

Digital Inverter 4 series

Outdoor Unit

RAV-SM304ATP-E
RAV-SM304ATJP-E
RAV-SM404ATP-E
RAV-SM404ATJP-E

Indoor Unit

RAV-SM307KRTP-E
RAV-SM407KRTP-E
RAV-SM407CTP-E
RAV-SM304MUT-E
RAV-SM404MUT-E
RAV-SM304SDT-E
RAV-SM404SDT-E

Contents

1. Line up.....	3
2. Indoor Unit.....	4
2-1. Hi-wall Type	5
2-1-1. Specifications.....	6
2-1-2. Dimension.....	7
2-1-3. Wiring diagrams.....	9
2-1-4. Sensible capacity table.....	10
2-1-5. Part load performance.....	11
2-1-6. Air throw distance chart.....	13
2-1-7. Sound characteristics (NC curve).....	15
2-2. Under ceiling Type.....	17
2-2-1. Specifications.....	18
2-2-2. Dimension.....	19
2-2-3. Wiring diagrams.....	20
2-2-4. Sensible capacity table.....	21
2-2-5. Part load performance.....	22
2-2-6. Air throw distance chart.....	23
2-2-7. Sound characteristics (NC curve).....	24
2-3. Compact 4-way cassette Type.....	25
2-3-1. Specifications.....	26
2-3-2. Dimension.....	27
2-3-3. Wiring diagrams.....	28
2-3-4. Sensible capacity table.....	29
2-3-5. Part load performance.....	30
2-3-6. Air throw distance chart.....	32
2-3-7. Sound characteristics (NC curve).....	33
2-4. Slim duct Type.....	34
2-4-1. Specifications.....	35
2-4-2. Dimension.....	36
2-4-3. Wiring diagrams.....	37
2-4-4. Sensible capacity table.....	38
2-4-5. Part load performance.....	39
2-4-6. Fan static characteristics	41
2-4-7. Sound characteristics (NC curve).....	42
3. Outdoor Unit.....	43
3-1. Specifications.....	44
3-2. Dimension.....	45
3-3. Wiring diagrams.....	46
3-4. Refrigerant cycle diagram.....	48
3-5. Sound characteristics (NC curve).....	49
3-6. Connecting pipe length and lift difference between indoor units vs. capacity correction value.....	50
Appendix	52

1. Line-up

Outdoor unit line-up

Model name	RAV-SM304ATJP-E / RAV-SM304ATP-E	RAV-SM404ATJP-E / RAV-SM404ATP-E
Appearance		

Indoor unit line-up

Capacity type			30	40
(HP equivalent)			1.0	1.5
Hi-Wall	RAV-SM**7KRTP-E			
Under Ceiling	RAV-SM**7CTP-E		—	
Compact 4-way Cassette (600*600)	RAV-SM**4MUT-E			
Slim Duct	RAV-SM**4SDT-E			

2. Indoor Unit

2-1. Hi-wall Type

2-2. Under Ceiling Type

2-3. Compact 4-way Cassette Type

2-4. Slim duct Type

2. Indoor Unit

2-1. 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 >

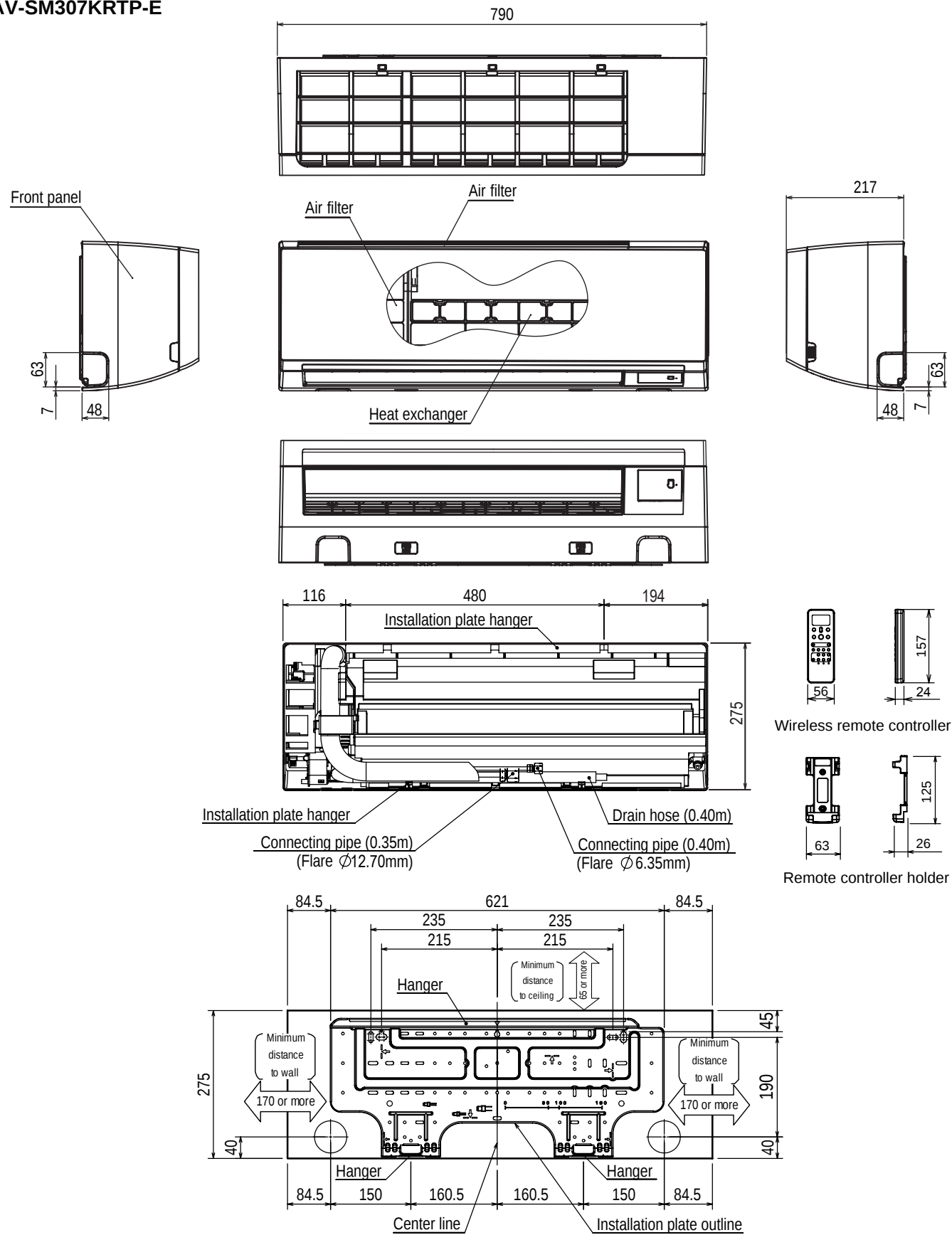
Model		Indoor unit		RAV-SM307KRTP-E	RAV-SM407KRTP-E
		Outdoor unit		RAV-SM304AT(J)P-E	RAV-SM407AT(J)P-E
Cooling capacity		(kW)		2.5 (0.9 – 3.0)	3.6 (0.9 – 4.0)
Heating capacity		(kW)		3.4 (0.8 – 4.5)	4.0 (0.8 – 5.0)
Power supply				1 phase 220 – 240V/50Hz & 1 phase 220 V 60Hz	
Electrical characteristics	Cooling	Power consumption (kW)		0.61	1.13
		EER		4.10	3.19
		Pdesign C (kW)		2.5	3.6
		SEER		5.90	5.40
	Heating	Cooling Energy grade		A+	A
		Power consumption (kW)		0.85	1.12
		COP		4.00	3.57
		Pdesign H (kW)		3.0	3.6
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 :

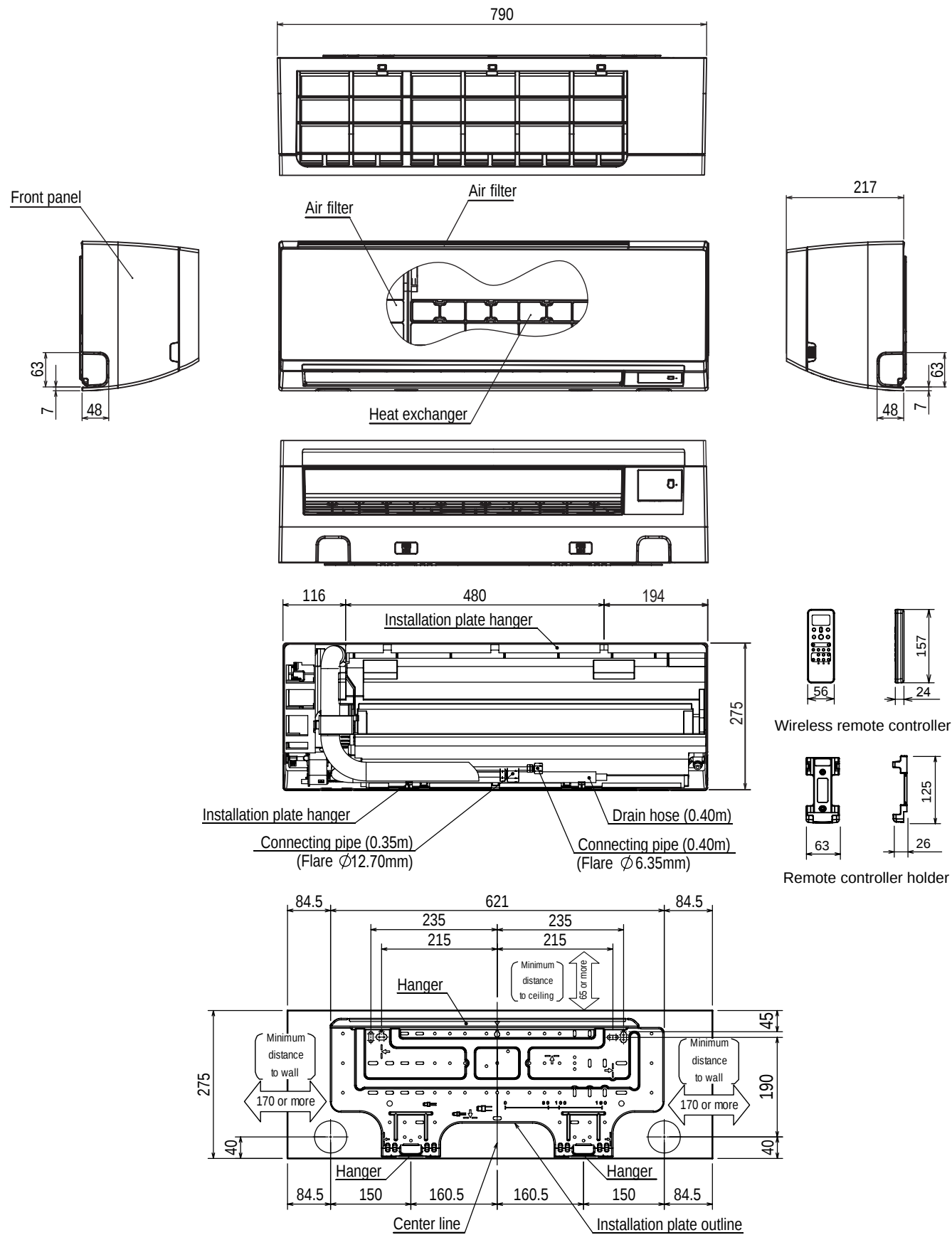
Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
 Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

2-1-2. Dimension

RAV-SM307KRTP-E

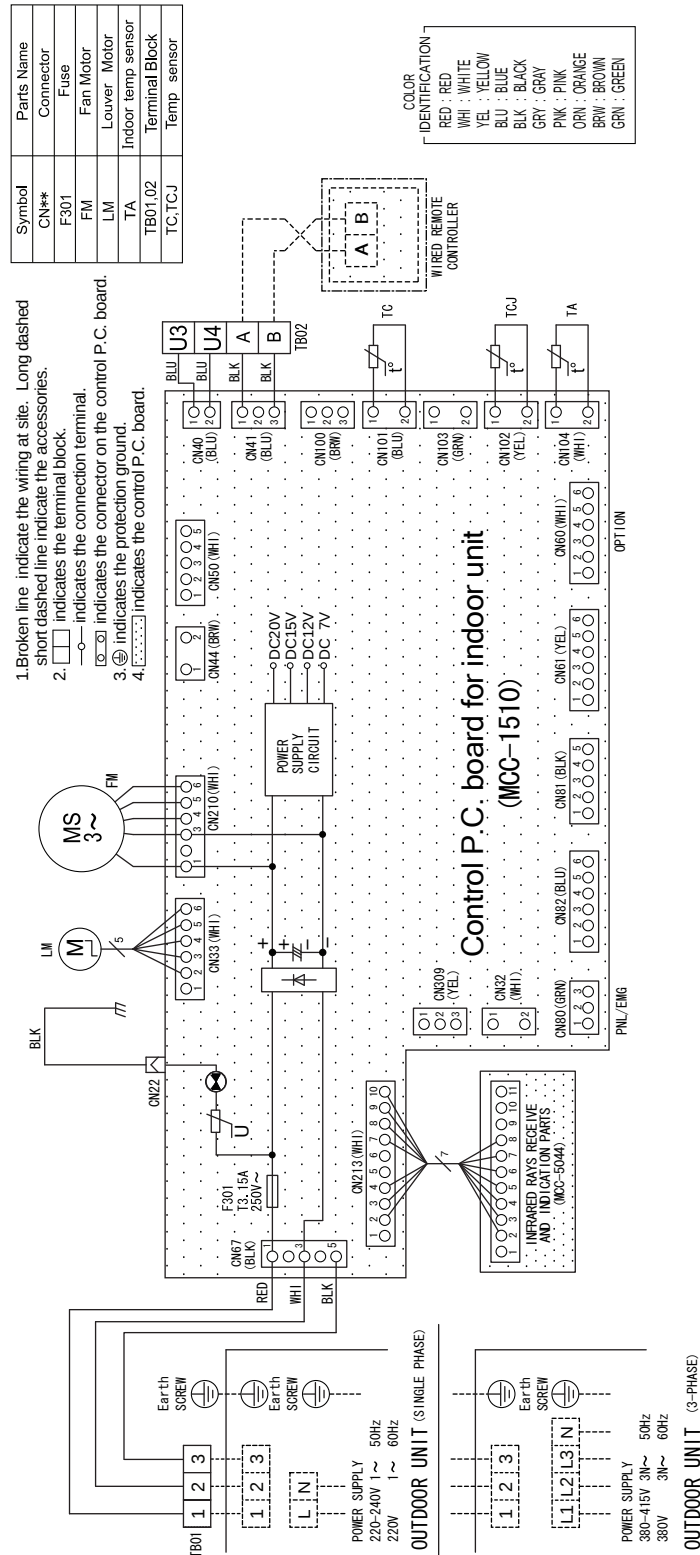


RAV-SM407KRTP-E



2-1-3. Wiring diagram

RAV-SM307KRTP-E,RAV-SM407KRTP-E



2-1-4. Sensible capacity table

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

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	3.54	2.87	3.67	2.94	3.91	3.06	4.01	3.12	4.19	3.25	4.31	3.24	4.44	3.23	4.70	3.18	4.92	3.11
	12.0	3.51	2.84	3.63	2.91	3.87	3.03	3.97	3.09	4.15	3.22	4.27	3.20	4.39	3.20	4.65	3.15	4.87	3.08
	14.0	3.47	2.81	3.59	2.88	3.83	2.99	3.92	3.06	4.10	3.18	4.23	3.17	4.35	3.16	4.60	3.12	4.81	3.04
	16.0	3.43	2.78	3.55	2.84	3.79	2.96	3.88	3.02	4.06	3.14	4.18	3.13	4.30	3.12	4.55	3.08	4.76	3.01
	18.0	3.39	2.75	3.51	2.81	3.74	2.92	3.83	2.99	4.01	3.11	4.13	3.09	4.24	3.09	4.50	3.04	4.70	2.97
	20.0	3.35	2.71	3.46	2.77	3.70	2.89	3.78	2.95	3.96	3.07	4.08	3.06	4.19	3.05	4.44	3.01	4.64	2.93
	21.0	3.32	2.69	3.44	2.75	3.67	2.87	3.76	2.93	3.93	3.05	4.05	3.03	4.16	3.03	4.41	2.98	4.61	2.91
	23.0	3.28	2.66	3.39	2.72	3.62	2.83	3.71	2.89	3.88	3.00	3.99	2.99	4.10	2.99	4.35	2.94	4.55	2.87
	25.0	3.22	2.61	3.34	2.67	3.56	2.78	3.64	2.84	3.81	2.95	3.92	2.94	4.04	2.94	4.27	2.89	4.47	2.82
	27.0	3.18	2.58	3.29	2.63	3.51	2.74	3.59	2.80	3.76	2.91	3.87	2.90	3.98	2.90	4.22	2.86	4.41	2.79
	29.0	3.13	2.54	3.24	2.59	3.45	2.70	3.54	2.75	3.70	2.87	3.81	2.86	3.92	2.85	4.15	2.81	4.34	2.74
	31.0	3.07	2.49	3.18	2.55	3.39	2.65	3.47	2.71	3.63	2.82	3.74	2.81	3.85	2.80	4.08	2.76	4.26	2.69
	33.0	3.02	2.45	3.12	2.50	3.33	2.60	3.41	2.66	3.57	2.77	3.67	2.76	3.78	2.75	4.00	2.71	4.19	2.65
	35.0	2.96	2.40	3.06	2.45	3.27	2.55	3.34	2.60	3.50	2.71	3.60	2.70	3.70	2.69	3.92	2.66	4.10	2.59
	37.0	2.90	2.35	3.00	2.40	3.20	2.50	3.28	2.55	3.43	2.66	3.53	2.65	3.63	2.64	3.85	2.61	4.02	2.54
	39.0	2.84	2.30	2.94	2.35	3.14	2.45	3.21	2.50	3.36	2.60	3.46	2.59	3.56	2.59	3.77	2.55	3.94	2.49

