

Air Conditioning Technical Data

RXYQQ-T



> RXYQQ8T7Y1B
> RXYQQ10T7Y1B
> RXYQQ12T7Y1B
> RXYQQ14T7Y1B
> RXYQQ16T7Y1B
> RXYQQ18T7Y1B

> RXYQQ20T7Y1B

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1 Features

Quick & quality replacement for R-22 and R-407C systems

- Cost effective and fast replacement as only the outdoor and indoor unit needs to be replaced, meaning almost no work has to be carried out inside the building
- Efficiency gains of more than 70% can be realized, by virtue of technological developments in heat pump technology and the more efficient R-410A refrigerant
- Less intrusive and time consuming installation compared to installing a new system, as the refrigerant piping can be maintained
- Unique automatic refrigerant charge eliminates the need to calculate refrigerant volume and allows safe replacement of competitor replacement
- Automatic cleaning of refrigerant piping ensures a clean piping network, even when a compressor breakdown has occurred
- Accurate temperature control, fresh air provision, air handling units and Biddle air curtains all integrated in a single system requiring only one single point of contact
- Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature and full inverter compressors
- 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
- VRV configurator software for the fastest and most accurate commissioning, configuration and customisation
- Outdoor unit display for quick on-site settings and easy read out of errors together with the indication of service parameters for checking basic functions.
- Possibility to add indoor units and increase capacity without changing the refrigerant piping
- Possibility to spread the various stages of replacement thanks to the modular design of the VRV system
- Free combination of outdoor units to meet installation space or efficiency requirements
- Keep your system in top condition via the Daikin Cloud Service: 24/7 monitoring for maximum efficiency, extended lifetime and immediate service support thanks to failure prediction



Inverter

2 Specifications

2-1 Technical Specifications				RXYQQ8T	RXYQQ10T	RXYQQ12T	RXYQQ14T	RXYQQ16T	RXYQQ18T	RXYQQ20T	
Recommended combinations				4 x FXMQ50P7 VEB	4 x FXMQ63P7 VEB	6 x FXMQ50P7 VEB	1 x FXMQ50P7 VEB + 5 x FXMQ63P7 VEB	4 x FXMQ63P7 VEB + 2 x FXMQ80P7 VEB	3 x FXMQ50P7 VEB + 5 x FXMQ63P7 VEB	2 x FXMQ50P7 VEB + 6 x FXMQ63P7 VEB	
Cooling capacity	Prated,c		kW	22.4 (1)	28.0 (1)	33.5 (1)	40.0 (1)	45.0 (1)	50.4 (1)	52.0 (1)	
Heating capacity	Prated,h		kW	13.7	16.0	18.4	20.6	23.2	27.9	31.0	
	Max.	6°CWB	kW	25.0 (2)	31.5 (2)	37.5 (2)	45.0 (2)	50.0 (2)	56.5 (2)	63.0 (2)	
ESEER - Automatic				7.53	7.20	6.96	6.83	6.50	6.38	5.67	
ESEER - Standard				6.37	5.67	5.50	5.31	5.05	4.97	4.42	
SEER				5.4	5.6	5.5	5.7	5.5		5.3	
SCOP				3.6	3.8		3.5		3.6	3.7	
ηs,c			%	212.4	222.0	216.9	226.6	216.8	216.2	210.3	
ηs,h			%	142.0	147.2	149.6	136.7	137.0	141.4	145.4	
Space cooling	A Condition (35°C - 27/19)	EERd		2.5	2.7	2.6		2.1		1.9	
		Pdc	kW	22.4	28.0	33.5	40.0	45.0	50.4	52.0	
	B Condition (30°C - 27/19)	EERd		4.1	4.4	4.2	4.3	4.0	3.7	3.6	
		Pdc	kW	16.5	20.6	24.7	29.5	33.2	37.1	38.3	
	C Condition (25°C - 27/19)	EERd		6.4	6.7	6.6	7.0	6.8	6.7	6.6	
		Pdc	kW	10.6	13.3	15.9	18.9	21.3	23.9	24.6	
	D Condition (20°C - 27/19)	EERd		8.7	8.9	8.7	9.5	10.0	11.8	11.7	
		Pdc	kW	4.8	6.9	7.1	8.4	9.5	10.6	10.9	
Space heating (Average climate)	TBivalent	COPd (declared COP)		2.0		2.1	1.9	1.7	1.8	2.0	
		Pdh (declared heating cap)	kW	13.7	16.0	18.4	20.6	23.2	27.9	31.0	
		Tbiv (bivalent temperature)	°C	-10							
	TOL	COPd (declared COP)		2.0		2.1	1.9	1.7	1.8	2.0	
		Pdh (declared heating cap)	kW	13.7	16.0	18.4	20.6	23.2	27.9	31.0	
		Tol (temperature operating limit)	°C	-10							
	A Condition (-7°C)	COPd (declared COP)		2.3		2.2		2.5			
		Pdh (declared heating cap)	kW	12.1	14.2	16.3	18.2	20.5	24.7	27.4	
	B Condition (2°C)	COPd (declared COP)		3.1	3.2		3.3		3.5	3.6	
		Pdh (declared heating cap)	kW	7.4	8.6	9.9	11.1	12.5	15.0	16.7	
	C Condition (7°C)	COPd (declared COP)		6.4	6.7	7.0	5.6		4.4	4.5	
		Pdh (declared heating cap)	kW	5.7	6.5	6.4	7.1	8.0	9.7	10.7	
	D Condition (12°C)	COPd (declared COP)		8.4	7.7	8.0	3.9	4.1	7.0		
		Pdh (declared heating cap)	kW	6.6	6.1	6.2	4.0	4.1	5.8	5.9	
	Capacity range			HP	8	10	12	14	16	18	20
	Maximum number of connectable indoor units				64 (3)						
Indoor index connection	Min.			100.0	125.0	150.0	175.0	200.0	225.0	250.0	
	Max.			260.0	325.0	390.0	455.0	520.0	585.0	650.0	
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	187	194		305		314		
	Packed unit		kg	205	212		325		334		
Packing	Material			Carton							
	Weight			kg	2.0			3.0			
Packing 2	Material			Wood							
	Weight			kg	17.0			18.5			

2 Specifications

2-1 Technical Specifications					RXYQQ8T	RXYQQ10T	RXYQQ12T	RXYQQ14T	RXYQQ16T	RXYQQ18T	RXYQQ20T
Packing 3	Material				Plastic						
	Weight			kg	0.5						
Capacity control	Method				Inverter controlled						
Casing	Colour				Daikin White						
	Material				Painted galvanized steel plate						
Heat exchanger	Type				Cross fin coil						
	Indoor side				Air						
	Outdoor side				Air						
	Air flow rate	Cooling	Rated	m³/h	9,720	10,500	11,100	13,380	15,600	15,060	15,660
		Heating	Rated	m³/h	9,720	10,500	11,100	13,380	15,600	15,060	15,660
Compressor	Quantity				1			2			
	Type				Hermetically sealed scroll compressor						
	Crankcase heater			W	33						
Fan	Quantity				1			2			
	External static pressure	Max.		Pa	78						
Fan motor	Quantity				1			2			
	Type				DC motor						
	Output			W	750						
Sound power level	Cooling	Nom.		dBA	78.0 (4)	79.0 (4)	81.0 (4)		86.0 (4)		88.0 (4)
Sound pressure level	Cooling	Nom.		dBA	58.0 (5)		61.0 (5)		64.0 (5)	65.0 (5)	66.0 (5)
Operation range	Cooling	Min.~Max.		°CDB	-5.0~43.0						
	Heating	Min.~Max.		°CWB	-20.0~15.5						
Refrigerant	Type				R-410A						
	GWP				2,087.5						
	Charge			TCO ₂ eq	12.3	12.5	13.2	21.5	21.7	24.4	24.6
				kg	5.9	6.0	6.3	10.3	10.4	11.7	11.8
Refrigerant oil	Type				Synthetic (ether) oil FVC68D						
Piping connections	Liquid	Type			Braze connection						
		OD		mm	9,52		12,7		15,9		
	Gas	Type			Braze connection						
		OD		mm	19.1	22.2	28.6				
	Total piping length	System	Actual	m	300 (6)						
Defrost method					Reversed cycle						
Safety devices	Item	01			High pressure switch						
		02			Fan driver overload protector						
		03			Inverter overload protector						
		04			PC board fuse						
PED	Category				Category II						
	Most critical part	Name			Accumulator						
		Ps*V		Bar*I	325			415		493	
Cooling	Cdc (Degradation cooling)				0.25						
Heating	Cdh (Degradation heating)				0.25						
Power consumption in other than active mode	Off mode	Cooling	POFF	kW	0.036	0.046		0.067			
		Heating	POFF	kW	0.048	0.050		0.077			
	Standby mode	Cooling	PSB	kW	0.036	0.046		0.067			
		Heating	PSB	kW	0.048	0.050		0.077			
	Thermostat-off mode	Cooling	PTO	kW	0.013			0.027			
		Heating	PTO	kW	0.065	0.067		0.112			
Indication if the heater is equipped with a supplementary heater					no						
Supplementary heater	Back-up capacity	Heating	elbu	kW	0.0						

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Connection pipes; Quantity : 1;

2 Specifications

2-2 Electrical Specifications				RXYQQ8T	RXYQQ10T	RXYQQ12T	RXYQQ14T	RXYQQ16T	RXYQQ18T	RXYQQ20T
Power supply	Name			Y1						
	Phase			3N~						
	Frequency		Hz	50						
	Voltage		V	380-415						
Voltage range	Min.		%	-10						
	Max.		%	10						
Current	Nominal running current (RLA) - 50Hz	Cooling	A	7.2 (7)	10.2 (7)	12.7 (7)	15.4 (7)	18.0 (7)	20.8 (7)	26.9 (7)
Current - 50Hz	Starting current (MSC) - remark			(8)						
	Zmax	List		No requirements						
	Minimum circuit amps (MCA)		A	16.1 (10)	22.0 (10)	24.0 (10)	27.0 (10)	31.0 (10)	35.0 (10)	39.0 (10)
	Maximum fuse amps (MFA)		A	20 (11)	25 (11)	32 (11)		40 (11)		50 (11)
	Total overcurrent amps (TOCA)		A	17.3 (12)	24.6 (12)		35.4 (12)		42.7 (12)	
	Full load amps (FLA)	Total	A	1.2 (13)	1.3 (13)	1.5 (13)	1.8 (13)	2.6 (13)		
Wiring connections - 50Hz	For power supply	Quantity		5G						
	For connection with indoor	Quantity		2						
		Remark		F1,F2						
Power supply intake				Both indoor and outdoor unit						

Notes

- (1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m
- (2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m
- (3) Actual number of connectable indoor units depends on the indoor unit type (VRV indoor, Hydrobox, RA indoor, etc.) and the connection ratio restriction for the system (50% ≤ CR ≤ 130%)
- (4) Sound power level is an absolute value that a sound source generates.
- (5) Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings.
- (6) Refer to refrigerant pipe selection or installation manual
- (7) RLA is based on following conditions: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB
- (8) MSC means the maximum current during start up of the compressor. VRV IV uses only inverter compressors. Starting current is always ≤ max. running current.
- (9) In accordance with EN/IEC 61000-3-12, it may be necessary to consult the distribution network operator to ensure that the equipment is connected only to a supply with Ssc ≥ minimum Ssc value
- (10) MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current.
- (11) MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker).
- (12) TOCA means the total value of each OC set.
- (13) FLA means the nominal running current of the fan
- (14) Maximum allowable voltage range variation between phases is 2%.
- (15) Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
- (16) The AUTOMATIC ESEER value corresponds with normal VRV4 Heat Pump operation, taking into account advanced energy saving operation functionality (variable refrigerant temperature)
- (17) The STANDARD ESEER value corresponds with normal VRV4 Heat Pump operation, not taking into account advanced energy saving operation functionality
- (18) Sound values are measured in a semi-anechoic room.
- (19) Soundpressure system [dBA] = $10 \cdot \log[10^A(A/10) + 10^B(B/10) + 10^C(C/10)]$, with Unit A = A dBA, Unit B = B dBA, Unit C = C dBA
- (20) EN/IEC 61000-3-12: European/international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current > 16A and ≤ 75A per phase
- (21) Ssc: Short-circuit power
- (22) For detailed contents of standard accessories, see installation/operation manual
- (23) Multi combination (22-54HP) data is corresponding with the standard multi combination

2 Specifications

2

2-3 Technical Specifications				RXYQQ 22T	RXYQQ 24T	RXYQQ 26T	RXYQQ 28T	RXYQQ 30T	RXYQQ 32T	RXYQQ 34T	RXYQQ 36T	RXYQQ 38T	RXYQQ 40T	RXYQQ 42T	
System	Outdoor unit module 1			RXYQ Q10T	RXYQ Q8T	RXYQQ12T			RXYQQ16T			RXYQ Q8T	RXYQQ10T		
	Outdoor unit module 2			RXYQ Q12T	RXYQ Q16T	RXYQ Q14T	RXYQ Q16T	RXYQ Q18T	RXYQ Q16T	RXYQ Q18T	RXYQ Q20T	RXYQ Q10T	RXYQ Q12T	RXYQ Q16T	
	Outdoor unit module 3			-								RXYQ Q20T	RXYQ Q18T	RXYQ Q16T	
Recommended combinations				6 x FXMQ 50P7V EB + 4 x FXMQ 63P7V EB	4 x FXMQ 50P7V EB + 4 x FXMQ 63P7V EB + 2 x FXMQ 80P7V EB	7 x FXMQ 50P7V EB + 5 x FXMQ 63P7V EB	6 x FXMQ 50P7V EB + 4 x FXMQ 63P7V EB + 2 x FXMQ 80P7V EB	9 x FXMQ 50P7V EB + 5 x FXMQ 63P7V EB	8 x FXMQ 63P7V EB + 4 x FXMQ 80P7V EB	3 x FXMQ 50P7V EB + 9 x FXMQ 63P7V EB + 2 x FXMQ 80P7V EB	2 x FXMQ 50P7V EB + 10 x FXMQ 63P7V EB + 2 x FXMQ 80P7V EB	6 x FXMQ 50P7V EB + 10 x FXMQ 63P7V EB	9 x FXMQ 50P7V EB + 9 x FXMQ 63P7V EB	12 x FXMQ 63P7V EB + 4 x FXMQ 80P7V EB	
Cooling capacity	Prated,c		kW	61.5 (1)	67.4 (1)	73.5 (1)	78.5 (1)	83.9 (1)	90.0 (1)	95.4 (1)	97.0 (1)	102.4 (1)	111.9 (1)	118.0 (1)	
Heating capacity	Prated,h		kW	34.4	36.9	37.1	39.7	44.4	46.4	51.1	54.2	58.2	58.9	60.9	
	Max.	6°CWB	kW	69.0 (2)	75.0 (2)	82.5 (2)	87.5 (2)	94.0 (2)	100.0 (2)	106.5 (2)	113.0 (2)	119.5 (2)	125.5 (2)	131.5 (2)	
ESEER - Automatic				7.07	6.81	6.89	6.69	6.60	6.50	6.44	6.02	6.36	6.74	6.65	
SEER				5.4	5.5	5.6	5.5			5.4			5.5		
SCOP				3.8	3.7		3.6	3.5		3.6	3.7				
ηs,c			%	213.5	215.3	222.0	216.8	216.2	216.8	216.4	213.2	213.6	217.6		
ηs,h			%	150.0	144.5	143.8	142.6	138.8	137.0	141.8	143.9	146.0	145.7	143.3	
Space cooling	A Condition (35°C - 27/19)	EERd		2.6	2.2	2.6	2.3	2.2	2.1		2.0	2.2	2.3		
		Pdc	kW	61.5	67.4	73.5	78.5	83.9	90.0	95.4	97.0	102.4	111.9	118.0	
	B Condition (30°C - 27/19)	EERd		4.3	4.0	4.2	4.0	3.9	4.0	3.8		3.9	4.0	4.1	
		Pdc	kW	45.3	49.7	54.2	57.8	61.8	66.3	70.3	71.5	75.5	82.4	86.9	
	C Condition (25°C - 27/19)	EERd		6.6	6.7	6.8	6.7		6.8		6.7	6.6	6.7	6.8	
		Pdc	kW	29.1	31.9	34.8	37.2	39.7	42.6	45.2	46.0	48.5	53.0	55.9	
	D Condition (20°C - 27/19)	EERd		7.6	9.5	9.1	9.4	10.3	10.0	10.9		10.0	9.8	9.5	
		Pdc	kW	13.0	14.3	15.5	16.6	17.7	18.9	20.1	20.4	21.6	23.6	24.8	
	Space heating (Average climate)	TBivalent	COPd (declared COP)		2.1	1.8	2.0	1.9		1.7	1.8	1.9	2.1	2.0	1.8
			Pdh (declared heating cap)	kW	34.4	36.9	37.1	39.7	44.4	46.4	51.1	54.2	58.2	58.9	60.9
Tbiv (bivalent temperature)			°C	-10											
TOL		COPd (declared COP)		2.1	1.8	2.0	1.9		1.7	1.8	1.9	2.1	2.0	1.8	
		Pdh (declared heating cap)	kW	34.4	36.9	37.1	39.7	44.4	46.4	51.1	54.2	58.2	58.9	60.9	
		Tol (temperature operating limit)	°C	-10											
A Condition (-7°C)		COPd (declared COP)		2.3	2.2			2.4	2.2	2.3		2.4		2.2	
		Pdh (declared heating cap)	kW	30.4	32.6	32.8	35.1	39.3	41.0	45.2	47.9	51.5	52.1	53.8	
B Condition (2°C)		COPd (declared COP)		3.2		3.3		3.4	3.3	3.4	3.5	3.4	3.3		
		Pdh (declared heating cap)	kW	18.5	19.8	20.0	21.4	23.9	25.0	27.5	29.2	31.3	31.7	32.8	
C Condition (7°C)		COPd (declared COP)		6.9	6.0	5.5	5.4	4.3	5.6	4.9		5.4	5.5	6.0	
		Pdh (declared heating cap)	kW	12.9	12.8		13.7	15.4	16.0	17.7	18.8	20.1	20.4	21.1	
D Condition (12°C)		COPd (declared COP)		8.0	8.4	8.0		7.0	4.1	6.9		6.7		5.7	
		Pdh (declared heating cap)	kW	6.2	6.6	6.2		6.8	8.3	7.9	8.3	9.0	9.1	10.3	
Capacity range			HP	22	24	26	28	30	32	34	36	38	40	42	
Maximum number of connectable indoor units				64 (3)											

