# VRV IV heat pump, for high ambient temperature regions Air Conditioning Technical Data

# RXYTQ-U5YF


RXYTQ8U5YF
RXYTQ10U5YF
RXYTQ12U5YF
RXYTQ14U5YF
RXYTQ16U5YF
RXYTQ18U5YF
RXYTQ20U5YF
RXYTQ22U5YF
RXYTQ24U5YF
RXYTQ26U5YF
RXYTQ28U5YF
RXYTQ30U5YF
RXYTQ32U5YF
RXYTQ34U5YF
RXYTQ36U5YF
RXYTQ38U5YF
RXYTQ40U5YF
RXYTQ42U5YF
RXYTQ44U5YF
RXYTQ46U5YF
RXYTQ48U5YF

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# 1 Features

## 1 - 1 RXYTQ-U5YF



› Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation and air handling units
› Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature, VRV configurator, 7 segment display and full inverter compressors, 4-side heat exchanger, refrigerant cooled PCB, new DC fan motor, ...
› Customize your VRV for best seasonal efficiency & comfort with the weather dependant Variable Refrigerant Temperature function. Increased seasonal efficiency with up to 28%. No more cold draft by supply of high outblow temperatures
› Free combination of outdoor units to meet installation space or efficiency requirements
› Fits any building as also indoor installation is possible as a result of high external static pressure of up to 78.4 Pa. Indoor installation leads to less piping length, lower installation costs, increased efficiency and better visual aesthetics
› Wide piping flexibility: 30m indoor height difference, maximum piping length: 190m, total piping length: 1,000m
› The ability to control each conditioned zone individually keeps VRV system running costs to an absolute minimum
› Spread your installation cost by phased installation
› Keep your system in top condition via the Daikin Cloud Service: 24/7 monitoring for maximum efficiency, extented lifetime and immediate service support thanks to failure prediction

Inverter

# 2 Specifications

## 1 - 1 RXYTQ-U5YF



| Technical Specifications | | | | | RXYTQ8U5YF | RXYTQ10U5YF | RXYTQ12U5YF | RXYTQ14U5YF | RXYTQ16U5YF |
|---|---|---|---|---|---|---|---|---|---|
| Cooling capacity | Test setup 2 | 35°C ISO - Full load | | Btu/h | 76,450 (2) | 95,550 (2) | 114,350 (2) | 136,500 (2) | 153,550 (2) |
| | | 35°C ISO - Full load | | kW | 22.4 (2) | 28.0 (2) | 33.5 (2) | 40.0 (2) | 45.0 (2) |
| | | 46°C ISO - Full load | | Btu/h | 68,950 (1) | 86,000 (1) | 97,250 (1) | 109,200 (1) | 119,800 (1) |
| | | 46°C ISO - Full load | | kW | 20.2 (1) | 25.2 (1) | 28.5 (1) | 32.0 (1) | 35.1 (1) |
| Heating capacity | Test setup 1 | Nom | 6°CWB | Btu/h | 76,450 (3) | 95,550 (3) | 114,350 (3) | 136,500 (3) | 153,550 (3) |
| | | | | kW | 22.4 (3) | 28.0 (3) | 33.5 (3) | 40.0 (3) | 45.0 (3) |
| Power input - 50Hz | Cooling | Test setup 2 | 35°C ISO - Full load - Total | kW | 5.37 (2) | 6.81 (2) | 8.63 (2) | 10.23 (2) | 12.64 (2) |
| | | | 46°C ISO - Full load - Total | kW | 6.56 (1) | 7.95 (1) | 8.72 (1) | 10.00 (1) | 12.10 (1) |
| | | | Power input indoor units | kW | 0.20 | 0.25 | 0.29 | 0.34 | 0.39 |
| | Heating | Test setup 1 | 6°CWB - Nom. | kW | 5.62 (3) | 7.20 (3) | 9.19 (3) | 11.01 (3) | 12.92 (3) |
| EER | Test setup 2 | 35°C ISO - Full load | | Btu/h/W | 14.23 (2) | 14.02 (2) | 13.24 (2) | 13.34 (2) | 12.15 (2) |
| | | 35°C ISO - Full load | | kW/kW | 4.17 (2) | 4.11 (2) | 3.88 (2) | 3.91 (2) | 3.56 (2) |
| | | 46°C ISO - Full load | | Btu/h/W | 10.51 (1) | 10.82 (1) | 11.16 (1) | 10.92 (1) | 9.90 (1) |
| | | 46°C ISO - Full load | | kW/kW | 3.08 (1) | 3.17 (1) | 3.27 (1) | 3.20 (1) | 2.90 (1) |
| COP at nom. capacity | Test setup 1 | 6°CWB | | Btu/h/W | 13.60 (3) | 13.26 (3) | 12.44 (3) | 12.40 (3) | 11.89 (3) |
| | | 6°CWB | | kW/kW | 3.99 (3) | 3.89 (3) | 3.64 (3) | 3.63 (3) | 3.48 (3) |
| CSPF | Test setup 2 | | | | 5.81 (4) | 6.13 (4) | 6.12 (4) | 5.66 (4) | 5.36 (4) |
| Capacity range | | | | HP | 8 | 10 | 12 | 14 | 16 |
| Maximum number of connectable indoor units | | | | | 64 (5) | | | | |
| Indoor index connection | Min. | | | | 100 | 125 | 150 | 175 | 200 |
| | Nom. | | | | 200 | 250 | 300 | 350 | 400 |
| | Max. | | | | 260 | 325 | 390 | 455 | 520 |
| Dimensions | Unit | Height | | mm | 1,685 | | | | |
| | | Width | | mm | 930 | 1,240 | | | |
| | | Depth | | mm | 765 | | | | |
| | Packed unit | Height | | mm | 1,820 | | | | |
| | | Width | | mm | 995 | 1,305 | | | |
| | | Depth | | mm | 860 | | | | |
| Weight | Unit | | | kg | 201 | 244 | | 299 | |
| | Packed unit | | | kg | 218 | 265 | | 320 | |
| Packing | Material | | | | Carton | | | | |
| | Weight | | | kg | 4.7 | 5.7 | | | |
| Packing 2 | Material | | | | Wood | | | | |
| | Weight | | | kg | 12.1 | 14.7 | | | |
| Packing 3 | Material | | | | Plastic | | | | |
| | Weight | | | kg | 0.5 | 0.7 | | | |
| Casing | Colour | | | | Ivory white | | | Daikin White | |
| | Material | | | | Painted galvanized steel plate | | | | |
| Heat exchanger | Type | | | | Cross fin coil | | | | |
| Fan | Quantity | | | | 1 | 2 | | | |
| | Air flow rate | Cooling | Nom. | $m^3$/min | 162 | 223 | | 260 | |
| | | | | cfm | 5,721 | 7,875 | | 9,182 | |
| | External static pressure | Max. | | Pa | 78 | | | | |
| Fan motor | Quantity | | | | 1 | 2 | | | |
| | Type | | | | DC motor | | | | |
| | Output | | | W | 550 | 750 | | | |
| Compressor | Quantity | | | | 1 | | | 2 | |
| | Type | | | | Hermetically sealed scroll compressor | | | | |
| | Crankcase heater | | | W | 33 | | | | |
| Operation range | Cooling | Min. | | °CDB | -5.0 | | | | |
| | | Max. | | °CDB | 52.0 | | | | |
| | Heating | Min. | | °CWB | -20.0 | | | | |
| | | Max. | | °CWB | 15.5 | | | | |
| Sound power level | Cooling | Nom. | | dBA | 78.0 (6) | 79.2 (6) | 81.0 (6) | 81.6 (6) | 86.0 (6) |
| Sound pressure level | Cooling | Nom. | | dBA | 57.0 (7) | 59.0 (7) | 61.0 (7) | | 64.0 (7) |
| Refrigerant | Type | | | | R-410A | | | | |
| | GWP | | | | 2,087.5 | | | | |
| | Charge | | | TCO2Eq | 14.0 | 21.5 | 21.7 | 24.4 | 24.6 |
| | Charge | | | kg | 6.7 | 10.3 | 10.4 | 11.7 | 11.8 |
| Refrigerant oil | Type | | | | Synthetic (ether) oil FVC68D | | | | |

# 2 Specifications

## 1 - 1 RXYTQ-U5YF

| Technical Specifications | | | | RXYTQ8U5YF | RXYTQ10U5YF | RXYTQ12U5YF | RXYTQ14U5YF | RXYTQ16U5YF |
|---|---|---|---|---|---|---|---|---|
| Piping connections | Liquid | Type | | Braze connection | | | | |
| | | OD | mm | 9.52 | | 12.70 | | |
| | Gas | Type | | Braze connection | | | | |
| | | OD | mm | 19.1 | 22.2 | 28.6 | | |
| | Total piping length | System Actual | m | 1,000 (8) | | | | |
| Defrost method | | | | Reversed cycle | | | | |
| Capacity control | Method | | | Inverter controlled | | | | |
| Safety devices | Item | 01 | | High pressure switch | | | | |
| | | 02 | | Fan driver overload protector | | | | |
| | | 03 | | Inverter overload protector | | | | |
| | | 04 | | PC board fuse | | | | |
| | | 05 | | Leakage current detector | | | | |

Standard accessories: Installation manual; Quantity: 1;

Standard accessories: Operation manual; Quantity: 1;

Standard accessories: Connection pipes; Quantity: 1;

| Electrical Specifications | | | | RXYTQ8U5YF | RXYTQ10U5YF | RXYTQ12U5YF | RXYTQ14U5YF | RXYTQ16U5YF |
|---|---|---|---|---|---|---|---|---|
| Power supply | Name | | | YF | | | | |
| | Phase | | | 3N~ | | | | |
| | Frequency | | Hz | 50/60 | | | | |
| | Voltage | | V | 380-415/400 | | | | |
| Power supply intake | | | | Both indoor and outdoor unit | | | | |
| Voltage range | Min. | | % | -10 | | | | |
| | Max. | | % | 10 | | | | |
| Current | Nominal running current (RLA) | Cooling | A (3) | 7.9 (9) | 10.4 (9) | 13.6 (9) | 16.8 (9) | 19.3 (9) |
| Current - 50Hz | Nominal running current (RLA) | Test setup 2 Cooling | | 10 (10) | 11 (10) | 12 (10) | 14 (10) | 17 (10) |
| | Starting current (MSC) - remark | | | See note 15 | | | | |
| | Minimum circuit amps (MCA) | | A | 16.1 (11) | 22.0 (11) | 24.0 (11) | 27.0 (11) | 31.0 (11) |
| | Maximum fuse amps (MFA) | | A | 20 (12) | 25 (12) | 32 (12) | | 40 (12) |
| | Full load amps (FLA) | Total | A | 1.2 (13) | 1.8 (13) | | 2.6 (13) | |
| Power Performance | Power factor | Test Setup 2 46°C ISO - Full load | | 0.94 | | 0.95 | 0.93 | 0.94 |
| Wiring connections - 50Hz | For power supply | Quantity | | 5G | | | | |
| | For connection with indoor | Quantity | | 2 | | | | |
| | | Remark | | F1,F2 | | | | |

(1)Cooling: T3: indoor temp. 29.0°CDB, 19.0°CWB, outdoor temp. 46°CDB, ISO15042:2011 |
(2)Cooling: T1: indoor temp. 27.0°CDB, 19.0°CWB, outdoor temp. 35°CDB, ISO15042:2011 |
(3)Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB, equivalent refrigerant piping: 5m, level difference: 0m. Power input of indoor units (duct type) included |
(4)Cooling seasonal performance factor for hot climates at T3 condition per ISO 16358-1:2013/AMD 1:2019 |
(5)Actual number of units depends on the indoor unit type (VRV DX indoor, etc.) and the connection ratio restriction for the system (being; 50% ≤ CR ≤ 130%). |
(6)Sound power level is an absolute value that a sound source generates. |
(7)Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings. |
(8)Refer to refrigerant pipe selection or installation manual |
(9)RLA is based on following conditions: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB |
(10)RLA is based on following conditions: indoor temp. 29°CDB, 19°CWB; outdoor temp. 46°C |
(11)MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current. |
(12)MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker). |
(13)FLA means the nominal running current of the fan |
(14)Cooling: indoor temp. 27.0°CDB, 19.0°CWB, outdoor temp. 29°CDB, ISO15042:2011 |
(15)MSC means the maximum current during start up of the compressor. This unit uses only inverter compressors. Starting current is always ≤ max. running current. |
Maximum allowable voltage range variation between phases is 2%. |
Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits. |
Sound values are measured in a semi-anechoic room. |
Soundpressure system [dBA] = 10*log[10^(A/10)+10^(B/10)+10^(C/10)] , with Unit A = A dBA, Unit B = B dBA, Unit C = C dBA |
For detailed contents of standard accessories, see installation/operation manual |
**Multi combination (18~48HP) data is corresponding with the standard multi combination**

| Technical specifications System | | RXYTQ18U5YF | RXYTQ20U5YF | RXYTQ22U5YF | RXYTQ24U5YF | RXYTQ26U5YF | RXYTQ28U5YF |
|---|---|---|---|---|---|---|---|
| System | Outdoor unit module 1 | RXYTQ8U | | RXYTQ10U | RXYTQ8U | RXYTQ12U | |
| | Outdoor unit module 2 | RXYTQ10U | RXYTQ12U | | RXYTQ16U | RXYTQ14U | RXYTQ16U |

# 2 Specifications

## 1 - 1 RXYTQ-U5YF



| Technical specifications System | | | | | RXYTQ18U5YF | RXYTQ20U5YF | RXYTQ22U5YF | RXYTQ24U5YF | RXYTQ26U5YF | RXYTQ28U5YF |
|---|---|---|---|---|---|---|---|---|---|---|
| Cooling capacity | Test setup 2 | 35°C ISO - Full load | | Btu/h | 171,950 (2) | 190,750 (2) | 209,850 (2) | 230,000 (2) | 250,800 (2) | 267,850 (2) |
| | | 35°C ISO - Full load | | kW | 50.4 (2) | 55.9 (2) | 61.5 (2) | 67.4 (2) | 73.5 (2) | 78.5 (2) |
| | | 46°C ISO - Full load | | Btu/h | 154,900 (1) | 166,150 (1) | 183,250 (1) | 188,700 (1) | 206,450 (1) | 217,000 (1) |
| | | 46°C ISO - Full load | | kW | 45.4 (1) | 48.7 (1) | 53.7 (1) | 55.3 (1) | 60.5 (1) | 63.6 (1) |
| Heating capacity | Test setup 1 | Nom | 6°CWB | Btu/h | 171,950 (3) | 190,750 (3) | 209,850 (3) | 230,000 (3) | 250,800 (3) | 267,850 (3) |
| | | | | kW | 50.4 (3) | 55.9 (3) | 61.5 (3) | 67.4 (3) | 73.5 (3) | 78.5 (3) |
| Power input - 50Hz | Cooling | Test setup 2 | 35°C ISO - Full load - Total | kW | 12.18 (2) | 14.01 (2) | 15.45 (2) | 18.01 (2) | 18.86 (2) | 21.27 (2) |
| | | | 46°C ISO - Full load - Total | kW | 14.51 (1) | 15.27 (1) | 16.67 (1) | 18.66 (1) | 18.72 (1) | 20.82 (1) |
| | | | Power input indoor units | kW | 0.44 | 0.49 | 0.54 | 0.59 | 0.64 | 0.68 |
| | Heating | Test setup 1 | 6°CWB - Nom. | kW | 12.82 (3) | 14.81 (3) | 16.40 (3) | 18.54 (3) | 20.20 (3) | 22.11 (3) |
| EER | Test setup 2 | 35°C ISO - Full load | | Btu/h/W | 14.11 (2) | 13.62 (2) | 13.59 (2) | 12.77 (2) | 13.29 (2) | 12.59 (2) |
| | | 35°C ISO - Full load | | kW/kW | 4.14 (2) | 3.99 (2) | 3.98 (2) | 3.74 (2) | 3.90 (2) | 3.69 (2) |
| | | 46°C ISO - Full load | | Btu/h/W | 10.68 (1) | 10.88 (1) | 10.99 (1) | 10.11 (1) | 11.03 (1) | 10.42 (1) |
| | | 46°C ISO - Full load | | kW/kW | 3.13 (1) | 3.19 (1) | 3.22 (1) | 2.96 (1) | 3.23 (1) | 3.05 (1) |
| COP at nom. capacity | Test setup 1 | 6°CWB | | Btu/h/W | 13.41 (3) | 12.88 (3) | 12.80 (3) | 12.41 (3) | 12.42 (3) | 12.11 (3) |
| | | 6°CWB | | kW/kW | 3.93 (3) | 3.77 (3) | 3.75 (3) | 3.64 (3) | | 3.55 (3) |
| CSPF | Test setup 2 | | | | 5.98 (4) | 5.97 (4) | 6.11 (4) | 5.60 (4) | 5.92 (4) | 5.76 (4) |
| Capacity range | | | | HP | 18 | 20 | 22 | 24 | 26 | 28 |
| Maximum number of connectable indoor units | | | | | 64 (5) | | | | | |
| Indoor index connection | Min. | | | | 225 | 250 | 275 | 300 | 325 | 350 |
| | Nom. | | | | 450 | 500 | 550 | 600 | 650 | 700 |
| | Max. | | | | 585 | 650 | 715 | 780 | 845 | 910 |
| Sound power level | Cooling | Nom. | | dBA | 81.7 (6) | 82.8 (6) | 83.2 (6) | 86.6 (6) | 84.3 (6) | 87.2 (6) |
| Sound pressure level | Cooling | Nom. | | dBA | 61.1 (7) | 62.5 (7) | 63.1 (7) | 64.8 (7) | 64.0 (7) | 65.8 (7) |

| Technical specifications System | | | | | RXYTQ30U5YF | RXYTQ32U5YF | RXYTQ34U5YF | RXYTQ36U5YF | RXYTQ38U5YF | RXYTQ40U5YF |
|---|---|---|---|---|---|---|---|---|---|---|
| System | Outdoor unit module 1 | | | | RXYTQ14U | RXYTQ16U | RXYTQ8U | | | RXYTQ10U |
| | Outdoor unit module 2 | | | | RXYTQ16U | | RXYTQ10U | RXYTQ12U | RXYTQ14U | |
| | Outdoor unit module 3 | | | | - | | RXYTQ16U | | | |
| Cooling capacity | Test setup 2 | 35°C ISO - Full load | | Btu/h | 290,050 (2) | 307,100 (2) | 325,500 (2) | 344,300 (2) | 366,450 (2) | 385,550 (2) |
| | | 35°C ISO - Full load | | kW | 85.0 (2) | 90.0 (2) | 95.4 (2) | 100.9 (2) | 107.4 (2) | 113.0 (2) |
| | | 46°C ISO - Full load | | Btu/h | 228,950 (1) | 239,550 (1) | 274,700 (1) | 285,950 (1) | 297,900 (1) | 314,950 (1) |
| | | 46°C ISO - Full load | | kW | 67.1 (1) | 70.2 (1) | 80.5 (1) | 83.8 (1) | 87.3 (1) | 92.3 (1) |
| Heating capacity | Test setup 1 | Nom | 6°CWB | Btu/h | 290,050 (3) | 307,100 (3) | 325,500 (3) | 344,300 (3) | 366,450 (3) | 385,550 (3) |
| | | | | kW | 85.0 (3) | 90.0 (3) | 95.4 (3) | 100.9 (3) | 107.4 (3) | 113.0 (3) |
| Power input - 50Hz | Cooling | Test setup 2 | 35°C ISO - Full load - Total | kW | 22.87 (2) | 25.28 (2) | 24.82 (2) | 26.65 (2) | 28.24 (2) | 29.68 (2) |
| | | | 46°C ISO - Full load - Total | kW | 22.10 (1) | 24.21 (1) | 26.61 (1) | 27.38 (1) | 28.66 (1) | 30.05 (1) |
| | | | Power input indoor units | kW | 0.73 | 0.78 | 0.83 | 0.88 | 0.93 | 0.98 |
| | Heating | Test setup 1 | 6°CWB - Nom. | kW | 23.92 (3) | 25.84 (3) | 25.74 (3) | 27.73 (3) | 29.54 (3) | 31.13 (3) |
| EER | Test setup 2 | 35°C ISO - Full load | | Btu/h/W | 12.68 (2) | 12.15 (2) | 13.11 (2) | 12.92 (2) | 12.98 (2) | 12.99 (2) |
| | | 35°C ISO - Full load | | kW/kW | 3.72 (2) | 3.56 (2) | 3.84 (2) | 3.79 (2) | 3.80 (2) | 3.81 (2) |
| | | 46°C ISO - Full load | | Btu/h/W | 10.36 (1) | 9.90 (1) | 10.32 (1) | 10.44 (1) | 10.39 (1) | 10.48 (1) |
| | | 46°C ISO - Full load | | kW/kW | 3.04 (1) | 2.90 (1) | 3.03 (1) | 3.06 (1) | 3.05 (1) | 3.07 (1) |
| COP at nom. capacity | Test setup 1 | 6°CWB | | Btu/h/W | 12.12 (3) | 11.89 (3) | 12.65 (3) | 12.42 (3) | 12.40 (3) | 12.39 (3) |
| | | 6°CWB | | kW/kW | 3.55 (3) | 3.48 (3) | 3.71 (3) | 3.64 (3) | | 3.63 (3) |
| CSPF | Test setup 2 | | | | 5.51 (4) | 5.36 (4) | 5.76 (4) | 5.78 (4) | 5.63 (4) | 5.72 (4) |
| Capacity range | | | | HP | 30 | 32 | 34 | 36 | 38 | 40 |
| Maximum number of connectable indoor units | | | | | 64 (5) | | | | | |
| Indoor index connection | Min. | | | | 375 | 400 | 425 | 450 | 475 | 500 |
| | Nom. | | | | 750 | 800 | 850 | 900 | 950 | 1,000 |
| | Max. | | | | 975 | 1,040 | 1,105 | 1,170 | 1,235 | 1,300 |
| Sound power level | Cooling | Nom. | | dBA | 87.3 (6) | 89.0 (6) | 87.4 (6) | 87.7 (6) | 87.8 (6) | 88.0 (6) |
| Sound pressure level | Cooling | Nom. | | dBA | 65.8 (7) | 67.0 (7) | 65.8 (7) | 66.3 (7) | | 66.6 (7) |