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

2-1-5. Part load performance

Combination

Indoor unit : RAV-SM307KRTP-E

Outdoor unit : RAV-SM304AT(J)P-E

	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	4100	3690	3280	2870	2460	2050	1640	1230	960	960
	W	960	840	730	620	510	410	320	230	190	190
10	Q	3660	3290	2930	2560	2200	1830	1460	1100	860	860
	W	890	770	680	580	470	380	290	210	180	180
7	Q	3400	3060	2720	2380	2040	1700	1360	1020	800	800
	W	850	740	650	550	450	360	280	200	170	170
5	Q	2580	2320	2060	1810	1550	1290	1030	770	610	610
	W	780	680	600	500	410	330	260	180	160	160
2	Q	2460	2210	1970	1720	1480	1230	980	740	580	580
	W	750	650	570	490	400	320	250	180	150	150
0	Q	2380	2140	1900	1670	1430	1190	950	710	560	560
	W	730	640	560	470	390	310	240	170	150	150
-5	Q	2180	1960	1740	1530	1310	1090	870	650	510	510
	W	680	590	520	440	360	290	220	160	140	140
-7	Q	2100	1890	1680	1470	1260	1050	840	630	490	490
	W	660	570	500	430	350	280	220	160	130	130
-10	Q	1910	1720	1530	1340	1150	960	760	570	450	450
	W	630	550	480	410	330	270	210	150	130	130
-15	Q	1470	1320	1180	1030	880	740	590	440	350	350
	W	560	490	430	360	300	240	180	130	110	110

Combination

Indoor unit : RAV-SM407KRTP-E

Outdoor unit : RAV-SM404AT(J)P-E

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
MINIMUM	900	180	800	140
RATING	3600	1130	4000	1120

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	1240	1080	910	740	600	470	350	240	200	200
35	Q	3600	3240	2880	2520	2160	1800	1440	1080	900	900
	W	1130	990	830	680	550	430	320	220	180	180
30	Q	3790	3410	3040	2660	2280	1900	1520	1140	950	950
	W	1020	890	750	610	500	390	290	200	160	160
25	Q	3920	3530	3140	2750	2350	1960	1570	1180	980	980
	W	910	800	670	550	440	350	260	180	150	150
20	Q	4080	3670	3260	2850	2450	2040	1630	1220	1020	1020
	W	810	710	600	490	400	310	230	160	130	130

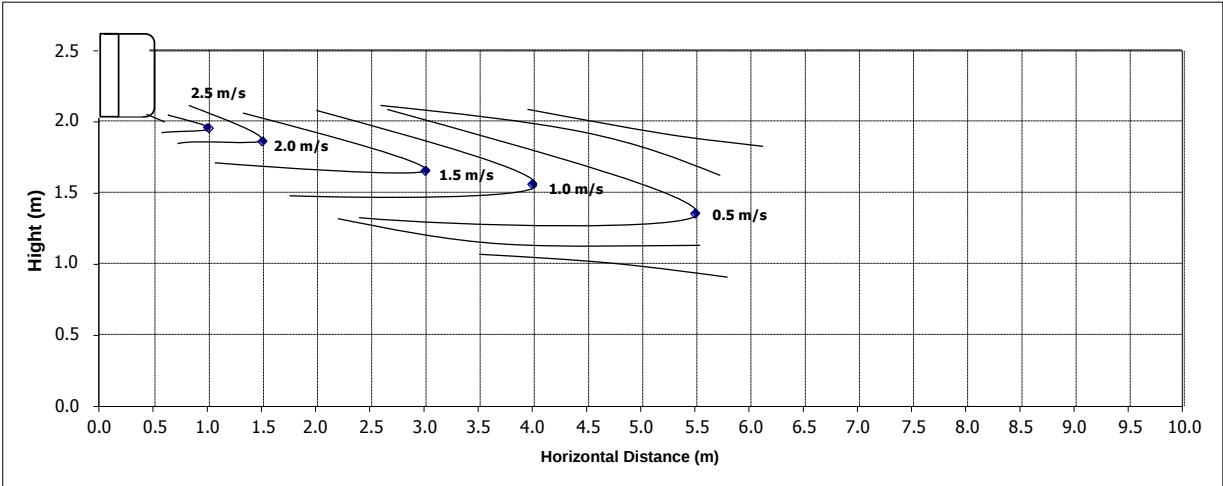
Heating

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	1260	1050	880	720	590	450	340	240	160	160
10	Q	4310	3880	3440	3010	2580	2150	1720	1290	860	860
	W	1170	970	820	670	540	420	310	220	150	150
7	Q	4000	3600	3200	2800	2400	2000	1600	1200	800	800
	W	1120	930	780	640	520	400	300	210	140	140
5	Q	3040	2730	2430	2120	1820	1520	1210	910	610	610
	W	1030	850	720	590	480	370	280	190	130	130
2	Q	2890	2600	2320	2030	1740	1450	1160	870	580	580
	W	990	820	690	560	460	350	260	190	120	120
0	Q	2800	2520	2240	1960	1680	1400	1120	840	560	560
	W	960	800	670	550	450	340	260	180	120	120
-5	Q	2560	2310	2050	1800	1540	1280	1030	770	510	510
	W	900	740	620	510	420	320	240	170	110	110
-7	Q	2470	2220	1980	1730	1480	1240	990	740	490	490
	W	870	720	610	500	400	310	230	160	110	110
-10	Q	2250	2020	1800	1570	1350	1120	900	670	450	450
	W	830	690	580	470	390	300	220	160	100	100
-15	Q	1730	1560	1380	1210	1040	860	690	520	350	350
	W	740	610	510	420	340	260	200	140	90	90

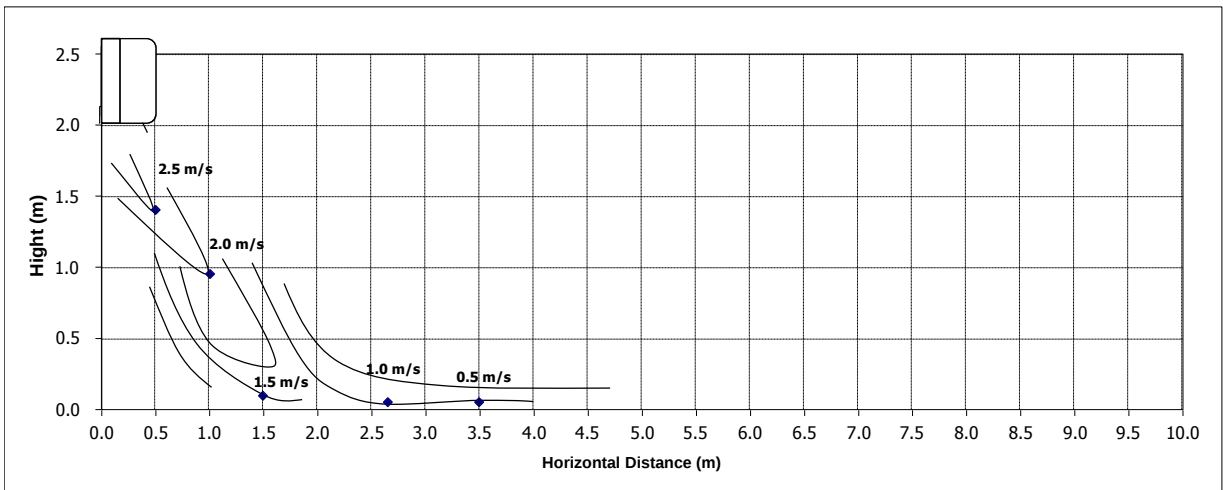
2-1-6. Air throw distance chart

RAV-SM307KRTP-E

Cooling

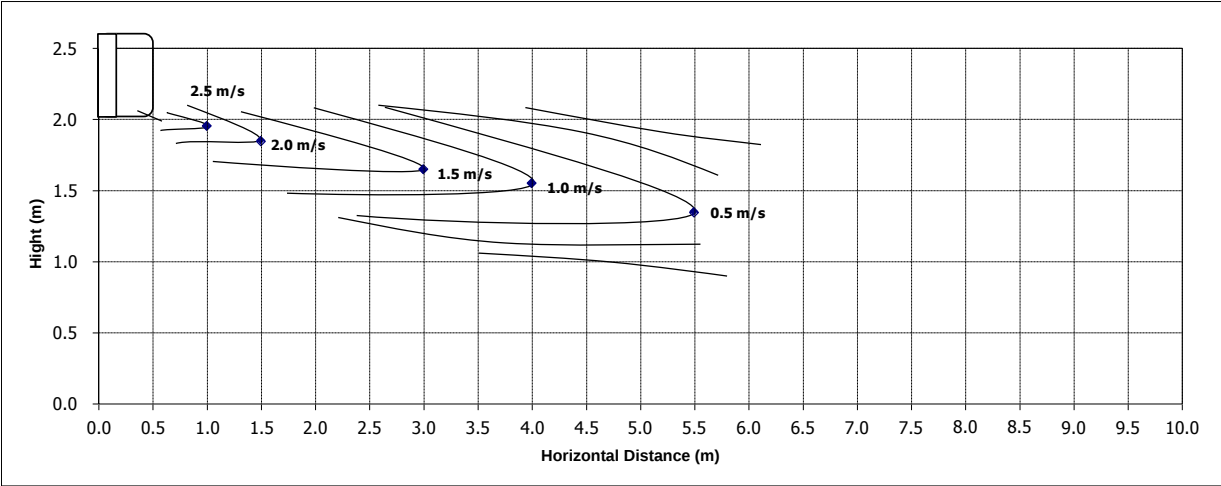


Heating

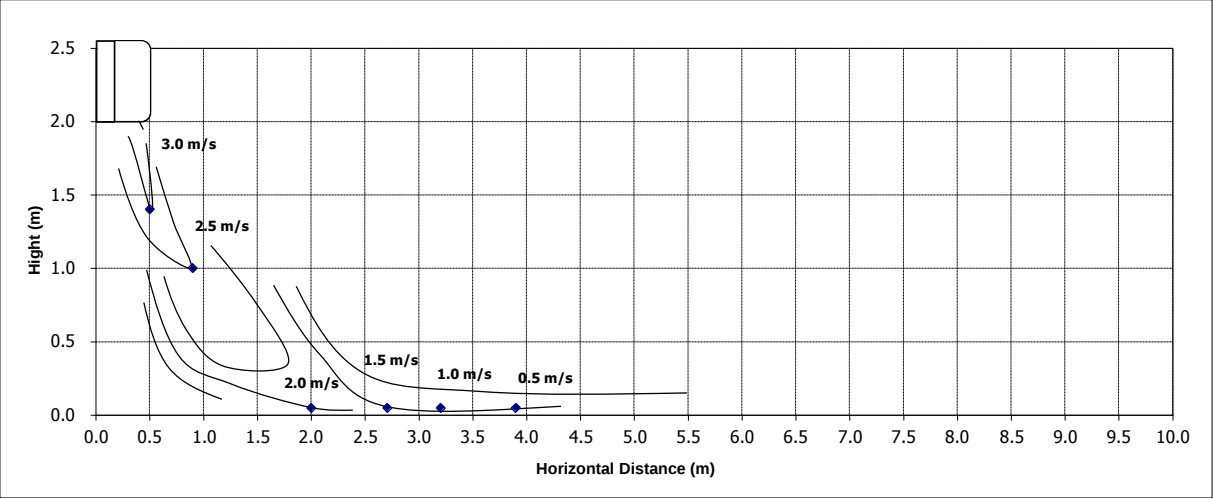


RAV-SM407KRTP-E

Cooling



Heating

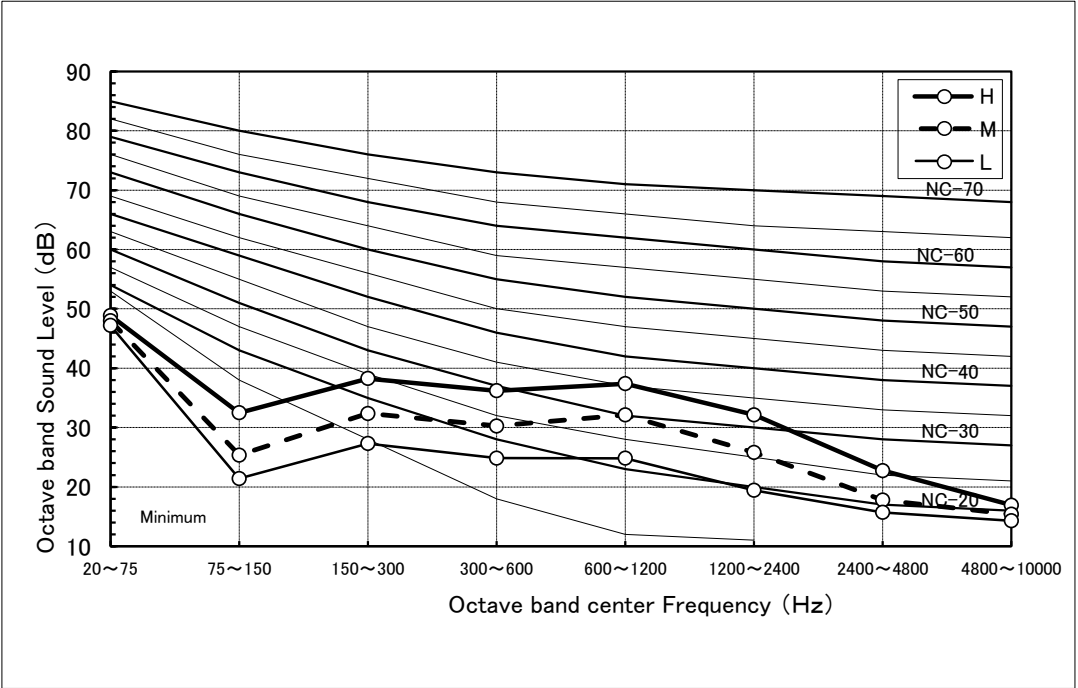


2-1-7. Sound characteristics (NC curve)

RAV-SM307KRTP-E

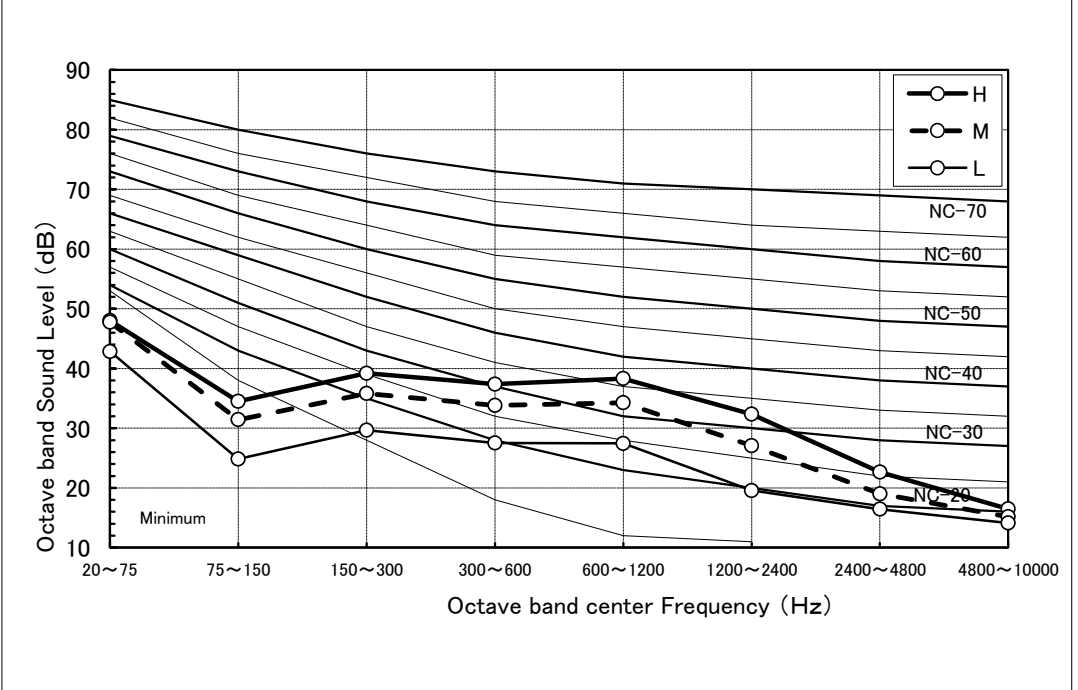
Cooling

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



Heating

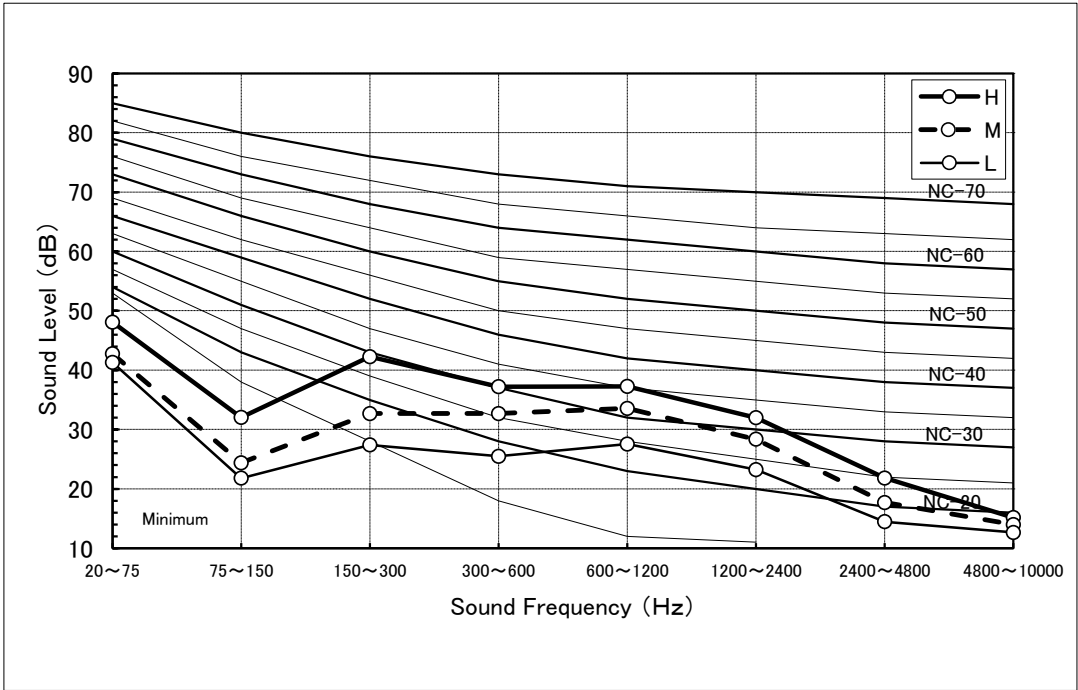
Specification (dB)			
Fan tap	H	M	L
Sound pressure level (dB(A))	41	37	31



