# VRV 5 S-series Air Conditioning Technical Data

# RXYSA-AY1


RXYSA4A7Y1B
RXYSA5A7Y1B
RXYSA6A7Y1B

EEDEN21

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# RXYSA-AY1

# 1 Features

## 1 - 1 RXYSA-AY1

### Lower CO2 equivalent and market-leading flexibility

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- Reduced CO2 equivalent thanks to the use of lower GWP R-32 refrigerant and lower refrigerant charge
- Top sustainability over the entire lifecycle, thanks to market leading real-life seasonal efficiency
- Compact (870mm high) and lightweight single fan design makes the unit unobtrusive, saves space and is easy to install
- Easy to transport thanks to lightweight and compact design
- Market-leading serviceability and handling, thanks to wide access area, 7-segment display and additional handle
- Offering like-for-like R-410A installation flexibility
- Specially designed indoor units for R-32, ensuring low sound and maximum efficiency


INVERTER
Inverter

# 2 Specifications

## 1 - 1 RXYSA-AY1

| Technical Specifications | | | | | RXYSA4AY1 | RXYSA5AY1 | RXYSA6AY1 |
|---|---|---|---|---|---|---|---|
| Recommended combination | | | | | 3 x FXSA25A2VEB + 1 x FXSA32A2VEB | 4 x FXSA32A2VEB | 2 x FXSA32A2VEB + 2 x FXSA40A2VEB |
| Cooling capacity | Prated,c | | | kW | 12.1 (1) | 14.0 (1) | 15.5 (1) |
| Heating capacity | Nom. | 6°CWB | | kW | 12.1 (2) | 14.0 (2) | 15.5 (2) |
| | Prated,h | | | kW | 8.4 | 9.7 | 10.7 |
| | Max. | 6°CWB | | kW | 14.2 (2) | 16.0 (2) | 18.0 (2) |
| Power input - 50Hz | Heating | Nom. | 6°CWB | kW | 2.69 (2) | 3.33 (2) | 3.78 (2) |
| COP at nom. capacity | 6°CWB | | | kW/kW | 4.49 | 4.20 | 4.10 |
| SCOP | | | | | 4.9 | 4.5 | |
| SEER | | | | | 7.9 | 7.4 | 7.3 |
| ηs,c | | | | % | 312.5 | 294.8 | 289.9 |
| ηs,h | | | | % | 193.1 | 178.8 | 176.8 |
| Space cooling | A Condition (35°C - 27/19) | EERd | | | 3.4 | 3.1 | 3.0 |
| | | Pdc | | kW | 12.1 | 14.0 | 15.5 |
| | B Condition (30°C - 27/19) | EERd | | | 5.6 | 5.1 | 4.8 |
| | | Pdc | | kW | 8.9 | 10.3 | 11.4 |
| | C Condition (25°C - 27/19) | EERd | | | 10.4 | 9.5 | 9.3 |
| | | Pdc | | kW | 5.7 | 6.6 | 7.3 |
| | D Condition (20°C - 27/19) | EERd | | | 17.5 | | 17.9 |
| | | Pdc | | kW | 4.9 | 4.5 | 4.9 |
| Space heating (Average climate) | TBivalent | COPd (declared COP) | | | 2.7 | 2.5 | 2.4 |
| | | Pdh (declared heating cap) | | kW | 8.4 | 9.7 | 10.7 |
| | | Tbiv (bivalent temperature) | | °C | -10 | | |
| | TOL | COPd (declared COP) | | | 2.7 | 2.5 | 2.4 |
| | | Pdh (declared heating cap) | | kW | 8.4 | 9.7 | 10.7 |
| | | Tol (temperature operating limit) | | °C | -10 | | |
| | A Condition (-7°C) | COPd (declared COP) | | | 3.3 | 2.8 | |
| | | Pdh (declared heating cap) | | kW | 7.4 | 8.5 | 9.5 |
| | B Condition (2°C) | COPd (declared COP) | | | 4.7 | 4.3 | 4.1 |
| | | Pdh (declared heating cap) | | kW | 4.5 | 5.2 | 5.8 |
| | C Condition (7°C) | COPd (declared COP) | | | 6.8 | 6.5 | |
| | | Pdh (declared heating cap) | | kW | 3.3 | | 3.7 |
| | D Condition (12°C) | COPd (declared COP) | | | 8.6 | 8.4 | 8.7 |
| | | Pdh (declared heating cap) | | kW | 3.9 | | 4.0 |
| Capacity range | | | | HP | 4 | 5 | 6 |
| PED | Category | | | | Category III | | |
| | Most critical part | Name | | | Accumulator | | |
| PED | Most critical part | Ps*V | | Bar*l | 257 | | |
| Maximum number of connectable indoor units | | | | | 13 (3) | 16 (3) | 18 (3) |
| Indoor index connection | Min. | | | | 50.0 | 62.5 | 70.0 |
| | Nom. | | | | 100 | 125 | 140 |
| | Max. | | | | 130.0 | 162.5 | 182.0 |
| Dimensions | Unit | Height | | mm | 869 | | |
| | | Width | | mm | 1,100 | | |
| | | Depth | | mm | 460 | | |
| | Packed unit | Height | | mm | 1,050 | | |
| | | Width | | mm | 1,205 | | |
| | | Depth | | mm | 569 | | |
| Weight | Unit | | | kg | 102 | | |
| | Packed unit | | | kg | 115 | | |
| Packing | Material | | | | Carton | | |
| | Weight | | | kg | 4 | | |
| Packing 2 | Material | | | | Wood | | |
| | Weight | | | kg | 6 | | |
| Packing 3 | Material | | | | Plastic | | |
| | Weight | | | kg | 1 | | |
| Casing | Colour | | | | Ivory white | | |
| | Material | | | | Painted galvanized steel plate | | |
| Heat exchanger | Type | | | | Cross fin coil | | |
| | Indoor side | | | | Air | | |
| | Outdoor side | | | | Air | | |
| | Air flow rate | Cooling | Rated | $m^3/h$ | 5,342 | | |
| | | Heating | Rated | $m^3/h$ | 5,519 | 6,204 | |

# 2 Specifications

## 1 - 1 RXYSA-AY1

| Technical Specifications | | | | | RXYSA4AY1 | RXYSA5AY1 | RXYSA6AY1 |
|---|---|---|---|---|---|---|---|
| Fan | Quantity | | | | 1 | | |
| | External static pressure | Max. | | Pa | 45 | | |
| Fan motor | Quantity | | | | 1 | | |
| | Type | | | | DC motor | | |
| | Output | | | W | 234 | | |
| Compressor | Quantity | | | | 1 | | |
| | Type | | | | Hermetically sealed swing compressor | | |
| | Crankcase heater | | | W | 33 | | |
| Operation range | Cooling | Min. | | °CDB | -5 | | |
| | | Max. | | °CDB | 46 | | |
| | Heating | Min. | | °CWB | -20 | | |
| Operation range | Heating | Max. | | °CWB | 16 | | |
| Sound power level | Cooling | Nom. | | dBA | 67.0 (4) | 68.1 (4) | 69.0 (4) |
| | Heating | According to ENER LOT21 | | dBA | 57.0 (5) | 59.0 (5) | 60.0 (5) |
| Sound pressure level | Cooling | Nom. | | dBA | 49.0 (6) | 51.0 (6) | |
| | Heating | | | dBA | 50.0 (6) | 52.0 (6) | |
| Refrigerant | Type | | | | R-32 | | |
| | GWP | | | | 675.0 | | |
| | Charge | | | TCO2Eq | 2.30 | | |
| | Charge | | | kg | 3.40 | | |
| Refrigerant oil | Type | | | | FW68DE | | |
| | Charged volume | | | l | 1.9 | | |
| Piping connections | Liquid | Type | | | Braze connection | | |
| | | OD | | mm | 9.52 | | |
| | Gas | Type | | | Braze connection | | |
| | | OD | | mm | 15.9 | | |
| | Total piping length | System | Actual | m | 300 (7) | | |
| | Level difference | OU - IU | Outdoor unit in highest position | m | 50 | | |
| | | | Indoor unit in highest position | m | 40 | | |
| Defrost method | | | | | Reversed cycle | | |
| Capacity control | Method | | | | Inverter controlled | | |
| Indication if the heater is equipped with a supplementary heater | | | | | no | | |
| Supplementary heater | Back-up capacity | Heating | elbu | kW | 0.000 | | |
| Power consumption in other than active mode | Crankcase heater mode | Cooling | PCK | kW | 0.000 | | |
| | | Heating | PCK | kW | 0.031 | | |
| | Off mode | Cooling | POFF | kW | 0.038 | | |
| | | Heating | POFF | kW | 0.013 | | |
| | Standby mode | Cooling | PSB | kW | 0.038 | | |
| | | Heating | PSB | kW | 0.013 | | |
| | Thermo-stat-off mode | Cooling | PTO | kW | 0.006 | | |
| | | Heating | PTO | kW | 0.049 | | |
| Cooling | Cdc (Degradation cooling) | | | | 0.25 | | |
| Heating | Cdh (Degradation heating) | | | | 0.25 | | |
| Safety devices | Item | 03 | | | Inverter overload protector | | |
| | | 04 | | | Compressor motor thermal protector | | |
| | | 05 | | | Fan driver overload protector | | |
| | | 06 | | | PC board fuse | | |
| | | 07 | | | High pressure switch (automatic) | | |
| Safety devices | Item | 08 | | | High pressure switch (manual) | | |

Standard accessories: Installation and operation manual; Quantity: 1;

Standard accessories: General safety precautions; Quantity: 1;

Standard accessories: Peel off F-gas label; Quantity: 1;

Standard accessories: Refrigerant label for F-gas regulation; Quantity: 1;

Standard accessories: Tie-wraps; Quantity: 2;

Standard accessories: Auxiliary piping set; Quantity: 1;

Standard accessories: Caution label; Quantity: 1;

| Electrical Specifications | | | | RXYSA4AY1 | RXYSA5AY1 | RXYSA6AY1 |
|---|---|---|---|---|---|---|
| Power supply | Name | | | Y1 | | |
| | Phase | | | 3N~ | | |
| | Frequency | | Hz | 50 | | |
| | Voltage | | V | 380-415 | | |
| Power supply intake | | | | Both indoor and outdoor unit | | |

# 2 Specifications

## 1 - 1 RXYSA-AY1

| Electrical Specifications | | | | | RXYSA4AY1 | RXYSA5AY1 | RXYSA6AY1 |
|---|---|---|---|---|---|---|---|
| Voltage range | Min. | | | % | | -10 | |
| | Max. | | | % | | 10 | |
| Current | Nominal running current (RLA) | Cooling | | A (2) | 5.4 (8) | 6.8 (8) | 7.6 (8) |
| Current - 50Hz | Nominal running current (RLA) | Combination A | Cooling | A | | - | |
| | | Combination B | Cooling | A | | - | |
| | Starting current (MSC) - remark | | | | | See note 13 | |
| | Zmax | List | | | | No requirements | |
| | Minimum circuit amps (MCA) | | | A | | 13.6 (9) | |
| | Maximum fuse amps (MFA) | | | A | | 16 (10) | |
| | Total overcurrent amps (TOCA) | | | A | | 13.6 (11) | |
| | Full load amps (FLA) | Total | | A | | 1.3 (12) | |
| Power Performance | Power factor | Combination B | 35°C ISO - Full load | | | - | |
| | | | 46°C ISO - Full load | | | - | |
| Wiring connections - 50Hz | For power supply | Quantity | | | | 5G | |
| | For connection with indoor | Quantity | | | | 2 | |
| | | Remark | | | | F1,F2 | |

(1)Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m |
(2)Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m |
(3)The actual number of units depends on the connection ratio (CR) and the restrictions for the system. |
(4)Sound power level is an absolute value that a sound source generates. |
(5)According to ENER Lot 21 |
(6)Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings. |
(7)Refer to refrigerant pipe selection or installation manual |
(8)RLA is based on following conditions: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB |
(9)MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current. |
(10)MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker). |
(11)TOCA means the total value of each OC set. |
(12)FLA means the nominal running current of the fan |
(13)MSC means the maximum current during start up of the compressor. This unit uses only inverter compressors. Starting current is always ≤ max. running current. |
In accordance with EN/IEC 61000-3-12, it may be necessary to consult the distribution network operator to ensure that the equipment is connected only to a supply wih Ssc ≥ minimum Ssc value

