VPD C6M Chiller

Heat Pump Outdoor Units | 208/230V | R-32 | 60Hz **10 and 15 Horsepower**

COMMERCIAL
PRODUCT SPECIFICATIONS (EHB)

ASHRAE Standard 90.1

MODEL NUMBER IDENTIFICATION

V P D 010 C 6 M - 5 Y

- **Brand/Family**: V = Variable Refrigerant Flow (VRF)
- **Unit Type**: P = Heat Pump Outdoor Unit
- **Major Design Sequence**: D = 4th Generation
- **Cooling Capacity - Tons**: 10 = 12 HP, 15 = 18 HP
- **Cooling Efficiency**: C = Water Chiller
- **Refrigerant Type**: 6 = R-32
- **Refrigerant Circuits**: M = Multiple Circuits
- **Control Protocol**: 5 = Phase 5
- **Voltage**: Y = 208/230V-3 phase-60Hz

Form Number 211234 | March 2025
Supersedes all previous versions

CONTENTS

Line up

Modulation guide

HP	usRT	Standard			High Efficiency		
		VPD010C6M-5Y	VPD015C6M-5Y	Recommended pipe size [A]	VPD010C6M-5G	VPD015C6M-5G	Recommended pipe size [A]
12	10	1		2"			
18	15		1	2"			
24	20	2		2"			
36	30		2	2 1/2"	3		2 1/2"
48	40	4		2 1/2"			
54	45		3	3"			
60	50	5		3"			
72	60		4	3"	6		3"
84	70	7		3 1/2"			
90	75		5	3 1/2"			
96	80	8		4"			
108	90		6	4"	9		4"
120	100	10		4"			
126	105		7	4"			
132	110	11		4"			
144	120		8	4"	12		4"
156	130	13		4"			
162	135		9	4"			
168	140	14		5"			
180	150		10	5"	15		5"
192	160	16		5"			
198	165		11	5"			
216	180		12	5"			
234	195		13	5"			
252	210		14	5"			
270	225		15	5"			
288	240		16	5"			

NOTE

- Total capacity of modulated units = Σ capacity of each chiller unit.
- Total power input of modulated units = Σ power input of each chiller unit.
- 'Standard' is compact combination type than 'High efficiency' for smaller installation space.

Specification

VPD Chiller

Type						VRF Chiller	VRF Chiller	VRF Chiller	VRF Chiller
Model Name						VPD010C6M-5Y	VPD015C6M-5Y	VPD010C6M-5G	VPD015C6M-5G
Power Supply					Φ, #, V, Hz	3,3,208~230,60	3,3,208~230,60	3,3,460,60	3,3,460,60
Mode					-	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	Ton				usRT	10	15	10	15
	HP				HP	12	18	12	18
	Capacity (Rated)	Cooling	Amb. 95°F, Entering/ Leaving Temp 55/44°F		kBtu/h	120.0	168.0	120.0	168.0
		Heating	Dry/Wet Bulb 47/43°F	Leaving Temp. 105°F	kBtu/h	128.0	182.0	128.0	182.0
				Leaving Temp. 120°F	kBtu/h	120.0	171.0	120.0	171.0
			Dry/Wet Bulb 17/15°F	Leaving Temp. 105°F	kBtu/h	84.0	90.0	84.0	90.0
				Leaving Temp. 120°F	kBtu/h	80.0	85.0	80.0	85.0
Power	Power Input	Cooling	Amb. 95°F, Entering/ Leaving Temp 55/44°F		kW	10.40	16.12	10.40	16.12
		Heating	Dry/Wet Bulb 47/43°F	Leaving Temp. 105°F	kW	9.77	15.17	9.77	15.17
				Leaving Temp. 120°F	kW	11.54	17.45	11.54	17.45
			Dry/Wet Bulb 17/15°F	Leaving Temp. 105°F	kW	10.99	11.78	10.99	11.78
				Leaving Temp. 120°F	kW	11.96	12.71	11.96	12.71
	Current Input	Cooling	Amb. 95°F, Entering/Leav ing Temp 55/44°F		A	28.40	44.00	14.20	22.00
		Heating	Dry/Wet Bulb 47/43°F	Leaving Temp. 105°F	A	26.70	41.40	13.40	20.80
				Leaving Temp. 120°F	A	31.50	47.70	15.80	23.90
			Dry/Wet Bulb 17/15°F	Leaving Temp. 105°F	A	30.00	32.20	15.00	16.10
				Leaving Temp. 120°F	A	32.70	34.70	16.40	17.40
	MCA				A	52.0	70.0	24.0	40.0
	MOP				A	70.0	90.0	30.0	50.0
	MOC (FLA #1 / FLA #2)				A	4.6 / 4.6	4.6 / 4.6	2.3 / 2.3	2.3 / 2.3
	The Rated Input Current of The Power Conversion Equipment				A	19.00	27.00	8.60	15.70
Efficiency	Cooling EER				Btu/(W×h)	11.54	10.42	11.54	10.42
	Heating COP		Dry /Wet Bulb 47/43°F	Leaving Temp. 105°F	W/W	3.84	3.52	3.84	3.52
				Leaving Temp. 120°F	W/W	3.05	2.87	3.05	2.87
			Dry /Wet Bulb 17/15°F	Leaving Temp. 105°F	W/W	2.24	2.24	2.24	2.24
				Leaving Temp. 120°F	W/W	1.96	1.96	1.96	1.96
	IPLV				Btu/(W×h)	21.53	19.75	21.53	19.75
Compressor	Type				-	Scroll Inverter	Scroll Inverter	Scroll Inverter	Scroll Inverter
	Output				kW × n	7.167 × 2	7.167 × 2	7.167 × 2	7.167 × 2
	Model Name				-	DS4BC5066EVASG	DS4BC5066EVASG	DS4BC7066FVASG	DS4BC7066FVASG
	Oil			Type	-	POE	POE	POE	POE
Fan	Type				-	Propeller	Propeller	Propeller	Propeller
	Output x n				W	630 x 2	630 x 2	630 x 2	630 x 2
	Air Flow Rate				CFM	12,855	12,855	12,855	12,855
	External Static Pressure			Max.	inAq	0.315	0.315	0.315	0.315
					Pa	78.5	78.5	78.5	78.5
					mmAq	8	8	8	8

Specification

VPD Chiller

Type					VRF Chiller	VRF Chiller	VRF Chiller	VRF Chiller
Model Name					VPD010C6M-5Y	VPD015C6M-5Y	VPD010C6M-5G	VPD015C6M-5G
Water Side Heat Exchanger	Type			-	Brazing Plate	Brazing Plate	Brazing Plate	Brazing Plate
	Water Flow	Minimum	Cooling	LPM (GPM)	59.8 (15.8)	63.6 (16.8)	59.8 (15.8)	63.6 (16.8)
			Heating	LPM (GPM)	59.8 (15.8)	63.6 (16.8)	59.8 (15.8)	63.6 (16.8)
		Nominal	Cooling	LPM (GPM)	90.8 (24.0)	127.2 (33.6)	90.8 (24.0)	127.2 (33.6)
			Heating	LPM (GPM)	90.8 (24.0)	127.2 (33.6)	90.8 (24.0)	127.2 (33.6)
		Maximum	Cooling	LPM (GPM)	181.7 (48.0)	254.4 (67.2)	181.7 (48.0)	254.4 (67.2)
			Heating	LPM (GPM)	181.7 (48.0)	254.4 (67.2)	181.7 (48.0)	254.4 (67.2)
	Quantity			EA	2	2	2	2
Water circuit	Connection Type			-	50A Cut Groove	50A Cut Groove	50A Cut Groove	50A Cut Groove
	Nominal water pressure drop			ftAq	11.71	20.07	11.71	20.07
				kPa (psi)	35.0 (5.08)	60.0 (8.70)	35.0 (5.08)	60.0 (8.70)
	Max. operation pressure			ftAq	335	335	335	335
				Mpa (psi)	1 (145)	1 (145)	1 (145)	1 (145)
	Minimum water volume in the system		Cooling	ℓ	272.5	381.6	272.5	381.6
				gal	72.0	100.8	72.0	100.8
			Heating	ℓ	272.5	381.6	272.5	381.6
				gal	72.0	100.8	72.0	100.8
Refrigerant	Type			-	R32	R32	R32	R32
	Factory Charging			lbs	30.4	30.4	30.4	30.4
Sound Level	Sound Pressure Level			dB(A)	55	61	55	61
	Sound Power Level			dB(A)	77	83	77	83
External Dimension	Net Weight			lbs	959	959	959	959
	Shipping Weight			lbs	1,008	1,008	1,008	1,008
	Net Dimensions (WxHxD)			inch	70.67 x 66.73 x 30.12	70.67 x 66.73 x 30.12	70.67 x 66.73 x 30.12	70.67 x 66.73 x 30.12
	Shipping Dimensions (WxHxD)			inch	74.80 x 74.29 x 36.18	74.80 x 74.29 x 36.18	74.80 x 74.29 x 36.18	74.80 x 74.29 x 36.18
Operating Water Temp. Range	Cooling			°F	41 ~ 77	41 ~ 77	41 ~ 77	41 ~ 77
	Cooling (If using brine)			°F	14 ~ 77	14 ~ 77	14 ~ 77	14 ~ 77
	Heating			°F	77 ~ 140[1)]	77 ~ 140[1)]	77 ~ 140[1)]	77 ~ 140[1)]
Operating Amb. Temp. Range	Cooling			°F	5 ~ 118	5 ~ 118	5 ~ 118	5 ~ 118
	Heating			°F	-13 ~ 109	-13 ~ 109	-13 ~ 109	-13 ~ 109

NOTE

- Certified efficiency data in accordance with AHRI Standard 550/590.
- Specification may be changed without further notification.
- Note 1) During heating operation, the maximum leaving water temperature allowed is 55°C (131°F) when the outside temperature is below 10°C (55°F).

