD*G/EU




### AE120/160RXYD*G/EU



# 2. Outdoor Units

## 2-8. Capacity table

### 1) Maximum Heating Capacity (Peak Value)

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), HC (Heating Capacity), PI (Power input)

| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE050RXYDEG | -20 | 3.57 | 1.50 | 3.40 | 1.66 | 3.41 | 1.71 | 3.43 | 1.98 | | | | | | | | |
| | -15 | 4.47 | 1.71 | 4.26 | 1.90 | 4.12 | 1.94 | 3.99 | 2.00 | 3.87 | 2.10 | | | | | | |
| | -10 | 5.25 | 1.73 | 5.00 | 1.94 | 4.85 | 2.00 | 4.70 | 2.08 | 4.56 | 2.20 | 4.23 | 2.44 | | | | |
| | -7 | 5.58 | 1.74 | 5.31 | 1.96 | 5.20 | 2.17 | 5.08 | 2.40 | 4.97 | 2.68 | 4.86 | 2.91 | | | | |
| | -2 | 5.91 | 1.68 | 5.63 | 1.89 | 5.41 | 2.08 | 5.20 | 2.26 | 4.94 | 2.54 | 4.68 | 2.77 | 4.43 | 3.05 | | |
| | 2 | 5.86 | 1.50 | 5.58 | 1.69 | 5.27 | 1.78 | 4.97 | 1.83 | 4.72 | 2.02 | 4.47 | 2.15 | 4.23 | 2.35 | | |
| | 7 | 5.25 | 0.92 | 5.00 | 1.03 | 4.90 | 1.22 | 4.80 | 1.30 | 4.55 | 1.55 | 4.30 | 1.52 | 4.08 | 1.79 | 3.85 | 1.84 |
| | 10 | 5.62 | 0.95 | 5.35 | 1.07 | 5.27 | 1.21 | 5.24 | 1.38 | 4.98 | 1.55 | 4.72 | 1.80 | 4.48 | 1.86 | 4.29 | 1.97 |
| | 15 | 6.22 | 0.99 | 5.92 | 1.11 | 5.87 | 1.23 | 5.93 | 1.42 | 5.64 | 1.60 | 5.45 | 1.81 | 5.18 | 1.87 | 4.95 | 1.94 |
| | 20 | 6.76 | 1.02 | 6.58 | 1.16 | 6.69 | 1.31 | 6.80 | 1.49 | 6.46 | 1.66 | 6.18 | 1.82 | 5.93 | 1.86 | 5.62 | 1.88 |
| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE080RXYD*G | -20 | 5.60 | 2.32 | 5.33 | 2.57 | 5.27 | 2.74 | 5.20 | 3.13 | | | | | | | | |
| | -15 | 6.56 | 2.54 | 6.25 | 2.82 | 6.15 | 2.98 | 6.06 | 3.16 | 5.88 | 3.32 | | | | | | |
| | -10 | 8.02 | 2.71 | 7.64 | 3.01 | 7.41 | 3.15 | 7.18 | 3.31 | 7.11 | 3.52 | 6.75 | 4.15 | | | | |
| | -7 | 8.04 | 2.80 | 7.80 | 2.95 | 7.43 | 3.25 | 7.27 | 3.40 | 7.15 | 3.73 | 6.80 | 4.01 | | | | |
| | -2 | 8.56 | 2.72 | 8.15 | 2.90 | 7.89 | 3.21 | 7.62 | 3.38 | 7.24 | 3.80 | 6.86 | 4.10 | 6.50 | 4.45 | | |
| | 2 | 8.55 | 2.43 | 8.14 | 2.73 | 7.85 | 2.89 | 7.56 | 2.98 | 7.18 | 3.28 | 6.80 | 3.58 | 6.44 | 3.95 | | |
| | 7 | 8.40 | 1.58 | 8.00 | 1.77 | 7.70 | 2.04 | 7.40 | 2.12 | 7.25 | 2.56 | 7.10 | 2.53 | 6.96 | 3.02 | 6.81 | 3.12 |
| | 10 | 9.04 | 1.62 | 8.61 | 1.82 | 8.36 | 2.02 | 8.19 | 2.27 | 7.78 | 2.56 | 7.37 | 2.98 | 7.01 | 3.07 | 6.70 | 3.25 |
| | 15 | 10.07 | 1.64 | 9.59 | 1.85 | 9.42 | 2.07 | 9.45 | 2.40 | 8.97 | 2.70 | 8.68 | 3.06 | 8.24 | 3.15 | 7.89 | 3.28 |
| | 20 | 11.02 | 1.67 | 10.73 | 1.89 | 10.85 | 2.20 | 10.98 | 2.55 | 10.43 | 2.84 | 9.98 | 3.13 | 9.58 | 3.20 | 9.07 | 3.24 |
| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE120RXYD*G | -20 | 9.82 | 4.36 | 9.35 | 4.81 | 9.04 | 4.91 | 8.72 | 4.88 | | | | | | | | |
| | -15 | 10.80 | 4.38 | 10.49 | 4.87 | 10.33 | 4.98 | 10.16 | 4.98 | 9.85 | 5.23 | | | | | | |
| | -10 | 12.39 | 4.32 | 12.20 | 4.88 | 11.65 | 5.04 | 11.46 | 5.23 | 11.39 | 5.49 | 11.37 | 5.72 | | | | |
| | -7 | 13.13 | 4.37 | 12.56 | 4.61 | 11.95 | 5.39 | 11.40 | 5.88 | 11.04 | 6.31 | 10.28 | 6.65 | | | | |
| | -2 | 13.60 | 4.05 | 12.95 | 4.55 | 12.72 | 5.09 | 12.48 | 5.62 | 12.25 | 6.32 | 11.83 | 7.02 | 11.14 | 7.80 | | |
| | 2 | 13.19 | 3.42 | 12.75 | 3.84 | 12.41 | 4.39 | 12.21 | 4.94 | 12.07 | 5.56 | 11.53 | 6.18 | 10.93 | 6.56 | | |
| | 7 | 12.60 | 2.57 | 12.00 | 2.65 | 11.85 | 3.06 | 11.70 | 3.18 | 11.50 | 3.46 | 11.30 | 3.73 | 11.11 | 4.06 | 10.48 | 4.53 |
| | 10 | 13.91 | 2.55 | 12.98 | 2.76 | 12.79 | 3.03 | 12.61 | 3.26 | 11.98 | 3.67 | 11.35 | 4.16 | 11.00 | 4.45 | 10.42 | 4.71 |
| | 15 | 16.09 | 2.51 | 15.02 | 2.72 | 14.76 | 2.93 | 14.51 | 3.19 | 13.79 | 3.59 | 13.06 | 4.03 | 12.66 | 4.19 | 11.99 | 4.48 |
| | 20 | 18.27 | 2.50 | 17.05 | 2.68 | 16.73 | 2.88 | 16.08 | 3.06 | 15.44 | 3.44 | 14.77 | 3.83 | 14.03 | 3.91 | 13.57 | 3.98 |
| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE160RXYD*G | -20 | 11.87 | 5.40 | 11.30 | 5.95 | 10.99 | 6.34 | 10.68 | 6.61 | | | | | | | | |
| | -15 | 13.24 | 5.50 | 12.87 | 6.12 | 12.66 | 6.50 | 12.44 | 6.74 | 12.07 | 7.08 | | | | | | |
| | -10 | 15.12 | 5.47 | 14.80 | 6.21 | 14.47 | 6.61 | 14.23 | 7.18 | 14.06 | 7.43 | 13.98 | 7.81 | | | | |
| | -7 | 15.97 | 5.56 | 15.65 | 6.03 | 15.27 | 7.05 | 14.91 | 7.84 | 14.36 | 7.72 | 13.60 | 7.91 | | | | |
| | -2 | 16.59 | 5.26 | 15.80 | 5.91 | 15.24 | 6.42 | 14.69 | 6.93 | 13.95 | 7.79 | 13.22 | 8.66 | 12.52 | 9.62 | | |
| | 2 | 16.12 | 4.55 | 15.35 | 5.12 | 14.15 | 5.27 | 12.95 | 5.42 | 12.31 | 6.10 | 11.66 | 6.77 | 11.04 | 7.19 | | |
| | 7 | 16.80 | 3.51 | 16.00 | 3.62 | 15.70 | 4.26 | 15.40 | 4.49 | 15.20 | 4.84 | 15.00 | 5.18 | 14.81 | 5.60 | 14.03 | 6.19 |
| | 10 | 18.25 | 3.55 | 17.04 | 3.85 | 16.75 | 4.31 | 16.47 | 4.72 | 15.64 | 5.31 | 14.82 | 6.01 | 14.37 | 6.43 | 13.61 | 6.81 |
| | 15 | 20.68 | 3.63 | 19.30 | 3.92 | 19.03 | 4.32 | 18.76 | 4.80 | 17.82 | 5.40 | 16.88 | 6.05 | 16.37 | 6.30 | 15.50 | 6.74 |
| | 20 | 23.10 | 3.73 | 21.56 | 4.00 | 21.31 | 4.42 | 20.62 | 4.78 | 19.79 | 5.38 | 18.95 | 5.98 | 18.00 | 6.11 | 17.40 | 6.23 |

1. Heating capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for heated water range $\triangle t$ = 3~8°C
2. Cooling capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for chilled water range $\triangle t$ = 3~8°C
3. Power input : Power input is according to Eurovent rating standard OM-3-2015.
4. Peak value : Tested without defrost operation in accordance with EN14511

※ The real capacity would be changed according to the install environment.

# 2. Outdoor Units

## 2-8. Capacity table

### 2) Maximum Heating Capacity (Integrated Value)

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), HC (Heating Capacity), PI (Power input)

| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE050RXYDEG | -20 | 3.57 | 1.50 | 3.40 | 1.66 | 3.41 | 1.71 | 3.43 | 1.98 | | | | | | | | |
| | -15 | 4.47 | 1.71 | 4.26 | 1.90 | 4.12 | 1.94 | 3.99 | 2.00 | 3.87 | 2.10 | | | | | | |
| | -10 | 4.89 | 1.69 | 4.66 | 1.90 | 4.80 | 1.99 | 4.65 | 2.08 | 4.47 | 2.18 | 4.15 | 2.39 | | | | |
| | -7 | 5.09 | 1.67 | 4.90 | 1.69 | 5.04 | 2.12 | 4.93 | 2.36 | 4.78 | 2.58 | 4.67 | 2.79 | | | | |
| | -2 | 4.94 | 1.45 | 4.75 | 1.63 | 4.67 | 1.83 | 4.44 | 1.95 | 4.26 | 2.19 | 4.08 | 2.44 | 3.86 | 2.71 | | |
| | 2 | 4.79 | 1.23 | 4.56 | 1.38 | 4.35 | 1.50 | 4.12 | 1.54 | 3.98 | 1.73 | 3.80 | 1.92 | 3.64 | 2.14 | | |
| | 7 | 5.25 | 0.92 | 5.00 | 1.03 | 4.90 | 1.22 | 4.80 | 1.30 | 4.55 | 1.55 | 4.30 | 1.52 | 4.08 | 1.79 | 3.85 | 1.84 |
| | 10 | 5.62 | 0.95 | 5.35 | 1.07 | 5.27 | 1.21 | 5.24 | 1.38 | 4.98 | 1.55 | 4.72 | 1.80 | 4.48 | 1.86 | 4.29 | 1.97 |
| | 15 | 6.22 | 0.99 | 5.92 | 1.11 | 5.87 | 1.23 | 5.93 | 1.42 | 5.64 | 1.60 | 5.45 | 1.81 | 5.18 | 1.87 | 4.95 | 1.94 |
| | 20 | 6.76 | 1.02 | 6.58 | 1.16 | 6.69 | 1.31 | 6.80 | 1.49 | 6.46 | 1.66 | 6.18 | 1.82 | 5.93 | 1.86 | 5.62 | 1.88 |
| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE080RXYD*G | -20 | 5.60 | 2.32 | 5.33 | 2.57 | 5.27 | 2.74 | 5.20 | 3.13 | | | | | | | | |
| | -15 | 6.56 | 2.54 | 6.25 | 2.82 | 6.15 | 2.98 | 6.06 | 3.16 | 5.88 | 3.32 | | | | | | |
| | -10 | 7.47 | 2.66 | 7.11 | 2.99 | 7.34 | 3.14 | 7.11 | 3.28 | 6.69 | 3.45 | 6.65 | 4.10 | | | | |
| | -7 | 7.33 | 2.69 | 7.06 | 2.72 | 7.20 | 3.17 | 6.98 | 3.32 | 6.93 | 3.73 | 6.00 | 3.97 | | | | |
| | -2 | 7.16 | 2.34 | 6.89 | 2.63 | 6.80 | 2.83 | 6.50 | 2.91 | 6.24 | 3.27 | 5.97 | 3.64 | 5.66 | 4.04 | | |
| | 2 | 6.98 | 1.99 | 6.65 | 2.23 | 6.48 | 2.44 | 6.27 | 2.49 | 6.05 | 2.80 | 5.79 | 3.11 | 5.54 | 3.46 | | |
| | 7 | 8.40 | 1.58 | 8.00 | 1.77 | 7.70 | 2.04 | 7.40 | 2.12 | 7.25 | 2.56 | 7.10 | 2.53 | 6.96 | 3.02 | 6.81 | 3.12 |
| | 10 | 9.04 | 1.62 | 8.61 | 1.82 | 8.36 | 2.02 | 8.19 | 2.27 | 7.78 | 2.56 | 7.37 | 2.98 | 7.01 | 3.07 | 6.70 | 3.25 |
| | 15 | 10.07 | 1.64 | 9.59 | 1.85 | 9.42 | 2.07 | 9.45 | 2.40 | 8.97 | 2.70 | 8.68 | 3.06 | 8.24 | 3.15 | 7.89 | 3.28 |
| | 20 | 11.02 | 1.67 | 10.73 | 1.89 | 10.85 | 2.20 | 10.98 | 2.55 | 10.43 | 2.84 | 9.98 | 3.13 | 9.58 | 3.20 | 9.07 | 3.24 |
| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE120RXYD*G | -20 | 9.82 | 4.36 | 9.35 | 4.81 | 9.04 | 4.91 | 8.72 | 4.88 | | | | | | | | |
| | -15 | 10.80 | 4.38 | 10.49 | 4.87 | 10.33 | 4.98 | 10.16 | 4.98 | 9.85 | 5.23 | | | | | | |
| | -10 | 11.78 | 4.23 | 11.80 | 4.85 | 11.44 | 4.99 | 11.30 | 5.23 | 11.28 | 5.49 | 11.25 | 5.72 | | | | |
| | -7 | 11.97 | 4.19 | 11.64 | 4.33 | 11.07 | 5.18 | 10.50 | 5.64 | 10.61 | 6.11 | 10.07 | 6.57 | | | | |
| | -2 | 11.49 | 3.56 | 11.06 | 4.01 | 10.97 | 4.48 | 10.76 | 4.95 | 10.43 | 5.62 | 9.88 | 6.24 | 9.36 | 7.01 | | |
| | 2 | 11.11 | 2.94 | 10.58 | 3.30 | 10.80 | 3.78 | 10.91 | 4.25 | 10.47 | 4.83 | 9.92 | 5.31 | 9.40 | 6.02 | | |
| | 7 | 12.60 | 2.57 | 12.00 | 2.65 | 11.85 | 3.06 | 11.70 | 3.18 | 11.50 | 3.46 | 11.30 | 3.73 | 11.11 | 4.06 | 10.48 | 4.53 |
| | 10 | 13.91 | 2.55 | 12.98 | 2.76 | 12.79 | 3.03 | 12.61 | 3.26 | 11.98 | 3.67 | 11.35 | 4.16 | 11.00 | 4.45 | 10.42 | 4.71 |
| | 15 | 16.09 | 2.51 | 15.02 | 2.72 | 14.76 | 2.93 | 14.51 | 3.19 | 13.79 | 3.59 | 13.06 | 4.03 | 12.66 | 4.19 | 11.99 | 4.48 |
| | 20 | 18.27 | 2.50 | 17.05 | 2.68 | 16.73 | 2.88 | 16.08 | 3.06 | 15.44 | 3.44 | 14.77 | 3.83 | 14.03 | 3.91 | 13.57 | 3.98 |
| Model | LWT(℃) | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | |
| | Tamb(℃) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) | HC(kW) | PI(kW) |
| AE160RXYD*G | -20 | 11.87 | 5.40 | 11.30 | 5.95 | 10.99 | 6.34 | 10.68 | 6.61 | | | | | | | | |
| | -15 | 13.24 | 5.50 | 12.87 | 6.12 | 12.66 | 6.50 | 12.44 | 6.74 | 12.07 | 7.08 | | | | | | |
| | -10 | 14.37 | 5.36 | 14.39 | 6.15 | 13.96 | 6.55 | 13.80 | 7.07 | 13.77 | 7.43 | 13.73 | 7.74 | | | | |
| | -7 | 14.56 | 5.34 | 14.16 | 5.52 | 14.14 | 6.77 | 14.12 | 7.53 | 14.06 | 7.64 | 13.12 | 7.75 | | | | |
| | -2 | 14.01 | 4.63 | 13.48 | 5.20 | 13.14 | 5.65 | 12.67 | 6.10 | 12.28 | 6.93 | 11.63 | 7.69 | 11.02 | 8.63 | | |
| | 2 | 13.58 | 3.92 | 12.94 | 4.40 | 12.05 | 4.53 | 11.03 | 4.66 | 10.58 | 5.29 | 10.03 | 5.83 | 9.50 | 6.60 | | |
| | 7 | 16.80 | 3.51 | 16.00 | 3.62 | 15.70 | 4.26 | 15.40 | 4.49 | 15.20 | 4.84 | 15.00 | 5.18 | 14.81 | 5.60 | 14.03 | 6.19 |
| | 10 | 18.25 | 3.55 | 17.04 | 3.85 | 16.75 | 4.31 | 16.47 | 4.72 | 15.64 | 5.31 | 14.82 | 6.01 | 14.37 | 6.43 | 13.61 | 6.81 |
| | 15 | 20.68 | 3.63 | 19.30 | 3.92 | 19.03 | 4.32 | 18.76 | 4.80 | 17.82 | 5.40 | 16.88 | 6.05 | 16.37 | 6.30 | 15.50 | 6.74 |
| | 20 | 23.10 | 3.73 | 21.56 | 4.00 | 21.31 | 4.42 | 20.62 | 4.78 | 19.79 | 5.38 | 18.95 | 5.98 | 18.00 | 6.11 | 17.40 | 6.23 |

1. Heating capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for heated water range △t = 3~8°C
2. Cooling capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for chilled water range △t = 3~8°C
3. Power input : Power input is according to Eurovent rating standard OM-3-2015.
4. Peak value : Tested without defrost operation in accordance with EN14511

※ The real capacity would be changed according to the install environment.

