

Digital Inverter 4 series

Outdoor Unit

RAV-SM304ATP-A

RAV-SM404ATP-A

Indoor Unit

RAV-SM307KRTP-A

RAV-SM407KRTP-A

RAV-RM301SDT-E

RAV-RM401SDT-E

Contents

- 1. Line up..... 2
- 2. Indoor Unit..... 3
 - Hi-wall Type 3
 - 2-1-1. Specifications..... 4
 - 2-1-2. Dimension..... 5
 - 2-1-3. Wiring diagrams..... 7
 - 2-1-4. Sensible capacity table..... 8
 - 2-1-5. Part load performance..... 9
 - 2-1-6. Air throw distance chart..... 11
 - 2-1-7. Sound characteristics (NC curve)..... 13
 - Slim Duct Type 15
 - 2-2-1. Specifications..... 16
 - 2-2-2. Dimension..... 17
 - 2-2-3. Wiring diagrams..... 19
 - 2-2-4. Sensible capacity table..... 20
 - 2-2-5. Part load performance..... 21
 - 2-2-6. Fan Static Characteristic..... 23
 - 2-2-7. Sound characteristics (NC curve)..... 24
- 3. Outdoor Unit..... 25
 - 3-1. Specifications..... 26
 - 3-2. Dimension..... 27
 - 3-3. Wiring diagrams..... 28
 - 3-4. Refrigerant cycle diagram..... 29
 - 3-5. Sound characteristics (NC curve)..... 30
 - 3-6. Connecting pipe length and lift difference between indoor units vs. capacity correction value..... 31

1. Line-up

Outdoor unit line-up

Model name	RAV-SM304ATP-A	RAV-SM404ATP-A
Appearance		

Indoor unit line-up

Capacity type			30	40
(HP equivalent)			1.0	1.5
Hi-Wall	RAV-SM**7KRTP-A			
Slim Duct	RAV-RM**1SDT-E			

2. Indoor Unit

Hi-wall Type

- 2-1-1. Specifications
- 2-1-2. Dimension
- 2-1-3. Wiring diagrams
- 2-1-4. Sensible capacity table
- 2-1-5. Part load performance
- 2-1-6. Air throw distance chart
- 2-1-7. Sound characteristics (NC curve)

2-1-1. Specifications

< Hi-Wall Type >

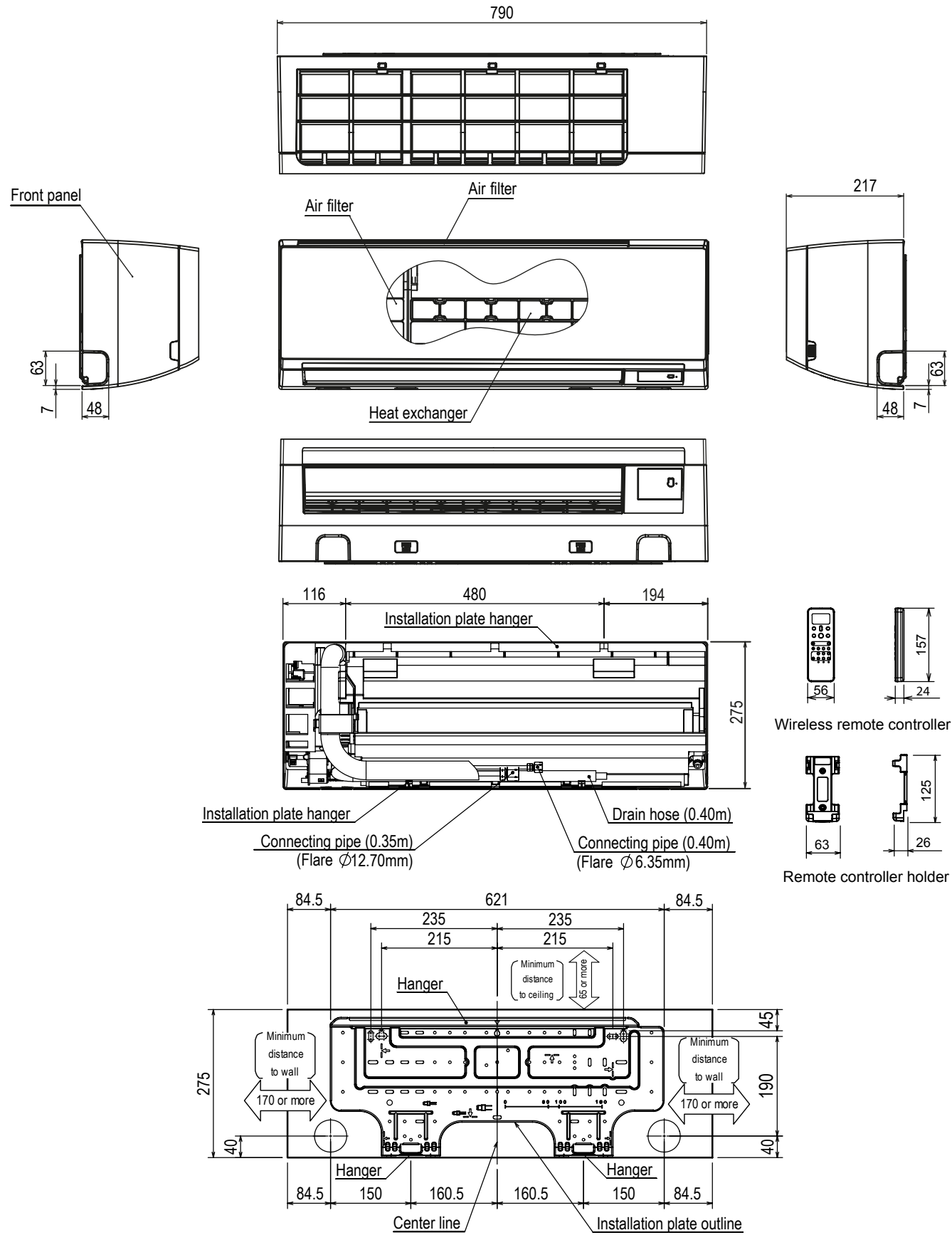
Model		Indoor unit		RAV-SM307KRTP-A	RAV-SM407KRTP-A
		Outdoor unit		RAV-SM304ATP-A	RAV-SM407ATP-A
Cooling capacity		(kW)		2.5 (0.9 – 3.0)	3.1 (0.9 – 4.0)
Heating capacity		(kW)		3.0 (0.8 – 4.5)	3.2 (0.8 – 5.0)
Power supply				1 phase 220 – 240V/50Hz	
Electrical characteristics	Cooling	Power consumption (kW)		0.61	0.78
		EER		4.10	3.97
		AEER		3.78	3.73
		Australia star rating		2.5	2.5
	Heating	Power consumption (kW)		0.71	0.81
		COP		4.23	3.95
		ACOP		3.0	3.6
		Australia star rating		3.0	2.5
FCU dimension	Main unit	Height (mm)		275	275
		Width (mm)		790	790
		Depth (mm)		217	217
Total weight	Main unit	(kg)		10.0	10.0
Cooling	FCU standard air flow	(H/M/L) (m³/h)		516/414/300	516/414/300
	Sound pressure level	(H/M/L) dB(A)		40/34/29	41/36/30
	Sound power level	(H/M/L) dB(A)		55/49/44	56/51/45
Heating	FCU standard air flow	(H/M/L) (m³/h)		570/462/360	690/522/350
	Sound pressure level	(H/M/L) dB(A)		41/37/31	45/40/32
	Sound power level	(H/M/L) dB(A)		56/52/46	60/55/47
CDU dimension	Main unit	Height (mm)		550	550
		Width (mm)		780	780
		Depth (mm)		290	290
Total weight	Main unit	(kg)		33	39
CDU Sound power level (C/H)				61/62	64/65
Refrigerant type				R410A	
Max. total pipe length				20 (Over 15 m, need to extracharge 20g/m)	
Max. height				10	
Flare connections	Gas side	(mm)		9.52	12.7
	Liquid side	(mm)		6.35	6.35
Operating Range	Cooling	(°C)		-15 to 46	
	Heating	(°C)		-15 to 24	

Note :

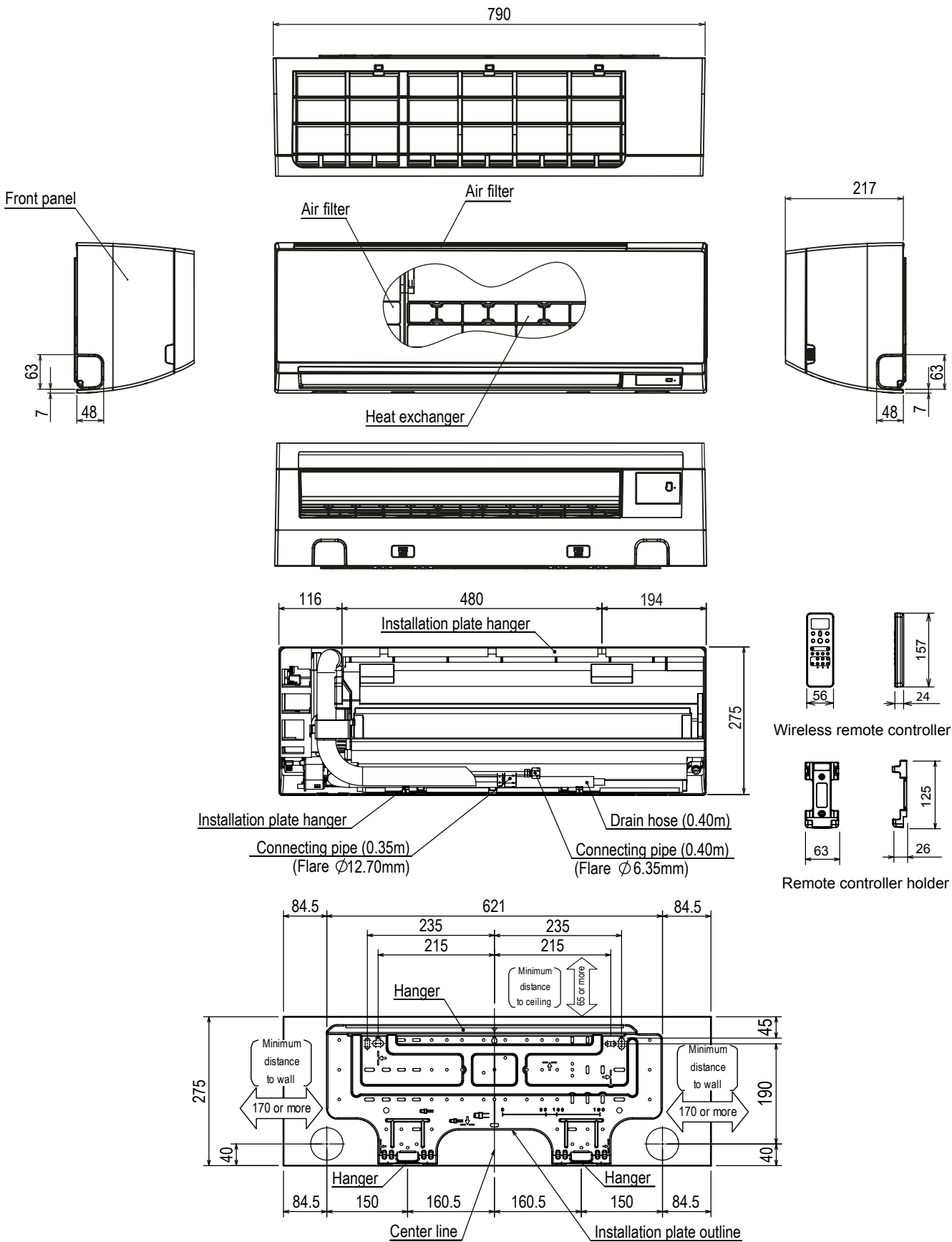
Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
 Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