Electric Characteristics

Capacity		Model	Power Supply		Voltage Range		Nominal Running Current [A]		Current [A]		ODU Fan Motor [kW]
			Hz	Voltage	Min. (-10%)	Max. (+10%)					
Ton	HP						Cooling	Heating	MCA	MOP	
10	12	VPD010C6M-5Y	60	208~230	187	253	28.4	31.5	52.0	70.0	0.630 x 2
15	18	VPD015C6M-5Y	60	208~230	187	253	44.0	47.7	70.0	90.0	0.630 x 2
10	12	VPD010C6M-5G	60	460	414	506	14.2	15.8	24.0	30.0	0.630 x 2
15	18	VPD015C6M-5G	60	460	414	506	22.0	23.9	40.0	50.0	0.630 x 2

NOTE

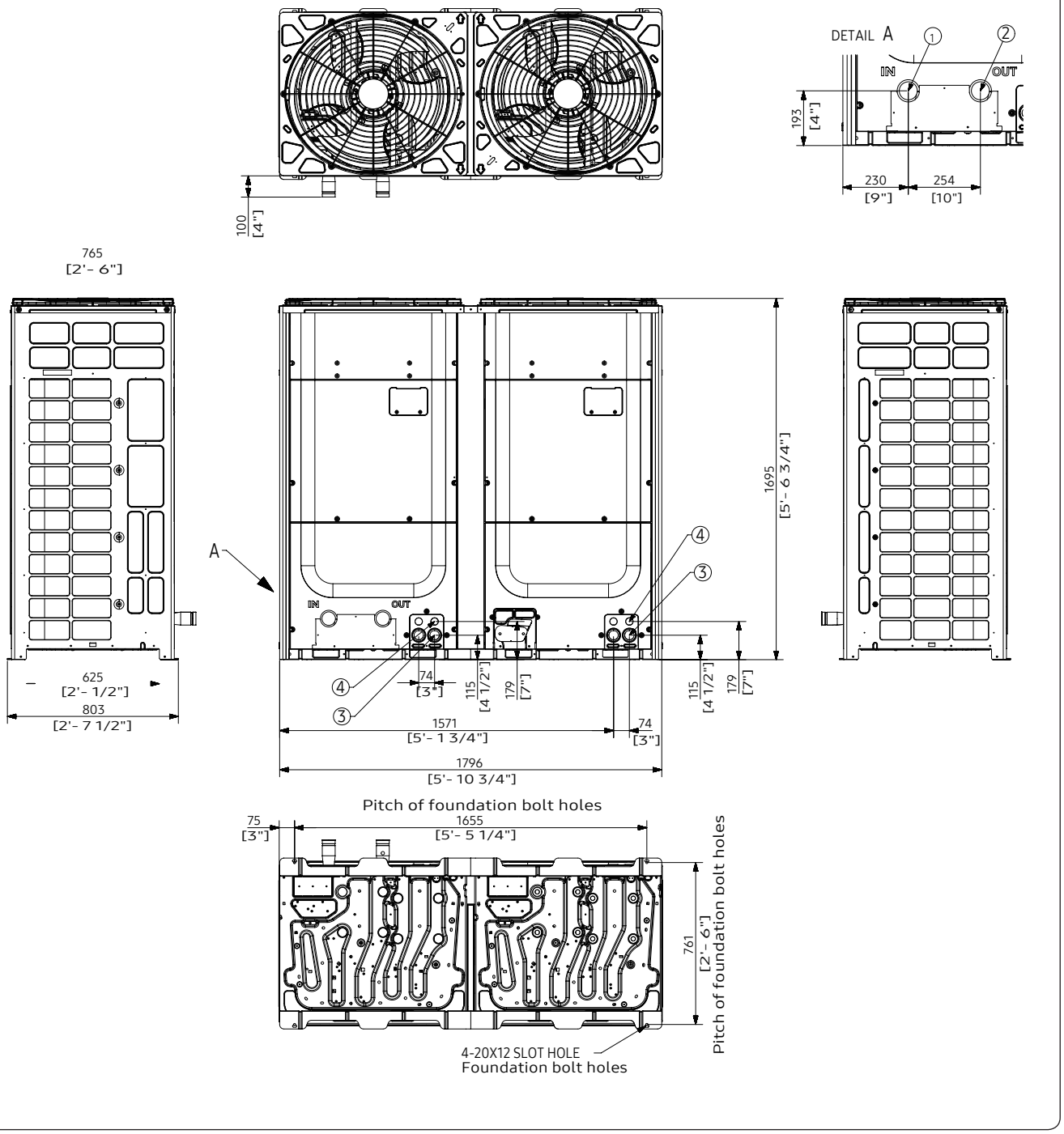
- MCA : Minimum circuit amperes
- MOP : Maximum Over current Protective Device
- Select wire size based on the value of MCA

Dimensional Drawing

VPD Chiller

- VPD010/015C6M-5*

Unit: mm (inches)



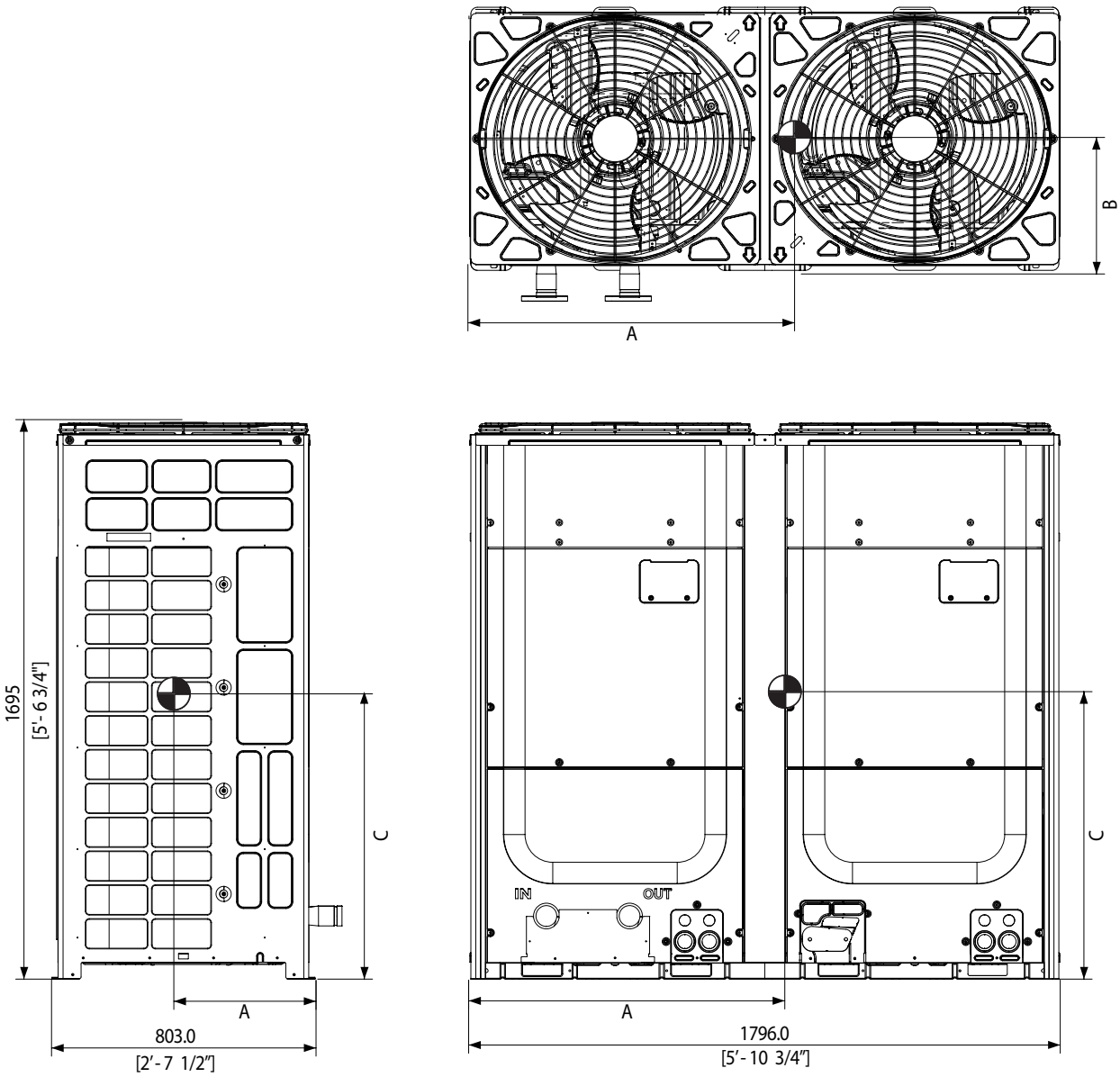
NO	Table of descriptions	Remark
1	Inlet water flange	15/20 HP 50A CUT Grooved Type (Use the Coupling in ASME standardized product)
2	Outlet water flange	15/20 HP 50A CUT Grooved Type (Use the Coupling in ASME standardized product)
3	Power wiring conduit	KNOCK OUT HOLE (FRONT)
4	Communication wiring conduit	KNOCK OUT HOLE (FRONT)

Center of Gravity

VPD Chiller

- VPD010/015C6M-5*

Unit: mm (inches)

