

AIR CONDITIONER

**Duct type**

# DESIGN & TECHNICAL MANUAL

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## INDOOR



ARXG09KLLAP  
ARXG12KLLAP  
ARXG14KLLAP



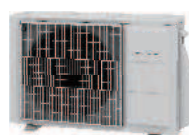
ARXG18KLLAP

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## OUTDOOR



AOHG09KATA  
AOHG12KATA



AOHG14KATA  
AOHG18KATA

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# Part 1. INDOOR UNIT

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DUCT TYPE:

ARXG09KLLAP

ARXG12KLLAP

ARXG14KLLAP

ARXG18KLLAP

# 1. Specifications

| Type                              |                        |           |               | Duct                                                                        |                 |              |                 |                   |
|-----------------------------------|------------------------|-----------|---------------|-----------------------------------------------------------------------------|-----------------|--------------|-----------------|-------------------|
|                                   |                        |           |               | Inverter heat pump                                                          |                 |              |                 |                   |
| Model name                        |                        |           |               | ARXG09KLLAP                                                                 | ARXG12KLLAP     | ARXG14KLLAP  | ARXG18KLLAP     |                   |
| Power supply                      |                        |           |               | 230 V ~ 50 Hz                                                               |                 |              |                 |                   |
| Power supply intake               |                        |           |               | Outdoor unit                                                                |                 |              |                 |                   |
| Available voltage range           |                        |           |               | 198—264 V                                                                   |                 |              |                 |                   |
| Capacity                          | Cooling                | Rated     | kW            | 2.5                                                                         | 3.5             | 4.3          | 5.2             |                   |
|                                   |                        |           | Btu/h         | 8,500                                                                       | 11,900          | 14,700       | 17,700          |                   |
|                                   |                        | Min.—Max. | kW            | 0.90—2.70                                                                   | 0.90—3.70       | 0.90—4.50    | 0.90—5.40       |                   |
|                                   |                        |           | Btu/h         | 3,100—9,200                                                                 | 3,100—12,600    | 3,100—15,300 | 3,100—18,400    |                   |
|                                   | Heating                | Rated     | kW            | 3.2                                                                         | 4.1             | 5.0          | 6.0             |                   |
|                                   |                        |           | Btu/h         | 10,900                                                                      | 14,000          | 17,000       | 20,500          |                   |
|                                   |                        | Min.—Max. | kW            | 0.90—3.90                                                                   | 0.90—4.40       | 0.90—5.30    | 0.90—6.30       |                   |
|                                   |                        |           | Btu/h         | 3,100—13,300                                                                | 3,100—15,000    | 3,100—18,000 | 3,100—21,400    |                   |
| Input power                       | Cooling                | Rated     | kW            | 0.69                                                                        | 1.09            | 1.37         | 1.66            |                   |
|                                   |                        | Max.      |               | 1.59                                                                        | 1.78            | 2.12         | 2.33            |                   |
|                                   | Heating                | Rated     |               | 0.88                                                                        | 1.17            | 1.42         | 1.71            |                   |
|                                   |                        | Max.      |               | 1.59                                                                        | 1.78            | 2.12         | 2.33            |                   |
| Current                           | Cooling                | Rated     | A             | 3.4                                                                         | 5.2             | 6.4          | 7.6             |                   |
|                                   | Heating                |           | 4.4           | 5.8                                                                         | 6.6             | 7.9          |                 |                   |
| Power factor                      | Cooling                |           | %             | 88.2                                                                        | 91.1            | 93.1         | 95.0            |                   |
|                                   | Heating                |           |               | 87.0                                                                        | 87.7            | 93.5         | 94.1            |                   |
| EER                               | Cooling                |           | kW/kW         | 3.62                                                                        | 3.21            | 3.14         | 3.13            |                   |
| COP                               | Heating                |           |               | 3.64                                                                        | 3.50            | 3.52         | 3.51            |                   |
| Moisture removal                  |                        |           | L/h (pints/h) | 0.7 (1.2)                                                                   | 1.3 (2.3)       | 1.5 (2.6)    | 2.0 (3.5)       |                   |
| Maximum operating current *1      |                        | Cooling   | A             | 6.9                                                                         | 7.7             | 9.2          | 10.1            |                   |
|                                   |                        | Heating   |               | 6.9                                                                         | 7.7             | 9.2          | 10.1            |                   |
| Fan                               | Airflow rate           | Cooling   | HIGH          | m³/h                                                                        | 600             | 650          | 800             | 940               |
|                                   |                        |           | MED           |                                                                             | 550             | 600          | 700             | 880               |
|                                   |                        |           | LOW           |                                                                             | 500             | 550          | 600             | 820               |
|                                   |                        |           | QUIET         |                                                                             | 450             | 480          |                 | 750               |
|                                   |                        | Heating   | HIGH          |                                                                             | 600             | 650          | 800             | 940               |
|                                   |                        |           | MED           |                                                                             | 550             | 600          | 700             | 880               |
|                                   |                        |           | LOW           |                                                                             | 500             | 550          | 600             | 820               |
|                                   |                        |           | QUIET         |                                                                             | 450             | 480          |                 | 750               |
|                                   | Type × Q'ty            |           |               |                                                                             | Sirocco fan × 2 |              | Sirocco fan × 3 |                   |
|                                   | Motor output           |           |               | W                                                                           | 81              |              |                 |                   |
| Recommended static pressure range |                        |           | Pa            | 0 to 90                                                                     |                 |              |                 |                   |
| Sound pressure level *2           | Cooling                | HIGH      | dB (A)        | 28                                                                          | 29              | 32           |                 |                   |
|                                   |                        | MED       |               | 27                                                                          | 28              | 30           |                 |                   |
|                                   |                        | LOW       |               | 26                                                                          |                 | 28           | 29              |                   |
|                                   |                        | QUIET     |               | 25                                                                          |                 | 26           | 27              |                   |
|                                   | Heating                | HIGH      |               | 28                                                                          | 29              | 32           |                 |                   |
|                                   |                        | MED       |               | 26                                                                          | 28              | 30           |                 |                   |
|                                   |                        | LOW       |               | 25                                                                          | 26              | 28           | 29              |                   |
|                                   |                        | QUIET     |               | 24                                                                          |                 | 25           | 27              |                   |
| Heat exchanger type               | Dimensions (H × W × D) |           | mm            | 294 × 500 × 39.9                                                            |                 |              |                 |                   |
|                                   | Fin pitch              |           |               | 1.3                                                                         |                 |              |                 |                   |
|                                   | Rows × Stages          |           |               | 3 × 14                                                                      |                 |              |                 |                   |
|                                   | Pipe type              |           |               | Copper tube                                                                 |                 |              |                 |                   |
|                                   | Fin type               |           |               | Aluminum                                                                    |                 |              |                 |                   |
| Enclosure                         | Material               |           |               | Steel sheet                                                                 |                 |              |                 |                   |
|                                   | Color                  |           |               | —                                                                           |                 |              |                 |                   |
| Dimensions (H × W × D)            | Net                    |           | mm            | 198 × 700 × 620                                                             |                 |              |                 | 198 × 900 × 620   |
|                                   | Gross                  |           |               | 276 × 968 × 772                                                             |                 |              |                 | 276 × 1,168 × 772 |
| Weight                            | Net                    |           | kg            | 17                                                                          |                 |              |                 | 20                |
|                                   | Gross                  |           |               | 22                                                                          |                 |              |                 | 26                |
| Connection pipe                   | Size                   | Liquid    | mm (in)       | Ø 6.35 (Ø 1/4)                                                              |                 |              |                 | Ø 12.70 (Ø 1/2)   |
|                                   |                        | Gas       |               | Ø 9.52 (Ø 3/8)                                                              |                 |              |                 |                   |
| Drain hose                        | Method                 |           |               | Flare                                                                       |                 |              |                 |                   |
|                                   | Material               |           |               | PVC                                                                         |                 |              |                 |                   |
| Operation range                   | Size                   |           | mm            | Ø 25 (I.D.), Ø 32 (O.D.)                                                    |                 |              |                 |                   |
|                                   | Cooling                |           |               | °C                                                                          | 18 to 32        |              |                 |                   |
|                                   |                        |           |               | %RH                                                                         | 80 or less      |              |                 |                   |
| Remote control (Option)           | Heating                |           | °C            | 16 to 30                                                                    |                 |              |                 |                   |
|                                   |                        |           |               | Wired remote controller, Wireless remote controller, Mobile app*3 (FGLair™) |                 |              |                 |                   |

## NOTES:

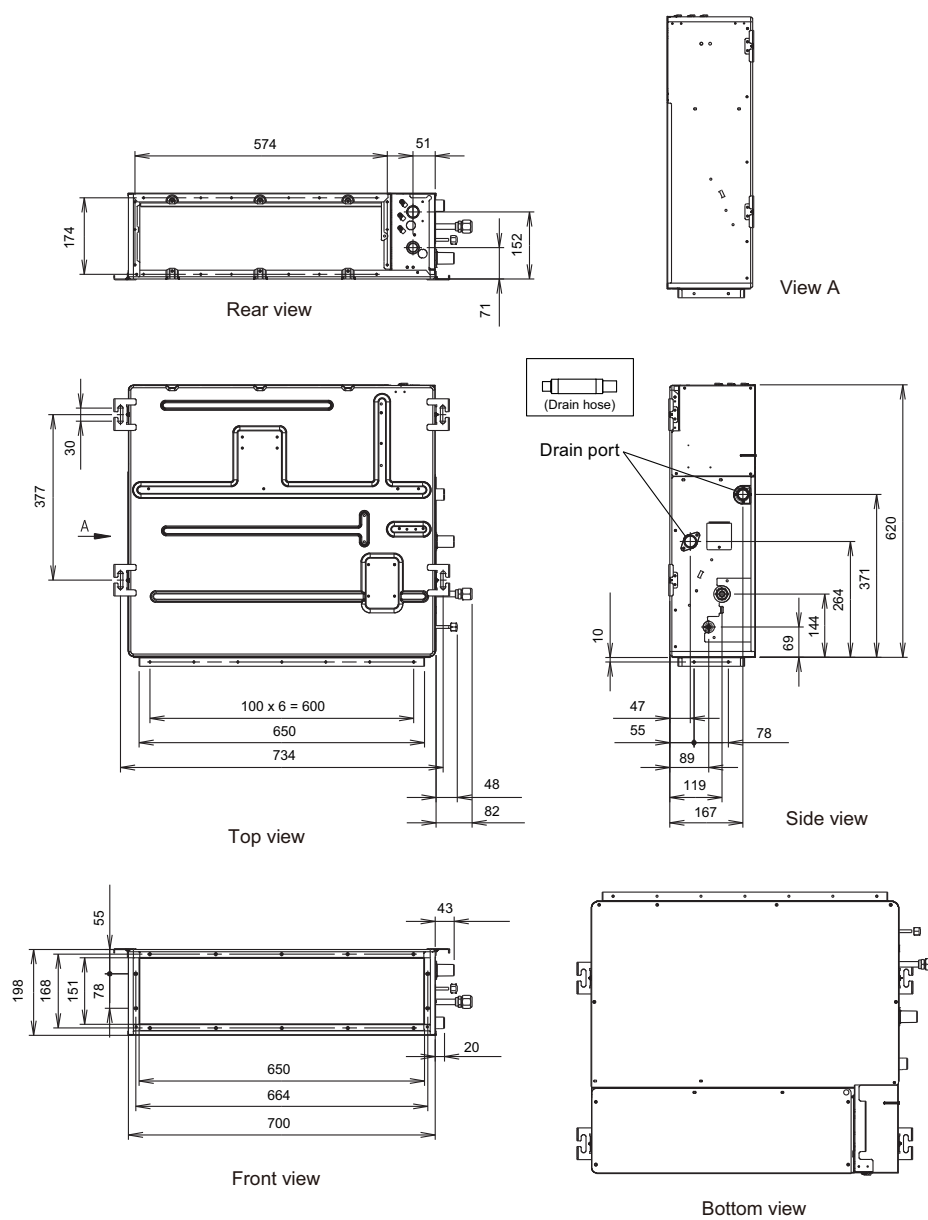
- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Standard static pressure: 25 Pa
  - Pipe length: 5.0 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
- \*3: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.

| Specifications for ErP Lot10 |                   |         |                |             |             |             |
|------------------------------|-------------------|---------|----------------|-------------|-------------|-------------|
| Model name                   |                   |         | ARXG09KLLAP    | ARXG12KLLAP | ARXG14KLLAP | ARXG18KLLAP |
| Energy efficiency class      | Cooling           |         | A <sup>+</sup> |             |             |             |
|                              | Heating (Average) |         | A              |             |             |             |
| Pdesign                      | Cooling           | kW      | 2.5 (35°C)     | 3.5 (35°C)  | 4.3 (35°C)  | 5.2 (35°C)  |
|                              | Heating (Average) |         | 2.3 (-10°C)    | 2.8 (-10°C) | 3.2 (-10°C) | 3.8 (-10°C) |
| SEER                         | Cooling           | kWh/kWh | 5.90           | 5.80        | 5.60        | 5.80        |
| SCOP                         | Heating (Average) |         | 3.80           |             |             |             |
| Annual energy consumption    | QCE               | kWh/a   | 148            | 211         | 269         | 313         |
|                              | QHE (Average)     |         | 847            | 1,031       | 1,177       | 1,398       |
| Sound power level            | Cooling           | HIGH    | dB (A)         | 57          | 58          | 60          |
|                              | Heating           |         |                | 57          | 58          | 60          |

## 2. Dimensions

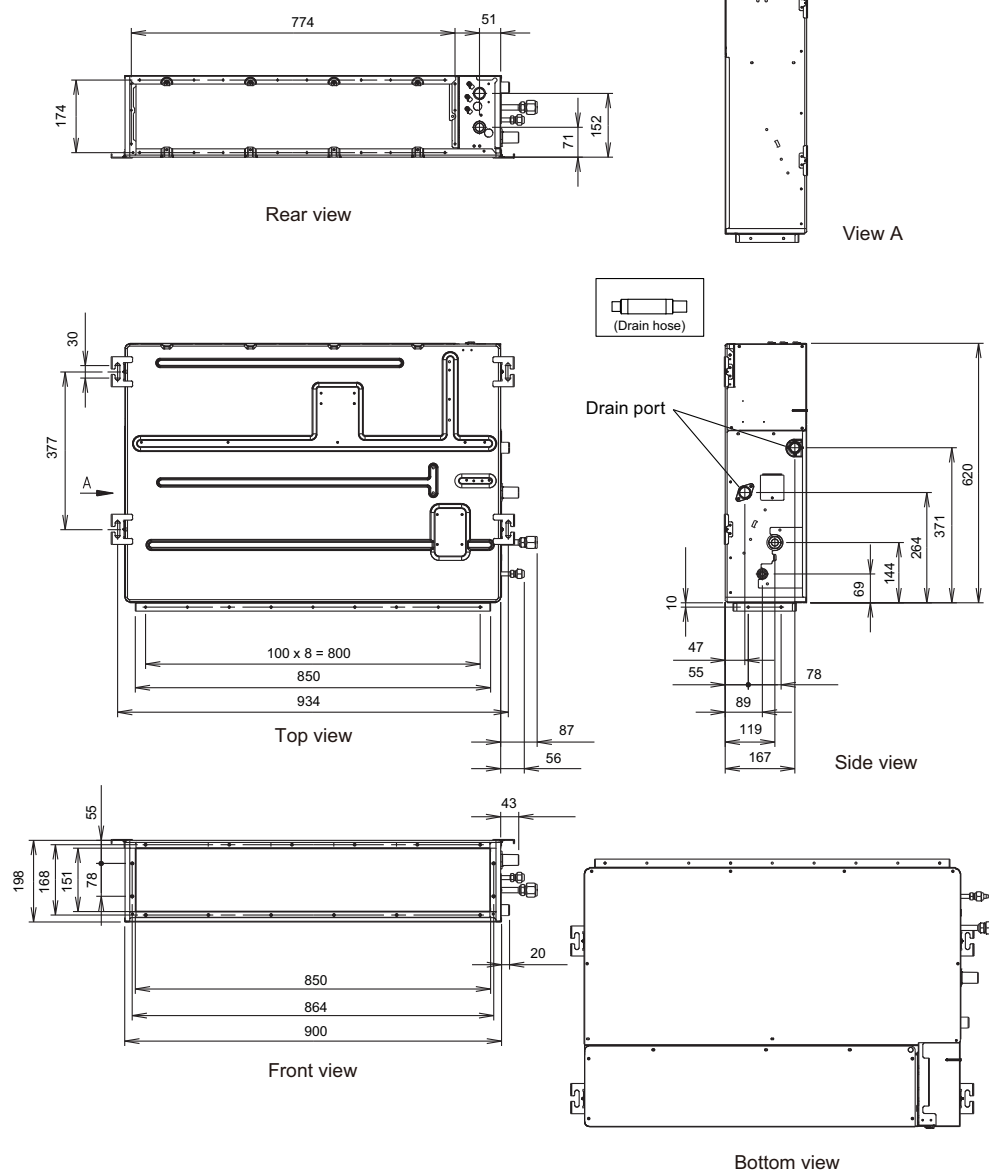
### 2-1. Models: ARXG09KLLAP, ARXG12KLLAP, and ARXG14KLLAP

Unit: mm



## 2-2. Model: ARXG18KLLAP

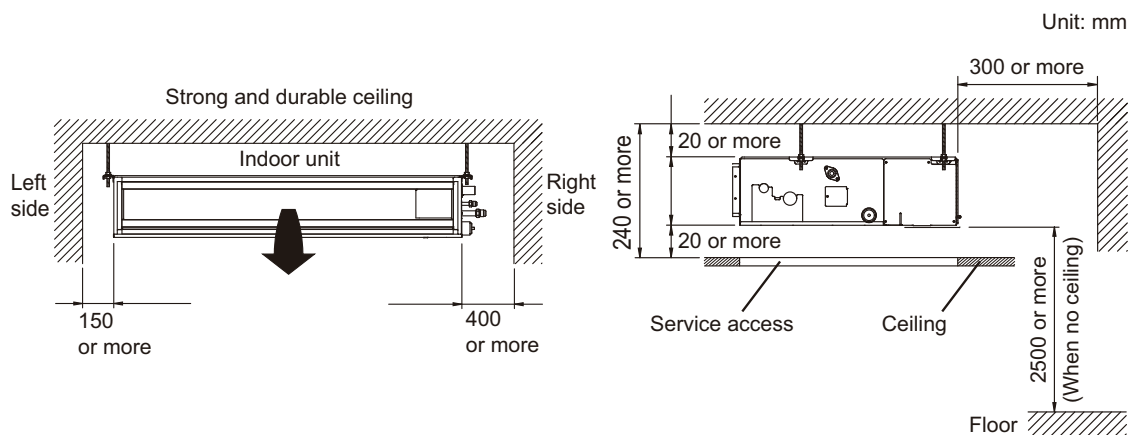
Unit: mm



## 2-3. Installation space requirement

Provide sufficient installation space for product safety.

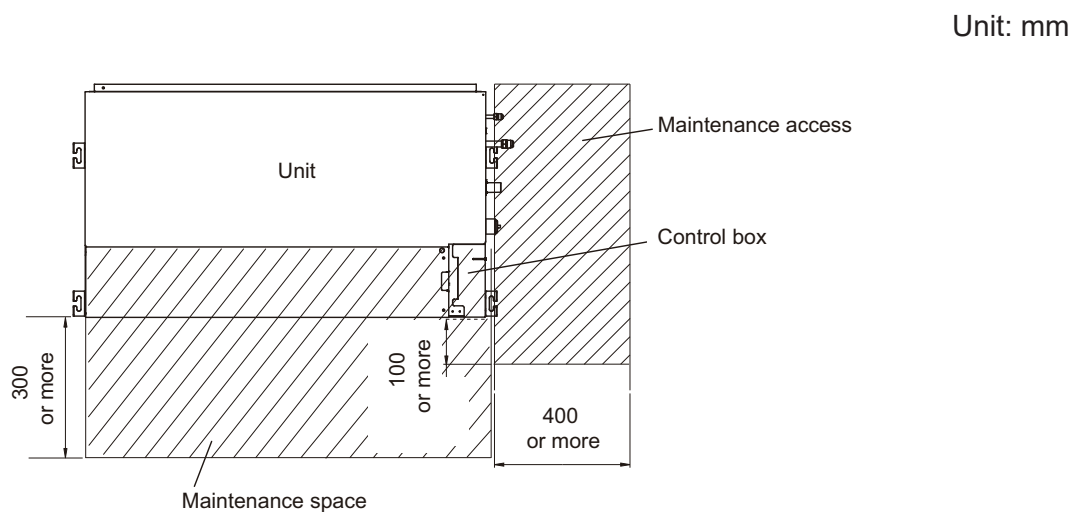
**In ceiling-concealed installations:**



## 2-4. Maintenance space requirement

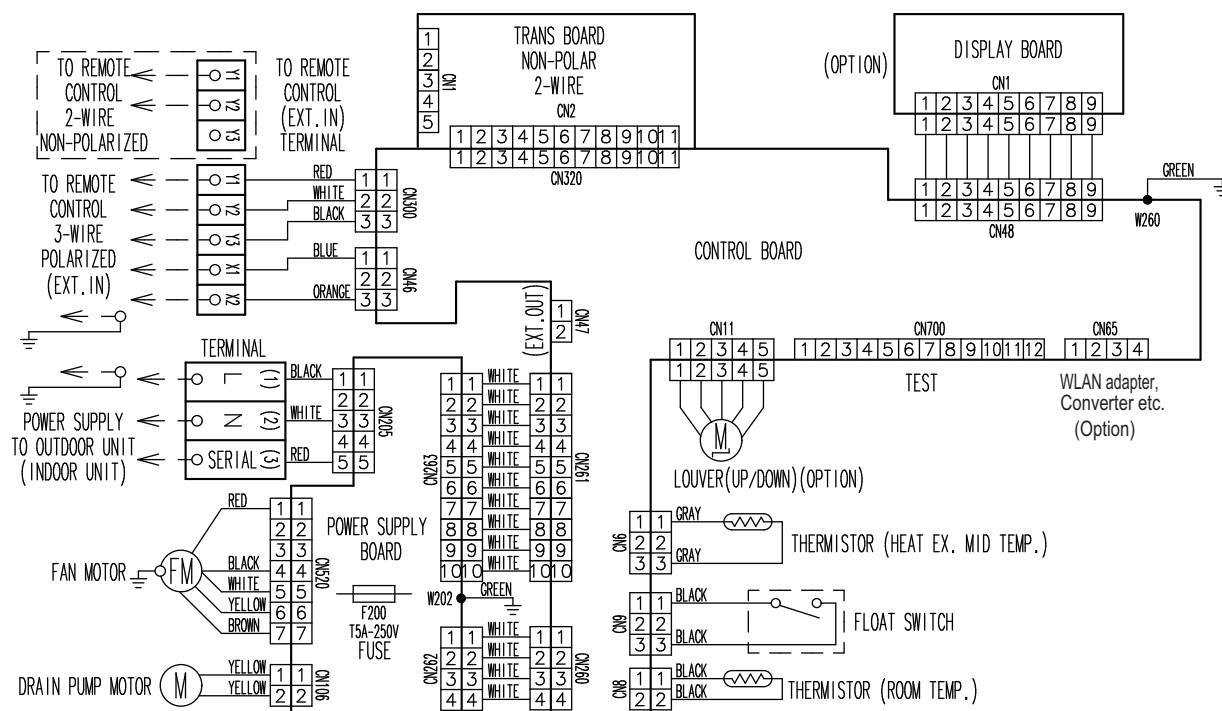
Provide sufficient maintenance space for efficient maintenance.

**NOTE:** Do not place any wiring or illumination in the maintenance space, as they will impede service.



### 3. Wiring diagrams

#### 3-1. Models: ARXG09KLLAP, ARXG12KLLAP, ARXG14KLLAP, and ARXG18KLLAP



## 4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

**For cooling capacity:** Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

**For heating capacity:** Total Capacity (TC) and Input Power (IP)

### 4-1. Cooling capacity

#### ■ Model: ARXG09KLLAP

| AFR                 |                    |      |      | m³/h |      |      |      |      |      |      |      |      | 600  |      |      |      |      |      |      |      |      |      |
|---------------------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Outdoor temperature | Indoor temperature |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                     | °CDB               | 18   |      |      | 21   |      |      | 23   |      |      | 25   |      |      | 27   |      |      | 29   |      |      | 32   |      |      |
|                     | °CWB               | 12   |      |      | 15   |      |      | 16   |      |      | 18   |      |      | 19   |      |      | 21   |      |      | 23   |      |      |
|                     | °CDB               | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   |
|                     |                    | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      |
|                     | -10                | 1.89 | 1.52 | 0.61 | 2.10 | 1.53 | 0.62 | 2.17 | 1.66 | 0.62 | 2.32 | 1.67 | 0.63 | 2.39 | 1.80 | 0.63 | 2.53 | 1.79 | 0.64 | 2.68 | 1.91 | 0.64 |
|                     | 0                  | 2.01 | 1.54 | 0.48 | 2.24 | 1.55 | 0.49 | 2.32 | 1.69 | 0.49 | 2.47 | 1.69 | 0.50 | 2.55 | 1.83 | 0.50 | 2.70 | 1.82 | 0.51 | 2.86 | 1.94 | 0.51 |
| 5                   | 2.04               | 1.59 | 0.55 | 2.27 | 1.60 | 0.56 | 2.35 | 1.74 | 0.56 | 2.50 | 1.74 | 0.57 | 2.58 | 1.88 | 0.57 | 2.73 | 1.87 | 0.58 | 2.89 | 1.99 | 0.58 |      |
| 10                  | 2.14               | 1.63 | 0.52 | 2.38 | 1.64 | 0.53 | 2.47 | 1.78 | 0.53 | 2.63 | 1.79 | 0.54 | 2.71 | 1.93 | 0.54 | 2.87 | 1.92 | 0.55 | 3.04 | 2.05 | 0.55 |      |
| 15                  | 2.08               | 1.60 | 0.58 | 2.31 | 1.61 | 0.59 | 2.39 | 1.75 | 0.59 | 2.55 | 1.76 | 0.60 | 2.63 | 1.90 | 0.60 | 2.79 | 1.89 | 0.61 | 2.95 | 2.02 | 0.61 |      |
| 20                  | 2.22               | 1.68 | 0.44 | 2.47 | 1.69 | 0.45 | 2.56 | 1.84 | 0.45 | 2.73 | 1.84 | 0.46 | 2.81 | 1.99 | 0.46 | 2.98 | 1.98 | 0.46 | 3.15 | 2.11 | 0.47 |      |
| 25                  | 2.13               | 1.69 | 0.52 | 2.38 | 1.70 | 0.53 | 2.46 | 1.85 | 0.53 | 2.62 | 1.85 | 0.54 | 2.70 | 2.00 | 0.54 | 2.86 | 1.99 | 0.55 | 3.02 | 2.12 | 0.55 |      |
| 30                  | 2.05               | 1.70 | 0.60 | 2.29 | 1.71 | 0.61 | 2.37 | 1.86 | 0.61 | 2.52 | 1.86 | 0.62 | 2.60 | 2.01 | 0.62 | 2.76 | 2.00 | 0.63 | 2.91 | 2.13 | 0.63 |      |
| 35                  | 1.98               | 1.70 | 0.67 | 2.20 | 1.71 | 0.68 | 2.28 | 1.86 | 0.68 | 2.43 | 1.87 | 0.69 | 2.50 | 2.02 | 0.69 | 2.65 | 2.01 | 0.70 | 2.80 | 2.14 | 0.70 |      |
| 40                  | 1.90               | 1.70 | 0.73 | 2.11 | 1.71 | 0.74 | 2.18 | 1.86 | 0.75 | 2.33 | 1.87 | 0.76 | 2.40 | 2.02 | 0.76 | 2.54 | 2.01 | 0.77 | 2.69 | 2.14 | 0.78 |      |
| 46                  | 1.81               | 1.70 | 0.80 | 2.02 | 1.71 | 0.81 | 2.08 | 1.86 | 0.82 | 2.22 | 1.86 | 0.83 | 2.29 | 2.01 | 0.83 | 2.43 | 2.00 | 0.84 | 2.56 | 2.13 | 0.85 |      |

