

Engineering Databook



Indoor unit

RAS-25PKVSG-ND
RAS-35PKVSG-ND

Outdoor unit

RAS-25PAVSG-ND
RAS-35PAVSG-ND

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Specifications

Performance data

Outdoor unit		RAS-25PAVSG-ND	RAS-35PAVSG-ND
Indoor unit		RAS-25PKVSG-ND	RAS-35PKVSG-ND
Cooling capacity	kW	2.5	3.5
Cooling range (min. - max.)	kW	1.1 - 3.5	1.1 - 4.5
Power input (min. - rated - max.)	kW C	0.22 - 0.56 - 0.87	0.22 - 0.89 - 1.37
Pdesignc	kW	2.5	3.5
EER	W/W	4.46	3.93
SEER		6.3	6.8
Energy efficiency class	C	A++	A++
Heating capacity	kW	3.2	4,2
Heating range (min. - max.)	kW	1.0 - 6.5	1.0 - 7.7
Power input (min. - rated - max.)	kW H	0.20 - 0.65 - 1.9	0.20 - 0.95 - 2.33
Pdesignh	kW	2.8	3.4
COP	W/W	4.92	4,42
SCOP		4.6	4,6
Energy efficiency class	H	A++	A++

Physical data indoor

Indoor unit		RAS-25PKVSG-ND	RAS-35PKVSG-ND
Air Flow (h)	m ³ /h - l/s C	650 - 180	750 - 210
Air Flow (l)	m ³ /h - l/s C	340 - 95	330 - 90
Sound pressure level (h/l (q))	dB(A) C	39 / 27 (25)	43 / 27 (25)
Sound power level (h)	dB(A) C	54	58
Air Flow (h)	m ³ /h - l/s H	790 - 220	840 - 230
Air Flow (l)	m ³ /h - l/s H	350 - 100	340 - 95
Sound pressure level (h/l (q))	dB(A) H	42 / 27 (25)	45 / 27 (25)
Sound power level (h)	dB(A) H	57	60
Dimensions (hxwxh)	mm	293 x 798 x 230	293 x 798 x 230
Weight	kg	10	9

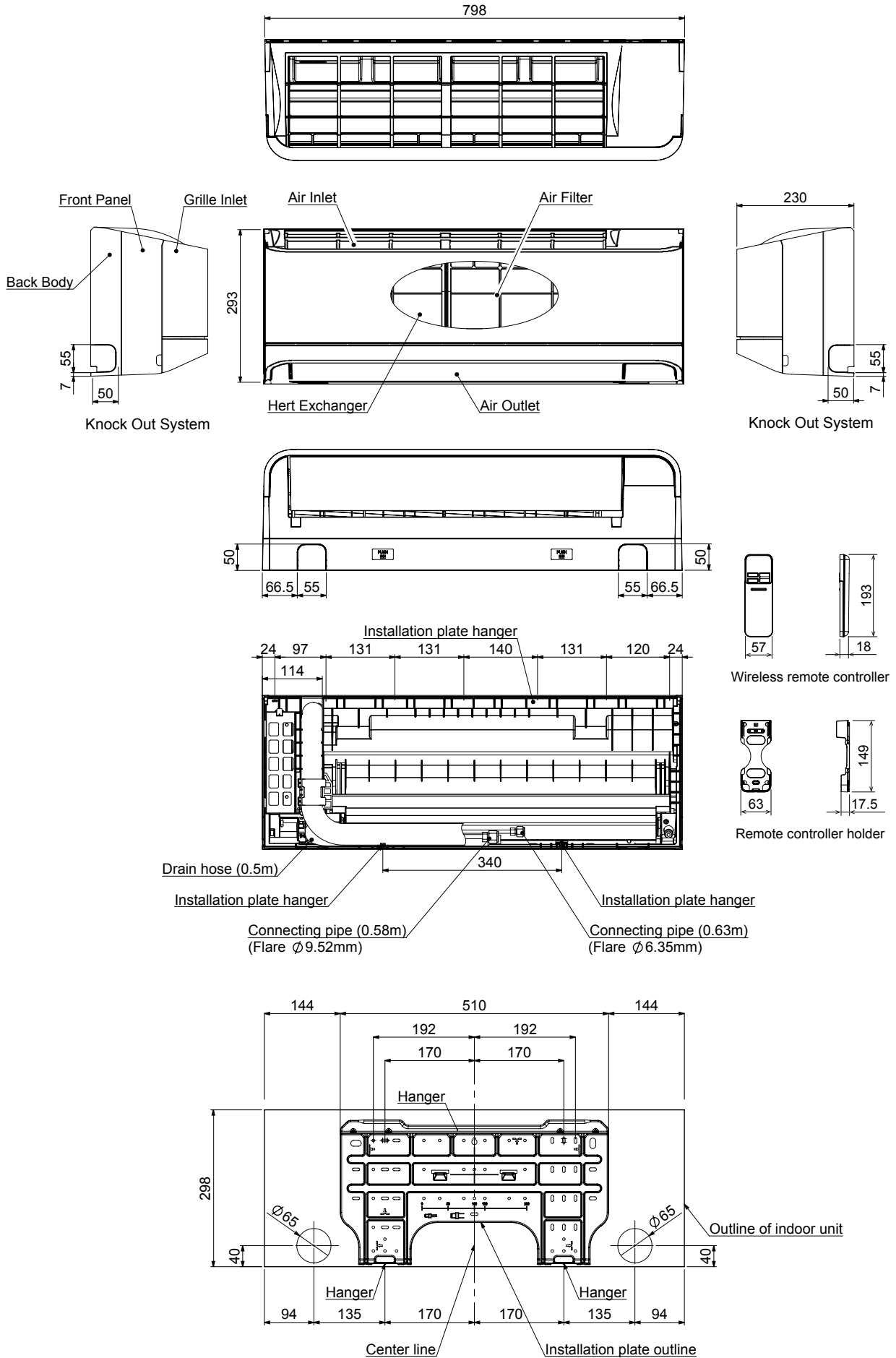
Physical data outdoor

Outdoor unit		RAS-25PAVSG-ND	RAS-35PAVSG-ND
Air Flow (max)	m ³ /h - l/s C	1840 - 510	2160 - 600
Sound pressure level (night mode)	dB(A) C	46 (40)	48 (41)
Sound power level	dB(A) C	61	63
Operating range	°C C	-15~46	-15~46
Air Flow (max)	m ³ /h - l/s H	1920 - 530	2160 - 600
Sound pressure level (night mode)	dB(A) H	47 (42)	50 (43)
Sound power level (h)	dBA H	62	65
Operating range	°C H	-25~24	-25~24
Dimensions (hxwxh)	mm	550 x 780 x 290	550 x 780 x 290
Weight	kg	36	36
Compressor type		DC Twin Rotary	DC Twin Rotary
Flare connections (gas-liquid)		3/8" - 1/4"	3/8" - 1/4"
Minimum pipe length	m	2	2
Maximum pipe length	m	20	20
Maximum height difference	m	10	10
Chargeless pipe length	m	15	15
Remote		WH-TA04LE	WH-TA04LE
Refrigerant amount	kg	0.76	0.76
Power supply	V-ph-Hz	220-240/1/50	220-240/1/50