2-1-2. Dimension

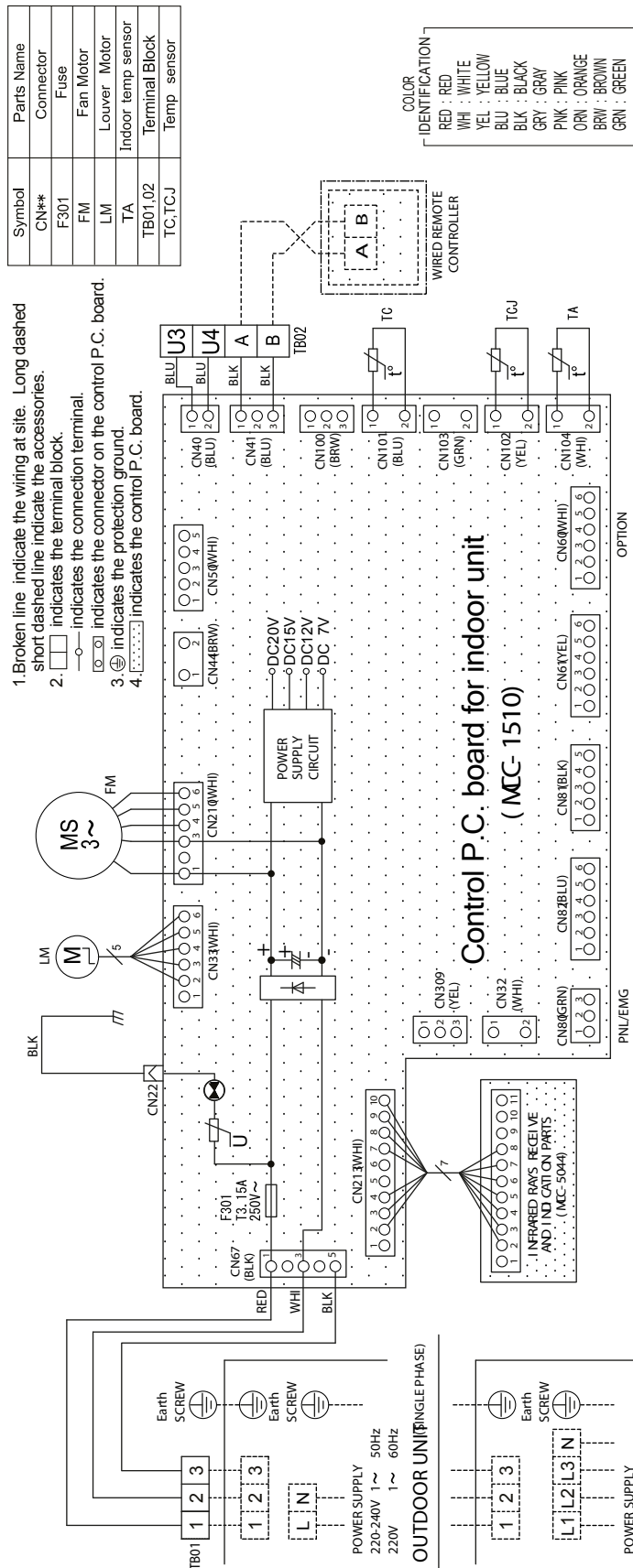
RAV-SM307KRTP-A



RAV-SM407KRTP-A



2-1-3. Wiring diagram

RAV-SM307KRTP-A, RAV-SM407KRTP-A

2-1-4. Sensible capacity table

Digital Inverter series 4 Sensible Heat Capacity : RAV-SM***K RTP-A

unit size	outdoor air temp . CDB	indoor air temp.																	
		14.0CWB		15.0CWB		16.0CWB		17.0CWB		18.0CWB		19.0CWB		20.0CWB		22.0CWB		24.0CWB	
		20.0CDB		21.5CDB		23.0CDB		24.5CDB		26.0CDB		27.0CDB		28.0CDB		30.0CDB		32.0CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
307	10.0	2.46	2.02	2.55	2.07	2.72	2.15	2.78	2.20	2.91	2.28	3.00	2.28	3.08	2.27	3.26	2.24	3.41	2.19
	12.0	2.44	2.00	2.52	2.04	2.69	2.13	2.75	2.17	2.88	2.26	2.97	2.25	3.05	2.25	3.23	2.22	3.38	2.17
	14.0	2.41	1.98	2.49	2.02	2.66	2.11	2.72	2.15	2.85	2.24	2.93	2.23	3.02	2.23	3.20	2.20	3.34	2.15
	16.0	2.38	1.96	2.47	2.00	2.63	2.08	2.69	2.13	2.82	2.21	2.90	2.20	2.98	2.20	3.16	2.17	3.30	2.12
	18.0	2.35	1.93	2.44	1.98	2.60	2.06	2.66	2.10	2.78	2.19	2.87	2.18	2.95	2.17	3.12	2.15	3.26	2.10
	20.0	2.32	1.91	2.41	1.95	2.57	2.03	2.63	2.07	2.75	2.16	2.83	2.15	2.91	2.15	3.08	2.12	3.22	2.07
	21.0	2.31	1.89	2.39	1.94	2.55	2.02	2.61	2.06	2.73	2.14	2.81	2.14	2.89	2.13	3.06	2.10	3.20	2.06
	23.0	2.28	1.87	2.36	1.91	2.51	1.99	2.57	2.03	2.69	2.11	2.77	2.11	2.85	2.10	3.02	2.07	3.16	2.03
	25.0	2.24	1.84	2.32	1.88	2.47	1.96	2.53	2.00	2.65	2.08	2.73	2.07	2.80	2.07	2.97	2.04	3.10	1.99
	27.0	2.21	1.81	2.28	1.85	2.44	1.93	2.50	1.97	2.61	2.05	2.69	2.04	2.76	2.04	2.93	2.01	3.06	1.97
	29.0	2.17	1.78	2.25	1.82	2.40	1.90	2.46	1.94	2.57	2.02	2.64	2.01	2.72	2.01	2.88	1.98	3.01	1.93
	31.0	2.13	1.75	2.21	1.79	2.36	1.86	2.41	1.90	2.52	1.98	2.60	1.97	2.67	1.97	2.83	1.95	2.96	1.90
	33.0	2.10	1.72	2.17	1.76	2.31	1.83	2.37	1.87	2.48	1.95	2.55	1.94	2.62	1.93	2.78	1.91	2.91	1.87
	35.0	2.05	1.69	2.12	1.72	2.27	1.79	2.32	1.83	2.43	1.91	2.50	1.90	2.57	1.90	2.72	1.87	2.85	1.83
	37.0	2.01	1.65	2.08	1.69	2.22	1.76	2.28	1.80	2.38	1.87	2.45	1.86	2.52	1.86	2.67	1.84	2.79	1.79
	39.0	1.97	1.62	2.04	1.65	2.18	1.72	2.23	1.76	2.33	1.83	2.40	1.82	2.47	1.82	2.61	1.80	2.73	1.76

unit size	outdoor air temp. CDB	indoor air temp.																	
		14.0CWB		15.0CWB		16.0CWB		17.0CWB		18.0CWB		19.0CWB		20.0CWB		22.0CWB		24.0CWB	
		20.0CDB		21.5CDB		23.0CDB		24.5CDB		26.0CDB		27.0CDB		28.0CDB		30.0CDB		32.0CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
407	10.0	3.05	2.45	3.16	2.50	3.37	2.61	3.45	2.66	3.61	2.77	3.72	2.76	3.82	2.75	4.05	2.71	4.23	2.64
	12.0	3.02	2.43	3.13	2.48	3.34	2.58	3.42	2.63	3.57	2.74	3.68	2.73	3.78	2.72	4.01	2.68	4.19	2.61
	14.0	2.99	2.40	3.09	2.45	3.30	2.55	3.38	2.60	3.53	2.71	3.64	2.70	3.74	2.69	3.96	2.65	4.15	2.59
	16.0	2.95	2.37	3.06	2.42	3.26	2.52	3.34	2.58	3.49	2.68	3.60	2.67	3.70	2.66	3.92	2.62	4.10	2.56
	18.0	2.92	2.34	3.02	2.39	3.22	2.49	3.30	2.54	3.45	2.65	3.55	2.64	3.66	2.63	3.87	2.59	4.05	2.53
	20.0	2.88	2.31	2.98	2.36	3.18	2.46	3.26	2.51	3.41	2.61	3.51	2.60	3.61	2.60	3.82	2.56	4.00	2.49
	21.0	2.86	2.30	2.96	2.35	3.16	2.44	3.24	2.49	3.38	2.60	3.48	2.59	3.58	2.58	3.80	2.54	3.97	2.48
	23.0	2.82	2.27	2.92	2.32	3.12	2.41	3.19	2.46	3.34	2.56	3.44	2.55	3.53	2.54	3.74	2.50	3.91	2.44
	25.0	2.78	2.23	2.87	2.28	3.07	2.37	3.14	2.42	3.28	2.52	3.38	2.51	3.48	2.50	3.68	2.46	3.85	2.40
	27.0	2.74	2.20	2.83	2.25	3.02	2.34	3.10	2.39	3.24	2.48	3.33	2.47	3.43	2.47	3.63	2.43	3.80	2.37
	29.0	2.69	2.16	2.79	2.21	2.97	2.30	3.04	2.35	3.18	2.44	3.28	2.43	3.37	2.43	3.57	2.39	3.74	2.33
	31.0	2.65	2.12	2.74	2.17	2.92	2.26	2.99	2.31	3.13	2.40	3.22	2.39	3.31	2.38	3.51	2.35	3.67	2.29
	33.0	2.60	2.09	2.69	2.13	2.87	2.22	2.94	2.26	3.07	2.36	3.16	2.35	3.25	2.34	3.45	2.31	3.60	2.25
	35.0	2.55	2.04	2.63	2.09	2.81	2.17	2.88	2.22	3.01	2.31	3.10	2.30	3.19	2.29	3.38	2.26	3.53	2.20
	37.0	2.50	2.01	2.58	2.05	2.76	2.13	2.82	2.18	2.95	2.27	3.04	2.26	3.13	2.25	3.31	2.22	3.46	2.16
	39.0	2.45	1.96	2.53	2.01	2.70	2.09	2.76	2.13	2.89	2.22	2.98	2.21	3.06	2.20	3.24	2.17	3.39	2.12

TC:Total Capacity [kW]
SHC:Sensible Heat Capacity [kW]

2-1-5. Part load performance

Combination

Indoor unit : RAV-SM307KRTP-A

Outdoor unit : RAV-SM304ATP-A

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
MINIMUM	900	250	800	170
RATING	2500	610	3400	850

Q: Capacity in W
W: Power Consumption in W

Cooling

Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	2320	2080	1850	1620	1390	1160	930	830	830	830
	W	670	590	520	470	400	350	310	270	270	270
35	Q	2500	2250	2000	1750	1500	1250	1000	900	900	900
	W	610	540	480	430	370	320	280	250	250	250
30	Q	2640	2370	2110	1840	1580	1320	1050	950	950	950
	W	550	490	430	390	330	290	250	230	230	230
25	Q	2730	2450	2180	1910	1640	1360	1090	980	980	980
	W	490	440	390	350	300	260	230	200	200	200
20	Q	2830	2550	2260	1980	1700	1420	1130	1020	1020	1020
	W	440	390	350	310	270	230	200	180	180	180

Heating

Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	3620	3260	2890	2530	2170	1810	1450	1090	960	960
	W	800	700	610	520	430	340	260	180	190	190
10	Q	3230	2910	2580	2260	1940	1610	1290	970	860	860
	W	740	650	570	480	400	310	240	170	180	180
7	Q	3400	2700	2400	2100	1800	1500	1200	900	800	800
	W	850	620	540	460	380	300	230	160	170	170
5	Q	2280	2050	1820	1590	1370	1140	910	680	610	610
	W	650	570	500	420	350	280	210	150	160	160
2	Q	2170	1950	1740	1520	1300	1090	870	650	580	580
	W	630	550	480	410	340	260	200	140	150	150
0	Q	2100	1890	1680	1470	1260	1050	840	630	560	560
	W	610	530	460	400	330	260	200	140	150	150
-5	Q	1920	1730	1540	1350	1150	960	770	580	510	510
	W	570	500	430	370	300	240	180	130	140	140
-7	Q	1850	1670	1480	1300	1110	930	740	560	490	490
	W	550	480	420	360	300	230	180	120	130	130
-10	Q	1690	1520	1350	1180	1010	840	670	510	450	450
	W	530	460	400	340	280	220	170	120	130	130
-15	Q	1300	1170	1040	910	780	650	520	390	350	350
	W	470	410	360	300	250	200	150	110	110	110

Combination

Indoor unit : RAV-SM407KRTP-A

Outdoor unit : RAV-SM404ATP-A

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
MINIMUM	900	180	800	140
RATING	3100	780	3200	810

Q: Capacity in W
W: Power Consumption in W

Cooling

Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	2870	2580	2300	2010	1720	1440	1150	860	830	830
	W	850	740	620	510	420	320	240	200	200	200
35	Q	3100	2790	2480	2170	1860	1550	1240	930	900	900
	W	780	680	570	470	380	290	220	180	180	180
30	Q	3270	2940	2610	2290	1960	1630	1310	980	950	950
	W	700	610	510	420	340	260	200	160	160	160
25	Q	3380	3040	2700	2370	2030	1690	1350	1010	980	980
	W	630	550	460	380	310	230	180	150	150	150
20	Q	3510	3160	2810	2460	2110	1750	1400	1050	1020	1020
	W	560	490	410	340	270	210	160	130	130	130

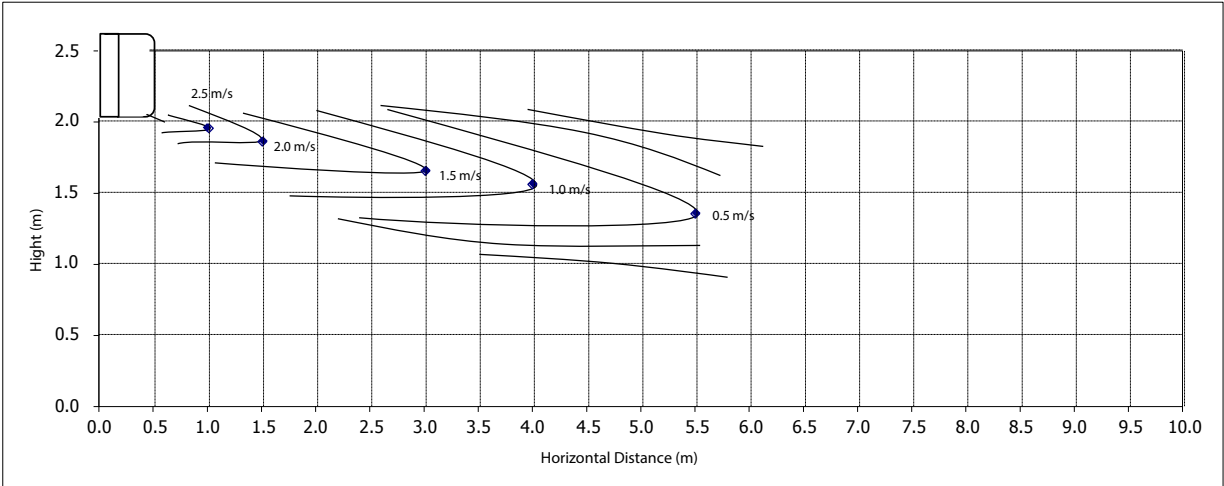
Heating

Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	3860	3470	3090	2700	2320	1930	1540	1160	960	960
	W	910	760	630	530	420	330	250	170	160	160
10	Q	3440	3100	2760	2410	2070	1720	1380	1030	860	860
	W	850	700	590	490	390	300	230	160	150	150
7	Q	3200	2880	2560	2240	1920	1600	1280	960	800	800
	W	810	670	560	470	370	290	220	150	140	140
5	Q	2430	2190	1940	1700	1460	1210	970	730	610	610
	W	740	610	510	430	340	270	200	140	130	130
2	Q	2320	2080	1850	1620	1390	1160	930	690	580	580
	W	710	590	490	410	330	260	190	130	120	120
0	Q	2240	2020	1790	1570	1340	1120	900	670	560	560
	W	700	580	480	400	320	250	190	130	120	120
-5	Q	2050	1850	1640	1440	1230	1030	820	620	510	510
	W	650	540	450	380	300	230	180	120	110	110
-7	Q	1980	1780	1580	1380	1190	990	790	590	490	490
	W	630	520	430	360	290	230	170	120	110	110
-10	Q	1800	1620	1440	1260	1080	900	720	540	450	450
	W	600	500	420	350	270	210	160	110	100	100
-15	Q	1380	1250	1110	970	830	690	550	420	350	350
	W	530	440	370	310	240	190	140	100	90	90

