

Digital Inverter R32 6.0HP

Light Commercial System

Outdoor Units

RAV-GM1601ATP-E / TR
RAV-GM1601ATJP-E
RAV-GM1601AT8P-E / TR
RAV-GM1601AT8JP-E

Indoor Units

4-way cassette type

RAV-HM561UTP-E / TR
RAV-HM801UTP-E / TR
RAV-HM1601UTP-E / TR

Compact 4-way cassette type

RAV-HM561MUTP-E / TR

Slim duct type

RAV-HM561SDT-E / TR

Standard ducted type

RAV-HM561BTP-E / TR
RAV-HM801BTP-E / TR
RAV-HM1601BTP-E / TR

Under Ceiling type

RAV-HM561CTP-E / TR
RAV-HM801CTP-E / TR
RAV-HM1601CTP-E / TR

High wall type

RAV-HM561KRTP-E/TR
RAV-HM801KRTP-E/TR

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1. Line up

1-1. Single Line-up

Outdoor unit

Model name	RAV-GM1601ATP-E / TR RAV-GM1601AT8P-E / TR	RAV-GM1601ATJP-E RAV-GM1601AT8JP-E
Appearance	 6 HP	

Indoor unit

Capacity Type		(kW equivalent) **	56	80	90	100	140	160
4-way Cassette		RAV-HM**01UTP	56	80	-	-	-	160
Compact 4-way		RAV-HM**01MUTP	56	-	-	-	-	-
Slim Duct		RAV-HM**01SDT	56	-	-	-	-	-
Standard Duct		RAV-HM**01BTP	56	80	-	-	-	160
Ceiling		RAV-HM**01CTP	56	80	-	-	-	160
High wall		RAV-HM**01KRTP	56	80	-	-	-	-

1-2. Combination Patterns

Capacity Range (HP)	Phase	Outdoor Unit		Indoor Unit					
		Model name	System	4-way Cassette	Compact 4-way	Slim duct	Standard Duct	Ceiling	Hi-wall
6.0	1	RAV-GM1601AT(J)P*	Single system	RAV-HM1601UTP*	-	-	RAV-HM1601BTP*	RAV-HM1601CTP*	-
			Twin system	RAV-HM801UTP*	-	-	RAV-HM801BTP*	RAV-HM801CTP*	RAV-HM801KRTP*
			Triple system	RAV-HM561UTP*	RAV-HM5601MUTP*	RAV-HM561SDT*	RAV-HM561BTP*	RAV-HM561CTP*	RAV-HM561KRTP*
	3	RAV-GM1601AT8(J)P*	Single system	RAV-HM1601UTP*	-	-	RAV-HM1601BTP*	RAV-HM1601CTP*	-
			Twin system	RAV-HM801UTP*	-	-	RAV-HM801BTP*	RAV-HM801CTP*	RAV-HM801KRTP*
			Triple system	RAV-HM561UTP*	RAV-HM5601MUTP*	RAV-HM561SDT*	RAV-HM561BTP*	RAV-HM561CTP*	RAV-HM561KRTP*

*-E/TR

2. Indoor Units

2-1. 4-way Cassette 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 Characteristic (NC Curve)

Accessories

2-1-1. Specifications

4-way Cassette Type

Model		Indoor unit		RAV-HM1601UTP-E / TR	RAV-HM1601UTP-E / TR
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR	RAV-GM1601AT8(J)P-E / AT8P-TR
Cooling capacity (kW)				14.0 < 3.0 - 16.0 >	14.0 < 3.0 - 16.0 >
Heating capacity (kW)				16.0 < 3.0 - 18.0 >	16.0 < 3.0 - 18.0 >
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz	3 phase 380V-415V/50Hz, 3phase 380V/60Hz
Electrical characteristics	Cooling	Running current (A)		21.03 - 19.27	7.25 - 6.64
		Power consumption (kW)		4.49	4.49
		Power factor (%)		97	94
		EER		3.12	3.12
		PdesignC		14.00	14.00
		SEER		6.30	6.30
	Heating	Running current (A)		20.77 - 19.04	7.16 - 6.56
		Power consumption (kW)		4.43	4.43
		Power factor (%)		97	94
		COP		3.61	3.61
		PdesignH (Tbiv -7°C)		8.00	8.00
		SCOP		4.35	4.35
Maximum current (A)		29.0	16.1		
Indoor unit					
Appearance		Main unit		Zinc hot dipping steel plate	Zinc hot dipping steel plate
		Ceiling panel	Model	RBC-U31PGP(W)-E, RBC-U31PGSP(W)-E	RBC-U31PGP(W)-E, RBC-U31PGSP(W)-E
		(Sold separately)	Panel color	W:Moon-white(2.5GY 9.0/0.5)	W:Moon-white(2.5GY 9.0/0.5)
Outer dimension	Main unit	Height (mm)	319	319	
		Width (mm)	840	840	
		Depth (mm)	840	840	
	Ceiling panel (Sold separately)	Height (mm)	30	30	
		Width (mm)	950	950	
		Depth (mm)	950	950	
Total weight	Main unit (kg)		24.0	24.0	
	Ceiling panel (Sold separately) (kg)		4.2	4.2	
Fan unit	Fan		Turbo fan	Turbo fan	
	Standard air flow	H/M/L (m³/h)	2130 / 1500 / 1230	2130 / 1500 / 1230	
	Motor (W)		150	150	
External static pressure	Standard (Upper - Lower) (Pa)		-	-	
Air filter				Standard filter (Long life filter)	Standard filter (Long life filter)
Sound pressure level		H/M/L (dB)	45 / 40 / 36	45 / 40 / 36	
Sound power level		H/M/L (dB)	60 / 55 / 51	60 / 55 / 51	
Connecting pipe	Drain port		VP25	VP25	

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 35°C DB

4-way Cassette Type

Twin system : Single phase model

Model		Indoor unit 1		RAV-HM801UTP-E / TR		
		Indoor unit 2		RAV-HM801UTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	21.03 - 19.27	
		Power consumption		(kW)	4.49	
		Power factor		(%)	97	
		EER			3.12	
		PdesignC			14.0	
		SEER			6.30	
	Heating	Running current		(A)	20.77 - 19.04	
		Power consumption		(kW)	4.43	
		Power factor		(%)	97	
		COP			3.61	
		PdesignH (Tbiv -7°C)			8.00	
		SCOP			4.35	
		Maximum current	(A)	29.0		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		RBC-U31PGPW-E, RBC-U31PGSPW-E	
			Panel color		W:Moon-white(2.5GY 9.0/0.5)	
Outer dimension		Main unit		Height	(mm)	256
				Width	(mm)	840
				Depth	(mm)	840
		Ceiling panel (Sold separately)		Height	(mm)	30
				Width	(mm)	950
				Depth	(mm)	950
Total weight		Main unit		(kg)	20.0	
		Ceiling panel (Sold separately)		(kg)	4.2	
Fan unit		Fan		Turbo fan		
		Standard air flow	H/M/L	(m³/h)	1230 / 960 / 810	
		Motor		(W)	20	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	35 / 31 / 28	
Sound power level			H/M/L	(dB)	50 / 46 / 43	
Connecting pipe		Drain port		VP25		

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 35°C DB

4-way Cassette Type

Twin system : Three phase model

Model		Indoor unit 1		RAV-HM801UTP-E / TR		
		Indoor unit 2		RAV-HM801UTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	7.25 - 6.64	
		Power consumption		(kW)	4.49	
		Power factor		(%)	94	
		EER			3.12	
		PdesignC			14.0	
		SEER			6.30	
	Heating	Running current		(A)	7.16 - 6.56	
		Power consumption		(kW)	4.43	
		Power factor		(%)	94	
		COP			3.61	
		PdesignH (Tbiv -7°C)			8.00	
		SCOP			4.35	
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		RBC-U31PGPW-E , RBC-U31PGSPW-E	
			Panel color		W: Moon-white(2.5GY 9.0/0.5)	
Outer dimension		Main unit	Height	(mm)	256	
			Width	(mm)	840	
			Depth	(mm)	840	
		Ceiling panel (Sold separately)	Height	(mm)	30	
			Width	(mm)	950	
			Depth	(mm)	950	
Total weight		Main unit		(kg)	20.0	
		Ceiling panel (Sold separately)		(kg)	4.2	
Fan unit		Fan		Turbo fan		
		Standard air flow	H/M/L	(m³/h)	1230 / 960 / 810	
		Motor		(W)	20	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	35 / 31 / 28	
Sound power level			H/M/L	(dB)	50 / 46 / 43	
Connecting pipe		Drain port		VP25		

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 35°C DB

4-way Cassette Type

Triple system : Single phase model

Model		Indoor unit 1		RAV-HM561UTP-E / TR		
		Indoor unit 2		RAV-HM561UTP-E / TR		
		Indoor unit 3		RAV-HM561UTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	21.03 - 19.27	
		Power consumption		(kW)	4.49	
		Power factor		(%)	97	
		EER		3.12		
		PdesignC		14.0		
		SEER		6.30		
	Heating	Running current		(A)	20.77 - 19.04	
		Power consumption		(kW)	4.43	
		Power factor		(%)	97	
		COP		3.61		
		PdesignH (Tbiv -7°C)		8.00		
		SCOP		4.35		
		Maximum current	(A)	29.0		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		RBC-U31PGPW-E , RBC-U31PGSPW-E	
			Panel color		W:Moon-white (2.5GY 9.0/0.5)	
Outer dimension		Main unit	Height	(mm)	256	
			Width	(mm)	840	
			Depth	(mm)	840	
		Ceiling panel (Sold separately)	Height	(mm)	30	
			Width	(mm)	950	
			Depth	(mm)	950	
Total weight		Main unit		(kg)	20.0	
		Ceiling panel (Sold separately)		(kg)	4.2	
Fan unit		Fan		Turbo fan		
		Standard air flow	H/M/L	(m³/h)	1050 / 870 / 780	
		Motor		(W)	14	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	32 / 29 / 28	
Sound power level			H/M/L	(dB)	47 / 44 / 43	
Connecting pipe		Drain port		VP25		

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 35°C DB

4-way Cassette Type

Triple system : Three phase model

Model		Indoor unit 1		RAV-HM561UTP-E / TR		
		Indoor unit 2		RAV-HM561UTP-E / TR		
		Indoor unit 3		RAV-HM561UTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	7.25 - 6.64	
		Power consumption		(kW)	4.49	
		Power factor		(%)	94	
		EER			3.12	
		PdesignC			14.0	
		SEER			6.30	
	Heating	Running current		(A)	7.16 - 6.56	
		Power consumption		(kW)	4.43	
		Power factor		(%)	94	
		COP			3.61	
		PdesignH (Tbiv -7°C)			8.00	
SCOP			4.35			
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model	RBC-U31PGPW-E , RBC-U31PGSPW-E		
			Panel color	W: Moon-white (2.5GY 9.0/0.5)		
Outer dimension		Main unit	Height	(mm)	256	
			Width	(mm)	840	
			Depth	(mm)	840	
		Ceiling panel (Sold separately)	Height	(mm)	30	
			Width	(mm)	950	
			Depth	(mm)	950	
Total weight		Main unit		(kg)	20.0	
		Ceiling panel (Sold separately)		(kg)	4.2	
Fan unit		Fan		Turbo fan		
		Standard air flow	H/M/L	(m³/h)	1050 / 870 / 780	
		Motor		(W)	14	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	32 / 29 / 28	
Sound power level			H/M/L	(dB)	47 / 44 / 43	
Connecting pipe		Drain port		VP25		

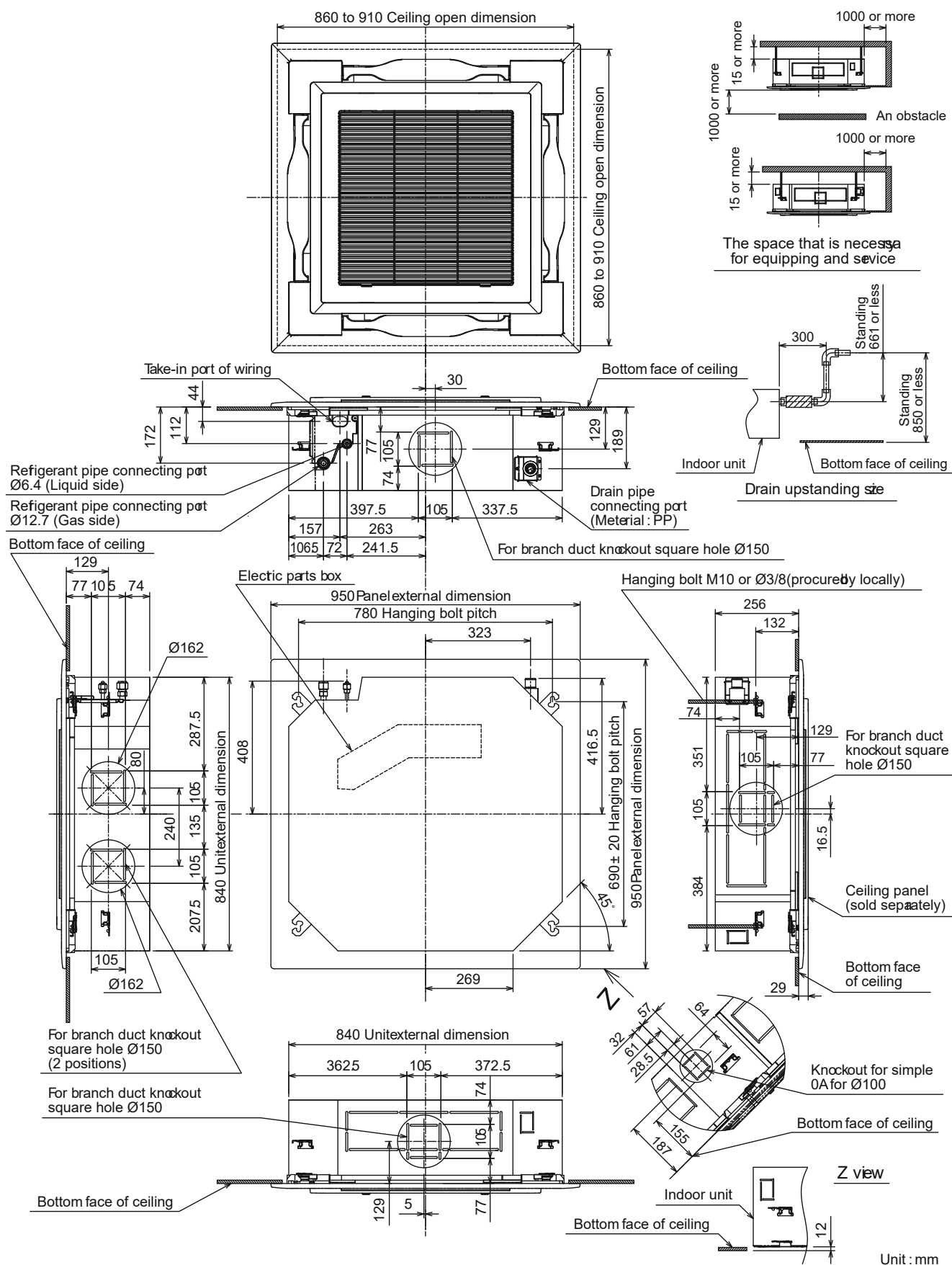
Note :

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 35°C DB

2-1-2. Dimension

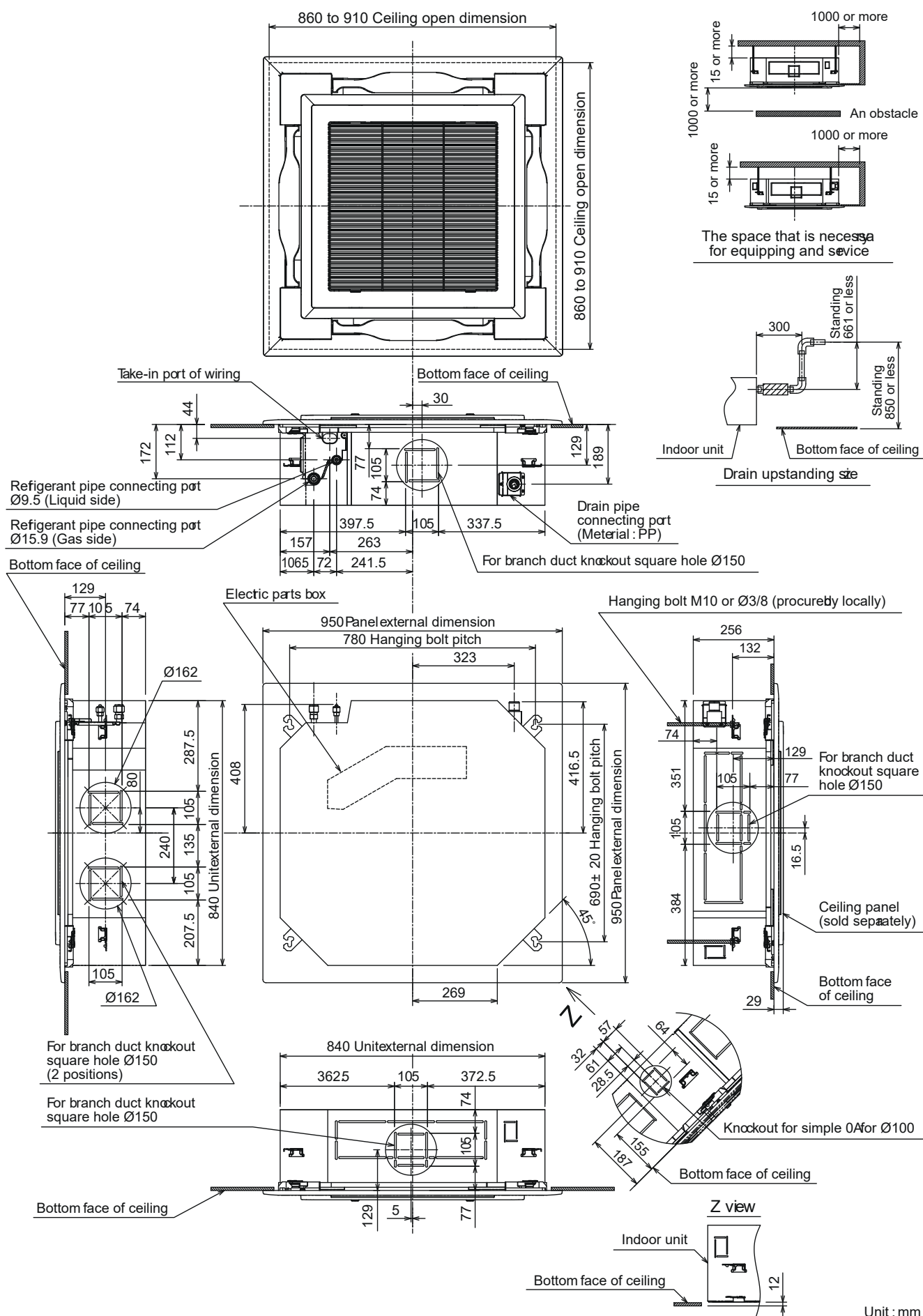
RAV-HM561UTP-E / TR

Standard panel (RBC-U32PGP-E)



RAV-HM801UTP-E / TR

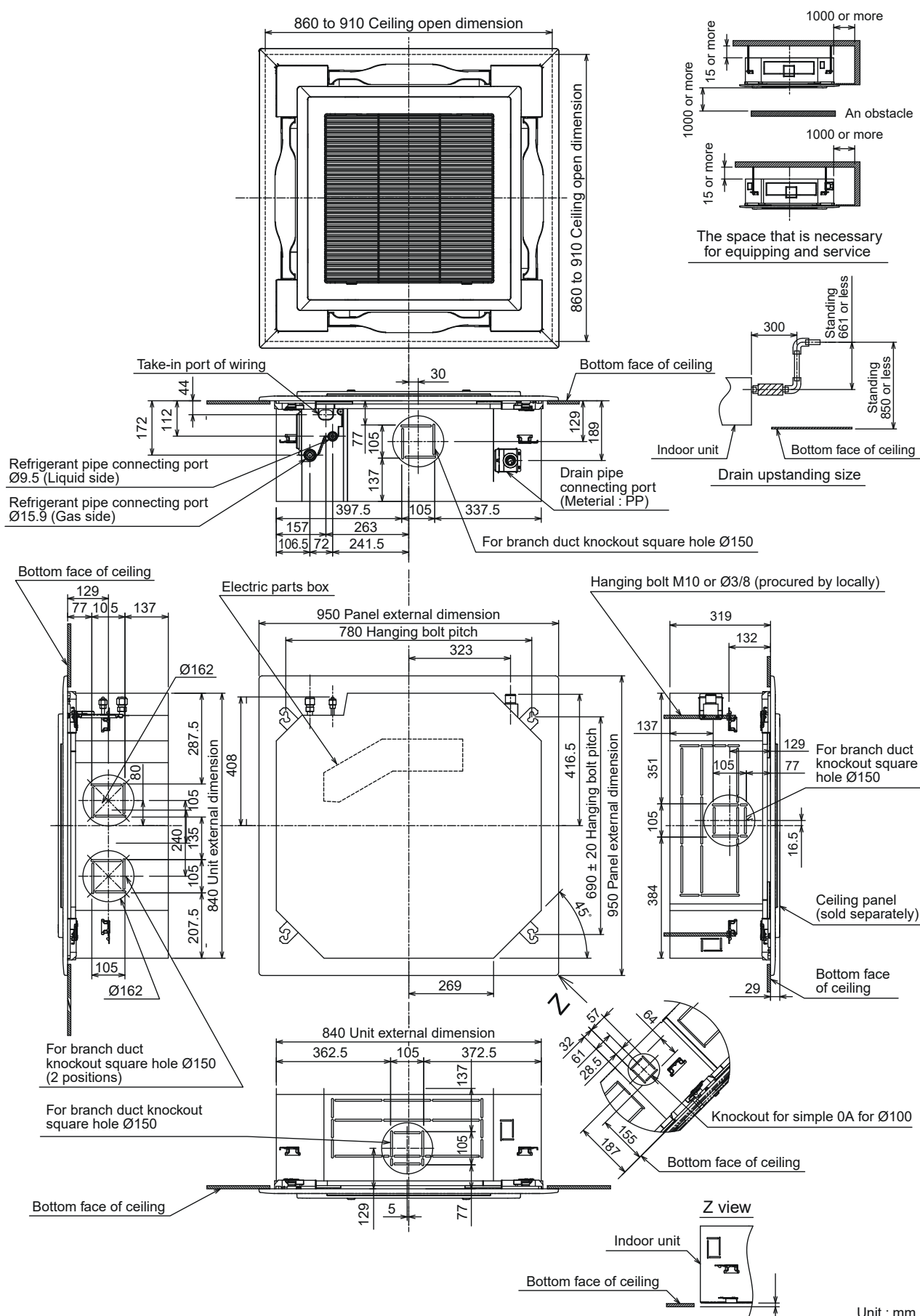
Standard panel (RBC-U32PGP-E)



Unit : mm

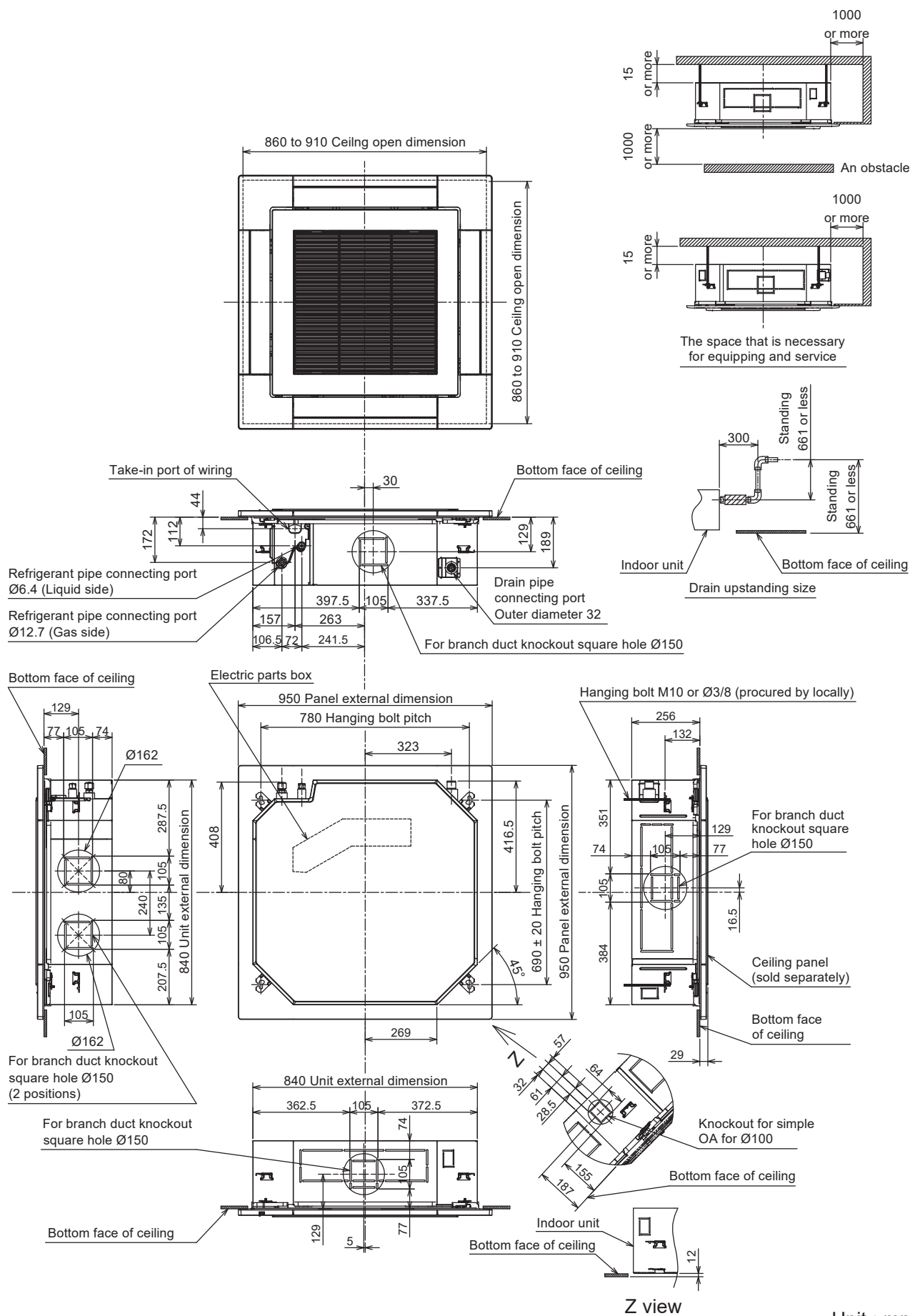
RAV-HM1601UTP-E / TR

Standard panel (RBC-U32PGP-E)



RAV-HM561UTP-E / TR

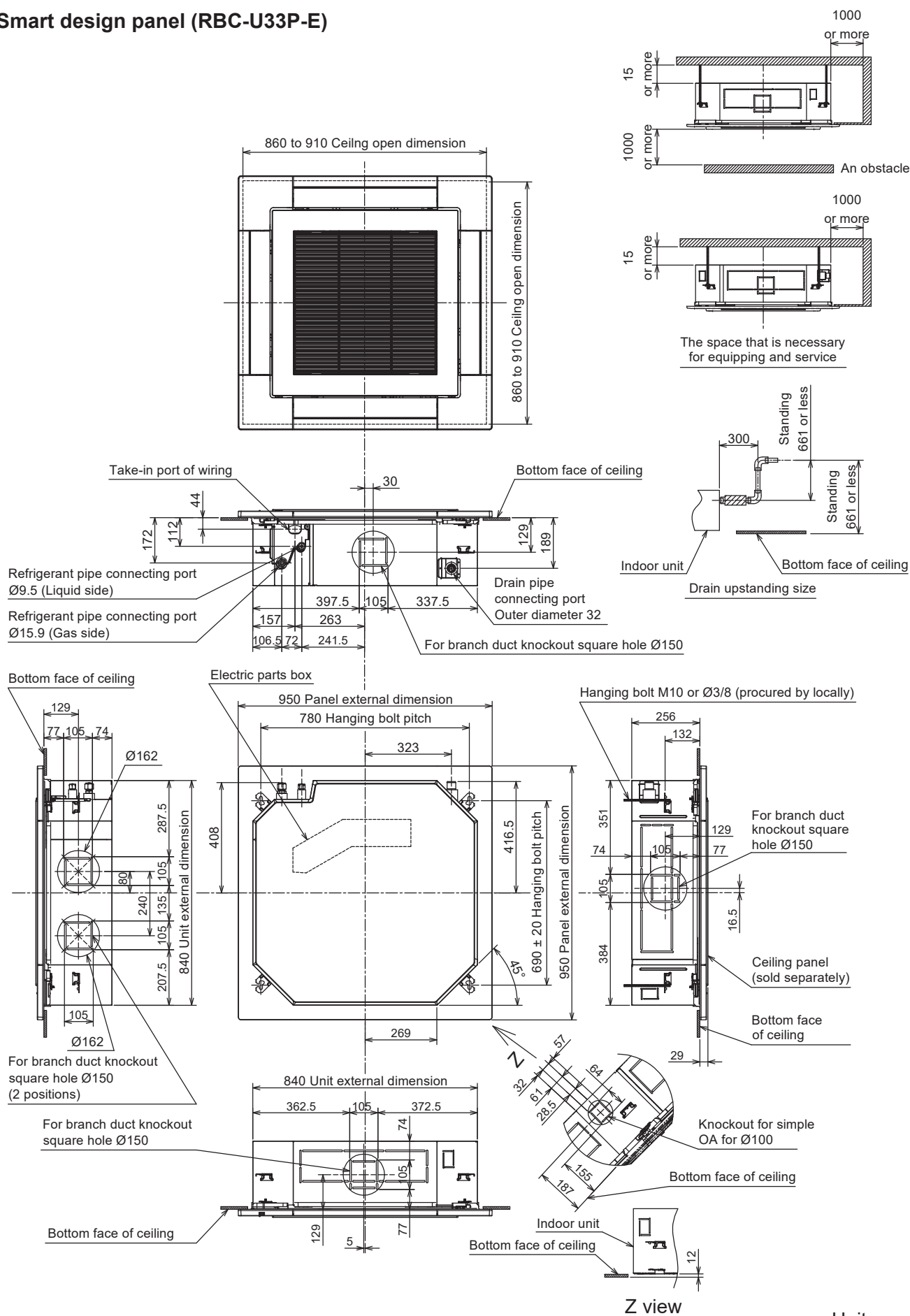
Smart design panel (RBC-U33P-E)



Unit : mm

RAV-HM801UTP-E / TR

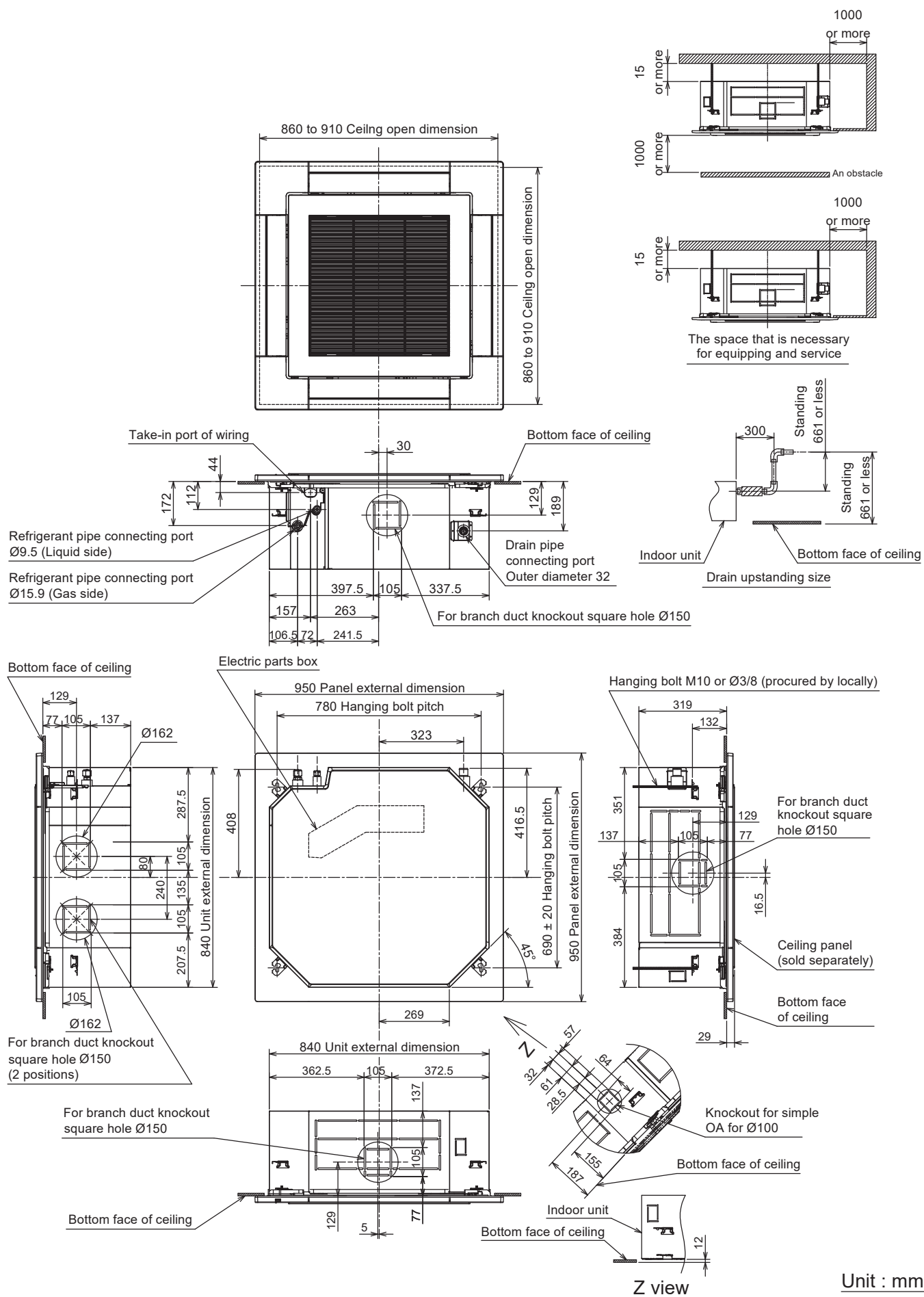
Smart design panel (RBC-U33P-E)



Unit : mm

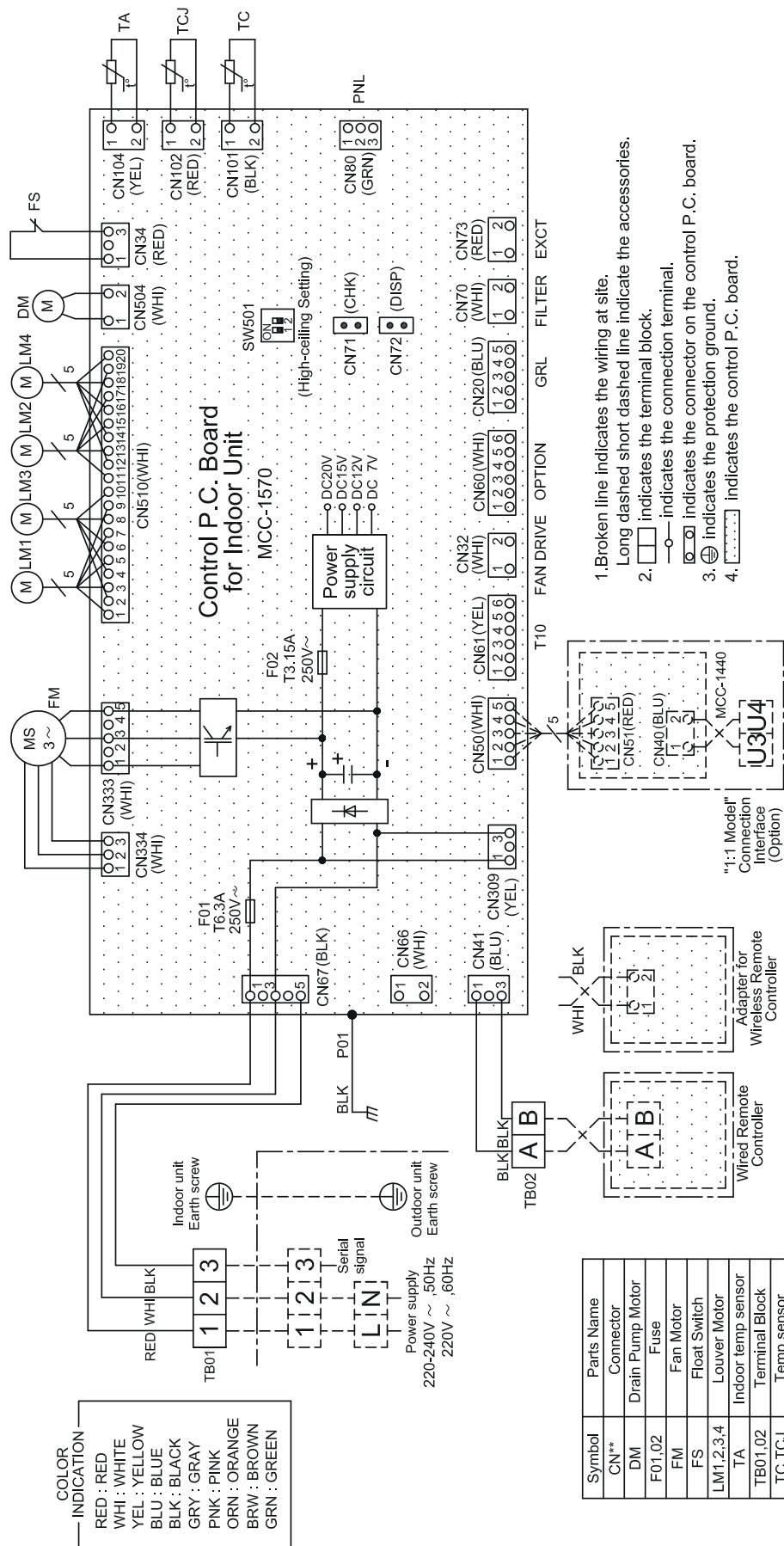
RAV-HM1601UTP-E / TR

Smart design panel (RBC-U33P-E)



2-1-3. Wiring Diagrams

RAV-HM561UTP-E / TR, RAV-HM801UTP-E / TR, RAV-HM1601UTP-E / TR



2-1-4. Sensible Capacity Table

RAV-HM1601UTP-E / TR : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

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
1601	10.0	13.1	9.6	13.8	10.1	14.5	10.6	15.0	11.0	15.5	11.3	16.0	11.7	16.5	12.0	17.4	12.7	18.2	13.3
	12.0	13.1	9.5	13.7	10.0	14.4	10.5	14.9	10.9	15.4	11.3	15.9	11.6	16.4	11.9	17.3	12.6	18.1	13.2
	14.0	13.0	9.5	13.7	10.0	14.3	10.4	14.8	10.8	15.4	11.2	15.8	11.5	16.3	11.8	17.2	12.5	18.0	13.1
	16.0	12.9	9.4	13.6	9.9	14.2	10.4	14.7	10.7	15.2	11.1	15.7	11.4	16.1	11.8	17.1	12.5	17.9	13.0
	18.0	12.8	9.3	13.5	9.8	14.1	10.3	14.6	10.7	15.1	11.0	15.6	11.3	16.0	11.7	17.0	12.4	17.7	12.9
	20.0	12.7	9.2	13.3	9.7	14.0	10.2	14.5	10.6	15.0	10.9	15.4	11.3	15.9	11.6	16.8	12.3	17.6	12.8
	21.0	12.6	9.2	13.3	9.7	13.9	10.2	14.4	10.5	14.9	10.9	15.4	11.2	15.8	11.5	16.7	12.2	17.5	12.8
	23.0	12.5	9.1	13.2	9.6	13.8	10.1	14.3	10.4	14.8	10.8	15.2	11.1	15.7	11.4	16.6	12.1	17.3	12.6
	25.0	12.4	9.0	13.0	9.5	13.7	9.9	14.1	10.3	14.6	10.7	15.1	11.0	15.5	11.3	16.4	11.9	17.1	12.5
	27.0	12.2	8.9	12.8	9.4	13.5	9.8	14.0	10.2	14.4	10.5	14.9	10.8	15.3	11.1	16.2	11.8	16.9	12.3
	29.0	12.1	8.8	12.7	9.2	13.3	9.7	13.8	10.0	14.3	10.4	14.7	10.7	15.1	11.0	16.0	11.6	16.7	12.2
	31.0	11.9	8.7	12.5	9.1	13.1	9.6	13.6	9.9	14.0	10.2	14.5	10.5	14.9	10.8	15.8	11.5	16.5	12.0
	33.0	11.7	8.5	12.3	9.0	12.9	9.4	13.4	9.7	13.8	10.1	14.2	10.4	14.6	10.7	15.5	11.3	16.2	11.8
	35.0	11.5	8.4	12.1	8.8	12.7	9.3	13.1	9.6	13.6	9.9	14.0	10.2	14.4	10.5	15.3	11.1	16.0	11.6
	37.0	11.3	8.2	11.9	8.6	12.5	9.1	12.9	9.4	13.3	9.7	13.7	10.0	14.1	10.3	15.0	10.9	15.6	11.4
	39.0	11.1	8.1	11.6	8.5	12.2	8.9	12.6	9.2	13.1	9.5	13.5	9.8	13.8	10.1	14.7	10.7	15.3	11.2

RAV-HM801UTP-E / TR (Twin) : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

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
801	10.0	7.9	6.8	8.2	7.0	8.5	7.2	8.7	7.4	8.9	7.6	9.1	7.8	9.4	8.0	9.8	8.2	10.2	8.3
	12.0	7.8	6.7	8.1	6.9	8.4	7.1	8.6	7.3	8.8	7.5	9.0	7.7	9.3	7.9	9.7	8.1	10.1	8.2
	14.0	7.7	6.6	8.0	6.8	8.3	7.0	8.5	7.2	8.7	7.4	8.9	7.6	9.2	7.8	9.6	8.0	10.0	8.1
	16.0	7.6	6.5	7.9	6.7	8.2	6.9	8.4	7.1	8.6	7.3	8.8	7.5	9.1	7.7	9.5	7.9	9.9	8.0
	18.0	7.5	6.4	7.8	6.6	8.1	6.8	8.3	7.0	8.5	7.2	8.7	7.4	9.0	7.6	9.4	7.8	9.8	7.9
	20.0	7.4	6.3	7.7	6.5	8.0	6.7	8.2	6.9	8.4	7.1	8.6	7.3	8.9	7.5	9.3	7.7	9.7	7.8
	21.0	7.3	6.2	7.6	6.4	7.9	6.6	8.1	6.8	8.3	7.0	8.5	7.2	8.8	7.4	9.2	7.6	9.6	7.7
	23.0	7.2	6.1	7.5	6.3	7.8	6.5	8.0	6.7	8.2	6.9	8.4	7.1	8.7	7.3	9.1	7.5	9.5	7.6
	25.0	7.1	6.0	7.4	6.2	7.7	6.4	7.9	6.6	8.1	6.8	8.3	7.0	8.6	7.2	9.0	7.4	9.4	7.5
	27.0	7.0	5.9	7.3	6.1	7.6	6.3	7.8	6.5	8.0	6.7	8.2	6.9	8.5	7.1	8.9	7.3	9.3	7.4
	29.0	6.8	5.8	7.1	6.0	7.4	6.2	7.6	6.4	7.8	6.6	8.0	6.8	8.3	7.0	8.7	7.2	9.1	7.3
	31.0	6.5	5.6	6.8	5.8	7.1	6.0	7.3	6.2	7.5	6.4	7.7	6.6	8.0	6.8	8.4	7.0	8.8	7.1
	33.0	6.2	5.4	6.5	5.6	6.8	5.8	7.0	6.0	7.2	6.2	7.4	6.4	7.7	6.6	8.1	6.8	8.5	6.9
	35.0	5.9	5.2	6.2	5.4	6.5	5.6	6.7	5.8	6.9	6.0	7.1	6.2	7.4	6.4	7.8	6.6	8.2	6.7
	37.0	5.8	5.1	6.1	5.3	6.4	5.5	6.6	5.7	6.8	5.9	7.0	6.1	7.3	6.3	7.7	6.5	8.1	6.6
	39.0	5.6	5.0	5.9	5.2	6.2	5.4	6.4	5.6	6.6	5.8	6.8	6.0	7.1	6.2	7.5	6.4	7.9	6.5

RAV-HM561UTP-E / TR (Triple) : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

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
561	10.0	4.7	3.9	4.9	4.1	5.2	4.3	5.4	4.4	5.6	4.6	5.7	4.7	5.9	4.9	6.2	5.1	6.5	5.4
	12.0	4.7	3.9	4.9	4.1	5.2	4.3	5.3	4.4	5.5	4.6	5.7	4.7	5.8	4.8	6.2	5.1	6.5	5.3
	14.0	4.6	3.8	4.9	4.0	5.1	4.2	5.3	4.4	5.5	4.5	5.6	4.7	5.8	4.8	6.1	5.1	6.4	5.3
	16.0	4.6	3.8	4.8	4.0	5.1	4.2	5.3	4.4	5.4	4.5	5.6	4.6	5.8	4.8	6.1	5.0	6.4	5.3
	18.0	4.6	3.8	4.8	4.0	5.0	4.2	5.2	4.3	5.4	4.5	5.6	4.6	5.7	4.7	6.1	5.0	6.3	5.2
	20.0	4.5	3.7	4.8	3.9	5.0	4.1	5.2	4.3	5.4	4.4	5.5	4.6	5.7	4.7	6.0	5.0	6.3	5.2
	21.0	4.5	3.7	4.7	3.9	5.0	4.1	5.2	4.3	5.3	4.4	5.5	4.5	5.6	4.7	6.0	4.9	6.3	5.2
	23.0	4.5	3.7	4.7	3.9	4.9	4.1	5.1	4.2	5.3	4.4	5.4	4.5	5.6	4.6	5.9	4.9	6.2	5.1
	25.0	4.4	3.6	4.6	3.8	4.9	4.0	5.0	4.2	5.2	4.3	5.4	4.4	5.5	4.6	5.9	4.8	6.1	5.1
	27.0	4.4	3.6	4.6	3.8	4.8	4.0	5.0	4.1	5.2	4.3	5.3	4.4	5.5	4.5	5.8	4.8	6.0	5.0
	29.0	4.3	3.6	4.5	3.7	4.8	3.9	4.9	4.1	5.1	4.2	5.2	4.3	5.4	4.5	5.7	4.7	6.0	4.9
	31.0	4.2	3.5	4.5	3.7	4.7	3.9	4.9	4.0	5.0	4.1	5.2	4.3	5.3	4.4	5.6	4.7	5.9	4.9
	33.0	4.2	3.5	4.4	3.6	4.6	3.8	4.8	3.9	4.9	4.1	5.1	4.2	5.2	4.3	5.5	4.6	5.8	4.8
	35.0	4.1	3.4	4.3	3.6	4.5	3.7	4.7	3.9	4.9	4.0	5.0	4.1	5.1	4.3	5.4	4.5	5.7	4.7
	37.0	4.0	3.3	4.2	3.5	4.4	3.7	4.6	3.8	4.8	3.9	4.9	4.1	5.0	4.2	5.3	4.4	5.6	4.6
	39.0	3.9	3.3	4.2	3.4	4.4	3.6	4.5	3.7	4.7	3.9	4.8	4.0	4.9	4.1	5.2	4.3	5.5	4.5

TC: Total Capacity [kW]

SHC: Sensible Heat Capacity [kW]

2-1-5. Part Load Performance

Indoor Unit : RAV-HM1601UTP-E / TR

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4487	16000	4432

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	12040	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5380	4520	3740	3040	2400	1850	1370	960	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	4960	4170	3450	2800	2210	1700	1260	880	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	4550	3820	3160	2560	2030	1560	1150	810	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4487	3770	3120	2530	2000	1540	1140	800	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3270	2750	2270	1840	1460	1120	830	580	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2690	2260	1870	1520	1200	920	680	480	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2150	1810	1500	1210	960	740	550	380	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	4900	4120	3410	2780	2220	1730	1300	960	670	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4640	3910	3240	2640	2100	1640	1240	910	640	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4432	3730	3090	2520	2010	1570	1180	870	610	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4290	3610	2990	2440	1950	1520	1140	840	590	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4080	3440	2850	2320	1850	1450	1090	800	560	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3620	3050	2520	2060	1640	1280	960	710	500	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3550	2980	2470	2020	1610	1260	940	700	490	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3510	2950	2450	2000	1590	1240	930	690	480	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3340	2810	2330	1900	1520	1180	890	660	460	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3130	2640	2180	1780	1420	1110	830	620	430	460

Twin system

Indoor Unit : RAV-HM801UTP-E / TR (x2)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4487	16000	4432

Cooling

Q: Capacity in W

W: Power Consumption in W

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	12040	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5380	4520	3740	3040	2400	1850	1370	960	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	4960	4170	3450	2800	2210	1700	1260	880	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	4550	3820	3160	2560	2030	1560	1150	810	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4487	3770	3120	2530	2000	1540	1140	800	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3270	2750	2270	1840	1460	1120	830	580	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2690	2260	1870	1520	1200	920	680	480	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2150	1810	1500	1210	960	740	550	380	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	4900	4120	3410	2780	2220	1730	1300	960	670	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4640	3910	3240	2640	2100	1640	1240	910	640	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4432	3730	3090	2520	2010	1570	1180	870	610	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4290	3610	2990	2440	1950	1520	1140	840	590	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4080	3440	2850	2320	1850	1450	1090	800	560	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3620	3050	2520	2060	1640	1280	960	710	500	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3550	2980	2470	2020	1610	1260	940	700	490	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3510	2950	2450	2000	1590	1240	930	690	480	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3340	2810	2330	1900	1520	1180	890	660	460	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3130	2640	2180	1780	1420	1110	830	620	430	460