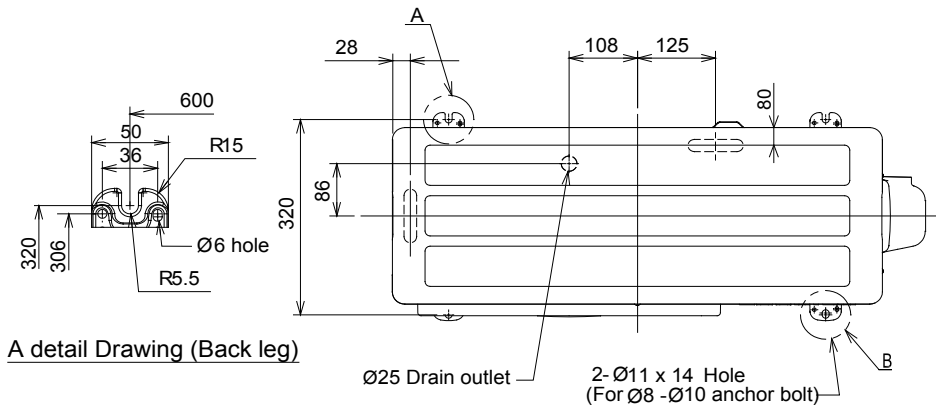
C = cooling mode

H = heating mode

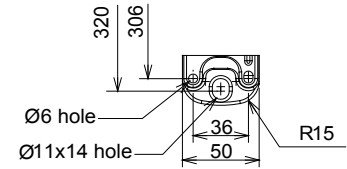
Dimensions Of Indoor units



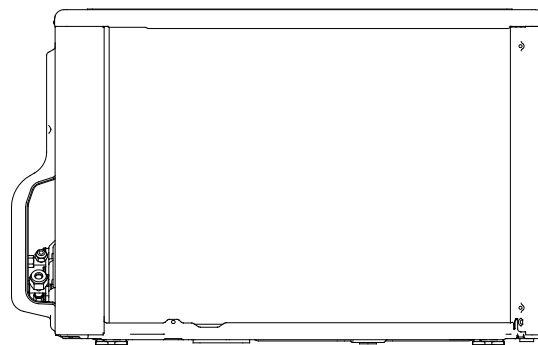
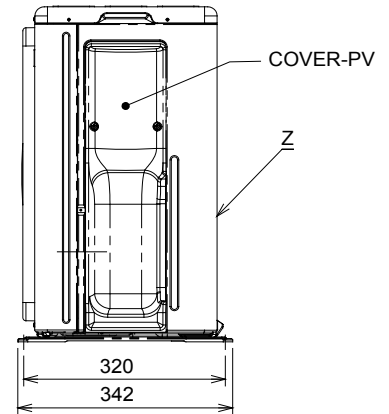
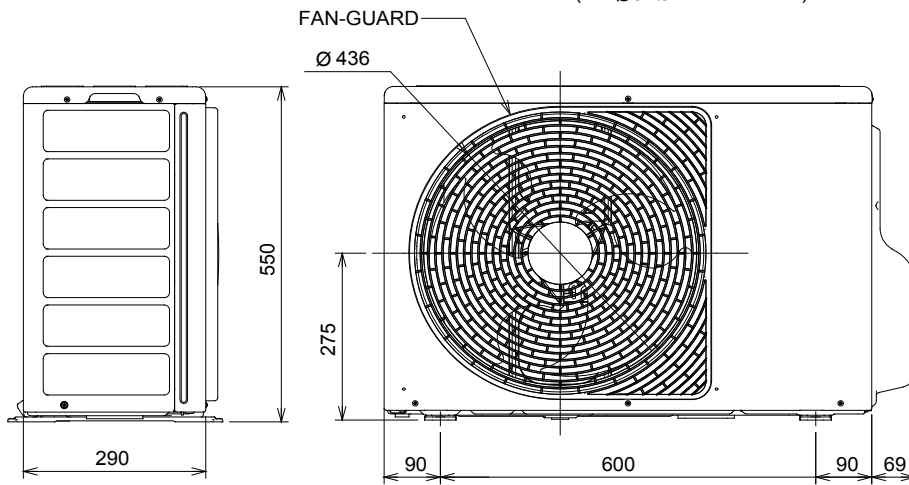
Dimensions Of Outdoor units



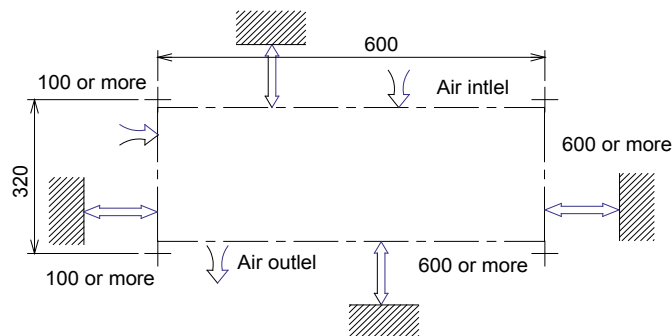
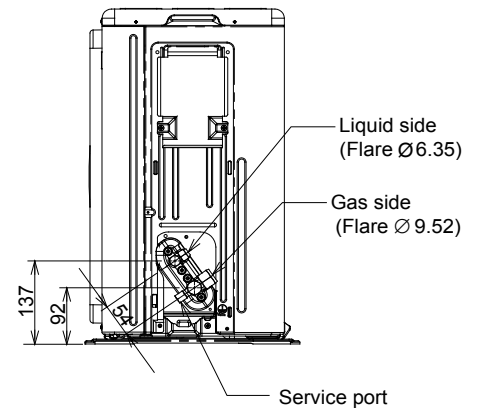
A detail Drawing (Back leg)



B Detail Drawing (Front leg)