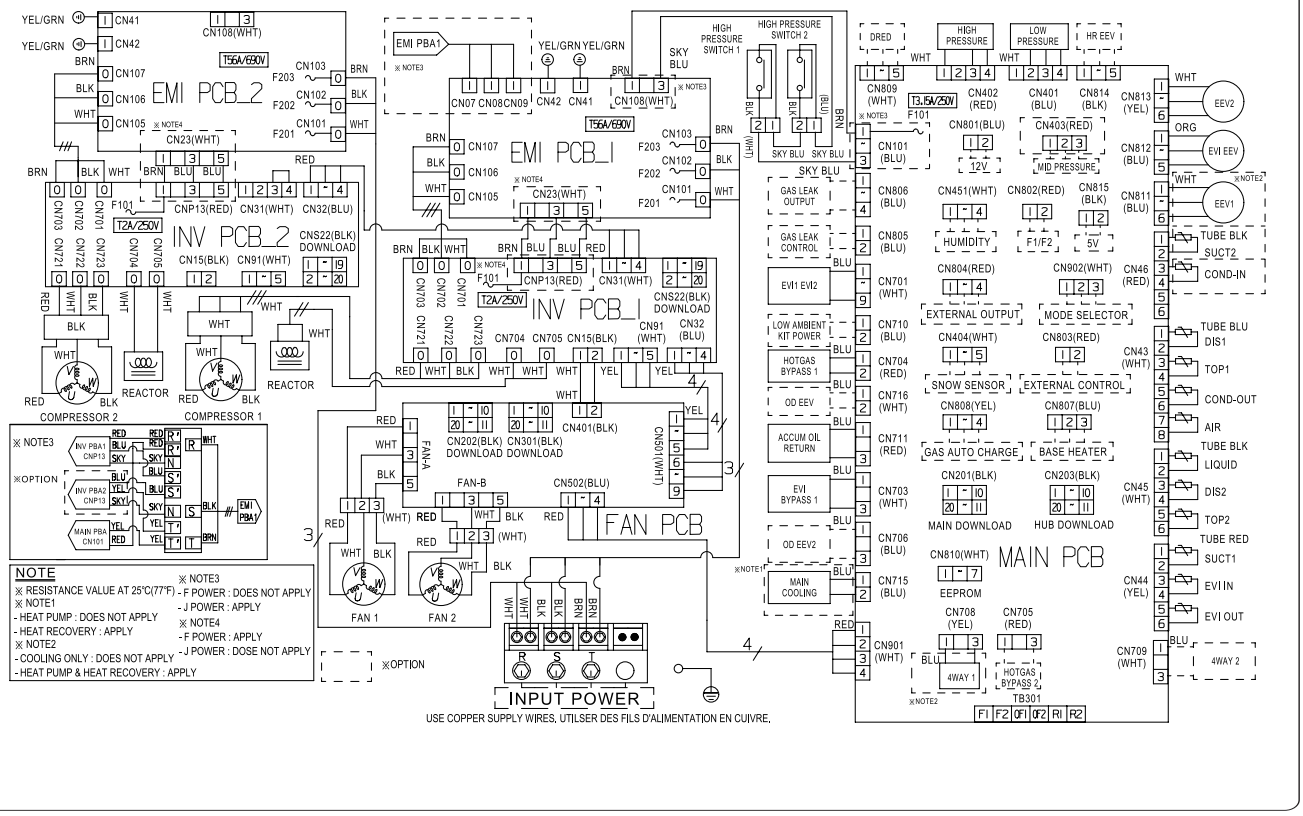


Model	A	B	C
VPD010/015C6M-5*	1020 [3'-4 1/4"]	380 [1'-3]	590 [1'-11 1/4"]

Electrical Wiring Diagrams

Inverter controller

VPD010/015C6M-5Y



INV PCB1	Printed circuit board (inverter1)	EEV1	Electronic expansion valve 1	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter2)	EEV2	Electronic expansion valve 2	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (emi1)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
EMI PCB2	Printed circuit board (emi2)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	4WAY1 V/V	Solenoid valve (4 Way valve1)
FAN PCB	Printed circuit board (fan motor)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	4WAY2 V/V	Solenoid valve (4 Way valve2)
MAIN PCB	Printed circuit board (main)	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
COMPRSSOR1	Motor (compressor1)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
COMPRSSOR2	Motor (compressor2)	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
FAN1	Motor (fan1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	F101	FUSE (INV PCB)
FAN2	Motor (fan2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	690V/56A	FUSE (EMI PCB)
EVI V/V1	Solenoid valve (EVI1)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
EVI V/V2	Solenoid valve (EVI2)	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
EVI EEV	Electronic expansion valve (EVI)	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
SNOW SENSOR	SNOW SENSOR	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)		

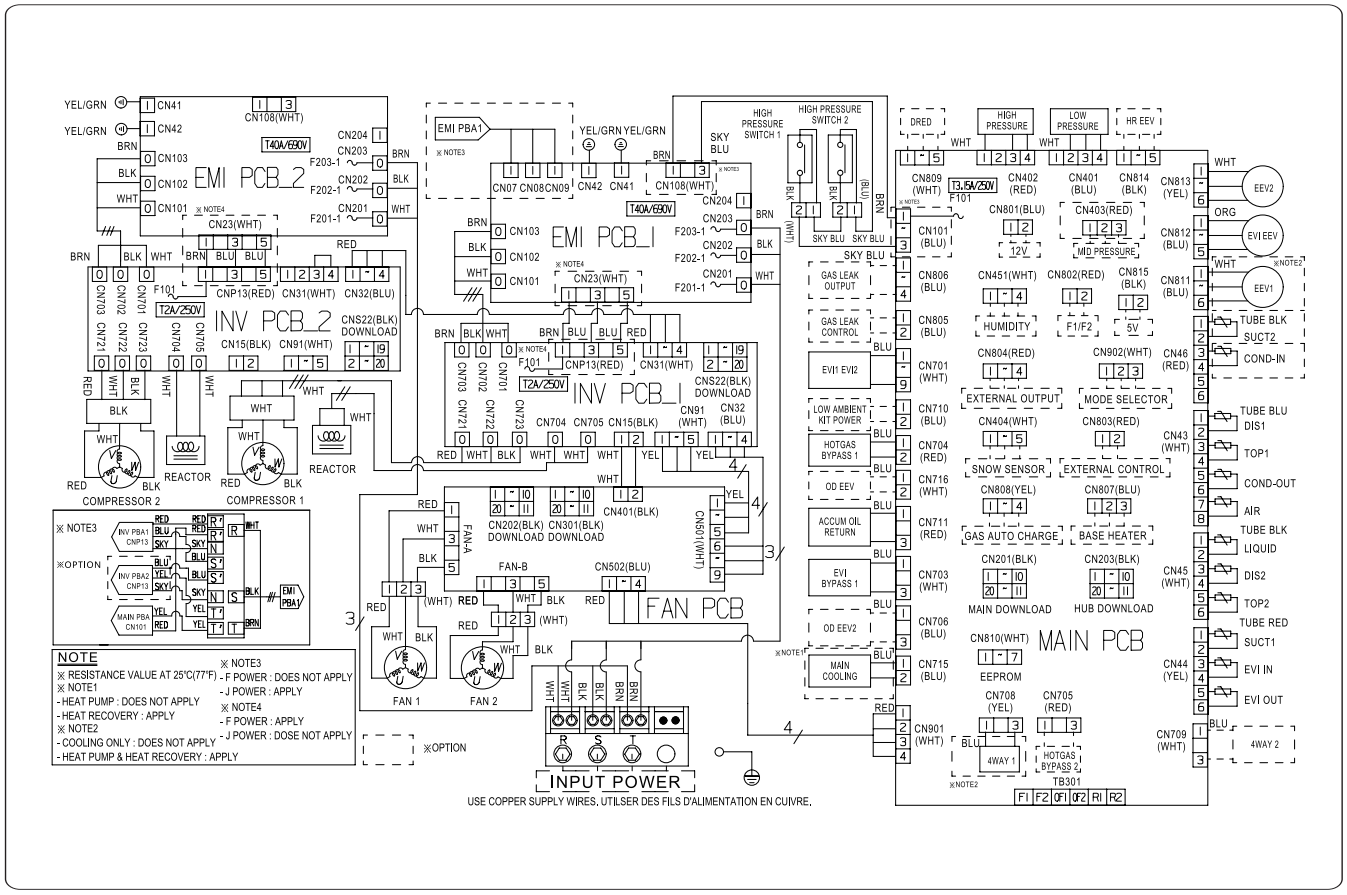
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: sky blue
- When operating, don't shortcircuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor_outdoor transmission OF1-OF2, refer to the installation manual.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N : The wire quantity

Electrical Wiring Diagrams

Inverter controller

VPD010/015C6M-5G



INV PCB1	Printed circuit board (inverter1)	EEV1	Electronic expansion valve 1	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter2)	EEV2	Electronic expansion valve 2	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (emi1)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
EMI PCB2	Printed circuit board (emi2)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	4WAY1 V/V	Solenoid valve (4 Way valve1)
FAN PCB	Printed circuit board (fan motor)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	4WAY2 V/V	Solenoid valve (4 Way valve2)
MAIN PCB	Printed circuit board (main)	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
COMPRSSOR1	Motor (compressor1)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
COMPRSSOR2	Motor (compressor2)	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
FAN1	Motor (fan1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	F101	FUSE (INV PCB)
FAN2	Motor (fan2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	690V/40A	FUSE (EMI PCB)
EVI V/V1	Solenoid valve (EVI1)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
EVI V/V2	Solenoid valve (EVI2)	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
EVI EEV	Electronic expansion valve (EVI)	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
SNOW SENSOR	SNOW SENSOR	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)		