# 3 Options

## 3 - 1 Options

**RXYSA-AV1**
**RXYSA-AY1**



**VRV5-S** Heat pump

Option list

| Nr. | Item | RXYSA4~6A7V1B | RXYSA4~6A7Y1B |
|---|---|---|---|
| 1 | Refnet header | KHRQ22M29H | KHRQ22M29H |
| 2 | Refnet joint | KHRQ22M20TA | KHRQ22M20TA |
| 3a | Cool/heat selector (switch) | KRC19-26 | KRC19-26 |
| 3b | Cool/heat selector (fixing box) | KJB111A | KJB111A |
| 4 | VRV configurator | EKPCCAB4 | EKPCCAB4 |
| 5 | Bottom plate heater | EKBPH250D | EKBPH250D |

Notes

1 All options are kits
2 Cool/Heat selector PCB is standard in unit.
3 To mount option ·3a·, option ·3b· is required.

**3D127872A**

# 4 Combination table

## 4 - 1 Combination Table

**RXYSA-AV1**
**RXYSA-AY1**



**VRV5-S** Heat pump

Indoor unit combination restrictions

| Combination table | RXYSA4~6A7V1B | RXYSA4~6A7Y1B |
|---|---|---|
| ·VRV* R32 DX· indoor unit | O | O |
| ·RA DX· indoor unit | X | X |
| Hydrobox unit | X | X |
| Air handling unit (AHU) | X | X |

O : Allowed
X : Not allowed

**3D127866**

**RXYSA-AV1**
**RXYSA-AY1**

### Unit combination restrictions: ·VRV5· outdoor units (all models) + ·15·-class indoor units

Units in scope: ·FXZA15A· and ·FXAA15A·.

1. In case the system contains these indoor units and the total connection ratio (·CR·) ≤ ·100·%: no special restrictions.
   Follow the restrictions that apply to regular ·VRV DX· indoor units.

2. In case the system contains these indoor units and the total connection ratio (·CR·) > ·100·%: special restrictions apply.
   A. When the connection ratio (·CR1·) of the sum of all ·FXZA15A· and/or ·FXAA15A· units in the system ≤ ·70·%, and ALL other ·VRV DX· indoor units have an individual capacity class > ·50·: no special restrictions.

   B. When the connection ratio (·CR1·) of the sum of all ·FXZA15A· and/or ·FXAA15A· units in the system ≤ ·70·%, and NOT ALL other ·VRV DX· indoor units have an individual capacity class > ·50·: the restrictions below apply.

   ° 100% < CR ≤ 105% -> ·CR1· of the sum of all ·FXZA15A· and/or ·FXAA15A· indoor units in the system must be ≤ ·70·%.
   ° 105% < CR ≤ 110% -> ·CR1· of the sum of all ·FXZA15A· and/or ·FXAA15A· indoor units in the system must be ≤ ·60·%.
   ° 110% < CR ≤ 115% -> ·CR1· of the sum of all ·FXZA15A· and/or ·FXAA15A· indoor units in the system must be ≤ ·40·%.
   ° 115% < CR ≤ 120% -> ·CR1· of the sum of all ·FXZA15A· and/or ·FXAA15A· indoor units in the system must be ≤ ·25·%.
   ° 120% < CR ≤ 125% -> ·CR1· of the sum of all ·FXZA15A· and/or ·FXAA15A· indoor units in the system must be ≤ ·10·%.
   ° 125% < CR ≤ 130% -> ·FXZA15A· and ·FXAA15A· cannot be used.

Remark

Only the ·15·-class indoor units explicitly mentioned on this page are in scope. Other indoor units follow the rules that apply to regular ·VRV DX· indoor units.

**4D127900**

# 5 Capacity tables

## 5 - 1 Capacity Table Legend



In order to fulfill more your requirements on quick access of data in the format you require, we have developed a tool to consult capacity tables.

Below you can find the link to the capacity table database and an overview of all the tools we have to help you select the correct product:

- **Capacity table database:** lets you find back and export quickly the capacity information you are looking for based upon unit model, refrigerant temperature and connection ratio.
- You can access the capacity table viewer here:
  https://my.daikin.eu/content/denv/en_US/home/applications/software-finder/capacity-table-viewer.html

- An overview of **all software tools** that we offer can be found here:
  https://my.daikin.eu/denv/en_US/home/applications/software-finder.html

# 5 Capacity tables

## 5 - 2 Capacity Correction Factor



**RXYSA-AV1**
**RXYSA-AY1**

### VRV5-S Heat pump

### Integrated heating capacity coefficient

The heating capacity tables do not take into account the capacity reduction in case of frost accumulation or defrost operation.
The capacity values that take these factors into account, or in other words, the integrated heating capacity values, can be calculated as follows:

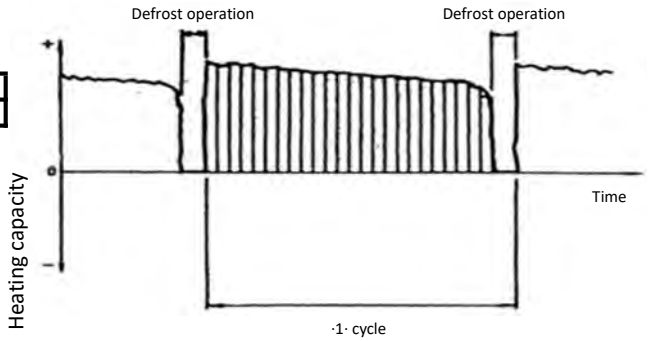
Formula

A = Integrated heating capacity
B = Capacity characteristics value
C = Integrated correction factor for frost accumulation (see table)

A = B * C

Inlet air temperature of heat exchanger

| [°CDB/°CWB] | -7/-7.6 | -5/-5.6 | -3/-3.7 | 0/-0.7 | 3/2.2 | 5/4.1 | 7/6 |
|---|---|---|---|---|---|---|---|
| RXYSA4A7V1B | 0,79 | 0,74 | 0,73 | 0,72 | 0,73 | 0,74 | 1,00 |




Notes

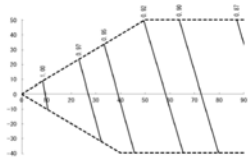
1. The figure shows the integrated heating capacity for a single cycle (from one defrost operation to the next).
2. When there is an accumulation of snow against the outdoor unit heat exchanger, there will always be a temporary reduction in capacity depending on the outdoor temperature (°C DB), relative humidity (RH) and the amount of frosting which occurs.

**4D127879**

**RXYSA4AV1**
**RXYSA4AY1**

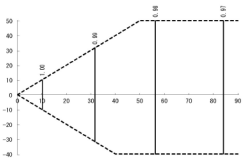
**RXYSA4A7(V/Y)1B**

**Correction ratio for cooling capacity**



x-axis : Equivalent length of the main pipe [m]
y-axis : Height difference between outdoor unit and furthest indoor unit [m]

**Correction ratio for heating capacity**



x-axis : Equivalent length of the main pipe [m]
y-axis : Height difference between outdoor unit and furthest indoor unit [m]

Notes

1. These figures illustrate the capacity correction factor due to the piping length for a standard indoor unit system at maximum load (with the thermostat set to maximum), under standard conditions.
   Moreover, under partial load conditions, there is only a minor deviation for the capacity correction ratio, as shown in the above figures.
2. With this outdoor unit, the following control is used:- in case of cooling: constant evaporating pressure control- in case of heating: constant condensing pressure control
3. Method of calculating the capacity of the outdoor units.
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is less.

**Indoor connection ratio ≤ 100%.**
Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at 100% connection ratio. x [ Correction factor for main pipe - (Longest branch length / 40 m) x 0,02 ]

**Indoor connection ratio > 100%.**
Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio. x [ Correction factor for main pipe - (Longest branch length / 40 m) x 0,02 ]

The correction factor for the main pipe can be found in graphs above.
The correction factor for the longest branch is calculated separately. The maximum allowed branch length of ·40· m corresponds with correction factor ·0,02·.

4. If the equivalent piping length between the outdoor unit and the furthest indoor unit is ≥ ·90· m, the size of the main gas pipe (between outdoor unit and first refrigerant branch kit) must be increased.
   For the new diameters, see below.

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| RXYSA4A7V1B | 9,5 | Not increased | 15,9 | 19,1 |
| RXYSA4A7Y1B | | | | |

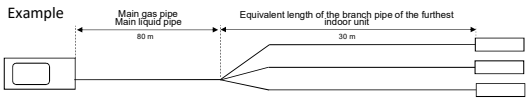
5. Equivalent length of the main pipe

Equivalent length of the main pipe = Equivalent length of the main pipe x Correction factor

Choose the correction factor from the following table.

| | Standard size | Size increase |
|---|---|---|
| Cooling | 1,0 | 0,5 |
| Heating | 1,0 | 1,0 |

Example




Equivalent length of the main pipe
- Cooling mode = 80 m x 0,5 = 40 m
- Heating mode = 80 m x 1,0 = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,95 - (30/40) x 0,02 = 0,935
- Heating mode = 0,972 - (30/40) x 0,02 = 0,957

**4D127880**

# 5 Capacity tables

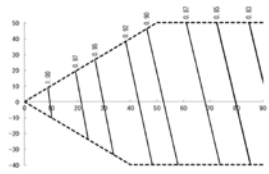
## 5 - 2 Capacity Correction Factor



### RXYSA5AV1
### RXYSA5AY1

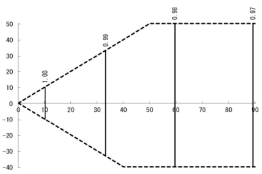
**RXYSA5A7(V/Y)1B**

**Correction ratio for cooling capacity**



x-axis : Equivalent length of the main pipe [m]
y-axis : Height difference between outdoor unit and furthest indoor unit [m]

**Correction ratio for heating capacity**



x-axis : Equivalent length of the main pipe [m]
y-axis : Height difference between outdoor unit and furthest indoor unit [m]

Notes

1. These figures illustrate the capacity correction factor due to the piping length for a standard indoor unit system at maximum load (with the thermostat set to maximum), under standard conditions. Moreover, under partial load conditions, there is only a minor deviation for the capacity correction ratio, as shown in the above figures.
2. With this outdoor unit, the following control is used:- in case of cooling: constant evaporating pressure control- in case of heating: constant condensing pressure control
3. Method of calculating the capacity of the outdoor units.
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is less.

**Indoor connection ratio ≤ 100%.**

Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at 100% connection ratio. x [ Correction factor for main pipe - (Longest branch length / 40 m) x 0,02 ]

**Indoor connection ratio > 100%.**

Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio. x [ Correction factor for main pipe - (Longest branch length / 40 m) x 0,02 ]

The correction factor for the main pipe can be found in graphs above.
The correction factor for the longest branch is calculated separately. The maximum allowed branch length of ·40· m corresponds with correction factor ·0,02·.

4. If the equivalent piping length between the outdoor unit and the furthest indoor unit is ≥ ·90· m, the size of the main gas pipe (between outdoor unit and first refrigerant branch kit) must be increased.
   For the new diameters, see below.