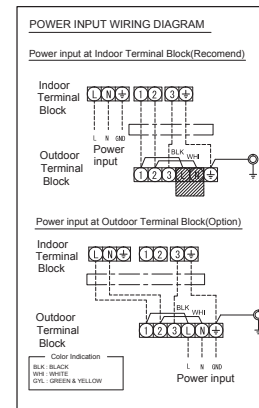
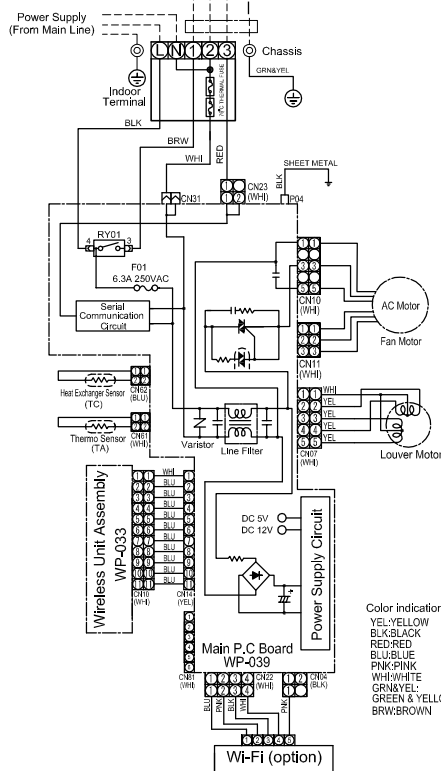
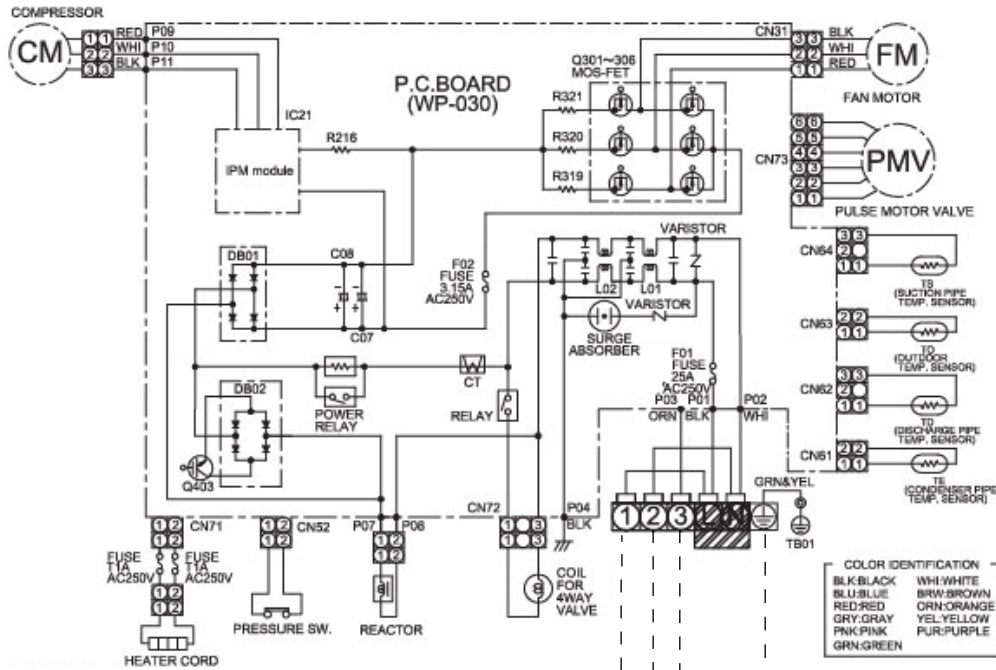
Z View



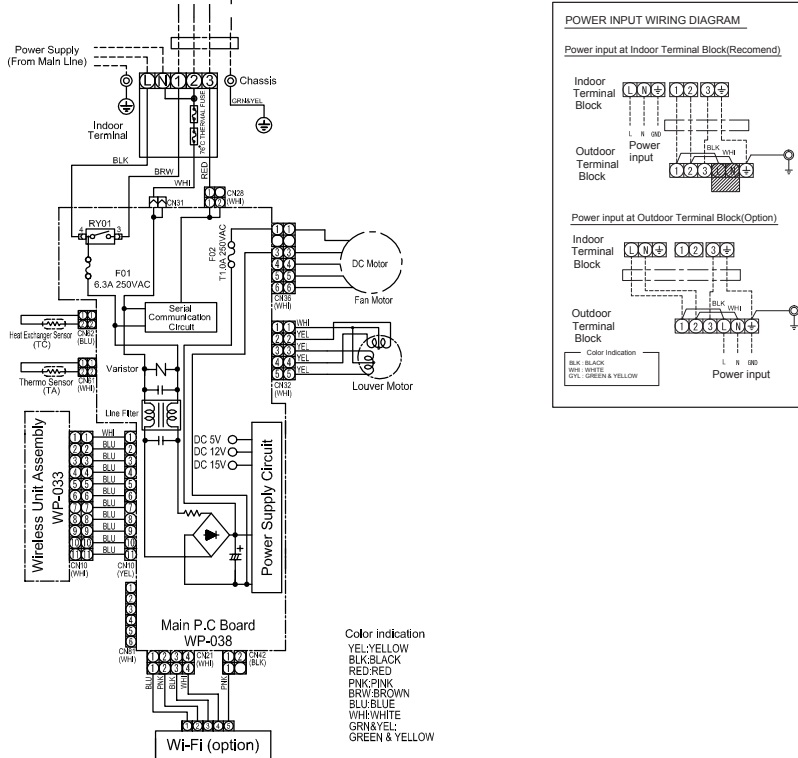
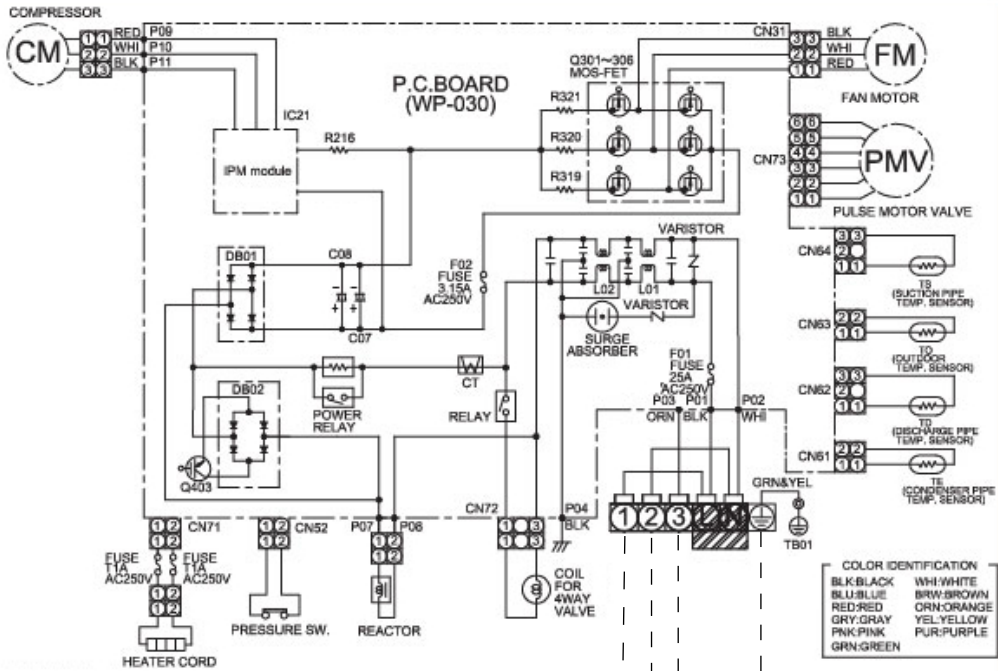
Installation dimension

Wiring Diagrams

RAS-25PKVSG-ND / RAS-25PAVSG-ND



RAS-35PKVSG-ND / RAS-35PAVSG-ND



Sensible Heat Capacity

Product models : **RAS-25PKVSG-ND / RAS-25PAVSG-ND**

Specification of product at standard condition

Standard Condition	Indoor	27°C (DB) / 19°C (WB)	Total Cooling Capacity (TC)	2.50	kW
	Outdoor	35°C (DB) / 24°C (WB)		Sensible Heat Capacity (SHC)	2.00