# 2 Specifications

## 1 - 1 RXYTQ-U5YF

| Technical specifications System | | | | | RXYTQ42U5YF | RXYTQ44U5YF | RXYTQ46U5YF | RXYTQ48U5YF |
|---|---|---|---|---|---|---|---|---|
| System | Outdoor unit module 1 | | | | RXYTQ10U | RXYTQ12U | RXYTQ14U | RXYTQ16U |
| | Outdoor unit module 2 | | | | RXYTQ16U | | | |
| | Outdoor unit module 3 | | | | RXYTQ16U | | | |
| Cooling capacity | Test setup 2 | 35°C ISO - Full load | | Btu/h | 402,650 (2) | 421,400 (2) | 443,600 (2) | 460,650 (2) |
| | | 35°C ISO - Full load | | kW | 118.0 (2) | 123.5 (2) | 130.0 (2) | 135.0 (2) |
| | | 46°C ISO - Full load | | Btu/h | 325,500 (1) | 336,800 (1) | 348,700 (1) | 359,300 (1) |
| | | 46°C ISO - Full load | | kW | 95.4 (1) | 98.7 (1) | 102.2 (1) | 105.3 (1) |
| Heating capacity | Test setup 1 | Nom | 6°CWB | Btu/h | 402,650 (3) | 421,400 (3) | 443,600 (3) | 460,650 (3) |
| | | | | kW | 118.0 (3) | 123.5 (3) | 130.0 (3) | 135.0 (3) |
| Power input - 50Hz | Cooling | Test setup 2 | 35°C ISO - Full load - Total | kW | 32.09 (2) | 33.91 (2) | 35.51 (2) | 37.92 (2) |
| | | | 46°C ISO - Full load - Total | kW | 32.16 (1) | 32.92 (1) | 34.21 (1) | 36.31 (1) |
| | | | Power input indoor units | kW | 1.03 | 1.08 | 1.13 | 1.17 |
| | Heating | Test setup 1 | 6°CWB - Nom. | kW | 33.04 (3) | 35.03 (3) | 36.84 (3) | 38.75 (3) |
| EER | Test setup 2 | 35°C ISO - Full load | | Btu/h/W | 12.55 (2) | 12.43 (2) | 12.49 (2) | 12.15 (2) |
| | | 35°C ISO - Full load | | kW/kW | 3.68 (2) | 3.64 (2) | 3.66 (2) | 3.56 (2) |
| | | 46°C ISO - Full load | | Btu/h/W | 10.12 (1) | 10.23 (1) | 10.19 (1) | 9.90 (1) |
| | | 46°C ISO - Full load | | kW/kW | 2.97 (1) | 3.00 (1) | 2.99 (1) | 2.90 (1) |
| COP at nom. capacity | Test setup 1 | 6°CWB | | Btu/h/W | 12.19 (3) | 12.03 (3) | 12.04 (3) | 11.89 (3) |
| | | 6°CWB | | kW/kW | 3.57 (3) | 3.53 (3) | | 3.48 (3) |
| CSPF | Test setup 2 | | | | 5.62 (4) | 5.64 (4) | 5.46 (4) | 5.36 (4) |
| Capacity range | | | | HP | 42 | 44 | 46 | 48 |
| Maximum number of connectable indoor units | | | | | 64 (5) | | | |
| Indoor index connection | Min. | | | | 525 | 550 | 575 | 600 |
| | Nom. | | | | 1,050 | 1,100 | 1,150 | 1,200 |
| | Max. | | | | 1,365 | 1,430 | 1,495 | 1,560 |
| Sound power level | Cooling | Nom. | | dBA | 89.4 (6) | 89.6 (6) | 89.7 (6) | 90.8 (6) |
| Sound pressure level | Cooling | Nom. | | dBA | 67.6 (7) | 68.0 (7) | | 68.8 (7) |

| Electrical specifications System | | | | | RXYTQ18U5YF | RXYTQ20U5YF | RXYTQ22U5YF | RXYTQ24U5YF | RXYTQ26U5YF | RXYTQ28U5YF |
|---|---|---|---|---|---|---|---|---|---|---|
| Power supply | Name | | | | YF | | | | | |
| | Phase | | | | 3N~ | | | | | |
| | Frequency | | | Hz | 50/60 | | | | | |
| | Voltage | | | V | 380-415/400 | | | | | |
| Power supply intake | | | | | Both indoor and outdoor unit | | | | | |
| Voltage range | Min. | | | % | -10 | | | | | |
| | Max. | | | % | 10 | | | | | |
| Current | Nominal running current (RLA) | Cooling | | A (3) | 18.3 (9) | 21.5 (9) | 23.9 (9) | 27.3 (9) | 30.3 (9) | 32.9 (9) |
| Current - 50Hz | Nominal running current (RLA) | Test Setup 2 | Cooling | A | 21 (10) | 22 (10) | 24 (10) | 27 (10) | | 30 (10) |
| | Starting current (MSC) - remark | | | | See note 15 | | | | | |
| | Minimum circuit amps (MCA) | | | A | 38.1 (11) | 40.1 (11) | 46.0 (11) | 47.1 (11) | 51.0 (11) | 55.0 (11) |
| | Maximum fuse amps (MFA) | | | A | 40 (12) | 50 (12) | 63 (12) | | | |
| Power Performance | Power factor | Test Setup 2 | 46°C ISO - Full load | | 0.94 | | 0.95 | 0.94 | | |
| Wiring connections - 50Hz | For power supply | Quantity | | | 5G | | | | | |
| | For connection with indoor | Quantity | | | 2 | | | | | |
| | | Remark | | | F1,F2 | | | | | |

| Electrical specifications System | | | | RXYTQ30U5YF | RXYTQ32U5YF | RXYTQ34U5YF | RXYTQ36U5YF | RXYTQ38U5YF | RXYTQ40U5YF |
|---|---|---|---|---|---|---|---|---|---|
| Power supply | Name | | | YF | | | | | |
| | Phase | | | 3N~ | | | | | |
| | Frequency | | Hz | 50/60 | | | | | |
| | Voltage | | V | 380-415/400 | | | | | |
| Power supply intake | | | | Both indoor and outdoor unit | | | | | |
| Voltage range | Min. | | % | -10 | | | | | |
| | Max. | | % | 10 | | | | | |

# 2 Specifications

## 1 - 1 RXYTQ-U5YF



| Electrical specifications System | | | | | RXYTQ30U5YF | RXYTQ32U5YF | RXYTQ34U5YF | RXYTQ36U5YF | RXYTQ38U5YF | RXYTQ40U5YF |
|---|---|---|---|---|---|---|---|---|---|---|
| Current | Nominal running current (RLA) | Cooling | | A (3) | 36.1 (9) | 38.7 (9) | 37.6 (9) | 40.8 (9) | 44.0 (9) | 46.5 (9) |
| Current - 50Hz | Nominal running current (RLA) | Test Setup 2 | Cooling | A | 32 (10) | 34 (10) | 38 (10) | 39 (10) | 41 (10) | 43 (10) |
| | Starting current (MSC) - remark | | | | See note 15 | | | | | |
| | Minimum circuit amps (MCA) | | | A | 58.0 (11) | 62.0 (11) | 69.1 (11) | 71.1 (11) | 74.1 (11) | 80.0 (11) |
| | Maximum fuse amps (MFA) | | | A | 80 (12) | | | | 100 (12) | |
| Power Performance | Power factor | Test Setup 2 | 46°C ISO - Full load | | 0.93 | 0.94 | | | 0.93 | |
| Wiring connections - 50Hz | For power supply | Quantity | | | 5G | | | | | |
| | For connection with indoor | Quantity | | | 2 | | | | | |
| | | Remark | | | F1,F2 | | | | | |

| Electrical specifications System | | | | | RXYTQ42U5YF | RXYTQ44U5YF | RXYTQ46U5YF | RXYTQ48U5YF |
|---|---|---|---|---|---|---|---|---|
| Power supply | Name | | | | YF | | | |
| | Phase | | | | 3N~ | | | |
| | Frequency | | | Hz | 50/60 | | | |
| | Voltage | | | V | 380-415/400 | | | |
| Power supply intake | | | | | Both indoor and outdoor unit | | | |
| Voltage range | Min. | | | % | -10 | | | |
| | Max. | | | % | 10 | | | |
| Current | Nominal running current (RLA) | Cooling | | A (3) | 49.0 (9) | 52.2 (9) | 55.4 (9) | 58.0 (9) |
| Current - 50Hz | Nominal running current (RLA) | Test Setup 2 | Cooling | A | 46 (10) | 47 (10) | 49 (10) | 52 (10) |
| | Starting current (MSC) - remark | | | | See note 15 | | | |
| | Minimum circuit amps (MCA) | | | A | 84.0 (11) | 86.0 (11) | 89.0 (11) | 93.0 (11) |
| | Maximum fuse amps (MFA) | | | A | 100 (12) | | | 125 (12) |
| Power Performance | Power factor | Test Setup 2 | 46°C ISO - Full load | | 0.94 | | 0.93 | 0.94 |
| Wiring connections - 50Hz | For power supply | Quantity | | | 5G | | | |
| | For connection with indoor | Quantity | | | 2 | | | |
| | | Remark | | | F1,F2 | | | |

# 3 Features and advantages

## 3 - 1 Features and Advantages



# Cooling Seasonal Performance Factor


## Nominal Efficiency vs. Seasonal Efficiency in line with real life performance

Cooling Seasonal Performance Factor

Currently, the energy efficiency of cooling devices is measured in artificial and standardized conditions. For air conditioners, this is done at a constant temperature of 46 °C or 35 °C and at full cooling capacity. This results in T1 & T3 energy efficiency (EER), which is representing only two points to conclude on Energy performance.

In other markets, like in the US and Europe, seasonal performance is measured with IPLV, SEER or ESEER calculations based on real-life conditions. However, these calculation methods have not been adopted for high Ambient or hot climates. In order to correct this situation, a more realistic calculation method called Cooling Seasonal Performance Factor for Hot Climate $CSPF_{T3}$ has been developed by the ISO Refrigeration and Air-Conditioning Subcommittee (SC6) for the testing and rating of air conditioners and heat pumps. This is the standard ISO 16358 -1 Amendment 1 issued in 2019 for the hot T3 climate zones.

# 3 Features and advantages

## 3 - 1 Features and Advantages



The implementation of the Seasonal Efficiency calculation reflects more realistic energy efficiency value through the entire cooling season at hot climate conditions compared to currently used EER value.

The calculation follows the below considerations:

- Use of a high ambient climate weather bin for cooling instead of one nominal temperature
- Considering operation at partial capacity instead of full capacity.

The adoption of the $CSPF_{T3}$ calculation method will result in a better estimation of the equipment's real-life performance over a year.

## What is $CSPF_{T3}$?

**(Cooling Seasonal Performance Factor for Hot Climate $CSPF_{T3}$ )** is the testing and rating of air conditioners as per the ISO 16358 -1 Amendment 1 issued in 2019 for T3 hot climate zones and takes into consideration the bin hours reflecting high ambient conditions.

## How is $CSPF_{T3}$ expressed?

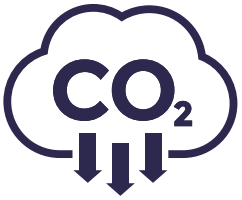
- It is expressed as the $CSPF_{T3}$ value (**Cooling Seasonal Performance Factor for Hot Climate $CSPF_{T3}$**)
- It is defined as the ratio of the total annual amount of heat that the equipment can remove from the indoor air when operating for cooling in active mode to the total annual amount of energy consumed by the equipment during the same period.

$$CSPF_{T3} = \frac{\text{Cooling Seasonal Total Load @ T3 ISO weather bin}}{\text{Cooling Seasonal Energy Consumption @ T3 ISO weather bin}}$$

## Benefits of $CSPF_{T3}$

The implementation of seasonal efficiency will provide end users with a fair comparison of different equipment based on realistic year-round efficiency which will lead to:

Reduced energy consumption




Reduced CO2 emission


Reduced electricity bills

# 3 Features and advantages

## 3 - 1 Features and Advantages



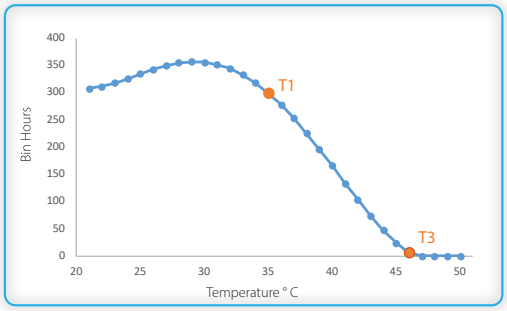
## Pioneering in innovation and environmental responsibility

For Daikin, seasonal efficiency brings together two core ambitions: pushing for innovation and reducing the environmental footprint of our products. Being the first in the industry to design equipment based on optimal seasonal efficiency values, Daikin is once again pioneering high-performance cooling products that lower the impact on the environment and on your wallet.

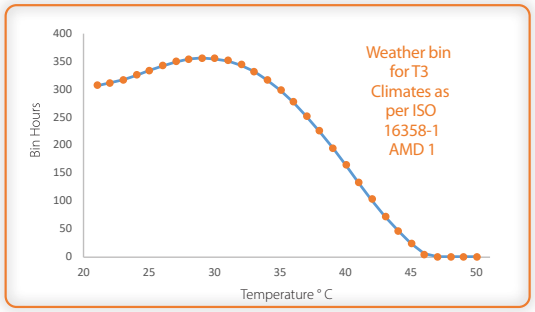
### Benefits of Seasonal Efficiency vs. Nominal Efficiency

**Energy Efficiency Ratio** → **Cooling Seasonal Performance Factor**

TEMPERATURE




Energy Efficiency Ratio rating is based on one outdoor Ambient Temperature condition (T1 or T3)




Cooling Seasonal Performance Factor is based on the Hot Climate Weather bin as per ISO 16358-1 AMD1

EFFICIENCY

$$EER_{@T1\ or\ T3} = \frac{\text{Cooling Capacity}_{@T1\ or\ T3}}{\text{Power Input}_{@T1\ or\ T3}}$$

**Nominal efficiency** gives an indication on how efficient an air conditioner operates at nominal conditions. 100% capacity performance is used to measure EER

$$CSPF_{T3} = \frac{\text{Cooling Seasonal Total Load}_{@T3\ ISO\ Weather\ bin}}{\text{Cooling Seasonal Energy Consumption}_{@T3\ ISO\ Weather\ bin}}$$

**$CSPF_{T3}$** gives an indication on how efficient an air conditioner operates over an entire cooling season. Variable or seasonal performance close to real life is used and not 100% capacity performance.

When the new ISO standard for hot climate was published, Daikin has resolutely chosen for early implementation of this new legislation and started testing all products for seasonal efficiency. This commitment to pioneering the implementation of seasonal efficiency is a practice we observe every day.
Today, Daikin leads the way towards more efficient and cost-effective comfort solutions. All Daikin products - residential, commercial, as well as industrial - are seasonal-efficient, reducing energy and costs the smart way.

# 4 Options

## 4 - 1 Options

**RXYTQ-U5YF**

**VRV4**
**Middle East**
**Option list**

| Nr. | Item | RXYTQ8U5 | RXYTQ10-12U5 | RXYTQ14-16U5 | RXYTQ18~48U5 |
|---|---|---|---|---|---|
| I. | Refnet header | KHRQ22M29H | | | |
| | | - | KHRQ22M64H | | |
| | | - | - | - | KHRQ22M75H |
| II. | Refnet joint | KHRQ22M20T | | | |
| | | KHRQ22M29T9 | | | |
| | | - | KHRQ22M64T | | |
| | | - | - | - | KHRQ22M75T |
| III. | Outdoor multi-connection kit (2) | - | - | - | BHFQ22P1007 |
| IV. | Outdoor multi-connection kit (2) | - | - | - | BHFQ22P1517 |

| Nr. | Item | 8HP | 10HP | 12HP | 14HP | 16HP |
|---|---|---|---|---|---|---|
| 1a. | Cool/heat selector (switch) | KRC19-26A | | | | |
| 1b. | Cool/heat selector (PCB) | BRP2A81 | | | | |
| 1c. | Cool/heat selector (fixing box) | KJB111A* | | | | |
| 2. | VRV configurator | EKPCCAB | | | | |
| 3. | Demand PCB (5) | DTA104A61/62* | | | | |
| 4. | Demand PCB mounting plate | - | KKSB26B1* | | | |

Notes
1. All options are kits
2. Only for multi units
3. To operate the cool/heat selector function, options 1a and 1b are both required.
4. To mount option 1a, option 1c is required.
5. To install the demand PCB on the large casing type, the demand PCB mounting plate is required.

*Medium casing type VRV4 Middle East heat pump: modules 8HP*
*Large casing type VRV4 Middle East heat pump: modules 10~16HP*

**3D119361**

# 5 Combination table

## 5 - 1 Combination Table

**RXYTQ-U5YF**



### Unit combination restrictions: ·VRV4· outdoor units (all models) + ·15·-class indoor units

Units in scope: ·FXZQ15A· and ·FXAQ15A·.

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 ·FXZQ15A· and/or ·FXAQ15A· 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 ·FXZQ15A· and/or ·FXAQ15A· 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 ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·70·%.
   ° 105% < CR ≤ 110% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·60·%.
   ° 110% < CR ≤ 115% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·40·%.
   ° 115% < CR ≤ 120% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·25·%.
   ° 120% < CR ≤ 125% -> ·CR1· of the sum of all ·FXZQ15A· and/or ·FXAQ15A· indoor units in the system must be ≤ ·10·%.
   ° 125% < CR ≤ 130% -> ·FXZQ15A· and ·FXAQ15A· 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.

**3D104665A**

**RXYTQ-U5YF**

### VRV4
### Middle East
### Indoor unit combination restrictions

| Indoor unit combination pattern | ·VRV* DX· indoor unit | Air handling unit (AHU) (3) |
|---|---|---|
| ·VRV* DX· indoor unit | O | $O_2$ |
| Air handling unit (AHU) (3) | O | $O_1$ |

**O:** Allowed
**X**: Not allowed

Notes

**1.** $O_1$
- *Combination of ·AHU· only + control box ·EKEQFA· (the combination with ·VRV DX· indoor units is not allowed; maximum ·48·HP for ·3x400· class ·EKEXV· kit)*
  → ·X·-control is possible (up to ·3x· [·EKEXV+EKEQFA*· boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
  → ·Y·-control is possible (up to ·3x· [·EKEXV+EKEQFA*· boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.
  → ·W·-control is possible (up to ·3x· [·EKEXV+EKEQFA*· boxes] can be connected to one outdoor unit (system)). No Variable Refrigerant Temperature control possible.

- *Combination of ·AHU· only + control box ·EKEQMA· (not combined with ·VRV DX· indoor units)*
  → Z-control is possible (the allowed number of [·EKEXV + EKEQMA· boxes] is determined by the connection ratio (·90-110%·) and the capacity of the outdoor unit.

**2.** $O_2$
- Combination of ·AHU· and ·VRV DX· indoor units
  → Z-control is possible (·EKEQMA*· boxes are allowed, but with a limited connection ratio).

**3.** (3) The following units are considered AHUs:
  → ·EKEXV + EKEQ(MA/FA) + AHU· coil
  → ·FXMQ_MF· units

Information
- ·VKM· units are considered to be regular ·VRV DX· indoor units.