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| RXYSA5A7V1B<br>RXYSA5A7Y1B | 9,5 | Not increased | 15,9 | 19,1 |

Equivalent length of the main pipe
- Cooling mode = 80 m x 0,5 = 40 m
- Heating mode = 80 m x 1,0 = 80 m

5. Equivalent length of the main pipe

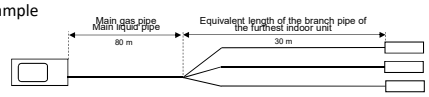
Equivalent length of the main pipe = Equivalent length of the main pipe x Correction factor

Choose the correction factor from the following table.

| | Standard size | Size increase |
|---|---|---|
| Cooling | 1,0 | 0,5 |
| Heating | 1,0 | 1,0 |

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,928 - (30/40) x 0,02 = 0,913
- Heating mode = 0,973 - (30/40) x 0,02 = 0,958

Example

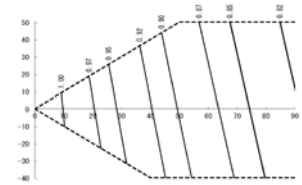



**4D127880**

### RXYSA6AV1
### RXYSA6AY1

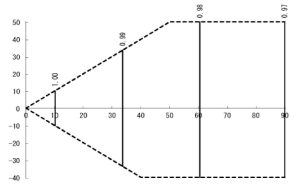
**RXYSA6A7(V/Y)1B**

**Correction ratio for cooling capacity**



x-axis : Equivalent length of the main pipe [m]
y-axis : Height difference between outdoor unit and furthest indoor unit [m]

**Correction ratio for heating capacity**



x-axis : Equivalent length of the main pipe [m]
y-axis : Height difference between outdoor unit and furthest indoor unit [m]

Notes

1. These figures illustrate the capacity correction factor due to the piping length for a standard indoor unit system at maximum load (with the thermostat set to maximum), under standard conditions. Moreover, under partial load conditions, there is only a minor deviation for the capacity correction ratio, as shown in the above figures.
2. With this outdoor unit, the following control is used:- in case of cooling: constant evaporating pressure control- in case of heating: constant condensing pressure control
3. Method of calculating the capacity of the outdoor units.
   The maximum capacity of the system will be either the total capacity of the indoor units or the maximum capacity of the outdoor units as mentioned below, whichever is less.

**Indoor connection ratio ≤ 100%.**

Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at 100% connection ratio. x [ Correction factor for main pipe - (Longest branch length / 40 m) x 0,02 ]

**Indoor connection ratio > 100%.**

Maximum capacity of outdoor units = Capacity of outdoor units from capacity table at installed connection ratio. x [ Correction factor for main pipe - (Longest branch length / 40 m) x 0,02 ]

The correction factor for the main pipe can be found in graphs above.
The correction factor for the longest branch is calculated separately. The maximum allowed branch length of ·40· m corresponds with correction factor ·0,02·.

4. If the equivalent piping length between the outdoor unit and the furthest indoor unit is ≥ ·90· m, the size of the main gas pipe (between outdoor unit and first refrigerant branch kit) must be increased.
   For the new diameters, see below.

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| RXYSA6A7V1B<br>RXYSA6A7Y1B | 9,5 | Not increased | 15,9 | 19,1 |

Equivalent length of the main pipe
- Cooling mode = 80 m x 0,5 = 40 m
- Heating mode = 80 m x 1,0 = 80 m

5. Equivalent length of the main pipe

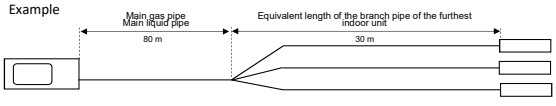
Equivalent length of the main pipe = Equivalent length of the main pipe x Correction factor

Choose the correction factor from the following table.

| | Standard size | Size increase |
|---|---|---|
| Cooling | 1,0 | 0,5 |
| Heating | 1,0 | 1,0 |

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,92 - (30/40) x 0,02 = 0,905
- Heating mode = 0,973 - (30/40) x 0,02 = 0,958

Example



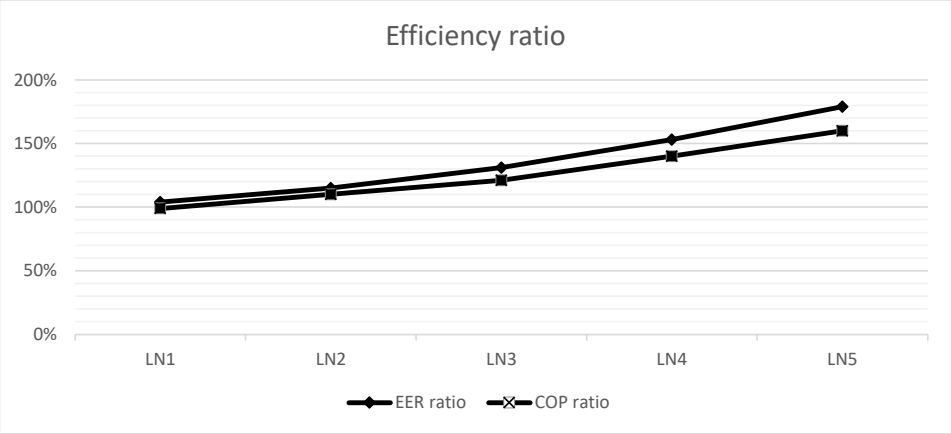

**4D127880**

# 6 Exchange efficiency

## 6 - 1 Exchange efficiency

**RXYSA-AV1**
**RXYSA-AY1**

**VRV5-S**
**Heat pump**
**Low noise operation performance specifications**




The capacity and efficiency ratios are calculated with reference to the nominal operation specifications.

LN1: Low noise level ·1·
LN2: Low noise level ·2·
LN3: Low noise level ·3·
LN4: Low noise level ·4·
LN5: Low noise level ·5·

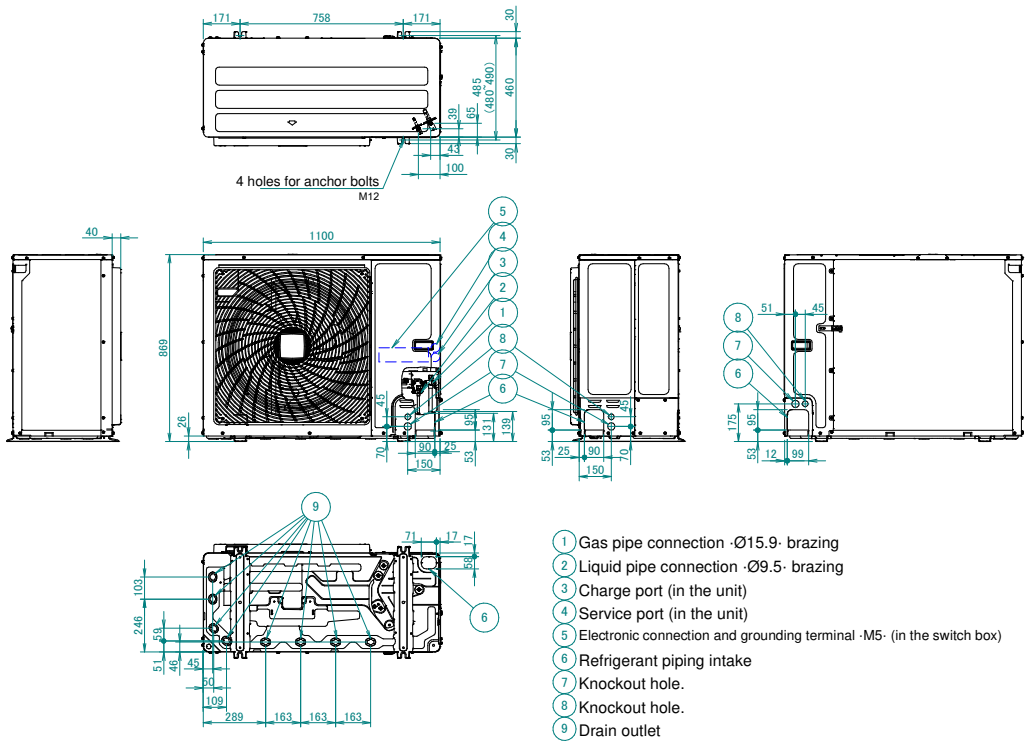
| | Capacity ratio |
|---|---|
| **LN1** | 90% |
| **LN2** | 75% |
| **LN3** | 60% |
| **LN4** | 45% |
| **LN5** | 30% |

**4D127867**

# 7 Dimensional drawings

## 7 - 1 Dimensional Drawings

**RXYSA-AV1**
**RXYSA-AY1**




1. Gas pipe connection ·Ø15.9· brazing
2. Liquid pipe connection ·Ø9.5· brazing
3. Charge port (in the unit)
4. Service port (in the unit)
5. Electronic connection and grounding terminal ·M5· (in the switch box)
6. Refrigerant piping intake
7. Knockout hole.
8. Knockout hole.
9. Drain outlet

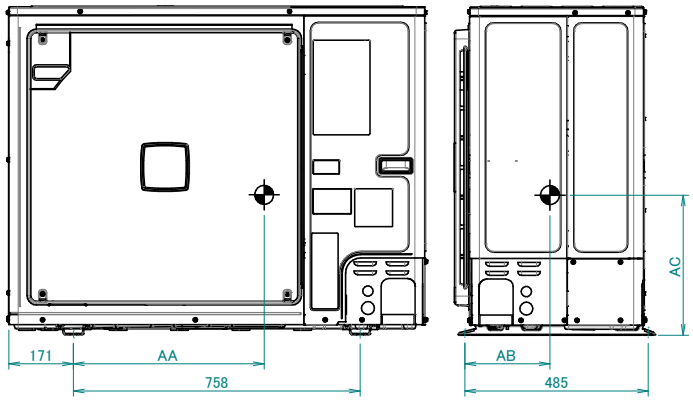
**3D127871A**

# 8 Centre of gravity

## 8 - 1 Centre of Gravity

**RXYSA-AV1**
**RXYSA-AY1**






| Model | AA | AB | AC |
|---|---|---|---|
| RZAG71N7V1B | 520.3 | 238.7 | 357.8 |
| RZAG71N7Y1B | 525.9 | 224.7 | 359.8 |
| RZAG100N7V1B | 499.7 | 239.3 | 367.6 |
| RZAG100N7Y1B | 511.2 | 223.5 | 362.5 |
| RZAG125/140N7V1B | 486.3 | 229.2 | 371.8 |
| RZAG125/140N7Y1B | 493.4 | 215.8 | 372.2 |
| RXYSA4/5/6A7V1B<br>RXYSA4/5/6A7Y1B | 530.4 | 249.9 | 389.0 |

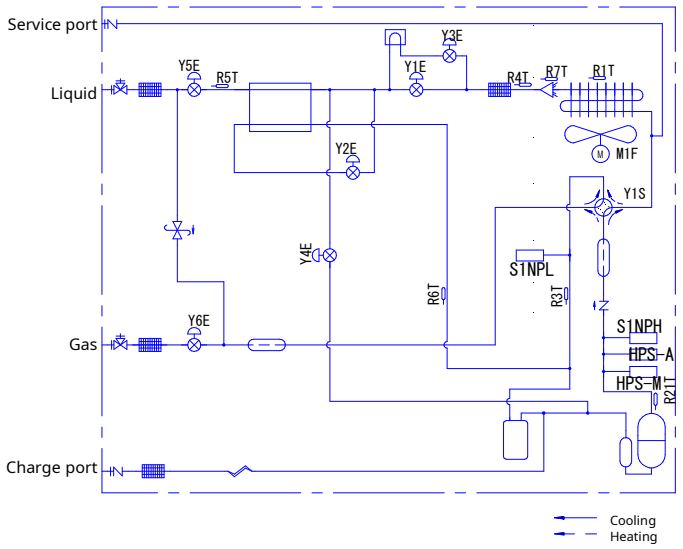
**4D120933B**

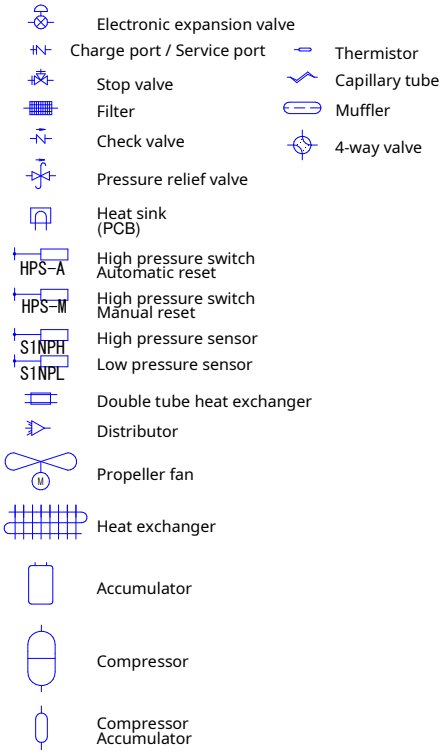
# 9 Piping diagrams

## 9 - 1 Piping Diagrams

**RXYSA-AV1**
**RXYSA-AY1**






**3D127852**

# 10 Wiring diagrams

## 10 - 1 Notes & Legend

**RXYSA-AY1**

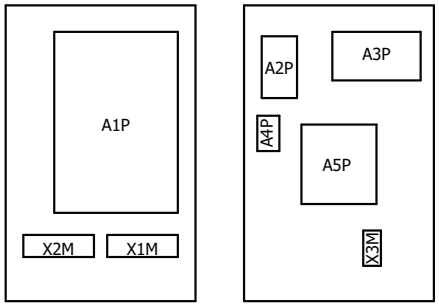
### NOTES to go through before starting the unit