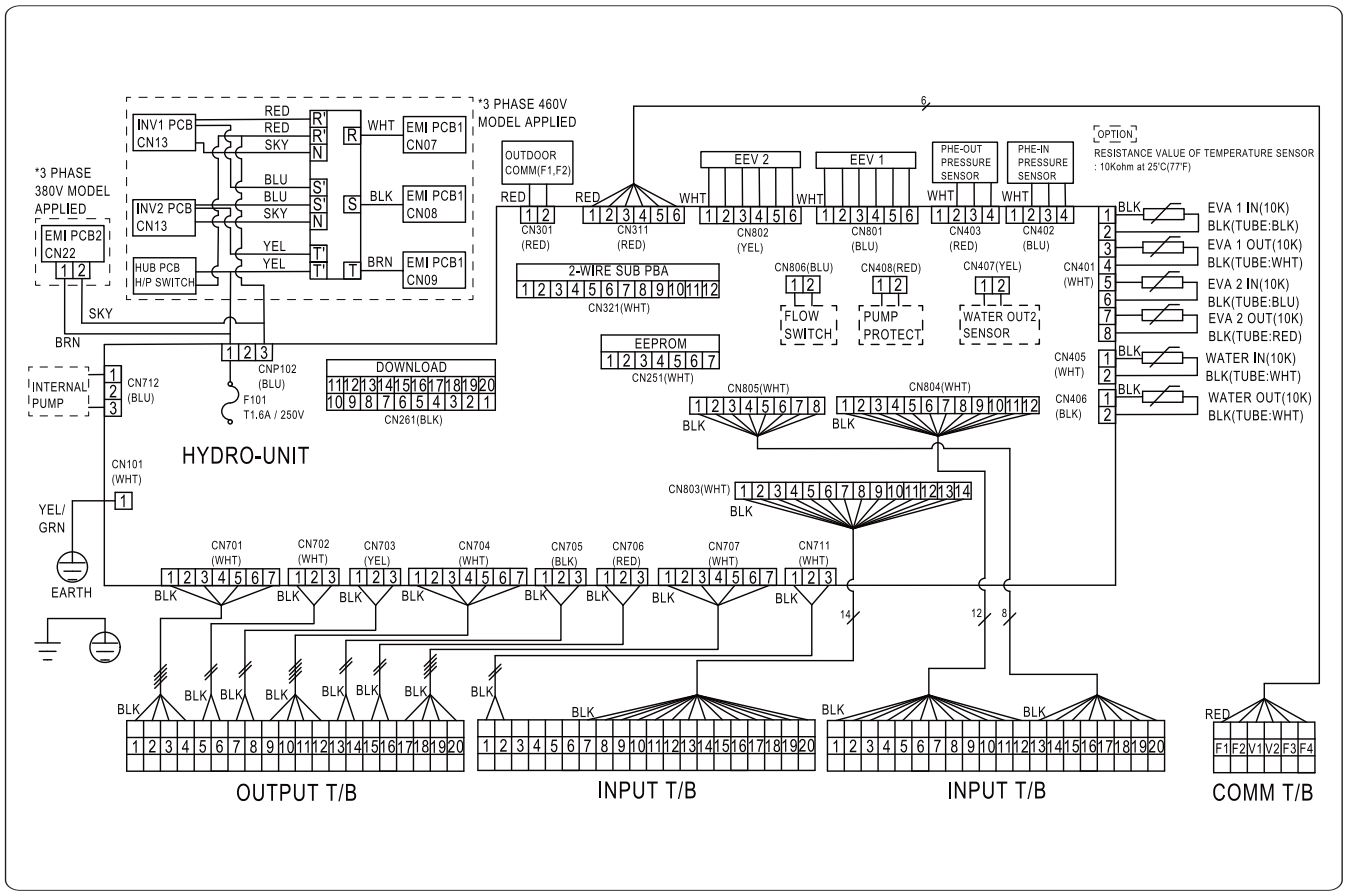
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: sky blue
- When operating, don't short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, refer to the installation manual.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N/ : The wire quantity

Electrical Wiring Diagrams

Hydro controller

VPD010/015C6M-5Y, VPD010/015C6M-5G



HYDRO-UNIT	Printed circuit board	EVI1-OUT(10K)	Thermistor (EVI-out_10kohm)
F101	FUSE(HYDRO-UNIT)	EVI2-IN(10K)	Thermistor (EVI-in_10kohm)
EEV1	Electronic expansion valve 1	EVI2-OUT(10K)	Thermistor (EVI-out_10kohm)
EEV2	Electronic expansion valve 2	WATER IN(10K)	Thermistor (WATER IN_10kohm)
EVI1-IN(10K)	Thermistor (EVI-in_10kohm)	WATER OUT(10K)	Thermistor (WATER OUT_10kohm)

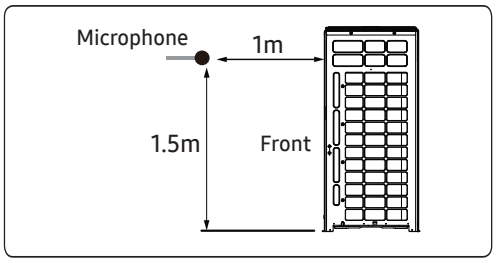
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue
- When operating, don't short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, refer to the installation manual.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N : The wire quantity

Sound Data

Sound Pressure level

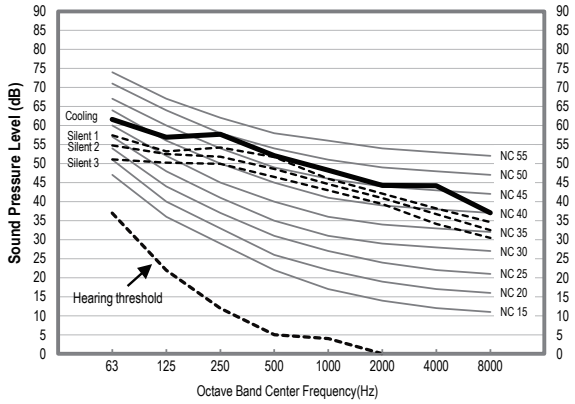
Unit: dB(A)



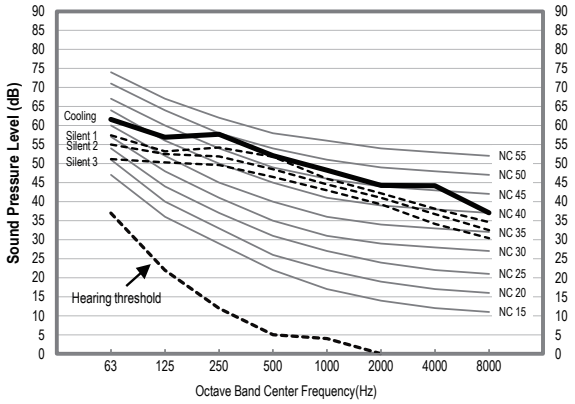
Model	Cooling	Silent1	Silent2	Silent3
VPD010C6M-5Y	55	54	52	49
VPD010C6M-5G	55	54	52	49
VPD015C6M-5Y	61	57	53	49
VPD015C6M-5G	61	57	53	49

- NC Curve

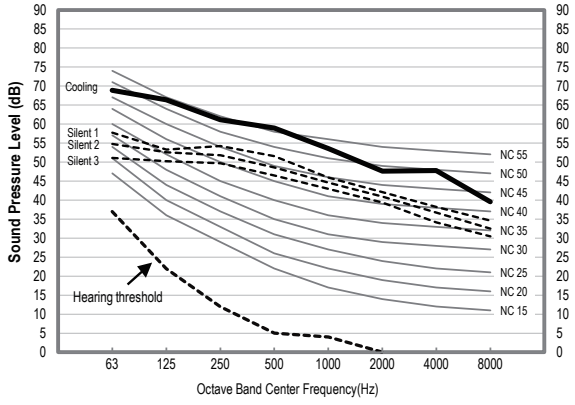
1) VPD010C6M-5Y



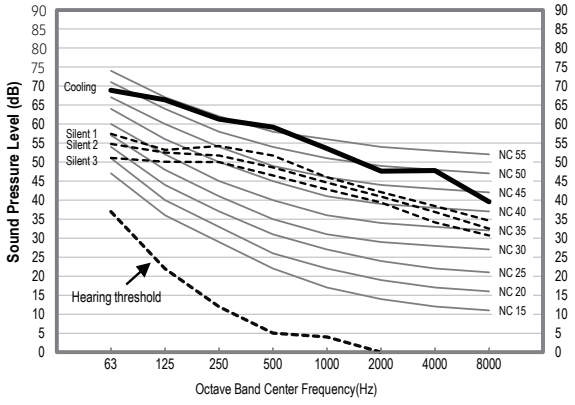
2) VPD010C6M-5G



3) VPD015C6M-5Y



4) VPD015C6M-5G



NOTE

- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

Sound Data

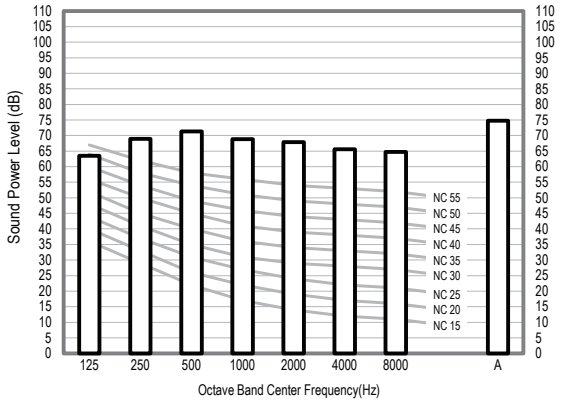
Sound Power level

Unit: dB(A)