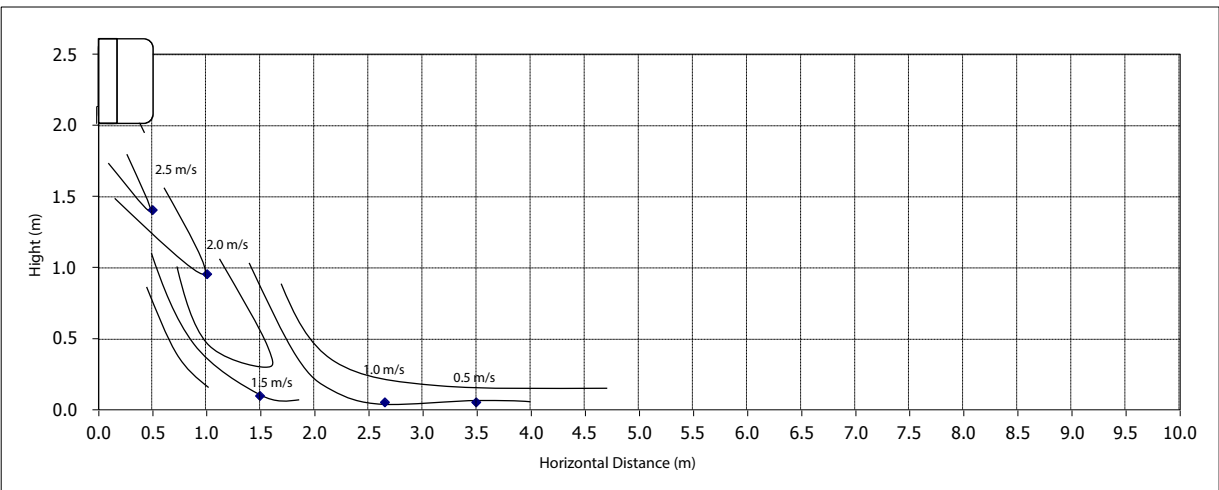
2-1-6. Air throw distance chart

RAV-SM307KRTP-A

Cooling

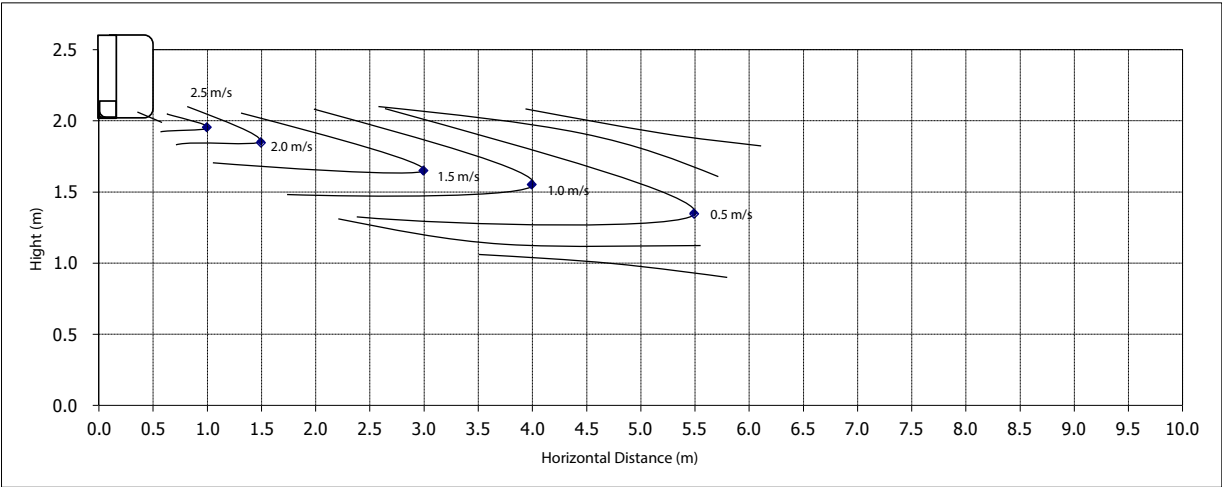


Heating

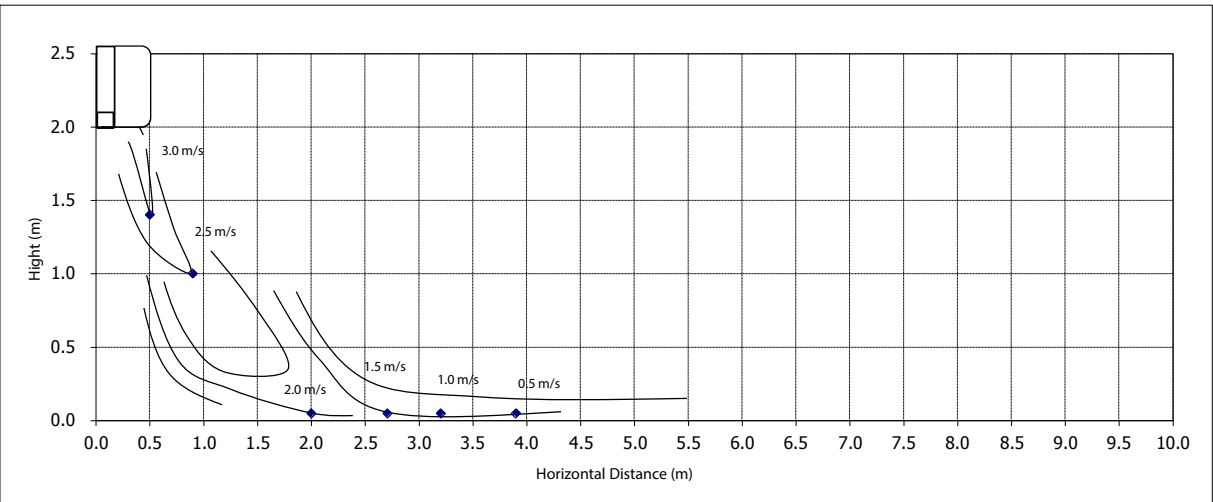


RAV-SM407KRTP-A

Cooling



Heating

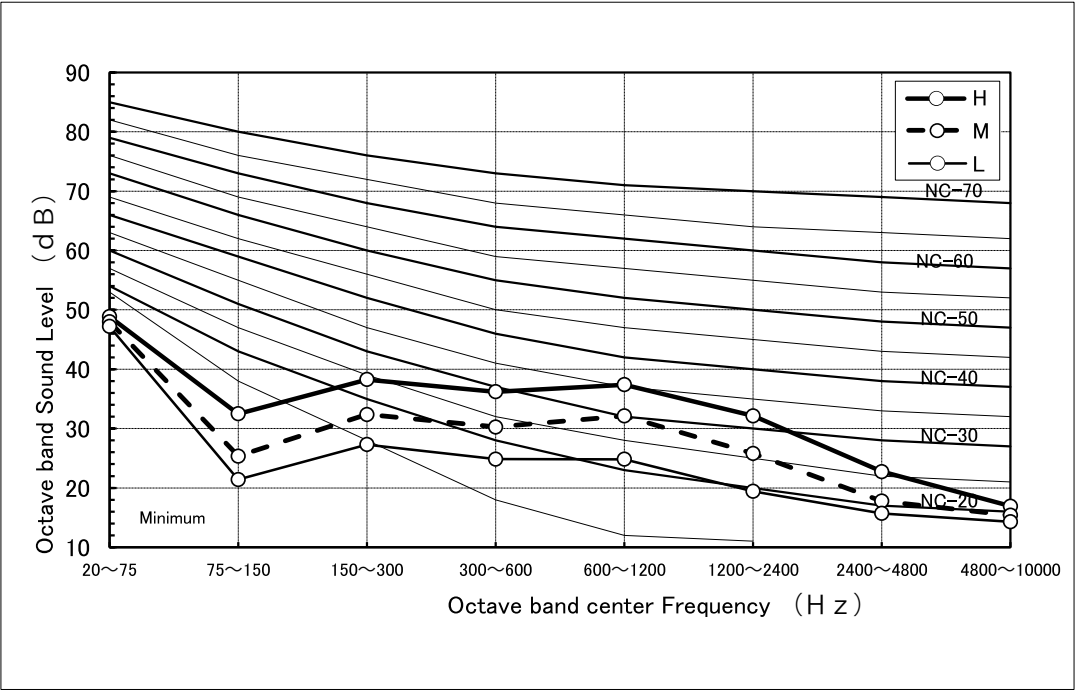


2-1-7. Sound characteristics (NC curve)

RAV-SM307KRTP-A

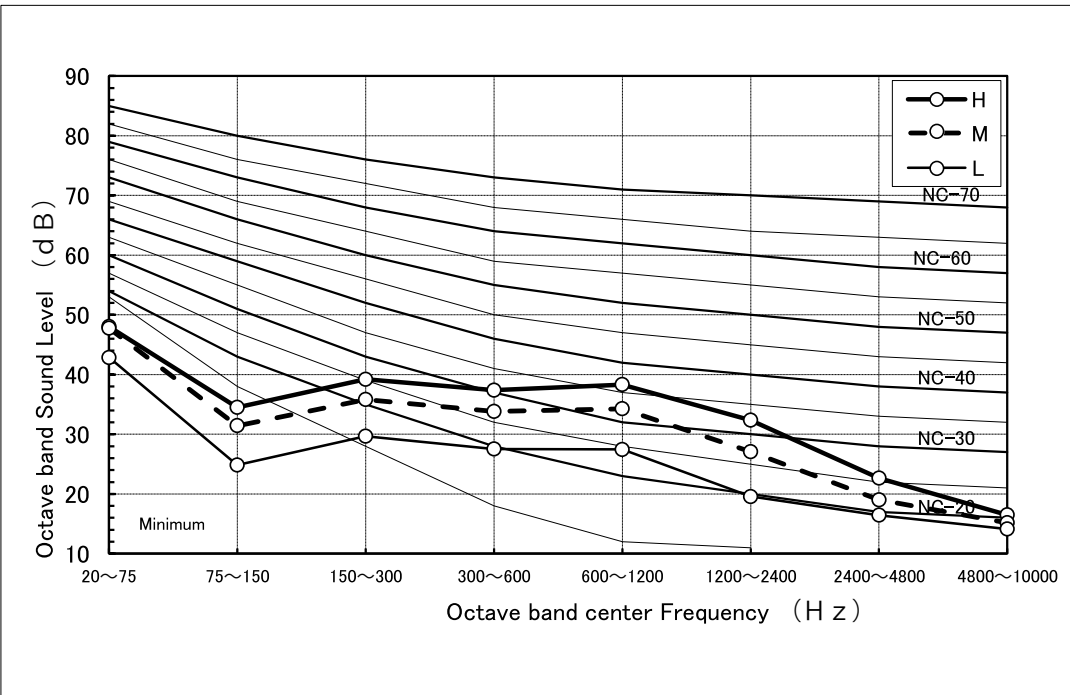
Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	40	34	29