RAV-SM407KRTP-E

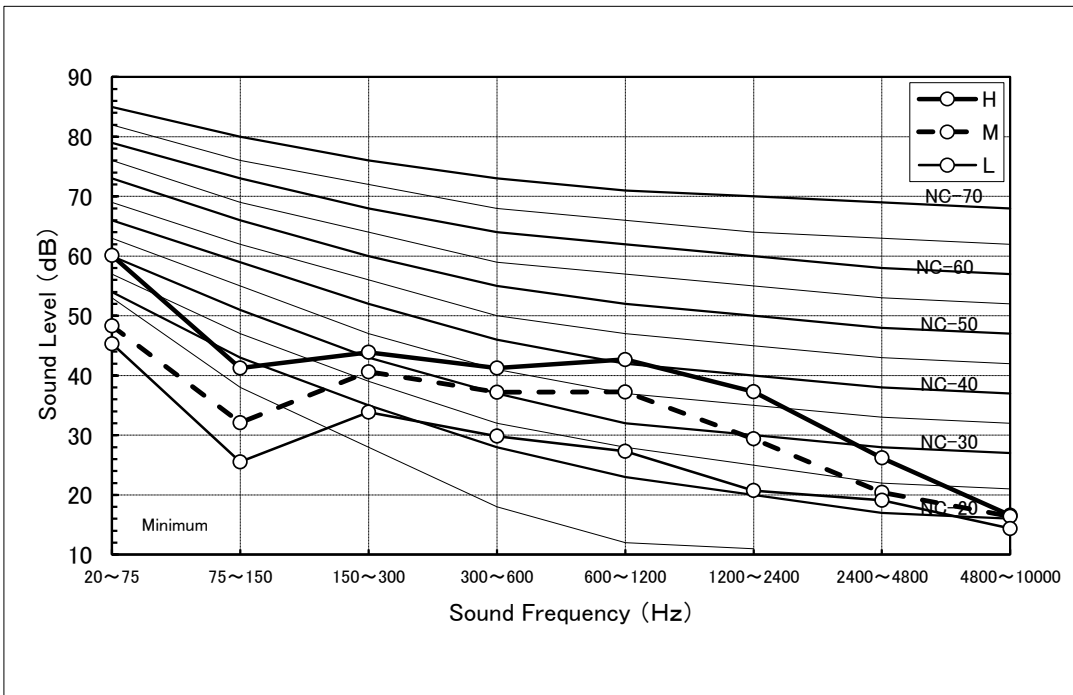
Specification (dB)			
Fan tap	H	M	L
Sound pressure level (dB(A))	41	36	30

Cooling



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

Heating



2-2. Under ceiling 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. Air throw distance chart

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

2-2-1. Specifications

< Under ceiling Type >

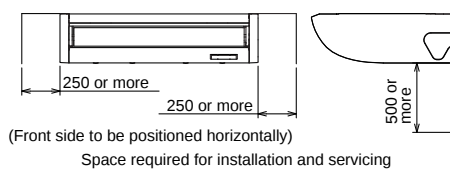
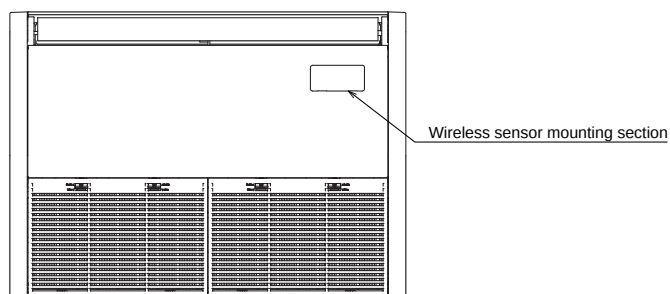
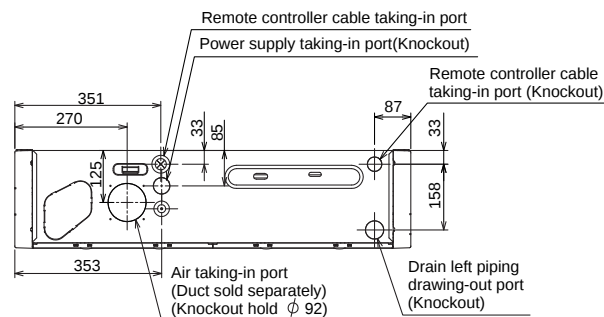
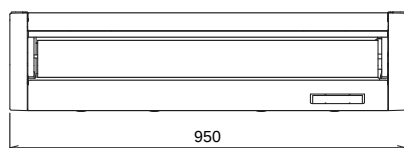
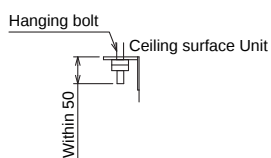
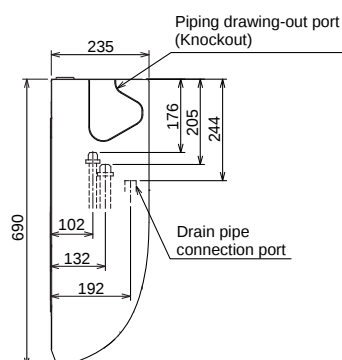
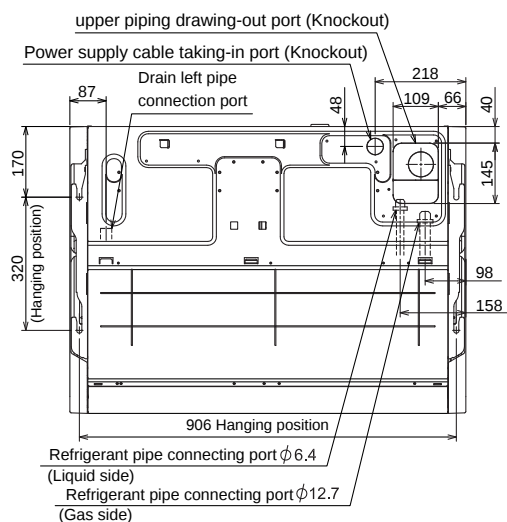
Model		Indoor unit	RAV-SM407CTP-E
		Outdoor unit	RAV-SM404AT(J)P-E
Cooling capacity		(kW)	3.6 (0.9 – 4.0)
Heating capacity		(kW)	4.0 (0.8 – 5.0)
Power supply			1 phase 220 – 240V/50Hz & 1 phase 220 V 60Hz
Electrical characteristics	Cooling	Power consumption	(kW) 0.83
		EER	4.34
		Pdesign C	(kW) 3.60
		SEER	5.96
		Cooling Energy grade	A+
	Heating	Power consumption	(kW) 0.78
		COP	5.13
		Pdesign H	(kW) 4.00
		SCOP	4.98
		Heating Energy grade	A++
FCU dimension	Main unit	Height	(mm) 235
		Width	(mm) 950
		Depth	(mm) 690
Total weight	Main unit	(kg)	23.0
Cooling	FCU standard air flow	(H/M/L) (m³/h)	900/720/540
	Sound pressure level	(H/M/L) dB(A)	37/35/28
	Sound power level	(H/M/L) dB(A)	52/50/43
Heating	FCU standard air flow	(H/M/L) (m³/h)	900/720/540
	Sound pressure level	(H/M/L) dB(A)	37/35/28
	Sound power level	(H/M/L) dB(A)	52/50/43
CDU dimension	Main unit	Height	(mm) 550
		Width	(mm) 780
		Depth	(mm) 290
Total weight	Main unit	(kg)	39
CDU Sound power level (C/H)			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)	12.7
	Liquid side	(mm)	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

2-2-2. Dimension

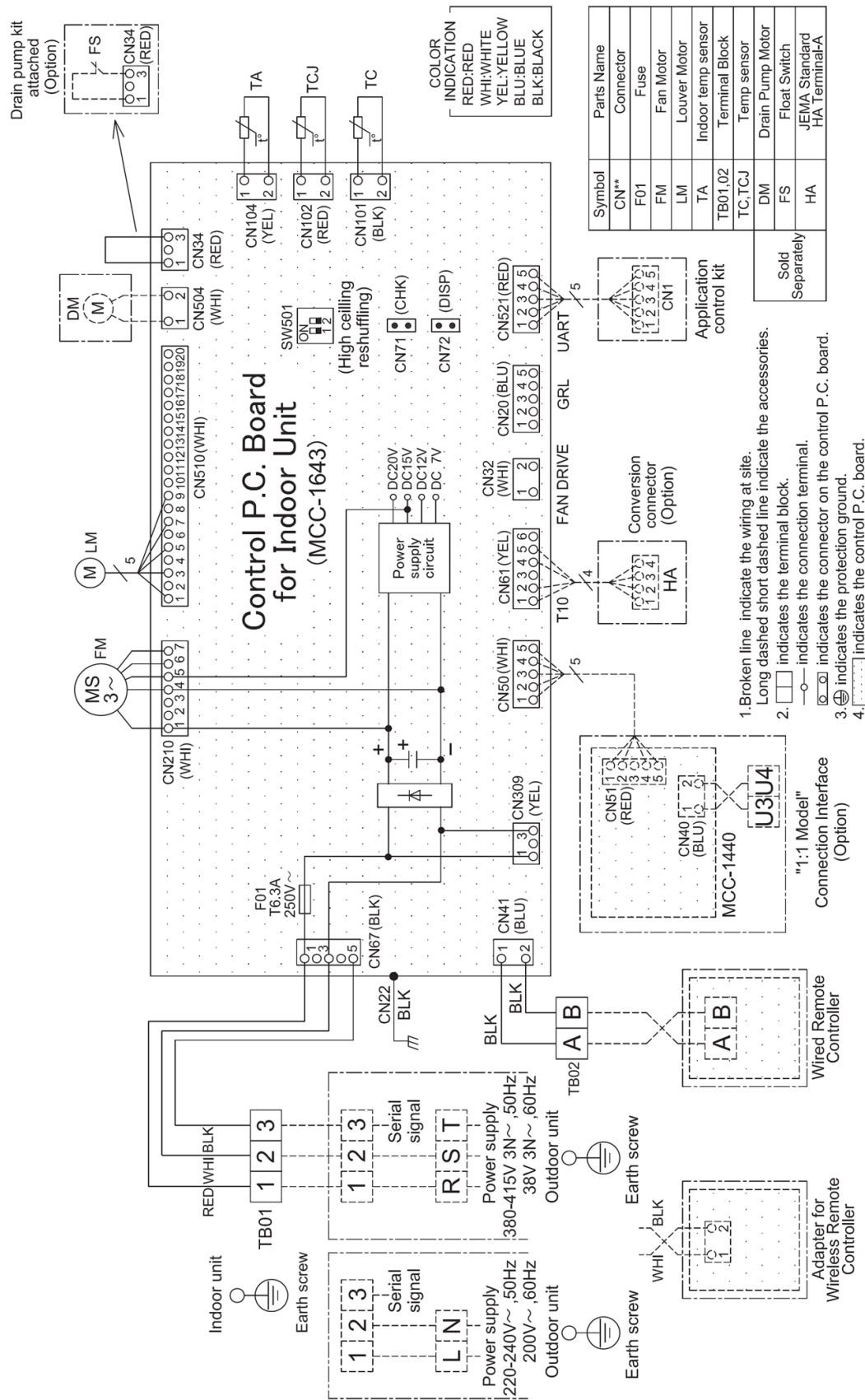
RAV-SM407CTP-E



(Unit:mm)

2-2-3. Wiring diagrams

RAV-SM407CTP-E



2-2-4. Sensible capacity table

Digital Inverter series 4 Sensible Heat Capacity : RAV-SM407CTP-E

unit size	outdoor air temp ℃	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	3.54	3.07	3.67	3.14	3.91	3.27	4.01	3.34	4.19	3.48	4.31	3.48	4.44	3.47	4.70	3.44	4.92	3.38
	12.0	3.51	3.04	3.63	3.11	3.87	3.24	3.97	3.31	4.15	3.45	4.27	3.44	4.39	3.44	4.65	3.41	4.87	3.35
	14.0	3.47	3.01	3.59	3.08	3.83	3.21	3.92	3.27	4.10	3.41	4.23	3.40	4.35	3.40	4.60	3.37	4.81	3.31
	16.0	3.43	2.97	3.55	3.04	3.79	3.17	3.88	3.24	4.06	3.37	4.18	3.36	4.30	3.36	4.55	3.33	4.76	3.27
	18.0	3.39	2.94	3.51	3.00	3.74	3.13	3.83	3.20	4.01	3.33	4.13	3.32	4.24	3.32	4.50	3.29	4.70	3.23
	20.0	3.35	2.90	3.46	2.97	3.70	3.09	3.78	3.16	3.96	3.29	4.08	3.28	4.19	3.28	4.44	3.25	4.64	3.19
	21.0	3.32	2.88	3.44	2.95	3.67	3.07	3.76	3.14	3.93	3.26	4.05	3.26	4.16	3.26	4.41	3.23	4.61	3.17
	23.0	3.28	2.84	3.39	2.90	3.62	3.03	3.71	3.09	3.88	3.22	3.99	3.21	4.10	3.21	4.35	3.18	4.55	3.13
	25.0	3.22	2.79	3.34	2.86	3.56	2.98	3.64	3.04	3.81	3.17	3.92	3.16	4.04	3.16	4.27	3.13	4.47	3.07
	27.0	3.18	2.75	3.29	2.82	3.51	2.94	3.59	3.00	3.76	3.12	3.87	3.12	3.98	3.12	4.22	3.09	4.41	3.03
	29.0	3.13	2.71	3.24	2.77	3.45	2.89	3.54	2.95	3.70	3.07	3.81	3.07	3.92	3.07	4.15	3.04	4.34	2.98
	31.0	3.07	2.66	3.18	2.72	3.39	2.84	3.47	2.90	3.63	3.02	3.74	3.01	3.85	3.01	4.08	2.99	4.26	2.93
	33.0	3.02	2.61	3.12	2.67	3.33	2.79	3.41	2.85	3.57	2.96	3.67	2.96	3.78	2.96	4.00	2.93	4.19	2.88
	35.0	2.96	2.56	3.06	2.62	3.27	2.73	3.34	2.79	3.50	2.90	3.60	2.90	3.70	2.90	3.92	2.87	4.10	2.82
	37.0	2.90	2.51	3.00	2.57	3.20	2.68	3.28	2.74	3.43	2.85	3.53	2.84	3.63	2.84	3.85	2.82	4.02	2.77
	39.0	2.84	2.46	2.94	2.52	3.14	2.62	3.21	2.68	3.36	2.79	3.46	2.78	3.56	2.78	3.77	2.76	3.94	2.71

TC:Total Capacity [kW]

SHC:Sensible Heat Capacity [kW]

2-2-5. Part load performance

Combination

Indoor unit : RAV-SM407CTP-E

Outdoor unit : RAV-SM404AT(J)P-E

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
MINIMUM	900	180	800	140
RATING	3600	830	4000	780