2 Specifications

2-3 Technical Specifications					RXYQQ 22T	RXYQQ 24T	RXYQQ 26T	RXYQQ 28T	RXYQQ 30T	RXYQQ 32T	RXYQQ 34T	RXYQQ 36T	RXYQQ 38T	RXYQQ 40T	RXYQQ 42T	
Indoor index connection	Min.				275.0	300.0	325.0	350.0	375.0	400.0	425.0	450.0	475.0	500.0	525.0	
	Max.				715.0	780.0	845.0	910.0	975.0	1,040. 0	1,105. 0	1,170. 0	1,235. 0	1,300. 0	1,365. 0	
Heat exchanger	Indoor side				Air											
	Outdoor side				Air											
	Air flow rate	Cooling	Rated	m³/h	21,600	25,320	24,480	26,700	26,160	31,200	30,660	31,260	35,880	36,660	41,700	
		Heating	Rated	m³/h	21,600	25,320	24,480	26,700	26,160	31,200	30,660	31,260	35,880	36,660	41,700	
Sound power level	Cooling	Nom.		dBA	83.1 (4)	86.6 (4)	84.0 (4)	87.2 (4)		89.0 (4)		90.1 (4)	88.9 (4)	87.8 (4)	89.4 (4)	
Sound pressure level	Cooling	Nom.		dBA	62.8 (5)	65.0 (5)	64.0 (5)	65.8 (5)	66.5 (5)	67.0 (5)	67.5 (5)	68.1 (5)	67.2 (5)	67.0 (5)	67.5 (5)	
Refrigerant	Type				R-410A											
	GWP				2,087.5											
Refrigerant oil	Type				Synthetic (ether) oil FVC68D											
Piping connections	Liquid	Type			Braze connection											-
		OD		mm	15.9		19.1									
	Gas	Type			Braze connection											-
		OD		mm	28.6	34.9					41.3					
	Total piping length	System	Actual	m	300 (6)											
PED	Category				Category II											
Cooling	Cdc (Degradation cooling)				0.25											
Heating	Cdh (Degradation heating)				0.25											
Power consumption in other than active mode	Off mode	Cooling	POFF	kW	0.092	0.103	0.113			0.134			0.149	0.159	0.180	
		Heating	POFF	kW	0.100	0.125	0.127			0.154			0.175	0.177	0.204	
	Standby mode	Cooling	PSB	kW	0.092	0.103	0.113			0.134			0.149	0.159	0.180	
		Heating	PSB	kW	0.100	0.125	0.127			0.154			0.175	0.177	0.204	
	Thermostat-off mode	Cooling	PTO	kW	0.026	0.040				0.054			0.053		0.067	
		Heating	PTO	kW	0.134	0.177	0.179			0.224			0.244	0.246	0.291	
Indication if the heater is equipped with a supplementary heater					no											
Supplementary heater	Back-up capacity	Heating	elbu	kW	0.0											

Standard Accessories : Installation manual; Quantity : 1;

Standard Accessories : Operation manual; Quantity : 1;

Standard Accessories : Connection pipes; Quantity : 1;

2-4 Electrical Specifications				RXYQQ 22T	RXYQQ 24T	RXYQQ 26T	RXYQQ 28T	RXYQQ 30T	RXYQQ 32T	RXYQQ 34T	RXYQQ 36T	RXYQQ 38T	RXYQQ 40T	RXYQQ 42T
Voltage range	Min.		%	-10										
	Max.		%	10										
Current	Nominal running current (RLA) - 50Hz	Cooling	A	22.9 (7)	25.2 (7)	28.1 (7)	30.7 (7)	33.5 (7)	36.0 (7)	38.8 (7)	44.9 (7)	44.3 (7)	43.7 (7)	46.2 (7)
Current - 50Hz	Starting current (MSC) - remark			(8)										
	Zmax	List		No requirements										
	Minimum circuit amps (MCA)		A	46.0 (10)		51.0 (10)	55.0 (10)	59.0 (10)	62.0 (10)	66.0 (10)	70.0 (10)	76.0 (10)	81.0 (10)	84.0 (10)
	Maximum fuse amps (MFA)		A	63 (11)				80 (11)				100 (11)		
Wiring connections - 50Hz	For power supply	Quantity		5G										
	For connection with indoor	Quantity		2										
		Remark		F1,F2										
Power supply intake				Both indoor and outdoor unit										

2 Specifications

Notes

- (1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m
- (2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m
- (3) Actual number of connectable indoor units depends on the indoor unit type (VRV indoor, Hydrobox, RA indoor, etc.) and the connection ratio restriction for the system (50% \<= CR \<= 130%)
- (4) Sound power level is an absolute value that a sound source generates.
- (5) Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings.
- (6) Refer to refrigerant pipe selection or installation manual
- (7) RLA is based on following conditions: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB
- (8) MSC means the maximum current during start up of the compressor. VRV IV uses only inverter compressors. Starting current is always ≤ max. running current.
- (9) In accordance with EN/IEC 61000-3-12, it may be necessary to consult the distribution network operator to ensure that the equipment is connected only to a supply with Ssc ≥ minimum Ssc value
- (10) MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current.
- (11) MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker).
- (12) TOCA means the total value of each OC set.
- (13) FLA means the nominal running current of the fan
- (14) Maximum allowable voltage range variation between phases is 2%.
- (15) Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
- (16) The AUTOMATIC ESEER value corresponds with normal VRV4 Heat Pump operation, taking into account advanced energy saving operation functionality (variable refrigerant temperature)
- (17) The STANDARD ESEER value corresponds with normal VRV4 Heat Pump operation, not taking into account advanced energy saving operation functionality
- (18) Sound values are measured in a semi-anechoic room.
- (19) Soundpressure system [dBA] = $10 \cdot \log[10^{A/10} + 10^{B/10} + 10^{C/10}]$, with Unit A = A dBA, Unit B = B dBA, Unit C = C dBA
- (20) EN/IEC 61000-3-12: European/international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current > 16A and ≤ 75A per phase
- (21) Ssc: Short-circuit power
- (22) For detailed contents of standard accessories, see installation/operation manual
- (23) Multi combination (22~54HP) data is corresponding with the standard multi combination

3 Options

3 - 1 Options

RYYQ-T
RYMQ-T
RXYQ-T
RXYQQ-T

VRV4 Heat Pump Option list

No	Item	RXYQ8T RYYQ8T RXYQQ8T		RXYQ10-12T RYYQ10-12T RXYQQ10-12T		RXYQ14-18T RYYQ14-18T RXYQQ14-18T		RXYQ20T RYYQ20T RXYQQ20T		RYYQ22-54T RXYQ22-54T RXYQQ22-42T		
I.	REFNET HEADER	KHRQ22M29H										
		-		KHRQ22M64H								
		-		-		-		KHRQ22M75H				
II.	REFNET JOINT	KHRQ22M20T										
		KHRQ22M29T9										
		-		KHRQ22M64T								
		-		-		-		KHRQ22M75T				
III.	OUTDOOR MULTI CONNECTION KIT (see note 2)	-		-		-		-		BHFQ22P1007		
IV.	OUTDOOR MULTI CONNECTION KIT (see note 2)	-		-		-		-		BHFQ22P1517		
No	Item	8HP	10HP	12HP	14HP	16HP	18HP	20HP				
1a	COOL/HEAT SELECTOR (SWITCH)					KRC19-26A						
1b	COOL/HEAT SELECTOR (PCB)					BRP2A81						
1c	COOL/HEAT SELECTOR (SWB MOUNTING PLATE)	-							KKS2A26A560*			
1d	COOL/HEAT SELECTOR (FIXING BOX)					KJB111A						
2	VRV CONFIGURATOR					EKPCCB*						
3	HEATER TAPE KIT (see note 6)	EKBPH012T*							EKBPH020T*			
4	HEATER TAPE KIT PCB					EKBPHPCBT*						
5	DEMAND PCB (see note 7)					DTA104A61/62*						
6	DEMAND PCB (MOUNTING PLATE)	-							KKS2B26B1*			

NOTES

1. All options are kits
2. Only for multi units
3. Option 1a and 1b are both required to operate the COOL/HEAT SELECTOR function on a VRV4 Heat Pump System
4. Option 1d is required to mount 1a
5. 1c is only required when combining 1b with 3 on a VRV4 Heat Pump system
6. To install the HEATER TAPE KIT, a HEATER TAPE KIT PCB is required
7. To install the DEMAND PCB on the Large casing type, the DEMAND PCB (MOUNTING PLATE) is required

Medium casing type VRV4 Heat Pump: modules 8~12HP

Large casing type VRV4 Heat Pump: modules 14~20HP

3D079531F

4 Combination table

4 - 1 Combination Table

RXYQQ-T

VRV4 Heat Pump Indoor unit combination Restrictions

Indoor unit combination pattern	VRV* DX indoor	AHU
VRV* DX indoor	0	X
AHU	X	0

0: Allowed
X: Not allowed

NOTES

1) VRV* DX indoor

The non-R410A VRV DX indoor units that can be connected are mentioned in 3D085036

2) Connection of air handling unit through EKEQ* and EKEXV* kit to outdoor unit

Pair combination only

3D084966

RXYQQ-T

VRV4-Q Heat Pump non-R410A DX indoor unit compatibility list

Type of indoor unit	Unified models	R22 models
Concealed Ceiling	FXYPB*K7V19	FXYPB*K*
	FXYSP*K7V19	FXYS*K*
	FXYPMP*KV19	FXYPMP*K*
Ceiling Mounted - 2way blow	FXYCP*K7V19	FXYC*K*
Ceiling Mounted - 4way blow	FXYFP*K7V19	FXYF*K*
Ceiling Mounted - corner cassette	FXYPK*KV19	FXYPK*K*
Ceiling Suspended	FXYPH*KVE9	FXYPH*K*
Floor Standing	FXYL(M)P*KV19	FXYL(M)*K*
Wall Mounted	FXYPK*KV19	FXYPK*K*

NOTES

Restrictions towards indoor unit connection:

(1) Only possible to use VRV4-Q if all the indoor units are corresponding to one of the following model groups:

- All R410A DX models
- All Unified models: refer to the limited table above. For some models special setting is required. Please contact your dealer for more information.
- All R22 DX models only models → connection only allowed upon SPN request

(2) If the indoor units are non-R410A models, a special setting on the outdoor unit is required (explained in the installation manual)

(3) Combination of

- Unified models with R410A models is not allowed
- Unified models with R22 models is not allowed
- R410A models with R22 models is not allowed

(4) Replacement of non-R410A AHU systems is possible, only if below requirements are met:

- in case of an existing ERX* system
- if AHU coil and field piping can cope with a design pressure of 33bar
- replacement of control box (EKEQ*) and expansion valve kit (EKEXV*) to R410A type is done
- AHU-installation in pair (1 outdoor to 1 AHU) is used

(5) Limitations on use of DX indoor units with VRV4 -Q Heat Pump is subject to rules mentioned in 3D084965 and 3D084966.

3D085036

4 Combination table

4 - 1 Combination Table

RYYQ-T
RYMQ-T
RXYQ-T
RXYQQ-T

VRV4 Heat Pump Standard combination table (multi)



See **Note** concerning base model type

		8HP	10HP	12HP	14HP	16HP	18HP	20HP
Heat PUMP	RXYQ8* / RYYQ8* / RXYQQ8*	1						
	RXYQ10* / RYYQ10* / RXYQQ10*		1					
	RXYQ12* / RYYQ12* / RXYQQ12*			1				
	RXYQ14* / RYYQ14* / RXYQQ14*				1			
	RXYQ16* / RYYQ16* / RXYQQ16*					1		
	RXYQ18* / RYYQ18* / RXYQQ18*						1	
Multi combination with 2 outdoor units	RXYQ20* / RYYQ20* / RXYQQ20*							1
	RXYQ22* / RYYQ22* / RXYQQ22*		1	1				
	RXYQ24* / RYYQ24* / RXYQQ24*	1				1		
	RXYQ26* / RYYQ26* / RXYQQ26*			1	1			
	RXYQ28* / RYYQ28* / RXYQQ28*			1		1		
	RXYQ30* / RYYQ30* / RXYQQ30*			1			1	
	RXYQ32* / RYYQ32* / RXYQQ32*					2		
	RXYQ34* / RYYQ34* / RXYQQ34*					1	1	
	RXYQ36* / RYYQ36* / RXYQQ36*					1		1
	RXYQ38* / RYYQ38* / RXYQQ38*	1	1					1
Multi combination with 3 outdoor units	RXYQ40* / RYYQ40* / RXYQQ40*		1	1			1	
	RXYQ42* / RYYQ42* / RXYQQ42*		1			2		
	RXYQ46* / RYYQ46*				1	2		
	RXYQ48* / RYYQ48*					3		
	RXYQ50* / RYYQ50*					2	1	
	RXYQ52* / RYYQ52*					1	2	
	RXYQ54* / RYYQ54*						3	

NOTES

RYYQ8~20 = single continuous heating model

RYYQ22~54 = multi continuous heating model

RXYQ8~20 = single non-continuous heating model

RXYQ22~54 = multi non-continuous heating model

RXYQQ8~20 = single non-continuous heating replacement model (VRV4-Q)

RXYQQ22~42 = multi non-continuous heating replacement model (VRV4-Q)

1) Single unit can be chosen: RYYQ* model (continuous heating) and RXYQ* model (non-continuous heating)

2) Multi combinations "non-continuous heating" consist out of RXYQ8~20 modules. Eg RXYQ36* = RXYQ16* + RXYQ20*

3) Multi combinations "continuous heating" consist out of **RYMQ8~20** modules. Eg RYYQ36* = RYMQ16* + RYMQ20*

-> multi modules RYMQ* cannot be used as stand alone units (RYMQ8~20HP)

4) Multi combinations can never contain RYYQ8~20 models

5) Multi "continuous heating" RYYQ* combinations can never contain RXYQ* models

6) Multi "non-continuous heating" RXYQ* combinations can never contain RYMQ* models

7) Multi "non-continuous heating" replacement models only consist out of RXYQQ8~20 modules. Eg RXYQQ36* = RXYQQ16* + RXYQQ20*

8) Replacement models can never be combined with other models

4 Combination table

4 - 1 Combination Table

4

RXYQQ-T

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) $\leq 100\%$: 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 $\leq 70\%$, 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 $\leq 70\%$, and NOT ALL other VRV DX indoor units have an individual capacity class > 50 : the restrictions below apply.
 - $100\% < CR \leq 105\% \rightarrow$ CR1 of the sum of all FXZQ15A and/or FXAQ15A indoor units in the system must be $\leq 70\%$.
 - $105\% < CR \leq 110\% \rightarrow$ CR1 of the sum of all FXZQ15A and/or FXAQ15A indoor units in the system must be $\leq 60\%$.
 - $110\% < CR \leq 115\% \rightarrow$ CR1 of the sum of all FXZQ15A and/or FXAQ15A indoor units in the system must be $\leq 40\%$.
 - $115\% < CR \leq 120\% \rightarrow$ CR1 of the sum of all FXZQ15A and/or FXAQ15A indoor units in the system must be $\leq 25\%$.
 - $120\% < CR \leq 125\% \rightarrow$ CR1 of the sum of all FXZQ15A and/or FXAQ15A indoor units in the system must be $\leq 10\%$.
 - $125\% < CR \leq 130\% \rightarrow$ 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.

3D104665

5 Capacity tables

5 - 1 Capacity Table Legend

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

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

- Capacity table database: lets you find back and export quickly the capacity information you are looking for based upon unit model, refrigerant temperature and connection ratio.

[Click here to access the capacity table viewer.](#)



- For more information about all our tools we offer [click here to see the overview](#) on my.daikin.eu



5 Capacity tables

5 - 2 Integrated Heating Capacity Correction Factor

RYYQ-T
RXYQ-T
RXYQQ-T

The heating capacity tables do not take account of the reduction in capacity, when frost has accumulated or while the defrosting operation is in progress. The capacity values, which take these factors into account, in other words, the integrated heating capacity values, can be calculated as follows:

Formula:

Integrated heating capacity = A

Value given in table of capacity characteristics = B

Integrating correction factor for frost accumulation (kW) = C

$A = B \times C$

Inlet air temperature of heat exchanger

[°CDB/°CWB]	-7/-7.6	-5/-5.6	-3/-3.7	0/-0.7	3/2.2	5/4.1	7/6
-------------	---------	---------	---------	--------	-------	-------	-----

Integrated correction factor for frost accumulation (C)

0.95	0.93	0.88	0.84	0.85	0.90	1.00
------	------	------	------	------	------	------

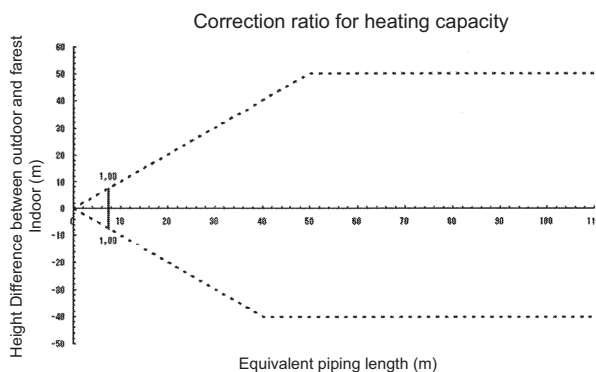
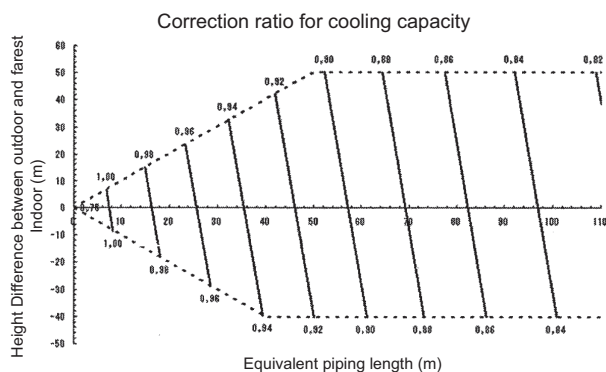
NOTES

1. The figure shows that the integrated heating capacity expresses the integrated capacity for a single cycle (from defrost operation to defrost operation) in terms of time.
2. Note that, when there is an accumulation of snow against the outside surface of the outdoor unit heat exchanger, there will always be a temporary reduction in capacity, although this will of course vary in degree in accordance with a number of other factors, such as the outdoor temperature (°CDB), relative humidity (RH) and the amount of frosting which occurs.
3. Multi combination (22~54HP) data is corresponding with the standard multi combination as mentioned on 3D079534

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ8T
RXYQ8T
RXYQQ8T



3D079897A

NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.

- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.

- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

Condition: Indoor connection ratio exceeds 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at installed connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
8HP	22.2	12.7

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
8HP	19.1	9.5

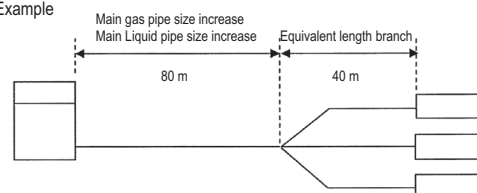
- Equivalent length used in the above figures is based upon the following equivalent length

$$\text{Equivalent piping length} = \text{Equivalent length of main pipe} \times \text{Correction factor} + \text{Equivalent length of branch pipes}$$

Choose the correction factor from the following table. When cooling capacity is calculated: gas pipe size When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example

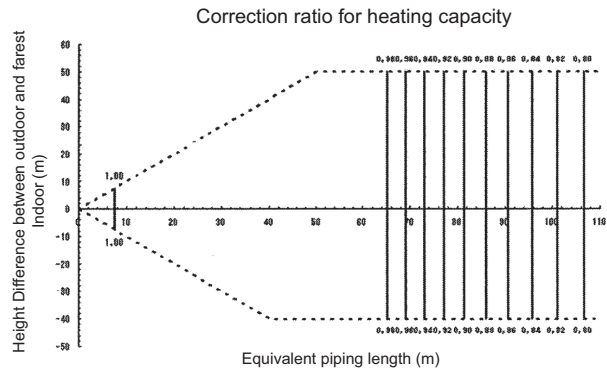
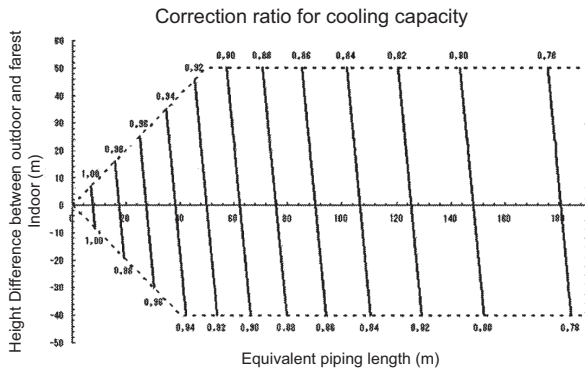


In the above case (Cooling) Overall equivalent length = $80 \text{ m} \times 0.5 + 40 \text{ m} = 80 \text{ m}$
(Heating) Overall equivalent length = $80 \text{ m} \times 0.5 + 40 \text{ m} = 80 \text{ m}$
The rate of change in cooling capacity when height difference = 0 is thus approximately 0.86
heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ10T
RXYQ10T
RXYQQ10T



3D079897A

NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.

- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.

- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\begin{aligned} \text{Maximum capacity of outdoor units} &= \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \\ &\times \text{Correction ratio of piping to furthest indoor} \end{aligned}$$

Condition: Indoor connection ratio exceeds 100%.

$$\begin{aligned} \text{Maximum capacity of outdoor units} &= \text{Capacity of outdoor units from capacity table at installed connection ratio} \\ &\times \text{Correction ratio of piping to furthest indoor} \end{aligned}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
RXYQ10P	25.4*	12.7

*If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).

*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
10 HP	22.2	9.5

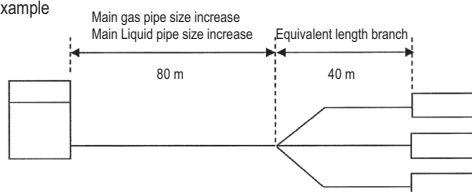
- Equivalent length used in the above figures is based upon the following equivalent length

$$\begin{aligned} \text{Equivalent piping length} &= \\ &\text{Equivalent length of main pipe} \times \text{Correction factor} \\ &+ \\ &\text{Equivalent length of branch pipes} \end{aligned}$$

Choose the correction factor from the following table. When cooling capacity is calculated: gas pipe size When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example



In the above case (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m

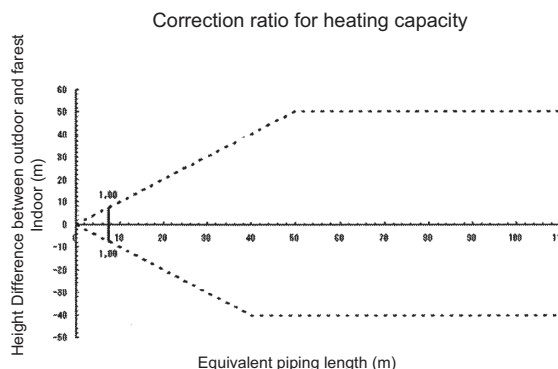
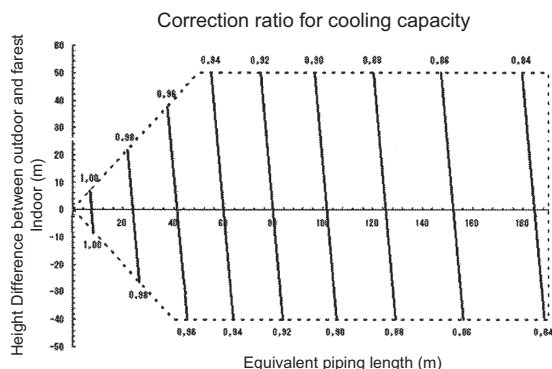
(Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m

The rate of change in cooling capacity when height difference = 0 is thus approximately 0.87
heating capacity when height difference = 0 is thus approximately 0.90

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ12,14,24,36T
RXYQ12,14,24,36T
RXYQQ12,14,24,36T



3D079897A

NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.

- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.

- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

Condition: Indoor connection ratio exceeds 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at installed connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
12 HP	28.6	15.9
14 HP	28.6	15.9
24 HP	34.9	19.1
36 HP	41.3	22.2

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).

*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
12 HP	28.6	12.7
14 HP	28.6	12.7
24 HP	34.9	15.9
36 HP	41.3	19.1

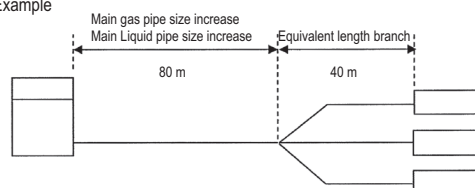
- Equivalent length used in the above figures is based upon the following equivalent length

$$\text{Equivalent piping length} = \text{Equivalent length of main pipe} \times \text{Correction factor} + \text{Equivalent length of branch pipes}$$

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example



In the above case (Cooling) Overall equivalent length = 80 m x 1.0 + 40 m = 120 m

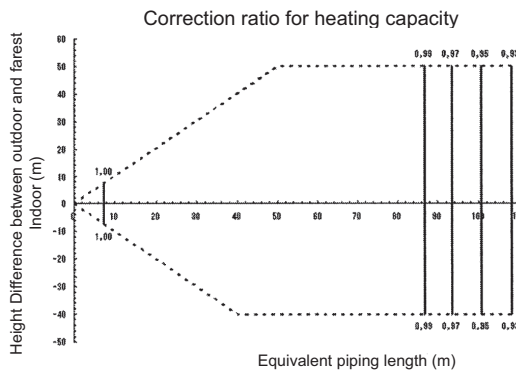
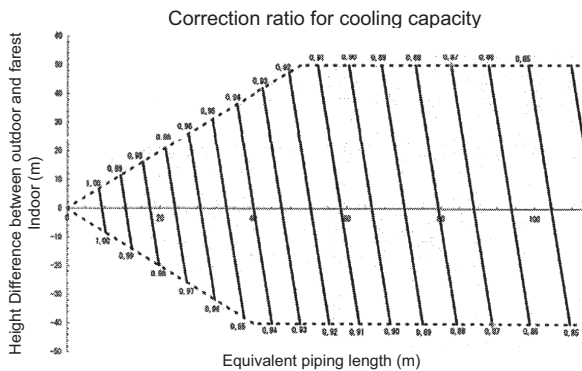
(Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m

The rate of change in cooling capacity when height difference = 0 is thus approximately 0.89
heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ16T
RXYQ16T
RXYQQ16T



3D079897A

NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.

- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.

- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\begin{aligned} \text{Maximum capacity of outdoor units} &= \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \\ &\times \text{Correction ratio of piping to furthest indoor} \end{aligned}$$

Condition: Indoor connection ratio exceeds 100%.

$$\begin{aligned} \text{Maximum capacity of outdoor units} &= \text{Capacity of outdoor units from capacity table at installed connection ratio} \\ &\times \text{Correction ratio of piping to furthest indoor} \end{aligned}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
16 HP	31.8*	15.9

*If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).

*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
16 HP	28.6	12.7

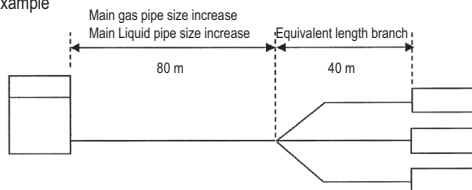
- Equivalent length used in the above figures is based upon the following equivalent length

$$\begin{aligned} \text{Equivalent piping length} &= \\ &\text{Equivalent length of main pipe} \times \text{Correction factor} \\ &+ \\ &\text{Equivalent length of branch pipes} \end{aligned}$$

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example



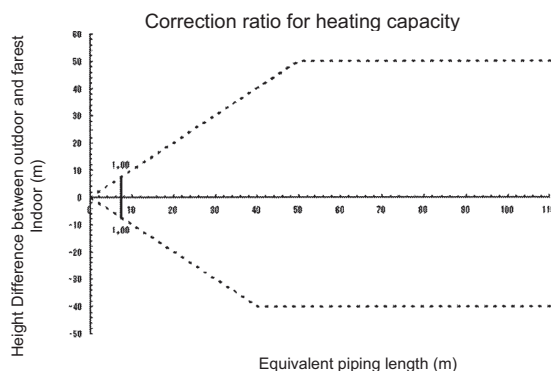
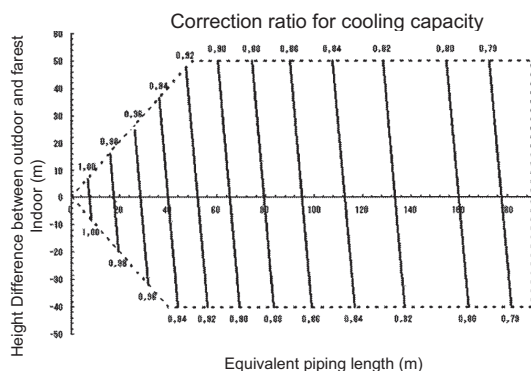
In the above case (Cooling) Overall equivalent length = 80 m x 1.0 + 40 m = 80 m
(Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m

The rate of change in cooling capacity when height difference = 0 is thus approximately 0.88
heating capacity when height difference = 0 is thus approximately 0.99

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ18,26,28,30,38,40,42,44T
RXYQ18,26,28,30,38,40,42,44T
RXYQQ18,26,28,30,38,40,42T



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NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.
- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

Condition: Indoor connection ratio exceeds 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at installed connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased.
For new diameters, see below.

Model	Gas	Liquid
18 HP	31.8*	19.1
26~30 HP	38.1*	22.2
38~44 HP	41.3	22.2

*If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).

*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
18 HP	28.6	15.9
26~30 HP	34.9	19.1
38~44 HP	41.3	19.1

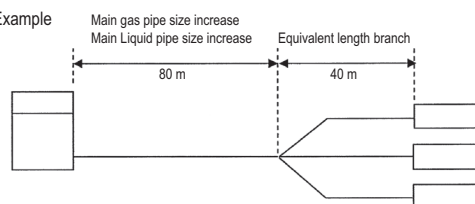
- Equivalent length used in the above figures is based upon the following equivalent length

$$\text{Equivalent piping length} = \text{Equivalent length of main pipe} \times \text{Correction factor} + \text{Equivalent length of branch pipes}$$

Choose the correction factor from the following table. When cooling capacity is calculated: gas pipe size. When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example

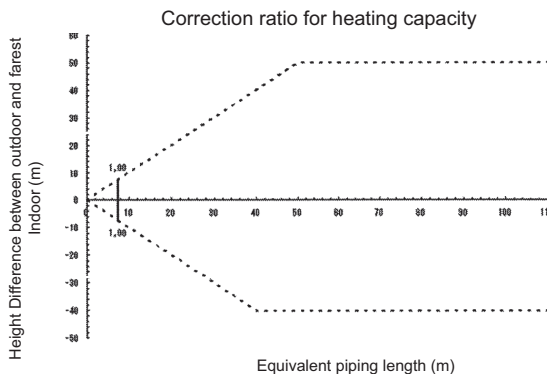
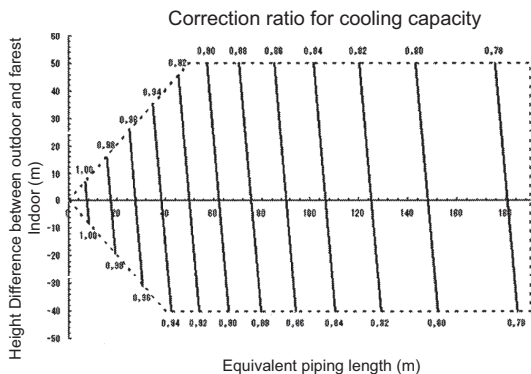


In the above case (for RXYQ38-44) (Cooling) Overall equivalent length = 80 m x 1.0 + 40 m = 120 m
(Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m
The rate of change in cooling capacity when height difference = 0 is thus approximately 0.83
heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ20,32,34T
RXYQ20,32,34T
RXYQQ20,32,34T



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NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.

- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.

- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\begin{aligned} \text{Maximum capacity of outdoor units} &= \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \\ &\times \text{Correction ratio of piping to furthest indoor} \end{aligned}$$

Condition: Indoor connection ratio exceeds 100%.

$$\begin{aligned} \text{Maximum capacity of outdoor units} &= \text{Capacity of outdoor units from capacity table at installed connection ratio} \\ &\times \text{Correction ratio of piping to furthest indoor} \end{aligned}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased. For new diameters, see below.

Model	Gas	Liquid
20 HP	31.8*	19.1
32/34 HP	38.1*	22.2

*If not available on site, do not increase. If not increased correction factor should be applied to the equivalent length (see note 6).

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).

*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
20 HP	28.6	15.9
32/34 HP	34.9	19.1

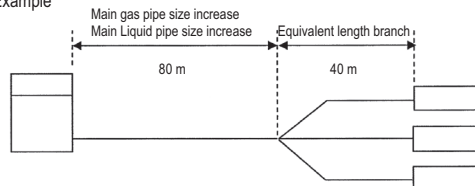
- Equivalent length used in the above figures is based upon the following equivalent length

$$\begin{aligned} \text{Equivalent piping length} &= \\ \text{Equivalent length of main pipe} &\times \text{Correction factor} \\ + \\ \text{Equivalent length of branch pipes} \end{aligned}$$

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example



In the above case (Cooling) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m

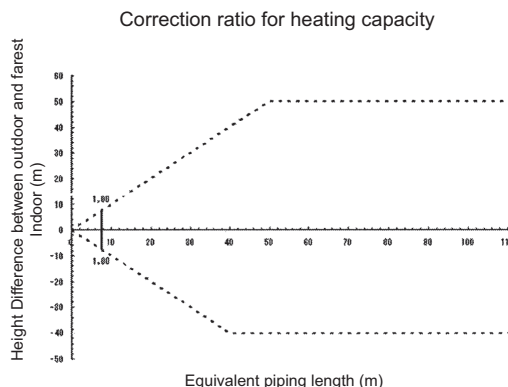
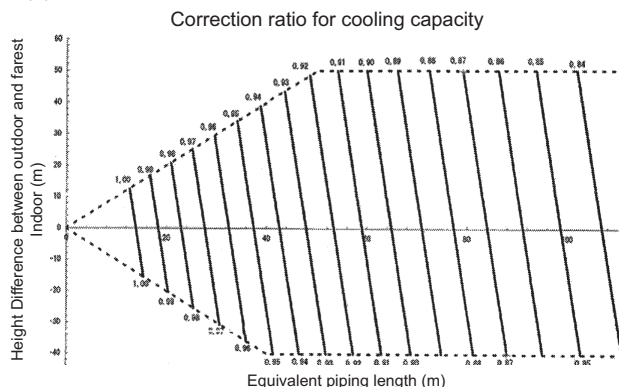
(Heating) Overall equivalent length = 80 m x 0.5 + 40 m = 80 m

The rate of change in cooling capacity when height difference = 0 is thus approximately 0.88
heating capacity when height difference = 0 is thus approximately 1.0

5 Capacity tables

5 - 3 Capacity Correction Factor

RYYQ22T
RXYQ22T
RXYQQ22T



3D079897A

NOTES

- These figures illustrate the correction ratio for piping length in capacity 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, shown in the above figures.
- With this outdoor unit, constant evaporating pressure control when cooling and constant condensing pressure control when heating is carried out.
- 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 smaller.

Condition: Indoor connection ratio does not exceed 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at the 100\% connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

Condition: Indoor connection ratio exceeds 100%.

$$\text{Maximum capacity of outdoor units} = \text{Capacity of outdoor units from capacity table at installed connection ratio} \times \text{Correction ratio of piping to furthest indoor}$$

- When level difference is 50 m or more (see installation manual and 3D079540 / 3D079543) and equivalent pipe length is 90 m or more, the diameter of the main gas and liquid pipes (outdoor unit - branch sections) must be increased.
For new diameters, see below.

Model	Gas	Liquid
22 HP	31.8*	19.1

* If not available on site, do not increase, if not increased, no correction factor should be applied to the equivalent length (see note 6).

- When the pipe length after the first refrigerant branch kit is more than 40 m, pipe size between first and final branch kit must be increased (only for VRV DX indoor units; details see installation manual).
*Refer to the installation manual for allowed system setups and rules for dedicated indoor connection types.

Diameter of main pipes (standard size)

Model	Gas	Liquid
22 HP	28.6	15.9

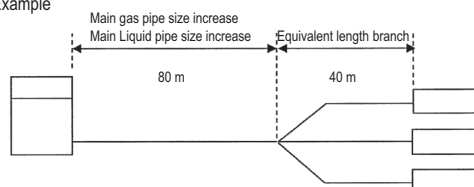
- Equivalent length used in the above figures is based upon the following equivalent length

$$\text{Overall equivalent length} = \text{Equivalent length of main pipe} \times \text{Correction factor} + \text{Equivalent length of branch pipes}$$

Choose a correction factor from the following table. When cooling capacity is calculated: gas pipe size When heating capacity is calculated: liquid pipe size

	Correction factor	
	Standard size	Size increase
Cooling (gas pipe)	1.0	0.5
Heating (liquid pipe)	1.0	0.5

Example

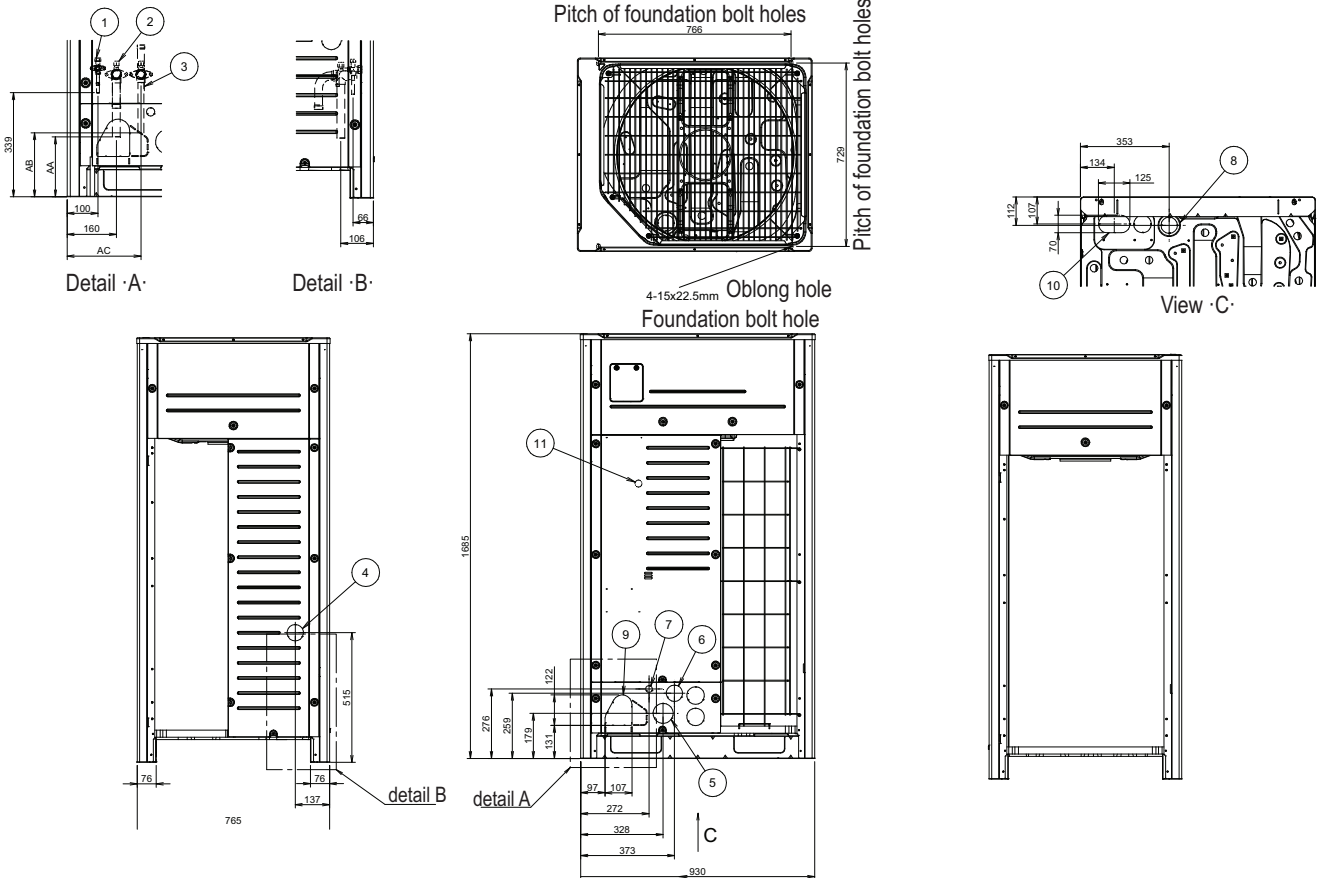


In the above case (Cooling) Overall equivalent length = $80 \text{ m} \times 0.5 + 40 \text{ m} = 80 \text{ m}$
(Heating) Overall equivalent length = $80 \text{ m} \times 0.5 + 40 \text{ m} = 80 \text{ m}$