Cooling



Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	41	37	31

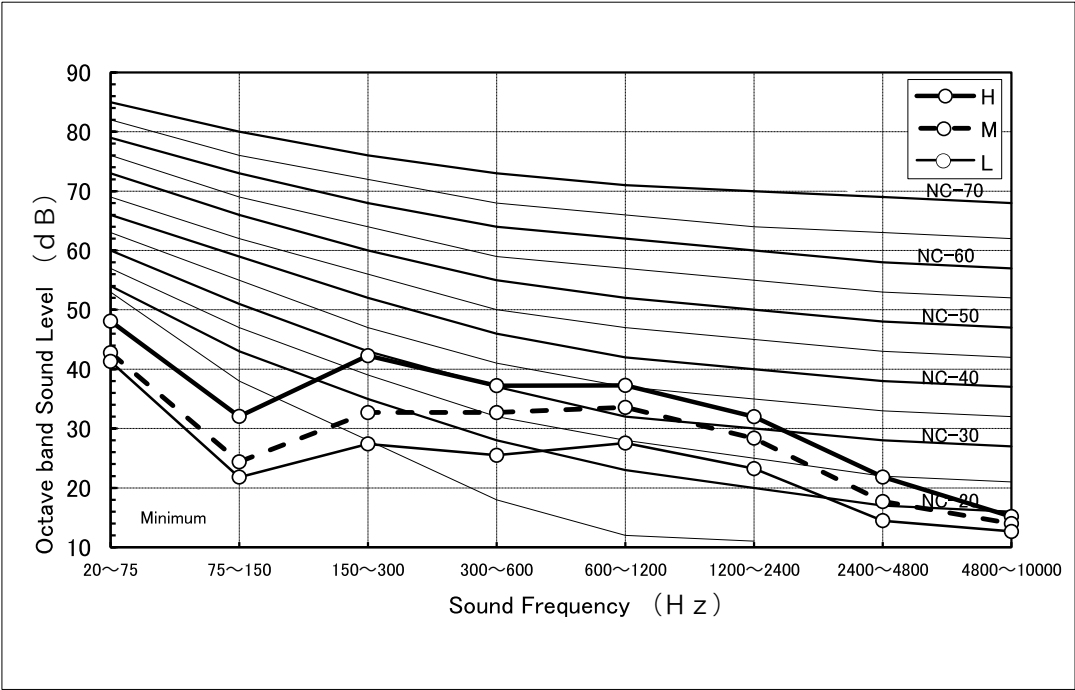
Heating



RAV-SM407KRTP-A

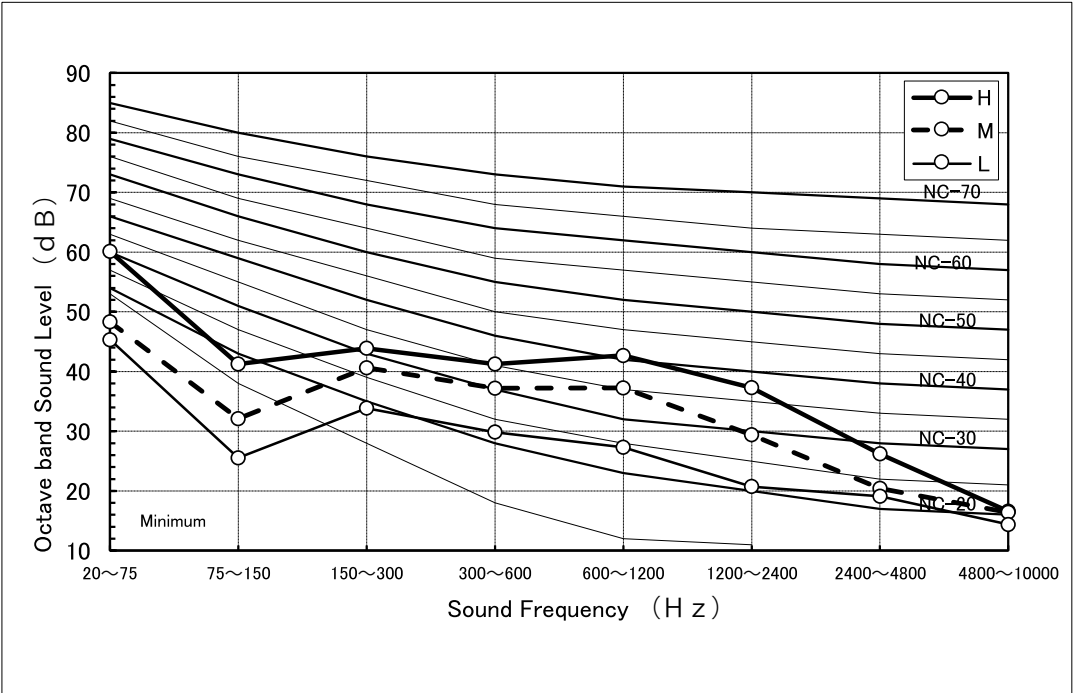
Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	41	36	30

Cooling



Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	45	40	32

Heating



Slim Duct Type

2-2-1. Specifications

2-2-2. Dimension

2-2-3. Wiring diagrams

2-2-4. Sensible capacity table

2-2-5. Part load performance

2-2-6. Fan Static Characteristic

2-2-7. Sound characteristics (NC curve)

2-2-1. Specifications

Slim Duct Type <Single Type>

Model		Indoor unit		RAV- RM301SDT-E		RAV- RM401SDT-E		
		Outdoor unit		RAV- SM304ATP-A		RAV- SM404ATP-A		
Cooling capacity				(kW)	2.5 < 0.9-3.0 >		3.6 < 0.9-4.0 >	
Heating capacity				(kW)	3.4 < 0.8-4.5 >		4.0 < 0.8-5.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz				
Electrical characteristics	Cooling	Running current		(A)	2.82-2.59		4.59-4.21	
		Power consumption		(kW)	0.56		0.93	
		Power factor		(%)	90		92	
		EER			4.46		3.87	
		AEER			4.09		3.67	
	Heating	Running current		(A)	4.20-3.85		4.74-4.35	
		Power consumption		(kW)	0.86		0.97	
		Power factor		(%)	93		93	
		COP			3.95		4.12	
		ACOP			3.73		3.92	
Maximum current		(A)	7.85		9.15			
Indoor unit								
Appearance		Main unit		Zinc hot dipping steel plate				
Outer dimension		Main unit		Height	(mm)	210		
				Width	(mm)	845		
				Depth	(mm)	645		
Total weight		Main unit		(kg)	22			
Fan unit		Fan		Centrifugal fan				
		Standard air flow	H/M/L	(m3/h)	660 / 560 / 480		690 / 600 / 522	
		Motor		(W)	60			
External static pressure		Standard (Upper - Lower)		(Pa)	5-15-30-45		5-15-30-45	
Air filter				Standard filter (Long life filter)				
Sound pressure level			H/M/L	(dB)	39 / 36 /33			
Sound power level			H/M/L	(dB)	54 / 51 /48			
Connecting pipe		Drain port		VP25				
Outdoor unit								
Air Flow				(m3/h)	1800		2200	
Outer dimension		Height		(mm)	550			
		Width		(mm)	780			
		Depth		(mm)	290			
Total weight		Main unit		(kg)	33		39	
Pipe		Min. length		(m)	2.0			
		Max. total length		(m)	20.0			
Flare Connections		Gas side		(mm)	9.5		12.7	
		Liquid side		(mm)	6.4		6.4	
Sound pressure level		Cooling/Heating		(dB)	46 / 47		49 / 50	
Sound power level		Cooling/Heating		(dB)	61 / 62		64 / 65	
Operating Range		Cooling		(°C)	-15 / 46			
		Heating		(°C)	-15 / 24			

*1 : The cooling capacities and electrical characteristics are measured under the conditions specified by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

*2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note :

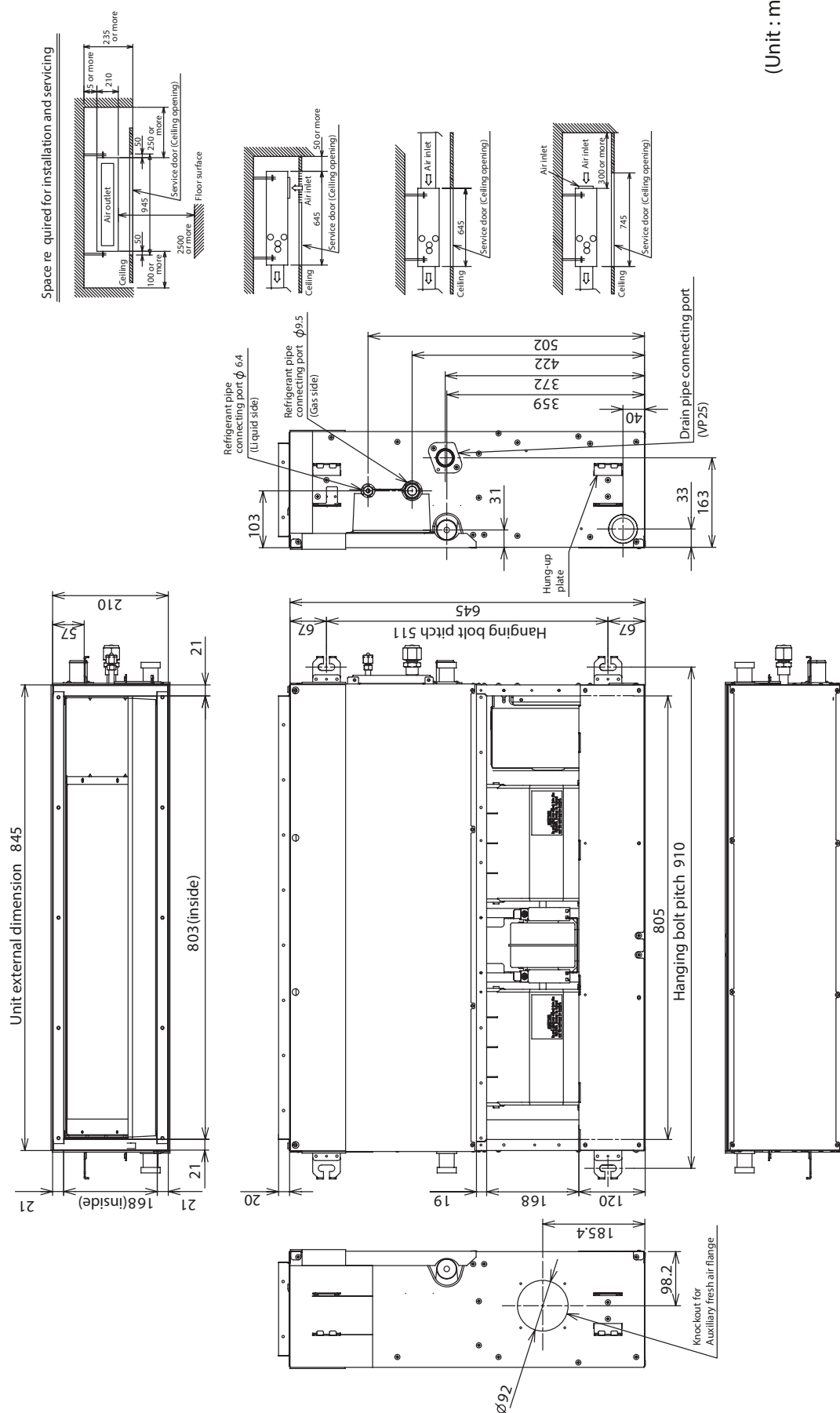
Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB

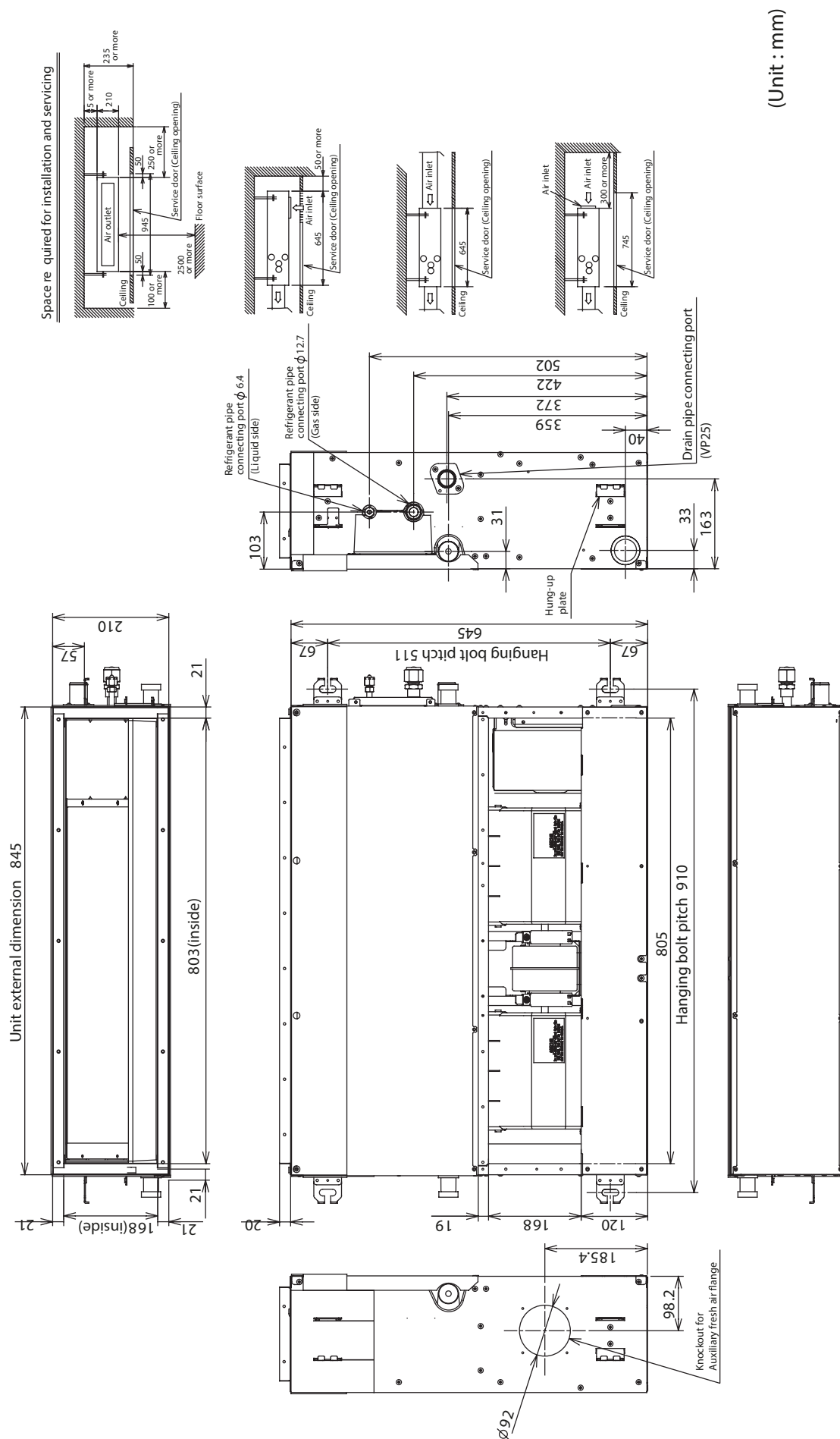
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

