VRD S6M

Heat Recovery Outdoor Units | 208/230/460V | R-32 | 60Hz **6 to 38 tons**

COMMERCIAL
PRODUCT SPECIFICATIONS (EHB)

ASHRAE Standard 90.1

MODEL NUMBER IDENTIFICATION

V R D 072 S 6 M - 5 Y

Brand/Family
V = Variable Refrigerant Flow (VRF)

Unit Type
R = Heat Recovery Outdoor Unit

Major Design Sequence
D = 4th Generation

Cooling Capacity - Tons

072 = 6 Tons	288 = 24 Tons
096 = 8 Tons	312 = 26 Tons
120 = 10 Tons	336 = 28 Tons
144 = 12 Tons	360 = 30 Tons
168 = 14 Tons	384 = 32 Tons
192 = 16 Tons	408 = 34 Tons
216 = 18 Tons	432 = 36 Tons
240 = 20 Tons	456 = 38 Tons
264 = 22 Tons	

Cooling Efficiency
S = High Efficiency

Refrigerant Type
6 = R-32

Refrigerant Circuits
M = Multiple Circuits

Minor Design Sequence
5 = 5th Revision

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

Form Number 211274 | March 2026
Supersedes all previous versions

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1. Combination Table : Outdoor units

VRD High Efficiency Heat Recovery Outdoor Units(208~230V)

System Model			Capacity (Ton)							
Capa (Ton)	Model Name	Number of individual outdoor units								
			6	8	10	12	14	16	18	20
6	VRD072S6M-5Y	1	1							
8	VRD096S6M-5Y	1		1						
10	VRD120S6M-5Y	1			1					
12	VRD144S6M-5Y	1				1				
14	VRD168S6M-5Y	1					1			
16	VRD192S6M-5Y	1						1		
18	VRD216S6M-5Y	1							1	
20	VRD240S6M-5Y	1								1
22	VRD264S6M-5Y	2		1			1			
24	VRD288S6M-5Y	2		1				1		
26	VRD312S6M-5Y	2		1					1	
28	VRD336S6M-5Y	2		1						1
30	VRD360S6M-5Y	2			1					1
32	VRD384S6M-5Y	2						2		
34	VRD408S6M-5Y	2						1	1	
36	VRD432S6M-5Y	3			2			1		
38	VRD456S6M-5Y	3			1	1		1		

NOTE

- Make sure to use an indoor unit that is compatible with VRF.
- 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. VRF 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 (VWMD***S6-5P) can be connected

1. Combination Table : Outdoor units

VRD High Efficiency Heat Recovery Outdoor Units (460V)

System Model			Capacity (Ton)							
Capa (Ton)	Model Name	Number of individual outdoor units								
			6	8	10	12	14	16	18	20
6	VRD072S6M-5G	1	1							
8	VRD096S6M-5G	1		1						
10	VRD120S6M-5G	1			1					
12	VRD144S6M-5G	1				1				
14	VRD168S6M-5G	1					1			
16	VRD192S6M-5G	1						1		
18	VRD216S6M-5G	1							1	
20	VRD240S6M-5G	1								1
22	VRD264S6M-5G	2		1			1			
24	VRD288S6M-5G	2		1				1		
26	VRD312S6M-5G	2		1					1	
28	VRD336S6M-5G	2		1						1
30	VRD360S6M-5G	2			1					1
32	VRD384S6M-5G	2						2		
34	VRD408S6M-5G	2						1	1	
36	VRD432S6M-5G	3			2			1		
38	VRD456S6M-5G	3			1	1		1		

NOTE

- Make sure to use an indoor unit that is compatible with VRF.
- 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. VRF 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 (VWMD***S6-5P) can be connected

