VRC L4M

Cold Climate Heat Recovery Outdoor Units | 208/230/460V | R-410A | 60Hz **6 to 24 tons**

COMMERCIAL
PRODUCT SPECIFICATIONS (EHB)

ASHRAE Standard 90.1

MODEL NUMBER IDENTIFICATION

V R C 072 L 4 M - 1 Y

Brand/Family
V = Variable Refrigerant Flow (VRF)

Unit Type
R = Heat Recovery Outdoor Unit

Major Design Sequence
C = 3rd Generation

Cooling Capacity - Tons

072 = 6 Tons	192 = 16 Tons
096 = 8 Tons	216 = 18 Tons
120 = 10 Tons	240 = 20 Tons
144 = 12 Tons	264 = 22 Tons
168 = 14 Tons	288 = 24 Tons

Cooling Efficiency
L = Cold Climate (Low Ambient)

Refrigerant Type
4 = R-410A

Refrigerant Circuits
M = Multiple Circuits

Minor Design Sequence
1 = 1st Revision

Voltage
Y = 208/230V-3 phase-60Hz
G = 460V-3 phase-60Hz

Form Number 211205 | December 2024
Supersedes all previous versions

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Combination Table : Outdoor units

(208~230V)

Capa (Ton)	Model name for combination	Number of Individual outdoor units	Combined outdoor units		
					
			072	096	120
			(6Ton)	(8Ton)	(10Ton)
6	VRC072L4M-4Y	1	1		
8	VRC096L4M-4Y	1		1	
10	VRC120L4M-4Y	1			1
12	VRC144L4M-4Y	2	2		
14	VRC168L4M-4Y	2	1	1	
16	VRC192L4M-4Y	2		2	
18	VRC216L4M-4Y	3	3		
20	VRC240L4M-4Y	3	2	1	
22	VRC264L4M-4Y	3	2		1
24	VRC288L4M-4Y	3	1	1	1

NOTE

- Make sure to use an indoor unit that is compatible with .
- Indoor units can be connected within the range indicated in following table.
- If the total capacity of the connected indoor units exceeds the indicated maximum capacity, cooling and heating capacity of the indoor unit may decrease.
- The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
  Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the “Design Procedure & Combination Ratio” section of this document for details

※ You can connect maximum 64 indoor units to the outdoor unit. Maximum quantity of connectable indoor unit is set to 64 since outdoor unit only support up to 64 communication address. Indoor unit address can be assigned from 0~63. If the indoor unit address was assigned from 64~79, E201 error will occur.

※ Maximum 32 Wall-mount type indoor units with EEV can be connected.

Combination Table : Outdoor units

(460V)

Capa (Ton)	Model name for combination	Number of Individual outdoor units	Combined outdoor units		
					
			072	096	120
			(6Ton)	(8Ton)	(10Ton)
6	VRC072L4M-4G	1	1		
8	VRC096L4M-4G	1		1	
10	VRC120L4M-4G	1			1
12	VRC144L4M-4G	2	2		
14	VRC168L4M-4G	2	1	1	
16	VRC192L4M-4G	2		2	
18	VRC216L4M-4G	3	3		
20	VRC240L4M-4G	3	2	1	
22	VRC264L4M-4G	3	2		1
24	VRC288L4M-4G	3	1	1	1

NOTE

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※ Maximum 32 Wall-mount type indoor units with EEV can be connected.

Combination Table : Outdoor units

External Appearance

(208~230V)

Capa [TON]	Model Name	Model	Capa [TON]	Model Name	Model
6 8 10	VRC072L4M-4Y VRC096L4M-4Y VRC120L4M-4Y				
12 14 16	VRC144L4M-4Y VRC168L4M-4Y VRC192L4M-4Y		18 20 22 24	VRC216L4M-4Y VRC240L4M-4Y VRC264L4M-4Y VRC288L4M-4Y	

Combination Table : Outdoor units

External Appearance

(460V)

Capa [TON]	Model Name	Model	Capa [TON]	Model Name	Model
6 8 10	VRC072L4M-4G VRC096L4M-4G VRC120L4M-4G				
12 14 16	VRC144L4M-4G VRC168L4M-4G VRC192L4M-4G		18 20 22 24	VRC216L4M-4G VRC240L4M-4G VRC264L4M-4G VRC288L4M-4G	

Design Procedure & Combination Ratio

Combination Ratio (Connection Ratio)

Definition of Combination Ratio, CR

$$CR = \frac{\text{Sum of Nominal Cooling Capacity of Indoor units}}{\text{Nominal Cooling Capacity of Outdoor unit}} * 100\%$$

Constraints of Allowable Combination Ratio

VRC systems are normally designed to utilize a CR 50% to 130% to ensure effective load balancing between indoor units and outdoor unit. As buildings have become more insulated, and usage and occupancy of buildings are highly variable, more buildings can realize a higher load balancing between IDUs and ODU, thus higher CR (>130%) is often required. If a system design exceeds 130%, risks associated to increased indoor sound level and reduced comfort levels should be considered. Therefore, when it is necessary to design a combination ratio exceeding 130%, the following conditions must be complied with: -

Design & Selection Procedure

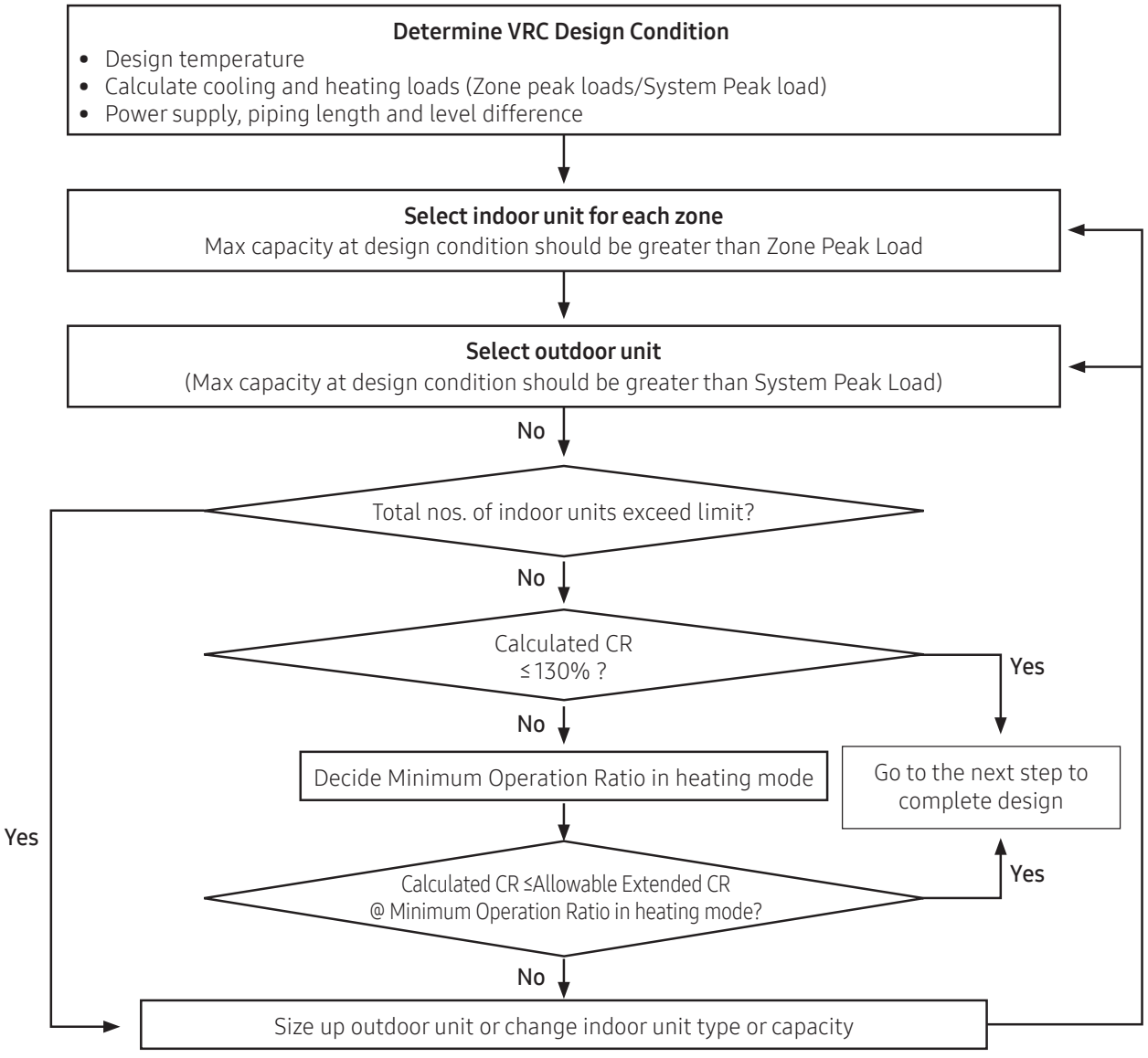


Fig. 1 Design & Selection Procedure for Extended Combination Ratio

Design Procedure & Combination Ratio

Combination Ratio (Connection Ratio)

Satisfying cooling & heating comfort

The Maximum Capacity of outdoor unit at design condition calculated from capacity data table or design tool (LVSS 2.0) should always be the same or greater than System Peak Load (Block Load) defined in table 1.

Time	Room A	Room B	Room C	Room D	Room E	Room F	Total
	Music Room	Class room	Class room	Class room	Class room	Class room	
09:00	8.4	8.0	8.4	8.0	8.4	8.6	49.8
12:00	9.2	8.8	10.8	8.6	10.8	9.8	58.0
14:00	10.0	9.6	9.6	9.6	11.4	10.8	61.0
16:00	11.0	10.6	8.8	10.8	9.6	9.6	60.4
18:00	9.4	9.0	8.8	9.0	9.0	8.4	53.6

Table 1. Example of System Peak loads

- ▶ Zone Peak Loads ( ): To satisfy the demand for each room any time
  - Sum of Zone peak Loads = 65.4kW (11.0 + 10.6 + 10.8 + 10.8 + 11.4 + 10.8)
- ▶ Block load ( ): Total peak load at a given time of day.
  - Sum of Zone Peak Loads at 14:00 = 61.0kW

NOTE

- When a system combination ratio is over 130%, a max system capacity is the same as the published capacity in TDB capacity table at the combination ratio of 130%

Cooling Operation Only

When only cooling operation is used, CR is allowed up to 180% if the Max Capacity of outdoor unit is greater than System Peak Load (Block load) as shown table 2.

Outdoor unit	All capacities of H/P & H/R model
Indoor unit	All indoor unit types
Operation Condition	Cooling mode only
Allowable CR	180%

Table 2. Allowable CR in only cooling operation

NOTE

- Table 2 shows a standard for allowable CR of cooling only model. Lennox is not responsible for any problem caused by using a heating mode at the site with a system designed by table 2. If heating operation is required, extended CR design must follow section "Allowable CR limit to avoid abnormal sound level risks in heating operation."

Design Procedure & Combination Ratio

Combination Ratio (Connection Ratio)

Allowable CR limit to avoid abnormal sound level risks in heating operation

- ▶ If the CR exceeds 130%, in a specific case of heating operation, an indoor unit may have higher sound level than the level specified in the technical documents.
- ▶ In order to minimize the sound level, the system minimum operation ratio needs to be verified and considered as follows:

※ Operation Ratio(%), OR

- Heat Pump system, H/P

$$OR_{(H/P)}(\%) = \frac{\text{Sum of nominal capacity of indoor units running in heating mode}}{\text{Sum of nominal capacity of indoor units}} * 100\%$$

- Heat Recovery system, H/R

$$OR_{(H/R)}(\%) = \frac{\text{Sum of nominal capacity of indoor units running in both cooling \& heating mode}}{\text{Sum of nominal capacity of indoor units}} * 100\%$$

The Minimum Operation Ratio should be determined during the project design stage using Fig. 2.