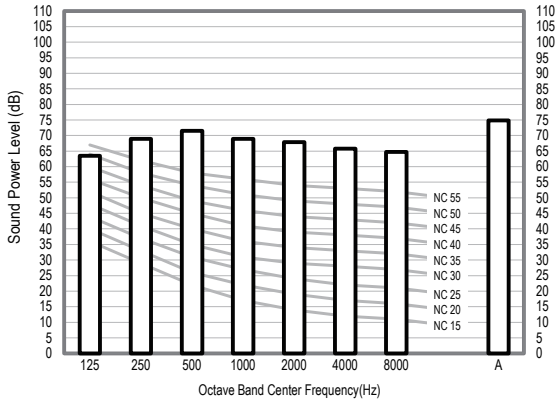
Model	Power
VPD010C6M-5Y	77
VPD010C6M-5G	77
VPD015C6M-5Y	83
VPD015C6M-5G	83

- NC Curve

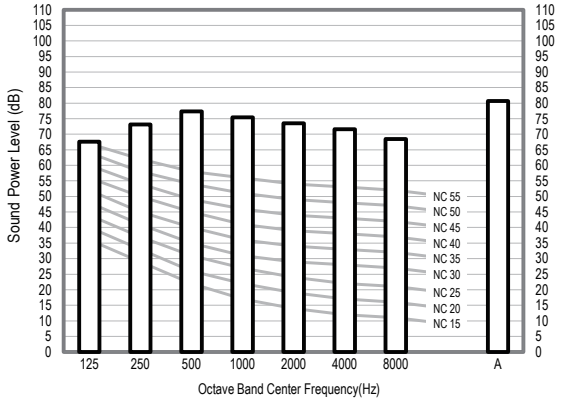
1) VPD010C6M-5Y



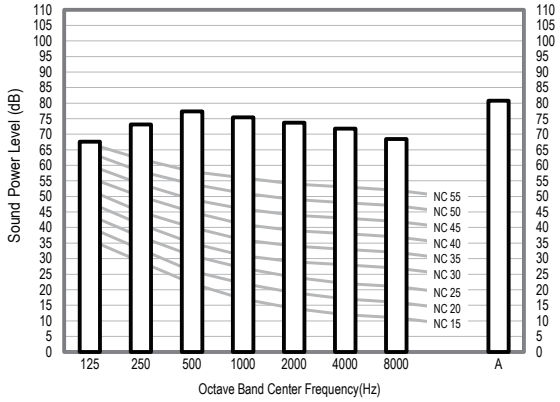
2) VPD010C6M-5G



3) VPD015C6M-5Y



4) VPD015C6M-5G



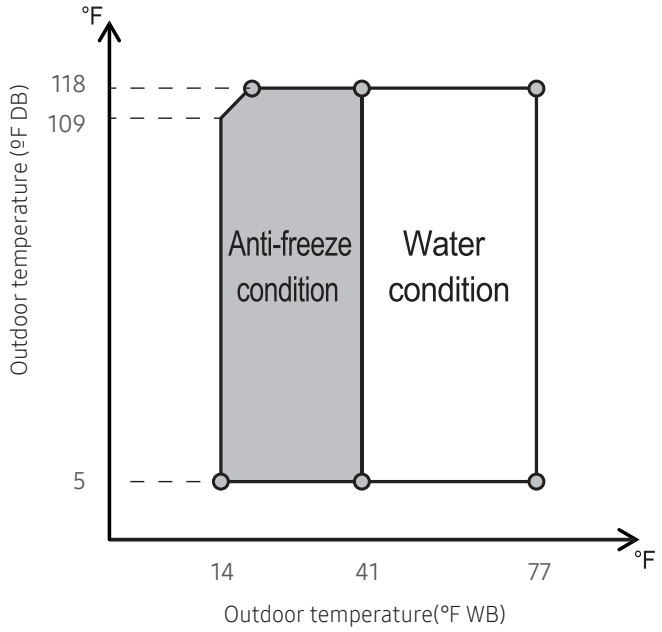
NOTE

- Specifications may be subject to change without prior notice.
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