2-2-2. Dimension

RAV-RM301SDT-E

(Unit: mm)

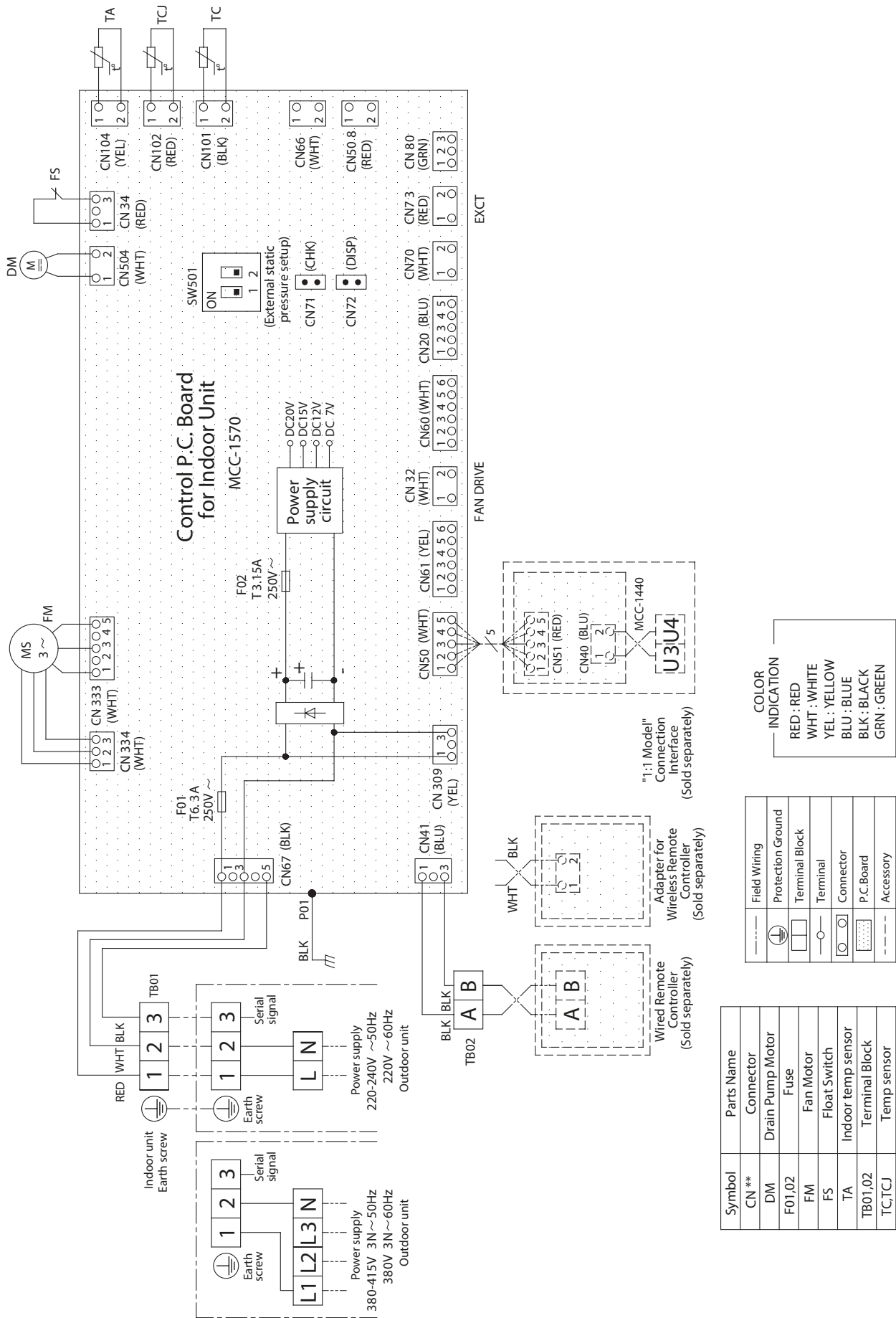


RAV-RM401SDT-E

(Unit: mm)

2-2-3. Wiring diagram

RAV-RM301SDT-E, RAV-RM401SDT-E



2-2-4. Sensible capacity table

Digital Inverter Series 4 Sensible Heat Capacity : RAV-RM***SDT-E

unit size	outdoor air temp. CDB	indoor air temp.																	
		14.0CWB 20.0CDB		15.0CWB 21.5CDB		16.0CWB 23.0CDB		17.0CWB 24.5CDB		18.0CWB 26.0CDB		19.0CWB 27.0CDB		20.0CWB 28.0CDB		22.0CWB 30.0CDB		24.0CWB 32.0CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
301	10.0	2.46	2.10	2.55	2.15	2.72	2.24	2.78	2.28	2.91	2.38	3.00	2.37	3.08	2.37	3.26	2.35	3.41	2.30
	12.0	2.44	2.08	2.52	2.13	2.69	2.21	2.75	2.26	2.88	2.35	2.97	2.35	3.05	2.35	3.23	2.32	3.38	2.28
	14.0	2.41	2.06	2.49	2.10	2.66	2.19	2.72	2.24	2.85	2.33	2.93	2.32	3.02	2.32	3.20	2.30	3.34	2.25
	16.0	2.38	2.03	2.47	2.08	2.63	2.17	2.69	2.21	2.82	2.30	2.90	2.30	2.98	2.30	3.16	2.27	3.30	2.23
	18.0	2.35	2.01	2.44	2.05	2.60	2.14	2.66	2.18	2.78	2.27	2.87	2.27	2.95	2.27	3.12	2.25	3.26	2.20
	20.0	2.32	1.98	2.41	2.03	2.57	2.11	2.63	2.16	2.75	2.25	2.83	2.24	2.91	2.24	3.08	2.22	3.22	2.17
	21.0	2.31	1.97	2.39	2.01	2.55	2.10	2.61	2.14	2.73	2.23	2.81	2.23	2.89	2.22	3.06	2.20	3.20	2.16
	23.0	2.28	1.94	2.36	1.99	2.51	2.07	2.57	2.11	2.69	2.20	2.77	2.19	2.85	2.19	3.02	2.17	3.16	2.13
	25.0	2.24	1.91	2.32	1.95	2.47	2.03	2.53	2.08	2.65	2.16	2.73	2.16	2.80	2.16	2.97	2.13	3.10	2.09
	27.0	2.21	1.88	2.28	1.93	2.44	2.01	2.50	2.05	2.61	2.13	2.69	2.13	2.76	2.13	2.93	2.11	3.06	2.06
	29.0	2.17	1.85	2.25	1.89	2.40	1.97	2.46	2.02	2.57	2.10	2.64	2.09	2.72	2.09	2.88	2.07	3.01	2.03
	31.0	2.13	1.82	2.21	1.86	2.36	1.94	2.41	1.98	2.52	2.06	2.60	2.06	2.67	2.06	2.83	2.04	2.96	2.00
	33.0	2.10	1.79	2.17	1.83	2.31	1.90	2.37	1.95	2.48	2.02	2.55	2.02	2.62	2.02	2.78	2.00	2.91	1.96
	35.0	2.05	1.75	2.12	1.79	2.27	1.87	2.32	1.91	2.43	1.98	2.50	1.98	2.57	1.98	2.72	1.96	2.85	1.92
	37.0	2.01	1.72	2.08	1.76	2.22	1.83	2.28	1.87	2.38	1.95	2.45	1.94	2.52	1.94	2.67	1.92	2.79	1.88
	39.0	1.97	1.68	2.04	1.72	2.18	1.79	2.23	1.83	2.33	1.91	2.40	1.90	2.47	1.90	2.61	1.88	2.73	1.84

unit size	outdoor air temp. CDB	indoor air temp.																	
		14.0CWB 20.0CDB		15.0CWB 21.5CDB		16.0CWB 23.0CDB		17.0CWB 24.5CDB		18.0CWB 26.0CDB		19.0CWB 27.0CDB		20.0CWB 28.0CDB		22.0CWB 30.0CDB		24.0CWB 32.0CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
401	10.0	3.54	3.02	3.67	3.09	3.91	3.22	4.01	3.29	4.19	3.42	4.31	3.42	4.44	3.41	4.70	3.38	4.92	3.31
	12.0	3.51	2.99	3.63	3.06	3.87	3.19	3.97	3.26	4.15	3.39	4.27	3.38	4.39	3.38	4.65	3.34	4.87	3.28
	14.0	3.47	2.96	3.59	3.03	3.83	3.15	3.92	3.22	4.10	3.35	4.23	3.35	4.35	3.34	4.60	3.31	4.81	3.24
	16.0	3.43	2.92	3.55	2.99	3.79	3.12	3.88	3.18	4.06	3.31	4.18	3.31	4.30	3.30	4.55	3.27	4.76	3.21
	18.0	3.39	2.89	3.51	2.96	3.74	3.08	3.83	3.14	4.01	3.27	4.13	3.27	4.24	3.26	4.50	3.23	4.70	3.17
	20.0	3.35	2.85	3.46	2.92	3.70	3.04	3.78	3.11	3.96	3.23	4.08	3.23	4.19	3.22	4.44	3.19	4.64	3.13
	21.0	3.32	2.83	3.44	2.90	3.67	3.02	3.76	3.08	3.93	3.21	4.05	3.20	4.16	3.20	4.41	3.17	4.61	3.11
	23.0	3.28	2.79	3.39	2.86	3.62	2.98	3.71	3.04	3.88	3.17	3.99	3.16	4.10	3.16	4.35	3.12	4.55	3.06
	25.0	3.22	2.75	3.34	2.81	3.56	2.93	3.64	2.99	3.81	3.11	3.92	3.11	4.04	3.10	4.27	3.07	4.47	3.01
	27.0	3.18	2.71	3.29	2.77	3.51	2.89	3.59	2.95	3.76	3.07	3.87	3.06	3.98	3.06	4.22	3.03	4.41	2.97
	29.0	3.13	2.67	3.24	2.73	3.45	2.84	3.54	2.90	3.70	3.02	3.81	3.01	3.92	3.01	4.15	2.98	4.34	2.92
	31.0	3.07	2.62	3.18	2.68	3.39	2.79	3.47	2.85	3.63	2.97	3.74	2.96	3.85	2.96	4.08	2.93	4.26	2.87
	33.0	3.02	2.57	3.12	2.63	3.33	2.74	3.41	2.80	3.57	2.91	3.67	2.91	3.78	2.91	4.00	2.88	4.19	2.82
	35.0	2.96	2.52	3.06	2.58	3.27	2.69	3.34	2.74	3.50	2.86	3.60	2.85	3.70	2.85	3.92	2.82	4.10	2.76
	37.0	2.90	2.47	3.00	2.53	3.20	2.64	3.28	2.69	3.43	2.80	3.53	2.80	3.63	2.79	3.85	2.77	4.02	2.71
	39.0	2.84	2.42	2.94	2.48	3.14	2.58	3.21	2.63	3.36	2.74	3.46	2.74	3.56	2.73	3.77	2.71	3.94	2.65

TC:Total Capacity [kW]
SHC:Sensible Heat Capacity [kW]

2-2-5. Part load performance

Combination

Indoor unit : RAV-RM301SDT-E

Outdoor unit : RAV-SM304ATP-A

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (WX)	Capacity Q (W)	Power consumption W (W)
Minimum	900	250	800	170
Rating	2500	560	3400	860

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	2320	2080	1850	1620	1390	1160	930	830	830	830
	W	610	550	480	430	370	330	280	270	270	270
35	Q	2500	2250	2000	1750	1500	1250	1000	900	900	900
	W	560	500	440	390	340	300	260	250	250	250
30	Q	2640	2370	2110	1840	1580	1320	1050	950	950	950
	W	500	450	400	350	310	270	230	230	230	230
25	Q	2730	2450	2180	1910	1640	1360	1090	980	980	980
	W	450	400	360	310	270	240	210	200	200	200
20	Q	2830	2550	2260	1980	1700	1420	1130	1020	1020	1020
	W	400	360	320	280	240	220	190	180	180	180

Heating

Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	4100	3690	3280	2870	2460	2050	1640	1230	960	960
	W	970	850	750	620	510	410	320	230	190	190
10	Q	3660	3290	2930	2560	2200	1830	1460	1100	860	860
	W	900	790	690	580	470	380	290	210	180	180
7	Q	3400	3060	2720	2380	2040	1700	1360	1020	800	800
	W	860	750	660	550	450	360	280	200	170	170
5	Q	2580	2320	2060	1810	1550	1290	1030	770	610	610
	W	790	690	610	500	410	330	260	180	160	160
2	Q	2460	2210	1970	1720	1480	1230	980	740	580	580
	W	760	660	580	490	400	320	250	180	150	150
0	Q	2380	2140	1900	1670	1430	1190	950	710	560	560
	W	740	640	570	470	390	310	240	170	150	150
-5	Q	2180	1960	1740	1530	1310	1090	870	650	510	510
	W	690	600	530	440	360	290	220	160	140	140
-7	Q	2100	1890	1680	1470	1260	1050	840	630	490	490
	W	670	580	510	430	350	280	220	160	130	130
-10	Q	1910	1720	1530	1340	1150	960	760	570	450	450
	W	640	560	490	410	330	270	210	150	130	130
-15	Q	1470	1320	1180	1030	880	740	590	440	350	350
	W	570	490	430	360	300	240	180	130	110	110