Triple system

Indoor Unit : RAV-HM561UTP-E (x3)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4487	16000	4432

Q: Capacity in W

W: Power Consumption in W

Cooling

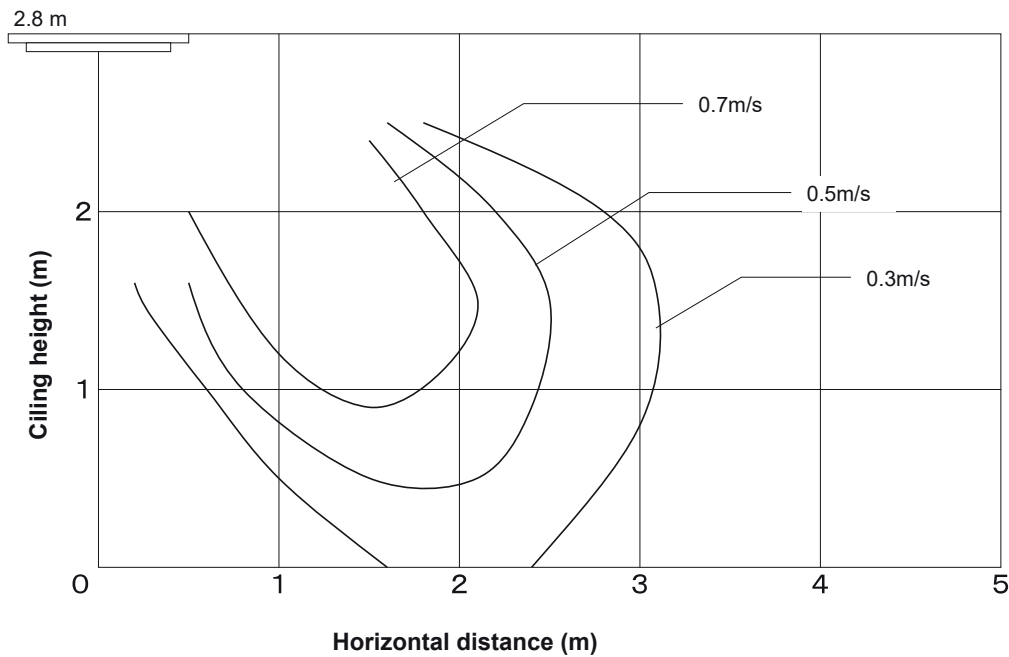
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	12040	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5380	4520	3740	3040	2400	1850	1370	960	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	4960	4170	3450	2800	2210	1700	1260	880	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	4550	3820	3160	2560	2030	1560	1150	810	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4487	3770	3120	2530	2000	1540	1140	800	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3270	2750	2270	1840	1460	1120	830	580	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2690	2260	1870	1520	1200	920	680	480	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2150	1810	1500	1210	960	740	550	380	310	310

Heating

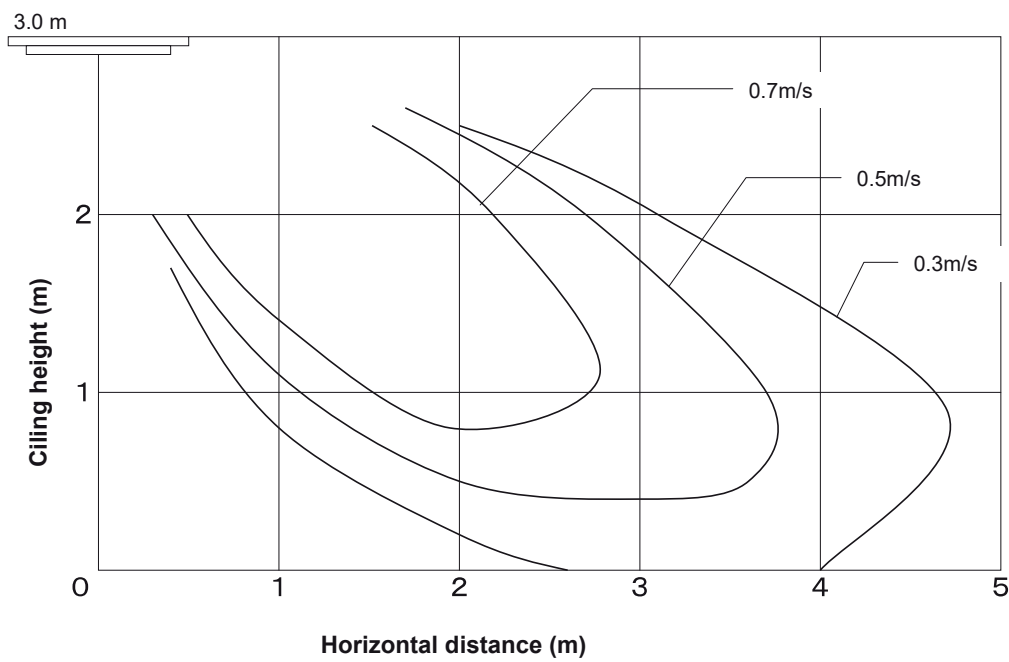
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	4900	4120	3410	2780	2220	1730	1300	960	670	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4640	3910	3240	2640	2100	1640	1240	910	640	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4432	3730	3090	2520	2010	1570	1180	870	610	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4290	3610	2990	2440	1950	1520	1140	840	590	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4080	3440	2850	2320	1850	1450	1090	800	560	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3620	3050	2520	2060	1640	1280	960	710	500	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3550	2980	2470	2020	1610	1260	940	700	490	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3510	2950	2450	2000	1590	1240	930	690	480	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3340	2810	2330	1900	1520	1180	890	660	460	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3130	2640	2180	1780	1420	1110	830	620	430	460

2-1-6. Air Throw Distance Chart

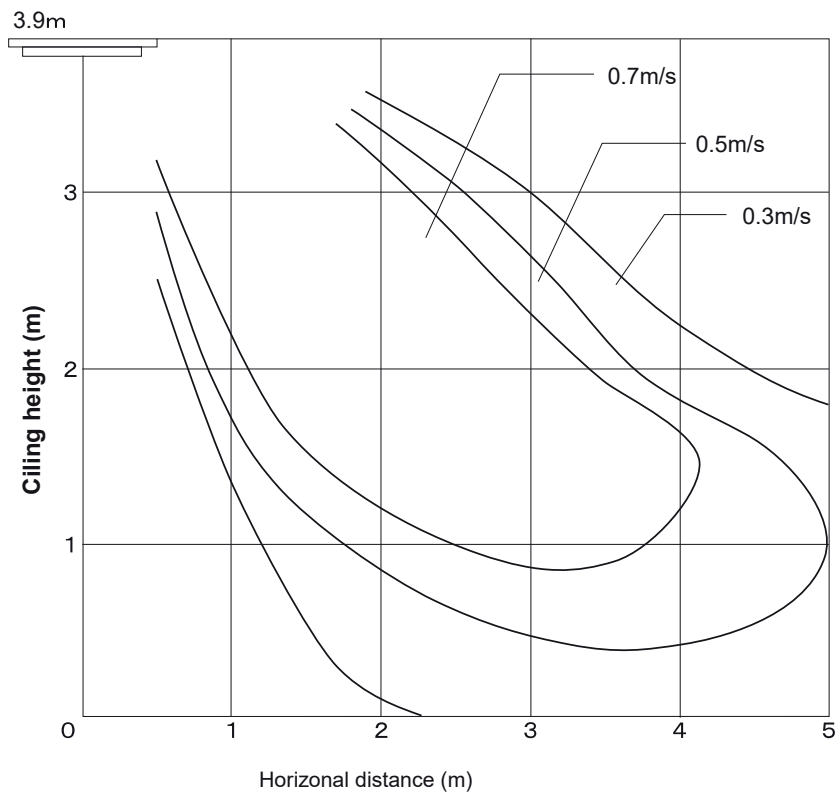
RAV-HM561UTP-E / TR



RAV-HM801UTP-E / TR

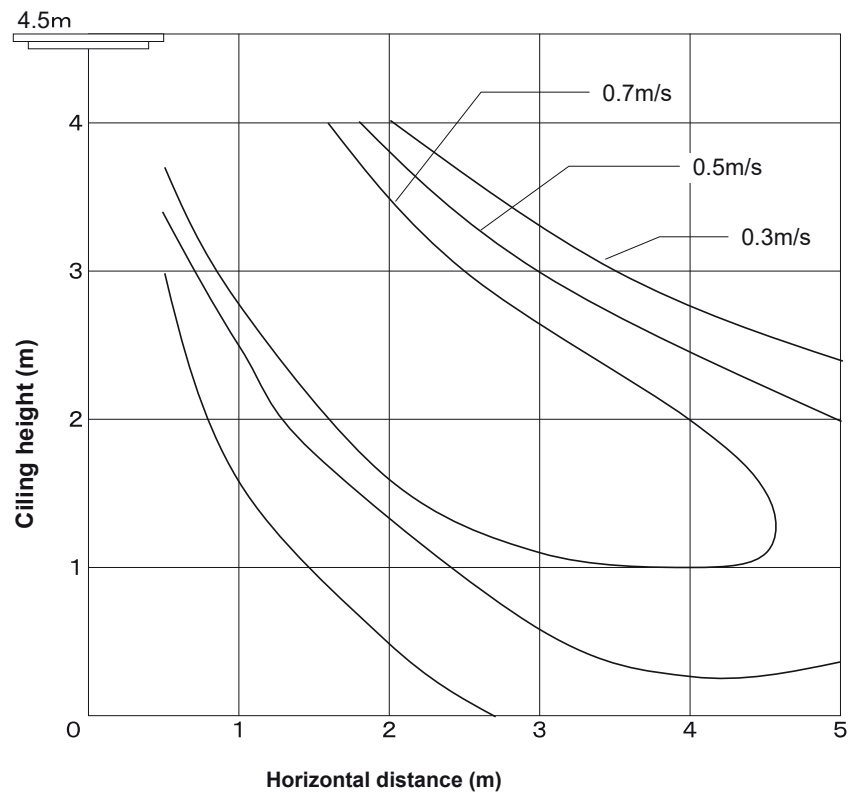


RAV-HM1601UTP-E/ TR

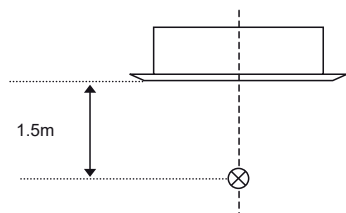


RAV-HM1601UTP-E / TR

(High ceiling)

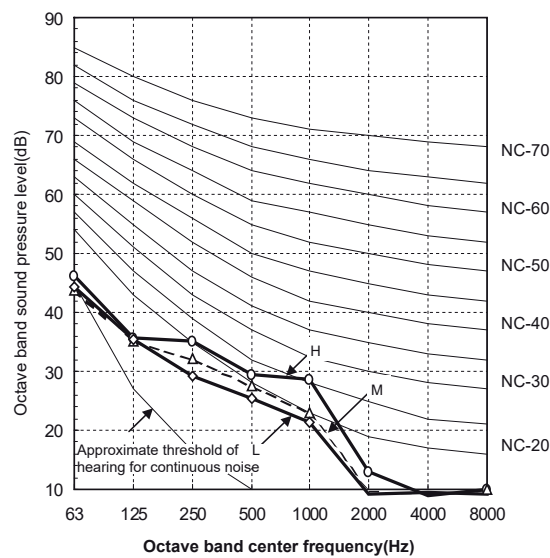


2-1-7. Sound characteristics (NC curve)



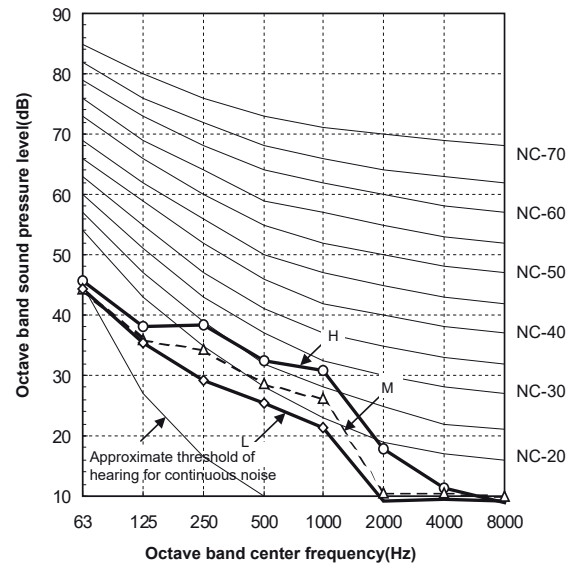
RAV-HM561UTP-E / TR

Fan tap	H	M	L
Sound pressure level (dB(A))	32	29	28

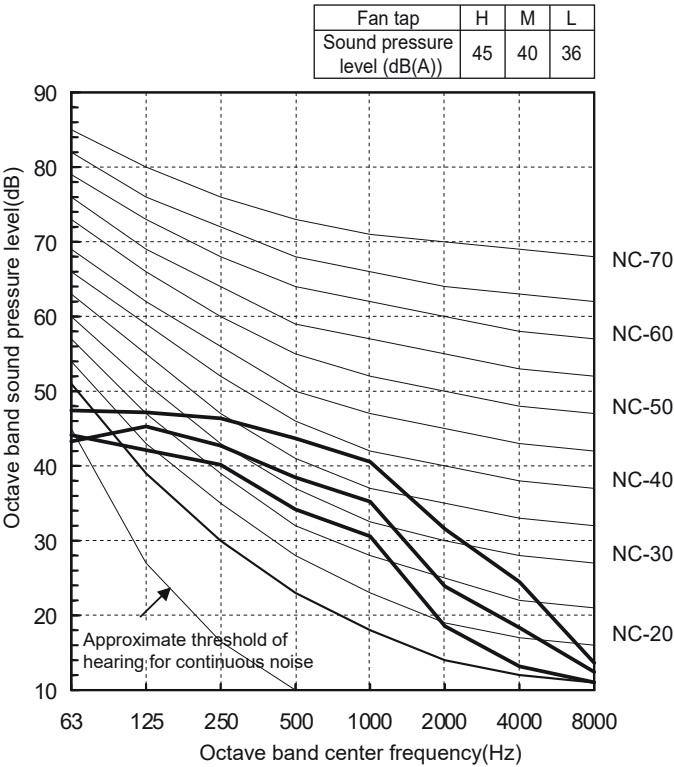


RAV-HM801UTP-E / TR

Fan tap	H	M	L
Sound pressure level (dB(A))	35	31	28

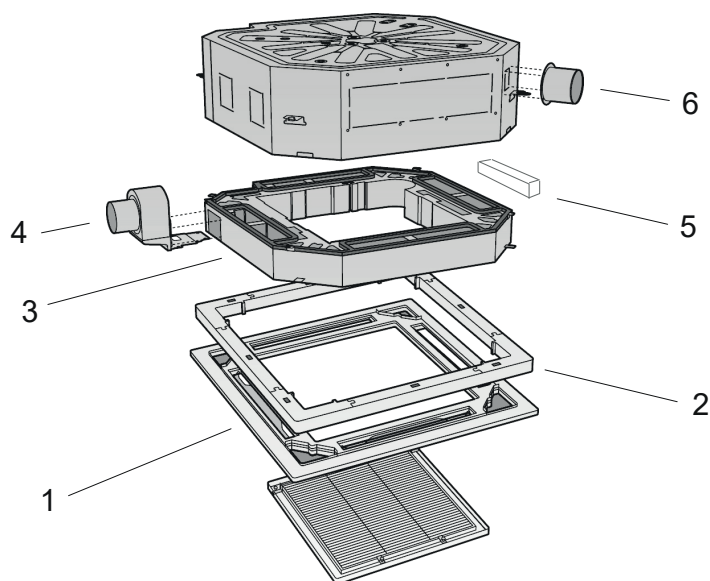


RAV-HM1601UTP-E / TR



Accessories

Optional parts for 4-Way Cassette type



Ceiling panel	RBC-U32PGP-E
Ceiling panel (smart design)	RBC-U33P-E
	RBC-U33PB-E

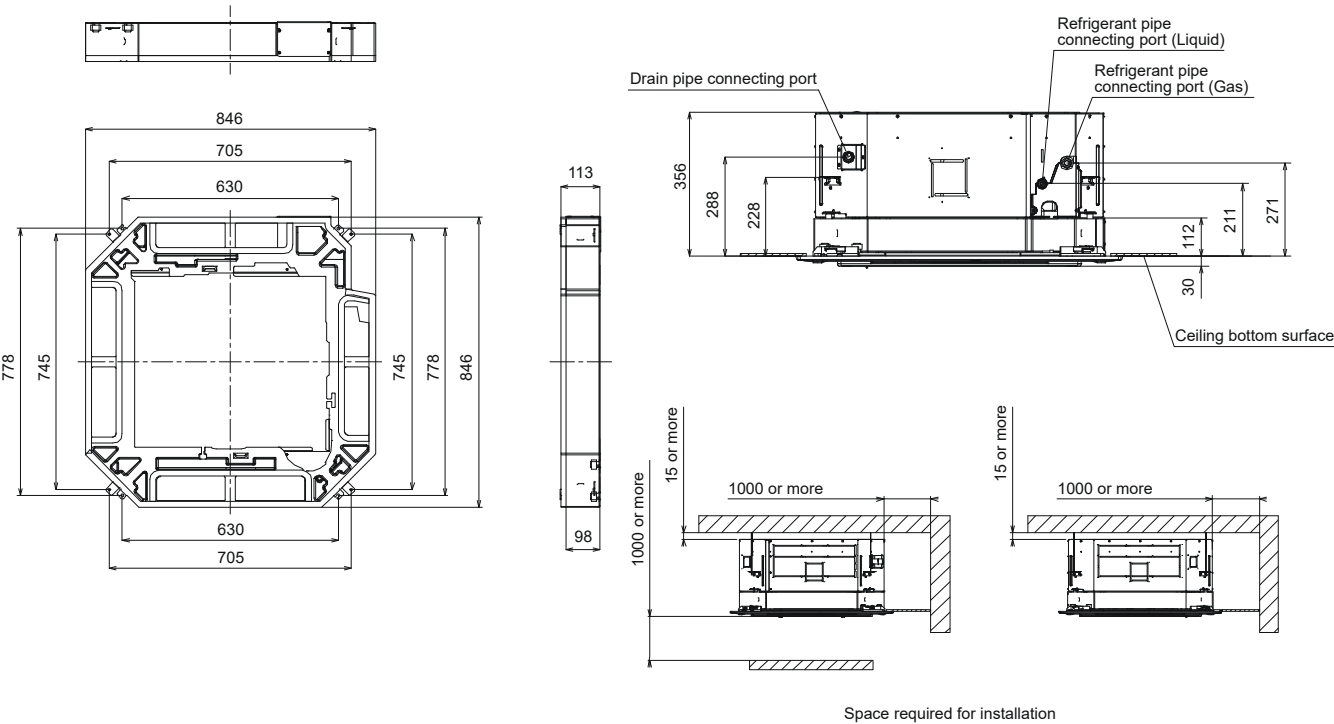
Optional parts list

No	Type	Model name	Qty/unit	Note
1	1.1 Ceiling panel	RBC-U32PGP-E	1	White (2.5GY9.0/0.5)
	1.2 Ceiling panel (Smart design)	RBC-U33P-E	1	White (5PB9/1)
	1.3 Ceiling panel (Smart design)	RBC-U33PB-E	1	Black (RAL9005)
2	Spacer for height adjustment	TCB-SP1602UE	1	50 mm
3	Fresh-air chamber	TCB-GFC1602UE	1	Use with TCB-GB1602UUL
4	Fresh-air inlet box	TCB-GB1602UE	1	Connection = Dia. 100 mm.
5	Air-discharge direction kit	TCB-BC1602UE	1	6-direction patterns
6	Auxiliary fresh air flange	TCB-FF101URE2		Connection = Dia.100

Appendix

1. Fresh-air chamber (TCB-GFC1602UE)

Unit : mm



2. Fresh-air inlet box (TCB-GB1602UE)

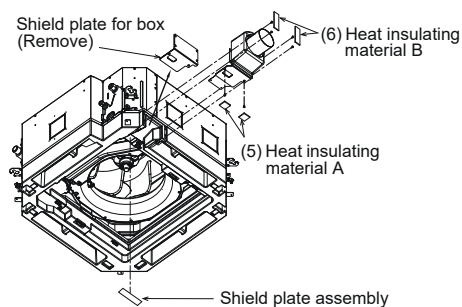
Accessories

(The following parts are included.)

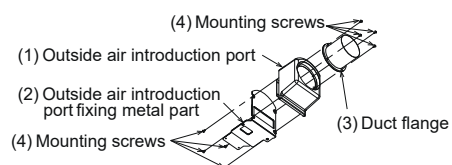
No.	Name	Qty	Remark
(1)	Outside air introduction port	1	
(2)	Outside air introduction port fixing metal part	1	
(3)	Duct flange 100 mm	1	
(4)	Mounting screws 4 × 10 mm	16	
(5)	Heat insulating material A	2	
(6)	Heat insulating material B	2	
(7)	Wind shield	1	
(8)	Installation manual	1	
(9)	Wire	1	

Installation

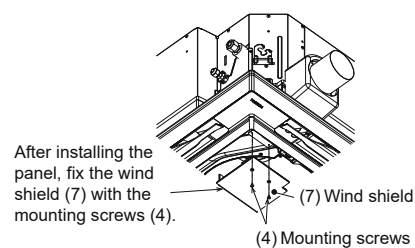
(Fig. 1)



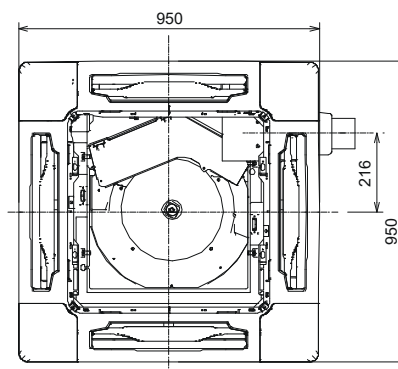
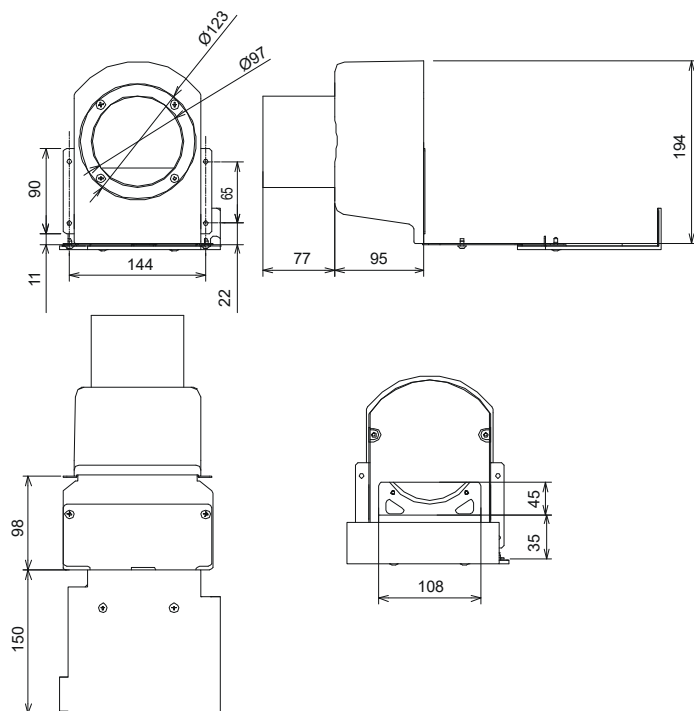
(Fig. 2)



(Fig. 3)



Dimension



Unit: mm

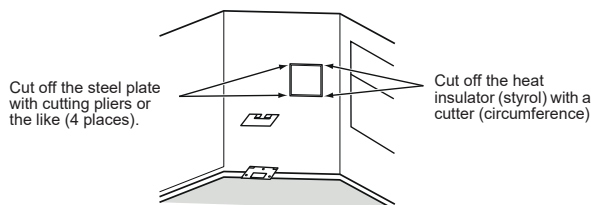
NOTE

This inlet box shall be used with the fresh-air chamber.

3. Auxiliary fresh air flange (TCB-FF101URE2)

Installation

1. Using the knockout of the indoor unit main body, as a marker, cut off the flange with the heat insulator (styrol) with cutting pliers or cutter.

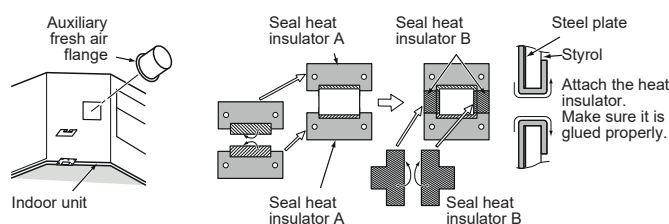


NOTE

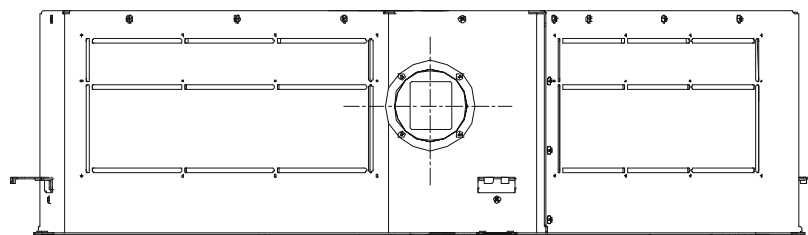
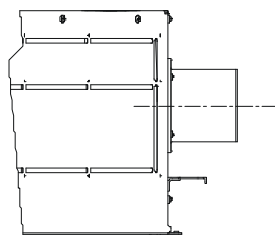
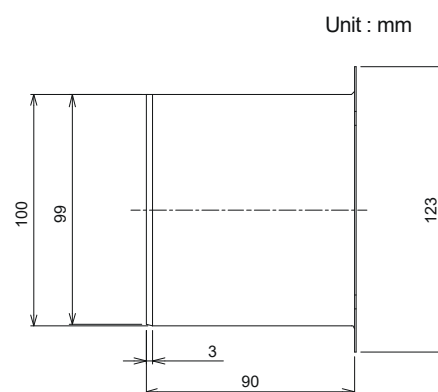
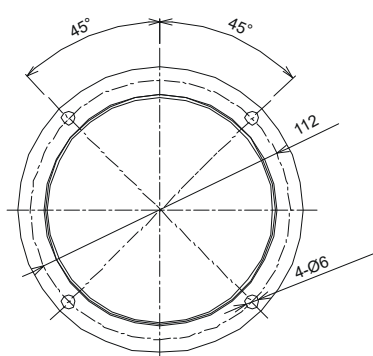
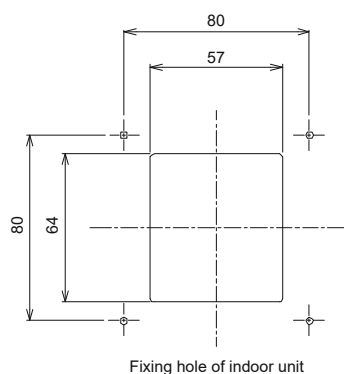
When cutting off the styrol inside, be careful not to insert the cutter blade deeper than 30 mm. (Damage to the drain pan inside can cause water leakage.)

Wear safety globes to carry out these works. Do not attempt with bare hands.

2. A gap between the styrol and steel plate may cause a trouble such as condensation. Be sure to attach the attached heat insulator A first with it aligned to the screw hole, and then attach B, according to the right figure.
3. Install the auxiliary fresh air flange to the indoor unit main body with attached 4 fixing screws.



Dimension

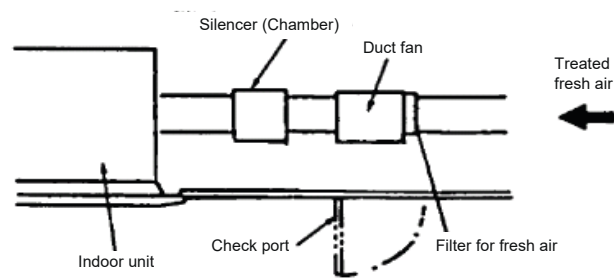


Installation status of indoor unit

Duct fan

In order to take fresh air, provide the duct fan separately.

1. Install the filter for fresh air
2. Provide the check port beneath the duct fan for maintenance.
3. Provide the silencer to prevent the effect of noise.



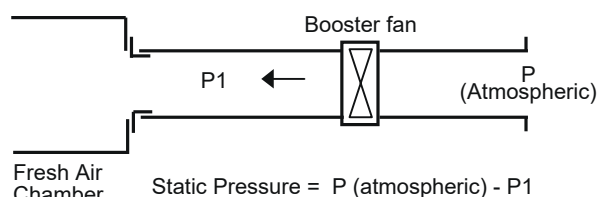
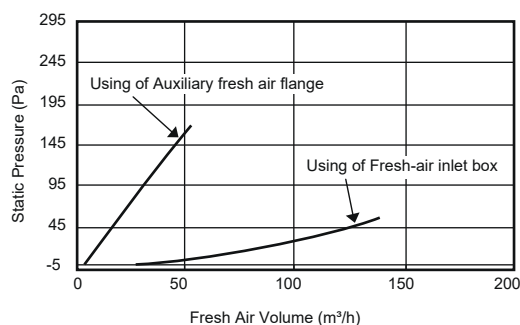
4. Fresh Air Intake

Usage

Fresh air is taken by using Fresh-air chamber and Fresh-air inlet box. And also is subsidiarily taken by using Auxiliary fresh air flange through the knock-out hole of the indoor unit body.

Caution

1. Be sure to provide air return.
2. The fresh air shall be treated by heat reclaim ventilator or the like.
3. Recommended treated air temperature is 12 °C to 30 °C.
4. Be sure to decide the fresh air volume so that mixed suction air with fresh air keep operating temperature.
Provide an air filter in fresh air way to prevent sucking dust.
5. Be sure to insulate the fresh air duct.
In order to accelerate starting up in heating mode, implement pre-heating operation by cutting off Fresh Air Intake.
6. The operating sound might increase when fresh air intake.



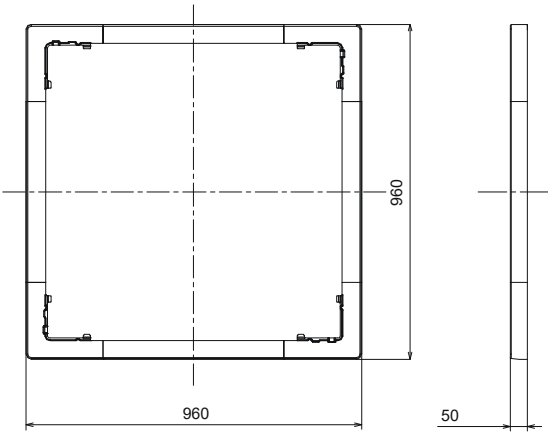
Characteristics between air volume of branching duct and static pressure

Following fresh air intake ratio is available by using the booster fan.

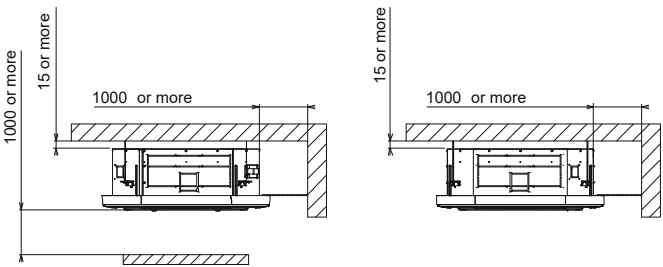
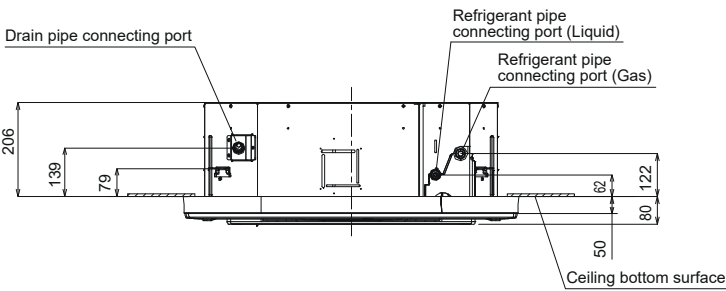
1. Fresh-air inlet box with Fresh-air chamber.
By using duct fan (local procurement), it is available to inlet up to 110 m³/h and 5% of rated air volume.
2. Auxiliary fresh air flange through the knock-out hole of the indoor unit body.
By using duct fan (local procurement), it is available to inlet up to 30 m³/h and 2% of rated air volume.

5. Spacer for height adjustment (TCB-SP1602UE)

Unit : mm

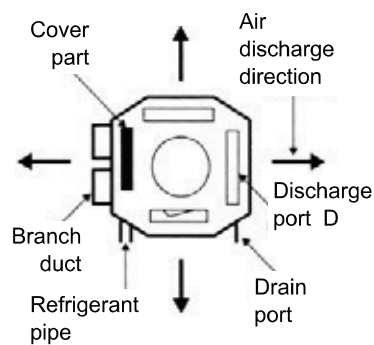


Material : Styrene foam
Color : Moon white



Space required for installation

6. Air discharge direction kit (TCB-BC1602UE)



Limited models only				
3-way air flow				
	Available for all models	Available for all models	Available only for 56 to 80 type	Available only for 110 to 160 type
2-way air flow				
	Available for all models	Available for all models	Available for all models	

2-2. Compact 4-way 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)

Accessories

2-2-1. Specifications

Compact 4-way Type

Triple system : Single phase model

Model		Indoor unit 1		RAV-HM561MUTP-E / TR		
		Indoor unit 2		RAV-HM561MUTP-E / TR		
		Indoor unit 3		RAV-HM561MUTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	23.27 - 21.33	
		Power consumption		(kW)	4.96	
		Power factor		(%)	94	
		EER			2.82	
		PdesignC			14.0	
		SEER			5.10	
	Heating	Running current		(A)	21.99 - 20.15	
		Power consumption		(kW)	4.69	
		Power factor		(%)	94	
		COP			3.41	
		PdesignH (Tbiv-7°C)			8.00	
SCOP			4.00			
		Maximum current	(A)	29.0		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		RBC-UM21P-E , RBC-UM21PB-E	
			Panel color		Gran White (Munsell 5PB9 / 1) , Black 3 C	
Outer dimension		Main unit	Height	(mm)	256	
			Width	(mm)	575	
			Depth	(mm)	575	
		Ceiling panel (Sold separately)	Height	(mm)	12	
			Width	(mm)	620	
			Depth	(mm)	620	
Total weight		Main unit		(kg)	16.0	
		Ceiling panel (Sold separately)		(kg)	2.5	
Fan unit		Fan		Turbo fan		
		Standard air flow	H/M+/M/L+/L	(m³/h)	798 / 720 / 672 / 562 / 546	
		Motor		(W)	60	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M+/M/L+/L	(dB)	44 / 42 / 39 / 36 / 35	
Sound power level			H/M+/M/L+/L	(dB)	59 / 57 / 54 / 51 / 50	
Connecting pipe		Drain port		VP20		

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 35°C DB

Compact 4-way Type

Triple system : Three phase model

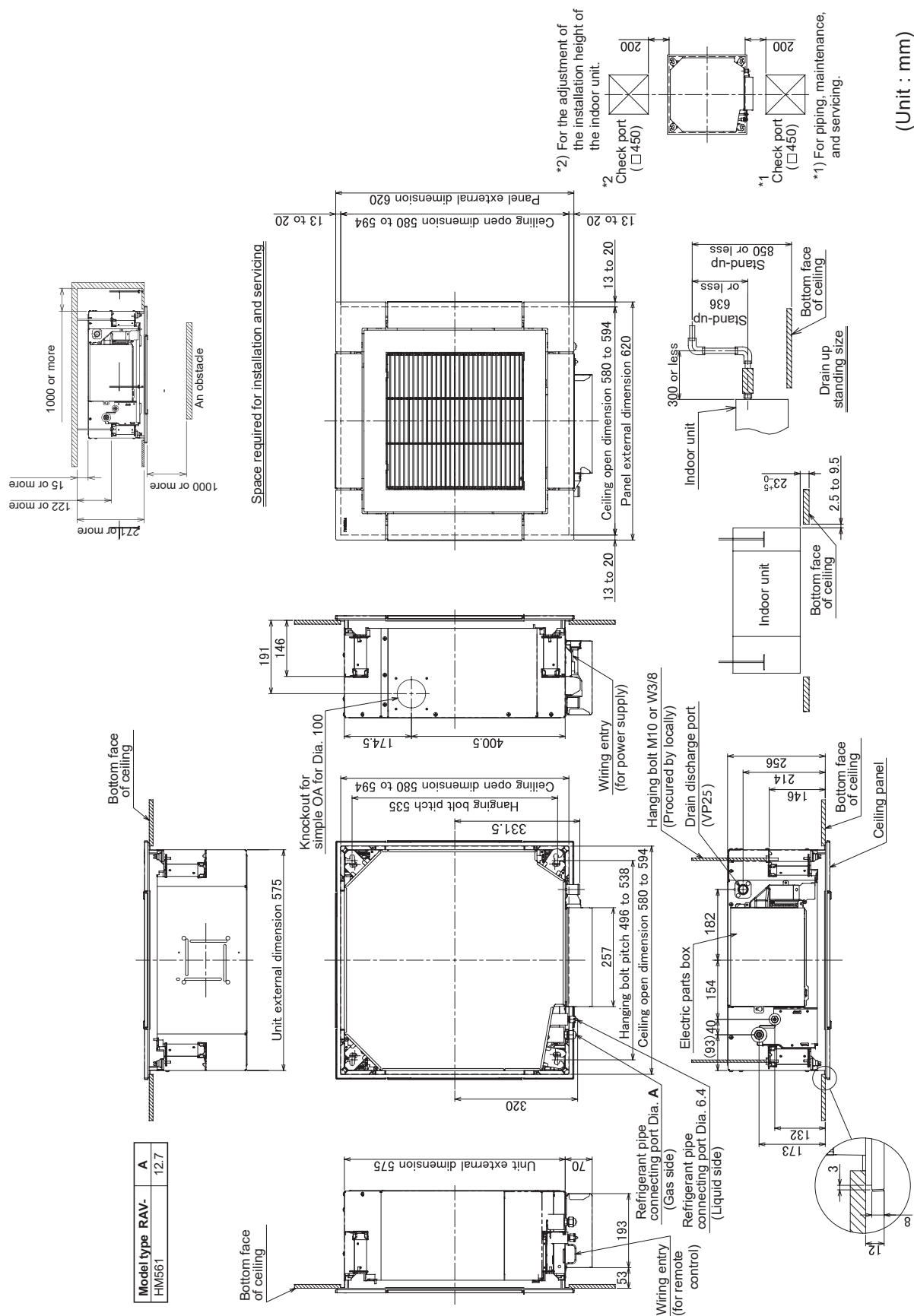
Model		Indoor unit 1		RAV-HM561MUTP-E / TR		
		Indoor unit 2		RAV-HM561MUTP-E / TR		
		Indoor unit 3		RAV-HM561MUTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	8.03 - 7.35	
		Power consumption		(kW)	4.96	
		Power factor		(%)	94	
		EER			2.82	
		PdesignC			14.0	
		SEER			5.10	
	Heating	Running current		(A)	7.58 - 6.94	
		Power consumption		(kW)	4.69	
		Power factor		(%)	94	
		COP			3.41	
		PdesignH (Tbiv-7°C)			8.00	
		SCOP			4.00	
				Maximum current	(A)	29.0
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		RBC-UM21P-E , RBC-UM21PB-E	
			Panel color		Gran White (Munsell 5PB9 / 1) , Black 3 C	
Outer dimension		Main unit		Height	(mm)	256
				Width	(mm)	575
				Depth	(mm)	575
		Ceiling panel (Sold separately)		Height	(mm)	12
				Width	(mm)	620
				Depth	(mm)	620
Total weight		Main unit		(kg)	16.0	
		Ceiling panel (Sold separately)		(kg)	2.5	
Fan unit		Fan		Turbo fan		
		Standard air flow	H/M+/M/L+/L	(m³/h)	798 / 720 / 672 / 562 / 546	
		Motor		(W)	60	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level				H/M+/M/L+/L	(dB)	44 / 42 / 39 / 36 / 35
Sound power level				H/M+/M/L+/L	(dB)	59 / 57 / 54 / 51 / 50
Connecting pipe		Drain port		VP20		

Note :

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

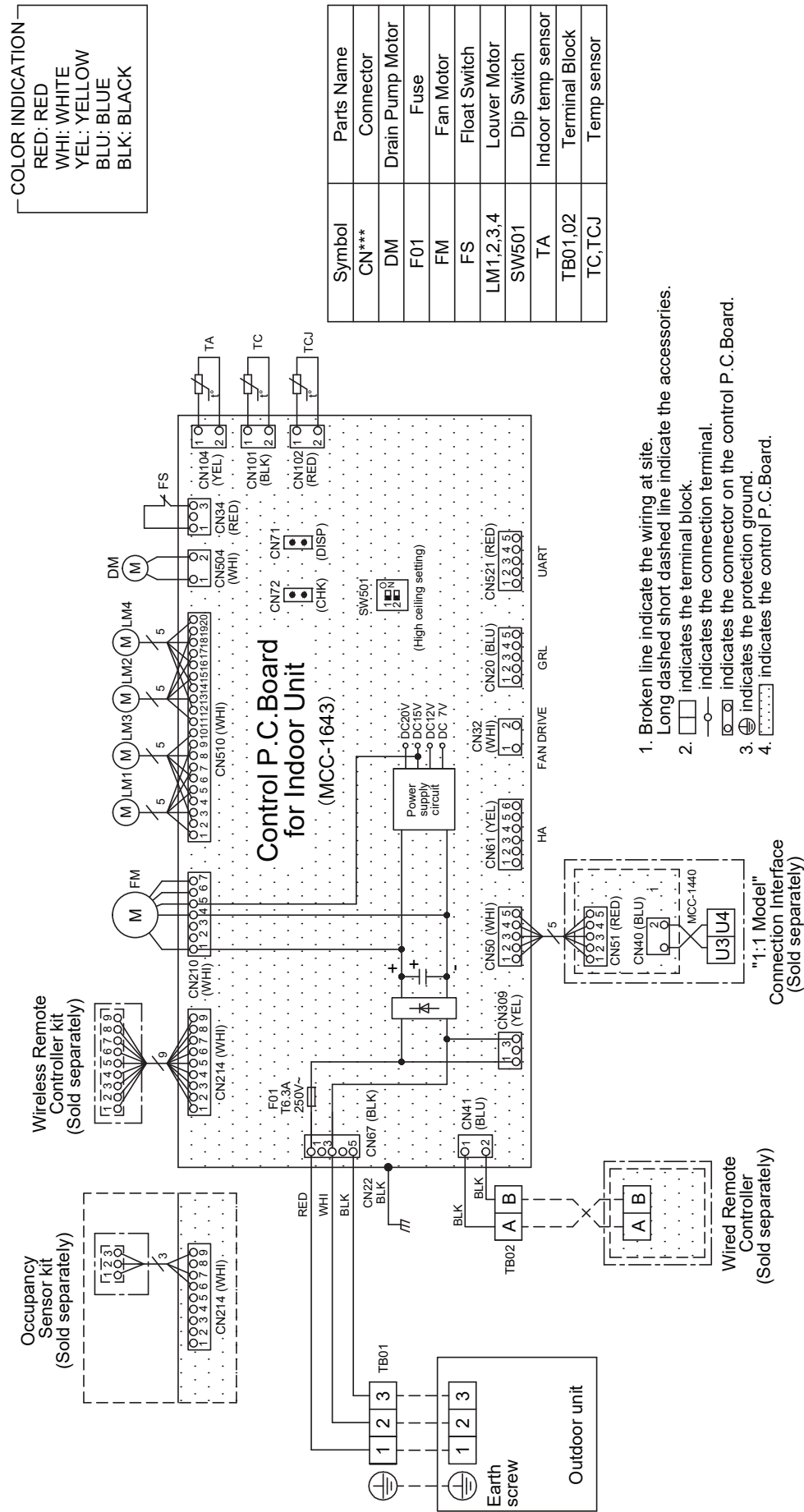
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 35°C DB

2-2-2. Dimension

RAV-HM561MUTP-E / TR

2-2-3. Wiring Diagrams

RAV-HM561MUTP-E / TR



2-2-4. Sensible Capacity Table

RAV-HM561MUTP-E / TR (Triple) ; RAV-GP160AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

Standard Condition

Indoor	27.0 °C DB / 19.0 °C WB
Outdoor	35.0 °C DB / 24.0 °C WB

Specification of product at standard condition.