Q: Capacity in W

W: Power Consumption in W

Cooling

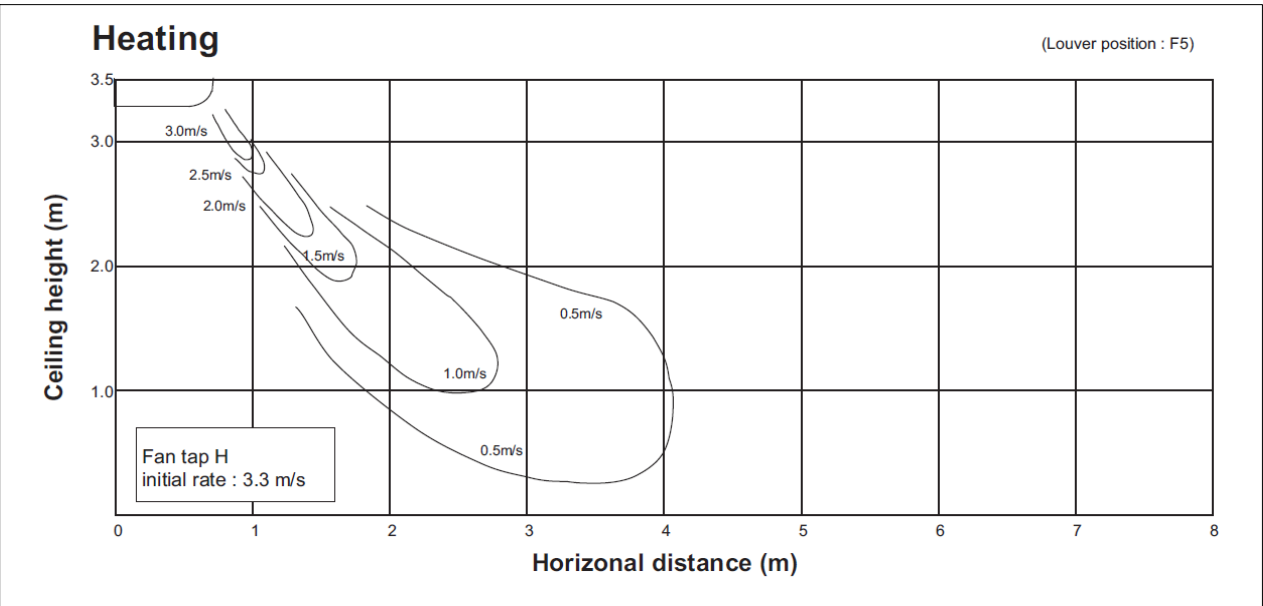
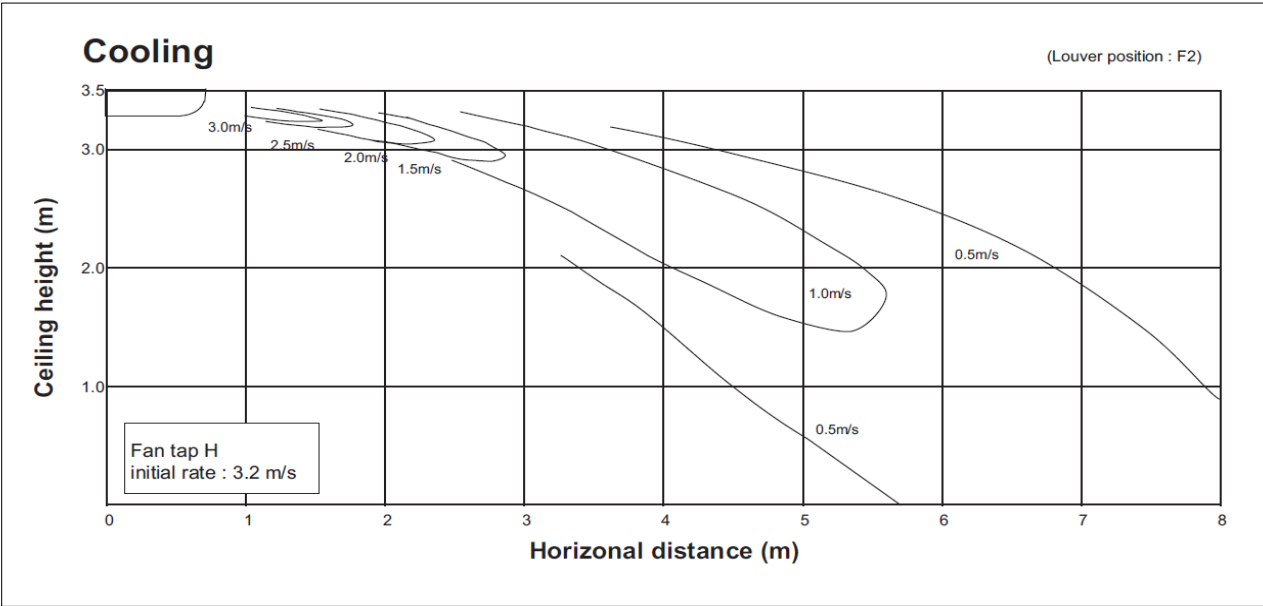
Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	3330	3000	2670	2330	2000	1670	1330	1000	830	830
	W	910	790	680	570	470	370	280	210	200	200
35	Q	3600	3240	2880	2520	2160	1800	1440	1080	900	900
	W	830	720	620	520	430	340	260	190	180	180
30	Q	3790	3410	3040	2660	2280	1900	1520	1140	950	950
	W	750	650	560	470	390	310	230	170	160	160
25	Q	3920	3530	3140	2750	2350	1960	1570	1180	980	980
	W	670	580	500	420	350	270	210	150	150	150
20	Q	4080	3670	3260	2850	2450	2040	1630	1220	1020	1020
	W	600	520	450	370	310	240	190	140	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	880	730	610	510	410	320	240	170	160	160
10	Q	4310	3880	3440	3010	2580	2150	1720	1290	860	860
	W	820	680	570	470	380	290	220	160	150	150
7	Q	4000	3600	3200	2800	2400	2000	1600	1200	800	800
	W	780	650	540	450	360	280	210	150	140	140
5	Q	3040	2730	2430	2120	1820	1520	1210	910	610	610
	W	720	600	500	410	330	260	190	140	130	130
2	Q	2890	2600	2320	2030	1740	1450	1160	870	580	580
	W	690	570	480	400	320	250	190	130	120	120
0	Q	2800	2520	2240	1960	1680	1400	1120	840	560	560
	W	670	560	460	390	310	240	180	130	120	120
-5	Q	2560	2310	2050	1800	1540	1280	1030	770	510	510
	W	620	520	430	360	290	220	170	120	110	110
-7	Q	2470	2220	1980	1730	1480	1240	990	740	490	490
	W	610	500	420	350	280	220	160	120	110	110
-10	Q	2250	2020	1800	1570	1350	1120	900	670	450	450
	W	580	480	400	330	270	210	160	110	100	100
-15	Q	1730	1560	1380	1210	1040	860	690	520	350	350
	W	510	430	360	300	240	180	140	100	90	90

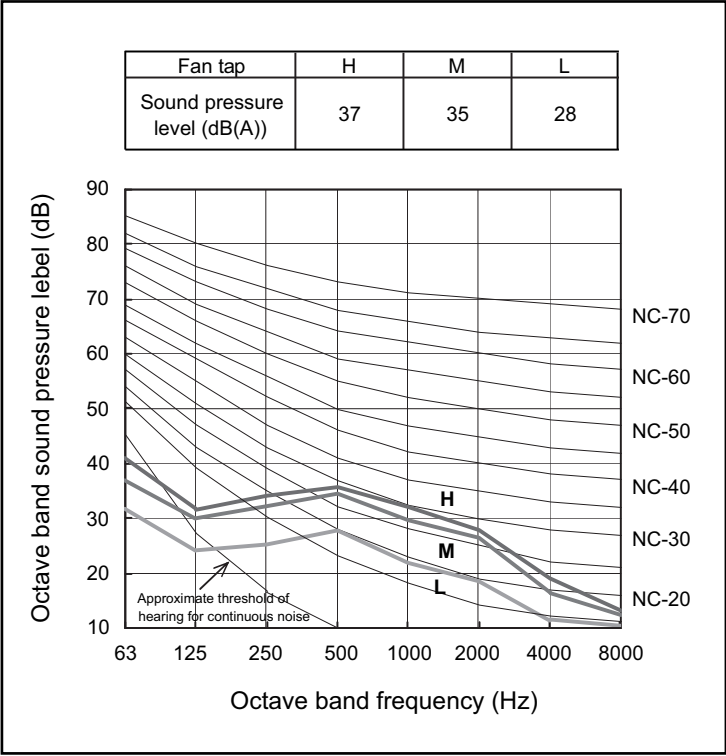
2-2-6. Air throw distance chart

RAV-SM407CTP-E



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

RAV-SM407CTP-E



2-3. Compact 4-way cassette Type

2-3-1. Specifications

2-3-2. Dimension

2-3-3. Wiring diagrams

2-3-4. Sensible capacity table

2-3-5. Part load performance

2-3-6. Air throw distance chart

2-3-7. Sound characteristics (NC curve)

2-3-1. Specifications

< Compact 4-way cassette Type >

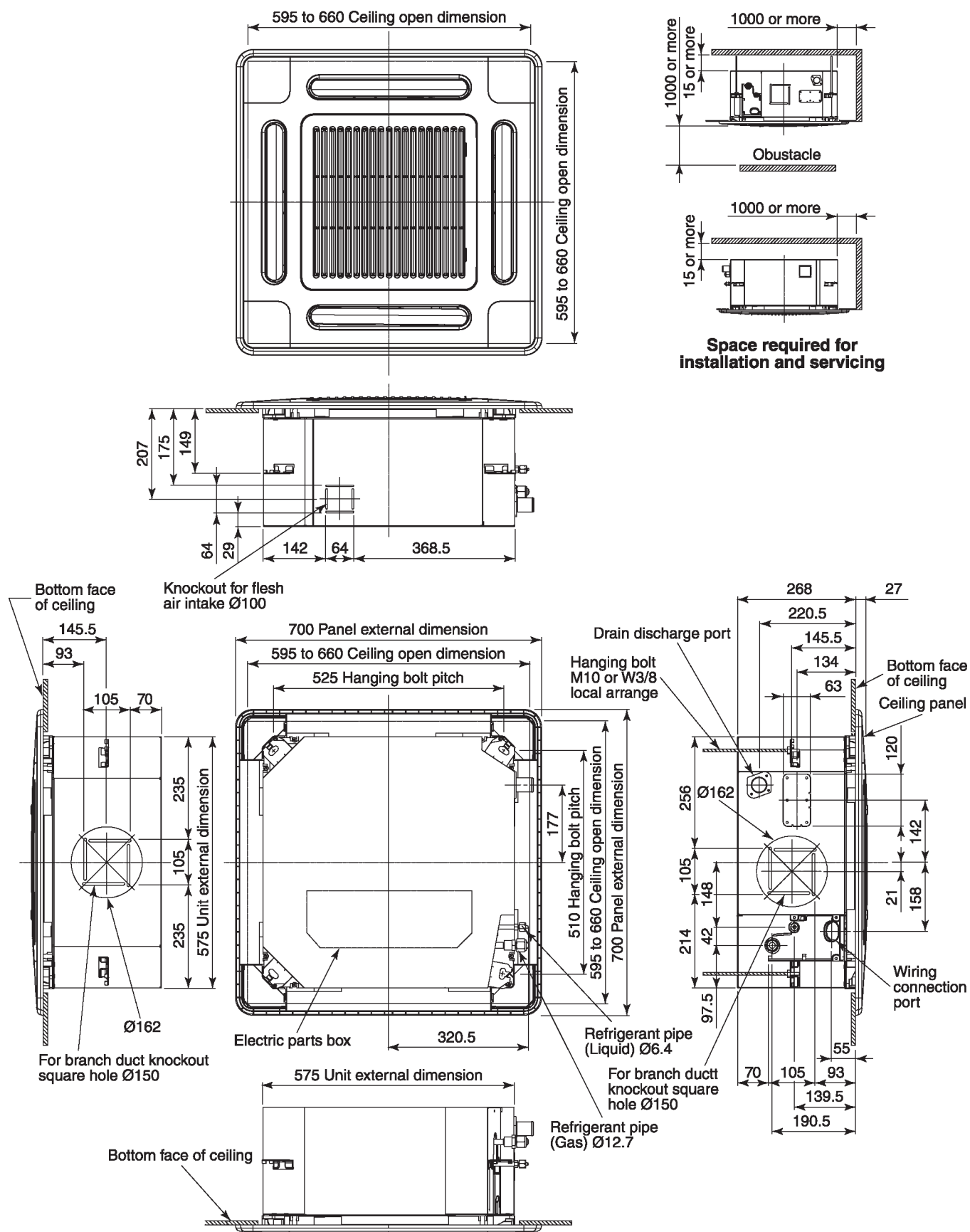
Model		Indoor unit		RAV-SM304MUT-E		RAV-SM404MUT-E			
		Outdoor unit		RAV-SM304AT(J)P-E		RAV-SM404AT(J)P-E			
Cooling capacity				(kW)		2.5 (0.9 – 3.0)		3.6 (0.9 – 4.0)	
Heating capacity				(kW)		3.4 (0.8 – 4.5)		4.0 (0.8 – 5.0)	
Power supply				1 phase 220 – 240V/50Hz & 1 phase 220 V 60Hz					
Electrical characteristics		Cooling	Power consumption (kW)		0.59		0.90		
			EER		4.24		4.00		
			Pdesign C (kW)		2.5		3.6		
			SEER		5.53		5.35		
			Cooling Energy grade		A		A		
		Heating	Power consumption (kW)		0.76		0.95		
			COP		4.47		4.21		
			Pdesign H (kW)		3.1		3.7		
			SCOP		4.27		4.27		
			Heating Energy grade		A+		A+		
Appearance		Main unit		Zinc hot dipping steel plate					
		Ceiling panel (Sold separately)		Model		RBC-UM11PG (W)-E			
				Panel color		Moon-white (Muncel 2.5GY 9.0/0.5)			
FCU dimension		Main unit	Height (mm)		268				
			Width (mm)		575				
			Depth (mm)		575				
		Ceiling panel (Sold separately)	Height (mm)		27				
			Width (mm)		700				
			Depth (mm)		700				
Total weight		Main unit (kg)		16.0					
		Ceiling panel (Sold separately) (kg)		3.0					
Cooling	FCU standard air flow		(H/M/L)	(m³/h)	640/520/440		660/552/468		
	Sound pressure level		(H/M/L)	dB(A)	40/36/31		40/36/31		
	Sound power level		(H/M/L)	dB(A)	55/51/46		55/51/46		
Heating	FCU standard air flow		(H/M/L)	(m³/h)	640/520/440		660/552/468		
	Sound pressure level		(H/M/L)	dB(A)	40/36/31		40/36/31		
	Sound power level		(H/M/L)	dB(A)	55/51/46		55/51/46		
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

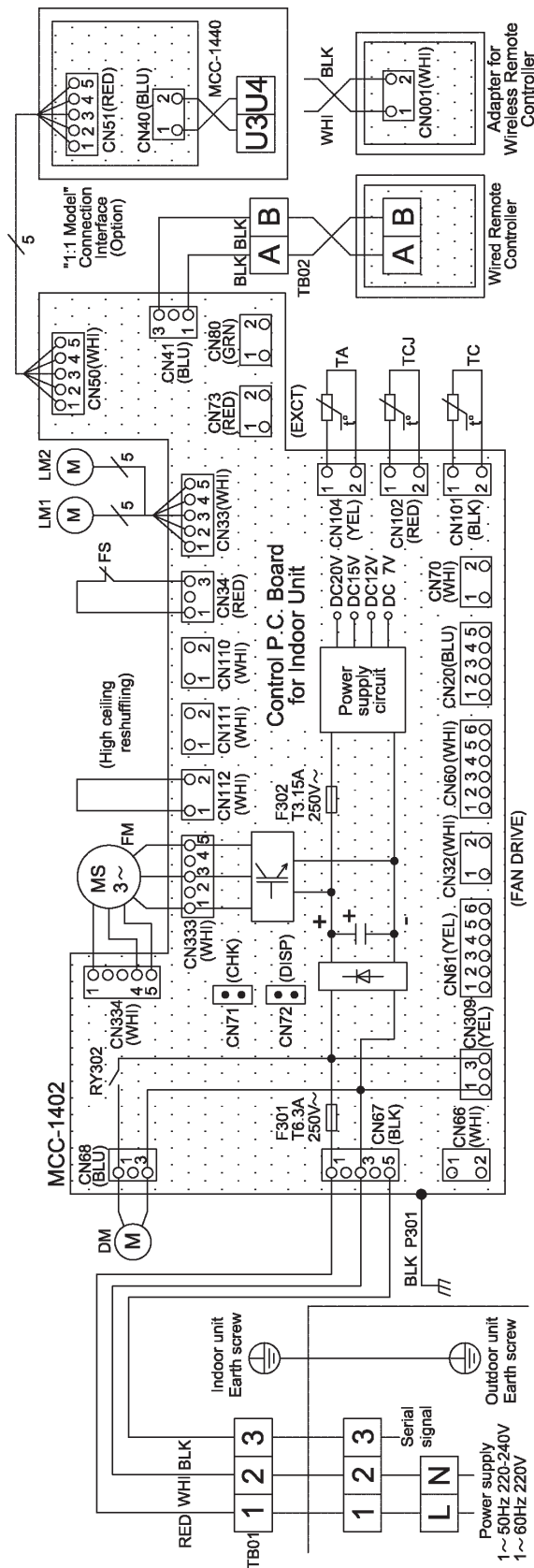
2-3-2. Dimension

RAV-SM304MUT-E ,RAV-SM404MUT-E



2-3-3. Wiring diagram

RAV-SM304MUT-E,RAV-SM404MUT-E



- 1. Broken line indicate the wiring at site.
Long dashed short dashed line indicate the accessories.
- 2. [Symbol] indicates the terminal block.
[Symbol] indicates the connection terminal.
[Symbol] indicates the connector on the control P.C. board.
- 3. [Symbol] indicates the protection ground.
- 4. [Symbol] indicates the control P.C. board.