Combination

Indoor unit : RAV-RM401SDT-E

Outdoor unit : RAV-SM404ATP-A

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
Minimum	900	180	800	140
Rating	3600	930	4000	970

Q: Capacity in W

W: Power Consumption in W

Cooling

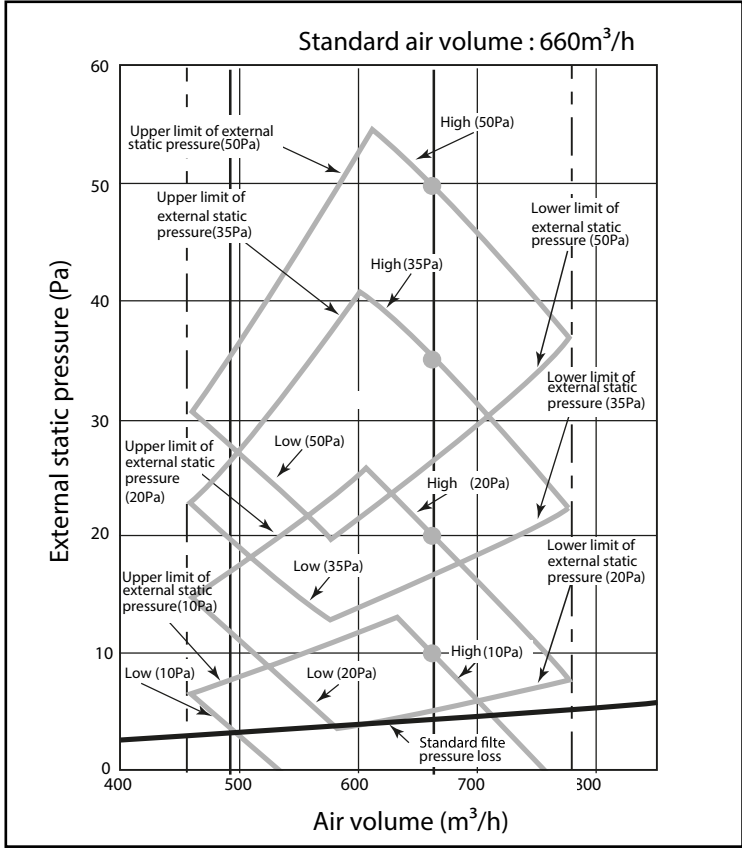
Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	3330	3000	2670	2330	2000	1670	1330	1000	830	830
	W	1020	890	750	640	520	420	320	230	200	200
35	Q	3600	3240	2880	2520	2160	1800	1440	1080	900	900
	W	930	810	690	590	480	380	290	210	180	180
30	Q	3790	3410	3040	2660	2280	1900	1520	1140	950	950
	W	840	730	620	530	430	340	260	190	160	160
25	Q	3920	3530	3140	2750	2350	1960	1570	1180	980	980
	W	750	650	560	480	390	310	230	170	150	150
20	Q	4080	3670	3260	2850	2450	2040	1630	1220	1020	1020
	W	670	580	500	430	350	270	210	150	130	130

Heating

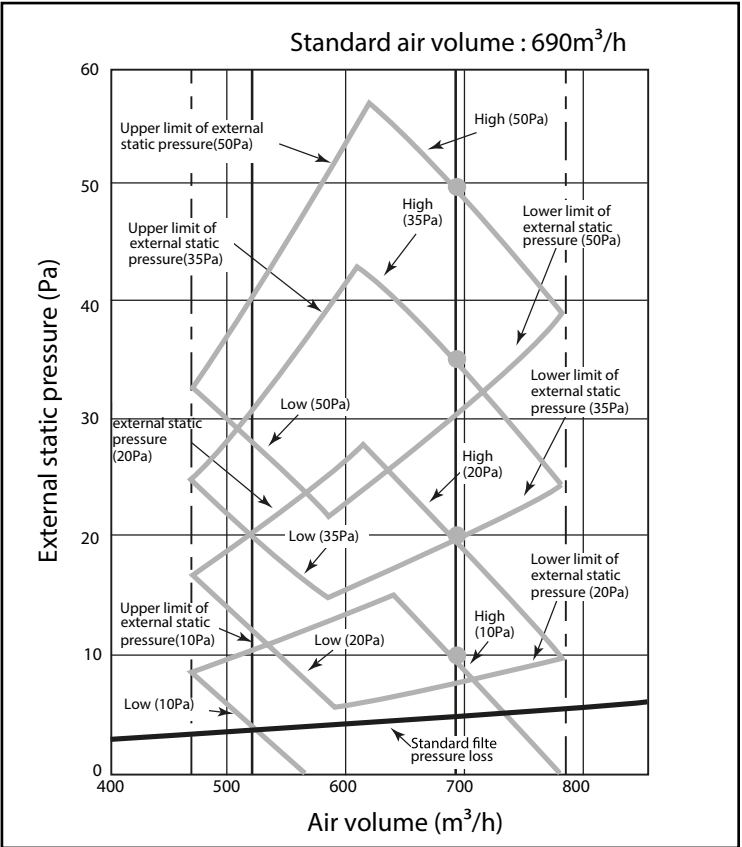
Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	4820	4340	3860	3380	2890	2410	1930	1450	960	960
	W	1100	900	770	630	510	400	290	200	160	160
10	Q	4310	3880	3440	3010	2580	2150	1720	1290	860	860
	W	1020	840	710	590	470	370	270	190	150	150
7	Q	4000	3600	3200	2800	2400	2000	1600	1200	800	800
	W	970	800	680	560	450	350	260	180	140	140
5	Q	3040	2730	2430	2120	1820	1520	1210	910	610	610
	W	890	730	620	510	410	320	240	170	130	130
2	Q	2890	2600	2320	2030	1740	1450	1160	870	580	580
	W	860	710	600	490	400	310	230	160	120	120
0	Q	2800	2520	2240	1960	1680	1400	1120	840	560	560
	W	830	690	580	480	390	300	220	150	120	120
-5	Q	2560	2310	2050	1800	1540	1280	1030	770	510	510
	W	780	640	540	450	360	280	210	140	110	110
-7	Q	2470	2220	1980	1730	1480	1240	990	740	490	490
	W	750	620	530	430	350	270	200	140	110	110
-10	Q	2250	2020	1800	1570	1350	1120	900	670	450	450
	W	720	590	500	420	330	260	190	130	100	100
-15	Q	1730	1560	1380	1210	1040	860	690	520	350	350
	W	640	530	450	370	300	230	170	120	90	90

2-2-6. Fan Static Charateristic

RAV-RM301SDT-E

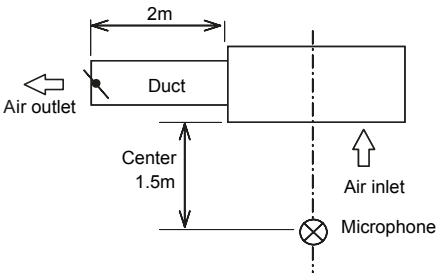


RAV-RM401SDT-E



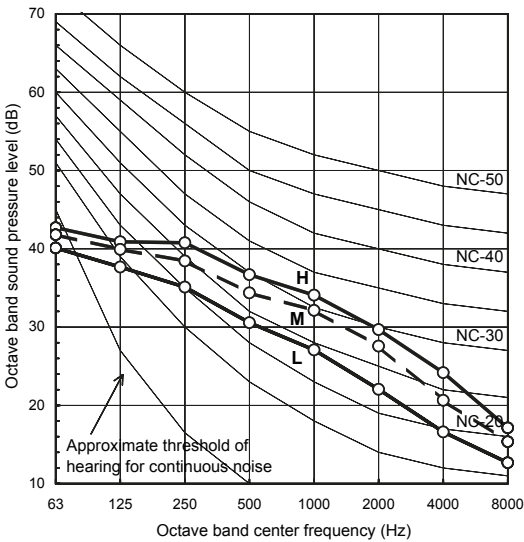
2-2-7. Sound characteristics (NC curve)

RAV-RM301SDT-E, RAV-RM401SDT-E



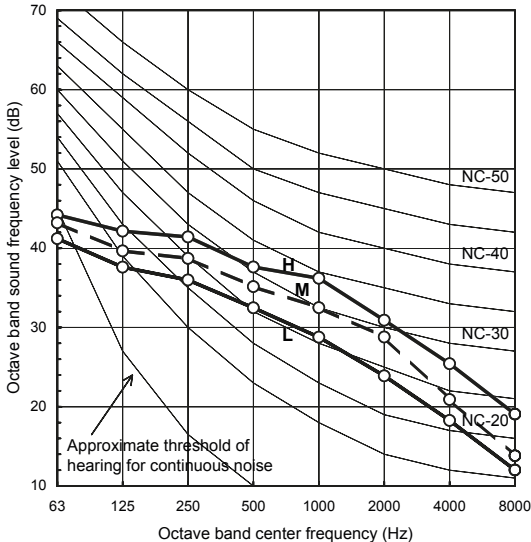
[External static pressure 10Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	39	36	33



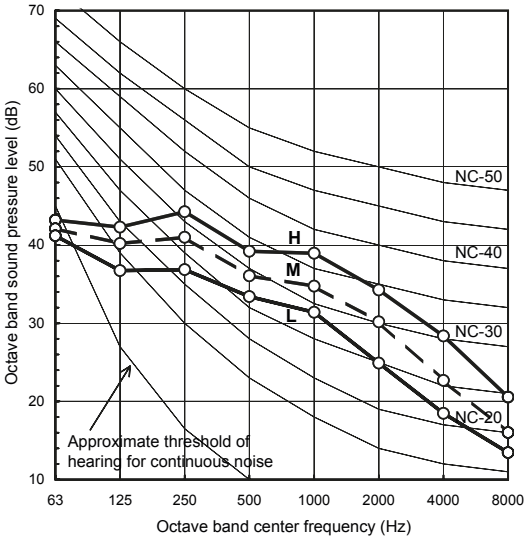
[External static pressure 20Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	40	37	34



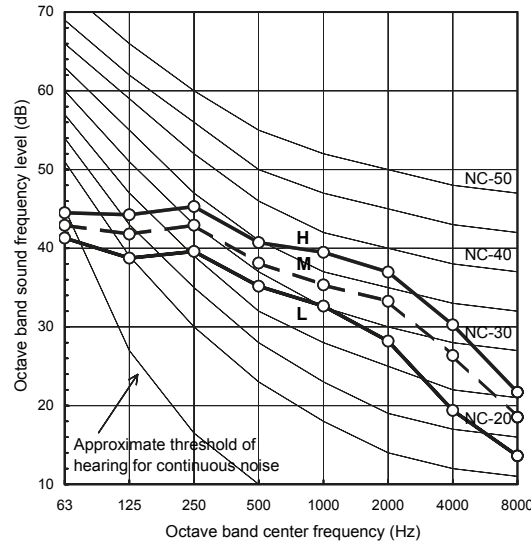
[External static pressure 30Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	41	38	35



[External static pressure 45Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	43	40	37



3. Outdoor Unit

- 3-1. Specifications
- 3-2. Dimension
- 3-3. Wiring diagrams
- 3-4. Refrigerant cycle diagram
- 3-5. Sound characteristics (NC curve)
- 3-6. Connecting pipe length and lift difference between indoor units vs. capacity correction value