1. Symbols

X1M : Main terminal
: Earth wiring
15 : Wire number 15
: Field wire
: Field cable
: Screened conductor
(1) : Several wiring possibilities
: Option
: Wiring depending on model
: Not mounted in switch box
: PCB

2. Refer to the installation or service manual on how to use BS1 ~ BS3 push buttons and DS1-1 ~ DS1-2 DIP switches.
3. Do not operate the unit by short-circuiting protection device S1PH. S1PH-A automatically resets after high pressure has been exceeded, S1PH-M has to be manually reset after high pressure has been exceeded.
4. Refer to the installation manual for indoor-outdoor transmission F1-F2 wiring.
5. When using the central control system, connect outdoor-outdoor transmission F1-F2.
6. The capacity of the contact is 220~240V AC - 0,5A (Rush current needs 3A or less).
7. Use dry contact for micro-current (1 mA or less 12V DC).
8. Digital output: max 40V DC - 0,025A. Refer to installation manual for how to use this output.
9. For X27A refer to the installation manual of the option.

### POSITION IN SWITCH BOX




Front side

Back side

### LEGEND

| Part n° | | Description |
|---|---|---|
| A1P | | main PCB |
| A2P | | sub PCB |
| A3P | | back up PCB |
| A4P | | cool / heat selector PCB |
| A5P | | noise filter PCB |
| BS* (A1P) | | push button switch |
| C* (A1P) | | capacitors |
| DS* (A1P) | | dipswitch |
| E1H | * | bottom plate heater |
| E1HC | | crank case heater |
| F1U (A1P) | | fuse T 6.3 A 250 V |
| F1U (A2P) | | fuse T 3.15 A 250 V |
| F1U | | fuse T 1.0 A 250 V |
| F6U (A1P) | | fuse T 6.3 A 250 V |
| F7U (A1P) | | fuse T 5 A 250 V |
| F101U (A3P) | | fuse T 2.0 A 250 V |
| HAP (A1P,A3P) | | running LED (service monitor-green) |
| K*M (A1P) | | contactor on PCB |
| K*R (A*P) | | relay on PCB |
| L1R (A1P) | | reactor |
| M1C | | motor (compressor) |
| M1F | | motor (fan) |
| PS* (A*P) | | switching power supply |
| Q1 | | overload switch |
| Q1DI | # | earth leakage circuit breaker |
| R* (A1P) | | resistor |
| R1T | | thermistor (ambient) |
| R3T | | thermistor (suction) |
| R4T | | thermistor (liquid) |
| R5T | | thermistor (subcool) |
| R6T | | thermistor (superheat) |
| R7T | | thermistor (heat exchanger) |
| R10T | | thermistor (fin) |
| R21T | | thermistor (discharge) |
| R*T (A*P) | | PTC thermistor |
| S1NPH | | high pressure sensor |

| Part n° | | Description |
|---|---|---|
| S1NPL | | low pressure sensor |
| S1PH* | | high pressure switch |
| S1S | * | air control switch |
| S2S | * | cool / heat switch |
| SEG* (A1P) | | 7-segment display |
| SFB | # | mechanical ventilation error input |
| V*D | | diode |
| V1R, V2R (A1P) | | IGBT power module |
| V3R, V4R (A1P) | | diode module |
| X*A | | PCB connector |
| X*M | | terminal strip |
| X*Y | | connector |
| Y1E | | electronic exp. valve (main - EVM1) |
| Y2E | | electronic exp. valve (EVT) |
| Y3E | | electronic exp. valve (main - EVM2) |
| Y4E | | electronic exp. valve (EVL) |
| Y5E | | electronic exp. valve (EVSL) |
| Y6E | | electronic exp. valve (EVSG) |
| Y1S | | solenoïd valve (4-way valve) |
| Y3S | # | error operation output (SVEO) |
| Y4S | # | leak sensor output (SVS) |
| Z*C | | noise filter (ferrite core) |
| Z*F (A*P) | | noise filter |

* : optional # : field supply

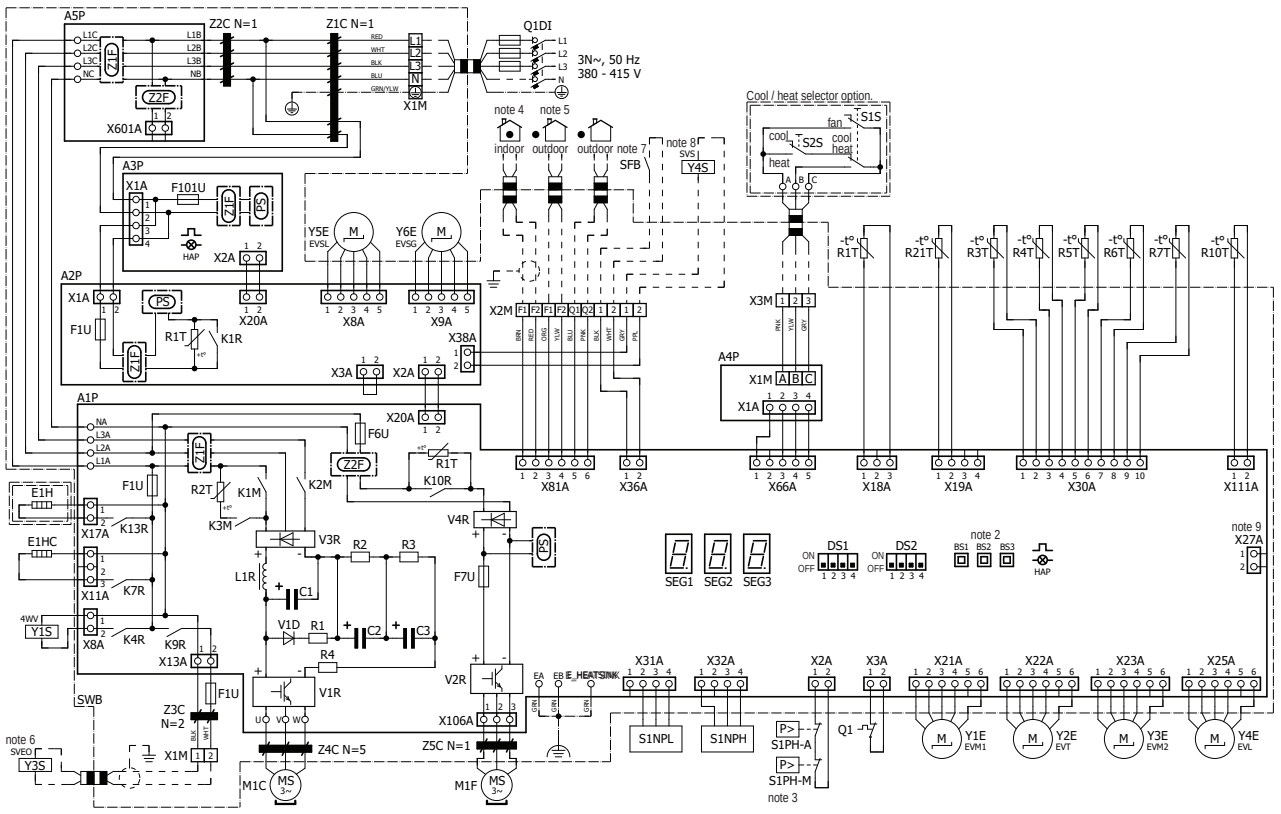
**4D127737**

# 10 Wiring diagrams

## 10 - 2 Wiring Diagrams - Three Phase



**RXYSA-AY1**



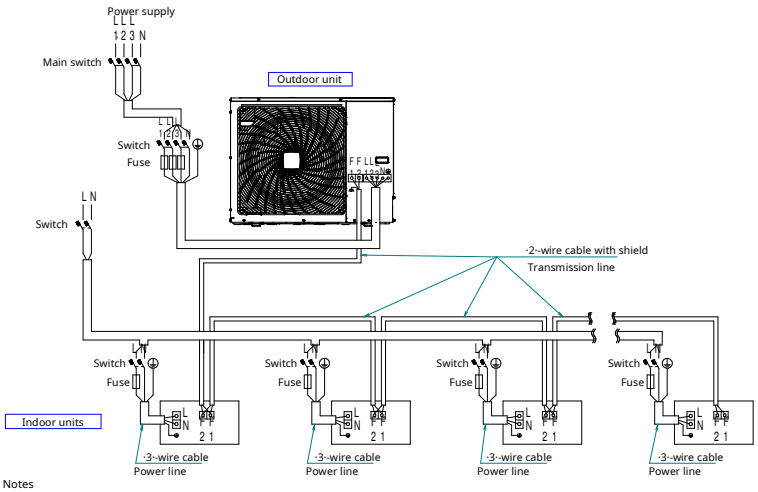

**4D127737**

# 11 External connection diagrams

## 11 - 1 External Connection Diagrams

**RXYSA-AY1**

### External connection diagram




Notes

1. All wiring, components and materials to be procured on-site must comply with the applicable legislation.
2. Use copper conductors only
3. For more details, refer to the wiring diagram of the unit.
4. Install a circuit breaker for safety.
5. All field wiring and components must be provided by an authorised electrician.
6. Unit has to be grounded in compliance with the applicable legislation.
7. The wiring shown is a general points-of-connection guide and is not intended to include all details for a specific installation.
8. Make sure to install the switch and the fuse to the power line of each equipement.
9. Install a main to switch to (if necessary) immediately interrupt all the system's power sources.
10. If there exists the possibility of reversed phase, loose phase or momentary blackout, or if the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase may break the compressor and other parts.
11. Install an earth leakage circuit breaker.
12. To ensure proper earthing, connect the shields of the incoming and outgoing transmission wiring of each indoor unit to each other.
13. The unit is equipped with a refrigerant leak detection system for safety. To be effective, the unit MUST be electrically powered at all times after installation, except for maintenance.