IDENTIFICATION	
COLOR	
RED : RED	
WHI : WHITE	
YEL : YELLOW	
BLU : BLUE	
BLK : BLACK	
GRY : GRAY	
PNK : PINK	
ORN : ORANGE	
BRW : BROWN	
GRN : GREEN	

Symbol	Parts Name
CN**	Connector
DM	Drain Pump Motor
F301,302	Fuse
FM	Fan Motor
FS	Float Switch
LM1,2	Louver Motor
RY302	Drain Control Relay
TA	Indoor temp sensor
TB01,02	Terminal Block
TC,TCJ	Temp sensor

2-3-4. Sensible capacity table

Digital Inverter series 4 Sensible Heat Capacity : RAV-SM***MUT-E

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
304	10.0	2.46	2.07	2.55	2.12	2.72	2.20	2.78	2.25	2.91	2.34	3.00	2.34	3.08	2.33	3.26	2.31	3.41	2.26
	12.0	2.44	2.05	2.52	2.09	2.69	2.18	2.75	2.23	2.88	2.32	2.97	2.31	3.05	2.31	3.23	2.29	3.38	2.24
	14.0	2.41	2.03	2.49	2.07	2.66	2.16	2.72	2.20	2.85	2.29	2.93	2.29	3.02	2.29	3.20	2.26	3.34	2.21
	16.0	2.38	2.00	2.47	2.05	2.63	2.13	2.69	2.18	2.82	2.27	2.90	2.26	2.98	2.26	3.16	2.23	3.30	2.19
	18.0	2.35	1.98	2.44	2.02	2.60	2.11	2.66	2.15	2.78	2.24	2.87	2.24	2.95	2.23	3.12	2.21	3.26	2.16
	20.0	2.32	1.95	2.41	2.00	2.57	2.08	2.63	2.13	2.75	2.21	2.83	2.21	2.91	2.20	3.08	2.18	3.22	2.13
	21.0	2.31	1.94	2.39	1.98	2.55	2.07	2.61	2.11	2.73	2.20	2.81	2.19	2.89	2.19	3.06	2.16	3.20	2.12
	23.0	2.28	1.91	2.36	1.96	2.51	2.04	2.57	2.08	2.69	2.17	2.77	2.16	2.85	2.16	3.02	2.13	3.16	2.09
	25.0	2.24	1.88	2.32	1.92	2.47	2.00	2.53	2.05	2.65	2.13	2.73	2.13	2.80	2.12	2.97	2.10	3.10	2.05
	27.0	2.21	1.86	2.28	1.90	2.44	1.98	2.50	2.02	2.61	2.10	2.69	2.10	2.76	2.09	2.93	2.07	3.06	2.03
	29.0	2.17	1.83	2.25	1.87	2.40	1.95	2.46	1.99	2.57	2.07	2.64	2.06	2.72	2.06	2.88	2.04	3.01	1.99
	31.0	2.13	1.79	2.21	1.84	2.36	1.91	2.41	1.95	2.52	2.03	2.60	2.03	2.67	2.02	2.83	2.00	2.96	1.96
	33.0	2.10	1.76	2.17	1.80	2.31	1.88	2.37	1.92	2.48	2.00	2.55	1.99	2.62	1.99	2.78	1.97	2.91	1.92
	35.0	2.05	1.73	2.12	1.77	2.27	1.84	2.32	1.88	2.43	1.95	2.50	1.95	2.57	1.95	2.72	1.93	2.85	1.89
	37.0	2.01	1.69	2.08	1.73	2.22	1.80	2.28	1.84	2.38	1.92	2.45	1.91	2.52	1.91	2.67	1.89	2.79	1.85
	39.0	1.97	1.66	2.04	1.70	2.18	1.77	2.23	1.80	2.33	1.88	2.40	1.87	2.47	1.87	2.61	1.85	2.73	1.81

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
404	10.0	3.54	2.97	3.67	3.04	3.91	3.17	4.01	3.23	4.19	3.36	4.31	3.36	4.44	3.35	4.70	3.31	4.92	3.24
	12.0	3.51	2.94	3.63	3.01	3.87	3.13	3.97	3.20	4.15	3.33	4.27	3.32	4.39	3.32	4.65	3.28	4.87	3.21
	14.0	3.47	2.91	3.59	2.98	3.83	3.10	3.92	3.17	4.10	3.30	4.23	3.29	4.35	3.28	4.60	3.24	4.81	3.18
	16.0	3.43	2.88	3.55	2.94	3.79	3.06	3.88	3.13	4.06	3.26	4.18	3.25	4.30	3.24	4.55	3.21	4.76	3.14
	18.0	3.39	2.84	3.51	2.91	3.74	3.03	3.83	3.09	4.01	3.22	4.13	3.21	4.24	3.21	4.50	3.17	4.70	3.10
	20.0	3.35	2.81	3.46	2.87	3.70	2.99	3.78	3.05	3.96	3.18	4.08	3.17	4.19	3.17	4.44	3.13	4.64	3.06
	21.0	3.32	2.79	3.44	2.85	3.67	2.97	3.76	3.03	3.93	3.16	4.05	3.15	4.16	3.14	4.41	3.11	4.61	3.04
	23.0	3.28	2.75	3.39	2.81	3.62	2.93	3.71	2.99	3.88	3.11	3.99	3.10	4.10	3.10	4.35	3.06	4.55	3.00
	25.0	3.22	2.70	3.34	2.76	3.56	2.88	3.64	2.94	3.81	3.06	3.92	3.05	4.04	3.05	4.27	3.01	4.47	2.95
	27.0	3.18	2.67	3.29	2.73	3.51	2.84	3.59	2.90	3.76	3.02	3.87	3.01	3.98	3.01	4.22	2.97	4.41	2.91
	29.0	3.13	2.62	3.24	2.68	3.45	2.79	3.54	2.85	3.70	2.97	3.81	2.96	3.92	2.96	4.15	2.92	4.34	2.86
	31.0	3.07	2.58	3.18	2.64	3.39	2.75	3.47	2.80	3.63	2.92	3.74	2.91	3.85	2.91	4.08	2.87	4.26	2.81
	33.0	3.02	2.53	3.12	2.59	3.33	2.70	3.41	2.75	3.57	2.87	3.67	2.86	3.78	2.85	4.00	2.82	4.19	2.76
	35.0	2.96	2.48	3.06	2.54	3.27	2.64	3.34	2.70	3.50	2.81	3.60	2.80	3.70	2.80	3.92	2.76	4.10	2.71
	37.0	2.90	2.43	3.00	2.49	3.20	2.59	3.28	2.65	3.43	2.75	3.53	2.75	3.63	2.74	3.85	2.71	4.02	2.65
	39.0	2.84	2.38	2.94	2.43	3.14	2.54	3.21	2.59	3.36	2.70	3.46	2.69	3.56	2.68	3.77	2.65	3.94	2.60

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

2-3-5. Part load performance

Combination

Indoor unit : RAV-SM304MUT-E

Outdoor unit : RAV-SM404AT(J)P-E

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
MINIMUM	900	250	800	170
RATING	2500	590	3400	760

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	640	580	510	450	390	340	300	270	270	270
35	Q	2500	2250	2000	1750	1500	1250	1000	900	900	900
	W	590	530	470	410	360	310	270	250	250	250
30	Q	2640	2370	2110	1840	1580	1320	1050	950	950	950
	W	530	480	420	370	320	280	240	230	230	230
25	Q	2730	2450	2180	1910	1640	1360	1090	980	980	980
	W	480	430	380	330	290	250	220	200	200	200
20	Q	2830	2550	2260	1980	1700	1420	1130	1020	1020	1020
	W	430	380	340	300	260	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	860	750	660	550	450	360	280	200	190	190
10	Q	3660	3290	2930	2560	2200	1830	1460	1100	860	860
	W	800	690	610	510	420	340	260	190	180	180
7	Q	3400	3060	2720	2380	2040	1700	1360	1020	800	800
	W	760	660	580	490	400	320	250	180	170	170
5	Q	2580	2320	2060	1810	1550	1290	1030	770	610	610
	W	700	610	530	450	370	290	230	170	160	160
2	Q	2460	2210	1970	1720	1480	1230	980	740	580	580
	W	670	580	510	430	350	280	220	160	150	150
0	Q	2380	2140	1900	1670	1430	1190	950	710	560	560
	W	650	570	500	420	340	270	210	150	150	150
-5	Q	2180	1960	1740	1530	1310	1090	870	650	510	510
	W	610	530	460	390	320	260	200	140	140	140
-7	Q	2100	1890	1680	1470	1260	1050	840	630	490	490
	W	590	510	450	380	310	250	190	140	130	130
-10	Q	1910	1720	1530	1340	1150	960	760	570	450	450
	W	560	490	430	360	300	240	190	130	130	130
-15	Q	1470	1320	1180	1030	880	740	590	440	350	350
	W	500	430	380	320	260	210	160	120	110	110

Combination

Indoor unit : RAV-SM404MUT-E

Outdoor unit : RAV-SM404AT(J)P-E

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	Capacity Q (W)	Power consumption W (W)
MINIMUM	900	180	800	140
RATING	3600	900	4000	950

Q: Capacity in W

W: Power Consumption in W

Cooling

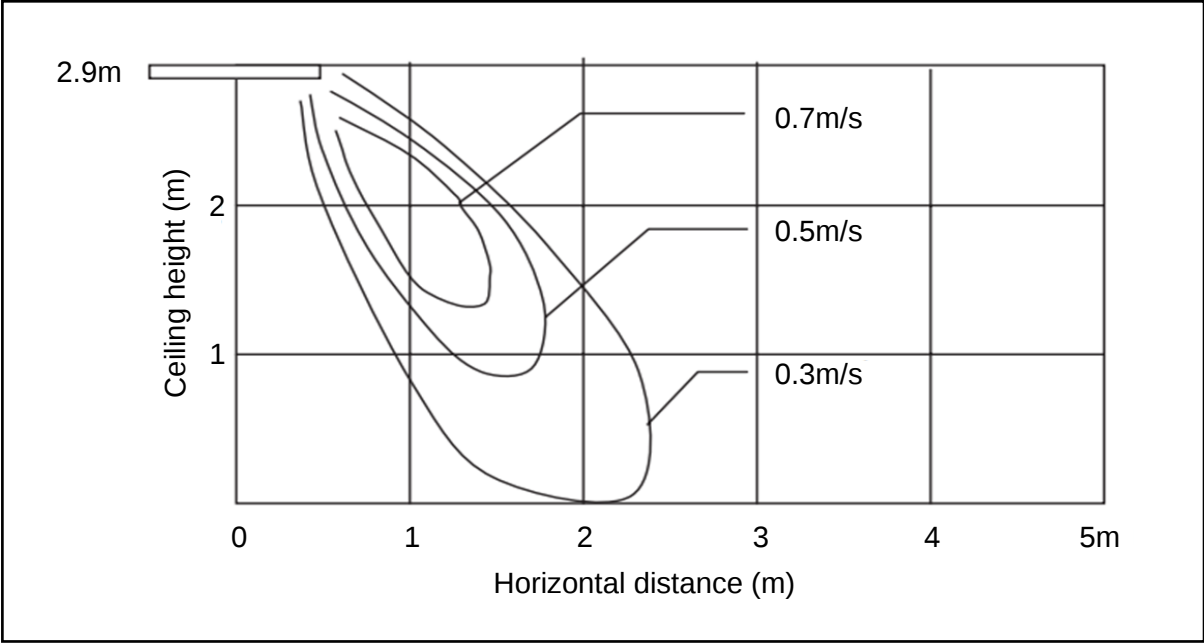
Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	3330	3000	2670	2330	2000	1670	1330	1000	830	830
	W	980	850	730	620	510	400	310	220	200	200
35	Q	3600	3240	2880	2520	2160	1800	1440	1080	900	900
	W	900	780	670	570	470	370	280	200	180	180
30	Q	3790	3410	3040	2660	2280	1900	1520	1140	950	950
	W	810	700	600	510	420	330	250	180	160	160
25	Q	3920	3530	3140	2750	2350	1960	1570	1180	980	980
	W	730	630	540	460	380	300	230	160	150	150
20	Q	4080	3670	3260	2850	2450	2040	1630	1220	1020	1020
	W	650	560	480	410	340	270	200	140	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	1070	890	750	620	500	380	290	200	160	160
10	Q	4310	3880	3440	3010	2580	2150	1720	1290	860	860
	W	990	830	690	580	460	360	270	190	150	150
7	Q	4000	3600	3200	2800	2400	2000	1600	1200	800	800
	W	950	790	660	550	440	340	260	180	140	140
5	Q	3040	2730	2430	2120	1820	1520	1210	910	610	610
	W	870	720	610	500	400	310	240	170	130	130
2	Q	2890	2600	2320	2030	1740	1450	1160	870	580	580
	W	840	700	580	490	390	300	230	160	120	120
0	Q	2800	2520	2240	1960	1680	1400	1120	840	560	560
	W	820	680	570	470	380	290	220	150	120	120
-5	Q	2560	2310	2050	1800	1540	1280	1030	770	510	510
	W	760	630	530	440	350	270	210	140	110	110
-7	Q	2470	2220	1980	1730	1480	1240	990	740	490	490
	W	740	610	510	430	340	260	200	140	110	110
-10	Q	2250	2020	1800	1570	1350	1120	900	670	450	450
	W	700	590	490	410	330	250	190	130	100	100
-15	Q	1730	1560	1380	1210	1040	860	690	520	350	350
	W	630	520	430	360	290	220	170	120	90	90

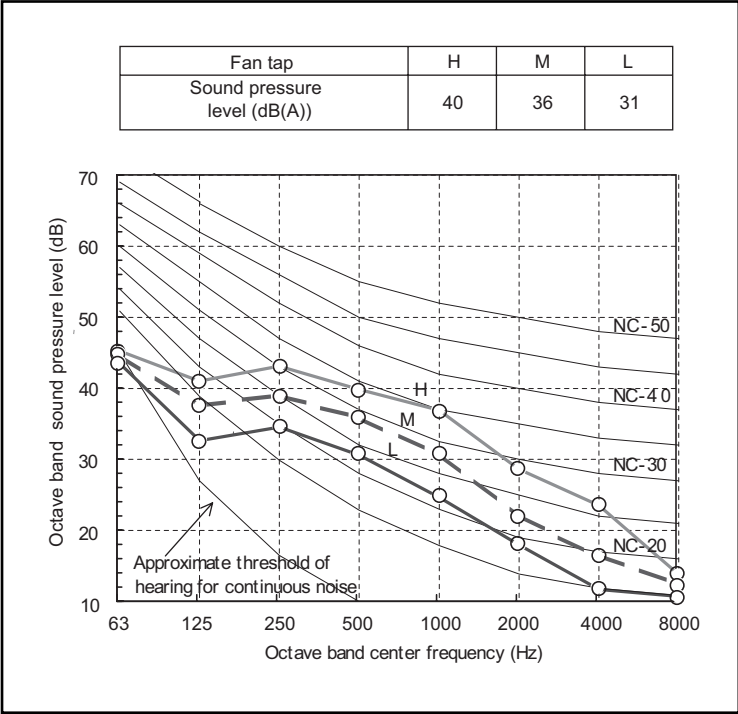
2-3-6. Air throw distance chart

RAV-SM304MUT-E,RAV-SM404MUT-E



2-3-7. Sound characteristics (NC curve)

RAV-SM304MUT-E , RAV-SM404MUT-E



2-4. Slim duct Type

2-4-1. Specifications

2-4-2. Dimension

2-4-3. Wiring diagrams

2-4-4. Sensible capacity table

2-4-5. Part load performance

2-4-6. Air throw distance chart

2-4-7. Sound characteristics (NC curve)

2-4-1. Specifications

< Slim duct Type >

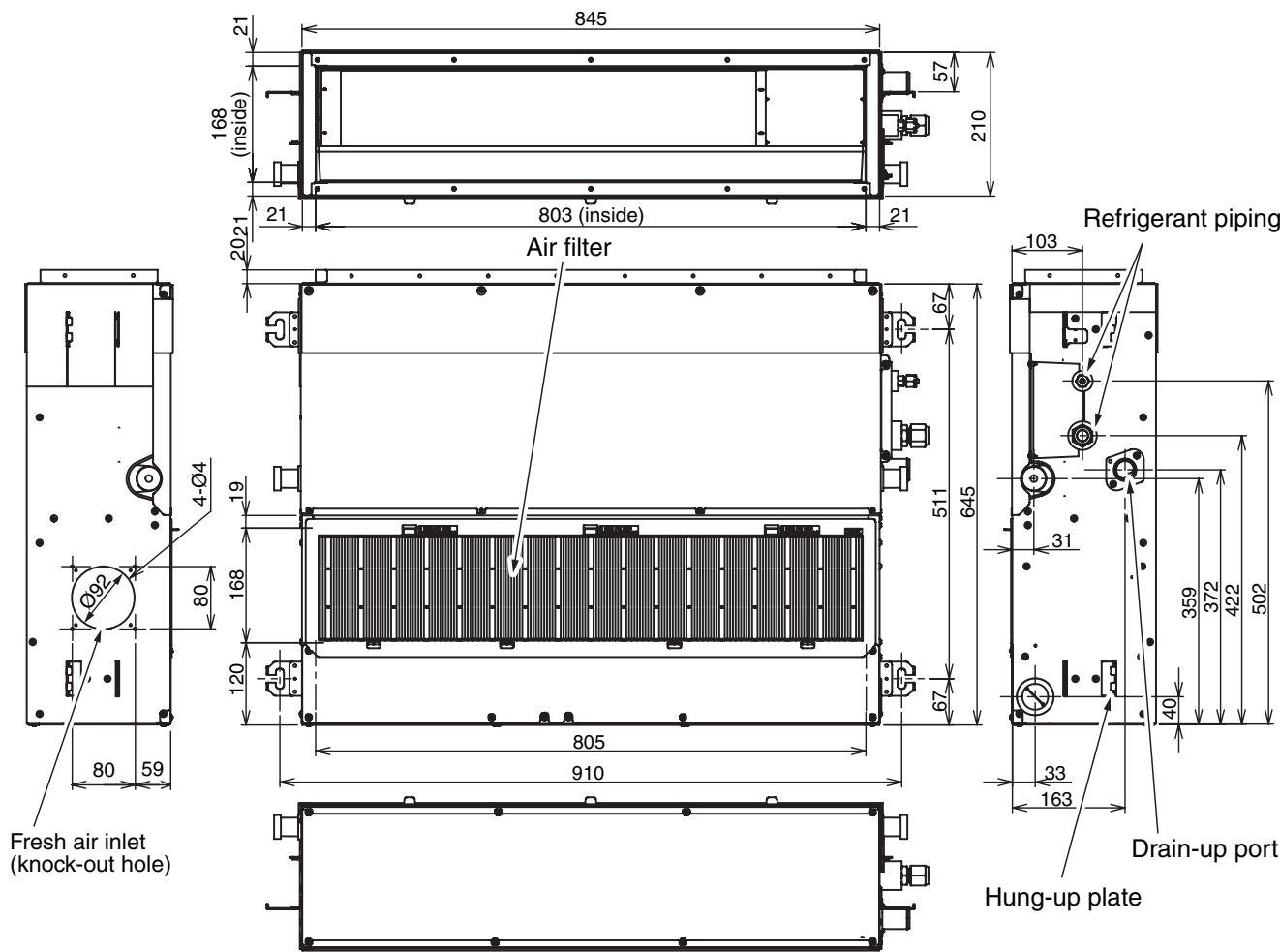
Model		Indoor unit	RAV-SM304SDT-E	RAV-SM404SDT-E
		Outdoor unit	RAV-SM304AT(J)P-E	RAV-SM404AT(J)P-E
Cooling capacity		(kW)	2.5 (0.9 – 3.0)	3.6 (0.9 – 4.0)
Heating capacity		(kW)	3.4 (0.8 – 4.5)	4.0 (0.8 – 5.0)
Power supply			1 phase 220 – 240V/50Hz & 1 phase 220 V 60Hz	
Electrical characteristics	Cooling	Power consumption (kW)	0.56	0.93
		EER	4.46	3.87
		Pdesign C (kW)	2.50	3.60
		SEER	6.10	5.55
	Cooling Energy grade		A++	A
	Heating	Power consumption (kW)	0.86	0.97
		COP	3.95	4.12
		Pdesign H (kW)	2.90	3.70
		SCOP	4.48	3.88
	Heating Energy grade		A+	A
FCU dimension	Main unit	Height (mm)	210	210
		Width (mm)	845	845
		Depth (mm)	645	645
Total weight	Main unit	(kg)	22.0	22.0
External static pressure - Standard (Upper - Lower) (Pa)			10(10-50)	10(10-50)
Cooling	FCU standard air flow	(H/M/L) (m³/h)	660/560/480	690/600/522
	Sound pressure level	(H/M/L) dB(A)	39/36/33	39/36/33
	Sound power level	(H/M/L) dB(A)	54/51/48	54/51/48
Heating	FCU standard air flow	(H/M/L) (m³/h)	660/560/480	690/600/522
	Sound pressure level	(H/M/L) dB(A)	39/36/33	39/36/33
	Sound power level	(H/M/L) dB(A)	54/51/48	54/51/48
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