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD072S6M-5Y	VRD096S6M-5Y	VRD120S6M-5Y
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
Power Supply				Φ | # | 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	Cooling	1) Nominal	Btu/h	72,000	96,000	120,000
			Rated	Btu/h	69,000	92,000	114,000
		Heating	1) Nominal	Btu/h	81,000	108,000	135,000
			Rated	Btu/h	77,000	103,000	129,000
Maximum number of connectable indoor units				EA	12	16	20
2) 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	28.0	36.0	40.8
		MOP		A	35	40	45
Efficiency	Cooling	EER	Ducted	Btu/h·W	11.60	12.20	11.70
			NonDucted	Btu/h·W	11.00	12.15	11.15
		IEER	Ducted	Btu/h·W	23.30	24.10	22.60
			NonDucted	Btu/h·W	24.18	27.98	25.92
			Mixed	Btu/h·W	23.74	26.04	24.26
	Heating	High COP(47F)	Ducted	W/W	3.90	3.94	3.80
			NonDucted	W/W	3.93	4.21	3.85
			Mixed	W/W	3.92	4.08	3.83
		Low COP(17F)	Ducted	W/W	2.84	2.75	2.80
			NonDucted	W/W	2.70	2.92	2.81
	Integrated Efficiency	SCHE	Ducted	Btu/h·W	25.08	25.84	25.18
			NonDucted	Btu/h·W	27.17	30.50	29.55
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	Model Name			-	DS2BD7046EVA	DS2BD7046EVA	DS2BD7046EVA
	Quantity			EA	1	2	2
	Type			-	SCROLL_INVERTER	SCROLL_INVERTER	SCROLL_INVERTER
	Output			kW	4.95	4.95	4.95
	Oil	Type		-	POE	POE	POE
		Initial Charge		fl oz	30.4	30.4	30.4
Fan	Type			-	Propeller	Propeller	Propeller
	Discharge direction			-	Top discharge	Top discharge	Top discharge
	Quantity			EA	1	2	2
	Air Flow Rate			CFM	5,580	9,924	9,924
	External Static Pressure			Pa	110	110	110
Fan Motor	Type			-	BLDC	BLDC	BLDC
	Output			W	630	620	620
				kW	0.63	0.62	0.62
3) Piping Connections	Liquid Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	3/8	3/8	1/2
	Gas Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	3/4	7/8	7/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD072S6M-5Y	VRD096S6M-5Y	VRD120S6M-5Y
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			5/8	3/4	3/4
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	11.0	14.1	14.1
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	54	57	57
			Heating	dB(A)	58	59	60
	6) Sound Power Level		Cooling	dB(A)	75	79	79
External Dimension	Net Weight			lbs	392	564	564
	Shipping Weight			lbs	423	602	602
	Net Dimensions		W x H x D	mm	930 x 1,695 x 765	1,295 x 1,695 x 765	1,295 x 1,695 x 765
				in	36-5/8 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		W x H x D	mm	998 x 1,887 x 829	1,363 x 1,887 x 829	1,363 x 1,887 x 829
				in	39-5/16 x 74-5/16 x 32-5/8	53-11/16 x 74-5/16 x 32-5/8	53-11/16 x 74-5/16 x 32-5/8
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD144S6M-5Y	VRD168S6M-5Y	VRD192S6M-5Y
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
Power Supply				Φ | # | 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	Cooling	1) Nominal	Btu/h	144,000	168,000	192,000
			Rated	Btu/h	138,000	160,000	184,000
		Heating	1) Nominal	Btu/h	162,000	189,000	216,000
			Rated	Btu/h	154,000	180,000	206,000
Maximum number of connectable indoor units				EA	25	29	33
2) 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	52.6	54.4	60.0
		MOP		A	60	60	70
Efficiency	Cooling	EER	Ducted	Btu/h·W	11.80	10.60	11.00
			NonDucted	Btu/h·W	11.30	10.15	10.20
		IEER	Ducted	Btu/h·W	22.19	21.19	22.10
			NonDucted	Btu/h·W	25.16	22.91	22.50
			Mixed	Btu/h·W	23.68	22.05	22.30
	Heating	High COP(47F)	Ducted	W/W	3.68	3.67	3.55
			NonDucted	W/W	3.65	3.55	3.20
			Mixed	W/W	3.67	3.61	3.38
		Low COP(17F)	Ducted	W/W	2.70	2.56	2.65
			NonDucted	W/W	2.69	2.51	2.22
	Integrated Efficiency	SCHE	Ducted	Btu/h·W	24.70	24.23	24.04
			NonDucted	Btu/h·W	26.41	25.94	25.65
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	Model Name			-	DS2BD7046EVA	DS4BC5066EVA	DS4BC5066EVA
	Quantity			EA	2	2	2
	Type			-	SCROLL_INVERTER	SCROLL_INVERTER	SCROLL_INVERTER
	Output			kW	4.95	7.17	7.17
	Oil	Type		-	POE	POE	POE
		Initial Charge		fl oz	30.4	37.2	37.2
Fan	Type			-	Propeller	Propeller	Propeller
	Discharge direction			-	Top discharge	Top discharge	Top discharge
	Quantity			EA	2	2	2
	Air Flow Rate			CFM	10,171	10,665	12,855
	External Static Pressure			Pa	110	110	80
Fan Motor	Type			-	BLDC	BLDC	BLDC
	Output			W	620	620	630
				kW	0.62	0.62	0.63
3) Piping Connections	Liquid Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1/2	1/2	1/2
	Gas Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1-1/8	1-1/8	1-1/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD144S6M-5Y	VRD168S6M-5Y	VRD192S6M-5Y
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			7/8	7/8	7/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	18.5	18.5	22.0
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	60	60	63
			Heating	dB(A)	63	63	66
	6) Sound Power Level		Cooling	dB(A)	81	83	85
External Dimension	Net Weight			lbs	604	657	833
	Shipping Weight			lbs	642	694	891
	Net Dimensions		W x H x D	mm	1,295 x 1,695 x 765	1,295 x 1,695 x 765	1,860 x 1,695 x 765
				in	51 x 66-3/4 x 30-1/8	51 x 66-3/4 x 30-1/8	73-1/4 x 66-3/4 x 30-1/8
	Shipping Dimensions		W x H x D	mm	1,363 x 1,887 x 829	1,363 x 1,887 x 829	1,928 x 1,887 x 829
				in	53-11/16 x 74-5/16 x 32-5/8	53-11/16 x 74-5/16 x 32-5/8	75-7/8 x 74-5/16 x 32-5/8
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD216S6M-5Y	VRD240S6M-5Y	VRD264S6M-5Y
	Outdoor unit module 1				-	-	VRD096S6M-5Y
	Outdoor unit module 2				-	-	VRD168S6M-5Y
	Outdoor unit module 3				-	-	-
Power Supply				Φ | # | 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	Cooling	1) Nominal	Btu/h	216,000	240,000	264,000
			Rated	Btu/h	206,000	228,000	252,000
		Heating	1) Nominal	Btu/h	243,000	270,000	297,000
			Rated	Btu/h	232,000	258,000	283,000
Maximum number of connectable indoor units				EA	37	41	45
2) 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	64.0	68.0	90.4
		MOP		A	80	80	-
Efficiency	Cooling	EER	Ducted	Btu/h·W	10.15	9.95	10.85