#### ■ Model: ARXG12KLLAP

| AFR                 |      |                    |      |      |      |      |      |      |      | m³/h |      |      |      |      |      |      |      |      |      | 650  |      |      |  |  |  |  |  |  |  |
|---------------------|------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|
|                     |      | Indoor temperature |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |
|                     |      | 18                 |      |      | 21   |      |      | 23   |      |      | 25   |      |      | 27   |      |      | 29   |      |      | 32   |      |      |  |  |  |  |  |  |  |
|                     |      | 12                 |      |      | 15   |      |      | 16   |      |      | 18   |      |      | 19   |      |      | 21   |      |      | 23   |      |      |  |  |  |  |  |  |  |
| Outdoor temperature | °CDB | TC                 | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   |  |  |  |  |  |  |  |
|                     |      | kW                 |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      |  |  |  |  |  |  |  |
|                     | -10  | 2.88               | 2.36 | 0.70 | 3.20 | 2.38 | 0.72 | 3.31 | 2.58 | 0.72 | 3.53 | 2.59 | 0.73 | 3.64 | 2.80 | 0.73 | 3.86 | 2.79 | 0.74 | 4.08 | 2.97 | 0.74 |  |  |  |  |  |  |  |
|                     | 0    | 2.91               | 2.38 | 0.66 | 3.24 | 2.39 | 0.67 | 3.35 | 2.60 | 0.67 | 3.57 | 2.61 | 0.68 | 3.68 | 2.82 | 0.68 | 3.90 | 2.81 | 0.69 | 4.12 | 2.99 | 0.69 |  |  |  |  |  |  |  |
|                     | 5    | 2.92               | 2.38 | 0.81 | 3.25 | 2.39 | 0.82 | 3.36 | 2.60 | 0.83 | 3.58 | 2.61 | 0.84 | 3.69 | 2.82 | 0.84 | 3.91 | 2.81 | 0.85 | 4.13 | 2.99 | 0.86 |  |  |  |  |  |  |  |
|                     | 10   | 3.13               | 2.46 | 0.55 | 3.48 | 2.48 | 0.56 | 3.60 | 2.70 | 0.56 | 3.84 | 2.70 | 0.57 | 3.96 | 2.92 | 0.57 | 4.20 | 2.91 | 0.58 | 4.44 | 3.10 | 0.58 |  |  |  |  |  |  |  |
|                     | 15   | 3.00               | 2.41 | 0.65 | 3.34 | 2.43 | 0.66 | 3.46 | 2.64 | 0.66 | 3.69 | 2.65 | 0.67 | 3.80 | 2.86 | 0.67 | 4.03 | 2.85 | 0.68 | 4.26 | 3.03 | 0.68 |  |  |  |  |  |  |  |
|                     | 20   | 2.99               | 2.43 | 0.67 | 3.34 | 2.45 | 0.68 | 3.45 | 2.66 | 0.68 | 3.68 | 2.67 | 0.69 | 3.79 | 2.88 | 0.69 | 4.02 | 2.87 | 0.70 | 4.24 | 3.06 | 0.70 |  |  |  |  |  |  |  |
|                     | 25   | 2.92               | 2.35 | 0.80 | 3.25 | 2.37 | 0.81 | 3.36 | 2.58 | 0.82 | 3.58 | 2.58 | 0.83 | 3.69 | 2.79 | 0.83 | 3.91 | 2.78 | 0.84 | 4.13 | 2.96 | 0.85 |  |  |  |  |  |  |  |
|                     | 30   | 2.84               | 2.28 | 0.93 | 3.16 | 2.29 | 0.94 | 3.27 | 2.49 | 0.95 | 3.48 | 2.50 | 0.96 | 3.59 | 2.70 | 0.96 | 3.81 | 2.69 | 0.97 | 4.02 | 2.86 | 0.98 |  |  |  |  |  |  |  |
| 35                  | 2.77 | 2.20               | 1.05 | 3.08 | 2.22 | 1.07 | 3.19 | 2.41 | 1.07 | 3.40 | 2.42 | 1.08 | 3.50 | 2.61 | 1.09 | 3.71 | 2.60 | 1.10 | 3.92 | 2.77 | 1.11 |      |  |  |  |  |  |  |  |
| 40                  | 2.48 | 2.20               | 1.03 | 2.76 | 2.22 | 1.05 | 2.86 | 2.41 | 1.05 | 3.05 | 2.42 | 1.06 | 3.14 | 2.61 | 1.07 | 3.33 | 2.60 | 1.08 | 3.52 | 2.77 | 1.09 |      |  |  |  |  |  |  |  |
| 46                  | 2.19 | 2.08               | 1.09 | 2.44 | 2.09 | 1.11 | 2.52 | 2.27 | 1.11 | 2.69 | 2.28 | 1.12 | 2.77 | 2.46 | 1.13 | 2.94 | 2.45 | 1.14 | 3.10 | 2.61 | 1.15 |      |  |  |  |  |  |  |  |

#### ■ Model: ARXG14KLLAP

| AFR                 |      |                    |      | m³/h |      |      |      |      |      |      |      |      | 800  |      |      |      |      |      |      |      |      |      |
|---------------------|------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                     |      | Indoor temperature |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                     |      | 18                 |      |      | 21   |      |      | 23   |      |      | 25   |      |      | 27   |      |      | 29   |      |      | 32   |      |      |
|                     | °CDB | 12                 |      |      | 15   |      |      | 16   |      |      | 18   |      |      | 19   |      |      | 21   |      |      | 23   |      |      |
| Outdoor temperature | °CDB | TC                 | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   |
|                     |      | kW                 |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      |
|                     | -10  | 3.60               | 2.89 | 0.72 | 4.01 | 2.91 | 0.74 | 4.15 | 3.17 | 0.74 | 4.42 | 3.18 | 0.75 | 4.56 | 3.43 | 0.75 | 4.83 | 3.42 | 0.76 | 5.11 | 3.64 | 0.77 |
|                     | 0    | 3.44               | 2.77 | 0.90 | 3.84 | 2.78 | 0.91 | 3.97 | 3.03 | 0.92 | 4.23 | 3.04 | 0.93 | 4.36 | 3.28 | 0.93 | 4.62 | 3.27 | 0.94 | 4.88 | 3.48 | 0.95 |
|                     | 5    | 3.34               | 2.69 | 0.98 | 3.72 | 2.71 | 1.00 | 3.85 | 2.94 | 1.00 | 4.10 | 2.95 | 1.01 | 4.23 | 3.19 | 1.02 | 4.48 | 3.18 | 1.03 | 4.74 | 3.38 | 1.04 |
|                     | 10   | 3.39               | 2.66 | 0.97 | 3.78 | 2.67 | 0.99 | 3.90 | 2.91 | 0.99 | 4.16 | 2.92 | 1.00 | 4.29 | 3.15 | 1.01 | 4.55 | 3.14 | 1.02 | 4.80 | 3.34 | 1.03 |
|                     | 15   | 3.44               | 2.75 | 0.97 | 3.83 | 2.77 | 0.99 | 3.96 | 3.01 | 0.99 | 4.22 | 3.02 | 1.00 | 4.35 | 3.26 | 1.01 | 4.61 | 3.25 | 1.02 | 4.87 | 3.46 | 1.03 |
|                     | 20   | 3.89               | 3.01 | 0.90 | 4.33 | 3.03 | 0.91 | 4.48 | 3.30 | 0.92 | 4.77 | 3.31 | 0.93 | 4.92 | 3.57 | 0.93 | 5.22 | 3.56 | 0.94 | 5.51 | 3.79 | 0.95 |
|                     | 25   | 3.72               | 2.93 | 1.04 | 4.14 | 2.95 | 1.06 | 4.29 | 3.20 | 1.06 | 4.57 | 3.21 | 1.07 | 4.71 | 3.47 | 1.08 | 4.99 | 3.46 | 1.09 | 5.28 | 3.68 | 1.10 |
|                     | 30   | 3.56               | 2.85 | 1.19 | 3.96 | 2.87 | 1.21 | 4.10 | 3.12 | 1.21 | 4.37 | 3.13 | 1.22 | 4.50 | 3.38 | 1.23 | 4.77 | 3.37 | 1.24 | 5.04 | 3.59 | 1.25 |
| 35                  | 3.40 | 2.77               | 1.32 | 3.78 | 2.78 | 1.34 | 3.91 | 3.03 | 1.35 | 4.17 | 3.04 | 1.36 | 4.30 | 3.28 | 1.37 | 4.56 | 3.27 | 1.38 | 4.82 | 3.48 | 1.40 |      |
| 40                  | 2.68 | 2.52               | 1.01 | 2.98 | 2.54 | 1.03 | 3.08 | 2.76 | 1.03 | 3.29 | 2.77 | 1.04 | 3.39 | 2.99 | 1.05 | 3.59 | 2.98 | 1.06 | 3.80 | 3.17 | 1.07 |      |
| 46                  | 2.11 | 2.11               | 0.84 | 2.35 | 2.27 | 0.85 | 2.43 | 2.43 | 0.86 | 2.59 | 2.47 | 0.87 | 2.67 | 2.67 | 0.87 | 2.83 | 2.66 | 0.88 | 2.99 | 2.83 | 0.89 |      |

# Model: ARXG18KLLAP

|     |                   |     |
|-----|-------------------|-----|
| AFR | m <sup>3</sup> /h | 940 |
|-----|-------------------|-----|

|                     |      | Indoor temperature |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------|------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| °CDB                |      | 18                 |      |      | 21   |      |      | 23   |      |      | 25   |      |      | 27   |      |      | 29   |      |      | 32   |      |      |
| °CWB                |      | 12                 |      |      | 15   |      |      | 16   |      |      | 18   |      |      | 19   |      |      | 21   |      |      | 23   |      |      |
| Outdoor temperature | °CDB | TC                 | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   | TC   | SHC  | IP   |
|                     |      | kW                 |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      | kW   |      |      |
|                     | -10  | 4.15               | 3.36 | 0.56 | 4.62 | 3.38 | 0.57 | 4.78 | 3.67 | 0.57 | 5.09 | 3.69 | 0.58 | 5.25 | 3.98 | 0.58 | 5.57 | 3.96 | 0.59 | 5.88 | 4.22 | 0.59 |
|                     | 0    | 3.99               | 3.32 | 0.73 | 4.44 | 3.34 | 0.74 | 4.60 | 3.63 | 0.75 | 4.90 | 3.64 | 0.76 | 5.05 | 3.93 | 0.76 | 5.35 | 3.91 | 0.77 | 5.66 | 4.17 | 0.78 |
|                     | 5    | 3.91               | 3.29 | 0.86 | 4.36 | 3.31 | 0.87 | 4.50 | 3.60 | 0.88 | 4.80 | 3.61 | 0.89 | 4.95 | 3.90 | 0.89 | 5.25 | 3.88 | 0.90 | 5.54 | 4.14 | 0.91 |
|                     | 10   | 4.05               | 3.35 | 0.66 | 4.51 | 3.37 | 0.67 | 4.67 | 3.66 | 0.67 | 4.98 | 3.68 | 0.68 | 5.13 | 3.97 | 0.68 | 5.44 | 3.95 | 0.69 | 5.75 | 4.21 | 0.69 |
|                     | 15   | 3.92               | 3.31 | 0.71 | 4.36 | 3.33 | 0.73 | 4.51 | 3.62 | 0.73 | 4.81 | 3.63 | 0.74 | 4.96 | 3.92 | 0.74 | 5.26 | 3.90 | 0.75 | 5.56 | 4.16 | 0.75 |
|                     | 20   | 4.27               | 3.23 | 0.97 | 4.76 | 3.25 | 0.98 | 4.92 | 3.54 | 0.99 | 5.25 | 3.55 | 1.00 | 5.41 | 3.83 | 1.00 | 5.73 | 3.81 | 1.01 | 6.06 | 4.06 | 1.02 |
|                     | 25   | 4.22               | 3.23 | 1.18 | 4.70 | 3.25 | 1.20 | 4.86 | 3.54 | 1.20 | 5.18 | 3.55 | 1.21 | 5.34 | 3.83 | 1.22 | 5.66 | 3.81 | 1.23 | 5.98 | 4.06 | 1.24 |
|                     | 30   | 4.16               | 3.23 | 1.39 | 4.64 | 3.25 | 1.41 | 4.80 | 3.54 | 1.42 | 5.11 | 3.55 | 1.43 | 5.27 | 3.83 | 1.44 | 5.59 | 3.81 | 1.45 | 5.90 | 4.06 | 1.47 |
| 35                  | 4.11 | 3.23               | 1.60 | 4.58 | 3.25 | 1.63 | 4.73 | 3.54 | 1.64 | 5.04 | 3.55 | 1.65 | 5.20 | 3.83 | 1.66 | 5.51 | 3.81 | 1.68 | 5.82 | 4.06 | 1.69 |      |
| 40                  | 3.49 | 3.00               | 1.24 | 3.89 | 3.01 | 1.26 | 4.02 | 3.28 | 1.27 | 4.29 | 3.29 | 1.28 | 4.42 | 3.55 | 1.29 | 4.69 | 3.54 | 1.30 | 4.95 | 3.77 | 1.32 |      |
| 46                  | 2.45 | 2.45               | 0.97 | 2.73 | 2.63 | 0.98 | 2.82 | 2.82 | 0.99 | 3.01 | 2.87 | 1.00 | 3.10 | 3.10 | 1.00 | 3.29 | 3.09 | 1.01 | 3.47 | 3.29 | 1.02 |      |

## 4-2. Heating capacity

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

### Model: ARXG09KLLAP

| AFR                 |      |      | m³/h               |      |      |      | 600  |      |      |      |      |      |
|---------------------|------|------|--------------------|------|------|------|------|------|------|------|------|------|
|                     |      |      | Indoor temperature |      |      |      |      |      |      |      |      |      |
|                     |      | °CDB | 16                 |      | 18   |      | 20   |      | 22   |      | 24   |      |
| Outdoor temperature | °CDB | °CWB | TC                 | IP   | TC   | IP   | TC   | IP   | TC   | IP   | TC   | IP   |
|                     |      |      | kW                 |      | kW   |      | kW   |      | kW   |      | kW   |      |
|                     | -15  | -16  | 2.10               | 0.79 | 2.05 | 0.80 | 2.00 | 0.82 | 1.95 | 0.84 | 1.90 | 0.85 |
|                     | -10  | -11  | 2.47               | 0.84 | 2.41 | 0.85 | 2.35 | 0.87 | 2.29 | 0.89 | 2.23 | 0.90 |
|                     | -5   | -7   | 2.84               | 0.88 | 2.77 | 0.90 | 2.70 | 0.92 | 2.63 | 0.94 | 2.57 | 0.96 |
|                     | 0    | -2   | 3.44               | 1.04 | 3.36 | 1.06 | 3.28 | 1.08 | 3.20 | 1.10 | 3.12 | 1.12 |
|                     | 5    | 3    | 3.91               | 1.13 | 3.81 | 1.16 | 3.72 | 1.18 | 3.63 | 1.20 | 3.53 | 1.23 |
|                     | 7    | 6    | 4.10               | 1.17 | 4.00 | 1.20 | 3.90 | 1.22 | 3.80 | 1.24 | 3.71 | 1.27 |
|                     | 10   | 8    | 4.20               | 1.18 | 4.10 | 1.21 | 4.00 | 1.23 | 3.90 | 1.25 | 3.80 | 1.28 |
|                     | 15   | 10   | 4.48               | 1.21 | 4.38 | 1.23 | 4.27 | 1.26 | 4.16 | 1.29 | 4.06 | 1.30 |
| 20                  | 15   | 4.45 | 1.03               | 4.35 | 1.05 | 4.24 | 1.07 | 4.13 | 1.09 | 4.03 | 1.11 |      |
| 24                  | 18   | 4.47 | 0.92               | 4.37 | 0.94 | 4.26 | 0.96 | 4.15 | 0.98 | 4.05 | 0.99 |      |

### Model: ARXG12KLLAP

| AFR                 |      |                    | m³/h |      |      |      | 650  |      |      |      |      |      |
|---------------------|------|--------------------|------|------|------|------|------|------|------|------|------|------|
|                     |      | Indoor temperature |      |      |      |      |      |      |      |      |      |      |
|                     |      | °CDB               | 16   |      | 18   |      | 20   |      | 22   |      | 24   |      |
| Outdoor temperature | °CDB | °CWB               | TC   | IP   | TC   | IP   | TC   | IP   | TC   | IP   | TC   | IP   |
|                     |      |                    | kW   |      | kW   |      | kW   |      | kW   |      | kW   |      |
|                     | -15  | -16                | 2.59 | 0.91 | 2.53 | 0.93 | 2.47 | 0.95 | 2.41 | 0.97 | 2.35 | 0.99 |
|                     | -10  | -11                | 2.87 | 0.95 | 2.80 | 0.97 | 2.73 | 0.99 | 2.66 | 1.01 | 2.59 | 1.03 |
|                     | -5   | -7                 | 3.24 | 0.98 | 3.17 | 1.00 | 3.09 | 1.02 | 3.01 | 1.04 | 2.94 | 1.06 |
|                     | 0    | -2                 | 3.85 | 1.15 | 3.76 | 1.18 | 3.67 | 1.20 | 3.58 | 1.22 | 3.49 | 1.25 |
|                     | 5    | 3                  | 4.40 | 1.28 | 4.29 | 1.30 | 4.19 | 1.33 | 4.09 | 1.36 | 3.98 | 1.38 |
|                     | 7    | 6                  | 4.62 | 1.32 | 4.51 | 1.35 | 4.40 | 1.38 | 4.29 | 1.41 | 4.18 | 1.44 |
|                     | 10   | 8                  | 4.78 | 1.27 | 4.66 | 1.29 | 4.55 | 1.32 | 4.44 | 1.35 | 4.32 | 1.37 |
|                     | 15   | 10                 | 5.04 | 1.17 | 4.92 | 1.20 | 4.80 | 1.22 | 4.68 | 1.24 | 4.56 | 1.26 |
| 20                  | 15   | 4.87               | 1.23 | 4.76 | 1.25 | 4.64 | 1.28 | 4.52 | 1.31 | 4.41 | 1.32 |      |
| 24                  | 18   | 5.04               | 1.11 | 4.92 | 1.14 | 4.80 | 1.16 | 4.68 | 1.18 | 4.56 | 1.20 |      |

### Model: ARXG14KLLAP

| AFR                 |      |      | m³/h               |      |      |      | 800  |      |      |      |      |      |
|---------------------|------|------|--------------------|------|------|------|------|------|------|------|------|------|
|                     |      |      | Indoor temperature |      |      |      |      |      |      |      |      |      |
|                     |      | °CDB | 16                 |      | 18   |      | 20   |      | 22   |      | 24   |      |
| Outdoor temperature | °CDB | °CWB | TC                 | IP   | TC   | IP   | TC   | IP   | TC   | IP   | TC   | IP   |
|                     |      |      | kW                 |      | kW   |      | kW   |      | kW   |      | kW   |      |
|                     | -15  | -16  | 3.15               | 1.13 | 3.08 | 1.16 | 3.00 | 1.18 | 2.93 | 1.20 | 2.85 | 1.23 |
|                     | -10  | -11  | 3.66               | 1.21 | 3.58 | 1.23 | 3.49 | 1.26 | 3.40 | 1.29 | 3.32 | 1.31 |
|                     | -5   | -7   | 4.22               | 1.30 | 4.12 | 1.32 | 4.02 | 1.35 | 3.92 | 1.38 | 3.82 | 1.40 |
|                     | 0    | -2   | 5.15               | 1.56 | 5.02 | 1.59 | 4.90 | 1.62 | 4.78 | 1.65 | 4.66 | 1.68 |
|                     | 5    | 3    | 5.42               | 1.66 | 5.29 | 1.70 | 5.16 | 1.73 | 5.03 | 1.76 | 4.90 | 1.80 |
|                     | 7    | 6    | 5.57               | 1.54 | 5.43 | 1.57 | 5.30 | 1.60 | 5.17 | 1.63 | 5.04 | 1.66 |
|                     | 10   | 8    | 5.74               | 1.56 | 5.61 | 1.59 | 5.47 | 1.62 | 5.33 | 1.65 | 5.20 | 1.68 |
|                     | 15   | 10   | 5.87               | 1.45 | 5.73 | 1.48 | 5.59 | 1.51 | 5.45 | 1.54 | 5.31 | 1.56 |
| 20                  | 15   | 5.44 | 1.13               | 5.31 | 1.16 | 5.18 | 1.18 | 5.05 | 1.20 | 4.92 | 1.22 |      |
| 24                  | 18   | 5.75 | 1.14               | 5.62 | 1.17 | 5.48 | 1.19 | 5.34 | 1.21 | 5.21 | 1.23 |      |

### Model: ARXG18KLLAP

| AFR                 |      |                    | m³/h |      |      |      | 940  |      |      |      |      |      |
|---------------------|------|--------------------|------|------|------|------|------|------|------|------|------|------|
|                     |      | Indoor temperature |      |      |      |      |      |      |      |      |      |      |
|                     |      | °CDB               | 16   |      | 18   |      | 20   |      | 22   |      | 24   |      |
| Outdoor temperature | °CDB | °CWB               | TC   | IP   | TC   | IP   | TC   | IP   | TC   | IP   | TC   | IP   |
|                     |      |                    | kW   |      | kW   |      | kW   |      | kW   |      | kW   |      |
|                     | -15  | -16                | 3.86 | 1.14 | 3.77 | 1.17 | 3.68 | 1.19 | 3.59 | 1.21 | 3.50 | 1.24 |
|                     | -10  | -11                | 4.39 | 1.22 | 4.28 | 1.24 | 4.18 | 1.27 | 4.08 | 1.30 | 3.97 | 1.32 |
|                     | -5   | -7                 | 4.91 | 1.31 | 4.80 | 1.33 | 4.68 | 1.36 | 4.56 | 1.39 | 4.45 | 1.41 |
|                     | 0    | -2                 | 5.93 | 1.58 | 5.79 | 1.62 | 5.65 | 1.65 | 5.51 | 1.68 | 5.37 | 1.72 |
|                     | 5    | 3                  | 6.36 | 1.68 | 6.21 | 1.72 | 6.06 | 1.75 | 5.91 | 1.79 | 5.76 | 1.82 |
|                     | 7    | 6                  | 6.62 | 1.73 | 6.46 | 1.76 | 6.30 | 1.80 | 6.14 | 1.84 | 5.99 | 1.87 |
|                     | 10   | 8                  | 6.98 | 1.76 | 6.82 | 1.79 | 6.65 | 1.83 | 6.48 | 1.87 | 6.32 | 1.90 |
|                     | 15   | 10                 | 7.59 | 1.80 | 7.41 | 1.83 | 7.23 | 1.87 | 7.05 | 1.91 | 6.87 | 1.94 |
| 20                  | 15   | 6.95               | 1.47 | 6.79 | 1.50 | 6.62 | 1.53 | 6.45 | 1.56 | 6.29 | 1.58 |      |
| 24                  | 18   | 6.89               | 1.48 | 6.72 | 1.51 | 6.56 | 1.54 | 6.40 | 1.57 | 6.23 | 1.59 |      |

## 5. Fan performance

**NOTE:** Airflow and capacity/outlet temperature curve data are measured based on the same conditions mentioned in "Specifications".

### 5-1. Air velocity and temperature distributions

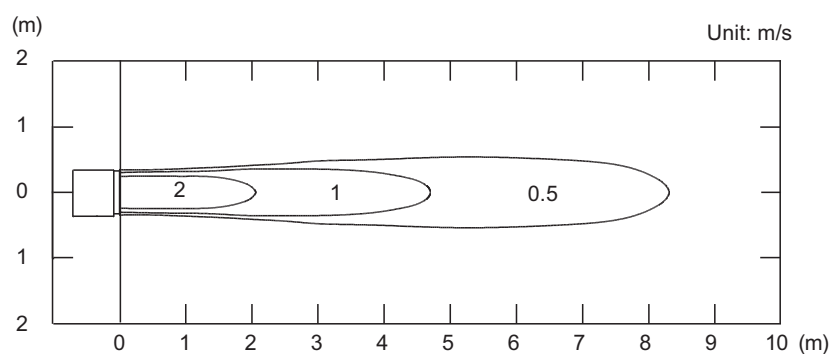
#### ■ Model: ARXG09KLLAP

**NOTE:** This data is measured after installing optional Auto Louver Grille Kit.

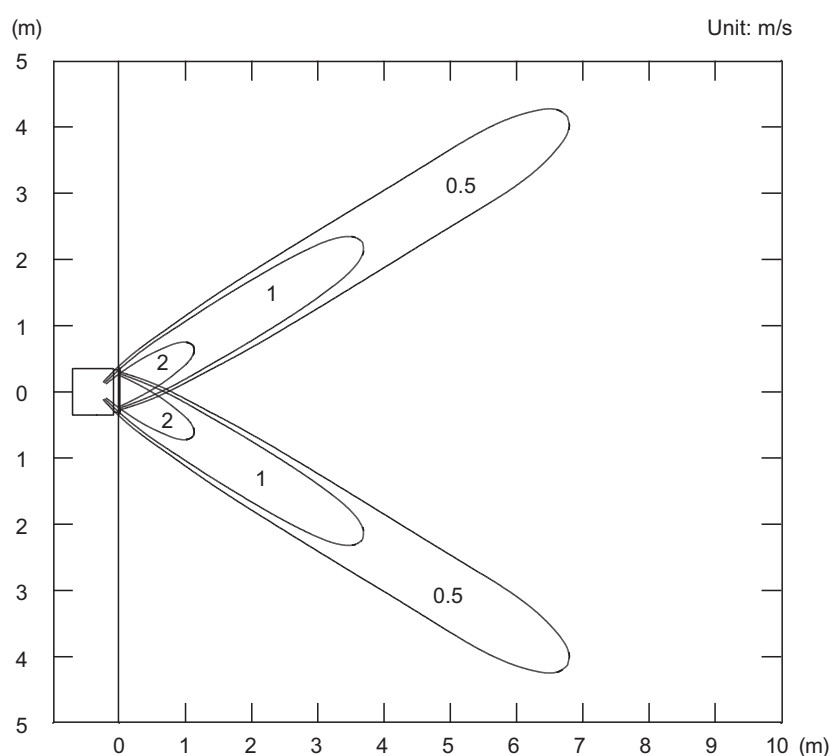
| Measuring conditions | Fan speed | Operation mode |
|----------------------|-----------|----------------|
|                      | HIGH      | FAN            |

- Air velocity distribution

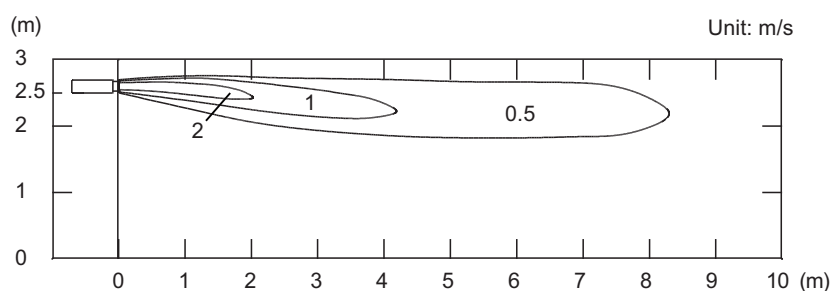
Top view  
Horizontal louver: Up  
Vertical louver: Center



Top view  
Horizontal louver: Up  
Vertical louver: Left & Right



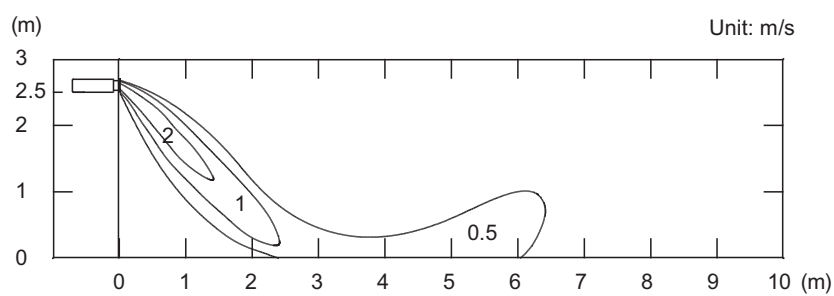
Side view  
Horizontal louver: Up  
Vertical louver: Center



| Measuring conditions | Fan speed | Operation mode |
|----------------------|-----------|----------------|
|                      | HIGH      | HEAT           |