Outdoor air temperature DB (°C)	Indoor air temperature													
	20.0°C (DB) 14.0°C (WB)		23.0°C (DB) 16.0°C (WB)		26.0°C (DB) 18.0°C (WB)		27.0°C (DB) 19.0°C (WB)		28.0°C (DB) 20.0°C (WB)		30.0°C (DB) 22.0°C (WB)		32.0°C (DB) 24.0°C (WB)	
	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	2.45	2.11	2.70	2.25	2.90	2.39	2.98	2.39	3.07	2.38	3.25	2.36	3.40	2.32
21	2.42	2.09	2.68	2.22	2.86	2.36	2.95	2.36	3.03	2.36	3.21	2.34	3.36	2.29
22	2.40	2.06	2.65	2.20	2.83	2.34	2.92	2.33	3.00	2.33	3.18	2.31	3.32	2.27
23	2.37	2.04	2.62	2.17	2.80	2.31	2.89	2.31	2.97	2.31	3.14	2.29	3.29	2.24
24	2.34	2.02	2.59	2.15	2.77	2.29	2.85	2.28	2.93	2.28	3.11	2.26	3.25	2.22
25	2.32	1.99	2.56	2.13	2.74	2.26	2.82	2.26	2.90	2.26	3.07	2.23	3.21	2.19
26	2.29	1.97	2.53	2.10	2.71	2.23	2.79	2.23	2.87	2.23	3.04	2.21	3.18	2.17
27	2.26	1.95	2.50	2.08	2.68	2.21	2.76	2.21	2.84	2.20	3.00	2.18	3.14	2.14
28	2.24	1.93	2.47	2.05	2.65	2.18	2.72	2.18	2.80	2.18	2.97	2.16	3.10	2.12
29	2.21	1.90	2.44	2.03	2.62	2.16	2.69	2.15	2.77	2.15	2.93	2.13	3.07	2.09
30	2.19	1.88	2.41	2.01	2.58	2.13	2.66	2.13	2.74	2.13	2.90	2.11	3.03	2.07
31	2.16	1.86	2.38	1.98	2.55	2.11	2.63	2.10	2.70	2.10	2.86	2.08	2.99	2.04
32	2.13	1.84	2.36	1.96	2.52	2.08	2.60	2.08	2.67	2.08	2.83	2.06	2.96	2.02
33	2.11	1.81	2.33	1.93	2.49	2.05	2.56	2.05	2.64	2.05	2.79	2.03	2.92	1.99
34	2.08	1.79	2.30	1.91	2.46	2.03	2.53	2.03	2.60	2.02	2.76	2.01	2.88	1.97
35	2.05	1.77	2.27	1.88	2.43	2.00	2.50	2.00	2.57	2.00	2.72	1.98	2.85	1.94
36	2.03	1.74	2.24	1.86	2.40	1.98	2.47	1.97	2.54	1.97	2.69	1.95	2.81	1.92
37	2.00	1.72	2.21	1.84	2.37	1.95	2.44	1.95	2.51	1.95	2.65	1.93	2.78	1.89
38	1.97	1.70	2.18	1.81	2.34	1.93	2.40	1.92	2.47	1.92	2.62	1.90	2.74	1.87
39	1.95	1.68	2.15	1.79	2.30	1.90	2.37	1.90	2.44	1.90	2.58	1.88	2.70	1.84
40	1.92	1.65	2.12	1.76	2.27	1.87	2.34	1.87	2.41	1.87	2.55	1.85	2.67	1.82
41	1.90	1.63	2.09	1.74	2.24	1.85	2.31	1.85	2.37	1.84	2.51	1.83	2.63	1.79
42	1.87	1.61	2.06	1.72	2.21	1.82	2.28	1.82	2.34	1.82	2.48	1.80	2.59	1.77
43	1.84	1.59	2.03	1.69	2.18	1.80	2.24	1.79	2.31	1.79	2.44	1.78	2.56	1.74
44	1.82	1.56	2.01	1.67	2.15	1.77	2.21	1.77	2.27	1.77	2.41	1.75	2.52	1.72
45	1.79	1.54	1.98	1.64	2.12	1.75	2.18	1.74	2.24	1.74	2.37	1.73	2.48	1.69
46	1.76	1.52	1.95	1.62	2.09	1.72	2.15	1.72	2.21	1.72	2.34	1.70	2.45	1.67