Total Cooling Capacity (TC)	5.00 kW
Sensible Heat Capacity (SHC)	4.05 kW

Outdoor air temp. °C DB	Indoor Air temperature																	
	14.0 °C WB		15.0 °C WB		16.0 °C WB		17.0 °C WB		18.0 °C WB		19.0 °C WB		20.0 °C WB		22.0 °C WB		24.0 °C WB	
	20.0 °C DB		21.0 °C DB		23.0 °C DB		24.0 °C DB		26.0 °C DB		27.0 °C DB		28.0 °C DB		30.0 °C DB		32.0 °C DB	
	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10.0	4.83	4.20	5.00	4.30	5.33	4.48	5.46	4.58	5.71	4.77	5.88	4.76	6.05	4.76	6.40	4.72	6.70	4.63
12.0	4.79	4.17	4.96	4.27	5.29	4.45	5.41	4.54	5.66	4.73	5.83	4.72	6.00	4.72	6.35	4.68	6.64	4.60
14.0	4.75	4.13	4.91	4.23	5.24	4.41	5.37	4.50	5.61	4.69	5.78	4.68	5.94	4.68	6.30	4.64	6.58	4.56
16.0	4.70	4.09	4.87	4.19	5.19	4.37	5.32	4.46	5.56	4.64	5.72	4.64	5.89	4.64	6.24	4.60	6.52	4.51
18.0	4.65	4.05	4.82	4.15	5.14	4.32	5.26	4.41	5.50	4.60	5.67	4.59	5.83	4.59	6.17	4.55	6.45	4.47
20.0	4.60	4.01	4.76	4.10	5.08	4.27	5.20	4.36	5.44	4.54	5.60	4.54	5.76	4.54	6.10	4.50	6.38	4.42
21.0	4.57	3.98	4.73	4.08	5.05	4.25	5.17	4.34	5.41	4.52	5.57	4.51	5.73	4.51	6.07	4.47	6.35	4.39
23.0	4.52	3.93	4.68	4.02	4.99	4.20	5.11	4.29	5.34	4.46	5.50	4.46	5.66	4.45	5.99	4.42	6.27	4.34
25.0	4.46	3.88	4.61	3.97	4.92	4.14	5.04	4.23	5.27	4.40	5.43	4.40	5.58	4.40	5.91	4.36	6.18	4.28
27.0	4.39	3.83	4.55	3.92	4.85	4.08	4.97	4.17	5.20	4.34	5.35	4.33	5.50	4.33	5.83	4.30	6.10	4.22
29.0	4.33	3.77	4.48	3.86	4.78	4.02	4.89	4.11	5.12	4.27	5.27	4.27	5.42	4.27	5.74	4.23	6.00	4.15
31.0	4.26	3.71	4.41	3.79	4.70	3.96	4.81	4.04	5.04	4.21	5.18	4.20	5.33	4.20	5.65	4.16	5.91	4.09
33.0	4.19	3.64	4.33	3.73	4.62	3.89	4.73	3.97	4.95	4.13	5.10	4.13	5.24	4.13	5.55	4.09	5.81	4.02
35.0	4.11	3.58	4.25	3.66	4.54	3.81	4.64	3.90	4.86	4.06	5.00	4.05	5.14	4.05	5.45	4.02	5.70	3.94
37.0	4.03	3.51	4.17	3.59	4.45	3.74	4.56	3.82	4.77	3.98	4.91	3.97	5.05	3.97	5.34	3.94	5.59	3.87
39.0	3.95	3.44	4.08	3.52	4.36	3.67	4.46	3.74	4.67	3.90	4.80	3.89	4.94	3.89	5.23	3.86	5.47	3.79
40.0	3.90	3.40	4.04	3.48	4.31	3.63	4.41	3.70	4.62	3.85	4.75	3.85	4.89	3.85	5.18	3.82	5.41	3.75
42.0	3.82	3.32	3.95	3.40	4.21	3.54	4.31	3.62	4.51	3.77	4.65	3.76	4.78	3.76	5.06	3.73	5.29	3.66
43.0	3.77	3.28	3.90	3.36	4.16	3.50	4.26	3.58	4.46	3.72	4.59	3.72	4.72	3.72	5.00	3.69	5.23	3.62
45.0	3.68	3.20	3.81	3.28	4.06	3.42	4.16	3.49	4.35	3.63	4.48	3.63	4.61	3.63	4.88	3.60	5.10	3.53
46.0	3.63	3.16	3.76	3.23	4.01	3.37	4.10	3.44	4.29	3.58	4.42	3.58	4.55	3.58	4.81	3.55	5.04	3.48

2-2-5. Part Load Performance

Combination

Indoor Unit : RAV-HM561MUTP-E / TR (x3)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RA V-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4965	16000	4692

Q: Capacity in W

W: Power Consumption in W

Cooling

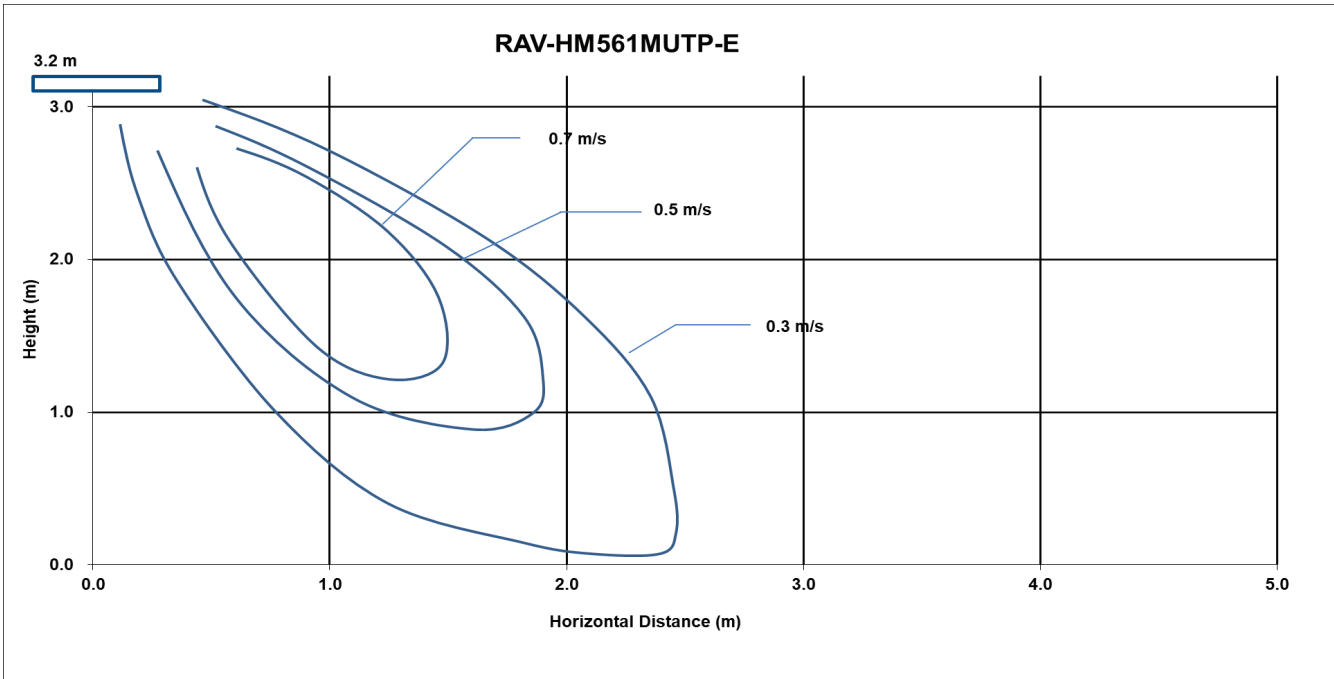
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11440	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5470	5000	4140	3360	2660	2040	1510	1070	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5490	4610	3810	3090	2450	1880	1390	980	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5030	4220	3490	2840	2250	1720	1280	900	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4965	4170	3450	2800	2220	1700	1260	890	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3620	3040	2520	2040	1620	1240	920	650	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2980	2500	2070	1680	1330	1020	760	530	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2380	2000	1660	1340	1070	820	600	430	310	310

Heating

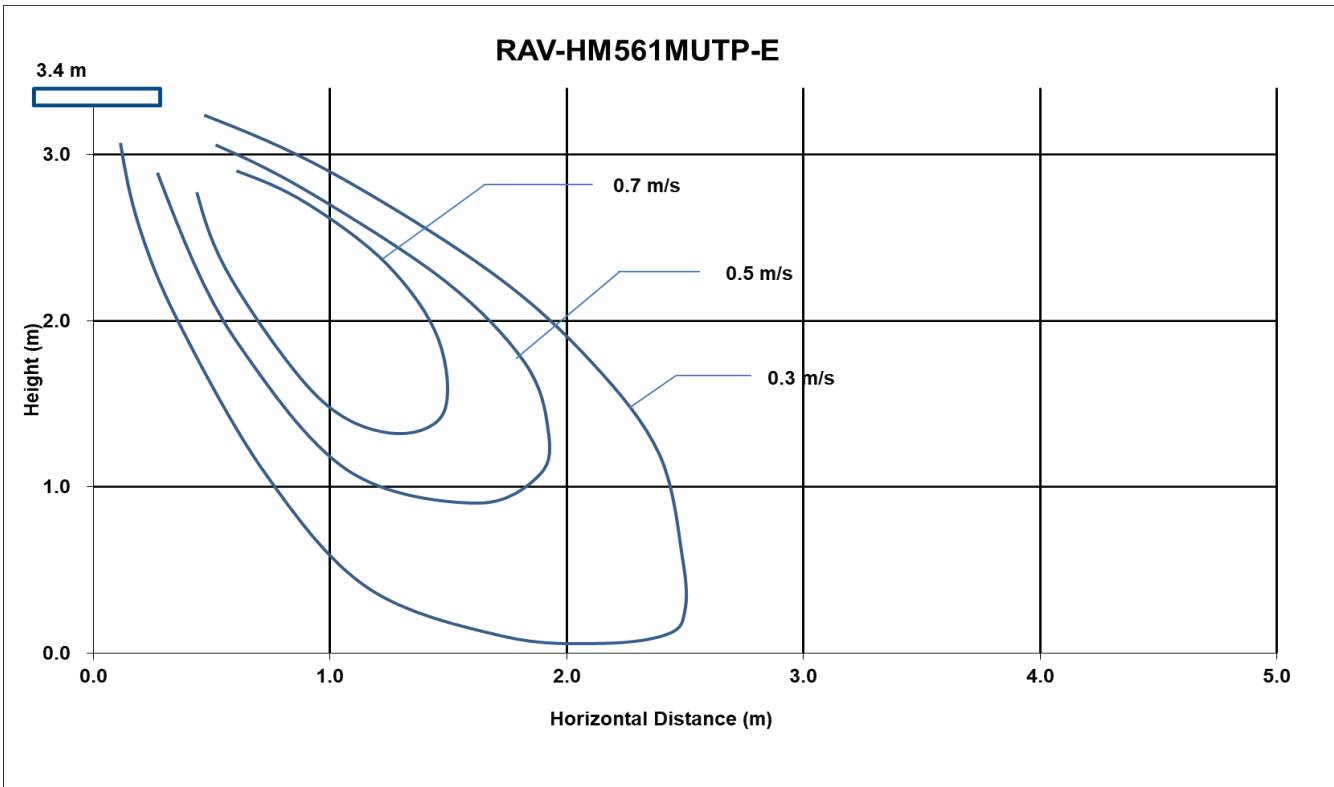
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5180	4360	3610	2950	2350	1830	1380	1020	720	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4910	4140	3420	2800	2230	1740	1310	960	680	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4692	3950	3270	2670	2130	1660	1250	920	650	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4550	3830	3170	2590	2060	1610	1210	890	630	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4320	3640	3010	2460	1960	1530	1150	850	600	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3830	3230	2670	2180	1740	1360	1020	750	530	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3750	3160	2620	2140	1700	1330	1000	740	520	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3720	3130	2590	2110	1690	1310	990	730	510	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3540	2980	2470	2010	1610	1250	940	690	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3320	2790	2310	1890	1510	1170	880	650	460	460

2-2-6. Air Throw Distance Chart

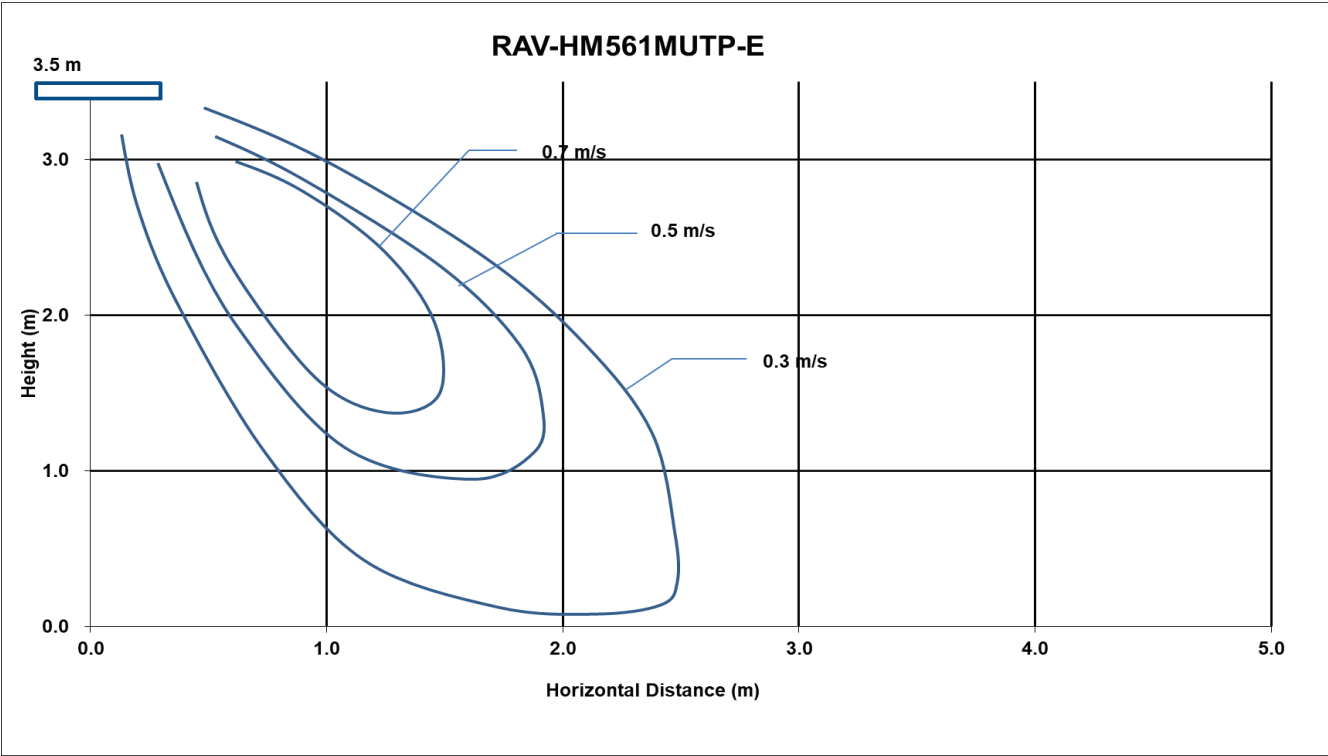
RAV-HM561MUTP-E / TR



RAV-HM561MUT-E / TR (High Ceiling mode 1)



RAV-HM561MUT-E / TR (High Ceiling mode 3)

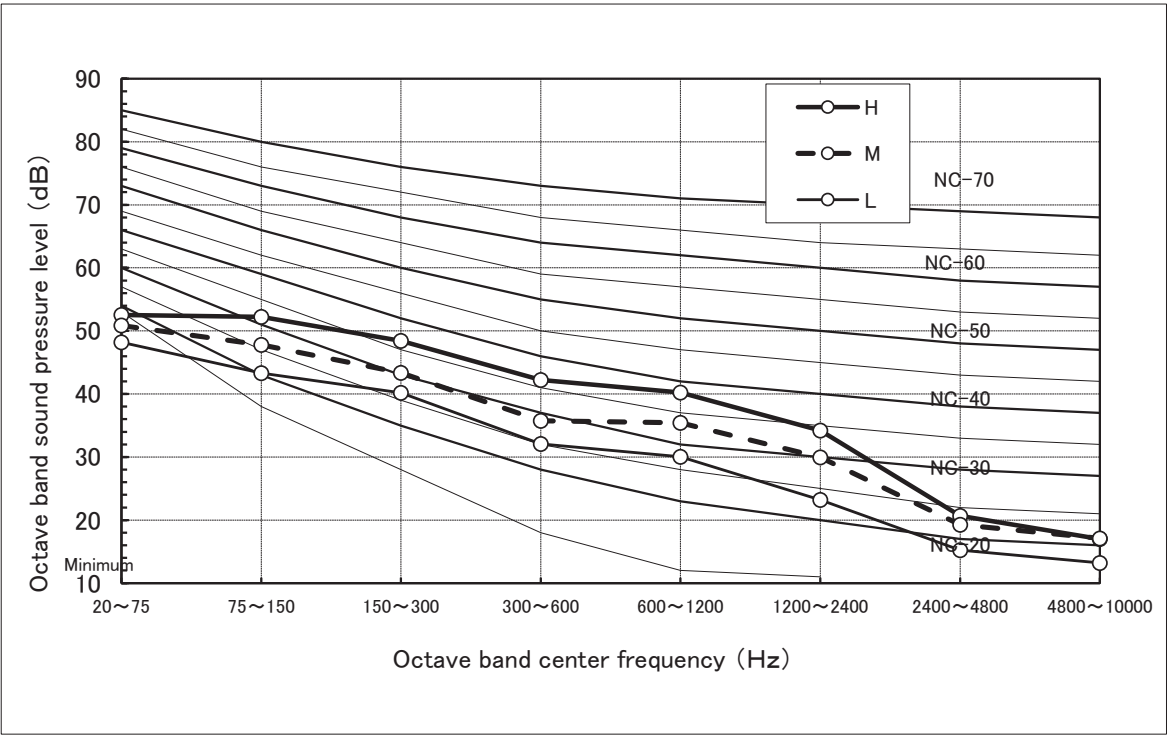


2-2-7. Sound characteristics (NC curve)

RAV-HM561MUTP-E/TR

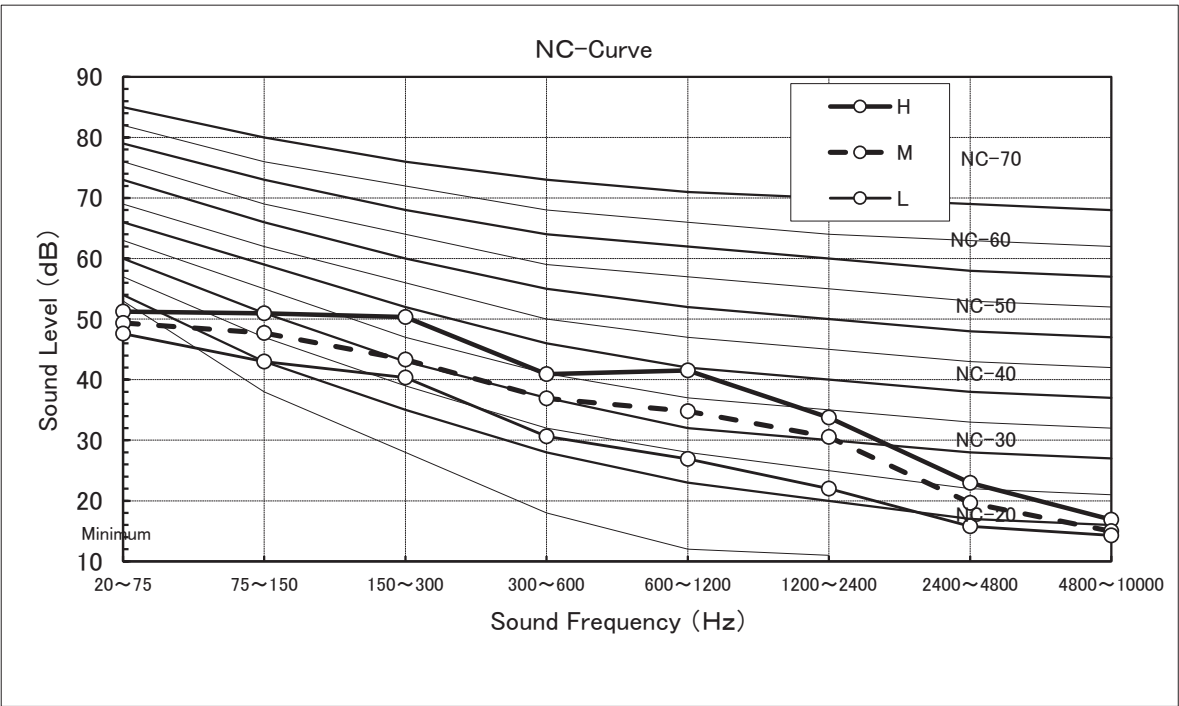
Cooling

Specification (dB)			
Fan tap	H	M	L
Sound pressure level (dB(A))	44	39	35

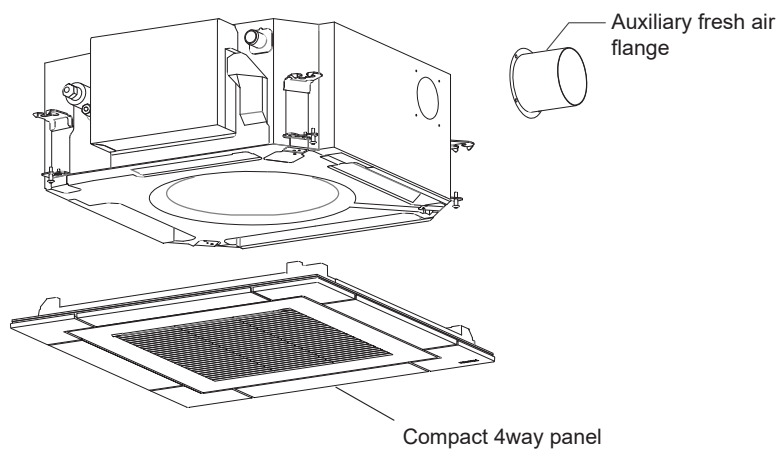


Heating

Specification (dB)			
Fan tap	H	M	L
Sound pressure level (dB(A))	44	39	35



Accessories



Compact 4way panel

RBC-UM21P-E



(White)

RBC-UM21PB-E



(Black)

No	Type	Model Name	Qty/unit
1	1.1 Compact 4way panel (White)	RBC-UM21P-E	1
	1.2 Compact 4way panel (Black)	RBC-UM21PB-E	1
2	Auxiliary fresh air flange	TCB-FF101URE2	1
3	Wireless RC (White)	RBC-AXU31UMP-E	1
	Wireless RC (Black)	RBC-AXU31UMPB-E	1
	Occupancy sensor kit	TCB-SIR41UMP-E	1
	3.2 Standard wired remote controller	RBC-ASCU11-E	1
	3.3 Wired remote controller	RBC-AMTU31-E	1
	Premium wired remote controller with bluetooth	RBC-AWSU52-E	1
	Premium wired remote without bluetooth	RBC-AMSU52-E	1

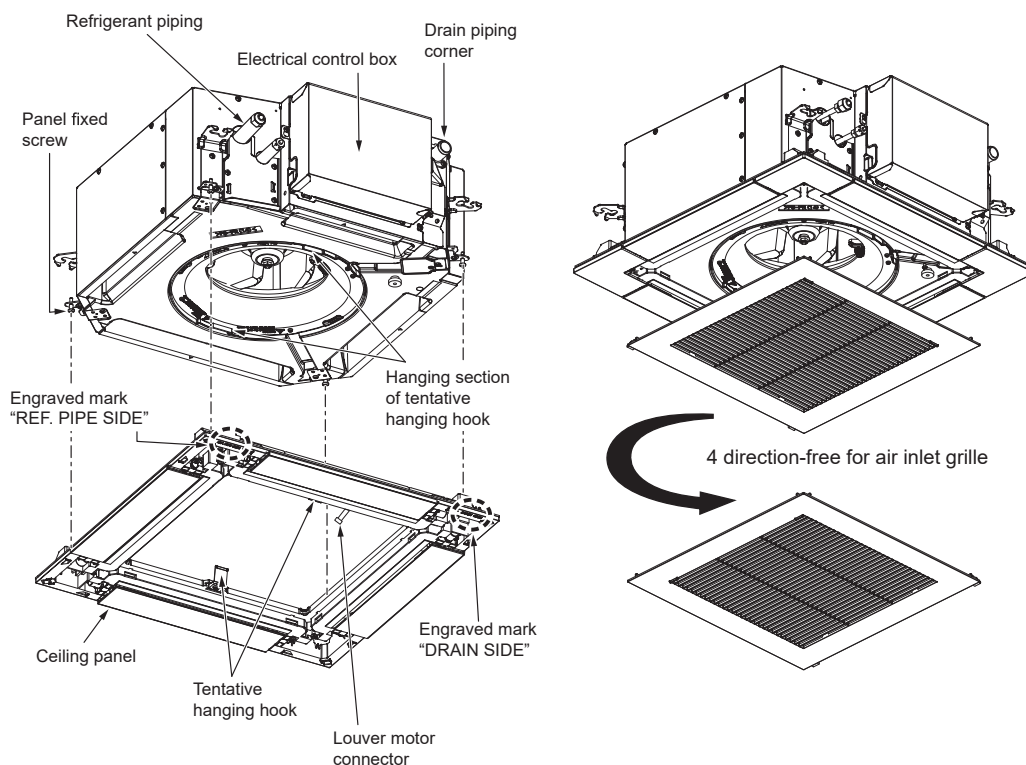
Combination pattern

		Compact 4way panel (White) RBC-UM21P-E	Compact 4way panel (Black) RBC-UM21PB-E	Wireless RC (White) RBC-AXU31UMP-E	Wireless RC (Black) RBC-AXU31UMPB-E	Occupancy sensor kit TCB-SIR41UMP-E	Standard wired remote controller RBC-ASCU11-E	Wired remote controller RBC-AMTU31-E	Premium wired remote controller with bluetooth RBC-AWSU52-E	Premium wired remote without bluetooth RBC-AMSU52-E	Auxiliary fresh air flange TCB-FF101URE2
Ceiling Panel	Compact 4way panel (White)	RBC-UM21P-E		OK		OK	OK	OK	OK	OK	OK
	Compact 4way panel (Black)	RBC-UM21PB-E			OK		OK	OK	OK	OK	OK
Wireless RC (White)		RBC-AXU31UMP-E	OK			OK	OK	OK	OK	OK	OK
Wireless RC (Black)		RBC-AXU31UMPB-E		OK			OK	OK	OK	OK	OK
Occupancy sensor kit		TCB-SIR41UMP-E	OK		OK		OK	OK	OK	OK	OK
Standard wired remote controller		RBC-ASCU11-E	OK	OK	OK	OK		OK	OK	OK	OK
Wired remote controller		RBC-AMTU31-E	OK	OK	OK	OK	OK		OK	OK	OK
Premium wired remote controller with bluetooth		RBC-AWSU52-E	OK	OK	OK	OK	OK	OK		OK	OK
Premium wired remote without bluetooth		RBC-AMSU52-E	OK	OK	OK	OK	OK	OK	OK		OK
Auxiliary fresh air flange		TCB-FF101URE2	OK	OK	OK	OK	OK	OK	OK	OK	

Appendix

1. Ceiling Panel

1.1 Compact 4way panel (white) : RBC-UM21P-E



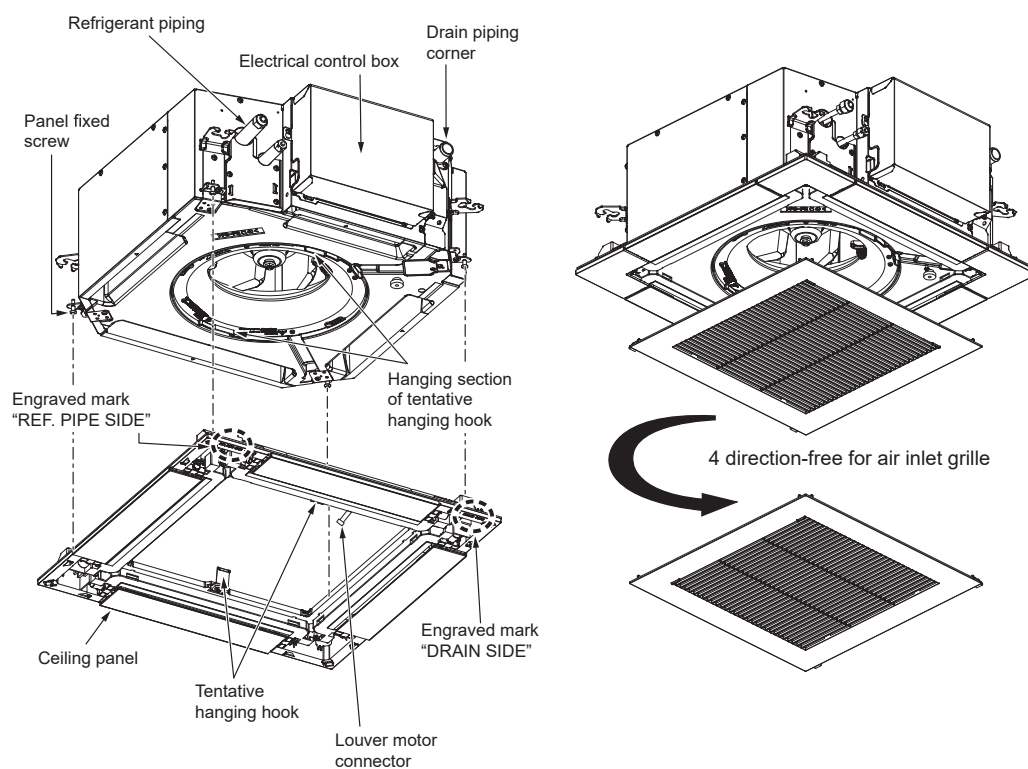
Wireless RC (White) : TCB-AXU31UMP-E



Occupancy sensor kit : TCB-SIR41UMP-E



1.2 Compact 4way panel (Black) : RBC-UM21PB-E



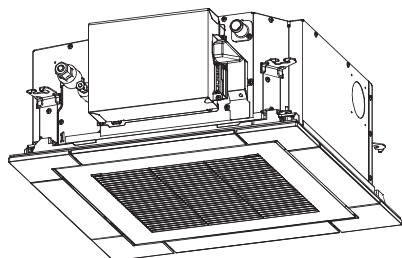
Wireless RC (Black) : TCB-AXU31UMPB-E



2.Auxiliary fresh air flange : TCB-FF101URE2

Installation

1. Using the knockout of the indoor unit main body, as a marker, cut off the flange with the heat insulator (styrol) with cutting pliers or cutter.

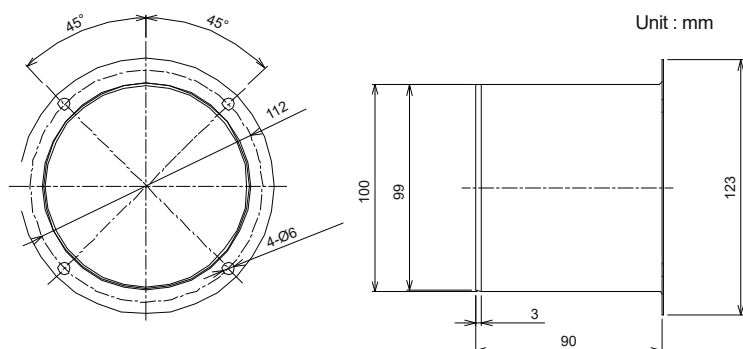


NOTE

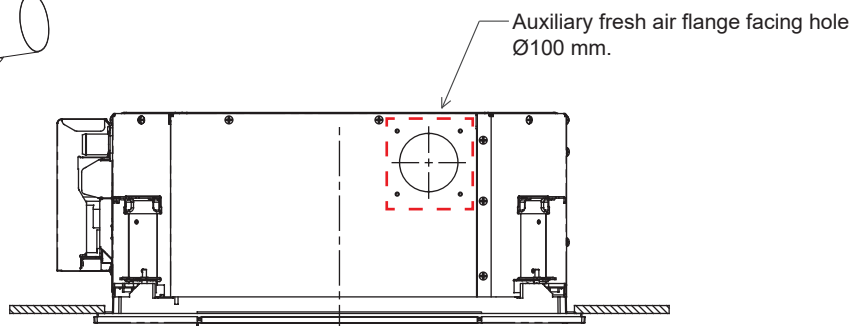
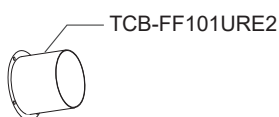
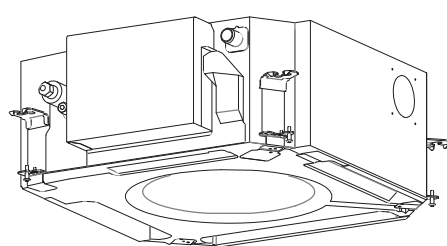
When cutting off the styrol inside, be careful not to insert the cutter blade deeper than 30 mm. (Damage to the drain pan inside can cause water leakage.) Wear safety globes to carry out these works. Do not attempt with bare hands.

2. A gap between the styrol and steel plate may cause a trouble such as condensation. Be sure to attach the attached heat insulator A first with it aligned to the screw hole, and then attach B, according to the right figure.
3. Install the auxiliary fresh air flange to the indoor unit main body with attached 4 fixing screws.

Dimension



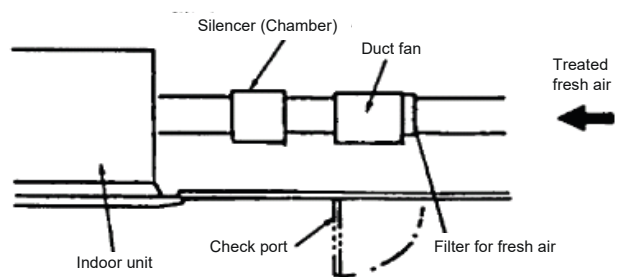
Installation



Duct fan

In order to take fresh air, provide the duct fan separately.

1. Install the filter for fresh air
2. Provide the check port beneath the duct fan for maintenance.
3. Provide the silencer to prevent the effect of noise.



Caution

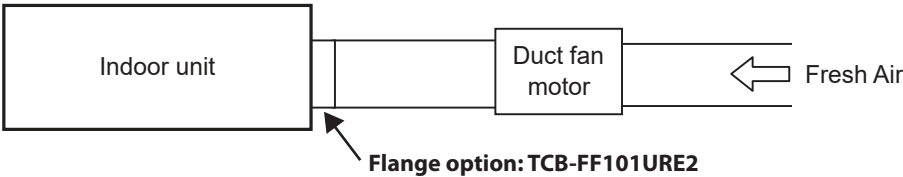
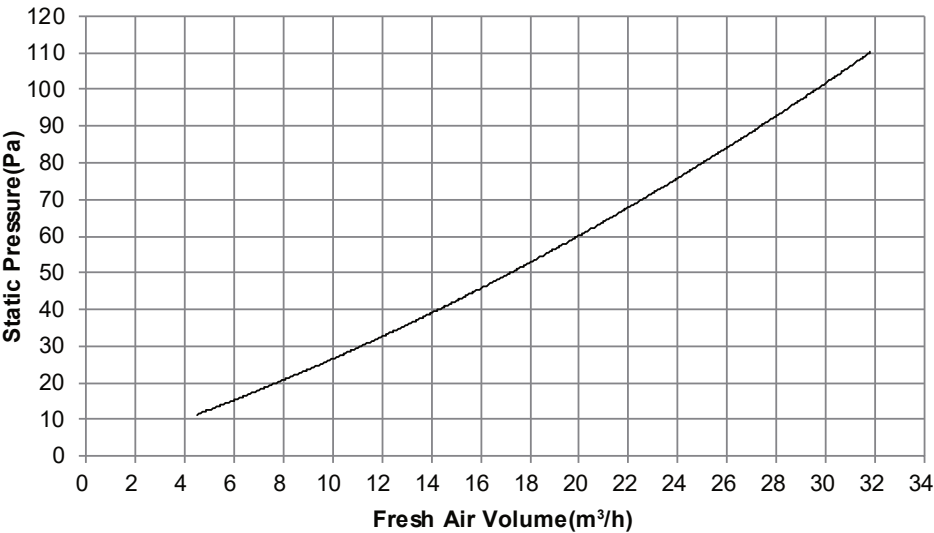
The fresh air shall be conditioned by a heat reclaim ventilator or similar.
Ensure the fresh air volume is determined so that mixed suction air and fresh air can maintain the operating temperature.

*1. Recommended conditioned air temperature is 12 °C to 30 °C.

However, Make a fresh air volume within 2% of standard.

Model name		RAV-HM561MUTP-E
Standard air flow	m³/h	798

Install a filter within the fresh air duct.
(Fresh air does not pass through the filter of Indoor unit.)
Insulate the fresh air duct.
Electrically connect the fan of the Heat exchanger unit and the Indoor unit to a single isolator.

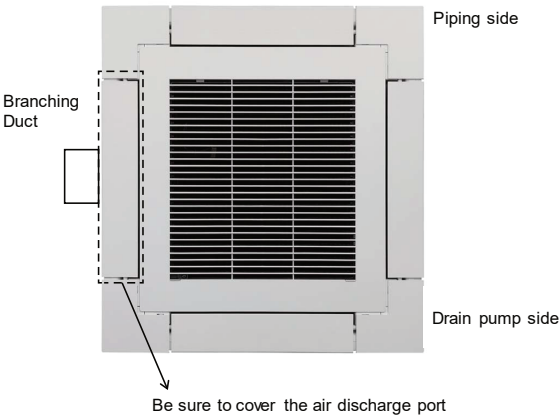
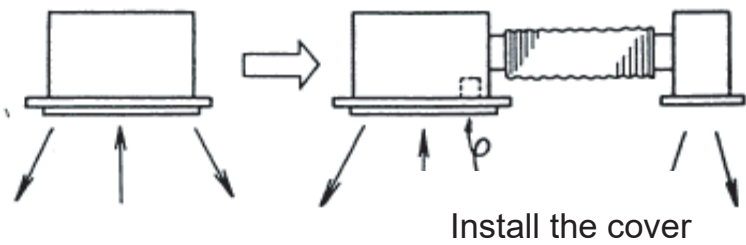


Inter - lock circuit

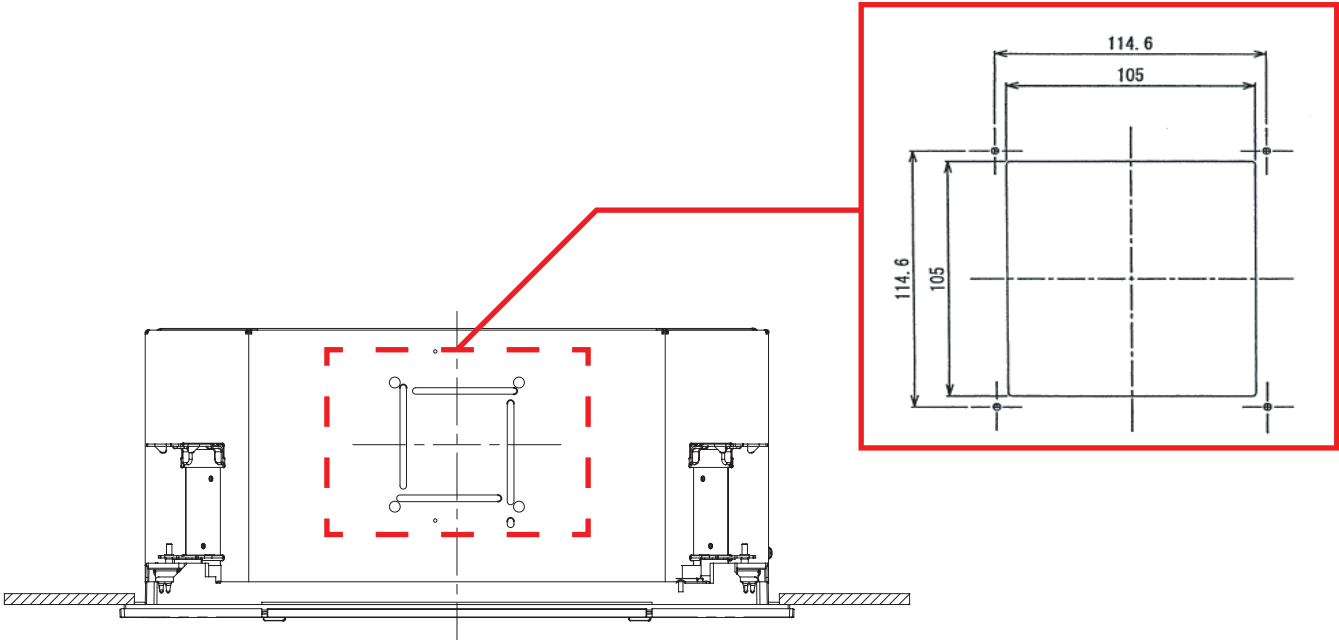
Connect the driving relay of the duct fan(DC 12V) between 1 and 6 on the indoor P.C. board.
(Rated current of the relay for duct fan should be up to 75mA.)
After installation, carry out a test run to check that the duct fan of the indoor unit start/stop simultaneously.
(Carry out the test run following the installation manual of the indoor unit.)

Branching duct (design guide)

Cover method

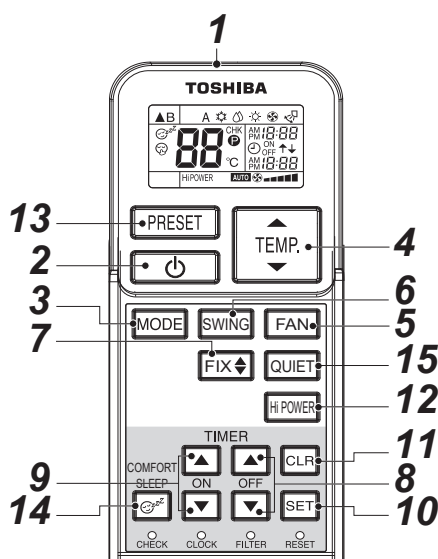


Dimension



3. Remote controller

3.1 Wireless RC (White / Black) : RBC-AXU31UMP-E / RBC-AXU31UMPB-E



1 Infrared signal emitter

Transmits a signal to the indoor unit.

2 START/STOP button

Press the button to start operation.

(A receiving beep is heard.)

Press the button again to stop operation.

(A receiving beep is heard.)

If no receiving sound is heard from the indoor unit, press the button twice.

3 Mode select button (MODE)

Press this button to select a mode.

Each time you press the button, a mode is selected in a sequence that goes from A : Auto, ☀ : Cool, 💧 : Dry, ☀ : Heat, 🌀 : Fan only, and back to A. (A receiving beep is heard.)

4 Temperature button (TEMP.)

TEMP. The set temperature is increased up to 30°C.

TEMP. The set temperature is dropped down to 17°C. (A receiving beep is heard.)

5 Fan speed button (FAN)

Press this button to select fan speed.

When you select AUTO, the fan speed is automatically adjusted according to the room temperature.

You can also manually select the desired fan speed from among five settings.

(LOW ■, LOW+ ■■, MED ■■■, MED+ ■■■■, HIGH ■■■■■)

(A receiving beep is heard.)

6 Auto louver button (SWING)

Press this button to swing the louver.

(A receiving beep is heard.)

Press the SWING button to stop the louver swinging.

(A receiving beep is heard.)

7 Set louver button (FIX)

Press this button to adjust the airflow direction.

(A receiving beep is heard.) While this FIX button is kept depressed, the receiving tone continuously sounds.

8 Off timer button (OFF)

Press this button to set the OFF timer.

9 On timer button (ON)

Press this button to set the ON timer.

10 Reserve button (SET)

Press this button to reserve time settings.

(A receiving beep is heard.)

11 Cancel button (CLR)

Press this button to cancel ON timer and

OFF timer.

(A receiving beep is heard.)

12 High power button (Hi POWER)

Press this button to start the high power operation.

This function is not operated group control.

13 PRESET button

Press this button to change the operation mode to the preferred operation mode memorized previously. To memorize the operation mode, press this button for at least 3 seconds during the preferred operation mode. P is displayed and the operation mode is memorized.

14 COMFORT SLEEP button

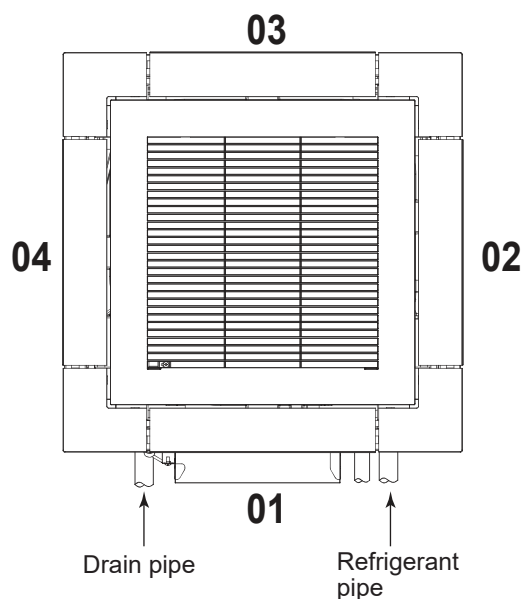
Press this button to start the OFF timer operation that automatically adjusts the room temperature and the fan speed. You can select the OFF timer time from four durations (1, 3, 5 or 9 hours). During group control operation, the set temperature and the fan speed are not automatically adjusted. Only off timer function is activated.

15 QUIET button

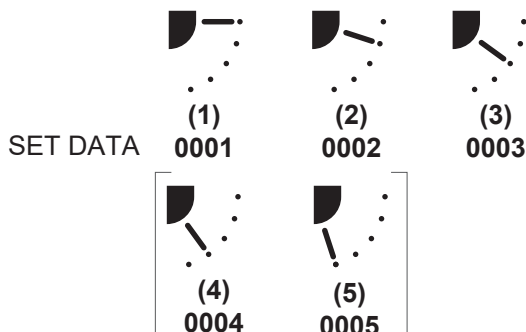
Press this button to start quiet operation.

Pressing this button again will restore normal operation.

Louvers position

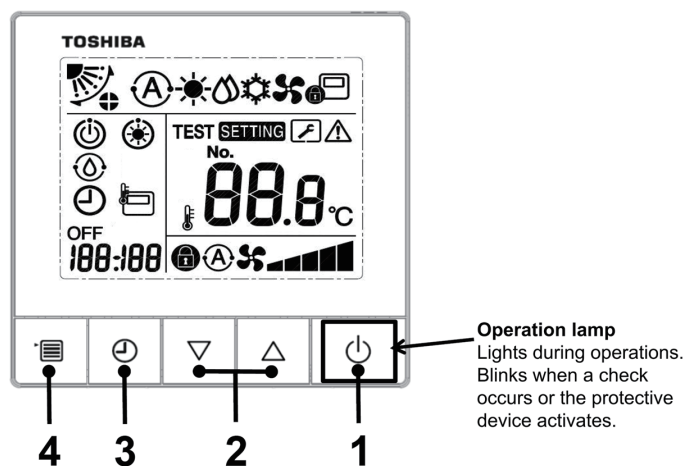


A position of the individual louvers (four directions) can be locked.



* When (4) or (5) is selected, dew drop may occur during cooling mode.

3.2 Standard wired remote controller : RBC-ASCU11-E



1 ON/OFF button

Press the button to turn on the air conditioner, and press the button again to turn off the air conditioner.

2 Setting button

It is used for temperature setting in general conditions. In running mode, fan speed mode and wind direction mode, it is used for the change of respective settings.

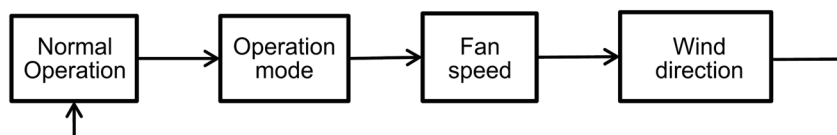
3 Timer off button

Set the timer off.

4 Menu button

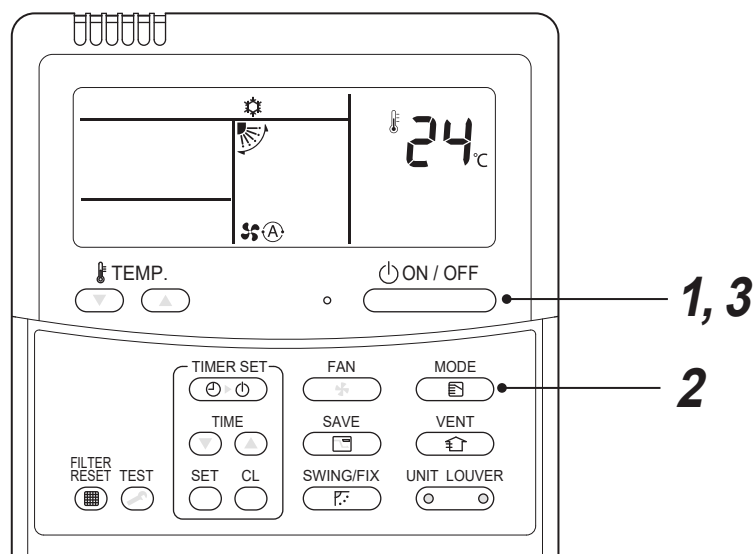
It is used for the selection of the running mode, fan speed and wind direction. Press of the button each time, then it will switch in the following order.

- In different modes of the indoor unit, the selection of fan speed or wind direction may be omitted.



3.3 Wired remote controller : RBC-AMTU31-E

■ Operations

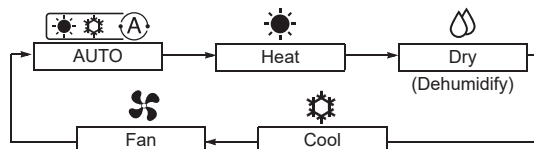


1 Push the button.

The operation lamp lights up.

2 Push the button to select a operation mode.

Each time you push the button, the operation mode and its icon change in the following order:



Depending on the type of unit connected, the operation modes that cannot be set will not be displayed.

3 Push the button to stop running.

The operation lamp turns off.

■ Changing the fan speed

Push the button to select a fan speed.

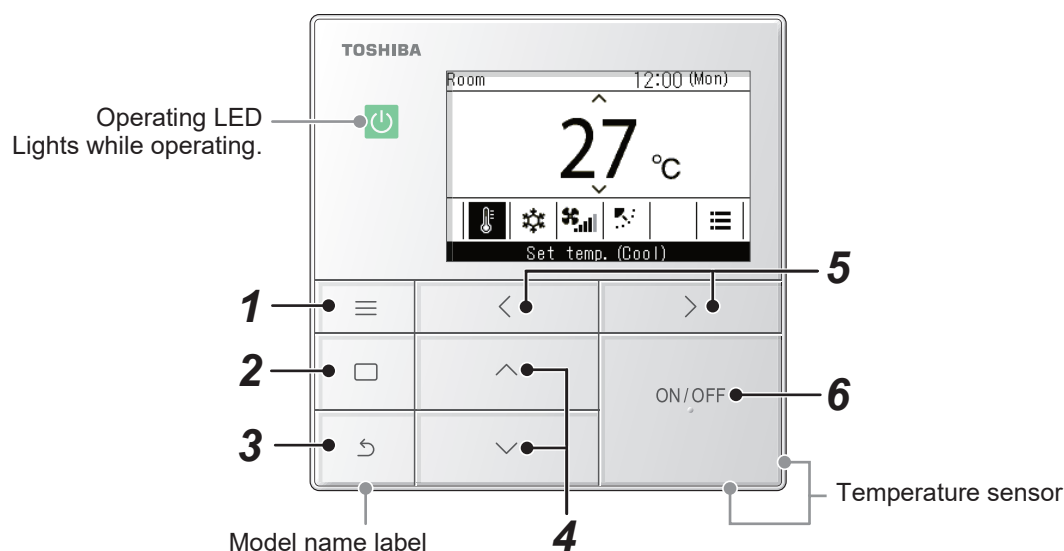
- Each time you push the button, fan speed and its indication change in the following order: (" Auto" cannot be selected in the FAN mode.)

* The available fan speeds vary depending on the indoor unit connected.



- The temperature sensor detects the return air temperature at the indoor unit, which may slightly differ from the actual room temperature depending on installation condition. Set temperature is a target of room temperature.

3.4 Premium wired remote controller with/without bluetooth : RBC-AWSU52-E / RBC-AMSU52-E



* The screens shown here are examples. The content that is displayed may differ, depending on the environment settings being used.

1 [≡ Menu] button

Shows the "Menu".
(Page 17)

2 [□ Set/Fix] button

Fixes and applies settings.
Ways to use it are shown on screen.

3 [↶ Return] button

Deletes selections.
Ways to use it are shown on screen.

4 [▲] and [▼] buttons

Changes settings and selects items.

5 [◀] and [▶] buttons

Selects setting items.
Other ways to use it are shown on screen.

6 [ON/OFF ON/OFF] button

Starts and stops connected devices.