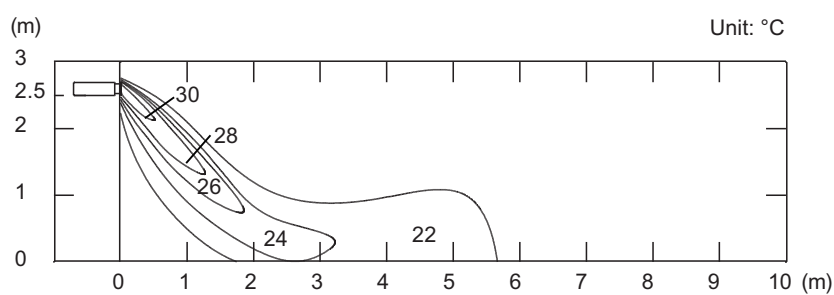
- Air velocity distribution

Side view  
Horizontal louver: Down  
Vertical louver: Center



- Air temperature distribution

Side view  
Horizontal louver: Down  
Vertical louver: Center



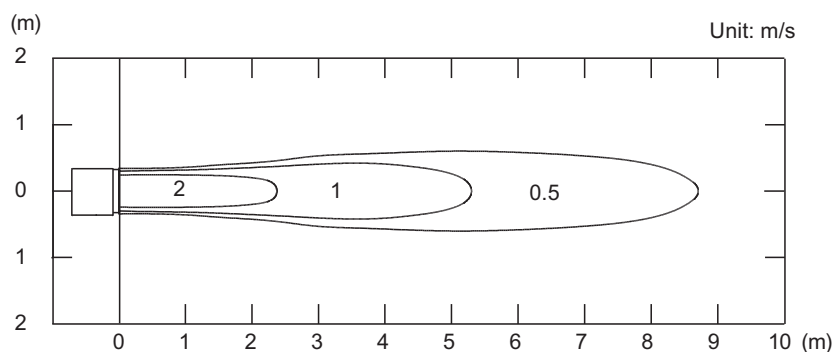
## Model: ARXG12KLLAP

**NOTE:** This data is measured after installing optional Auto Louver Grille Kit.

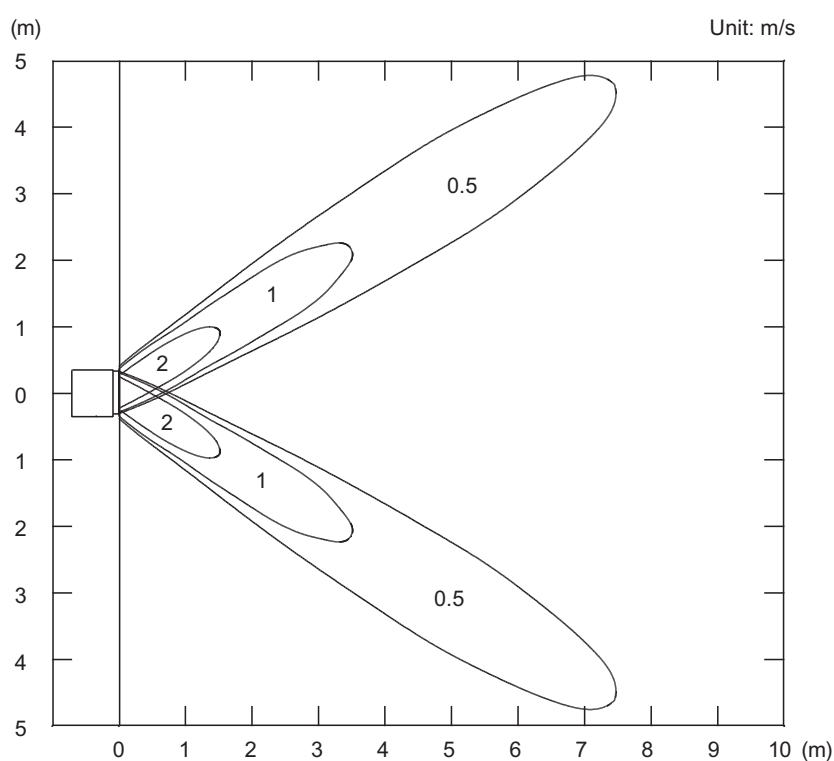
| Measuring conditions | Fan speed | Operation mode |
|----------------------|-----------|----------------|
|                      | HIGH      | FAN            |

- Air velocity distribution

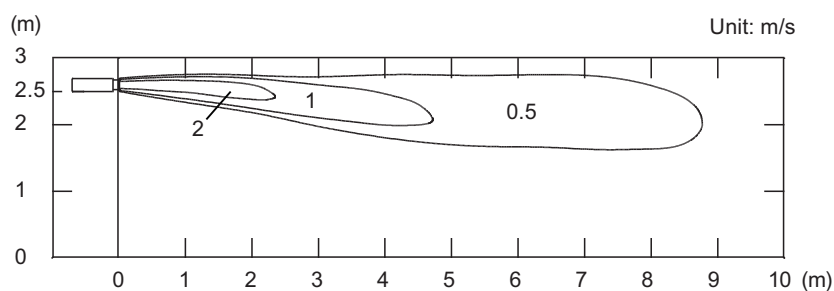
Top view  
Horizontal louver: Up  
Vertical louver: Center



Top view  
Horizontal louver: Up  
Vertical louver: Left & Right



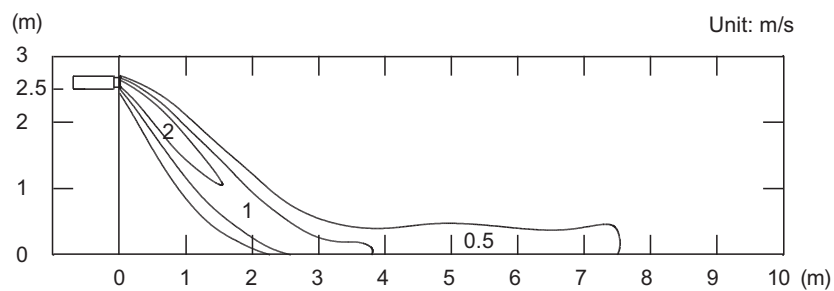
Side view  
Horizontal louver: Up  
Vertical louver: Center



| Measuring conditions | Fan speed | Operation mode |
|----------------------|-----------|----------------|
|                      | HIGH      | HEAT           |

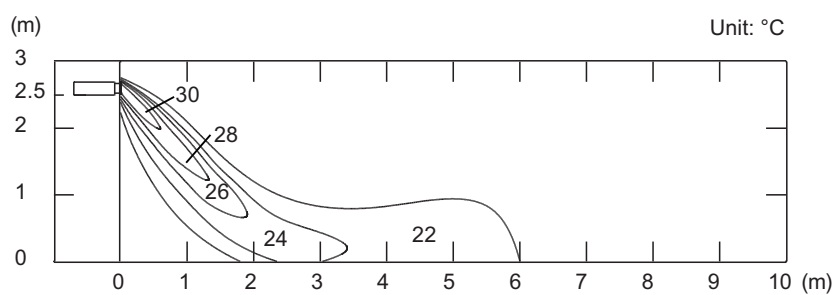
- Air velocity distribution

Side view  
Horizontal louver: Down  
Vertical louver: Center



- Air temperature distribution

Side view  
Horizontal louver: Down  
Vertical louver: Center

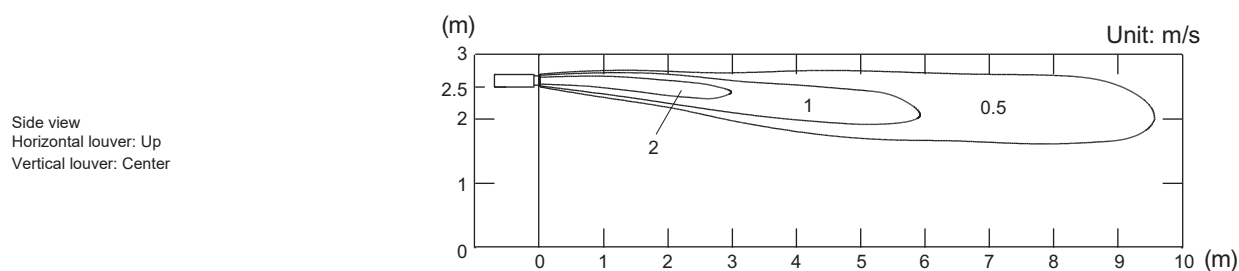
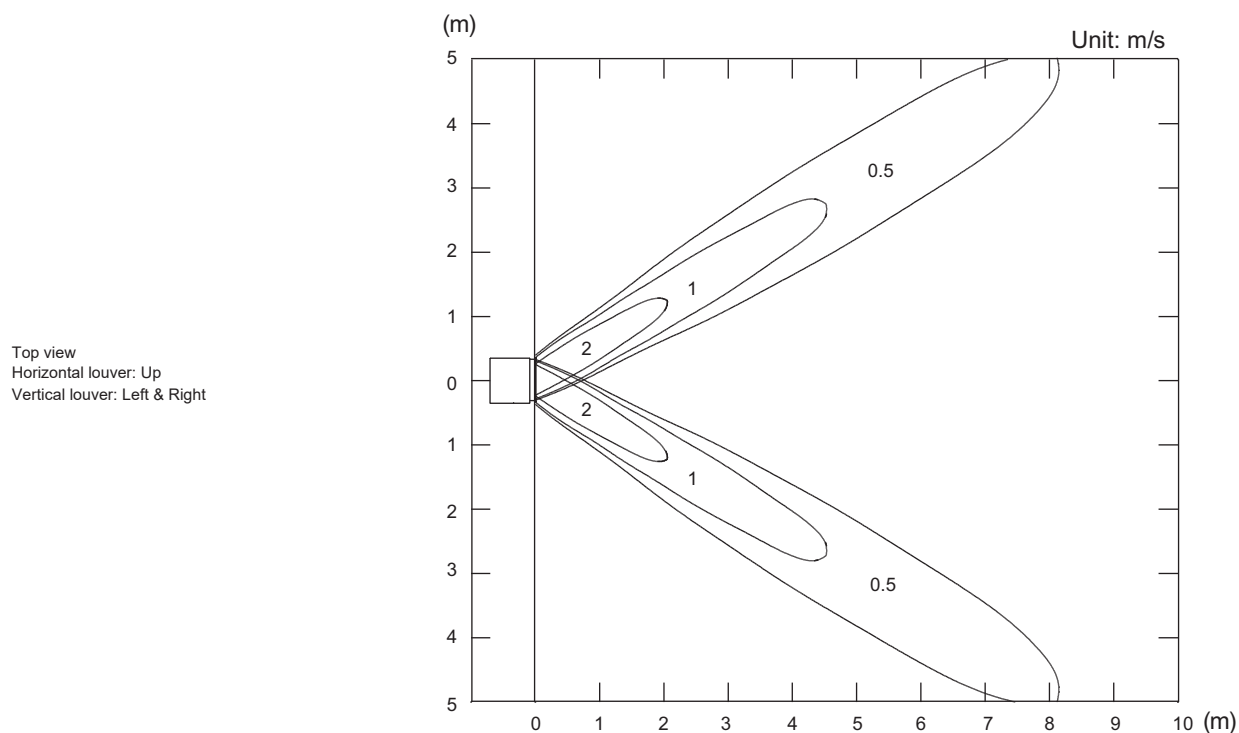
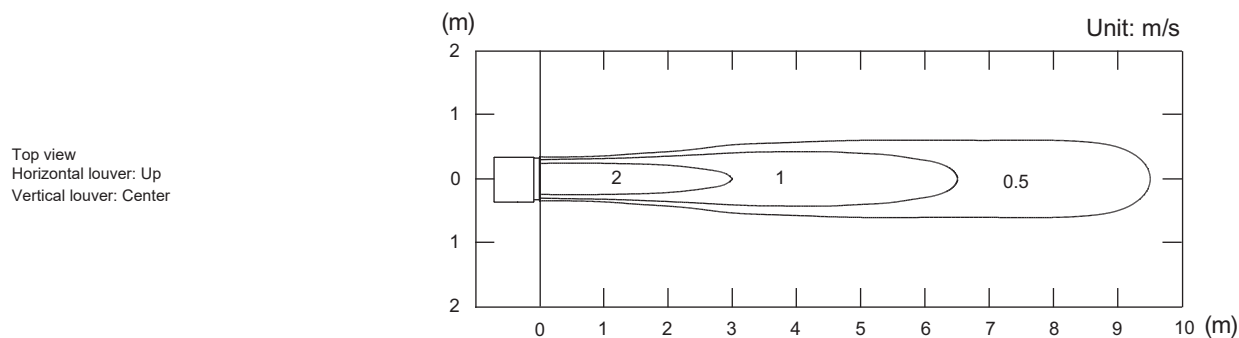


## Model: ARXG14KLLAP

**NOTE:** This data is measured after installing optional Auto louver grille kit.

- Air velocity distribution

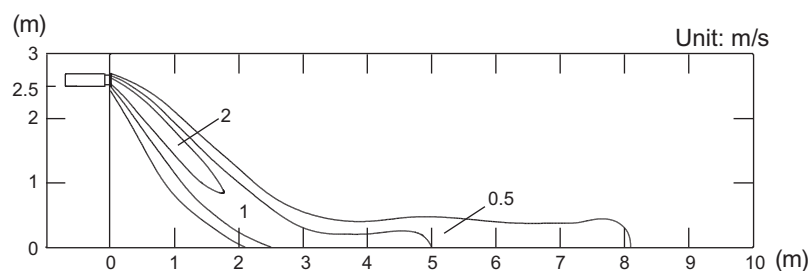
| Measuring conditions | Fan speed | Operation mode |
|----------------------|-----------|----------------|
|                      | HIGH      | FAN            |



- Air velocity distribution

|                      |           |                |
|----------------------|-----------|----------------|
| Measuring conditions | Fan speed | Operation mode |
|                      | HIGH      | HEAT           |

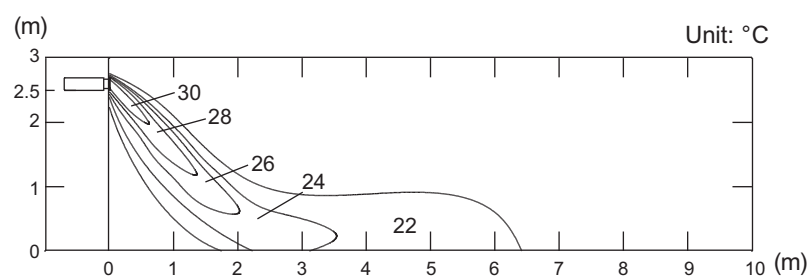
Side view  
Horizontal louver: Down  
Vertical louver: Center



- Air temperature distribution

|                      |           |                |
|----------------------|-----------|----------------|
| Measuring conditions | Fan speed | Operation mode |
|                      | HIGH      | HEAT           |

Side view  
Horizontal louver: Down  
Vertical louver: Center



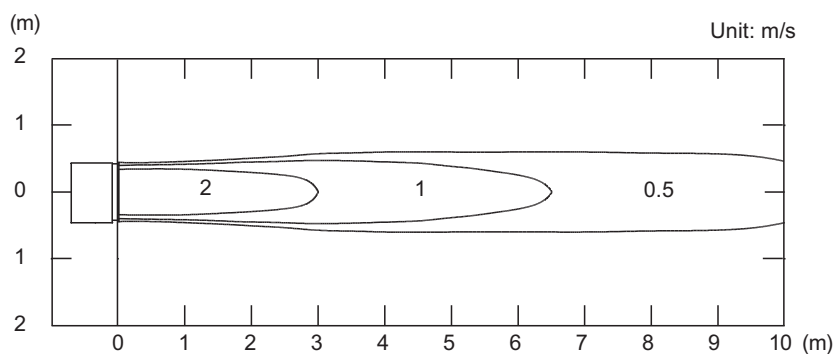
## Model: ARXG18KLLAP

**NOTE:** This data is measured after installing optional Auto Louver Grille Kit.

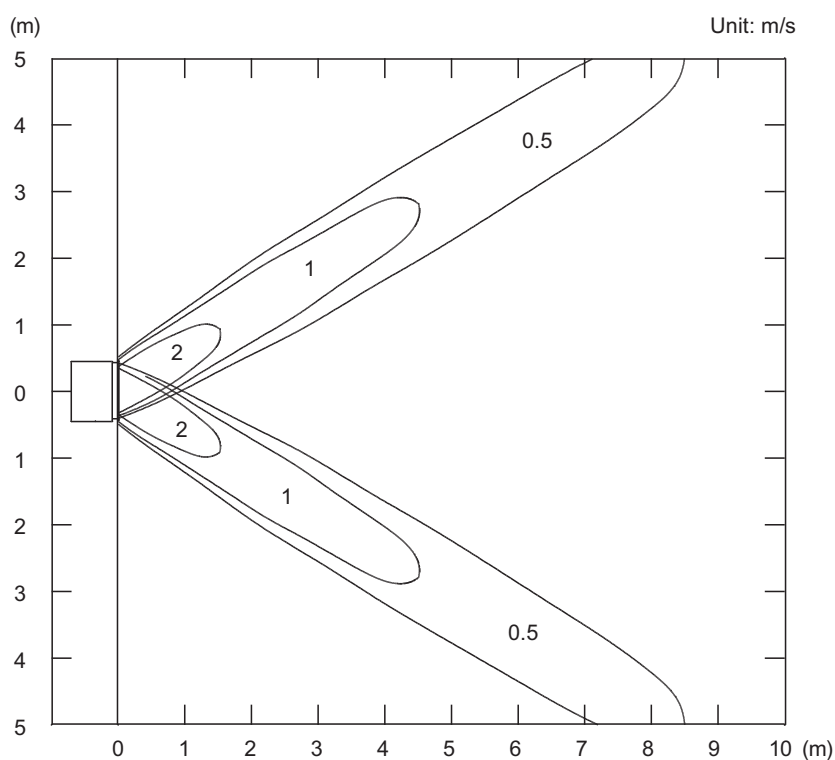
| Measuring conditions | Fan speed | Operation mode |
|----------------------|-----------|----------------|
|                      | HIGH      | FAN            |

- Air velocity distribution

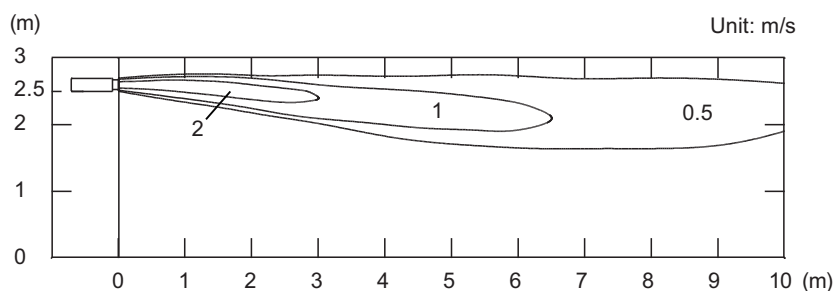
Top view  
Horizontal louver: Up  
Vertical louver: Center



Top view  
Horizontal louver: Up  
Vertical louver: Left & Right



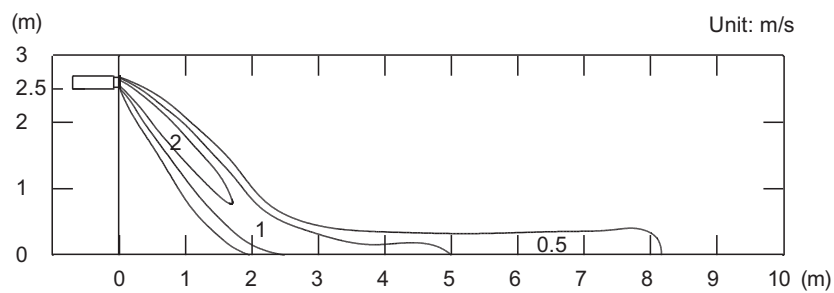
Side view  
Horizontal louver: Up  
Vertical louver: Center



|                      |           |                |
|----------------------|-----------|----------------|
| Measuring conditions | Fan speed | Operation mode |
|                      | HIGH      | HEAT           |

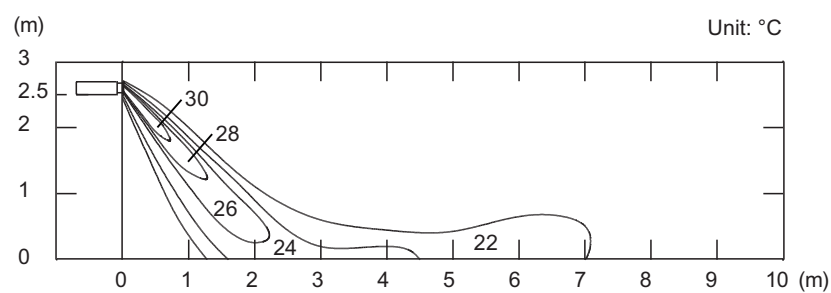
- Air velocity distribution

Side view  
Horizontal louver: Down  
Vertical louver: Center



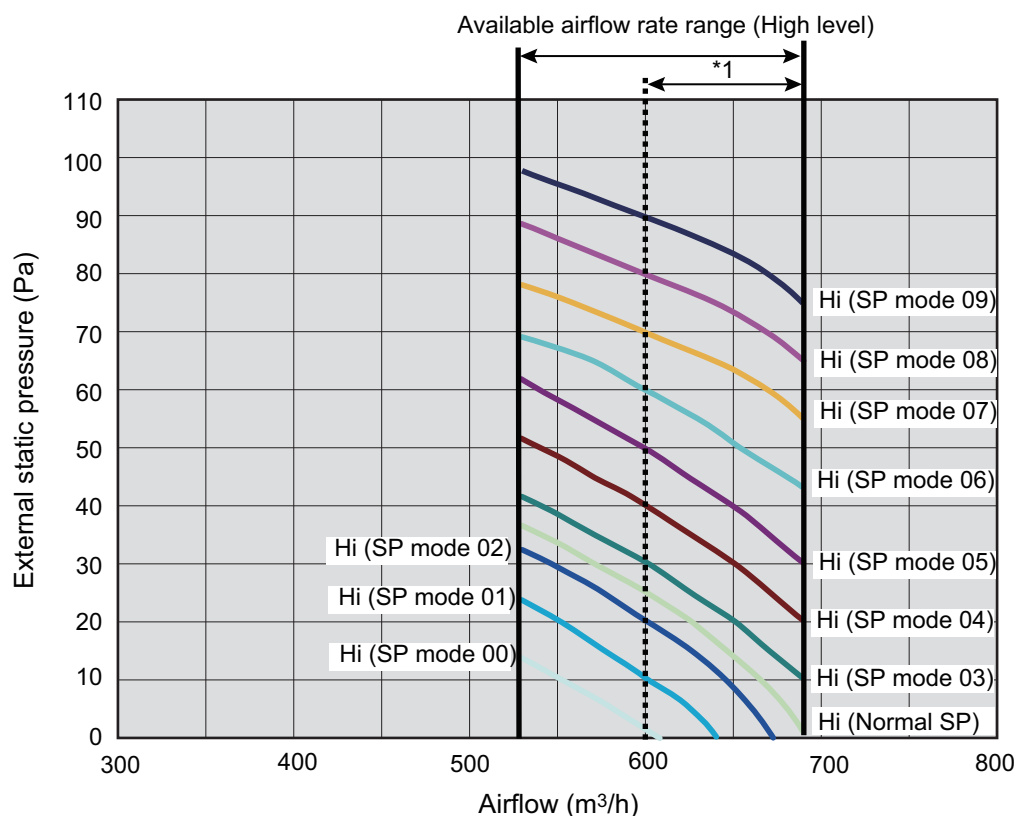
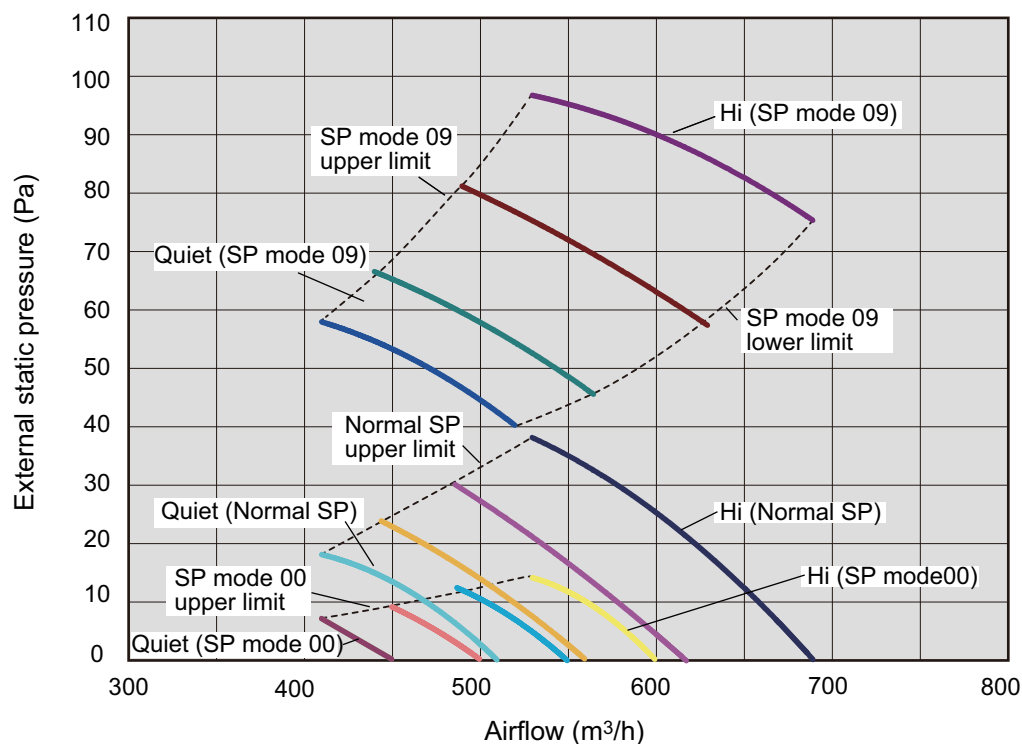
- Air temperature distribution

Side view  
Horizontal louver: Down  
Vertical louver: Center



## 5-2. Fan performance curve

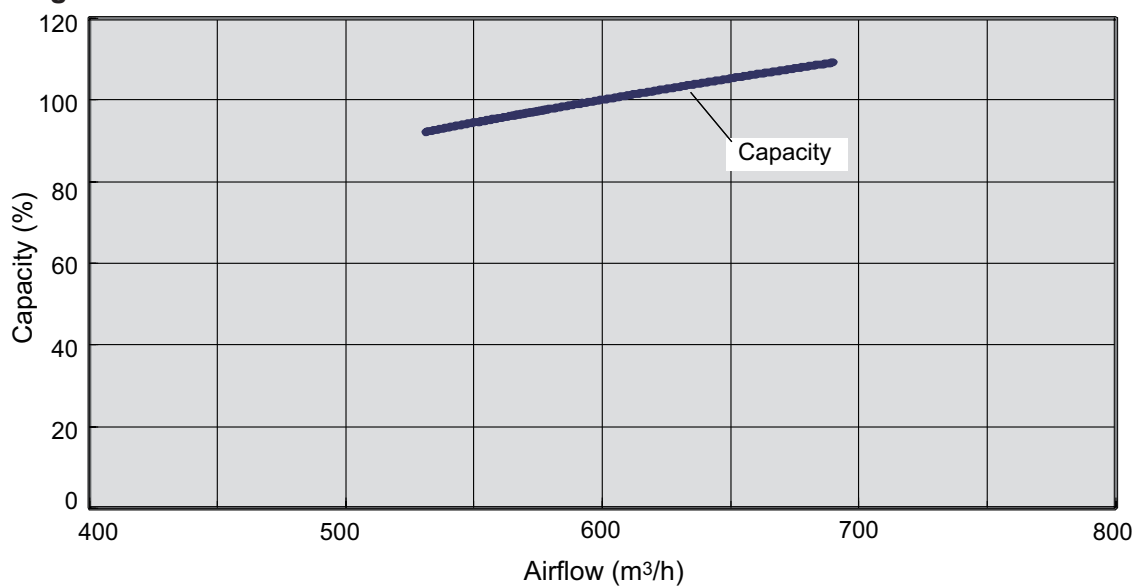
### ■ Model: ARXG09KLLAP



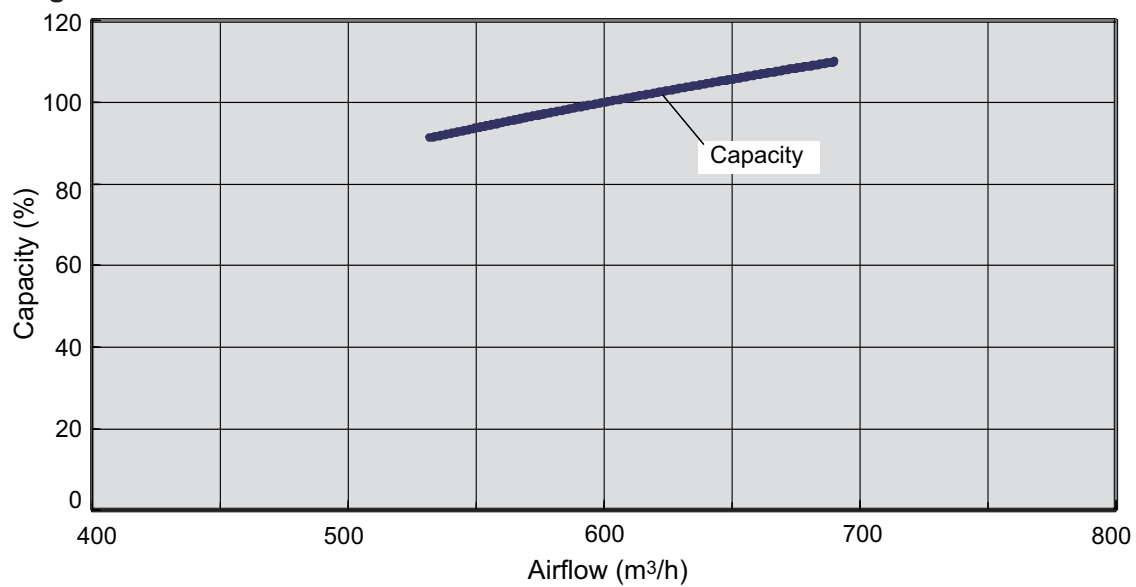
\*1: Available airflow rate range when Auto louver grille (option) is installed.  
Fan speed: HIGH  
Vertical airflow direction louver: Up