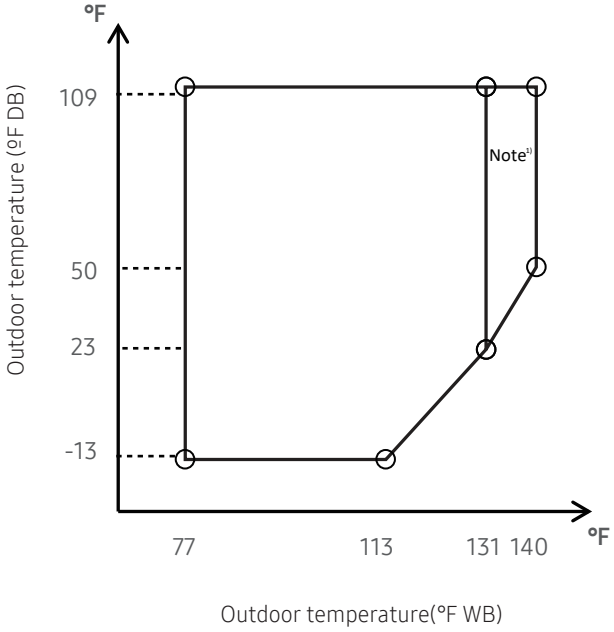
Operation Range

Inverter controller

Cooling



Heating

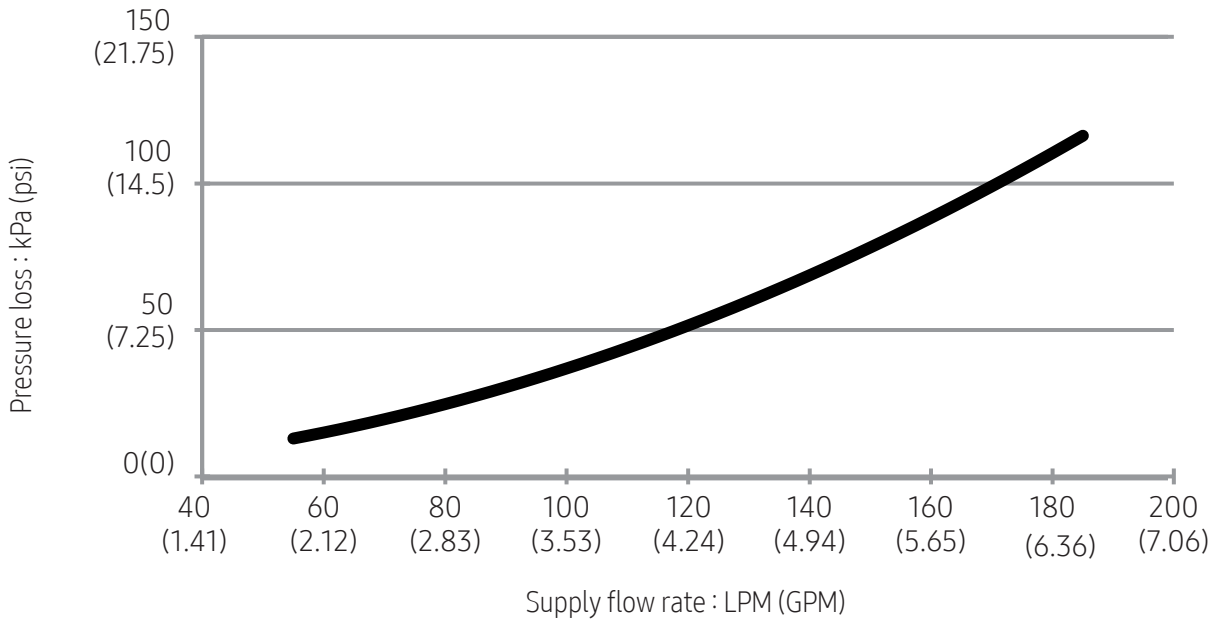


Note1) It might work in part load in this area

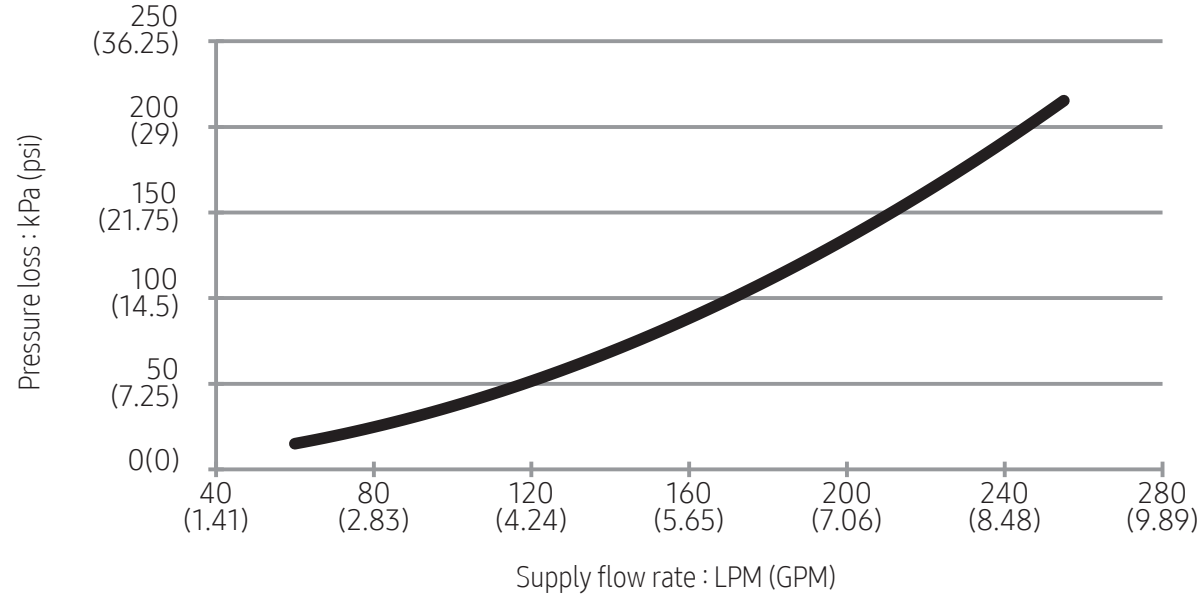
Operation Range

Hydro controller

VPD010C6M-5*



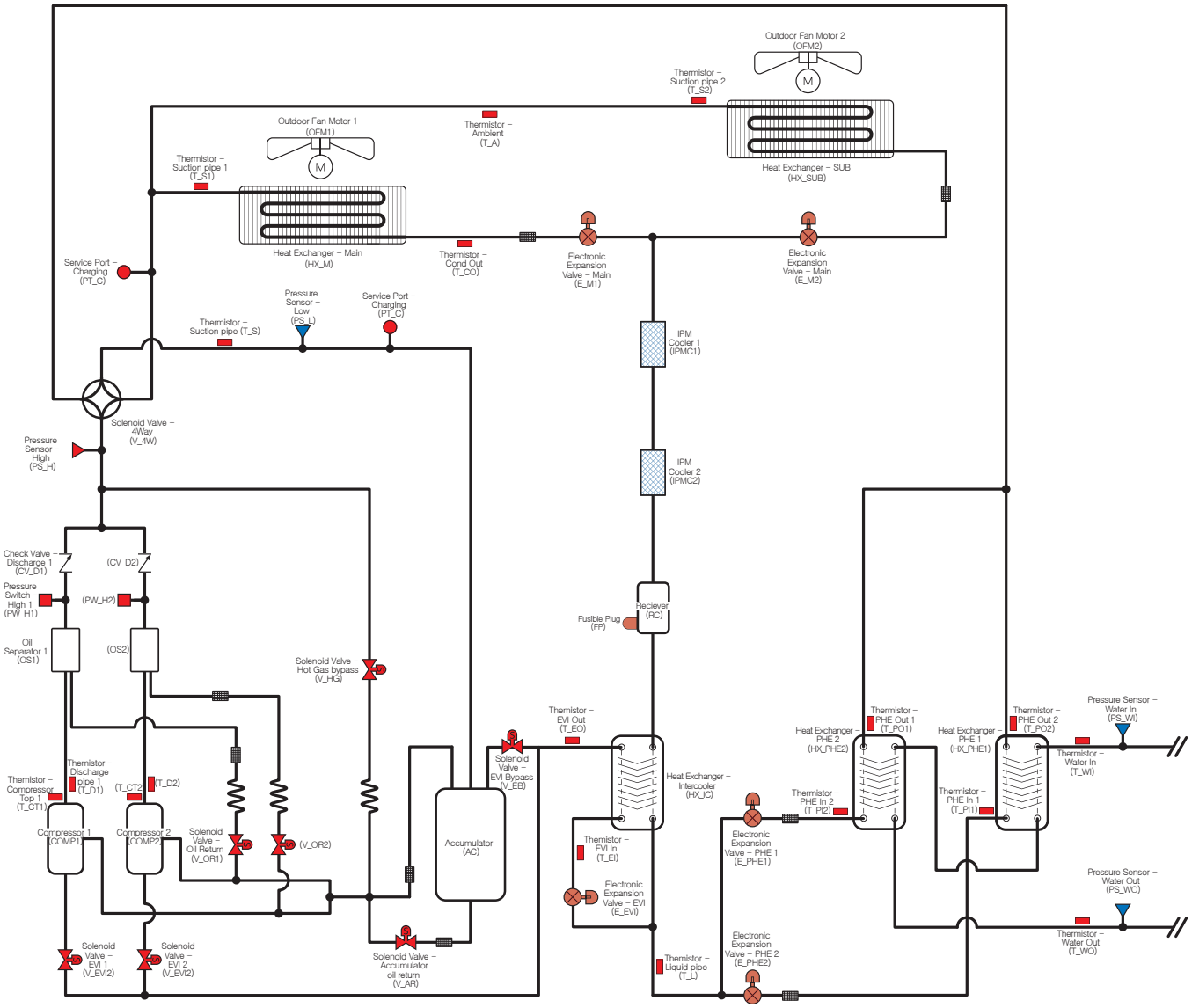
VPD015C6M-5*



Piping Diagram

VPD Chiller

- VPD010/015C6M-5*



Capacity Table

VPD010C6M-5*

Cooling (ΔT = 10°F)

TC : Total Capacity, PI : Power Input

LWT (°F)	Outdoor Air temperature(°F, DB)																							
	55			65			75			85			95			105			115			118.4		
	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow
	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM
14[2)]	7.671	5.596	18.410	7.499	6.799	17.995	7.251	7.588	17.401	6.575	8.181	15.800	5.930	9.213	15.800[3)]	5.258	10.434	15.800[3)]	4.004	10.321	15.800[3)]	3.583	9.498	15.800[3)]
23[2)]	9.853	6.000	23.646	9.844	7.216	23.624	9.738	7.975	23.369	9.293	8.589	22.302	8.844	9.688	21.224	7.793	10.855	18.701	6.340	11.197	15.800[3)]	5.673	10.770	15.800[3)]
32[2)]	9.954	6.076	23.887	9.946	7.403	23.867	9.839	8.283	23.611	9.394	8.895	22.544	8.945	10.001	21.466	7.914	11.232	18.992	6.795	11.537	16.308	6.081	11.188	15.800[3)]
41	10.859	6.235	26.059	10.857	7.593	26.054	10.748	8.489	25.792	10.299	9.189	24.715	9.749	10.314	23.395	8.660	11.542	20.783	7.274	11.913	17.456	6.550	11.641	15.800[3)]
44	11.110	6.302	26.653	11.108	7.675	26.653	11.004	8.572	26.412	10.550	9.274	25.314	10.000	10.400	24.000	8.860	11.630	21.272	7.430	11.918	17.820	6.646	11.564	15.949
48	11.820	6.416	28.368	11.820	7.795	28.368	11.670	8.691	28.013	11.250	9.497	27.003	10.620	10.604	25.487	9.410	11.556	22.577	7.890	11.740	18.936	7.095	11.358	17.026
52	12.390	6.527	29.733	12.390	7.914	29.733	12.240	8.807	29.371	11.730	9.584	28.153	11.178	10.808	26.826	9.887	11.482	23.724	8.310	11.526	19.941	7.370	11.063	17.686
56	12.947	6.645	31.072	12.950	8.040	31.072	12.797	8.927	30.710	12.290	9.545	29.492	11.642	10.594	27.936	10.330	11.216	24.799	8.690	11.247	20.858	7.750	10.762	18.599
60	13.500	6.765	32.394	13.500	8.160	32.394	13.350	9.050	32.032	12.820	9.575	30.774	12.172	10.585	29.213	10.760	10.954	25.830	9.060	10.983	21.735	8.106	10.533	19.453
64.4	14.073	6.834	33.773	14.078	8.235	33.785	13.927	9.134	33.422	13.320	9.729	31.966	12.663	10.750	30.389	11.195	11.116	26.865	9.400	11.093	22.558	8.387	10.661	20.127

Heating (ΔT = 10°F)

TC : Total Capacity, PI : Power Input

LWT (°F)	Outdoor Air temperature(°F, DB)																													
	-13.0			-4.0			5.0			14.0			17.0			19.4			28.4			35.6			47.0			59.0			68.0		
	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow
	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM
86	6.16	14.97	15.80	6.73	12.40	16.08	7.05	10.82	16.84	7.45	9.82	17.80	7.61	9.90	18.17	7.73	9.48	18.46	8.90	9.74	21.26	10.11	9.50	24.13	11.60	8.84	27.68	12.86	8.91	30.69	13.93	7.48	33.25
95	6.00	15.93	15.80	6.56	13.20	15.80	6.87	11.52	16.41	7.26	10.46	17.34	7.41	10.54	17.70	7.54	10.10	17.99	8.68	10.37	20.71	9.94	10.12	23.72	11.30	9.41	26.98	12.53	9.50	29.91	13.57	8.91	32.40
105	5.25	16.30	15.80	6.19	13.81	15.80	6.49	12.00	15.80	6.85	10.90	16.36	7.00	11.35	16.71	7.11	10.52	16.98	8.19	10.80	19.55	9.30	10.55	22.20	10.66	9.74	25.46	11.82	9.89	28.22	12.81	9.80	30.58
120	-	-	-	-	-	-	6.17	13.64	15.80	6.52	12.32	15.80	6.65	12.85	15.88	6.76	11.90	16.14	7.74	12.41	18.49	8.75	12.29	20.89	10.01	11.54	23.90	11.10	11.62	26.49	12.02	11.51	28.70
122	-	-	-	-	-	-	5.61	16.55	15.80	5.92	15.01	15.80	6.05	15.12	15.80	6.15	14.50	15.80	7.04	15.05	16.81	7.96	14.90	18.99	9.10	13.96	21.73	10.09	14.09	24.08	10.93	13.96	26.09
131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.61	12.75	15.80	6.34	12.59	15.80	7.26	11.77	17.32	8.04	11.88	19.21	8.71	11.62	20.80
140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.94	10.02	16.10	6.13	9.54	16.63

NOTE

- Capacity table may be subject to change without prior notice.
- ΔT = Leaving water temperature - Entering water temperature
- LWT : Leaving water temperature, TC : Total Capacity, PI : Power Input
- When using brine, refer to the capacity correction factors by brine %wt.
  (This capacity data is based on Ethylene glycol 50%wt.)
- ΔT is comply with the condition of minimum flow-rate.