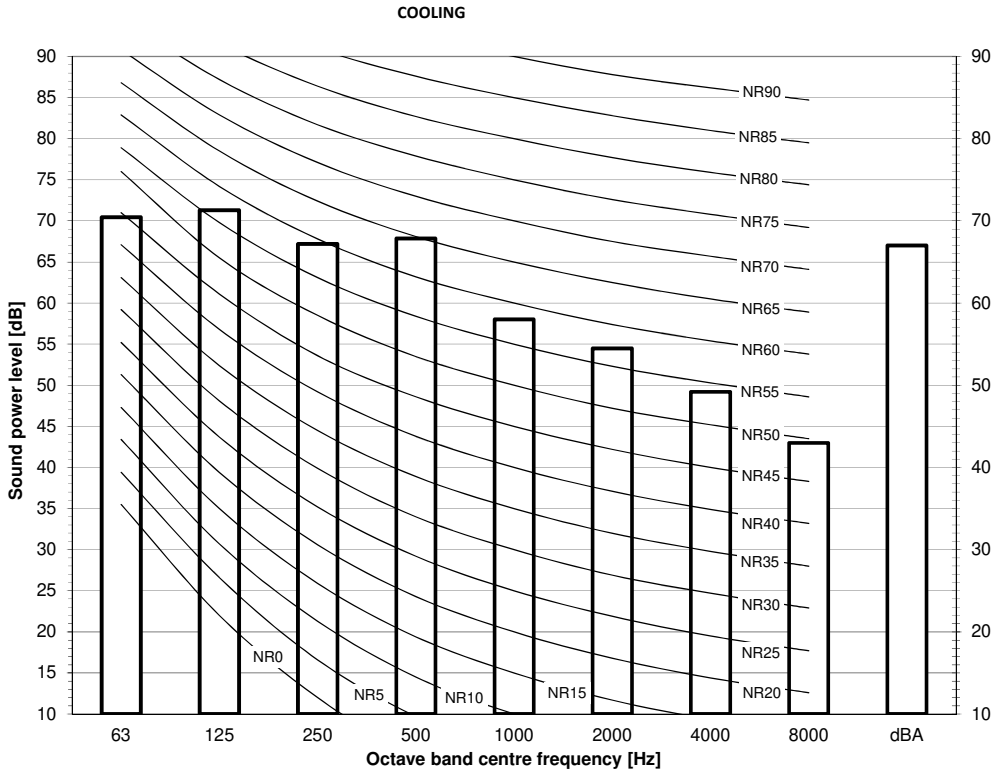
**2D127870**

# 12 Sound data

## 12 - 1 Sound Power Spectrum



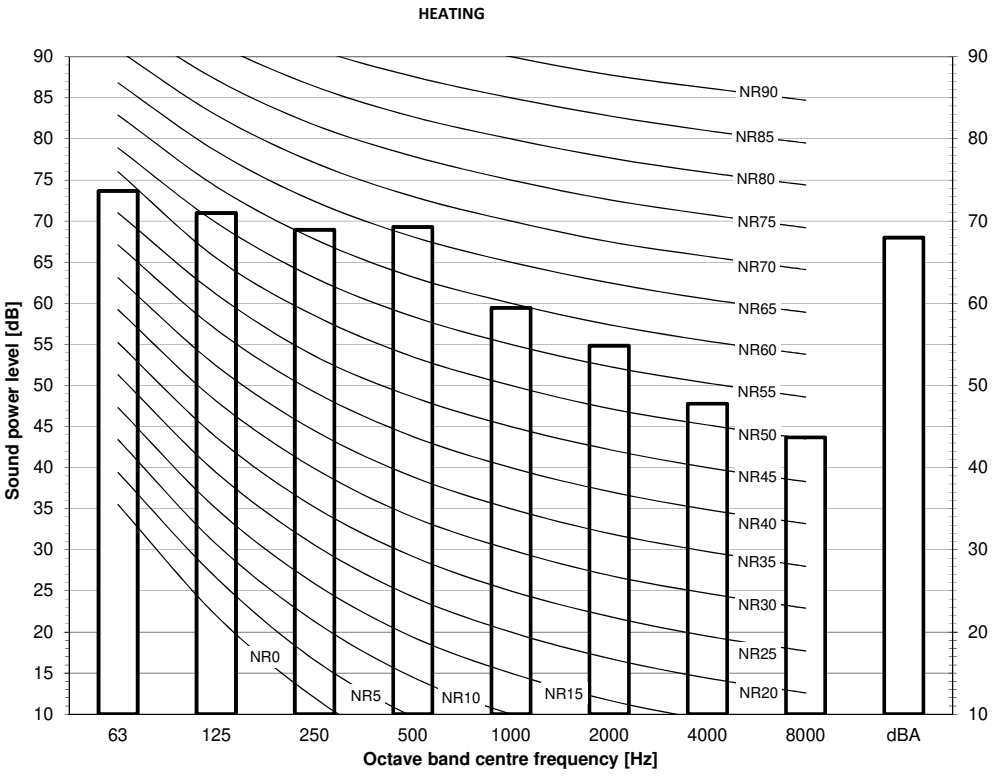
**RXYSA4AV1**
**RXYSA4AY1**




Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = ·10E-6µW/m²·
- Measured according to ISO 3744

**4D127854**

**RXYSA4AV1**
**RXYSA4AY1**




Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = ·10E-6µW/m²·
- Measured according to ISO 3744

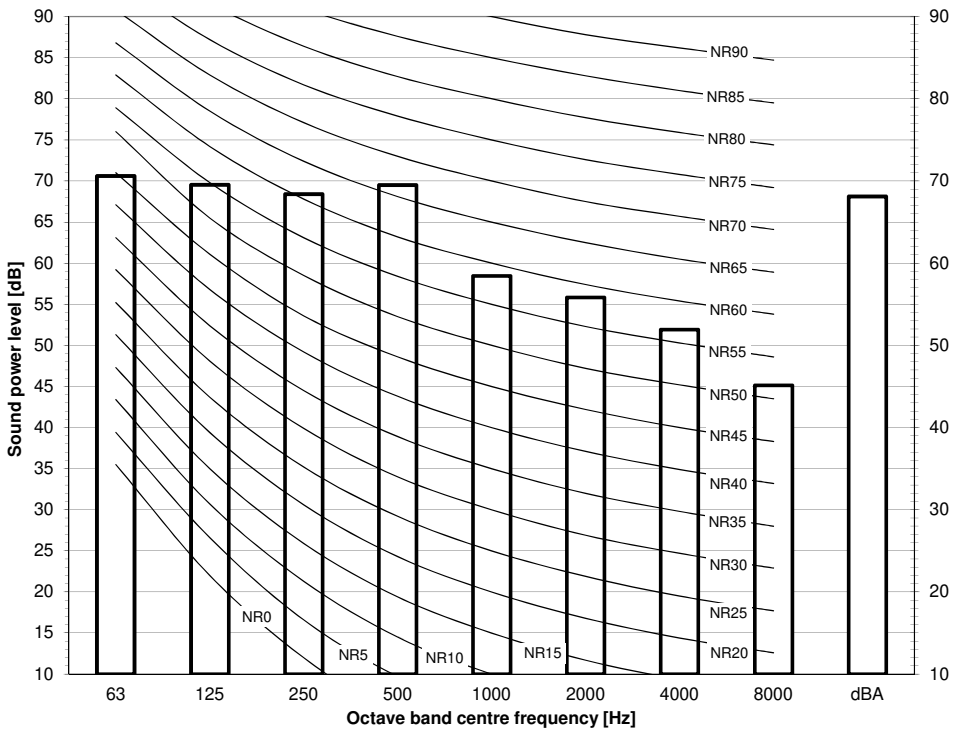
**4D127857**

# 12 Sound data

## 12 - 1 Sound Power Spectrum

**RXYSA5AV1**
**RXYSA5AY1**

**COOLING**

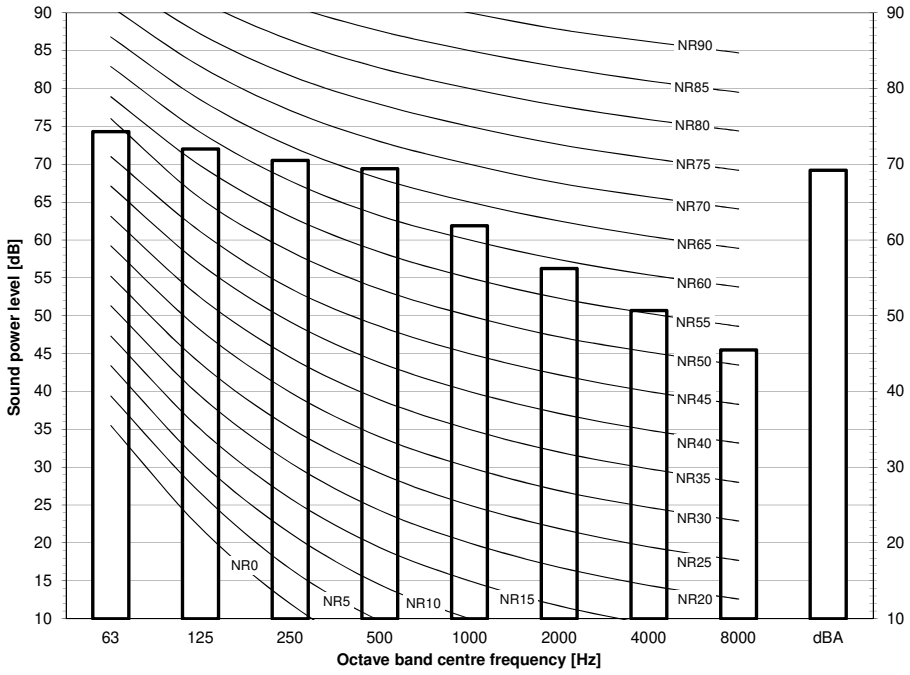



Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = ·10E-6µW/m²·
- Measured according to ISO 3744

**4D127855**

**RXYSA5AV1**
**RXYSA5AY1**

**HEATING**




Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = ·10E-6µW/m²·
- Measured according to ISO 3744

**4D127858**

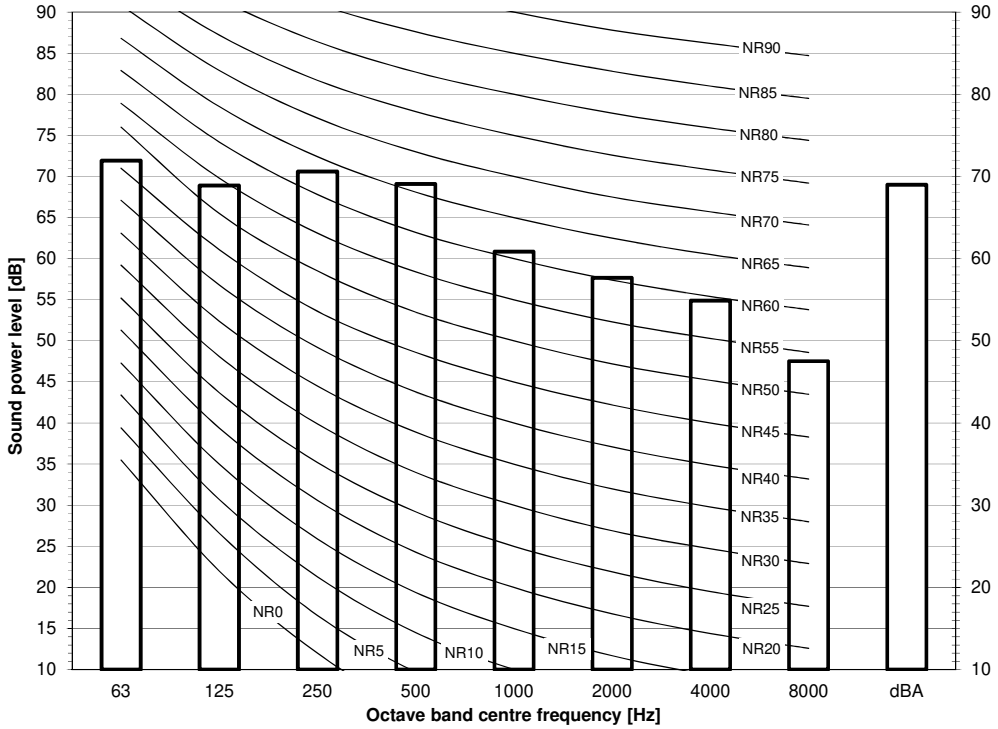
# 12 Sound data

## 12 - 1 Sound Power Spectrum



**RXYSA6AV1**
**RXYSA6AY1**

**COOLING**

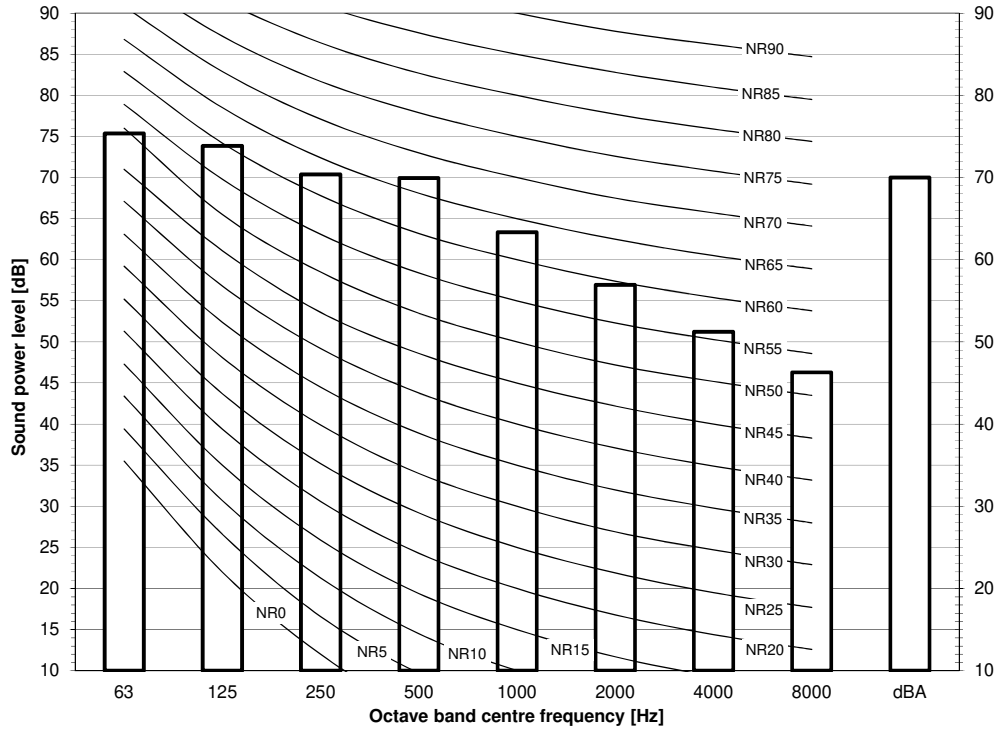



Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = ·10E-6µW/m²·
- Measured according to ISO 3744