## ● Characteristics of air volume and capacity

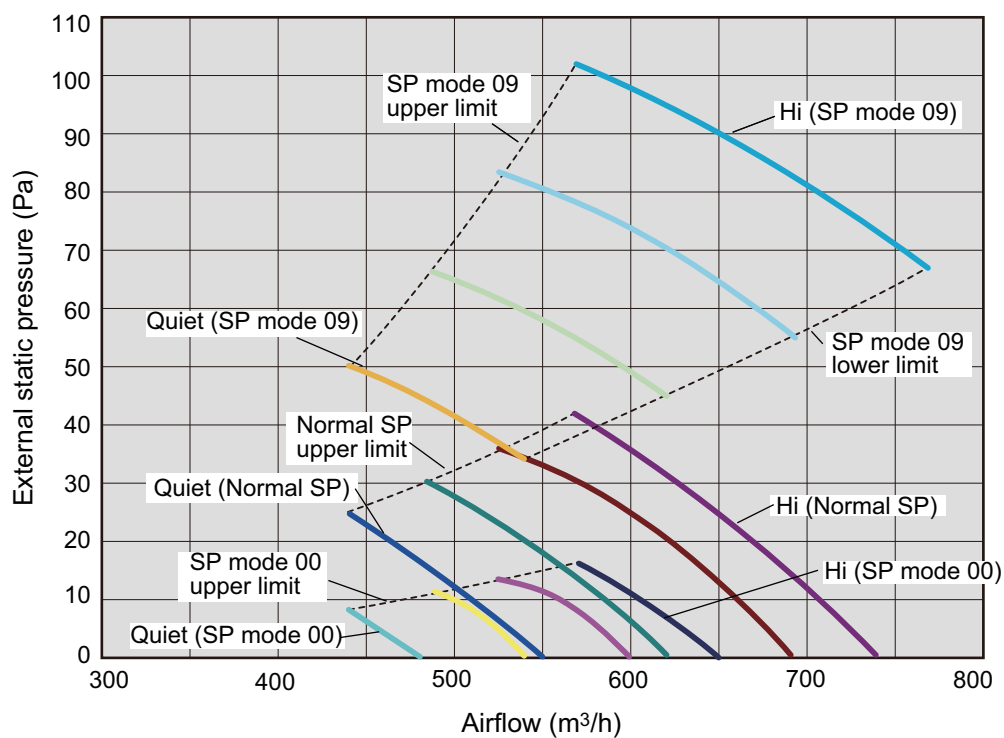
### • Cooling



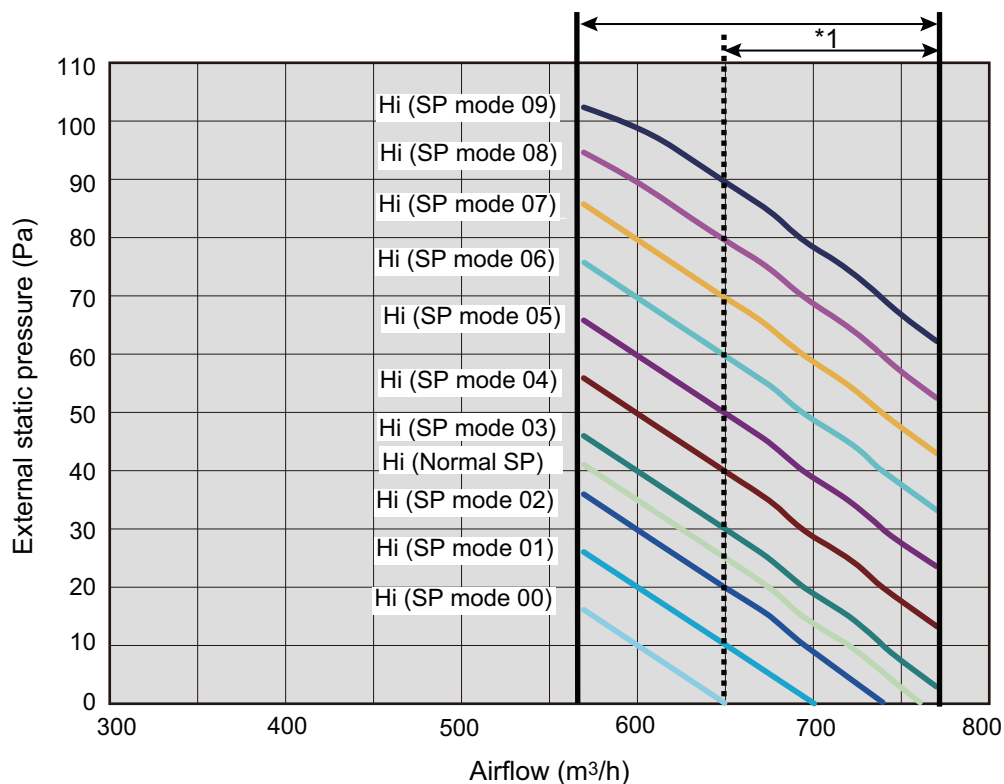
### • Heating



# Model: ARXG12KLLAP



Available airflow rate range (High level)



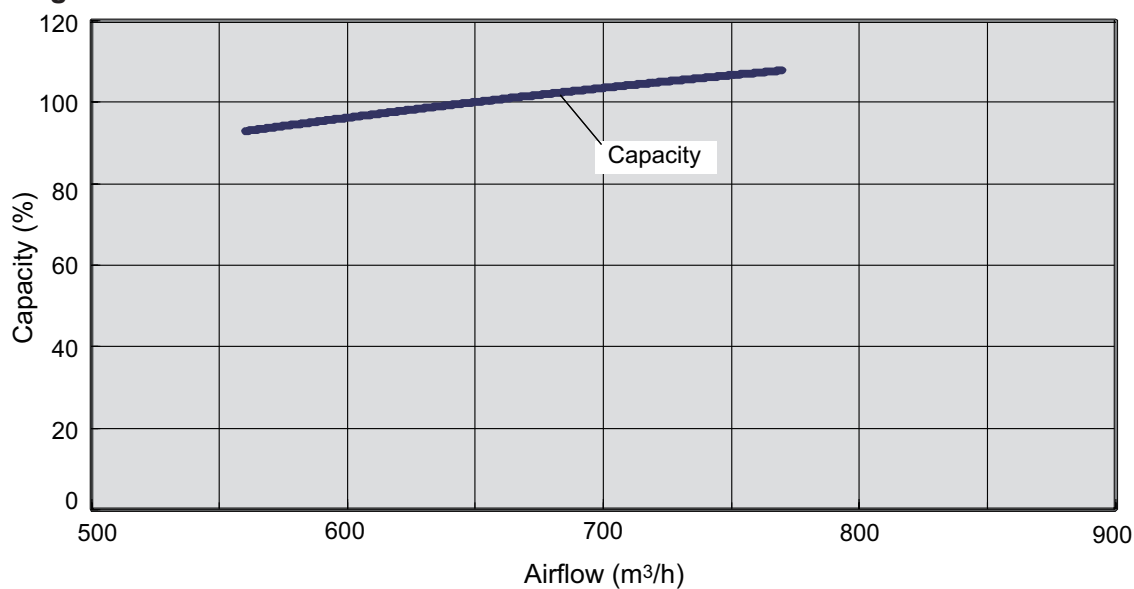
\*1: Available airflow rate range when Auto louver grille (option) is installed.

Fan speed: HIGH

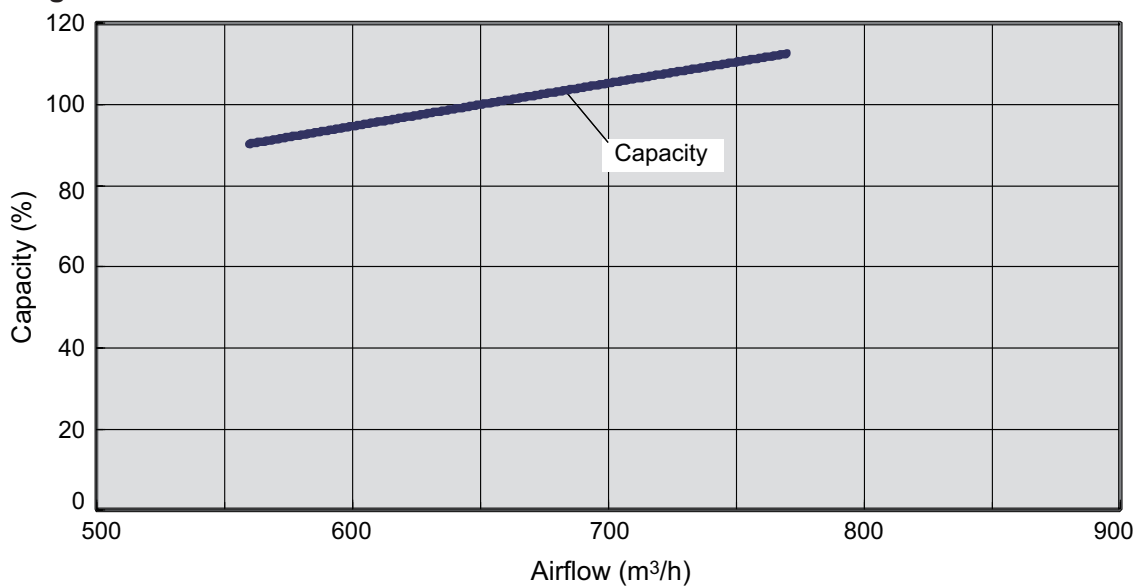
Vertical airflow direction louver: Up

## ● Characteristics of air volume and capacity

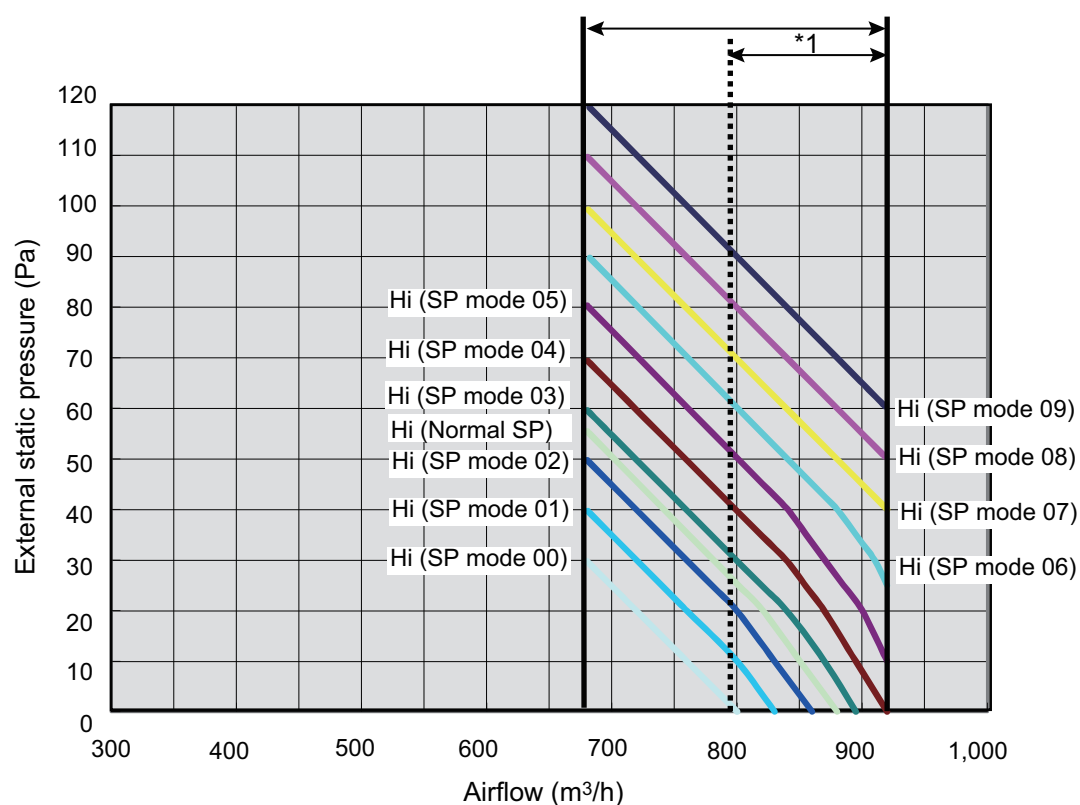
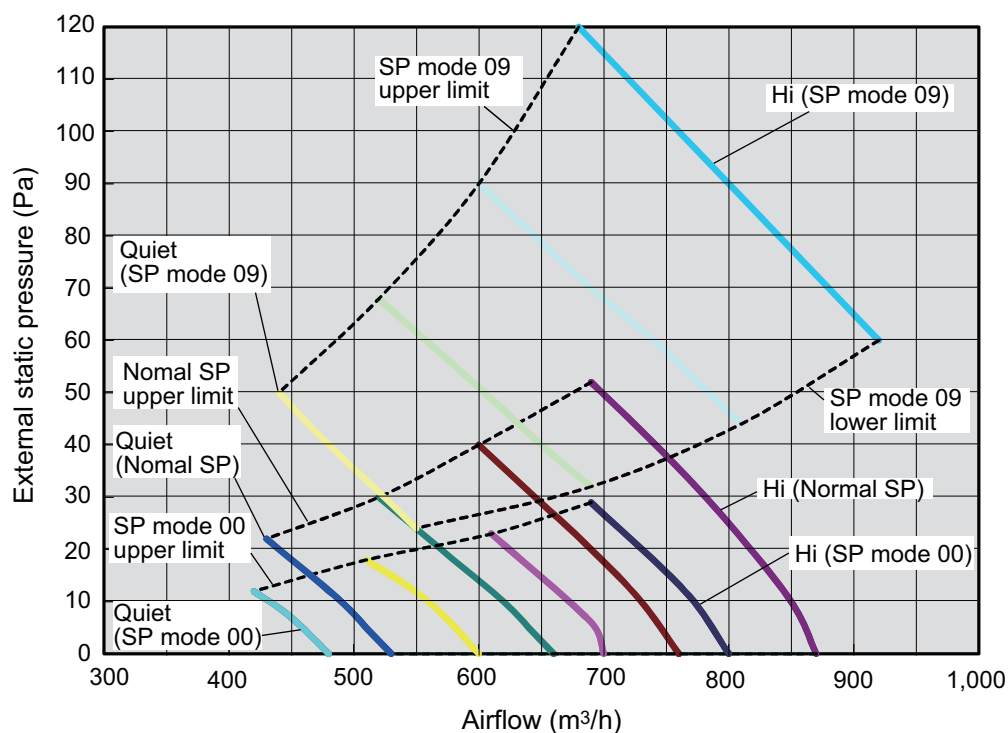
### • Cooling



### • Heating



# Model: ARXG14KLLAP



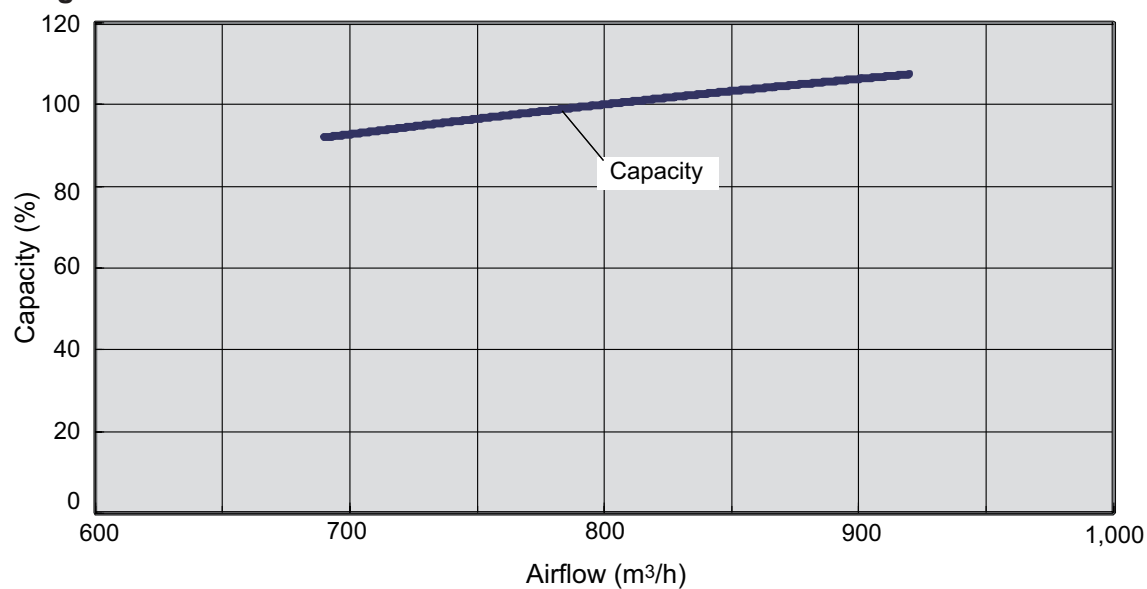
\*1: Available airflow rate range when Auto louver grille (option) is installed.

Fan speed: HIGH

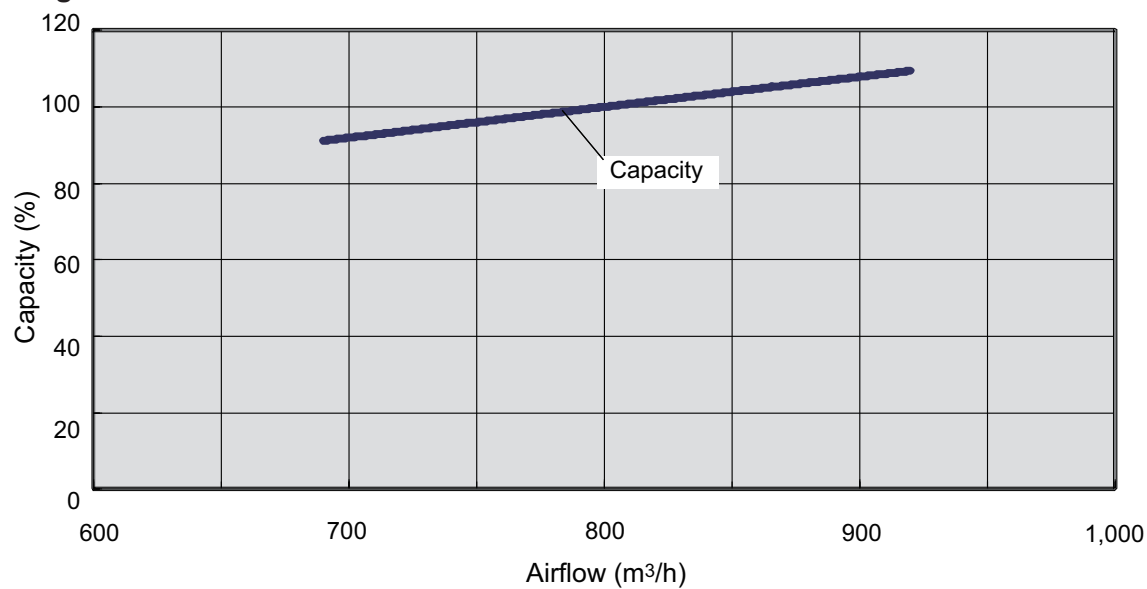
Vertical airflow direction louver: Up

## ● Characteristics of air volume and capacity

### • Cooling



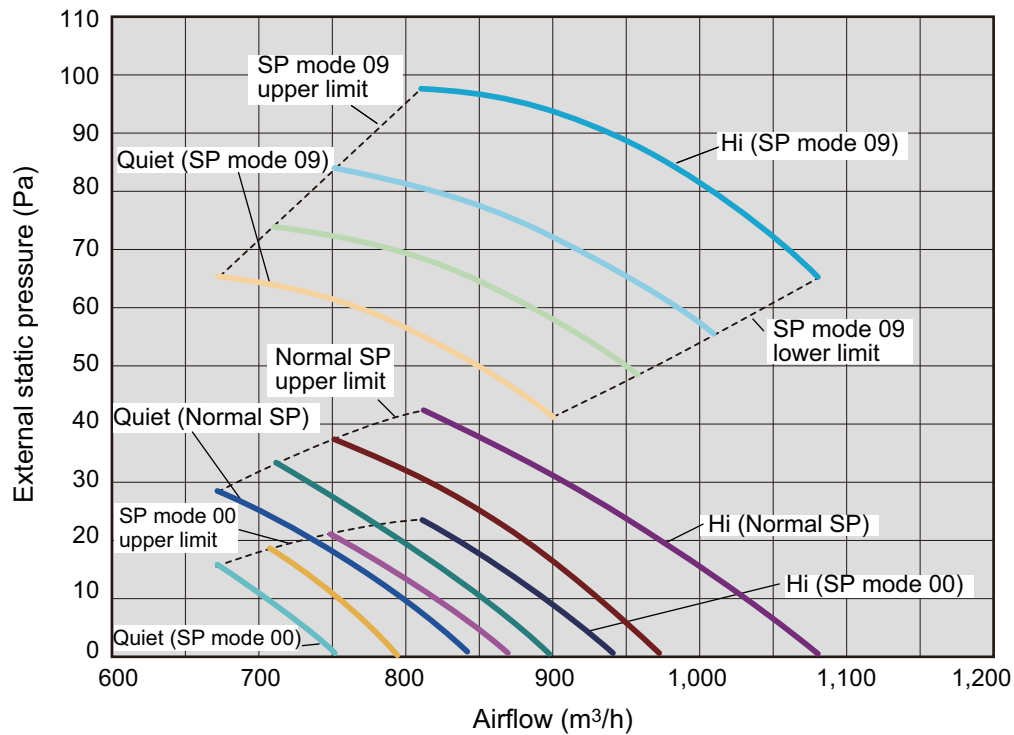
### • Heating



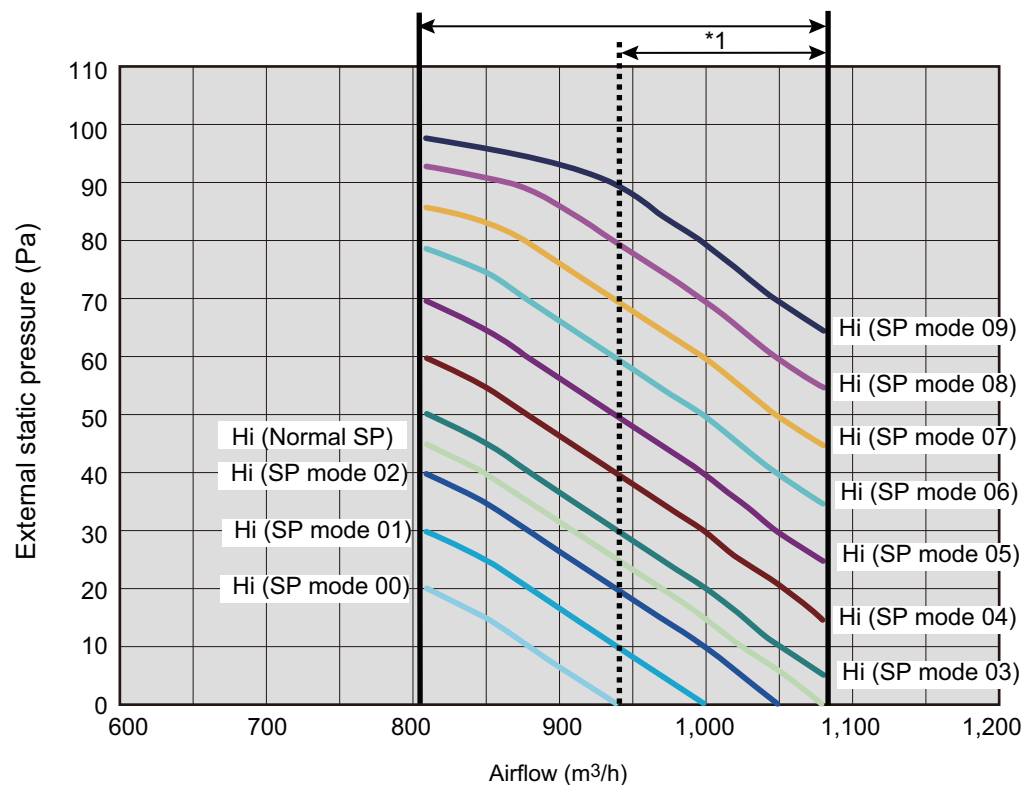
# Model: ARXG18KLLAP

DUCT TYPE  
ARXG09-18KLLAP

DUCT TYPE  
ARXG09-18KLLAP



Available airflow rate range (High level)



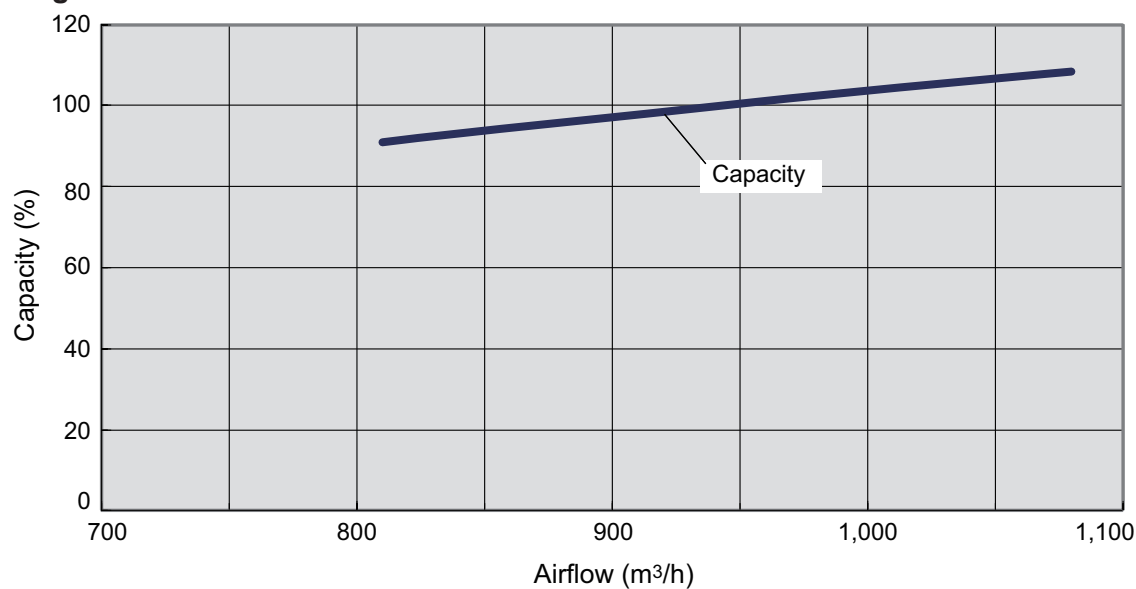
\*1: Available airflow rate range when Auto louver grille (option) is installed.