3-1. Outdoor Unit

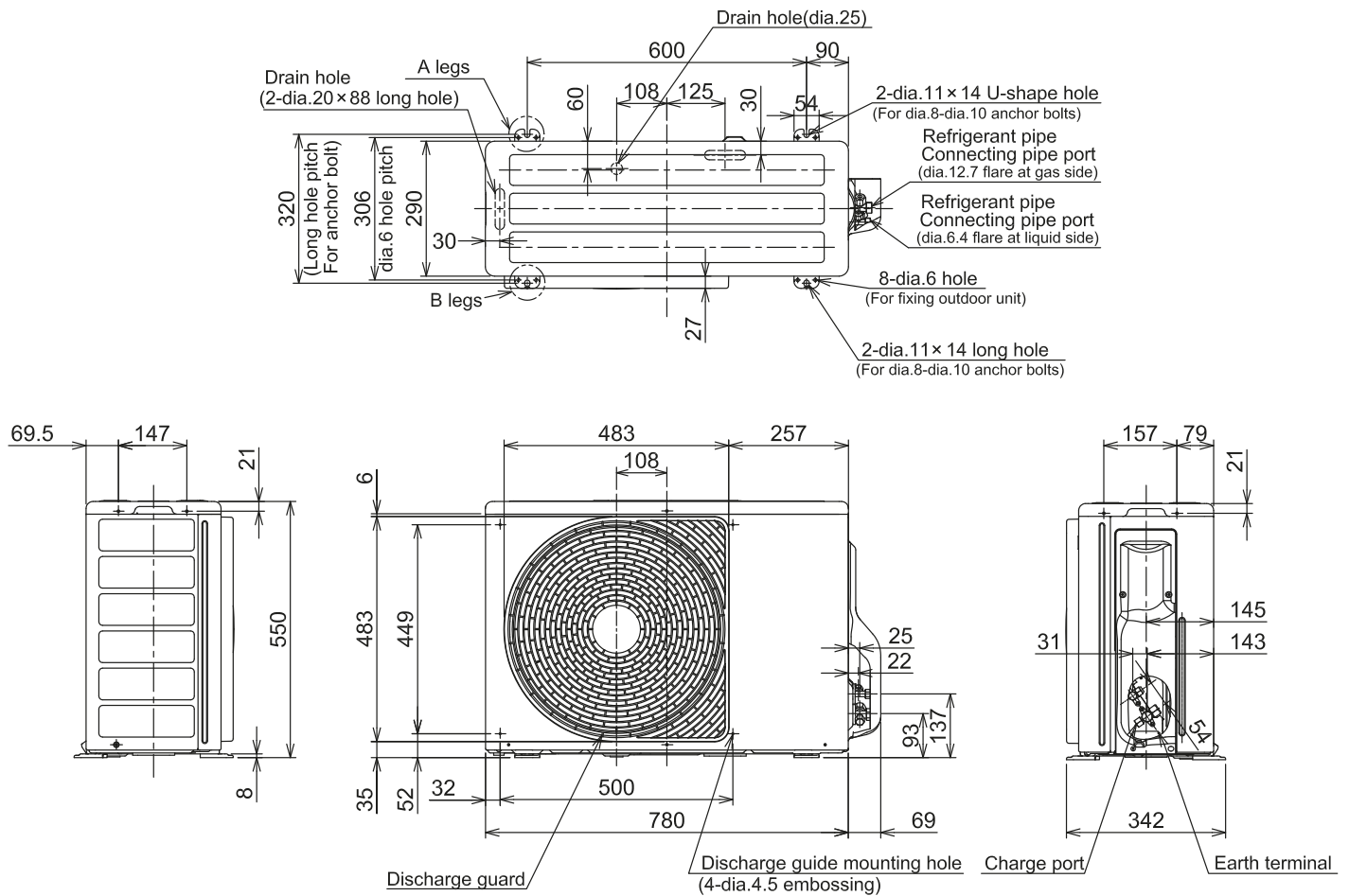
<Digital Inverter series 4>

Model name	Outdoor unit		RAV-SM	304ATP-A	404ATP-A
Power supply				1 phase 220-240V, 50Hz 1 phase 220V, 60Hz (Power exclusive to outdoor is required.)	
Compressor	Motor		(kW)	0.75	1.1
	Pole			4.0	4.0
Refrigerant charged			(kg)	0.8	1.4
Refrigerant control				Pulse motor valve	
Inter connecting pipe	Standard length		(m)	7.5	7.5
	Min. length		(m)	2	2
	Max. total length		(m)	20	20
	Additional refrigerant charge under long piping connector			20g/m (15m to 20m)	20g/m (15m to 20m)
	Height difference	Outdoor lower	(m)	10	10
		Outdoor higher	(m)	10	10
Outer dimension	Height		(mm)	550	550
	Width		(mm)	780	780
	Depth		(mm)	290	290
Appearance				Silky shade (Muncel 1Y8.5/0.5)	
Total weight			(kg)	33	39
Heat exchanger				Finned tube	
Fan unit	Fan			Propeller fan	
	Standard air flow high		(m³/min.)	30	37
	Motor		(W)	43	43
Connecting pipe	Gas side		(mm)	9.5	12.7
	Liquid side		(mm)	6.4	6.4
Sound pressure level			Cooling/Heating (dB·A)	46/47	49/50
Sound power level			Cooling/Heating (dB·A)	61/62	64/65
Outside air temperature, Cooling			°C (Dry bulb temp.)	-15 to 46	
Outside air temperature, Heating			°C (Wet bulb temp.)	-15 to 24	

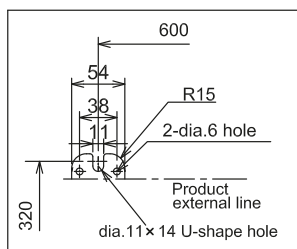
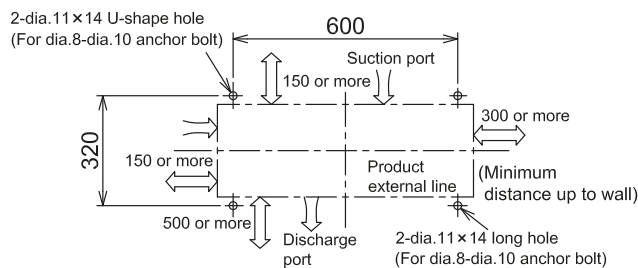
3-2. Dimension

RAV-SM304ATP-A

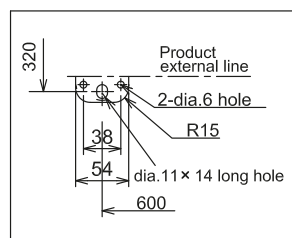
RAV-SM404ATP-A



Space required for service



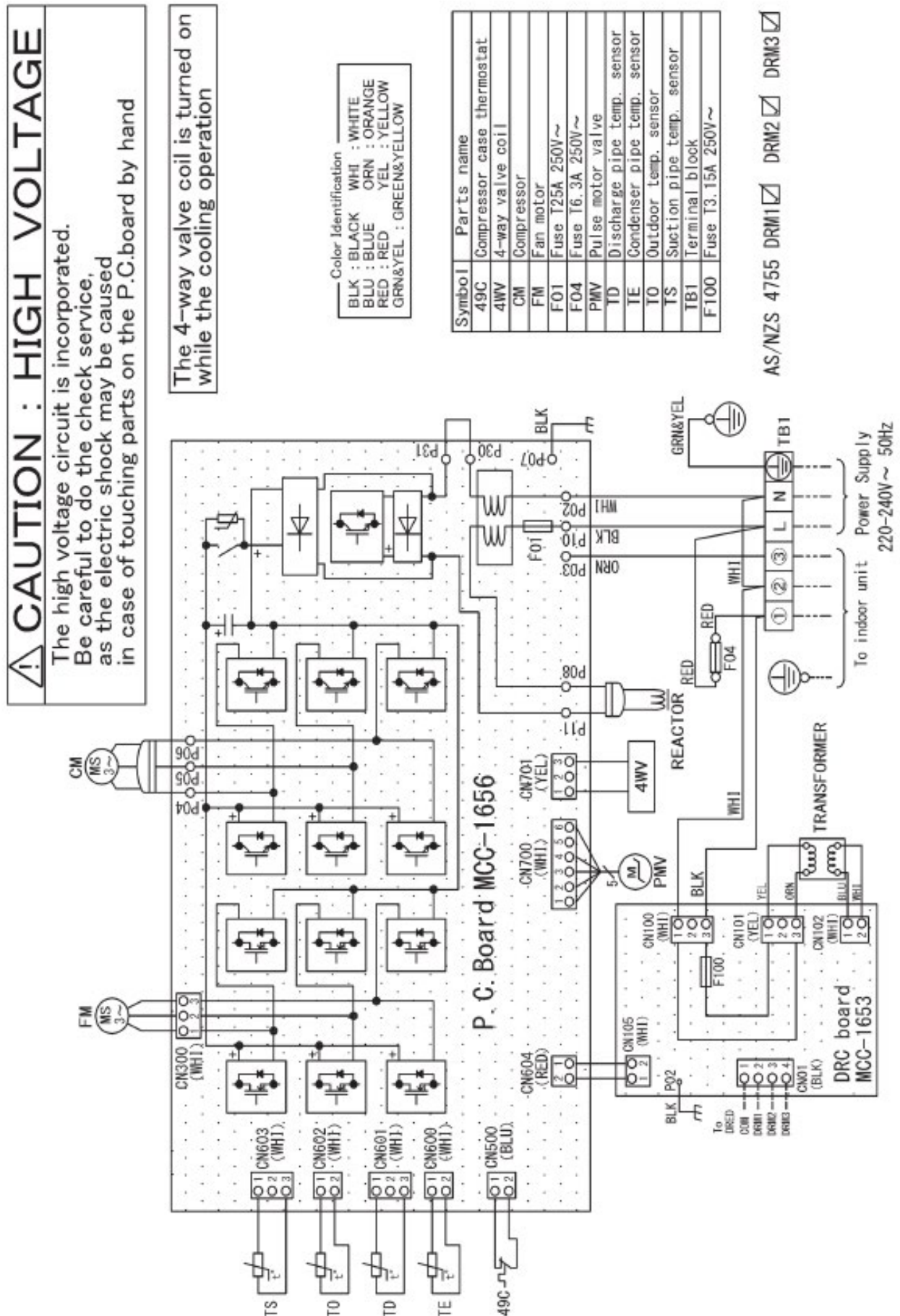
Details of A legs



Details of B legs

(Unit:mm)