Outdoor unit	All capacities of H/P & H/R (Single, Dual and Triple Module Systems)		
Indoor unit	All indoor unit types*) except Wall-Mounted		Wall-Mounted
Operation Ratio	Nominal Capacity ≤ 18kBtu/h	Nominal capacity > 18kBtu/h	All capacities
10%	150%	158%	141%
20%	161%	170%	155%
30%	171%	184%	173%

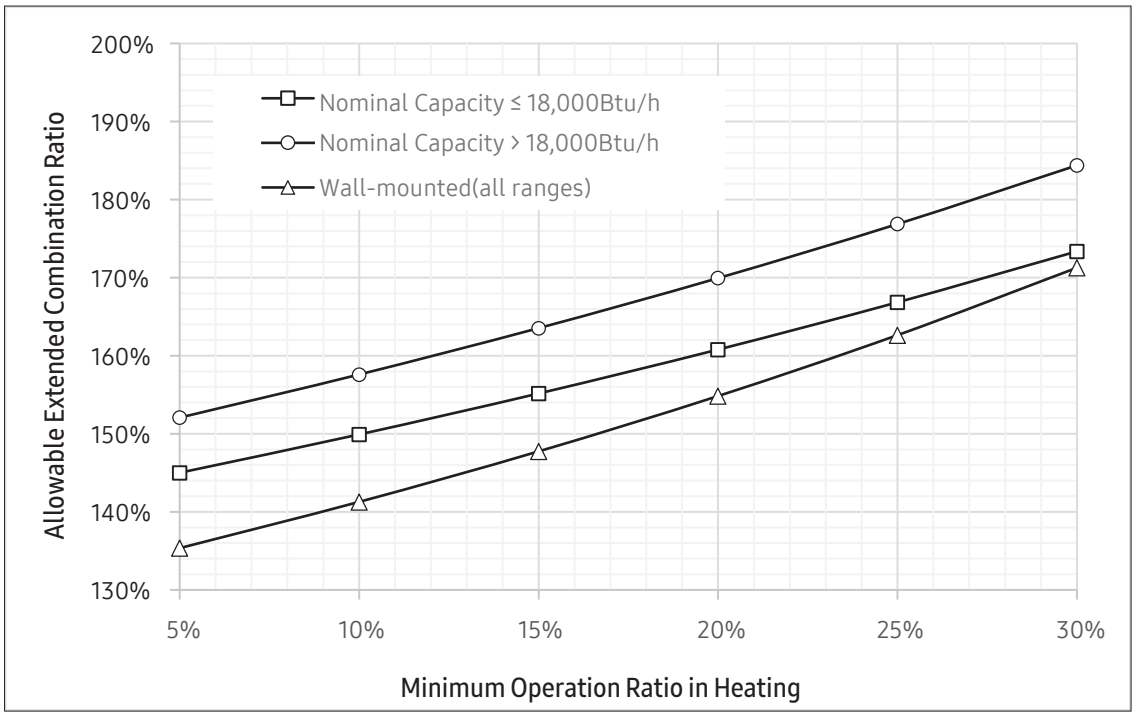


Fig. 2 Allowable CR with respect to indoor unit type as operation ratio increases

Design Procedure & Combination Ratio

Combination Ratio (Connection Ratio)

- The minimum operation ratio should be considered during the design stage.
- If a system has a mix of unit types or capacity, the lowest extended connection ratio curve must be utilized.
- In case that a designed Minimum Operation Ratio is less than 5% or more than 30%, the Allowable Extended CR must be considered as the value at 5% and 30%, respectively.
- *)If one of following indoor unit types is included in a system, the CR cannot be extended beyond 130%.

Type of indoor unit	Limited by CR 130%
1Way Cassette / 4Way Cassette (600 x 600)	9kBtu/h or below
360 Cassette / Slim Duct (LSP duct)	12kBtu/h or below
4Way Cassette	18kBtu/h or below
Floor Standing (Exposed or Concealed)	18kBtu/h only
Ceiling Suspended	24kBtu/h only
Hydro unit (HE/HT)	All capacities

NOTE

- Lennox is not responsible for any issue, including abnormal noise that arises during heating operation due solely to the operation rate being lower than the designated combination ratio shown in Fig. 2. Please contact your local Lennox representative for further details if the project requires you to design the project with a connection ratio greater than 130%.

Specification

(208~230V)

Model Name				VRC072L4M-4Y	VRC096L4M-4Y	VRC120L4M-4Y
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 3, 208~230, 60	3, 3, 208~230, 60	3, 3, 208~230, 60
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON		TON	6	8	10
	Capacity (Nominal)	Cooling	Btu/h	72,000	96,000	120,000
		Heating	Btu/h	81,000	108,000	135,000
	Capacity (Rated)	Cooling	Btu/h	69,000	92,000	114,000
		Heating	Btu/h	77,000	103,000	129,000
Maximum number of connectable indoor units			EA	12	16	20
Total capacity of the connected Indoor Units		Min.	Btu/h	36,000	48,000	60,000
		Max.	Btu/h	93,600	124,800	156,000
Power	Current	MCA	A	50.0	62.0	76.0
		MOP	A	60	70	90
Casing	Material	Body	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
		Base	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 2	Inverter Scroll x 2	Inverter Scroll x 2
	Output		kW x n	4.39 x 2	6.45 x 2	6.45 x 2
	Model Name		-	DS2GT7046EV* x 2	DS4GT5066EV* x 2	DS4GT5066EV* x 2
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	900 x 2	1,100 x 2	1,100 x 2
			fl oz x n	30.4 x 2	37.2 x 2	37.2 x 2
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	2	2	2
	Air Flow Rate		CFM (㎥/min)	9,924 (281)	9,571 (271)	10,171 (288)
	External Static Pressure	Max.	㎜Aq	11	11	11
			Pa	110	110	110
			in Wg (Pa)	0.43 (107.87)	0.43 (107.87)	0.43 (107.87)
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	620 x 2	620 x 2	620 x 2
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	3/8 (9.52)	3/8 (9.52)	1/2 (12.70)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	3/4 (19.05)	7/8 (22.22)	1-1/8 (28.58)
	High pressure Gas Pipe(HR Only)		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	5/8 (15.88)	3/4 (19.05)	3/4 (19.05)
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]	656 [722]	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295	295	295
	Total piping length (System)	Max.	ft	3,281	3,281	3,281
	Level difference (ODU in highest position)	Max.	ft	361	361	361

Specification

(208~230V)

Model Name				VRC072L4M-4Y	VRC096L4M-4Y	VRC120L4M-4Y
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361	361	361
	Level difference (IDU-IDU)	Max.	ft	131	131	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		lbs (kg)	17.6 (8.0)	23.1 (10.5)	23.1 (10.5)
Sound	Sound Pressure	Cooling	dB(A)	55.0	57.0	59.0
		Heating	dB(A)	56.0	58.0	59.0
	Sound Power		dB(A)	74.0	77.0	79.0
External Dimension	Net Weight		lbs (kg)	567 (257)	659 (299)	659 (299)
	Shipping Weight		lbs (kg)	604 (274)	697 (316)	697 (316)
	Net Dimensions (WxHxD)		㎜	1,295 x 1,695 x 765	1,295 x 1,695 x 765	1,295 x 1,695 x 765
			inch	51 x 66-3/4 x 30-1/8	51 x 66-3/4 x 30-1/8	51 x 66-3/4 x 30-1/8
	Shipping Dimensions (WxHxD)		㎜	1,363 x 1,887 x 829	1,363 x 1,887 x 829	1,363 x 1,887 x 829
			inch	53-11/16 x 74-5/16 x 32-11/16	53-11/16 x 74-5/16 x 32-11/16	53-11/16 x 74-5/16 x 32-11/16
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Specification

(208~230V)

Model Name				VRC144L4M-4Y	VRC168L4M-4Y	VRC192L4M-4Y
	Outdoor unit module 1			VRC072L4M-4Y	VRC072L4M-4Y	VRC096L4M-4Y
	Outdoor unit module 2			VRC072L4M-4Y	VRC096L4M-4Y	VRC096L4M-4Y
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 3, 208~230, 60	3, 3, 208~230, 60	3, 3, 208~230, 60
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON		TON	12	14	16
	Capacity (Nominal)	Cooling	Btu/h	144,000	168,000	192,000
		Heating	Btu/h	162,000	189,000	216,000
	Capacity (Rated)	Cooling	Btu/h	138,000	160,000	184,000
		Heating	Btu/h	154,000	180,000	206,000
Maximum number of connectable indoor units			EA	25	29	33
Total capacity of the connected Indoor Units		Min.	Btu/h	72,000	84,000	96,000
		Max.	Btu/h	187,200	218,400	249,600
Power	Current	MCA	A	-	-	-
		MOP	A	-	-	-
Casing	Material	Body	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
		Base	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 4	Inverter Scroll x 4	Inverter Scroll x 4
	Output		kW x n	(4.39 x 2) x 2	(4.39 x 2) x 1 + (6.45 x 2) x 1	(6.45 x 2) x 2
	Model Name		-	(DS2GT7046EV* x 2) x 2	(DS2GT7046EV* x 2) x 1 + (DS4GT5066EV* x 2) x 1	(DS4GT5066EV* x 2) x 2
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	(900 x 2) x 2	(900 x 2) x 1 + (1,100 x 2) x 1	(1,100 x 2) x 2
			fl oz x n	(30.4 x 2) x 2	(30.4 x 2) x 1 + (37.2 x 2) x 1	(37.2 x 2) x 2
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	4	4	4
	Air Flow Rate		CFM (㎥/min)	9,924 x 2 (281 x 2)	9,924 x 1 + 9,571 x 1 (281 x 1 + 271 x 1)	9,571 x 2 (271 x 2)
	External Static Pressure	Max.	㎜Aq	-	-	-
			Pa	-	-	-
			in Wg (Pa)	-	-	-
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(620 x 2) x 2	(620 x 2) x 2	(620 x 2) x 2
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)	1-1/8 (28.58)	1-1/8 (28.58)
	High pressure Gas Pipe(HR Only)		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	7/8 (22.22)	7/8 (22.22)	1-1/8 (28.58)
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]	656 [722]	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295	295	295
	Total piping length (System)	Max.	ft	3,281	3,281	3,281
	Level difference (ODU in highest position)	Max.	ft	361	361	361

Specification

(208~230V)

Model Name				VRC144L4M-4Y	VRC168L4M-4Y	VRC192L4M-4Y
	Outdoor unit module 1			VRC072L4M-4Y	VRC072L4M-4Y	VRC096L4M-4Y
	Outdoor unit module 2			VRC072L4M-4Y	VRC096L4M-4Y	VRC096L4M-4Y
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361	361	361
	Level difference (IDU-IDU)	Max.	ft	131	131	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		lbs (kg)	17.6 x 2 (8.0 x 2)	17.6 x 1 + 23.1 x 1 (8.0 x 1 + 10.5 x 1)	23.1 x 2 (10.5 x 2)
Sound	Sound Pressure	Cooling	dB(A)	58.0	59.1	60.0
		Heating	dB(A)	59.0	60.1	61.0
	Sound Power		dB(A)	77.0	78.8	80.0
External Dimension	Net Weight		lbs (kg)	567 x 2 (257 x 2)	567 x 1 + 659 x 1 (257 x 1 + 299 x 1)	659 x 2 (299 x 2)
	Shipping Weight		lbs (kg)	604 x 2 (274 x 2)	604 x 1 + 697 x 1 (274 x 1 + 316 x 1)	697 x 2 (316 x 2)
	Net Dimensions (WxHxD)		㎜	(1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 2
			inch	(51 x 66-3/4 x 30-1/8) x 2	(51 x 66-3/4 x 30-1/8) x 2	(51 x 66-3/4 x 30-1/8) x 2
	Shipping Dimensions (WxHxD)		㎜	(1,363 x 1,887 x 829) x 2	(1,363 x 1,887 x 829) x 2	(1,363 x 1,887 x 829) x 2
			inch	(53-11/16 x 74-5/16 x 32-11/16) x 2	(53-11/16 x 74-5/16 x 32-11/16) x 2	(53-11/16 x 74-5/16 x 32-11/16) x 2
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Specification

(208~230V)

Model Name				VRC216L4M-4Y	VRC240L4M-4Y	VRC264L4M-4Y
	Outdoor unit module 1			VRC072L4M-4Y	VRC072L4M-4Y	VRC072L4M-4Y
	Outdoor unit module 2			VRC072L4M-4Y	VRC072L4M-4Y	VRC072L4M-4Y
	Outdoor unit module 3			VRC072L4M-4Y	VRC096L4M-4Y	VRC120L4M-4Y
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 3, 208~230, 60	3, 3, 208~230, 60	3, 3, 208~230, 60
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON		TON	18	20	22
	Capacity (Nominal)	Cooling	Btu/h	216,000	240,000	264,000
		Heating	Btu/h	243,000	270,000	297,000
	Capacity (Rated)	Cooling	Btu/h	206,000	228,000	252,000
		Heating	Btu/h	232,000	258,000	282,000
Maximum number of connectable indoor units			EA	37	41	45
Total capacity of the connected Indoor Units		Min.	Btu/h	108,000	120,000	132,000
		Max.	Btu/h	280,800	312,000	343,200
Power	Current	MCA	A	-	-	-
		MOP	A	-	-	-
Casing	Material	Body	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
		Base	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 6	Inverter Scroll x 6	Inverter Scroll x 6
	Output		kW x n	(4.39 x 2) x 3	(4.39 x 2) x 2 + (6.45 x 2) x 1	(4.39 x 2) x 2 + (6.45 x 2) x 1
	Model Name		-	(DS2GT7046EV* x 2) x 3	(DS2GT7046EV* x 2) x 2 + (DS4GT5066EV* x 2) x 1	(DS2GT7046EV* x 2) x 2 + (DS4GT5066EV* x 2) x 1
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	(900 x 2) x 3	(900 x 2) x 2 + (1,100 x 2) x 1	(900 x 2) x 2 + (1,100 x 2) x 1
			fl oz x n	(30.4 x 2) x 3	(30.4 x 2) x 2 + (37.2 x 2) x 1	(30.4 x 2) x 2 + (37.2 x 2) x 1
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	6	6	6
	Air Flow Rate		CFM (㎥/min)	9,924 x 3 (281 x 3)	9,924 x 2 + 9,571 x 1 (281 x 2 + 271 x 1)	9,924 x 2 + 10,171 x 1 (281 x 2 + 288 x 1)
	External Static Pressure	Max.	㎜Aq	-	-	-
			Pa	-	-	-
			in Wg (Pa)	-	-	-
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(620 x 2) x 3	(620 x 2) x 3	(620 x 2) x 3
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	5/8 (15.88)	5/8 (15.88)	3/4 (19.05)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)	1-3/8 (34.92)	1-3/8 (34.92)
	High pressure Gas Pipe(HR Only)		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)	1-1/8 (28.58)	1-1/8 (28.58)
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]	656 [722]	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295	295	295
	Total piping length (System)	Max.	ft	3,281	3,281	3,281
	Level difference (ODU in highest position)	Max.	ft	361	361	361