The rate of change in cooling capacity when height difference = 0 is thus approximately 0.88
heating capacity when height difference = 0 is thus approximately 1.0

6 - 1 Dimensional Drawings

RXYQQ8-12T



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

Model	AA	AB	AC
RYYQ8T, RXYQ8T, RXYQQ8T, RXYTQ8T	248		
RYYQ10-12T, RXYQ10-12T, RXYQQ10-12T	195		
RYMQ8T	248	208	240
REMQR5T, RYMQ10-12T, REYQ8-12T	195	208	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

RYYQ8T, RYMQ8T, RXYQ8T, RXYQQ8T, RXYTQ8T RYYQ10T, RYMQ10T

RXYQ10T, RXYQQ10T REMQ5T, REYQ8-12T

RYYQ12T, RYMQ12T, RXYQ12T, RXYQQ12T

Liquid pipe

RYYQ8-10T, RYMQ8-10T, RXYQ8-10T, RXYQQ8-10T, REMQ5T, REYQ8-12T

RXYTQ8T

RYYQ12T, RYMQ12T, RXYQ12T, RXYQQ12T

Equalising pipe

RYSMQ12T

RYSMQ8-10T

High pressure/low pressure gas pipe

REMQ5T, REYQ8-12T

: Ø · 19.1 · brazing connection

: Ø · 22.2 · brazing connection

: Ø · 25.4 · brazing connection

: Ø ·28.6· brazing connection

: Ø · 9.5 · brazing connection

: Ø · 12.7 · brazing connection

: Ø · 19.1 · brazing connection

: Ø · 22.2 · brazing connection

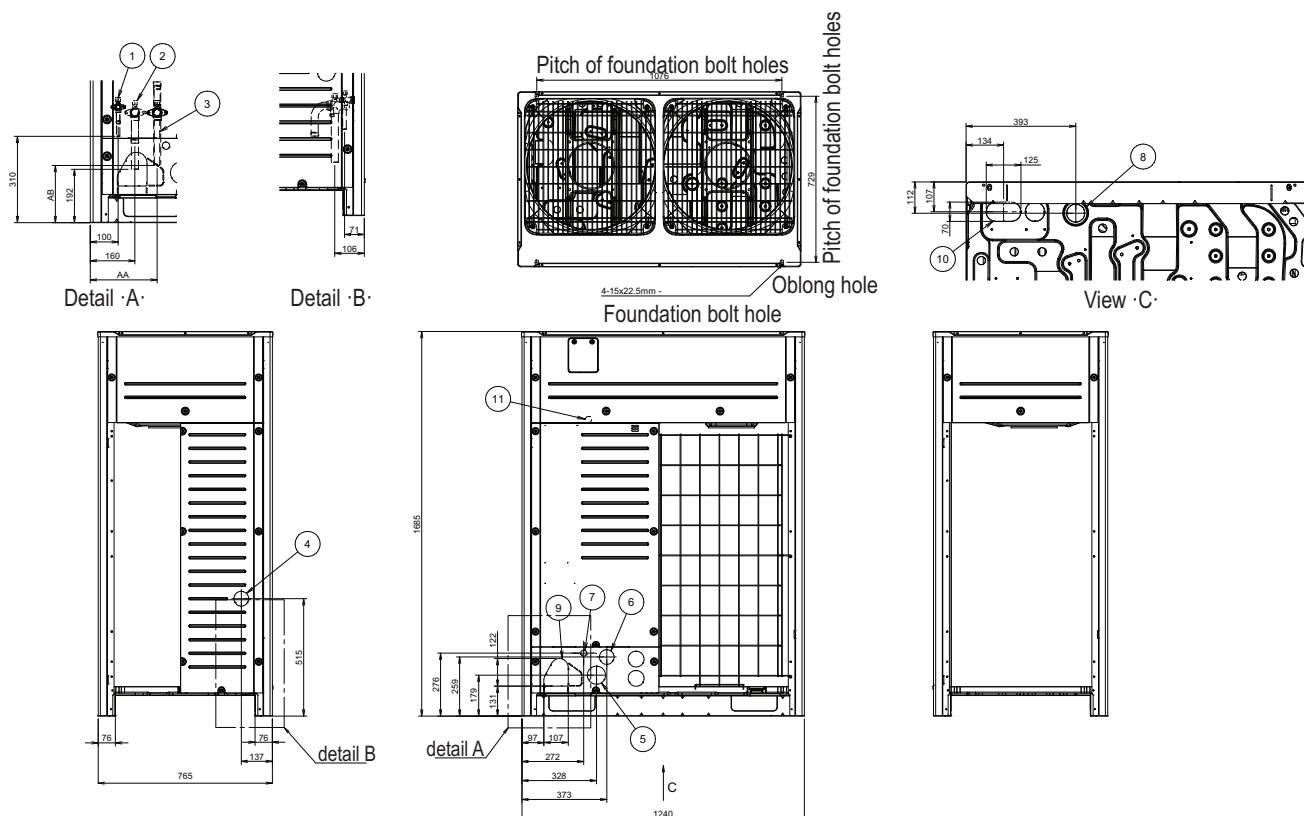
: Ø ·19.1· brazing connection

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6 Dimensional drawings

6 - 1 Dimensional Drawings

RXYQQ14-20T



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

Model	AA	AB
RYMQ14-16T, RXYQQ14-16T, REYQ14-20T	240	205
RYMQ18-20T, RXYQQ18-20T	240	210

NOTES

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

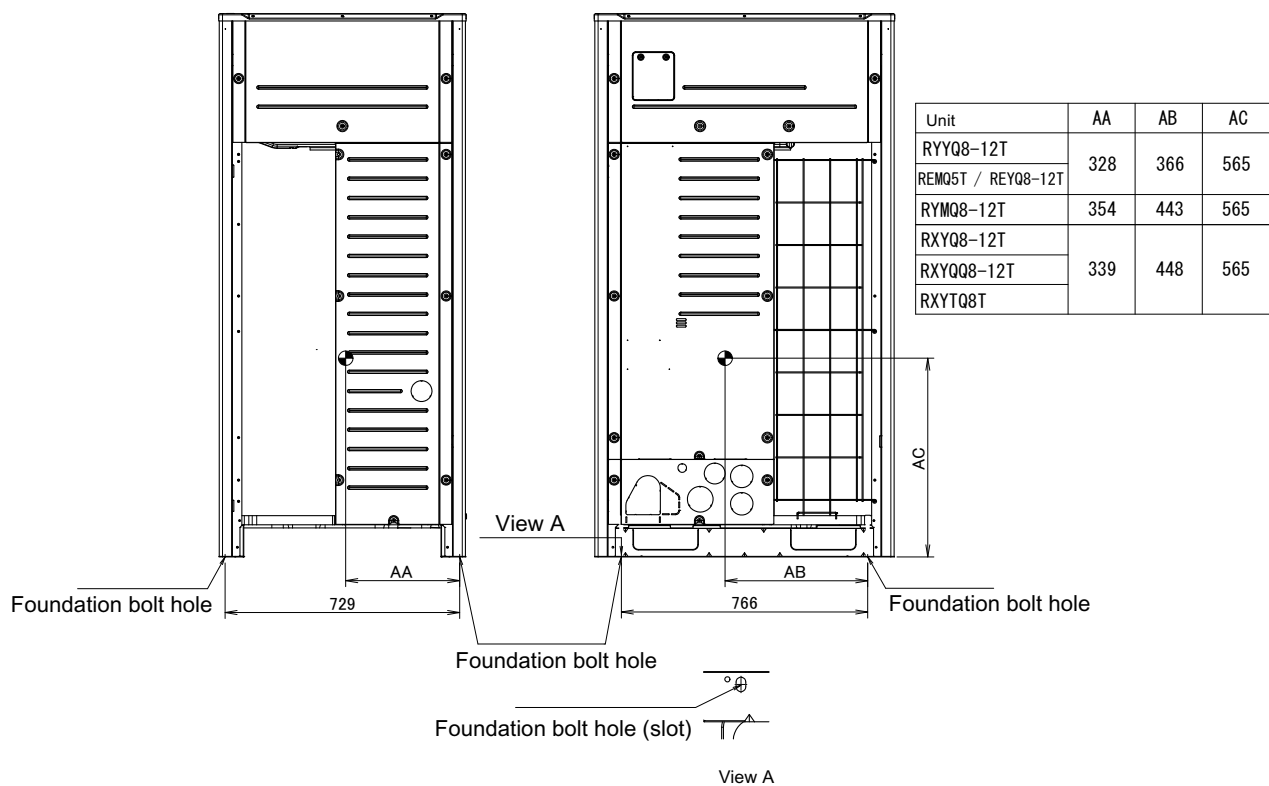
RXYTQ10T	: Ø 22.2 brazing connection
REYQ14-20T	: Ø 25.4 brazing connection
RYYQ14-20T, RYMQ14-20T, RXYQ14-20T, RXYQQ14-20T, RXYTQ12-16T	: Ø 28.6 brazing connection
Liquid pipe	
RXYTQ10T	: Ø 9.5 brazing connection
RYYQ14-16T, RYMQ14-16T, RXYQ14-16T, RXYQQ14-16T, REYQ14-20T	: Ø 12.7 brazing connection
RXYTQ12-16T RYYQ18-20T, RYMQ18-20T, RXYQ18-20T, RXYQQ18-20T	: Ø 15.9 brazing connection
Equalising pipe	
RYMQ14-16T	: Ø 22.2 brazing connection
RYMQ18-20T	: Ø 28.6 brazing connection
High pressure/low pressure gas pipe	
REYQ14-20T	: Ø 22.2 brazing connection