**4D127856**

**RXYSA6AV1**
**RXYSA6AY1**

**HEATING**



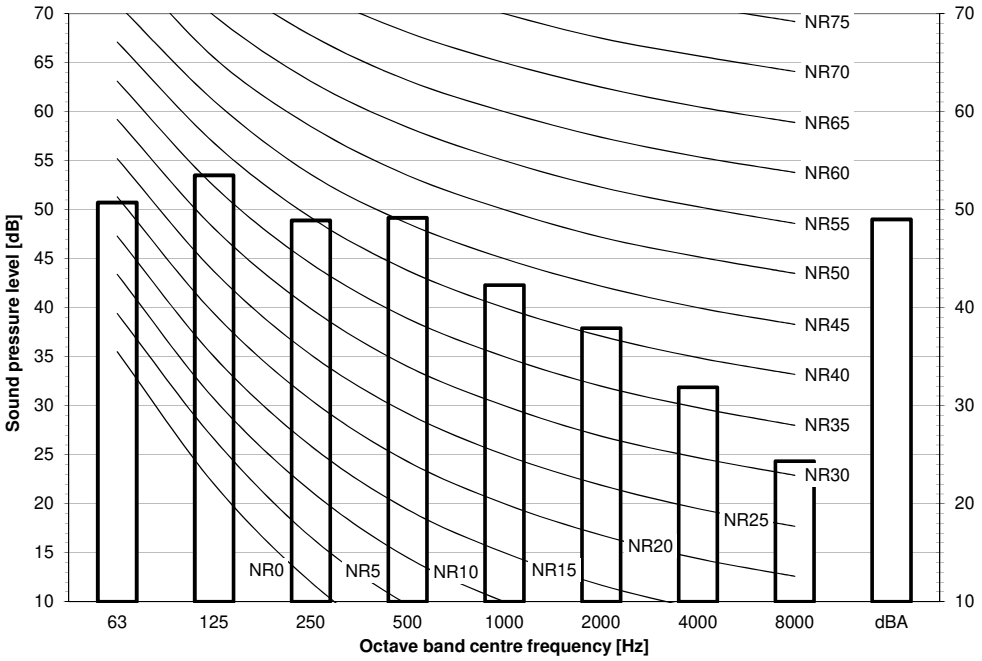

Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = ·10E-6µW/m²·
- Measured according to ISO 3744

**4D127859**

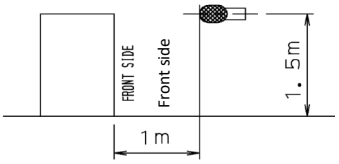
# 12 Sound data

## 12 - 2 Sound Pressure Spectrum - Cooling

**RXYSA4AV1**
**RXYSA4AY1**

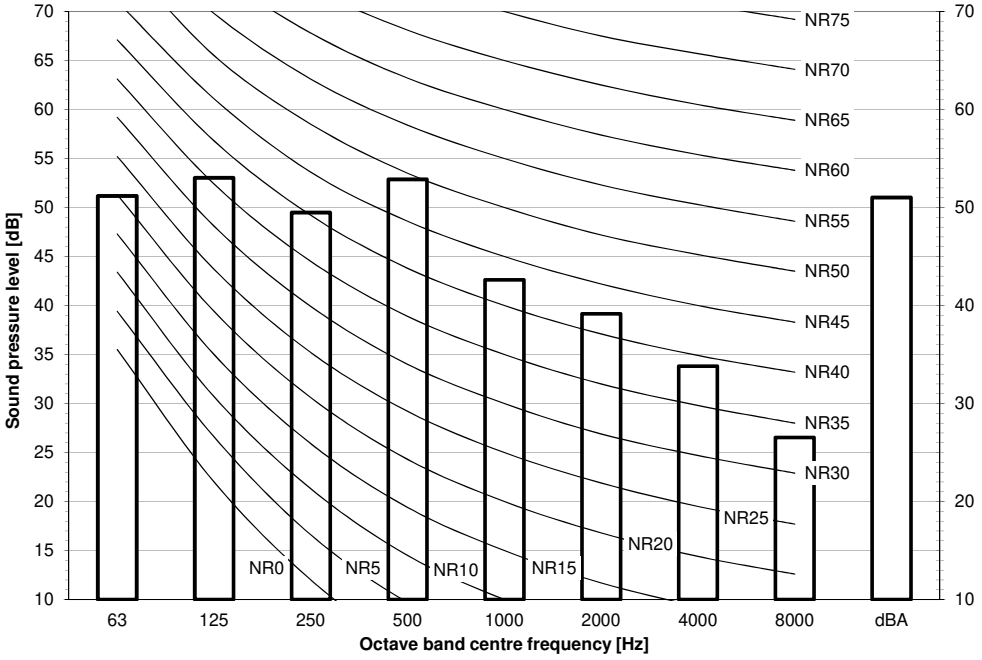



Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

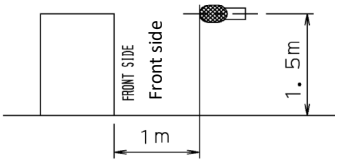



**4D127860**

**RXYSA5AV1**
**RXYSA5AY1**




Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa



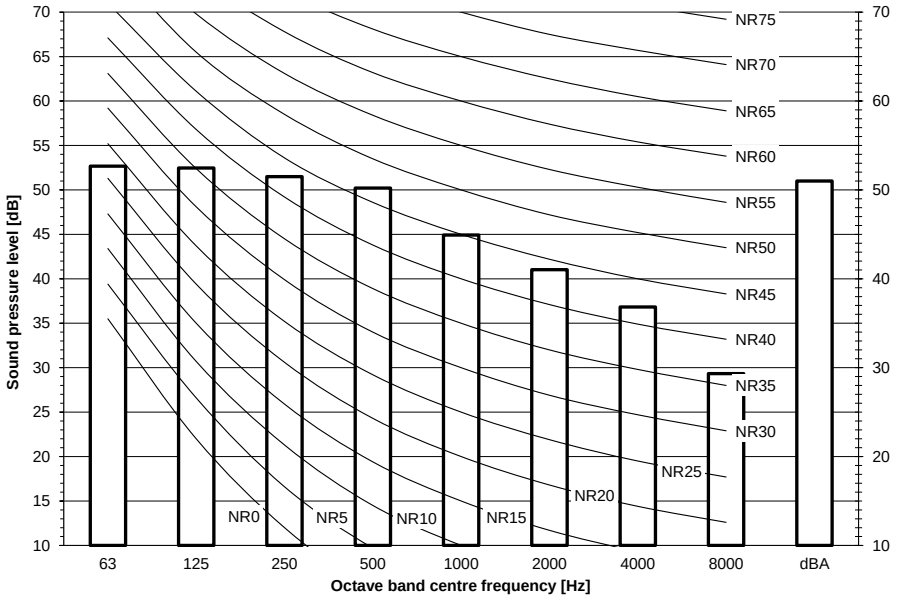

**4D127861**

# 12 Sound data

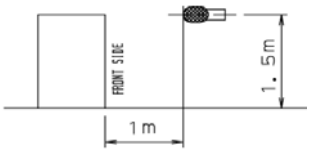
## 12 - 2 Sound Pressure Spectrum - Cooling