Specification

(208~230V)

Model Name				VRC216L4M-4Y	VRC240L4M-4Y	VRC264L4M-4Y
	Outdoor unit module 1			VRC072L4M-4Y	VRC072L4M-4Y	VRC072L4M-4Y
	Outdoor unit module 2			VRC072L4M-4Y	VRC072L4M-4Y	VRC072L4M-4Y
	Outdoor unit module 3			VRC072L4M-4Y	VRC096L4M-4Y	VRC120L4M-4Y
	Outdoor unit module 4			-	-	-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361	361	361
	Level difference (IDU-IDU)	Max.	ft	131	131	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		lbs (kg)	17.6 x 3 (8.0 x 3)	17.6 x 2 + 23.1 x 1 (8.0 x 2 + 10.5 x 1)	17.6 x 2 + 23.1 x 1 (8.0 x 2 + 10.5 x 1)
Sound	Sound Pressure	Cooling	dB(A)	59.8	60.5	61.5
		Heating	dB(A)	60.8	61.5	62.0
	Sound Power		dB(A)	78.8	80.0	81.1
External Dimension	Net Weight		lbs (kg)	567 x 3 (257 x 3)	567 x 2 + 659 x 1 (257 x 2 + 299 x 1)	567 x 2 + 659 x 1 (257 x 2 + 299 x 1)
	Shipping Weight		lbs (kg)	604 x 3 (274 x 3)	604 x 2 + 697 x 1 (274 x 2 + 316 x 1)	604 x 2 + 697 x 1 (274 x 2 + 316 x 1)
	Net Dimensions (WxHxD)		㎜	(1,295 x 1,695 x 765) x 3	(1,295 x 1,695 x 765) x 3	(1,295 x 1,695 x 765) x 3
			inch	(51 x 66-3/4 x 30-1/8) x 3	(51 x 66-3/4 x 30-1/8) x 3	(51 x 66-3/4 x 30-1/8) x 3
	Shipping Dimensions (WxHxD)		㎜	(1,363 x 1,887 x 829) x 3	(1,363 x 1,887 x 829) x 3	(1,363 x 1,887 x 829) x 3
			inch	(53-11/16 x 74-5/16 x 32-11/16) x 3	(53-11/16 x 74-5/16 x 32-11/16) x 3	(53-11/16 x 74-5/16 x 32-11/16) x 3
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Specification

(208~230V)

Model Name				VRC288L4M-4Y
	Outdoor unit module 1			VRC072L4M-4Y
	Outdoor unit module 2			VRC096L4M-4Y
	Outdoor unit module 3			VRC120L4M-4Y
	Outdoor unit module 4			-
Power Supply			Ø, #, V, Hz	3, 3, 208~230, 60
Mode			-	Heat Recovery
Performance	TON		TON	24
	Capacity (Nominal)	Cooling	Btu/h	288,000
		Heating	Btu/h	324,000
	Capacity (Rated)	Cooling	Btu/h	274,000
		Heating	Btu/h	308,000
Maximum number of connectable indoor units			EA	49
Total capacity of the connected Indoor Units		Min.	Btu/h	144,000
		Max.	Btu/h	374,400
Power	Current	MCA	A	-
		MOP	A	-
Casing	Material	Body	-	GI Steel Plate
		Base	-	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube
	Material	Fin	-	Al
		Tube	-	Cu
	Fin Treatment		-	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 6
	Output		kW x n	(4.39 x 2) x 1 + (6.45 x 2) x 2
	Model Name		-	(DS2GT7046EV* x 2) x 1 + (DS4GT5066EV* x 2) x 2
	Oil	Type	-	PVE
		Initial charge	cc x n	(900 x 2) x 1 + (1,100 x 2) x 2
			fl oz x n	(30.4 x 2) x 1 + (37.2 x 2) x 2
Fan	Type		-	Propeller
	Discharge direction		-	Top
	Quantity		EA	6
	Air Flow Rate		CFM (m^3/min)	9,924 x 1 + 9,571 x 1 + 10,171 x 1 (281 x 1 + 271 x 1 + 288 x 1)
	External Static Pressure	Max.	㎜Aq	-
			Pa	-
			in Wg (Pa)	-
Fan Motor	Type		-	BLDC Motor
	Output		W x n	(620 x 2) x 3
Piping Connections	Liquid Pipe		Type	Braze connection
			Φ, inch (㎜)	3/4 (19.05)
	Gas Pipe		Type	Braze connection
			Φ, inch (㎜)	1-3/8 (34.92)
	High pressure Gas Pipe(HR Only)		Type	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)
	Heat Insulation		-	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295
	Total piping length (System)	Max.	ft	3,281
	Level difference (ODU in highest position)	Max.	ft	361

Specification

(208~230V)

Model Name				VRC288L4M-4Y
	Outdoor unit module 1			VRC072L4M-4Y
	Outdoor unit module 2			VRC096L4M-4Y
	Outdoor unit module 3			VRC120L4M-4Y
	Outdoor unit module 4			-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361
	Level difference (IDU-IDU)	Max.	ft	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75
		Remark	-	F1, F2
	Power supply intake		-	Both indoor and outdoor unit
Refrigerant	Type		-	R410A
	Factory Charging		lbs (kg)	17.6 x 1 + 23.1 x 2 (8.0 x 1 + 10.5 x 2)
Sound	Sound Pressure	Cooling	dB(A)	62.1
		Heating	dB(A)	62.6
	Sound Power		dB(A)	81.9
External Dimension	Net Weight		lbs (kg)	567 x 1 + 659 x 2 (257 x 1 + 299 x 2)
	Shipping Weight		lbs (kg)	604 x 1 + 697 x 2 (274 x 1 + 316 x 2)
	Net Dimensions (WxHxD)		㎜	(1,295 x 1,695 x 765) x 3
			inch	(51 x 66-3/4 x 30-1/8) x 3
	Shipping Dimensions (WxHxD)		㎜	(1,363 x 1,887 x 829) x 3
			inch	(53-11/16 x 74-5/16 x 32-11/16) x 3
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables

Specification

(460V)

Model Name				VRC072L4M-4G	VRC096L4M-4G	VRC120L4M-4G
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 3, 460, 60	3, 3, 460, 60	3, 3, 460, 60
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON		TON	6	8	10
	Capacity (Nominal)	Cooling	Btu/h	72,000	96,000	120,000
		Heating	Btu/h	81,000	108,000	135,000
	Capacity (Rated)	Cooling	Btu/h	69,000	92,000	114,000
		Heating	Btu/h	77,000	103,000	129,000
Maximum number of connectable indoor units			EA	12	16	20
Total capacity of the connected Indoor Units		Min.	Btu/h	36,000	48,000	60,000
		Max.	Btu/h	93,600	124,800	156,000
Power	Current	MCA	A	25.0	31.0	38.0
		MOP	A	30	35	45
Casing	Material	Body	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
		Base	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 2	Inverter Scroll x 2	Inverter Scroll x 2
	Output		kW x n	4.39 x 2	6.67 x 2	6.67 x 2
	Model Name		-	DS2GR7046FV* x 2	DS4GR7066FV* x 2	DS4GR7066FV* x 2
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	900 x 2	1,100 x 2	1,100 x 2
			fl oz x n	30.4 x 2	37.2 x 2	37.2 x 2
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	2	2	2
	Air Flow Rate		CFM (㎥/min)	9,924 (281)	9,571 (271)	10,171 (288)
	External Static Pressure	Max.	㎜Aq	11	11	11
			Pa	110	110	110
			in Wg (Pa)	0.43 (107.87)	0.43 (107.87)	0.43 (107.87)
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	620 x 2	620 x 2	620 x 2
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	3/8 (9.52)	3/8 (9.52)	1/2 (12.70)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	3/4 (19.05)	7/8 (22.22)	1-1/8 (28.58)
	High pressure Gas Pipe(HR Only)		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	5/8 (15.88)	3/4 (19.05)	3/4 (19.05)
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]	656 [722]	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295	295	295
	Total piping length (System)	Max.	ft	3,281	3,281	3,281
	Level difference (ODU in highest position)	Max.	ft	361	361	361

Specification

(460V)

Model Name				VRC072L4M-4G	VRC096L4M-4G	VRC120L4M-4G
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361	361	361
	Level difference (IDU-IDU)	Max.	ft	131	131	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		lbs (kg)	17.6 (8.0)	23.1 (10.5)	23.1 (10.5)
Sound	Sound Pressure	Cooling	dB(A)	55.0	57.0	59.0
		Heating	dB(A)	56.0	58.0	59.0
	Sound Power		dB(A)	74.0	77.0	79.0
External Dimension	Net Weight		lbs (kg)	584 (265)	677 (307)	677 (307)
	Shipping Weight		lbs (kg)	622 (282)	714 (324)	714 (324)
	Net Dimensions (WxHxD)		㎜	1,295 x 1,695 x 765	1,295 x 1,695 x 765	1,295 x 1,695 x 765
			inch	51 x 66-3/4 x 30-1/8	51 x 66-3/4 x 30-1/8	51 x 66-3/4 x 30-1/8
	Shipping Dimensions (WxHxD)		㎜	1,363 x 1,887 x 829	1,363 x 1,887 x 829	1,363 x 1,887 x 829
			inch	53-11/16 x 74-5/16 x 32-11/16	53-11/16 x 74-5/16 x 32-11/16	53-11/16 x 74-5/16 x 32-11/16
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Specification

(460V)

Model Name				VRC144L4M-4G	VRC168L4M-4G	VRC192L4M-4G
	Outdoor unit module 1			VRC072L4M-4G	VRC072L4M-4G	VRC096L4M-4G
	Outdoor unit module 2			VRC072L4M-4G	VRC096L4M-4G	VRC096L4M-4G
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 3, 460, 60	3, 3, 460, 60	3, 3, 460, 60
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON		TON	12	14	16
	Capacity (Nominal)	Cooling	Btu/h	144,000	168,000	192,000
		Heating	Btu/h	162,000	189,000	216,000
	Capacity (Rated)	Cooling	Btu/h	138,000	160,000	184,000
		Heating	Btu/h	154,000	180,000	206,000
Maximum number of connectable indoor units			EA	25	29	33
Total capacity of the connected Indoor Units		Min.	Btu/h	72,000	84,000	96,000
		Max.	Btu/h	187,200	218,400	249,600
Power	Current	MCA	A	-	-	-
		MOP	A	-	-	-
Casing	Material	Body	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
		Base	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 4	Inverter Scroll x 4	Inverter Scroll x 4
	Output		kW x n	(4.39 x 2) x 2	(4.39 x 2) x 1 + (6.67 x 2) x 1	(6.67 x 2) x 2
	Model Name		-	(DS2GR7046FV* x 2) x 2	(DS2GR7046FV* x 2) x 1 + (DS4GR7066FV* x 2) x 1	(DS4GR7066FV* x 2) x 2
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	(900 x 2) x 2	(900 x 2) x 1 + (1,100 x 2) x 1	(1,100 x 2) x 2
			fl oz x n	(30.4 x 2) x 2	(30.4 x 2) x 1 + (37.2 x 2) x 1	(37.2 x 2) x 2
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	4	4	4
	Air Flow Rate		CFM (㎥/min)	9,924 x 2 (281 x 2)	9,924 x 1 + 9,571 x 1 (281 x 1 + 271 x 1)	9,571 x 2 (271 x 2)
	External Static Pressure	Max.	㎜Aq	-	-	-
			Pa	-	-	-
			in Wg (Pa)	-	-	-
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(620 x 2) x 2	(620 x 2) x 2	(620 x 2) x 2
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)	1-1/8 (28.58)	1-1/8 (28.58)
	High pressure Gas Pipe(HR Only)		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	7/8 (22.22)	7/8 (22.22)	1-1/8 (28.58)
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]	656 [722]	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295	295	295
	Total piping length (System)	Max.	ft	3,281	3,281	3,281
	Level difference (ODU in highest position)	Max.	ft	361	361	361