			NonDucted	Btu/h·W	10.10	9.90	10.55
		IEER	Ducted	Btu/h·W	20.60	20.30	19.18
			NonDucted	Btu/h·W	21.50	21.44	21.76
			Mixed	Btu/h·W	21.05	20.87	20.47
	Heating	High COP(47F)	Ducted	W/W	3.45	3.25	3.61
			NonDucted	W/W	3.20	3.24	3.49
			Mixed	W/W	3.33	3.25	3.55
		Low COP(17F)	Ducted	W/W	2.60	2.45	2.41
			NonDucted	W/W	2.18	2.39	2.44
	Integrated Efficiency	SCHE	Ducted	Btu/h·W	22.71	22.52	23.56
			NonDucted	Btu/h·W	25.08	25.08	24.42
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	Model Name			-	DS4BC5066EVA	DS4BC5066EVA	(DS2BD7046EVAx2)x1 +(DS4BC5066EVAx2)x1
	Quantity			EA	2	2	2x1+2x1
	Type			-	SCROLL_INVERTER	SCROLL_INVERTER	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1
	Output			kW	7.17	7.17	(4.95x2)x1+(7.17x2)x1
	Oil	Type		-	POE	POE	POE
		Initial Charge		fl oz	37.2	37.2	(30.4x2)x1+(37.2x2)x1
Fan	Type			-	Propeller	Propeller	Propeller
	Discharge direction			-	Top discharge	Top discharge	Top discharge
	Quantity			EA	2	2	4
	Air Flow Rate			CFM	13,314	13,773	9,924x1+10,665x1
	External Static Pressure			Pa	80	80	-
Fan Motor	Type			-	BLDC	BLDC	BLDC
	Output			W	630	630	(620x2)x1+(620x2)x1
				kW	0.63	0.63	(0.62x2)x1+(0.62x2)x1
3) Piping Connections	Liquid Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1/2	1/2	5/8
	Gas Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1-1/8	1-1/8	1-1/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD216S6M-5Y	VRD240S6M-5Y	VRD264S6M-5Y
	Outdoor unit module 1				-	-	VRD096S6M-5Y
	Outdoor unit module 2				-	-	VRD168S6M-5Y
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			7/8	1-1/8	1-1/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	25.8	25.8	32.6
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	64	66	62
			Heating	dB(A)	67	68	64
	6) Sound Power Level		Cooling	dB(A)	85	86.5	84
External Dimension	Net Weight			lbs	851.0	851.0	564.0x1+657.0x1
	Shipping Weight			lbs	908.0	908.0	602.0x1+694.0x1
	Net Dimensions		W x H x D	mm	1,860 x 1,695 x 765	1,860 x 1,695 x 765	(1,295 x 1,695 x 765) x 2
				in	73-1/4 x 66-3/4 x 30-1/8	73-1/4 x 66-3/4 x 30-1/8	(51 x 66-3/4 x 30-1/8) x 2
	Shipping Dimensions		W x H x D	mm	1,928 x 1,887 x 829	1,928 x 1,887 x 829	(1,363 x 1,887 x 829) x 2
				in	75-7/8 x 74-5/16 x 32-5/8	75-7/8 x 74-5/16 x 32-5/8	(53-11/16 x 74-5/16 x 32-5/8) x 2
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name						VRD288S6M-5Y	VRD312S6M-5Y	VRD336S6M-5Y
	Outdoor unit module 1					VRD096S6M-5Y	VRD096S6M-5Y	VRD096S6M-5Y
	Outdoor unit module 2					VRD192S6M-5Y	VRD216S6M-5Y	VRD240S6M-5Y
	Outdoor unit module 3					-	-	-
Power Supply					Φ | # | 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	24	26	28
	Capacity	Cooling	1) Nominal		Btu/h	288,000	312,000	336,000
			Rated		Btu/h	276,000	298,000	320,000
		Heating	1) Nominal		Btu/h	324,000	351,000	378,000
			Rated		Btu/h	309,000	335,000	361,000
Maximum number of connectable indoor units					EA	49	54	58
2) Total capacity of the connected Indoor Units		Min.			Btu/h	144,000	156,000	168,000
		Max.			Btu/h	374,400	405,600	436,800
Power	Current	MCA			A	96.0	100.0	104.0
		MOP			A	-	-	-
Efficiency	Cooling	EER		Ducted	Btu/h·W	10.75	10.45	10.20
				NonDucted	Btu/h·W	10.25	9.75	9.65
		IEER		Ducted	Btu/h·W	20.04	19.62	19.42
				NonDucted	Btu/h·W	22.70	21.15	22.05
				Mixed	Btu/h·W	21.37	20.39	20.74
	Heating	High COP(47F)		Ducted	W/W	3.55	3.50	3.45
				NonDucted	W/W	3.33	3.31	3.30
				Mixed	W/W	3.44	3.41	3.38
		Low COP(17F)		Ducted	W/W	2.41	2.36	2.31
				NonDucted	W/W	2.26	2.32	2.46
	Integrated Efficiency	SCHE		Ducted	Btu/h·W	22.52	20.14	19.67
				NonDucted	Btu/h·W	23.28	23.18	22.42
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	Model Name				-	(DS2BD7046EVAx2)x1 +(DS4BC5066EVAx2)x1	(DS2BD7046EVAx2)x1 +(DS4BC5066EVAx2)x1	(DS2BD7046EVAx2)x1 +(DS4BC5066EVAx2)x1
	Quantity				EA	2x1+2x1	2x1+2x1	2x1+2x1
	Type				-	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1
	Output				kW	(4.95x2)x1+(7.17x2)x1	(4.95x2)x1+(7.17x2)x1	(4.95x2)x1+(7.17x2)x1
	Oil	Type			-	POE	POE	POE
		Initial Charge			fl oz	(30.4x2)x1+(37.2x2)x1	(30.4x2)x1+(37.2x2)x1	(30.4x2)x1+(37.2x2)x1
Fan	Type				-	Propeller	Propeller	Propeller
	Discharge direction				-	Top discharge	Top discharge	Top discharge
	Quantity				EA	4	4	4
	Air Flow Rate				CFM	9,924x1+12,855x1	9,924x1+13,314x1	9,924x1+13,773x1
	External Static Pressure				Pa	-	-	-
Fan Motor	Type				-	BLDC	BLDC	BLDC
	Output				W	(620x2)x1+(630x2)x1	(620x2)x1+(630x2)x1	(620x2)x1+(630x2)x1
					kW	(0.62x2)x1+(0.63x2)x1	(0.62x2)x1+(0.63x2)x1	(0.62x2)x1+(0.63x2)x1
3) Piping Connections	Liquid Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	5/8	5/8	5/8
	Gas Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	1-3/8	1-3/8	1-3/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD288S6M-5Y	VRD312S6M-5Y	VRD336S6M-5Y
	Outdoor unit module 1				VRD096S6M-5Y	VRD096S6M-5Y	VRD096S6M-5Y
	Outdoor unit module 2				VRD192S6M-5Y	VRD216S6M-5Y	VRD240S6M-5Y
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			1-1/8	1-1/8	1-1/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	36.1	39.9	39.9
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	64	65	67
			Heating	dB(A)	67	68	69
	6) Sound Power Level		Cooling	dB(A)	86	86	87
External Dimension	Net Weight			lbs	564x1+833x1	564x1+851x1	564x1+851x1
	Shipping Weight			lbs	602x1+891x1	602x1+908x1	602x1+908x1
	Net Dimensions		W x H x D	mm	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1
				in	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1
	Shipping Dimensions		W x H x D	mm	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1
				in	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name						VRD360S6M-5Y	VRD384S6M-5Y	VRD408S6M-5Y
	Outdoor unit module 1					VRD120S6M-5Y	VRD192S6M-5Y	VRD192S6M-5Y
	Outdoor unit module 2					VRD240S6M-5Y	VRD192S6M-5Y	VRD216S6M-5Y