Fan speed: HIGH

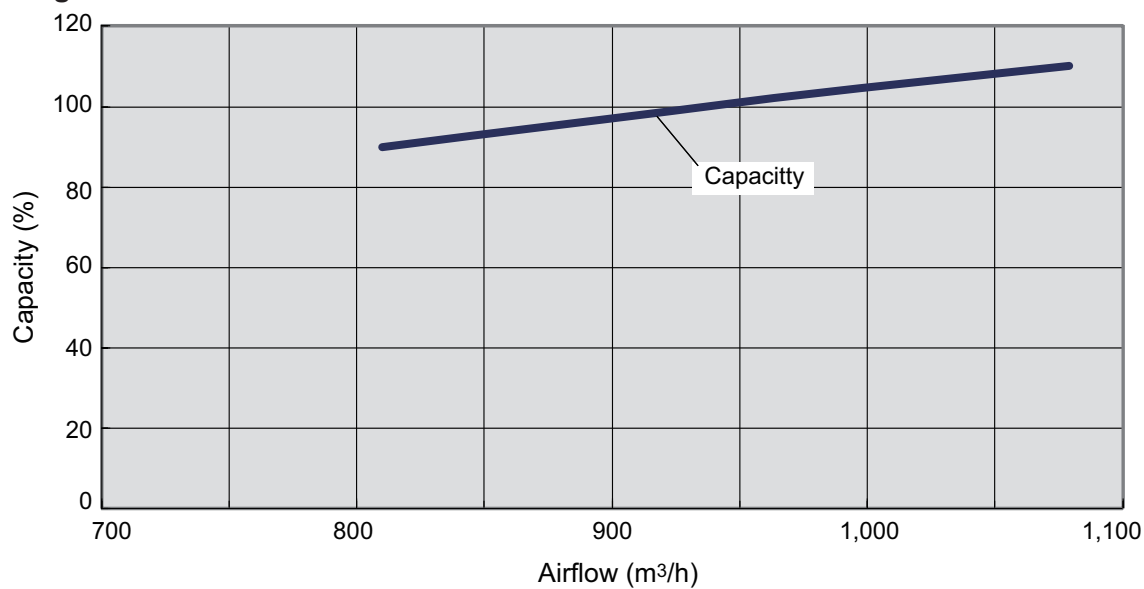
Vertical airflow direction louver: Up

## ● Characteristics of air volume and capacity

### • Cooling



### • Heating



## 5-3. Airflow

Conversion factor:

- $1 \text{ m}^3/\text{h} = 0.2778 \text{ l/s} = 0.5886 \text{ CFM}$
- $3.6 \text{ m}^3/\text{h} = 1 \text{ l/s}$
- $1.699 \text{ m}^3/\text{h} = 1 \text{ CFM}$

### ■ Model: ARXG09KLLAP

#### ● Cooling

| Fan speed | Airflow               |     |
|-----------|-----------------------|-----|
| HIGH      | $\text{m}^3/\text{h}$ | 600 |
|           | $\text{l/s}$          | 167 |
|           | CFM                   | 353 |
| MED       | $\text{m}^3/\text{h}$ | 550 |
|           | $\text{l/s}$          | 153 |
|           | CFM                   | 324 |
| LOW       | $\text{m}^3/\text{h}$ | 500 |
|           | $\text{l/s}$          | 139 |
|           | CFM                   | 294 |
| QUIET     | $\text{m}^3/\text{h}$ | 450 |
|           | $\text{l/s}$          | 125 |
|           | CFM                   | 265 |

#### ● Heating

| Fan speed | Airflow               |     |
|-----------|-----------------------|-----|
| HIGH      | $\text{m}^3/\text{h}$ | 600 |
|           | $\text{l/s}$          | 167 |
|           | CFM                   | 353 |
| MED       | $\text{m}^3/\text{h}$ | 550 |
|           | $\text{l/s}$          | 153 |
|           | CFM                   | 324 |
| LOW       | $\text{m}^3/\text{h}$ | 500 |
|           | $\text{l/s}$          | 139 |
|           | CFM                   | 294 |
| QUIET     | $\text{m}^3/\text{h}$ | 450 |
|           | $\text{l/s}$          | 125 |
|           | CFM                   | 265 |

## ■ Model: ARXG12KLLAP

### ● Cooling

| Fan speed | Airflow           |     |
|-----------|-------------------|-----|
| HIGH      | m <sup>3</sup> /h | 650 |
|           | l/s               | 181 |
|           | CFM               | 383 |
| MED       | m <sup>3</sup> /h | 600 |
|           | l/s               | 167 |
|           | CFM               | 353 |
| LOW       | m <sup>3</sup> /h | 550 |
|           | l/s               | 153 |
|           | CFM               | 324 |
| QUIET     | m <sup>3</sup> /h | 480 |
|           | l/s               | 133 |
|           | CFM               | 283 |

### ● Heating

| Fan speed | Airflow           |     |
|-----------|-------------------|-----|
| HIGH      | m <sup>3</sup> /h | 650 |
|           | l/s               | 181 |
|           | CFM               | 383 |
| MED       | m <sup>3</sup> /h | 600 |
|           | l/s               | 167 |
|           | CFM               | 353 |
| LOW       | m <sup>3</sup> /h | 550 |
|           | l/s               | 153 |
|           | CFM               | 324 |
| QUIET     | m <sup>3</sup> /h | 480 |
|           | l/s               | 133 |
|           | CFM               | 283 |

## ■ Model: ARXG14KLLAP

### ● Cooling

| Fan speed | Airflow           |     |
|-----------|-------------------|-----|
| HIGH      | m <sup>3</sup> /h | 800 |
|           | l/s               | 222 |
|           | CFM               | 471 |
| MED       | m <sup>3</sup> /h | 700 |
|           | l/s               | 194 |
|           | CFM               | 412 |
| LOW       | m <sup>3</sup> /h | 600 |
|           | l/s               | 167 |
|           | CFM               | 353 |
| QUIET     | m <sup>3</sup> /h | 480 |
|           | l/s               | 133 |
|           | CFM               | 283 |

### ● Heating

| Fan speed | Airflow           |     |
|-----------|-------------------|-----|
| HIGH      | m <sup>3</sup> /h | 800 |
|           | l/s               | 222 |
|           | CFM               | 471 |
| MED       | m <sup>3</sup> /h | 700 |
|           | l/s               | 194 |
|           | CFM               | 412 |
| LOW       | m <sup>3</sup> /h | 600 |
|           | l/s               | 167 |
|           | CFM               | 353 |
| QUIET     | m <sup>3</sup> /h | 480 |
|           | l/s               | 133 |
|           | CFM               | 283 |

## ■ Model: ARXG18KLLAP

### ● Cooling

| Fan speed | Airflow           |     |
|-----------|-------------------|-----|
| HIGH      | m <sup>3</sup> /h | 940 |
|           | l/s               | 261 |
|           | CFM               | 553 |
| MED       | m <sup>3</sup> /h | 880 |
|           | l/s               | 244 |
|           | CFM               | 518 |
| LOW       | m <sup>3</sup> /h | 820 |
|           | l/s               | 228 |
|           | CFM               | 483 |
| QUIET     | m <sup>3</sup> /h | 750 |
|           | l/s               | 208 |
|           | CFM               | 441 |

### ● Heating

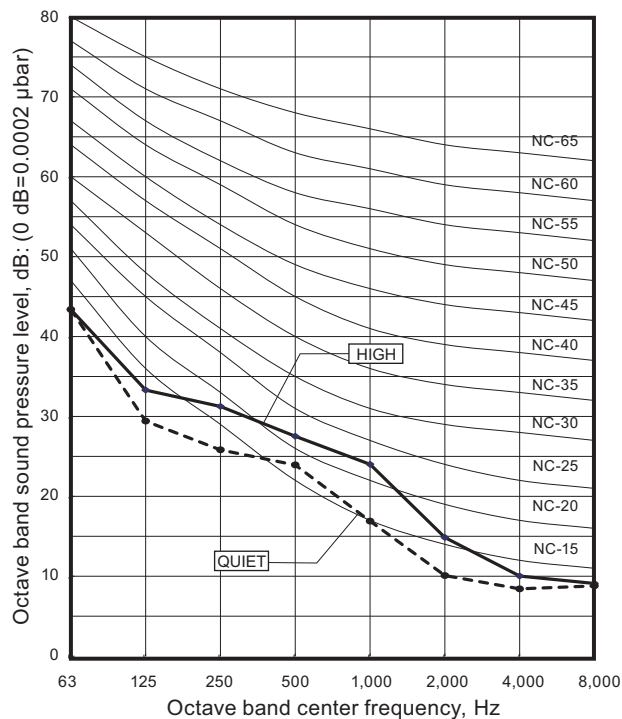
| Fan speed | Airflow           |     |
|-----------|-------------------|-----|
| HIGH      | m <sup>3</sup> /h | 940 |
|           | l/s               | 261 |
|           | CFM               | 553 |
| MED       | m <sup>3</sup> /h | 880 |
|           | l/s               | 244 |
|           | CFM               | 518 |
| LOW       | m <sup>3</sup> /h | 820 |
|           | l/s               | 228 |
|           | CFM               | 483 |
| QUIET     | m <sup>3</sup> /h | 750 |
|           | l/s               | 208 |
|           | CFM               | 441 |

## 6. Operation noise (sound pressure)

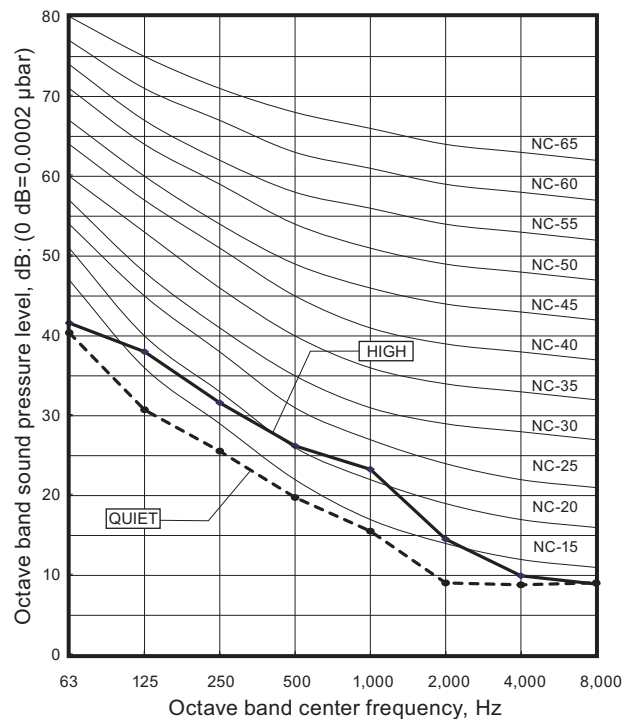
### 6-1. Noise level curve

#### ■ Model: ARXG09KLLAP

##### ● Cooling

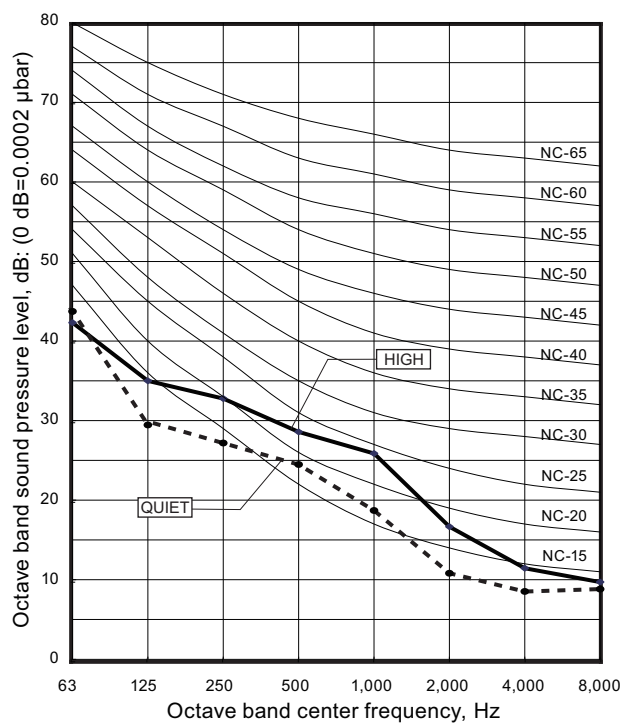


##### ● Heating

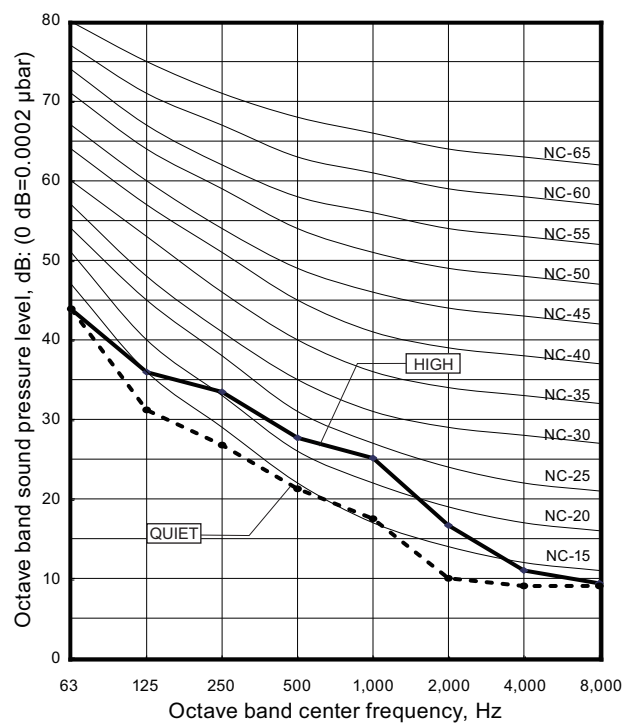


#### ■ Model: ARXG12KLLAP

##### ● Cooling

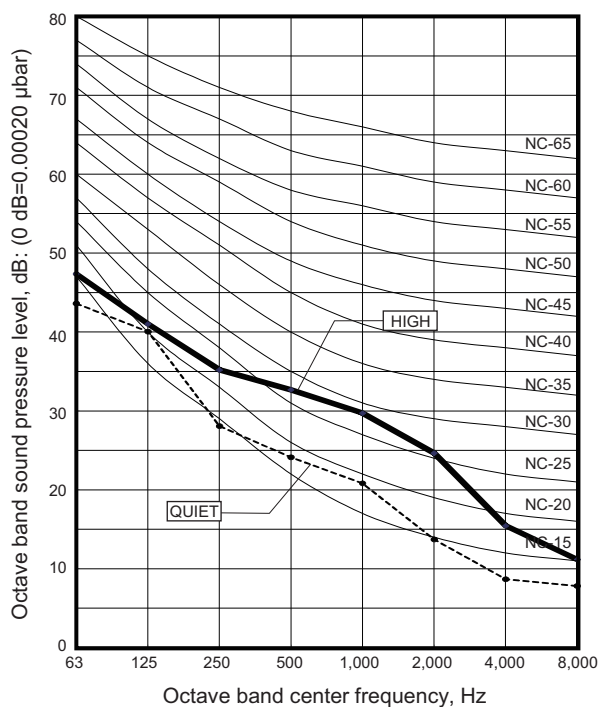


##### ● Heating

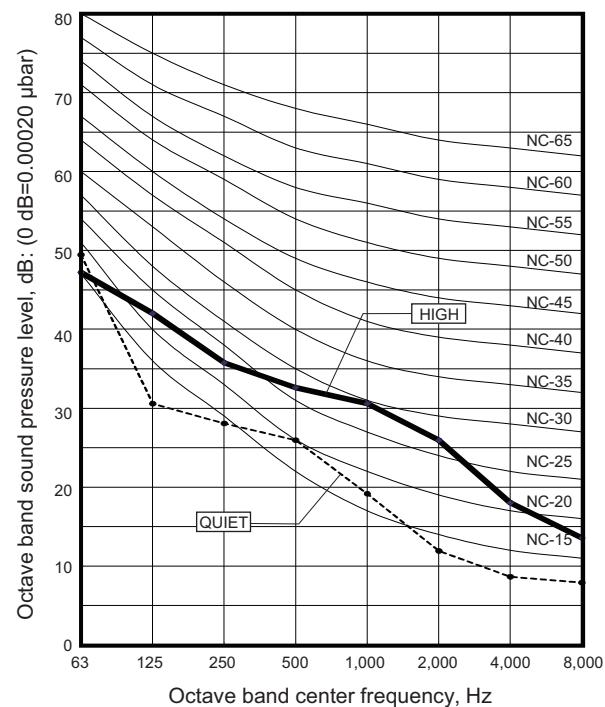


## Model: ARXG14KLLAP

### Cooling

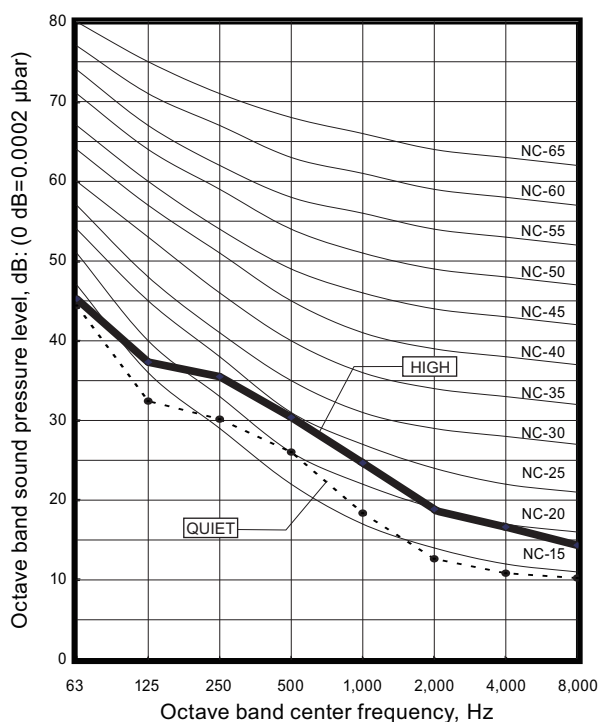


### Heating

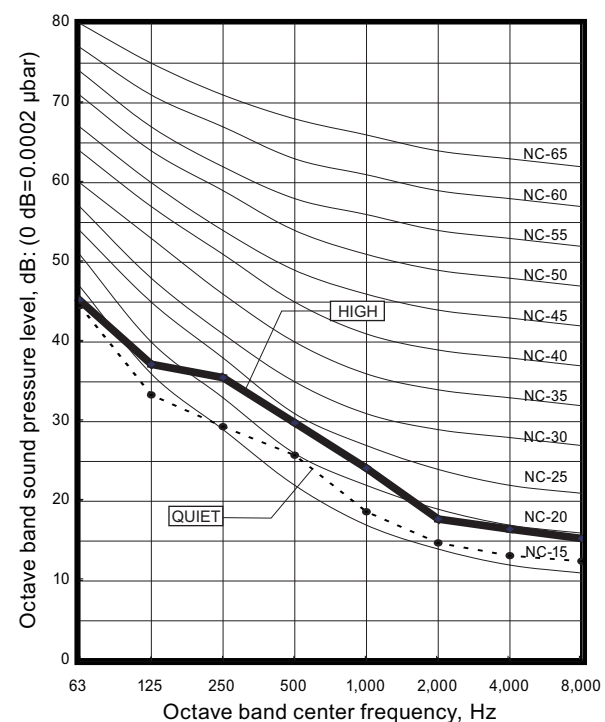


## Model: ARXG18KLLAP

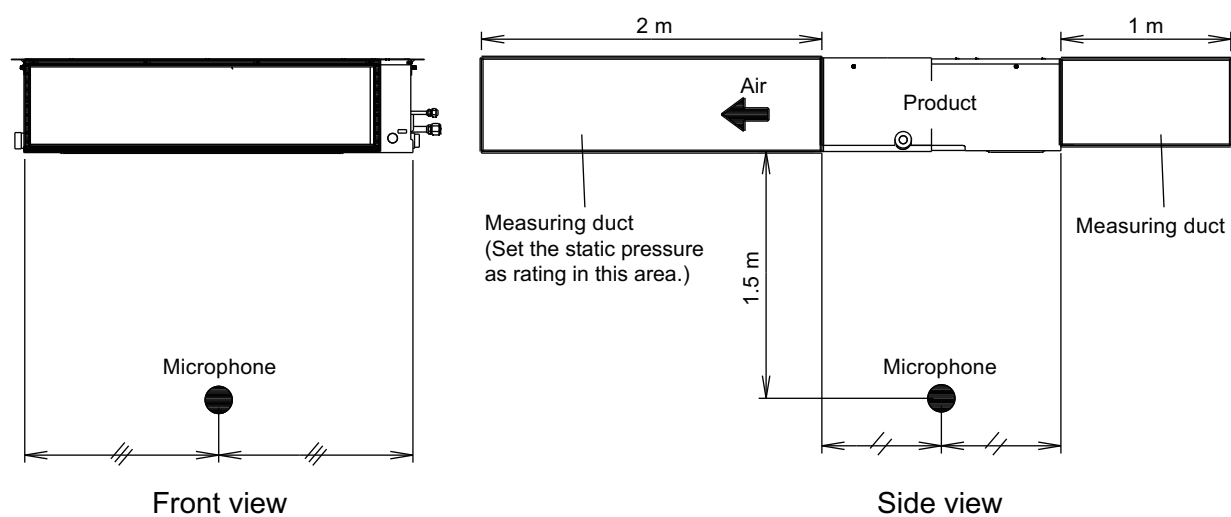
### Cooling



### Heating



## 6-2. Sound level check point

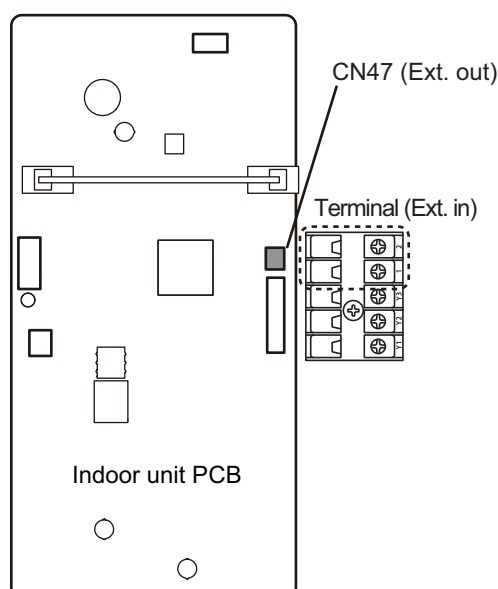


## 7. Safety devices

| Type of protection   | Protection form            |          | Model                                                    |
|----------------------|----------------------------|----------|----------------------------------------------------------|
|                      |                            |          | ARXG09KLLAP<br>ARXG12KLLAP<br>ARXG14KLLAP<br>ARXG18KLLAP |
| Circuit protection   | Current fuse (PCB*)        |          | 250 V, 5 A                                               |
| Fan motor protection | Thermal protection program | Activate | 135 ± 15 °C<br>Fan motor stop                            |
|                      |                            | Reset    | 115 ± 15 °C<br>Fan motor restart                         |
|                      | Current protection         |          | 1.31—1.71 A                                              |

\*: Printed Circuit Board

## 8. External input and output

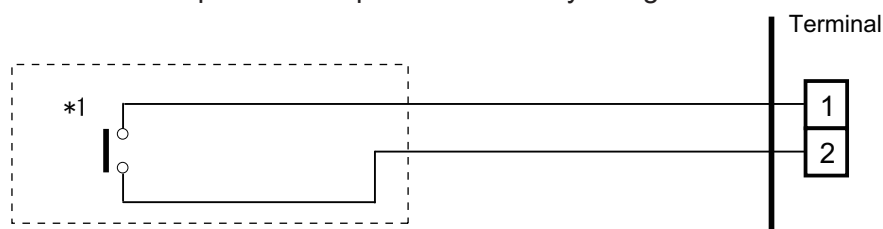


| External input and output |                                  | Connector | Input select | Input signal | External Connect Kit (Optional part) |
|---------------------------|----------------------------------|-----------|--------------|--------------|--------------------------------------|
| External input            | Operation/Stop<br>Forced stop    | Terminal  | Dry contact  | Edge         | —                                    |
| External output           | Operation status                 | CN47      | —            | —            | UTY-XWZXZG                           |
|                           | Error status                     |           |              |              |                                      |
|                           | Indoor unit fan operation status |           |              |              |                                      |
|                           | External heater output           |           |              |              |                                      |

### 8-1. External input

- “Operation/Stop” mode or “Forced stop” mode can be selected with function setting of indoor unit.
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 150 m.
- The wire connection should be separate from the power cable line.

Indoor unit functions such as Operation/Stop can be done by using indoor unit terminals.



\*1: The switch can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

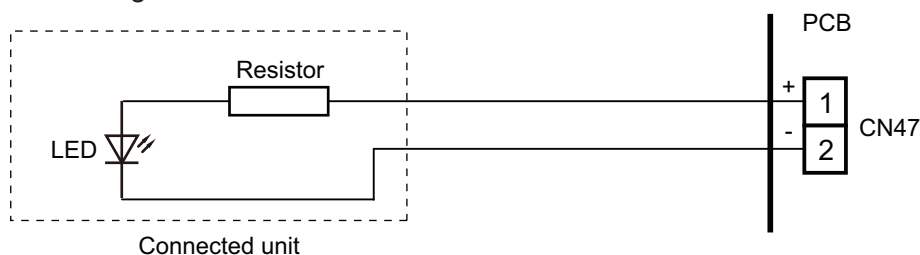
## 8-2. External output

Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

- A twisted pair cable (22AWG) should be used. Maximum length of cable is 25 m.
- Output voltage: High DC 12 V  $\pm$  2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to ["Combination of external input and output"](#) on page 37.

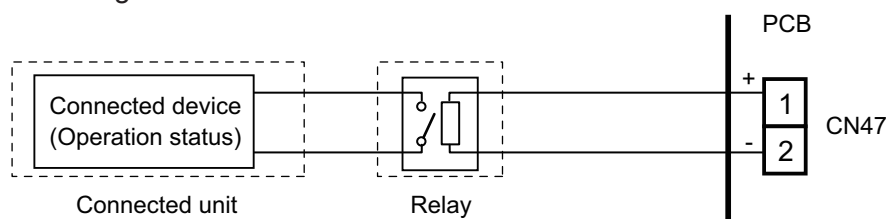
### ● When indicator, etc. are connected directly

**Example:** Function setting 60 is set to "00"



### ● When connecting with a device equipped with a power supply

**Example:** Function setting 60 is set to "00"



## 8-3. Combination of external input and output

By combining the function setting of the indoor unit, you can select various combinations of functions.

Combination examples of external input and output are as follows:

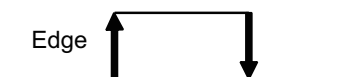
| Mode | Function setting | External input       | External output                  |
|------|------------------|----------------------|----------------------------------|
|      |                  | Terminal             | CN47                             |
| 0    | 60—00            | Operation/Stop       |                                  |
| 1—8  | 60—01 to 60—08   | (Setting prohibited) |                                  |
| 9    | 60—09            | Operation/Stop       | Error status                     |
| 10   | 60—10            | Operation/Stop       | Indoor unit fan operation status |
| 11   | 60—11            | Operation/Stop       | External heater output           |

**NOTE:** Input of Operation/Stop depends on the setting of function setting 46.

- 00: Operation/Stop mode 1 (Remote controller enabled)
- 01: (Setting prohibited)
- 02: Forced stop
- 03: Operation/Stop mode 2 (Remote controller disabled)

### ■ Input signal type

- Indoor unit  
Input signal type is only "Edge".

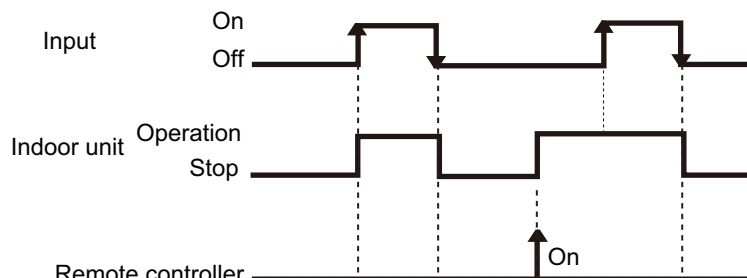


## 8-4. Details of function

### ■ Control input function

- When function setting is "Operation/Stop" mode 1

| Function setting | External input | Input signal | Command   |
|------------------|----------------|--------------|-----------|
| 46—00            | Terminal       | Off → On     | Operation |
|                  |                | On → Off     | Stop      |

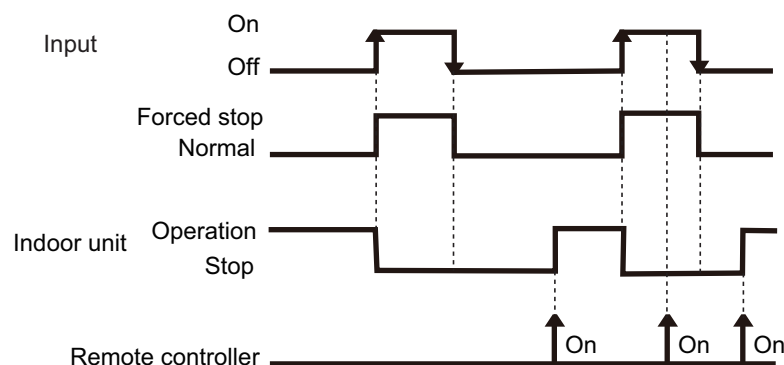


#### NOTES:

- The last command has priority.
- The indoor units within the same remote controller group operates in the same mode.