Specification

(460V)

Model Name				VRC144L4M-4G	VRC168L4M-4G	VRC192L4M-4G
	Outdoor unit module 1			VRC072L4M-4G	VRC072L4M-4G	VRC096L4M-4G
	Outdoor unit module 2			VRC072L4M-4G	VRC096L4M-4G	VRC096L4M-4G
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361	361	361
	Level difference (IDU-IDU)	Max.	ft	131	131	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		lbs (kg)	17.6 x 2 (8.0 x 2)	17.6 x 1 + 23.1 x 1 (8.0 x 1 + 10.5 x 1)	23.1 x 2 (10.5 x 2)
Sound	Sound Pressure	Cooling	dB(A)	58.0	59.1	60.0
		Heating	dB(A)	59.0	60.1	61.0
	Sound Power		dB(A)	77.0	78.8	80.0
External Dimension	Net Weight		lbs (kg)	584 x 2 (265 x 2)	584 x 1 + 677 x 1 (265 x 1 + 307 x 1)	677 x 2 (307 x 2)
	Shipping Weight		lbs (kg)	622 x 2 (282 x 2)	622 x 1 + 714 x 1 (282 x 1 + 324 x 1)	714 x 2 (324 x 2)
	Net Dimensions (WxHxD)		㎜	(1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 2
			inch	(51 x 66-3/4 x 30-1/8) x 2	(51 x 66-3/4 x 30-1/8) x 2	(51 x 66-3/4 x 30-1/8) x 2
	Shipping Dimensions (WxHxD)		㎜	(1,363 x 1,887 x 829) x 2	(1,363 x 1,887 x 829) x 2	(1,363 x 1,887 x 829) x 2
			inch	(53-11/16 x 74-5/16 x 32-11/16) x 2	(53-11/16 x 74-5/16 x 32-11/16) x 2	(53-11/16 x 74-5/16 x 32-11/16) x 2
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Specification

(460V)

Model Name				VRC216L4M-4G	VRC240L4M-4G	VRC264L4M-4G
	Outdoor unit module 1			VRC072L4M-4G	VRC072L4M-4G	VRC072L4M-4G
	Outdoor unit module 2			VRC072L4M-4G	VRC072L4M-4G	VRC072L4M-4G
	Outdoor unit module 3			VRC072L4M-4G	VRC096L4M-4G	VRC120L4M-4G
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 3, 460, 60	3, 3, 460, 60	3, 3, 460, 60
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON		TON	18	20	22
	Capacity (Nominal)	Cooling	Btu/h	216,000	240,000	264,000
		Heating	Btu/h	243,000	270,000	297,000
	Capacity (Rated)	Cooling	Btu/h	206,000	228,000	252,000
		Heating	Btu/h	232,000	258,000	282,000
Maximum number of connectable indoor units			EA	37	41	45
Total capacity of the connected Indoor Units		Min.	Btu/h	108,000	120,000	132,000
		Max.	Btu/h	280,800	312,000	343,200
Power	Current	MCA	A	-	-	-
		MOP	A	-	-	-
Casing	Material	Body	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
		Base	-	GI Steel Plate	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 6	Inverter Scroll x 6	Inverter Scroll x 6
	Output		kW x n	(4.39 x 2) x 3	(4.39 x 2) x 2 + (6.67 x 2) x 1	(4.39 x 2) x 2 + (6.67 x 2) x 1
	Model Name		-	(DS2GR7046FV* x 2) x 3	(DS2GR7046FV* x 2) x 2 + (DS4GR7066FV* x 2) x 1	(DS2GR7046FV* x 2) x 2 + (DS4GR7066FV* x 2) x 1
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	(900 x 2) x 3	(900 x 2) x 2 + (1,100 x 2) x 1	(900 x 2) x 2 + (1,100 x 2) x 1
			fl oz x n	(30.4 x 2) x 3	(30.4 x 2) x 2 + (37.2 x 2) x 1	(30.4 x 2) x 2 + (37.2 x 2) x 1
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	6	6	6
	Air Flow Rate		CFM (㎥/min)	9,924 x 3 (281 x 3)	9,924 x 2 + 9,571 x 1 (281 x 2 + 271 x 1)	9,924 x 2 + 10,171 x 1 (281 x 2 + 288 x 1)
	External Static Pressure	Max.	㎜Aq	-	-	-
			Pa	-	-	-
			in Wg (Pa)	-	-	-
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(620 x 2) x 3	(620 x 2) x 3	(620 x 2) x 3
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	5/8 (15.88)	5/8 (15.88)	3/4 (19.05)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)	1-3/8 (34.92)	1-3/8 (34.92)
	High pressure Gas Pipe(HR Only)		Type	Braze connection	Braze connection	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)	1-1/8 (28.58)	1-1/8 (28.58)
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]	656 [722]	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295	295	295
	Total piping length (System)	Max.	ft	3,281	3,281	3,281
	Level difference (ODU in highest position)	Max.	ft	361	361	361

Specification

(460V)

Model Name				VRC216L4M-4G	VRC240L4M-4G	VRC264L4M-4G
	Outdoor unit module 1			VRC072L4M-4G	VRC072L4M-4G	VRC072L4M-4G
	Outdoor unit module 2			VRC072L4M-4G	VRC072L4M-4G	VRC072L4M-4G
	Outdoor unit module 3			VRC072L4M-4G	VRC096L4M-4G	VRC120L4M-4G
	Outdoor unit module 4			-	-	-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361	361	361
	Level difference (IDU-IDU)	Max.	ft	131	131	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		lbs (kg)	17.6 x 3 (8.0 x 3)	17.6 x 2 + 23.1 x 1 (8.0 x 2 + 10.5 x 1)	17.6 x 2 + 23.1 x 1 (8.0 x 2 + 10.5 x 1)
Sound	Sound Pressure	Cooling	dB(A)	59.8	60.5	61.5
		Heating	dB(A)	60.8	61.5	62.0
	Sound Power		dB(A)	78.8	80.0	81.1
External Dimension	Net Weight		lbs (kg)	584 x 3 (265 x 3)	584 x 2 + 677 x 1 (265 x 2 + 307 x 1)	584 x 2 + 677 x 1 (265 x 2 + 307 x 1)
	Shipping Weight		lbs (kg)	622 x 3 (282 x 3)	622 x 2 + 714 x 1 (282 x 2 + 324 x 1)	622 x 2 + 714 x 1 (282 x 2 + 324 x 1)
	Net Dimensions (WxHxD)		㎜	(1,295 x 1,695 x 765) x 3	(1,295 x 1,695 x 765) x 3	(1,295 x 1,695 x 765) x 3
			inch	(51 x 66-3/4 x 30-1/8) x 3	(51 x 66-3/4 x 30-1/8) x 3	(51 x 66-3/4 x 30-1/8) x 3
	Shipping Dimensions (WxHxD)		㎜	(1,363 x 1,887 x 829) x 3	(1,363 x 1,887 x 829) x 3	(1,363 x 1,887 x 829) x 3
			inch	(53-11/16 x 74-5/16 x 32-11/16) x 3	(53-11/16 x 74-5/16 x 32-11/16) x 3	(53-11/16 x 74-5/16 x 32-11/16) x 3
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Specification

(460V)

Model Name				VRC288L4M-4G
	Outdoor unit module 1			VRC072L4M-4G
	Outdoor unit module 2			VRC096L4M-4G
	Outdoor unit module 3			VRC120L4M-4G
	Outdoor unit module 4			-
Power Supply			Ø, #, V, Hz	3, 3, 460, 60
Mode			-	Heat Recovery
Performance	TON		TON	24
	Capacity (Nominal)	Cooling	Btu/h	288,000
		Heating	Btu/h	324,000
	Capacity (Rated)	Cooling	Btu/h	274,000
		Heating	Btu/h	308,000
Maximum number of connectable indoor units			EA	49
Total capacity of the connected Indoor Units		Min.	Btu/h	144,000
		Max.	Btu/h	374,400
Power	Current	MCA	A	-
		MOP	A	-
Casing	Material	Body	-	GI Steel Plate
		Base	-	GI Steel Plate
Heat Exchanger	Type		-	Fin & Tube
	Material	Fin	-	Al
		Tube	-	Cu
	Fin Treatment		-	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 6
	Output		kW x n	(4.39 x 2) x 1 + (6.67 x 2) x 2
	Model Name		-	(DS2GR7046FV* x 2) x 1 + (DS4GR7066FV* x 2) x 2
	Oil	Type	-	PVE
		Initial charge	cc x n	(900 x 2) x 1 + (1,100 x 2) x 2
			fl oz x n	(30.4 x 2) x 1 + (37.2 x 2) x 2
Fan	Type		-	Propeller
	Discharge direction		-	Top
	Quantity		EA	6
	Air Flow Rate		CFM (m^3/min)	9,924 x 1 + 9,571 x 1 + 10,171 x 1 (281 x 1 + 271 x 1 + 288 x 1)
	External Static Pressure	Max.	㎜Aq	-
			Pa	-
			in Wg (Pa)	-
Fan Motor	Type		-	BLDC Motor
	Output		W x n	(620 x 2) x 3
Piping Connections	Liquid Pipe		Type	Braze connection
			Φ, inch (㎜)	3/4 (19.05)
	Gas Pipe		Type	Braze connection
			Φ, inch (㎜)	1-3/8 (34.92)
	High pressure Gas Pipe(HR Only)		Type	Braze connection
			Φ, inch (㎜)	1-1/8 (28.58)
	Heat Insulation		-	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	ft	656 [722]
	Piping length (1st Branch-IDU)	Max.	ft	295
	Total piping length (System)	Max.	ft	3,281
	Level difference (ODU in highest position)	Max.	ft	361

Specification

(460V)

Model Name				VRC288L4M-4G
	Outdoor unit module 1			VRC072L4M-4G
	Outdoor unit module 2			VRC096L4M-4G
	Outdoor unit module 3			VRC120L4M-4G
	Outdoor unit module 4			-
Piping Connections	Level difference (IDU in highest position)	Max.	ft	361
	Level difference (IDU-IDU)	Max.	ft	131
Wiring Connections	Transmission Cable	Min.	㎟	0.75
		Remark	-	F1, F2
	Power supply intake		-	Both indoor and outdoor unit
Refrigerant	Type		-	R410A
	Factory Charging		lbs (kg)	17.6 x 1 + 23.1 x 2 (8.0 x 1 + 10.5 x 2)
Sound	Sound Pressure	Cooling	dB(A)	62.1
		Heating	dB(A)	62.6
	Sound Power		dB(A)	81.9
External Dimension	Net Weight		lbs (kg)	584 x 1 + 677 x 2 (265 x 1 + 307 x 2)
	Shipping Weight		lbs (kg)	622 x 1 + 714 x 2 (282 x 1 + 324 x 2)
	Net Dimensions (WxHxD)		㎜	(1,295 x 1,695 x 765) x 3
			inch	(51 x 66-3/4 x 30-1/8) x 3
	Shipping Dimensions (WxHxD)		㎜	(1,363 x 1,887 x 829) x 3
			inch	(53-11/16 x 74-5/16 x 32-11/16) x 3
Operating Temp. Range	Cooling		°F (°C)	5 ~ 122 (-15 ~ 50)
	Heating		°F (°C)	-22 ~ 75 (-30 ~ 24)

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

1) Nominal capacities are based on (Equivalent refrigerant piping : 25ft, Level differences : 0ft);
   - Cooling : Indoor temperature 80°F DB, 67°F WB / Outdoor temperature 95°F DB, 75°F WB
   - Heating : Indoor temperature 70°F DB, 60°F WB / Outdoor temperature 47°F DB, 43°F WB
2) The standard allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%. Combination ratio of up to 184% is allowed depending on operation mode, minimum operation ratio and connected indoor unit models. LVSS 2.0 design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
3) IIf outdoor unit is located in a higher position than indoor unit, level difference is 361ft or under.
   (If the level difference is higher than 164ft, the PDM kit should be installed)
   *PDM kit: Pressure Drop Modulation kit
4) These products contain R410A which is fluorinated greenhouse gas.
5) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
6) Sound power level is an absolute value that a sound source generates.
   Sound pressure level is a relative value, depending on the distance and acoustic environment.
   Sound values are obtained in an anechoic room.
   Sound values of multi comvination are theoretical values based on sound results of individual installed units.
7) Cooling operation is possible at -15°C(5°F) or higher if satisfied following conditions.
   (If the outdoor temperature below -5°C(23°F), wind(snow) protection duct must be installed on the suction side of the heat exchanger and at least 50%capacity of the connected indoor units must be operated.) However, if the outdoor unit is installed below the indoor unit, cooling operation is possible only at -5°C(23°F) or higher.
8) External static pressure of the model installed as a combined module follows the external static pressure of each single unit.