Capacity Table

VPD015C6M-5*

Cooling (ΔT = 10°F)

TC : Total Capacity, PI : Power Input

LWT (°F)	Outdoor Air temperature(°F, DB)																							
	55			65			75			85			95			105			115			118.4		
	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow
	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM	Ton	kW	GPM
14[2]	10.931	8.823	26.232	10.685	10.610	25.642	10.336	12.384	24.805	9.368	13.481	22.481	8.646	14.645	20.748	7.235	15.596	17.363	4.990	13.007	16.800[3]	4.205	11.580	16.800[3]
23[2]	14.039	9.460	33.691	14.027	11.262	33.661	13.881	13.020	33.311	13.240	14.156	31.773	12.574	14.462	30.174	10.778	16.467	25.866	7.901	14.460	18.962	6.657	13.196	16.800[3]
32[2]	14.183	9.578	34.035	14.171	11.553	34.007	14.025	13.523	33.657	13.383	14.659	32.116	12.713	15.388	30.509	10.900	17.005	26.157	8.468	14.834	20.322	7.136	13.804	17.126
41	15.472	9.830	37.129	15.469	11.847	37.123	15.320	13.855	36.765	14.672	15.144	35.210	13.901	16.314	33.359	11.887	17.530	28.527	9.035	15.206	21.683	7.687	14.655	18.447
44	15.830	9.936	37.981	15.830	11.971	37.981	15.680	13.997	37.637	15.030	15.286	36.072	14.000	16.120	33.600	12.190	17.681	29.253	9.260	15.269	22.219	7.799	14.567	18.716
48	16.840	10.477	40.424	16.840	12.572	40.424	16.630	13.978	39.918	16.030	15.189	38.480	15.130	16.605	36.319	12.940	17.761	31.048	9.840	15.296	23.610	8.353	14.524	20.045
52	17.650	10.750	42.370	17.650	12.598	42.370	17.440	13.958	41.854	16.720	15.092	40.118	15.364	16.224	36.874	13.590	17.845	32.622	10.360	15.315	24.864	8.615	14.357	20.674
56	18.450	11.060	44.277	18.450	12.749	44.277	18.232	13.937	43.762	17.510	15.112	42.025	16.590	16.634	39.809	14.210	17.535	34.100	10.840	15.335	26.008	9.089	14.315	21.813
60	19.230	11.232	46.161	19.230	12.572	46.161	19.020	13.918	45.646	18.270	15.128	43.852	16.860	16.343	40.471	14.800	17.215	35.519	11.290	15.354	27.101	9.512	14.378	22.828
64.4	20.047	11.341	48.108	20.054	12.689	48.125	19.842	14.044	47.617	18.983	15.378	45.556	17.524	16.869	42.054	15.398	17.483	36.951	11.729	15.489	28.148	9.842	14.550	23.619

Heating (ΔT = 10°F)

TC : Total Capacity, PI : Power Input

LWT (°F)	Outdoor Air temperature(°F, DB)																													
	-13.0			-4.0			5.0			14.0			17.0			19.4			28.4			35.6			47.0			59.0			68.0		
	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow	TC	PI	Water flow
	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM	USRT	kW	GPM
86	6.60	15.79	16.80	7.22	13.08	17.23	7.56	11.41	18.05	7.99	10.36	19.07	8.16	10.44	19.47	8.51	10.38	20.31	10.88	12.35	25.98	13.61	13.73	32.49	16.49	13.72	39.37	18.28	13.84	43.65	19.81	11.61	47.29
95	6.43	16.81	16.80	7.03	13.92	16.80	7.37	12.15	17.59	7.79	11.04	18.59	7.95	11.12	18.97	8.29	11.05	19.79	10.60	13.15	25.32	13.38	14.63	31.94	16.07	14.61	38.37	17.82	14.75	42.53	19.30	13.84	46.08
105	5.63	17.20	16.80	6.64	14.56	16.80	6.95	12.69	16.80	7.35	11.50	17.54	7.50	11.81	17.91	7.82	11.52	18.67	10.01	13.70	23.89	12.52	15.24	29.88	15.17	15.12	36.21	16.81	15.36	40.14	18.22	15.22	43.49
120	-	-	-	-	-	-	6.57	13.83	16.80	6.94	12.49	16.80	7.08	12.75	16.80	7.39	12.54	17.65	9.44	15.24	22.54	11.79	17.26	28.14	14.25	17.45	34.02	15.82	17.57	37.75	17.13	17.41	40.90
122	-	-	-	-	-	-	5.97	16.86	16.80	6.31	15.22	16.80	6.44	15.34	16.80	6.72	15.25	16.80	8.58	18.48	20.49	10.72	20.92	25.58	12.97	21.11	30.96	14.38	21.31	34.32	15.58	21.11	37.18
131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.85	15.61	16.80	8.54	17.65	20.39	10.34	17.80	24.69	11.46	17.97	27.37	12.42	17.56	29.65
140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.79	13.90	21.13	8.05	13.23	21.83

NOTE

- Capacity table may be subject to change without prior notice.
- ΔT = Leaving water temperature - Entering water temperature
- LWT : Leaving water temperature, TC : Total Capacity, PI : Power Input
- When using brine, refer to the capacity correction factors by brine %wt.
  (This capacity data is based on Ethylene glycol 50%wt.)
- ΔT is comply with the condition of minimum flow-rate.

Capacity correction

VPD Chiller

1) Correction factor by % glycol

Anti-freeze	Ethylene glycol					Propylene glycol				
%wt	Freezing point (°F)	Min. LWT (°F)	Correction factor			Freezing point (°F)	Min. LWT (°F)	Correction factor		
			Capacity	Power Input	Pressure drop			Capacity	Power Input	Pressure drop
0%	32.0	41.0	1.000	1.000	1.000	32.0	41.0	1.000	1.000	1.000
10%	24.8	33.8	0.989	0.995	1.010	26.6	35.6	0.988	0.994	1.029
20%	15.8	24.8	0.975	0.990	1.023	19.4	28.4	0.973	0.988	1.061
30%	3.2	14.0	0.960	0.985	1.041	8.6	17.6	0.955	0.982	1.098
40%	-9.4	14.0	0.943	0.980	1.064	-7.6	14.0	0.933	0.976	1.142
50%	-34.6	14.0	0.924	0.975	1.082	-31.0	14.0	0.910	0.970	1.193

2) Defrosting correction factor (Capacity coefficient)

Model	Outdoor Air Temperature (°F, DB)								
	14.0	**17.6**	**21.2**	**24.8**	**28.4**	**32.0**	**35.6**	**41.0**	**44.6**
VPD010C6M-5*	0.99	0.99	0.99	0.98	0.94	0.91	0.89	0.94	1.00
VPD015C6M-5*	0.99	0.99	0.98	0.97	0.92	0.90	0.88	0.93	1.00

NOTE

- Corrected heating capacity = Heating Capacity x Capacity coefficient.
- On heating operation, frost can be formed on heat exchanger according to outdoor temperature. (Frost on heat exchanger results in decreasing the performance.)
- To remove frost on heat exchanger of air cooled chiller unit, defrost operation is carried out periodically.
- During defrost operation, capacity of air cooled chiller unit may decrease.
- The decrement is not considered to the individual capacity tables.

Capacity correction

VPD Chiller

3) Correction factor by water frow rate

Correction	Outdoor Air Temperature (°F, DB)									
	50	56	67	78	89	100	111	133	167	200
Power input	0.981	0.981	0.985	0.990	0.995	1.000	1.005	1.015	1.030	1.044
ΔT (°F)	20.0	18.0	15.0	12.9	11.3	10.0	9.0	7.5	6.0	4.5

4) Quiet funcion correction factor

- Cooling

Quiet funcion	Outdoor Air Temperature (°F, DB)							
	32.0		68.0		95.0		113.0	
	Capacity	Power Input	Capacity	Power Input	Capacity	Power Input	Capacity	Power Input
Level 1	1.00	1.00	1.00	1.00	1.00	1.27	0.52	1.08
Level 2	1.00	1.00	1.00	1.00	1.00	1.36	0.51	1.07
Level 3	1.00	1.00	0.90	0.86	0.70	0.90	0.40	0.96

- Heating

Quiet funcion	Outdoor Air Temperature (°F, DB)							
	5.0		35.6		44.6		59.0	
	Capacity	Power Input	Capacity	Power Input	Capacity	Power Input	Capacity	Power Input
Level 1	0.47	1.08	0.88	1.21	1.00	1.24	1.00	1.00
Level 2	0.46	1.06	0.88	1.27	1.00	1.33	1.00	1.00
Level 3	0.34	0.96	0.60	0.92	0.67	0.91	1.00	1.00

5) Correction factor by altitude

Altitude (m)	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Power input	1.0000	1.0091	1.0185	1.0281	1.0380	1.0481	1.0585	1.0692	1.0801	1.0913	1.1029