# 2. Outdoor Units

## 2-8. Capacity table

### 3) Cooling Capacity

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), CC (Cooling Capacity), PI (Power input)

| | LWT(℃) | 7 | | 10 | | 13 | | 15 | | 18 | | 25 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamb(℃) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) |
| AE050RXYDEG | 10 | 4.32 | 0.86 | 4.62 | 0.85 | 4.93 | 0.85 | 5.23 | 0.85 | 5.54 | 0.85 | 6.09 | 0.87 |
| | 20 | 4.15 | 0.97 | 4.45 | 0.97 | 4.74 | 0.97 | 5.03 | 0.97 | 5.33 | 0.96 | 5.86 | 0.98 |
| | 30 | 3.99 | 1.09 | 4.27 | 1.08 | 4.55 | 1.08 | 4.83 | 1.08 | 5.11 | 1.08 | 5.62 | 1.10 |
| | 35 | 3.90 | 1.15 | 4.18 | 1.15 | 4.45 | 1.15 | 4.73 | 1.14 | 5.00 | 1.14 | 5.50 | 1.16 |
| | 46 | 3.72 | 1.27 | 3.98 | 1.27 | 4.24 | 1.27 | 4.50 | 1.26 | 4.77 | 1.26 | 5.24 | 1.28 |
| | LWT(℃) | 7 | | 10 | | 13 | | 15 | | 18 | | 25 | |
| | Tamb(℃) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) |
| AE080RXYD*G | 10 | 6.31 | 1.40 | 6.92 | 1.33 | 7.53 | 1.26 | 8.14 | 1.19 | 8.75 | 1.12 | 9.62 | 1.14 |
| | 20 | 6.07 | 1.59 | 6.66 | 1.51 | 7.24 | 1.43 | 7.83 | 1.35 | 8.41 | 1.27 | 9.25 | 1.29 |
| | 30 | 5.83 | 1.78 | 6.39 | 1.69 | 6.95 | 1.60 | 7.51 | 1.51 | 8.07 | 1.42 | 8.88 | 1.45 |
| | 35 | 5.70 | 1.88 | 6.25 | 1.79 | 6.80 | 1.69 | 7.35 | 1.60 | 7.90 | 1.50 | 8.69 | 1.53 |
| | 46 | 5.43 | 2.08 | 5.96 | 1.97 | 6.48 | 1.87 | 7.00 | 1.76 | 7.53 | 1.66 | 8.28 | 1.69 |
| | LWT(℃) | 7 | | 10 | | 13 | | 15 | | 18 | | 25 | |
| | Tamb(℃) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) |
| AE120RXYD*G | 10 | 9.96 | 2.03 | 10.79 | 2.04 | 11.62 | 2.05 | 12.45 | 2.06 | 13.28 | 2.06 | 14.61 | 2.10 |
| | 20 | 9.59 | 2.31 | 10.38 | 2.32 | 11.18 | 2.32 | 11.98 | 2.33 | 12.78 | 2.34 | 14.06 | 2.39 |
| | 30 | 9.20 | 2.58 | 9.96 | 2.59 | 10.73 | 2.60 | 11.50 | 2.61 | 12.26 | 2.62 | 13.49 | 2.67 |
| | 35 | 9.00 | 2.73 | 9.75 | 2.74 | 10.50 | 2.75 | 11.25 | 2.76 | 12.00 | 2.77 | 13.20 | 2.83 |
| | 46 | 8.58 | 3.02 | 9.29 | 3.03 | 10.01 | 3.04 | 10.72 | 3.05 | 11.44 | 3.06 | 12.58 | 3.12 |
| | LWT(℃) | 7 | | 10 | | 13 | | 15 | | 18 | | 25 | |
| | Tamb(℃) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) | CC(kW) | PI(kW) |
| AE160RXYD*G | 10 | 11.51 | 2.45 | 12.51 | 2.45 | 13.51 | 2.45 | 14.50 | 2.45 | 15.50 | 2.44 | 17.05 | 2.49 |
| | 20 | 11.08 | 2.78 | 12.03 | 2.78 | 12.99 | 2.78 | 13.95 | 2.77 | 14.91 | 2.77 | 16.40 | 2.83 |
| | 30 | 10.63 | 3.11 | 11.55 | 3.11 | 12.47 | 3.10 | 13.39 | 3.10 | 14.31 | 3.10 | 15.74 | 3.16 |
| | 35 | 10.40 | 3.29 | 11.30 | 3.29 | 12.20 | 3.29 | 13.10 | 3.28 | 14.00 | 3.28 | 15.40 | 3.35 |
| | 46 | 9.91 | 3.64 | 10.77 | 3.63 | 11.63 | 3.63 | 12.48 | 3.63 | 13.34 | 3.62 | 14.68 | 3.70 |

1. Heating capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for heated water range △t = 3~8°C
2. Cooling capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for chilled water range △t = 3~8°C
3. Power input : Power input is according to Eurovent rating standard OM-3-2015.

※ The real capacity would be changed according to the install environment.

# 2. Outdoor Units

## 2-9. Silent mode corrections

### Heating

| Silent Function | Outdoor Air Temperature(°C DB) | | | |
|---|---|---|---|---|
| | -15 | 2 | 7 | 15 |
| Level 1 | 0.92 | 0.87 | 0.94 | 0.94 |
| Level 2 | 0.82 | 0.78 | 0.84 | 0.84 |
| Level 3 | 0.68 | 0.64 | 0.69 | 0.69 |
| Low-noise | 0.7 | 0.6 | 0.69 | 0.69 |

### Heating

| Silent Function | Outdoor Air Temperature(°C DB) | | | |
|---|---|---|---|---|
| | 10 | 20 | 35 | 45 |
| Level 1 | 1 | 1 | 0.92 | 0.92 |
| Level 2 | 0.98 | 0.89 | 0.83 | 0.83 |
| Level 3 | 0.81 | 0.74 | 0.68 | 0.68 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE200RNWMEG/EU | AE200RNWMEG/EU | AE200RNWMEG/EU |
|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Mode | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Power Supply | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Power input | Cooling (Nominal) | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Nominal) | | kW | 0.2 | 0.2 | 0.2 |
| | Cooling (Max) | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Max) | | kW | 5.2 | 5.2 | 5.2 |
| Current Input | Cooling (Nominal) | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Nominal) | | A | 0.9 | 0.9 | 0.9 |
| | Cooling (Max) | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Max) | | A | 22.7 | 22.7 | 22.7 |
| Field Wiring | MCA | | A | 22.7 | 22.7 | 22.7 |
| | MFA | | | 28.4 | 28.4 | 28.4 |
| Heating up time | | | h /min | 2 / 20 | 2 / 0 | 1 / 30 |
| Water Heating | Declared load profile | | - | L | L | L |
| | Energy efficiency Class | | - | A+ | A+ | A |
| Water Connections | Water Flow Rate (Std)[H/C] | | LPM | 14.4/14.4 | 23.1/21.6 | 34.6/34.6 |
| | Water Pressure (Max) | | bar | 3 | 3 | 3 |
| | Water pipe (To outdoor unit) | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 |
| | Water pipe (Space heating) | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 |
| | Water pipe (DHW) | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 22 | 22 | 22 |
| | | Outlet | Φ, mm | 22 | 22 | 22 |
| | Water pipe (Secondary water return, Only 260L | Type | - | - | - | - |
| | | Inlet | Φ, mm | - | - | - |
| | Leaving Water Temperature | Heating | °C | 15~65 | 15~65 | 15~65 |
| | | Cooling | °C | 5~25 | 5~25 | 5~25 |
| DHW Tank | Nominal Water Volume | | liter | 200 | 200 | 200 |
| | Net Water Volume | | liter | 194 | 194 | 194 |
| | Material | | - | SUS 316L | SUS 316L | SUS 316L |
| | Max. water pressure | | bar | 10 | 10 | 10 |
| | Max. water temperature | | °C | 70 | 70 | 70 |
| | Immersion heater (= booster heater) | | kW | 3 (230V) | 3 (230V) | 3 (230V) |
| | Insulation | | - | PU Foam | PU Foam | PU Foam |
| Water Pump | Type | | - | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) |
| | Motor Input | | W | 100 | 100 | 100 |
| | Number of Unit | | EA | 1 | 1 | 1 |
| Backup Heater | Power | | kW | 2 (230V) | 2 (230V) | 2 (230V) |
| | Thermostat | | °C | 80±4 | 80±4 | 80±4 |
| | Thermostat (Thermal Fuse) | | °C | 93 +0 -5 | 93 +0 -5 | 93 +0 -5 |
| Safety device | Pressure relief valve | | bar | 2.9 | 2.9 | 2.9 |
| | Flow Sensor | | LPM | 5~60 | 5~60 | 5~60 |
| | Temperature & Pressure relief valve(Tank) | | bar, °C | 7, 90 | 7, 90 | 7, 90 |
| | Thermostat (for immersion heater) | | °C | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) |
| Expansion vessel | Internal water volume | | liter | 8 | 8 | 8 |
| | Working pressure | | MPa | 0.3 | 0.3 | 0.3 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE200RNWMEG/EU | AE200RNWMEG/EU | AE200RNWMEG/EU |
|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Water Pump (Primary) | Type | | - | BLDC Inv | BLDC Inv | BLDC Inv |
| | Max static pressure | | mAq | 9.5 | 9.5 | 9.5 |
| Water Heat Exchanger | Type | | - | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager |
| | Quantity | | EA | 1 | 1 | 1 |
| | Internal water volume | | L | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) |
| | Water flow rate | Min. | l/min | 7 | 7 | 12 |
| | | Max. | l/min | 48 | 48 | 58 |
| | Insulation material | | - | PE-FOAM | PE-FOAM | PE-FOAM |
| IP Class | | | - | IPX1 | IPX1 | IPX1 |
| Air Purge Valve | | | Φ, inch | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" |
| Sound | Sound Pressure | Heating | dB(A) | 26 | 26 | 30 |
| | | Cooling | dB(A) | 26 | 26 | 30 |
| | Sound Power | Heating | dB(A) | 40 | 40 | 44 |
| Casing | Color | | - | Earth brown | Earth brown | Earth brown |
| | Material | | - | Poweder coated Galvanised steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| Packing | Material | | - | EPS/BOX | EPS/BOX | EPS/BOX |
| | Packing Weight | | kg | 12.0 | 12.0 | 12.0 |
| External Dimension | Net Weight | | kg | 130.0 | 130.0 | 130.0 |
| | Shipping Weight | | kg | 142.0 | 142.0 | 142.0 |
| | Net Dimensions (WxHxD) | | mm | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 |
| | Shipping Dimensions (WxHxD) | | mm | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 |

### NOTE

- Specifications may be subject to change without prior notice.

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE200RNWMEG/EU | AE260RNWMEG/EU | AE260RNWMEG/EU |
|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Mode | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Power Supply | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Power input | Cooling (Nominal) | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Nominal) | | kW | 0.2 | 0.2 | 0.2 |
| | Cooling (Max) | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Max) | | kW | 5.2 | 5.2 | 5.2 |
| Current Input | Cooling (Nominal) | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Nominal) | | A | 0.9 | 0.9 | 0.9 |
| | Cooling (Max) | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Max) | | A | 22.7 | 22.7 | 22.7 |
| Field Wiring | MCA | | A | 22.7 | 22.7 | 22.7 |
| | MFA | | | 28.4 | 28.4 | 28.4 |
| Heating up time | | | h /min | 1 / 30 | 2 / 25 | 1 / 50 |
| Water Heating | Declared load profile | | - | L | XL | XL |
| | Energy efficiency Class | | - | A | A+ | A |
| Water Connections | Water Flow Rate (Std)[H/C] | | LPM | 46.2/40.4 | 23.1/21.6 | 34.6/34.6 |
| | Water Pressure (Max) | | bar | 3 | 3 | 3 |
| | Water pipe (To outdoor unit) | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 |
| | Water pipe (Space heating) | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 |
| | Water pipe (DHW) | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 22 | 22 | 22 |
| | | Outlet | Φ, mm | 22 | 22 | 22 |
| | Water pipe (Secondary water return, Only 260L | Type | - | - | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | - | 22 | 22 |
| | Leaving Water Temperature | Heating | °C | 15~65 | 15~65 | 15~65 |
| | | Cooling | °C | 5~25 | 5~25 | 5~25 |
| DHW Tank | Nominal Water Volume | | liter | 200 | 260 | 260 |
| | Net Water Volume | | liter | 194 | 254 | 254 |
| | Material | | - | SUS 316L | SUS 316L | SUS 316L |
| | Max. water pressure | | bar | 10 | 10 | 10 |
| | Max. water temperature | | °C | 70 | 70 | 70 |
| | Immersion heater (= booster heater) | | kW | 3 (230V) | 3 (230V) | 3 (230V) |
| | Insulation | | - | PU Foam | PU Foam | PU Foam |
| Water Pump | Type | | - | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) |
| | Motor Input | | W | 100 | 100 | 100 |
| | Number of Unit | | EA | 1 | 1 | 1 |
| Backup Heater | Power | | kW | 2 (230V) | 2 (230V) | 2 (230V) |
| | Thermostat | | °C | 80±4 | 80±4 | 80±4 |
| | Thermostat (Thermal Fuse) | | °C | 93 +0 -5 | 93 +0 -5 | 93 +0 -5 |
| Safety device | Pressure relief valve | | bar | 2.9 | 2.9 | 2.9 |
| | Flow Sensor | | LPM | 5~60 | 5~60 | 5~60 |
| | Temperature & Pressure relief valve(Tank) | | bar, °C | 7, 90 | 7, 90 | 7, 90 |
| | Thermostat (for immersion heater) | | °C | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) |
| Expansion vessel | Internal water volume | | liter | 8 | 8 | 8 |
| | Working pressure | | MPa | 0.3 | 0.3 | 0.3 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE200RNWMEG/EU | AE260RNWMEG/EU | AE260RNWMEG/EU |
|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Water Pump (Primary) | Type | | - | BLDC Inv | BLDC Inv | BLDC Inv |
| | Max static pressure | | mAq | 9.5 | 9.5 | 9.5 |
| Water Heat Exchanger | Type | | - | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager |
| | Quantity | | EA | 1 | 1 | 1 |
| | Internal water volume | | L | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) |
| | Water flow rate | Min. | l/min | 12 | 7 | 12 |
| | | Max. | l/min | 58 | 48 | 58 |
| | Insulation material | | - | PE-FOAM | PE-FOAM | PE-FOAM |
| IP Class | | | - | IPX1 | IPX1 | IPX1 |
| Air Purge Valve | | | Φ, inch | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" |
| Sound | Sound Pressure | Heating | dB(A) | 30 | 26 | 30 |
| | | Cooling | dB(A) | 30 | 26 | 30 |
| | Sound Power | Heating | dB(A) | 44 | 40 | 44 |
| Casing | Color | | - | Earth brown | Earth brown | Earth brown |
| | Material | | - | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| Packing | Material | | - | EPS/BOX | EPS/BOX | EPS/BOX |
| | Packing Weight | | kg | 12.0 | 12.0 | 12.0 |
| External Dimension | Net Weight | | kg | 130.0 | 140.0 | 140.0 |
| | Shipping Weight | | kg | 142.0 | 152.0 | 152.0 |
| | Net Dimensions (WxHxD) | | mm | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 |
| | Shipping Dimensions (WxHxD) | | mm | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 |

### NOTE

- Specifications may be subject to change without prior notice.