	Outdoor unit module 3					-	-	-
Power Supply					Φ | # | 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	30	32	34
	Capacity	Cooling	1) Nominal		Btu/h	360,000	384,000	408,000
			Rated		Btu/h	342,000	368,000	390,000
		Heating	1) Nominal		Btu/h	405,000	432,000	459,000
			Rated		Btu/h	387,000	412,000	438,000
Maximum number of connectable indoor units					EA	62	64	64
2) Total capacity of the connected Indoor Units		Min.			Btu/h	180,000	192,000	204,000
		Max.			Btu/h	468,000	499,200	530,400
Power	Current	MCA			A	108.8	120.0	124.0
		MOP			A	-	-	-
Efficiency	Cooling	EER		Ducted	Btu/h·W	9.65	9.60	9.20
				NonDucted	Btu/h·W	9.45	9.60	9.50
		IEER		Ducted	Btu/h·W	18.93	17.68	17.46
				NonDucted	Btu/h·W	21.86	19.47	19.26
				Mixed	Btu/h·W	20.40	18.58	18.36
	Heating	High COP(47F)		Ducted	W/W	3.40	3.30	3.30
				NonDucted	W/W	3.24	3.30	3.25
				Mixed	W/W	3.32	3.30	3.28
		Low COP(17F)		Ducted	W/W	2.30	2.35	2.35
				NonDucted	W/W	2.33	2.20	2.15
	Integrated Efficiency	SCHE		Ducted	Btu/h·W	19.38	18.72	18.24
				NonDucted	Btu/h·W	22.23	22.04	21.28
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	Model Name				-	(DS2BD7046EVAx2)x1 +(DS4BC5066EVAx2)x1	(DS4BC5066EVAx2)x2	(DS4BC5066EVAx2)x1 +(DS4BC5066EVAx2)x1
	Quantity				EA	2x1+2x1	2x2	2x1+2x1
	Type				-	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x2	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1
	Output				kW	(4.95x2)x1+(7.17x2)x1	(7.17x2)x2	(7.17x2)x1+(7.17x2)x1
	Oil	Type			-	POE	POE	POE
		Initial Charge			fl oz	(30.4x2)x1+(37.2x2)x1	(37.2x2)x2	(37.2x2)x1+(37.2x2)x1
Fan	Type				-	Propeller	Propeller	Propeller
	Discharge direction				-	Top discharge	Top discharge	Top discharge
	Quantity				EA	4	4	4
	Air Flow Rate				CFM	9,924x1+13,773x1	12,855x2	12,855x1+13,314x1
	External Static Pressure				Pa	-	-	-
Fan Motor	Type				-	BLDC	BLDC	BLDC
	Output				W	(620x2)x1+(630x2)x1	(630x2)x2	(630x2)x1+(630x2)x1
					kW	(0.62x2)x1+(0.63x2)x1	(0.63x2)x2	(0.63x2)x1+(0.63x2)x1
3) Piping Connections	Liquid Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	5/8	5/8	5/8
	Gas Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	1-3/8	1-3/8	1-3/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD360S6M-5Y	VRD384S6M-5Y	VRD408S6M-5Y
	Outdoor unit module 1				VRD120S6M-5Y	VRD192S6M-5Y	VRD192S6M-5Y
	Outdoor unit module 2				VRD240S6M-5Y	VRD192S6M-5Y	VRD216S6M-5Y
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			1-1/8	1-3/8	1-3/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	39.9	44.0	47.8
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	67	66	67
			Heating	dB(A)	69	69	70
	6) Sound Power Level		Cooling	dB(A)	87	88	88
External Dimension	Net Weight			lbs	564x1+851x1	833x2	833x1+851x1
	Shipping Weight			lbs	602x1+908x1	891x2	891x1+908x1
	Net Dimensions		W x H x D	mm	(1,295 x 1,695 x 7,65) x 1 +(1,860 x 1,695 x 7,65) x 1	(1,860 x 1,695 x 765) x 2	(1,860 x 1,695 x 765) x 2
				in	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1	(73-1/4 x 66-3/4 x 30-1/8) x 2	(73-1/4 x 66-3/4 x 30-1/8) x 2
	Shipping Dimensions		W x H x D	mm	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,88 7 x 829) x 1	(1,928 x 1,887 x 829) x 2	(1,928 x 1,887 x 829) x 2
				in	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1	(75-7/8 x 74-5/16 x 32-5/8) x 2	(75-7/8 x 74-5/16 x 32-5/8) x 2
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name						VRD432S6M-5Y	VRD456S6M-5Y
	Outdoor unit module 1					VRD120S6M-5Y	VRD120S6M-5Y
	Outdoor unit module 2					VRD120S6M-5Y	VRD144S6M-5Y
	Outdoor unit module 3					VRD192S6M-5Y	VRD192S6M-5Y
Power Supply					Φ | # | V | Hz	3 | 3 | 208-230 | 60	3 | 3 | 208-230 | 60
Mode					-	Heat Recovery	Heat Recovery
Performance	TON				TON	36	38
	Capacity	Cooling	1) Nominal		Btu/h	432,000	456,000
			Rated		Btu/h	412,000	436,000
		Heating	1) Nominal		Btu/h	486,000	513,000
			Rated		Btu/h	464,000	489,000
Maximum number of connectable indoor units					EA	64	64
2) Total capacity of the connected Indoor Units		Min.			Btu/h	216,000	228,000
		Max.			Btu/h	561,600	592,800
Power	Current	MCA			A	141.6	153.4
		MOP			A	-	-
Efficiency	Cooling	EER	Ducted		Btu/h·W	9.15	9.10
			NonDucted		Btu/h·W	8.85	9.10
		IEER	Ducted		Btu/h·W	17.84	17.00
			NonDucted		Btu/h·W	18.32	18.02
			Mixed		Btu/h·W	18.08	17.51
	Heating	High COP(47F)	Ducted		W/W	3.25	3.20
			NonDucted		W/W	3.30	3.29
			Mixed		W/W	3.28	3.25
		Low COP(17F)	Ducted		W/W	2.35	2.25
			NonDucted		W/W	2.17	2.10
	Integrated Efficiency	SCHE	Ducted		Btu/h·W	18.62	18.53
			NonDucted		Btu/h·W	21.28	21.19
Casing	Material	Body			-	GI Steel Plate	GI Steel Plate
		Base			-	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type				-	Fin & Tube	Fin & Tube
	Material	Fin			-	Al	Al
		Tube			-	Cu	Cu
	Fin Treatment				-	Anti-corrosion	Anti-corrosion
Compressor	Model Name				-	(DS2BD7046EVAx2)x2 +(DS4BC5066EVAx2)x1	(DS2BD7046EVAx2)x2 +(DS4BC5066EVAx2)x1
	Quantity				EA	2x2+2x1	2x1+2x1+2x1
	Type				-	(SCROLL_INVERTERx2)x2 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2) x1 +(SCROLL_INVERTERx2)x1
	Output				kW	(4.95x2)x2+(7.17x2)x1	(4.95x2)x1+(4.95x2)x1+(7.17x2)x1
	Oil	Type			-	POE	POE
		Initial Charge			fl oz	(30.4x2)x2+(37.2x2)x1	(30.4x2)x1+(30.4x2)x1+(37.2x2)x1
Fan	Type				-	Propeller	Propeller
	Discharge direction				-	Top discharge	Top discharge
	Quantity				EA	6	6
	Air Flow Rate				CFM	9,924x2+12,855x1	9,924x1+10,171x1+12,855x1
	External Static Pressure				Pa	-	-
Fan Motor	Type				-	BLDC	BLDC
	Output				W	(620x2)x2+(630x2)x1	(620x2)x1+(620x2)x1+(630x2)x1
					kW	(0.62x2)x2+(0.63x2)x1	(0.62x2)x1+(0.62x2)x1+(0.63x2)x1
3) Piping Connections	Liquid Pipe	Type			-	Welding	Welding
		Diameter			in	3/4	3/4
	Gas Pipe	Type			-	Welding	Welding
		Diameter			in	1-5/8	1-5/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (208~230V)