**3D096860A**

# 6 Capacity tables

## 6 - 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

# 6 Capacity tables

## 6 - 2 Integrated Heating Capacity Correction Factor



### RXYTQ-U5YF

### Integrated heating capacity coefficient

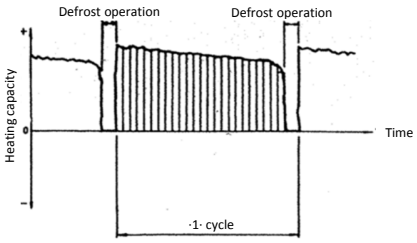
The heating capacity tables do not take into account the capacity reduction in case of frost accumulation or defrost operation.
The capacity values that take these factors into account, or in other words, the integrated heating capacity values, can be calculated as follows:

Formula **A = B * C**

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

*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 |
|---|---|---|---|---|---|---|---|
| *Integrated correction factor for frost accumulation ·(C)·* | | | | | | | |
| **8HP** | 0,95 | 0,93 | 0,88 | 0,84 | 0,85 | 0,90 | 1,00 |
| **10HP** | 0,95 | 0,93 | 0,87 | 0,79 | 0,80 | 0,88 | 1,00 |
| **12HP** | 0,95 | 0,92 | 0,87 | 0,75 | 0,76 | 0,85 | 1,00 |
| **14HP** | 0,95 | 0,92 | 0,86 | 0,72 | 0,73 | 0,84 | 1,00 |
| **16HP** | 0,95 | 0,92 | 0,86 | 0,72 | 0,72 | 0,83 | 1,00 |




Only free multi-outdoor-unit combinations are possible. Respect the following calculation rules:
The total integrated heating capacity of a multi-outdoor-unit system = the sum of the integrated heating capacity of each module separately.

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.

**3D097510**

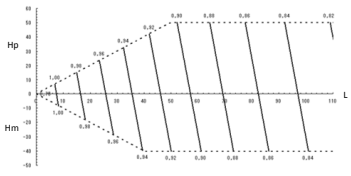
# 6 Capacity tables

## 6 - 3 Capacity Correction Factor

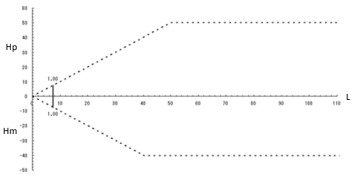


### RXYTQ8U5YF

Correction ratio for cooling capacity




Correction ratio for heating capacity




Legend

**Hp:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned higher than the indoor units.

**Hm:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned lower than the indoor units.

**L:** Equivalent piping length [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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 8HP | 9,5 | 12,7 | 19,1 | 22,2 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

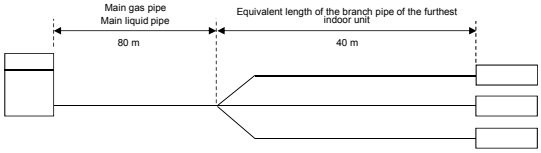
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 8HP | 1 | 0,5 | 1 | 0,5 |

5. Example



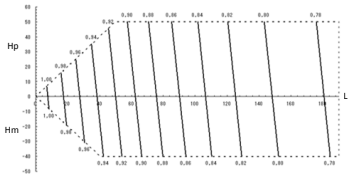

Overall equivalent length
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,86
- Heating mode = 1,0

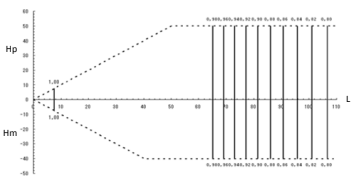
**3D119351**

### RXYTQ10U5YF

Correction ratio for cooling capacity




Correction ratio for heating capacity




Legend

**Hp:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned higher than the indoor units.

**Hm:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned lower than the indoor units.

**L:** Equivalent piping length [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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 10HP | 9,5 | 12,7 | 22,2 | 25,4 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

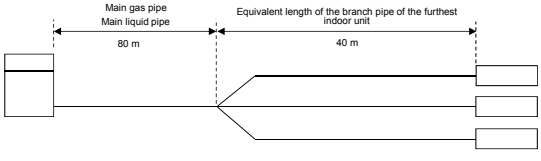
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 10HP | 1 | 0,5 | 1 | 0,5 |

5. Example




Overall equivalent length
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,87
- Heating mode = 0,90

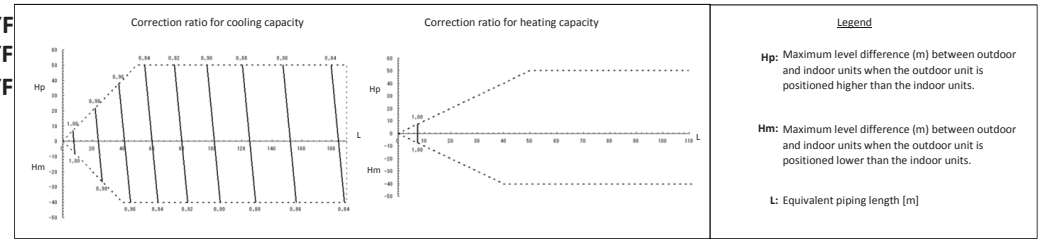
**3D119351**

# 6 Capacity tables

## 6 - 3 Capacity Correction Factor



**RXYTQ12U5YF**
**RXYTQ14U5YF**
**RXYTQ24U5YF**
**RXYTQ36U5YF**




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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 12HP | 12,7 | 15,9 | 28,6 | 28,6 |
| 14HP | 12,7 | 15,9 | 28,6 | 28,6 |
| 24HP | 15,9 | 19,1 | 34,9 | 34,9 |
| 36HP | 19,1 | 22,2 | 41,3 | 41,3 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

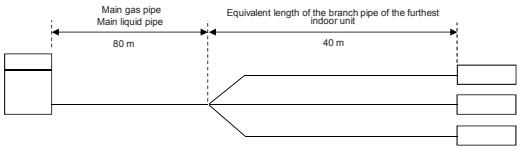
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 12/14/24/36HP | 1 | / | 1 | 0,5 |

5. Example

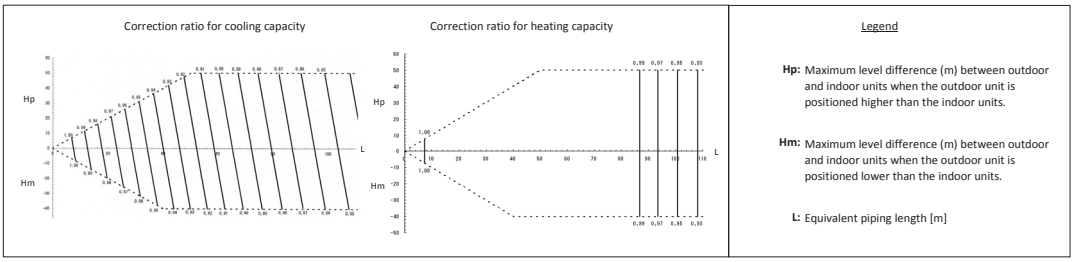



Overall equivalent length
- Cooling mode = 80 m x 1,0 + 40 m = 120 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,89
- Heating mode = 1,0

**3D119351**

**RXYTQ16U5YF**




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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 16HP | 12,7 | 15,9 | 28,6 | 31,8 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

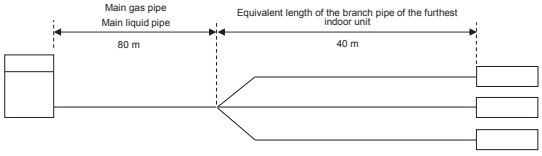
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 16HP | 1 | 0,5 | 1 | 0,5 |

5. Example




Overall equivalent length
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,88
- Heating mode = 0,99

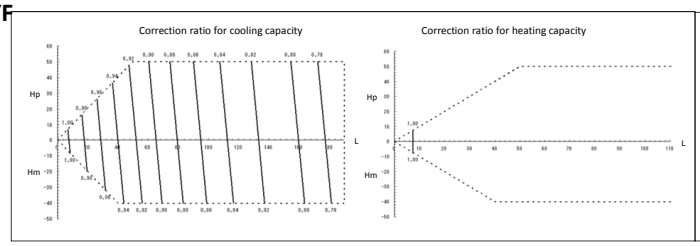
**3D119351**

# 6 Capacity tables

## 6 - 3 Capacity Correction Factor



**RXYTQ18U5YF**
**RXYTQ26-30U5YF**
**RXYTQ38U5YF**
**RXYTQ44U5YF**




Legend

**Hp:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned higher than the indoor units.

**Hm:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned lower than the indoor units.

**L:** Equivalent piping length [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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 18HP | 15,9 | 19,1 | 28,6 | 31,8 |
| 26-30HP | 19,1 | 22,2 | 34,9 | 38,1 |
| 38-44HP | 19,1 | 22,2 | 41,3 | 41,3 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

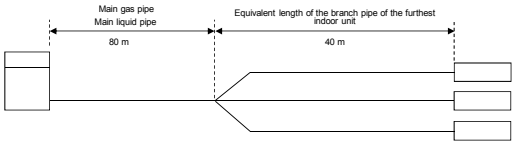
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 18/26-30/38-44HP | 1 | 0,5 | 1 | 0,5 |

5. Example RXYTQ38-44T

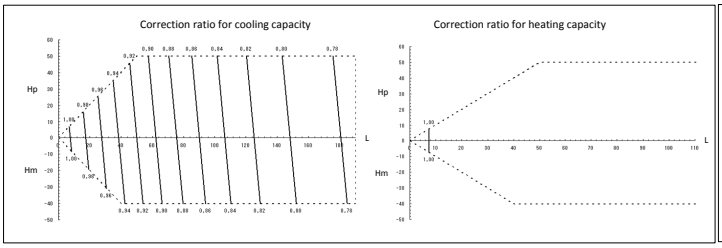



Overall equivalent length
- Cooling mode = 80 m x 1,0 + 40 m = 120 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,83
- Heating mode = 1,0

**3D119351**

**RXYTQ20U5YF**
**RXYTQ32U5YF**
**RXYTQ34U5YF**




Legend

**Hp:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned higher than the indoor units.

**Hm:** Maximum level difference (m) between outdoor and indoor units when the outdoor unit is positioned lower than the indoor units.

**L:** Equivalent piping length [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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 20HP | 15,9 | 19,1 | 28,6 | 31,8 |
| 32/34HP | 19,1 | 22,2 | 34,9 | 38,1 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

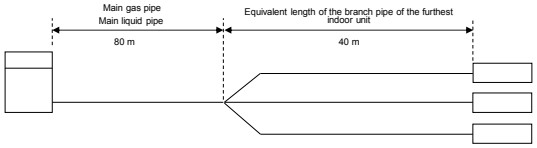
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 20/32/34HP | 1 | 0,5 | 1 | 0,5 |

5. Example RXYTQ38-44T




Overall equivalent length
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,88
- Heating mode = 1,0

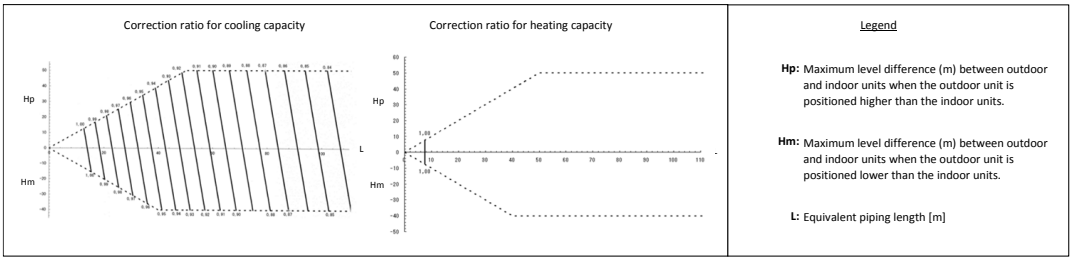
**3D119351**

# 6 Capacity tables

## 6 - 3 Capacity Correction Factor



### RXYTQ22U5YF




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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 22HP | 15,9 | 19,1 | 28,6 | 31,8 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

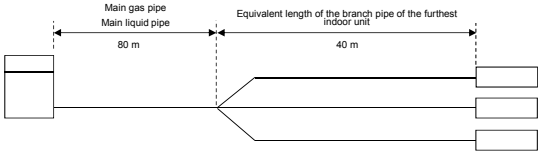
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 22HP | 1 | 0,5 | 1 | 0,5 |

5. Example

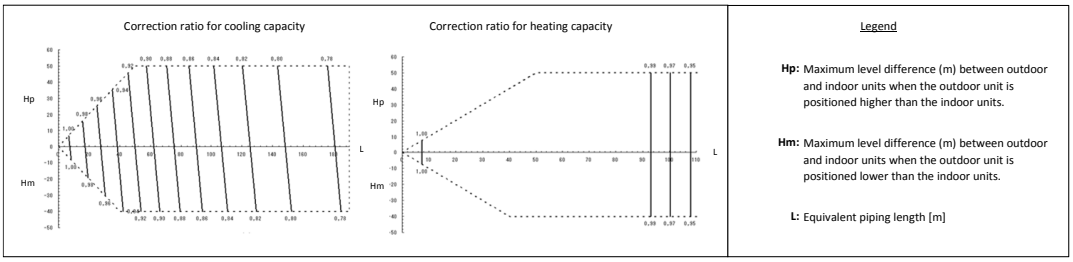



Overall equivalent length
- Cooling mode = 80 m x 0,5 + 40 m = 80 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,88
- Heating mode = 1,0

**3D119351**

### RXYTQ46U5YF




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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 46HP | 19,1 | 22,2 | 41,3 | 41,3 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

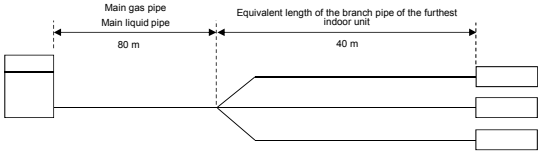
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 46HP | 1 | / | 1 | 0,5 |

5. Example




Overall equivalent length
- Cooling mode = 80 m x 1,0 + 40 m = 120 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,83
- Heating mode = 1,0

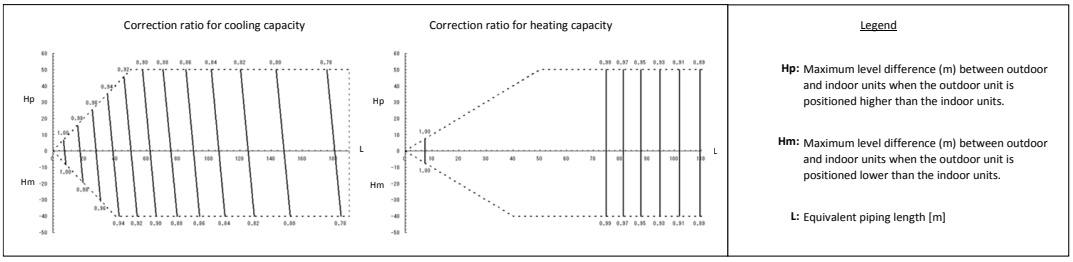
**3D119351**

# 6 Capacity tables

## 6 - 3 Capacity Correction Factor



**RXYTQ48U5YF**




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 it the above figures.

2. 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 ratio of piping to furthest indoor unit |
|---|---|---|---|---|

**Indoor connection ratio > 100%.**

| Maximum capacity of outdoor units | = | Capacity of outdoor units from capacity table at installed connection ratio. | X | Correction ratio of piping to furthest indoor unit |
|---|---|---|---|---|

3. Main liquid and gas pipe size increase

| Model | Standard liquid side Ø | Increased liquid side Ø | Standard gas side Ø | Increased gas side Ø |
|---|---|---|---|---|
| 48HP | 19,1 | 22,2 | 41,3 | 41,3 |

For the allowed system setups and the rules for when to increase the main liquid and gas piping diameter, refer to the installation manual.

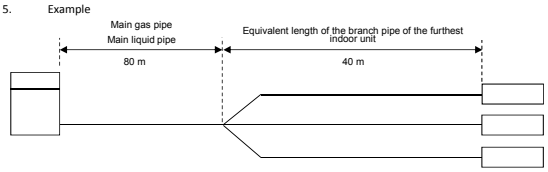
4. Overall equivalent length

| Overall equivalent length | = | Equivalent length of the main pipe | X | Correction factor | + | Equivalent length of the branch pipes |
|---|---|---|---|---|---|---|

Choose the correction factor from the following table.

| Model | Correction ratio for cooling capacity | | Correction ratio for heating capacity | |
|---|---|---|---|---|
| | Standard size | Size increase | Standard size | Size increase |
| 48HP | 1 | / | 1 | 0,5 |

5. Example




Overall equivalent length
- Cooling mode = 80 m x 1,0 + 40 m = 120 m
- Heating mode = 80 m x 0,5 + 40 m = 80 m

Capacity correction ratio (height difference = 0)
- Cooling mode = 0,83
- Heating mode = 0,97

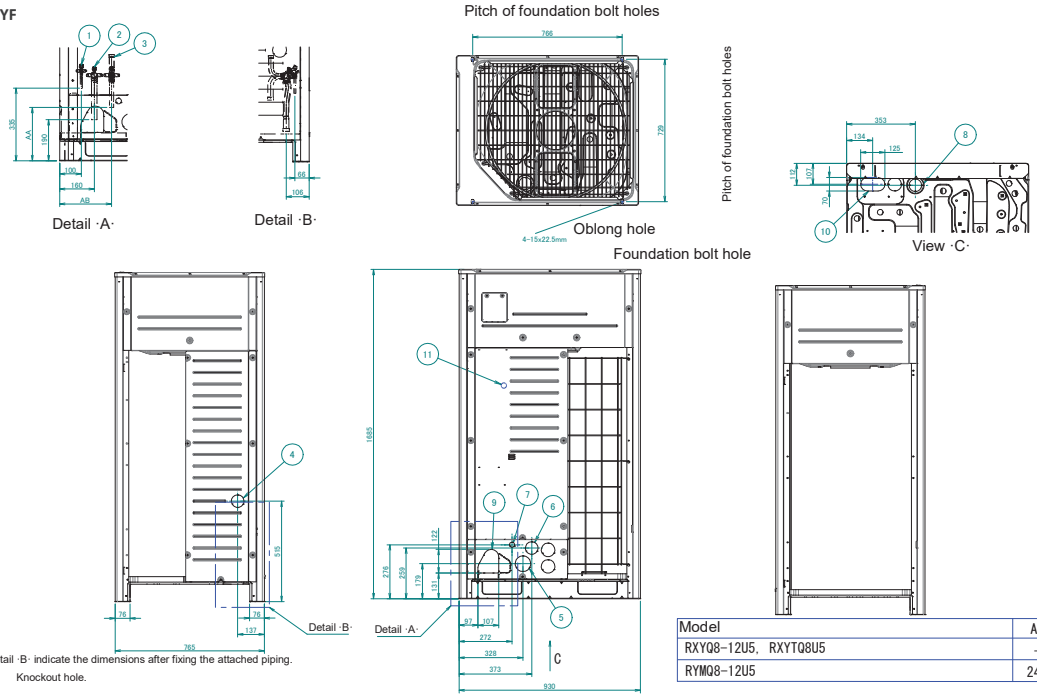
**3D119351**

# 7 Dimensional drawings

## 7 - 1 Dimensional Drawings



**RXYTQ8-U5YF**




| Model | AA | AB |
|---|---|---|
| RXYQ8-12U5, RXYTQ8U5 | – | – |
| RYMQ8-12U5 | 246 | 240 |

Notes

1. Detail ·A· and detail ·B· indicate the dimensions after fixing the attached piping.
2. Items ·4 - 10·: Knockout hole.
3. Gas pipe

| | |
|---|---|
| RYYQ8U, RYMQ8U5, RXYQ8U5, RXYQQ8U, RXYTQ8U5 RYYQ10U, RYMQ10U5, RXYQ10U5, RXYQQ10U REMQ5U, REYQ8-12U | : Ø ·19.1· brazing connection<br>: Ø ·22.2· brazing connection<br>: Ø ·25.4· brazing connection |
| RYYQ12U5, RYMQ12U5, RXYQ12U5, RXYQQ12U | : Ø ·28.6· brazing connection |

Liquid pipe

| | |
|---|---|
| RYYQ8-10U, RYMQ8-10U5, RXYQ8-10U5, RXYQQ8-10U, REMQ5U, REYQ8-12U, RXYTQ8U5 | : Ø ·9.5· brazing connection |
| RYYQ12U, RYMQ12U5, RXYQ12U5, RXYQQ12U | : Ø ·12.7· brazing connection |

Equalising pipe

| | |
|---|---|
| RYMQ8-10U5 | : Ø ·19.1· brazing connection |
| RYMQ12U5 | : Ø ·22.2· brazing connection |