Installation Clearances

Choosing the installation location

Required space for installation

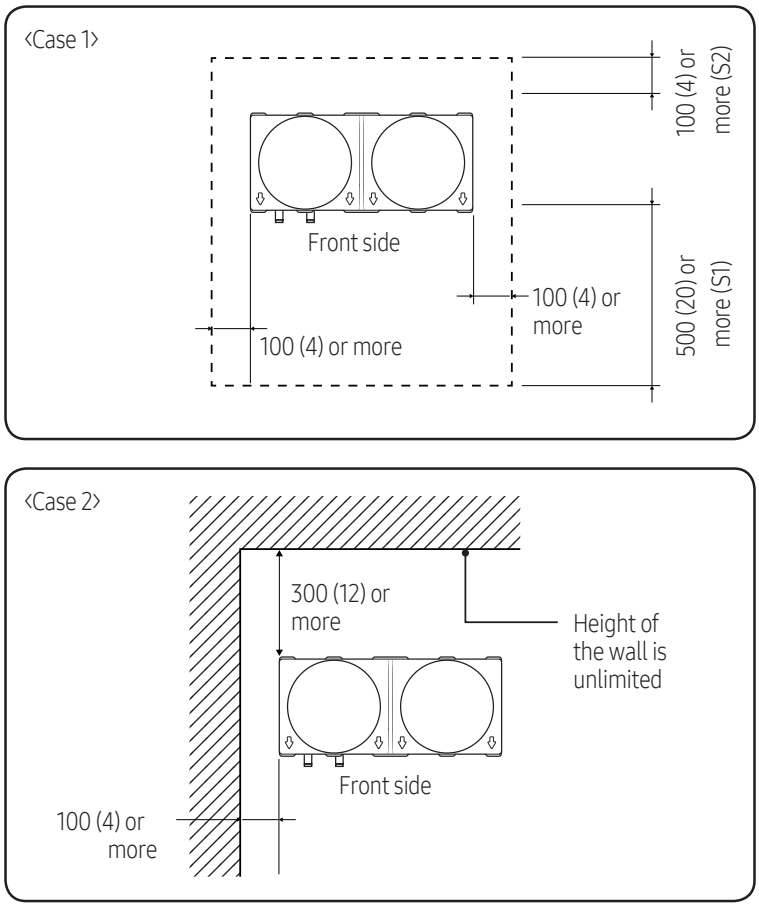
- Space requirement is based on the following conditions; Cooling mode, outdoor temperature of 35°C (95°F). Larger space is required if the outdoor temperature is higher than 35°C (95°F) or if the place is heated easily by extreme solar radiation.
- When you secure installation space, consider path for people and the direction of the wind.
- Secure installation space as shown in the figure, considering ventilation and the service space.
- If the installation space is narrow, installer or other worker may get injured during work and may also cause a problem with the product.
- If you install multiple number of VRF CHILLERs in one space, make sure to secure enough ventilation space if there's any walls around the product that may disturb the air flow. If enough ventilation space is not secured, the product may malfunction.
- VRF CHILLERs can be installed with 4 inches between each unit, but performance may decrease depending on the installation environment. More than 4 inches is recommended.

⚠ CAUTION

- If unit is to be stored, it shall be stored in an area or room without continuously operating open flames (for example, an operating gas appliance) or other potential ignition sources, such as operating electric heaters or hot surfaces.

1 Single installation

Unit: mm (inch)

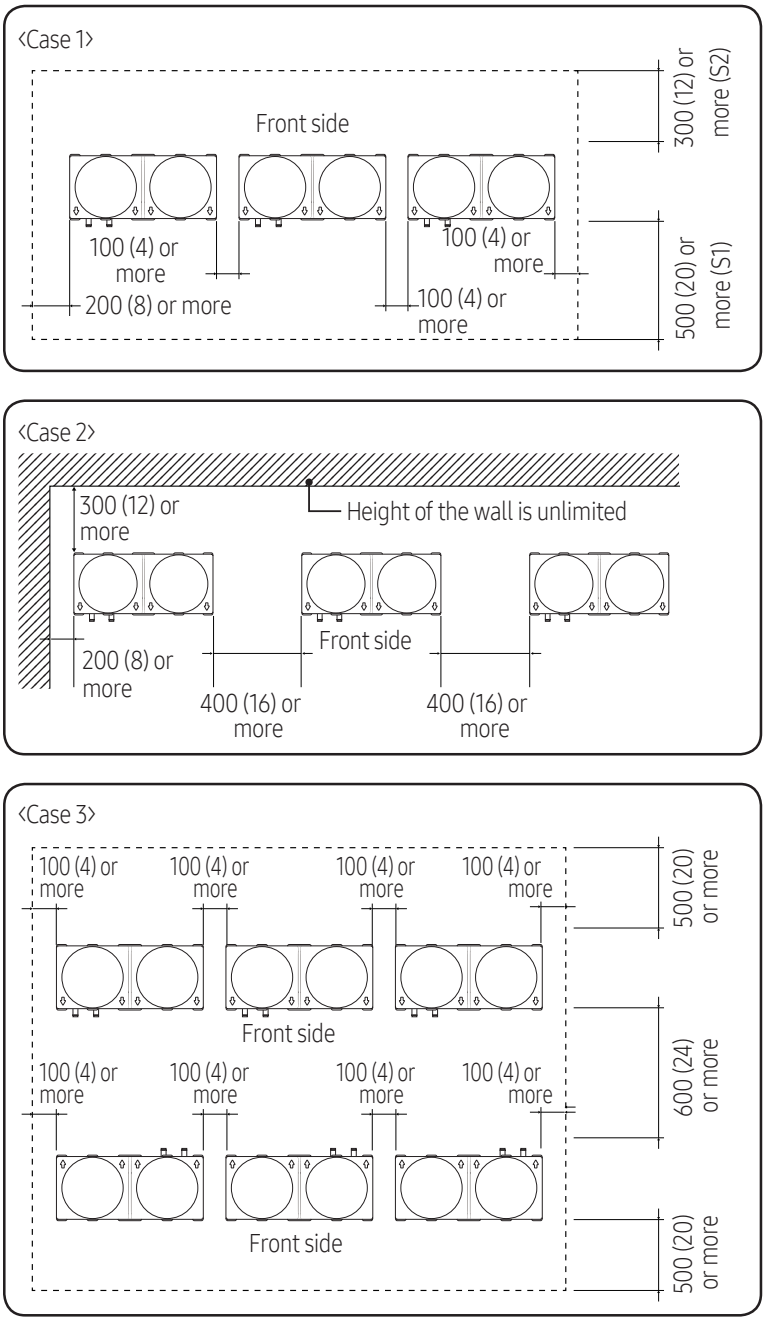


Installation Clearances

Choosing the installation location

2 Module installation

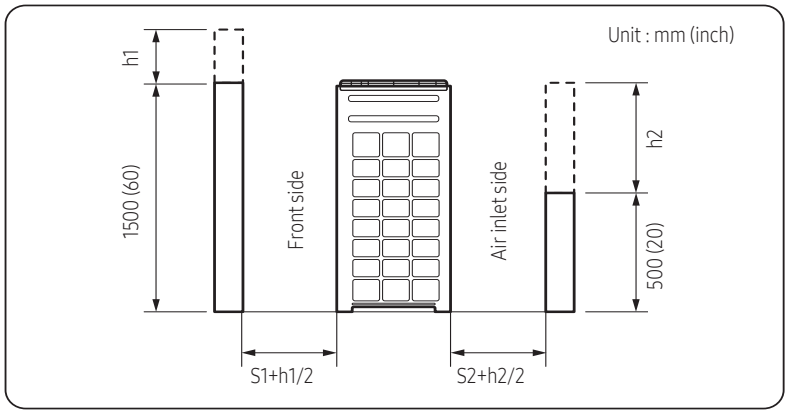
Unit: mm (inch)



Installation Clearances

Choosing the installation location

- Installing by <Case 1> or <Case 3>
  - Height of the wall on the front side should not be higher than 1500 mm (59 inch).
  - Height of the wall on the air inlet side should not be higher than 500 mm (20 inch).
  - Height of the wall on the side is not limited.
  - If the height of the wall exceeds by certain value (h1, h2), additional clearance [(h1)/2, (h2)/2 : Half of the exceeded distance] should be added to the service space (S1, S2).



⚠ WARNING

- Make sure to remove the wooden pallet before installing the VRF CHILLER. If you do not remove the wooden pallet, there is risk of fire during welding the pipes. If the VRF CHILLER is installed with wooden pallet on, and it was used for long period time, wooden palette may break and cause electrical hazard or high pressure may damage the pipes.
- Fix VRF CHILLER firmly on the base ground with anchor bolts.

⚠ CAUTION

- Manufacturer is not responsible for the damage occurred by not following the installation standards.

1 Make sure that the height of the base ground is 20 mm (8 inch) or higher to protect the product from rain water or other external conditions. Also, install a drainage hole around the supporting base and connect the drain pipe to the drainage pit.
2 Considering the vibration and weight of the product, strength of the base ground must be strong to prevent noise and the top surface of it should be flat.
3 Area of the base ground should be 1.5 times larger than the bottom of the product.
4 Product must be fixed firmly so that it can withstand the wind speed of 30 m/s (100 ft/s). If you cannot fix the VRF CHILLER on the supporting base, fix it by side or use extra structure.
5 In heating operation, defrost water may form so you must pay close attention to the drainage and waterproofing of the floor. To prevent defrost water from stagnating or freezing, construct a drainage pit with over 1/50 slant to prevent ice formation on the floor in the winter time.
6 It is necessary to add wire mesh or steel bar during concrete construction for the base ground to prevent damage or cracks.
7 When installing multiple VRF CHILLERs at the same place, construct an H beam or a vibration-isolation frame on the base ground to install the product.
8 After installing an H beam or a vibration-isolation frame, apply corrosion protection and other necessary coating.
9 When concrete construction for product installation is complete, install an isolation pad (t = 20 mm (0.78 inch) or more) or a vibration-isolation frame to prevent vibration of the product from transferring to the supporting base.
10 Place the product on an H beam or a vibration isolation frame and fix it with the anchor bolt, nut and washer. (The bearing capacity of the anchor bolt has to be over 3.5 kN (787 lbf))

AHRI CERTIFIED®
www.ahridirectory.org
Variable Refrigerant Flow (VRF) Multi-Split AC and HP
AHRI Standard 1230

C ETL US LISTED
Intertek

LENNOX®

Powered by SAMSUNG

Visit us at www.lennox.com
For the latest technical information, www.lennoxcommercial.com
Contact us at 1-800-4-LENNOX

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability.
Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.
Installation and service must be performed by a qualified installer and servicing agency.