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7 Centre of gravity

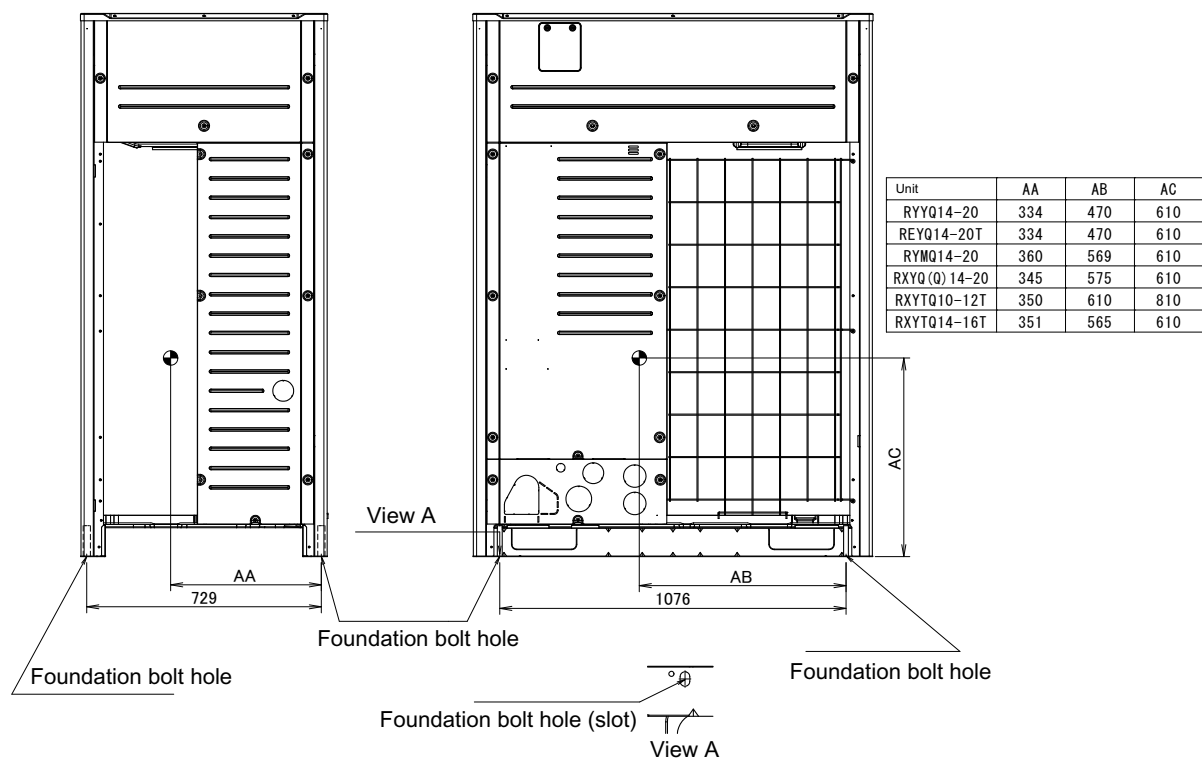
7 - 1 Centre of Gravity

RXYQQ8-12T



3D079582C

RXYQQ14-20T

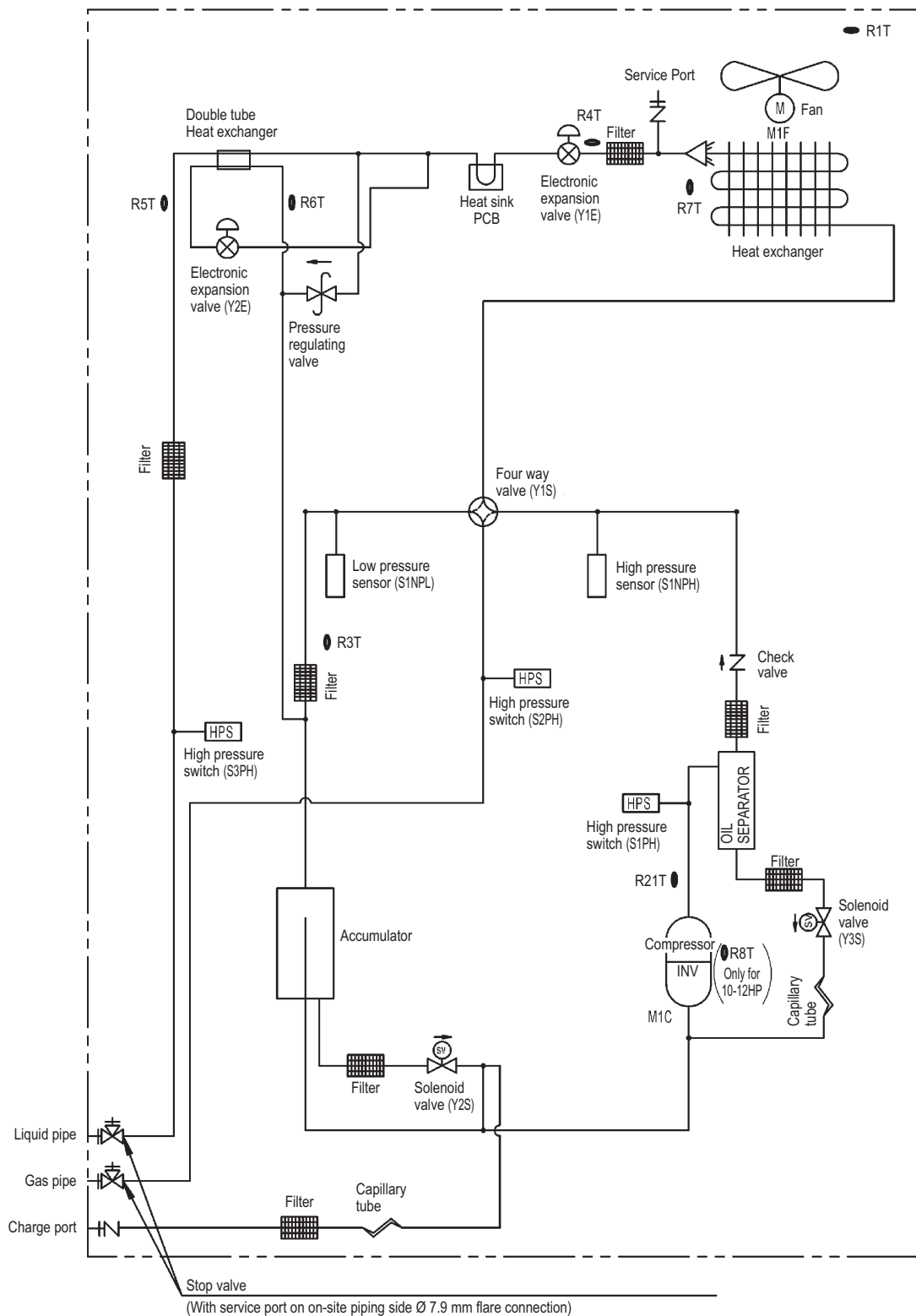


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8 Piping diagrams

8 - 1 Piping Diagrams

RXYQQ8-12T

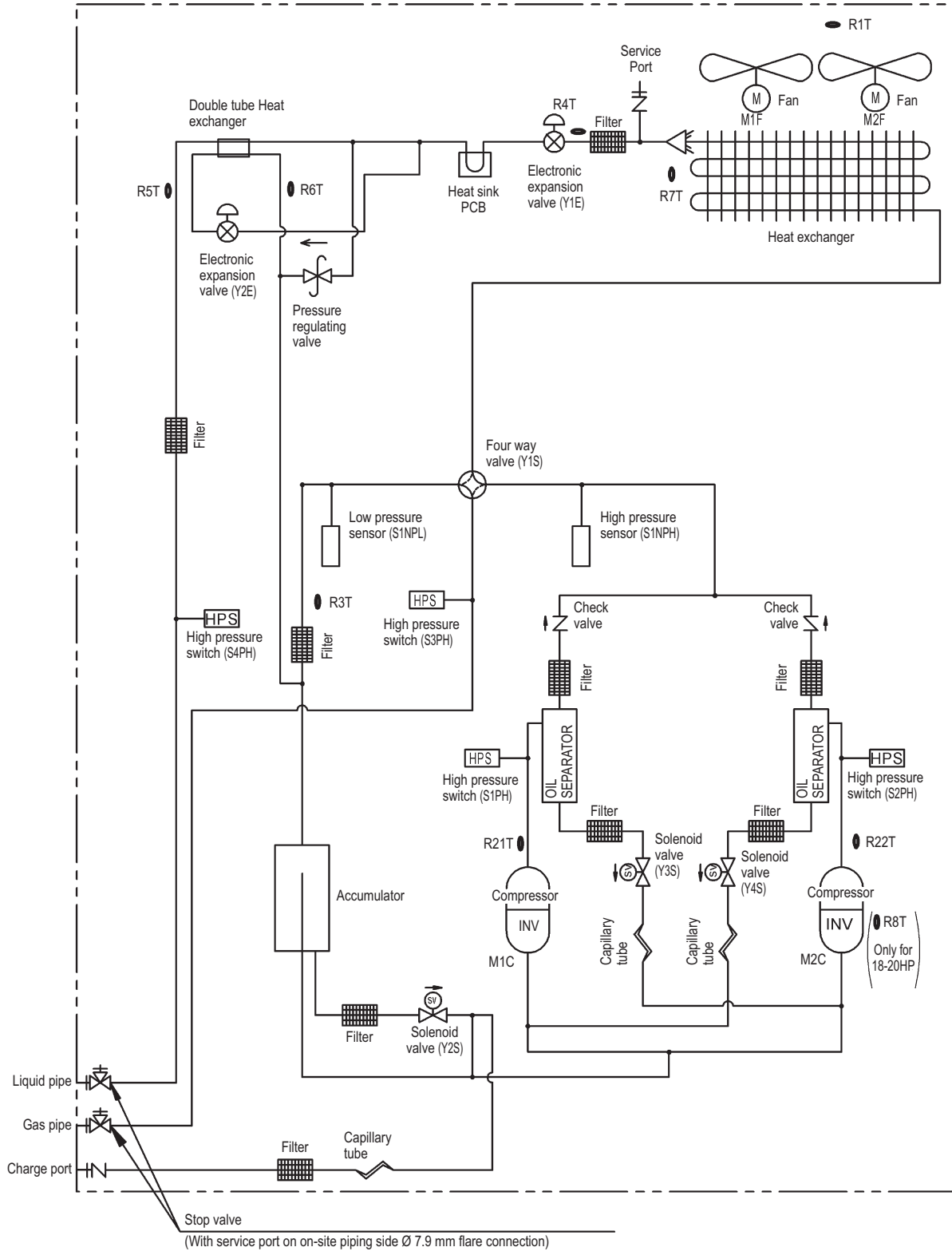


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8 Piping diagrams

8 - 1 Piping Diagrams

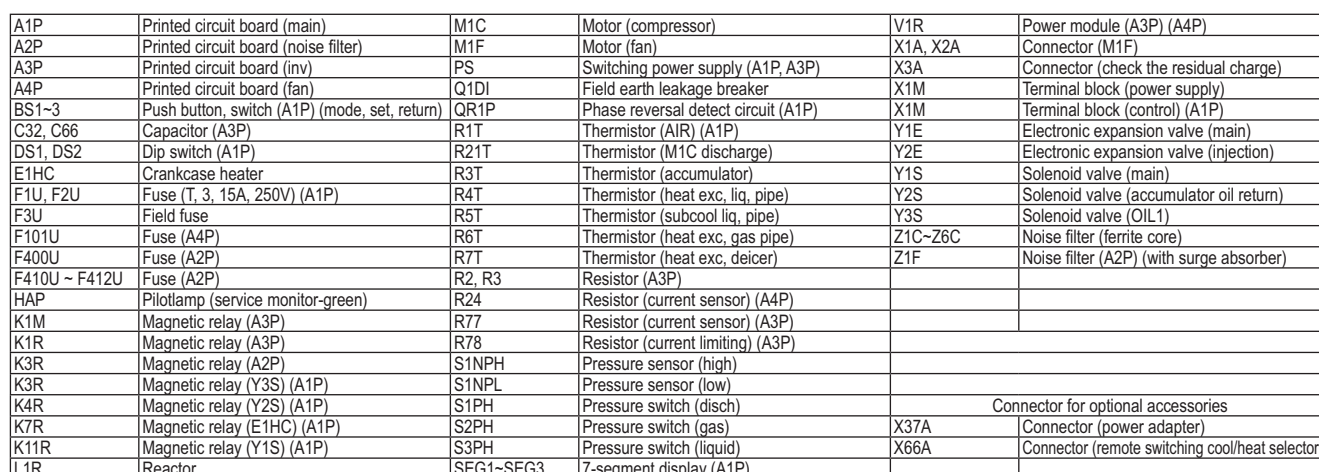
RXYQQ14-20T



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9 - 1 Wiring Diagrams - Three Phase

Power supply
3/N~380-415V 50Hz



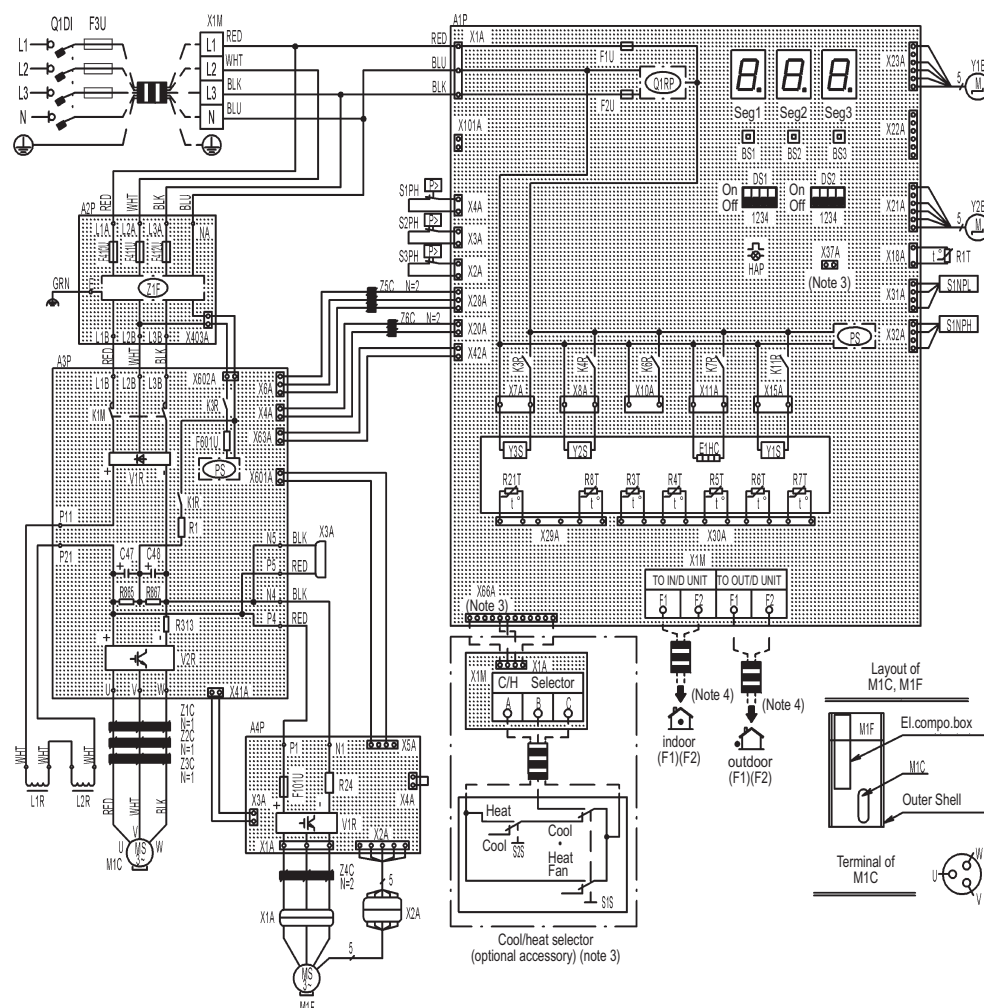
1. This wiring diagram applies only to the outdoor unit.
2. : field wiring, : terminal block, : connector, : terminal, : Protective earth (SREW)
3. When using the optional adapter, refer to the installation manual of the optional adapter.
4. For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, 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~S3PH)
7. Colors blk: black. red: red. blu: blue. wht: white. grn: green.

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RXYQQ10-12T

Power supply
3/N~380-415V 50Hz



A1P	Printed circuit board (main)	L1R, L2R	Reactor	S2PH	Pressure switch (gas)
A2P	Printed circuit board (noise filter)	M1C	Motor (compressor)	S3PH	Pressure switch (liquid)
A3P	Printed circuit board (inv)	M1F	Motor (fan)	SEG1~SEG3	7-segment display (A1P)
A4P	Printed circuit board (fan)	PS	Switching power supply (A1P, A3P)	V1R	Power module (A3P) (A4P)
BS1~3	Push button, switch (A1P) (mode, set, return)	Q1DI	Field earth leakage breaker	V2R	Power module (A3P)
C47, C48	Capacitor (A3P)	Q1RP	Phase reversal detect circuit (A1P)	X1A, X2A	Connector (M1F)
DS1, DS2	Dip switch (A1P)	R1T	Thermistor (AlR) (A1P)	X3a	Connector (check the residual charge)
E1HC	Crankcase heater	R21T	Thermistor (M1C discharge)	X1M	Terminal block (power supply)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R3T	Thermistor (accumulator)	X1M	Terminal block (control) (A1P)
F3U	Field fuse	R4T	Thermistor (heat exc, liq, pipe)	Y1E	Electronic expansion valve (main)
F101U	Fuse (A4P)	R5T	Thermistor (subcool liq, pipe)	Y2E	Electronic expansion valve (injection)
F410U ~ F412U	Fuse (A2P)	R6T	Thermistor (heat exc, gas pipe)	Y1S	Solenoid valve (main)
F601U	Fuse (A3P)	R7T	Thermistor (heat exc, deicer)	Y2S	Solenoid valve (accumulator oil return)
HAP	Pilotlamp (service monitor-green) (A1P)	R8T	Thermistor (M1C body)	Y3S	Solenoid valve (OIL1)
K1M	Magnetic contactor (A3P)	R1	Resistor (current limiting) (A3P)	Z1C~Z6C	Noise filter (ferrite core)
K1R	Magnetic relay (A3P)	R24	Resistor (current sensor) (A4P)	Z1F	Noise filter (A2P) (with surge absorber)
K3R	Magnetic relay (A3P)	R13	Resistor (current sensor) (A3P)		
K3R	Magnetic relay (Y3S) (A1P)	R865, R867	Resistor (A3P)		
K4R	Magnetic relay (Y2S) (A1P)	S1NPH	Pressure sensor (high)		Connector for optional accessories
K7R	Magnetic relay (E1HC) (A1P)	S1NPL	Pressure sensor (low)	X37A	Connector (power adapter)
K11R	Magnetic relay (Y1S) (A1P)	S1PH	Pressure switch (disch)	X66A	Connector (remote switching cool/heat selector)

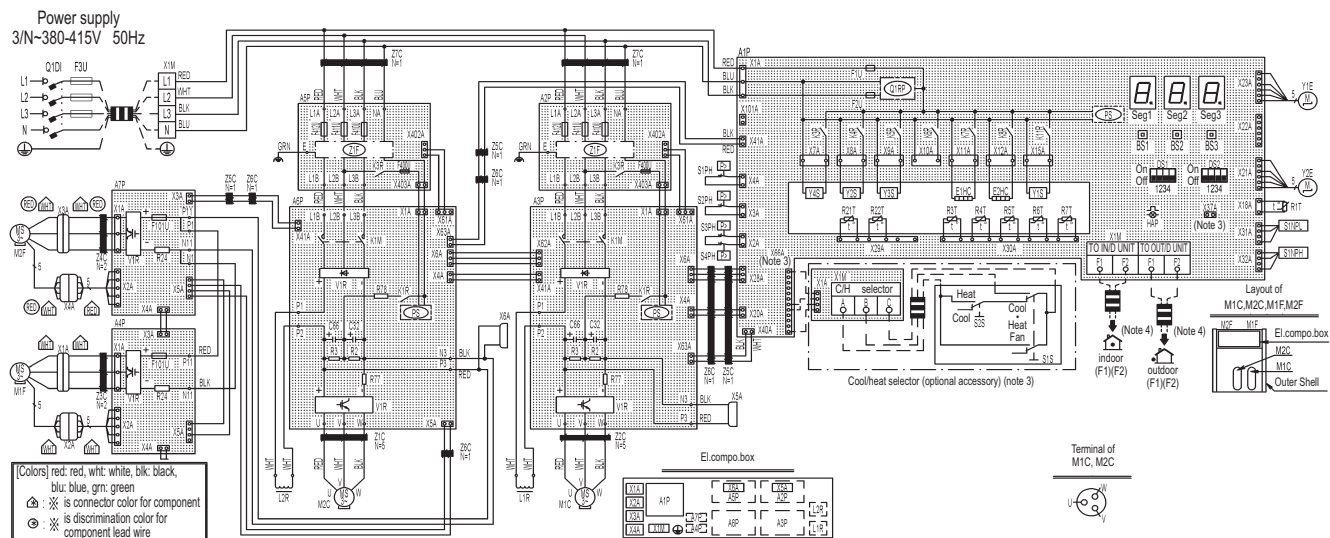
NOTES

1. This wiring diagram applies only to the outdoor unit.
2.  : field wiring,  : terminal block,  : connector,  : terminal,  : Protective earth (SREW)
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, 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 ~ S3PH).
7. Colors BLK: Black; RED: Red; BLU: Blue; WHT: White; GRN: Green.

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RXYQQ14-16T



A1P	Printed circuit board (main)	K11R	Magnetic relay (Y1S) (A1P)	S4PH	Pressure switch (liquid)
A2P, A5P	Printed circuit board (noise filter)	L1R, L2R	Reactor	SEG1~SEG3	7-segment display (A1P)
A3P, A6P	Printed circuit board (inv)	M1C, M2C	Motor (compressor)	V1R	Power module (A3P, A6P)
A4P, A7P	Printed circuit board (fan)	M1F, M2F	Motor (fan)	V1R	Power module (A4P, A7P)
BS1~3	Push button, switch (A1P) (mode, set, return)	PS	Switching power supply (A1P, A3P, A6P)	X1A~4A	Connector (M1F, M2F)
C32, C66	Capacitor (A3P), (A6P)	Q1DI	Field earth leakage breaker	X5A~X6A	Connector (check the residual charge)
DS1, DS2	Dip switch (A1P)	Q1RP	Phase reversal detect circuit (A1P)	X1M	Terminal block (power supply)
E1HC, E2HC	Crankcase heater	R2, R3	Resistor (A3P, A6P)	X1M	Terminal block (control) (A1P)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R24	Resistor (current sensor) (A4P, A7P)	Y1E	Electronic expansion valve (main)
F3U	Field fuse	R77	Resistor (current sensor) (A3P, A6P)	Y2E	Electronic expansion valve (injection)
F101U	Fuse (A4P, A7P)	R78	Resistor (current limiting) (A3P, A6P)	Y1S	Solenoid valve (main)
F400U	Fuse (A2P, A5P)	R1T	Thermistor (AIR) (A1P)	Y2S	Solenoid valve (accumulator oil return)
F410U ~ F412U	Fuse (A2P, A5P)	R21T, R22T	Thermistor (M1C, MC2 discharge)	Y3S	Solenoid valve (OIL1)
HAP	Pilotlamp (service monitor-green)	R3T	Thermistor (accumulator)	Y4S	Solenoid valve (OIL2)
K1M	Magnetic contactor (A3P, A6P)	R4T	Thermistor (heat exc, liq. pipe)	Z1C~Z7C	Noise filter (ferrite core)
K1R	Magnetic relay (A3P, A6P)	R5T	Thermistor (subcool liq. pipe)	Z1F	Noise filter (A2P, A5P) (with surge absorber)
K3R	Magnetic relay (A2P, A5P)	R6T	Thermistor (heat exc, gas pipe)		
K3R	Magnetic relay (Y4S) (A1P)	R7T	Thermistor (heat exc, deicer)		
K4R	Magnetic relay (Y2S) (A1P)	S1NPH	Pressure sensor (high)		
K5R	Magnetic relay (Y3S) (A1P)	S1NPL	Pressure sensor (low)		Connector for optional accessories
K7R	Magnetic relay (E1HC) (A1P)	S1PH, S2PH	Pressure switch (disch)	X37A	Connector (power adapter)
K8R	Magnetic relay (E2HC) (A1P)	S3PH	Pressure switch (gas)	X66A	Connector (remote switching cool/heat selector)

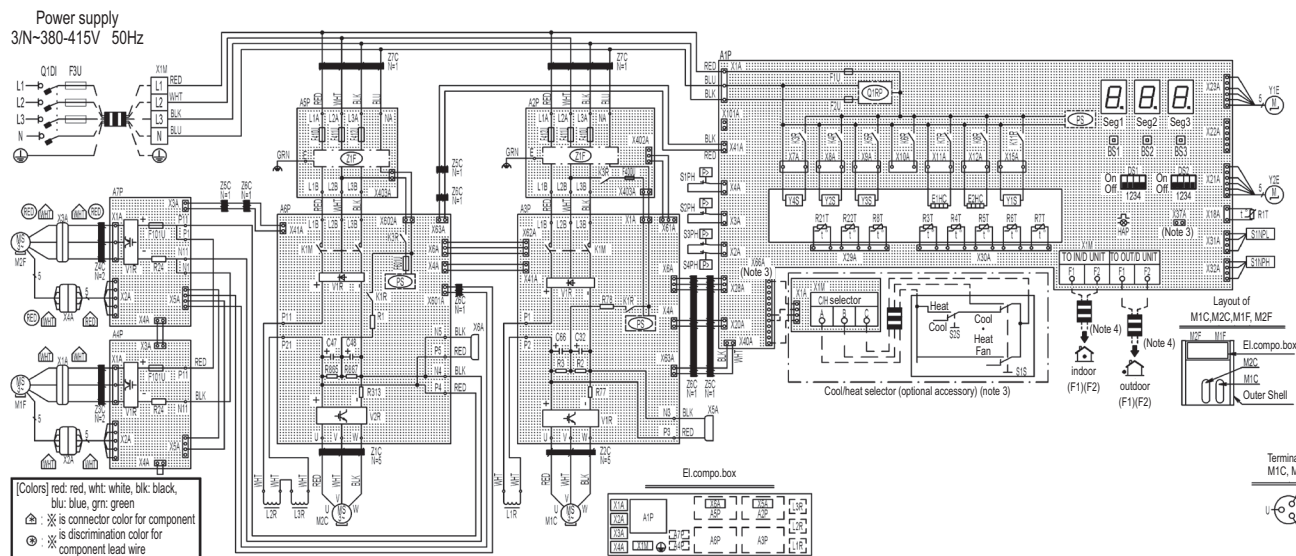
NOTES

1. This wiring diagram applies only to the outdoor unit.
2. : field wiring, : terminal block, : connector, : terminal, : Protective earth (SREW)
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, 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 ~ S4PH).