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE260RNWMEG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU |
|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Mode | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Power Supply | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50<br>3,4,380-415,50 | 1,2,220-240,50<br>3,4,380-415,50 | 1,2,220-240,50<br>3,4,380-415,50 |
| Power input | Cooling (Nominal) | | kW | 0.2 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 |
| | Heating (Nominal) | | kW | 0.2 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 |
| | Cooling (Max) | | kW | 0.2 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 |
| | Heating (Max) | | kW | 5.2 | 3Φ 6.00 / 1Φ 3.20 | 3Φ 6.00 / 1Φ 3.20 | 3Φ 6.00 / 1Φ 3.20 |
| Current Input | Cooling (Nominal) | | A | 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 |
| | Heating (Nominal) | | A | 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 |
| | Cooling (Max) | | A | 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 |
| | Heating (Max) | | A | 22.7 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 |
| Field Wiring | MCA | | A | 22.7 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 |
| | MFA | | | 28.4 | 3Φ 10.9 / 1Φ 17.5 | 3Φ 10.9 / 1Φ 17.5 | 3Φ 10.9 / 1Φ 17.5 |
| Heating up time | | | h /min | 1 / 50 | 2 / 25 | 1 / 50 | 1 / 50 |
| Water Heating | Declared load profile | | - | XL | XL | XL | XL |
| | Energy efficiency Class | | - | A | A+ | A | A |
| Water Connections | Water Flow Rate (Std)[H/C] | | LPM | 46.2/40.4 | 23.1/21.6 | 34.6/34.6 | 46.2/40.4 |
| | Water Pressure (Max) | | bar | 3 | 3 | 3 | 3 |
| | Water pipe (To outdoor unit) | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 | 28 |
| | Water pipe (Space heating) | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 | 28 |
| | Water pipe (DHW) | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 22 | 22 | 22 | 22 |
| | | Outlet | Φ, mm | 22 | 22 | 22 | 22 |
| | Water pipe (Secondary water return, Only 260L | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 22 | 22 | 22 | 22 |
| | Leaving Water Temperature | Heating | °C | 15~65 | 15~65 | 15~65 | 15~65 |
| | | Cooling | °C | 5~25 | 5~25 | 5~25 | 5~25 |
| DHW Tank | Nominal Water Volume | | liter | 260 | 260 | 260 | 260 |
| | Net Water Volume | | liter | 254 | 254 | 254 | 254 |
| | Material | | - | SUS 316L | SUS 316L | SUS 316L | SUS 316L |
| | Max. water pressure | | bar | 10 | 10 | 10 | 10 |
| | Max. water temperature | | °C | 70 | 70 | 70 | 70 |
| | Immersion heater (= booster heater) | | kW | 3 (230V) | 3 (230V) | 3 (230V) | 3 (230V) |
| | Insulation | | - | PU Foam | PU Foam | PU Foam | PU Foam |
| Water Pump | Type | | - | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) |
| | Motor Input | | W | 100 | 100 | 100 | 100 |
| | Number of Unit | | EA | 1 | 1 | 1 | 1 |
| Backup Heater | Power | | kW | 2 (230V) | 6 (3Φ 400V) | 6 (3Φ 400V) | 6 (3Φ 400V) |
| | Thermostat | | °C | 80±4 | 80±4 | 80±4 | 80±4 |
| | Thermostat (Thermal Fuse) | | °C | 93 +0 -5 | 93 +0 -5 | 93 +0 -5 | 93 +0 -5 |
| Safety device | Pressure relief valve | | bar | 2.9 | 2.9 | 2.9 | 2.9 |
| | Flow Sensor | | LPM | 5~60 | 5~60 | 5~60 | 5~60 |
| | Temperature & Pressure relief valve(Tank) | | bar, °C | 7, 90 | 7, 90 | 7, 90 | 7, 90 |
| | Thermostat (for immersion heater) | | °C | 80 ±5 (Auto)<br>90 ±5 (Manual) | 80 ±5 (Auto)<br>90 ±5 (Manual) | 80 ±5 (Auto)<br>90 ±5 (Manual) | 80 ±5 (Auto)<br>90 ±5 (Manual) |
| Expansion vessel | Internal water volume | | liter | 8 | 8 | 8 | 8 |
| | Working pressure | | MPa | 0.3 | 0.3 | 0.3 | 0.3 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE260RNWMEG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU | AE260RNWMGG/EU |
|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Water Pump (Primary) | Type | | - | BLDC Inv | BLDC Inv | BLDC Inv | BLDC Inv |
| | Max static pressure | | mAq | 9.5 | 9.5 | 9.5 | 9.5 |
| Water Heat Exchanger | Type | | - | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager |
| | Quantity | | EA | 1 | 1 | 1 | 1 |
| | Internal water volume | | L | 1.01(Water Side) 0.98(Refrigerant Side) | 1.01(Water Side) 0.98(Refrigerant Side) | 1.01(Water Side) 0.98(Refrigerant Side) | 1.01(Water Side) 0.98(Refrigerant Side) |
| | Water flow rate | Min. | l/min | 12 | 7 | 12 | 12 |
| | | Max. | l/min | 58 | 48 | 58 | 58 |
| | Insulation material | | - | PE-FOAM | PE-FOAM | PE-FOAM | PE-FOAM |
| IP Class | | | - | IPX1 | IPX1 | IPX1 | IPX1 |
| Air Purge Valve | | | Φ, inch | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" |
| Sound | Sound Pressure | Heating | dB(A) | 30 | 26 | 30 | 30 |
| | | Cooling | dB(A) | 30 | 26 | 30 | 30 |
| | Sound Power | Heating | dB(A) | 44 | 40 | 44 | 44 |
| Casing | Color | | - | Earth brown | Earth brown | Earth brown | Earth brown |
| | Material | | - | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| Packing | Material | | - | EPS/BOX | EPS/BOX | EPS/BOX | EPS/BOX |
| | Packing Weight | | kg | 12.0 | 12.0 | 12.0 | 12.0 |
| External Dimension | Net Weight | | kg | 140.0 | 140.0 | 140.0 | 140.0 |
| | Shipping Weight | | kg | 152.0 | 152.0 | 152.0 | 152.0 |
| | Net Dimensions (WxHxD) | | mm | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 |
| | Shipping Dimensions (WxHxD) | | mm | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 |

### NOTE

- Specifications may be subject to change without prior notice.

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | | Indoor Unit | | AE200CNWMEG/EU | AE200CNWMEG/EU | AE200CNWMEG/EU |
|---|---|---|---|---|---|---|---|
| | | | Outdoor Unit | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Mode | | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Power Supply | | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Power input | Cooling (Nominal) | | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Nominal) | | | kW | 0.2 | 0.2 | 0.2 |
| | Cooling (Max) | | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Max) | | | kW | 5.2 | 5.2 | 5.2 |
| Current Input | Cooling (Nominal) | | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Nominal) | | | A | 0.9 | 0.9 | 0.9 |
| | Cooling (Max) | | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Max) | | | A | 22.7 | 22.7 | 22.7 |
| Field Wiring | MCA | | | A | 22.7 | 22.7 | 22.7 |
| | MFA | | | | 28.4 | 28.4 | 28.4 |
| Heating up time | | | | h /min | 2 / 20 | 2 / 0 | 1 / 30 |
| Water Heating | Declared load profile | | | - | L | L | L |
| | Energy efficiency Class | | | - | A+ | A+ | A |
| Water Connections | Water Flow Rate (Std)[H/C] | | | LPM | 14.4/14.4 | 23.1/21.6 | 34.6/34.6 |
| | Water Pressure (Max) | | | bar | 3 | 3 | 3 |
| | Water pipe (To outdoor unit) | Type | | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | | Φ, mm | 28 | 28 | 28 |
| | | Outlet | | Φ, mm | 28 | 28 | 28 |
| | Water pipe (Space heating) | Type | | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | | Φ, mm | 28 | 28 | 28 |
| | | Outlet | | Φ, mm | 28 | 28 | 28 |
| | Water pipe (DHW) | Type | | - | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | | Φ, mm | 22 | 22 | 22 |
| | | Outlet | | Φ, mm | 22 | 22 | 22 |
| | Water pipe (Secondary water return, Only 260L | Type | | - | - | - | - |
| | | Inlet | | Φ, mm | - | - | - |
| | Leaving Water Temperature | Heating | | °C | 15~65 | 15~65 | 15~65 |
| | | Cooling | | °C | 5~25 | 5~25 | 5~25 |
| DHW Tank | Nominal Water Volume | | | liter | 200 | 200 | 200 |
| | Net Water Volume | | | liter | 194 | 194 | 194 |
| | Material | | | - | SUS 316L | SUS 316L | SUS 316L |
| | Max. water pressure | | | bar | 10 | 10 | 10 |
| | Max. water temperature | | | °C | 70 | 70 | 70 |
| | Immersion heater (= booster heater) | | | kW | 3 (230V) | 3 (230V) | 3 (230V) |
| | Insulation | | | - | PU Foam | PU Foam | PU Foam |
| Water Pump | Type | | | - | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) |
| | Motor Input | | | W | 100 | 100 | 100 |
| | Number of Unit | | | EA | 1 | 1 | 1 |
| Backup Heater | Power | | | kW | 2 (230V) | 2 (230V) | 2 (230V) |
| | Thermostat | | | °C | 85±4 | 85±4 | 85±4 |
| | Thermostat (Thermal Fuse) | | | °C | 98 +0 -5 | 98 +0 -5 | 98 +0 -5 |
| Safety device | Pressure relief valve | | | bar | 2.9 | 2.9 | 2.9 |
| | Flow Sensor | | | LPM | 5~60 | 5~60 | 5~60 |
| | Temperature & Pressure relief valve(Tank) | | | bar, °C | 7, 90 | 7, 90 | 7, 90 |
| | Thermostat (for immersion heater) | | | °C | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) |
| Expansion vessel | Internal water volume | | | liter | 8 | 8 | 8 |
| | Working pressure | | | MPa | 0.3 | 0.3 | 0.3 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE200CNWMEG/EU | AE200CNWMEG/EU | AE200CNWMEG/EU |
|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE050RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Water Pump (Primary) | Type | | - | BLDC Inv | BLDC Inv | BLDC Inv |
| | Max static pressure | | mAq | 9.0 | 9.0 | 9.0 |
| Water Heat Exchanger | Type | | - | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager |
| | Quantity | | EA | 1 | 1 | 1 |
| | Internal water volume | | L | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) |
| | Water flow rate | Min. | l/min | 7 | 7 | 12 |
| | | Max. | l/min | 48 | 48 | 58 |
| | Insulation material | | - | PE-FOAM | PE-FOAM | PE-FOAM |
| IP Class | | | - | IPX1 | IPX1 | IPX1 |
| Air Purge Valve | | | Φ, inch | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" |
| Sound | Sound Pressure | Heating | dB(A) | 26 | 26 | 30 |
| | | Cooling | dB(A) | 26 | 26 | 30 |
| | Sound Power | Heating | dB(A) | 40 | 40 | 44 |
| Casing | Color | | - | Earth brown | Earth brown | Earth brown |
| | Material | | - | Poweder coated Galvanised steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| Packing | Material | | - | EPS/BOX | EPS/BOX | EPS/BOX |
| | Packing Weight | | kg | 12.0 | 12.0 | 12.0 |
| External Dimension | Net Weight | | kg | 128.0 | 128.0 | 128.0 |
| | Shipping Weight | | kg | 140.0 | 140.0 | 140.0 |
| | Net Dimensions (WxHxD) | | mm | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 |
| | Shipping Dimensions (WxHxD) | | mm | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 |

### NOTE

- Specifications may be subject to change without prior notice.

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | | Indoor Unit | | AE200CNWMEG/EU | AE260CNWMEG/EU | AE260CNWMEG/EU |
|---|---|---|---|---|---|---|---|
| | | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Mode | | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Power Supply | | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Power input | Cooling (Nominal) | | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Nominal) | | | kW | 0.2 | 0.2 | 0.2 |
| | Cooling (Max) | | | kW | 0.2 | 0.2 | 0.2 |
| | Heating (Max) | | | kW | 5.2 | 5.2 | 5.2 |
| Current Input | Cooling (Nominal) | | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Nominal) | | | A | 0.9 | 0.9 | 0.9 |
| | Cooling (Max) | | | A | 0.9 | 0.9 | 0.9 |
| | Heating (Max) | | | A | 22.7 | 22.7 | 22.7 |
| Field Wiring | MCA | | | A | 22.7 | 22.7 | 22.7 |
| | MFA | | | | 28.4 | 28.4 | 28.4 |
| Heating up time | | | | h /min | 1 / 30 | 2 / 25 | 1 / 50 |
| Water Heating | Declared load profile | | | - | L | XL | XL |
| | Energy efficiency Class | | | - | A | A+ | A |
| Water Connections | Water Flow Rate (Std)[H/C] | | | LPM | 46.2/40.4 | 23.1/21.6 | 34.6/34.6 |
| | Water Pressure (Max) | | | bar | 3 | 3 | 3 |
| | Water pipe (To outdoor unit) | | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | | Inlet | Φ, mm | 28 | 28 | 28 |
| | | | Outlet | Φ, mm | 28 | 28 | 28 |
| | Water pipe (Space heating) | | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | | Inlet | Φ, mm | 28 | 28 | 28 |
| | | | Outlet | Φ, mm | 28 | 28 | 28 |
| | Water pipe (DHW) | | Type | - | Straight pipe | Straight pipe | Straight pipe |
| | | | Inlet | Φ, mm | 22 | 22 | 22 |
| | | | Outlet | Φ, mm | 22 | 22 | 22 |
| | Water pipe (Secondary water return, Only 260L | | Type | - | - | Straight pipe | Straight pipe |
| | | | Inlet | Φ, mm | - | 22 | 22 |
| | Leaving Water Temperature | | Heating | °C | 15~65 | 15~65 | 15~65 |
| | | | Cooling | °C | 5~25 | 5~25 | 5~25 |
| DHW Tank | Nominal Water Volume | | | liter | 200 | 260 | 260 |
| | Net Water Volume | | | liter | 194 | 254 | 254 |
| | Material | | | - | SUS 316L | SUS 316L | SUS 316L |
| | Max. water pressure | | | bar | 10 | 10 | 10 |
| | Max. water temperature | | | °C | 70 | 70 | 70 |
| | Immersion heater (= booster heater) | | | kW | 3 (230V) | 3 (230V) | 3 (230V) |
| | Insulation | | | - | PU Foam | PU Foam | PU Foam |
| Water Pump | Type | | | - | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) |
| | Motor Input | | | W | 100 | 100 | 100 |
| | Number of Unit | | | EA | 1 | 1 | 1 |
| Backup Heater | Power | | | kW | 2 (230V) | 2 (230V) | 2 (230V) |
| | Thermostat | | | °C | 85±4 | 85±4 | 85±4 |
| | Thermostat (Thermal Fuse) | | | °C | 98 +0 -5 | 98 +0 -5 | 98 +0 -5 |
| Safety device | Pressure relief valve | | | bar | 2.9 | 2.9 | 2.9 |
| | Flow Sensor | | | LPM | 5~60 | 5~60 | 5~60 |
| | Temperature & Pressure relief valve(Tank) | | | bar, °C | 7, 90 | 7, 90 | 7, 90 |
| | Thermostat (for immersion heater) | | | °C | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) | 80 ±5 (Auto) 90 ±5 (Manual) |
| Expansion vessel | Internal water volume | | | liter | 8 | 8 | 8 |
| | Working pressure | | | MPa | 0.3 | 0.3 | 0.3 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE200CNWMEG/EU | AE260CNWMEG/EU | AE260CNWMEG/EU |
|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDEG/EU | AE120RXYDEG/EU |
| Water Pump (Primary) | Type | | - | BLDC Inv | BLDC Inv | BLDC Inv |
| | Max static pressure | | mAq | 9.0 | 9.0 | 9.0 |
| Water Heat Exchanger | Type | | - | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager |
| | Quantity | | EA | 1 | 1 | 1 |
| | Internal water volume | | L | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) | 1.01(Water Side)<br>0.98(Refrigerant Side) |
| | Water flow rate | Min. | l/min | 12 | 7 | 12 |
| | | Max. | l/min | 58 | 48 | 58 |
| | Insulation material | | - | PE-FOAM | PE-FOAM | PE-FOAM |
| IP Class | | | - | IPX1 | IPX1 | IPX1 |
| Air Purge Valve | | | Φ, inch | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" |
| Sound | Sound Pressure | Heating | dB(A) | 30 | 26 | 30 |
| | | Cooling | dB(A) | 30 | 26 | 30 |
| | Sound Power | Heating | dB(A) | 44 | 40 | 44 |
| Casing | Color | | - | Earth brown | Earth brown | Earth brown |
| | Material | | - | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| Packing | Material | | - | EPS/BOX | EPS/BOX | EPS/BOX |
| | Packing Weight | | kg | 12.0 | 12.0 | 12.0 |
| External Dimension | Net Weight | | kg | 128.0 | 136.0 | 136.0 |
| | Shipping Weight | | kg | 140.0 | 148.0 | 148.0 |
| | Net Dimensions (WxHxD) | | mm | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 |
| | Shipping Dimensions (WxHxD) | | mm | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 |

**NOTE**

- Specifications may be subject to change without prior notice.