Model Name					VRD432S6M-5Y	VRD456S6M-5Y
	Outdoor unit module 1				VRD120S6M-5Y	VRD120S6M-5Y
	Outdoor unit module 2				VRD120S6M-5Y	VRD144S6M-5Y
	Outdoor unit module 3				VRD192S6M-5Y	VRD192S6M-5Y
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding
		Diameter			1-3/8	1-3/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18
		Remark		-	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32
	Factory Charge			lbs	50.2	54.6
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	65	65
			Heating	dB(A)	68	68
	6) Sound Power Level		Cooling	dB(A)	87	87
External Dimension	Net Weight			lbs	564x2+833x1	564x1+604x1+833x1
	Shipping Weight			lbs	602x2+891x1	602x1+642x1+891x1
	Net Dimensions		W x H x D	mm	(1,295 x 1,695 x 765) x 2 +(1,860 x 1,695 x 765) x 1	(1,295 x 1,695 x 765) x 2 +(1,860 x 1,695 x 765) x 1
				in	(51 x 66-3/4 x 30-1/8) x 2 +(73-1/4 x 66-3/4 x 30-1/8) x 1	(51 x 66-3/4 x 30-1/8) x 2 +(73-1/4 x 66-3/4 x 30-1/8) x 1
	Shipping Dimensions		W x H x D	mm	(1,363 x 1,887 x 829) x 2 +(1,928 x 1,887 x 829) x 1	(1,363 x 1,887 x 829) x 2 +(1,928 x 1,887 x 829) x 1
				in	(53-11/16 x 74-5/16 x 32-5/8) x 2 +(75-7/8 x 74-5/16x 32-5/8) x 1	(53-11/16 x 74-5/16 x 32-5/8) x 2 +(75-7/8 x 74-5/16x 32-5/8) x 1
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD072S6M-5G	VRD096S6M-5G	VRD120S6M-5G
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
Power Supply				Φ | # | 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	Cooling	1) Nominal	Btu/h	72,000	96,000	120,000
			Rated	Btu/h	69,000	92,000	114,000
		Heating	1) Nominal	Btu/h	81,000	108,000	135,000
			Rated	Btu/h	77,000	103,000	129,000
Maximum number of connectable indoor units				EA	12	16	20
2) 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	15.0	18.0	19.4
		MOP		A	20	20	25
Efficiency	Cooling	EER	Ducted	Btu/h·W	11.60	12.20	11.70
			NonDucted	Btu/h·W	11.00	12.15	11.15
		IEER	Ducted	Btu/h·W	23.30	24.10	22.60
			NonDucted	Btu/h·W	24.18	27.98	25.92
			Mixed	Btu/h·W	23.74	26.04	24.26
	Heating	High COP(47F)	Ducted	W/W	3.90	3.94	3.80
			NonDucted	W/W	3.93	4.21	3.85
			Mixed	W/W	3.92	4.08	3.83
		Low COP(17F)	Ducted	W/W	2.84	2.75	2.80
			NonDucted	W/W	2.70	2.92	2.81
	Integrated Efficiency	SCHE	Ducted	Btu/h·W	25.08	25.84	25.18
			NonDucted	Btu/h·W	27.17	30.50	29.55
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	Model Name			-	DS2BD7046FVA	DS2BD7046FVA	DS2BD7046FVA
	Quantity			EA	1	2	2
	Type			-	SCROLL_INVERTER	SCROLL_INVERTER	SCROLL_INVERTER
	Output			kW	4.95	4.95	4.95
	Oil	Type		-	POE	POE	POE
		Initial Charge		fl oz	30.4	30.4	30.4
Fan	Type			-	Propeller	Propeller	Propeller
	Discharge direction			-	Top discharge	Top discharge	Top discharge
	Quantity			EA	1	2	2
	Air Flow Rate			CFM	5,580	9,924	9,924
	External Static Pressure			Pa	110	110	110
Fan Motor	Type			-	BLDC	BLDC	BLDC
	Output			W	630	620	620
				kW	0.63	0.62	0.62
3) Piping Connections	Liquid Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	3/8	3/8	1/2
	Gas Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	3/4	7/8	7/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD072S6M-5G	VRD096S6M-5G	VRD120S6M-5G
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			5/8	3/4	3/4
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	11.0	14.1	14.1
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	54	57	57
			Heating	dB(A)	58	59	60
	6) Sound Power Level		Cooling	dB(A)	75	79	79
External Dimension	Net Weight			lbs	408	582	582
	Shipping Weight			lbs	439	619	619
	Net Dimensions		W x H x D	mm	930 x 1,695 x 765	1,295 x 1,695 x 765	1,295 x 1,695 x 765
				in	36-5/8 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		W x H x D	mm	998 x 1,887 x 829	1,363 x 1,887 x 829	1,363 x 1,887 x 829
				in	39-5/16 x 74-5/16 x 32-5/8	53-11/16 x 74-5/16 x 32-5/8	53-11/16 x 74-5/16 x 32-5/8
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD144S6M-5G	VRD168S6M-5G	VRD192S6M-5G
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
Power Supply				Φ | # | 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	Cooling	1) Nominal	Btu/h	144,000	168,000	192,000
			Rated	Btu/h	138,000	160,000	184,000
		Heating	1) Nominal	Btu/h	162,000	189,000	216,000
			Rated	Btu/h	154,000	180,000	206,000
Maximum number of connectable indoor units				EA	25	29	33
2) 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	26.2	29.0	34.0
		MOP		A	35	35	40
Efficiency	Cooling	EER	Ducted	Btu/h·W	11.80	10.60	11.00
			NonDucted	Btu/h·W	11.30	10.15	10.20
		IEER	Ducted	Btu/h·W	22.19	21.19	22.10
			NonDucted	Btu/h·W	25.16	22.91	22.50
			Mixed	Btu/h·W	23.68	22.05	22.30
	Heating	High COP(47F)	Ducted	W/W	3.68	3.67	3.55
			NonDucted	W/W	3.65	3.55	3.20
			Mixed	W/W	3.67	3.61	3.38
		Low COP(17F)	Ducted	W/W	2.70	2.56	2.65
			NonDucted	W/W	2.69	2.51	2.22
	Integrated Efficiency	SCHE	Ducted	Btu/h·W	24.70	24.23	24.04
			NonDucted	Btu/h·W	26.41	25.94	25.65
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	Model Name			-	DS2BD7046FVA	DS4BC7066FVA	DS4BC7066FVA