2-3. Slim Duct 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. Fan Static Characteristics

2-3-7. Sound Characteristics (NC Curve)

2-3-1. Specifications

Slim Duct Type

Tripple system : Single phase model

Model		Indoor unit 1		RAV-HM561SDT-E / TR		
		Indoor unit 2		RAV-HM561SDT-E / TR		
		Indoor unit 3		RAV-HM561SDT-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	23.35 - 21.40	
		Power consumption		(kW)	4.98	
		Power factor		(%)	97	
		EER			2.81	
		PdesignC			14.0	
		SEER			5.10	
	Heating	Running current		(A)	21.99 - 20.15	
		Power consumption		(kW)	4.69	
		Power factor		(%)	97	
		COP			3.41	
		PdesignH(Tbiv-7°C)			8.00	
		SCOP			4.00	
		Maximum current	(A)	29.0		
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height	(mm)	210	
			Width	(mm)	845	
			Depth	(mm)	645	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	22	
		Ceiling panel (Sold separately)		(kg)	3.0	
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	780 / 678 / 582	
		Motor		(W)	60	
External static pressure		Standard (Upper - Lower)		(Pa)	29 (44-4)	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	45 / 40 / 36	
Sound power level			H/M/L	(dB)	60 / 55 / 51	
Connecting pipe		Drain port		VP25		

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 35°C DB

Slim Duct Type

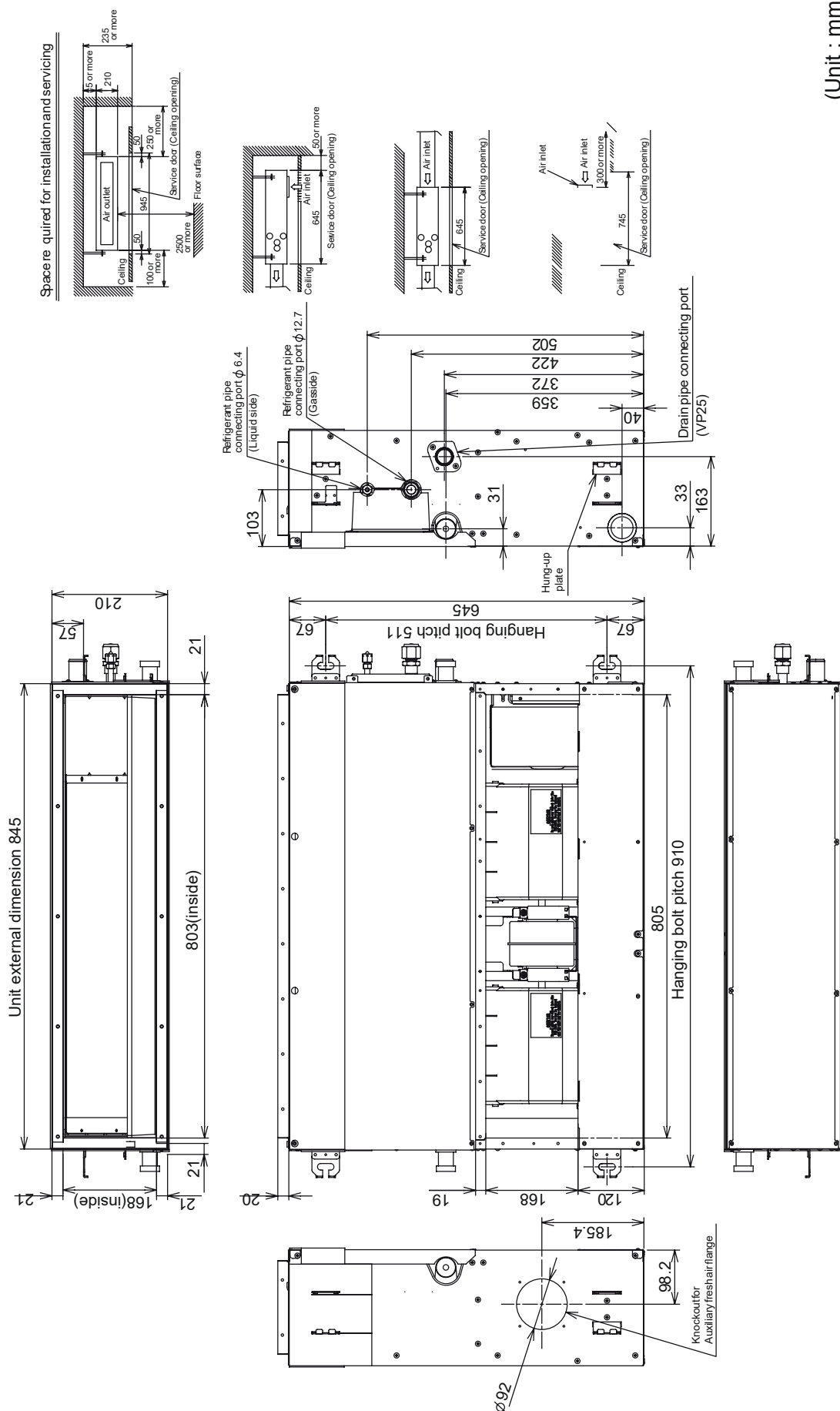
Tripple system : Three phase model

Model		Indoor unit 1		RAV-HM561SDT-E / TR		
		Indoor unit 2		RAV-HM561SDT-E / TR		
		Indoor unit 2		RAV-HM561SDT-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	8.05 - 7.37	
		Power consumption		(kW)	4.98	
		Power factor		(%)	94	
		EER			2.81	
		PdesignC			14.0	
		SEER			5.10	
	Heating	Running current		(A)	7.58 - 6.94	
		Power consumption		(kW)	4.69	
		Power factor		(%)	94	
		COP			3.41	
		PdesignH (Tbiv -7°C)			8.00	
		SCOP			4.00	
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model	-		
			Panel color	-		
Outer dimension		Main unit	Height	(mm)	210	
			Width	(mm)	845	
			Depth	(mm)	645	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	22	
		Ceiling panel (Sold separately)		(kg)	3.0	
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	780 / 678 / 582	
		Motor		(W)	60	
External static pressure		Standard (Upper - Lower)		(Pa)	29 (44-4)	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	45 / 40 / 36	
Sound power level			H/M/L	(dB)	60 / 55 / 51	
Connecting pipe		Drain port		VP25		

Note :

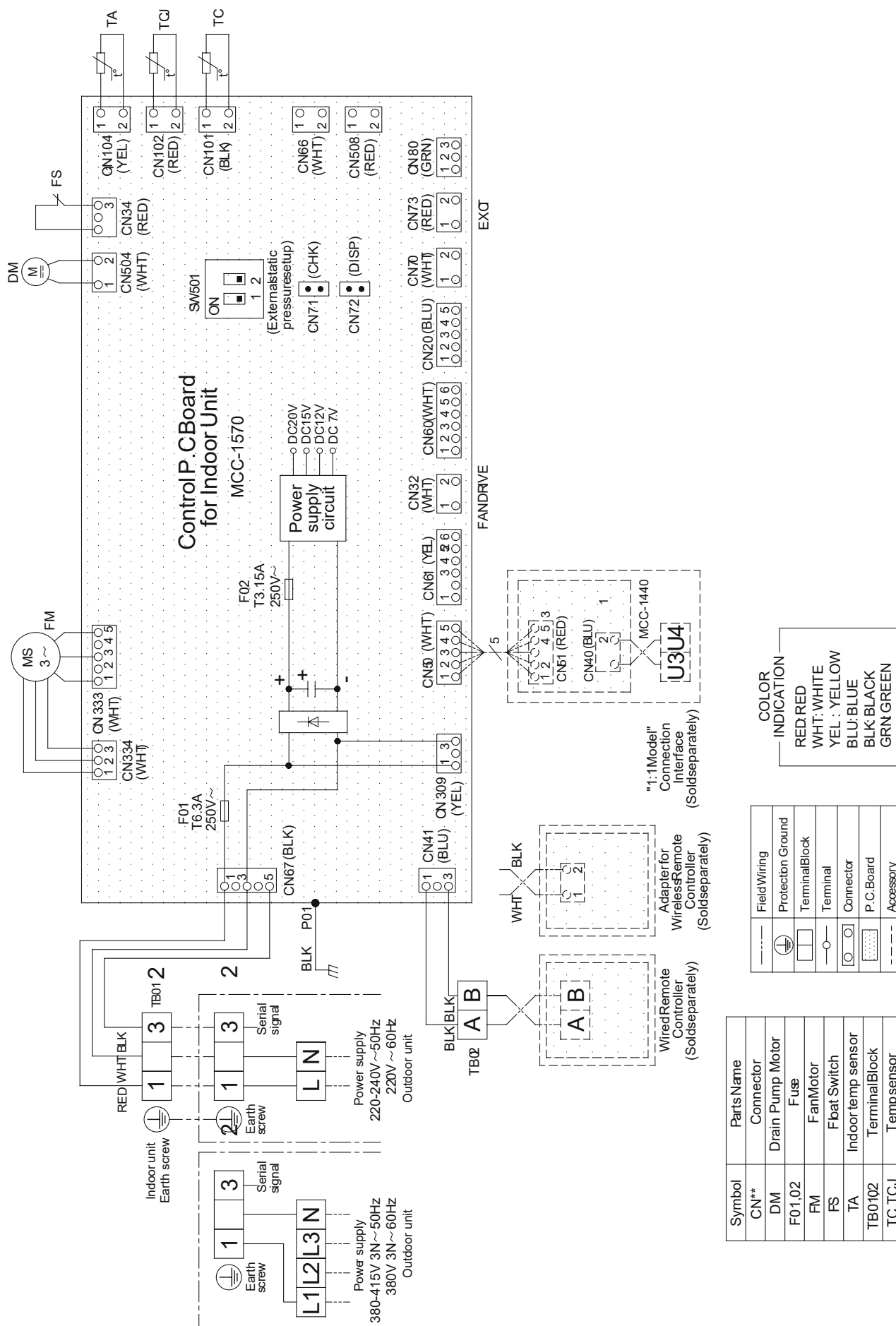
Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
 Heating : Indoor air temperature 20°C DB, Outdoor air temperature 35°C DB

2-3-2. Dimension

RAV-HM561SDT-E / TR

(Unit : mm)

2-3-3. Wiring Diagrams

RAV-HM561SDT-E / TR

2-3-4. Sensible Capacity Table

RAV-HM561SDT-E / TR (Triple) : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

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
561	10.0	4.7	3.6	4.9	3.8	5.2	3.9	5.4	4.1	5.6	4.2	5.7	4.3	5.9	4.5	6.2	4.7	6.5	5.0
	12.0	4.7	3.5	4.9	3.7	5.2	3.9	5.3	4.1	5.5	4.2	5.7	4.3	5.8	4.4	6.2	4.7	6.5	4.9
	14.0	4.6	3.5	4.9	3.7	5.1	3.9	5.3	4.0	5.5	4.2	5.6	4.3	5.8	4.4	6.1	4.7	6.4	4.9
	16.0	4.6	3.5	4.8	3.7	5.1	3.9	5.3	4.0	5.4	4.1	5.6	4.3	5.8	4.4	6.1	4.6	6.4	4.9
	18.0	4.6	3.5	4.8	3.7	5.0	3.8	5.2	4.0	5.4	4.1	5.6	4.2	5.7	4.3	6.1	4.6	6.3	4.8
	20.0	4.5	3.4	4.8	3.6	5.0	3.8	5.2	3.9	5.4	4.1	5.5	4.2	5.7	4.3	6.0	4.6	6.3	4.8
	21.0	4.5	3.4	4.7	3.6	5.0	3.8	5.2	3.9	5.3	4.1	5.5	4.2	5.6	4.3	6.0	4.5	6.3	4.8
	23.0	4.5	3.4	4.7	3.6	4.9	3.7	5.1	3.9	5.3	4.0	5.4	4.1	5.6	4.3	5.9	4.5	6.2	4.7
	25.0	4.4	3.4	4.6	3.5	4.9	3.7	5.0	3.8	5.2	4.0	5.4	4.1	5.5	4.2	5.9	4.5	6.1	4.7
	27.0	4.4	3.3	4.6	3.5	4.8	3.7	5.0	3.8	5.2	3.9	5.3	4.0	5.5	4.2	5.8	4.4	6.0	4.6
	29.0	4.3	3.3	4.5	3.4	4.8	3.6	4.9	3.7	5.1	3.9	5.2	4.0	5.4	4.1	5.7	4.3	6.0	4.5
	31.0	4.2	3.2	4.5	3.4	4.7	3.6	4.9	3.7	5.0	3.8	5.2	3.9	5.3	4.0	5.6	4.3	5.9	4.5
	33.0	4.2	3.2	4.4	3.3	4.6	3.5	4.8	3.6	4.9	3.8	5.1	3.9	5.2	4.0	5.5	4.2	5.8	4.4
	35.0	4.1	3.1	4.3	3.3	4.5	3.4	4.7	3.6	4.9	3.7	5.0	3.8	5.1	3.9	5.4	4.1	5.7	4.3
	37.0	4.0	3.1	4.2	3.2	4.4	3.4	4.6	3.5	4.8	3.6	4.9	3.7	5.0	3.8	5.3	4.1	5.6	4.2
	39.0	3.9	3.0	4.2	3.2	4.4	3.3	4.5	3.4	4.7	3.5	4.8	3.7	4.9	3.8	5.2	4.0	5.5	4.2

TC: Total Capacity [kW]

SHC: Sensible Heat Capacity [kW]

2-3-5. Part Load Performance

Combination

Indoor Unit : RAV-HM561SDT-E / TR (x3)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4982	16000	4692

Q: Capacity in W

W: Power Consumption in W

Cooling

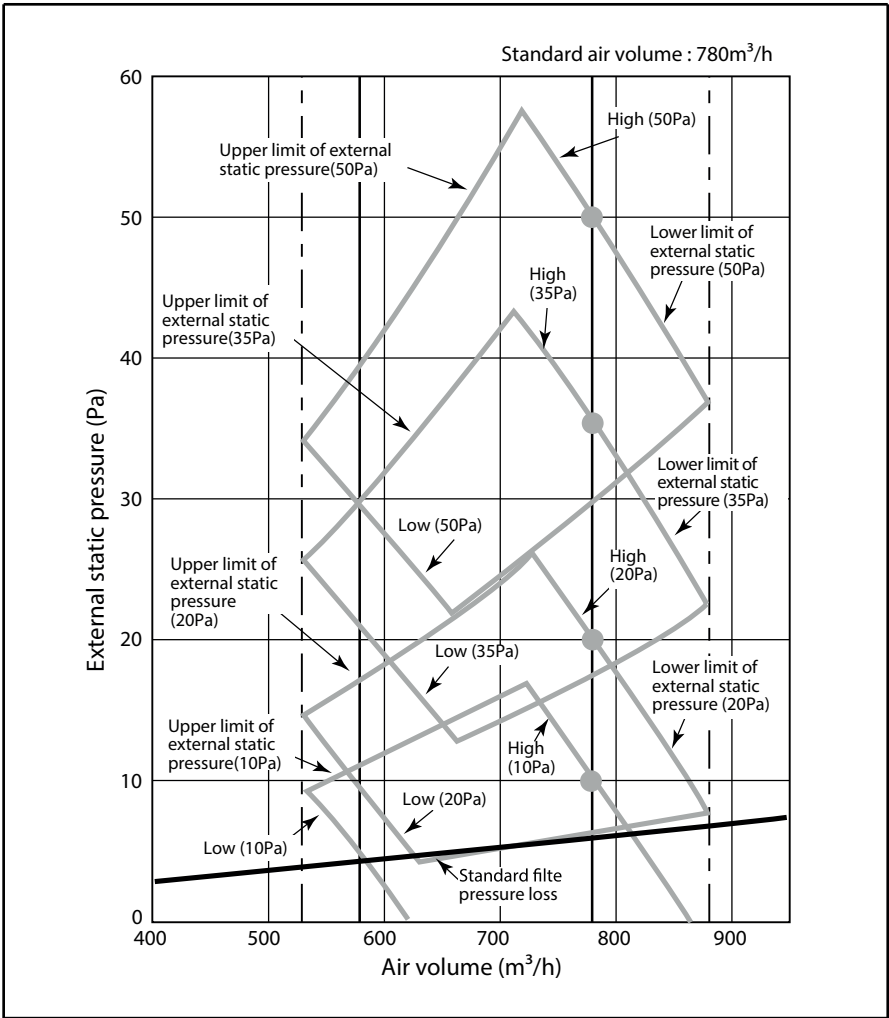
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11410	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5470	5030	4150	3370	2660	2050	1510	1070	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5510	4630	3820	3110	2450	1890	1390	980	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5050	4240	3500	2850	2250	1730	1280	900	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4982	4190	3460	2810	2220	1710	1260	890	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3630	3050	2520	2050	1620	1250	920	650	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2990	2510	2080	1690	1330	1030	760	530	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2390	2010	1660	1350	1070	820	600	430	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5180	4360	3610	2950	2350	1830	1380	1020	720	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4910	4140	3420	2800	2230	1740	1310	960	680	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4692	3950	3270	2670	2130	1660	1250	920	650	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4550	3830	3170	2590	2060	1610	1210	890	630	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4320	3640	3010	2460	1960	1530	1150	850	600	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3830	3230	2670	2180	1740	1360	1020	750	530	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3750	3160	2620	2140	1700	1330	1000	740	520	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3720	3130	2590	2110	1690	1310	990	730	510	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3540	2980	2470	2010	1610	1250	940	690	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3320	2790	2310	1890	1510	1170	880	650	460	460

2-3-6. Fan Static Characteristics

RAV-HM561SDT-E/TR

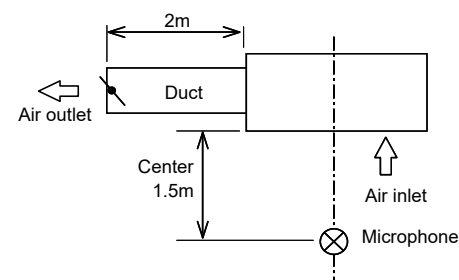


2-3-7. Sound characteristics (NC curve)

RAV-HM561SDT-E / TR

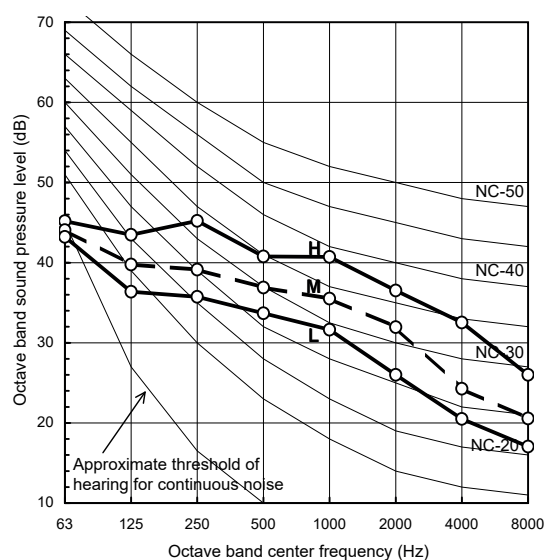
[Measuring location]

Under air intake



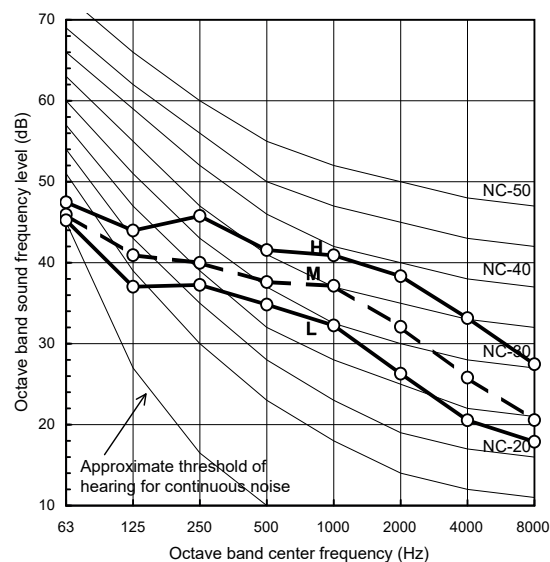
[External static pressure 10Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	45	40	36



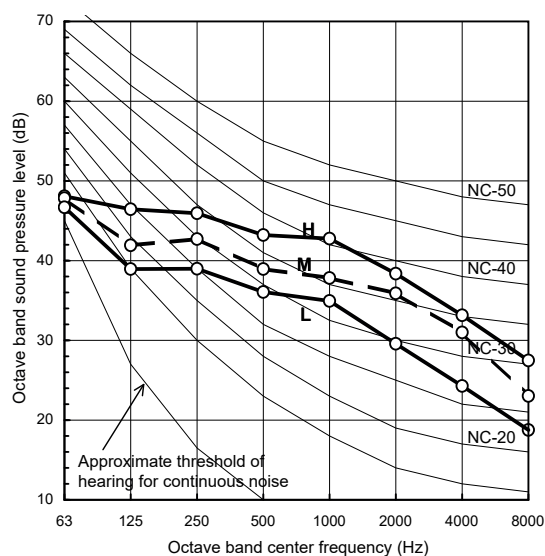
[External static pressure 20Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	46	41	37



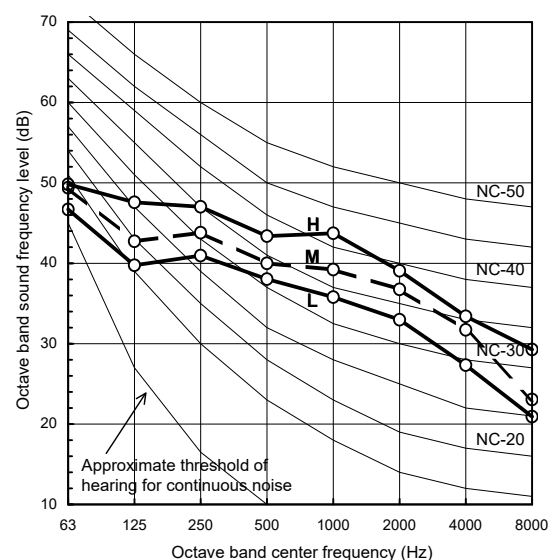
[External static pressure 35Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	47	43	39



[External static pressure 50Pa]

Fan tap	H	M	L
Sound pressure level (dB(A))	48	44	41



2-4. 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. Fan Static Characteristics

2-4-7. Sound Characteristics (NC Curve)

Accessories

2-4-1. Specifications

Standard Duct Type

Model		Indoor unit		RAV-HM1601BTP-E / TR		RAV-HM1601BTP-E / TR	
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		RAV-GM1601AT8(J)P-E / AT8P-TR	
Cooling capacity (kW)				14.0 < 3.0 - 16.0 >		14.0 < 3.0 - 16.0 >	
Heating capacity (kW)				16.0 < 3.0 - 18.0 >		16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		3 phase 380V-415V/50Hz, 3phase 380V/60Hz	
Electrical characteristics	Cooling	Running current (A)		24.03 - 22.03		8.29 - 7.59	
		Power consumption (kW)		5.13		5.13	
		Power factor (%)		97		94	
		EER		2.73		2.73	
		PdesignC		14.00		14.00	
		SEER		5.30		5.30	
	Heating	Running current (A)		21.99 - 20.15		7.58 - 6.94	
		Power consumption (kW)		4.69		4.69	
		Power factor (%)		97		94	
		COP		3.41		3.41	
		PdesignH (Tbiv-7 °C)		8.00		8.00	
		SCOP		3.90		3.90	
		Maximum current (A)		29.0		16.1	
Indoor unit							
Appearance		Main unit		Zinc hot dipping steel plate		Zinc hot dipping steel plate	
		Ceiling panel	Model	-		-	
		(Sold separately)	Panel color	-		-	
Outer dimension		Main unit	Height (mm)	275		275	
			Width (mm)	1400		1400	
			Depth (mm)	750		750	
		Ceiling panel (Sold separately)	Height (mm)	-		-	
			Width (mm)	-		-	
			Depth (mm)	-		-	
Total weight		Main unit (kg)		40.0		40.0	
		Ceiling panel (Sold separately) (kg)		-		-	
Fan unit		Fan		Centrifugal fan		Centrifugal fan	
		Standard air flow	H/M/L (m³/h)	2100 / 1650 / 1260		2100 / 1650 / 1260	
		Motor (W)		250		250	
External static pressure		Standard (Upper - Lower) (Pa)		50 (120-30)		50 (120-30)	
Air filter				Standard filter (Long life filter)		Standard filter (Long life filter)	
Sound pressure level			H/M/L (dB)	40 / 36 / 33		40 / 36 / 33	
Sound power level			H/M/L (dB)	55 / 51 / 48		55 / 51 / 48	
Connecting pipe		Drain port		VP25		VP25	

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 35°C DB

Standard Duct Type

Twin system : Single phase model

Model		Indoor unit 1		RAV-HM801BTP-E / TR		
		Indoor unit 2		RAV-HM801BTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1 phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	24.03 - 22.03	
		Power consumption		(kW)	5.13	
		Power factor		(%)	97	
		EER			2.73	
		PdesignC			14.0	
		SEER			5.30	
	Heating	Running current		(A)	21.99 - 20.15	
		Power consumption		(kW)	4.69	
		Power factor		(%)	97	
		COP			3.41	
		PdesignH (Tbiv-7 °C)			8.00	
		SCOP			3.90	
Maximum current		(A)	29.0			
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height	(mm)	275	
			Width	(mm)	1000	
			Depth	(mm)	750	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	30.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	1200 / 930 / 720	
		Motor		(W)	150	
Extarnal static pressure		Standard (Upper - Lower)		(Pa)	30 (120-30)	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	34 / 30 / 26	
Sound power level			H/M/L	(dB)	49 / 45 / 41	
Connecting pipe		Drain port		VP25		

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 35°C DB

Standard Duct Type

Twin system : Three phase model

Model		Indoor unit 1		RAV-HM801BTP-E / TR		
		Indoor unit 2		RAV-HM801BTP-E / TR		
		Outdoor unit		RAV-GM1601A8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	8.29 - 7.59	
		Power consumption		(kW)	5.13	
		Power factor		(%)	94	
		EER			2.73	
		PdesignC			14.0	
		SEER			5.30	
	Heating	Running current		(A)	7.58 - 6.94	
		Power consumption		(kW)	4.69	
		Power factor		(%)	94	
		COP			3.41	
		PdesignH (Tbiv-7°C)			8.00	
		SCOP			3.90	
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height	(mm)	275	
			Width	(mm)	1000	
			Depth	(mm)	750	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	30.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	1200 / 930 / 720	
		Motor		(W)	150	
External static pressure		Standard (Upper - Lower)		(Pa)	30 (120-30)	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	34 / 30 / 26	
Sound power level			H/M/L	(dB)	49 / 45 / 41	
Connecting pipe		Drain port		VP25		

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 35°C DB

Standard Duct Type

Triple system : Single phase model

Model		Indoor unit 1		RAV-HM561BTP-E / TR		
		Indoor unit 2		RAV-HM561BTP-E / TR		
		Indoor unit 3		RAV-HM561BTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	24.03 - 22.03	
		Power consumption		(kW)	5.13	
		Power factor		(%)	97	
		EER			2.73	
		PdesignC			14.0	
		SEER			5.30	
	Heating	Running current		(A)	4.69	
		Power consumption		(kW)	21.99 - 20.15	
		Power factor		(%)	97	
		COP			3.41	
		PdesignH (Tbiv-7 °C)			8.00	
		SCOP			3.90	
		Maximum current	(A)	29.0		
Indoor unit						
Appearance		Main unit		Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height (mm)		275	
			Width (mm)		700	
			Depth (mm)		750	
		Ceiling panel (Sold separately)	Height (mm)		-	
			Width (mm)		-	
			Depth (mm)		-	
Total weight		Main unit (kg)		23.0		
		Ceiling panel (Sold separately) (kg)		-		
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L (m³/h)	800 / 630 / 480		
		Motor (W)		150		
External static pressure		Standard (Upper - Lower) (Pa)		30 (120-30)		
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L (dB)	33 / 29 / 25		
Sound power level			H/M/L (dB)	48 / 44 / 40		
Connecting pipe		Drain port		VP25		

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 35°C DB

Standard Duct Type

Triple system : Three phase model

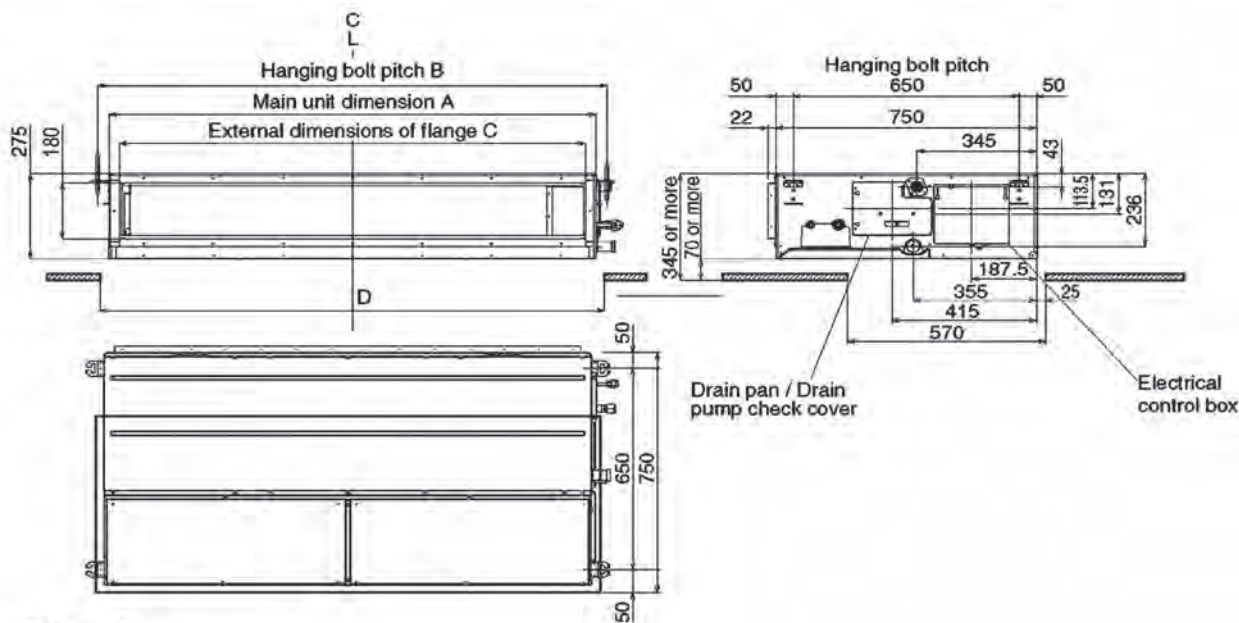
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			Indoor unit 2		RAV-HM561BTP-E / TR		
			Indoor unit 3		RAV-HM561BTP-E / TR		
			Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity			(kW)		14.0 < 3.0 - 16.0 >		
Heating capacity			(kW)		16.0 < 3.0 - 18.0 >		
Power supply					3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	8.29 - 7.59		
		Power consumption		(kW)	5.13		
		Power factor		(%)	94		
		EER		2.73			
		PdesignC		14.0			
		SEER		5.30			
	Heating	Running current		(A)	7.58 - 6.94		
		Power consumption		(kW)	4.69		
		Power factor		(%)	94		
		COP		3.41			
		PdesignH (Tbiv-7°C)		8.00			
SCOP		3.90					
		Maximum current		(A)	16.1		
Indoor unit							
Appearance		Main unit			Zinc hot dipping steel plate		
		Ceiling panel (Sold separately)		Model		-	
				Panel color		-	
Outer dimension		Main unit		Height (mm)		275	
				Width (mm)		700	
				Depth (mm)		750	
		Ceiling panel (Sold separately)		Height (mm)		-	
				Width (mm)		-	
				Depth (mm)		-	
Total weight		Main unit (kg)			23.0		
		Ceiling panel (Sold separately) (kg)			-		
Fan unit		Fan				Centrifugal fan	
		Standard air flow		H/M/L (m³/h)		800 / 630 / 480	
		Motor (W)		150			
Extarnal static pressure		Standard (Upper - Lower) (Pa)			30 (120-30)		
Air filter					Standard filter (Long life filter)		
Sound pressure level			H/M/L (dB)		33 / 29 / 25		
Sound power level			H/M/L (dB)		48 / 44 / 40		
Connecting pipe		Drain port			VP25		

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 35°C DB

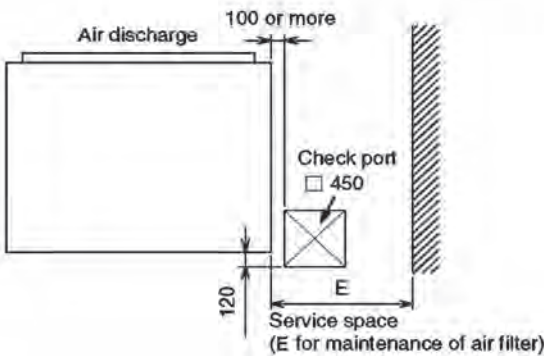
2-4-2. Dimension

RAV-HM561BTP-E / TR, RAV-HM801BTP-E / TR, RAV-HM1601BTP-E / TR



Dimension

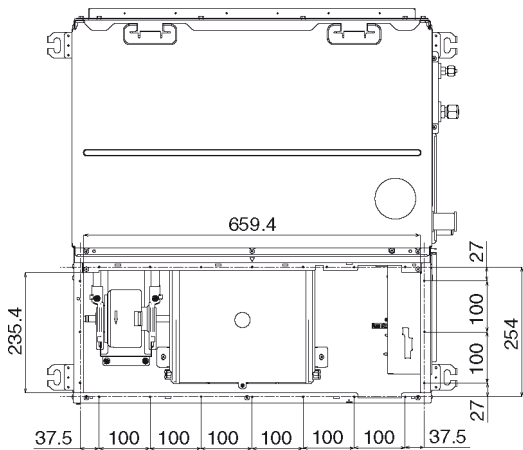
	A	B	C	D
HM56 type	700	765	640	750
HM80 type	1000	1065	940	1050
HM160 type	1400	1465	1340	1450



	E
HM56 type	700
HM80 type	500
HM160 type	700

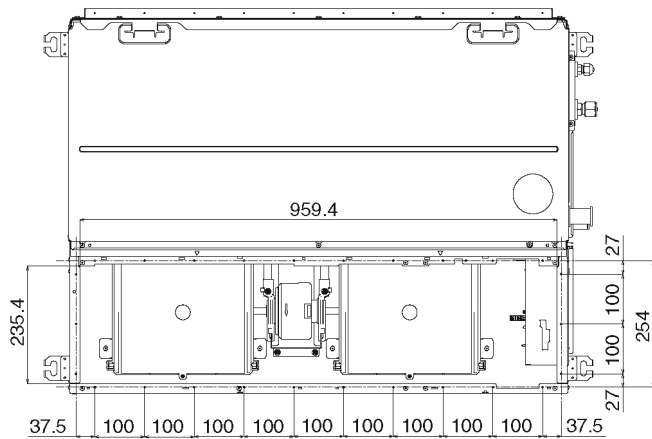
HM56 type

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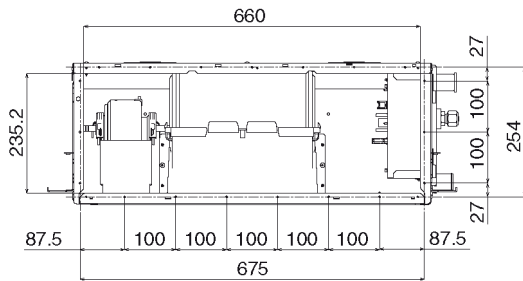


HM80 type

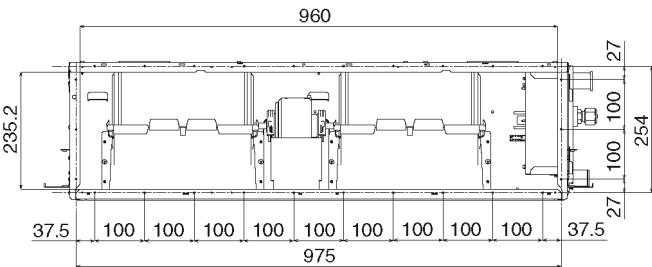
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<Back air intake>

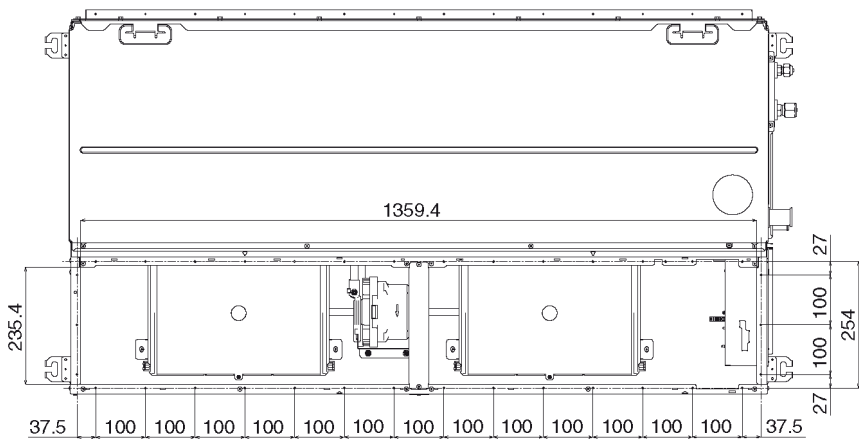


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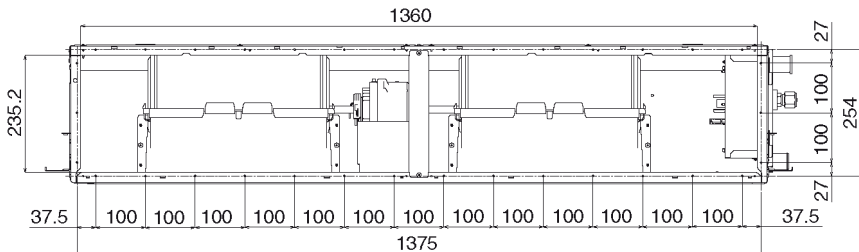


HM160 type

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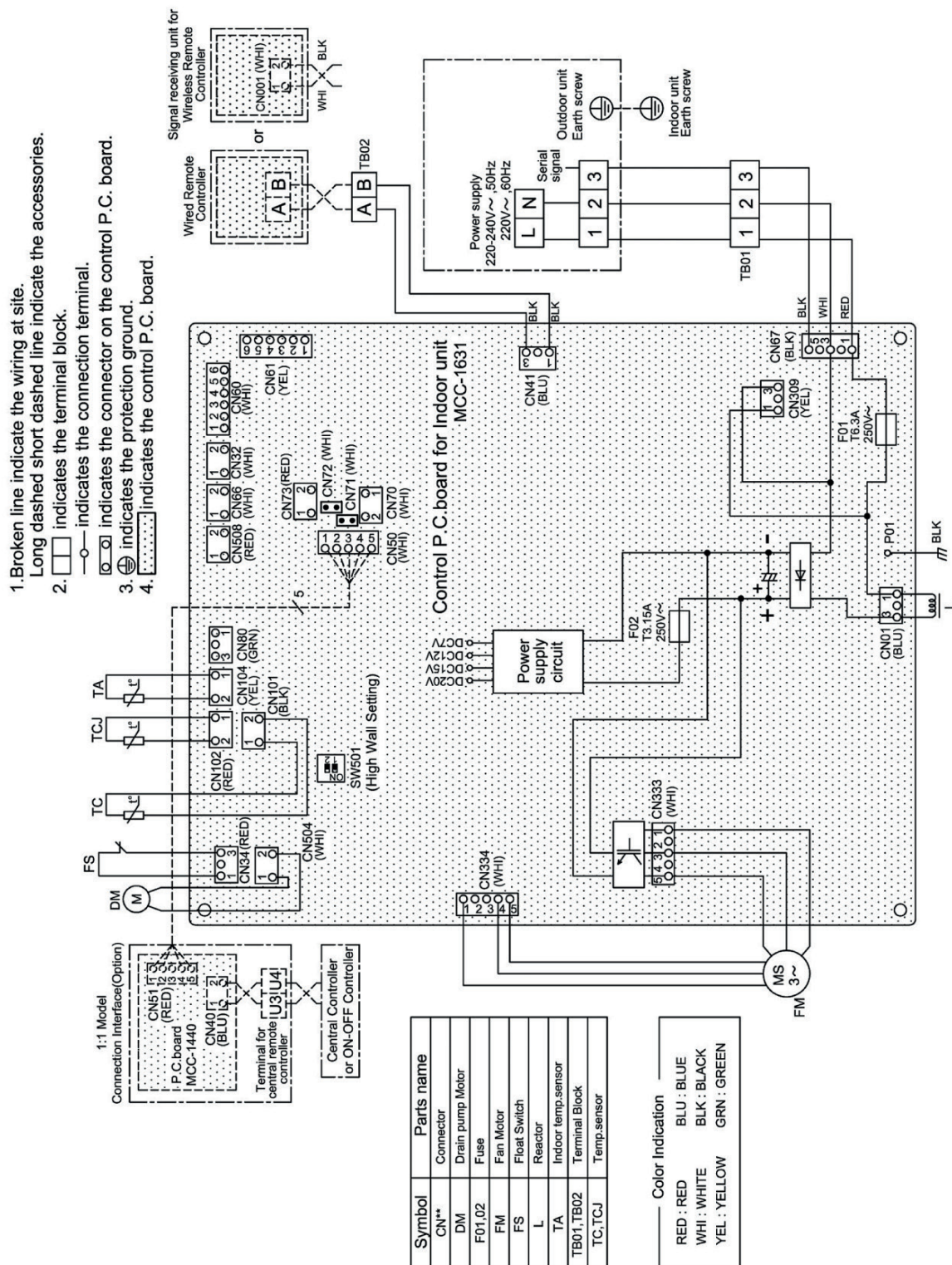


<Back air intake>



2-4-3. Wiring Diagrams

RAV-HM561BTP-E / TR, RAV-HM801BTP-E / TR, RAV-HM1601BTP-E / TR



2-4-4. Sensible Capacity Table

RAV-HM1601BTP-E / TR : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
1601	10.0	13.1	9.6	13.8	10.1	14.5	10.6	15.0	11.0	15.5	11.3	16.0	11.7	16.5	12.0	17.4	12.7	18.2	13.3
	12.0	13.1	9.5	13.7	10.0	14.4	10.5	14.9	10.9	15.4	11.3	15.9	11.6	16.4	11.9	17.3	12.6	18.1	13.2
	14.0	13.0	9.5	13.7	10.0	14.3	10.4	14.8	10.8	15.4	11.2	15.8	11.5	16.3	11.8	17.2	12.5	18.0	13.1
	16.0	12.9	9.4	13.6	9.9	14.2	10.4	14.7	10.7	15.2	11.1	15.7	11.4	16.1	11.8	17.1	12.5	17.9	13.0
	18.0	12.8	9.3	13.5	9.8	14.1	10.3	14.6	10.7	15.1	11.0	15.6	11.3	16.0	11.7	17.0	12.4	17.7	12.9
	20.0	12.7	9.2	13.3	9.7	14.0	10.2	14.5	10.6	15.0	10.9	15.4	11.3	15.9	11.6	16.8	12.3	17.6	12.8
	21.0	12.6	9.2	13.3	9.7	13.9	10.2	14.4	10.5	14.9	10.9	15.4	11.2	15.8	11.5	16.7	12.2	17.5	12.8
	23.0	12.5	9.1	13.2	9.6	13.8	10.1	14.3	10.4	14.8	10.8	15.2	11.1	15.7	11.4	16.6	12.1	17.3	12.6
	25.0	12.4	9.0	13.0	9.5	13.7	9.9	14.1	10.3	14.6	10.7	15.1	11.0	15.5	11.3	16.4	11.9	17.1	12.5
	27.0	12.2	8.9	12.8	9.4	13.5	9.8	14.0	10.2	14.4	10.5	14.9	10.8	15.3	11.1	16.2	11.8	16.9	12.3
	29.0	12.1	8.8	12.7	9.2	13.3	9.7	13.8	10.0	14.3	10.4	14.7	10.7	15.1	11.0	16.0	11.6	16.7	12.2
	31.0	11.9	8.7	12.5	9.1	13.1	9.6	13.6	9.9	14.0	10.2	14.5	10.5	14.9	10.8	15.8	11.5	16.5	12.0
	33.0	11.7	8.5	12.3	9.0	12.9	9.4	13.4	9.7	13.8	10.1	14.2	10.4	14.6	10.7	15.5	11.3	16.2	11.8
	35.0	11.5	8.4	12.1	8.8	12.7	9.3	13.1	9.6	13.6	9.9	14.0	10.2	14.4	10.5	15.3	11.1	16.0	11.6
	37.0	11.3	8.2	11.9	8.6	12.5	9.1	12.9	9.4	13.3	9.7	13.7	10.0	14.1	10.3	15.0	10.9	15.6	11.4
	39.0	11.1	8.1	11.6	8.5	12.2	8.9	12.6	9.2	13.1	9.5	13.5	9.8	13.8	10.1	14.7	10.7	15.3	11.2

RAV-HM801BTP-E / TR (Twin) : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
801	10.0	7.9	5.9	8.2	6.1	8.5	6.3	8.7	6.5	8.9	6.7	9.1	6.9	9.4	7.1	9.8	7.3	10.2	7.4
	12.0	7.8	5.8	8.1	6.0	8.4	6.2	8.6	6.4	8.8	6.6	9.0	6.8	9.3	7.0	9.7	7.2	10.1	7.3
	14.0	7.7	5.7	8.0	5.9	8.3	6.1	8.5	6.3	8.7	6.5	8.9	6.7	9.2	6.9	9.6	7.1	10.0	7.2
	16.0	7.6	5.6	7.9	5.8	8.2	6.0	8.4	6.2	8.6	6.4	8.8	6.6	9.1	6.8	9.5	7.0	9.9	7.1
	18.0	7.5	5.5	7.8	5.7	8.1	5.9	8.3	6.1	8.5	6.3	8.7	6.5	9.0	6.7	9.4	6.9	9.8	7.0
	20.0	7.4	5.4	7.7	5.6	8.0	5.8	8.2	6.0	8.4	6.2	8.6	6.4	8.9	6.6	9.3	6.8	9.7	6.9
	21.0	7.3	5.3	7.6	5.5	7.9	5.7	8.1	5.9	8.3	6.1	8.5	6.3	8.8	6.5	9.2	6.7	9.6	6.8
	23.0	7.2	5.2	7.5	5.4	7.8	5.6	8.0	5.8	8.2	6.0	8.4	6.2	8.7	6.4	9.1	6.6	9.5	6.7
	25.0	7.1	5.1	7.4	5.3	7.7	5.5	7.9	5.7	8.1	5.9	8.3	6.1	8.6	6.3	9.0	6.5	9.4	6.6
	27.0	7.0	5.0	7.3	5.2	7.6	5.4	7.8	5.6	8.0	5.8	8.2	6.0	8.5	6.2	8.9	6.4	9.3	6.5
	29.0	6.8	4.9	7.1	5.1	7.4	5.3	7.6	5.5	7.8	5.7	8.0	5.9	8.3	6.1	8.7	6.3	9.1	6.4
	31.0	6.5	4.7	6.8	4.9	7.1	5.1	7.3	5.3	7.5	5.5	7.7	5.7	8.0	5.9	8.4	6.1	8.8	6.2
	33.0	6.2	4.5	6.5	4.7	6.8	4.9	7.0	5.1	7.2	5.3	7.4	5.5	7.7	5.7	8.1	5.9	8.5	6.0
	35.0	5.9	4.3	6.2	4.5	6.5	4.7	6.7	4.9	6.9	5.1	7.1	5.3	7.4	5.5	7.8	5.7	8.2	5.8
	37.0	5.8	4.2	6.1	4.4	6.4	4.6	6.6	4.8	6.8	5.0	7.0	5.2	7.3	5.4	7.7	5.6	8.1	5.7
	39.0	5.6	4.1	5.9	4.3	6.2	4.5	6.4	4.7	6.6	4.9	6.8	5.1	7.1	5.3	7.5	5.5	7.9	5.6

RAV-HM561BTP-E / TR (Triple) : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
561	10.0	4.7	3.9	4.9	4.1	5.2	4.3	5.4	4.5	5.6	4.6	5.7	4.8	5.9	4.9	6.2	5.2	6.5	5.4
	12.0	4.7	3.9	4.9	4.1	5.2	4.3	5.3	4.5	5.5	4.6	5.7	4.7	5.8	4.9	6.2	5.2	6.5	5.4
	14.0	4.6	3.9	4.9	4.1	5.1	4.3	5.3	4.4	5.5	4.6	5.6	4.7	5.8	4.9	6.1	5.1	6.4	5.4
	16.0	4.6	3.8	4.8	4.0	5.1	4.3	5.3	4.4	5.4	4.6	5.6	4.7	5.8	4.8	6.1	5.1	6.4	5.3
	18.0	4.6	3.8	4.8	4.0	5.0	4.2	5.2	4.4	5.4	4.5	5.6	4.6	5.7	4.8	6.1	5.1	6.3	5.3
	20.0	4.5	3.8	4.8	4.0	5.0	4.2	5.2	4.3	5.4	4.5	5.5	4.6	5.7	4.7	6.0	5.0	6.3	5.3
	21.0	4.5	3.8	4.7	4.0	5.0	4.2	5.2	4.3	5.3	4.5	5.5	4.6	5.6	4.7	6.0	5.0	6.3	5.2
	23.0	4.5	3.7	4.7	3.9	4.9	4.1	5.1	4.3	5.3	4.4	5.4	4.5	5.6	4.7	5.9	4.9	6.2	5.2
	25.0	4.4	3.7	4.6	3.9	4.9	4.1	5.0	4.2	5.2	4.4	5.4	4.5	5.5	4.6	5.9	4.9	6.1	5.1
	27.0	4.4	3.6	4.6	3.8	4.8	4.0	5.0	4.2	5.2	4.3	5.3	4.4	5.5	4.6	5.8	4.8	6.0	5.1
	29.0	4.3	3.6	4.5	3.8	4.8	4.0	4.9	4.1	5.1	4.3	5.2	4.4	5.4	4.5	5.7	4.8	6.0	5.0
	31.0	4.2	3.5	4.5	3.7	4.7	3.9	4.9	4.1	5.0	4.2	5.2	4.3	5.3	4.4	5.6	4.7	5.9	4.9
	33.0	4.2	3.5	4.4	3.7	4.6	3.9	4.8	4.0	4.9	4.1	5.1	4.3	5.2	4.4	5.5	4.6	5.8	4.8
	35.0	4.1	3.4	4.3	3.6	4.5	3.8	4.7	3.9	4.9	4.1	5.0	4.2	5.1	4.3	5.4	4.6	5.7	4.8
	37.0	4.0	3.4	4.2	3.5	4.4	3.7	4.6	3.9	4.8	4.0	4.9	4.1	5.0	4.2	5.3	4.5	5.6	4.7
	39.0	3.9	3.3	4.2	3.5	4.4	3.6	4.5	3.8	4.7	3.9	4.8	4.0	4.9	4.1	5.2	4.4	5.5	4.6

TC: Total Capacity [kW]

SHC: Sensible Heat Capacity [kW]