- For more information regarding capacity correction, please refer to capacity tables.

Electric Characteristics

(208~230V)

Capacity	Model Name	Power Supply		Module #1				Module #2				Module #3			
				FLA[A]		MCA [A]	MOP [A]	FLA[A]		MCA [A]	MOP [A]	FLA[A]		MCA [A]	MOP [A]
TON		Hz	Voltage	FAN1	FAN2			FAN1	FAN2			FAN1	FAN2		
6	VRC072L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	-	-	-	-	-	-	-	-
8	VRC096L4M-4Y	60	208~230	4.2	4.2	62.0	70.0	-	-	-	-	-	-	-	-
10	VRC120L4M-4Y	60	208~230	4.2	4.2	76.0	90.0	-	-	-	-	-	-	-	-
12	VRC144L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	4.2	4.2	50.0	60.0	-	-	-	-
14	VRC168L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	4.2	4.2	62.0	70.0	-	-	-	-
16	VRC192L4M-4Y	60	208~230	4.2	4.2	62.0	70.0	4.2	4.2	62.0	70.0	-	-	-	-
18	VRC216L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	4.2	4.2	50.0	60.0	4.2	4.2	50.0	60.0
20	VRC240L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	4.2	4.2	50.0	60.0	4.2	4.2	62.0	70.0
22	VRC264L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	4.2	4.2	50.0	60.0	4.2	4.2	76.0	90.0
24	VRC288L4M-4Y	60	208~230	4.2	4.2	50.0	60.0	4.2	4.2	62.0	70.0	4.2	4.2	76.0	90.0

(460V)

Capacity	Model Name	Power Supply		Module #1				Module #2				Module #3			
				FLA[A]		MCA [A]	MOP [A]	FLA[A]		MCA [A]	MOP [A]	FLA[A]		MCA [A]	MOP [A]
TON		Hz	Voltage	FAN1	FAN2			FAN1	FAN2			FAN1	FAN2		
6	VRC072L4M-4G	60	460	2.1	2.1	25.0	30.0	-	-	-	-	-	-	-	-
8	VRC096L4M-4G	60	460	2.1	2.1	31.0	35.0	-	-	-	-	-	-	-	-
10	VRC120L4M-4G	60	460	2.1	2.1	38.0	45.0	-	-	-	-	-	-	-	-
12	VRC144L4M-4G	60	460	2.1	2.1	25.0	30.0	2.1	2.1	25.0	30.0	-	-	-	-
14	VRC168L4M-4G	60	460	2.1	2.1	25.0	30.0	2.1	2.1	31.0	35.0	-	-	-	-
16	VRC192L4M-4G	60	460	2.1	2.1	31.0	35.0	2.1	2.1	31.0	35.0	-	-	-	-
18	VRC216L4M-4G	60	460	2.1	2.1	25.0	30.0	2.1	2.1	25.0	30.0	2.1	2.1	25.0	30.0
20	VRC240L4M-4G	60	460	2.1	2.1	25.0	30.0	2.1	2.1	25.0	30.0	2.1	2.1	31.0	35.0
22	VRC264L4M-4G	60	460	2.1	2.1	25.0	30.0	2.1	2.1	25.0	30.0	2.1	2.1	38.0	45.0
24	VRC288L4M-4G	60	460	2.1	2.1	25.0	30.0	2.1	2.1	31.0	35.0	2.1	2.1	38.0	45.0

NOTE

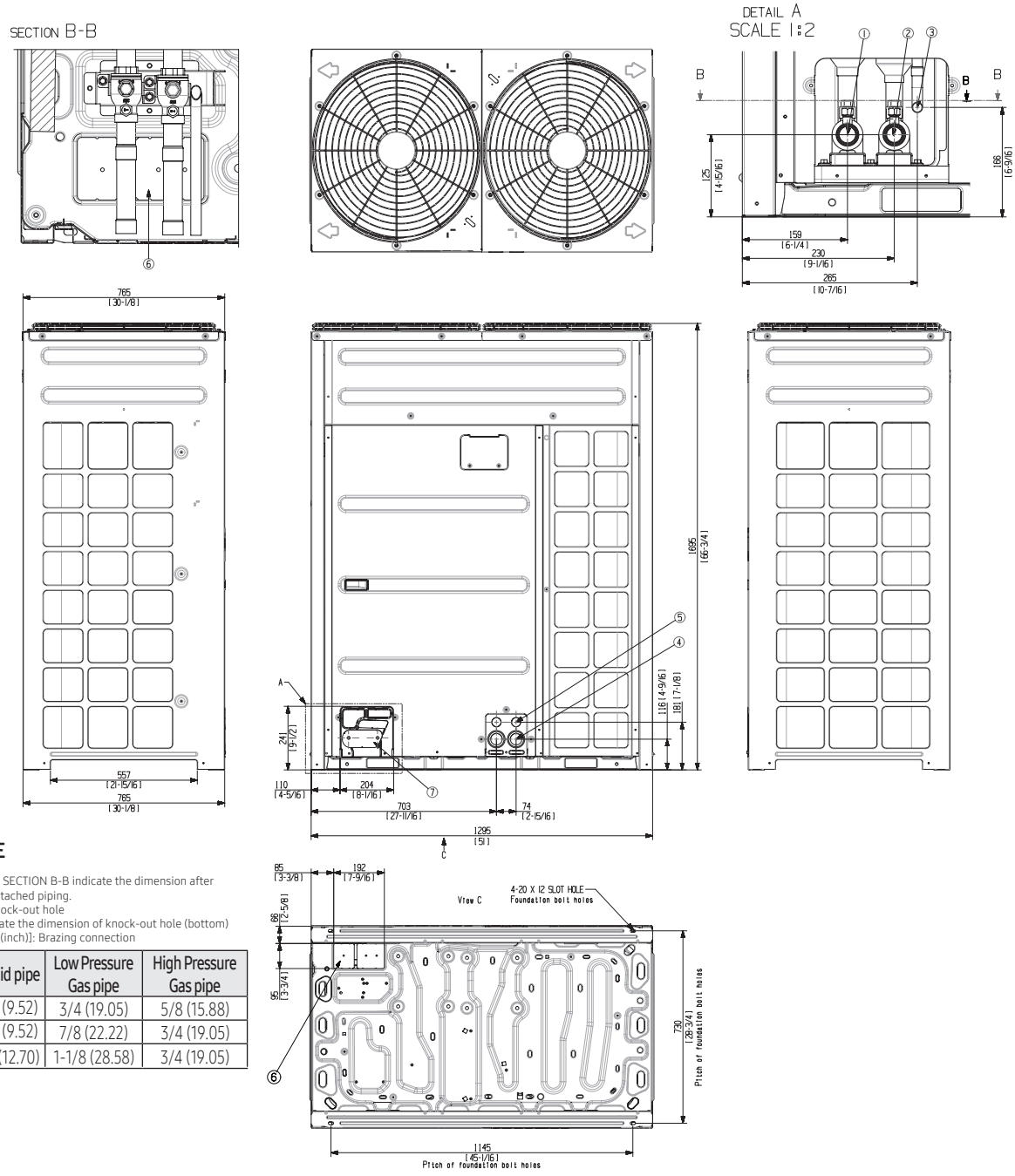
- Voltage Tolerance is ± 10%
- Maximum allowable voltage between phases is 2%
- Refer to module combination table for independent units information
- FLA : Full Load Ampere
- MCA : Minimum Circuit Ampere (A)
- MOP : Maximum Overcurrent Protective Device (A)

Dimensional Drawing

Outdoor unit

- VRC072/096/120L4M-4Y, VRC072/096/120L4M-4G

Unit: mm (inches)



NOTE

1. Detail A and SECTION B-B indicate the dimension after fixing the attached piping.
2. Item 3-6: Knock-out hole
3. View C indicate the dimension of knock-out hole (bottom)
4. Pipe [Ø, mm(inch)]: Brazing connection

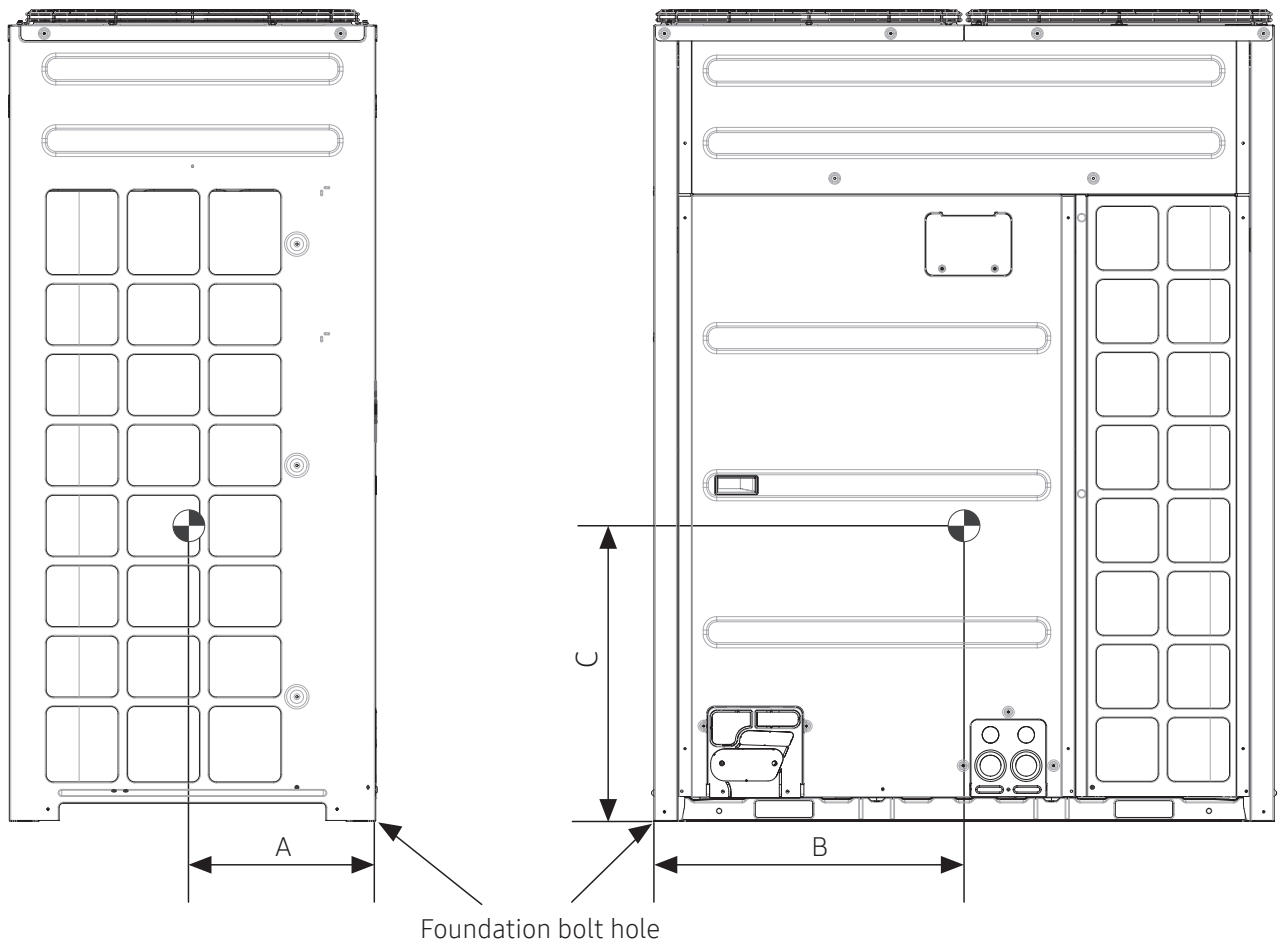
kBtu	Liquid pipe	Low Pressure Gas pipe	High Pressure Gas pipe
072	3/8 (9.52)	3/4 (19.05)	5/8 (15.88)
096	3/8 (9.52)	7/8 (22.22)	3/4 (19.05)
120	1/2 (12.70)	1-1/8 (28.58)	3/4 (19.05)

NO	Table of descriptions	Remark	NO	Table of descriptions	Remark
1	Low Pressure Gas Ref.pipe	See NOTE 4.	5	Communication wiring conduit	
2	High Pressure Ref.pipe	See NOTE 4.	6	Knock-out Hole for Ref.Piping (bottom)	
3	Liquid Ref.pipe	See NOTE 4.	7	Knock-out Hole for Ref.Piping (front)	
4	Power wiring conduit	Ø44			

Center of Gravity

Outdoor unit

Unit: mm (inches)



Model	A	B	C
VRC072L4M-4* VRC096L4M-4* VRC120L4M-4*	324 [12 - 3/4]	520 [20 - 1/2]	678 [26 - 11/16]