**RXYSA6AV1**
**RXYSA6AY1**






Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

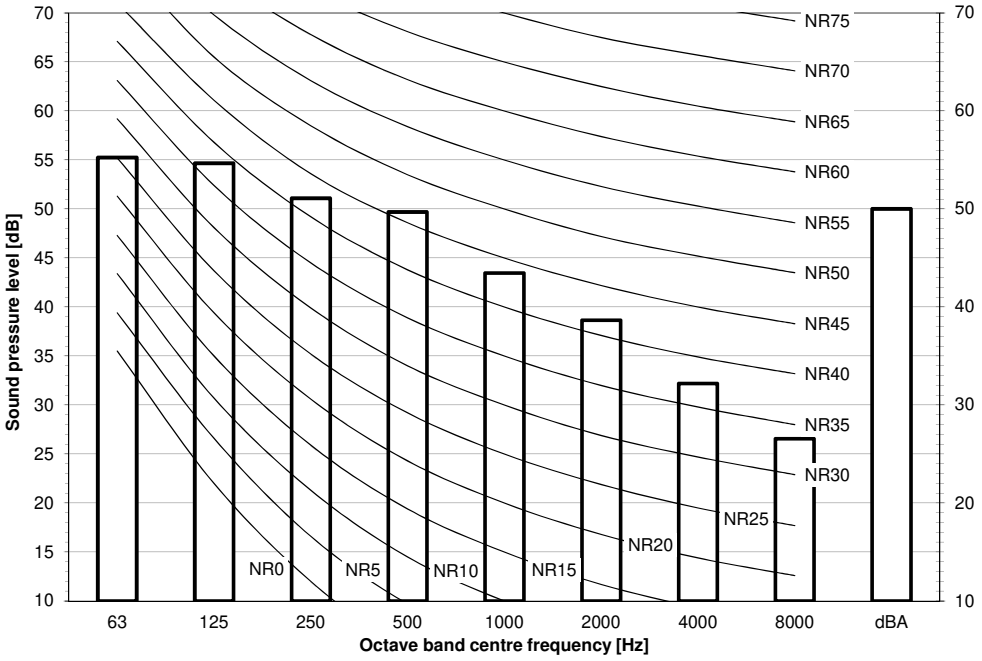



**4D127862**

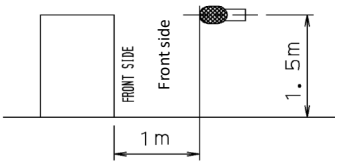
# 12 Sound data

## 12 - 3 Sound Pressure Spectrum - Heating

**RXYSA4AV1**
**RXYSA4AY1**

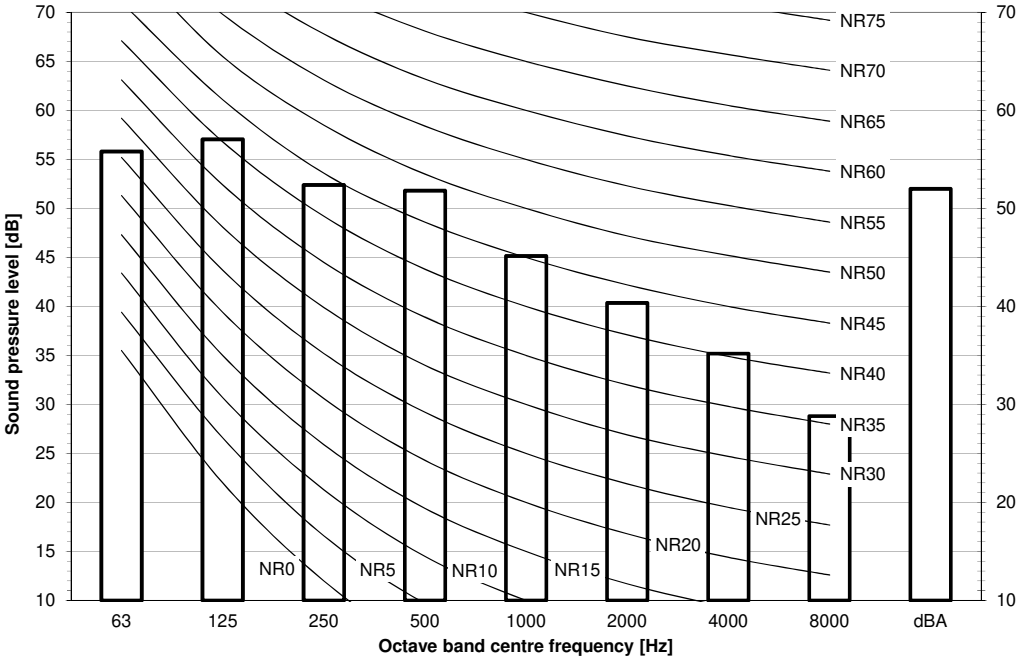



Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

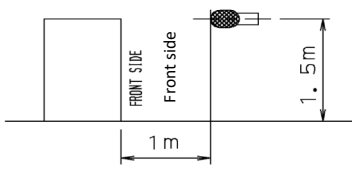



**4D127863**

**RXYSA5AV1**
**RXYSA5AY1**




Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa

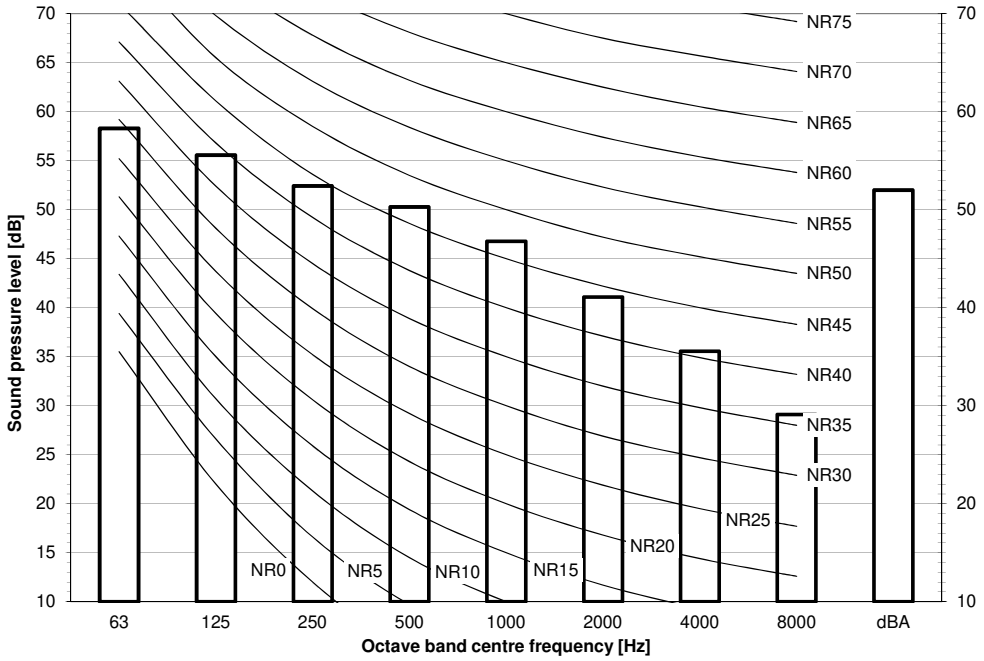



**4D127864**

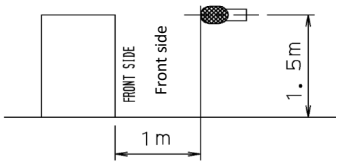
# 12 Sound data

## 12 - 3 Sound Pressure Spectrum - Heating

**RXYSA6AV1**
**RXYSA6AY1**




Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa




**4D127865**

# 12 Sound data

## 12 - 4 Sound power spectrum at high ESP

**RXYSA-AV1**
**RXYSA-AY1**



### VRV5-S Heat pump
### High ESP

| 4HP | Cooling | Heating |
|---|---|---|
| | Sound power [dBA] | Sound power [dBA] |
| ESP1 | 70 | 72 |
| ESP2 | 75 | 77 |

| 6HP | Cooling | Heating |
|---|---|---|
| | Sound power [dBA] | Sound power [dBA] |
| ESP1 | 71 | 78 |
| ESP2 | 75 | 78 |

| 5HP | Cooling | Heating |
|---|---|---|
| | Sound power [dBA] | Sound power [dBA] |
| ESP1 | 71 | 76 |
| ESP2 | 75 | 77 |

Sound power is measured on a freestanding unit.
Actual sound is depending on the installation of the duct.

**4D127882**

# 12 Sound data

## 12 - 5 Sound level data Quiet mode

**RXYSA-AV1**
**RXYSA-AY1**



**VRV5-S Heat pump**
**Low noise data (level ·1-5·)**

| 4HP | Cooling | | Heating | |
|---|---|---|---|---|
| | Sound pressure [dBa] | Sound power [dBA] | Sound pressure [dBa] | Sound power [dBA] |
| LN1 | 47 | 65 | 48 | 66 |
| LN2 | 45 | 64 | 46 | 64 |
| LN3 | 43 | 62 | 44 | 62 |
| LN4 | 41 | 59 | 42 | 60 |
| LN5 | 39 | 57 | 40 | 58 |

| 5HP | Cooling | | Heating | |
|---|---|---|---|---|
| | Sound pressure [dBa] | Sound power [dBA] | Sound pressure [dBa] | Sound power [dBA] |
| LN1 | 48 | 66 | 51 | 68 |
| LN2 | 46 | 64 | 48 | 66 |
| LN3 | 44 | 62 | 46 | 64 |
| LN4 | 42 | 60 | 44 | 62 |
| LN5 | 40 | 58 | 42 | 60 |

| 6HP | Cooling | | Heating | |
|---|---|---|---|---|
| | Sound pressure [dBa] | Sound power [dBA] | Sound pressure [dBa] | Sound power [dBA] |
| LN1 | 49 | 67 | 51 | 69 |
| LN2 | 47 | 65 | 49 | 67 |
| LN3 | 45 | 63 | 47 | 65 |
| LN4 | 43 | 61 | 45 | 63 |
| LN5 | 41 | 59 | 43 | 61 |

| | Capacity ratio |
|---|---|
| LN1 | 90% |
| LN2 | 75% |
| LN3 | 60% |
| LN4 | 45% |
| LN5 | 30% |

LN1: Low noise level ·1·
LN2: Low noise level ·2·
LN3: Low noise level ·3·
LN4: Low noise level ·4·
LN5: Low noise level ·5·

**4D127868**

# 13 Installation

## 13 - 1 Installation Method

**RXYSA-AV1**
**RXYSA-AY1**

**Single unit (■) | Single row of units (■■■)**



### Suction side

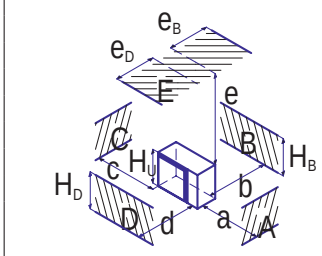
In the illustration below, the service space at the suction side is based on 35°C DB and cooling operation. Foresee more space in the following cases:

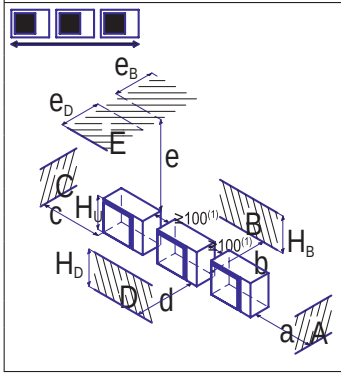
- When the suction side temperature regularly exceeds this temperature.
- When the heat load of the outdoor units is expected to regularly exceed the maximum operating capacity.

### Discharge side

Take refrigerant piping work into account when positioning the units. If your lay out does not match with any of the layouts below, contact your dealer.

### Single unit (■) | Single row of units (■■■)




| A~E | Hb Hd Hu | | (mm) a | b | c | d | e | $e_B$ | $e_D$ | |
|---|---|---|---|---|---|---|---|---|---|---|
| B | - | | | ≥ 100 | | | | | | |
| A,B,C | - | | ≥ 100(1) | ≥ 100 | ≥ 100 | | | | | |
| B,E | - | | | ≥ 100 | | | ≥ 1000 | | ≤500 | |
| A,B,C,E | - | | ≥ 150(1) | ≥ 150 | ≥ 150 | | ≥ 1000 | | ≤500 | |
| D | - | | | | | ≥ 500 | | | | |
| D,E | - | | | | | ≥ 500 | ≥ 1000 | ≤500 | | |
| B,D | Hd>Hu | | | ≥ 100 | | ≥ 500 | | | | |
| | Hd≤Hu | | | ≥ 100 | | ≥ 500 | | | | |
| B,D,E | Hd>Hu | Hb≤½Hu | | ≥ 250 | | ≥ 750 | ≥ 1000 | ≤500 | | 1 |
| | | ½Hu>Hb≤Hu | | ≥ 250 | | ≥ 1000 | ≥ 1000 | ≤500 | | |
| | | Hb>Hu | ⊘ | | | | | | | |
| | Hd≤Hu | Hd≤½Hu | | ≥ 100 | | ≥ 1000 | ≥ 1000 | | ≤500 | |
| | | ½Hu<Hd≤Hu | | ≥ 200 | | ≥ 1000 | ≥ 1000 | | ≤500 | |
| | | Hd>Hu | ⊘ | | | | | | | |
| A,B,C | - | | ≥ 200(1) | ≥ 300 ≥ | 1000 | | | | | |
| A,B,C,E | - | | ≥ 200(1) | ≥ 300 | ≥ 1000 | | ≥ 1000 | | ≤500 | |
| D | - | | | | | ≥ 1000 | | | | |
| D,E | - | | | | | ≥ 1000 | ≥ 1000 | ≤500 | | |
| B,D | Hd>Hu | | | ≥ 300 | | ≥ 1000 | | | | |
| | Hd≤Hu | Hd≤½Hu | | ≥ 250 | | ≥ 1500 | | | | |
| | | ½Hu<Hd≤Hu | | ≥ 300 | | ≥ 1500 | | | | |
| B,D,E | Hd>Hu | Hb≤½Hu | | ≥ 300 | | ≥ 1000 | ≥ 1000 | ≤500 | | 1+2 |
| | | ½Hu<Hb≤Hu | | ≥ 300 | | ≥ 1250 | ≥ 1000 | ≤500 | | |
| | | Hb>Hu | ⊘ | | | | | | | |
| | Hd≤Hu | Hd≤½Hu | | ≥ 250 | | ≥ 1500 | ≥ 1000 | | ≤500 | |
| | | ½Hu<Hd≤Hu | | ≥ 300 | | ≥ 1500 | ≥ 1000 | | ≤500 | |
| | | Hd>Hu | ⊘ | | | | | | | |

(1) For better serviceability, use a distance ≥250 mm
A,B,C,D Obstacles (walls/baffle plates)
E Obstacle (roof)
a,b,c,d,e Minimum service space between the unit and obstacles A, B, C, D and E
$e_B$ Maximum distance between the unit and the edge of obstacle E, in the direction of obstacle B
$e_D$ Maximum distance between the unit and the edge of obstacle E, in the direction of obstacle D
Hu Height of the unit
Hb,Hd Height of obstacles B and D
1 Seal the bottom of the installation frame to prevent discharged air from flowing back to the suction side through the bottom of the unit.
2 Maximum two units can be installed.
⊘ Not allowed