2-4-5. Part load performance

Indoor Unit : RAV-HM1601BTP-E / TR

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	5128	16000	4692

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11320	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5510	5130	4240	3440	2720	2090	1550	1080	770	770
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5670	4760	3930	3190	2530	1940	1440	1010	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5190	4370	3610	2930	2320	1780	1320	920	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	5128	4310	3560	2890	2290	1760	1300	910	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3740	3140	2600	2110	1670	1280	950	660	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	3080	2590	2140	1730	1370	1060	780	550	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2460	2070	1710	1390	1100	840	620	440	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5180	4360	3610	2950	2350	1830	1380	1020	720	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4910	4140	3420	2800	2230	1740	1310	960	680	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4692	3950	3270	2670	2130	1660	1250	920	650	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4550	3830	3170	2590	2060	1610	1210	890	630	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4320	3640	3010	2460	1960	1530	1150	850	600	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3830	3230	2670	2180	1740	1360	1020	750	530	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3750	3160	2620	2140	1700	1330	1000	740	520	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3730	3140	2600	2120	1690	1320	990	730	520	520
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3560	2990	2480	2020	1610	1260	950	700	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3320	2790	2310	1890	1510	1170	880	650	460	460

Twin system**Indoor Unit** : RAV-HM801BTP-E / TR (x2)**Outdoor unit** : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	5128	16000	4692

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11320	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5510	5130	4240	3440	2720	2090	1550	1080	770	770
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5670	4760	3930	3190	2530	1940	1440	1010	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5190	4370	3610	2930	2320	1780	1320	920	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	5128	4310	3560	2890	2290	1760	1300	910	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3740	3140	2600	2110	1670	1280	950	660	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	3080	2590	2140	1730	1370	1060	780	550	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2460	2070	1710	1390	1100	840	620	440	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5180	4360	3610	2950	2350	1830	1380	1020	720	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4910	4140	3420	2800	2230	1740	1310	960	680	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4692	3950	3270	2670	2130	1660	1250	920	650	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4550	3830	3170	2590	2060	1610	1210	890	630	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4320	3640	3010	2460	1960	1530	1150	850	600	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3830	3230	2670	2180	1740	1360	1020	750	530	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3750	3160	2620	2140	1700	1330	1000	740	520	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3730	3140	2600	2120	1690	1320	990	730	520	520
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3560	2990	2480	2020	1610	1260	950	700	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3320	2790	2310	1890	1510	1170	880	650	460	460

Triple system

Indoor Unit : RAV-HM561BTP-E / TR (x3)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	5128	16000	4692

Q: Capacity in W

W: Power Consumption in W

Cooling

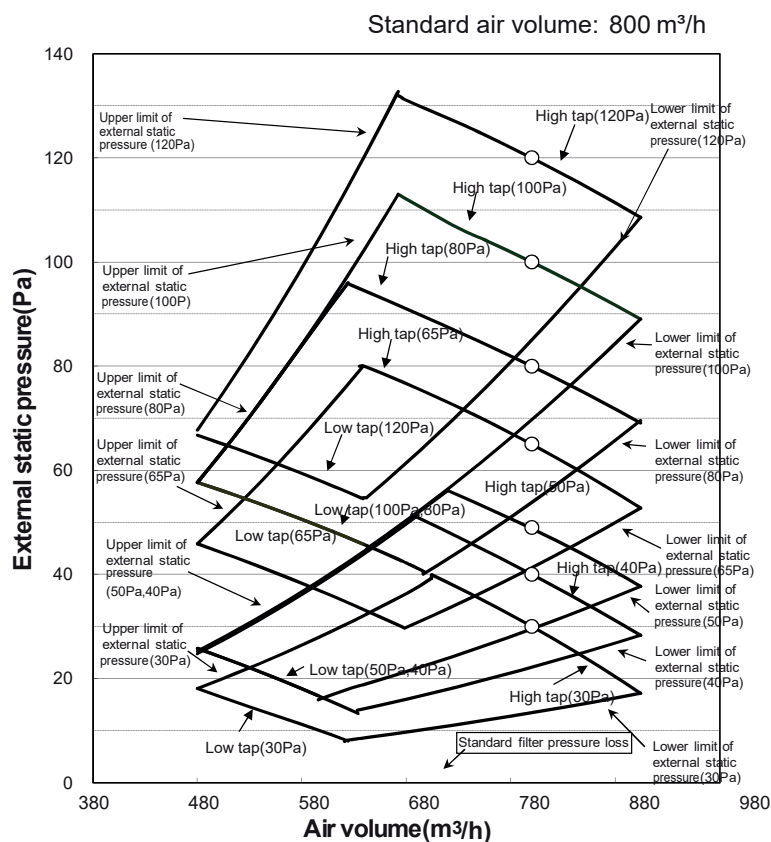
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11320	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5510	5130	4240	3440	2720	2090	1550	1080	770	770
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5670	4760	3930	3190	2530	1940	1440	1010	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5190	4370	3610	2930	2320	1780	1320	920	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	5128	4310	3560	2890	2290	1760	1300	910	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3740	3140	2600	2110	1670	1280	950	660	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	3080	2590	2140	1730	1370	1060	780	550	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2460	2070	1710	1390	1100	840	620	440	310	310

Heating

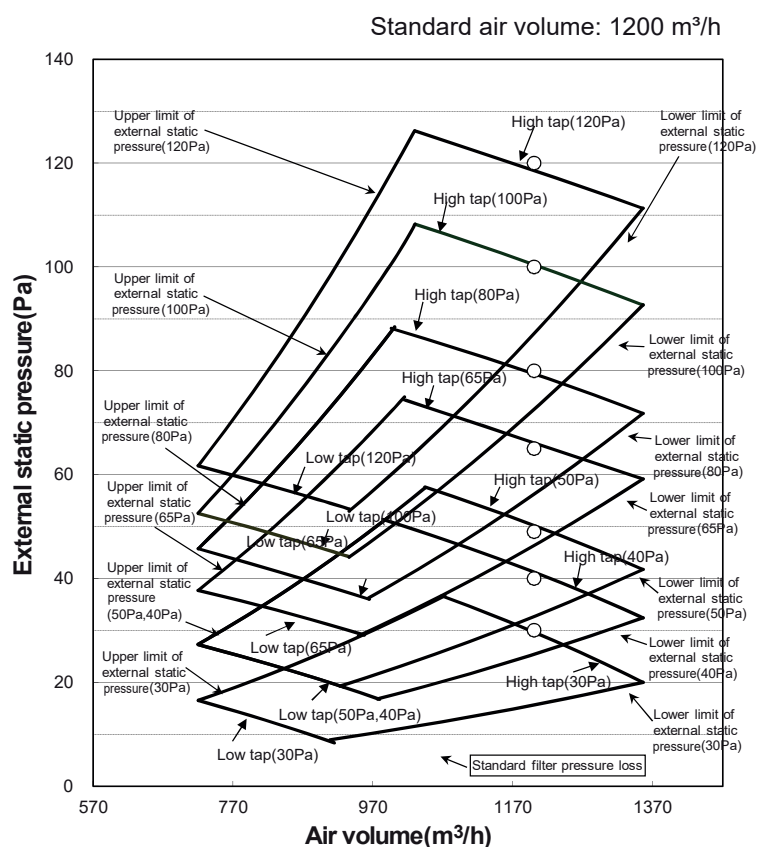
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5180	4360	3610	2950	2350	1830	1380	1020	720	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4910	4140	3420	2800	2230	1740	1310	960	680	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4692	3950	3270	2670	2130	1660	1250	920	650	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4550	3830	3170	2590	2060	1610	1210	890	630	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4320	3640	3010	2460	1960	1530	1150	850	600	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3830	3230	2670	2180	1740	1360	1020	750	530	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3750	3160	2620	2140	1700	1330	1000	740	520	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3730	3140	2600	2120	1690	1320	990	730	520	520
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3560	2990	2480	2020	1610	1260	950	700	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3320	2790	2310	1890	1510	1170	880	650	460	460

2-4-6. Fan Static Characteristics

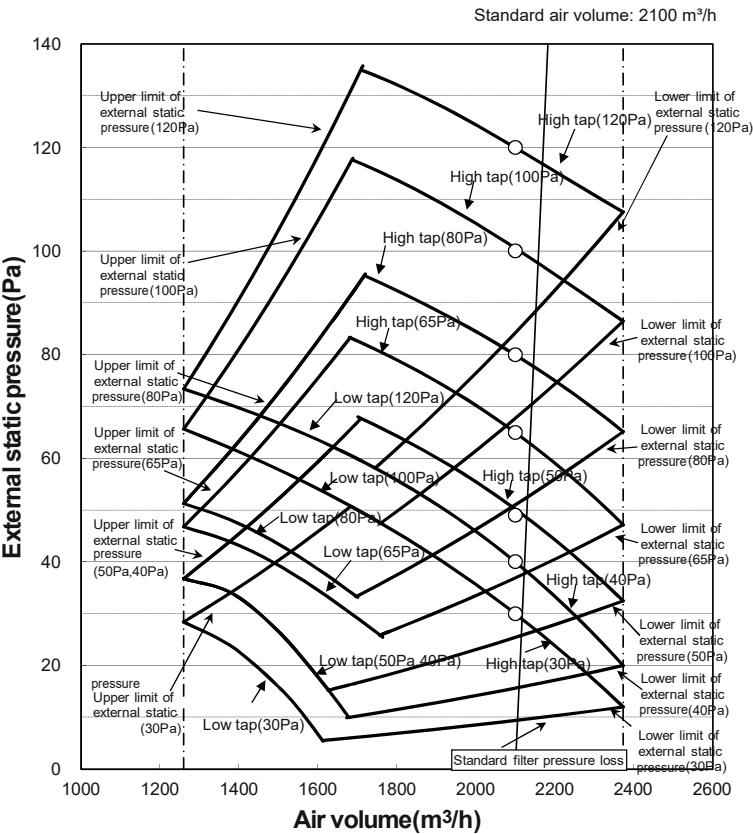
RAV-HM561BTP-E / TR



RAV-HM801BTP-E / TR

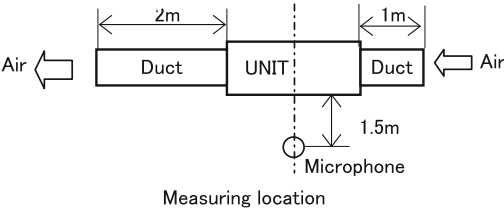


RAV-HM1601BTP-E / TR



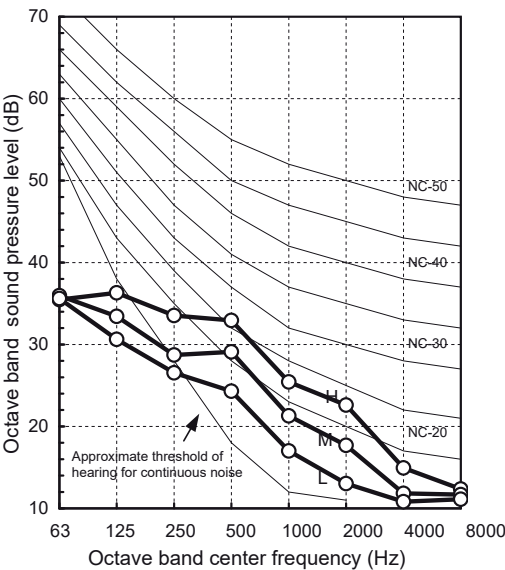
2-4-7. Sound characteristics (NC curve)

RAV-HM561BTP-E / TR



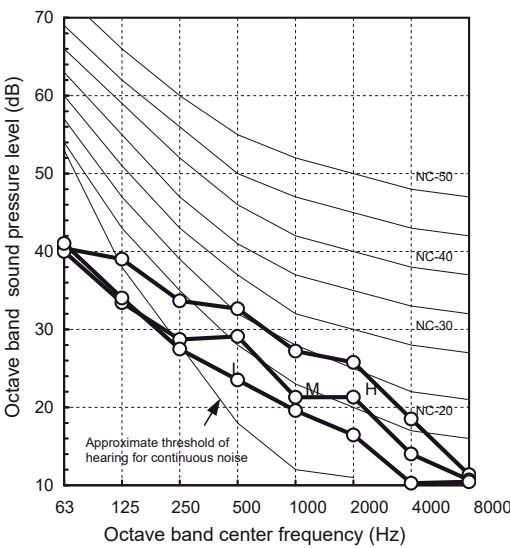
External static pressure 30Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	33	29	25



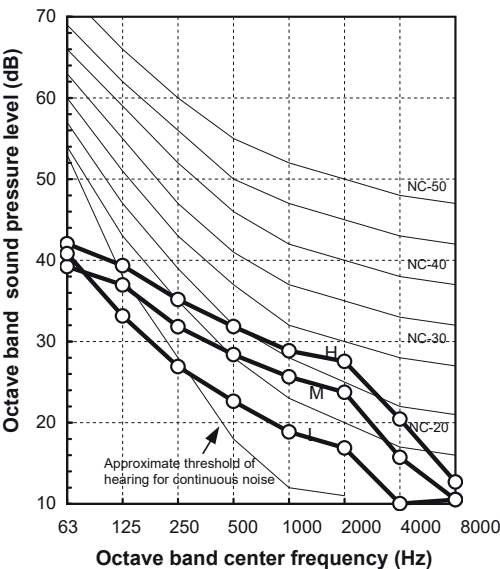
External static pressure 40Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	34	30	26



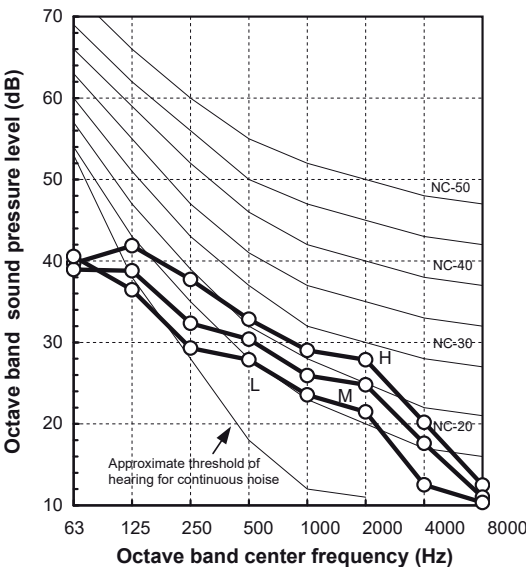
External static pressure 50Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	35	31	26



External static pressure 65Pa

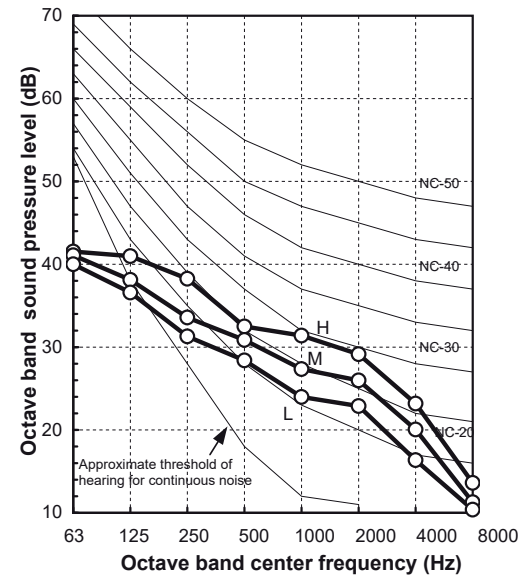
Fan tap	H	M	L
Sound pressure level (dB(A))	36	32	29



RAV-HM561BTP-E / TR

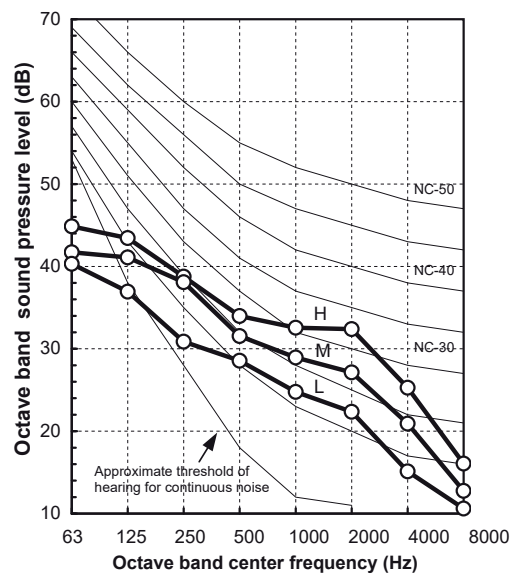
External static pressure 80Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	37	33	31



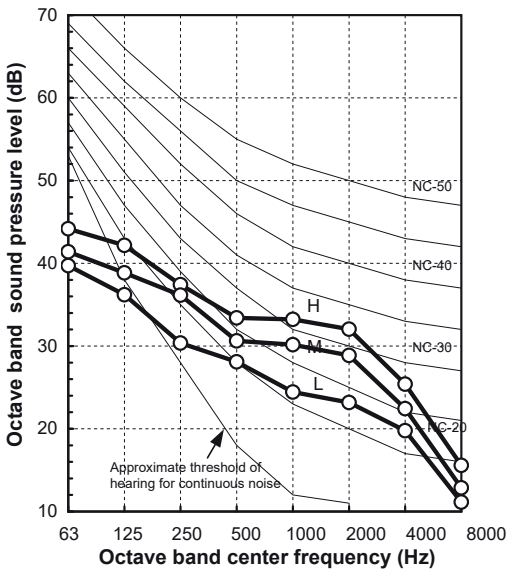
External static pressure 100Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	38	35	31



External static pressure 120Pa

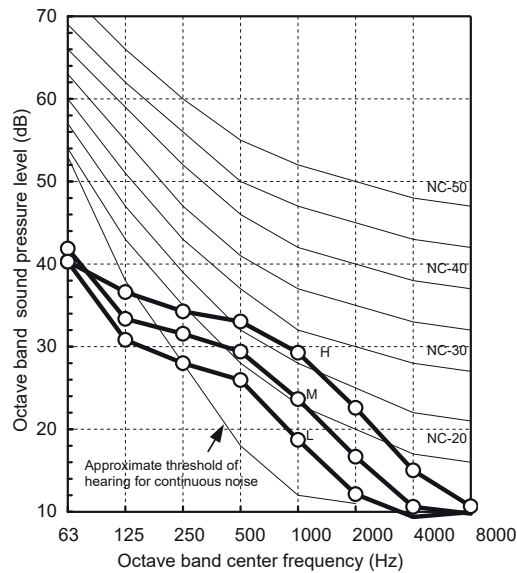
Fan tap	H	M	L
Sound pressure level (dB(A))	39	35	31



RAV-HM801BTP-E / TR

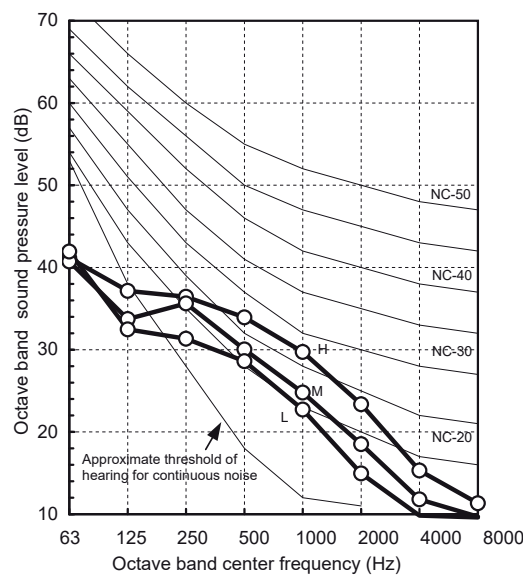
External static pressure 30Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	34	30	26



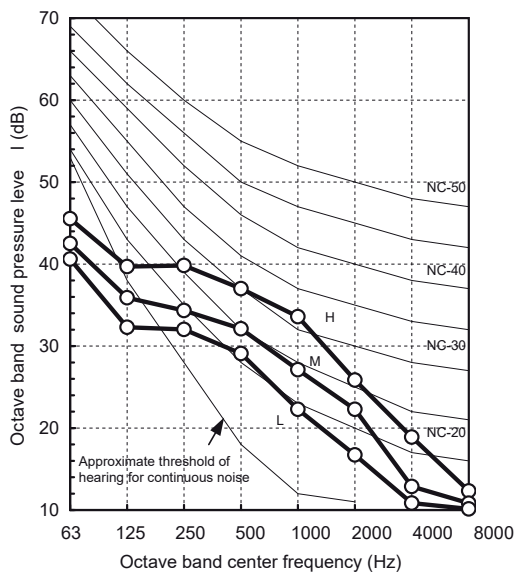
External static pressure 40Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	35	32	29



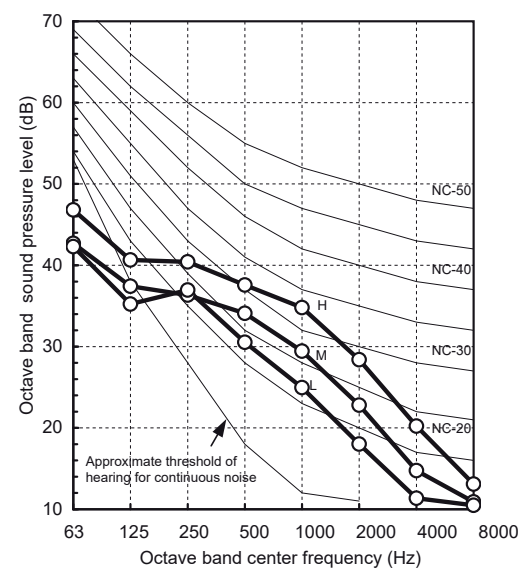
External static pressure 50Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	38	33	29



External static pressure 65Pa

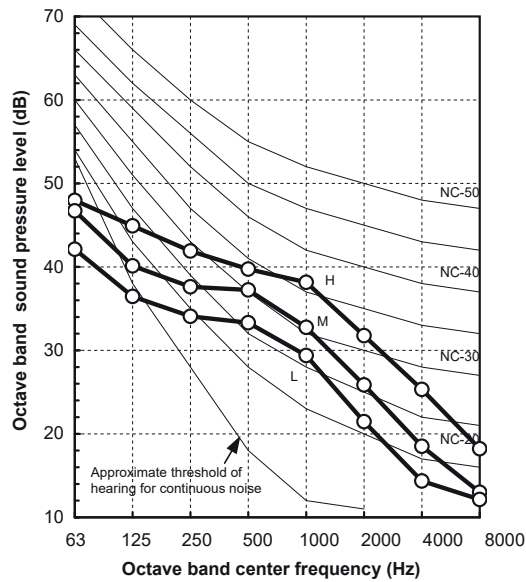
Fan tap	H	M	L
Sound pressure level (dB(A))	39	35	32



RAV-HM801BTP-E / TR

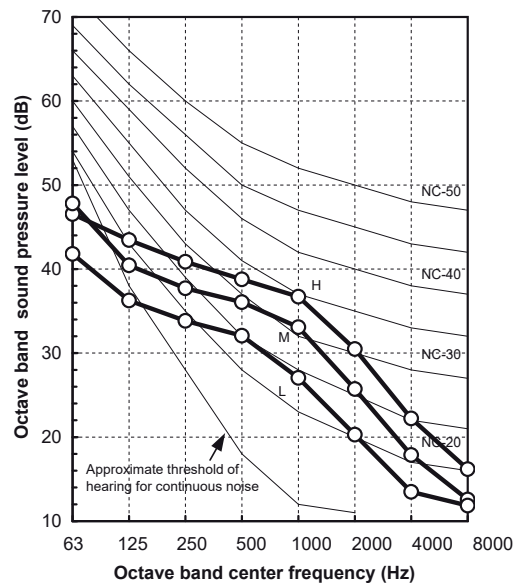
External static pressure 80Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	42	38	34



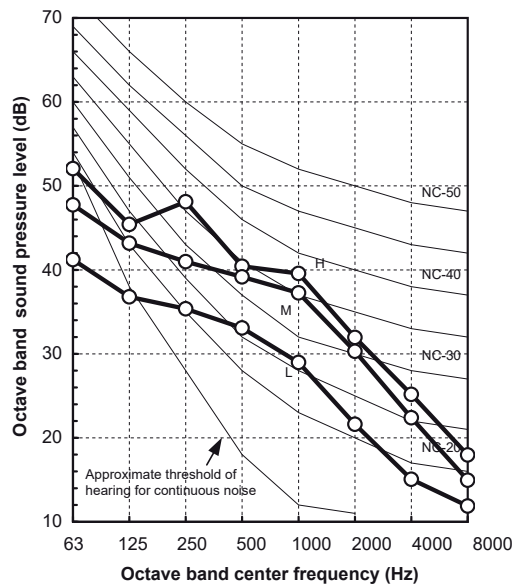
External static pressure 100Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	42	39	33



External static pressure 120Pa

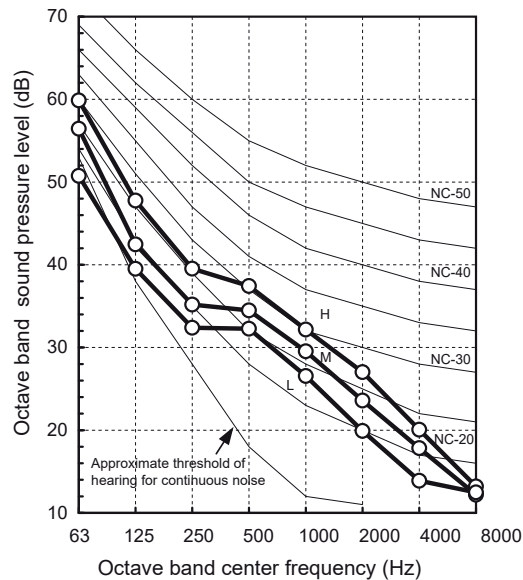
Fan tap	H	M	L
Sound pressure level (dB(A))	44	41	34



RAV-HM1601BTP-E / TR

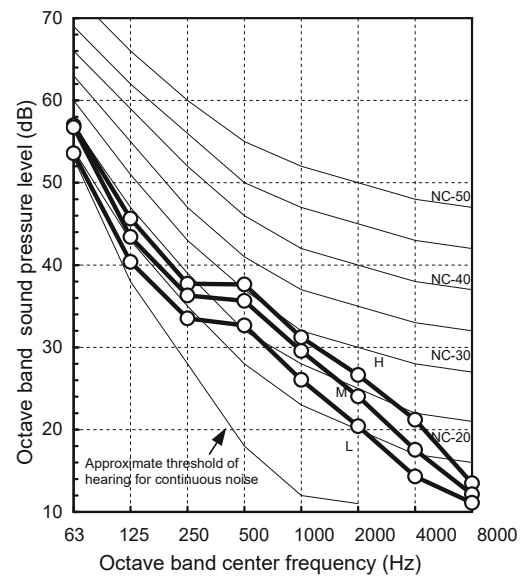
External static pressure 30Pa

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



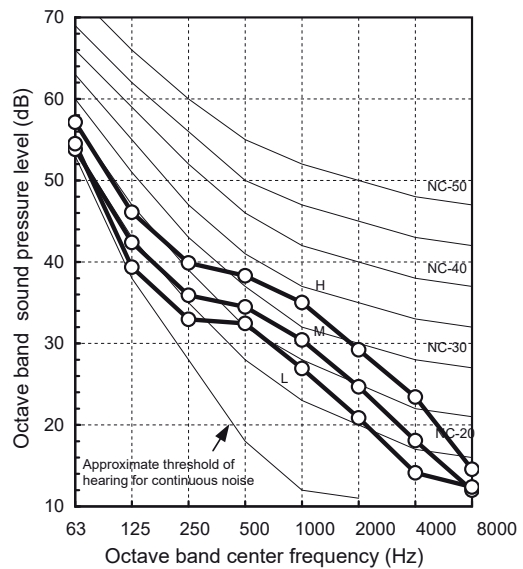
External static pressure 40Pa

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



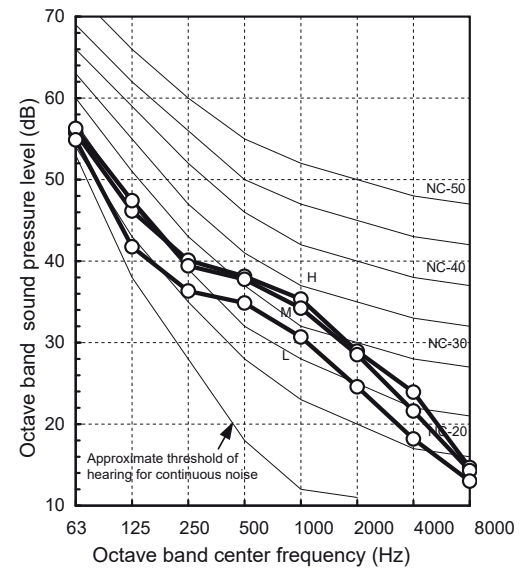
External static pressure 50Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	40	36	33



External static pressure 65Pa

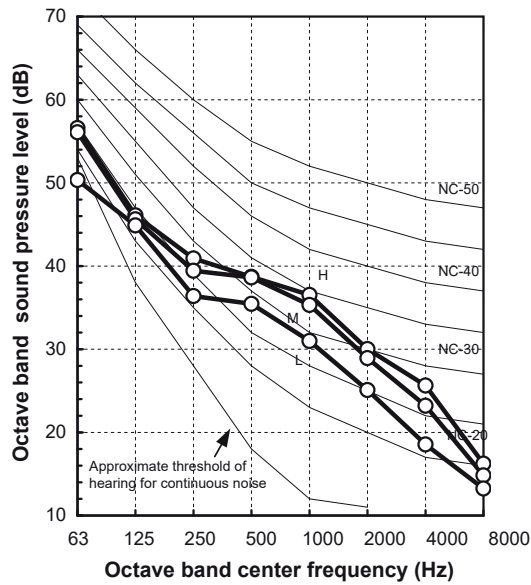
Fan tap	H	M	L
Sound pressure level (dB(A))	41	39	36



RAV-HM1601BTP-E / TR

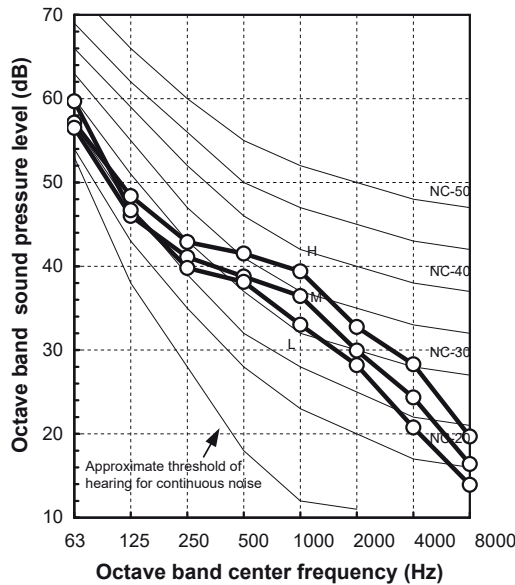
External static pressure 80Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	41	40	36



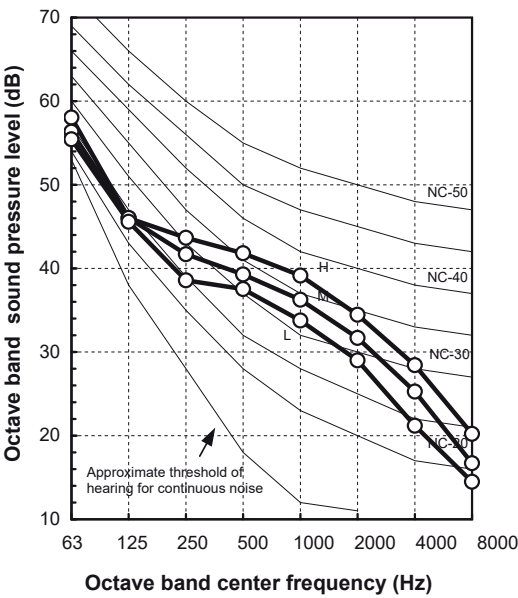
External static pressure 100Pa

Fan tap	H	M	L
Sound pressure level (dB(A))	43	41	39



External static pressure 120Pa

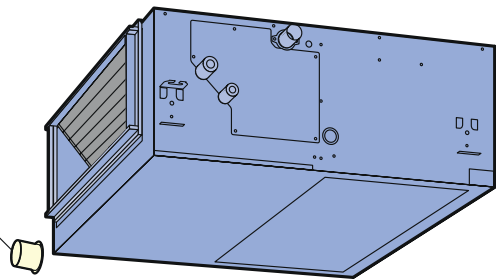
Fan tap	H	M	L
Sound pressure level (dB(A))	44	42	39



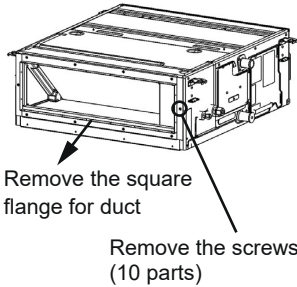
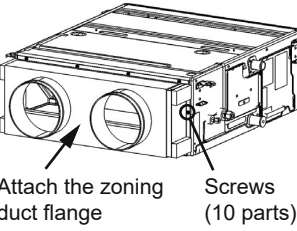
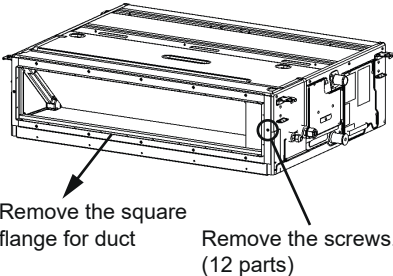
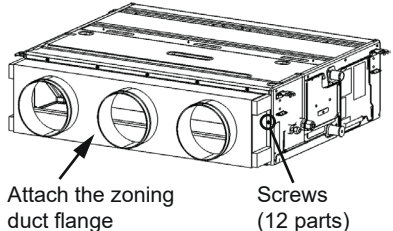
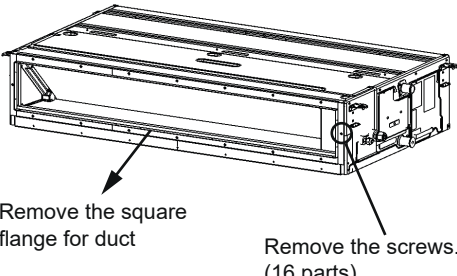
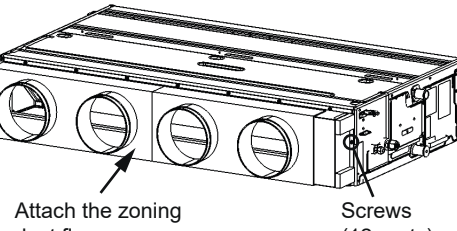
Accessories

Option Parts	Model Name	Applicable FCU
Auxiliary fresh air flange	TCB-FF151US-E	For Duct type
Zoning duct flange	TCB-SF5606BPE	For Duct type
	TCB-SF8006BPE	For Duct type
	TCB-SF16006BPE	For Duct type

Auxiliary fresh air flange
TCB-FF151US-E



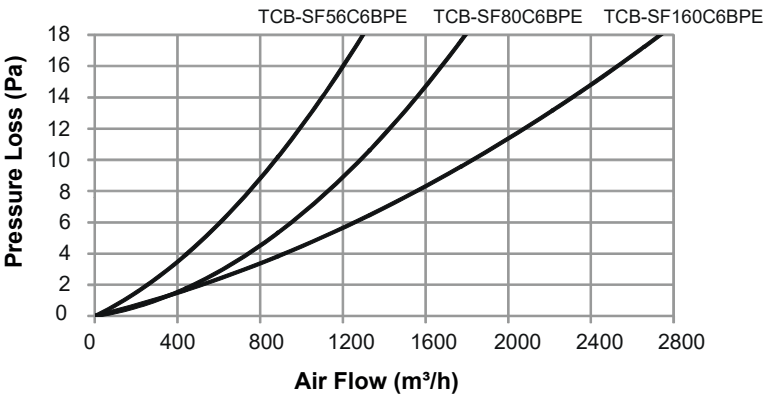
Appendix

Zoning duct flange TCB-SF56C6BPE	Zoning duct flange TCB-SF80C6BPE	Zoning duct flange TCB-SF160C6BPE
 Remove the square flange for duct Remove the screws. (10 parts)  Attach the zoning duct flange Screws (10 parts)	 Remove the square flange for duct Remove the screws. (12 parts)  Attach the zoning duct flange Screws (12 parts)	 Remove the square flange for duct Remove the screws. (16 parts)  Attach the zoning duct flange Screws (12 parts)

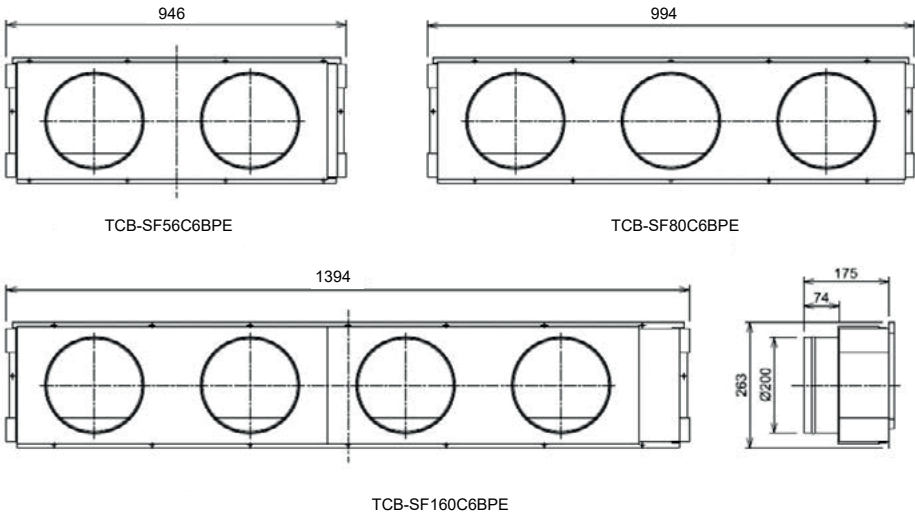
Remove screws on square flange for duct of indoor unit and attach the zoning duct flange with the screw.

External pressure loss characteristic

When you use these “Zoning duct flange” with Concealed Duct Type and High Static Pressure type, pressure-loss characteristics depends on Air Flow.



External dimension



Auxiliary fresh air flange (TCB-FF151US-E)

Arrange a flexible duct (locally procured).

It is necessary to install auxiliary fresh air flange.

INSTALLATION PROCEDURE

- 1 Using the knockout of the indoor unit, as a marker, cut off the steel plate with cutting pliers or cutter.
- 2 Install the auxiliary fresh air flange to the indoor unit with attached 4 fixing screws.

CAUTION

The fresh air shall be conditioned by heat reclaim ventilator or similar.

Emsure the fresh air volume is determined so that mixed suction air and fresh air maintain the operating temperature.

Recommended conditioned air temperature is 12°C to 30°C.

however, make a fresh air volume within 10% of standard.

Provide an air filter in fresh air duct. (Fresh air doesn't pass through the filter of indoor unit.)

Besure to insulate fresh air duct.

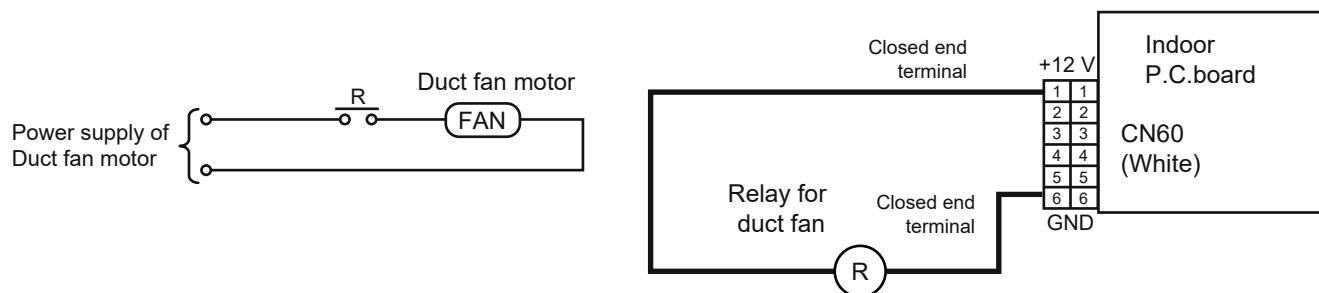
Please wire for inter-lock with fan of indoor unit by using CN60.

Inter - lock circuit

1. Connect the driving relay of the duct fan (DC 12 V) between 1 and 6 on the indoor P.C.board.

Part indicated with a bold line is the connecting circuit.

After installation, implement a test run to check that the duct fan of the indoor unit start / stop simultaneously.
(Implement the test run following to the installation manual of the indoor unit.)



2-5. Ceiling Type

2-5-1. Specifications

2-5-2. Dimension

2-5-3. Wiring Diagrams

2-5-4. Sensible Capacity Table

2-5-5. Part Load Performance

2-5-6. Air Throw Distance Chart

2-5-7. Sound Characteristics (NC Curve)

Accessories

2-5-1. Specifications

Ceiling Type

Model		Indoor unit		RAV-HM1601CTP-E / TR		RAV-HM1601CTP-E / TR				
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		RAV-GM1601AT8(J)P-E/ AT8P-TR				
Cooling capacity				(kW)		14.0 < 3.0 - 16.0 >		14.0 < 3.0 - 16.0 >		
Heating capacity				(kW)		16.0 < 3.0 - 18.0 >		16.0 < 3.0 - 18.0 >		
Power supply						1 phase 220V-240V/50Hz, 1phase 220V/60Hz		3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)		21.79 - 19.97		7.52 - 6.88		
		Power consumption		(kW)		4.65		4.65		
		Power factor		(%)		97		94		
		EER				3.01		3.01		
		PdesignC				14.00		14.00		
		SEER				5.90		5.90		
	Heating	Running current		(A)		21.60 - 19.80		7.45 - 6.82		
		Power consumption		(kW)		4.61		4.61		
		Power factor		(%)		97		94		
		COP				3.47		3.47		
		PdesignH				8.00		8.00		
		SCOP				4.10		4.10		
		Maximum current		(A)		29.0		16.1		
Indoor unit										
Appearance		Main unit				Pure white		Pure white		
		Ceiling panel (Sold separately)	Model				-		-	
			Panel color				-		-	
Outer dimension		Main unit	Height (mm)		235		235			
			Width (mm)		1586		1586			
			Depth (mm)		690		690			
		Ceiling panel (Sold separately)	Height (mm)		-		-			
			Width (mm)		-		-			
			Depth (mm)		-		-			
Total weight		Main unit (kg)		37.0		37.0				
		Ceiling panel (Sold separately) (kg)		-		-				
Fan unit		Fan		Centrifugal fan		Centrifugal fan				
		Standard air flow	H/M/L (m³/h)	2040 / 1650 / 1260		2040 / 1650 / 1260				
		Motor (W)		139		139				
External static pressure		Standard (Upper - Lower) (Pa)		-		-				
Air filter				Standard filter (Long life filter)		Standard filter (Long life filter)				
Sound pressure level			H/M/L (dB)	46 / 42 / 36		46 / 42 / 36				
Sound power level			H/M/L (dB)	61 / 57 / 51		61 / 57 / 51				
Connecting pipe		Drain port		VP25		VP25				

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 35°C DB

Ceilling Type

Twin system : Single phase model

Model			Indoor unit 1		RAV-HM801CTP-E / TR	
			Indoor unit 2		RAV-HM801CTP-E / TR	
			Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR	
Cooling capacity					(kW)	14.0 < 3.0 - 16.0 >
Heating capacity					(kW)	16.0 < 3.0 - 18.0 >
Power supply					1 phase 220V-240V/50Hz, 1phase 220V/60Hz	
Electrical characteristics	Cooling	Running current			(A)	21.79 - 19.97
		Power consumption			(kW)	4.65
		Power factor			(%)	97
		EER				3.01
		PdesignC				14.0
		SEER				5.90
	Heating	Running current			(A)	21.60 - 19.80
		Power consumption			(kW)	4.61
		Power factor			(%)	97
		COP				3.47
		PdesignH(Tbiv-7°C)				8.00
		SCOP				4.10
Maximum current			(A)	29.0		
Indoor unit						
Appearance		Main unit			Pure white	
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height		(mm)	235
			Width		(mm)	1270
			Depth		(mm)	690
		Ceiling panel (Sold separately)	Height		(mm)	-
			Width		(mm)	-
			Depth		(mm)	-
Total weight		Main unit			(kg)	29.0
		Ceiling panel (Sold separately)			(kg)	-
Fan unit		Fan			Centrifugal fan	
		Standard air flow	H/M/L	(m³/h)	1410 / 1002 / 750	
		Motor			(W)	94
External static pressure		Standard (Upper - Lower)			(Pa)	-
Air filter					Standard filter (Long life filter)	
Sound pressure level			H/M/L	(dB)	41 / 36 / 29	
Sound power level			H/M/L	(dB)	56 / 51 / 44	
Connecting pipe		Drain port			VP20	

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 35°C DB

Ceiling Type

Twin system : Three phase model

Model		Indoor unit 1		RAV-HM801CTP-E / TR		
		Indoor unit 2		RAV-HM801CTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	7.52 - 6.88	
		Power consumption		(kW)	4.65	
		Power factor		(%)	94	
		EER			3.01	
		PdesignC			14.0	
		SEER			5.90	
	Heating	Running current		(A)	7.45 - 6.82	
		Power consumption		(kW)	4.61	
		Power factor		(%)		
		COP			3.47	
		PdesignH (Tbiv -7°C)			8.00	
		SCOP			4.10	
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Pure white		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height	(mm)	235	
			Width	(mm)	1270	
			Depth	(mm)	690	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	29.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	1410 / 1002 / 750	
		Motor		(W)	94	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	41 / 36 / 29	
Sound power level			H/M/L	(dB)	56 / 51 / 44	
Connecting pipe		Drain port		VP20		

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 35°C DB

Ceiling Type

Triple system : Single phase model

Model		Indoor unit 1		RAV-HM561CTP-E / TR		
		Indoor unit 2		RAV-HM561CTP-E / TR		
		Indoor unit 3		RAV-HM561CTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	21.79 - 19.97	
		Power consumption		(kW)	4.65	
		Power factor		(%)	97	
		EER			3.01	
		PdesignC			14.0	
		SEER			5.90	
	Heating	Running current		(A)	21.60 - 19.80	
		Power consumption		(kW)	4.61	
		Power factor		(%)	97	
		COP			3.47	
		PdesignH(Tbiv-7°C)			8.00	
		SCOP			4.10	
		Maximum current	(A)	29.0		
Indoor unit						
Appearance		Main unit		Pure white		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height	(mm)	235	
			Width	(mm)	952	
			Depth	(mm)	690	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	23.0	
		Ceiling panel (Sold separately)		(kg)		
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	900 / 720 / 540	
		Motor		(W)	94	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	37 / 35 / 28	
Sound power level			H/M/L	(dB)	52 / 50 / 43	
Connecting pipe		Drain port		VP20		

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 35°C DB

Ceiling Type

Triple system : Three phase model

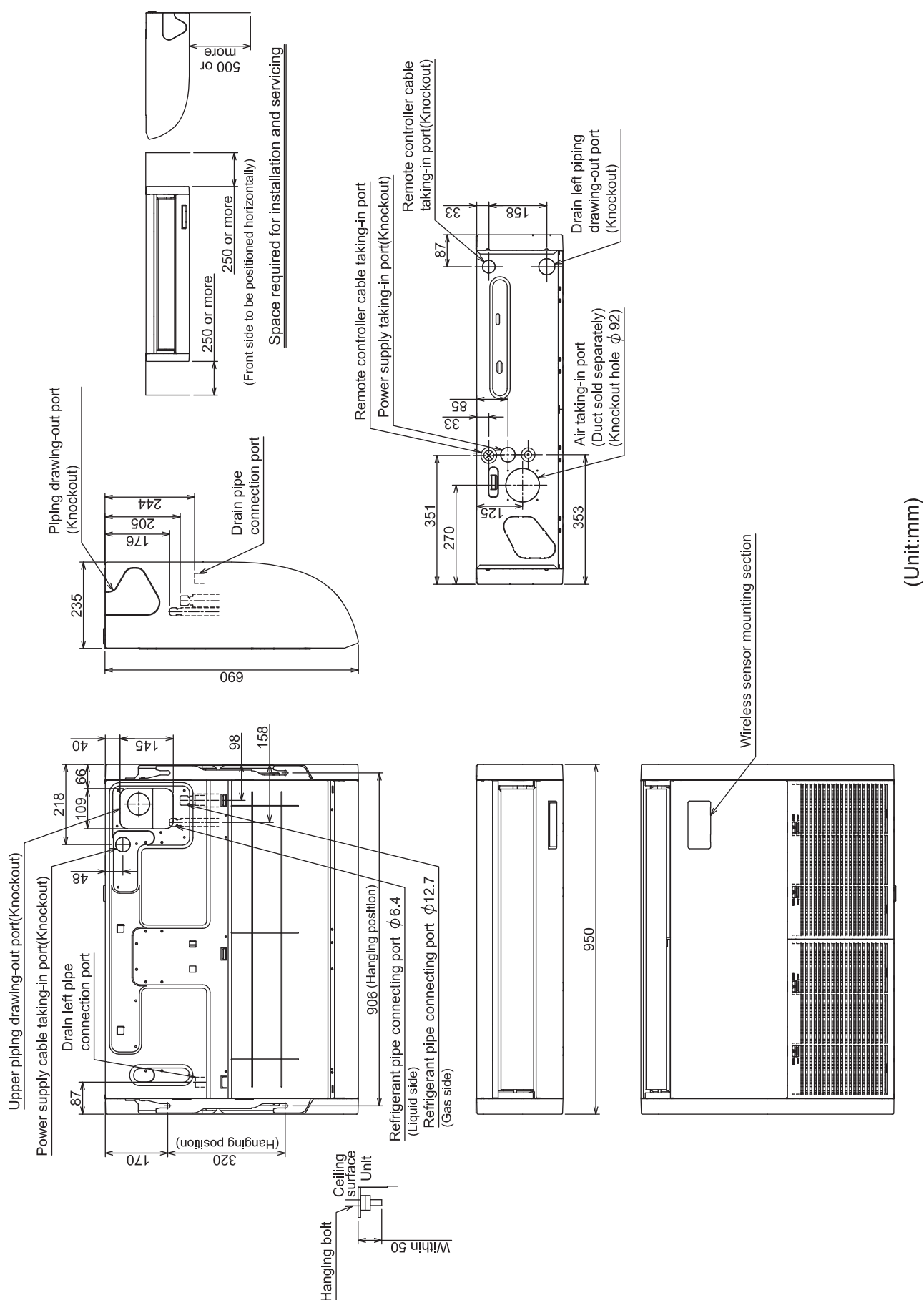
Model		Indoor unit 1		RAV-HM561CTP-E / TR		
		Indoor unit 2		RAV-HM561CTP-E / TR		
		Indoor unit 3		RAV-HM561CTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	7.52 - 6.88	
		Power consumption		(kW)	4.65	
		Power factor		(%)	94	
		EER		3.01		
		PdesignC		14.0		
		SEER		5.90		
	Heating	Running current		(A)	7.45 - 6.82	
		Power consumption		(kW)	4.61	
		Power factor		(%)	94	
		COP		3.47		
		PdesignH (Tbiv -7°C)		8.00		
		SCOP		4.10		
		Maximum current		(A)	16.1	
Indoor unit						
Appearance		Main unit		Pure white		
		Ceiling panel (Sold separately)	Model	-		
			Panel color	-		
Outer dimension		Main unit	Height	(mm)	235	
			Width	(mm)	952	
			Depth	(mm)	690	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	23.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Centrifugal fan		
		Standard air flow	H/M/L	(m³/h)	900 / 720 / 540	
		Motor		(W)	94	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	37 / 35 / 28	
Sound power level			H/M/L	(dB)	52 / 50 / 43	
Connecting pipe		Drain port		VP20		