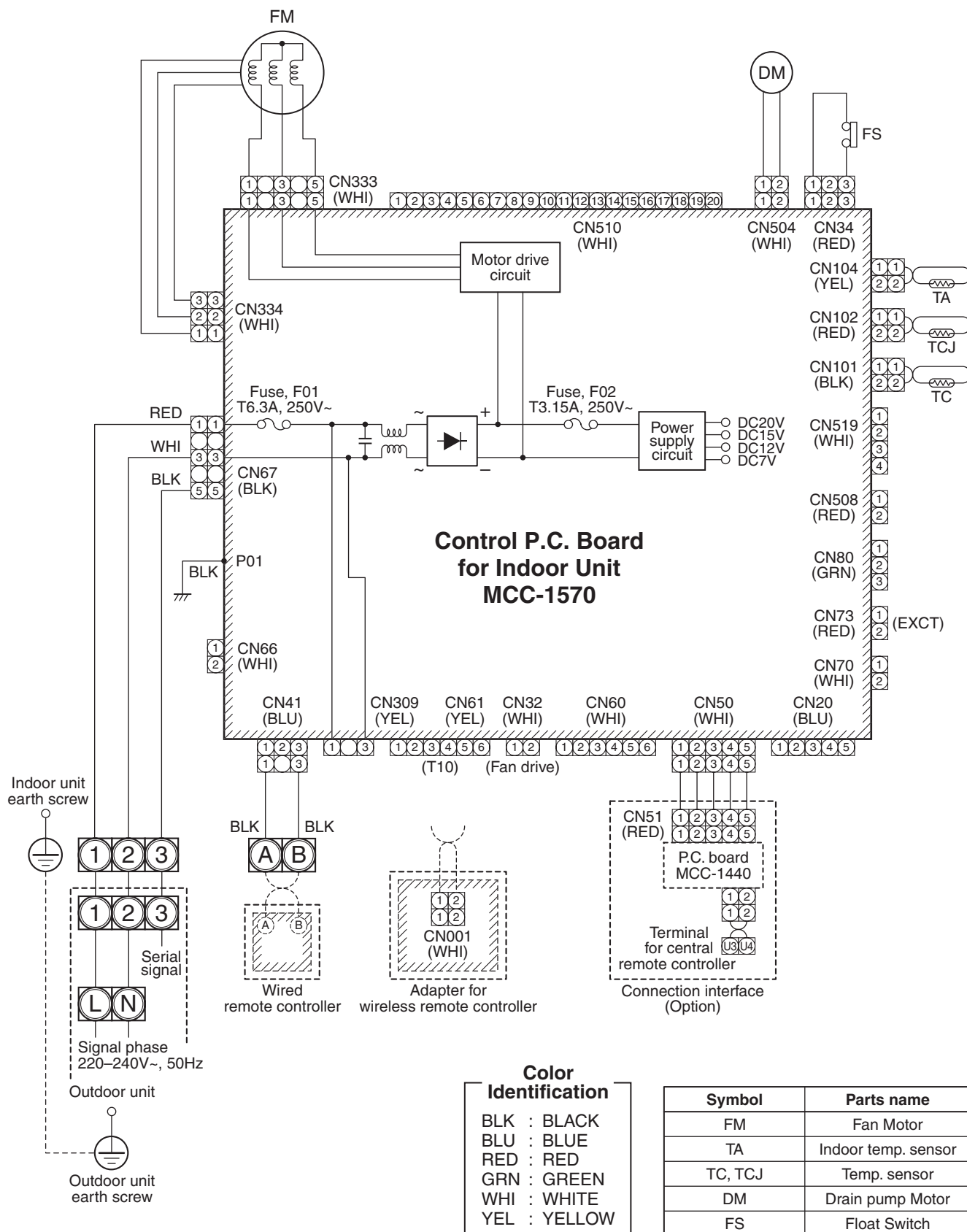
2-4-2. Dimension

RAV-SM304SDT-E, RAV-SM404SDT-E



2-4-3. Wiring diagrams

RAV-SM304SDT-E, RAV-SM404SDT-E



2-4-4. Sensible capacity table

Digital Inverter 4 Series Sensible Heat Capacity : RAV-SM***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
304	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
404	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]

2-4-5. Part load performance

Combination

Indoor unit : RAV-SM304SDT-E

Outdoor unit : RAV-SM304AT(J)P-E

	Cooling		Heating	
	Capacity Q (W)	Power consumption W (W)	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-SM404SDT-E

Outdoor unit : RAV-SM404AT(J)P-E

	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

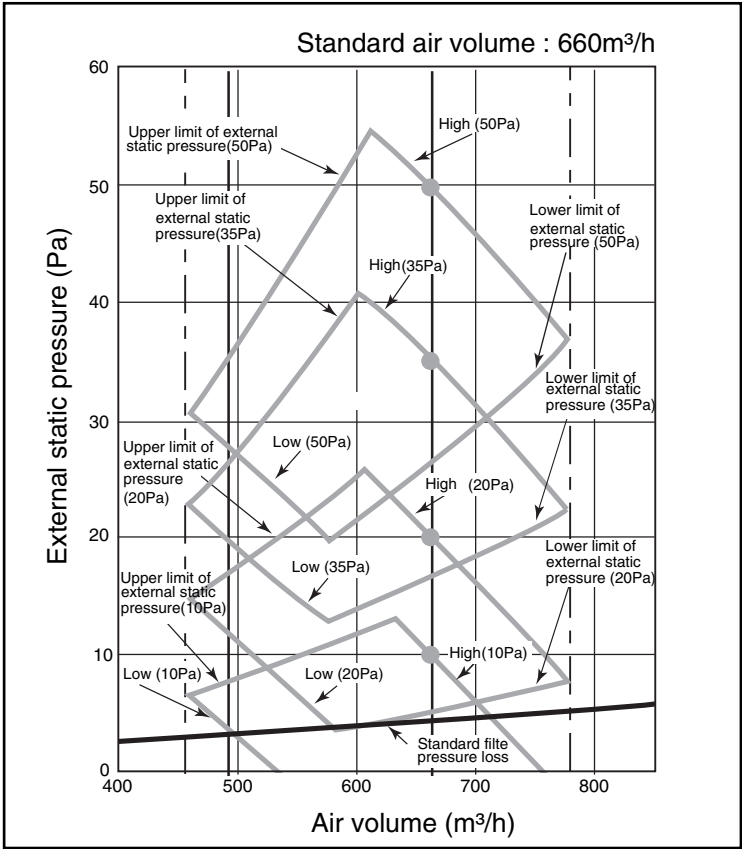
Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
40	Q	3330	3000	2670	2330	2000	1670	1330	1000	830	830
	W	1020	890	750	640	520	420	320	230	200	200
35	Q	3600	3240	2880	2520	2160	1800	1440	1080	900	900
	W	930	810	690	590	480	380	290	210	180	180
30	Q	3790	3410	3040	2660	2280	1900	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

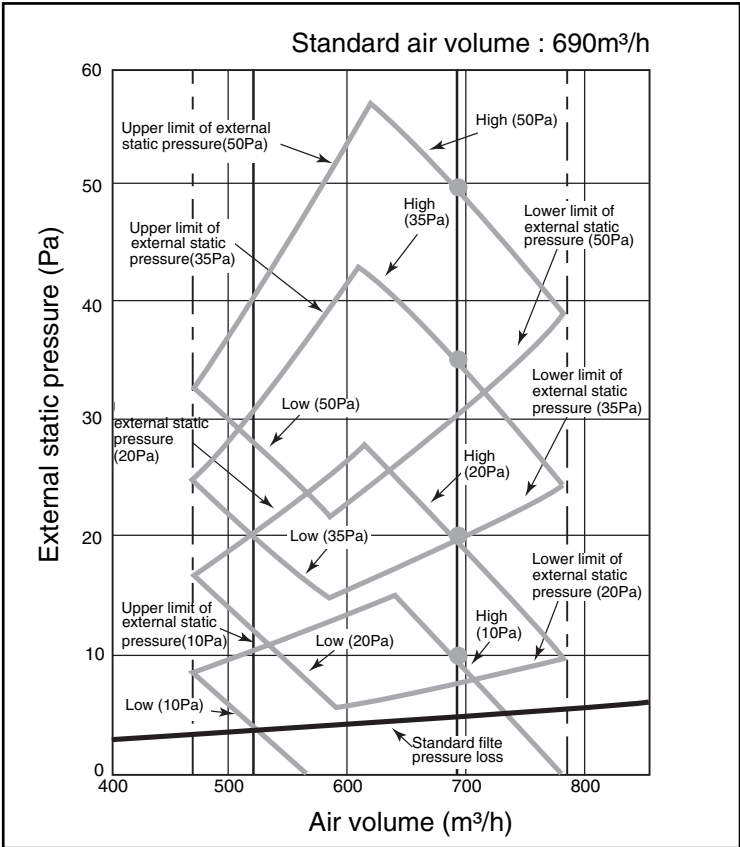
Outdoor temperature (°C)		Load (%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	4820	4340	3860	3380	2890	2410	1930	1450	960	960
	W	1100	900	770	630	510	400	290	200	160	160
10	Q	4310	3880	3440	3010	2580	2150	1720	1290	860	860
	W	1020	840	710	590	470	370	270	190	150	150
7	Q	4000	3600	3200	2800	2400	2000	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

2-4-6. Fan static characteristics

RAV-SM304SDT-E



RAV-SM404SDT-E

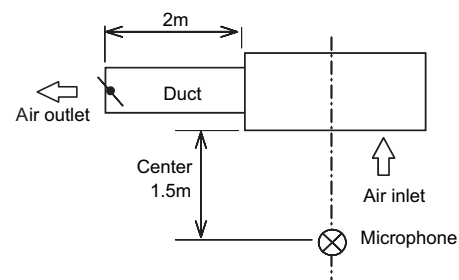


2-4-7. Sound characteristics (NC curve)

RAV-SM304SDT-E, RAV-SM404SDT-E

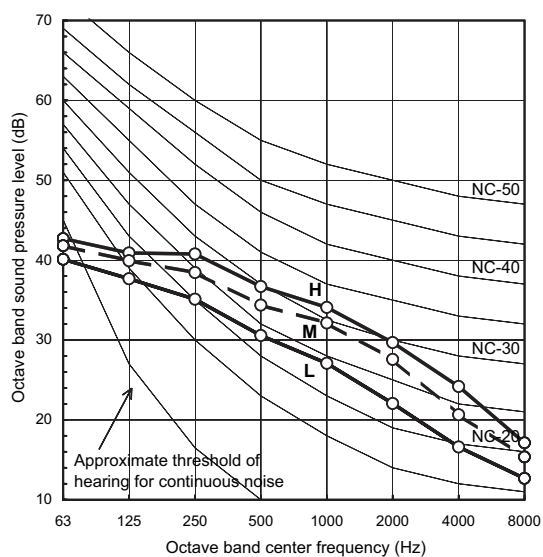
[Measuring location]

Under air intake



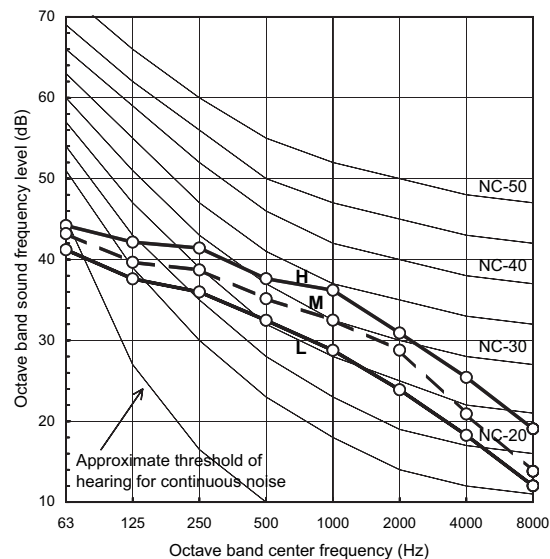
[External static pressure 10Pa]

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



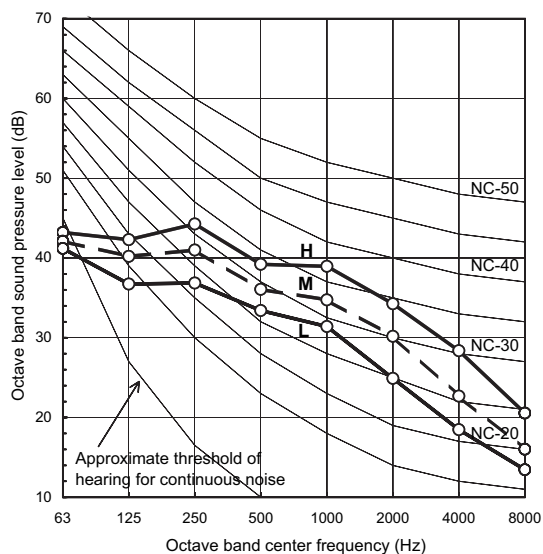
[External static pressure 20Pa]

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



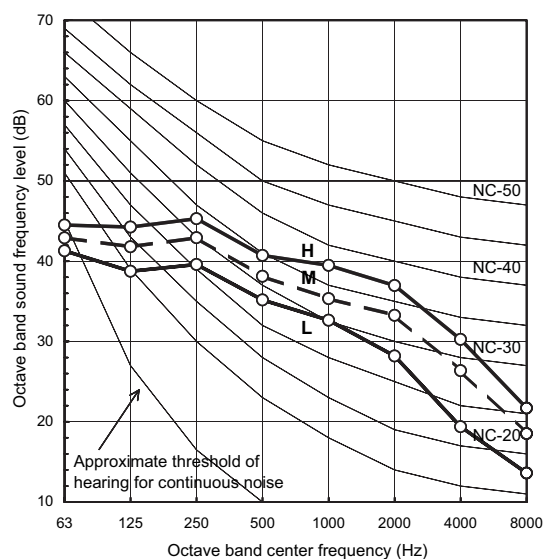
[External static pressure 35Pa]

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



[External static pressure 50Pa]