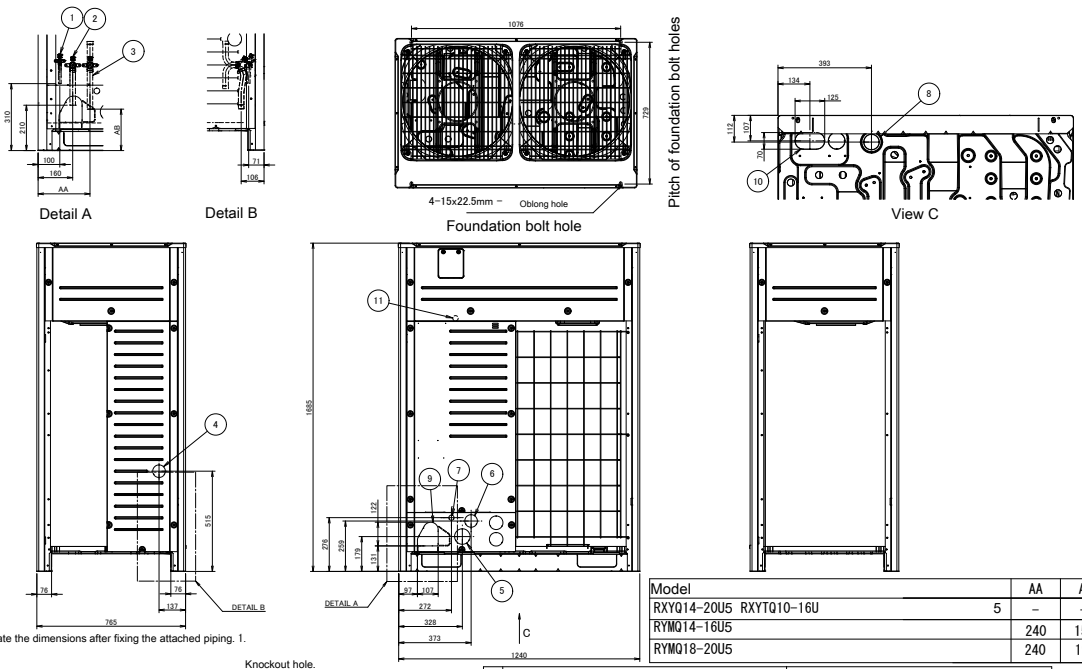
High pressure/low pressure gas pipe

| | |
|---|---|
| REMQ5U, REYQ8-12U | : Ø ·19.1· brazing connection |

| No. | Part name | |
|---|---|---|
| 11 | Grounding terminal | |
| 10 | Pipe routing hole (bottom) | |
| 9 | Pipe routing hole (front) | Inside of the switch box (·M8·) |
| 8 | Power cord routing hole (bottom) | Ø65 |
| 7 | Power cord routing hole (front) | Ø27 |
| 6 | Power cord routing hole (front) | Ø65 |
| 5 | Power cord routing hole (front) | Ø80 |
| 4 | Power cord routing hole (side) | Ø65 |
| 3 | Equalising pipe connection port<br>High pressure/low pressure gas pipe | See note ·3·.<br>See note ·3·. |
| 2 | Gas pipe connection port | See note ·3·. |
| 1 | Liquid pipe connection port | Remark |

2D119001

**RXYTQ10-16U5YF**




| Model | | AA | AB |
|---|---|---|---|
| RXYQ14-20U5 RXYTQ10-16U | 5 | – | – |
| RYMQ14-16U5 | | 240 | 155 |
| RYMQ18-20U5 | | 240 | 192 |

Notes

1. Detail A and detail B indicate the dimensions after fixing the attached piping. 1.
2. Items 4 - 10: Knockout hole.
3. Gas pipe

| | |
|---|---|
| RXYTQ10U5 | Ø 22.2 brazing connection |
| RYYQ14-20U, RYMQ14-20U5 RXYQ14-20U5, RXYQQ14-20U, RXYTQ12-16U5 Liquid pipe | Ø 25.4 brazing connection<br>Ø 28.6 brazing connection |
| RXYTQ10U5 | Ø 9.5 brazing connection |
| RYYQ14-16U, RYMQ14-16U5, RXYQ14-16U5, RXYQQ14-16U, REYQ14-20U, RXYTQ12-16U5 | Ø 12.7 brazing connection<br>Ø 15.9 brazing connection |
| RYYQ18-20U, RYMQ18-20U5, RXYQ18-20U5, RXYQQ18-20U Equalising pipe | |
| RYMQ14-16U5 | Ø 22.2 brazing connection |
| RYMQ18-20U5 | Ø 28.6 brazing connection |

High pressure/low pressure gas pipe

| | |
|---|---|
| REYQ14-20U | Ø 22.2 brazing connection |

| No. | Part name | |
|---|---|---|
| 11 | Grounding terminal | |
| 10 | Pipe routing hole (bottom) | |
| 9 | Pipe routing hole (front) | Inside of the switch box (M8) |
| 8 | Power cord routing hole (bottom) | Ø65 |
| 7 | Power cord routing hole (front) | Ø27 |
| 6 | Power cord routing hole (front) | Ø65 |
| 5 | Power cord routing hole (front) | Ø80 |
| 4 | Power cord routing hole (side) | Ø65 |
| 3 | Equalising pipe connection port<br>High pressure/low pressure gas pipe | See note 3. |
| 2 | Gas pipe connection port | See note 3. |
| 1 | Liquid pipe connection port | See note 3. |
| | Part name | Remark |

2D119091

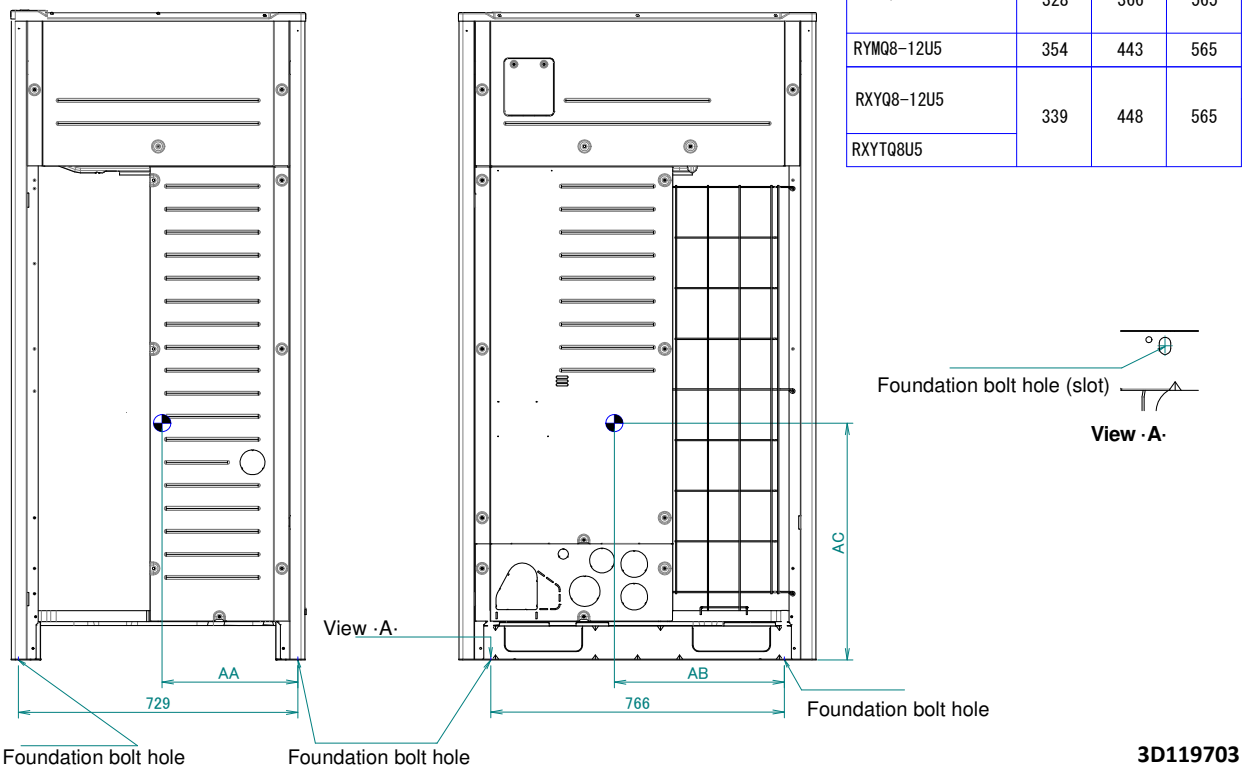
# 8 Centre of gravity

## 8 - 1 Centre of Gravity



**RXYTQ8U5YF**

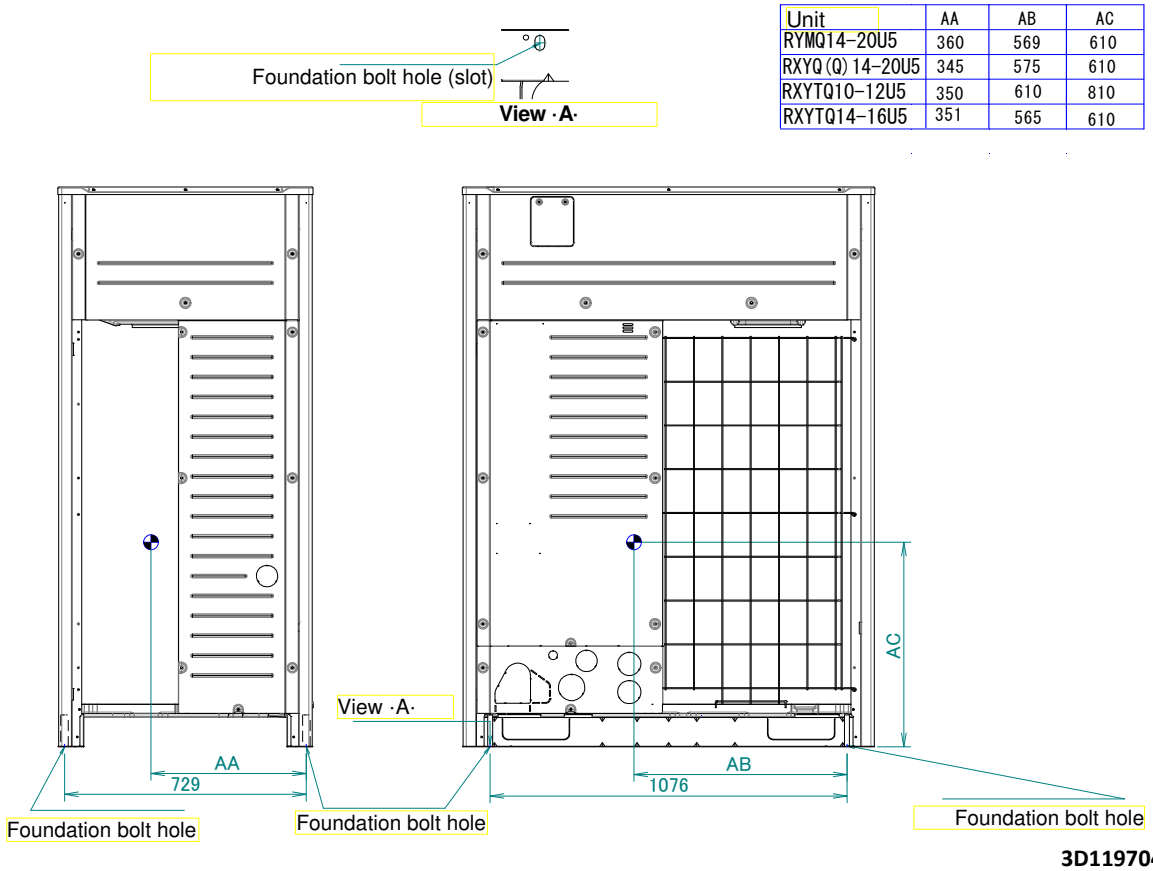
| Unit | AA | AB | AC |
|---|---|---|---|
| REMQ5U | 328 | 366 | 565 |
| RYMQ8-12U5 | 354 | 443 | 565 |
| RXYQ8-12U5 | 339 | 448 | 565 |
| RXYTQ8U5 | | | |




3D119703

**RXYTQ10-16U5YF**

| Unit | AA | AB | AC |
|---|---|---|---|
| RYMQ14-20U5 | 360 | 569 | 610 |
| RXYQ(Q)14-20U5 | 345 | 575 | 610 |
| RXYTQ10-12U5 | 350 | 610 | 810 |
| RXYTQ14-16U5 | 351 | 565 | 610 |

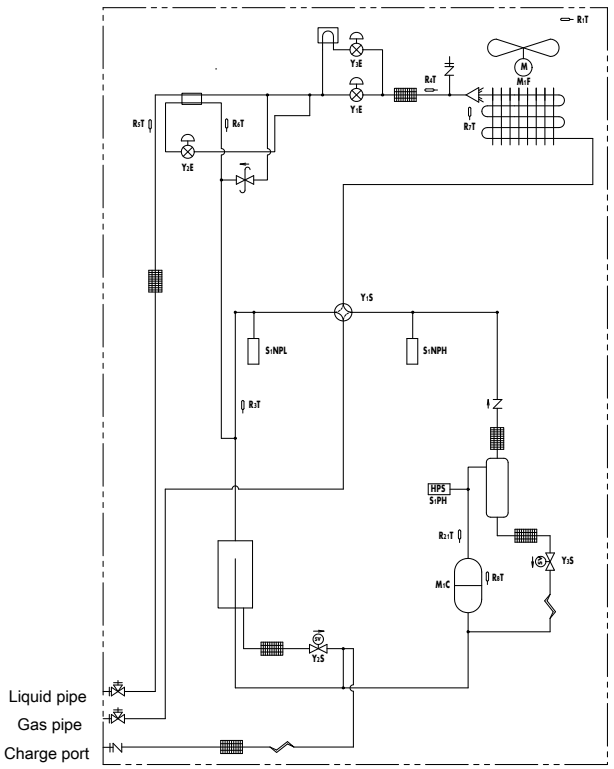



3D119704

# 9 Piping diagrams

## 9 - 1 Piping Diagrams

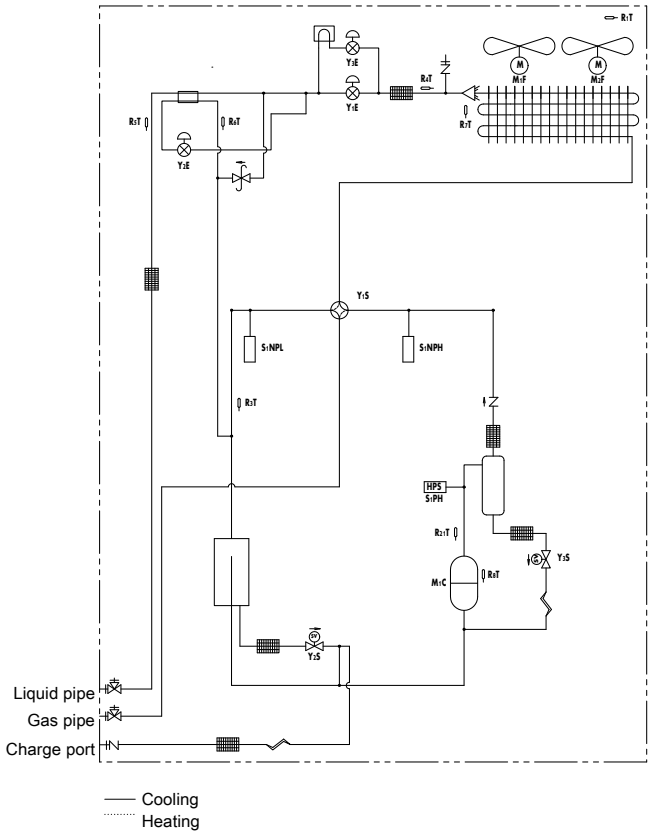
**RXYTQ8U5YF**




- Charge port / Service port
- Stop valve
- Filter
- Check valve
- Pressure relief valve
- Thermistor
- Heat sink (PCB)
- Capillary tube
- Expansion valve
- 4-way valve
- Propeller fan
- High pressure switch
- Low pressure sensor
- High pressure sensor
- Accumulator
- Heat exchanger
- Compressor
- Oil separator
- Double tube heat exchanger
- Distributor
- Solenoid valve

**3D118179**

**RXYTQ10-12U5YF**



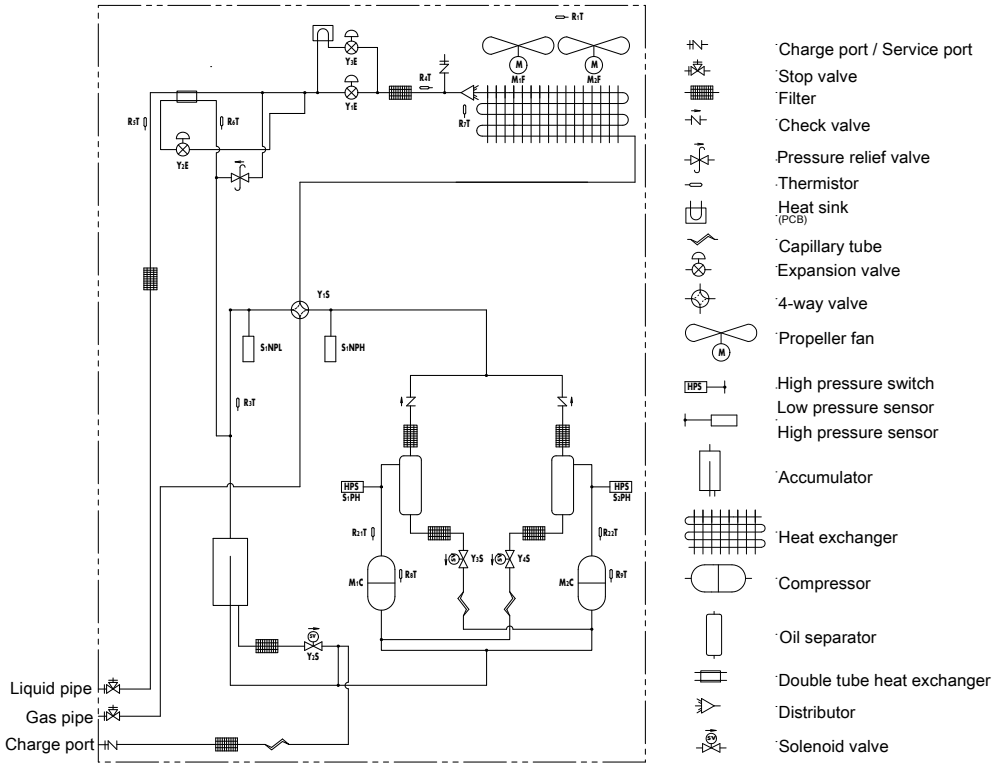

- Charge port / Service port
- Stop valve
- Filter
- Check valve
- Pressure relief valve
- Thermistor
- Heat sink (PCB)
- Capillary tube
- Expansion valve
- 4-way valve
- Propeller fan
- High pressure switch
- Low pressure sensor
- High pressure sensor
- Accumulator
- Heat exchanger
- Compressor
- Oil separator
- Double tube heat exchanger
- Distributor
- Solenoid valve

**3D119341**

# 9 Piping diagrams

## 9 - 1 Piping Diagrams

**RXYQ14-16U5YF**




- Charge port / Service port
- Stop valve
- Filter
- Check valve
- Pressure relief valve
- Thermistor
- Heat sink (PCB)
- Capillary tube
- Expansion valve
- 4-way valve
- Propeller fan
- High pressure switch
- Low pressure sensor
- High pressure sensor
- Accumulator
- Heat exchanger
- Compressor
- Oil separator
- Double tube heat exchanger
- Distributor
- Solenoid valve