Note :

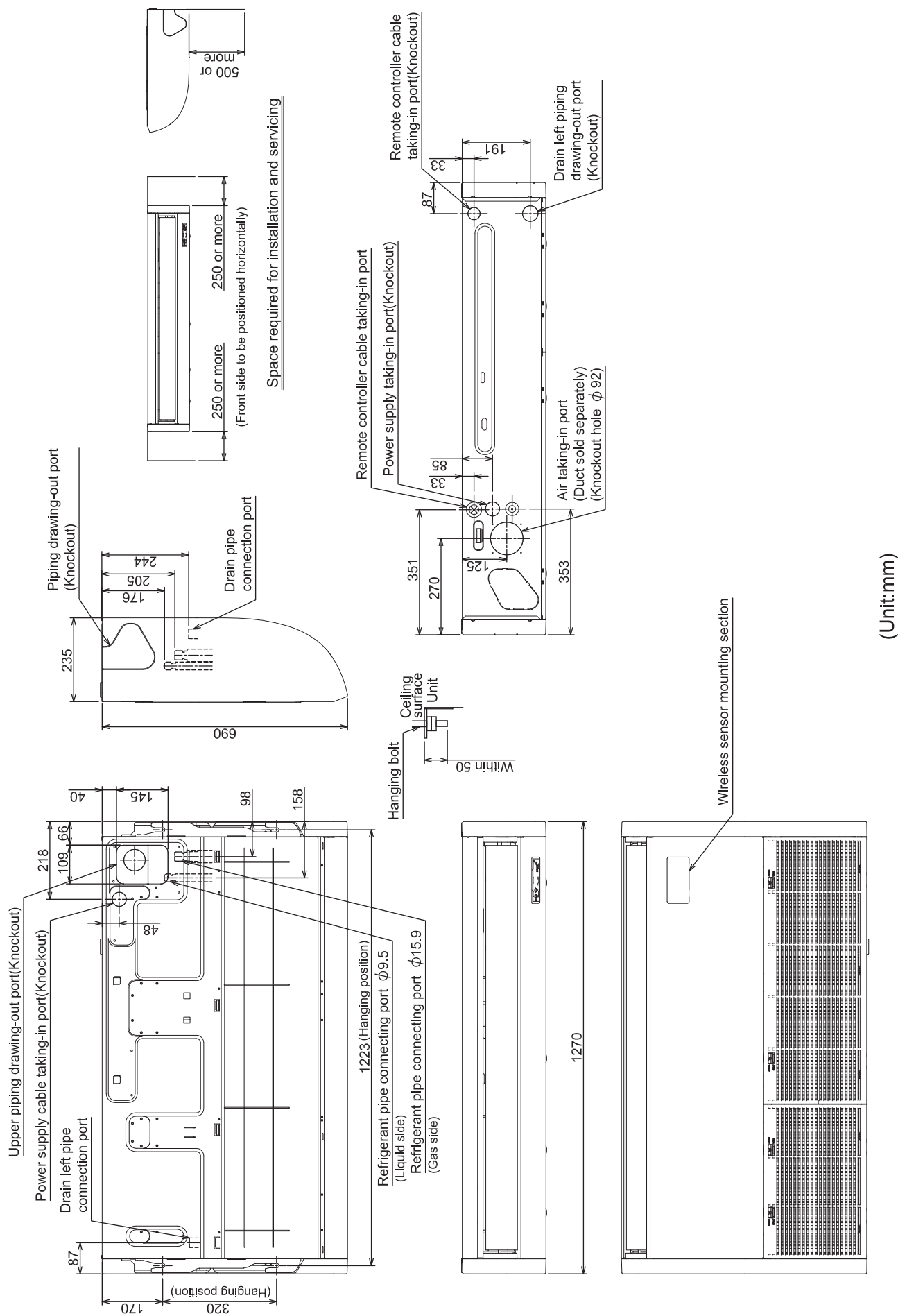
Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
 Heating : Indoor air temperature 20°C DB, Outdoor air temperature 35°C DB

2-5-2. Dimension

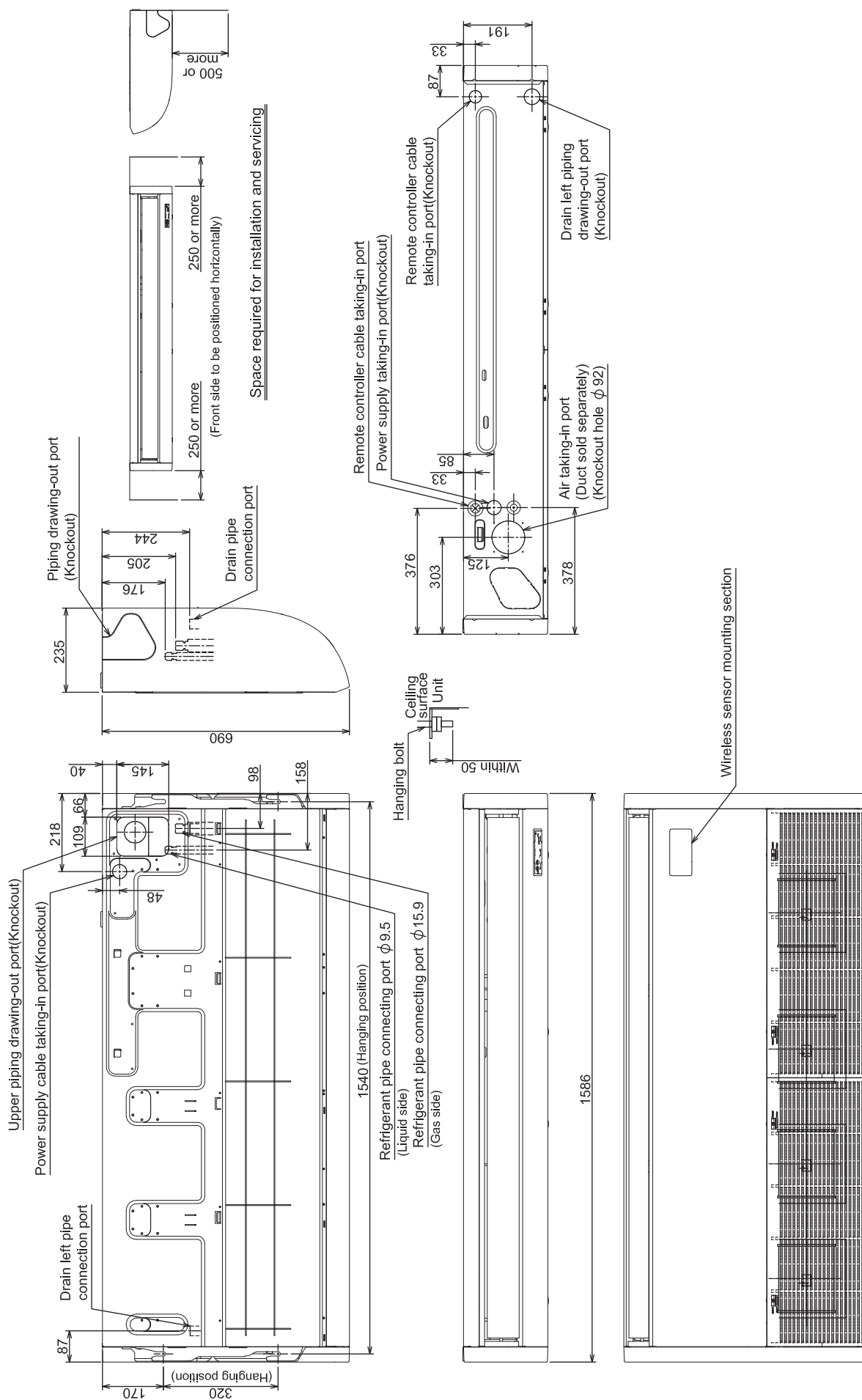
RAV-HM561CTP-E / TR



RAV-HM801CTP-E / TR



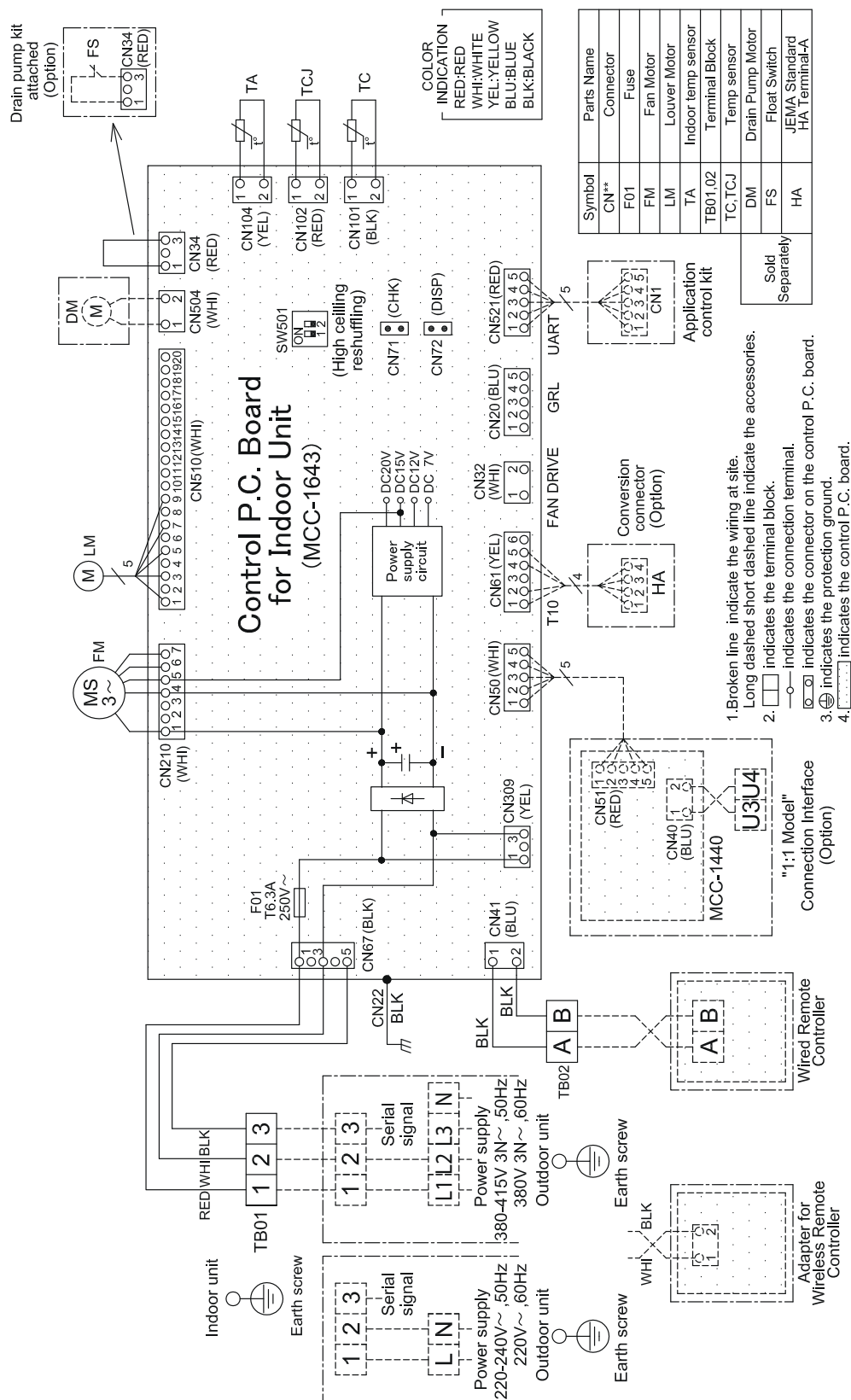
(Unit:mm)

RAV-HM1601CTP-E / TR

(Unit:mm)

2-5-3. Wiring Diagrams

RAV-HM561CTP-E / TR, RAV-HM801CTP-E / TR, RAV-HM1601CTP-E / TR



2-5-4. Sensible Capacity Table

RAV-HM1601CTP-E / TR : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
1601	10.0	13.1	9.2	13.8	9.7	14.5	10.2	15.0	10.5	15.5	10.9	16.0	11.2	16.5	11.5	17.4	12.2	18.2	12.8
	12.0	13.1	9.1	13.7	9.6	14.4	10.1	14.9	10.5	15.4	10.8	15.9	11.1	16.4	11.5	17.3	12.1	18.1	12.7
	14.0	13.0	9.1	13.7	9.6	14.3	10.0	14.8	10.4	15.4	10.7	15.8	11.1	16.3	11.4	17.2	12.1	18.0	12.6
	16.0	12.9	9.0	13.6	9.5	14.2	10.0	14.7	10.3	15.2	10.7	15.7	11.0	16.1	11.3	17.1	12.0	17.9	12.5
	18.0	12.8	9.0	13.5	9.4	14.1	9.9	14.6	10.2	15.1	10.6	15.6	10.9	16.0	11.2	17.0	11.9	17.7	12.4
	20.0	12.7	8.9	13.3	9.3	14.0	9.8	14.5	10.2	15.0	10.5	15.4	10.8	15.9	11.1	16.8	11.8	17.6	12.3
	21.0	12.6	8.8	13.3	9.3	13.9	9.8	14.4	10.1	14.9	10.5	15.4	10.8	15.8	11.1	16.7	11.7	17.5	12.3
	23.0	12.5	8.8	13.2	9.2	13.8	9.7	14.3	10.0	14.8	10.3	15.2	10.7	15.7	11.0	16.6	11.6	17.3	12.1
	25.0	12.4	8.7	13.0	9.1	13.7	9.6	14.1	9.9	14.6	10.2	15.1	10.5	15.5	10.8	16.4	11.5	17.1	12.0
	27.0	12.2	8.5	12.8	9.0	13.5	9.4	14.0	9.8	14.4	10.1	14.9	10.4	15.3	10.7	16.2	11.3	16.9	11.9
	29.0	12.1	8.4	12.7	8.9	13.3	9.3	13.8	9.6	14.3	10.0	14.7	10.3	15.1	10.6	16.0	11.2	16.7	11.7
	31.0	11.9	8.3	12.5	8.7	13.1	9.2	13.6	9.5	14.0	9.8	14.5	10.1	14.9	10.4	15.8	11.0	16.5	11.5
	33.0	11.7	8.2	12.3	8.6	12.9	9.0	13.4	9.4	13.8	9.7	14.2	10.0	14.6	10.3	15.5	10.9	16.2	11.4
	35.0	11.5	8.0	12.1	8.5	12.7	8.9	13.1	9.2	13.6	9.5	14.0	9.8	14.4	10.1	15.3	10.7	16.0	11.2
	37.0	11.3	7.9	11.9	8.3	12.5	8.7	12.9	9.0	13.3	9.3	13.7	9.6	14.1	9.9	15.0	10.5	15.6	11.0
	39.0	11.1	7.7	11.6	8.1	12.2	8.5	12.6	8.8	13.1	9.1	13.5	9.4	13.8	9.7	14.7	10.3	15.3	10.7

RAV-HM801CTP-E / TR (Twin) : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
801	10.0	7.9	6.1	8.2	6.3	8.5	6.5	8.7	6.7	8.9	6.9	9.1	7.1	9.4	7.3	9.8	7.5	10.2	7.6
	12.0	7.8	6.0	8.1	6.2	8.4	6.4	8.6	6.6	8.8	6.8	9.0	7.0	9.3	7.2	9.7	7.4	10.1	7.5
	14.0	7.7	5.9	8.0	6.1	8.3	6.3	8.5	6.5	8.7	6.7	8.9	6.9	9.2	7.1	9.6	7.3	10.0	7.4
	16.0	7.6	5.8	7.9	6.0	8.2	6.2	8.4	6.4	8.6	6.6	8.8	6.8	9.1	7.0	9.5	7.2	9.9	7.3
	18.0	7.5	5.7	7.8	5.9	8.1	6.1	8.3	6.3	8.5	6.5	8.7	6.7	9.0	6.9	9.4	7.1	9.8	7.2
	20.0	7.4	5.6	7.7	5.8	8.0	6.0	8.2	6.2	8.4	6.4	8.6	6.6	8.9	6.8	9.3	7.0	9.7	7.1
	21.0	7.3	5.5	7.6	5.7	7.9	5.9	8.1	6.1	8.3	6.3	8.5	6.5	8.8	6.7	9.2	6.9	9.6	7.0
	23.0	7.2	5.4	7.5	5.6	7.8	5.8	8.0	6.0	8.2	6.2	8.4	6.4	8.7	6.6	9.1	6.8	9.5	6.9
	25.0	7.1	5.3	7.4	5.5	7.7	5.7	7.9	5.9	8.1	6.1	8.3	6.3	8.6	6.5	9.0	6.7	9.4	6.8
	27.0	7.0	5.2	7.3	5.4	7.6	5.6	7.8	5.8	8.0	6.0	8.2	6.2	8.5	6.4	8.9	6.6	9.3	6.7
	29.0	6.8	5.1	7.1	5.3	7.4	5.5	7.6	5.7	7.8	5.9	8.0	6.1	8.3	6.3	8.7	6.5	9.1	6.6
	31.0	6.5	4.9	6.8	5.1	7.1	5.3	7.3	5.5	7.5	5.7	7.7	5.9	8.0	6.1	8.4	6.3	8.8	6.4
	33.0	6.2	4.7	6.5	4.9	6.8	5.1	7.0	5.3	7.2	5.5	7.4	5.7	7.7	5.9	8.1	6.1	8.5	6.2
	35.0	5.9	4.5	6.2	4.7	6.5	4.9	6.7	5.1	6.9	5.3	7.1	5.5	7.4	5.7	7.8	5.9	8.2	6.0
	37.0	5.8	4.4	6.1	4.6	6.4	4.8	6.6	5.0	6.8	5.2	7.0	5.4	7.3	5.6	7.7	5.8	8.1	5.9
	39.0	5.6	4.3	5.9	4.5	6.2	4.7	6.4	4.9	6.6	5.1	6.8	5.3	7.1	5.5	7.5	5.7	7.9	5.8

RAV-HM561CTP-E / TR (Triple) : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
561	10.0	4.7	3.9	4.9	4.1	5.2	4.3	5.4	4.5	5.6	4.6	5.7	4.7	5.9	4.9	6.2	5.2	6.5	5.4
	12.0	4.7	3.9	4.9	4.1	5.2	4.3	5.3	4.4	5.5	4.6	5.7	4.7	5.8	4.8	6.2	5.1	6.5	5.4
	14.0	4.6	3.8	4.9	4.0	5.1	4.2	5.3	4.4	5.5	4.5	5.6	4.7	5.8	4.8	6.1	5.1	6.4	5.3
	16.0	4.6	3.8	4.8	4.0	5.1	4.2	5.3	4.4	5.4	4.5	5.6	4.6	5.8	4.8	6.1	5.1	6.4	5.3
	18.0	4.6	3.8	4.8	4.0	5.0	4.2	5.2	4.3	5.4	4.5	5.6	4.6	5.7	4.7	6.1	5.0	6.3	5.3
	20.0	4.5	3.8	4.8	4.0	5.0	4.1	5.2	4.3	5.4	4.4	5.5	4.6	5.7	4.7	6.0	5.0	6.3	5.2
	21.0	4.5	3.7	4.7	3.9	5.0	4.1	5.2	4.3	5.3	4.4	5.5	4.6	5.6	4.7	6.0	5.0	6.3	5.2
	23.0	4.5	3.7	4.7	3.9	4.9	4.1	5.1	4.2	5.3	4.4	5.4	4.5	5.6	4.6	5.9	4.9	6.2	5.1
	25.0	4.4	3.7	4.6	3.9	4.9	4.0	5.0	4.2	5.2	4.3	5.4	4.5	5.5	4.6	5.9	4.9	6.1	5.1
	27.0	4.4	3.6	4.6	3.8	4.8	4.0	5.0	4.1	5.2	4.3	5.3	4.4	5.5	4.5	5.8	4.8	6.0	5.0
	29.0	4.3	3.6	4.5	3.8	4.8	3.9	4.9	4.1	5.1	4.2	5.2	4.3	5.4	4.5	5.7	4.7	6.0	5.0
	31.0	4.2	3.5	4.5	3.7	4.7	3.9	4.9	4.0	5.0	4.2	5.2	4.3	5.3	4.4	5.6	4.7	5.9	4.9
	33.0	4.2	3.5	4.4	3.6	4.6	3.8	4.8	4.0	4.9	4.1	5.1	4.2	5.2	4.3	5.5	4.6	5.8	4.8
	35.0	4.1	3.4	4.3	3.6	4.5	3.8	4.7	3.9	4.9	4.0	5.0	4.1	5.1	4.3	5.4	4.5	5.7	4.7
	37.0	4.0	3.3	4.2	3.5	4.4	3.7	4.6	3.8	4.8	4.0	4.9	4.1	5.0	4.2	5.3	4.4	5.6	4.6
	39.0	3.9	3.3	4.2	3.4	4.4	3.6	4.5	3.7	4.7	3.9	4.8	4.0	4.9	4.1	5.2	4.3	5.5	4.5

TC: Total Capacity [kW]

SHC: Sensible Heat Capacity [kW]

2-5-5. Part load performance

Indoor unit : RAV-HM1601CTP-E / TR

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4651	16000	4611

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11800	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5400	4690	3880	3140	2500	1910	1420	1000	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5140	4320	3570	2900	2300	1760	1300	920	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	4710	3960	3270	2650	2110	1610	1200	840	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4651	3910	3230	2620	2080	1590	1180	830	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3390	2850	2350	1910	1520	1160	860	610	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2790	2350	1940	1570	1250	950	710	500	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2230	1880	1550	1260	1000	760	570	400	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5100	4290	3560	2900	2310	1800	1360	990	710	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4830	4060	3370	2740	2190	1710	1290	940	670	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4611	3880	3220	2620	2090	1630	1230	900	640	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4470	3760	3120	2540	2030	1580	1190	870	620	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4250	3570	2970	2410	1920	1500	1130	830	590	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3770	3170	2630	2140	1710	1330	1000	740	520	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3690	3100	2580	2100	1670	1300	980	720	510	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3660	3080	2560	2080	1660	1290	980	710	510	520
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3500	2940	2440	1990	1580	1240	930	680	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3260	2740	2280	1850	1480	1150	870	640	450	460

Twin system**Indoor unit** : RAV-HM801CTP-E / TR (x2)**Outdoor unit** : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4651	16000	4611

Cooling

Q: Capacity in W

W: Power Consumption in W

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11800	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5400	4690	3880	3140	2500	1910	1420	1000	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5140	4320	3570	2900	2300	1760	1300	920	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	4710	3960	3270	2650	2110	1610	1200	840	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4651	3910	3230	2620	2080	1590	1180	830	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3390	2850	2350	1910	1520	1160	860	610	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2790	2350	1940	1570	1250	950	710	500	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2230	1880	1550	1260	1000	760	570	400	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5100	4290	3560	2900	2310	1800	1360	990	710	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4830	4060	3370	2740	2190	1710	1290	940	670	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4611	3880	3220	2620	2090	1630	1230	900	640	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4470	3760	3120	2540	2030	1580	1190	870	620	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4250	3570	2970	2410	1920	1500	1130	830	590	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3770	3170	2630	2140	1710	1330	1000	740	520	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3690	3100	2580	2100	1670	1300	980	720	510	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3660	3080	2560	2080	1660	1290	980	710	510	520
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3500	2940	2440	1990	1580	1240	930	680	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3260	2740	2280	1850	1480	1150	870	640	450	460

Triple system

Indoor unit : RAV-HM561CTP-E / TR (x3)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	4651	16000	4611

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11800	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5400	4690	3880	3140	2500	1910	1420	1000	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5140	4320	3570	2900	2300	1760	1300	920	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	4710	3960	3270	2650	2110	1610	1200	840	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	4651	3910	3230	2620	2080	1590	1180	830	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3390	2850	2350	1910	1520	1160	860	610	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	2790	2350	1940	1570	1250	950	710	500	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2230	1880	1550	1260	1000	760	570	400	310	310

Heating

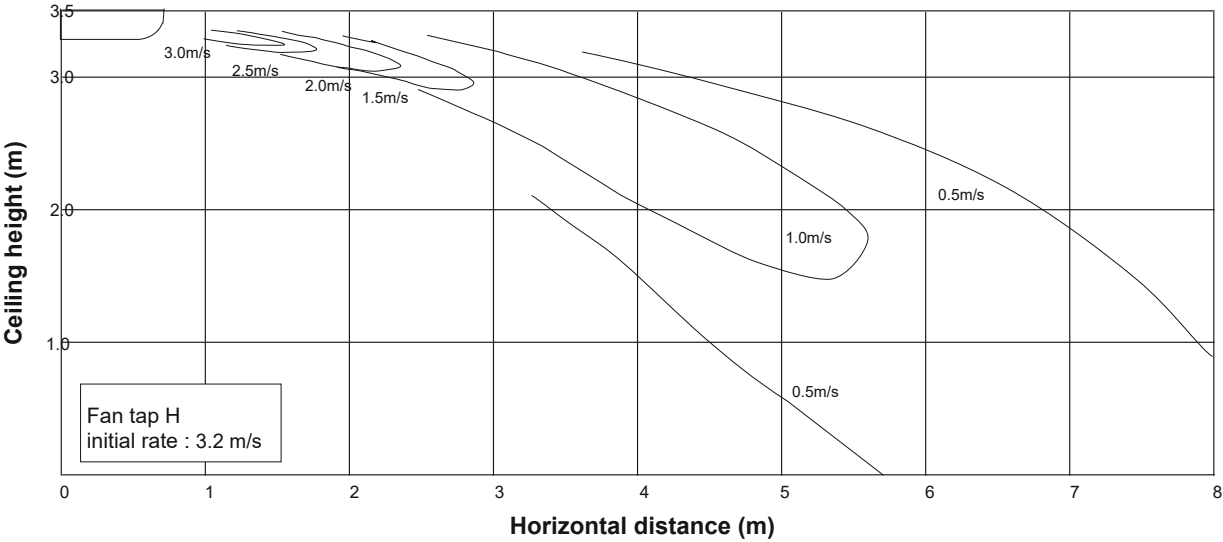
Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5100	4290	3560	2900	2310	1800	1360	990	710	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	4830	4060	3370	2740	2190	1710	1290	940	670	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4611	3880	3220	2620	2090	1630	1230	900	640	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4470	3760	3120	2540	2030	1580	1190	870	620	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4250	3570	2970	2410	1920	1500	1130	830	590	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	3770	3170	2630	2140	1710	1330	1000	740	520	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3690	3100	2580	2100	1670	1300	980	720	510	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3660	3080	2560	2080	1660	1290	980	710	510	520
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3500	2940	2440	1990	1580	1240	930	680	490	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3260	2740	2280	1850	1480	1150	870	640	450	460

2-5-6. Air Throw Distance Chart

RAV-HM561CTP-E / TR

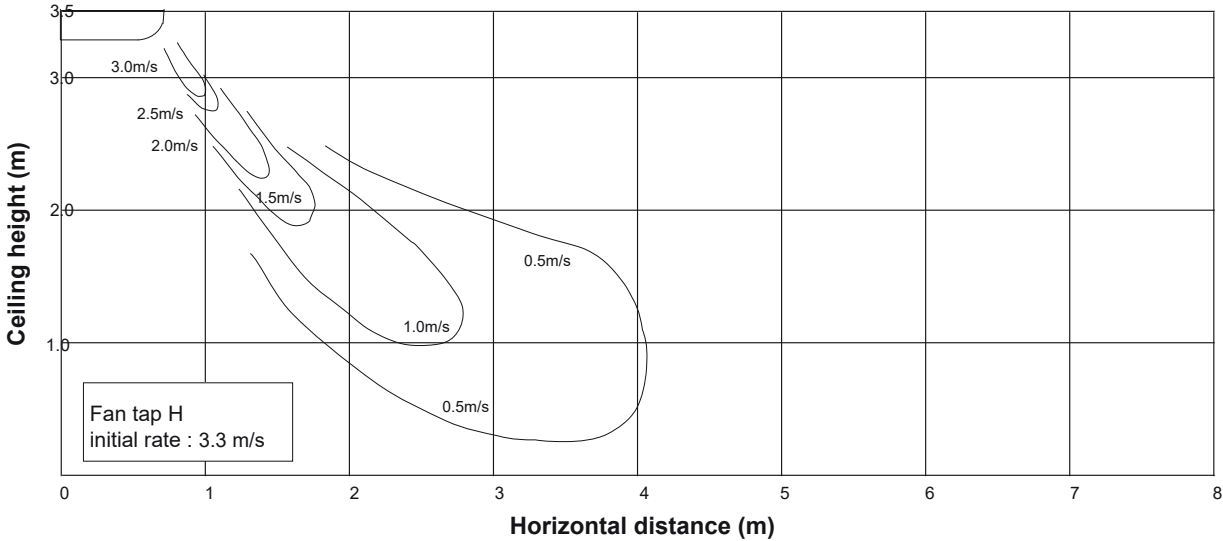
Cooling

(Louver position : F2)



Heating

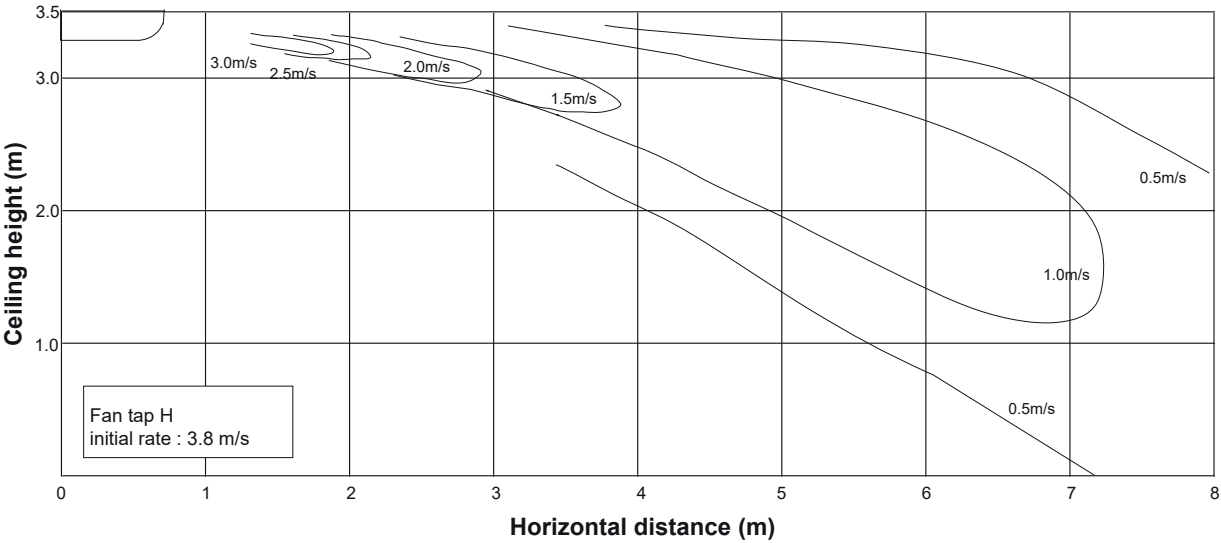
(Louver position : F5)



RAV-HM801CTP-E / TR

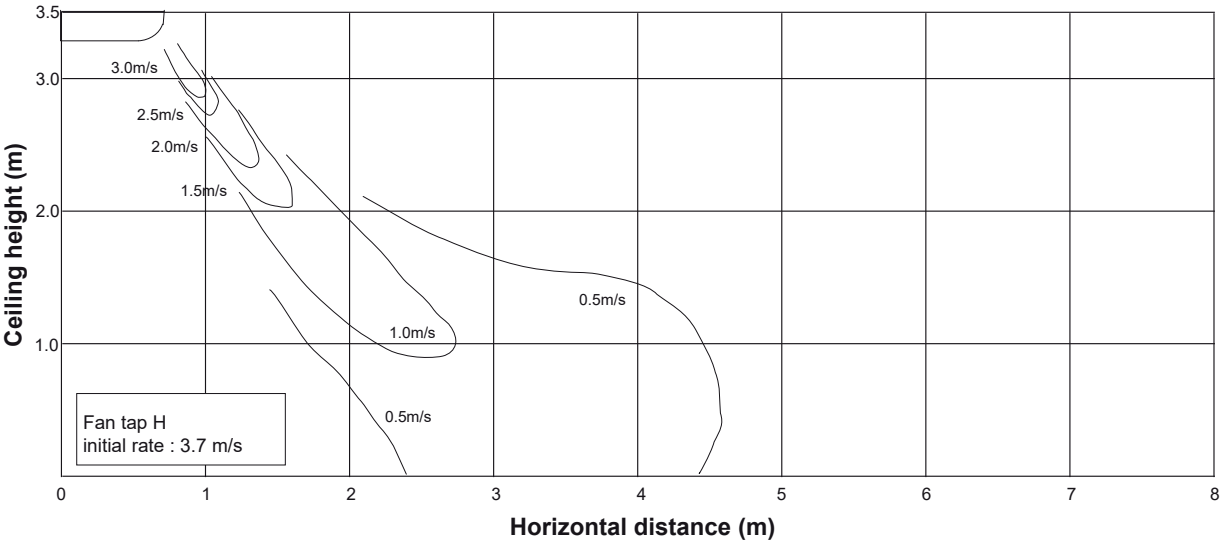
Cooling

(Louver position : F2)

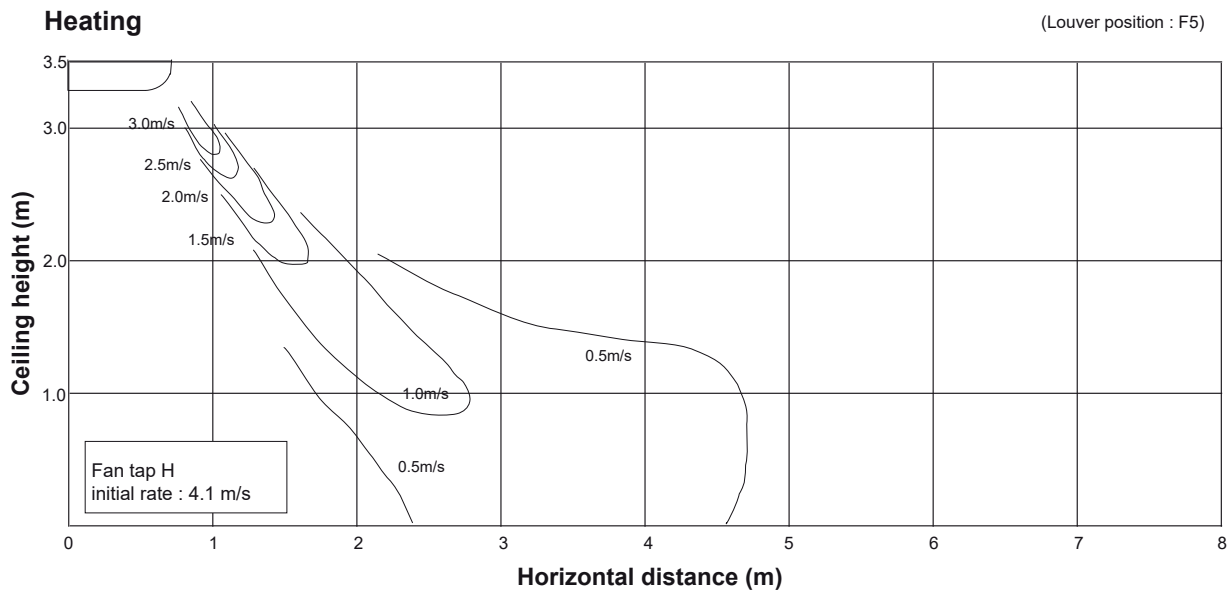
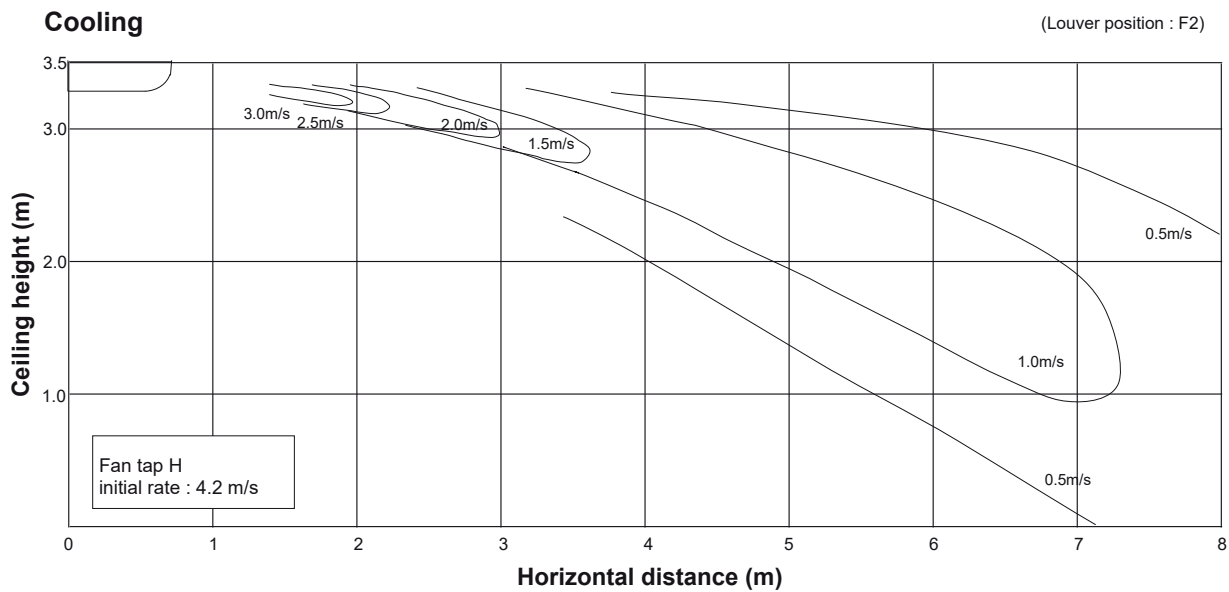


Heating

(Louver position : F5)



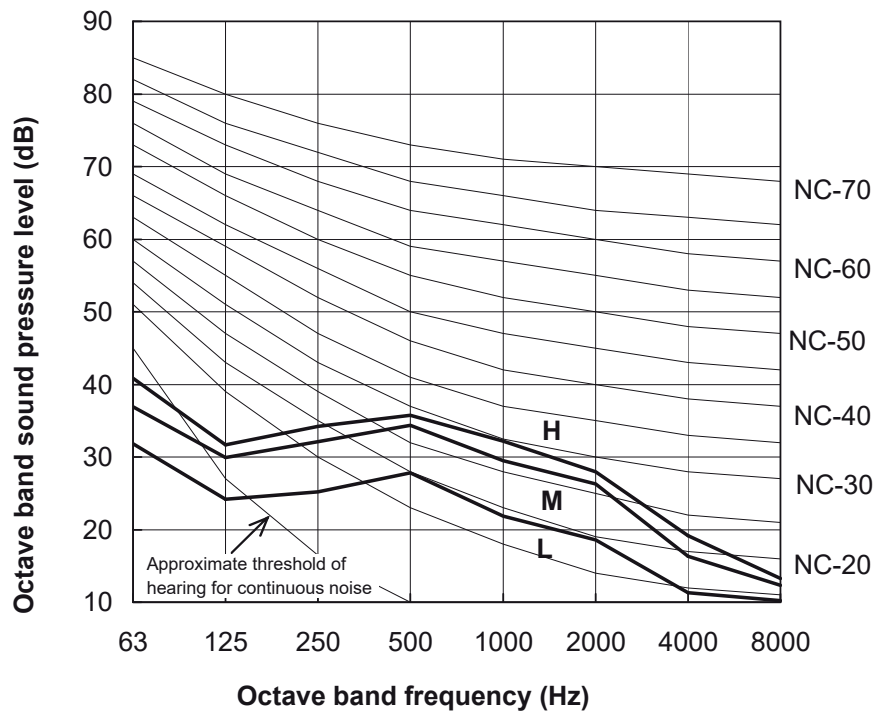
RAV-HM1601CTP-E / TR



2-5-7. Sound Characteristics (NC curve)

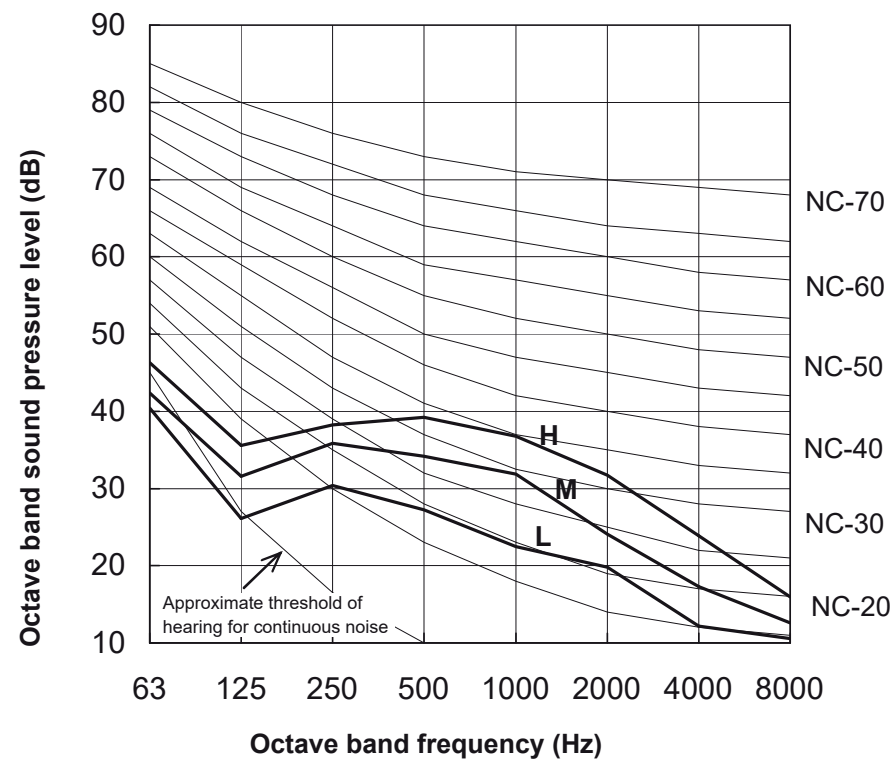
RAV-HM561CTP-E / TR

Fan tap	H	M	L
Sound pressure level (dB(A))	37	35	28



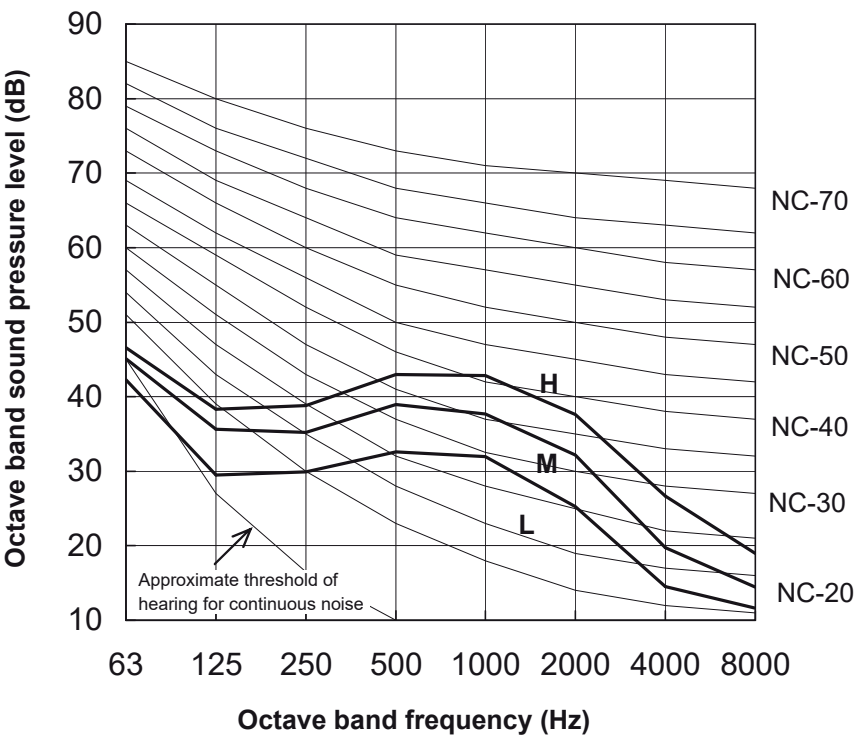
RAV-HM801CTP-E / TR

Fan tap	H	M	L
Sound pressure level (dB(A))	41	36	29



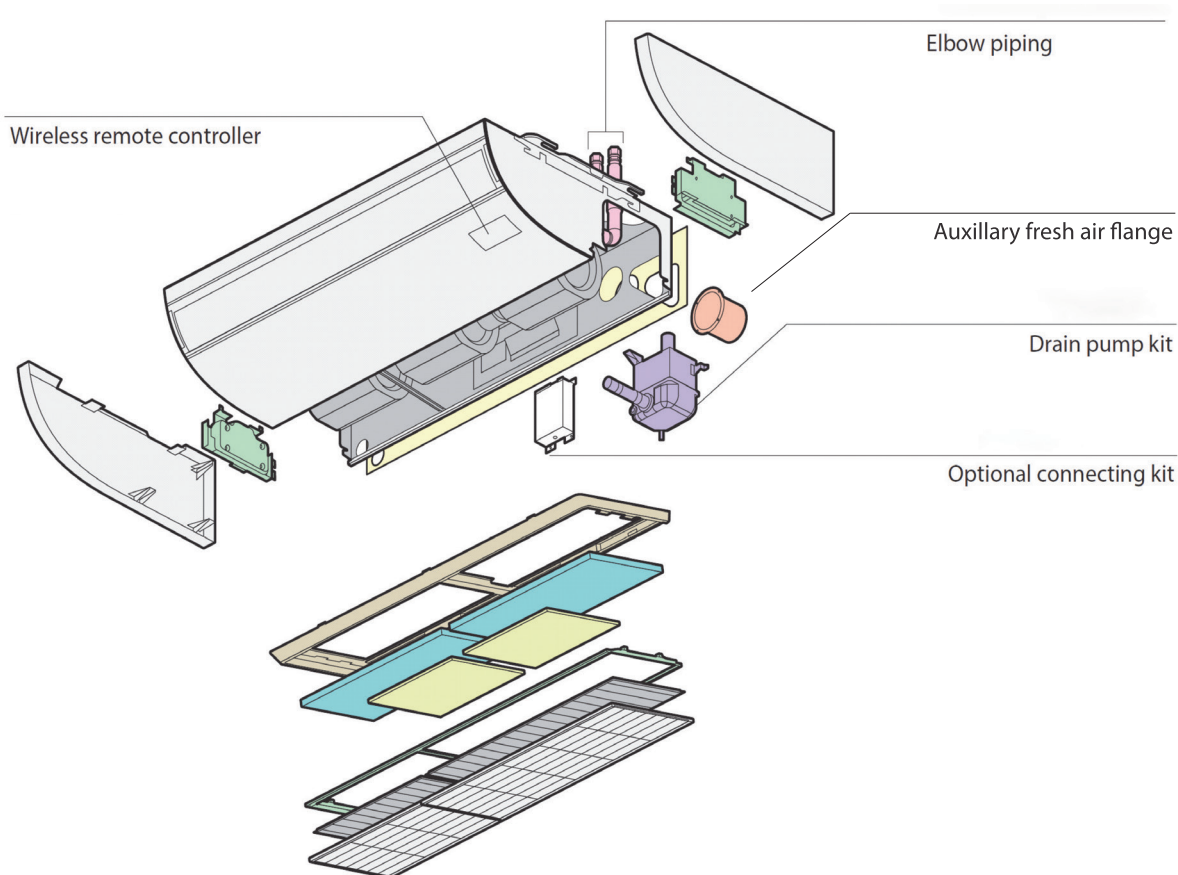
RAV-HM1601CTP-E / TR

Fan tap	H	M	L
Sound pressure level (dB(A))	46	41	35



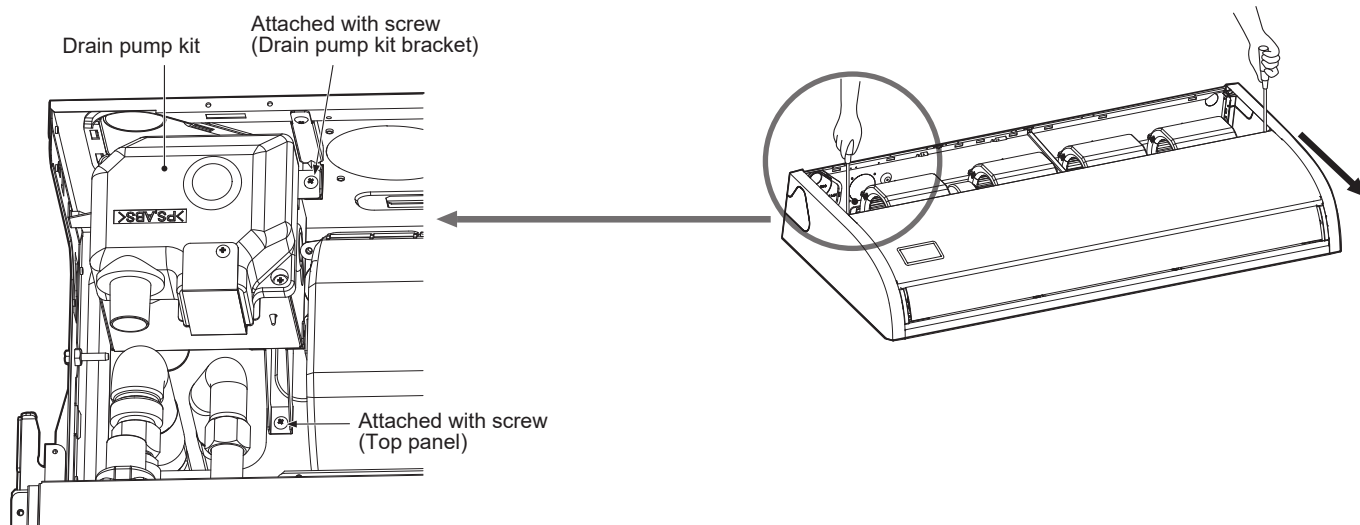
Accessories

Parts name	Model name	Applied Model	Feature	Remark
Wireless Remote Controller kit	RBC-AXU31C-E	All Model	-	
Drain pump kit	TCB-DP31CE	All Model	Antibacterial glass is built into Drain pump kit	
Elbow piping kit	TCB-KP14CPE	2HP model	It is necessary for installation of Drain pump kit	Use with TCB-DP31CE
	TCB-KP24CPE	3-6HP model	It is necessary for installation of Drain pump kit	
Option connecting kit	TCB-PCUC2E	All Model	For external I/O signal without local relay preparation	
Auxillary fresh air flange	TCB-FF101URE2	All Model		