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



3. Outdoor Unit

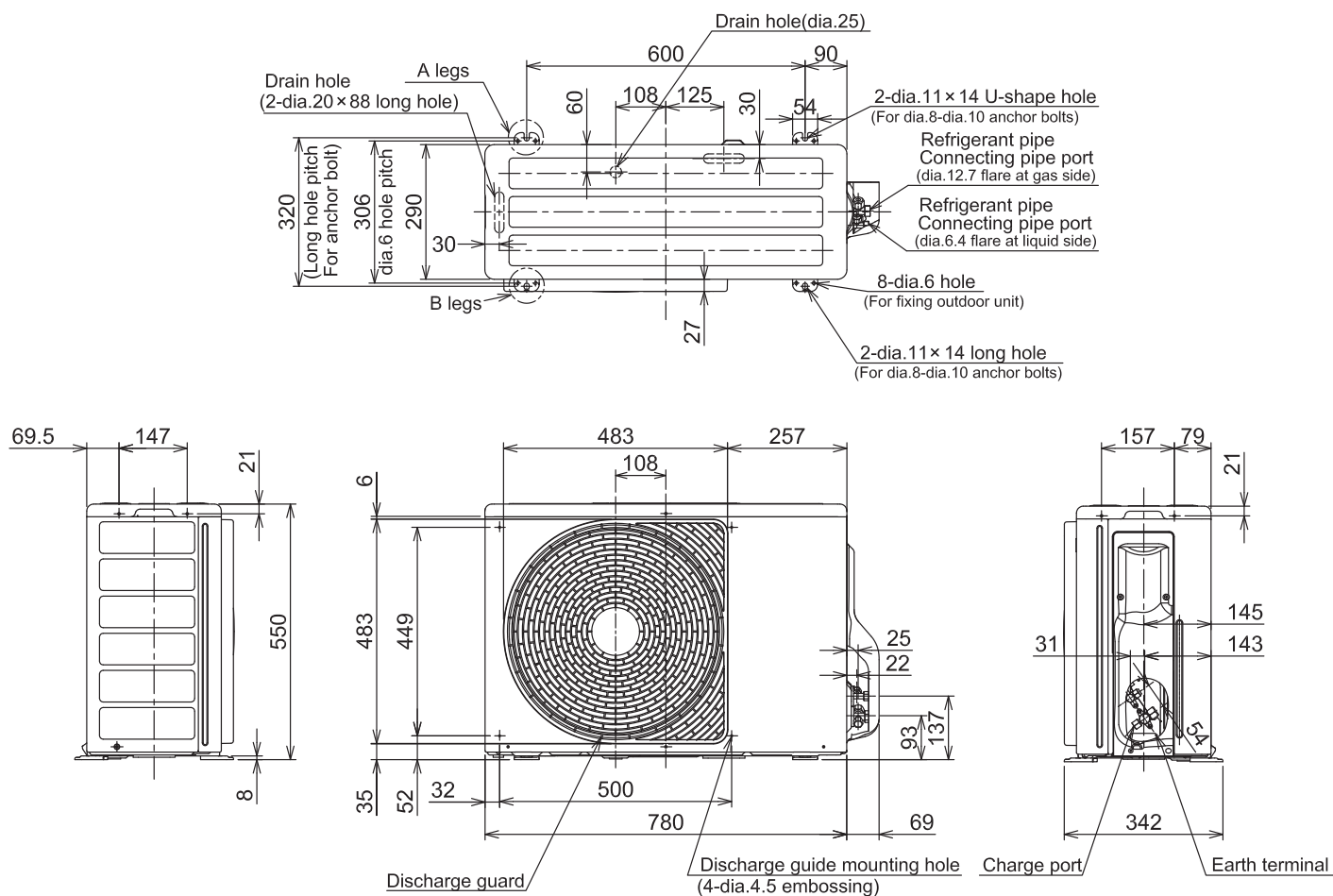
- 3-1. Specifications
- 3-2. Dimension
- 3-3. Wiring diagrams
- 3-4. Refrigerant cycle diagram
- 3-5. Sound characteristics (NC curve)
- 3-6. Connecting pipe length and lift difference between indoor units vs. capacity correction value

3-1. Outdoor Unit

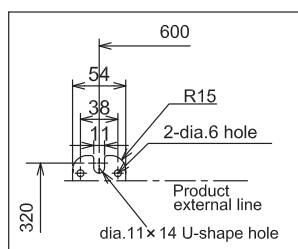
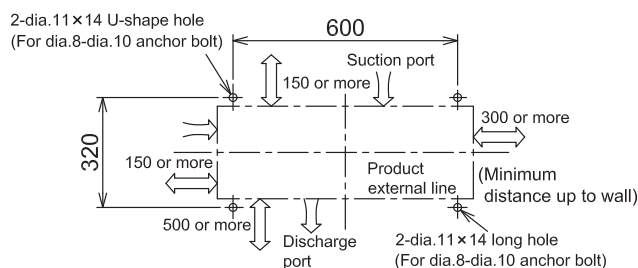
<Digital Inverter series 4>

Model name	Outdoor unit		RAV-SM	304AT(J)P-E	404AT(J)P-E
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	

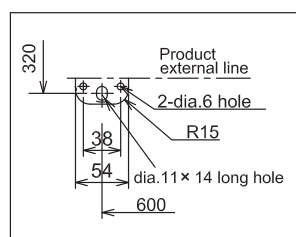
3-2. Dimension

RAV-SM304AT(J)P-E**RAV-SM404AT(J)P-E**

Space required for service



Details of A legs



Details of B legs

(Unit:mm)

3.3 Wiring diagrams

RAV-SM304AT(J)P-E

⚠ CAUTION : HIGH VOLTAGE

The high voltage circuit is incorporated.

Be careful to do the check service,

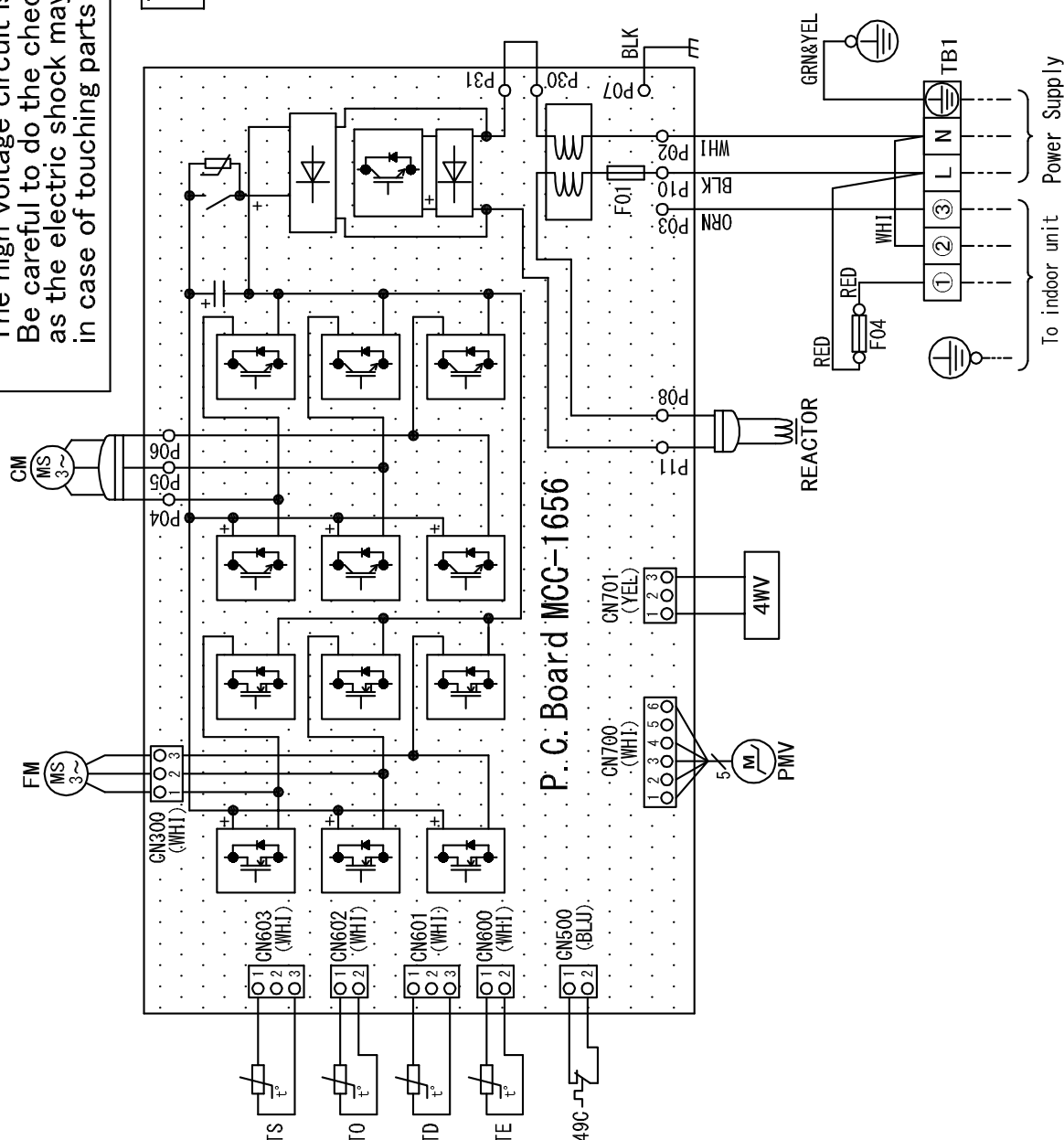
As the electric shock may be caused in case of touching parts on the P.C.board by hand

The 4-way valve coil is turned on while the cooling operation

— Color Identification —

BLK : BLACK	WHI : WHITE
BLU : BLUE	ORN : ORANGE
RED : RED	YEL : YELLOW
GRN&YEL : GREEN&YELLOW	

Symbol	Parts name
49C	Compressor case thermostat
4WV	4-way valve coil
CM	Compressor
FM	Fan motor
F01	Fuse T25A 250V~
F04	Fuse T6.3A 250V~
PMV	Pulse motor valve
TD	Discharge pipe temp. sensor
TE	Condenser pipe temp. sensor
T0	Outdoor temp. sensor
TS	Suction pipe temp. sensor
TR1	Terminal block

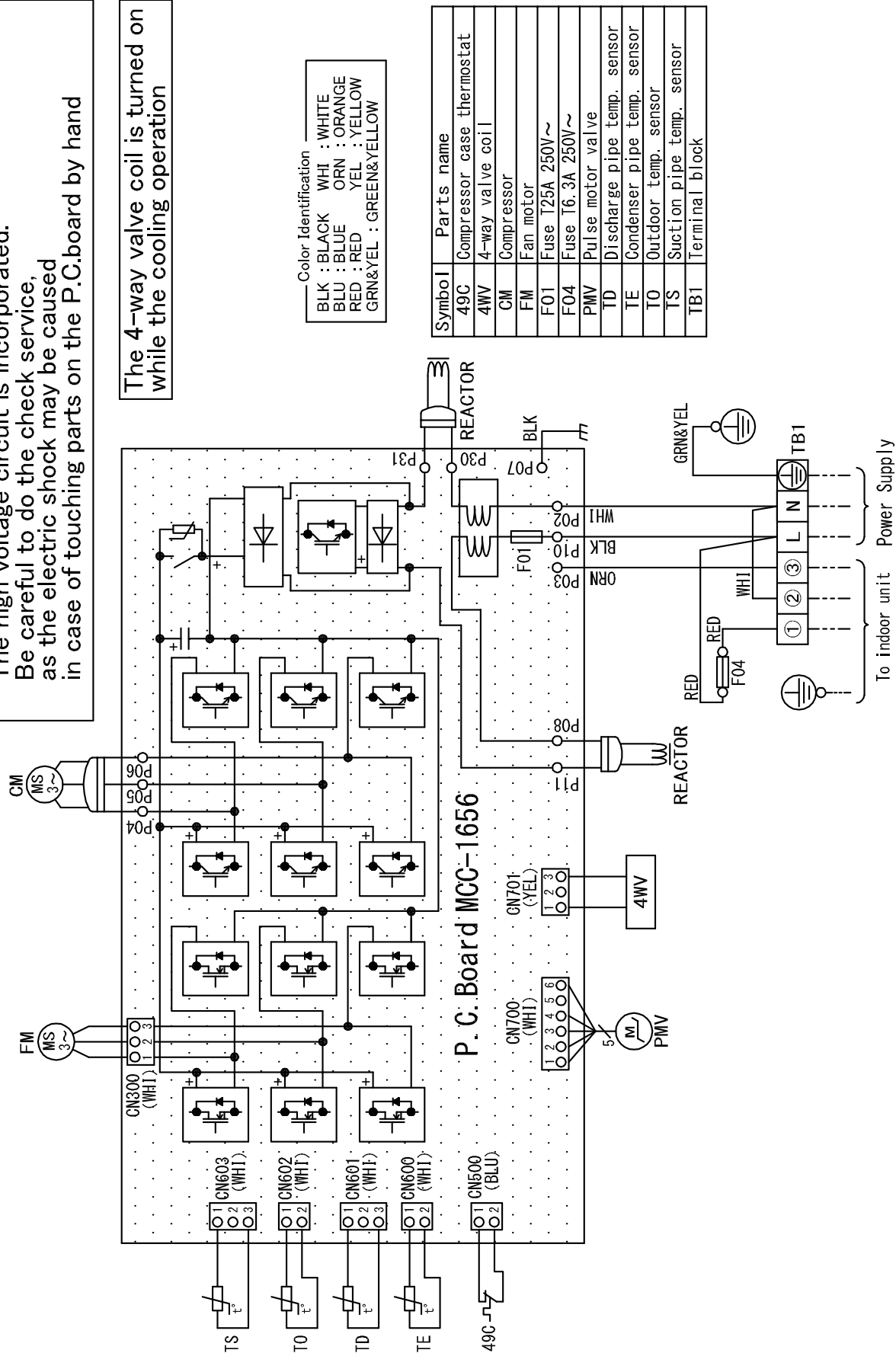


RAV-SM404AT(J)P-E

⚠ CAUTION : HIGH VOLTAGE

The high voltage circuit is incorporated.
Be careful to do the check service,
as the electric shock may be caused
in case of touching parts on the P.C.board by hand

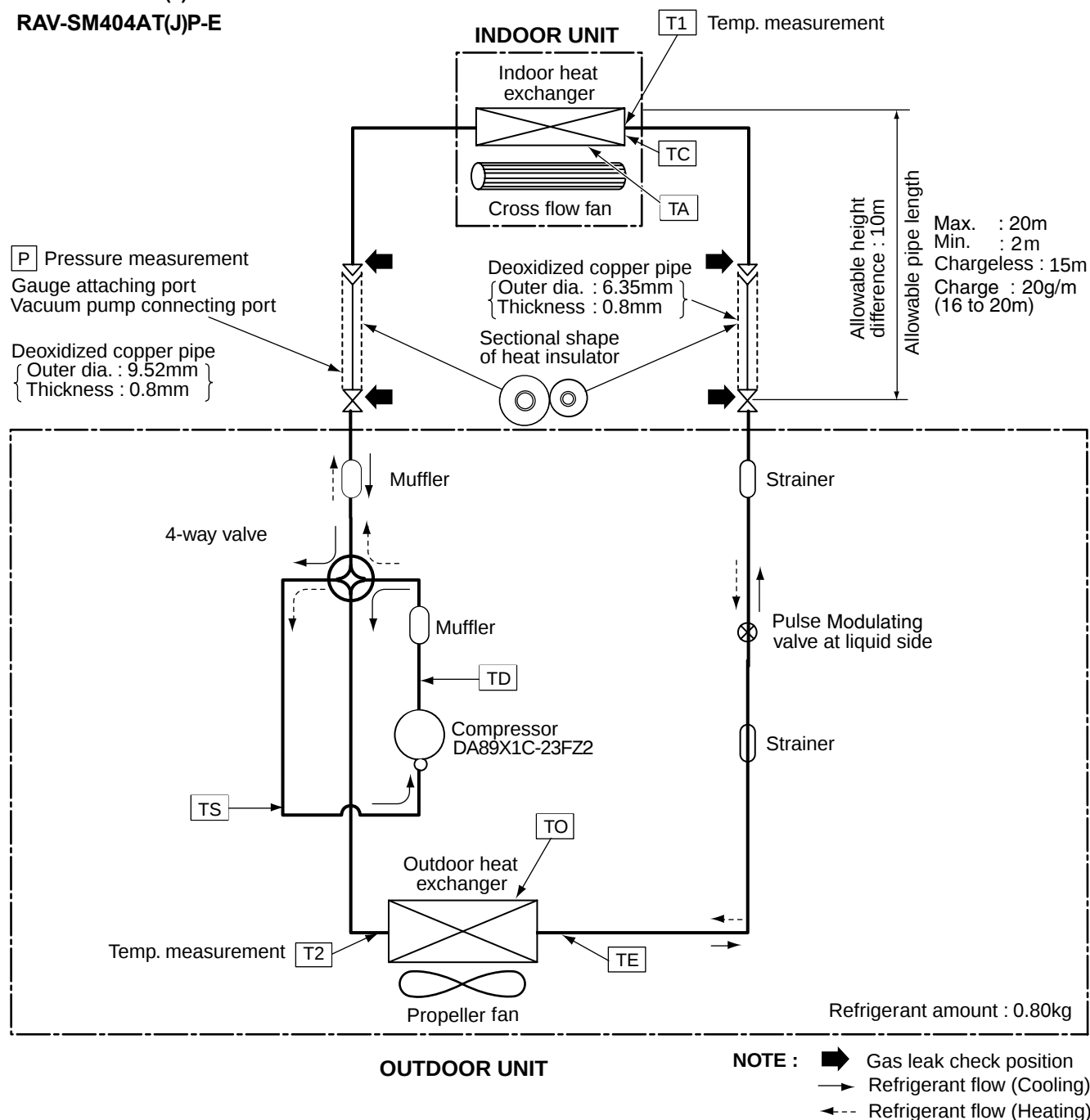
The 4-way valve coil is turned on while the cooling operation