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE260CNWMEG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU |
|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Mode | | | - | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) | Heat Pump (A2W) |
| Power Supply | | | Φ, #, V, Hz | 1,2,220-240,50 | 1,2,220-240,50<br>3,4,380-415,50 | 1,2,220-240,50<br>3,4,380-415,50 | 1,2,220-240,50<br>3,4,380-415,50 |
| Power input | Cooling (Nominal) | | kW | 0.2 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 |
| | Heating (Nominal) | | kW | 0.2 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 |
| | Cooling (Max) | | kW | 0.2 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 | 3Φ - / 1Φ 0.20 |
| | Heating (Max) | | kW | 5.2 | 3Φ 6.00 / 1Φ 3.20 | 3Φ 6.00 / 1Φ 3.20 | 3Φ 6.00 / 1Φ 3.20 |
| Current Input | Cooling (Nominal) | | A | 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 |
| | Heating (Nominal) | | A | 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 |
| | Cooling (Max) | | A | 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 | 3Φ - / 1Φ 0.9 |
| | Heating (Max) | | A | 22.7 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 |
| Field Wiring | MCA | | A | 22.7 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 | 3Φ 8.7 / 1Φ 14.0 |
| | MFA | | | 28.4 | 3Φ 10.9 / 1Φ 17.5 | 3Φ 10.9 / 1Φ 17.5 | 3Φ 10.9 / 1Φ 17.5 |
| Heating up time | | | h /min | 1 / 50 | 2 / 25 | 1 / 50 | 1 / 50 |
| Water Heating | Declared load profile | | - | XL | XL | XL | XL |
| | Energy efficiency Class | | - | A | A+ | A | A |
| Water Connections | Water Flow Rate (Std)[H/C] | | LPM | 46.2/40.4 | 23.1/21.6 | 34.6/34.6 | 46.2/40.4 |
| | Water Pressure (Max) | | bar | 3 | 3 | 3 | 3 |
| | Water pipe (To outdoor unit) | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 | 28 |
| | Water pipe (Space heating) | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 28 | 28 | 28 | 28 |
| | | Outlet | Φ, mm | 28 | 28 | 28 | 28 |
| | Water pipe (DHW) | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 22 | 22 | 22 | 22 |
| | | Outlet | Φ, mm | 22 | 22 | 22 | 22 |
| | Water pipe (Secondary water return, Only 260L | Type | - | Straight pipe | Straight pipe | Straight pipe | Straight pipe |
| | | Inlet | Φ, mm | 22 | 22 | 22 | 22 |
| | Leaving Water Temperature | Heating | °C | 15~65 | 15~65 | 15~65 | 15~65 |
| | | Cooling | °C | 5~25 | 5~25 | 5~25 | 5~25 |
| DHW Tank | Nominal Water Volume | | liter | 260 | 260 | 260 | 260 |
| | Net Water Volume | | liter | 254 | 254 | 254 | 254 |
| | Material | | - | SUS 316L | SUS 316L | SUS 316L | SUS 316L |
| | Max. water pressure | | bar | 10 | 10 | 10 | 10 |
| | Max. water temperature | | °C | 70 | 70 | 70 | 70 |
| | Immersion heater (= booster heater) | | kW | 3 (230V) | 3 (230V) | 3 (230V) | 3 (230V) |
| | Insulation | | - | PU Foam | PU Foam | PU Foam | PU Foam |
| Water Pump | Type | | - | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) | Centrifurugal (GPA 25-9H) |
| | Motor Input | | W | 100 | 100 | 100 | 100 |
| | Number of Unit | | EA | 1 | 1 | 1 | 1 |
| Backup Heater | Power | | kW | 2 (230V) | 6 (3Φ 400V) | 6 (3Φ 400V) | 6 (3Φ 400V) |
| | Thermostat | | °C | 85±4 | 85±4 | 85±4 | 85±4 |
| | Thermostat (Thermal Fuse) | | °C | 98 +0 -5 | 98 +0 -5 | 98 +0 -5 | 98 +0 -5 |
| Safety device | Pressure relief valve | | bar | 2.9 | 2.9 | 2.9 | 2.9 |
| | Flow Sensor | | LPM | 5~60 | 5~60 | 5~60 | 5~60 |
| | Temperature & Pressure relief valve(Tank) | | bar, °C | 7, 90 | 7, 90 | 7, 90 | 7, 90 |
| | Thermostat (for immersion heater) | | °C | 80 ±5 (Auto)<br>90 ±5 (Manual) | 80 ±5 (Auto)<br>90 ±5 (Manual) | 80 ±5 (Auto)<br>90 ±5 (Manual) | 80 ±5 (Auto)<br>90 ±5 (Manual) |
| Expansion vessel | Internal water volume | | liter | 8 | 8 | 8 | 8 |
| | Working pressure | | MPa | 0.3 | 0.3 | 0.3 | 0.3 |

# 3. Tank integrated hydro unit

## 3-1. Specifications

| Model Name | | Indoor Unit | | AE260CNWMEG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU | AE260CNWMGG/EU |
|---|---|---|---|---|---|---|---|
| | | Outdoor Unit | | AE160RXYDEG/EU | AE080RXYDGG/EU | AE120RXYDGG/EU | AE160RXYDGG/EU |
| Water Pump (Primary) | Type | | - | BLDC Inv | BLDC Inv | BLDC Inv | BLDC Inv |
| | Max static pressure | | mAq | 9.0 | 9.0 | 9.0 | 9.0 |
| Water Heat Exchanger | Type | | - | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager | Braszed Plate Exchager |
| | Quantity | | EA | 1 | 1 | 1 | 1 |
| | Internal water volume | | L | 1.01(Water Side) 0.98(Refrigerant Side) | 1.01(Water Side) 0.98(Refrigerant Side) | 1.01(Water Side) 0.98(Refrigerant Side) | 1.01(Water Side) 0.98(Refrigerant Side) |
| | Water flow rate | Min. | l/min | 12 | 7 | 12 | 12 |
| | | Max. | l/min | 58 | 48 | 58 | 58 |
| | Insulation material | | - | PE-FOAM | PE-FOAM | PE-FOAM | PE-FOAM |
| IP Class | | | - | IPX1 | IPX1 | IPX1 | IPX1 |
| Air Purge Valve | | | Φ, inch | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" | BSPP male 3/8" |
| Sound | Sound Pressure | Heating | dB(A) | 30 | 26 | 30 | 30 |
| | | Cooling | dB(A) | 30 | 26 | 30 | 30 |
| | Sound Power | Heating | dB(A) | 44 | 40 | 44 | 44 |
| Casing | Color | | - | Earth brown | Earth brown | Earth brown | Earth brown |
| | Material | | - | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel | Poweder coated Electro galvanized steel |
| Packing | Material | | - | EPS/BOX | EPS/BOX | EPS/BOX | EPS/BOX |
| | Packing Weight | | kg | 12.0 | 12.0 | 12.0 | 12.0 |
| External Dimension | Net Weight | | kg | 136.0 | 138.0 | 138.0 | 138.0 |
| | Shipping Weight | | kg | 148.0 | 150.0 | 150.0 | 150.0 |
| | Net Dimensions (WxHxD) | | mm | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 | 595 x 1,800 x 700 |
| | Shipping Dimensions (WxHxD) | | mm | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 | 700 x 2,000 x 780 |

### NOTE

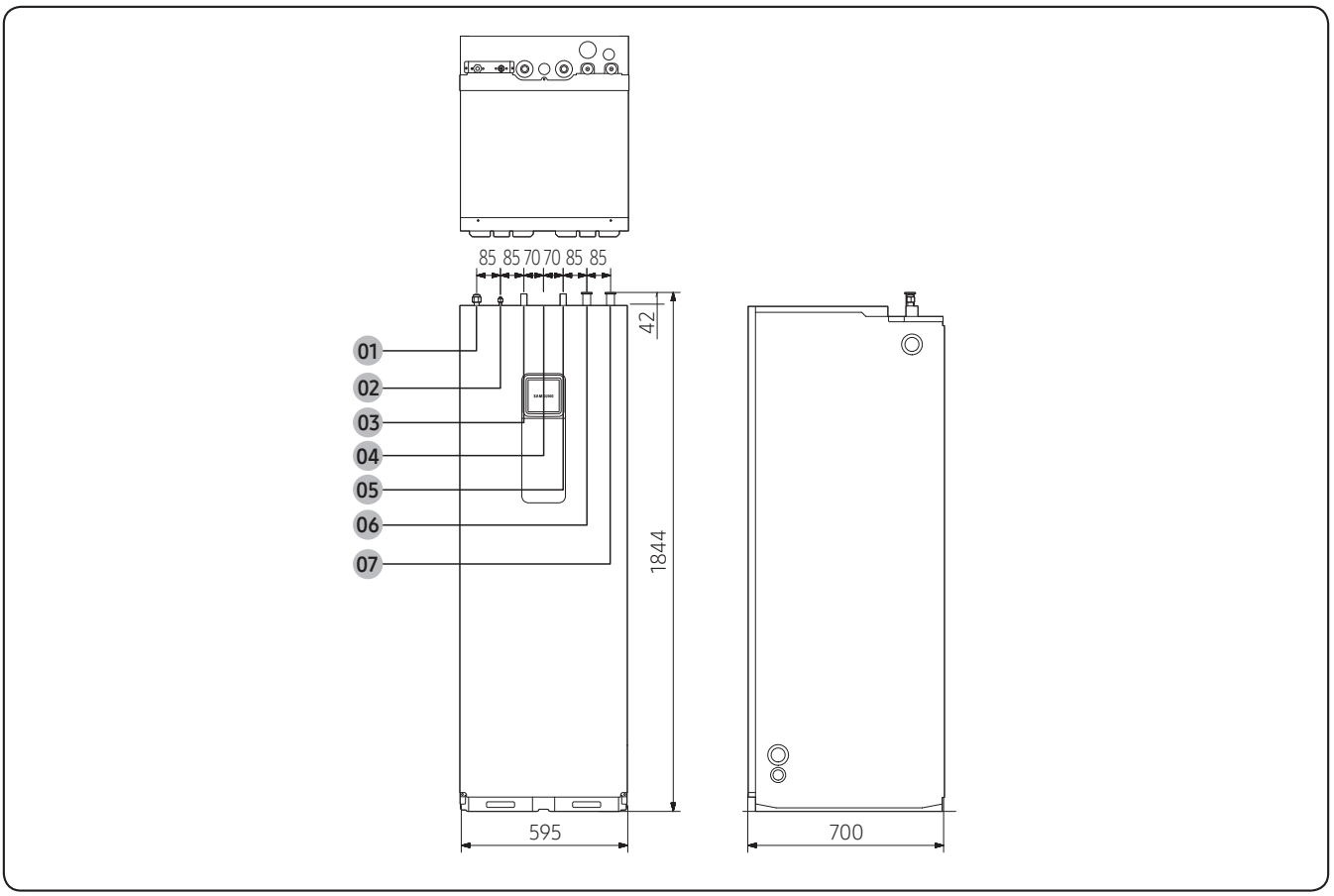
- Specifications may be subject to change without prior notice.

# 3. Tank integrated hydro unit

## 3-2. Dimensional drawing

### AE200/260*NW**G/EU

Unit : mm



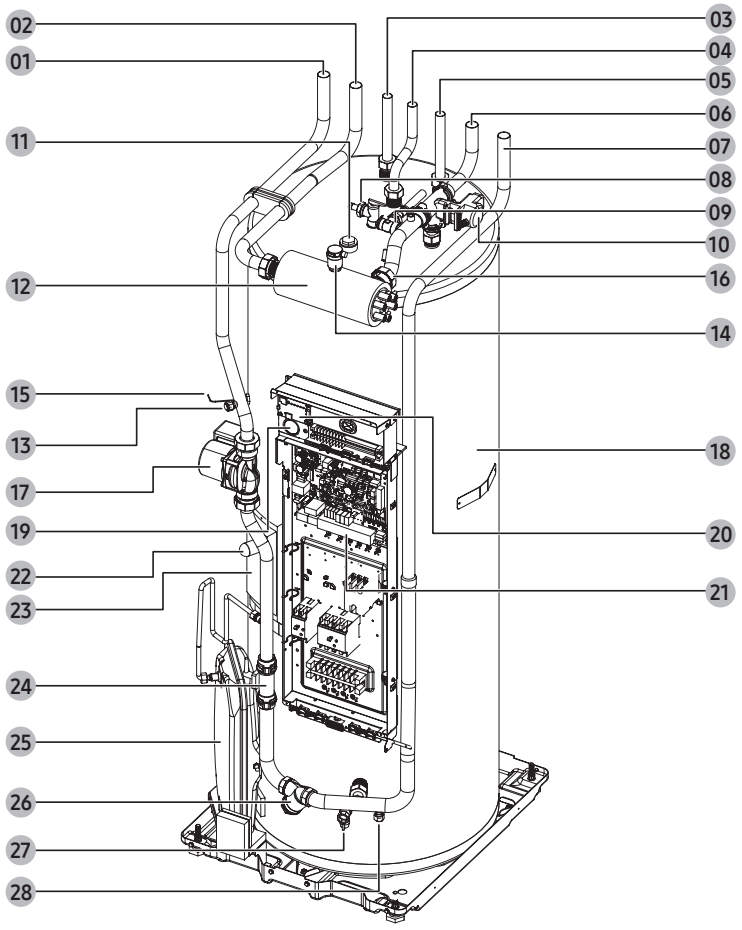

| NO | Name | Description |
|---|---|---|
| 01 | Mono outdoor outlet | Ø28, T1.2 |
| 02 | Mono outdoor inlet | Ø28, T1.2 |
| 03 | Hot water outlet | Ø22, T1.0 |
| 04 | Secondary return (260L option) | Ø22, T1.0 |
| 05 | Cold water inlet | Ø22, T1.0 |
| 06 | Space heating outlet | Ø28, T1.2 |
| 07 | Space heating inlet | Ø28, T1.2 |

# 3. Tank integrated hydro unit

## 3-2. Dimensional drawing

### Main components

AE200/260RNWM*G/EU



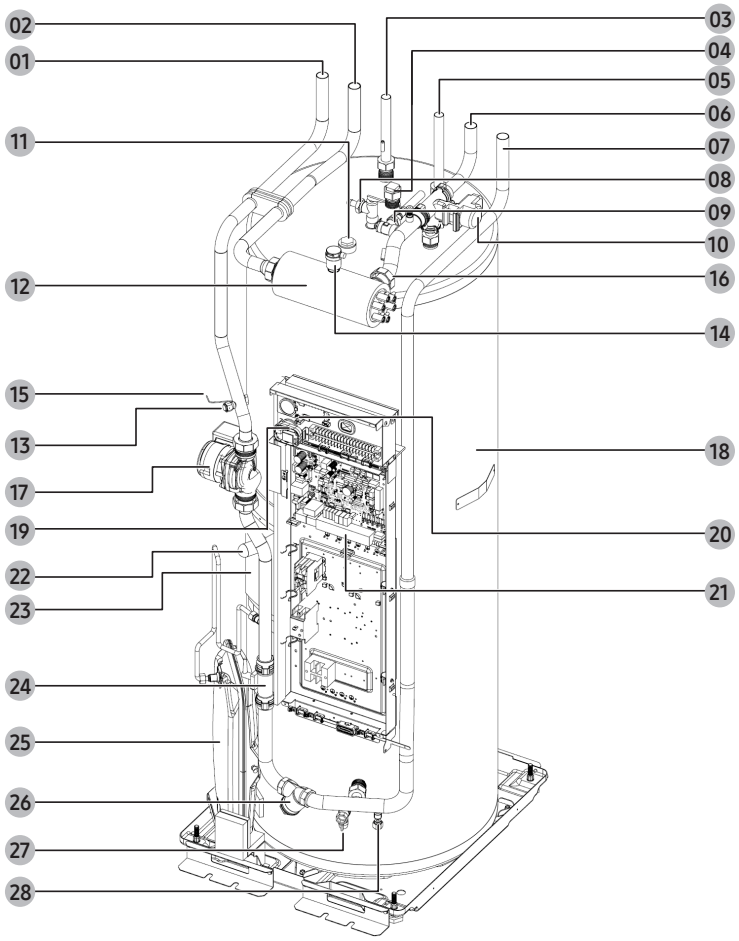

| NO | Part name | Note | NO | Part name | Note |
|---|---|---|---|---|---|
| 01 | Water pipe (Return to heat pump) | ø28, Straight pipe | 15 | Tank thermistor | |
| 02 | Water pipe (Flow from heat pump) | ø28, Straight pipe | 16 | Heater thermistor | |
| 03 | Hot water outlet | ø22, Straight pipe | 17 | Water pump | |
| 04 | Secondary return | ø22, Straight pipe (260 L option) | 18 | Water tank | 200 L / 260 L |
| 05 | Cold water inlet | ø22, Straight pipe | 19 | Manometer | 0~4 bar |
| 06 | Space heating outlet | ø28, Straight pipe | 20 | S/D converter | |
| 07 | Space heating inlet | ø28, Straight pipe | 21 | Control box | |
| 08 | T/P valve | 7 bar, 90°C | 22 | Booster heater | 3kW |
| 09 | Pressure relief valve | 3 bar, BSPP 1/2" | 23 | Booster heater thermostat | |
| 10 | 3-way valve | | 24 | Flow sensor | |
| 11 | Anode bar | BSPP 1" | 25 | Expasion vessel | 8 L, Pre-charge gas: 0.1 MPa, N2, BSPP 3/8" |
| 12 | Back-up heater | | 26 | Strainer | |
| 13 | Drain port | | 27 | Tank drain valve | |
| 14 | Air vent | BSPP 3/8" | 28 | Drain port | Primary circuit |