Installation Clearances

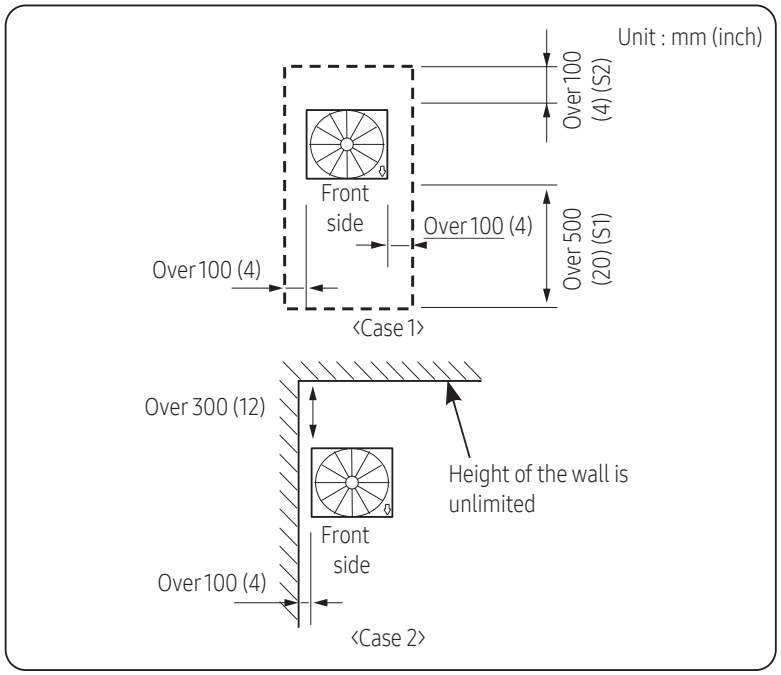
Choosing the installation location

- Do not install the product in places where corrosive gases such as sulfur oxides, ammonia, and sulfurous gas are produced. (e.g. Toilet outlet, ventilation opening, sewage works, dyeing complex, cattle shed, sulfuric hot spring, nuclear power plant, ship etc.) When installing the product in those places, contact an installationspecialty store as the copper pipe and brazing part will need additional corrosion proof or anti-rust additive to prevent corrosion.
- Make sure not to keep any inflammable materials (such as wooden materials, oil etc.) around the outdoor unit. When there's fire, those inflammable material will easily catch the fire and may pass it on to the product.
- Depending on the condition of power supply, unstable power or voltage any cause malfunction of the parts or control system. (At the ship or places using power supply from electric generator...etc)
- Make sure to install MCU when using HR products.
- When you select the location to install the MCU, the location is far away from indoor rooms because the refrigerant running of MCU may create noise.

Outdoor unit space requirements

- Space requirement was decided based on 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 quantity of solar radiation.
- When you secure installation space, consider path for people and the direction of the wind.
- Secure installation space as shown in the below illustration, 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 problem to the product.
- If you install multiple number of outdoor units 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, product may malfunction.
- You may install the outdoor units with 20mm (0.78inch) of space between the product, but product's performance may decrease depending on the installation environment.

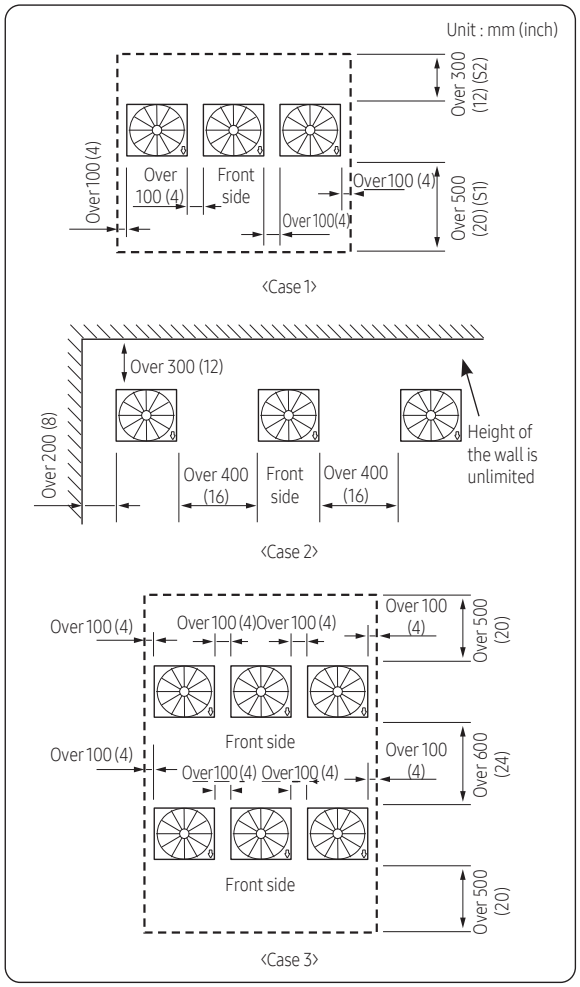
Single installation



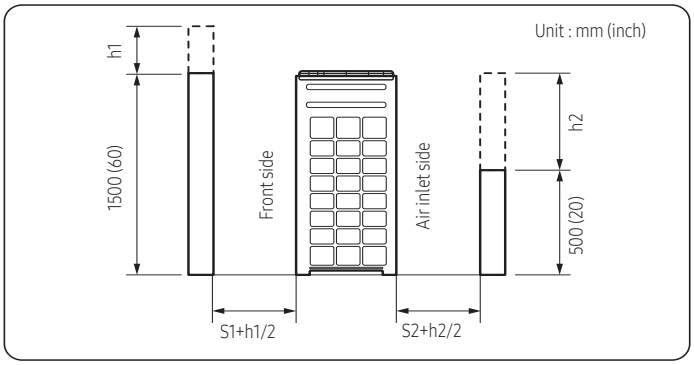
Installation Clearances

Choosing the installation location

Module installation



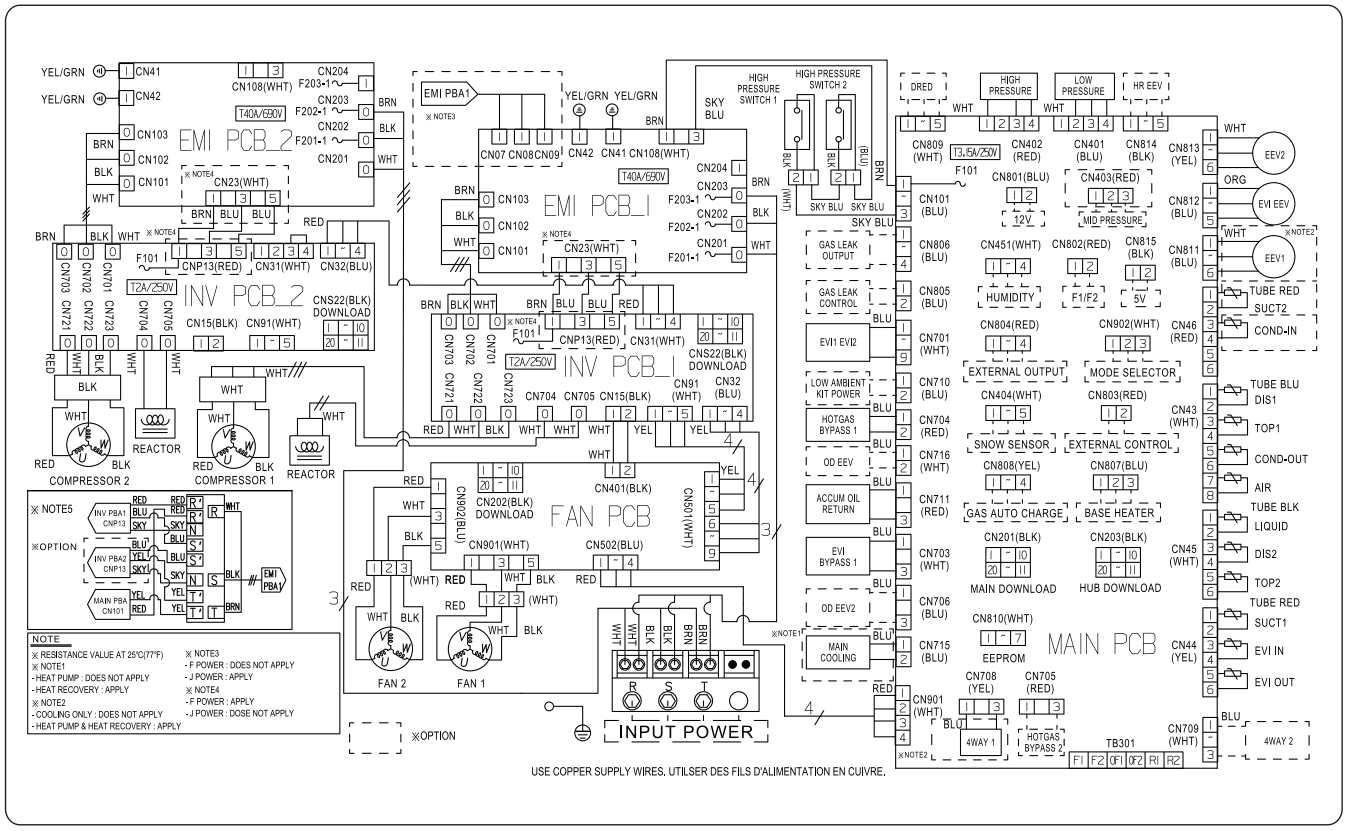
- For ‹Case 1› or ‹Case 3›
  - Height of the wall on the front side should not be higher than 1500mm (60inch).
  - Height of the wall on the air inlet side should not be higher than 500mm (20inch).
  - Height of the wall on the side is not limited.
  - If the height of the wall exceeds by certain value (h1, h2), additional clearance [(h1)/2, (h2)/2 : Half of the exceeded height] should be added to the service space (S1, S2).



Electrical Wiring Diagrams

Outdoor unit

VRC072L4M-4Y, VRC072/096/120L4M-4G



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	Solenode valve (EVI1)	TOP2(200K)	Thermistor (Compressor Top 2200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
EVI V/V2	Solenode 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)		

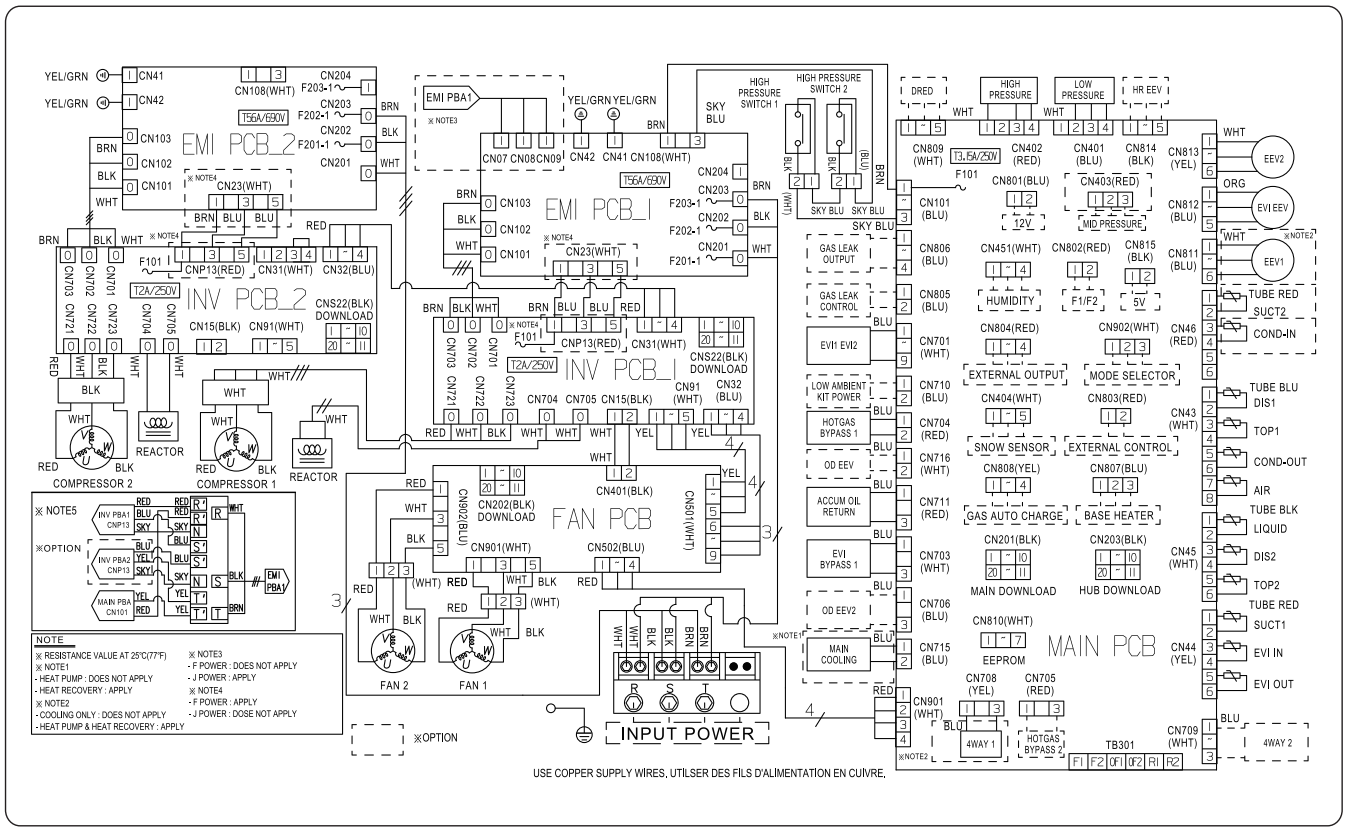
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue
- 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