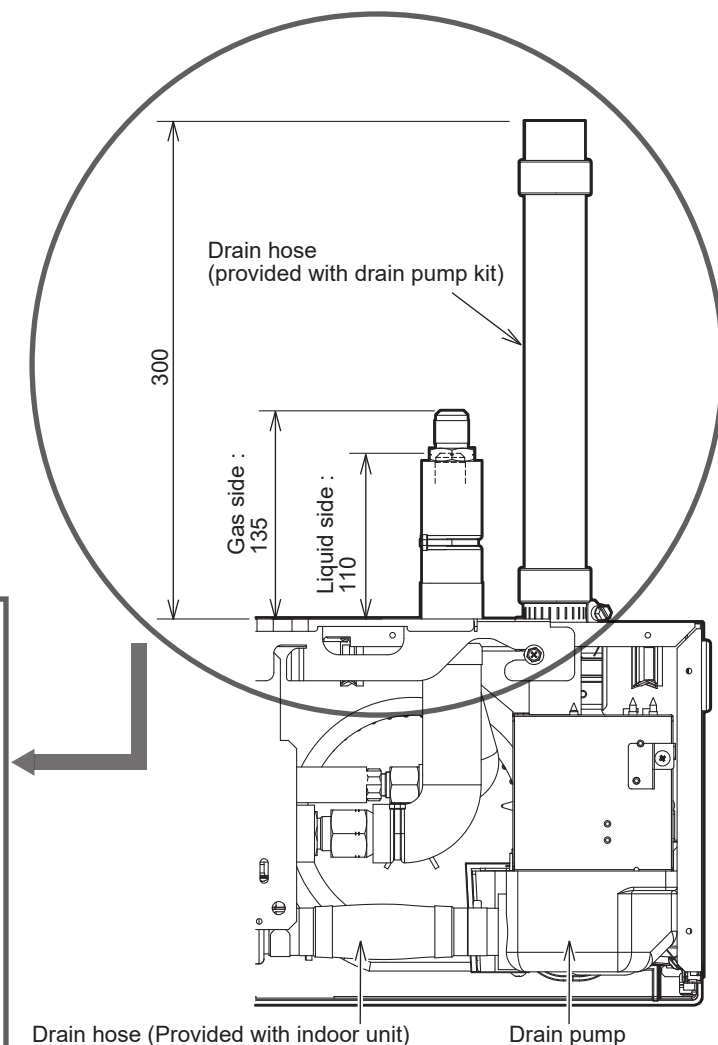
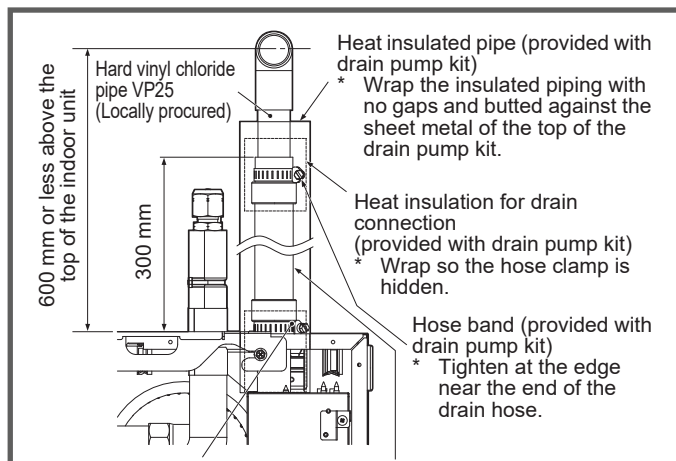
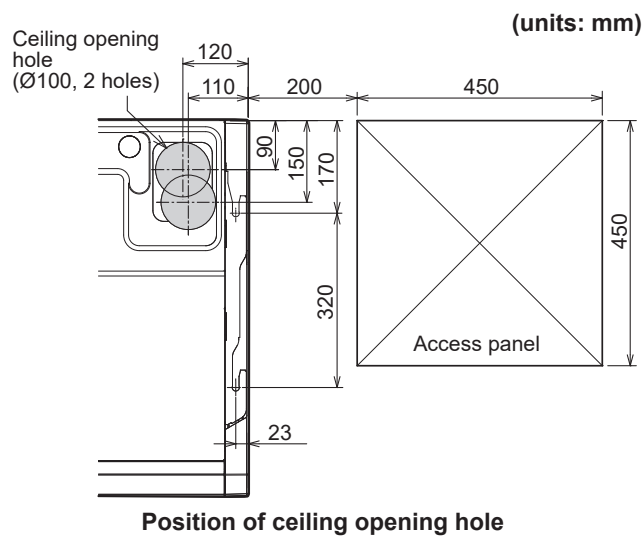


Appendix

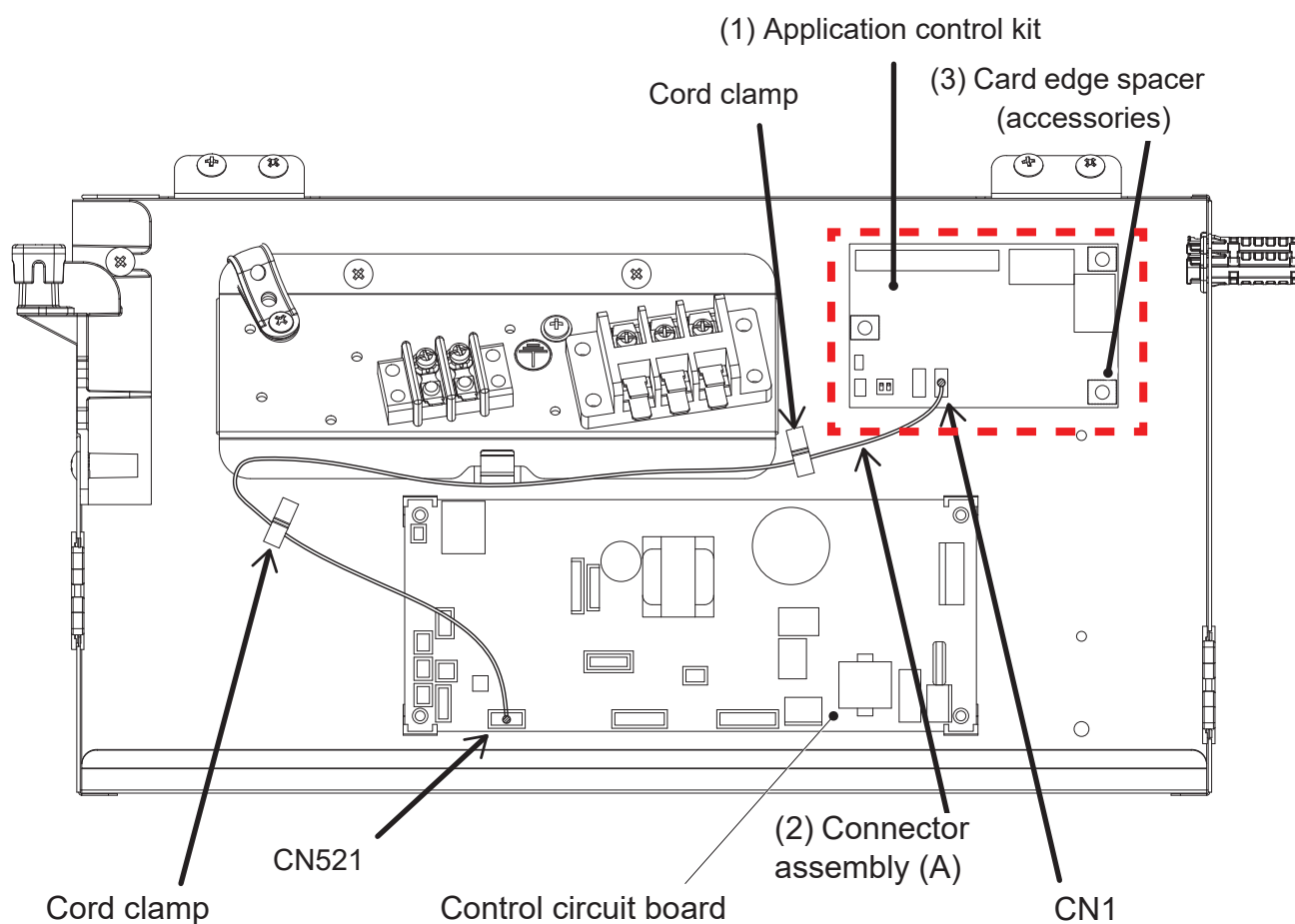
Drain pump kit : TCB-DP31CE



- The elbow piping kit (TCB-KP13CE, KP23CE) (sold separately) is also needed to install the drain pump kit because the pipes must be directed upward.
- Insulate all drain pipes.
- Cut two holes in the ceiling (Ø100) where the installation is being done through which to pass the refrigerant pipe and the drain pipe.
- Install a 450 × 450 access panel in the ceiling where the installation is being done.



Option Connecting Kit : TCB-PCUC2E



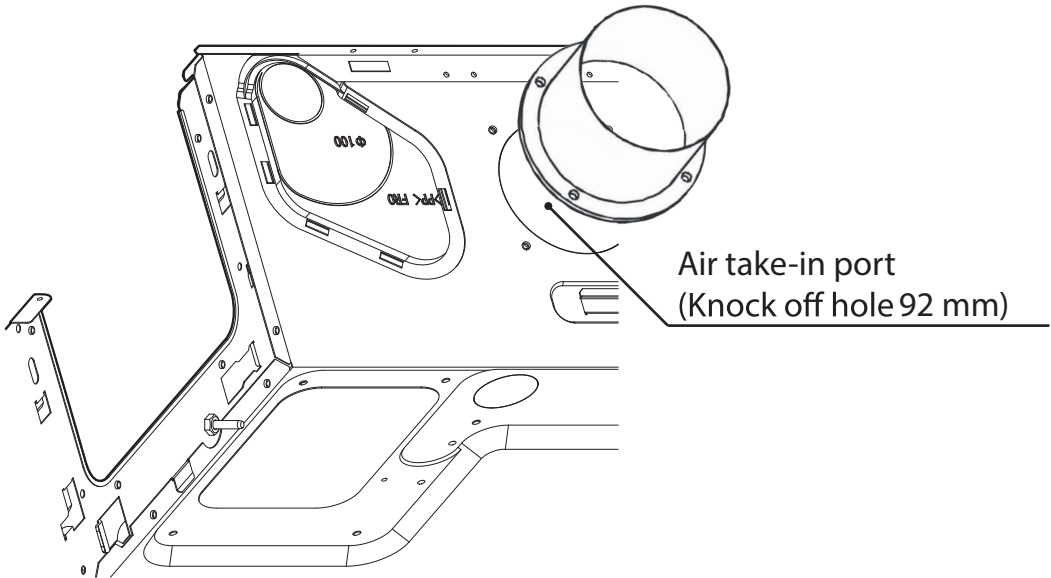
- 1 Use the (3) card edge spacers (3 pcs) provided with the electrical control box to install the (1) application control kit.
- 2 Use the (2) connector assembly (A) provided to connect CN1 on the (1) application control kit and CN521 on the indoor control circuit board, then run the wires and fix it in place with two cord clamps.

REQUIREMENT

Remove the clamp filter of (2) Connector assembly (A).

Auxiliary outside air flange : TCB-FF101URE2

Name		Q'ty
Auxiliary fresh air flange 100 mm		1



Approximately 5% or less of standard airflow volume will be reduced

2-6. High Wall Type

2-6-1. Specifications

2-6-2. Dimension

2-6-3. Wiring Diagrams

2-6-4. Sensible Capacity Table

2-6-5. Part Load Performance

2-6-6. Air Throw Distance Chart

2-6-7. Sound Characteristics (NC Curve)

2-6-1. Specifications

High Wall Type

Twin system : Single phase model

Model			Indoor unit 1		RAV-HM801KRTP-E / TR	
			Indoor unit 2		RAV-HM801KRTP-E / TR	
			Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR	
Cooling capacity					(kW)	14.0 < 3.0 - 16.0 >
Heating capacity					(kW)	16.0 < 3.0 - 18.0 >
Power supply					1 phase 220V-240V/50Hz, 1phase 220V/60Hz	
Electrical characteristics	Cooling	Running current			(A)	23.85 - 21.86
		Power consumption			(kW)	5.09
		Power factor			(%)	97
		EER				2.75
		PdesignC				14.0
		SEER				5.10
	Heating	Running current			(A)	23.36 - 21.41
		Power consumption			(kW)	4.98
		Power factor			(%)	97
		COP				3.21
		PdesignH (Tbiv-7 °C)				8.00
		SCOP				4.00
Maximum current			(A)	29.0		
Indoor unit						
Appearance		Main unit			Pure white	
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height		(mm)	320
			Width		(mm)	1,050
			Depth		(mm)	250
		Ceiling panel (Sold separately)	Height		(mm)	-
			Width		(mm)	-
			Depth		(mm)	-
Total weight		Main unit			(kg)	14.0
		Ceiling panel (Sold separately)			(kg)	-
Fan unit		Fan			Cross flow fan	
		Standard air flow	H/M/L	(m³/h)	1040 / 910 / 680	
		Motor			(W)	30
External static pressure		Standard (Upper - Lower)			(Pa)	-
Air filter					Standard filter (Long life filter)	
Sound pressure level			H/M/L	(dB)	45 / 41 / 35	
Sound power level			H/M/L	(dB)	60 / 56 /50	
Connecting pipe		Drain port			VP16	

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 35°C DB

High Wall Type

Twin system : Three phase model

Model		Indoor unit 1		RAV-HM801KRTP-E / TR		
		Indoor unit 2		RAV-HM801KRTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	8.23 - 7.53	
		Power consumption		(kW)	5.09	
		Power factor		(%)	94	
		EER			2.75	
		PdesignC			14.0	
		SEER			5.10	
	Heating	Running current		(A)	8.06 - 7.38	
		Power consumption		(kW)	4.98	
		Power factor		(%)	94	
		COP			3.21	
		PdesignH (Tbiv -7°C)			8.0	
		SCOP			4.00	
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Pure white		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height		(mm)	320
			Width		(mm)	1,050
			Depth		(mm)	250
		Ceiling panel (Sold separately)	Height		(mm)	-
			Width		(mm)	-
			Depth		(mm)	-
Total weight		Main unit		(kg)	14.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Cross flow fan		
		Standard air flow	H/M/L	(m³/h)	1040 / 910 / 680	
		Motor		(W)	30	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	45 / 41 / 35	
Sound power level			H/M/L	(dB)	60 / 56 / 50	
Connecting pipe		Drain port		VP16		

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 35°C DB

High Wall Type

Triple system : Single phase model

Model		Indoor unit 1		RAV-HM561KRTP-E / TR		
		Indoor unit 2		RAV-HM561KRTP-E / TR		
		Indoor unit 2		RAV-HM561KRTP-E / TR		
		Outdoor unit		RAV-GM1601AT(J)P-E / ATP-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				1 phase 220V-240V/50Hz, 1phase 220V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	23.85 - 21.86	
		Power consumption		(kW)	5.09	
		Power factor		(%)	97	
		EER		2.75		
		PdesignC		14.0		
		SEER		5.10		
	Heating	Running current		(A)	23.36 - 21.41	
		Power consumption		(kW)	4.98	
		Power factor		(%)	97	
		COP		3.21		
		PdesignH(Tbiv-7°C)		8.00		
		SCOP		4.00		
		Maximum current		(A)	29.0	
Indoor unit						
Appearance		Main unit		Pure white		
		Ceiling panel (Sold separately)	Model		-	
			Panel color		-	
Outer dimension		Main unit	Height	(mm)	320	
			Width	(mm)	1,050	
			Depth	(mm)	250	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	14.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Cross flow fan		
		Standard air flow	H/M/L	(m³/h)	960 / 830 / 680	
		Motor		(W)	30	
External static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	42 / 39 / 35	
Sound power level			H/M/L	(dB)	57 / 54 /50	
Connecting pipe		Drain port		VP16		

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 35°C DB

High Wall Type

Triple system : Three phase model

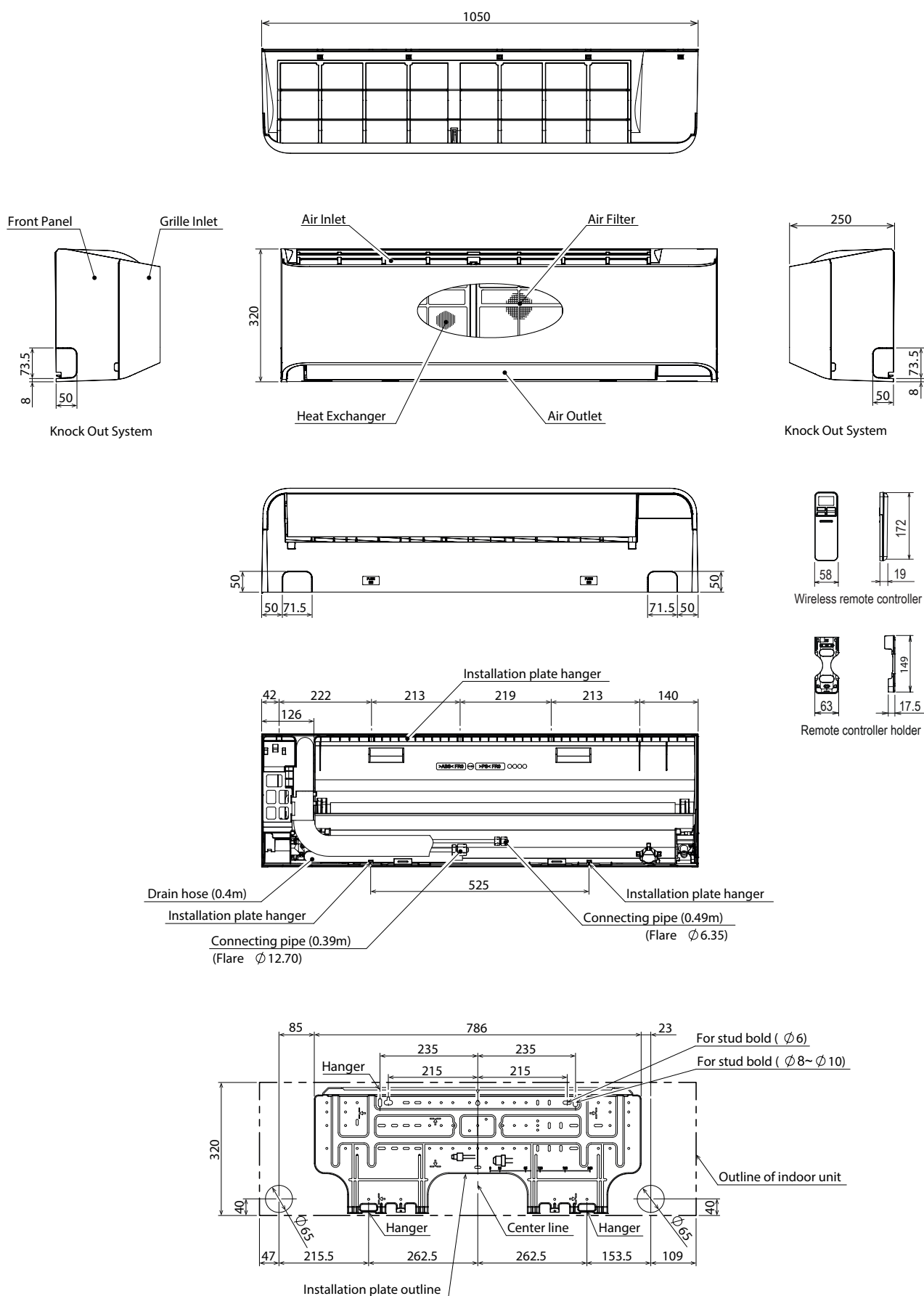
Model		Indoor unit 1		RAV-HM561KRTP-E / TR		
		Indoor unit 2		RAV-HM561KRTP-E / TR		
		Indoor unit 3		RAV-HM561KRTP-E / TR		
		Outdoor unit		RAV-GM1601AT8(J)P-E / AT8P-TR		
Cooling capacity				(kW)	14.0 < 3.0 - 16.0 >	
Heating capacity				(kW)	16.0 < 3.0 - 18.0 >	
Power supply				3 phase 380V-415V/50Hz, 3phase 380V/60Hz		
Electrical characteristics	Cooling	Running current		(A)	8.23 - 7.53	
		Power consumption		(kW)	5.09	
		Power factor		(%)	94	
		EER			2.75	
		PdesignC			14.0	
		SEER			5.10	
	Heating	Running current		(A)	8.06 - 7.38	
		Power consumption		(kW)	4.98	
		Power factor		(%)	94	
		COP			3.21	
		PdesignH (Tbiv -7°C)			8.00	
		SCOP			4.00	
		Maximum current	(A)	16.1		
Indoor unit						
Appearance		Main unit		Pure white		
		Ceiling panel (Sold separately)	Model	-		
			Panel color	-		
Outer dimension		Main unit	Height	(mm)	320	
			Width	(mm)	1,050	
			Depth	(mm)	250	
		Ceiling panel (Sold separately)	Height	(mm)	-	
			Width	(mm)	-	
			Depth	(mm)	-	
Total weight		Main unit		(kg)	14.0	
		Ceiling panel (Sold separately)		(kg)	-	
Fan unit		Fan		Cross flow fan		
		Standard air flow	H/M/L	(m³/h)	960 / 830 / 680	
		Motor		(W)	30	
Extarnal static pressure		Standard (Upper - Lower)		(Pa)	-	
Air filter				Standard filter (Long life filter)		
Sound pressure level			H/M/L	(dB)	42 / 39 / 35	
Sound power level			H/M/L	(dB)	57 / 54 /50	
Connecting pipe		Drain port		VP16		

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 35°C DB

2-6-2. Dimension

RAV-HM561KRTP-E / TR, RAV-HM801KRTP-E / TR



2-6-4. Sensible Capacity Table

RAV-HM801KRTP-E / TR (Twin) : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
801	10.0	6.7	4.7	7.0	4.9	7.4	5.2	7.6	5.4	7.9	5.6	8.1	5.7	8.3	5.9	8.8	6.2	9.2	6.5
	12.0	6.6	4.7	7.0	4.9	7.3	5.2	7.6	5.3	7.8	5.5	8.1	5.7	8.3	5.8	8.8	6.2	9.2	6.5
	14.0	6.6	4.6	6.9	4.9	7.3	5.1	7.5	5.3	7.8	5.5	8.0	5.6	8.2	5.8	8.7	6.1	9.1	6.4
	16.0	6.5	4.6	6.9	4.8	7.2	5.1	7.5	5.3	7.7	5.4	8.0	5.6	8.2	5.8	8.7	6.1	9.1	6.4
	18.0	6.5	4.6	6.8	4.8	7.2	5.0	7.4	5.2	7.7	5.4	7.9	5.6	8.1	5.7	8.6	6.1	9.0	6.3
	20.0	6.4	4.5	6.8	4.8	7.1	5.0	7.4	5.2	7.6	5.4	7.8	5.5	8.1	5.7	8.5	6.0	8.9	6.3
	21.0	6.4	4.5	6.7	4.7	7.1	5.0	7.3	5.2	7.6	5.3	7.8	5.5	8.0	5.6	8.5	6.0	8.9	6.3
	23.0	6.3	4.5	6.7	4.7	7.0	4.9	7.2	5.1	7.5	5.3	7.7	5.4	7.9	5.6	8.4	5.9	8.8	6.2
	25.0	6.3	4.4	6.6	4.6	6.9	4.9	7.2	5.0	7.4	5.2	7.6	5.4	7.9	5.5	8.3	5.9	8.7	6.1
	27.0	6.2	4.4	6.5	4.6	6.8	4.8	7.1	5.0	7.3	5.2	7.5	5.3	7.8	5.5	8.2	5.8	8.6	6.0
	29.0	6.1	4.3	6.4	4.5	6.7	4.8	7.0	4.9	7.2	5.1	7.4	5.2	7.7	5.4	8.1	5.7	8.5	6.0
	31.0	6.0	4.2	6.3	4.5	6.7	4.7	6.9	4.9	7.1	5.0	7.3	5.2	7.5	5.3	8.0	5.6	8.4	5.9
	33.0	5.9	4.2	6.2	4.4	6.5	4.6	6.8	4.8	7.0	4.9	7.2	5.1	7.4	5.2	7.9	5.5	8.2	5.8
	35.0	5.8	4.1	6.1	4.3	6.4	4.5	6.7	4.7	6.9	4.9	7.1	5.0	7.3	5.1	7.7	5.4	8.1	5.7
	37.0	5.7	4.0	6.0	4.2	6.3	4.4	6.5	4.6	6.8	4.8	7.0	4.9	7.2	5.0	7.6	5.3	7.9	5.6
	39.0	5.6	3.9	5.9	4.2	6.2	4.4	6.4	4.5	6.6	4.7	6.8	4.8	7.0	4.9	7.4	5.2	7.8	5.5

RAV-HM561KRTP-E / TR (Triple) : RAV-GP1601AT(J)P-E / ATP-TR, RAV-GP1601AT8(J)P-E / AT8P-TR

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
561	10.0	4.7	3.8	4.9	4.1	5.2	4.3	5.4	4.4	5.6	4.6	5.7	4.7	5.9	4.8	6.2	5.1	6.5	5.3
	12.0	4.7	3.8	4.9	4.0	5.2	4.2	5.3	4.4	5.5	4.5	5.7	4.7	5.8	4.8	6.2	5.1	6.5	5.3
	14.0	4.6	3.8	4.9	4.0	5.1	4.2	5.3	4.3	5.5	4.5	5.6	4.6	5.8	4.8	6.1	5.0	6.4	5.3
	16.0	4.6	3.8	4.8	4.0	5.1	4.2	5.3	4.3	5.4	4.5	5.6	4.6	5.8	4.7	6.1	5.0	6.4	5.2
	18.0	4.6	3.7	4.8	3.9	5.0	4.1	5.2	4.3	5.4	4.4	5.6	4.6	5.7	4.7	6.1	5.0	6.3	5.2
	20.0	4.5	3.7	4.8	3.9	5.0	4.1	5.2	4.2	5.4	4.4	5.5	4.5	5.7	4.7	6.0	4.9	6.3	5.2
	21.0	4.5	3.7	4.7	3.9	5.0	4.1	5.2	4.2	5.3	4.4	5.5	4.5	5.6	4.6	6.0	4.9	6.3	5.1
	23.0	4.5	3.7	4.7	3.9	4.9	4.0	5.1	4.2	5.3	4.3	5.4	4.5	5.6	4.6	5.9	4.9	6.2	5.1
	25.0	4.4	3.6	4.6	3.8	4.9	4.0	5.0	4.1	5.2	4.3	5.4	4.4	5.5	4.5	5.9	4.8	6.1	5.0
	27.0	4.4	3.6	4.6	3.8	4.8	3.9	5.0	4.1	5.2	4.2	5.3	4.4	5.5	4.5	5.8	4.7	6.0	5.0
	29.0	4.3	3.5	4.5	3.7	4.8	3.9	4.9	4.0	5.1	4.2	5.2	4.3	5.4	4.4	5.7	4.7	6.0	4.9
	31.0	4.2	3.5	4.5	3.7	4.7	3.8	4.9	4.0	5.0	4.1	5.2	4.2	5.3	4.4	5.6	4.6	5.9	4.8
	33.0	4.2	3.4	4.4	3.6	4.6	3.8	4.8	3.9	4.9	4.1	5.1	4.2	5.2	4.3	5.5	4.5	5.8	4.8
	35.0	4.1	3.4	4.3	3.5	4.5	3.7	4.7	3.9	4.9	4.0	5.0	4.1	5.1	4.2	5.4	4.5	5.7	4.7
	37.0	4.0	3.3	4.2	3.5	4.4	3.6	4.6	3.8	4.8	3.9	4.9	4.0	5.0	4.1	5.3	4.4	5.6	4.6
	39.0	3.9	3.2	4.2	3.4	4.4	3.6	4.5	3.7	4.7	3.8	4.8	3.9	4.9	4.1	5.2	4.3	5.5	4.5

TC: Total Capacity [kW]

SHC: Sensible Heat Capacity [kW]

2-6-5. Part Load Performance

Twin system

Indoor Unit : RAV-HM801KRTP-E / TR (x2)

Outdoor unit : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	5091	16000	4980

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11200	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5420	5140	4250	3440	2720	2100	1550	1090	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5630	4730	3910	3170	2510	1930	1430	1010	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5160	4340	3590	2910	2300	1770	1310	920	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	5091	4280	3540	2870	2270	1750	1290	910	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3710	3120	2580	2090	1650	1280	940	660	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	3050	2570	2120	1720	1360	1050	770	550	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2440	2050	1700	1380	1090	840	620	440	310	310

Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5500	4630	3850	3130	2500	1940	1470	1070	760	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	5210	4390	3640	2960	2370	1840	1390	1020	720	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4980	4190	3480	2830	2260	1760	1330	970	690	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4830	4060	3370	2740	2190	1710	1290	940	670	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4590	3860	3210	2610	2080	1620	1220	890	640	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	4070	3420	2840	2310	1850	1440	1090	790	560	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3980	3350	2780	2260	1810	1410	1060	780	550	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3940	3320	2760	2240	1790	1390	1050	770	550	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3750	3160	2620	2130	1700	1330	1000	730	520	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3520	2960	2460	2000	1600	1240	940	690	490	460

Triple system**Indoor Unit** : RAV-HM561KRTP-E / TR (x3)**Outdoor unit** : RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR

	Cooling		Heating	
	Capacity(W)	Power consumption (W)	Capacity(W)	Power consumption (W)
MINIMUM	3000	650	3000	650
RATING	14000	5091	16000	4980

Q: Capacity in W

W: Power Consumption in W

Cooling

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
46	Q	11200	10840	9630	8430	7220	6020	4820	3610	2580	2580
	W	5420	5140	4250	3440	2720	2100	1550	1090	780	780
43	Q	12660	11390	10120	8860	7590	6330	5060	3800	2710	2710
	W	5630	4730	3910	3170	2510	1930	1430	1010	720	720
40	Q	13150	11830	10520	9200	7890	6570	5260	3940	2820	2820
	W	5160	4340	3590	2910	2300	1770	1310	920	660	660
35	Q	14000	12600	11200	9800	8400	7000	5600	4200	3000	3000
	W	5091	4280	3540	2870	2270	1750	1290	910	650	650
30	Q	14900	13410	11920	10430	8940	7450	5960	4470	3190	3190
	W	3710	3120	2580	2090	1650	1280	940	660	470	470
25	Q	15830	14250	12660	11080	9500	7910	6330	4750	3390	3390
	W	3050	2570	2120	1720	1360	1050	770	550	390	390
20	Q	16800	15120	13440	11760	10080	8400	6720	5040	3600	3600
	W	2440	2050	1700	1380	1090	840	620	440	310	310

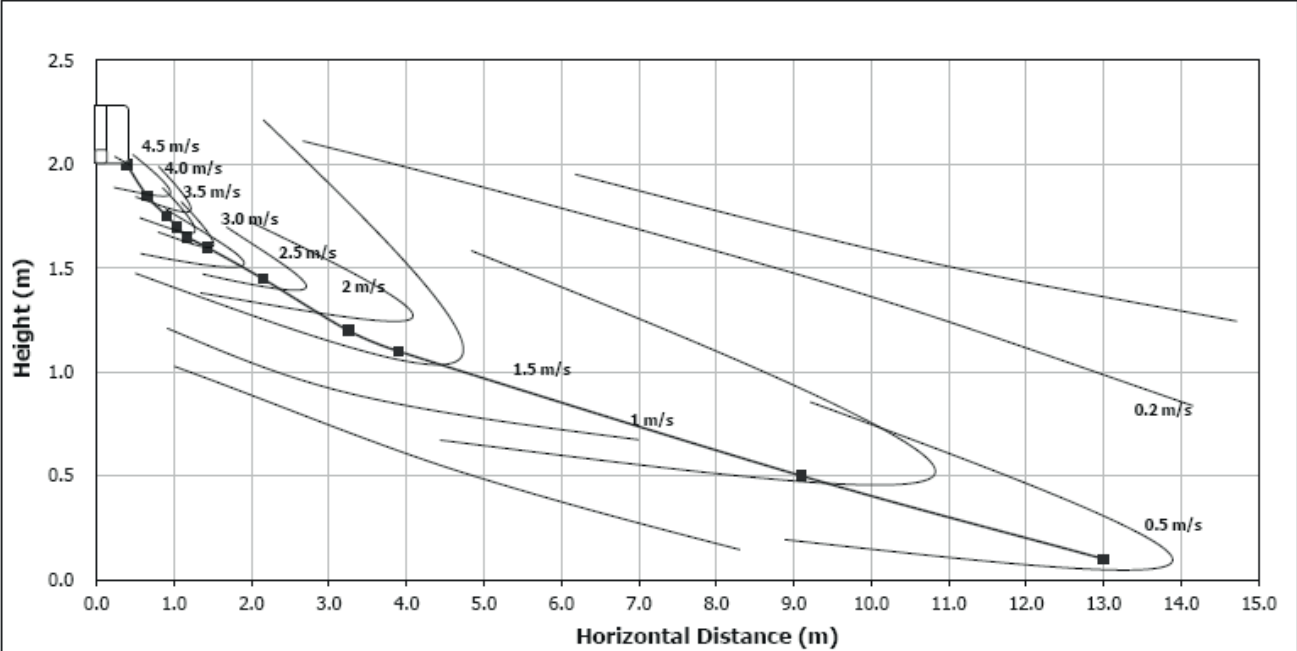
Heating

Outdoor temperature(°C)		Load(%)									
		100	90	80	70	60	50	40	30	20	10
15	Q	19300	17370	15440	13510	11580	9650	7720	5790	3860	3620
	W	5500	4630	3850	3130	2500	1940	1470	1070	760	720
10	Q	17260	15540	13810	12080	10360	8630	6910	5180	3450	3240
	W	5210	4390	3640	2960	2370	1840	1390	1020	720	680
7	Q	16000	14400	12800	11200	9600	8000	6400	4800	3200	3000
	W	4980	4190	3480	2830	2260	1760	1330	970	690	650
5	Q	15170	13650	12130	10620	9100	7580	6070	4550	3030	2840
	W	4830	4060	3370	2740	2190	1710	1290	940	670	630
2	Q	12000	10800	9600	8400	7200	6000	4800	3600	2400	2250
	W	4590	3860	3210	2610	2080	1620	1220	890	640	600
0	Q	11680	10510	9340	8180	7010	5840	4670	3500	2340	2190
	W	4070	3420	2840	2310	1850	1440	1090	790	560	530
-5	Q	10880	9790	8700	7620	6530	5440	4350	3260	2180	2040
	W	3980	3350	2780	2260	1810	1410	1060	780	550	520
-7	Q	9820	8840	7860	6880	5890	4910	3930	2950	1960	1840
	W	3940	3320	2760	2240	1790	1390	1050	770	550	510
-10	Q	9000	8100	7200	6300	5400	4500	3600	2700	1800	1690
	W	3750	3160	2620	2130	1700	1330	1000	730	520	490
-15	Q	7580	6830	6070	5310	4550	3790	3030	2280	1520	1420
	W	3520	2960	2460	2000	1600	1240	940	690	490	460

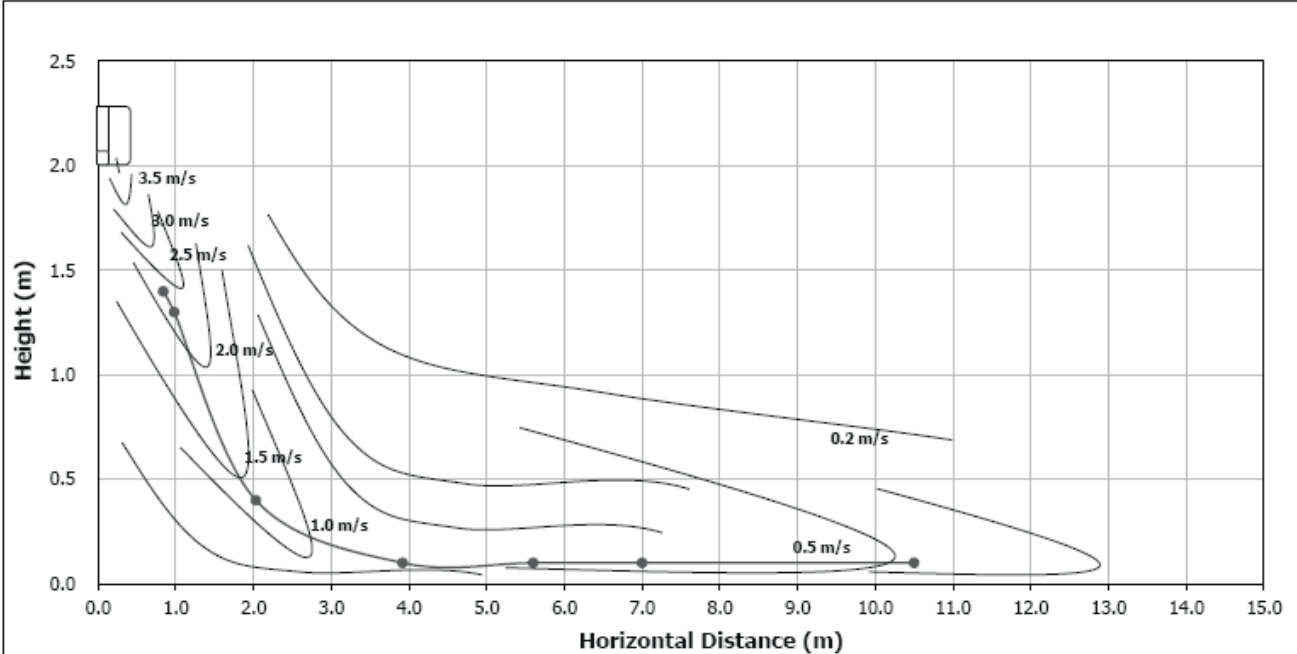
2-6-6. Air Throw Distance Chart

RAV-HM561KRTP-E / TR

Cooling

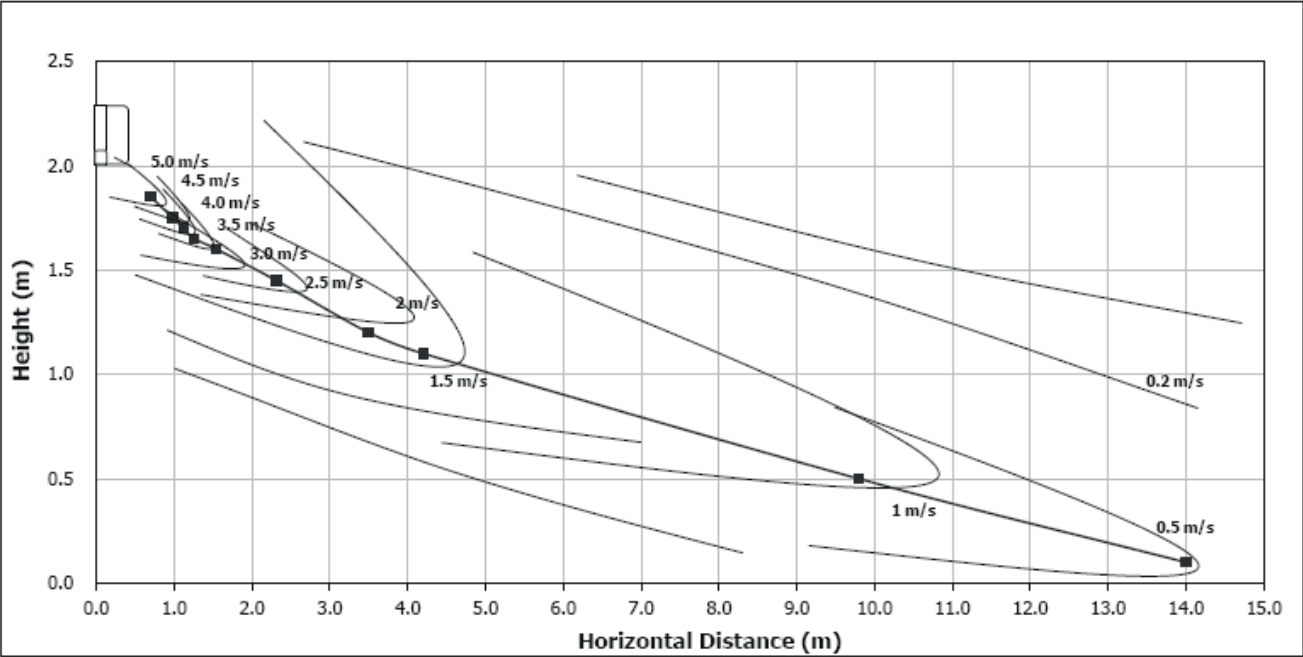


Heating

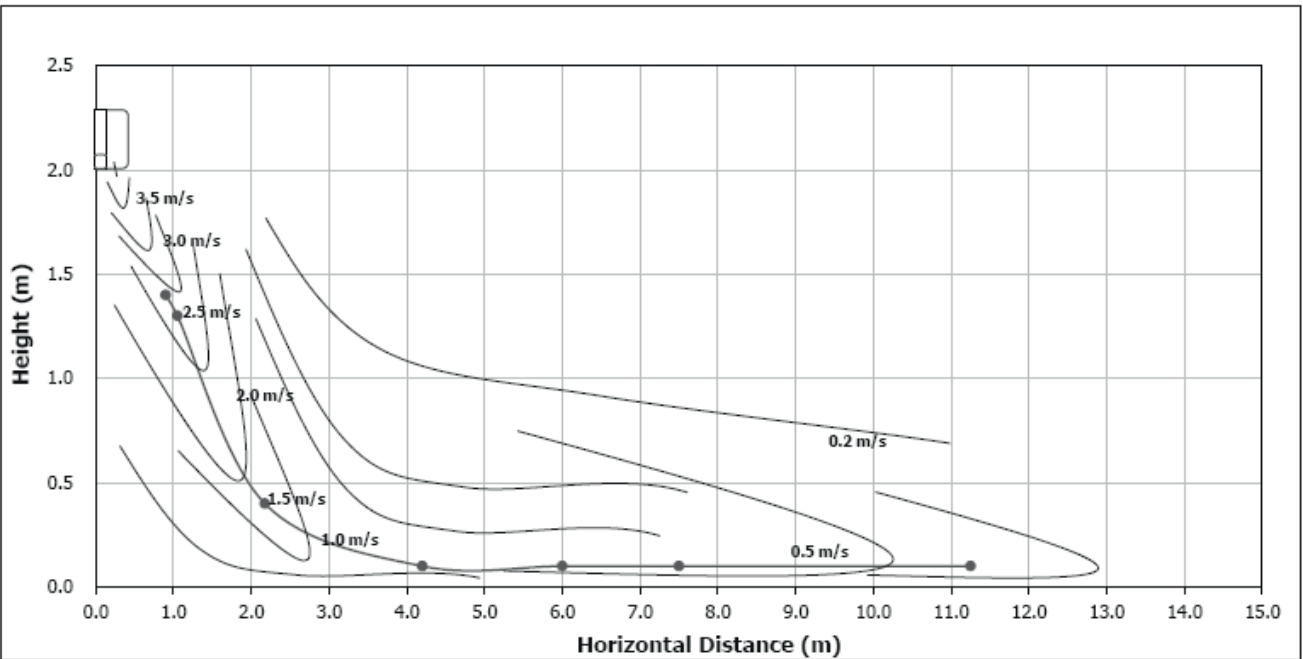


RAV-HM801KRTP-E / TR

Cooling



Heating

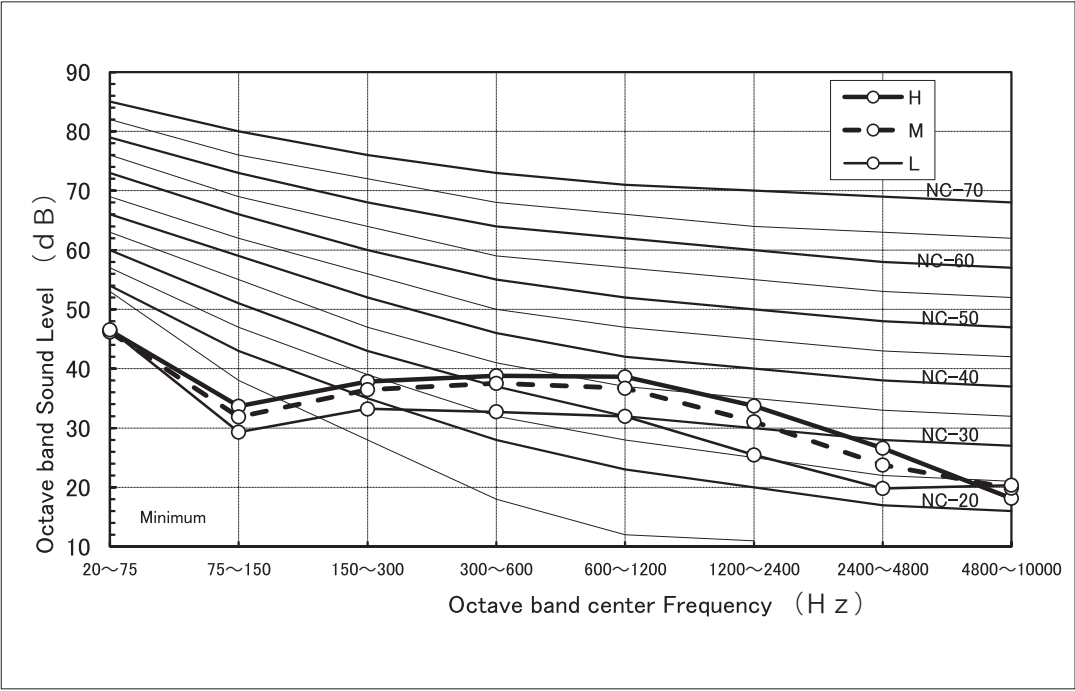


2-6-7. Sound characteristics (NC curve)