- When function setting is "Forced stop" mode

| Function setting | External input | Input signal | Command     |
|------------------|----------------|--------------|-------------|
| 46—02            | Terminal       | Off → On     | Forced stop |
|                  |                | On → Off     | Normal      |

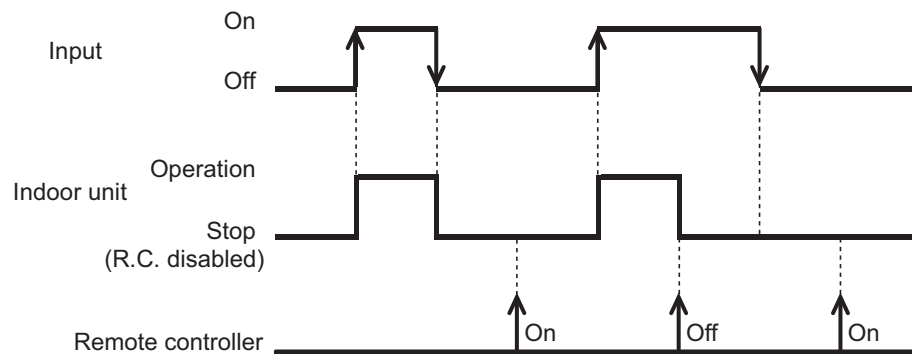


#### NOTES:

- When the forced stop is triggered, indoor unit stops and Operation/Stop operation by the remote controller is restricted.
- When forced stop function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.

• When function setting is "Operation/Stop" mode 2

| Function setting | External input | Input signal | Command                           |
|------------------|----------------|--------------|-----------------------------------|
| 46—03            | Terminal       | Off → On     | Operation                         |
|                  |                | On → Off     | Stop (Remote controller disabled) |

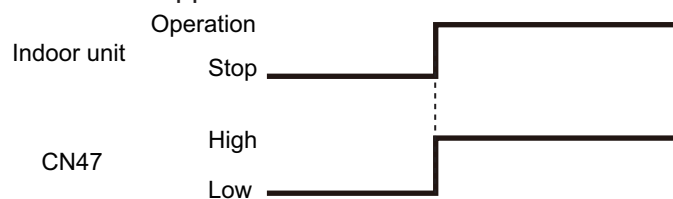


**NOTE:** When "Operation/Stop" mode 2 function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.

## ■ Control output function

| Function setting | External output | Output signal | Command   |
|------------------|-----------------|---------------|-----------|
| 60—00            | CN47            | Low → High    | Operation |
|                  |                 | High → Low    | Stop      |

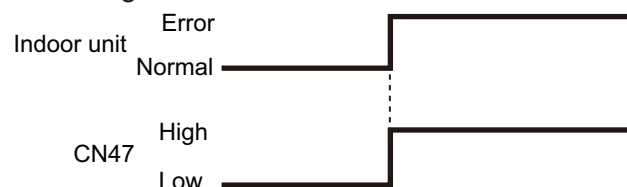
The output is low when the unit is stopped.



## ■ Error status

| Function setting | External output | Output signal | Command |
|------------------|-----------------|---------------|---------|
| 60—09            | CN47            | Low → High    | Error   |
|                  |                 | High → Low    | Normal  |

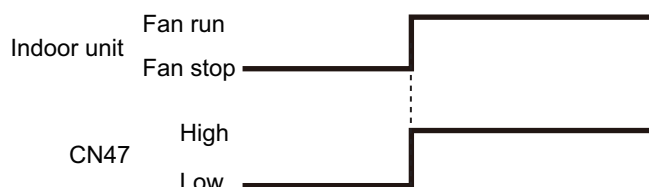
The output is ON when an error is generated for the indoor unit.



## Indoor unit fan operation status

| Function setting | External output | Output signal | Command  |
|------------------|-----------------|---------------|----------|
| 60—10            | CN47            | Low → High    | Fan run  |
|                  |                 | High → Low    | Fan stop |

| Output signal | Condition                                                                                              |
|---------------|--------------------------------------------------------------------------------------------------------|
| On            | The indoor unit fan is operating.                                                                      |
| Low → High    |                                                                                                        |
| Off           | The fan is stopped or during cold air prevention.<br>During thermostat off when in dry mode operation. |
| High → Low    |                                                                                                        |



## External heater output

| Function setting | External output | Output signal | Command    |
|------------------|-----------------|---------------|------------|
| 60—11            | CN47            | Low → High    | Heater on  |
|                  |                 | High → Low    | Heater off |

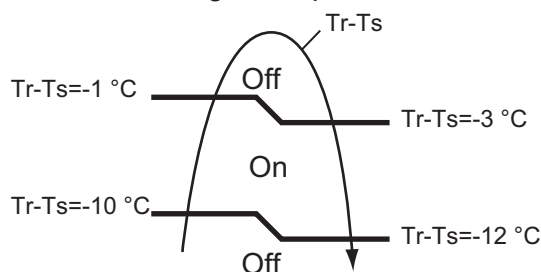
| Output signal | Condition                                                   |
|---------------|-------------------------------------------------------------|
| Low → High    | Heater turns on as shown in diagram of heating temperature  |
| Off → On      |                                                             |
| High → Low    | Heater turns off as shown in diagram of heating temperature |
| On → Off      |                                                             |

- Other than Heating mode
- Error occurred
- Forced thermo off
- Fan stop protection

Specifications of the signal output performance are as shown as follows:

**Example** When set temperature ( $T_s$ ) is set at 22 °C;

- And room temperature ( $T_r$ ) increase above 12 °C, signal output is on.
- And  $T_r$  increase above 21 °C, signal output is off.
- And  $T_r$  decrease below 19 °C, signal output is on.
- And  $T_r$  decrease below 10 °C, signal output is off.



The output also turns off in defrost operation.

## 9. Function settings

To adjust the functions of this product according to the installation environment, various types of function settings are available.

**NOTE:** Incorrect settings can cause a product malfunction.

### 9-1. Function settings on indoor unit

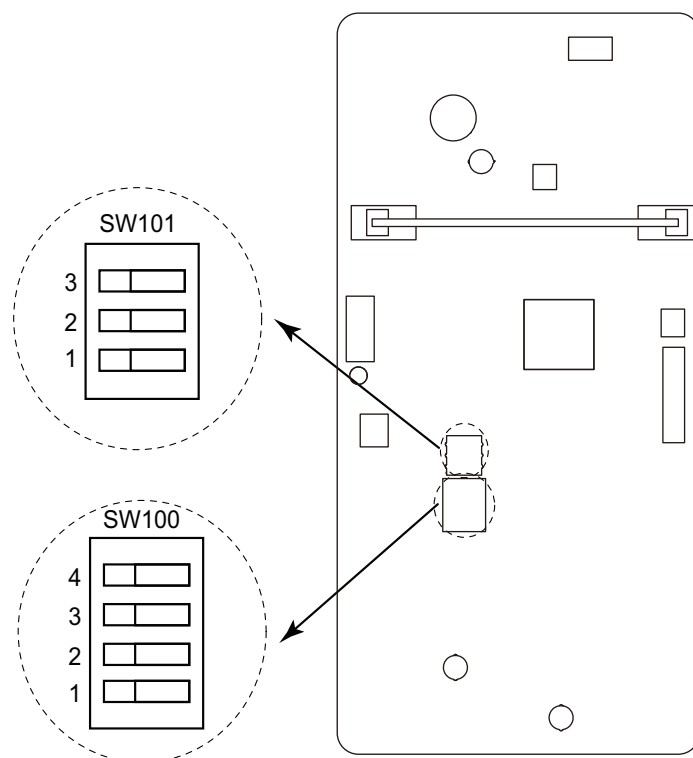
By using some components on the PCB, you can change the function settings.

**Related components on the PCB and the applicable settings:**

| Component  |       |   | Setting content                   |
|------------|-------|---|-----------------------------------|
| DIP switch | SW100 | 1 | Remote controller address setting |
|            |       | 2 |                                   |
|            |       | 3 |                                   |
|            |       | 4 |                                   |
|            | SW101 | 1 | Drainage function setting         |
|            |       | 2 | Auto louver grille setting        |
|            |       | 3 | Fan delay setting                 |

#### ■ Component location

Components on the indoor unit main PCB used for the function settings are located as shown in the following figure.



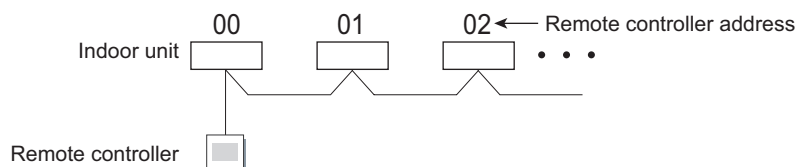
## ■ DIP switch setting

### • SW100: Remote controller address setting

When operating a number of indoor units by using a wired remote controller, DIP switch setting for assigning unit number to each indoor unit is required.

The slide switches are normally set to make the unit number 00.

| Remote controller address | Switch number |     |     |     | Factory setting |
|---------------------------|---------------|-----|-----|-----|-----------------|
|                           | 1             | 2   | 3   | 4   |                 |
| 00                        | OFF           | OFF | OFF | OFF | ◆               |
| 01                        | ON            | OFF | OFF | OFF |                 |
| 02                        | OFF           | ON  | OFF | OFF |                 |
| 03                        | ON            | ON  | OFF | OFF |                 |
| 04                        | OFF           | OFF | ON  | OFF |                 |
| 05                        | ON            | OFF | ON  | OFF |                 |
| 06                        | OFF           | ON  | ON  | OFF |                 |
| 07                        | ON            | ON  | ON  | OFF |                 |
| 08                        | OFF           | OFF | OFF | ON  |                 |
| 09                        | ON            | OFF | OFF | ON  |                 |
| 10                        | OFF           | ON  | OFF | ON  |                 |
| 11                        | ON            | ON  | OFF | ON  |                 |
| 12                        | OFF           | OFF | ON  | ON  |                 |
| 13                        | ON            | OFF | ON  | ON  |                 |
| 14                        | OFF           | ON  | ON  | ON  |                 |
| 15                        | ON            | ON  | ON  | ON  |                 |



### • SW101-Switch 1: Drainage function setting

| Switch 1 | Drainage function | Factory setting |
|----------|-------------------|-----------------|
| ON       | Disabled          |                 |
| OFF      | Enabled           | ◆               |

### • SW101-Switch 2: Auto louver grille setting

When Auto Louver Grille Kit (optional parts) is attached, set to "Enabled".

| Switch 2 | Auto louver grille setting | Factory setting |
|----------|----------------------------|-----------------|
| ON       | Enabled                    |                 |
| OFF      | Disabled                   | ◆               |

### • SW101-Switch 3: Fan delay setting

When the indoor unit is stopped while operating in conjunction with auxiliary heater, the indoor unit fan operation will continue for 1 minute.

| Switch 3 | Fan delay | Factory setting |
|----------|-----------|-----------------|
| ON       | Enabled   |                 |
| OFF      | Disabled  | ◆               |

## 9-2. Function settings by using remote controller

Some function settings can be changed on the remote controller. After confirming the setting procedure and the content of each function setting, select appropriate functions for your installation environment.

### ■ Setting procedure by using remote controller

Remote controller is not attached for this product. For details of the installing remote controller, refer to following information.

- Overview information: Operating manual of the remote controller
- Setting procedure: Installation manual of the remote controller

### ■ Contents of function setting

Each function setting listed in this section is adjustable in accordance with the installation environment.

**NOTE:** Setting will not be changed if invalid numbers or setting values are selected.

### ● Function setting list

|     | Function no. | Functions                                                   |
|-----|--------------|-------------------------------------------------------------|
| 1)  | 11           | Filter sign                                                 |
| 2)  | 26           | Static pressure                                             |
| 3)  | 30/31        | Room temperature control for indoor unit sensor             |
| 4)  | 35/36        | Room temperature control for wired remote controller sensor |
| 5)  | 40           | Auto restart                                                |
| 6)  | 42           | Room temperature sensor switching                           |
| 7)  | 44           | Remote controller custom code                               |
| 8)  | 46           | External input control                                      |
| 9)  | 48           | Room temperature sensor switching (Aux.)                    |
| 10) | 49           | Indoor unit fan control for energy saving for cooling       |
| 11) | 60           | Switching functions for external output terminal            |

#### 1) Filter sign

Select appropriate intervals for displaying the filter sign on the indoor unit according to the estimated amount of dust in the air of the room.

If the indication is not required, select "No indication" (03).

| Function number | Setting value | Setting description         | Factory setting |
|-----------------|---------------|-----------------------------|-----------------|
| 11              | 00            | Standard (400 hours)        |                 |
|                 | 01            | Long interval (1,000 hours) |                 |
|                 | 02            | Short interval (200 hours)  |                 |
|                 | 03            | No indication               | ◆               |

## 2) Static pressure

Select the appropriate static pressure according to the installation conditions.

| Function number | Setting value | Setting description | Factory setting |
|-----------------|---------------|---------------------|-----------------|
| 26              | 00            | 0 Pa                |                 |
|                 | 01            | 10 Pa               |                 |
|                 | 02            | 20 Pa               |                 |
|                 | 03            | 30 Pa               |                 |
|                 | 04            | 40 Pa               |                 |
|                 | 05            | 50 Pa               |                 |
|                 | 06            | 60 Pa               |                 |
|                 | 07            | 70 Pa               |                 |
|                 | 08            | 80 Pa               |                 |
|                 | 09            | 90 Pa               |                 |
|                 | 31            | Standard (25 Pa)    | ◆               |

## 3) Room temperature control for indoor unit sensor

**NOTE:** If the remote sensor unit option is selected, perform this setting.

Depending on the installed environment, correction of the room temperature sensor may be required. Select the appropriate control setting according to the installed environment.

The temperature of the room temperature sensor is corrected as follows:

Corrected temp. = Temp. of the room temp. sensor - Correction temp. value

Example of correction:

When the temperature of the room temp. sensor is 26°C and the setting value is "03" (-1.0°C), corrected temp. will be 27°C (26°C - [-1.0°C]).

The temperature correction values show the difference from the Standard setting "00" (manufacturer's recommended value).

| Function number     |                     | Setting value | Setting description | Factory setting              |
|---------------------|---------------------|---------------|---------------------|------------------------------|
| 30<br>(For cooling) | 31<br>(For heating) | 00            | Standard setting    | ◆                            |
|                     |                     | 01            | No correction 0.0°C |                              |
|                     |                     | 02            | -0.5°C              | More cooling<br>Less heating |
|                     |                     | 03            | -1.0°C              |                              |
|                     |                     | 04            | -1.5°C              |                              |
|                     |                     | 05            | -2.0°C              |                              |
|                     |                     | 06            | -2.5°C              |                              |
|                     |                     | 07            | -3.0°C              |                              |
|                     |                     | 08            | -3.5°C              |                              |
|                     |                     | 09            | -4.0°C              |                              |
|                     |                     | 10            | +0.5°C              | Less cooling<br>More heating |
|                     |                     | 11            | +1.0°C              |                              |
|                     |                     | 12            | +1.5°C              |                              |
|                     |                     | 13            | +2.0°C              |                              |
|                     |                     | 14            | +2.5°C              |                              |
|                     |                     | 15            | +3.0°C              |                              |
|                     |                     | 16            | +3.5°C              |                              |
|                     |                     | 17            | +4.0°C              |                              |

#### 4) Room temperature control for wired remote controller sensor

Depending on the installed environment, correction of the wire remote temperature sensor may be required. Select the appropriate control setting according to the installed environment.

To change this setting, set Function 42 to Both "01".

Ensure that the Thermo Sensor icon is displayed on the remote controller screen.

| Function number     |                     | Setting value | Setting description | Factory setting              |
|---------------------|---------------------|---------------|---------------------|------------------------------|
| 35<br>(For cooling) | 36<br>(For heating) | 00            | Standard setting    | ◆                            |
|                     |                     | 01            | No correction 0.0°C |                              |
|                     |                     | 02            | -0.5°C              | More cooling<br>Less heating |
|                     |                     | 03            | -1.0°C              |                              |
|                     |                     | 04            | -1.5°C              |                              |
|                     |                     | 05            | -2.0°C              |                              |
|                     |                     | 06            | -2.5°C              |                              |
|                     |                     | 07            | -3.0°C              |                              |
|                     |                     | 08            | -3.5°C              |                              |
|                     |                     | 09            | -4.0°C              |                              |
|                     |                     | 10            | +0.5°C              | Less cooling<br>More heating |
|                     |                     | 11            | +1.0°C              |                              |
|                     |                     | 12            | +1.5°C              |                              |
|                     |                     | 13            | +2.0°C              |                              |
|                     |                     | 14            | +2.5°C              |                              |
|                     |                     | 15            | +3.0°C              |                              |
|                     |                     | 16            | +3.5°C              |                              |
|                     |                     | 17            | +4.0°C              |                              |

#### 5) Auto restart

Enables or disables automatic restart after a power interruption.

| Function number | Setting value | Setting description | Factory setting |
|-----------------|---------------|---------------------|-----------------|
| 40              | 00            | Enable              | ◆               |
|                 | 01            | Disable             |                 |

**NOTE:** Auto restart is an emergency function such as for power outage etc. Do not attempt to use this function in normal operation. Be sure to operate the unit by remote controller or external device.

#### 6) Room temperature sensor switching

When using the wired remote controller temperature sensor, change the setting to "Both" (01).

| Function number | Setting value | Setting description | Factory setting |
|-----------------|---------------|---------------------|-----------------|
| 42              | 00            | Indoor unit         | ◆               |
|                 | 01            | Both                |                 |

00: Sensor on the indoor unit is active.

01: Sensors on both indoor unit and wired remote controller are active.

## 7) Remote controller custom code

(Only for wireless remote controller)

The indoor unit custom code can be changed. Select the appropriate custom code.

| Function number | Setting value | Setting description | Factory setting |
|-----------------|---------------|---------------------|-----------------|
| 44              | 00            | A                   | ◆               |
|                 | 01            | B                   |                 |
|                 | 02            | C                   |                 |
|                 | 03            | D                   |                 |

## 8) External input control

"Operation/Stop" mode or "Forced stop" mode can be selected.

| Function number | Setting value | Setting description                                   | Factory setting |
|-----------------|---------------|-------------------------------------------------------|-----------------|
| 46              | 00            | Operation/Stop mode 1<br>(Remote controller enabled)  | ◆               |
|                 | 01            | (Setting prohibited)                                  |                 |
|                 | 02            | Forced stop mode                                      |                 |
|                 | 03            | Operation/Stop mode 2<br>(Remote controller disabled) |                 |

## 9) Room temperature sensor switching (Aux.)

To use the temperature sensor on the wired remote controller only, change the setting to "Wired remote controller" (01).

This function will only work if the function setting 42 is set at "Both" (01).

When the setting value is set to "Both" (00), more suitable control of the room temperature is possible by setting function setting 30 and 31 too.

| Function number | Setting value | Setting description     | Factory setting |
|-----------------|---------------|-------------------------|-----------------|
| 48              | 00            | Both                    | ◆               |
|                 | 01            | Wired remote controller |                 |

## 10) Indoor unit fan control for energy saving for cooling

Enables or disables the power-saving function by controlling the indoor unit fan rotation when the outdoor unit is stopped during cooling operation.

| Function number | Setting value | Setting description | Factory setting |
|-----------------|---------------|---------------------|-----------------|
| 49              | 00            | Disable             |                 |
|                 | 01            | Enable              |                 |
|                 | 02            | Remote controller   | ◆               |

00: When the outdoor unit is stopped, the indoor unit fan operates continuously following the setting on the remote controller.

01: When the outdoor unit is stopped, the indoor unit fan operates intermittently at a very low speed.

02: Enable or disable this function by remote controller setting.

**NOTE:** Set to "00" or "01" when connecting a remote controller that cannot set the Fan control for energy saving function or connecting a network converter. To confirm if the remote controller has this setting, refer to the operating manual of each remote controller.

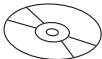
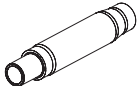
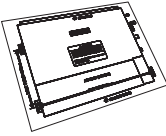
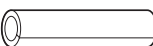
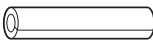
## 11) Switching functions for external output terminal

Functions of the external output terminal can be switched. For details, refer to “External input and output”.

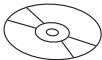
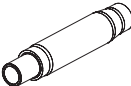
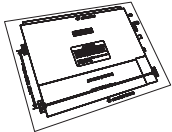
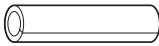
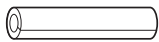
| Function number | Setting value | Setting description  | Factory setting |
|-----------------|---------------|----------------------|-----------------|
| 60              | 00            | Operation status     | ◆               |
|                 | 01—08         | (Setting prohibited) |                 |
|                 | 09            | Error status         |                 |
|                 | 10            | Fresh air control    |                 |
|                 | 11            | External heater      |                 |

## 10. Accessories

### 10-1. Models: ARXG09KLLAP, ARXG12KLLAP, and ARXG14KLLAP

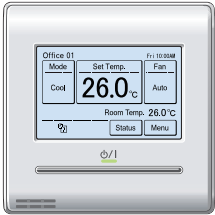
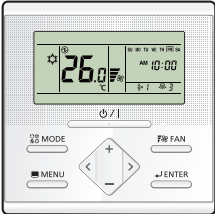
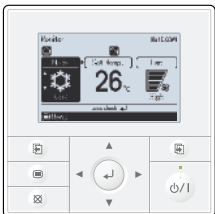
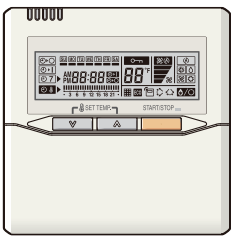
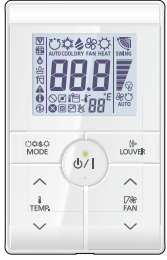
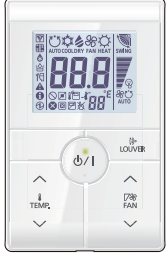
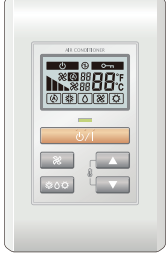
| Part name                 | Exterior                                                                            | Qty | Part name                          | Exterior                                                                              | Qty |
|---------------------------|-------------------------------------------------------------------------------------|-----|------------------------------------|---------------------------------------------------------------------------------------|-----|
| Operation manual          |    | 1   | Filter (small)                     |    | 2   |
| Operation manual (CD-ROM) |    | 1   | Drain hose                         |    | 1   |
| Installation manual       |    | 1   | Hose band                          |    | 1   |
| Installation template     |    | 1   | Drain hose insulation B            |    | 1   |
| Washer                    |   | 8   | Insulation (for electrical wiring) |   | 2   |
| Cable tie (large)         |  | 4   | Coupler heat insulation (large)    |  | 1   |
| Cable tie (medium)        |  | 3   | Coupler heat insulation (small)    |  | 1   |

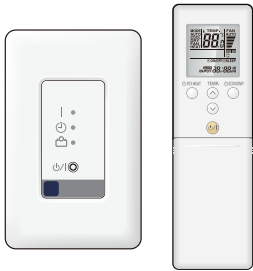
## 10-2. Model: ARXG18KLLAP

| Part name                 | Exterior                                                                          | Q'ty | Part name                          | Exterior                                                                            | Q'ty |
|---------------------------|-----------------------------------------------------------------------------------|------|------------------------------------|-------------------------------------------------------------------------------------|------|
| Operating manual          |  | 1    | Filter (large)                     |  | 2    |
| Operating manual (CD-ROM) |  | 1    | Drain hose                         |  | 1    |
| Installation manual       |  | 1    | Hose band                          |  | 1    |
| Installation template     |  | 1    | Drain hose insulation B            |  | 1    |
| Washer                    |  | 8    | Insulation (for electrical wiring) |  | 2    |
| Cable tie (large)         |  | 4    | Coupler heat insulation (large)    |  | 1    |
| Cable tie (medium)        |  | 3    | Coupler heat insulation (small)    |  | 1    |

# 11. Optional parts

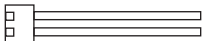
## 11-1. Controllers

| Exterior                                                                            | Part name                | Model name | Summary                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|--------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Wired Remote Controller  | UTY-RNRGZ* | Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room.<br>Wire type: Non-polar 2-wire                                              |
|    | Wired Remote Controller  | UTY-RLRG   | High visibility and easy operation. Room temperature can be accurately controlled using the thermo sensor.<br>Wire type: Non-polar 2-wire                                  |
|   | Wired Remote Controller  | UTY-RVNGM  | Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key.<br>Wire type: Polar 3-wire                                          |
|  | Wired Remote Controller  | UTY-RNNGM  | Room temperature can be controlled by detecting the temperature accurately with thermo sensor.<br>Wire type: Polar 3-wire                                                  |
|  | Simple Remote Controller | UTY-RSRG   | Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode.<br><br>Wire type: Non-polar 2-wire |
|  | Simple Remote Controller | UTY-RHRG   | Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting.<br><br>Wire type: Non-polar 2-wire                 |
|  | Simple Remote Controller | UTY-RSNGM  | Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode.<br>Wire type: Polar 3-wire         |

| Exterior                                                                          | Part name                                       | Model name | Summary                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------|------------|---------------------------------------------------------|
|  | IR Receiver Kit with Wireless Remote Controller | UTY-LBTGM  | Unit control is performed by Wireless Remote Controller |

**NOTE:** Available functions may differ by the remote controller. For details, refer to the operation manual.

## 11-2. Others

| Exterior                                                                            | Part name              | Model name | Summary                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Remote Sensor Unit     | UTY-XSZX   | Thermo-sensor for sensing the temperature of arbitrary place in the room.                                                                                                                                                                                              |
|   | Auto Louver Grille Kit | UTD-GXTA-W | Width: 683 mm<br>For 09, 12, and 14 models                                                                                                                                                                                                                             |
|  | Auto Louver Grille Kit | UTD-GXTB-W | Width: 883 mm<br>For 18 model                                                                                                                                                                                                                                          |
|  | External Connect Kit   | UTY-XWZXZG | Use to connect with various peripheral devices and air conditioner PCB.<br>For control output port.                                                                                                                                                                    |
|  | WLAN Adapter           | UTY-TFSXZ1 | Remotely manage an air conditioning system using mobile devices such as smartphones and tablets.<br>For connection indoor unit with UART interface.<br>Appropriate application for each region is required to use this option. For details, contact FGL sales company. |
|  | Modbus Converter       | UTY-VMSX   | For connection between indoor unit with UART interface and a Modbus open network.                                                                                                                                                                                      |

| Exterior                                                                          | Part name                  | Model name | Summary                                                                                   |
|-----------------------------------------------------------------------------------|----------------------------|------------|-------------------------------------------------------------------------------------------|
|  | KNX Convertor              | UTY-VKSX   | For connection between indoor unit with UART interface and a KNX open network.            |
|  | External Switch Controller | UTY-TERX   | Air conditioner switching can be controlled by connecting other external sensor switches. |