# 3. Tank integrated hydro unit

## 3-2. Dimensional drawing

### Main components

AE200/260CNWM*G/EU

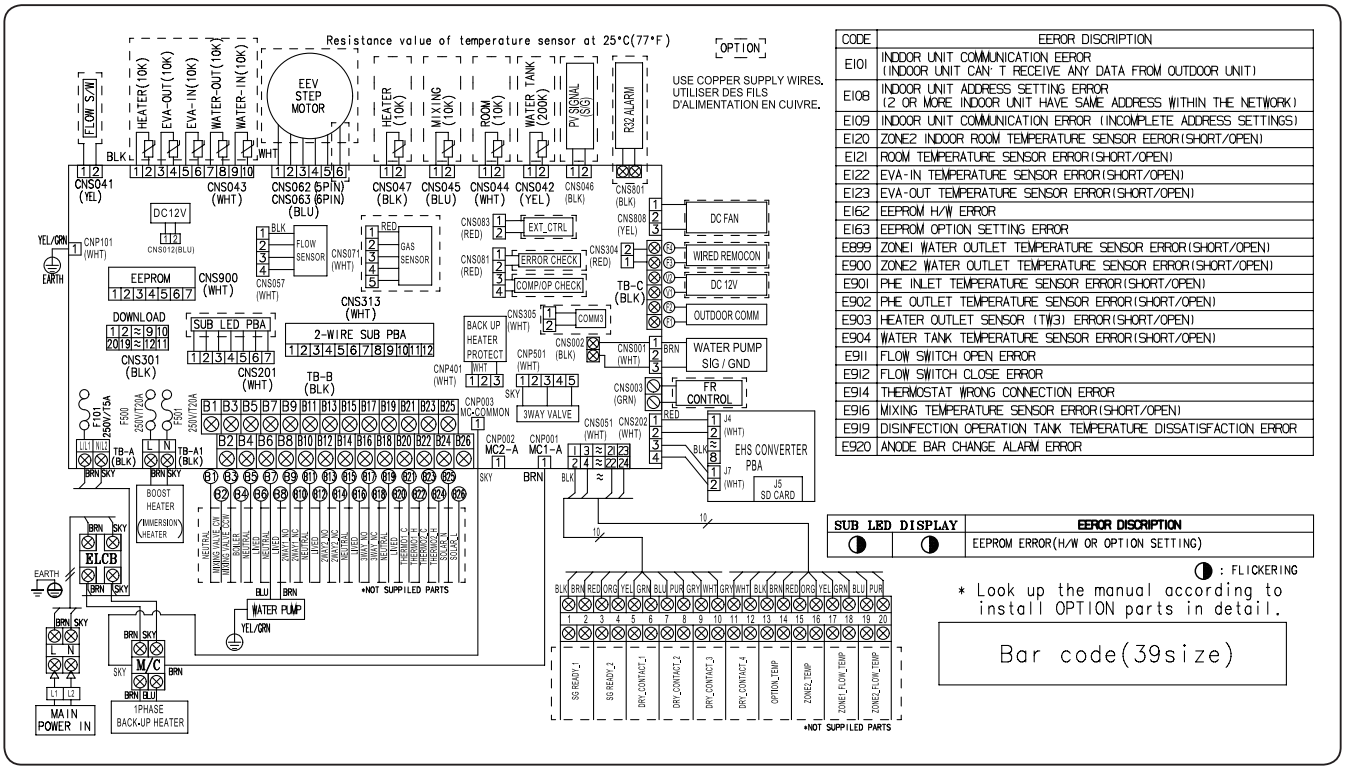



| NO | Part name | Note | NO | Part name | Note |
|---|---|---|---|---|---|
| 01 | Water pipe (Return to heat pump) | ø28, Straight pipe | 15 | Tank thermistor | |
| 02 | Water pipe (Flow from heat pump) | ø28, Straight pipe | 16 | Heater thermistor | |
| 03 | Hot water outlet | ø22, Straight pipe | 17 | Water pump | |
| 04 | Secondary return | ø22, Straight pipe (260 L option) | 18 | Water tank | 200 L / 260 L |
| 05 | Cold water inlet | ø22, Straight pipe | 19 | W-LAN Module | |
| 06 | Space heating outlet | ø28, Straight pipe | 20 | S/D converter | |
| 07 | Space heating inlet | ø28, Straight pipe | 21 | Control box | |
| 08 | T/P valve | 7 bar, 90°C | 22 | Booster heater | 3kW |
| 09 | Pressure relief valve | 3 bar, BSPP 1/2" | 23 | Booster heater thermostat | |
| 10 | 3-way valve | | 24 | Flow sensor | |
| 11 | Anode bar | BSPP 1” | 25 | Expasion vessel | 8 L, Pre-charge gas: 0.1 MPa, N2, BSPP 3/8” |
| 12 | Back-up heater | | 26 | Strainer | |
| 13 | Drain port | | 27 | Tank drain valve | |
| 14 | Air vent | BSPP 3/8” | 28 | Drain port | Primary circuit |

# 3. Tank integrated hydro unit

## 3-3. Electrical wiring diagram

### AE200/260RNWMEG/EU




| CODE | EERROR DISCRIPTION |
|---|---|
| E101 | INDOOR UNIT COMMUNICATION EERROR (INDOOR UNIT CAN' T RECEIVE ANY DATA FROM OUTDOOR UNIT) |
| E108 | INDOOR UNIT ADDRESS SETTING ERROR (2 OR MORE INDOOR UNIT HAVE SAME ADDRESS WITHIN THE NETWORK) |
| E109 | INDOOR UNIT COMMUNICATION ERROR (INCOMPLETE ADDRESS SETTINGS) |
| E120 | ZONE2 INDOOR ROOM TEMPERATURE SENSOR EERROR(SHORT/OPEN) |
| E121 | ROOM TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E122 | EVA-IN TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E123 | EVA-OUT TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E162 | EEPROM H/W ERROR |
| E163 | EEPROM OPTION SETTING ERROR |
| E899 | ZONE1 WATER OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E900 | ZONE2 WATER OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E901 | PHE INLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E902 | PHE OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E903 | HEATER OUTLET SENSOR (TW3) ERROR(SHORT/OPEN) |
| E904 | WATER TANK TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E911 | FLOW SWITCH OPEN ERROR |
| E912 | FLOW SWITCH CLOSE ERROR |
| E914 | THERMOSTAT WRONG CONNECTION ERROR |
| E916 | MIXING TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E919 | DISINFECTION OPERATION TANK TEMPERATURE DISSATISFACTION ERROR |
| E920 | ANODE BAR CHANGE ALARM ERROR |

※ It does not support external input(CNS083)/output(CNS081) signal function

| | | | |
|---|---|---|---|
| HEATER | Thermistor HEATER(10K) | EVA-OUT | Thermistor EVA-OUT(10K) |
| EVA-IN | Thermistor EVA-IN(10K) | WATER-OUT | Thermistor WATER-OUT(10K) |
| WATER-IN | Thermistor WATER-IN(10K) | WATER TANK | Thermistor WATER TANK(200K) |
| MIXING | Thermistor MIXING VALVE(10K) | WIRED REMOCON | Wired Remote Controller |
| OUTDOOR COMM | Outdoor Communication | SIG/GND | Signal/Ground |
| ELCB | Earth Leakage Circuit Breaker | M/C | Magnetic Contactor |

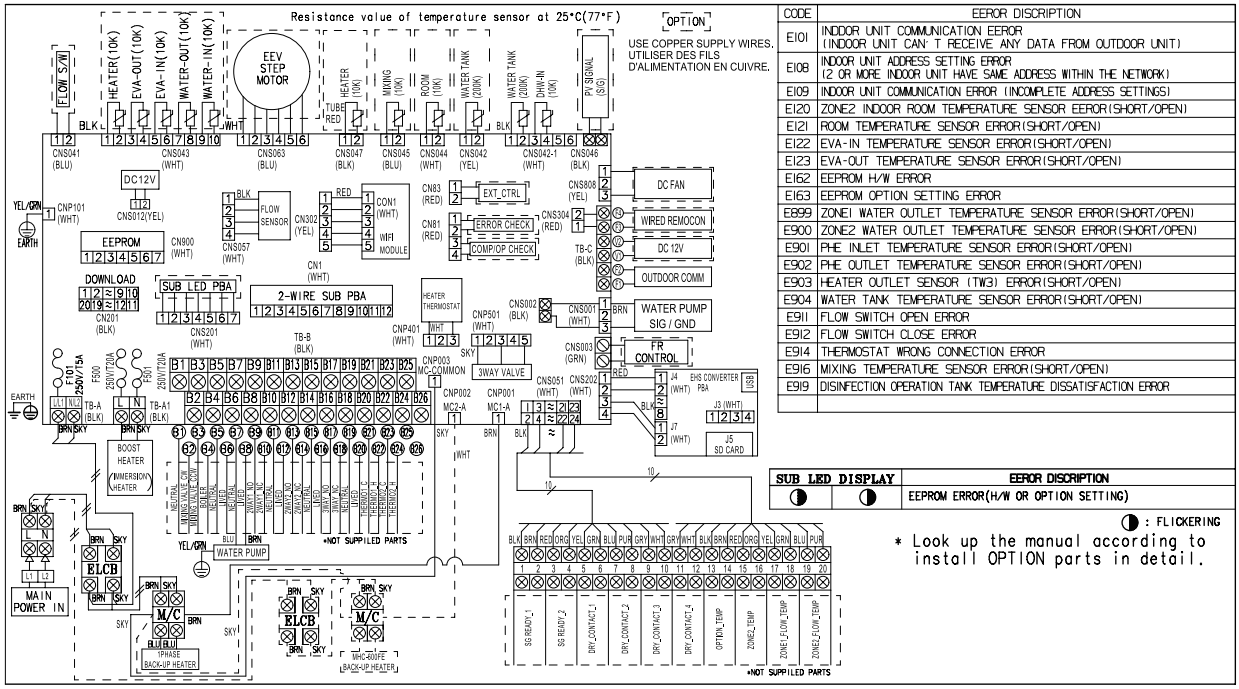
### NOTES

1. This wiring diagram applies only to the Indoor unit.
2. Symbols show as follow :
   blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
3. For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
4. ⏚ Protective earth(SCREW)

# 3. Tank integrated hydro unit

## 3-3. Electrical wiring diagram

### AE200/260CNWMEG/EU




| CODE | EERROR DISCRIPTION |
|---|---|
| E101 | INDOOR UNIT COMMUNICATION EERROR (INDOOR UNIT CAN' T RECEIVE ANY DATA FROM OUTDOOR UNIT) |
| E108 | INDOOR UNIT ADDRESS SETTING ERROR (2 OR MORE INDOOR UNIT HAVE SAME ADDRESS WITHIN THE NETWORK) |
| E109 | INDOOR UNIT COMMUNICATION ERROR (INCOMPLETE ADDRESS SETTINGS) |
| E120 | ZONE2 INDOOR ROOM TEMPERATURE SENSOR EERROR(SHORT/OPEN) |
| E121 | ROOM TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E122 | EVA-IN TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E123 | EVA-OUT TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E162 | EEPROM H/W ERROR |
| E163 | EEPROM OPTION SETTING ERROR |
| E899 | ZONE1 WATER OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E900 | ZONE2 WATER OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E901 | PHE INLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E902 | PHE OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E903 | HEATER OUTLET SENSOR (TW3) ERROR(SHORT/OPEN) |
| E904 | WATER TANK TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E911 | FLOW SWITCH OPEN ERROR |
| E912 | FLOW SWITCH CLOSE ERROR |
| E914 | THERMOSTAT WRONG CONNECTION ERROR |
| E916 | MIXING TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E919 | DISINFECTION OPERATION TANK TEMPERATURE DISSATISFACTION ERROR |

| SUB LED DISPLAY | | EERROR DISCRIPTION |
|---|---|---|
| ◑ | ◑ | EEPROM ERROR(H/W OR OPTION SETTING) |

◑ : FLICKERING

* Look up the manual according to install OPTION parts in detail.

※ It does not support external input(CNS083)/output(CNS081) signal function

| | | | |
|---|---|---|---|
| HEATER | Thermistor HEATER(10K) | EVA-OUT | Thermistor EVA-OUT(10K) |
| EVA-IN | Thermistor EVA-IN(10K) | WATER-OUT | Thermistor WATER-OUT(10K) |
| WATER-IN | Thermistor WATER-IN(10K) | WATER TANK | Thermistor WATER TANK(200K) |
| MIXING | Thermistor MIXING VALVE(10K) | DHW-IN | Thermistor DHW-IN (10K) |
| OUTDOOR COMM | Outdoor Communication | WIRED REMOCON | Wired Remote Controller |
| ELCB | Earth Leakage Circuit Breaker | SIG/GND | Signal/Ground |
| | | M/C | Magnetic Contactor |

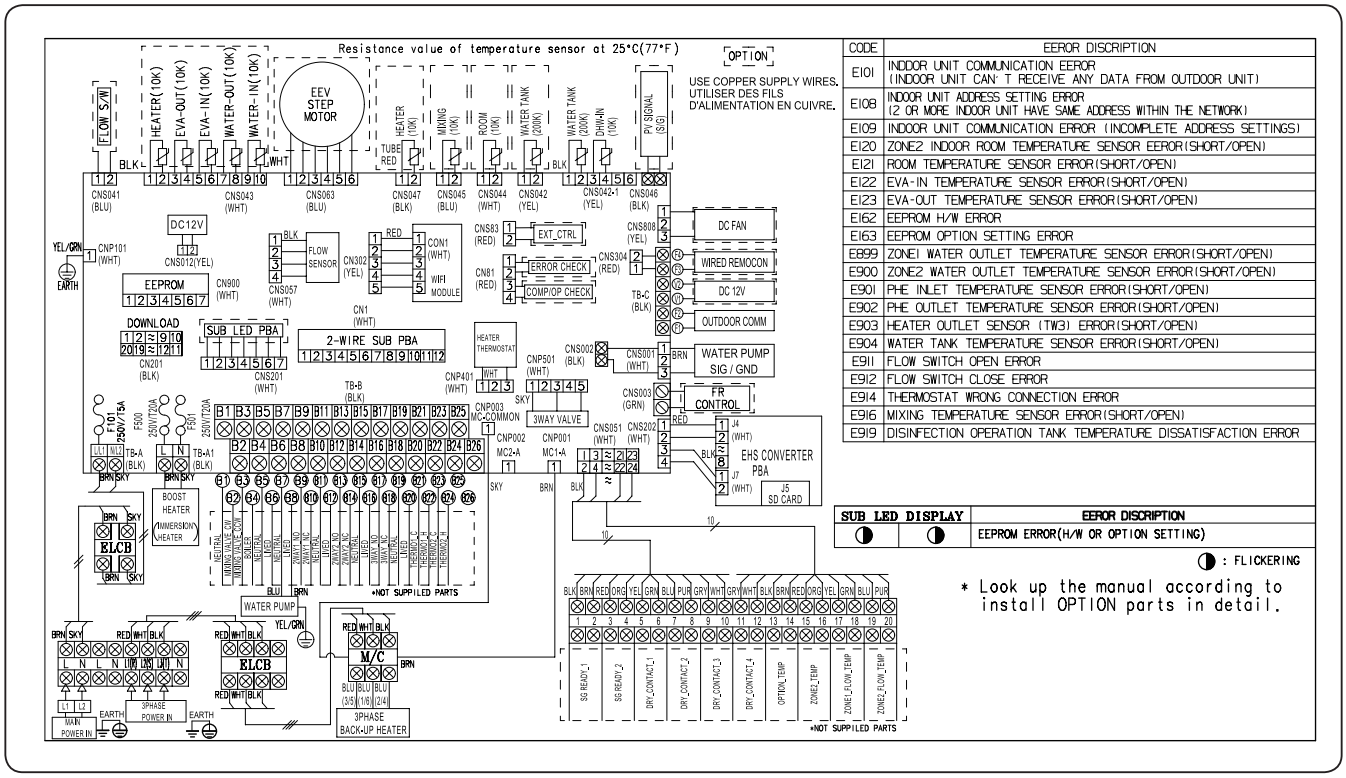
### NOTES

1. This wiring diagram applies only to the Indoor unit.
2. Symbols show as follow :
   blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
3. For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
4. ⏚ Protective earth(SCREW)

# 3. Tank integrated hydro unit

## 3-3. Electrical wiring diagram

### AE260CNWMGG/EU




| CODE | EERROR DISCRIPTION |
|---|---|
| E101 | INDOOR UNIT COMMUNICATION EERROR (INDOOR UNIT CAN' T RECEIVE ANY DATA FROM OUTDOOR UNIT) |
| E108 | INDOOR UNIT ADDRESS SETTING ERROR (2 OR MORE INDOOR UNIT HAVE SAME ADDRESS WITHIN THE NETWORK) |
| E109 | INDOOR UNIT COMMUNICATION ERROR (INCOMPLETE ADDRESS SETTINGS) |
| E120 | ZONE2 INDOOR ROOM TEMPERATURE SENSOR EERROR(SHORT/OPEN) |
| E121 | ROOM TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E122 | EVA-IN TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E123 | EVA-OUT TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E162 | EEPROM H/W ERROR |
| E163 | EEPROM OPTION SETTING ERROR |
| E899 | ZONE1 WATER OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E900 | ZONE2 WATER OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E901 | PHE INLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E902 | PHE OUTLET TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E903 | HEATER OUTLET SENSOR (TW3) ERROR(SHORT/OPEN) |
| E904 | WATER TANK TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E911 | FLOW SWITCH OPEN ERROR |
| E912 | FLOW SWITCH CLOSE ERROR |
| E914 | THERMOSTAT WRONG CONNECTION ERROR |
| E916 | MIXING TEMPERATURE SENSOR ERROR(SHORT/OPEN) |
| E919 | DISINFECTION OPERATION TANK TEMPERATURE DISSATISFACTION ERROR |

| SUB LED DISPLAY | | EERROR DISCRIPTION |
|---|---|---|
| ◑ | ◑ | EEPROM ERROR(H/W OR OPTION SETTING) |

※ It does not support external input(CNS083)/output(CNS081) signal function

| | | | |
|---|---|---|---|
| HEATER | Thermistor HEATER(10K) | EVA-OUT | Thermistor EVA-OUT(10K) |
| EVA-IN | Thermistor EVA-IN(10K) | WATER-OUT | Thermistor WATER-OUT(10K) |
| WATER-IN | Thermistor WATER-IN(10K) | WATER TANK | Thermistor WATER TANK(200K) |
| MIXING | Thermistor MIXING VALVE(10K) | DHW-IN | Thermistor DHW-IN (10K) |
| OUTDOOR COMM | Outdoor Communication | WIRED REMOCON | Wired Remote Controller |
| ELCB | Earth Leakage Circuit Breaker | SIG/GND | Signal/Ground |
| | | M/C | Magnetic Contactor |

## NOTES

1. Th is wiring diagram applies only to the Indoor unit.
2. Symbols show as follow :
   blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
3. For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
4. Protective earth(SCREW)