	Quantity			EA	2	2	2
	Type			-	SCROLL_INVERTER	SCROLL_INVERTER	SCROLL_INVERTER
	Output			kW	4.95	7.17	7.17
	Oil	Type		-	POE	POE	POE
		Initial Charge		fl oz	30.4	37.2	37.2
Fan	Type			-	Propeller	Propeller	Propeller
	Discharge direction			-	Top discharge	Top discharge	Top discharge
	Quantity			EA	2	2	2
	Air Flow Rate			CFM	10,171	10,665	12,855
	External Static Pressure			Pa	110	110	80
Fan Motor	Type			-	BLDC	BLDC	BLDC
	Output			W	620	620	630
				kW	0.62	0.62	0.63
3) Piping Connections	Liquid Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1/2	1/2	1/2
	Gas Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1-1/8	1-1/8	1-1/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD144S6M-5G	VRD168S6M-5G	VRD192S6M-5G
	Outdoor unit module 1				-	-	-
	Outdoor unit module 2				-	-	-
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			7/8	7/8	7/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	18.5	18.5	22.0
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	60	60	63
			Heating	dB(A)	63	63	66
	6) Sound Power Level		Cooling	dB(A)	81	83	85
External Dimension	Net Weight			lbs	622	675	844
	Shipping Weight			lbs	659	712	902
	Net Dimensions		W x H x D	mm	1,295 x 1,695 x 765	1,295 x 1,695 x 765	1,860 x 1,695 x 765
				in	51 x 66-3/4 x 30-1/8	51 x 66-3/4 x 30-1/8	73-1/4 x 66-3/4 x 30-1/8
	Shipping Dimensions		W x H x D	mm	1,363 x 1,887 x 829	1,363 x 1,887 x 829	1,928 x 1,887 x 829
				in	53-11/16 x 74-5/16 x 32-5/8	53-11/16 x 74-5/16 x 32-5/8	75-7/8 x 74-5/16 x 32-5/8
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD216S6M-5G	VRD240S6M-5G	VRD264S6M-5G
	Outdoor unit module 1				-	-	VRD096S6M-5G
	Outdoor unit module 2				-	-	VRD168S6M-5G
	Outdoor unit module 3				-	-	-
Power Supply				Φ | # | 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	Cooling	1) Nominal	Btu/h	216,000	240,000	264,000
			Rated	Btu/h	206,000	228,000	252,000
		Heating	1) Nominal	Btu/h	243,000	270,000	297,000
			Rated	Btu/h	232,000	258,000	283,000
Maximum number of connectable indoor units				EA	37	41	45
2) 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	38.0	40.0	47.0
		MOP		A	50	50	-
Efficiency	Cooling	EER	Ducted	Btu/h·W	10.15	9.95	10.85
			NonDucted	Btu/h·W	10.10	9.90	10.55
		IEER	Ducted	Btu/h·W	20.60	20.30	19.18
			NonDucted	Btu/h·W	21.50	21.44	21.76
			Mixed	Btu/h·W	21.05	20.87	20.47
	Heating	High COP(47F)	Ducted	W/W	3.45	3.25	3.61
			NonDucted	W/W	3.20	3.24	3.49
			Mixed	W/W	3.33	3.25	3.55
		Low COP(17F)	Ducted	W/W	2.60	2.45	2.41
			NonDucted	W/W	2.18	2.39	2.44
	Integrated Efficiency	SCHE	Ducted	Btu/h·W	22.71	22.52	23.56
			NonDucted	Btu/h·W	25.08	25.08	24.42
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	Model Name			-	DS4BC7066FVA	DS4BC7066FVA	(DS2BD7046FVAx2)x1 +(DS4BC7066FVAx2)x1
	Quantity			EA	2	2	2x1+2x1
	Type			-	SCROLL_INVERTER	SCROLL_INVERTER	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1
	Output			kW	7.17	7.17	(4.95x2)x1+(7.17x2)x1
	Oil	Type		-	POE	POE	POE
		Initial Charge		fl oz	37.2	37.2	(30.4x2)x1+(37.2x2)x1
Fan	Type			-	Propeller	Propeller	Propeller
	Discharge direction			-	Top discharge	Top discharge	Top discharge
	Quantity			EA	2	2	4
	Air Flow Rate			CFM	13,314	13,773	9,924x1+10,665x1
	External Static Pressure			Pa	80	80	-
Fan Motor	Type			-	BLDC	BLDC	BLDC
	Output			W	630	630	(620x2)x1+(620x2)x1
				kW	0.63	0.63	(0.62x2)x1+(0.62x2)x1
3) Piping Connections	Liquid Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1/2	1/2	5/8
	Gas Pipe	Type		-	Welding	Welding	Welding
		Diameter		in	1-1/8	1-1/8	1-1/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD216S6M-5G	VRD240S6M-5G	VRD264S6M-5G
	Outdoor unit module 1				-	-	VRD096S6M-5G
	Outdoor unit module 2				-	-	VRD168S6M-5G
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			7/8	1-1/8	1-1/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	25.8	25.8	32.6
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	64	66	62
			Heating	dB(A)	67	68	64
	6) Sound Power Level		Cooling	dB(A)	85	86.5	84
External Dimension	Net Weight			lbs	862	862	582x1+675x1
	Shipping Weight			lbs	919	919	619x1+712x1
	Net Dimensions		W x H x D	mm	1,860 x 1,695 x 765	1,860 x 1,695 x 765	(1,295 x 1,695 x 765) x 2
				in	73-1/4 x 66-3/4 x 30-1/8	73-1/4 x 66-3/4 x 30-1/8	(51 x 66-3/4 x 30-1/8) x 2
	Shipping Dimensions		W x H x D	mm	1,928 x 1,887 x 829	1,928 x 1,887 x 829	(1,363 x 1,887 x 829) x 2
				in	75-7/8 x 74-5/16 x 32-5/8	75-7/8 x 74-5/16 x 32-5/8	(53-11/16 x 74-5/16 x 32-5/8) x 2
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name						VRD288S6M-5G	VRD312S6M-5G	VRD336S6M-5G
	Outdoor unit module 1					VRD096S6M-5G	VRD096S6M-5G	VRD096S6M-5G
	Outdoor unit module 2					VRD192S6M-5G	VRD216S6M-5G	VRD240S6M-5G
	Outdoor unit module 3					-	-	-
Power Supply					Φ | # | V | Hz	3 | 3 | 460 | 60	3 | 3 | 460 | 60	3 | 3 | 460 | 60
Mode					-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON				TON	24	26	28
	Capacity	Cooling	1) Nominal		Btu/h	288,000	312,000	336,000
			Rated		Btu/h	276,000	298,000	320,000