Sensible Heat Capacity

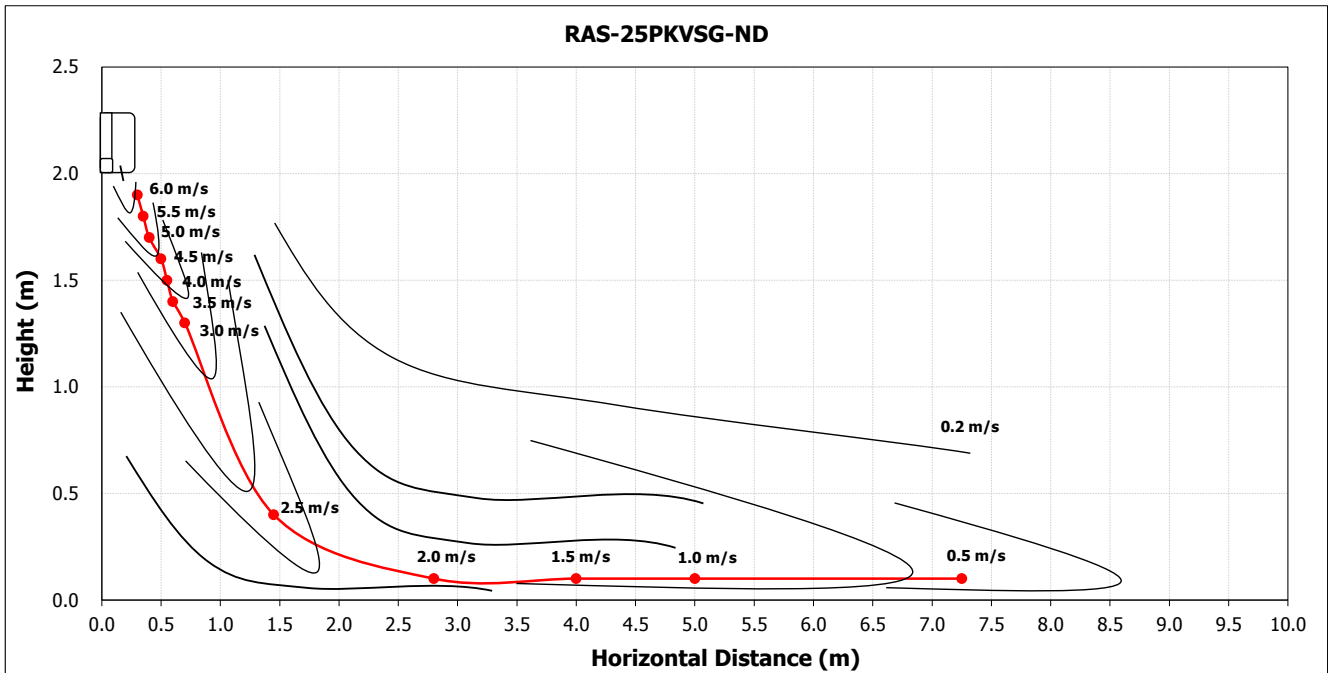
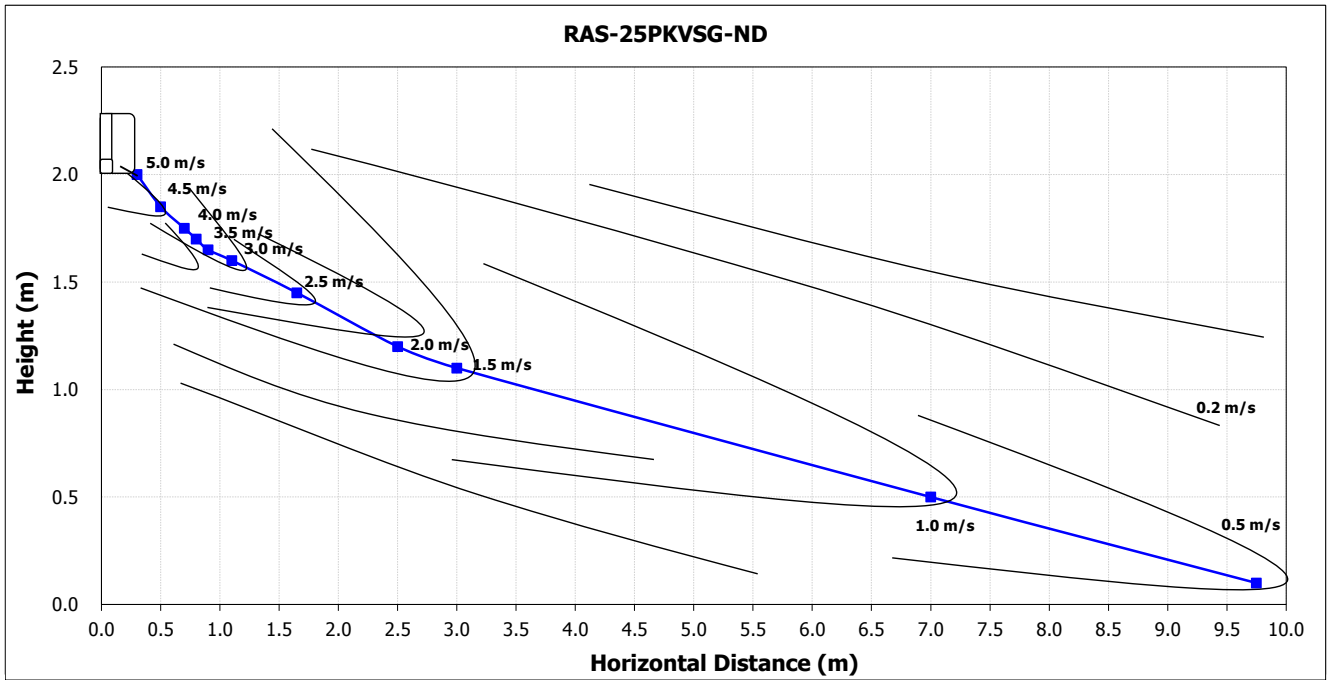
Product models : **RAS-35PKVSG-ND / RAS-35PAVSG-ND**

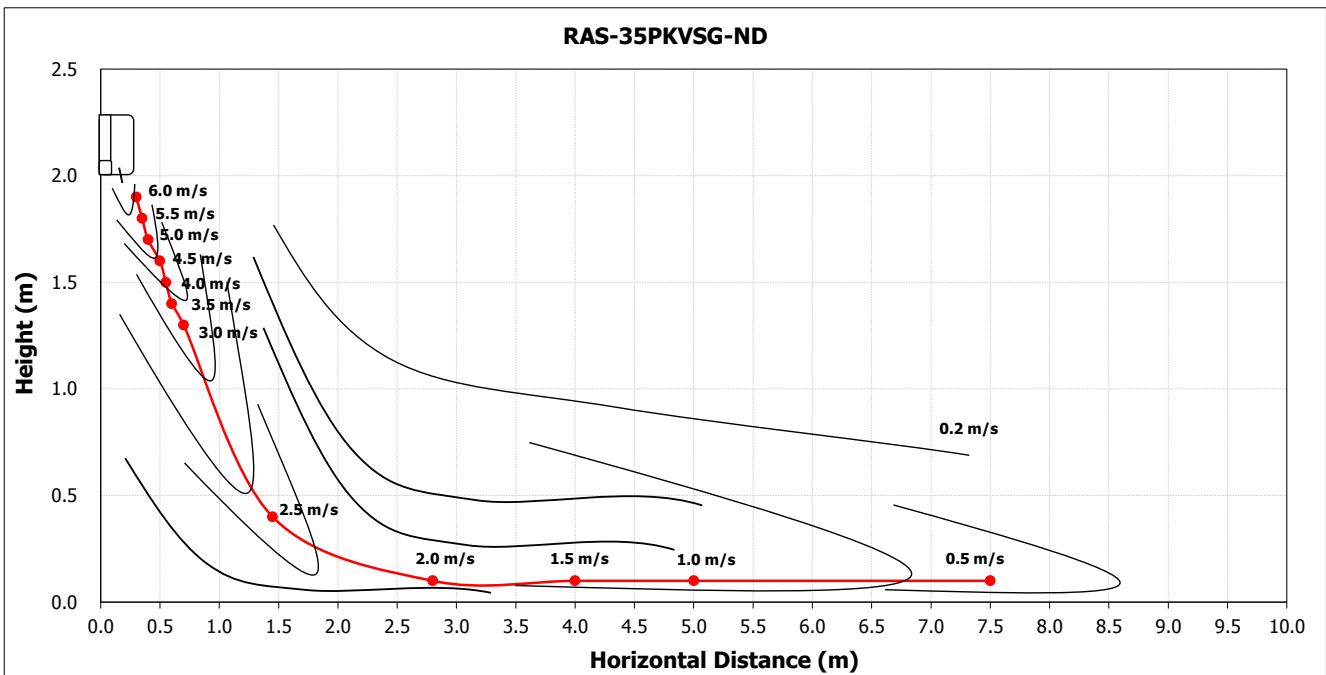
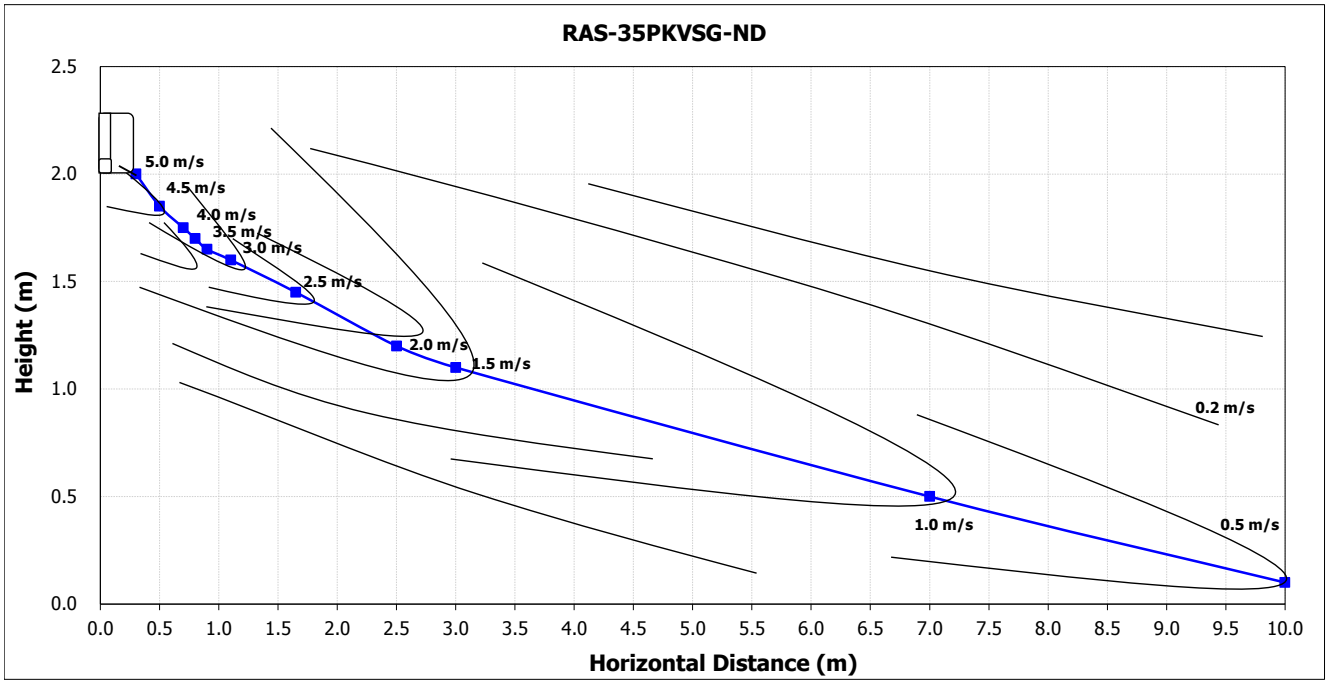
Specification of product at standard condition