9 Wiring diagrams

9 - 1 Wiring Diagrams - Three Phase

RXYQQ18-20T



A1P	Printed circuit board (main)	L1R ~ L3R	Reactor	S4PH	Pressure switch (liquid)
A2P, A5P	Printed circuit board (noise filter)	M1C, M2C	Motor (compressor)	SEG1~SEG3	7-segment display (A1P)
A3P, A6P	Printed circuit board (inv)	M1F, M2F	Motor (fan)	V1R	Power module (A3P, A6P)
A4P, A7P	Printed circuit board (fan)	PS	Switching power supply (A1P, A3P, A6P)	V1R	Power module (A4P, A7P)
BS1~3	Push button, switch (A1P) (mode, set, return)	Q1DI	Field earth leakage breaker	V2R	Power module (A6P)
C32, C66	Capacitor (A3P)	Q1RP	Phase reversal detect circuit (A1P)	X1A~4A	Connector (M1F, M2F)
C47, C48	Capacitor (A6P)	R1	Resistor (current limiting) (A6P)	X5A~X6A	Connector (check the residual charge)
DS1, DS2	Dip switch (A1P)	R2, R3	Resistor (A3P)	X1M	Terminal block (power supply)
E1HC, E2HC	Crankcase heater	R24	Resistor (current sensor) (A4P, A7P)	X1M	Terminal block (control) (A1P)
F1U, F2U	Fuse (T, 3, 15A, 250V) (A1P)	R77	Resistor (current sensor) (A3P)	Y1E	Electronic expansion valve (main)
F101U	Fuse (A4P, A7P)	R78	Resistor (current limiting) (A3P)	Y2E	Electronic expansion valve (injection)
F3U	Field fuse	R313	Resistor (current sensor) (A6P)	Y1S	Solenoid valve (main)
F400U	Fuse (A2P)	R865, R867	Resistor (A6P)	Y2S	Solenoid valve (accumulator oil return)
F410U ~ F412U	Fuse (A2P, A5P)	R1T	Thermistor (AIR) (A1P)	Y3S	Solenoid valve (OIL1)
F601U	Fuse (A6P)	R21T, R22T	Thermistor (M1C, MC2 discharge)	Y4S	Solenoid valve (OIL2)
HAP	Pilotlamp (A1P) (service monitor-green)	R3T	Thermistor (accumulator)	Z1C~Z7C	Noise filter (ferrite core)
K1M	Magnetic contactor (A3P, A6P)	R4T	Thermistor (heat exc, liq, pipe)	Z1F	Noise filter (A2P, A5P) (with surge absorber)
K1R	Magnetic relay (A3P, A6P)	R5T	Thermistor (subcool liq, pipe)		
K3R	Magnetic relay (A2P, A6P)	R6T	Thermistor (heat exc, gas pipe)		
K3R	Magnetic relay (Y4S) (A1P)	R7T	Thermistor (heat exc, deicer)		
K4R	Magnetic relay (Y2S) (A1P)	R8T	Thermistor (M2C, body)		
K5R	Magnetic relay (Y3S) (A1P)	S1NPH	Pressure sensor (high)		
K7R	Magnetic relay (E1HC) (A1P)	S1NPL	Pressure sensor (low)		Connector for optional accessories
K8R	Magnetic relay (E2HC) (A1P)	S1PH, S2PH	Pressure switch (disch)	X37A	Connector (power adapter)
K11R	Magnetic relay (Y1S) (A1P)	S3PH	Pressure switch (gas)	X66A	Connector (remote switching cool/heat selector)

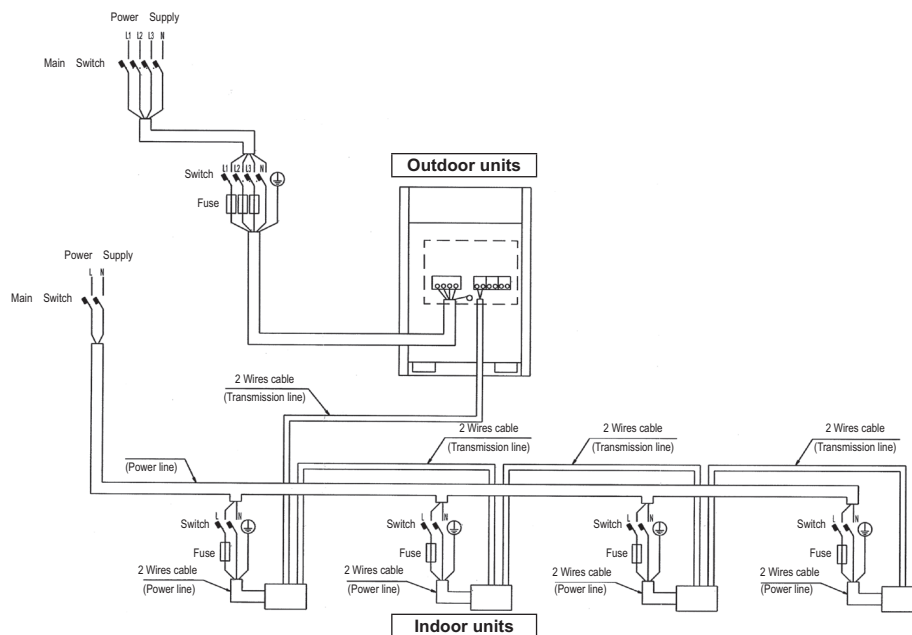
NOTES

- This wiring diagram applies only to the outdoor unit.
- ⓧ: field wiring, □: terminal block, □: connector, ○: terminal, ⊕: Protective earth (SREW)
- When using the optional adapter, refer to the installation manual of the optional adapter.
- For connection wiring to indoor-outdoor transmission F1-F2, outdoor-outdoor transmission F1-F2, refer to the installation manual.
- How to use BS1~3 switch. Refer to "service precaution" label on el. compo. box cover.
- When operating, don't shortcircuit the protection devices (S1PH ~ S4PH).

10 External connection diagrams

10 - 1 External Connection Diagrams

RYYQ8-20T
RXYQ8-20T
RXYQQ8-20T

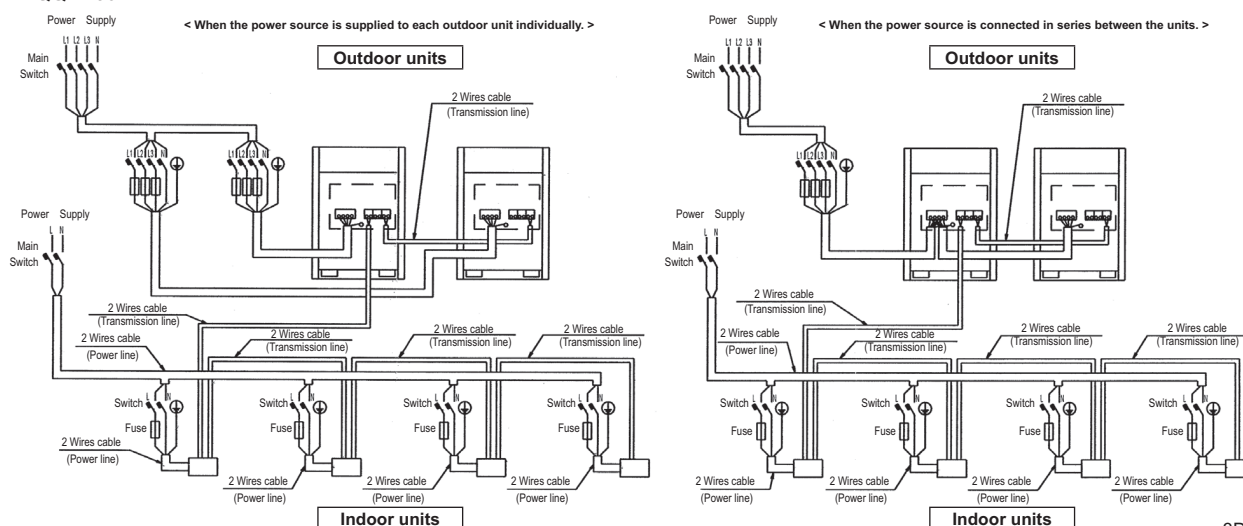


3D079576

NOTES

1. All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
2. Use copper conductors only.
3. As for details, see wiring diagram.
4. Install circuit breaker for safety.
5. All field wiring and components must be provided by licensed electrician.
6. Unit shall be grounded in compliance with the applicable local and national codes.
7. Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8. Be sure to install the switch and the fuse to the power line of each equipment.
9. Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
10. If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally.
Running the product in reversed phase may break the compressor and other parts.
11. Must install earth leakage circuit breaker.

RYYQ22-36T
RXYQ22-36T
RXYQQ22-36T



3D079577

NOTES

1. All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
2. Use copper conductors only.
3. As for details, see wiring diagram.
4. Install circuit breaker for safety.
5. All field wiring and components must be provided by licensed electrician.
6. Unit shall be grounded in compliance with the applicable local and national codes.
7. Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8. Be sure to install the switch and the fuse to the power line of each equipment.
9. Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
10. the capacity of UNIT1 must be larger than UNIT2 when the power source is connected in series between the units.
11. If there exists the possibility of reversed phase, lose phase, momentary blackout or 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. Must install earth leakage circuit breaker.

10 External connection diagrams

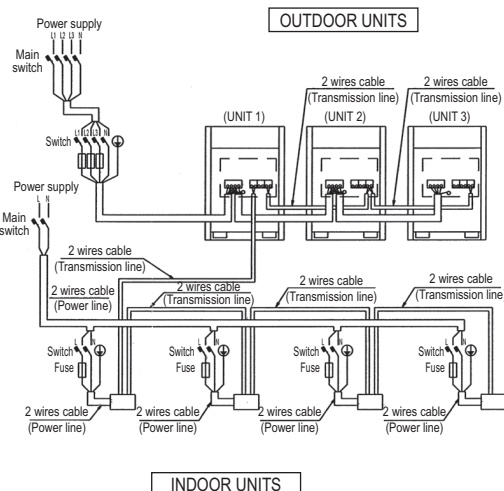
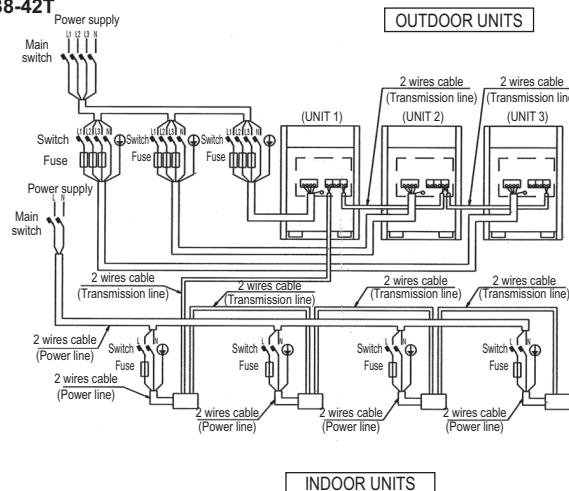
10 - 1 External Connection Diagrams

10

RYYQ38-54T
RXYQ38-54T
RXYQQ38-42T

<When the power source is supplied to each outdoor unit individually>

<When the power source is connected in series between the units>



3D079578

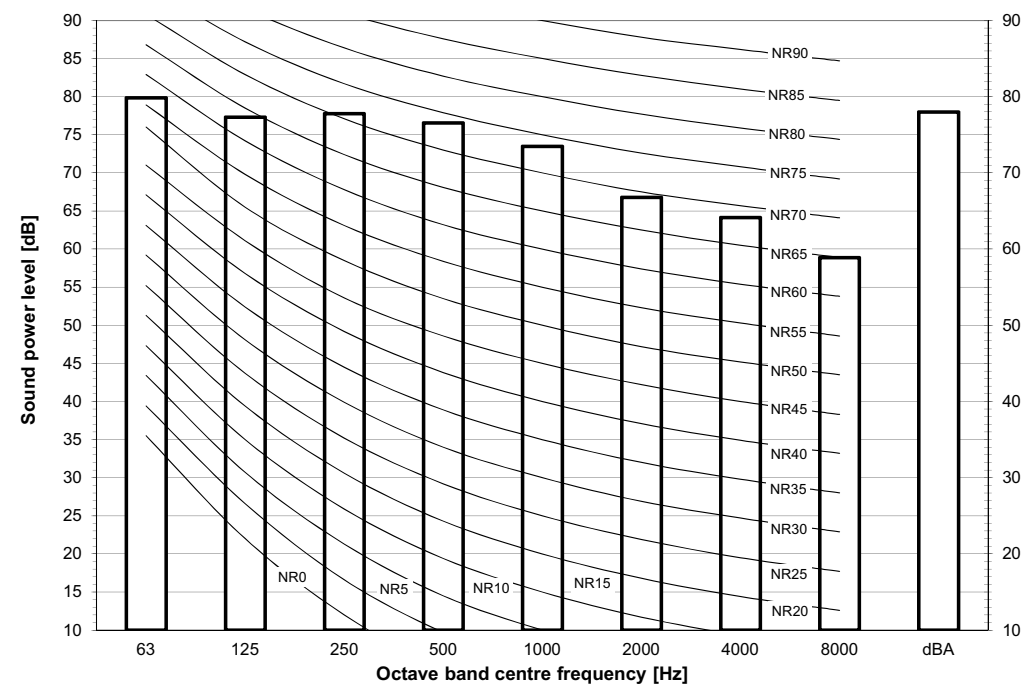
NOTES

1. All wiring, components and materials to be produced on the site must comply with the applicable local and national codes.
2. Use copper conductors only.
3. As for details, see wiring diagram.
4. Install circuit breaker for safety.
5. All field wiring and components must be provided by licensed electrician.
6. Unit shall be grounded in compliance with the applicable local and national codes.
7. Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8. Be sure to install the switch and the fuse to the power line of each equipment.
9. Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
10. The capacity of UNIT1 must be larger than UNIT2 when the power source is connected in series between the units.
11. If there exists the possibility of reversed phase, lose phase, momentary blackout or 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. Must install earth leakage circuit breaker.

11 Sound data

11 - 1 Sound Power Spectrum

RXYQQ8T

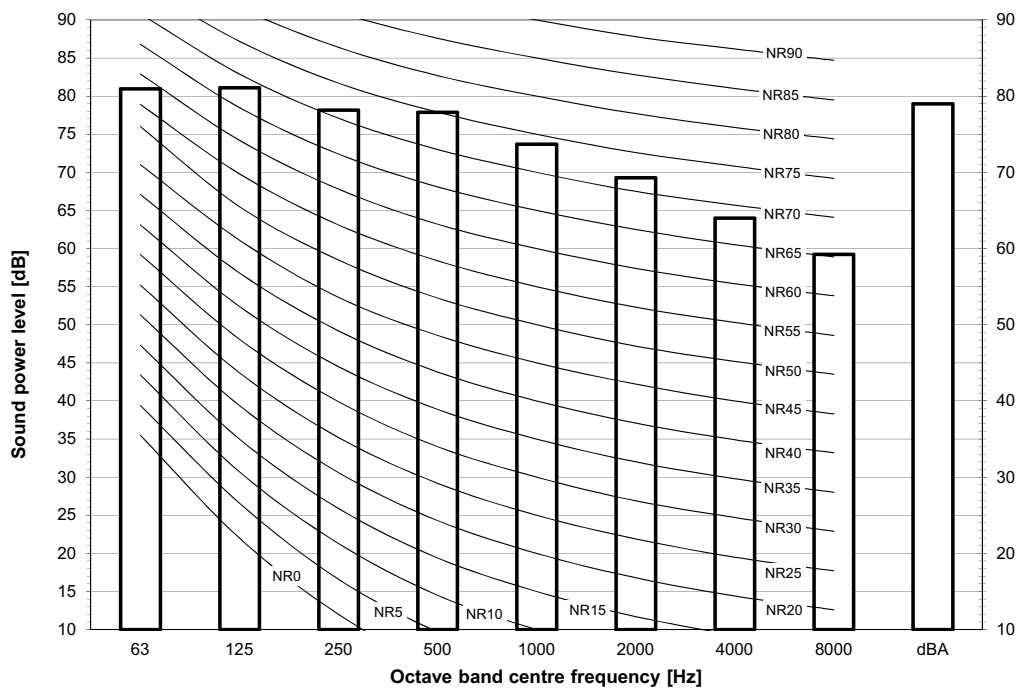


Notes

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

3D079537D

RXYQQ10T



Notes

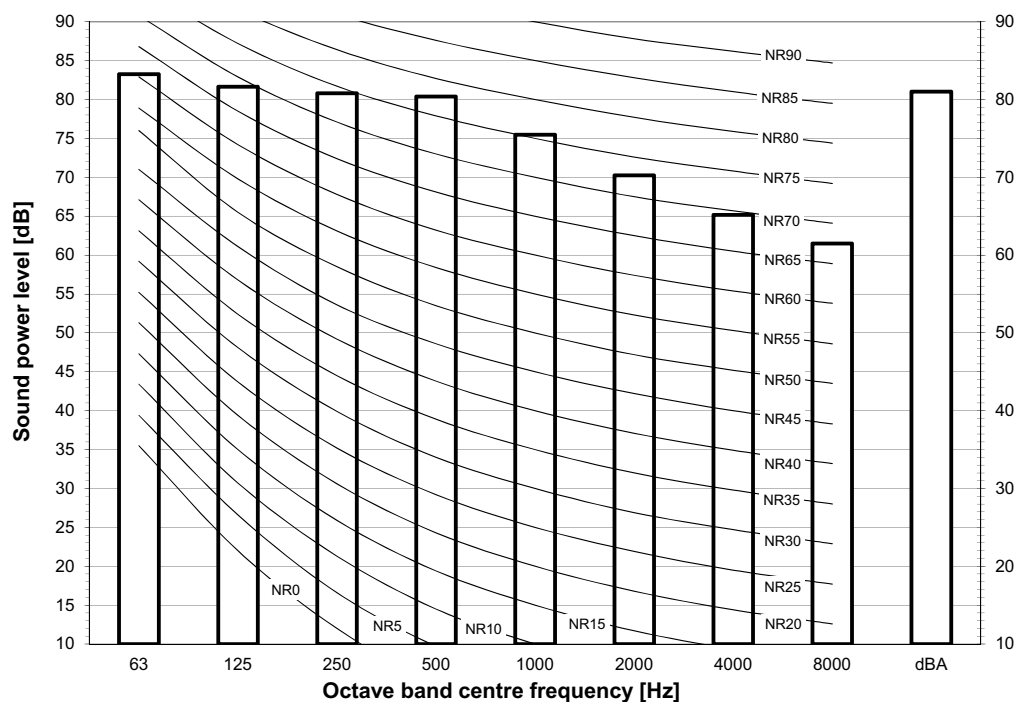
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10E-6μW/m²
- Measured according to ISO 3744