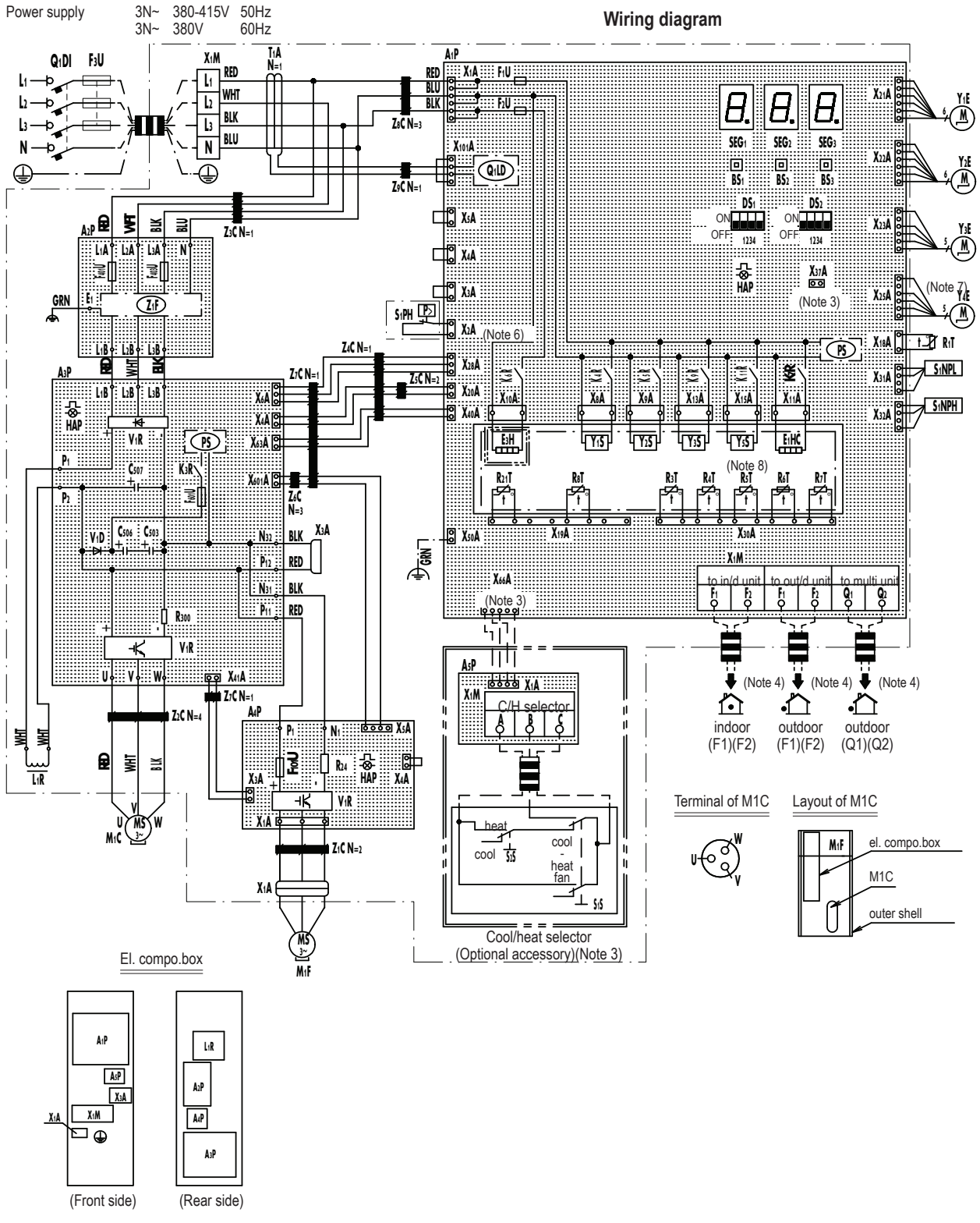
**3D118180**

# 10 Wiring diagrams

## 10 - 1 Wiring Diagrams - Three Phase

**RXYTQ8U5YF**





# 10 Wiring diagrams

## 10 - 1 Wiring Diagrams - Three Phase

**RXYTQ8U5YF**



| | | | |
|---|---|---|---|
| A1P | Printed Circuit Board (Main) | R3T | Thermistor (Accumulator) |
| A2P | Printed Circuit Board (Noise Filter) | R4T | Thermistor (Heat Exc,Liq,Pipe) |
| A3P | Printed Circuit Board (Inv) | R5T | Thermistor (Subcool,Liq,Pipe) |
| A4P | Printed Circuit Board (Fan) | R6T | Thermistor (Heat Exc,Gas Pipe) |
| A5P | Printed Circuit Board (ABC I/P)(Option) | R7T | Thermistor (Heat Exc,Deicer) |
| BS1~3 (A1P) | Push Button Switch (Mode,Set,Return) | R8T | Thermistor (M1C body) |
| C503,C506,C507 (A3P) | Capacitor | R21T | Thermistor (M1C discharge) |
| DS1,DS2 (A1P) | DIP Switch | S1NPH | Pressure Sensor (High) |
| E1HC | Crankcase Heater | S1NPL | Pressure Sensor (Low) |
| E3H | Drainpan Heater (Option) | S1PH | Pressure Switch (Disch) |
| F1U,F2U (A1P) | Fuse (T,3,15A,250V) | SEG1~SEG3 (A1P) | 7-Segment Display |
| F3U | Field Fuse | T1A | Current Sensor |
| F101U (A4P) | Fuse | V1D (A3P) | Diode |
| F401U,F403U (A2P) | Fuse | V1R (A3P,A4P) | Power Module |
| F601U (A3P) | Fuse | X*A | Connector |
| HAP (A1P,A3P, A4P) | Pilotlamp (Service Monitor-Green) | X1M (A1P) | Terminal Block (Control) |
| K3R (A3P) | Magnetic Relay | X1M (A5P) | Terminal Block (Power Supply)(Option) |
| K4R (A1P) | Magnetic Relay (Y1S) | Y1E | Electronic Expansion Valve(Main) |
| K5R (A1P) | Magnetic Relay (Y2S) | Y2E | Electronic Expansion Valve (Injection) |
| K6R (A1P) | Magnetic Relay (E3H) | Y3E | Electronic Expansion Valve (Refrigerant Jacket) |
| K7R (A1P) | Magnetic Relay (E1HC) | Y4E | Electronic Expansion Valve (Storage Vessel) |
| K9R (A1P) | Magnetic Relay (Y3S) | Y1S | Solenoid Valve (Main) |
| K11R (A1P) | Magnetic Relay (Y5S) | Y2S | Solenoid Valve (Accumulator Oil Return) |
| L1R | Reactor | Y3S | Solenoid Valve (Oil1) |
| M1C | Motor (Compressor) | Y5S | Solenoid Valve (Sub) |
| M1F | Motor (Fan) | Z*C | Noise Filter (Ferrite Core) |
| PS (A1P,A3P) | Switching Power Supply | Z*F (A2P) | Noise Filter (With Surge Absorber) |
| Q1DI | Field Earth Leakage Breaker | Connector For Optional Accessories | |
| Q1LD (A1P) | Field Earth Current Detector | X10A | Connector (Drainpan Heater) |
| R24 (A4P) | Resistor (Current Sensor) | X37A | Connector (Power Adapter) |
| R300 (A3P) | Resistor (Current Sensor) | X66A | Connector (Remote Switching Cool/Heat Selector) |
| R1T | Thermistor (Air) | | |

**NOTES**

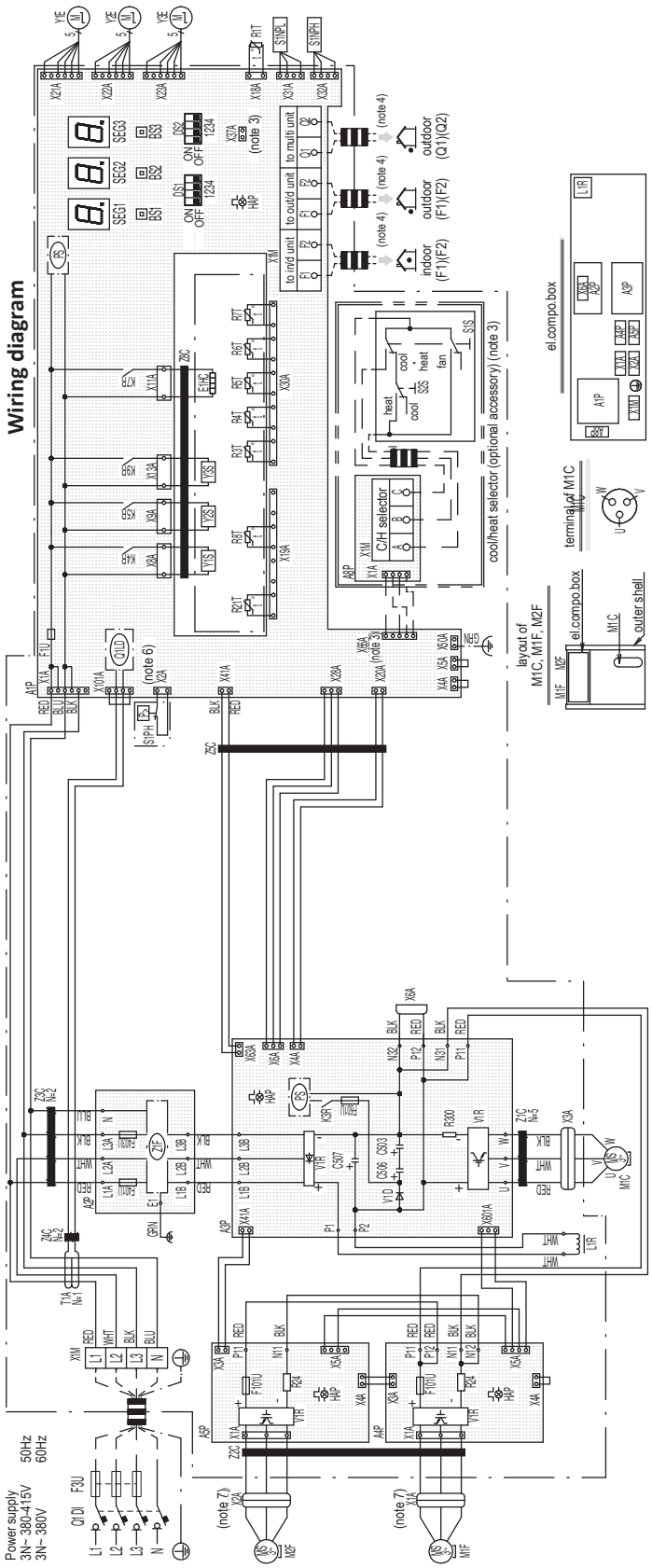
1. This wiring diagram applies only to the outdoor unit.
2. ▬▮▬: :field wiring, ⊏⊐⊏⊐: terminal block, ⊂⊃: connector, -○-: terminal, ⏚: protective earth (screw), ⏚: functional earth, ——: earth wiring, — — —: field supply, ▭: PCB, ▭: switch box, ▭: option
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, outdoor-multi transmission Q1-Q2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to “service precaution” label on el. compo. box cover.
6. When operating, don’t shortcircuit the protection devices (S1PH).
7. Only for RYYQ model.
8. Only for RYYQ/RYMQ model.
9. Colors: BLK: Black, RED: Red, BLU: Blue, WHT: White, GRN: Green.

**2D117534**

# 10 Wiring diagrams

## 10 - 1 Wiring Diagrams - Three Phase

**RXYTQ10-12U5YF**




| | |
|---|---|
| A1P | Printed circuit board (main) |
| A2P | Printed circuit board (noise filter) |
| A3P | Printed circuit board (inv) |
| A4P,A5P | Printed circuit board (fan) |
| A8P | Printed circuit board (abc i/p)(option) |
| BS1~3 (A1P) | Push button switch (mode,set,return) |
| C503,C506,C507 (A3P) | Capacitor |
| DS1,DS2 (A1P) | Dip switch |
| E1HC | Crankcase heater |
| F1U (A1P) | Fuse (T,3,15A,250V) |
| F3U | Field fuse |
| F101U (A4P,A5P) | Fuse |
| F401U,F403U (A2P) | Fuse |
| F601U (A3P) | Fuse |
| HAP (A1P,A3P,A4P,A5P) | Pilotlamp (service monitor-green) |
| K3R (A3P) | Magnetic relay |
| K4R (A1P) | Magnetic relay (Y1S) |
| K5R (A1P) | Magnetic relay (Y2S) |
| K7R (A1P) | Magnetic relay (E1HC) |
| K9R (A1P) | Magnetic relay (Y3S) |
| L1R | Reactor |
| M1C | Motor (compressor) |
| M1F,M2F | Motor (fan) |
| PS (A1P,A3P) | Switching power supply |
| Q1DI | Field earth leakage breaker |
| Q1LD (A1P) | Field earth current detector |
| R24 (A4P,A5P) | Resistor (current sensor) |
| R300 (A3P) | Resistor (current sensor) |
| R1T | Thermistor (air) |
| R3T | Thermistor (accumulator) |
| R4T | Thermistor (heat exc. Liq. Pipe) |
| R5T | Thermistor (subcool liq. Pipe) |
| R6T | Thermistor (heat exc. Gas pipe) |
| R7T | Thermistor (heat exc. Deicer) |
| R8T | Thermistor (M1C body) |
| R21T | Thermistor (M1C discharge) |
| S1NPH | Pressure sensor (high) |
| S1NPL | Pressure sensor (low) |
| S1PH | Pressure switch (discharge) |
| SEG1~SEG3 (A1P) | 7-Segment display |
| T1A | Current sensor |
| V1D (A3P) | Diode |
| V1R (A3P,A4P,A5P) | Power module |
| X*A | Connector |
| X1M | Terminal block |
| X1M (A1P) | Terminal block (control) |
| X1M (A8P) | Terminal block (power supply) |
| Y1E | Electronic expansion valve (main) |
| Y2E | Electronic expansion valve (injection) |
| Y3E | Electronic expansion valve (refrigerant jacket) |
| Y1S | Solenoid valve (main) |
| Y2S | Solenoid valve (accumulator oil return) |
| Y3S | Solenoid valve (oil1) |
| Z*C | Noise filter (ferrite core) |
| Z*F (A2P) | Noise filter (with surge absorber) |
| Connector for optional accessories | |
| X37A | Connector (power adapter) |
| X66A | Connector (remote switching cool/heat selector) |

**NOTES**

1. This wiring diagram applies only to the outdoor unit.
2. ⊏▮▮⊐: Field wiring, ⊏⊐⊏⊐: terminal block, ⊏o o⊐: connector, -○- :terminal, ⊕: protective earth (screw), ⏚: functional earth, ——: earth wiring, — — —: field supply, ▭: PCB, ⊏ ⊐: switch box, ⊏▭⊐ : option
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, outdoor-multi transmission Q1-Q2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to “service precaution” label on el. Compo. Box cover.
6. When operating, don’t shortcircuit the protection devices (S1PH)
7. Connector x1a (m1f) is red, connector x2a (m2f) is white.
8. Colors: BLK: black, RED: red, BLU: blue, WHT: white, GRN: green.

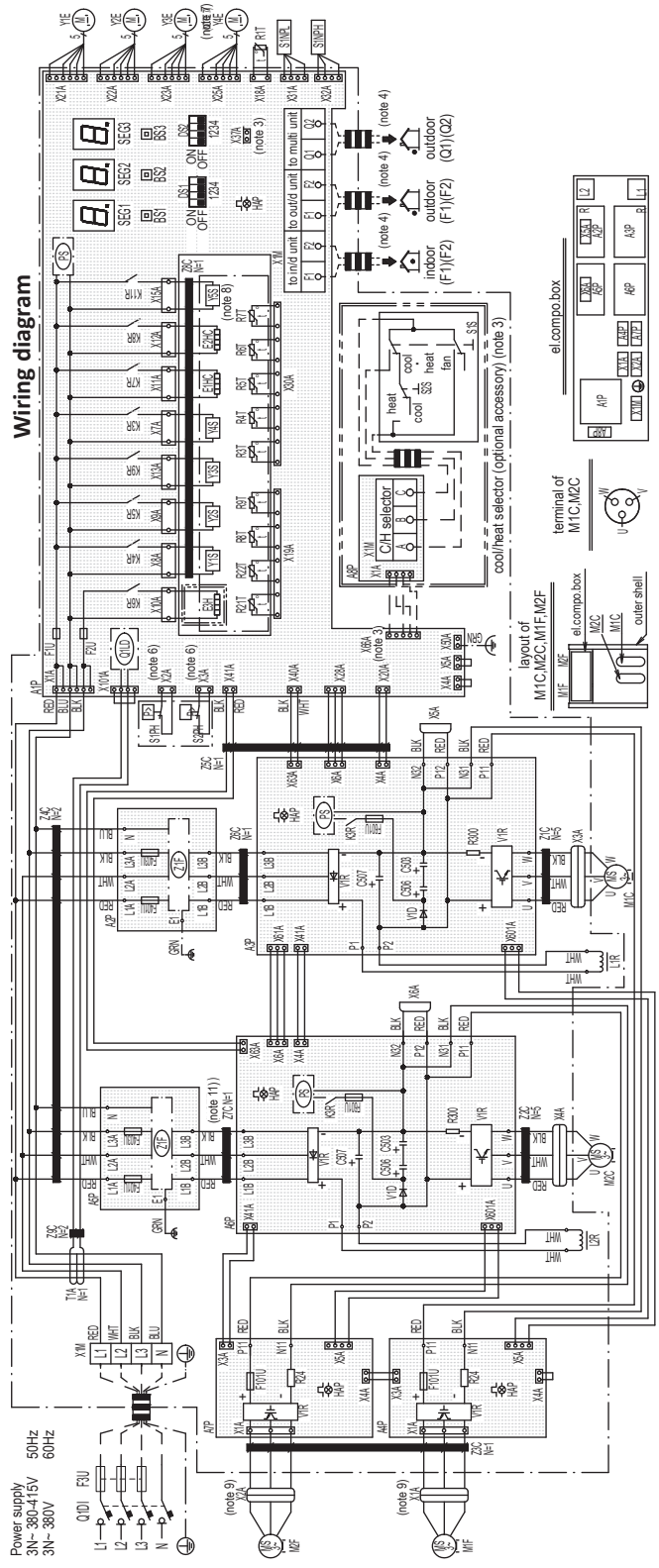
**2D120654A**

# 10 Wiring diagrams

## 10 - 1 Wiring Diagrams - Three Phase



**RXYTQ14-16U5YF**




| | |
|---|---|
| A1P | Printed circuit board (main) |
| A2P, A5P | Printed circuit board (noise filter) |
| A3P, A6P | Printed circuit board (inv) |
| A4P, A7P | Printed circuit board (fan) |
| A8P | Printed circuit board (ABC I/P) |
| BS1~3 (A1P) | Push button switch (mode, set, return) |
| C503, C506, C507 (A3P, A6P) | Capacitor |
| DS1, DS2 (A1P) | Dip switch S1PH, |
| E1HC, E2HC | Crankcase heater |
| E3H | Drainpan heater (option) |
| F1U, F2U (A1P) | Fuse (T, 3, 15A, 250V) |
| F3U | Field fuse |
| F101U (A4P, A7P) | Fuse |
| F401U, F403U (A2P, A5P) | Fuse |
| F601U (A3P, A6P) | Fuse |
| HAP (A1P, A3P, A4P, A6P, A7P) | Pilotlamp (service monitor-green) |
| K3R (A3P, A6P) | Magnetic relay |
| K3R (A1P) | Magnetic relay (Y4S) |
| K4R (A1P) | Magnetic relay (Y1S) |
| K5R (A1P) | Magnetic relay (Y2S) |
| K6R (A1P) | Magnetic relay (E3H) |
| K7R (A1P) | Magnetic relay (E1HC) |
| K8R (A1P) | Magnetic relay (E2HC) |
| K9R (A1P) | Magnetic relay (Y3S) |
| K11R (A1P) | Magnetic relay (Y5S) |
| L1R, L2R | Reactor |
| M1C, M2C | Motor (compressor) |
| M1F, M2F | Motor (fan) |
| PS (A1P, A3P, A6P) | Switching power supply |
| Q1DI | Field earth leakage breaker |
| Q1LD (A1P) | Field earth current detector |
| R24 (A4P, A7P) | Resistor (current sensor) |
| R300 (A3P, A6P) | Resistor (current sensor) |
| R1T | Thermistor (air) |
| R3T | Thermistor (accumulator) |
| R4T | Thermistor (heat exc, liq, pipe) |
| R5T | Thermistor (subcool, liq, pipe) |
| R6T | Thermistor (heat exc, gas pipe) |
| R7T | Thermistor (heat exc, deicer) |
| R8T, R9T | Thermistor (M1C, M2C body) |
| R21T, R22T | Thermistor (M1C, M2C discharge) |
| S1NPH | Pressure sensor (high) |
| S1NPL | Pressure sensor (low) |
| S1PH, S2PH | Pressure switch (disch) |
| SEG1~SEG3 (A1P) | 7-segment display |
| T1A | Current sensor |
| V1D (A3P, A6P) | Diode |
| V1R (A3P, A4P, A6P, A7P) | Power module |
| X*A | Connector |
| X1M (A1P) | Terminal block (control) |
| X1M (A8P) | Terminal block (power supply) |
| Y1E | Electronic expansion valve (main) |
| Y2E | Electronic expansion valve (injection) |
| Y3E | Electronic expansion valve (refrigerant jacket) |
| Y4E | Electronic expansion valve (storage vessel (note 7) |
| Y1S | Solenoid valve (main) |
| Y2S | Solenoid valve (accumulator oil return) |
| Y3S | Solenoid valve (oil1) |
| Y4S | Solenoid valve (oil2) |
| Y5S | Solenoid valve (sub) (note 8) |
| Z*C | Noise filter (ferrite core) |
| Z*F (A2P, A5P) | Noise filter (with surge absorber) |
| | |
| Connector for optional accessories | |
| X10A | Connector (drainpan heater) |
| X37A | Connector (power adapter) |
| X66A | Connector (remote switching |
| | Cool/heat selector) |

**NOTES**

1. This wiring diagram applies only to the outdoor unit.
2. ⊐▮▮▮⊏: Field wiring, ▭▭▭: terminal block, ⊡⊡: connector, -○- :terminal, ⏚: protective earth (screw), ⏚: functional earth, ——·——: earth wiring, — — —: field supply, ▭: pcb, ▭▭: switch box, ▭▭: option
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, outdoor-multi transmission Q1-Q2, refer to the installation manual.
5. How to use BS1~3 switch. Refer to "service precaution" label on el. Compo. Box cover.
6. When operating, don't shortcircuit the protection devices (S1PH,S2PH)
7. Only for RYYQ model.
8. Only for RYYQ/RYMQ model.
9. Connector X1A (M1F) is red, connector X2A (M2F) is white.
10. Colors: BLK:black, RED:red, BLU:blue, WHT:white, GRN:green.
11. Only for 14,16 class