		Heating	1) Nominal		Btu/h	324,000	351,000	378,000
			Rated		Btu/h	309,000	335,000	361,000
Maximum number of connectable indoor units					EA	49	53	57
2) Total capacity of the connected Indoor Units		Min.			Btu/h	144,000	156,000	168,000
		Max.			Btu/h	374,400	405,600	436,800
Power	Current	MCA			A	52.0	56.0	58.0
		MOP			A	-	-	-
Efficiency	Cooling	EER		Ducted	Btu/h·W	10.75	10.45	10.20
				NonDucted	Btu/h·W	10.25	9.75	9.65
		IEER		Ducted	Btu/h·W	20.04	19.62	19.42
				NonDucted	Btu/h·W	22.70	21.15	22.05
				Mixed	Btu/h·W	21.37	20.39	20.74
	Heating	High COP(47F)		Ducted	W/W	3.55	3.50	3.45
				NonDucted	W/W	3.33	3.31	3.30
				Mixed	W/W	3.44	3.41	3.38
		Low COP(17F)		Ducted	W/W	2.41	2.36	2.31
				NonDucted	W/W	2.26	2.32	2.46
	Integrated Efficiency	SCHE		Ducted	Btu/h·W	22.52	20.14	19.67
				NonDucted	Btu/h·W	23.28	23.18	22.42
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	Model Name				-	(DS2BD7046FVAx2)x1 +(DS4BC7066FVAx2)x1	(DS2BD7046FVAx2)x1 +(DS4BC7066FVAx2)x1	(DS2BD7046FVAx2)x1 +(DS4BC7066FVAx2)x1
	Quantity				EA	2x1+2x1	2x1+2x1	2x1+2x1
	Type				-	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1
	Output				kW	(4.95x2)x1+(7.17x2)x1	(4.95x2)x1+(7.17x2)x1	(4.95x2)x1+(7.17x2)x1
	Oil	Type			-	POE	POE	POE
		Initial Charge			fl oz	(30.4x2)x1+(37.2x2)x1	(30.4x2)x1+(37.2x2)x1	(30.4x2)x1+(37.2x2)x1
Fan	Type				-	Propeller	Propeller	Propeller
	Discharge direction				-	Top discharge	Top discharge	Top discharge
	Quantity				EA	4	4	4
	Air Flow Rate				CFM	9,924x1+12,855x1	9,924x1+13,314x1	9,924x1+13,773x1
	External Static Pressure				Pa	-	-	-
Fan Motor	Type				-	BLDC	BLDC	BLDC
	Output				W	(620x2)x1+(630x2)x1	(620x2)x1+(630x2)x1	(620x2)x1+(630x2)x1
					kW	(0.62x2)x1+(0.63x2)x1	(0.62x2)x1+(0.63x2)x1	(0.62x2)x1+(0.63x2)x1
3) Piping Connections	Liquid Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	5/8	5/8	5/8
	Gas Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	1-3/8	1-3/8	1-3/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD288S6M-5G	VRD312S6M-5G	VRD336S6M-5G
	Outdoor unit module 1				VRD096S6M-5G	VRD096S6M-5G	VRD096S6M-5G
	Outdoor unit module 2				VRD192S6M-5G	VRD216S6M-5G	VRD240S6M-5G
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			1-1/8	1-1/8	1-1/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	36.1	39.9	39.9
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	64	65	67
			Heating	dB(A)	67	68	69
	6) Sound Power Level		Cooling	dB(A)	86	86	87
External Dimension	Net Weight			lbs	582x1+844x1	582x1+862x1	582x1+862x1
	Shipping Weight			lbs	619x1+902x1	619x1+919x1	619x1+919x1
	Net Dimensions		W x H x D	mm	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1
				in	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1
	Shipping Dimensions		W x H x D	mm	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1
				in	(53-11/16 x 74-5/16 x 32-5/8 x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name						VRD336S6M-5G	VRD384S6M-5G	VRD408S6M-5G
	Outdoor unit module 1					VRD120S6M-5G	VRD192S6M-5G	VRD192S6M-5G
	Outdoor unit module 2					VRD240S6M-5G	VRD192S6M-5G	VRD216S6M-5G
	Outdoor unit module 3					-	-	-
Power Supply					Φ | # | V | Hz	3 | 3 | 460 | 60	3 | 3 | 460 | 60	3 | 3 | 460 | 60
Mode					-	Heat Recovery	Heat Recovery	Heat Recovery
Performance	TON				TON	30	32	34
	Capacity	Cooling	1) Nominal		Btu/h	360,000	384,000	408,000
			Rated		Btu/h	342,000	368,000	390,000
		Heating	1) Nominal		Btu/h	405,000	432,000	459,000
			Rated		Btu/h	387,000	412,000	438,000
Maximum number of connectable indoor units					EA	61	66	70
2) Total capacity of the connected Indoor Units		Min.			Btu/h	180,000	192,000	204,000
		Max.			Btu/h	468,000	499,200	530,400
Power	Current	MCA			A	59.4	68.0	72.0
		MOP			A	-	-	-
Efficiency	Cooling	EER		Ducted	Btu/h·W	9.65	9.60	9.20
				NonDucted	Btu/h·W	9.45	9.60	9.50
		IEER		Ducted	Btu/h·W	18.93	17.68	17.46
				NonDucted	Btu/h·W	21.86	19.47	19.26
				Mixed	Btu/h·W	20.40	18.58	18.36
	Heating	High COP(47F)		Ducted	W/W	3.40	3.30	3.30
				NonDucted	W/W	3.24	3.30	3.25
				Mixed	W/W	3.32	3.30	3.28
		Low COP(17F)		Ducted	W/W	2.30	2.35	2.35
				NonDucted	W/W	2.33	2.20	2.15
	Integrated Efficiency	SCHE		Ducted	Btu/h·W	19.38	18.72	18.24
				NonDucted	Btu/h·W	22.23	22.04	21.28
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	Model Name				-	(DS2BD7046FVAx2)x1 +(DS4BC7066FVAx2)x1	(DS4BC7066FVAx2)x2	(DS4BC7066FVAx2)x1 +(DS4BC7066FVAx2)x1
	Quantity				EA	2x1+2x1	2x2	2x1+2x1
	Type				-	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x2	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2)x1
	Output				kW	(4.95x2)x1+(7.17x2)x1	(7.17x2)x2	(7.17x2)x1+(7.17x2)x1
	Oil	Type			-	POE	POE	POE
		Initial Charge			fl oz	(30.4x2)x1+(37.2x2)x1	(37.2x2)x2	(37.2x2)x1+(37.2x2)x1
Fan	Type				-	Propeller	Propeller	Propeller
	Discharge direction				-	Top discharge	Top discharge	Top discharge
	Quantity				EA	4	4	4
	Air Flow Rate				CFM	9,924x1+13,773x1	12,855x2	12,855x1+13,314x1