**NOTE:** Combined use of following optional parts and WLAN Adapter (UTY-TFSXZ1) is not allowed.

- Modbus Converter
- KNX Convertor

# **Part 2. OUTDOOR UNIT**

---

**SINGLE TYPE:**

**AOHG09KATA**

**AOHG12KATA**

**AOHG14KATA**

**AOHG18KATA**

# 1. Specifications

| Type                    |                        |                                 |                   | Inverter heat pump                                 |                                                              |                                                        |               |     |  |
|-------------------------|------------------------|---------------------------------|-------------------|----------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------|---------------|-----|--|
| Model name              |                        |                                 |                   | AOHG09KATA                                         | AOHG12KATA                                                   | AOHG14KATA                                             | AOHG18KATA    |     |  |
| Power supply            |                        |                                 |                   | 230 V ~ 50 Hz                                      |                                                              |                                                        |               |     |  |
| Available voltage range |                        |                                 |                   | 198—264 V                                          |                                                              |                                                        |               |     |  |
| Starting current        |                        |                                 |                   | A                                                  | 4.4                                                          | 5.8                                                    | 6.6           | 7.9 |  |
| Fan                     | Airflow rate           | Cooling                         | m³/h              | 1,610                                              | 1,630                                                        | 1,670                                                  | 1,710         |     |  |
|                         |                        | Heating                         |                   | 1,550                                              | 1,410                                                        | 1,580                                                  | 1,840         |     |  |
|                         | Type × Qty             |                                 | Propeller fan × 1 |                                                    |                                                              |                                                        |               |     |  |
| Motor output            |                        | W                               | 23                |                                                    |                                                              |                                                        |               |     |  |
| Sound pressure level *1 |                        | Cooling                         | dB (A)            | 47                                                 | 49                                                           | 50                                                     | 51            |     |  |
|                         |                        | Heating                         |                   | 48                                                 | 50                                                           | 51                                                     | 52            |     |  |
| Sound power level       |                        | Cooling                         | dB (A)            | 60                                                 | 62                                                           | 63                                                     |               |     |  |
|                         |                        | Heating                         |                   | 60                                                 | 62                                                           | 63                                                     | 64            |     |  |
| Heat exchanger type     |                        | Dimensions (H × W × D)          | mm                | 504 × 650 × 18.19                                  | Main 1:<br>504 × 630 × 18.19<br>Main 2:<br>504 × 630 × 18.19 | Main 1: 504 × 881 × 18.19<br>Main 2: 504 × 851 × 18.19 |               |     |  |
|                         |                        | Fin pitch                       |                   | 1.3                                                | Main 1: 1.3<br>Main 2: 1.3                                   |                                                        |               |     |  |
|                         |                        | Rows × Stages                   |                   | 1 × 24                                             | Main 1: 1 × 24<br>Main 2: 1 × 24                             |                                                        |               |     |  |
|                         |                        | Pipe type                       |                   | Copper tube                                        |                                                              |                                                        |               |     |  |
|                         |                        | Fin type                        |                   | Type (Material)                                    | Aluminum                                                     |                                                        |               |     |  |
|                         |                        |                                 |                   | Surface treatment                                  | PC fin                                                       |                                                        |               |     |  |
| Compressor              | Type × Qty             |                                 | DC rotary × 1     |                                                    |                                                              |                                                        |               |     |  |
|                         | Motor output           |                                 | W                 | 550                                                | 900                                                          |                                                        |               |     |  |
| Refrigerant             |                        | Type (Global warming potential) |                   | R32 (675)                                          |                                                              |                                                        |               |     |  |
|                         |                        | Charge                          | g                 | 600                                                | 700                                                          | 850                                                    | 900           |     |  |
| Refrigerant oil         |                        | Type                            |                   | RB74AF                                             |                                                              | RB68A                                                  |               |     |  |
|                         |                        | Amount                          | cm³               | 240                                                |                                                              | 340                                                    |               |     |  |
| Enclosure               |                        | Material                        |                   | Steel sheet                                        |                                                              |                                                        |               |     |  |
|                         |                        | Color                           |                   | Beige<br>Approximate color of Munsell 10YR 7.5/1.0 |                                                              |                                                        |               |     |  |
| Dimensions (H × W × D)  | Net                    | mm                              | 541 × 663 × 290   |                                                    | 542 × 799 × 290                                              |                                                        |               |     |  |
|                         | Gross                  |                                 | 602 × 804 × 375   |                                                    | 602 × 940 × 375                                              |                                                        |               |     |  |
| Weight                  | Net                    | kg                              | 23                | 25                                                 | 32                                                           | 33                                                     |               |     |  |
|                         | Gross                  |                                 | 27                | 29                                                 | 36                                                           |                                                        |               |     |  |
| Connection pipe         | Size                   | Liquid                          | mm (in)           | Ø6.35 (Ø 1/4)                                      |                                                              |                                                        |               |     |  |
|                         |                        | Gas                             |                   | Ø9.52 (Ø3/8)                                       |                                                              |                                                        | Ø12.70 (Ø1/2) |     |  |
|                         | Method                 |                                 | Flare             |                                                    |                                                              |                                                        |               |     |  |
|                         | Pre-charge length      |                                 | m                 | 15                                                 |                                                              |                                                        |               |     |  |
|                         | Max. length            |                                 |                   | 15                                                 |                                                              |                                                        |               |     |  |
|                         | Max. height difference |                                 |                   | 15                                                 |                                                              |                                                        |               |     |  |
| Operation range         |                        | Cooling                         | °C                | -10 to 46                                          |                                                              |                                                        |               |     |  |
|                         |                        | Heating                         |                   | -15 to 24                                          |                                                              |                                                        |               |     |  |
| Drain hose              |                        | Material                        |                   | Polypropylene                                      |                                                              |                                                        |               |     |  |
|                         |                        | Size                            | mm                | Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)              |                                                              |                                                        |               |     |  |

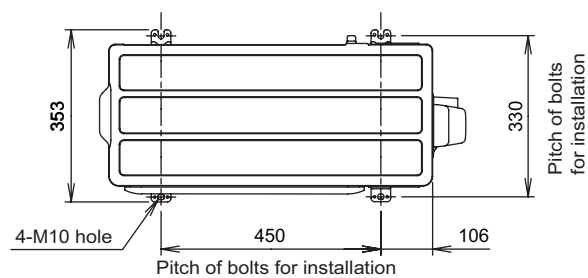
## NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5.0 m, Height difference: 0 m (Between outdoor unit and indoor unit.).
- Protective function might work when using it outside the operation range.
- \*1: Sound pressure level
  - Measured values in manufacturer's semi-anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

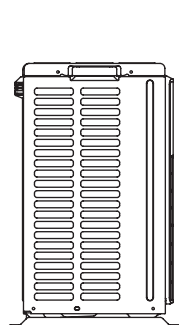
## 2. Dimensions

### 2-1. Models: AOHG09KATA and AOHG12KATA

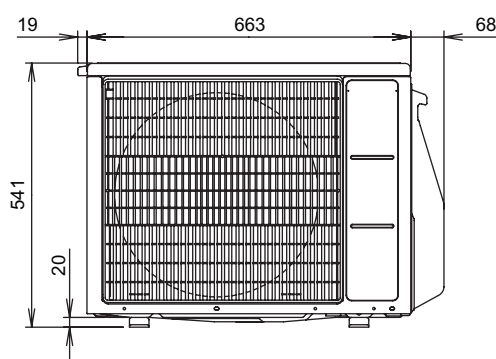
Unit: mm



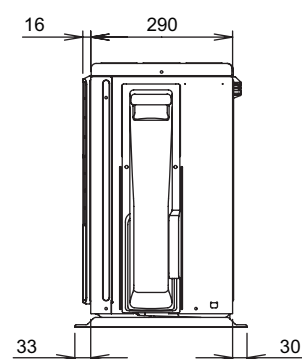
Top view



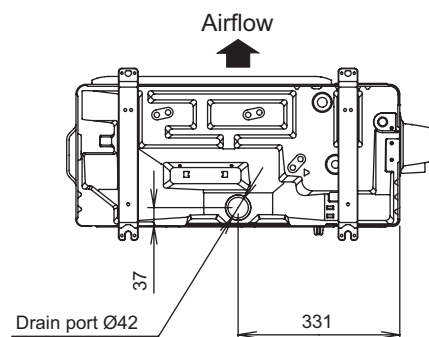
Side view



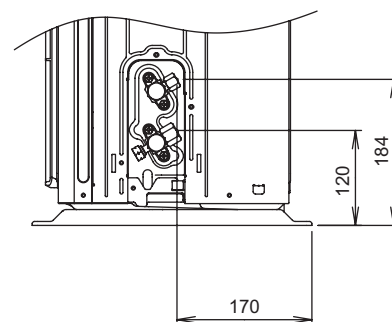
Front view



Side view



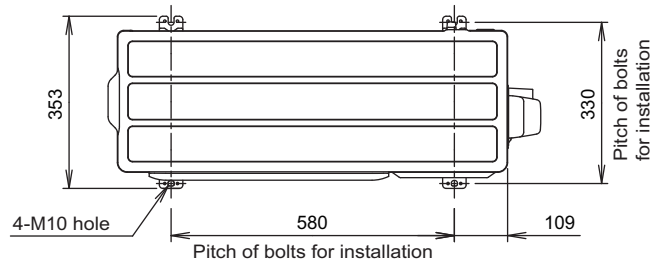
Bottom view



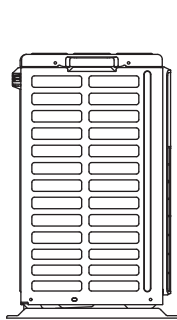
Side view (Valve part)

## 2-2. Models: AOHG14KATA and AOHG18KATA

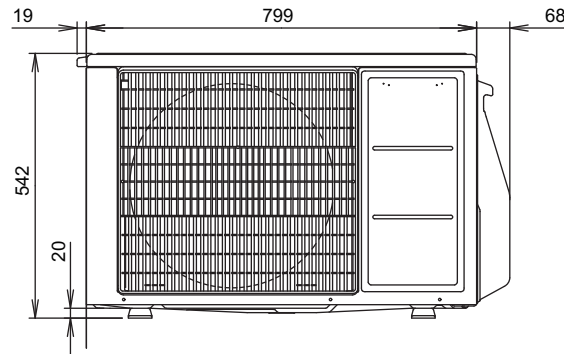
Unit: mm

OUTDOOR UNIT  
AOHG09-18KATAOUTDOOR UNIT  
AOHG09-18KATA

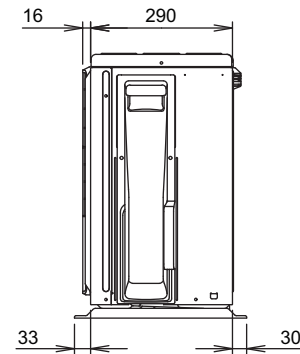
Top view



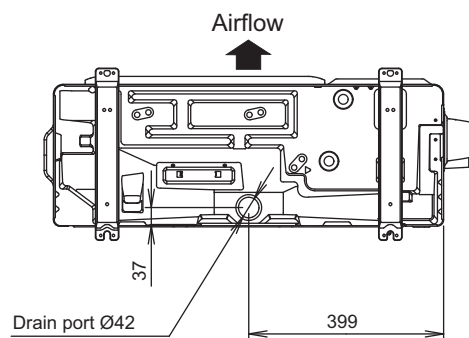
Side view



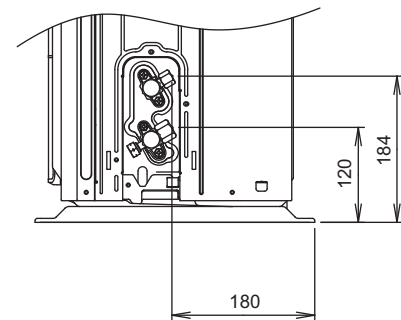
Front view



Side view



Bottom view



Side view (Valve part)

### 3. Installation space

#### 3-1. Models: AOHG09KATA, AOHG12KATA, AOHG14KATA, and AOHG18KATA

##### ■ Space requirement

Provide sufficient installation space for product safety.

##### ⚠ CAUTION

Keep the space shown in the installation examples.

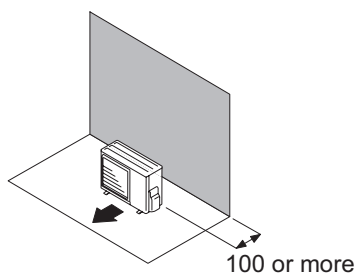
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

##### ● Single outdoor unit installation

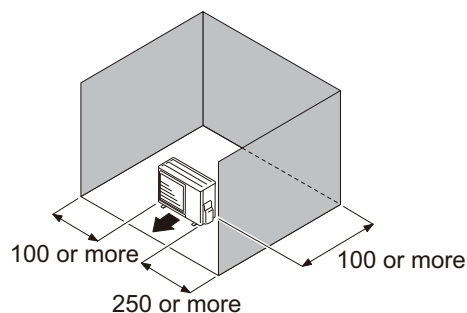
- When the upper space is open:

Unit: mm

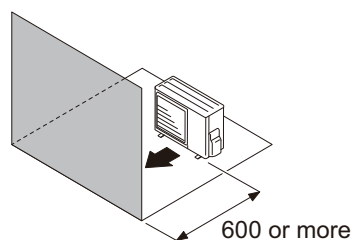
Obstacles at rear only



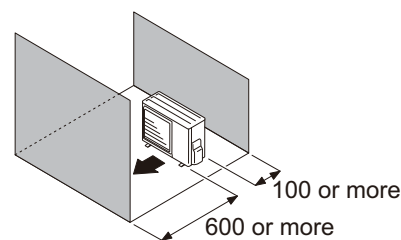
Obstacles at rear and sides



Obstacles at front



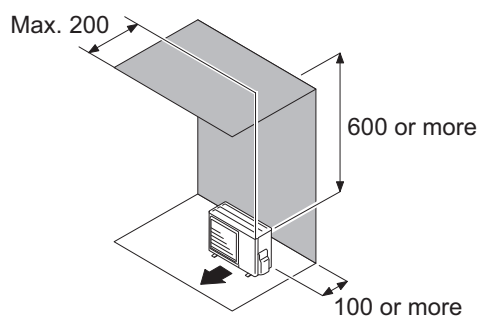
Obstacles at front and rear



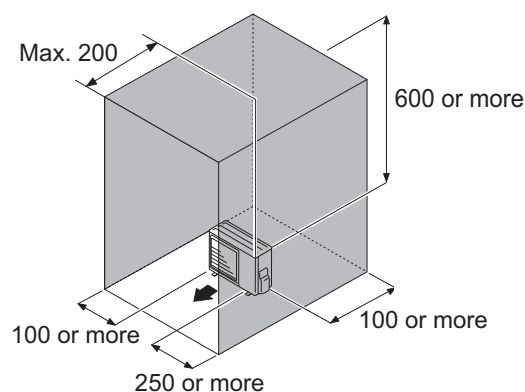
- When an obstruction in the upper space:

Unit: mm

Obstacles at rear and above



Obstacles at rear, sides, and above



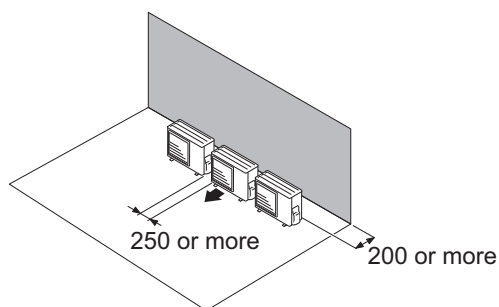
## ● Multiple outdoor unit installation

- Provide at least 250 mm of space between the outdoor units if multiple units are installed.
- When routing the piping from the side of an outdoor unit, provide space for piping.
- No more than 3 units must be installed side by side.  
When 4 units or more are arranged in a line, provide the space as shown in the following example **“When an obstruction in the upper space:”**.

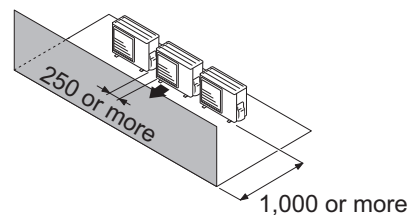
- **When the upper space is open:**

Unit: mm

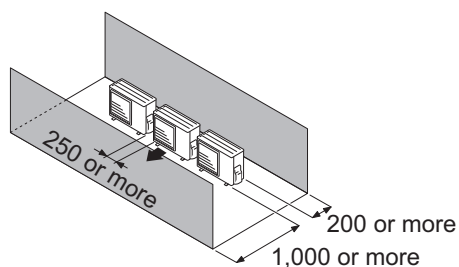
Obstacles at rear only



Obstacles at front only



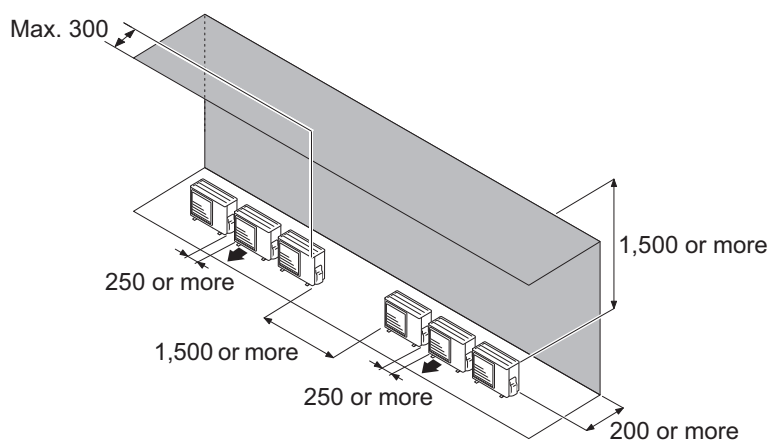
Obstacles at front and rear



- **When an obstruction in the upper space:**

Unit: mm

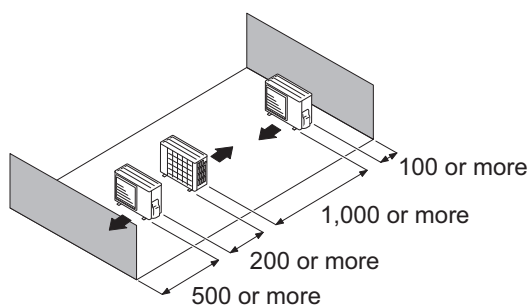
Obstacles at rear and above.



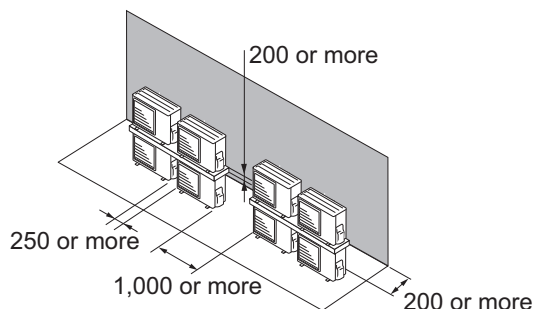
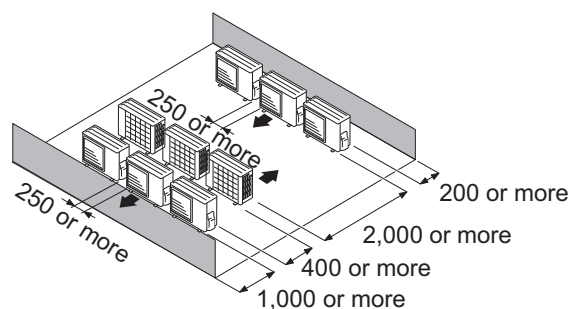
## ● Outdoor units installation in multi-row

Unit: mm

Single parallel unit arrangement



Multiple parallel unit arrangement

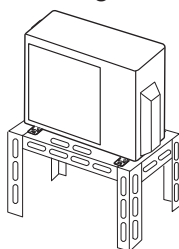


### NOTES:

- If the space is larger than stated above, the condition will be the same as when there is no obstacle.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

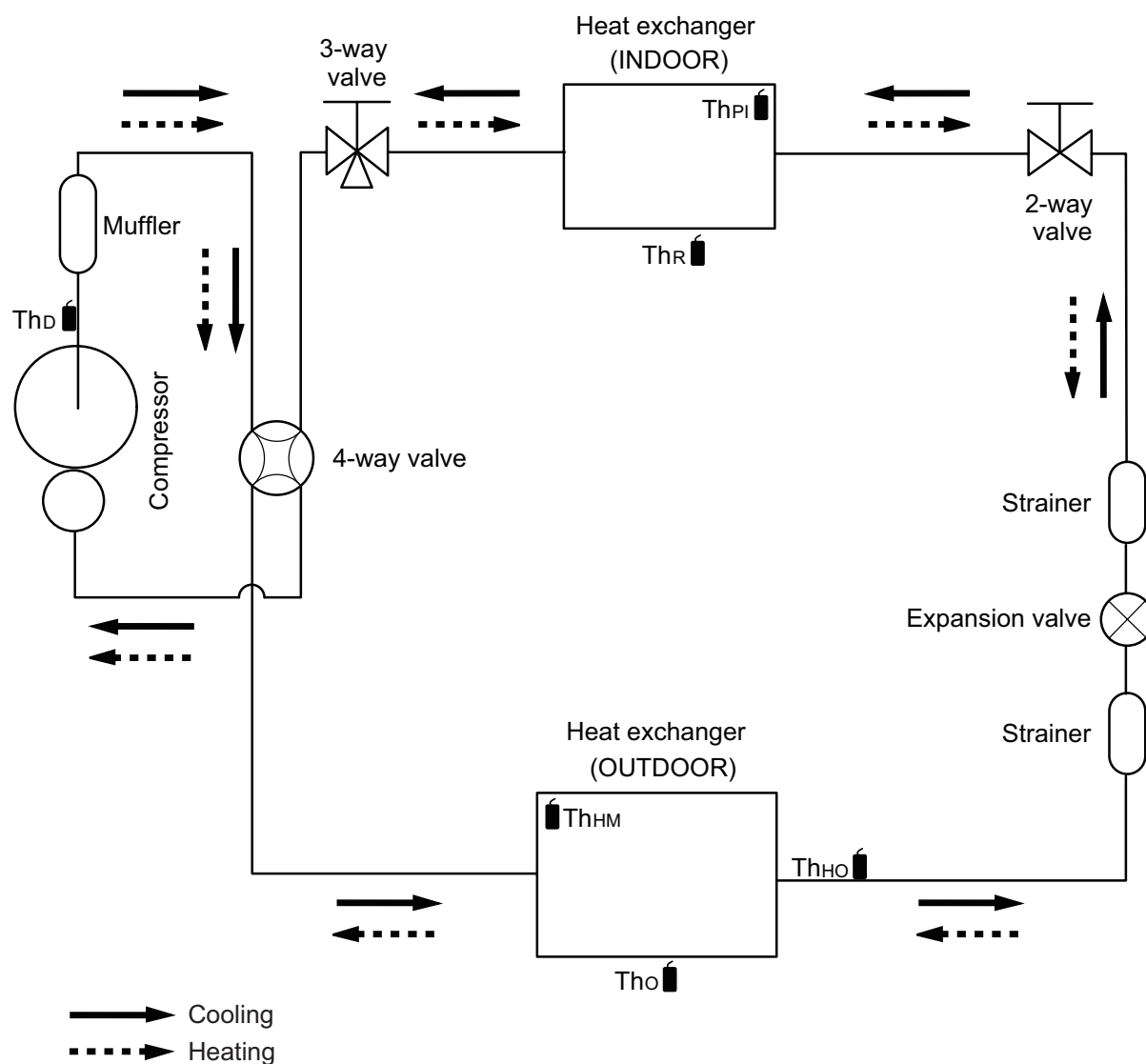
### ⚠ CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.



## 4. Refrigerant circuit

### 4-1. Models: AOHG09KATA and AOHG12KATA



ThD : Thermistor (Discharge temperature)

Tho : Thermistor (Outdoor temperature)

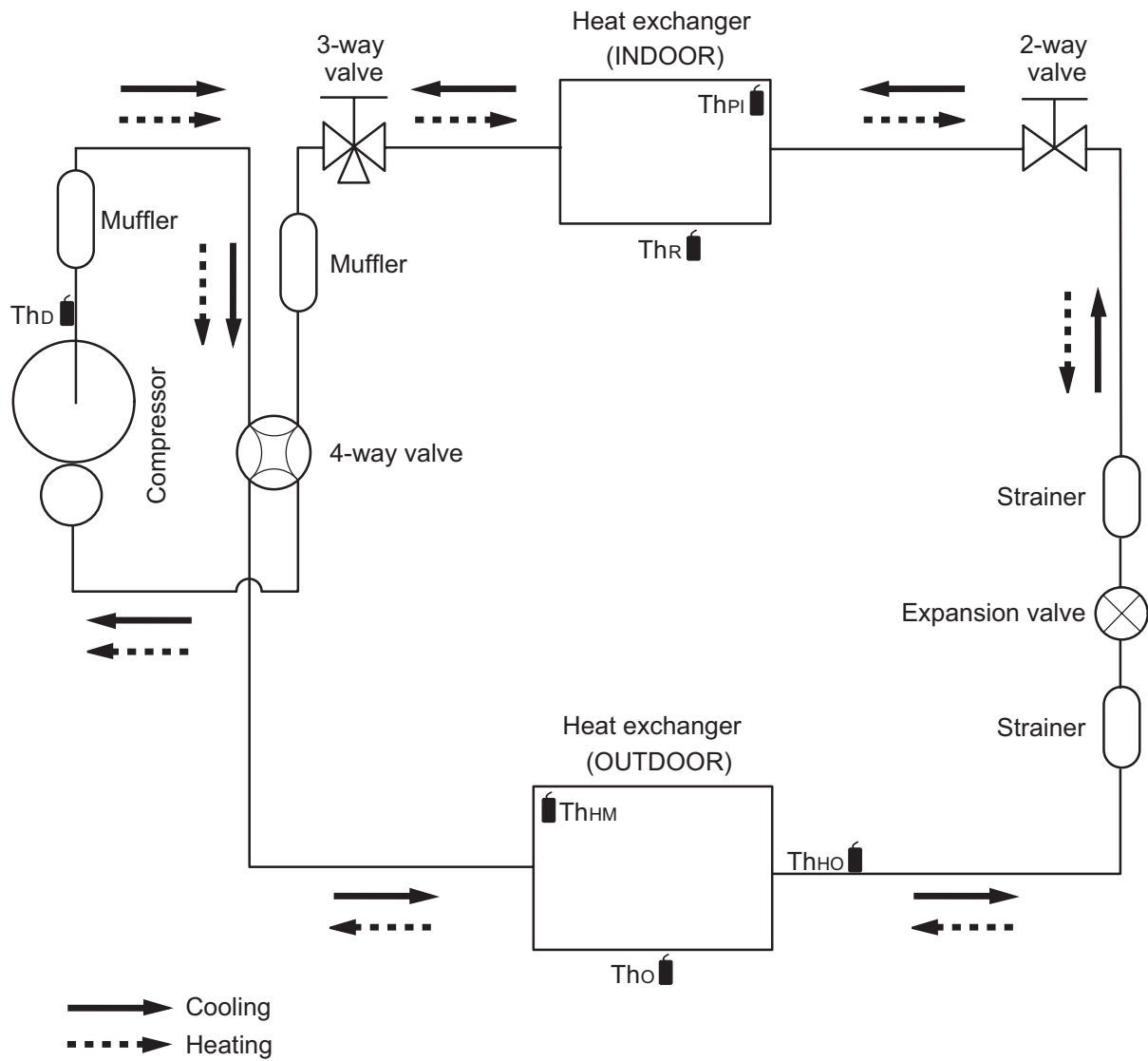
ThHO : Thermistor (Heat exchanger out temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

ThR : Thermistor (Room temperature)

ThPI : Thermistor (Pipe temperature)

## 4-2. Models: AOHG14KATA and AOHG18KATA



Th<sub>D</sub> : Thermistor (Discharge temperature)

Th<sub>HM</sub> : Thermistor (Heat exchanger middle temperature)

Th<sub>O</sub> : Thermistor (Outdoor temperature)

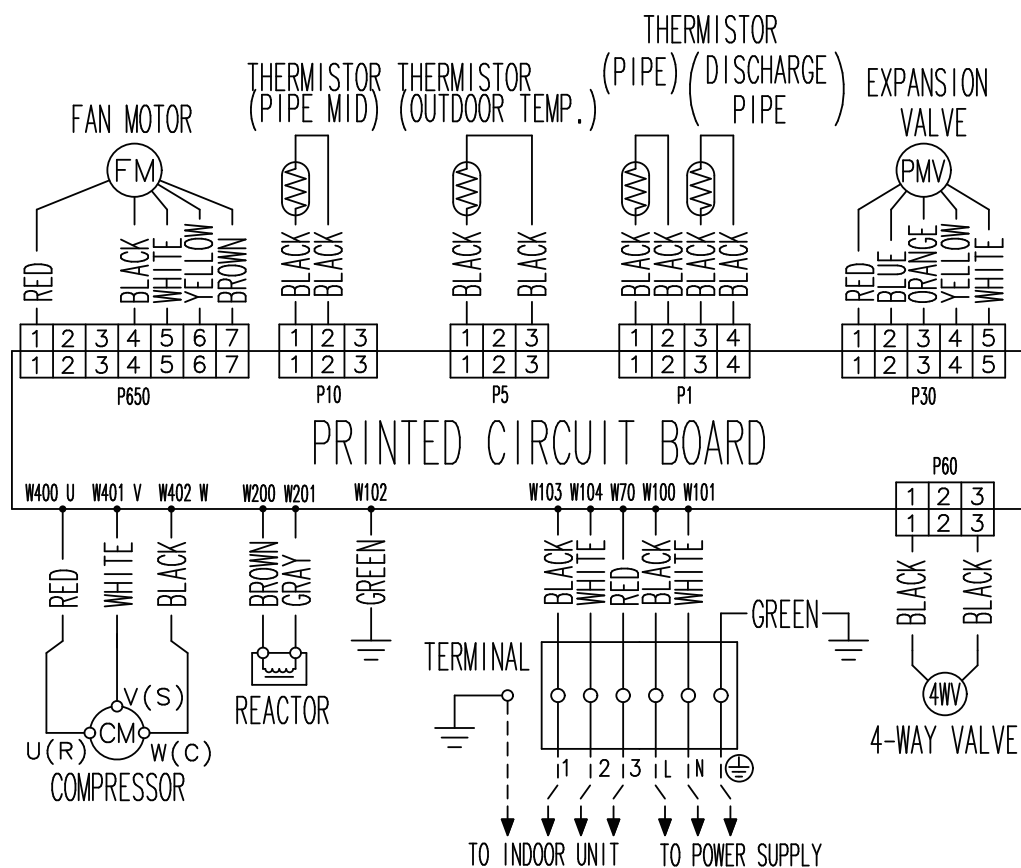
Th<sub>HO</sub> : Thermistor (Heat exchanger out temperature)