Standard Condition	Indoor	27°C (DB) / 19°C (WB)	Total Cooling Capacity (TC)	3.50	kW
	Outdoor	35°C (DB) / 24°C (WB)		Sensible Heat Capacity (SHC)	2.70

Outdoor air temperature DB (°C)	Indoor air temperature													
	20.0°C (DB) 14.0°C (WB)		23.0°C (DB) 16.0°C (WB)		26.0°C (DB) 18.0°C (WB)		27.0°C (DB) 19.0°C (WB)		28.0°C (DB) 20.0°C (WB)		30.0°C (DB) 22.0°C (WB)		32.0°C (DB) 24.0°C (WB)	
	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	3.43	2.85	3.79	3.04	4.05	3.23	4.17	3.22	4.29	3.21	4.55	3.18	4.76	3.11
21	3.39	2.82	3.75	3.01	4.01	3.19	4.13	3.19	4.25	3.18	4.50	3.14	4.70	3.07
22	3.35	2.79	3.70	2.97	3.97	3.16	4.08	3.15	4.20	3.15	4.45	3.11	4.65	3.04
23	3.32	2.76	3.66	2.94	3.92	3.12	4.04	3.12	4.15	3.11	4.40	3.07	4.60	3.01
24	3.28	2.73	3.62	2.91	3.88	3.09	3.99	3.08	4.11	3.08	4.35	3.04	4.55	2.97
25	3.24	2.70	3.58	2.87	3.84	3.06	3.95	3.05	4.06	3.04	4.30	3.01	4.50	2.94
26	3.21	2.67	3.54	2.84	3.79	3.02	3.90	3.01	4.02	3.01	4.25	2.97	4.45	2.91
27	3.17	2.64	3.50	2.81	3.75	2.99	3.86	2.98	3.97	2.97	4.20	2.94	4.40	2.87
28	3.13	2.61	3.46	2.78	3.71	2.95	3.81	2.94	3.92	2.94	4.16	2.90	4.35	2.84
29	3.10	2.58	3.42	2.74	3.66	2.92	3.77	2.91	3.88	2.90	4.11	2.87	4.29	2.81
30	3.06	2.55	3.38	2.71	3.62	2.88	3.72	2.87	3.83	2.87	4.06	2.83	4.24	2.77
31	3.02	2.52	3.34	2.68	3.57	2.85	3.68	2.84	3.78	2.83	4.01	2.80	4.19	2.74
32	2.99	2.48	3.30	2.65	3.53	2.81	3.63	2.80	3.74	2.80	3.96	2.77	4.14	2.71
33	2.95	2.45	3.26	2.61	3.49	2.78	3.59	2.77	3.69	2.76	3.91	2.73	4.09	2.67
34	2.91	2.42	3.22	2.58	3.44	2.74	3.54	2.73	3.65	2.73	3.86	2.70	4.04	2.64
35	2.87	2.39	3.17	2.55	3.40	2.71	3.50	2.70	3.60	2.70	3.81	2.66	3.99	2.61
36	2.84	2.36	3.13	2.51	3.36	2.67	3.46	2.67	3.55	2.66	3.76	2.63	3.94	2.57
37	2.80	2.33	3.09	2.48	3.31	2.64	3.41	2.63	3.51	2.63	3.71	2.60	3.89	2.54
38	2.76	2.30	3.05	2.45	3.27	2.60	3.37	2.60	3.46	2.59	3.67	2.56	3.83	2.50
39	2.73	2.27	3.01	2.42	3.23	2.57	3.32	2.56	3.42	2.56	3.62	2.53	3.78	2.47
40	2.69	2.24	2.97	2.38	3.18	2.53	3.28	2.53	3.37	2.52	3.57	2.49	3.73	2.44
41	2.65	2.21	2.93	2.35	3.14	2.50	3.23	2.49	3.32	2.49	3.52	2.46	3.68	2.40
42	2.62	2.18	2.89	2.32	3.09	2.46	3.19	2.46	3.28	2.45	3.47	2.42	3.63	2.37
43	2.58	2.15	2.85	2.29	3.05	2.43	3.14	2.42	3.23	2.42	3.42	2.39	3.58	2.34
44	2.54	2.12	2.81	2.25	3.01	2.40	3.10	2.39	3.18	2.38	3.37	2.36	3.53	2.30
45	2.51	2.09	2.77	2.22	2.96	2.36	3.05	2.35	3.14	2.35	3.32	2.32	3.48	2.27
46	2.47	2.05	2.73	2.19	2.92	2.33	3.01	2.32	3.09	2.31	3.27	2.29	3.42	2.24