Outdoor unit

VRC096/120L4M-4Y



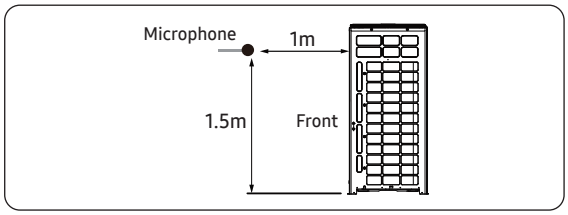
INV PCB1	Printed circuit board (inverter1)	EEV1	Electronic expansion valve 1	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter1)	EEV2	Electronic expansion valve 2	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (inverter2)	EVI-OUT(10K)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

Sound Data

Sound Pressure level

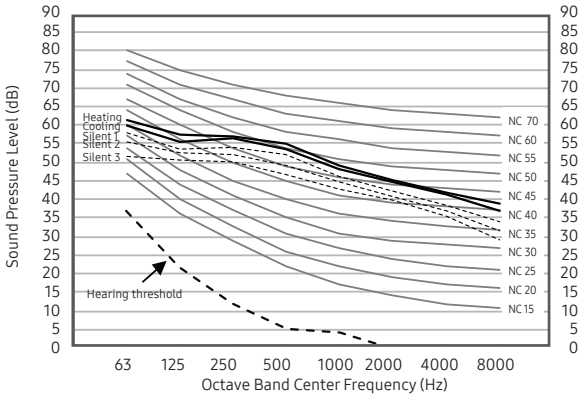


Unit: dB(A)

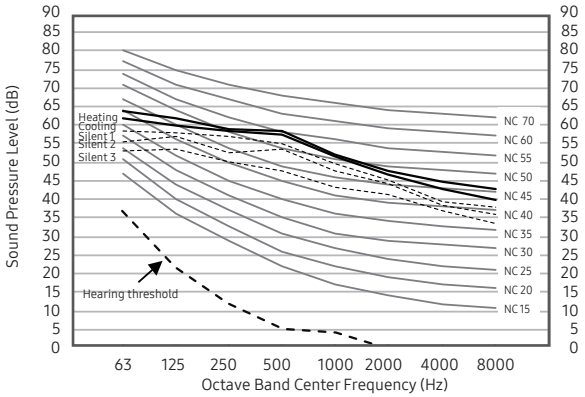
Model	Cooling	Silent 1	Silent 2	Silent 3
VRC072L4M-4Y	55	53	51	49
VRC096L4M-4Y	57	55	53	49
VRC120L4M-4Y	59	57	53	49

• NC Curve

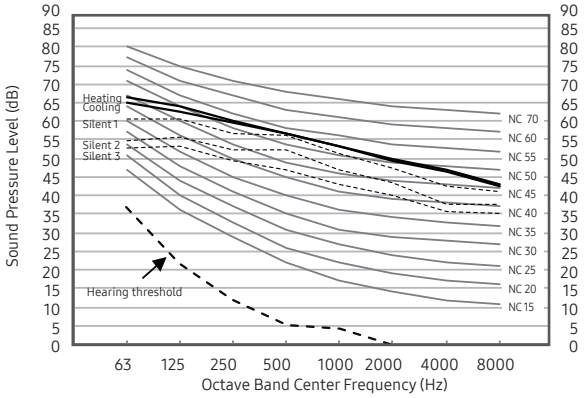
1) VRC072L4M-4Y



2) VRC096L4M-4Y



3) VRC120L4M-4Y

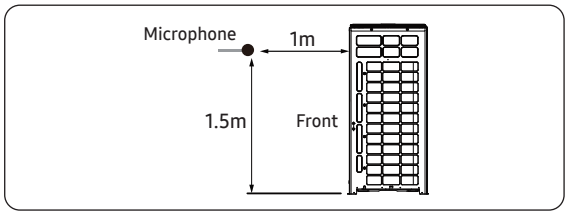


NOTE

- 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 Pressure level

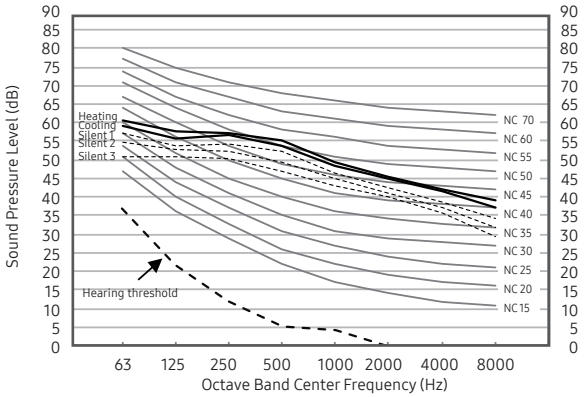


Unit: dB(A)

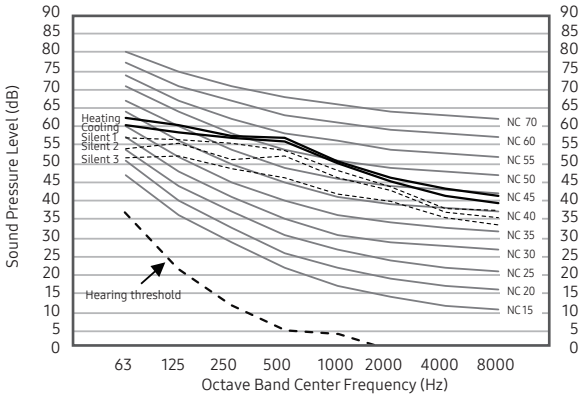
Model	Cooling	Silent 1	Silent 2	Silent 3
VRC072L4M-4G	55	53	51	49
VRC096L4M-4G	57	55	53	49
VRC120L4M-4G	59	57	53	49

• NC Curve

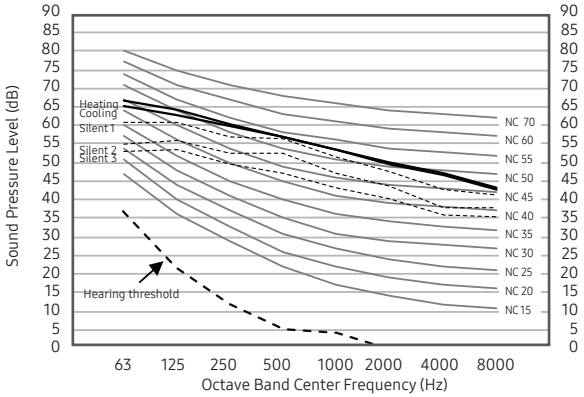
1) VRC072L4M-4G



2) VRC096L4M-4G



3) VRC120L4M-4G



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

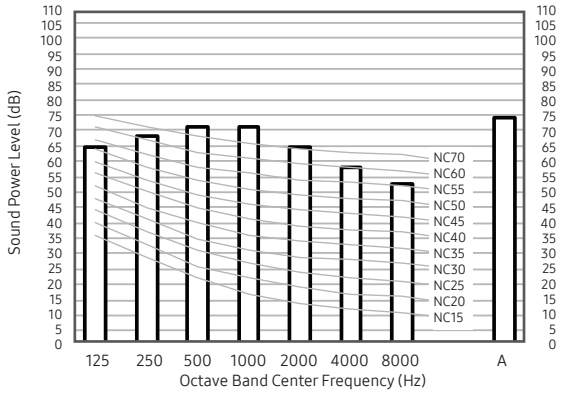
Sound Power level

Unit: dB(A)

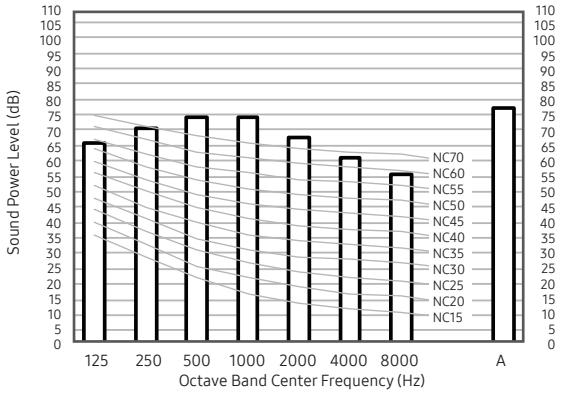
Model	Cooling
VRC072L4M-4Y	74
VRC096L4M-4Y	77
VRC120L4M-4Y	79

• NC Curve

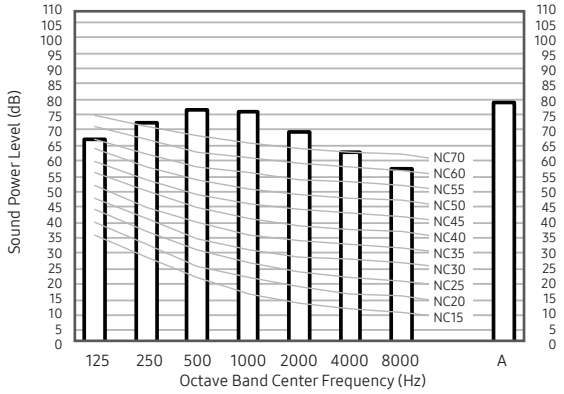
1) VRC072L4M-4Y



2) VRC096L4M-4Y



3) VRC120L4M-4Y



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.

Sound Data

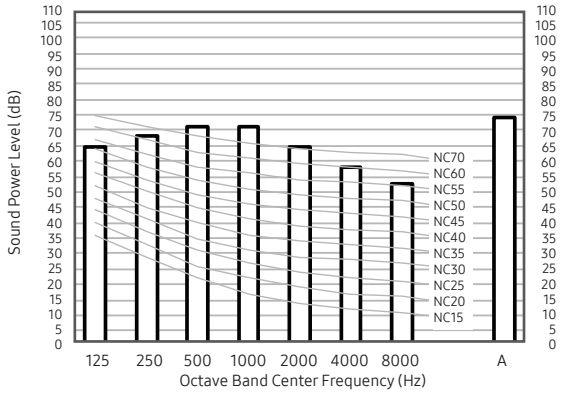
Sound Power level

Unit: dB(A)

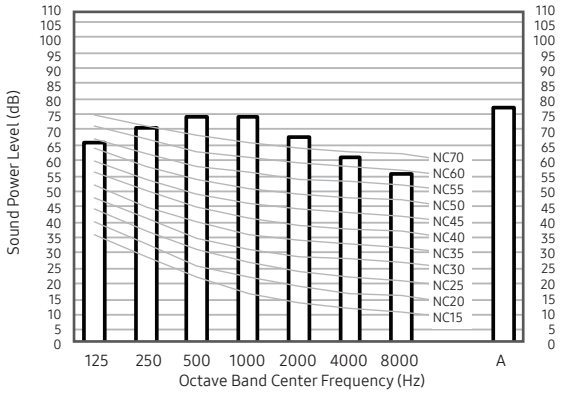
Model	Cooling
VRC072L4M-4G	74
VRC096L4M-4G	77
VRC120L4M-4G	79

• NC Curve

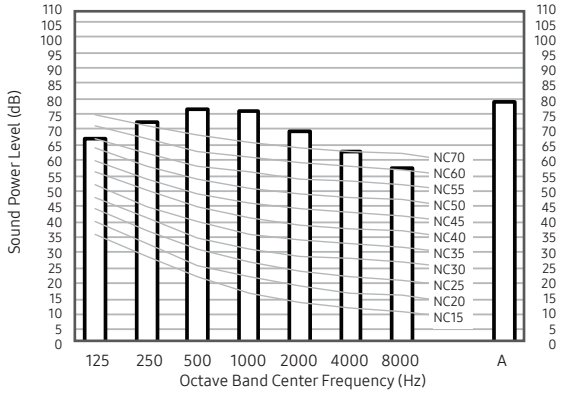
1) VRC072L4M-4G



2) VRC096L4M-4G



3) VRC120L4M-4G



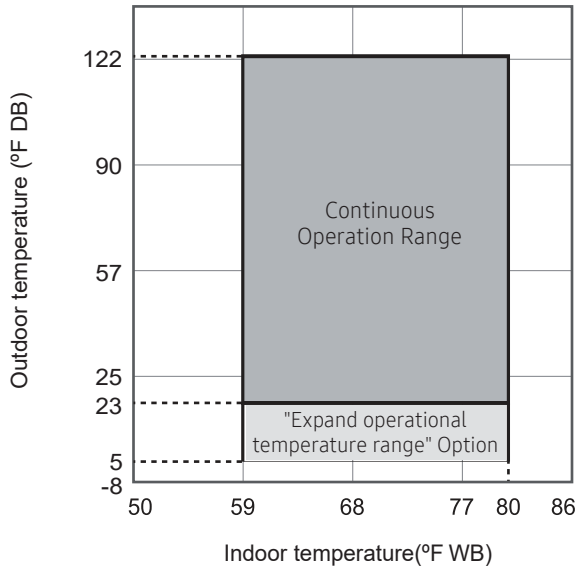
NOTE

- 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.