3D079908D

11 Sound data

11 - 1 Sound Power Spectrum

RXYQQ12T

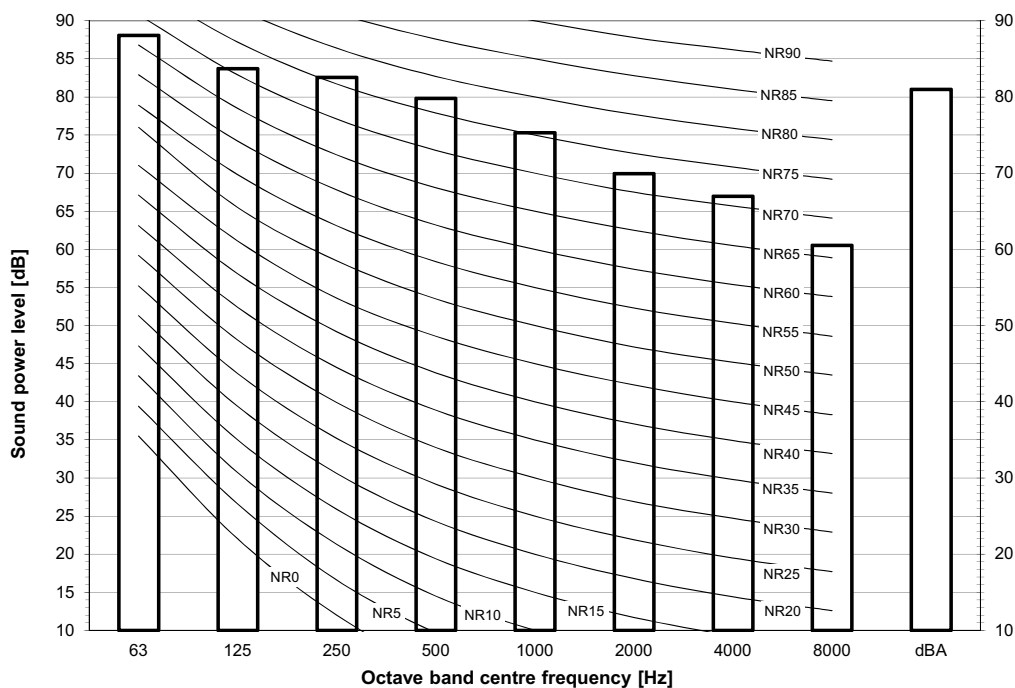


Notes

- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
- Measured according to ISO 3744

3D079909D

RXYQQ14T



Notes

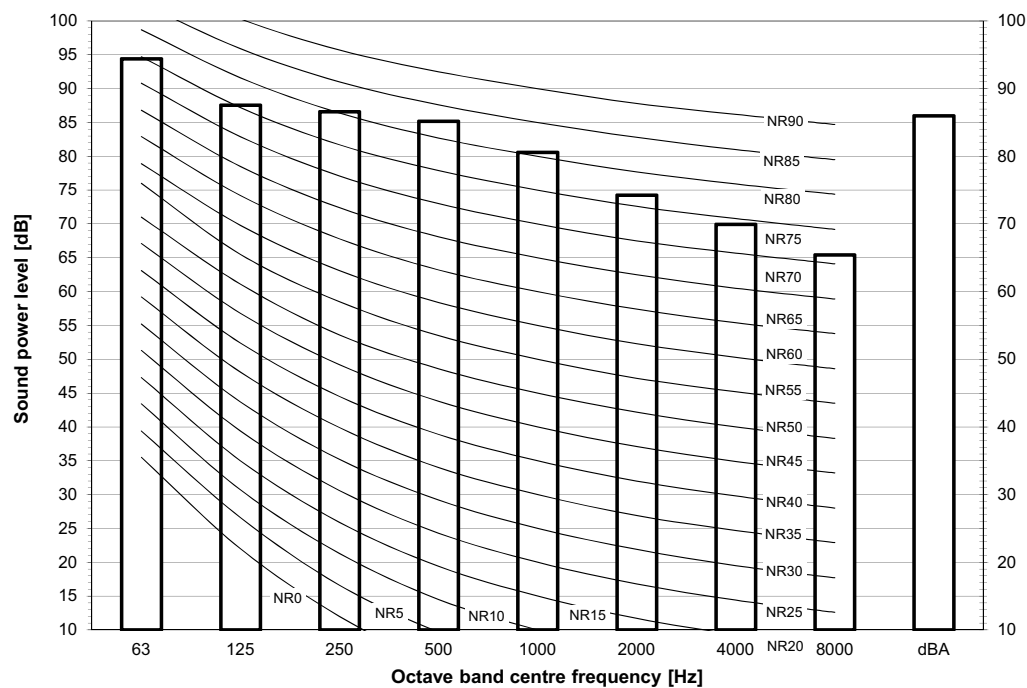
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
- Measured according to ISO 3744

3D079910D

11 Sound data

11 - 1 Sound Power Spectrum

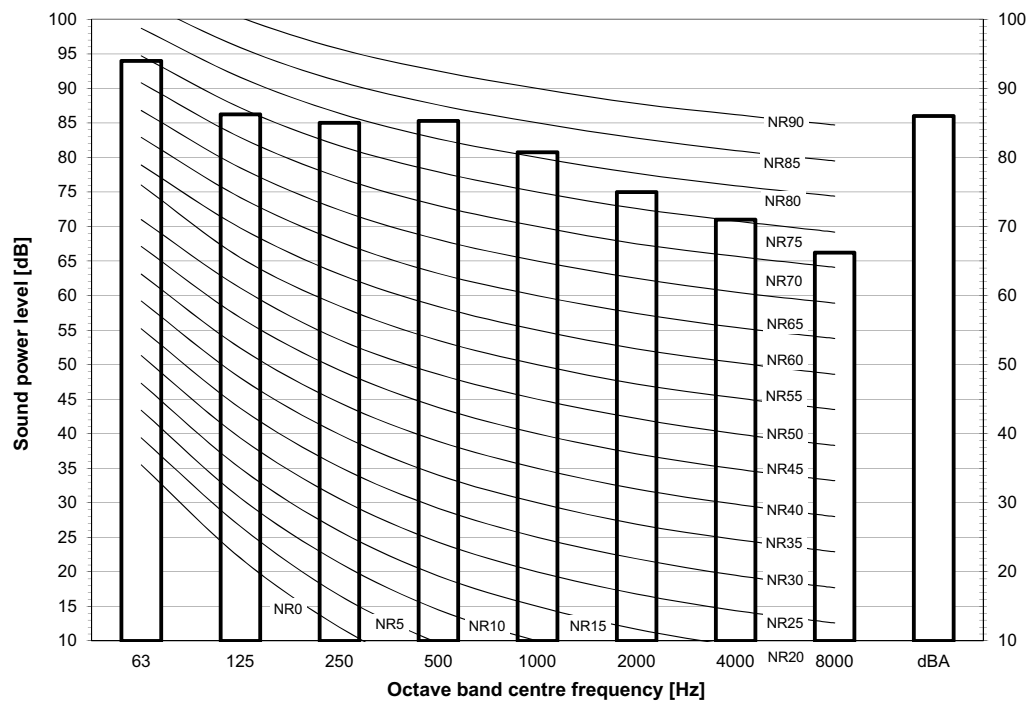
RXYQQ16T



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

3D079911D

RXYQQ18T



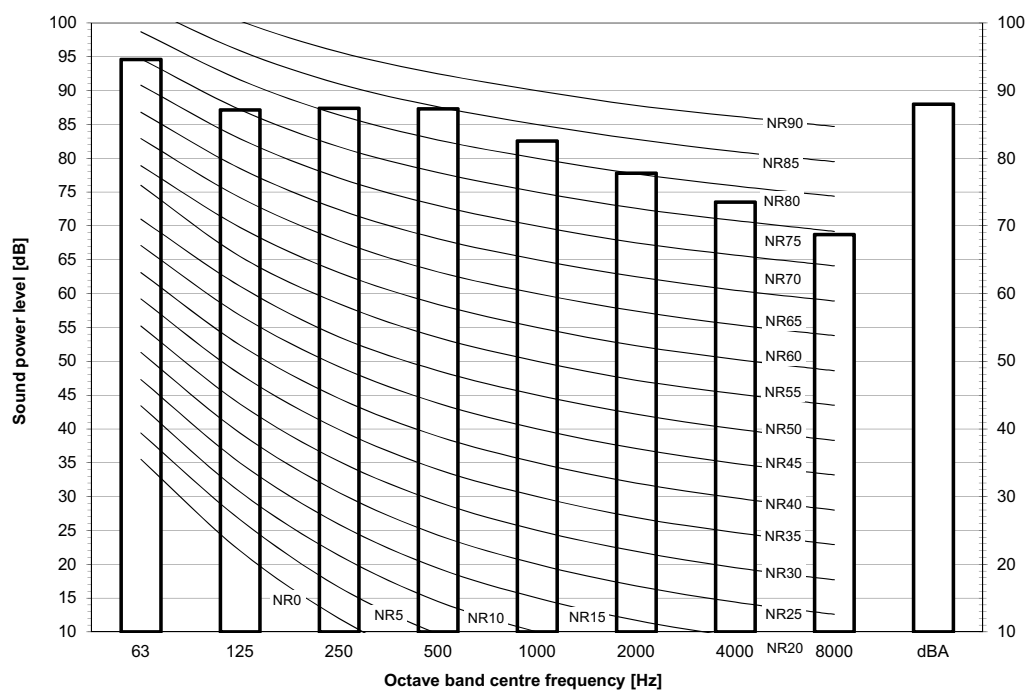
Notes
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity 0dB = 10E-6μW/m²
- Measured according to ISO 3744

3D079912D

11 Sound data

11 - 1 Sound Power Spectrum

RXYQQ20T



Notes

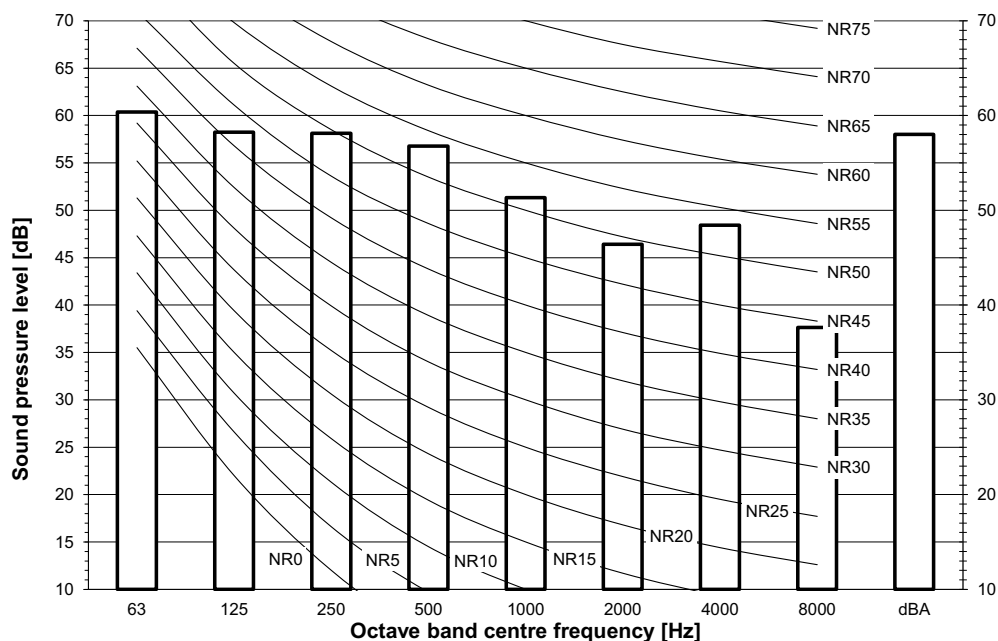
- dBA = A-weighted sound power level (A scale according to IEC).
- Reference acoustic intensity $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
- Measured according to ISO 3744