RAV-HM561KRTP-E / TR

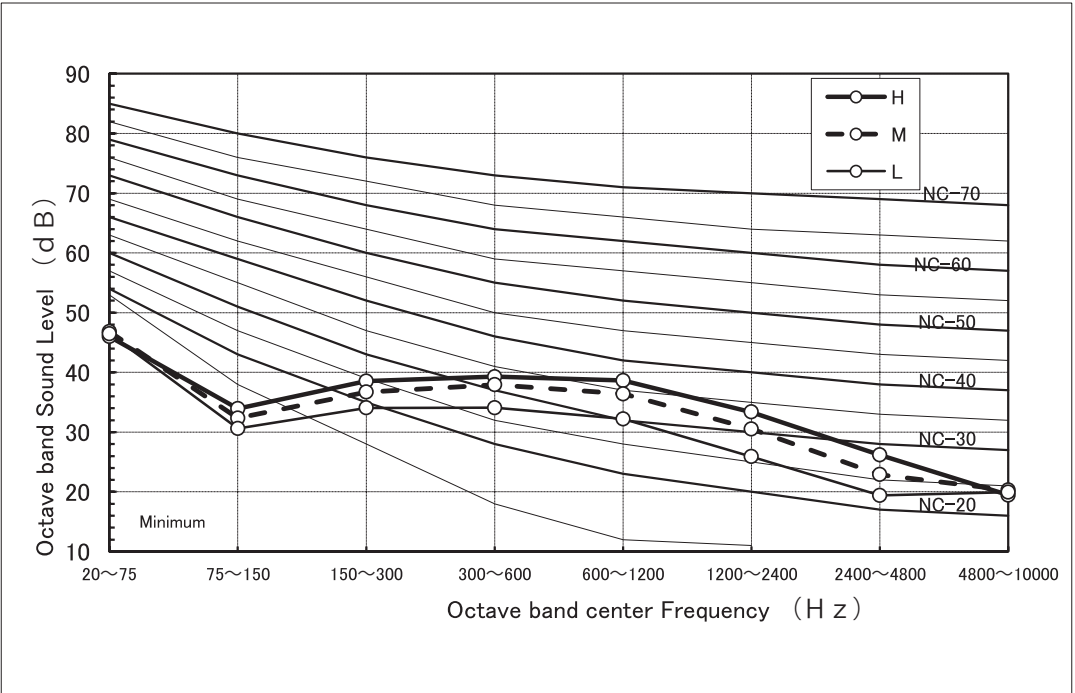
Cooling

Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	42	39	35



Heating

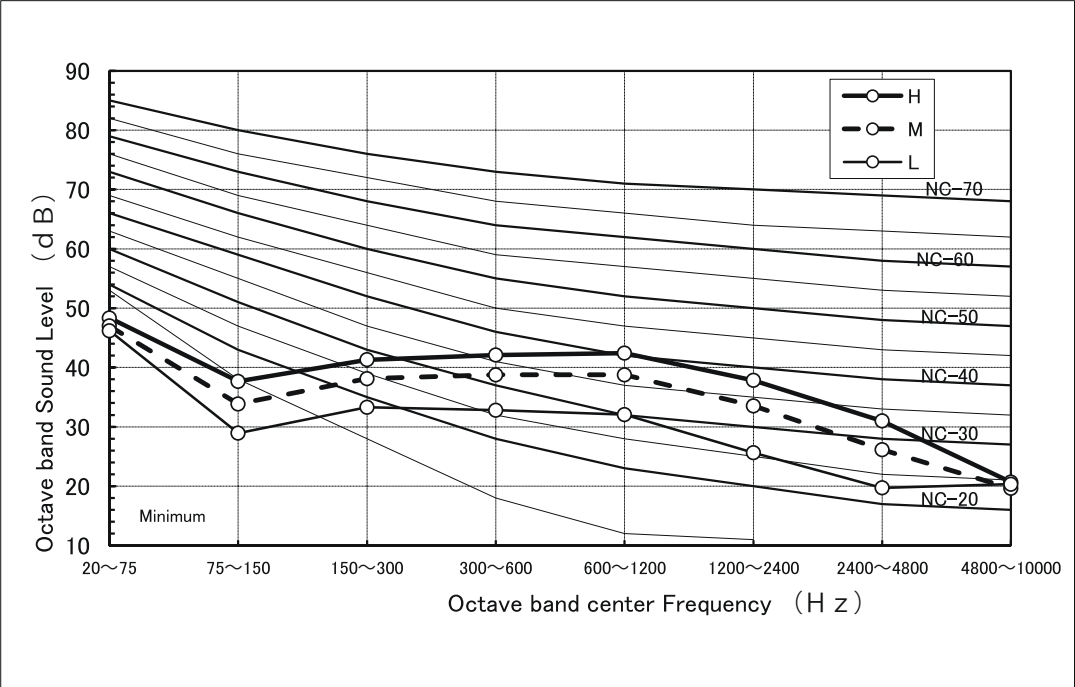
Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	42	39	35



RAV-HM801KRTP-E / TR

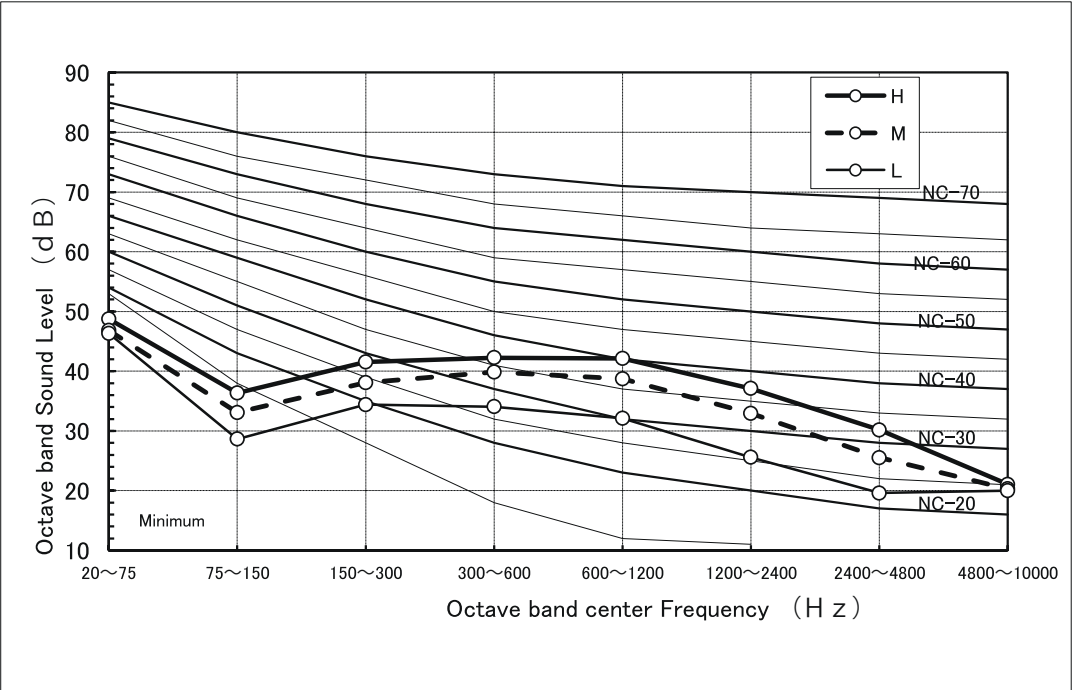
Cooling

Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	45	41	35



Heating

Specification (d B)			
Fan tap	H	M	L
Sound pressure level (dB(A))	45	41	35



3. Outdoor Unit

3-1. Specifications

3-2. Dimension

3-3. Wiring Diagrams

3-4. Refrigerant Cycle Diagram

3-5. Sound Characteristic

3-6. Connecting Pipe Length and Lift Difference Between Indoor Units VS. Capacity Correction Value

3-1 Specification

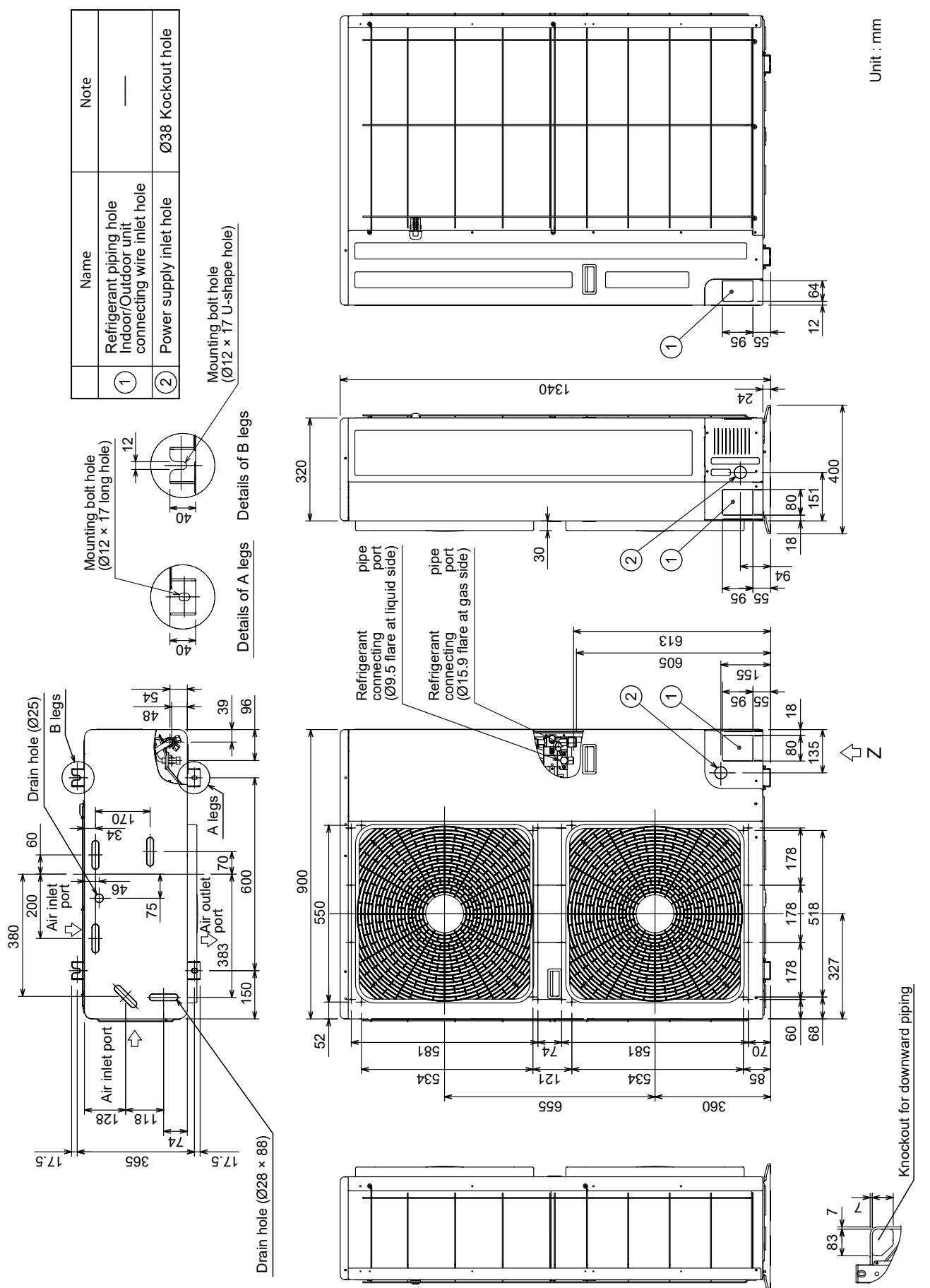
Model name	Outdoor unit	RAV-GM1601AT(J)P-E / ATP-TR	
Power supply		1 phase 220-240v, 50Hz 1 phase 220v, 60Hz (Power exclusive to outdoor is required.)	
Compressor	Type	Hermetic compressor	
	Motor (kW)	3.75	
	Pole	4	
Refrigerant charged (kg)		2.4	
Refrigerant control		Pulse motor valve	
Inter connecting pipe	Standard length (m)	7.5	
	Min. length (m)	5	
	Max. total length (m)	50	
	Additional refrigerant charge under long piping connector		35g/m (31m to 50m)
	Height difference	Outdoor lower (m)	30
		Outdoor higher (m)	30
Outer dimension	Height (mm)	1340	
	Width (mm)	900	
	Depth (mm)	320	
Appearance		Silky shade (Muncel 1Y8.5/0.5)	
Total weight (kg)		95	
Heat exchanger		Finned tube	
Fan unit	Fan	Propeller fan	
	Standard air flow high (m3/min.)	115	
	Motor (W)	100+100	
Connecting pipe	Gas side (mm)	15.9	
	Liquid side (mm)	6.4	
Sound pressure level		Cooling/Heating (dB A)	53/55
Sound power level		Cooling/Heating (dB A)	70/72
Outside air temperature, Cooling		°C (Dry bulb temp.)	-15 to 46
Outside air temperature, Heating		°C (Wet bulb temp.)	-15 to 15

Model name	Outdoor unit	RAV-GM1601AT8P-E	RAV-GM1601AT8JP-E
Power supply		3 phase 380-415V 50Hz 3 phase 380V 60Hz (Power exclusive to outdoor is required.)	
Compressor	Type	Hermetic compressor	
	Motor (kW)	3.75	
	Pole	4	
Refrigerant charged (kg)		2.4	
Refrigerant control		Pulse motor valve	
Inter connecting pipe	Standard length (m)	7.5	
	Max. total length (m)	50	
	Additional refrigerant charge under long piping connector		35g/m (Over 30m)
	Height difference	Outdoor lower (m)	30
		Outdoor higher (m)	30
Outer dimension	Height (mm)	1340	
	Width (mm)	900	
	Depth (mm)	320	
Appearance		Silky shade (Muncel 1Y8.5/0.5)	
Total weight (kg)		94	
Heat exchanger		Finned tube	
Fan unit	Fan	Propeller fan	
	Standard air flow high (m3/min.)	138	
	Motor (W)	100	
Connecting pipe	Gas side (mm)	15.9	
	Liquid side (mm)	9.52	
Sound pressure level Cooling/Heating (dB·A)		53/55	
Sound power level Cooling/Heating (dB·A)		70/72	
Outside air temperature, cooling °C (Dry bulb temp.)		-15 to 46	
Outside air temperature, heating °C (Wet bulb temp.)		-15 to 15	

Model name	Outdoor unit	RAV-GM1601AT8P-TR	
Power supply		3 phase 380-415V 50Hz 3 phase 380V 60Hz (Power exclusive to outdoor is required.)	
Compressor	Type	Hermetic compressor	
	Motor (kW)	3.75	
	Pole	4	
Refrigerant charged (kg)		2.4	
Refrigerant control		Pulse motor valve	
Inter connecting pipe	Standard length (m)		7.5
	Max. total length (m)		50
	Additional refrigerant charge under long piping connector		35g/m (Over 30m)
	Height difference	Outdoor lower (m)	30
		Outdoor higher (m)	30
Outer dimension	Height (mm)		1340
	Width (mm)		900
	Depth (mm)		320
Appearance		Silky shade (Muncel 1Y8.5/0.5)	
Total weight (kg)		91	
Heat exchanger		Finned tube	
Fan unit	Fan		Propeller fan
	Standard air flow high (m3/min.)		138
	Motor (W)		100
Connecting pipe	Gas side (mm)		15.9
	Liquid side (mm)		9.52
Sound pressure level		Cooling/Heating (dB·A)	53/55
Sound power level		Cooling/Heating (dB·A)	70/72
Outside air temperature, cooling °C (Dry bulb temp.)		-15 to 46	
Outside air temperature, heating °C (Wet bulb temp.)		-15 to 15	

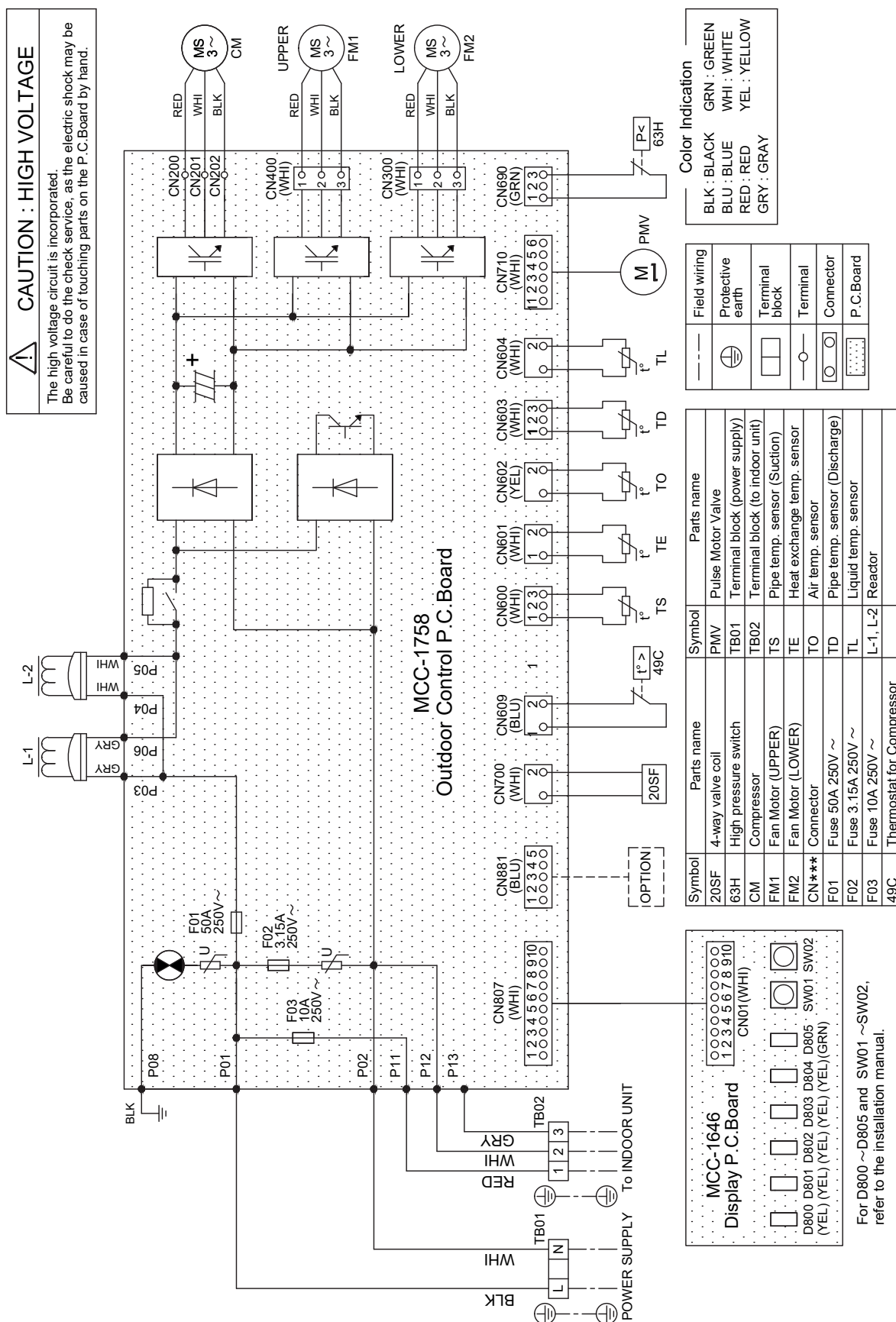
3-2. Dimension

RAV-GM1601AT(J)P-E / ATP-TR, RAV-GM1601AT8(J)P-E / AT8P-TR



3-3. Wiring diagrams

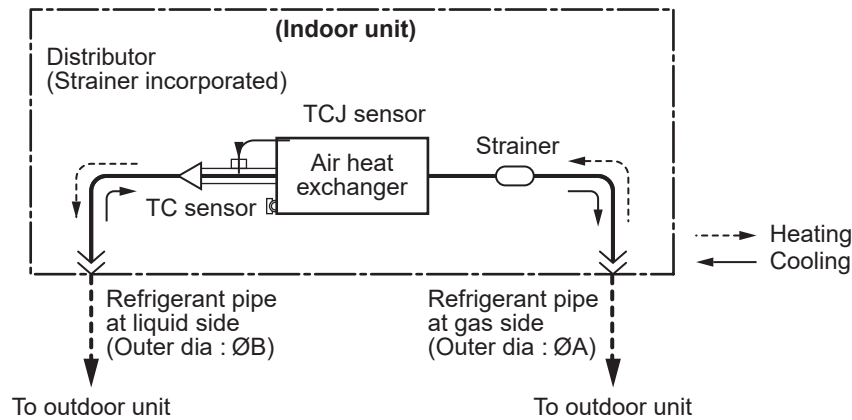
RAV-GM1601AT(J)P- E / ATP-TR, RAV-GM1601AT8(J)P- E / AT8P-TR



3-4. Refrigerant cycle diagram

Indoor unit

Single type (combination of 1 indoor unit and 1 out door unit)



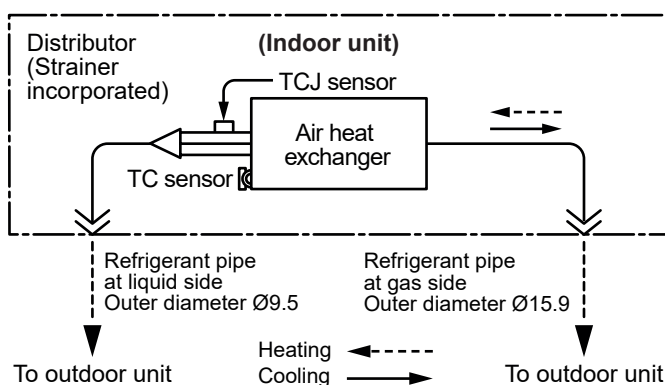
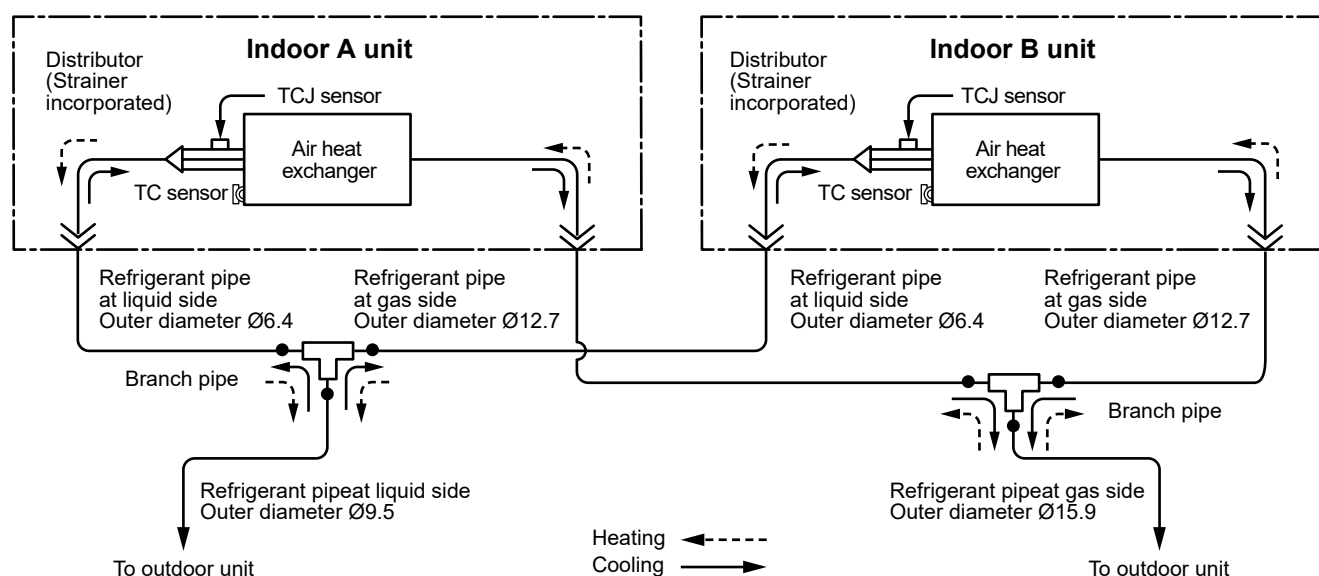
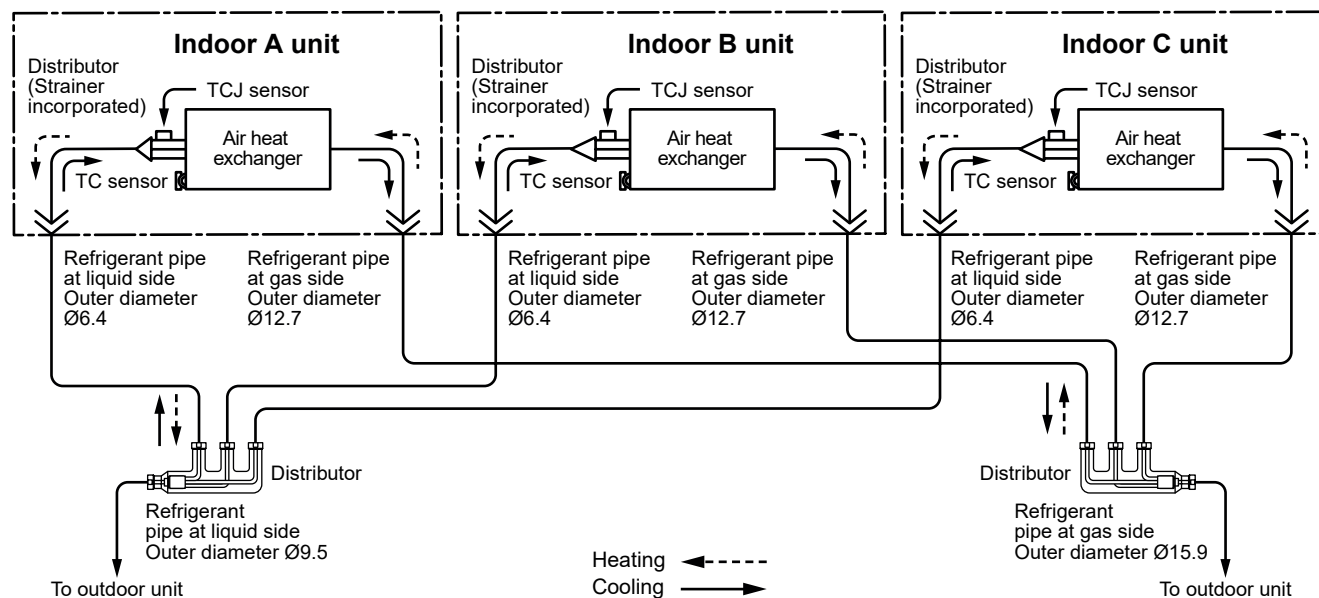
Dimension table

Indoor unit	Outer diameter of refrigerant pipe	
	Gas side ØA	Liquid side ØB
GM160 type	15.9	9.5

< Indoor unit to be connected to RAV-GM1601ATP*

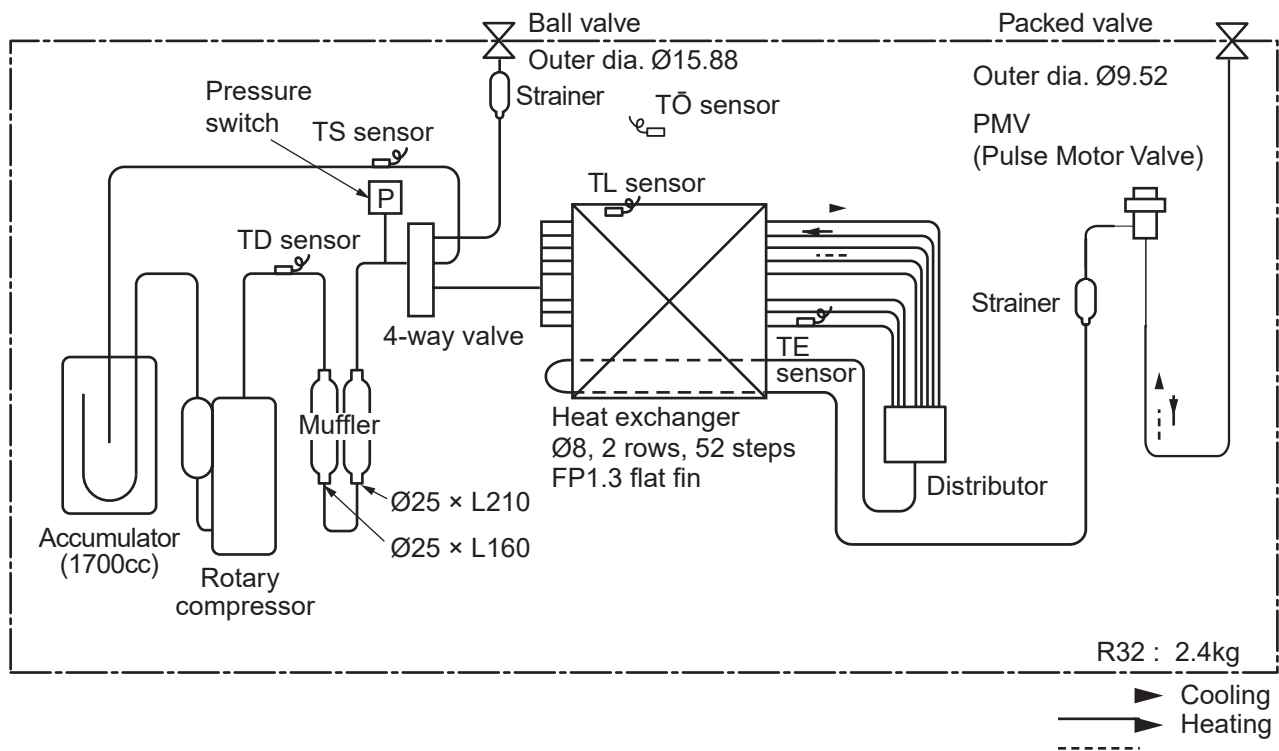
• **Single type**

(Combination of one indoor unit and one outdoor unit)

• **Twin type (Combination of two indoor units and one outdoor unit)**• **Triple type (Combination of three indoor units and one outdoor unit)**

Outdoor unit

RAV-GM1601AT *P*



RAV-GM1601AT *P*

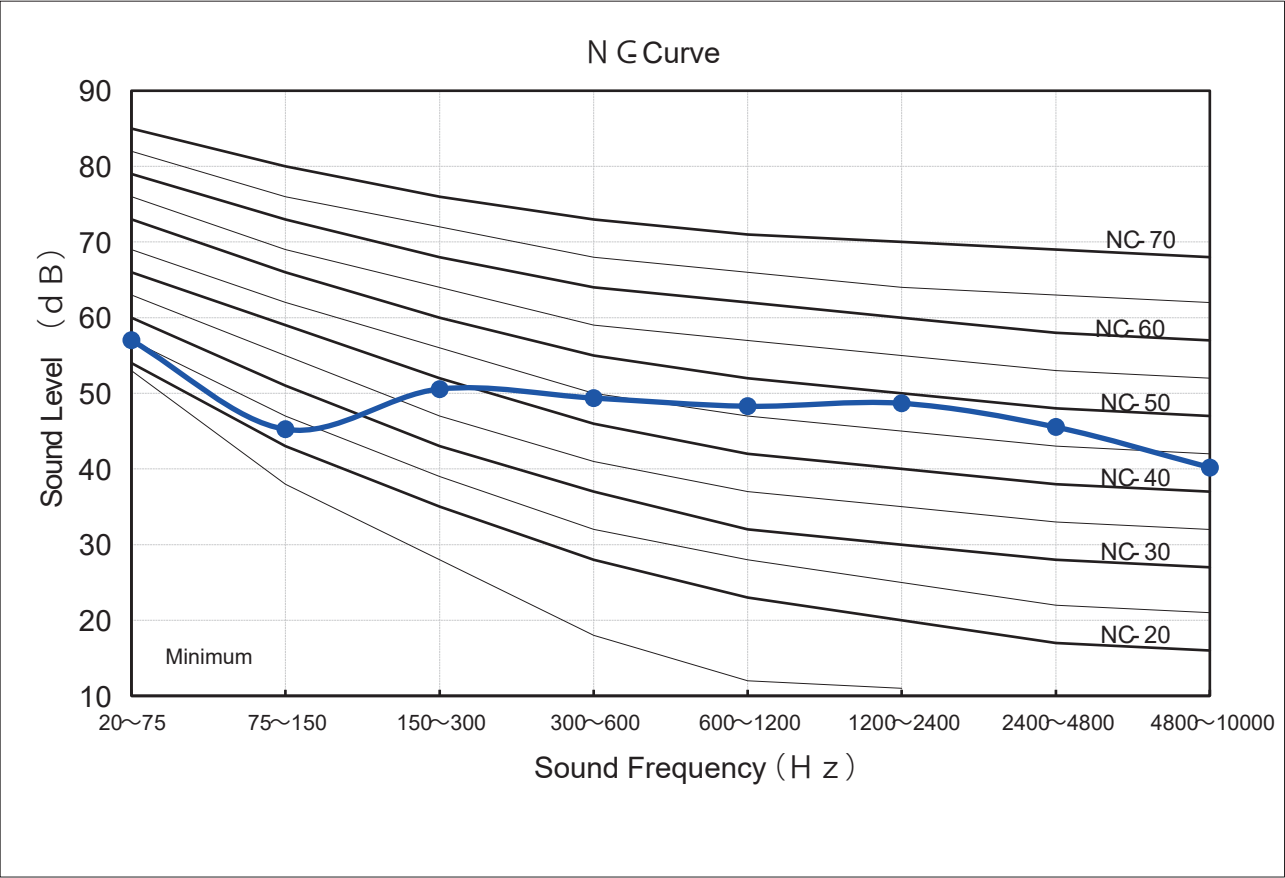
		Pressure				Pipe surface temperature (°C)				* Comp. Hz	Fan	Temp	
		(MPa)		(kg/cm²G)									
		Pd	Ps	Pd	Ps	(TD)	(TS)	(TC)	(TE)			In	Out
Cooling	Standard	2.86	0.85	29.2	8.7	91	8	8	39	68	HIGH	27/19	35/-
	Overload	3.40	0.97	34.7	9.9	82	12	15	54	67	HIGH	32/23	46/-
	Low load	2.92	0.74	29.8	7.5	66	3	4	47	30	LOW	18/13	-15/-
Heating	Standard	2.97	0.63	50.3	6.4	88	1	49	3	68	HIGH	20/-	7/6
	Overload	3.10	1.12	30.6	11.4	86	19	52	16	27	LOW	27/-	24/18
	Low load	2.22	0.26	22.6	2.6	84	-18	36	-17	81	HIGH	15/-	-15/-

* 4 poles are provided to this compressor.
The compressor frequency (Hz) measured with a clamp meter is 2 times of revolutions (rps) of the compressor.

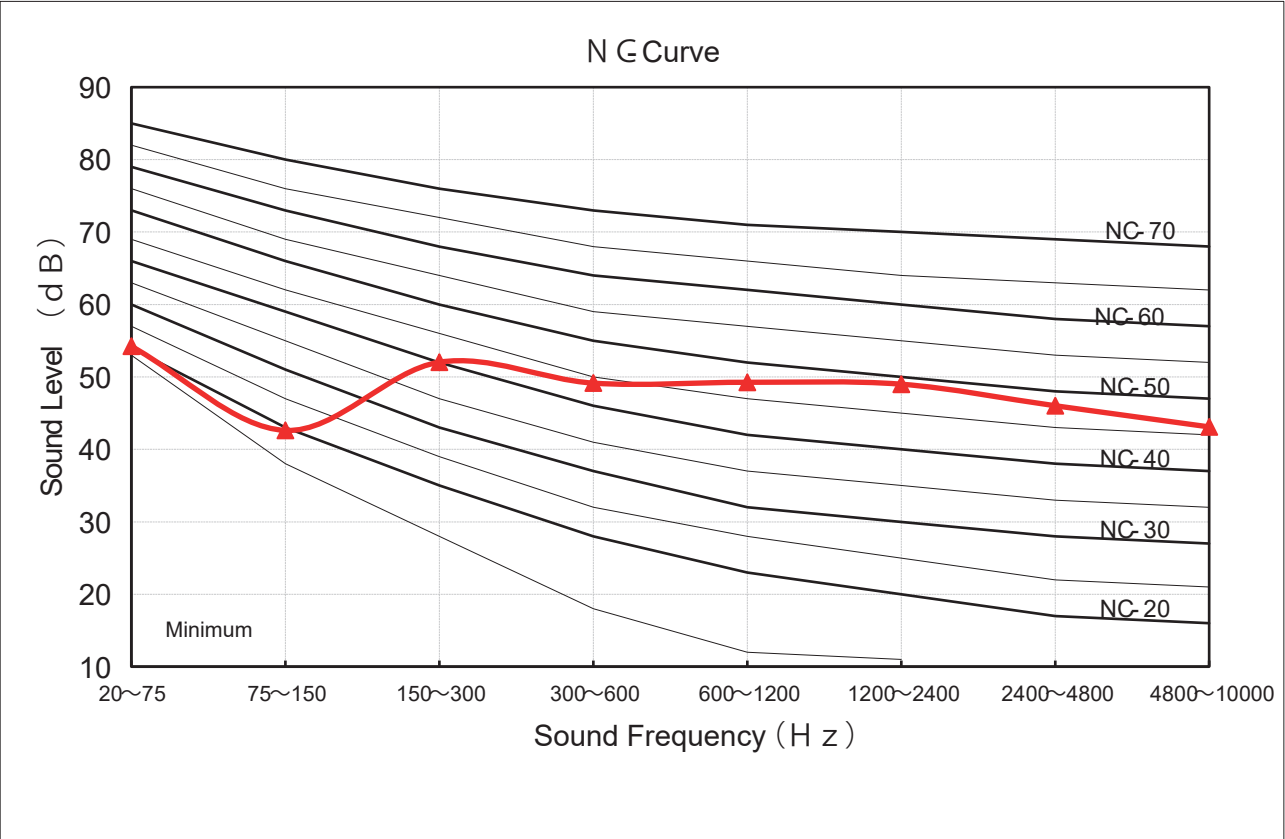
3-5. Sound characteristics (NC curve)

RAV-GM1601AT(J)P- E / ATP-TR, RAV-GM1601AT8(J)P- E / AT8P-TR

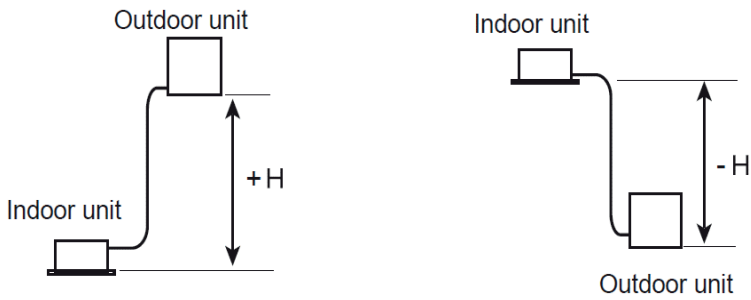
Cooling



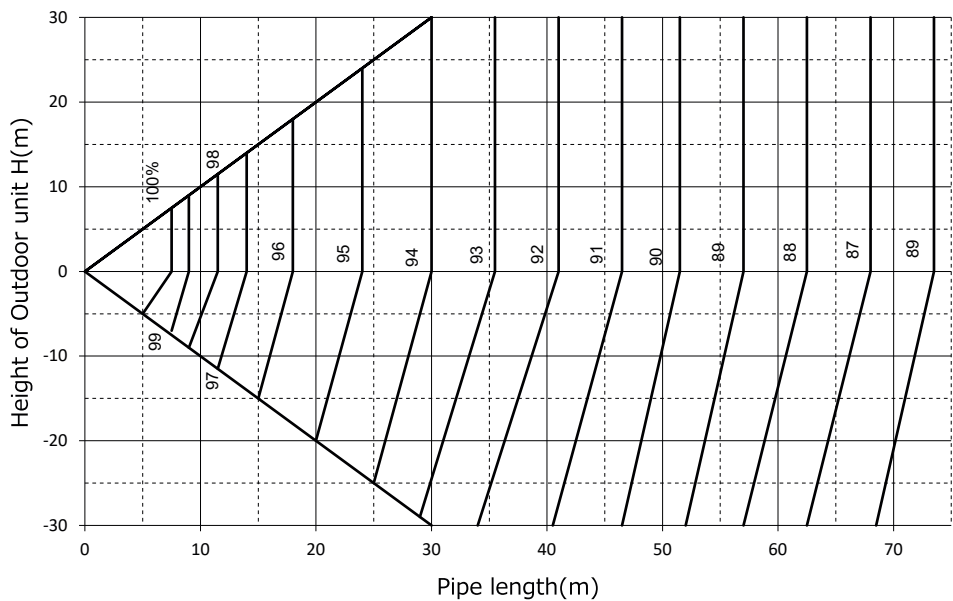
Heating



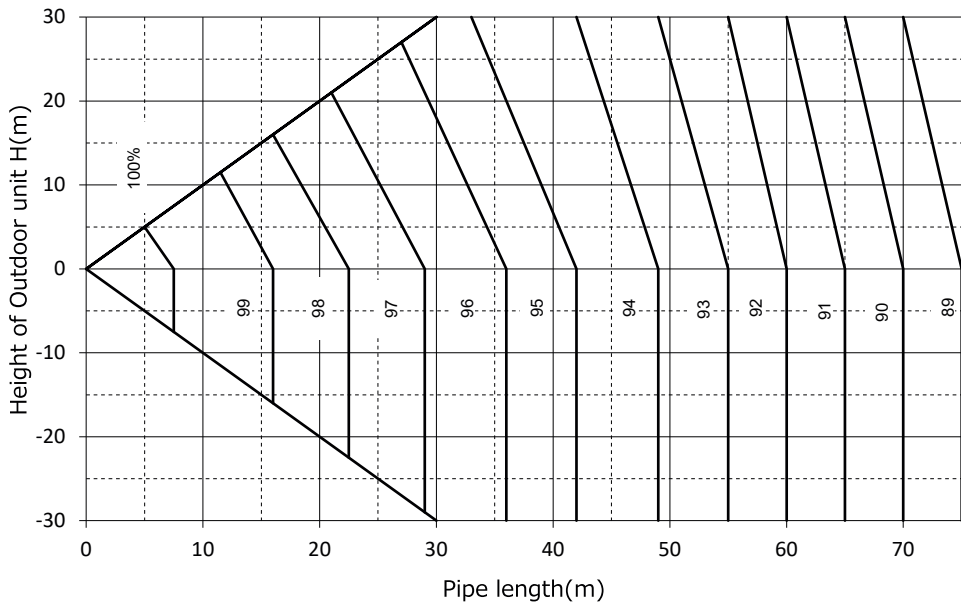
3-6. Connecting pipe length and lift difference between indoor units vs. capacity correction value



[Cooling]



[Heating]



Charging additional refrigerant

Figure of Single

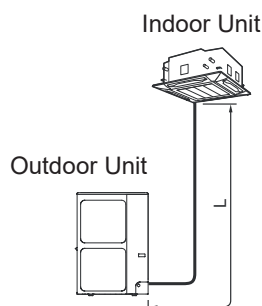


Figure of Simultaneous twin

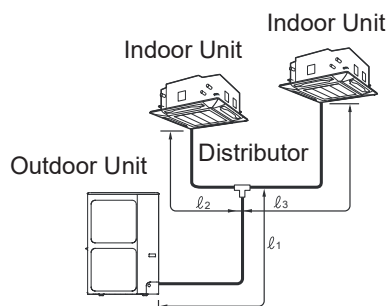
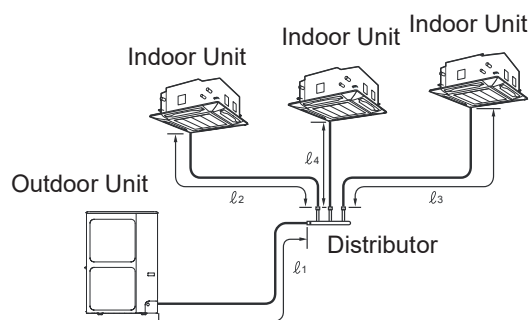


Figure of Simultaneous triple



Formula for calculating the amount of additional refrigerant

(Formula will differ depending on the diameter of the liquid connecting side pipe.)

* l_1 to l_4 are the lengths of the pipes shown in the figures above (unit: m).

Single

Diameter of connecting pipe (liquid side)	Amount of additional refrigerant per meter (g/m)	Amount of additional refrigerant (g) = Amount of refrigerant charged for main pipe
l	α	
Ø9.5	40	$\alpha \times (l - 30)$

Simultaneous twin

Outdoor unit	Diameter of connecting pipe (liquid side)			Amount of additional refrigerant per meter (g/m)		Amount of additional refrigerant (g) = Amount of refrigerant charged for main pipe + amount of refrigerant charged for branch piping
	l_1	l_2	l_3	α	β	
GM160	Ø9.5	Ø9.5	Ø9.5	40	40	$\alpha \times (l_1 - 28) + \beta \times (l_2 + l_3 - 4)$

Simultaneous triple

Outdoor unit	Diameter of connecting pipe (liquid side)				Amount of additional refrigerant per meter (g/m)		Amount of additional refrigerant (g) = Amount of refrigerant charged for main pipe + amount of refrigerant charged for branch piping
	l_1	l_2	l_3	l_4	α	β	
GM160	Ø9.5	Ø6.4	Ø6.4	Ø6.4	40	20	$\alpha \times (l_1 - 28) + \beta \times (l_2 + l_3 + l_4 - 6)$

4. Optional Accessories

Accessory Parts List		4-way Cassette			Compac t 4-way	Slim duct	Standard duct	Ceiling	High wall					
		series 1			series 1	series 1	series 1	series 1	series 1					
		RAV-HM561UTP-E/-TR	RAV-HM801UTP-E/-TR	RAV-HM1601UTP-E/-TR	RAV-HM561MUTP-E/- TR	RAV-HM561SDT-E/-TR	RAV-HM561BTP-E/-TR	RAV-HM801BTP-E/-TR	RAV-HM1601BTP-E/-TR	RAV-HM561CTP-E/-TR	RAV-HM801CTP-E/-TR	RAV-HM1601CTP-E/-TR	RAV-HM561KRTP-E/-TR	RAV-HM801KRTP-E/-TR
Wired Remote Controller	RBC-AMS51E-EN,ES	OK			OK	OK	OK	OK	OK	OK			OK	OK
	RBC-AM S55E-EN, ES	OK			OK	OK	OK	OK	OK	OK			OK	OK
	RBC-AM S41E	OK			OK	OK	OK	OK	OK	OK			OK	OK
	RBC-AM T32E	OK			OK	OK	OK	OK	OK	OK			OK	OK
	RBC-AS41E	OK			OK	OK	OK	OK	OK	OK			OK	OK
	RBC-ASCU11E				OK									
	RBC-AM TU31E				OK									
	RBC-AWSU52-E				OK									
RBC-AM SU52-E				OK										
Wireless Remote Controller	RBC-AXU31UM -E				OK									
	RBC-AXU31UM P-E				OK									
	RBC-AXU31UM P B-E				OK									
	TCB-AX32E2	OK			OK	OK	OK	OK	OK					
	RBC-AX32U(W)-E	OK												
	RBC-AX33CE									OK				
Schedule Timer	TCB-EXS21TLE	OK			OK	OK	OK	OK	OK	OK			OK	
TCC-Link adaptor	TCB-PCNT30TLE2	OK			OK	OK	OK	OK	OK	OK				
Ceiling Panel	RBC-UM21E				OK									
	RBC-UM21P-E				OK									
	RBC-UM21P B-E				OK									
	RBC-U32P GP-E	OK												
	RBC-U33P-E	OK												
	RBC-U33P B-E	OK												
Occupancy Sensor	TCB-SIR41UM -E				OK									
	TCB-SIR41UM P-E				OK									
Fresh air filter chamber	TCB-GFC1602UE	OK												
Fresh air inlet box	TCB-GB1602UE	OK												
Spacer for height	TCB-SP1602UE	OK												
Air discharge direction kit	TCB-BC1602UE	OK												
Auxiliary fresh air flange	TCB-FF101URE2	OK			OK	OK	OK							
Optional connecting kit	TCB-PCUC2E										OK			
Spigot shaped flange	TCB-SF56C6BPE, TCB-SF80C6BPE, TCB-SF160C6BPE								OK					
Application control kit	TCB-PCOS1E2		OK		OK	OK	OK	OK	OK	OK				
Optional connector table (Peak-cut control/Night operation	TCB-KBOS4E	OK			OK	OK	OK	OK	OK	OK				

4.2 Controller

Parts name	Model name	Used with
ON-OFF controller	TCB-CC163TLE2	Wired remote controller/Central remote controller
Central controller	BMS-CM1280TLE	All indoor units
1:1 model connection interface	TCB-PCNT30TLE2	4 way cassette type / Compact 4-way cassette type / Ducted type Slim Duct type / Ceiling type / High wall type
Terminal box	TCB-PX30MUE	Used with TCB-PCNT30TLE2
		4-way cassette (4 series) type

Energy Save operation (RBC-AMS54/55E-EN/ES)

The method to control power consumption by limiting the peak of the compressor's electric current.

= To control peak current by limiting **% of the current release

		FCU only function	Combination function with CDU		
			DI R32		
		Linked with A2A HEX by TCC link*1	Energy save operation (Limit the peak of electric current)	Night Operation by only New Controller *2	Frost Protection (8°C set temp. in heating mode)
4-way cassette type	RAV-HM**1UTP-E/TP	×	○	×	×
Compact 4-way cassette type	RAV-HM**1MUTP-E/TP	OK	○	×	×
Standard duct	RAV-HM**1BTP-E/TP	OK	○	×	×
Slim Duct	RAV-HM**1SDT-E/TP	×	○	×	×
Ceiling type	RAV-HM**1CTP-E/TP	OK	○	×	×
High Wall type	RAV-HM**1KRTP-E/TP	×	○	×	×

*1) A2A HEX: VN-M**HE

*2) New Controller : RBC-AMS54/55E-EN/ES

*3) Only 75% :Even if save ratio is set over 50%, the save operation will be 75% automatically

	RBC-AMS54/55E-EN/ES	RBC-AMT32E/RBC-AMS41E
○	0%, 50%, Option (Only 75%)*3	Option (Only 75%)*3
×	NA	NA

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