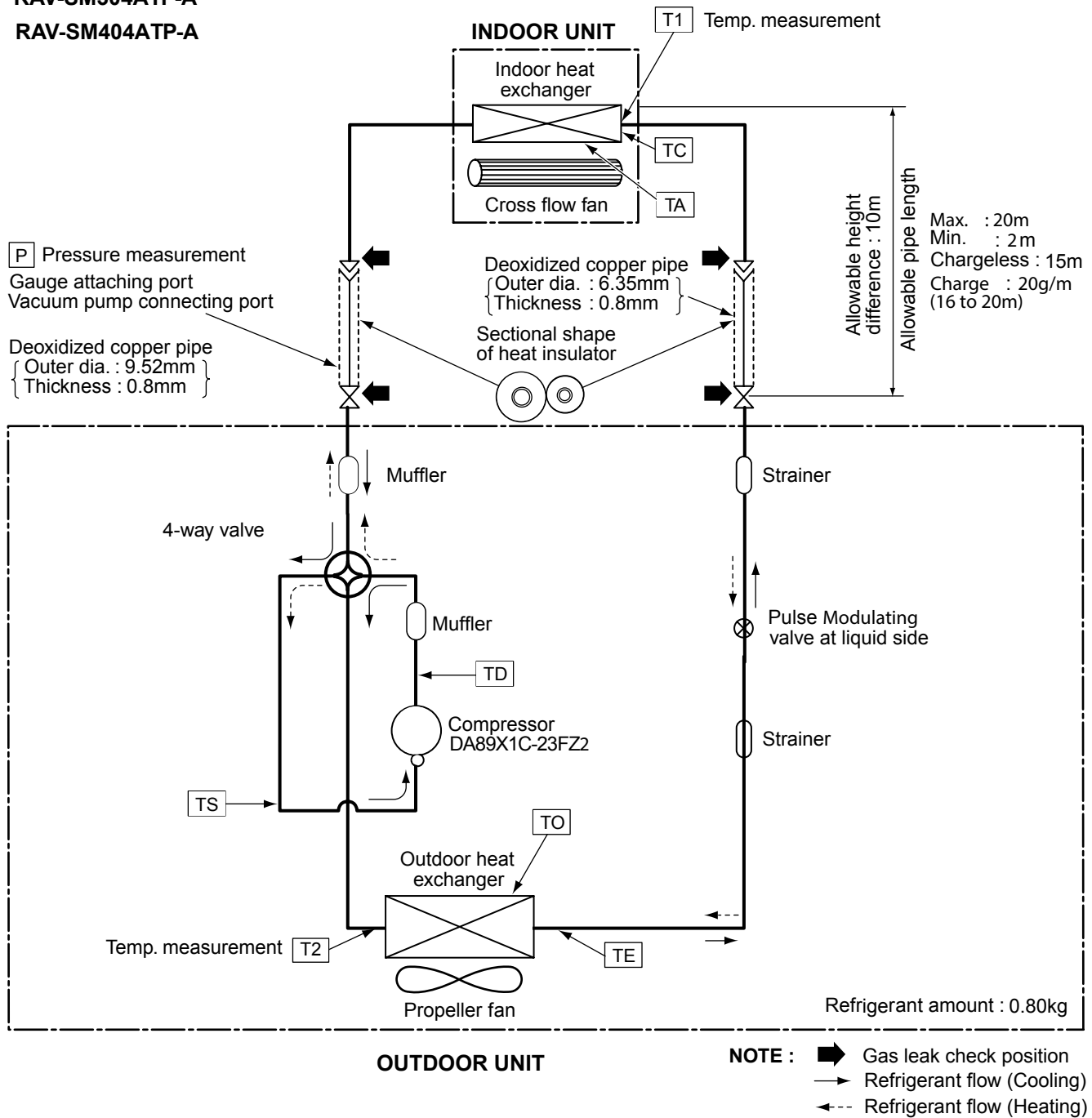
3-3. Wiring diagrams

RAV-SM304ATP-A**RAV-SM404ATP-A**

3-4. Refrigerant cycle diagrams

RAV-SM304ATP-A

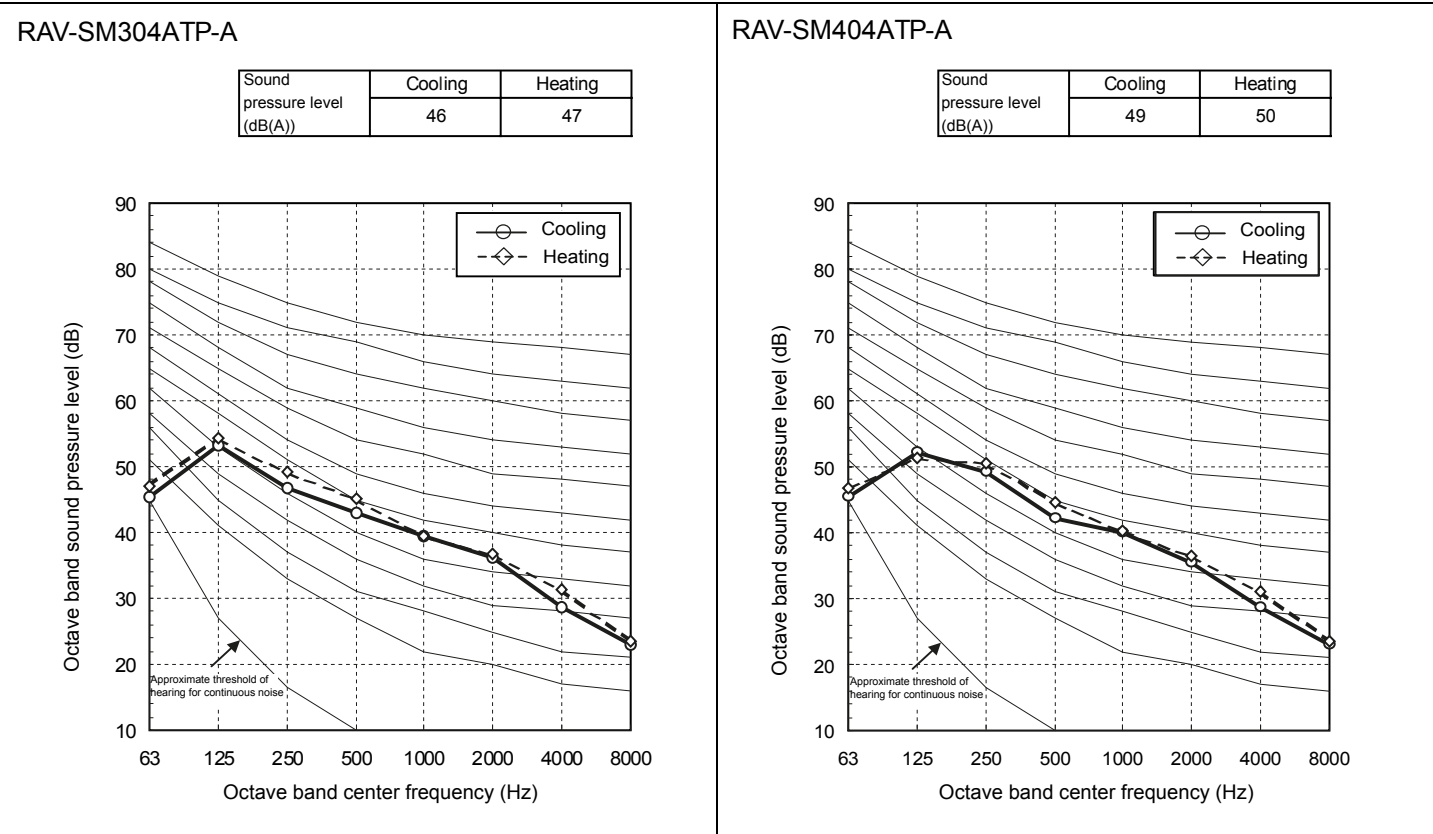
RAV-SM404ATP-A



NOTE :

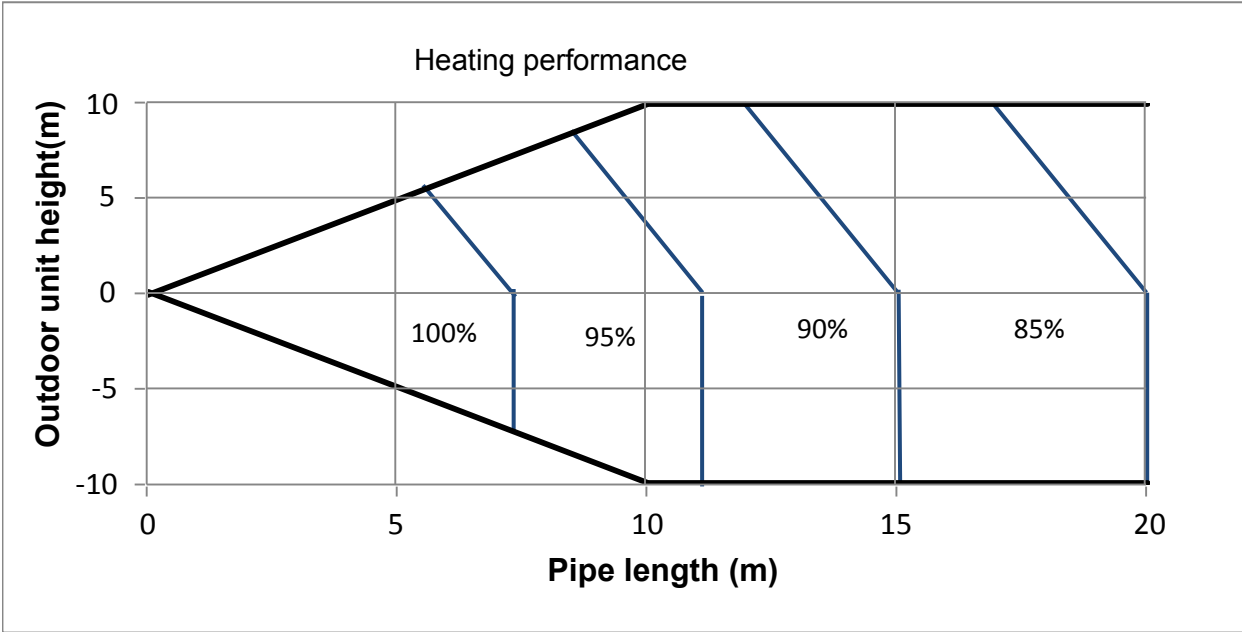
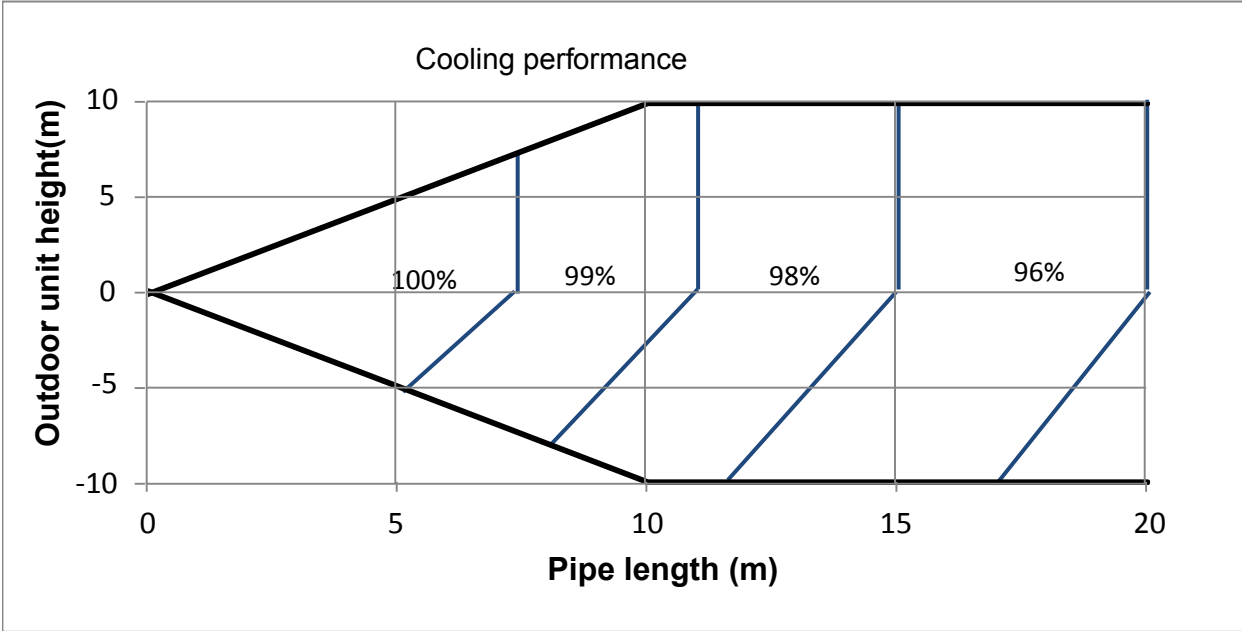
- The maximum pipe length of this air conditioner is 20 m. When the pipe length exceeds 15m, the additional charging of refrigerant, 20g per 1m for the part of pipe exceeded 15m is required. (Max. 100g)

3-5. Sound characteristics (NC curve)

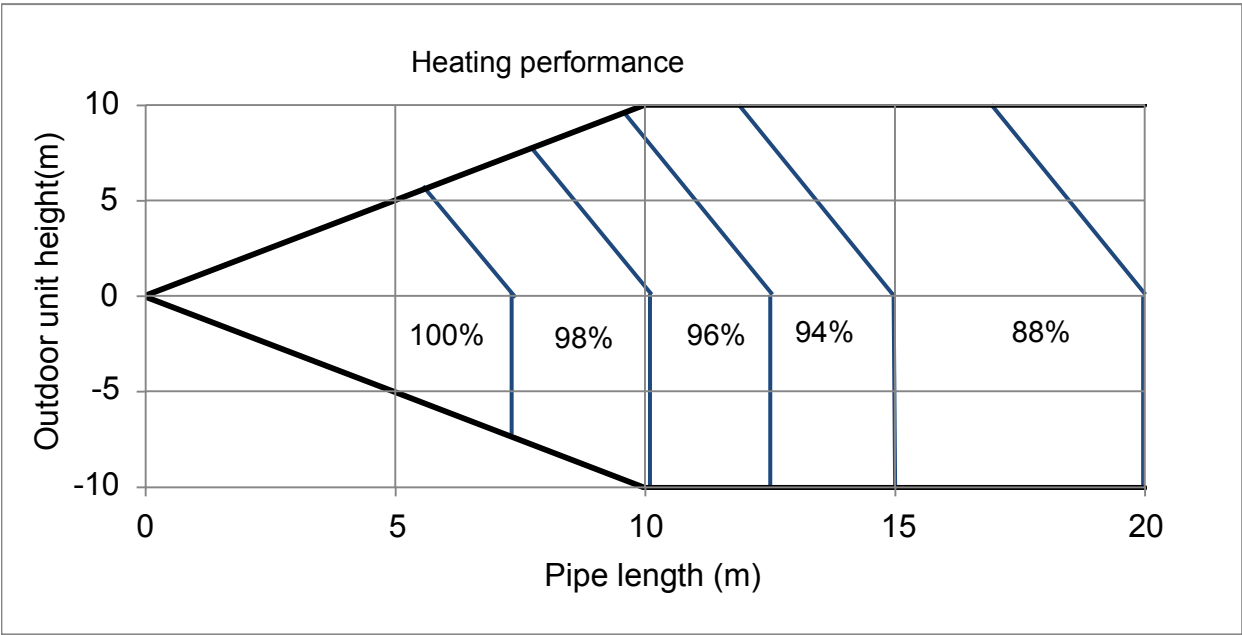
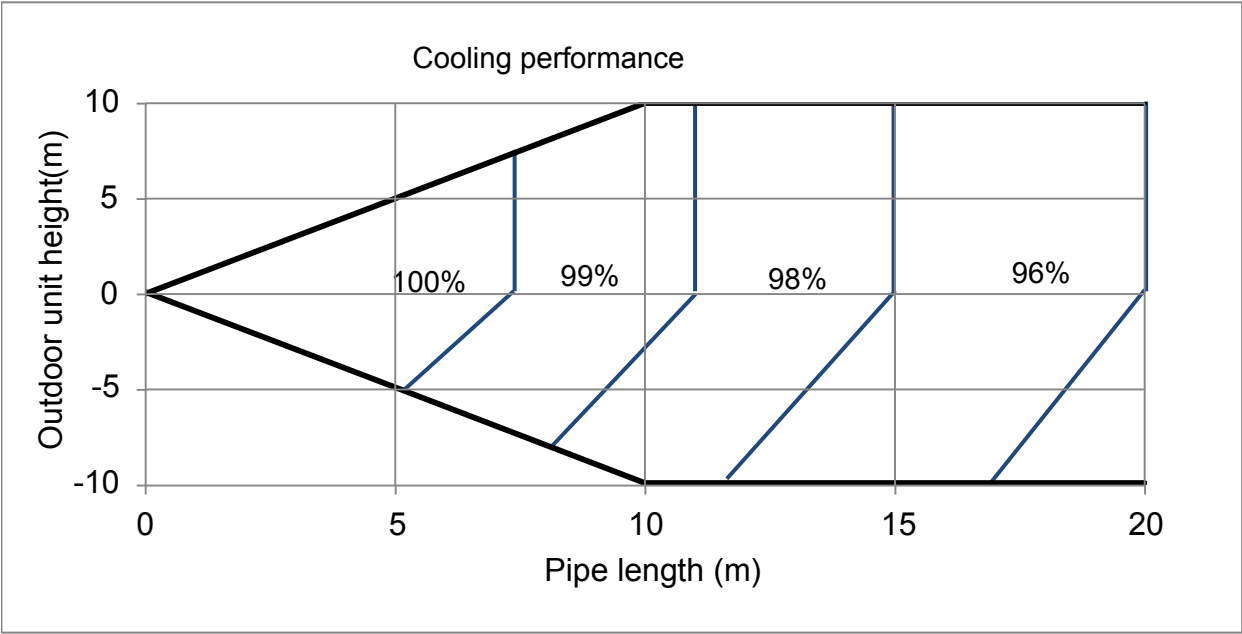


3-6. Connecting pipe length and lift difference between indoor units vs. capacity correction value

RAV-SM304ATP-A



RAV-SM404ATP-A



TOSHIBA CARRIER (THAILAND) CO., LTD.

144/9 Moo 5, Bangkadi Industrial Park, Tivanon Road, Tambol Bangkadi,
Amphur Muang, Pathumthani 12000, Thailand

Copyright © 2014 TOSHIBA CARRIER (THAILAND), All Rights Reserved

Notice : Toshiba is committed to continuously improving its products to ensure the highest quality and reliability standard, and to meet local regulations and market requirements. All features and specifications are subject to change without prior notice.