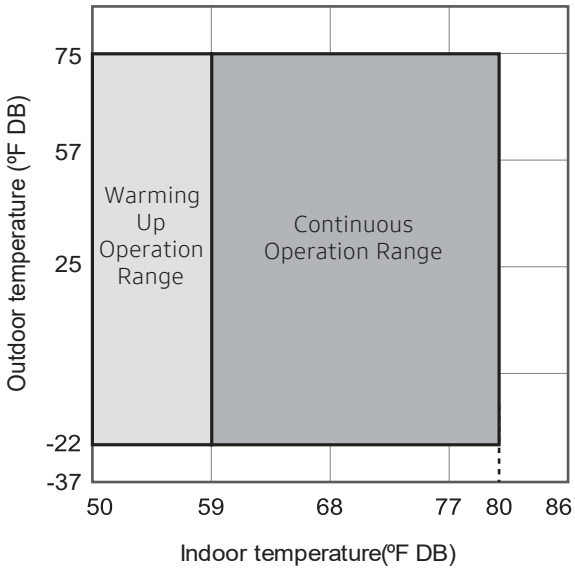
Operation Range

Outdoor unit

Cooling



Heating



(1) The operating range is shown in these figures

(2) The assumed installation condtions are as follows
- Outdoor units and indoor units combination
- The Pipe length(including elbow) is 5m (16.4ft)
- The Level difference is 0m

(3) In the low temperature expansion option application, the cooling operating is possible under expand operational range only for HR system

(4) In case of heatlng mode, operating is possible under warming up operation range. However continus opearting is impossible due to a protection control

Operation Range

Outdoor unit

Defrosting correction factor

The heating capacity tables do not take account of the reduction in capacity, when frost has accumulated or while the defrosting operation is in progress.

The capacity values, which take these factors into account, in other words, the integrated heating capacity values, can be calculated as follows :

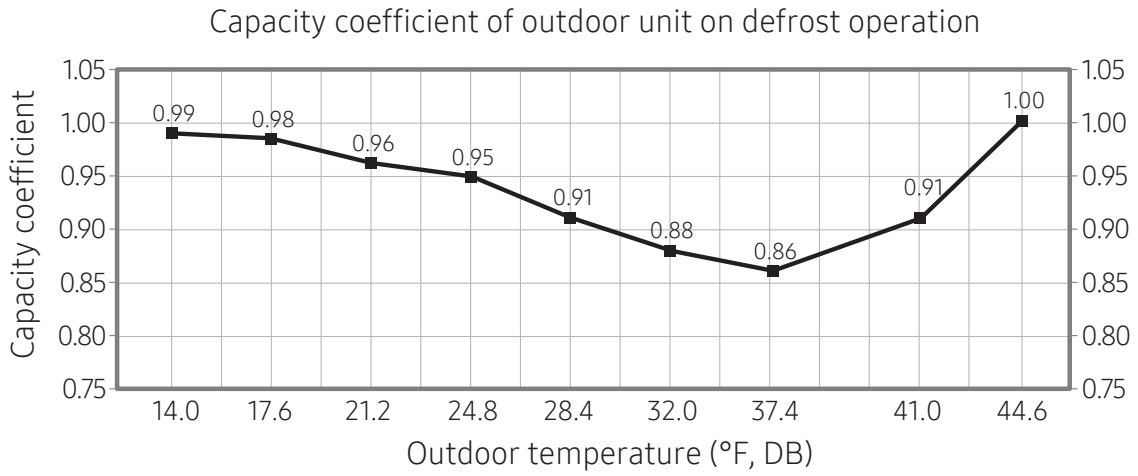
Formula : A = B × C

Integrated heating capacity = A

Value given in table of capacity characteristics = B

Integrating correction factor for frost accumulation (kW) = C

Outdoor temperature (°F, DB)	14	17.6	21.2	24.8	28.4	32	37.4	41	44.6
Capacity coefficient	0.99	0.98	0.96	0.95	0.91	0.88	0.86	0.91	1.00



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 outdoor unit, defrost operation is carried out periodically.

During defrost operation, capacity of outdoor unit may decrease.

The decrement is not considered to the individual capacity tables.

This figure shows an effect of intelligence defrost operation

It is actually the frost occurrence section from 0 °C(32 °F) or less.

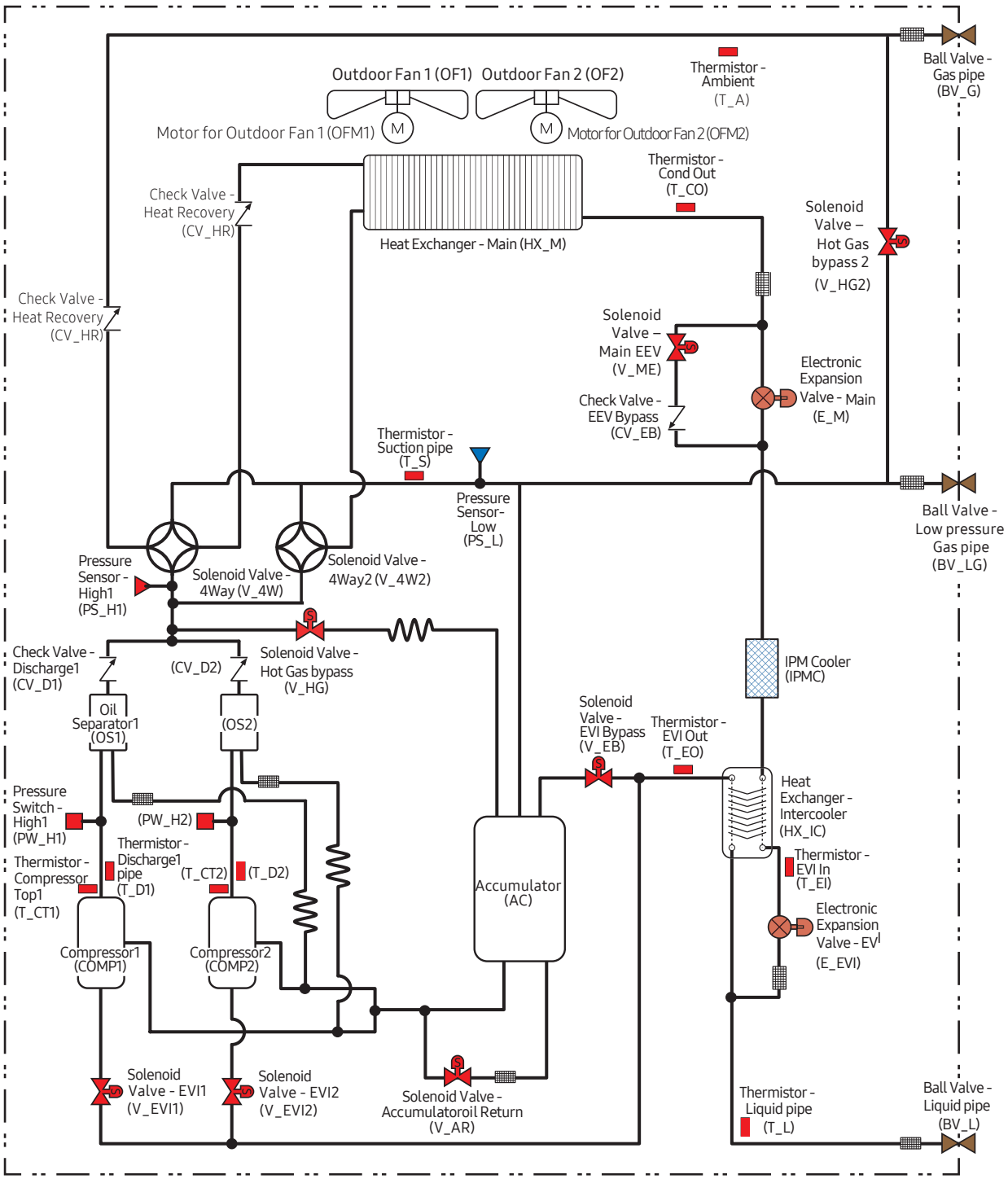
Since the outdoor temperature over 0 °C(32 °F), the heating performance is the same before and after applying intelligence defrost operation

In outdoor conditions below 0 °C(32 °F), frost conditions reflect the actual entering the defrost opration because heating performance is improved

Piping Diagram

Outdoor unit

VRC072L4M-4*, VRC096L4M-4*, AM120L4M-4*



AHRI Data

Model Code	Rated Capacity (Btu/h)		EER (Btu/Wh)		IEER (Btu/Wh)			High COP(47F) (W/W)			Low COP(17F) (W/W)		SCHE (Btu/Wh)	
	Cooling	Heating	Non-Ducted	Ducted	Non-Ducted	Ducted	Mixed	Non-Ducted	Ducted	Mixed	Non-Ducted	Ducted	Non-Ducted	Ducted
VRC072L4M-4Y	69,000	77,000	13.10	12.70	28.30	23.70	26.00	4.30	4.14	4.22	2.58	2.46	28.31	24.80
VRC096L4M-4Y	92,000	103,000	13.40	12.85	28.00	25.10	26.55	4.06	3.94	4.00	2.49	2.47	28.12	25.08
VRC120L4M-4Y	114,000	129,000	12.00	12.65	26.50	24.90	25.70	3.98	3.92	3.95	2.25	2.32	27.93	24.32
VRC144L4M-4Y	138,000	154,000	12.70	12.30	26.90	19.60	23.25	3.88	3.89	3.89	2.32	2.34	26.32	24.51
VRC168L4M-4Y	160,000	180,000	12.80	12.25	26.40	22.50	24.45	3.79	3.86	3.83	2.26	2.32	25.46	23.56
VRC192L4M-4Y	184,000	206,000	12.40	12.15	24.90	22.50	23.70	3.76	3.83	3.80	2.20	2.27	24.61	22.71
VRC216L4M-4Y	206,000	232,000	12.30	12.10	25.90	22.40	24.15	3.66	3.81	3.74	2.20	2.23	25.08	22.71
VRC240L4M-4Y	228,000	258,000	12.00	12.05	25.30	22.30	23.80	3.61	3.80	3.71	2.10	2.16	22.23	22.23
VRC264L4M-4Y	252,000	282,000	11.60	11.60	25.30	21.70	23.50	3.34	3.74	3.54	2.05	2.15	22.33	21.85
VRC288L4M-4Y	274,000	308,000	11.50	11.50	24.80	21.30	23.05	3.28	3.60	3.44	2.05	2.13	22.61	20.90
VRC072L4M-4G	69,000	77,000	13.10	12.70	28.30	23.70	26.00	4.30	4.14	4.22	2.58	2.46	28.31	24.80
VRC096L4M-4G	92,000	103,000	13.40	12.85	28.00	25.10	26.55	4.06	3.94	4.00	2.49	2.47	28.12	25.08
VRC120L4M-4G	114,000	129,000	12.00	12.65	26.50	24.90	25.70	3.98	3.92	3.95	2.25	2.32	27.93	24.32
VRC144L4M-4G	138,000	154,000	12.70	12.30	26.90	19.60	23.25	3.88	3.89	3.89	2.32	2.34	26.32	24.51
VRC168L4M-4G	160,000	180,000	12.80	12.25	26.40	22.50	24.45	3.79	3.86	3.83	2.26	2.32	25.46	23.56
VRC192L4M-4G	184,000	206,000	12.40	12.15	24.90	22.50	23.70	3.76	3.83	3.80	2.20	2.27	24.61	22.71
VRC216L4M-4G	206,000	232,000	12.30	12.10	25.90	22.40	24.15	3.66	3.81	3.74	2.20	2.23	25.08	22.71
VRC240L4M-4G	228,000	258,000	12.00	12.05	25.30	22.30	23.80	3.61	3.80	3.71	2.10	2.16	22.23	22.23
VRC264L4M-4G	252,000	282,000	11.60	11.60	25.30	21.70	23.50	3.34	3.74	3.54	2.05	2.15	22.33	21.85
VRC288L4M-4G	274,000	308,000	11.50	11.50	24.80	21.30	23.05	3.28	3.60	3.44	2.05	2.13	22.61	20.90

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