Air Speed distribution

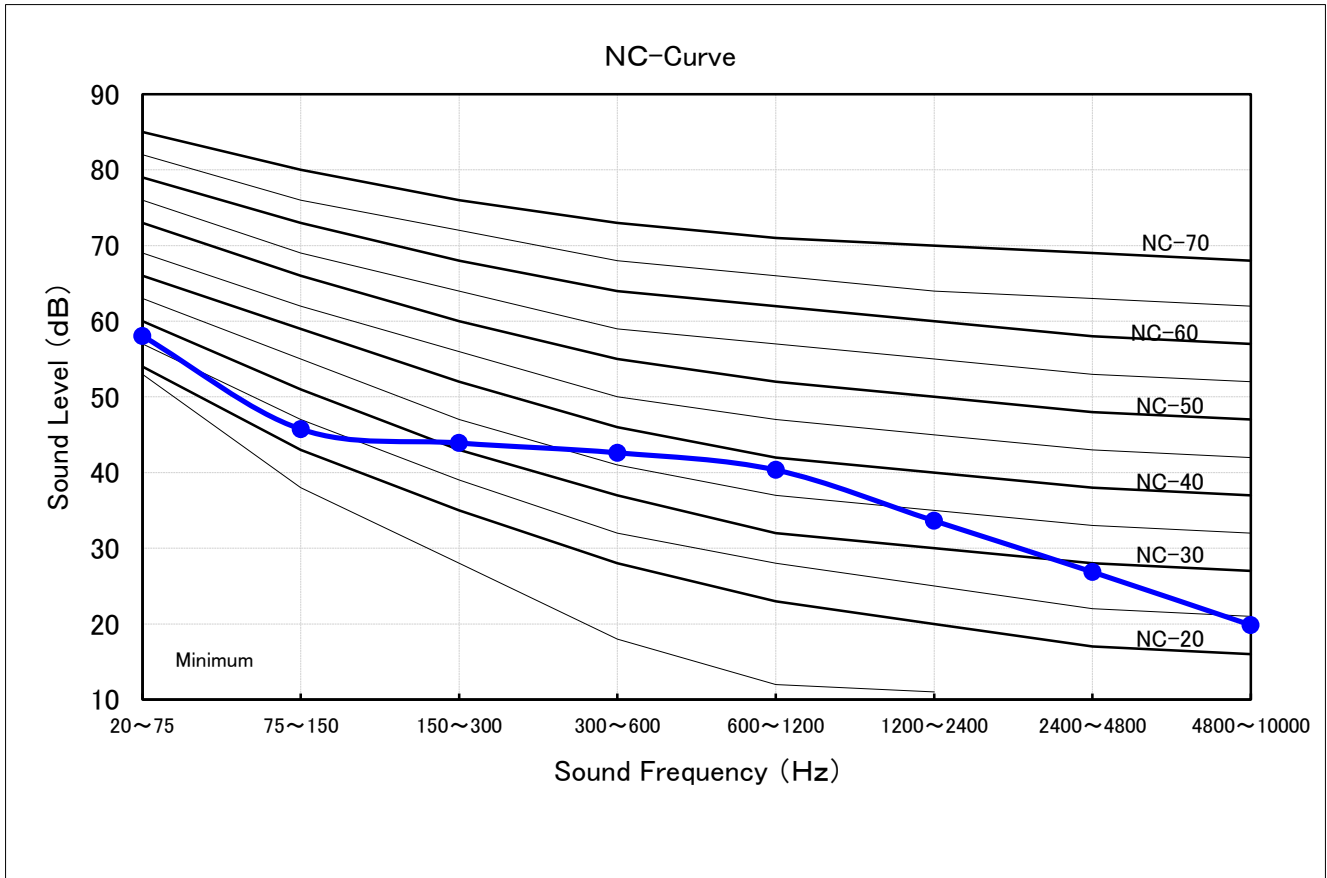




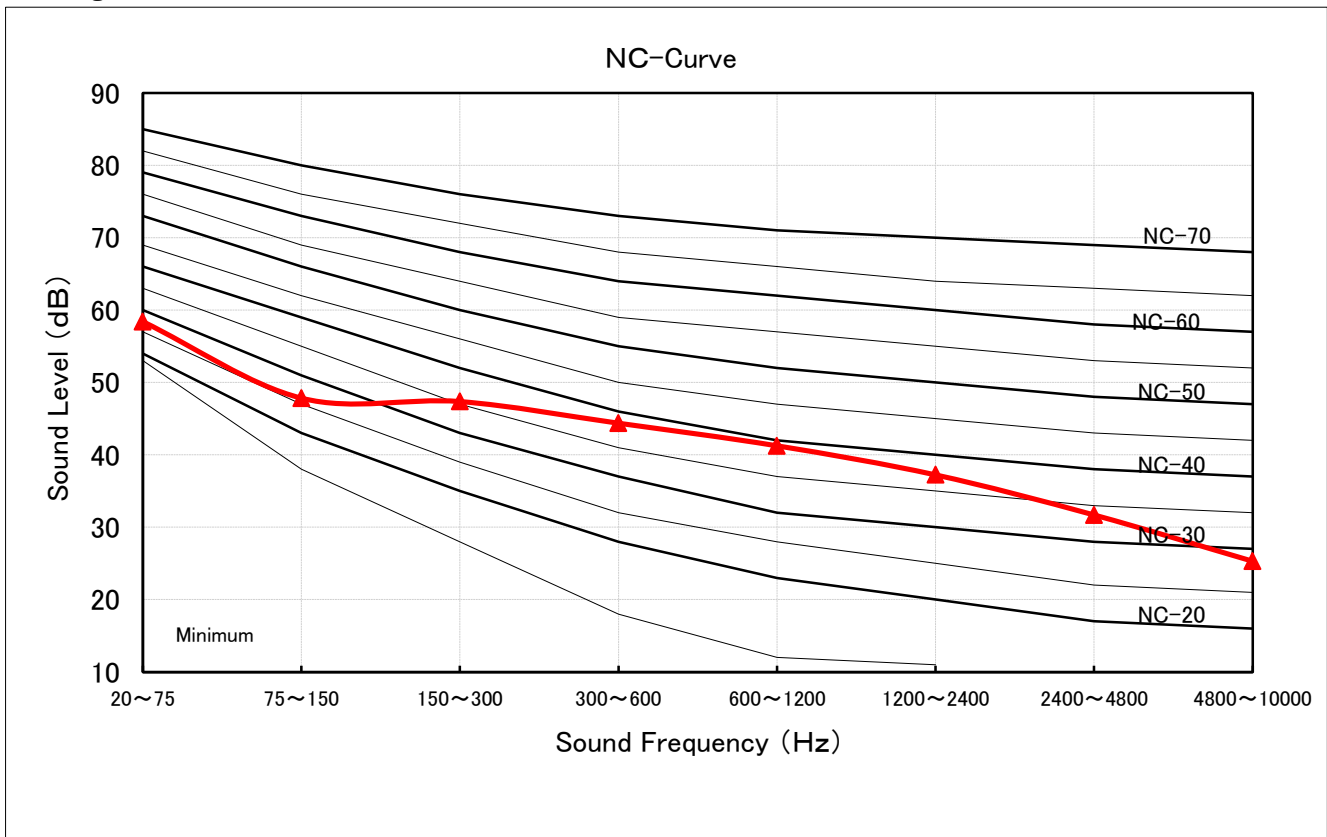
Sound characteristics (NC Curve)

RAS-25PAVSG-ND (Rate Hz)