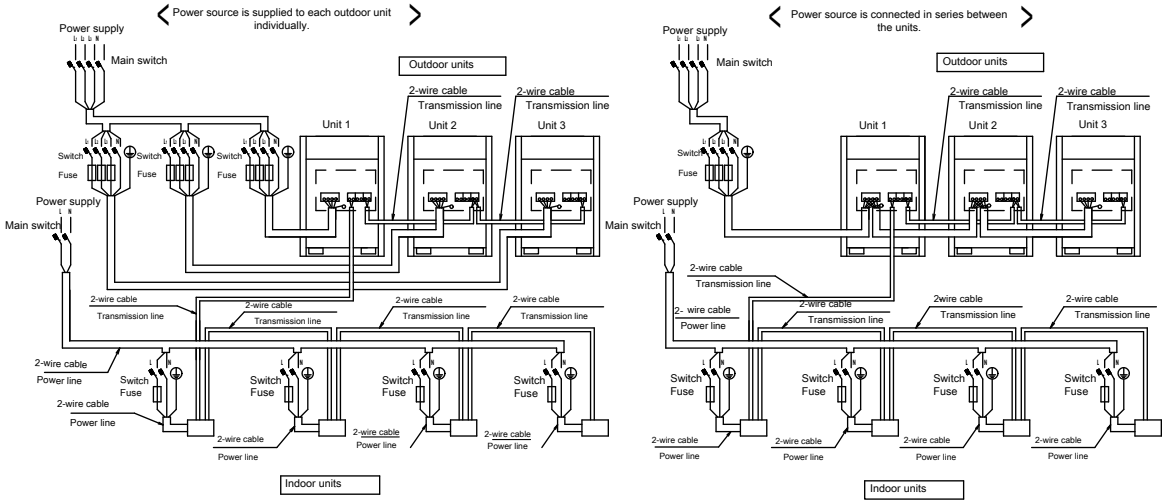
**2D117536C**

# 11 External connection diagrams

## 11 - 1 External Connection Diagrams

**RXYTQ8-16U5YF** Notes

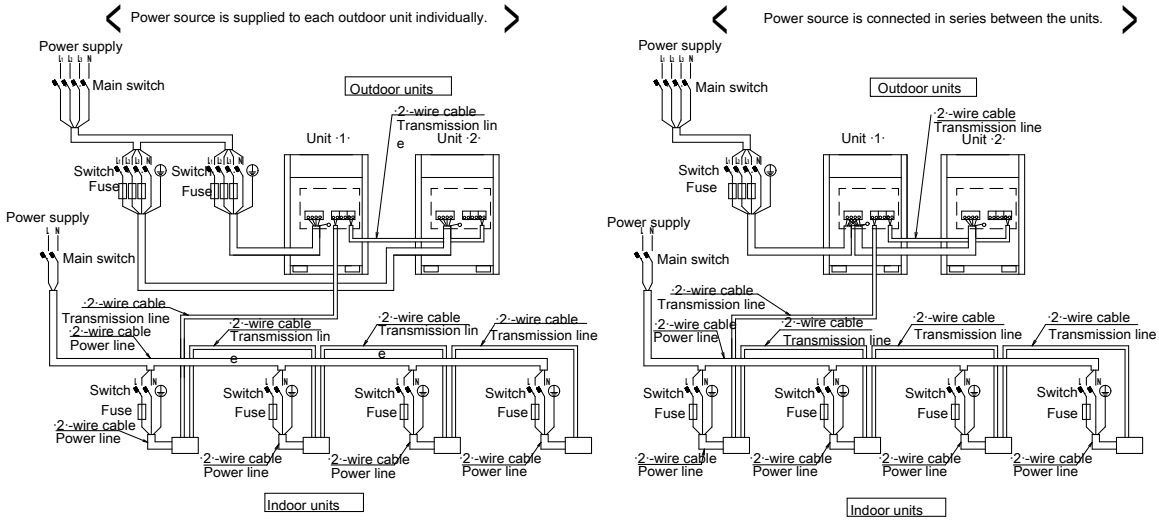
1. All wiring, components and materials to be procured on-site must comply with the applicable legislation.
2. Use copper conductors only
3. For details, refer to the wiring diagram attached to the outdoor unit.
4. Install a circuit breaker for safety.
5. All field wiring and components must be provided 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 switch to control the multiple power sources that the various components of the system make use of.
10. The capacity of UNIT1 must be larger than that of UNIT2 when the power source is connected in series between the units.
    The capacity of UNIT 2 must be larger than that of UNIT3 when the power source is connected in series between the units.
11. 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.
12. Install an earth leakage circuit breaker.




**3D119200**

**RXYTQ8-16U5YF** 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 details, refer to the wiring diagram attached to the outdoor 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 switch to control the multiple power sources that the various components of the system make use of.
10. The capacity of UNIT1 must be larger than that of UNIT2 when the power source is connected in series between the units.
11. 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.
12. Install an earth leakage circuit breaker.



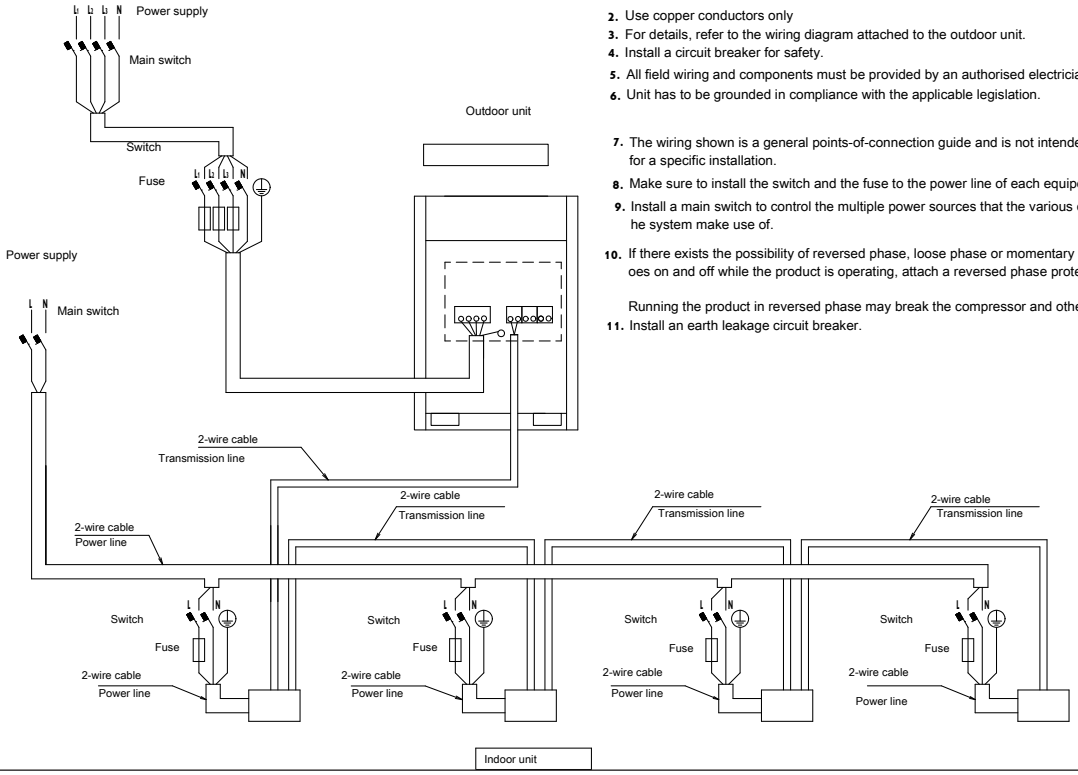

**3D119316**

# 11 External connection diagrams

## 11 - 1 External Connection Diagrams

**RXYTQ8-16U5YF**






Notes

1. All wiring, components and materials to be procured on-site must comply with the applicable le gislation.
2. Use copper conductors only
3. For details, refer to the wiring diagram attached to the outdoor 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 switch to control the multiple power sources that the various components of t he system make use of.
10. If there exists the possibility of reversed phase, loose phase or momentary blackout, or if the power g oes on and off while the product is operating, attach a reversed phase protection circuit locally.

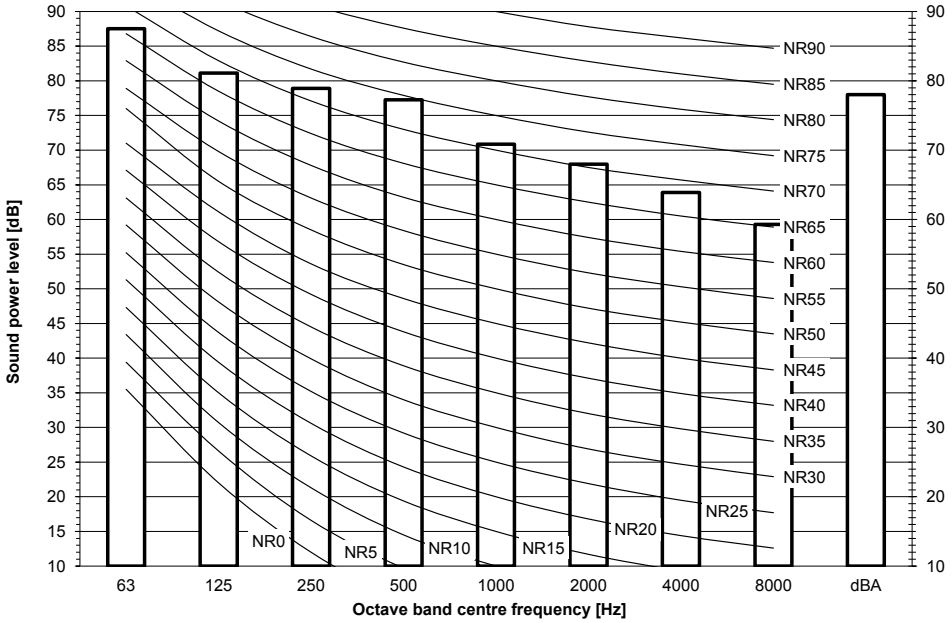
    Running the product in reversed phase may break the compressor and other parts.
11. Install an earth leakage circuit breaker.