# 3. Tank integrated hydro unit

## 3-4. Sound data

| Capacity (Liter) | Model | Sound Pressure dB(A) (Heating) | Sound Power dB(A) (Heating) |
|---|---|---|---|
| 200 | AE200*NWMEG/EU+AE050RXYDEG/EU | 26 | 40 |
| | AE200*NWMEG/EU+AE080RXYDEG/EU | 26 | 40 |
| | AE200*NWMEG/EU+AE120RXYDEG/EU | 30 | 44 |
| | AE200*NWMEG/EU+AE160RXYDEG/EU | 30 | 44 |
| 260 | AE260*NWMEG/EU+AE080RXYDEG/EU | 26 | 40 |
| | AE260*NWMEG/EU+AE120RXYDEG/EU | 30 | 44 |
| | AE260*NWMEG/EU+AE160RXYDEG/EU | 30 | 44 |
| | AE260*NWMGG/EU+AE080RXYDGG/EU | 26 | 40 |
| | AE260*NWMGG/EU+AE120RXYDGG/EU | 30 | 44 |
| | AE260*NWMGG/EU+AE160RXYDGG/EU | 30 | 44 |

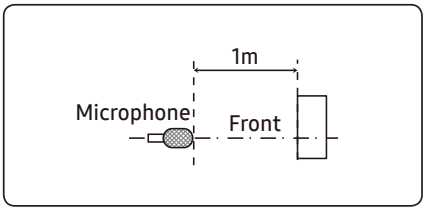
**NOTE**

- Specifications may be subject to change without prior notice.
- Sound Pressure Level
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa
- Sound Power Level
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

# 3. Tank integrated hydro unit

## 3-4. Sound data

### Sound Pressure level

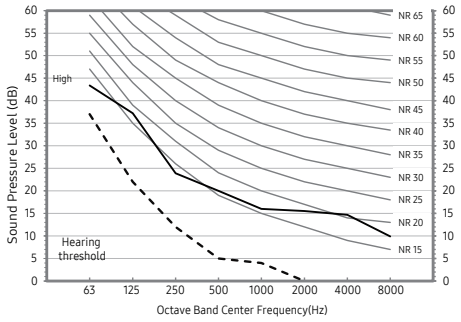



Unit: dB(A)

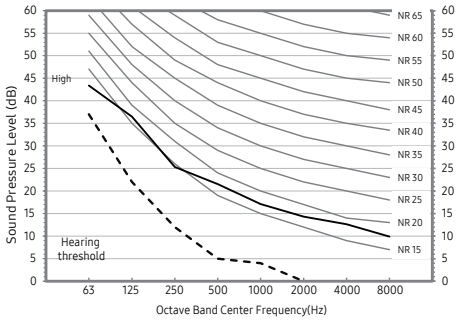
| Model | Heating |
|---|---|
| AE200*NWMEG/EU+AE050RXYDEG/EU | 26 |
| AE200*NWMEG/EU+AE080RXYDEG/EU | 26 |
| AE200*NWMEG/EU+AE120RXYDEG/EU | 30 |
| AE200*NWMEG/EU+AE160RXYDEG/EU | 30 |

- NR Curve

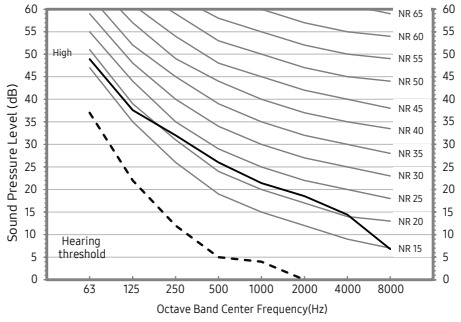
1) AE200*NWMEG/EU+AE050RXYDEG/EU



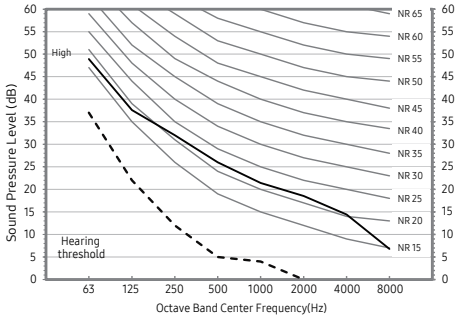

2) AE200*NWMEG/EU+AE080RXYDEG/EU




3) AE200*NWMEG/EU+AE120RXYDEG/EU




4) AE200*NWMEG/EU+AE160RXYDEG/EU

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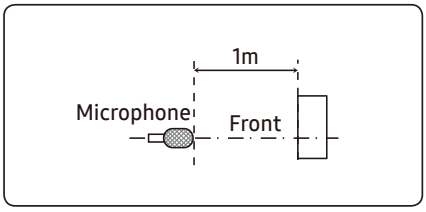
  - dBA = A weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

# 3. Tank integrated hydro unit

## 3-4. Sound data

### Sound Pressure level

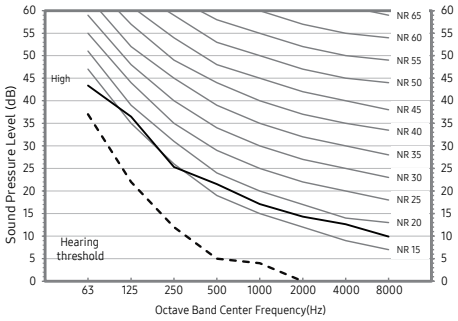



Unit: dB(A)

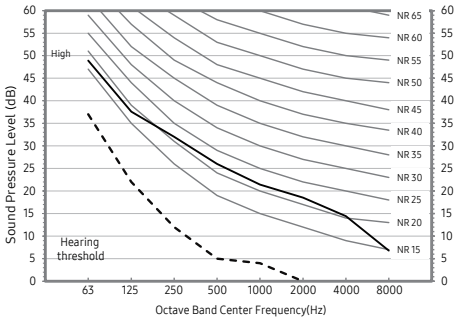
| Model | Heating |
|---|---|
| AE260*NWMEG/EU+AE080RXYDEG/EU | 26 |
| AE260*NWMEG/EU+AE120RXYDEG/EU | 30 |
| AE260*NWMEG/EU+AE160RXYDEG/EU | 30 |

- NR Curve

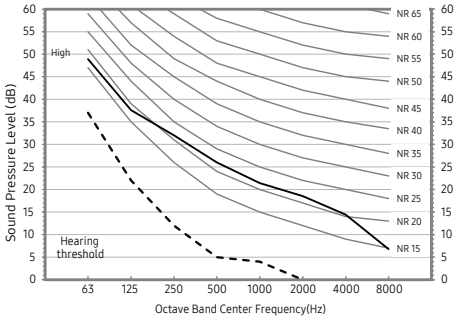
1) AE260*NWMEG/EU+AE080RXYDEG/EU




2) AE260*NWMEG/EU+AE120RXYDEG/EU




3) AE260*NWMEG/EU+AE160RXYDEG/EU

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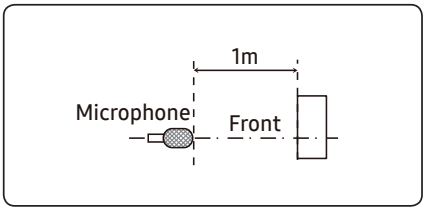
  - dBA = A weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

# 3. Tank integrated hydro unit

## 3-4. Sound data

### Sound Pressure level

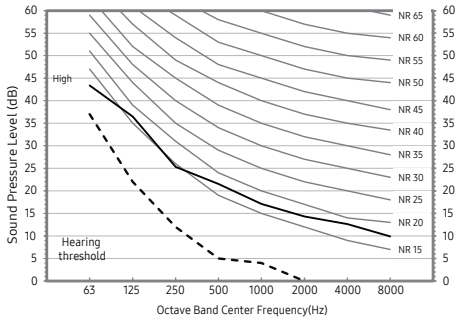



Unit: dB(A)

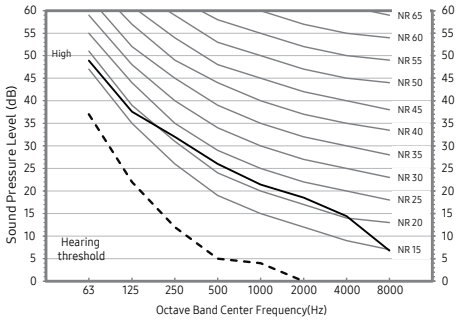
| Model | Heating |
|---|---|
| AE260*NWMGG/EU+AE080RXYDGG/EU | 26 |
| AE260*NWMGG/EU+AE120RXYDGG/EU | 30 |
| AE260*NWMGG/EU+AE160RXYDGG/EU | 30 |

- NR Curve

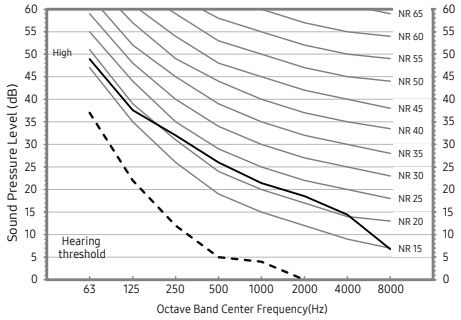
1) AE260*NWMGG/EU+AE080RXYDGG/EU




2) AE260*NWMGG/EU+AE120RXYDGG/EU




3) AE260*NWMGG/EU+AE160RXYDGG/EU

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  - Sound pressure level is obtained in an anechoic room.
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  - Reference acoustic pressure 0 dB = 20μPa

# 3. Tank integrated hydro unit

## 3-4. Sound data

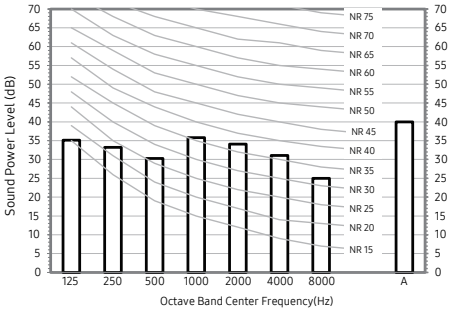
### Sound Power level

**NOTE**

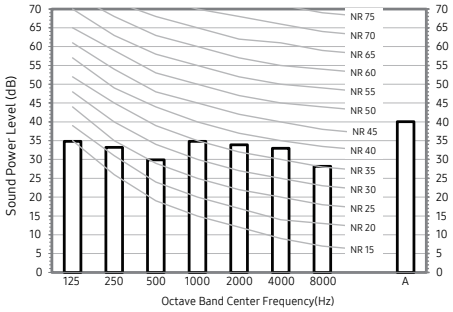
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

| Model | Power (dBA) |
|---|---|
| AE200*NWMEG/EU+ AE050RXYDEG/EU | 40 |
| AE200*NWMEG/EU+ AE080RXYDEG/EU | 40 |
| AE200*NWMEG/EU+ AE120RXYDEG/EU | 44 |
| AE200*NWMEG/EU+ AE160RXYDEG/EU | 44 |

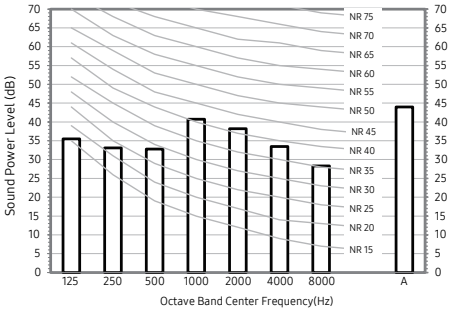
1) AE200*NWMEG/EU+AE050RXYDEG/EU



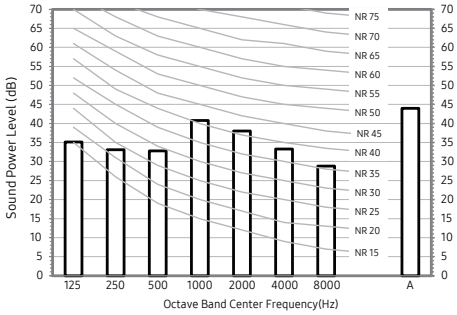

2) AE200*NWMEG/EU+AE080RXYDEG/EU




3) AE200*NWMEG/EU+AE120RXYDEG/EU




4) AE200*NWMEG/EU+AE160RXYDEG/EU



# 3. Tank integrated hydro unit

## 3-4. Sound data

### Sound Power level

**NOTE**

- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
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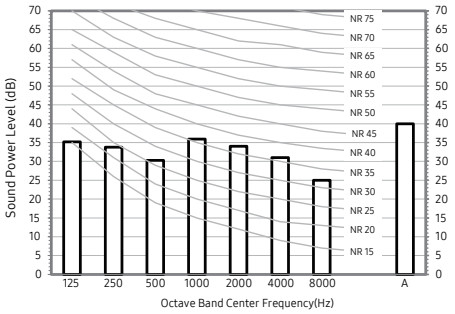
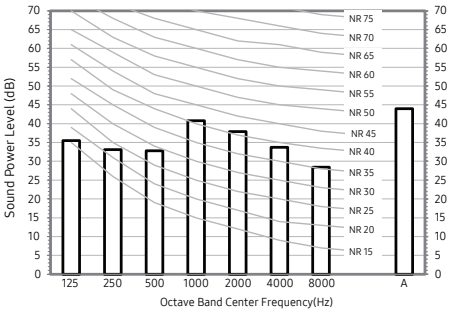
  - Reference power : 1pW.
  - Measured according to ISO 3741.

| Model | Power (dBA) |
|---|---|
| AE260*NWMEG/EU+ AE080RXYDEG/EU | 40 |
| AE260*NWMEG/EU+ AE120RXYDEG/EU | 44 |
| AE260*NWMEG/EU+ AE160RXYDEG/EU | 44 |

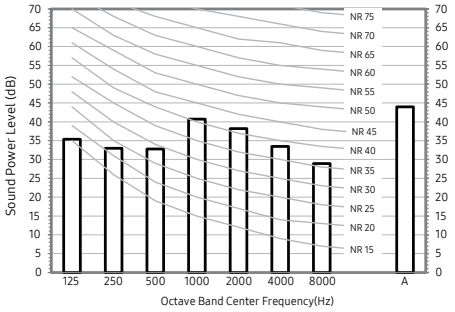
1) AE260*NWMEG/EU+AE080RXYDEG/EU




2) AE260*NWMEG/EU+AE120RXYDEG/EU




3) AE260*NWMEG/EU+AE160RXYDEG/EU



# 3. Tank integrated hydro unit

## 3-4. Sound data

### Sound Power level

**NOTE**

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  - Sound power level is an absolute value that a sound source generates.
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  - Reference power : 1pW.
  - Measured according to ISO 3741.

| Model | Power (dBA) |
|---|---|
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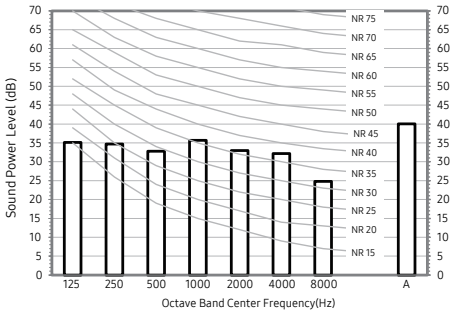
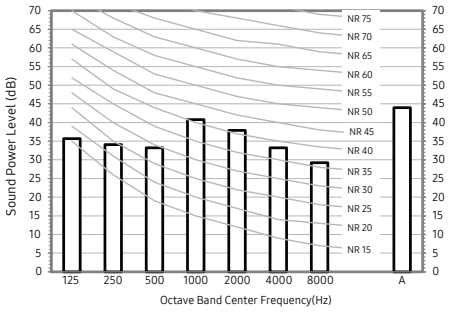
| AE260*NWMGG/EU+ AE160RXYDGG/EU | 44 |