Cooling

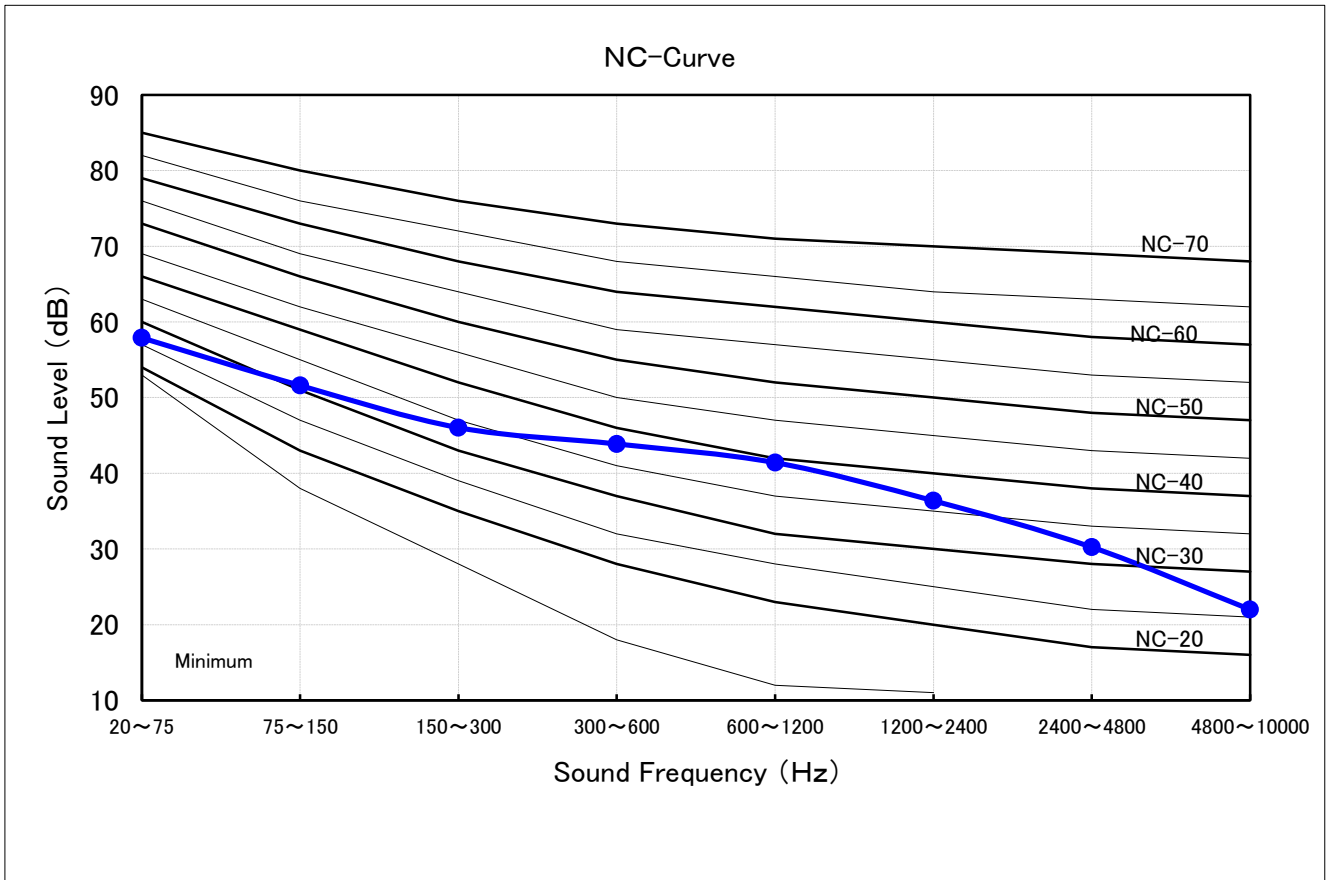


Heating

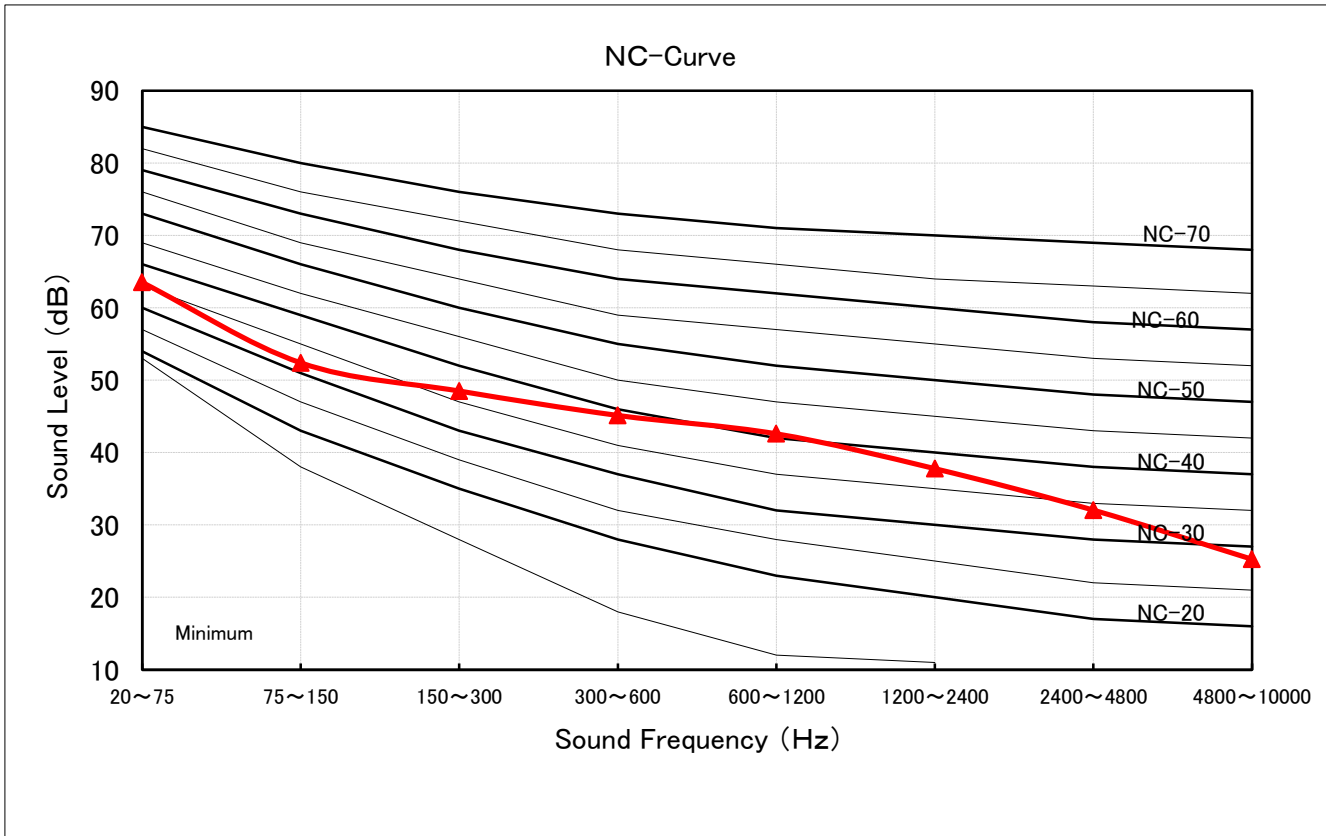


RAS-35PAVSG-ND (Rate Hz)

Cooling



Heating



TOSHIBA
Leading Innovation >>>