**1D128513**

# 13 Installation

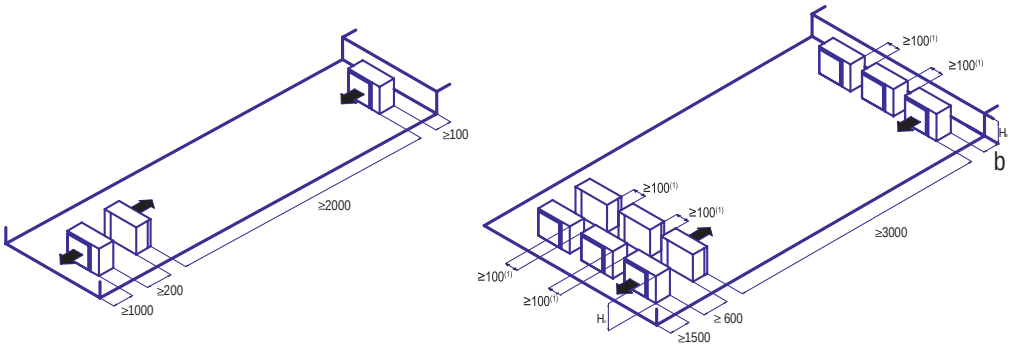
## 13 - 1 Installation Method

**RXYSA-AV1**
**RXYSA-AY1**

13

**Multiple rows of units ( )**

Multiple rows of units ( )




| Hb Hu | b (mm) |
|---|---|
| Hb≤½Hu | b≥250 |
| ½Hu<Hb≤Hu | b≥ 300 |
| Hb>Hu | ⃠ |

(1) For better serviceability, use a distance ≥250 mm
⃠ Not allowed

**1D128513**

# 13 Installation

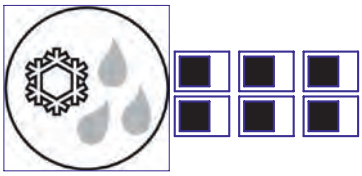
## 13 - 1 Installation Method

**RXYSA-AV1**
**RXYSA-AY1**

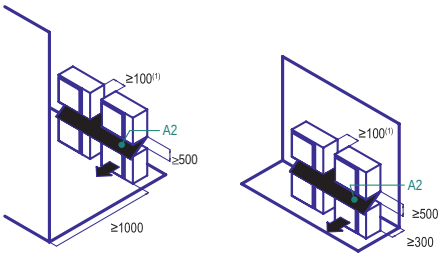
**Stacked units (max.2 levels) ( )**

Stacked units (max.2 levels) ( )

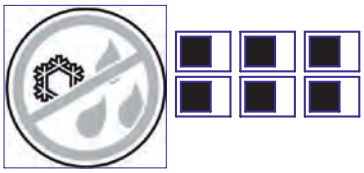
A1



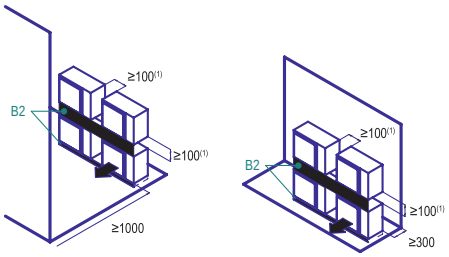
A2




B1



B2




(1) For better serviceability, use a distance ≥250 mm

A1=>A2 (A1) If there is danger of drainage dripping and freezing between the upper and lower units…
(A2) Then install a roof between the upper and lower units. Install the upper unit high enough above the lower unit to prevent ice buildup at the upper unit's bottom plate.

B1=>B2 (B1) If there is no danger of drainage dripping and freezing between the upper and lower units…
(B2) Then it is not required to install a roof, but seal the gap between the upper and lower units to prevent discharged air from flowing back to the suction side through the bottom of the unit.

**1D128513**

# 13 Installation

## 13 - 2 Refrigerant Pipe Selection

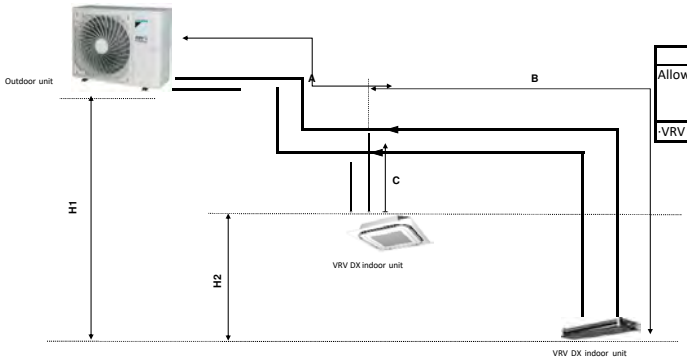


**RXYSA-AV1**
**RXYSA-AY1**

### VRV5-S Heat pump
### Piping restrictions ·1/2·

| | | Maximum piping length | | Maximum height difference | | Total piping length |
|---|---|---|---|---|---|---|
| | | Longest pipe (A+B) Actual / (Equivalent) See note ·1·. | After first branch (B, C) Actual | Indoor-to-outdoor (H1) Outdoor above indoor / (indoor above outdoor) | Indoor-to-indoor (H2) | See note ·2·. |
| VRV DX indoor unit | RXYSA4~6A7V1B | 120/(150)m | 40m | 50/(40)m | 15m | 300m |
| | RXYSA4~6A7Y1B | | | | | |

Notes
1. Assume equivalent piping length of refnet joint = ·0.5· m and refnet header = ·1· m (for calculation purposes of equivalent piping length, not for refrigerant charge calculations).
2. Maximum total piping length also depends on refrigerant charge limitations. See ·4D128599·.




| System pattern | Allowed capacity |
|---|---|
| Allowed connection ratio (CR) | VRV DX indoor unit |
| ·VRV DX· indoor units only | 50~130% |

Notes
1. Schematic indication
   Illustrations may differ from the actual appearance of the unit.
2. This is only to illustrate piping length limitations.
   Refer to combination table ·3D127866· for details about the allowed combinations.

**4D127886**

**RXYSA-AV1**
**RXYSA-AY1**

### VRV5-S
### Heat pump
### Piping restrictions ·2/2·

| System pattern | Allowed capacity |
|---|---|
| Allowed connection ratio (CR) | VRV DX indoor unit |
| ·VRV DX· indoor units only | 50~130% |

**4D127886**

# 13 Installation

## 13 - 2 Refrigerant Pipe Selection



**RXYSA-AV1**
**RXYSA-AY1**

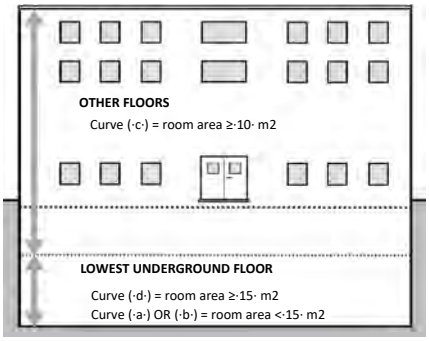
### Refrigerant charge restrictions

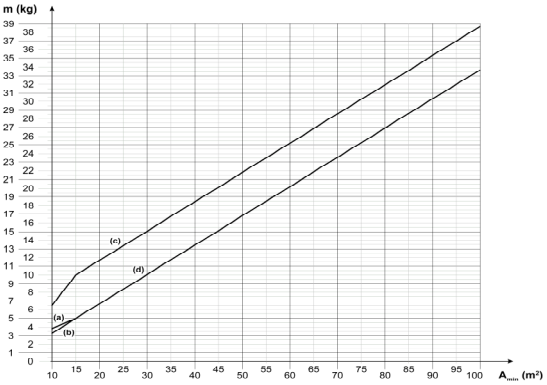
The total amount of refrigerant in the system shall be less than or equal to the maximum allowed total refrigerant amount.

For more information, refer to the installation manual.

**Step ·1·**
Determine the area of the smallest room in order to derive the total refrigerant charge limit in the system.
**Step ·2·**
Depending on the installation height of the indoor units, different values may be used in the next step IF:
- Installation height is ·1.8·≤x<·2.2· m, then use the charge limit of the graph for wall-mounted units.
- Installation height is ≥·2.2· m, then use the charge limit of the graph for ceiling-mounted units.

**Step ·3·**
Use the graph or table to determine the total refrigerant charge limit in the system.
In case there are any underground floors in the building, there are special requirements for the maximum allowable charge.
- The maximum allowable charge is determined by using graph (·a·), (·b·) or (·d·) for room with the smallest area on the lowest underground floor.
- The maximum allowable charge has to be assessed for the room with the smallest room area in both the lowest underground floor and the other floors.
- The lowest maximum allowable charge of both MUST be used.




(a) Ceiling-mounted
(b) Wall-mounted
(c) Smallest room not in underground floor
(d) Smallest room in underground floor

**4D128599**

# 14 Operation range

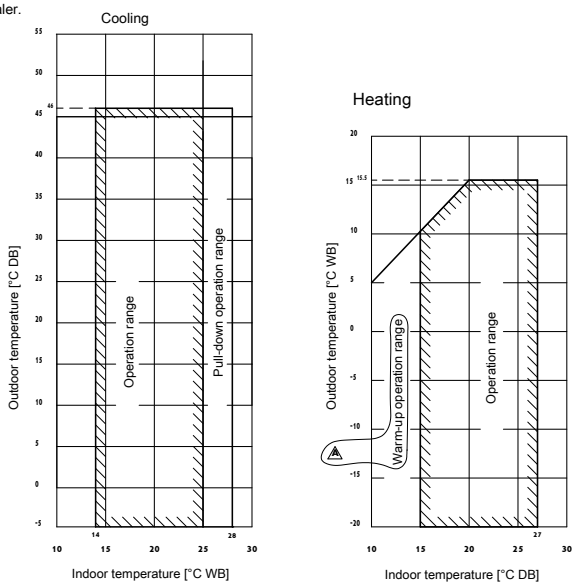
## 14 - 1 Operation Range

**RXYSA-AV1**
**RXYSA-AY1**



Notes

1. These figures assume the following operation conditions
   Indoor and outdoor units
   Equivalent piping length: 5m
   Level difference: 0m
2. Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
3. To reduce the freeze-up operation (indoor de-icing) frequency, it is recommended to install the outdoor unit in a location not exposed to wind.
4. Operation range is valid in case direct expansion indoor units are used.
   If other indoor units are used, refer to the documentation of the respective indoor units.
5. If the unit is selected to operate at ambient temperatures <-5°C for 5 days or more, with relative humidity levels >95%, it is recommended to apply a Daikin range specifically designed for such application.
   For more information, contact your dealer.




**3D094664A**

# 15 Appropriate Indoors

## 15 - 1 Appropriate Indoors

**RXYSA-AV1**
**RXYSA-AY1**



### Recommended indoor units for ·RXYSA*A*· outdoor units

| ·· HP | 4 | 5 | 6 |
|---|---|---|---|
| | 3xFXSA25<br>1xFXSA32 | 4xFXSA32 | 2xFXSA32<br>2xFXSA40 |

For details about the allowed combinations, see the engineering databook.

### Appropriate indoor units for ·RXYSA*A*· outdoor units

**Covered by ·ENER LOT21·**

FXFA20-25-32-40-50-63-80-100-125
FXZA15-20-25-32-40-50
FXDA10-15-20-25-32-40-50-63
FXSA15-20-25-32-40-50-63-80-100-125-140
FXAA15-20-25-32-40-50-63

**4D127887**

**Daikin Europe N.V.** Naamloze Vennootschap · Zandvoordestraat 300 · 8400 Oostende · Belgium · BE 0412 120 336 · RPR Oostende (Responsible Editor)

Daikin Europe N.V. participates in the Eurovent Certified Performance programme for Fan Coil Units and Variable Refrigerant Flow systems. Check ongoing validity of certificate

EEDEN21 06/2021

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