3D079913D

11 Sound data

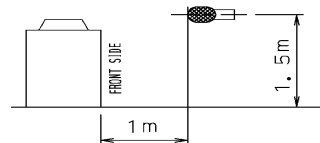
11 - 2 Sound Pressure Spectrum

RXYQQ8T



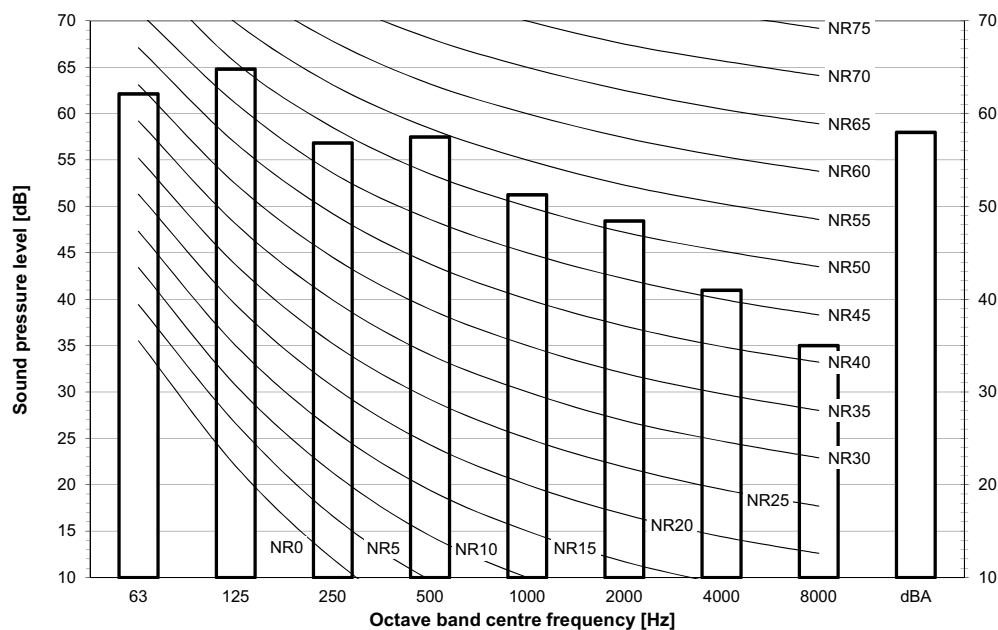
Notes

- 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 μ Pa



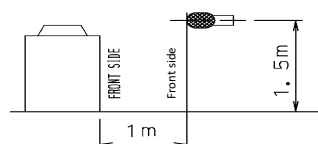
3D079536D

RXYQQ10T



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 μ Pa

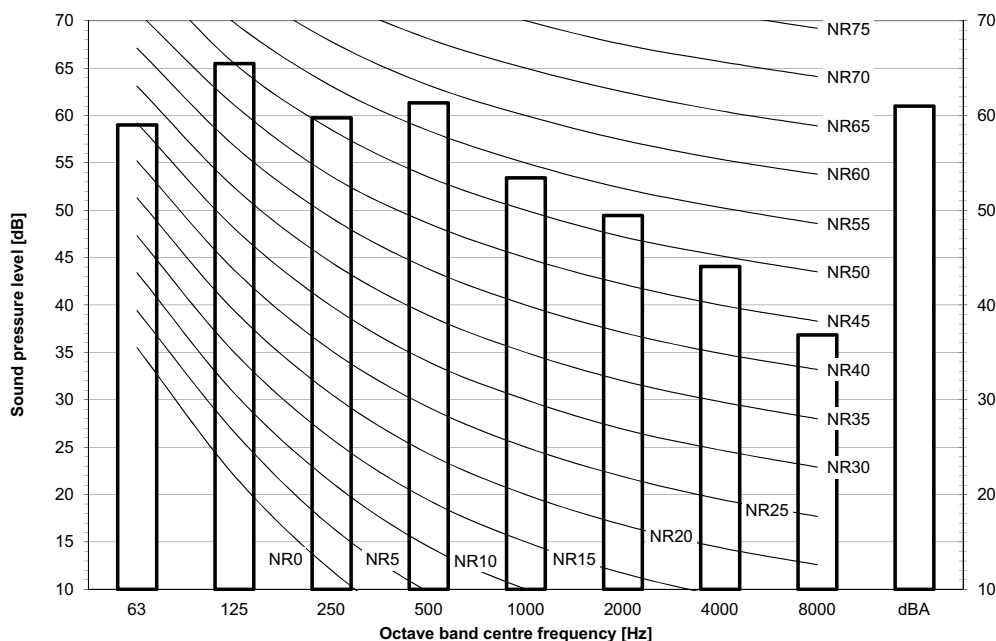


3D079902D

11 Sound data

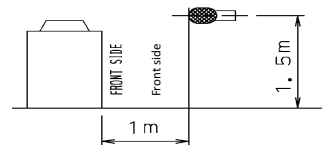
11 - 2 Sound Pressure Spectrum

RXYQQ12T



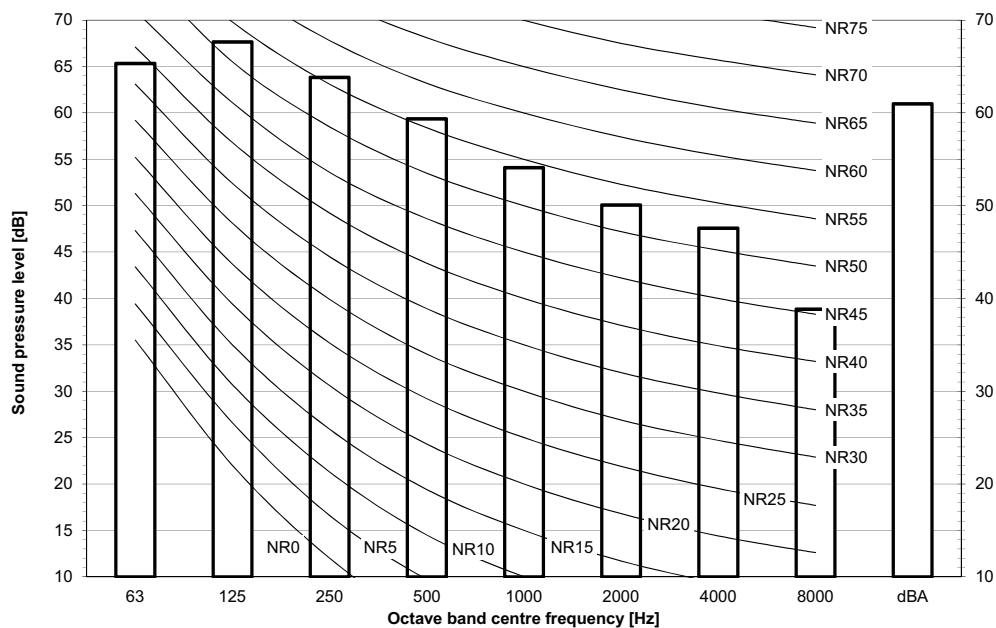
Notes

- 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 μ Pa



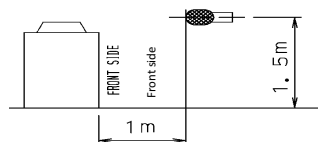
3D079903D

RXYQQ14T



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 μ Pa

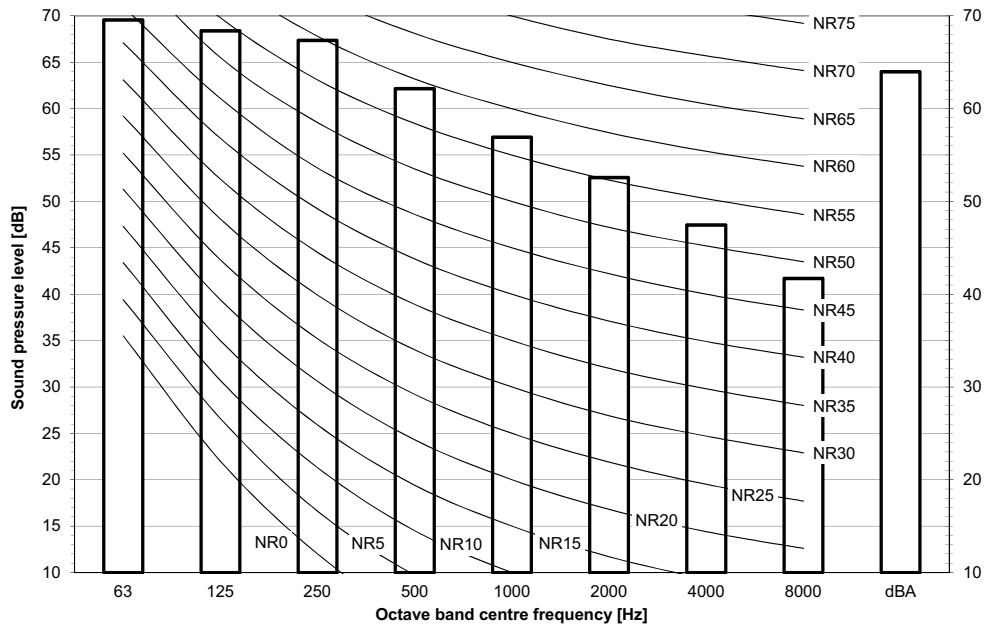


3D079904D

11 Sound data

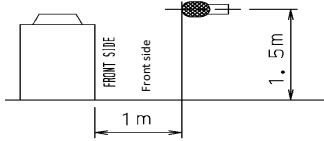
11 - 2 Sound Pressure Spectrum

RXYQQ16T



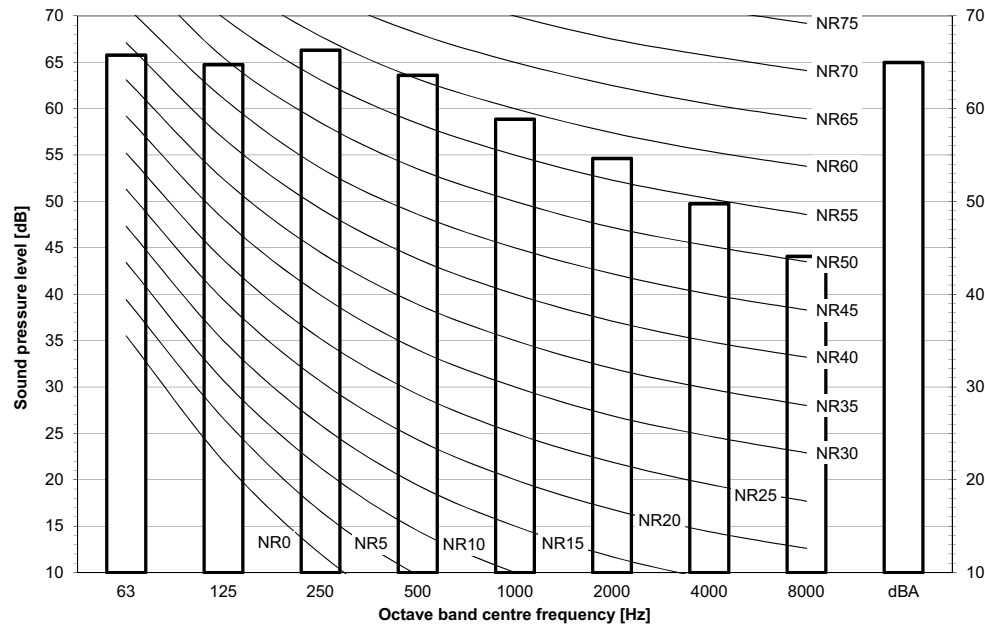
Notes

- 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 μ Pa



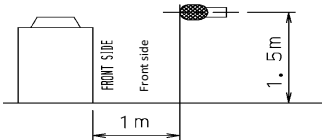
3D079905D

RXYQQ18T



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 μ Pa

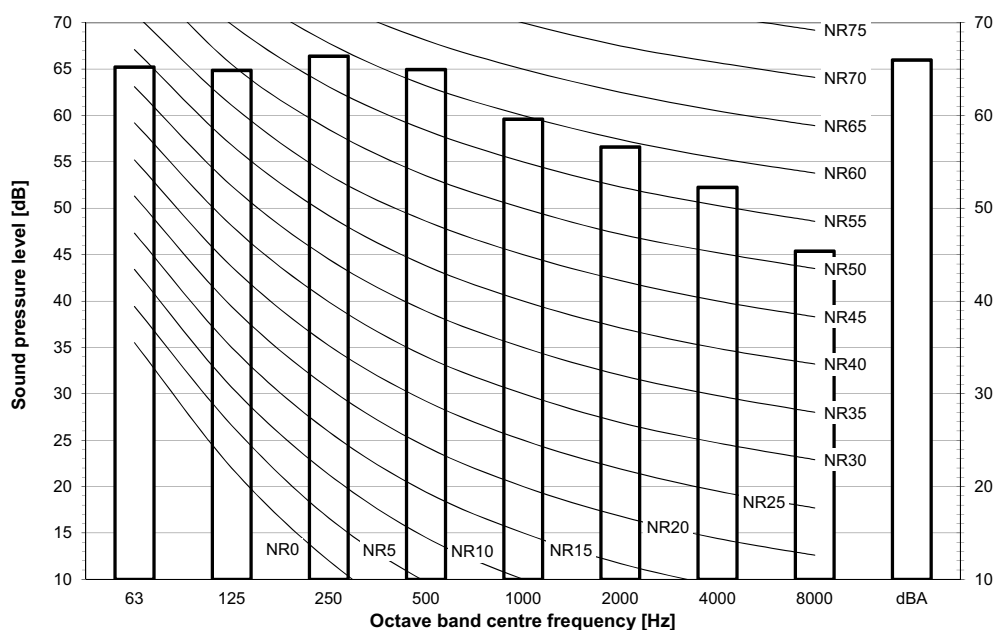


3D079906D

11 Sound data

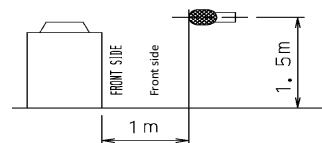
11 - 2 Sound Pressure Spectrum

RXYQQ20T



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 μ Pa



3D079907D

12 Installation

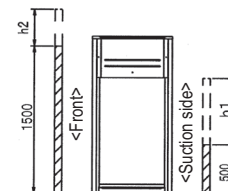
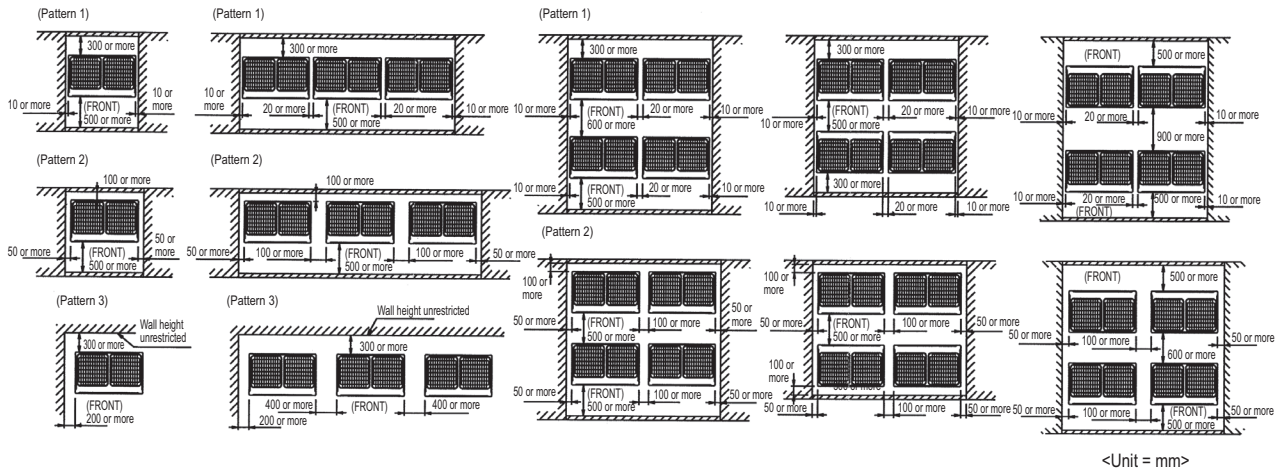
12 - 1 Installation Method

RYYQ-T
RYMQ-T
RXYQ-T
RXYQQ-T

For single unit installation

For installation in rows

For centralized group layout



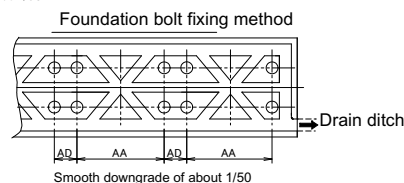
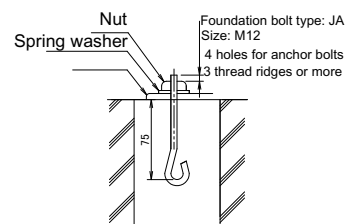
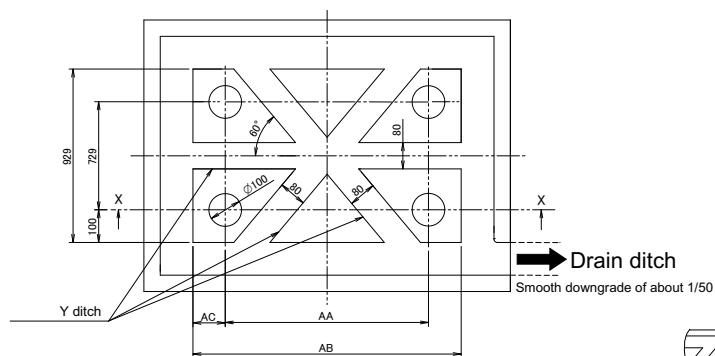
NOTES

- Heights of walls in case of patterns 1 and 2:
Front: 1500mm
Suction side: 500mm
Side: Height unrestricted
Installation space as shown on this drawing is based on the cooling operation at 35 degrees outdoor air temperature.
When the design outdoor air temperature exceeds 35 degrees or the load exceeds maximum ability of much generation load of heat in all outdoor unit, take the suction side space more broadly than the space as shown on this drawing.
- If the above wall heights are exceeded then $h2/2$ and $h1/2$ should be added to the front and suction side service spaces respectively as shown in the figure on the right.
- When installing the units most appropriate pattern should be selected from those shown above in order to obtain the best fit in the space available. Always keep in mind the need to leave enough space for a person to pass between units and wall and also for the air to circulate freely.
(If more units are to be installed than are catered for in the above patterns your layout should take account of the possibility of short circuits).
- The units should be installed to leave sufficient space at the front for the on site refrigerant piping work to be carried out comfortably.

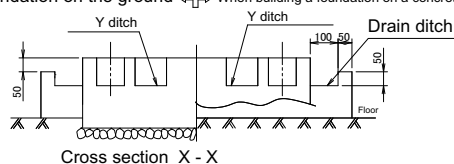
12 Installation

12 - 2 Fixation and Foundation of Units

RXYQQ-T



When building a foundation on the ground $\longleftrightarrow$ When building a foundation on a concrete floor



For multi-unit installation

Model	AA	AB	AC	AD
RYYQ8-12T	766	992	113	185
RYM08-12T				
RXYQ8-12T				
RXYQ08-12T				
REM05T/REYQ8-12T	1076	1076	113	185
RXYTQ8T				
RYYQ14-20T				
RYM14-20T				
RXYQ14-20T	1076	1076	113	185
RXYQ014-20T				
REYQ14-20T				
RXYTQ10-16T				
RXYQ8	497	697	100	160
RXYQ10-14	792	992		
RXYQ16-20	1102	1302		

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.

3D079547E

12 Installation

12 - 3 Refrigerant Pipe Selection

RXYQQ-T

VRV4-Q Heat Pump Field Piping Restrictions (1/3)

Reference drawing see
Page 2/3

		Maximum piping length			Maximum height difference			Total Piping Length
		Longest pipe (A+[B,J])	After first branch (B,J)	After first branch for outdoor multi (D)	Indoor to outdoor (H1)	Indoor to indoor (H2)	Outdoor to outdoor (H3)	
		Actual / (Equivalent)	Actual	Actual / (Equivalent)	outdoor above indoor / (indoor above outdoor)			
Standard								
Only VRV DX indoor connected		120/(150)m	FXYS*K*	10/(13)m	50/(40)m	15m	5m	300m
Standard multi combination								
AHU connection	Pair	50/(55)m ⁽²⁾	-	-	40/(40)m	-	-	-

NOTES

For standard multi combinations; see 3D079534

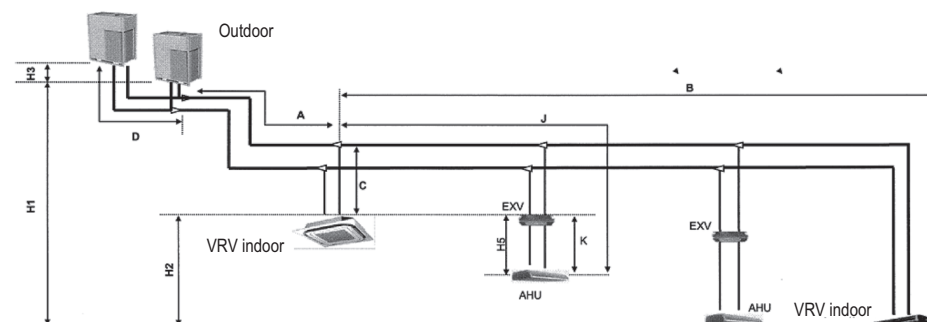
(1) Extension is possible if all below conditions are met (limitation can be extended up to 90m)

- The piping length between all indoor to the nearest branch kit is ≤ 40m.
 - It is necessary to increase the pipe size of the gas and liquid piping if the pipe length between the first and the final branch kit is over 40m
If the increased pipe size is larger than the pipe size of the main pipe, then the pipe size of the main pipe has to be increased as well
 - When the piping size is increased (b), the piping length has to be counted as double. The total piping length has to be within limitations (see table above).
 - The piping length difference between the nearest indoor from first branch to the outdoor unit and farthest indoor to the outdoor unit is ≤ 40m
- (2) The allowable minimum length is 5 m.

3D084965(1/3)

RXYQQ-T

VRV4-Q Heat Pump Field Piping Restrictions (2/3)



NOTES

- Schematic indication: illustrations may vary from real unit outlook.
- Displayed system is only to illustrate piping length limitations ! Combination of displayed indoor unit types is not allowed. See 3D084966 for allowed combinations.

		Allowable piping length	Max. height difference
		EXV to AHU (K)	EXV to AHU (H5)
AHU connection	Pair	≤5m	5m

3D084965(2/3)

12 Installation

12 - 3 Refrigerant Pipe Selection

12

RXYQQ-T

VRV4-Q Heat Pump Field Piping Restrictions (3/3)

System pattern Allowed connection ratio (CR) * Other combinations are N.A.	Total		Allowable capacity	
	capacity	Indoor unit quantity (VRV, RA, AHU, Hydrobox) (excl. BP box and EXV kits)	VRV DX indoor	AHU
Only VRV DX indoor	50~130%	Max. 64	50~130%	-
Only AHU (pair AHU) ³⁾	90~110%	1	-	90~110%

NOTES

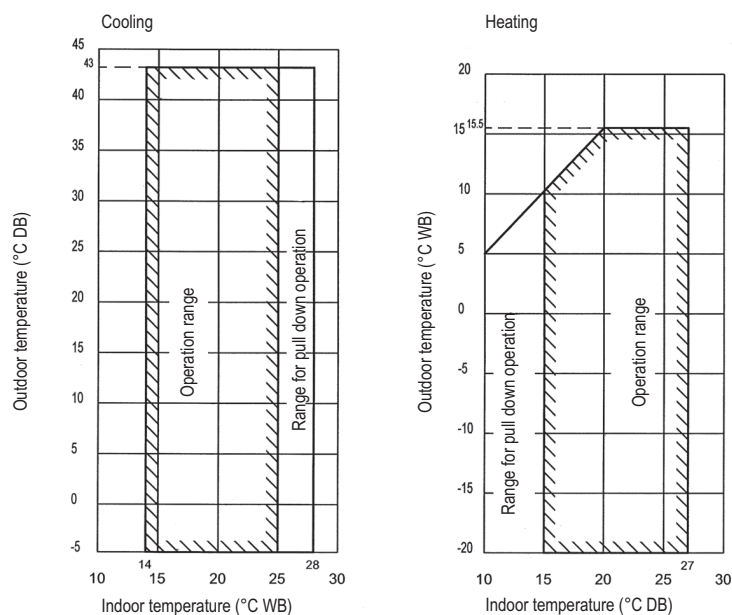
1. When using AHU connection: see EKEXV kit as an indoor unit for counting the total number of indoor units
2. Restrictions by air handling unit capacity
3. Pair AHU = system with 1 AHU connected to one outdoor unit

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13 Operation range

13 - 1 Operation Range

RYYQ-T
RYMQ-T
RXYQ-T
RXYQQ-T



NOTES

- These figures assume the following operation conditions:
Indoor and outdoor units:
Equivalent pipe length: 5m
Level difference: 0m
- Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
- 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.
- Operation range is valid in case direct expansion indoor units are used. In case special indoor units are used, (eg. Hydrobox), refer to technical specs of dedicated unit.

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14 Appropriate Indoors

14 - 1 Appropriate Indoors

RXYQQ-T

Recommended indoor units for RXYQQ*T* outdoor units

HP	8	10	12	14	16	18	20
	4xFXMQ50	4xFXMQ63	6xFXMQ50	1xFXMQ50 5xFXMQ63	4xFXMQ63 2xFXMQ80	3xFXMQ50 5xFXMQ63	2xFXMQ50 6xFXMQ63

For multi outdoor units >16HP, the recommended amount of indoor units is the sum of the indoor units defined for a single outdoor unit.
For details about the allowed combinations, see the engineering databook.

Appropriate indoor units for RXYQQ*T* outdoor units

Covered by ENER LOT21

FXFQ20-25-32-40-50-63-80-100-125
FXZQ15-20-25-32-40-50
FXCQ20-25-32-40-50-63-80-125
FXKQ25-32-40-63
FXDQ15-20-25-32-40-50-63
FXSQ15-20-25-32-40-50-63-80-100-125-140
FXMQ50-63-80-100-125-200-250
FXAQ15-20-25-32-40-50-63
FXHQ32-63-100
FXUQ71-100
FXNQ20-25-32-40-50-63
FXLQ20-25-32-40-50-63

Outside the scope of ENER LOT21

EKEXV50-63-80-100-125-140-200-250-400-500 + EKEQM / EKEQF
VKM50-80-100
FXYBP20-25K7V19
FXYSP20-25-32-40-50-63-80-100-125KA7V19
FXYMP40-50-63-80-100-125-200-250KV1
FXYCP20-25-32-40-50-63-80-125K7V19
FXYFP20-25-32-40-50-63-80-100-125KB7V19
FXYKP25-32-40-63KV1
FXYHP32-63-100KVE9
FXYLP20-25-32-40-50-63KV19
FXYLMP20-25-32-40-50-63KV1
FXYAP20-25-32-40-50-63KV19

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