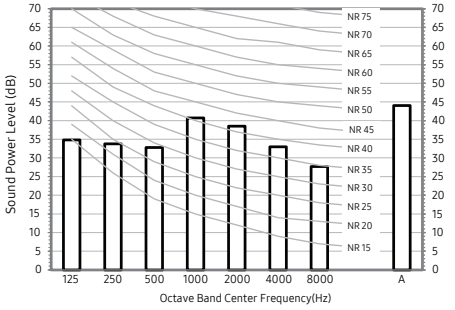
1) AE260*NWMGG/EU+AE080RXYDGG/EU




2) AE260*NWMGG/EU+AE120RXYDGG/EU



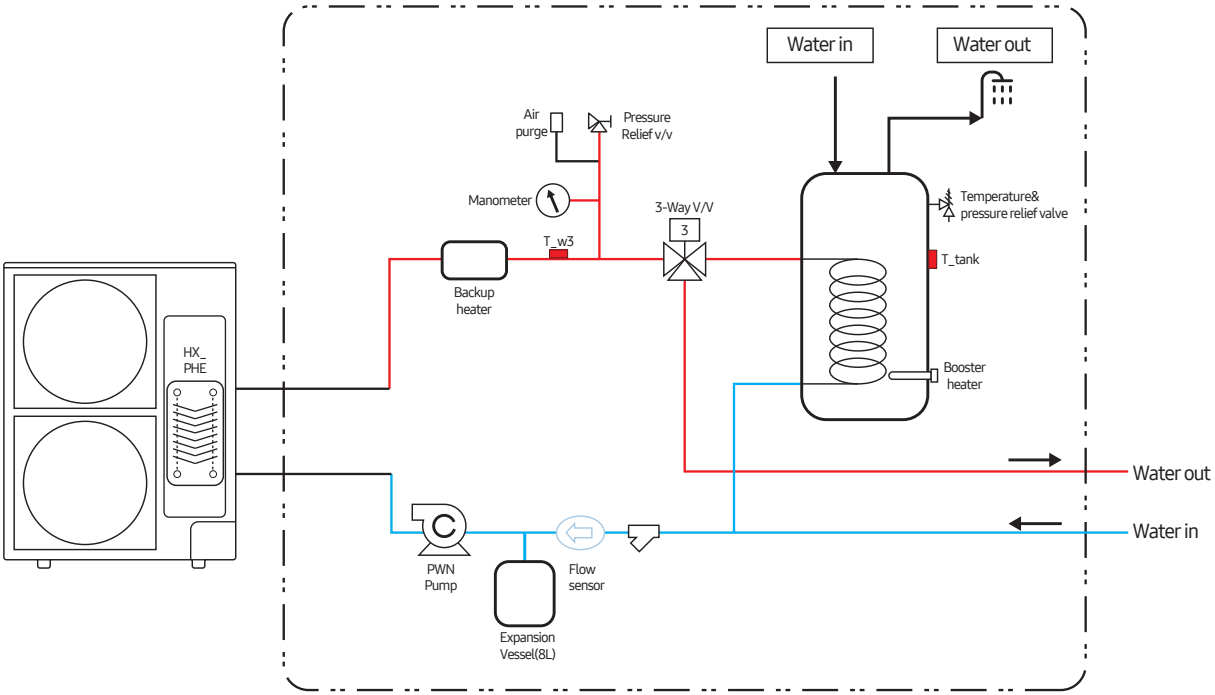

3) AE260*NWMGG/EU+AE160RXYDGG/EU



# 3. Tank integrated hydro unit

## 3-5. Piping diagram

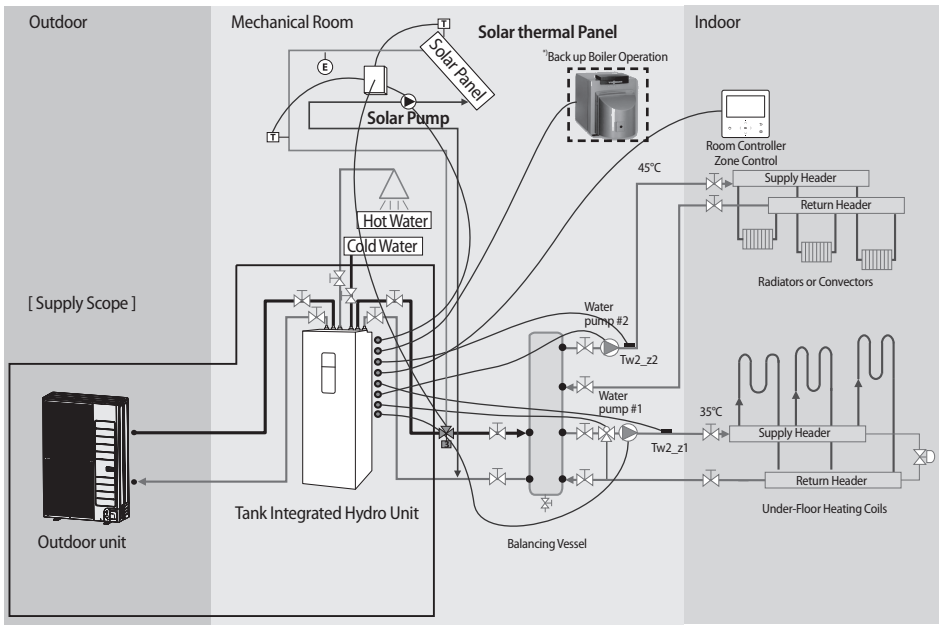
### AE200/260*NWS*G/EU



# 4. Installation

## Tank integrated hydro unit

### Mono outdoor + Tank Integrated Hydro Unit

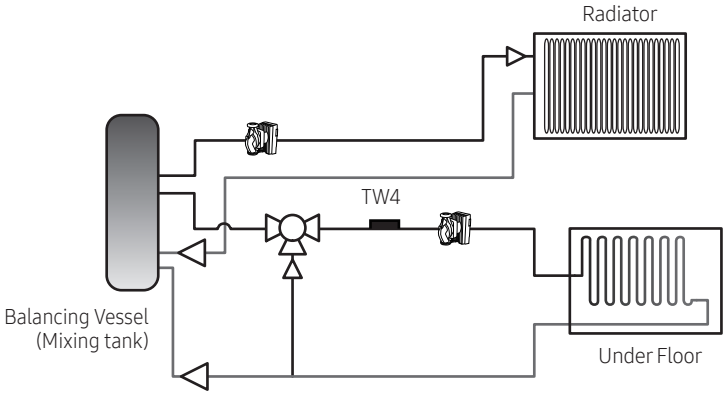



*) We control only the on / off signal of backup boiler according to outdoor temperature.
Backup boiler should be installed with own device according to the field condition.

# 4. Installation

## Tank integrated hydro unit

## Installation of mixing valve




When two different zones are used with different temperature, adjust the temperature of discharge water to high temperature water and control the amount of bypass to provide low temperature water by applying the mixing valve and temperature sensor of the mixing valve (TW4).

1. Select a mixing valve from the manufacturers as below (recommended) and install it at the enterance of the zone.
2. Install the supplied temperature sensor (TW4) on the rear part of the mixing valve.Install TW4 Sensor within 1m of Mixing Valve.
3. Since running time varies depending on the manufacturer, set the FSV (default 90 sec.) by referring to the FSV value below.

| Maker | | BELIMO | SIEMENS | HONEYWELL |
|---|---|---|---|---|
| Model code | 3 Way Valve | R3020-6P3-S2 | VXP45.20-4 (kvs 4) | V5011E1213 |
| | Actuator | LR230A(-S) | SSB31 | ML6420A3015 |
| Running time | | 90 sec. | 150 sec. | 60 sec. |
| FSV(#4046) setting | | 9 | 15 | 6 |

※ The table above is for your reference. It can be changed without advanced notice.

# 4. Installation

## Tank integrated hydro unit

4. Set the FSV value by referring to the table below depending on installation environment.

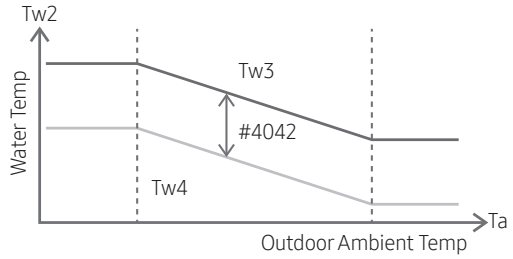
| Function | Details | Code | Unit | Default | Min. | Max. |
|---|---|---|---|---|---|---|
| Mixing valve | Use or not | 4041 | - | 0(No) | 0 | 2 |
| | Target temperature difference (Heating) (TW3-TW4) | 4042 | °C | 10 | 5 | 15 |
| | Target temperature difference (Cooling) (TW4-TW3) | 4043 | °C | 10 | 5 | 15 |
| | Control factor | 4044 | - | 2 | 1 | 5 |
| | Interval of valve control | 4045 | Min. | 2 | 1 | 30 |
| | Running time (10 second unit) | 4046 | (x10) sec | 9 | 6 | 24 |

※ 4041 =1 : Controlled based on the temperature difference (4042, 4043)

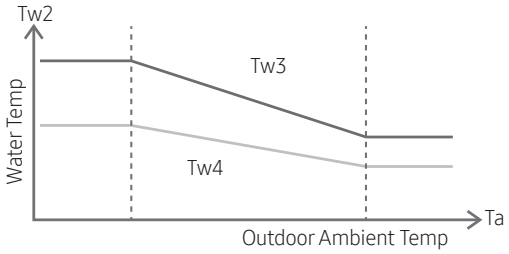
※ 4041 =2 : Controlled based on the temperature difference of the WL value

ex) Heating

<#4041=1>




<#4041=2>




※ The mixing valve is controlled based on the FCU WL value.

※ As the #4044 value increases and the #4045 value decreases, the control speed increases. (Temperature hunting may occur if the control speed increases depending on the load.)

※ The additional pump and mixing valve should be purchased separately. TW4 sensor is included in the product accessories.

※ TW3 : Water temp. sensor 3

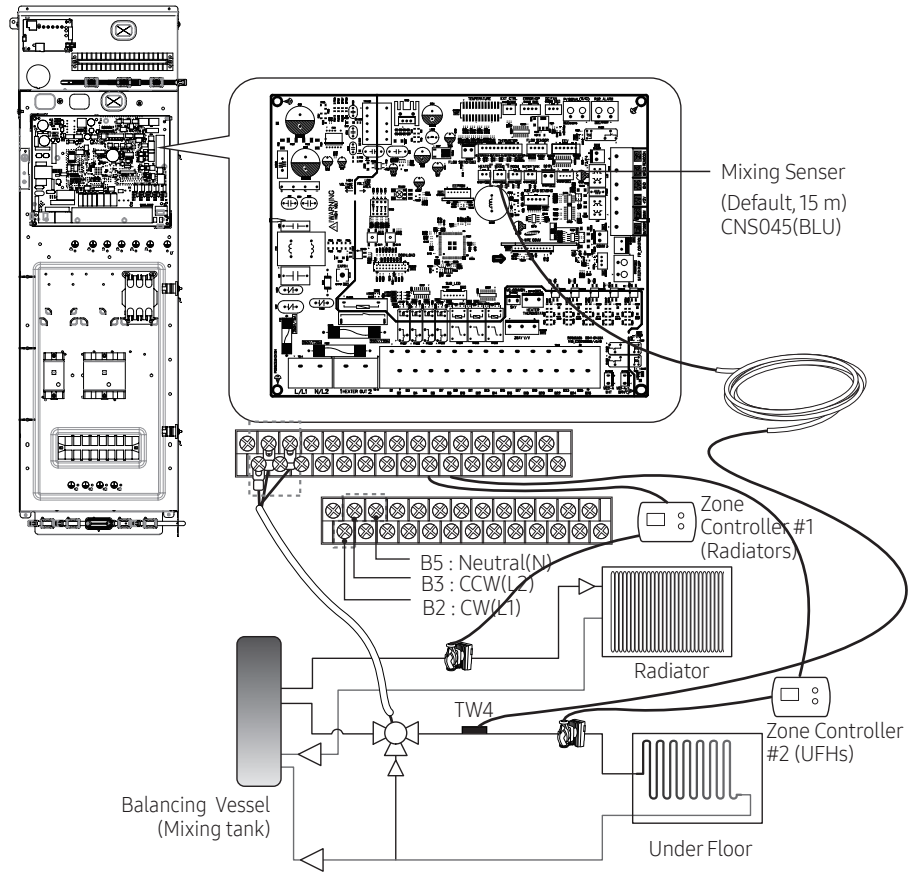
### ⚠ CAUTION

- When the thermostat control is set as 'Use', the mixing valve can be used for Zone 1 and Zone 2. (When both FSV #2091 and #2092 are set as 1/2)
- When using Zone control (FSV 4061 = 1), ignore Thermostat signal.

# 4. Installation

## Tank integrated hydro unit

### 2-zone control using Thermostat



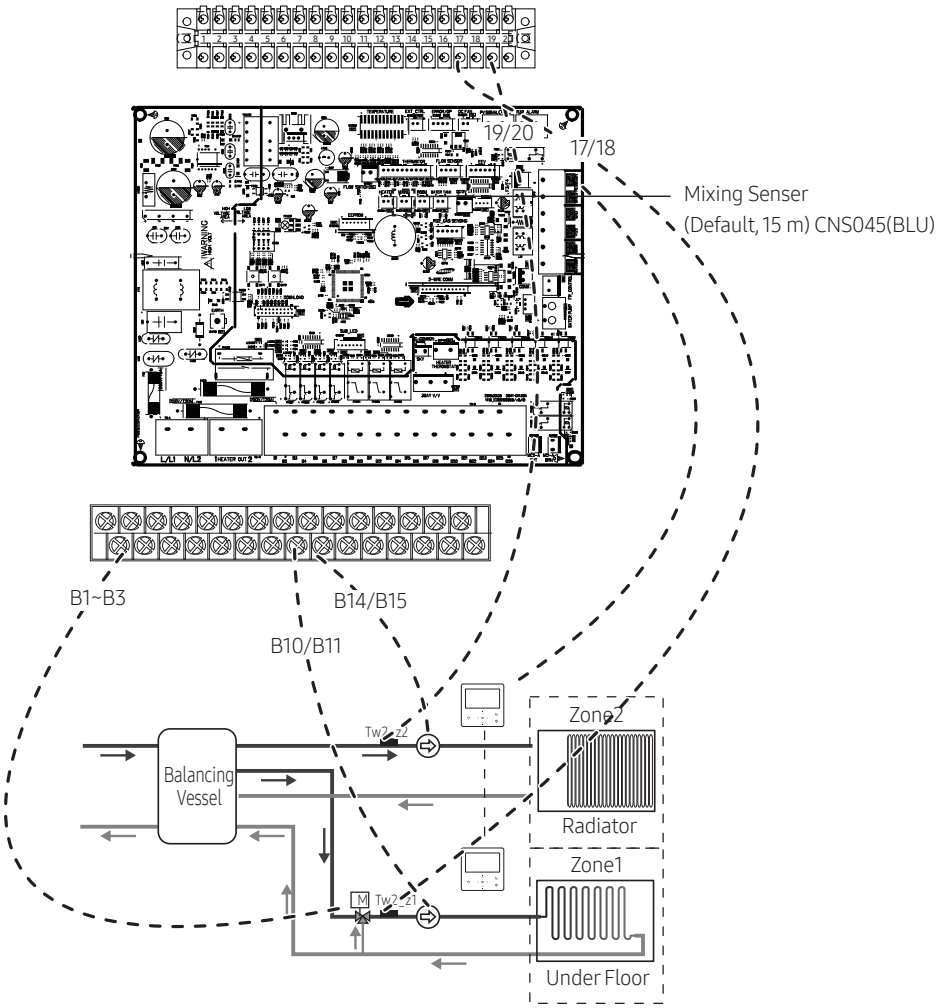

| Description | No. of wires | Max. current | Thickness | Supply Scope |
|---|---|---|---|---|
| Mixing valve | 4 | 22 mA | › 0.75 mm², H05RN-F or H07RH-F | Field supply (230 V~, Input) |

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.

# 4. Installation

## Tank integrated hydro unit

### 2-Zone Control Using Remote Controller




You can operate the 2-zone control using a mixing value, water-out temperature sensors, and built-in or external room temperature sensors installed in a wired remote controller.

When both zones are simultaneously Thermo on, the operation is performed based on Zone2. Therefore, set the zone that you want to have the higher set temperature to Zone2.

(The mixing valve must be installed in the zone that you want to have the lower set temperature.)

1. Install the mixing valve. (See "Installation of mixing valve.")
2. Install the water-out temperature sensors (Tw2_z1, Tw2_z2) for all zones.
3. Unlike the zone control with a thermostat, connect the water pump signal lines to the product.
    - Zone1 water pump connection: B10 (L1) + B11 (N)
    - Zone2 water pump connection: B14 (L1) + B15 (N)
4. FSV 4061 = 1: Enable the 2-zone control using the wired remote controller.

※ If you want to operate the 2-zone control by using water-out temperatures, you have only to complete steps 1 to 4 above.

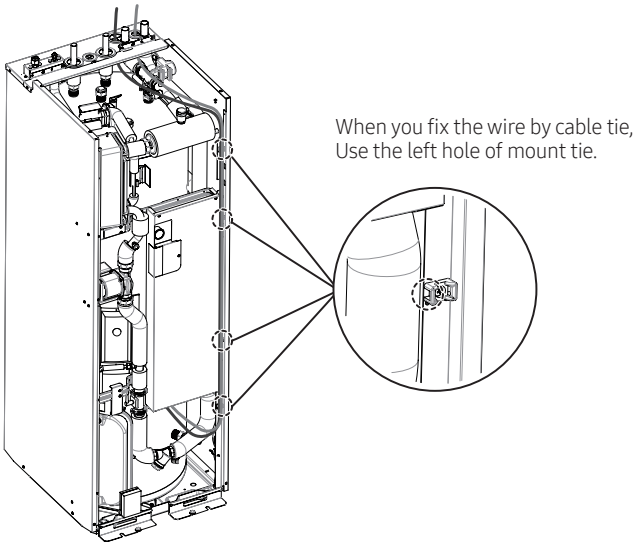
※ If you want to operate the 2-zone control by using room temperatures and built-in temperature sensors in wired remote controllers, you must install two wired remote controllers in each room. (If you use external room temperature sensors, you can control each room temperature with only one wired remote controller.)

# 4. Installation

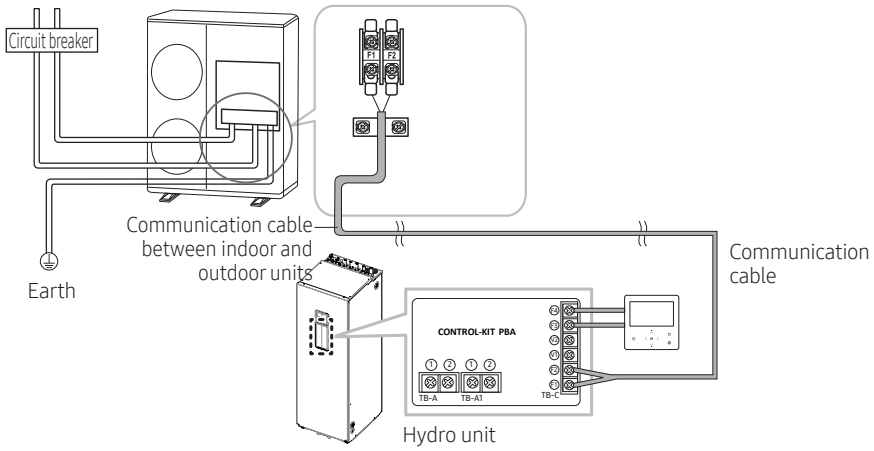
## Tank integrated hydro unit

### Wiring work

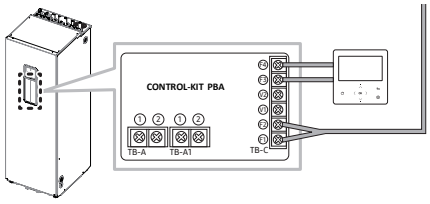
* When you use inlet hole through the cabinet top positions for power/communication wires, please fix the wire by using mount tie of the cabinet right.