**3D119317**

# 12 Sound data

## 12 - 1 Sound Power Spectrum

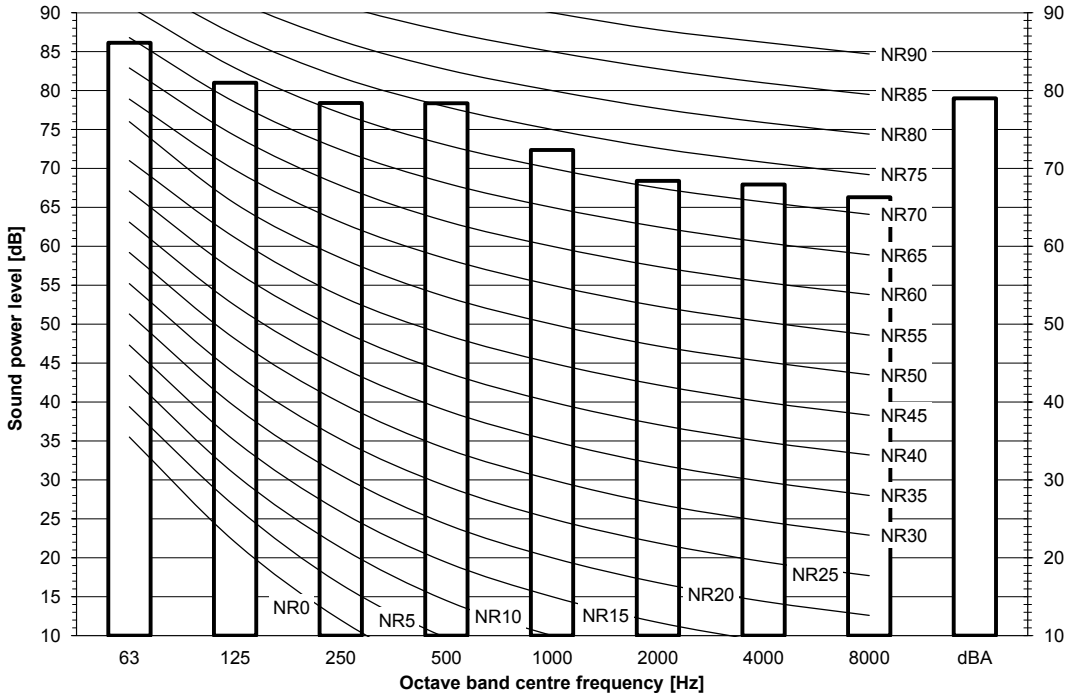
**RXYTQ8U5YF**




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

**3D119528**

**RXYTQ10U5YF**




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

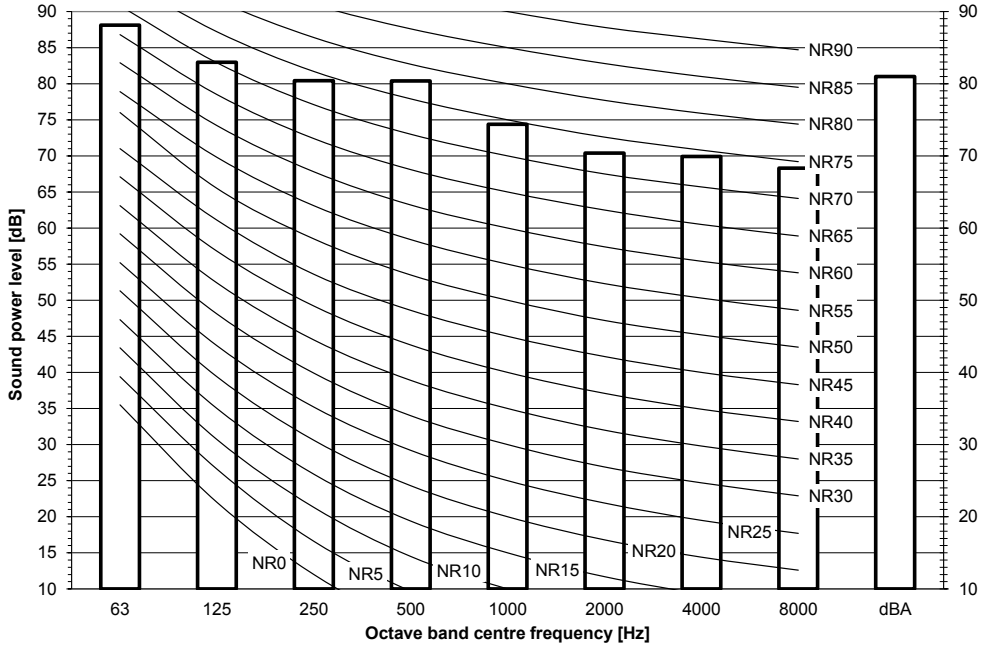
**3D119342**

# 12 Sound data

## 12 - 1 Sound Power Spectrum



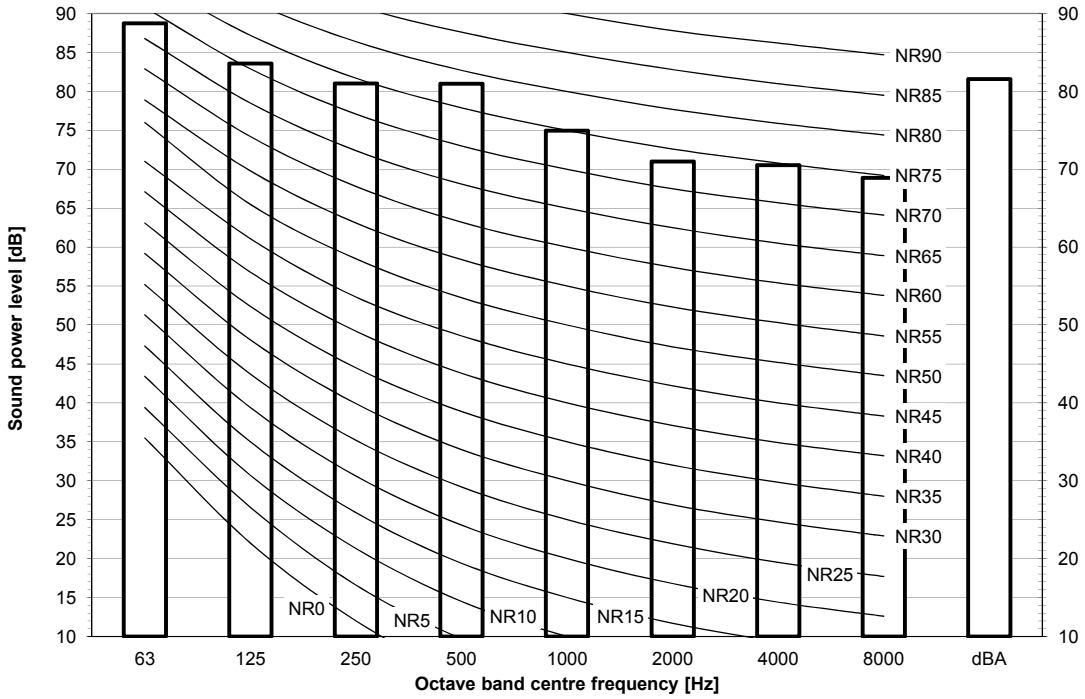
**RXYTQ12U5YF**




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

**3D119343**

**RXYTQ14U5YF**




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

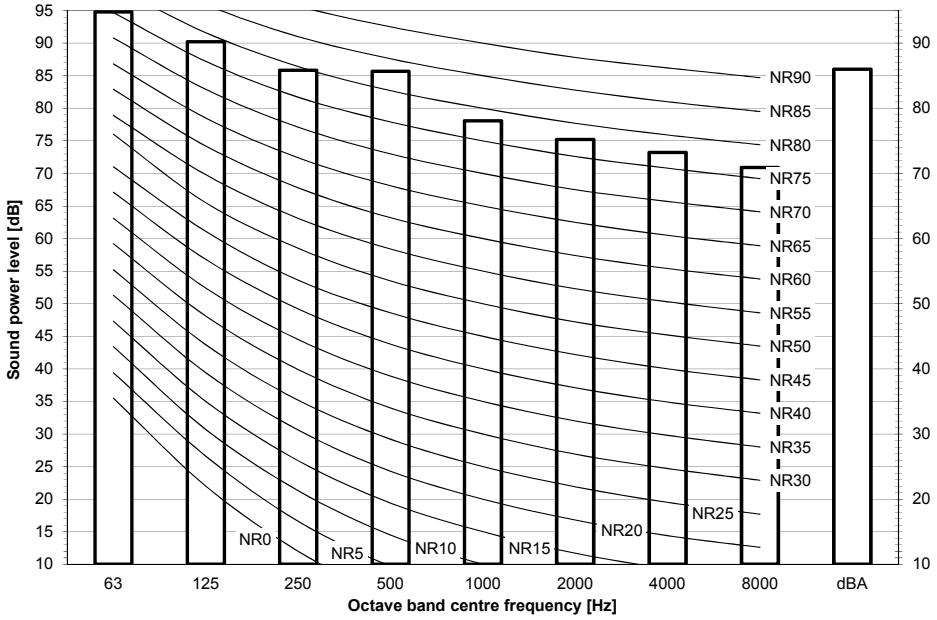
**3D119366**

# 12 Sound data

## 12 - 1 Sound Power Spectrum

**RXYTQ16U5YF**






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

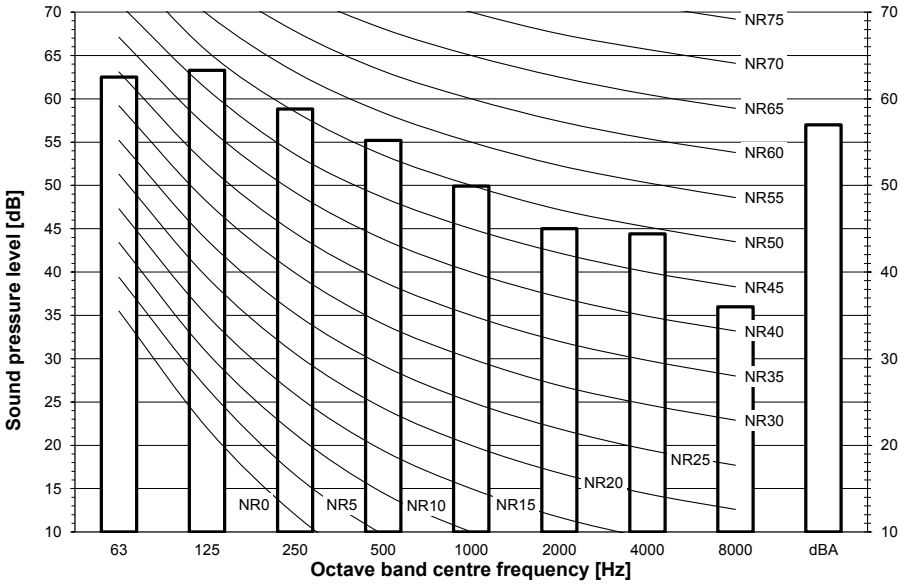
**3D119368**

# 12 Sound data

## 12 - 2 Sound Pressure Spectrum

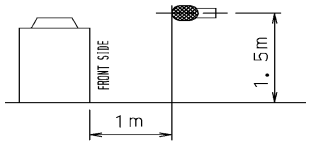


**RXYTQ8U5YF**



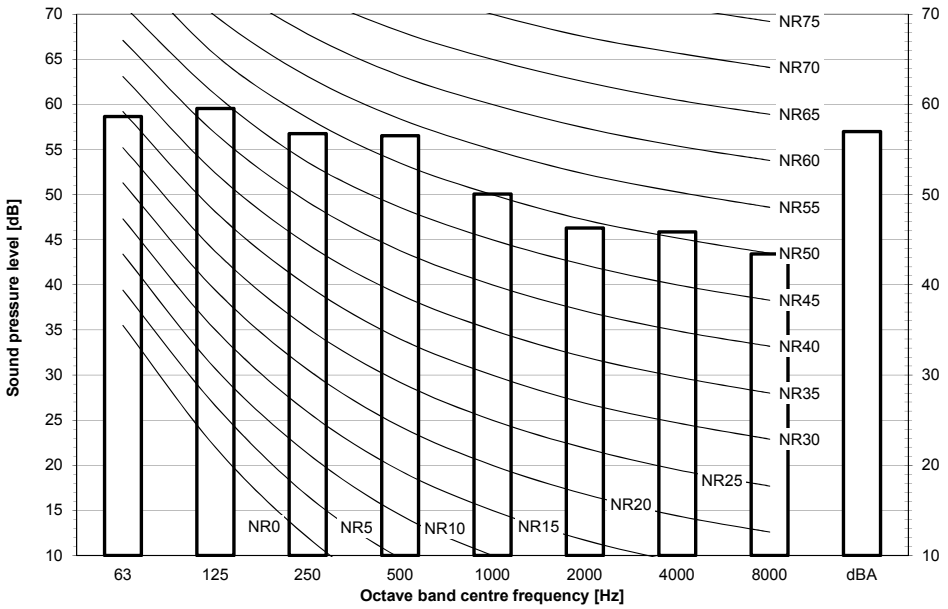

Notes

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



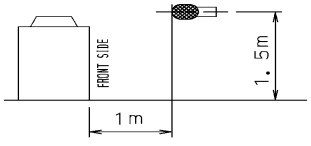

**3D119521**

**RXYTQ10U5YF**




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



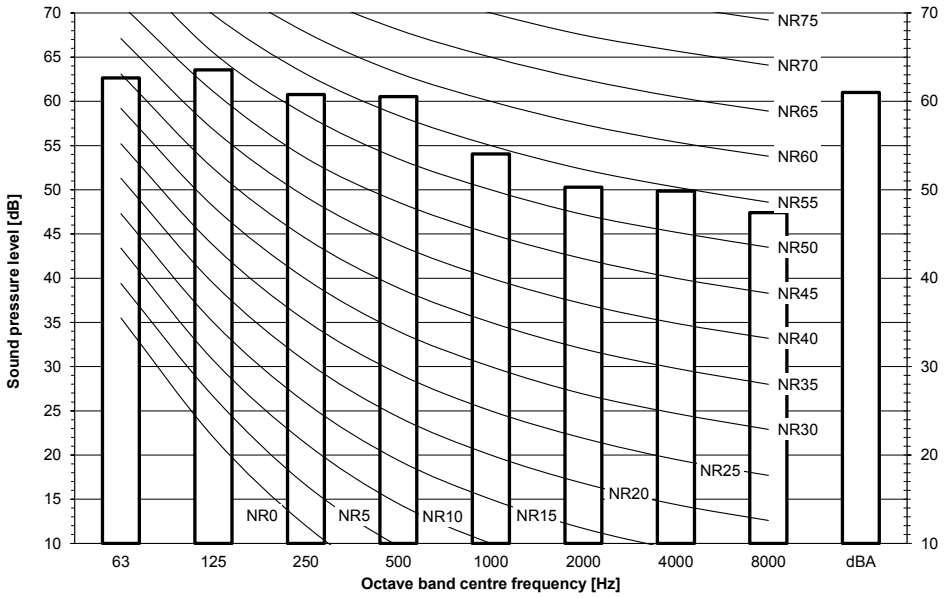

**3D119344**

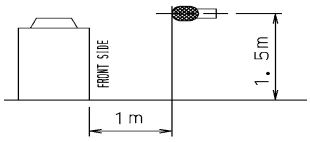
# 12 Sound data

## 12 - 2 Sound Pressure Spectrum



**RXYTQ12U5YF**

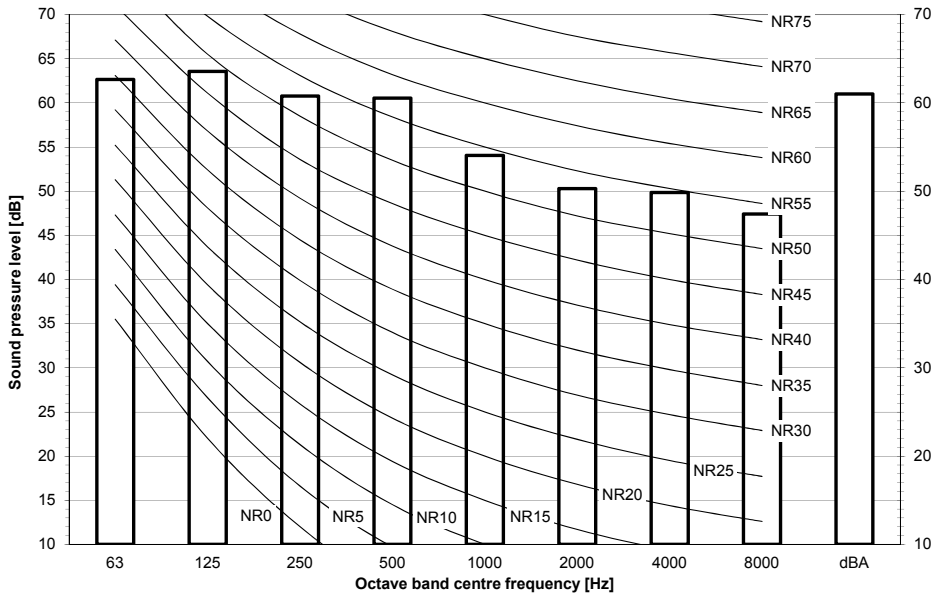


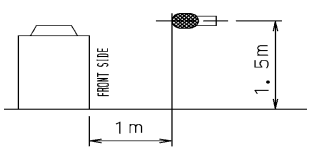




Notes
Data is valid at free field condition.
Data is valid at nominal operation condition.
dBA = A-weighted sound pressure level (A scale according to IEC).
Reference acoustic pressure 0 dB = 20 µPa

**3D119345**

**RXYTQ14U5YF**




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

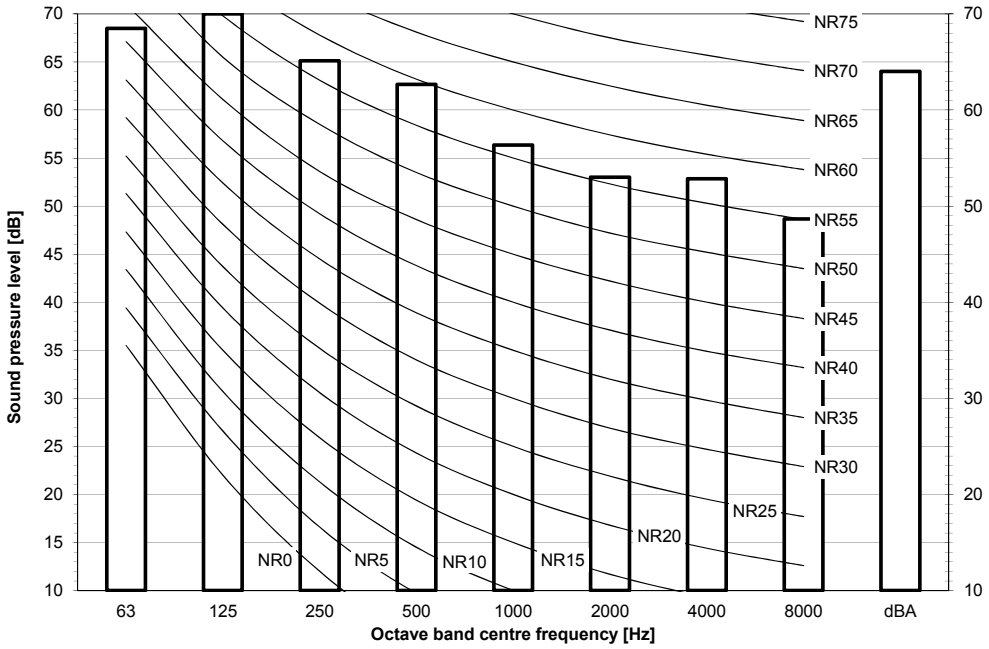
**3D119365**

# 12 Sound data

## 12 - 2 Sound Pressure Spectrum

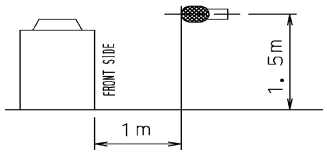


**RXYTQ16U5YF**




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



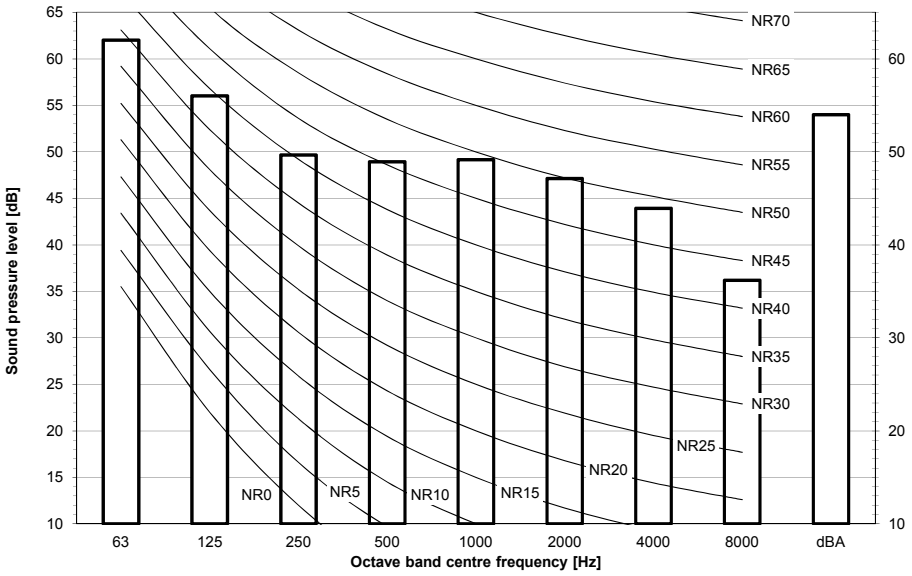

**3D119367**

# 12 Sound data

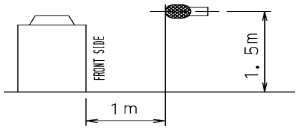
## 12 - 3 Sound Pressure Spectrum Quiet Mode Level 1



**RXYQ8-12U5**
**RXYTQ8U5YF**
**RYMQ8-12U5**

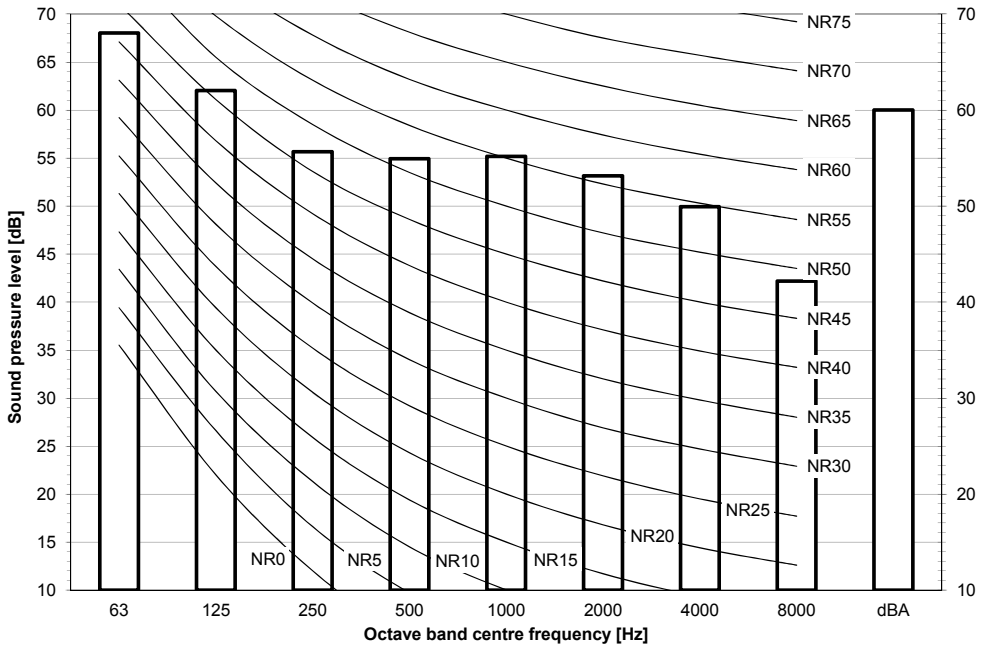



Notes
Data is valid at free field condition.
Data is valid at nominal operation condition.
dBA = A-weighted sound pressure level (A scale according to IEC).
Reference acoustic pressure 0 dB = 20 µPa
Data is valid under the following conditions
Cooling operation
Outdoor Ta: 35°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

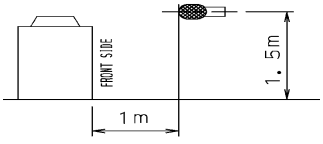



**3D119535**

**RXYTQ10-12U5YF**




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
Data is valid under the following conditions
Cooling operation
Outdoor Ta: -35-°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)



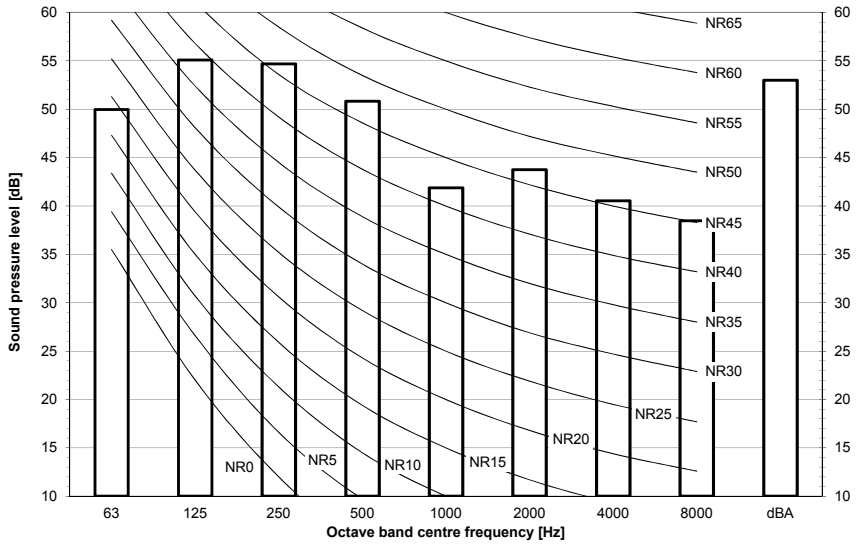

**3D119346**

# 12 Sound data

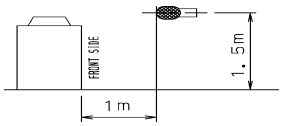
## 12 - 3 Sound Pressure Spectrum Quiet Mode Level 1



**RXYQ14-16U5**
**RXYTQ14-16U5YF**
**RYMQ14-16U**




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
Data is valid under the following conditions
Cooling operation
Outdoor Ta: 35°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

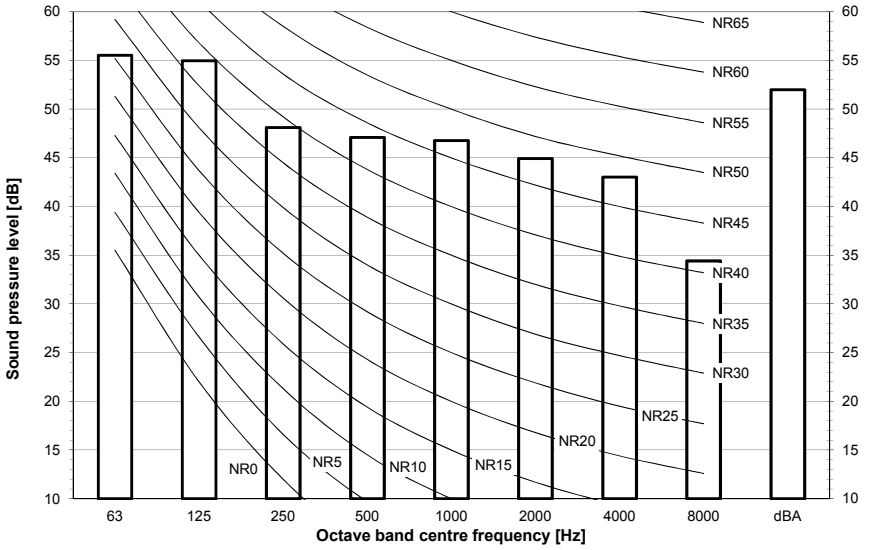



**3D119538**

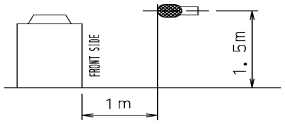
# 12 Sound data

## 12 - 4 Sound Pressure Spectrum Quiet Mode Level 2

**RXYQ8-12U5**
**RXYTQ8U5YF**
**RYMQ8-12U5**

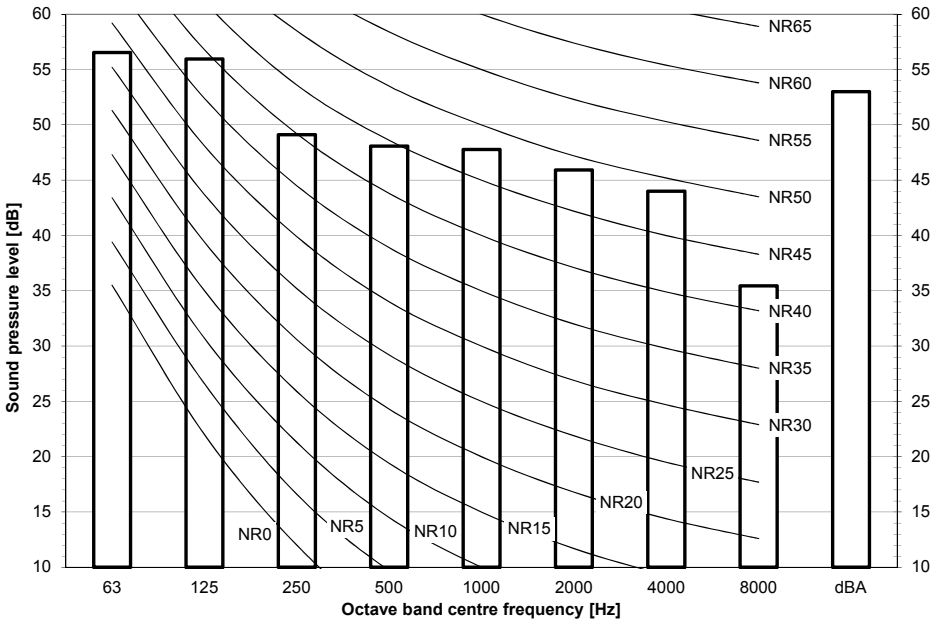



Notes
Data is valid at free field condition.
Data is valid at nominal operation condition.
dBA = A-weighted sound pressure level (A scale according to IEC).
Reference acoustic pressure 0 dB = 20 µPa
Data is valid under the following conditions
Cooling operation
Outdoor Ta: 35°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

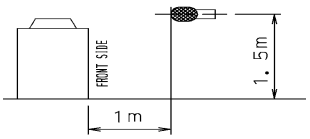



**3D119536**

**RXYTQ10-12U5YF**




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
Data is valid under the following conditions
Cooling operation
Outdoor Ta: -35-°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

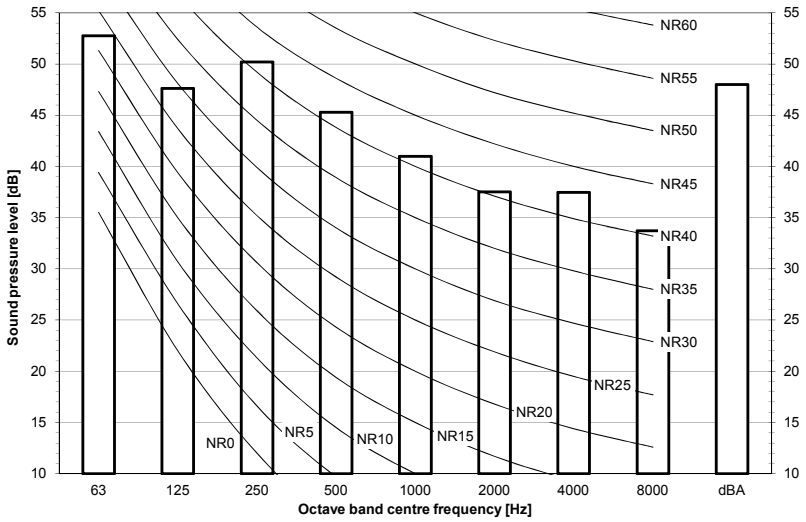



**3D119347**

# 12 Sound data

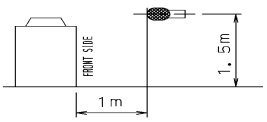
## 12 - 4 Sound Pressure Spectrum Quiet Mode Level 2

**RXYQ14-16U5**
**RXYTQ14-16U5YF**
**RYMQ14-16U5**




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

Data is valid under the following conditions
Cooling operation
Outdoor Ta: 35°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)