3.4 Refrigerant cycle diagrams

RAV-SM304AT(J)P-E

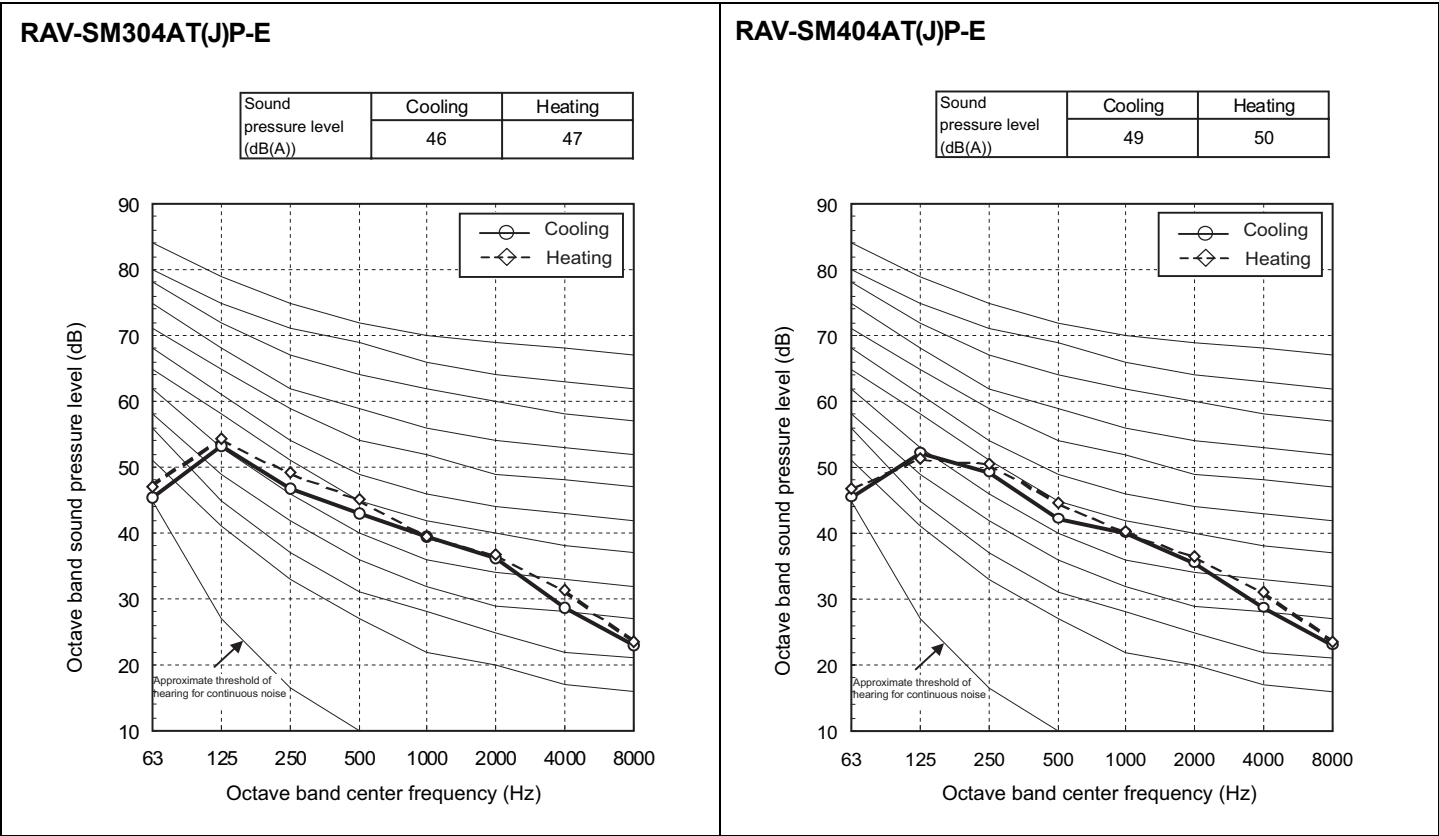
RAV-SM404AT(J)P-E



NOTE :

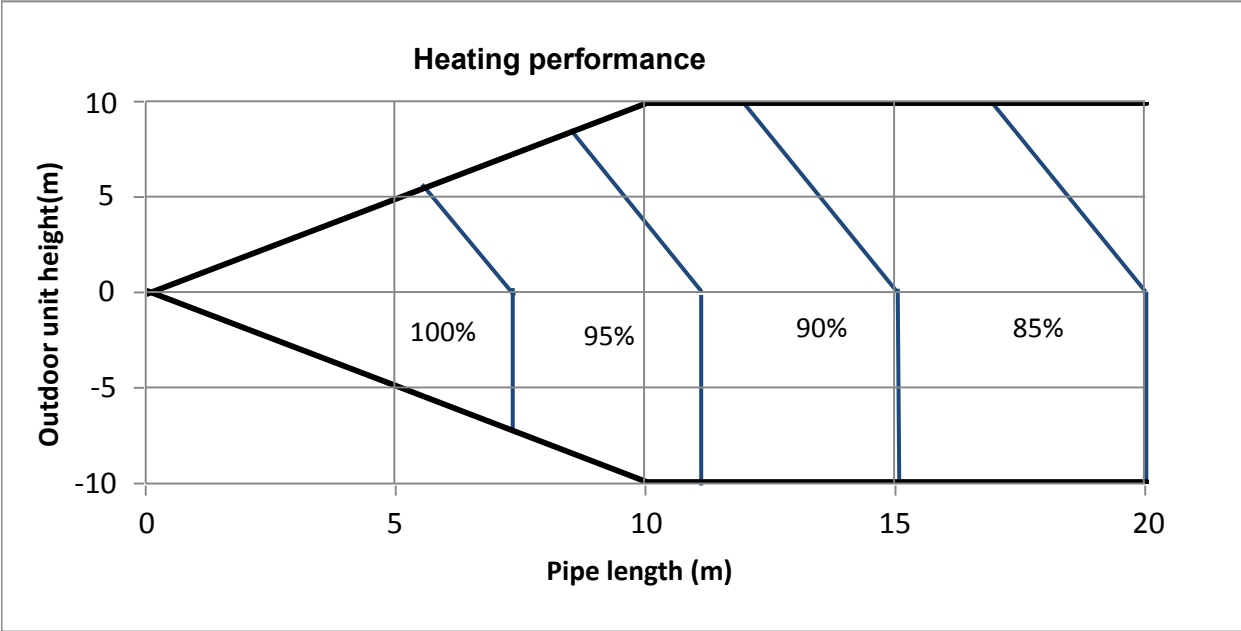
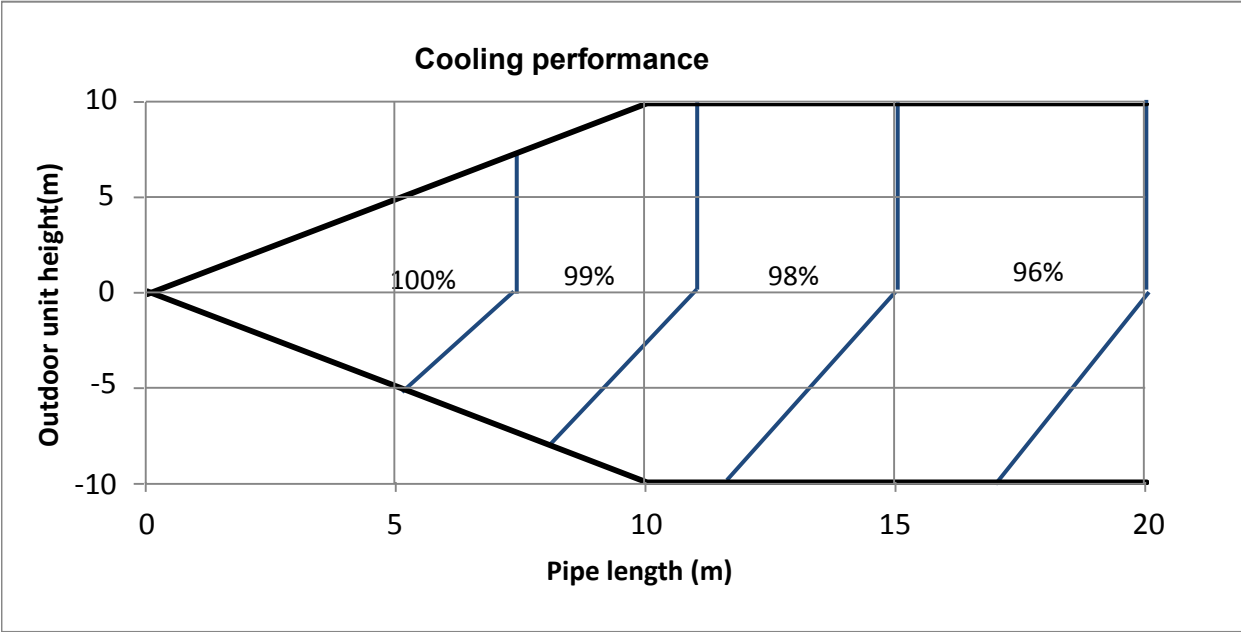
- The maximum pipe length of this air conditioner is 20 m. When the pipe length exceeds 15m, the additional charging of refrigerant, 20g per 1m for the part of pipe exceeded 15m is required. (Max. 100g)

3.5 Sound characteristics (NC curve)

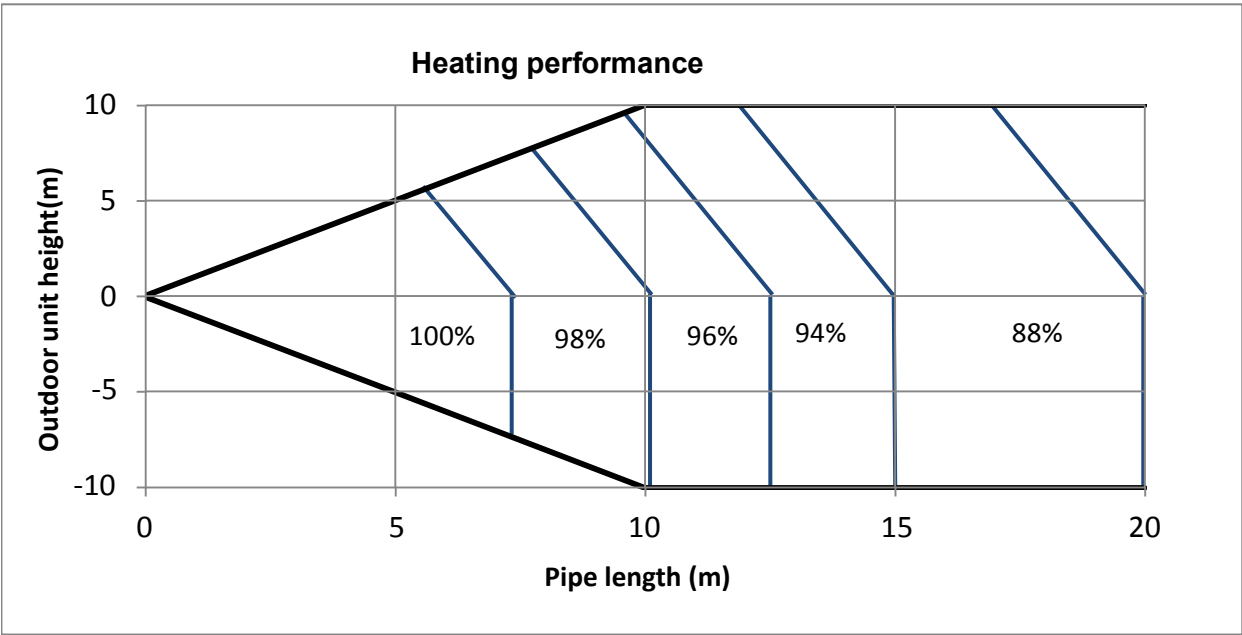
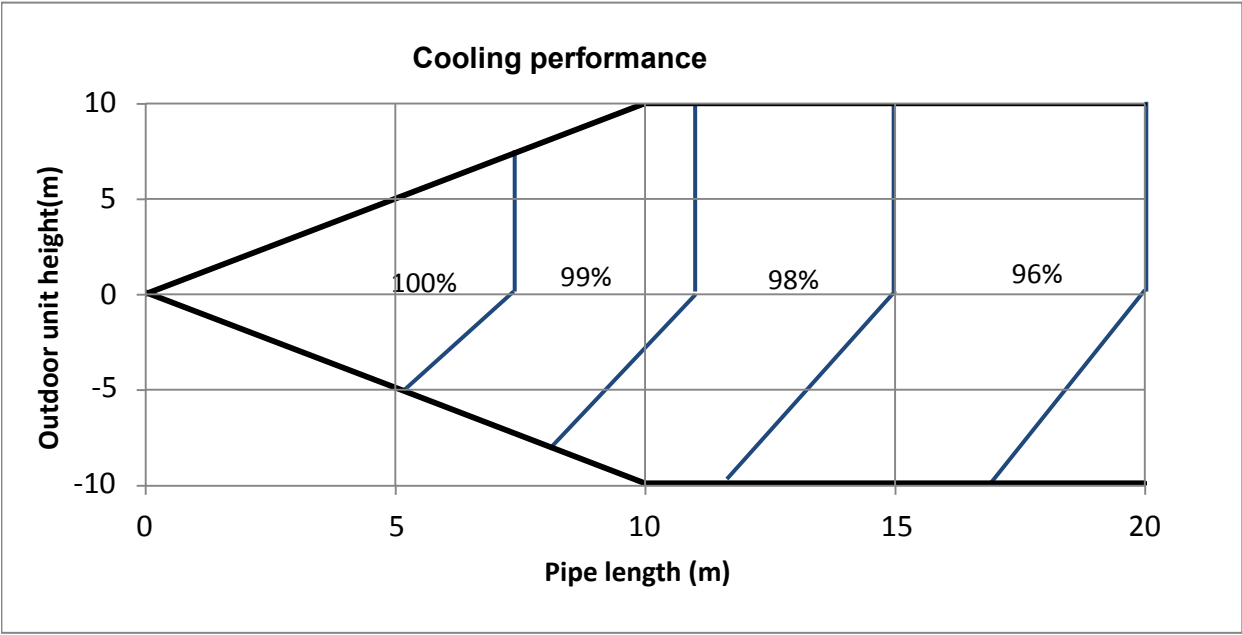


3.6 Connecting pipe length and lift difference between indoor units vs. capacity correction value

RAV-SM304AT(J)P-E



RAV-SM404AT(J)P-E



Appendix

Specifications for ErP Lot-10 , Turkey Lot-10 <Single unit>

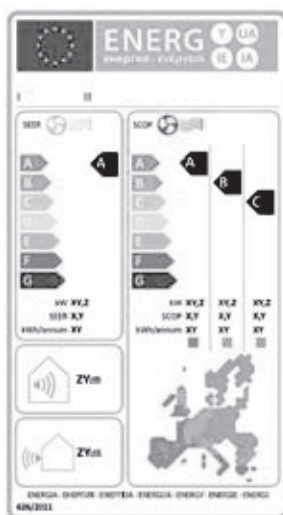
Indoor unit type	Indoor unit name	Outdoor unit name	HP	Rated Capacity (kW) Cooling / Heating	SEER	Energy Label	Pdesign C	SCOP (average)	Energy Label	Pdesign h (average)
ErP Lot-10	RAV-SM307KRTP-E	RAV-SM304AT(J)P-E	1	2.5/3.4	5.90	A+	2.5	4.00	A+	3.0
	RAV-SM304MUT-E	RAV-SM304AT(J)P-E	1	2.5/3.4	5.53	A	2.5	4.27	A+	3.1
	RAV-SM304SDT-E	RAV-SM304AT(J)P-E	1	2.5/3.4	6.10	A++	2.5	4.48	A+	2.9
	RAV-SM407KRTP-E	RAV-SM404AT(J)P-E	1.5	3.6/4.0	5.40	A	3.6	4.12	A+	3.6
	RAV-SM404MUT-E	RAV-SM404AT(J)P-E	1.5	3.6/4.0	5.35	A	3.6	4.27	A+	3.7
	RAV-SM404SDT-E	RAV-SM404AT(J)P-E	1.5	3.6/4.0	5.55	A	3.6	3.88	A	3.7
Turkey Lot-10	RAV-SM407CTP-E	RAV-SM404AT(J)P-E	1.5	3.6/4.0	5.96	A+	3.6	4.98	A++	4.0
	RAV-SM307KRTP-TR	RAV-SM304ATP-TR	1	2.5/3.4	5.90	A+	2.5	4.00	A+	3.0
	RAV-SM304MUT-TR	RAV-SM304ATP-TR	1	2.5/3.4	5.53	A	2.5	4.27	A+	3.1
	RAV-SM304SDT-TR	RAV-SM304ATP-TR	1	2.5/3.4	6.10	A++	2.5	4.48	A+	2.9
	RAV-SM407KRTP-TR	RAV-SM404ATP-TR	1.5	3.6/4.0	5.40	A	3.6	4.12	A+	3.6
	RAV-SM404MUT-TR	RAV-SM404ATP-TR	1.5	3.6/4.0	5.35	A	3.6	4.27	A+	3.7
	RAV-SM407CTP-TR	RAV-SM404ATP-TR	1.5	3.6/4.0	5.96	A+	3.6	4.98	A++	4.0

* ErP Lot-10

In Europe the nominal efficiency method is becoming outdated.

The Seasonal Energy Efficiency Ratio (SEER) and the Seasonal Coefficient Of Performance (SCOP) will be introduced. The SEER/SCOP measuring method is more reliable and better represent the performance of the units during the year. Instead of a single reference temperature condition, with this new method the air conditioning systems are evaluated at different operating conditions (partial load); where Toshiba inverter units are known for being extremely efficient.

The SEER/SCOP measurement applies only to air conditioners in single or multi split combinations with a cooling capacity below 12kW.



Energy Efficiency Class	SEER	SCOP
A+++	SEER ≥ 8.50	SCOP ≥ 5.10
A++	6.10 ≤ SEER < 8.50	4.60 ≤ SCOP < 5.10
A+	5.60 ≤ SEER < 6.10	4.00 ≤ SCOP < 4.60
A	5.10 ≤ SEER < 5.60	3.40 ≤ SCOP < 4.00
B	4.60 ≤ SEER < 5.10	3.10 ≤ SCOP < 3.40
C	4.10 ≤ SEER < 4.60	2.80 ≤ SCOP < 3.10
D	3.60 ≤ SEER < 4.10	2.50 ≤ SCOP < 2.80
E	3.10 ≤ SEER < 3.60	2.20 ≤ SCOP < 2.50
F	2.60 ≤ SEER < 3.10	1.90 ≤ SCOP < 2.20
G	SEER < 2.60	SCOP < 1.90

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