### 2 wires for communication cable



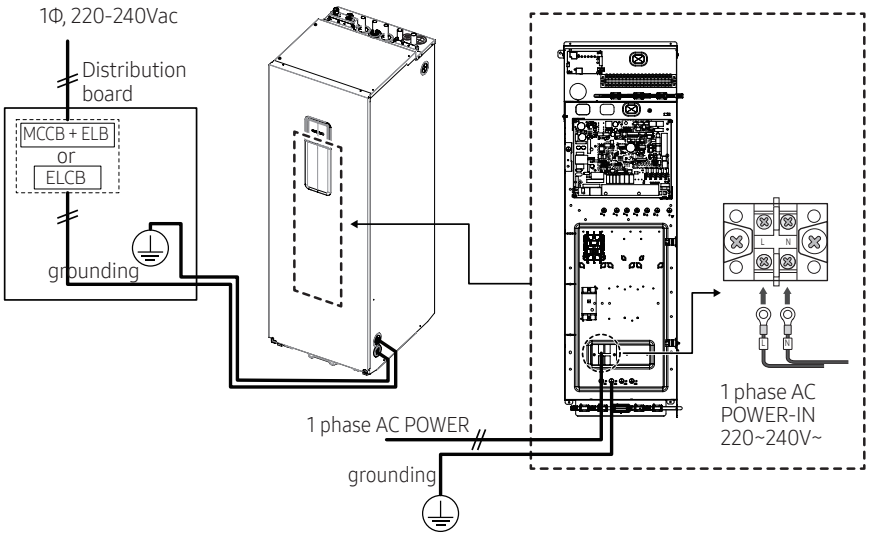

### Communication cable connection



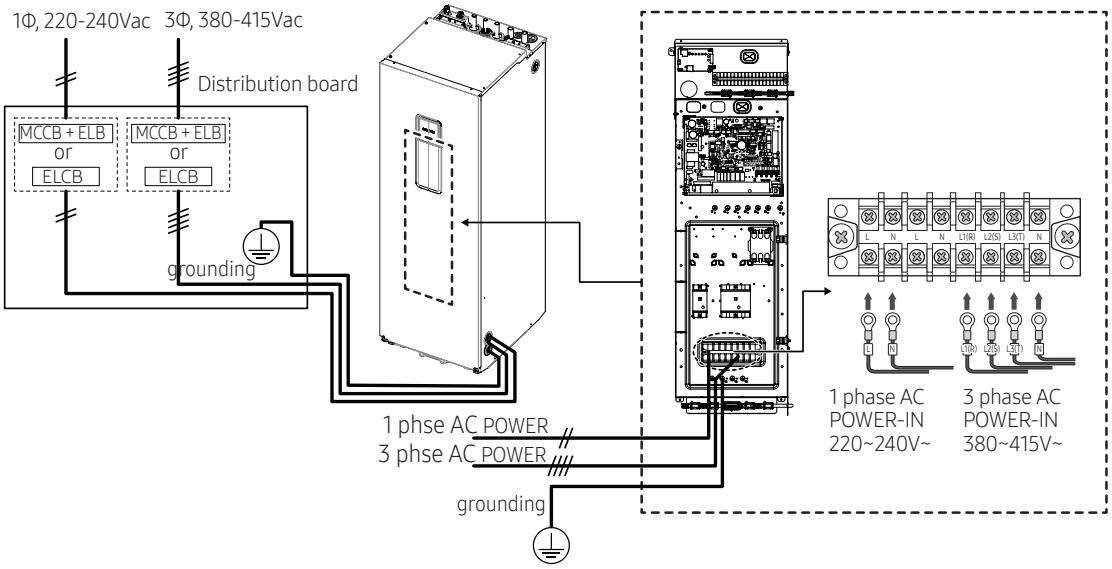
# 4. Installation

## Tank integrated hydro unit

1. 1 phase product




2. 3 phase product




## ⚠ CAUTION

- If the supply cable is damaged, it must be replaced by a special cable or assembly available from the manufacturer or installer.
- Circuit Breaker (ELCB, ELB, MCCB etc.) for outdoor and indoor units shall be installed by installers because they are not sub-parts in the units. But you don't need to install for hydro unit (Built-in ELCB).
- It cause damage to chassis, PCB parts if the main power is not connected correctly. You should make certain that R, S, T is connected correctly before turning on the main power. (3 phase models only)

※ ELCB : Earth leakage circuit breaker
ELB : Earth leakage breaker
MCCB : Molded case circuit breaker

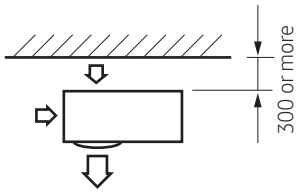
# 4. Installation

## Outdoor Unit

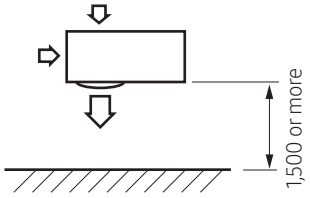
### Space requirements for outdoor unit

#### When installing 1 outdoor unit

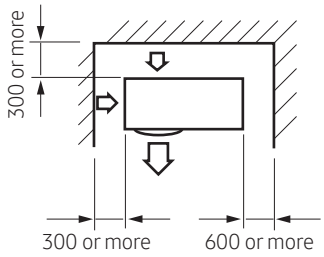
(Unit : mm)

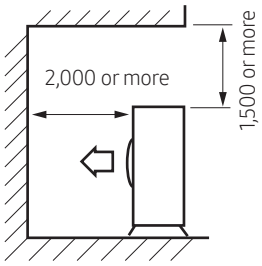



※ When the air outlet is opposite the wall

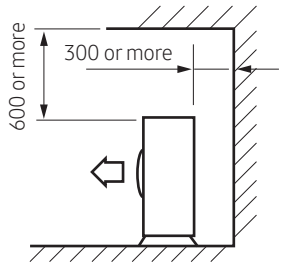



※ When the air outlet is towards the wall



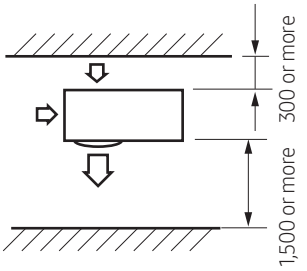




※ When 3 sides of the outdoor unit are blocked by the wall




※ The upper part of the outdoor unit and the air outlet is opposite the wall

※ The upper part of the outdoor unit and the air outlet is towards the wall



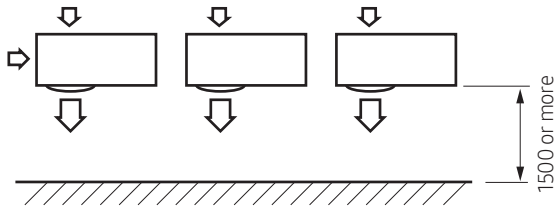

※ When front and rear side of the outdoor unit is towards the wall

# 4. Installation

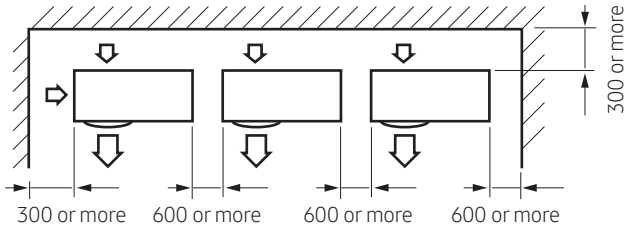
## Outdoor Unit

### When installing more than 1 outdoor unit

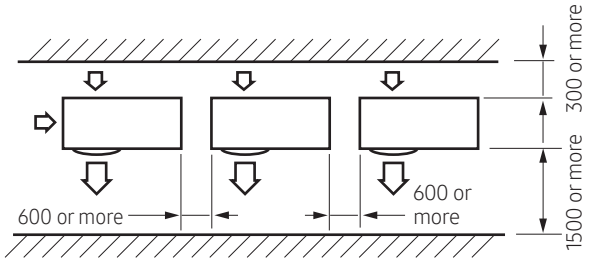
(Unit : mm)



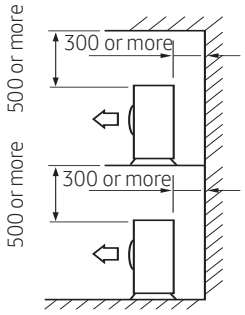

※ When the air outlet is towards the wall



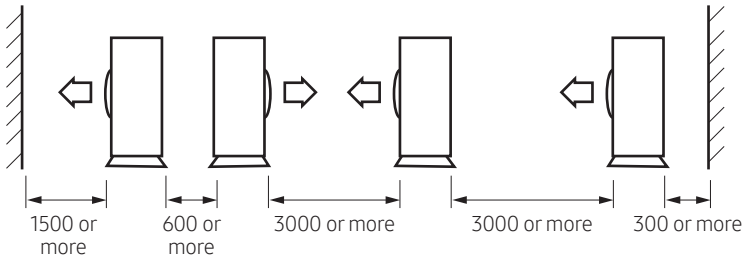

※ When 3 sides of the outdoor unit are blocked by the wall




※ When front and rear side of the outdoor unit is towards the wall




※ The upper part of the outdoor unit and the air outlet is opposite the wall




※ When front and rear side of the outdoor unit is towards the wall

## ⚠ CAUTION

- The units must be installed according to distances declared, in order to permit accessibility from each side, either to guarantee correct operation of maintenance or repairing products. The unit's parts must be reachable and removable completely under safety condition (for people or things).

# 4. Installation

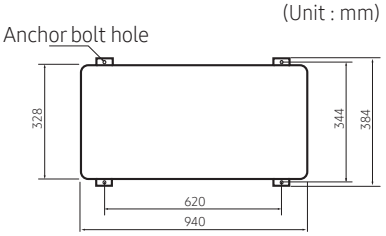
## Outdoor Unit

### Outdoor unit installation

The outdoor unit must be installed on a rigid and stable base to avoid any increase in the noise level and vibration, particularly if the outdoor unit is to be installed in a location exposed to strong winds or at a height, the unit must be fixed to an appropriate support(wall or ground).

- Fix the outdoor unit with anchor bolts.

(Unit : mm)



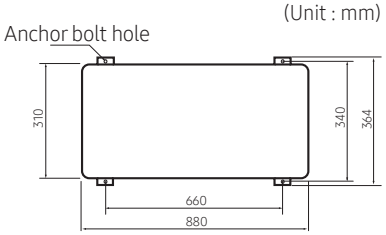

**NOTE**

- The anchor bolt must be 20mm or higher from the base surface.

### ⚠ CAUTION

- When tightening the anchor bolt, tighten the rubber washer to prevent the outdoor unit bolt connection part from corroding.
- Make a drain outlet around the base for outdoor unit drainage.
- If the outdoor unit is installed on the roof, you have to check the ceiling strength and waterproof the unit.

(Unit : mm)




## Wiring

Two electronic cables must be connected to the outdoor unit.

- The connection cord between indoor unit and outdoor unit.
- The power cable between outdoor unit and auxiliary circuit breaker.
- Specially for Russian and European market, before installation, the supply authority should be consulted to determine the supply system impendance to ensure compliance.

### ⚠ CAUTION

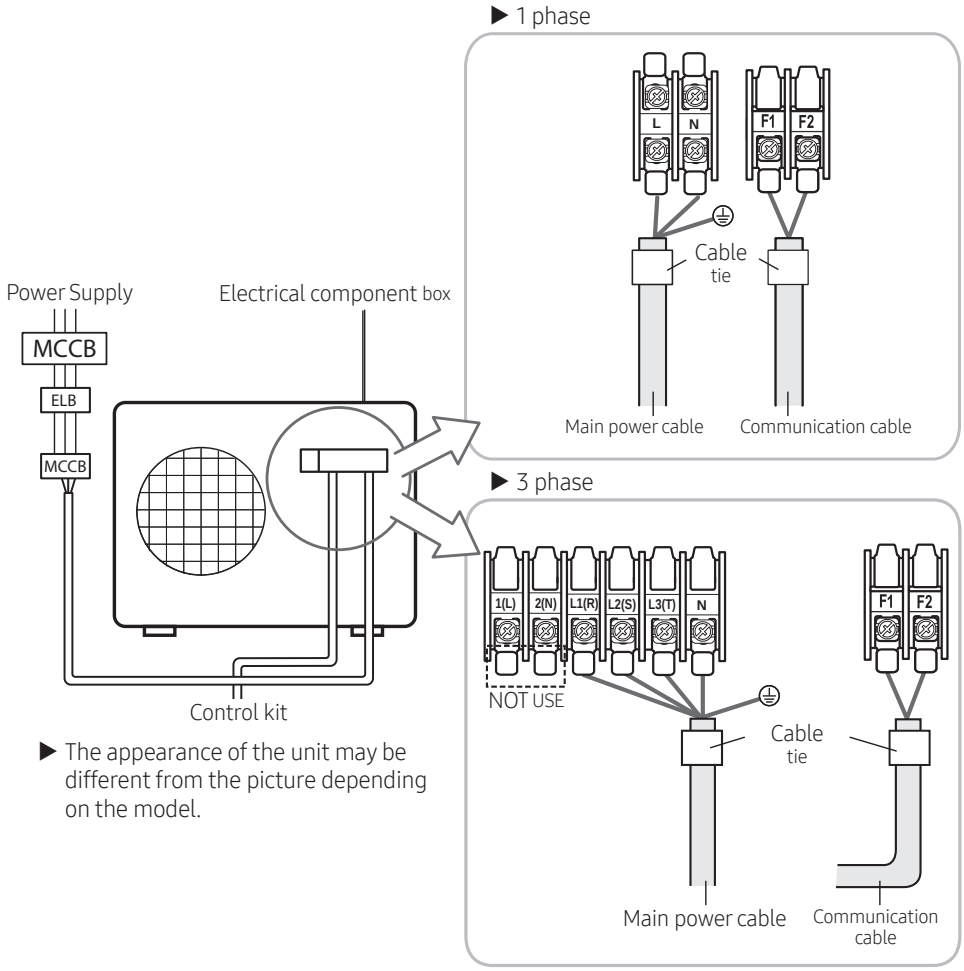
- During the unit installation make first refrigerant connections and then electrical connections. If unit is uninstalled first disconnect electrical cables, then refrigerant connections.
- Connect the Air to water heat pump to grounding system before performing the electrical connection.
- When installing the unit, you shouldn't use inter connection wire.

# 4. Installation

## Outdoor Unit

### Wiring diagram of power cable

#### When using ELB for1 phase and 3 phase




▶ The appearance of the unit may be different from the picture depending on the model.

## ⚠ CAUTION

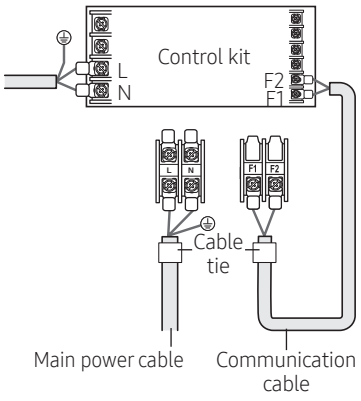
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
  - If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply rating, the control kit is protected, stopped and the error mode indicates.
- To protect the product from water and possible shock, you should keep the power cable and the connection cord of the control kit and outdoor units within ducts. (with appropriate IP rating and material selection for your application)
- Ensure that main supply connection is made through a switch that disconnects all poles, with contact gap of a least 3 mm.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 50mm or more between power cable and communication cable.

# 4. Installation

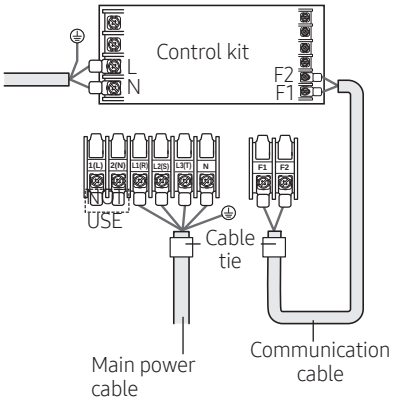
## Outdoor Unit

### Wiring diagram of connection cord

**1 phase**




**3 phase**




**NOTE**

- Lay the electrical wiring so that the front cover does not rise up when doing wiring work and attach the front cover securely.
- Ground wire for the indoor unit and outdoor unit connection cable must be clamped to a soft copper tin-plated eyelet terminal with screw hole (NOT SUPPLIED WITH UNIT ACCESSORIES).

### Primary water circuit freeze protection

If the ambient temperature is below freezing conditions, freezing of water in the primary circuit (outdoor unit and pipework) may occur during power failure or temporary loss of power by SmartGrid activation. To prevent damaging of the product (outdoor unit and pipework) due to freezing, we advise to add antifreeze according to below stated table.
Freeze protection solutions must use propylene glycol with a toxicity rating of Class 1 as listed in Clinical Toxicology of Commercial Products, 5th Edition.

WARNING
- Ethylene glycol is toxic and must not be used in the primary water circuit in case of any cross-contamination of the potable circuit.

| Freezing Points of Propylene Glycol - Water Mixtures | | |
|---|---|---|
| **Percent Propylene Glycol [wt. %]** | **Freezing Point [ °F ]** | **Freezing Point [ °C ]** |
| 0 | 32 | 0 |
| 10 | 26 | -3 |
| 20 | 20 | -7 |
| 30 | 10 | -12 |
| 36 | 0 | -18 |
| 40 | -5 | -20 |
| 43 | -10 | -23 |
| 48 | -20 | -29 |

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Samsung Electronics Co., LTD.
Head Office (Suwon Korea) 129, Samsung-Ro, Yeongtong-Gu, Suwon City, Gyeonggi-Do, Korea 16677
Website : www.samsung.com, https://partnerhub.samsung.com Email : airconditioner@samsung.com