Th<sub>PI</sub> : Thermistor (Pipe temperature)

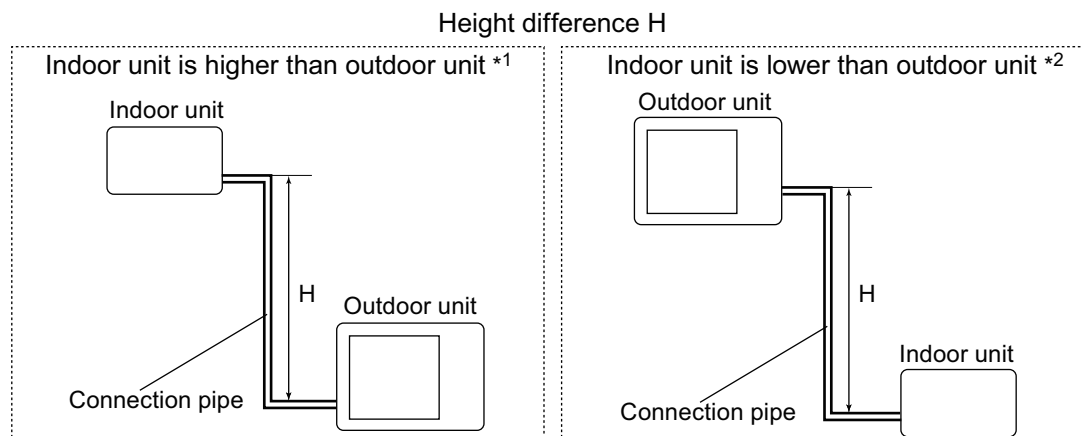
Th<sub>R</sub> : Thermistor (Room temperature)

## 5. Wiring diagrams

### 5-1. Models: AOHG09KATA, AOHG12KATA, AOHG14KATA, and AOHG18KATA



## 6. Capacity compensation rate for pipe length and height difference



### 6-1. Model: AOHG09KATA

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

| COOLING                 |                                            |      | Pipe length (m) |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.903 |
|                         |                                            | 10   | —               | —     | 0.964 | 0.918 |
|                         |                                            | 7.5  | —               | 0.988 | 0.968 | 0.922 |
|                         |                                            | 5    | 0.992           | 0.992 | 0.972 | 0.925 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 0.980 | 0.933 |
|                         |                                            | -5   | 1.000           | 1.000 | 0.980 | 0.933 |
|                         |                                            | -7.5 | —               | 1.000 | 0.980 | 0.933 |
|                         |                                            | -10  | —               | —     | 0.980 | 0.933 |
|                         |                                            | -15  | —               | —     | —     | 0.933 |

| HEATING                 |                                            |      | Pipe length (m) |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.943 |
|                         |                                            | 10   | —               | —     | 1.010 | 0.943 |
|                         |                                            | 7.5  | —               | 1.000 | 1.010 | 0.943 |
|                         |                                            | 5    | 1.000           | 1.000 | 1.010 | 0.943 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 1.010 | 0.943 |
|                         |                                            | -5   | 0.995           | 0.995 | 1.005 | 0.939 |
|                         |                                            | -7.5 | —               | 0.993 | 1.002 | 0.936 |
|                         |                                            | -10  | —               | —     | 0.999 | 0.934 |
|                         |                                            | -15  | —               | —     | —     | 0.925 |

## 6-2. Model: AOHG12KATA

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

| COOLING                 |                                            |      | Pipe length (m) |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.903 |
|                         |                                            | 10   | —               | —     | 0.964 | 0.918 |
|                         |                                            | 7.5  | —               | 0.988 | 0.968 | 0.922 |
|                         |                                            | 5    | 0.992           | 0.992 | 0.972 | 0.925 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 0.980 | 0.933 |
|                         |                                            | -5   | 1.000           | 1.000 | 0.980 | 0.933 |
|                         |                                            | -7.5 | —               | 1.000 | 0.980 | 0.933 |
|                         |                                            | -10  | —               | —     | 0.980 | 0.933 |
|                         |                                            | -15  | —               | —     | —     | 0.933 |

| HEATING                 |                                            |      | Pipe length (m) |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.943 |
|                         |                                            | 10   | —               | —     | 1.010 | 0.943 |
|                         |                                            | 7.5  | —               | 1.000 | 1.010 | 0.943 |
|                         |                                            | 5    | 1.000           | 1.000 | 1.010 | 0.943 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 1.010 | 0.943 |
|                         |                                            | -5   | 0.995           | 0.995 | 1.005 | 0.939 |
|                         |                                            | -7.5 | —               | 0.993 | 1.002 | 0.936 |
|                         |                                            | -10  | —               | —     | 0.999 | 0.934 |
|                         |                                            | -15  | —               | —     | —     | 0.925 |

## 6-3. Model: AOHG14KATA

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

| COOLING                 |                                            |      | Pipe length (m) |       |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    | 20    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.953 | 0.950 |
|                         |                                            | 10   | —               | —     | 0.983 | 0.968 | 0.966 |
|                         |                                            | 7.5  | —               | 0.988 | 0.987 | 0.972 | 0.970 |
|                         |                                            | 5    | 0.992           | 0.992 | 0.991 | 0.976 | 0.974 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 0.999 | 0.984 | 0.982 |
|                         |                                            | -5   | 1.000           | 1.000 | 0.999 | 0.984 | 0.982 |
|                         |                                            | -7.5 | —               | 1.000 | 0.999 | 0.984 | 0.982 |
|                         |                                            | -10  | —               | —     | 0.999 | 0.984 | 0.982 |
|                         |                                            | -15  | —               | —     | —     | 0.984 | 0.982 |

| HEATING                 |                                            |      | Pipe length (m) |       |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    | 20    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.918 | 0.891 |
|                         |                                            | 10   | —               | —     | 0.981 | 0.918 | 0.891 |
|                         |                                            | 7.5  | —               | 1.000 | 0.981 | 0.918 | 0.891 |
|                         |                                            | 5    | 1.000           | 1.000 | 0.981 | 0.918 | 0.891 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 0.981 | 0.918 | 0.891 |
|                         |                                            | -5   | 0.995           | 0.995 | 0.976 | 0.914 | 0.886 |
|                         |                                            | -7.5 | —               | 0.993 | 0.974 | 0.912 | 0.884 |
|                         |                                            | -10  | —               | —     | 0.972 | 0.909 | 0.882 |
|                         |                                            | -15  | —               | —     | —     | 0.900 | 0.873 |

## 6-4. Model: AOHG18KATA

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

| COOLING                 |                                            |      | Pipe length (m) |       |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    | 20    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.953 | 0.950 |
|                         |                                            | 10   | —               | —     | 0.983 | 0.968 | 0.966 |
|                         |                                            | 7.5  | —               | 0.988 | 0.987 | 0.972 | 0.970 |
|                         |                                            | 5    | 0.992           | 0.992 | 0.991 | 0.976 | 0.974 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 0.999 | 0.984 | 0.982 |
|                         |                                            | -5   | 1.000           | 1.000 | 0.999 | 0.984 | 0.982 |
|                         |                                            | -7.5 | —               | 1.000 | 0.999 | 0.984 | 0.982 |
|                         |                                            | -10  | —               | —     | 0.999 | 0.984 | 0.982 |
|                         |                                            | -15  | —               | —     | —     | 0.984 | 0.982 |

| HEATING                 |                                            |      | Pipe length (m) |       |       |       |       |
|-------------------------|--------------------------------------------|------|-----------------|-------|-------|-------|-------|
|                         |                                            |      | 5               | 7.5   | 10    | 15    | 20    |
| Height difference H (m) | Indoor unit is higher than outdoor unit *1 | 15   | —               | —     | —     | 0.920 | 0.894 |
|                         |                                            | 10   | —               | —     | 0.982 | 0.920 | 0.894 |
|                         |                                            | 7.5  | —               | 1.000 | 0.982 | 0.920 | 0.894 |
|                         |                                            | 5    | 1.000           | 1.000 | 0.982 | 0.920 | 0.894 |
|                         | Indoor unit is lower than outdoor unit *2  | 0    | 1.000           | 1.000 | 0.982 | 0.920 | 0.894 |
|                         |                                            | -5   | 0.995           | 0.995 | 0.977 | 0.916 | 0.889 |
|                         |                                            | -7.5 | —               | 0.993 | 0.975 | 0.913 | 0.887 |
|                         |                                            | -10  | —               | —     | 0.972 | 0.911 | 0.885 |
|                         |                                            | -15  | —               | —     | —     | 0.902 | 0.876 |

## 7. Additional charge calculation

### 7-1. Model: AOHG09KATA

|                    |   |     |
|--------------------|---|-----|
| Refrigerant type   |   | R32 |
| Refrigerant amount | g | 600 |

#### ■ Refrigerant charge

|                   |   |           |       |
|-------------------|---|-----------|-------|
| Total pipe length | m | 15 (Max.) | 0 g/m |
| Additional charge | g | 0         |       |

**NOTE:** There is no additional refrigerant charge in this model. (Chargeless system)

### 7-2. Model: AOHG12KATA

|                    |   |     |
|--------------------|---|-----|
| Refrigerant type   |   | R32 |
| Refrigerant amount | g | 700 |

#### ■ Refrigerant charge

|                   |   |           |       |
|-------------------|---|-----------|-------|
| Total pipe length | m | 15 (Max.) | 0 g/m |
| Additional charge | g | 0         |       |

**NOTE:** There is no additional refrigerant charge in this model. (Chargeless system)

### 7-3. Model: AOHG14KATA

|                    |   |     |
|--------------------|---|-----|
| Refrigerant type   |   | R32 |
| Refrigerant amount | g | 850 |

#### ■ Refrigerant charge

|                   |   |            |           |        |
|-------------------|---|------------|-----------|--------|
| Total pipe length | m | 15 or less | 20 (Max.) | 20 g/m |
| Additional charge | g | 0          | 100       |        |

### 7-4. Model: AOHG18KATA

|                    |   |     |
|--------------------|---|-----|
| Refrigerant type   |   | R32 |
| Refrigerant amount | g | 900 |

#### ■ Refrigerant charge

|                   |   |            |           |        |
|-------------------|---|------------|-----------|--------|
| Total pipe length | m | 15 or less | 20 (Max.) | 20 g/m |
| Additional charge | g | 0          | 100       |        |

## 8. Airflow

### 8-1. Model: AOHG09KATA

#### ● Cooling

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,610 |
| l/s               | 447   |
| CFM               | 948   |

#### ● Heating

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,550 |
| l/s               | 431   |
| CFM               | 912   |

### 8-2. Model: AOHG12KATA

#### ● Cooling

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,630 |
| l/s               | 453   |
| CFM               | 959   |

#### ● Heating

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,410 |
| l/s               | 392   |
| CFM               | 830   |

### 8-3. Model: AOHG14KATA

#### ● Cooling

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,670 |
| l/s               | 464   |
| CFM               | 983   |

#### ● Heating

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,580 |
| l/s               | 439   |
| CFM               | 930   |

## 8-4. Model: AOHG18KATA

### ● Cooling

|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,710 |
| l/s               | 475   |
| CFM               | 1,007 |

### ● Heating

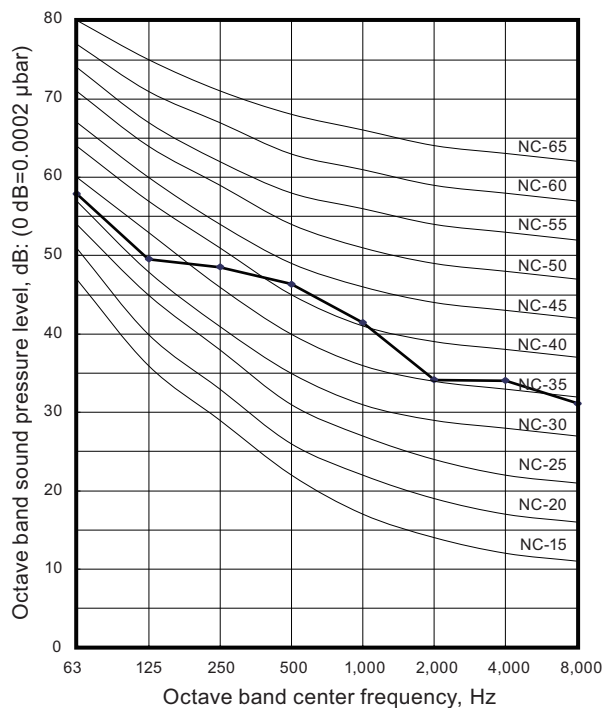
|                   |       |
|-------------------|-------|
| m <sup>3</sup> /h | 1,840 |
| l/s               | 511   |
| CFM               | 1,083 |

## 9. Operation noise (sound pressure)

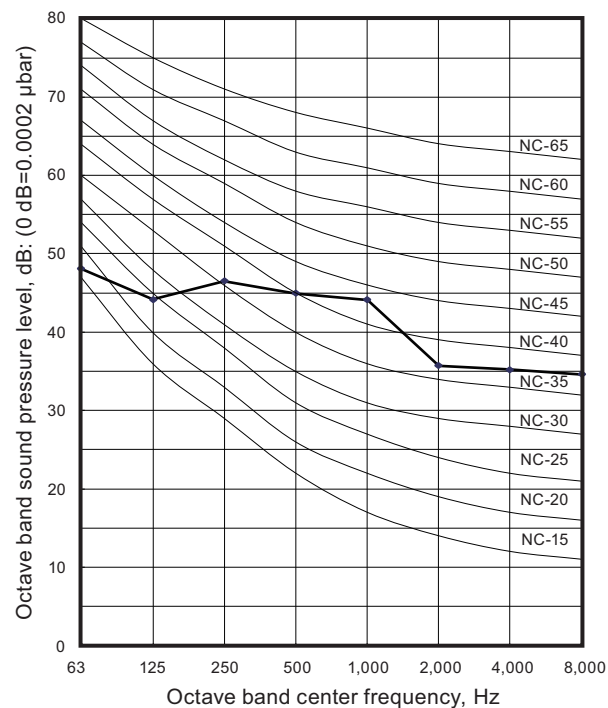
### 9-1. Noise level curve

#### Model: AOHG09KATA

##### ● Cooling

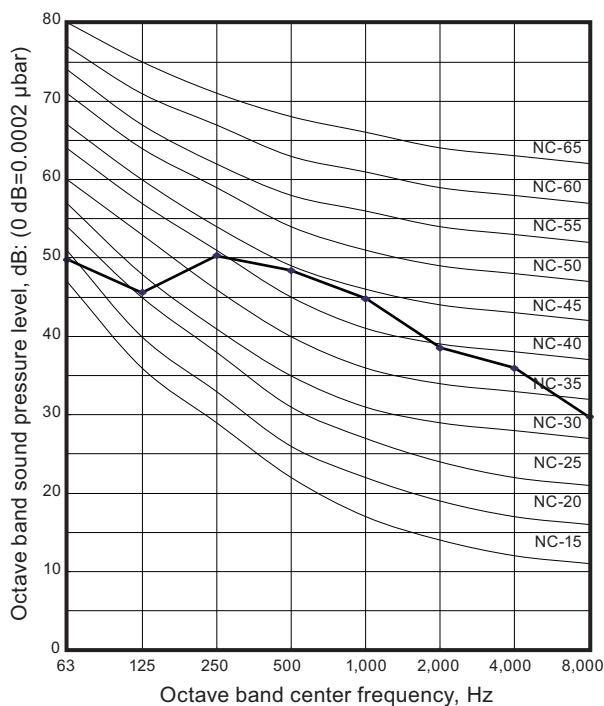


##### ● Heating

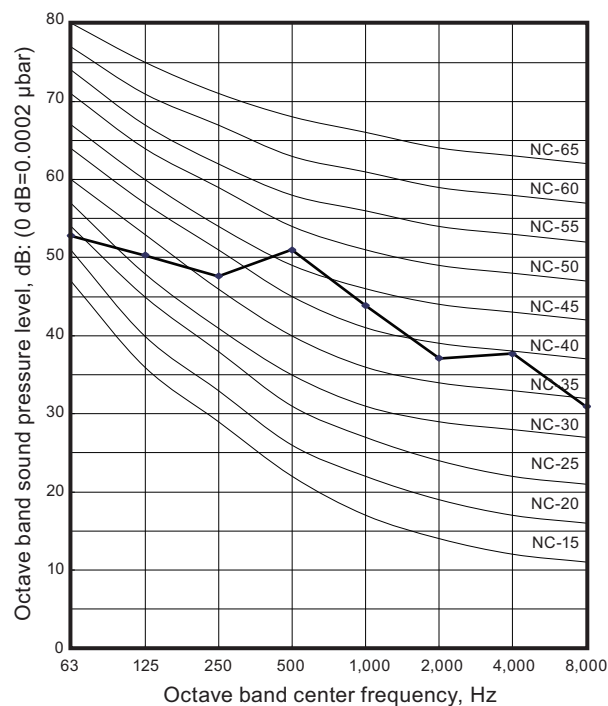


#### Model: AOHG12KATA

##### ● Cooling

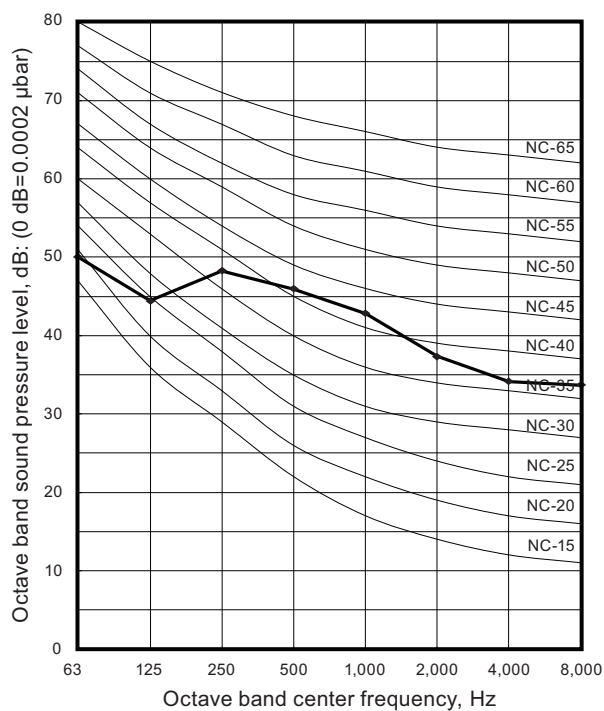


##### ● Heating

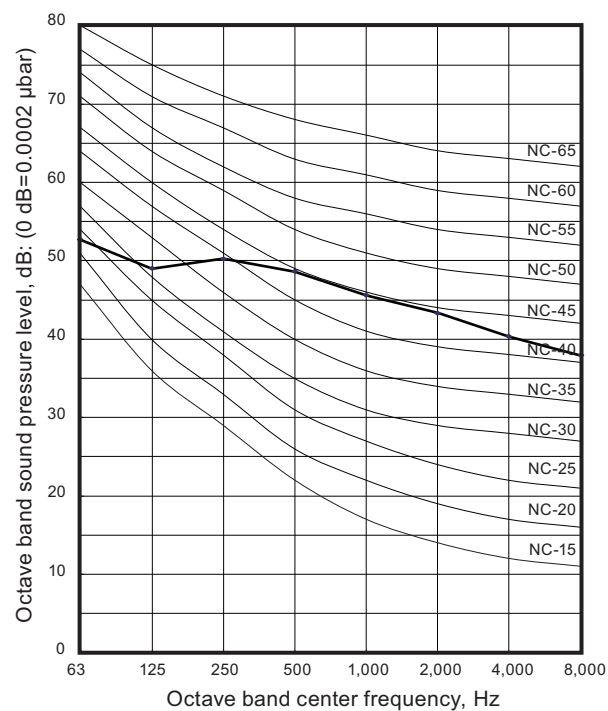


## Model: AOHG14KATA

### Cooling

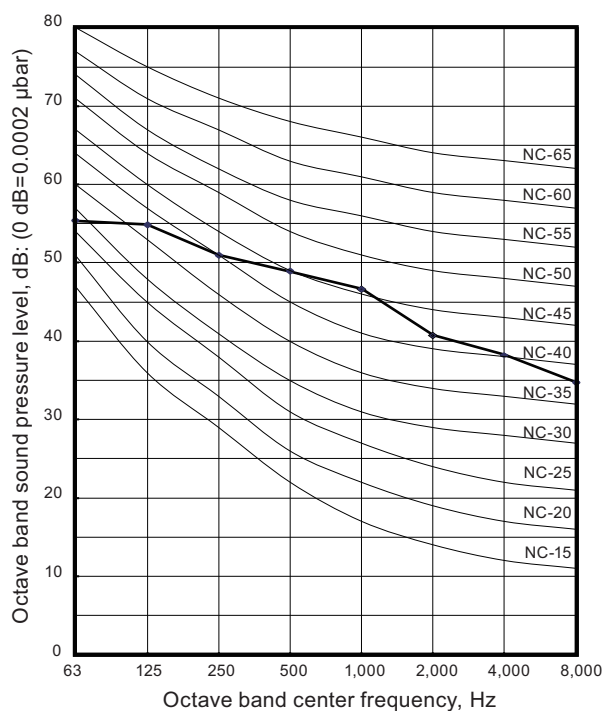


### Heating

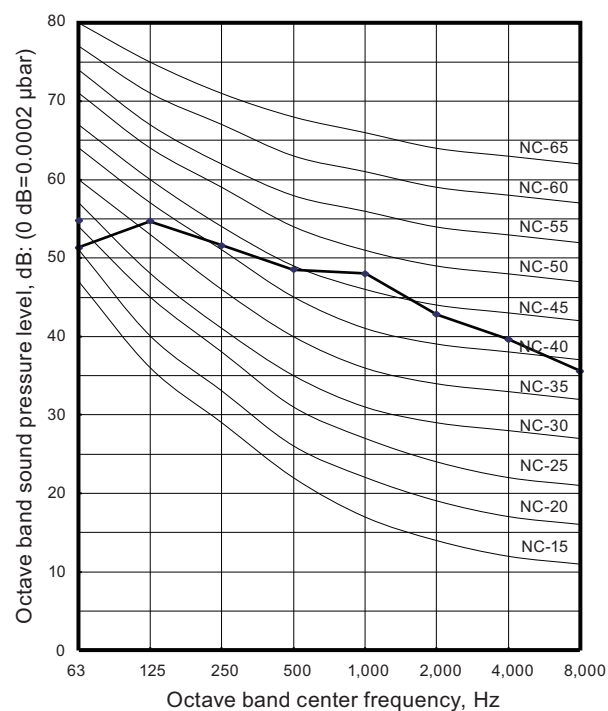


## Model: AOHG18KATA

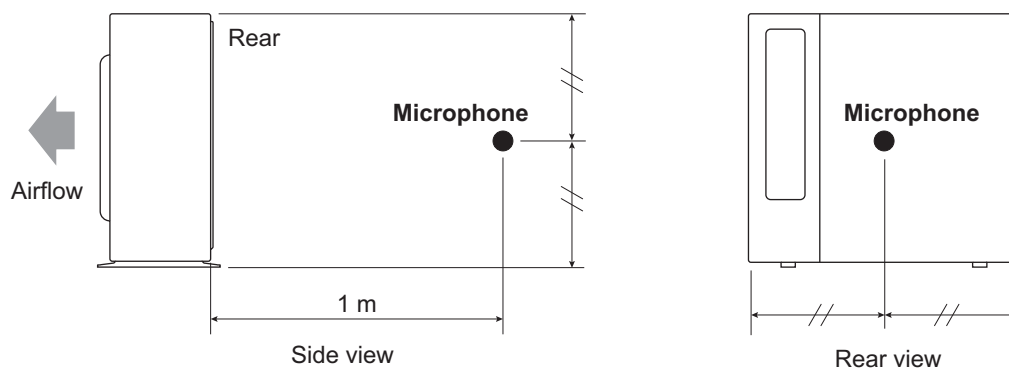
### Cooling



### Heating



## 9-2. Sound level check point



**NOTE:** Detailed shape of the actual outdoor unit might be slightly different from the one illustrated above.

## 10. Electrical characteristics

| Model name               |                         |                       |                 | AOHG09KATA |  | AOHG12KATA |  |
|--------------------------|-------------------------|-----------------------|-----------------|------------|--|------------|--|
| Power supply             | Voltage                 |                       | V               | 230 ~      |  |            |  |
|                          | Frequency               |                       | Hz              | 50         |  |            |  |
| Max operating current *1 |                         |                       | A               | 6.9        |  | 7.7        |  |
| Starting current         |                         |                       | A               | 4.4        |  | 5.8        |  |
| Wiring spec. *2          | Circuit breaker current |                       | A               | 10         |  |            |  |
|                          | Power cable             |                       | mm <sup>2</sup> | 1.5        |  |            |  |
|                          | Connection cable *3     | Cross-sectional area  | mm <sup>2</sup> | 1.5        |  |            |  |
|                          |                         | Limited wiring length | m               | 16         |  |            |  |

| Model name               |                         |                       |                 | AOHG14KATA |  | AOHG18KATA |  |
|--------------------------|-------------------------|-----------------------|-----------------|------------|--|------------|--|
| Power supply             | Voltage                 |                       | V               | 230 ~      |  |            |  |
|                          | Frequency               |                       | Hz              | 50         |  |            |  |
| Max operating current *1 |                         |                       | A               | 9.2        |  | 10.1       |  |
| Starting current         |                         |                       | A               | 6.6        |  | 7.9        |  |
| Wiring spec. *2          | Circuit breaker current |                       | A               | 13         |  |            |  |
|                          | Power cable             |                       | mm <sup>2</sup> | 1.5        |  |            |  |
|                          | Connection cable *3     | Cross-sectional area  | mm <sup>2</sup> | 1.5        |  |            |  |
|                          |                         | Limited wiring length | m               | 21         |  |            |  |

\*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.

\*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.

\*3: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

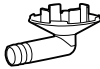
# 11. Safety devices

| Type of protection    | Protection form                               |          | Model                                 |            |
|-----------------------|-----------------------------------------------|----------|---------------------------------------|------------|
|                       |                                               |          | AOHG09KATA                            | AOHG12KATA |
| Circuit protection    | Current fuse (Main PCB)                       |          | 250 V, 20 A                           |            |
|                       |                                               |          | 250 V, 5 A                            |            |
| Fan motor protection  | Terminal protection program                   | Activate | 127 ±5 °C<br>Fan motor stop           |            |
|                       |                                               | Reset    | 95 °C or less<br>Fan motor restart    |            |
| Compressor protection | Terminal protection program (Discharge temp.) | Activate | 110 °C<br>Compressor stop             |            |
|                       |                                               | Reset    | After 7 minutes<br>Compressor restart |            |
|                       | Thermal protection program (Outdoor temp.)    | Activate | -20 °C<br>Compressor stop             |            |
|                       |                                               | Reset    | -15 °C<br>Compressor restart          |            |

| Type of protection    | Protection form                               |          | Model                                 |            |
|-----------------------|-----------------------------------------------|----------|---------------------------------------|------------|
|                       |                                               |          | AOHG14KATA                            | AOHG18KATA |
| Circuit protection    | Current fuse (Main PCB)                       |          | 250 V, 20 A                           |            |
|                       |                                               |          | 250 V, 5 A                            |            |
| Fan motor protection  | Terminal protection program                   | Activate | 127 ±5 °C<br>Fan motor stop           |            |
|                       |                                               | Reset    | 95 °C or less<br>Fan motor restart    |            |
| Compressor protection | Terminal protection program (Discharge temp.) | Activate | 110 °C<br>Compressor stop             |            |
|                       |                                               | Reset    | After 7 minutes<br>Compressor restart |            |
|                       | Thermal protection program (Outdoor temp.)    | Activate | -20 °C<br>Compressor stop             |            |
|                       |                                               | Reset    | -15 °C<br>Compressor restart          |            |

## 12. Accessories

### 12-1. Models: AOHG09KATA, AOHG12KATA, AOHG14KATA, and AOHG18KATA

| Part name           | Exterior                                                                          | Qty | Part name  | Exterior                                                                            | Qty |
|---------------------|-----------------------------------------------------------------------------------|-----|------------|-------------------------------------------------------------------------------------|-----|
| Installation manual |  | 1   | Drain pipe |  | 1   |