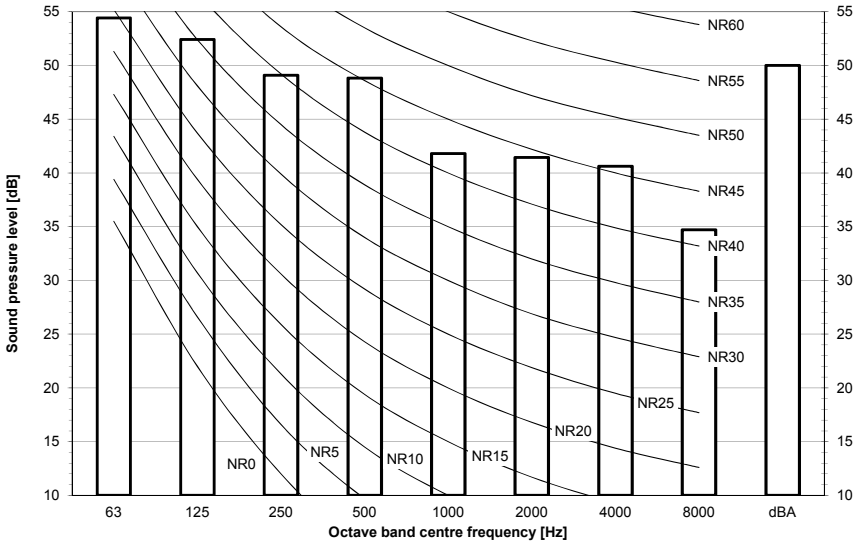

**3D119539**

# 12 Sound data

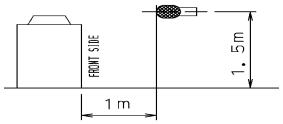
## 12 - 5 Sound Pressure Spectrum Quiet Mode Level 3



**RXYQ8-12U5**
**RXYTQ8U5YF**
**RYMQ8-12U5**

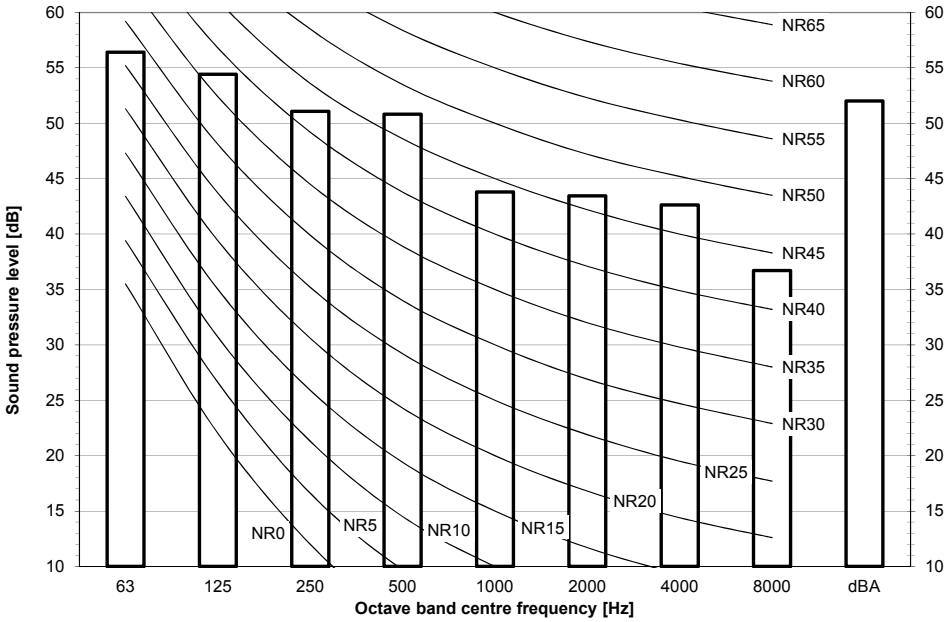



Notes
Data is valid at free field condition.
Data is valid at nominal operation condition.
dBA = A-weighted sound pressure level (A scale according to IEC).
Reference acoustic pressure 0 dB = 20 µPa
Data is valid under the following conditions
Cooling operation
Outdoor Ta: 35°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

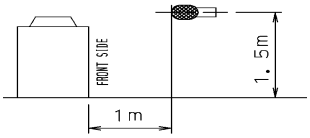



**3D119537**

**RXYTQ10-12U5YF**




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
Data is valid under the following conditions
Cooling operation
Outdoor Ta: -35-°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)



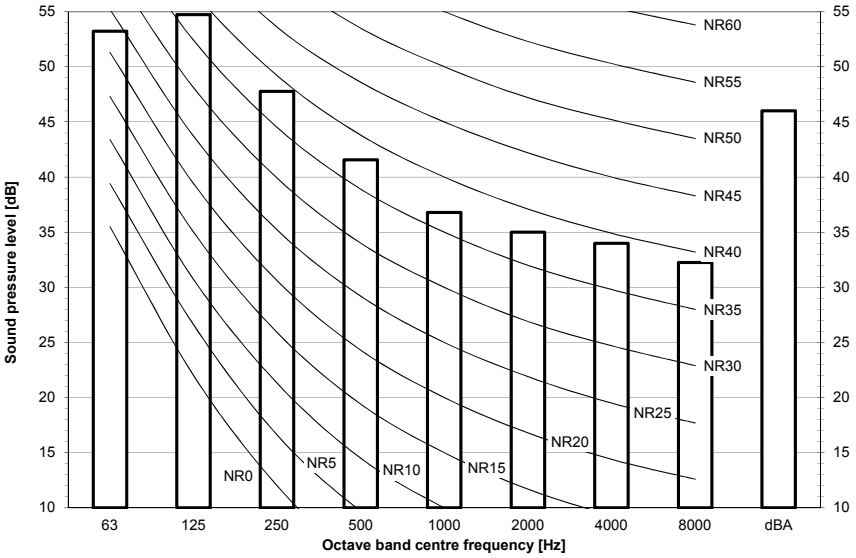

**3D119348**

# 12 Sound data

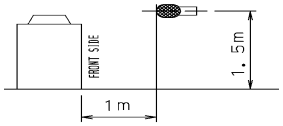
## 12 - 5 Sound Pressure Spectrum Quiet Mode Level 3



**RXYQ14-16U5**
**RXYTQ14-16U5YF**
**RYMQ14-16U5**




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
Data is valid under the following conditions
Cooling operation
Outdoor Ta: 35°C
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)




**3D119540**

# 13 Installation

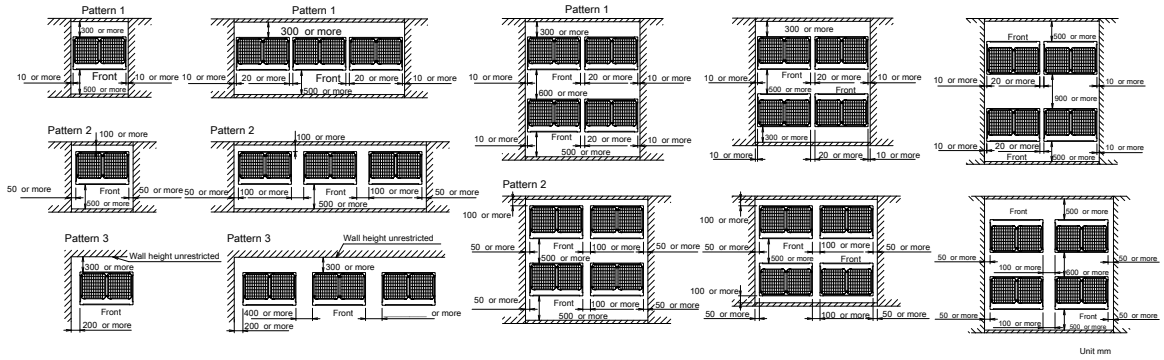
## 13 - 1 Installation Method

**RXYTQ-U5YF**

For single unit installation

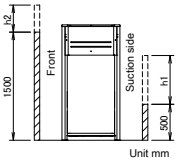
For installation in rows

For centralised group layout




Notes

1. Height of the walls in case of patterns 1 and 2:
   Front: 1500mm
   Suction side: 500mm
   Side: height unrestricted
   The installation space shown on this drawing is based on cooling operation at 46°C (outdoor temperature).
2. If the design outdoor air temperature exceeds 46°C, provide a broader suction space than shown on the drawing.
3. When installing the units, select the pattern that best fits the available space.
   Always keep in mind to leave sufficient space for a person to pass between unit and wall and for the air to circulate freely.
   If more units are to be installed than are foreseen in the above patterns, your layout should take into account the possibility of air short circuits.
4. Provide sufficient space at the front to connect refrigerant piping (comfortably).



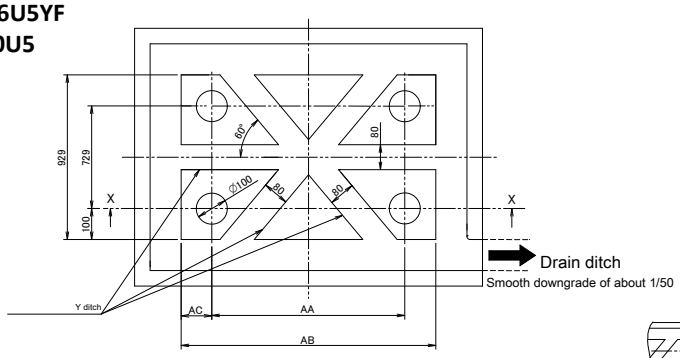

3D096862A

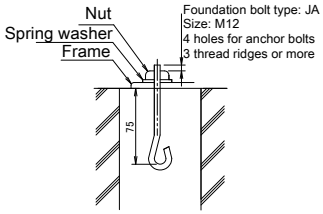
# 13 Installation

## 13 - 2 Fixation and Foundation of Units

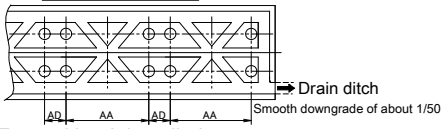


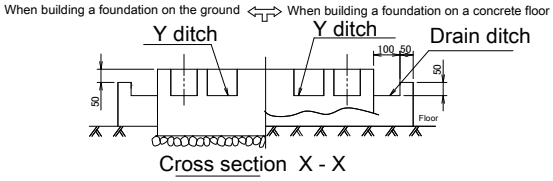
**RXYQ8-20U5**
**RXYTQ8-16U5YF**
**RYMQ8-20U5**




Foundation bolt fixing method




For multi-unit installation

| Model | AA | AB | AC | AD |
|---|---|---|---|---|
| RYMQ8-12U5<br>RXYQ8-12U5<br>RXYTQ8U5 | 766 | 992 | 113 | 185 |
| RYMQ14-20U5<br>RXYQ14-20U5<br>RXYTQ10-16U5 | 1076 | 1076 | | |

Notes

1. Provide a drain ditch around the foundation to drain water from the installation area.
2. The surface has to be finished with mortar. The corner edges have to be chamfered.
3. Build the foundation on a concrete floor or, if not possible, make sure the foundation surface has a rough finish.
4. Use a cement/sand/gravel ratio of 1/2/4 for the concrete, and a diameter of 10 mm for the reinforcement bars (approximately, 300mm intervals).
5. When installing the equipment on a roof, make sure to check the strength of the floor and take adequate water proofing measures.

**3D118459**

# 13 Installation

## 13 - 3 Refrigerant Pipe Selection



**RXYTQ-U5YF**

**VRV4**
**Middle East**
**Piping restrictions ·1/3·**

| For the reference drawing, see page ·2/3·. | | Maximum piping length: Longest pipe (A+[B,J]) Actual / (Equivalent) | Maximum piping length: After first branch (B,J) Actual | Maximum piping length: After first branch (for multi-outdoor) (D) Actual / (Equivalent) | Maximum height difference: Indoor-to-outdoor (H1) (2) | Maximum height difference: Indoor-to-indoor (H2) | Maximum height difference: Outdoor-to-outdoor (H3) | Total piping length |
|---|---|---|---|---|---|---|---|---|
| Single unit | | 165/(190)m | 40m (1) | 10/(13)m | 50/(40)m (2) | 30m | 5m | 1000m |
| Multi-combination | | 135/(160)m | 40m (1) | 10/(13)m | 50/(40)m (2) | 30m | 5m | 500m |
| Air handling unit (AHU) Connection | Pair (4) | 50/(55)m (3) | - | - | 40/(40)m | - | - | - |
| | Multi (5) | 165/(190)m | 40m | 10/(13)m | 40/(40)m | 15m | 5m | 500m |
| | Mix | 165/(190)m | 40m | 10/(13)m | 40/(40)m | 15m | 5m | 500m |

Notes

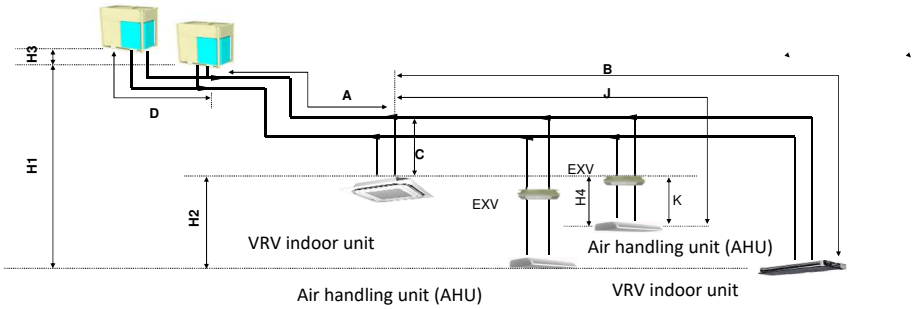
1. An extension to up to ·90· m is possible if all of the following conditions are met:
   a. The piping length between all indoor units and the nearest branch kit is ≤ 40m.
   b. It is necessary to increase the size of the gas and liquid piping.
      If the increased pipe size is larger than the pipe size of the main pipe, also increase the size of the main pipe.
   c. When the piping size is increased, the piping length has to be counted as double.
      The total piping length has to be within limitations.
   d. The piping length difference between the nearest indoor unit to the outdoor unit and the farthest indoor unit to the outdoor unit is ≤ ·40·m.
2. An extension to up to ·90· m is possible without an additional option kit. Respect the following conditions:
   -> If the outdoor units are positioned higher than the indoor units:
   - Size up the liquid piping
     For more information, refer to the installation manual.
   - A dedicated setting on the outdoor unit is required.
     For more information, refer to the installation manual.
   -> If the outdoor units are positioned lower than the indoor units:
   - 40~60m: Minimum connection ratio: ·80%·
   - 60~65m: Minimum connection ratio: ·90%·
   - 65~80m: Minimum connection ratio: ·100%·
   - 80~90m: Minimum connection ratio: ·110%·

   +
   - Size up the liquid piping
     For more information, refer to the installation manual.
   - A dedicated setting on the outdoor unit is required.
     For more information, refer to the installation manual.
3. The allowable minimum length is ·5· m.
4. Multiple air handling units (·AHU·)(·EKEXV· + ·EKEQ· kits).
5. Mix of air handling units (·AHU·) and ·VRV DX· indoor units.
6. If the equivalent piping length between is > ·90·m, size up the main liquid and gas piping.

**3D096859B**

**RXYTQ-U5YF**

**VRV4**
**Middle East**
**Piping restrictions ·2/3·**




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 ·3D096860· for details about the allowed combinations.

| | | Allowed piping length ·EXV· to ·AHU· (K) | Maximum height difference ·EXV· to ·AHU· (H4) |
|---|---|---|---|
| Air handling unit (AHU) Connection | Pair (1) | ≤5m | 5m |
| | Multi (2) | ≤5m | 5m |
| | Mix | ≤5m | 5m |

Notes

1. Multiple air handling units (·AHU·)(·EKEXV· + ·EKEQ· kits).
2. Mix of air handling units (·AHU·) and ·VRV DX· indoor units.

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# 13 Installation

## 13 - 3 Refrigerant Pipe Selection

**RXYTQ-U5YF**

**VRV4**
**Middle East**
**Piping restrictions ·3/3·**



| System pattern<br>Allowed connection ratio (CR)<br>Other combinations are not allowed. | Total | | Connection ratio | |
|---|---|---|---|---|
| | Connection ratio | Maximum allowed amount of connectable indoor units (·VRV,AHU·)<br>Excluding ·EXV· kits | VRV DX indoor unit | Air handling unit (AHU) |
| ·VRV DX· indoor units only | 50~130% | Maximum ·64· | 50~130% | - |
| ·VRV DX· indoor unit + ·AHU·<br>Mix | 50~110% (2) | Maximum ·64· (1) | 50~110% | 0~110% |
| ·AHU· only (3)<br>Pair + multi | 90~110% (2) | Maximum ·64· (1) | - | 90~110% (4) |

Notes
1. ·EKEXV· kits are also considered indoor units.
2. Restrictions regarding the air handling unit capacity
3. Pair AHU = system with 1 air handling unit connected to one outdoor unit
   Multi AHU = system with multiple air handling units connected to one outdoor unit
4. In case of cooling-only use in the ·DAME· region, the allowed connection ratio is ·75~110·%.

About ventilation applications
I. ·FXMQ_MF· units are considered air handling units, following air handling unit limitations.
- Maximum connection ratio when combined with ·VRV DX· indoor units: ·CR ≤ 30·%.
- Maximum connection ratio when only air handling units are connected: ·CR ≤ 100·%.
  For information on the operation range, refer to the documentation of the ·FXMQ_MF· unit.

II. ·Biddle· air curtains are considered air handling units, following air handling unit limitations:
  For information on the operation range, refer to the documentation of the ·Biddle· unit.

III. ·EKEXV + EKEQ· units combined with an air handling unit are considered air handling units, following air handling unit limitations.
  For information on the operation range, refer to the documentation of the ·EKEXV-EKEQ· unit.

IV. ·VKM· units are considered to be regular ·VRV DX· indoor units.
  For information on the operation range, refer to the documentation of the ·VKM· unit.

V. Because there is no refrigerant connection with the outdoor unit (only communication F1/F2), ·VAM· units do not have connection limitations.
  However, since there is communication via F1/F2, count them as regular indoor unit when calculating the maximum allowed number of connectable indoor units.

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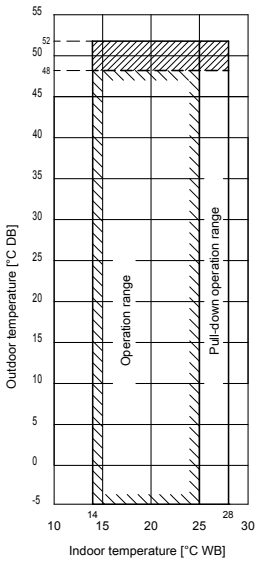
# 14 Operation range

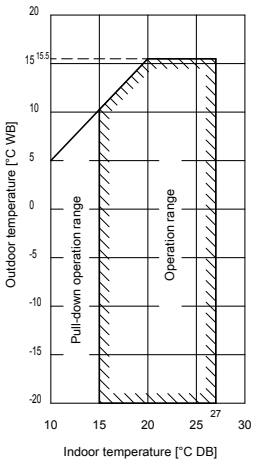
## 14 - 1 Operation Range

**RXYTQ-U5YF**

Cooling




Heating




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. : Unit operation is possible, but no guaranteed capacity

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# 15 Appropriate Indoors

## 15 - 1 Appropriate Indoors



**RXYTQ-U5YF**

Recommended indoor units for ·RXYTQ*U5*· outdoor units

| ·*· HP | 8 | 10 | 12 | 14 | 16 |
|---|---|---|---|---|---|
| | 4 x FXMQ50 | 5 x FXMQ50 | 6 x FXMQ50 | 7 x FXMQ50 | 8 x FXMQ50 |

For multi outdoor units ·>16HP·, the recommended amount of indoor units is the sum of the indoor units defined for a single outdoor unit.

Appropriate indoor units for ·RXYTQ*U5*· outdoor units

| Model name | Class |
|---|---|
| FXAQ-A | 15-20-25-32-40-50-63 |
| FXAQ-PVER | 20-25-32-40-50-63 |
| FXCQ-A | 20-25-32-40-50-63-80-125 |
| FXDQ-A3 | 15-20-25-32-40-50-63 |
| FXFQ-B | 20-25-32-40-50-63-80-100-125 |
| FXFSQ-ARVE | 25-32-40-50-63-80-100-125-140 |
| FXHQ-A | 32-63-100 |
| FXKQ | 25-32-40-63 |
| FXLQ | 20-25-32-40-50-63 |
| FXMQ-P7 | 50-63-80-100-125 |
| FXMQ-P7H | 50 |
| FXMQ-PVE | 140 |
| FXMQ-NVE6 | 200-250 |
| FXNQ-A | 20-25-32-40-50-63 |
| FXSQ-A | 15-20-25-32-40-50-63-80-100-125-140 |
| FXUQ-A | 71-100 |
| FXZQ-A | 15-20-25-32-40-50 |
| VKM-GB | 50-80-100 |
| VKM-GBM | 50-80-100 |
| FXMQ-MF | 125-200-250 |
| EKEXV | 50-63-80-100-125-140-200-250-400-500 |

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