	External Static Pressure				Pa	-	-	-
Fan Motor	Type				-	BLDC	BLDC	BLDC
	Output				W	(620x2)x1+(630x2)x1	(630x2)x2	(630x2)x1+(630x2)x1
					kW	(0.62x2)x1+(0.63x2)x1	(0.63x2)x2	(0.63x2)x1+(0.63x2)x1
3) Piping Connections	Liquid Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	5/8	5/8	5/8
	Gas Pipe	Type			-	Welding	Welding	Welding
		Diameter			in	1-3/8	1-3/8	1-3/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD360S6M-5G	VRD384S6M-5G	VRD408S6M-5G
	Outdoor unit module 1				VRD120S6M-5G	VRD192S6M-5G	VRD192S6M-5G
	Outdoor unit module 2				VRD240S6M-5G	VRD192S6M-5G	VRD216S6M-5G
	Outdoor unit module 3				-	-	-
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding	Welding
		Diameter			1-1/8	1-3/8	1-3/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18	18
		Remark		-	F1, F2	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32	R32
	Factory Charge			lbs	39.9	44.0	47.8
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	67	66	67
			Heating	dB(A)	69	69	70
	6) Sound Power Level		Cooling	dB(A)	87	88	88
External Dimension	Net Weight			lbs	582x1+862x1	844x2	844x1+862x1
	Shipping Weight			lbs	619x1+919x1	902x2	902x1+919x1
	Net Dimensions		W x H x D	mm	(1,295 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1	(1,860 x 1,695 x 765) x 2	(1,860 x 1,695 x 765) x 1 +(1,860 x 1,695 x 765) x 1
				in	(51 x 66-3/4 x 30-1/8) x 1 +(73-1/4x 66-3/4 x 30-1/8) x 1	(73-1/4 x 66-3/4 x 30-1/8) x 2	(73-1/4 x 66-3/4 x 30-1/8) x 1 +(73-1/4 x 66-3/4 x 30-1/8) x 1
	Shipping Dimensions		W x H x D	mm	(1,363 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1	(1,928 x 1,887 x 829) x 2	(1,928 x 1,887 x 829) x 1 +(1,928 x 1,887 x 829) x 1
				in	(53-11/16 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1	(75-7/8 x 74-5/16 x 32-5/8) x 2	(75-7/8 x 74-5/16 x 32-5/8) x 1 +(75-7/8 x 74-5/16 x 32-5/8) x 1
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name						VRD432S6M-5G	VRD456S6M-5G
	Outdoor unit module 1					VRD120S6M-5G	VRD120S6M-5G
	Outdoor unit module 2					VRD120S6M-5G	VRD144S6M-5G
	Outdoor unit module 3					VRD192S6M-5G	VRD192S6M-5G
Power Supply					Φ | # | V | Hz	3 | 3 | 460 | 60	3 | 3 | 460 | 60
Mode					-	Heat Recovery	Heat Recovery
Performance	TON				TON	36	38
	Capacity	Cooling	1) Nominal		Btu/h	432,000	456,000
			Rated		Btu/h	412,000	436,000
		Heating	1) Nominal		Btu/h	486,000	513,000
			Rated		Btu/h	464,000	489,000
Maximum number of connectable indoor units					EA	73	78
2) Total capacity of the connected Indoor Units		Min.			Btu/h	216,000	228,000
		Max.			Btu/h	561,600	592,800
Power	Current	MCA			A	72.8	79.6
		MOP			A	-	-
Efficiency	Cooling	EER	Ducted		Btu/h·W	9.15	9.10
			NonDucted		Btu/h·W	8.85	9.10
		IEER	Ducted		Btu/h·W	17.84	17.00
			NonDucted		Btu/h·W	18.32	18.02
			Mixed		Btu/h·W	18.08	17.51
	Heating	High COP(47F)	Ducted		W/W	3.25	3.20
			NonDucted		W/W	3.30	3.29
			Mixed		W/W	3.28	3.25
		Low COP(17F)	Ducted		W/W	2.35	2.25
			NonDucted		W/W	2.17	2.10
	Integrated Efficiency	SCHE	Ducted		Btu/h·W	18.62	18.53
			NonDucted		Btu/h·W	21.28	21.19
Casing	Material	Body			-	GI Steel Plate	GI Steel Plate
		Base			-	GI Steel Plate	GI Steel Plate
Heat Exchanger	Type				-	Fin & Tube	Fin & Tube
	Material	Fin			-	Al	Al
		Tube			-	Cu	Cu
	Fin Treatment				-	Anti-corrosion	Anti-corrosion
Compressor	Model Name				-	(DS2BD7046FVAx2)x2 +(DS4BC7066FVAx2)x1	(DS2BD7046FVAx2)x1 +(DS2BD7046FVAx2)x1 +(DS4BC7066FVAx2)x1
	Quantity				EA	2x2+2x1	2x1+2x1+2x1
	Type				-	(SCROLL_INVERTERx2)x2 +(SCROLL_INVERTERx2)x1	(SCROLL_INVERTERx2)x1 +(SCROLL_INVERTERx2) x1 +(SCROLL_INVERTERx2)x1
	Output				kW	(4.95x2)x2+(7.17x2)x1	(4.95x2)x1+(4.95x2)x1+(7.17x2)x1
	Oil	Type			-	POE	POE
		Initial Charge			fl oz	(30.4x2)x2+(37.2x2)x1	(30.4x2)x1+(30.4x2)x1+(37.2x2)x1
Fan	Type				-	Propeller	Propeller
	Discharge direction				-	Top discharge	Top discharge
	Quantity				EA	6	6
	Air Flow Rate				CFM	9,924x2+12,855x1	9,924x1+10,171x1+12,855x1
	External Static Pressure				Pa	-	-
Fan Motor	Type				-	BLDC	BLDC
	Output				W	(620x2)x2+(630x2)x1	(620x2)x1+(620x2)x1+(630x2)x1
					kW	(0.62x2)x2+(0.63x2)x1	(0.62x2)x1+(0.62x2)x1+(0.63x2)x1
3) Piping Connections	Liquid Pipe	Type			-	Welding	Welding
		Diameter			in	3/4	3/4
	Gas Pipe	Type			-	Welding	Welding
		Diameter			in	1-5/8	1-5/8

2. Specification

VRD High Efficiency Heat Recovery Outdoor Units (460V)

Model Name					VRD432S6M-5G	VRD456S6M-5G
	Outdoor unit module 1				VRD120S6M-5G	VRD120S6M-5G
	Outdoor unit module 2				VRD120S6M-5G	VRD144S6M-5G
	Outdoor unit module 3				VRD192S6M-5G	VRD192S6M-5G
3) Piping Connections	High Pressure Gas Pipe	Type			Welding	Welding
		Diameter			1-3/8	1-3/8
	Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes
	Total piping length (System)		Max.	ft	3,281	3,281
	Piping length (1st Branch-IDU)		Max.	ft	295	295
	Piping length (ODU-IDU)		Max.	ft	656	656
	Piping length (ODU-IDU)	Equivalent	Max.	ft	722	722
	Level difference (IDU-IDU)		Max.	ft	131	131
	Level difference (ODU in highest position)		Max.	ft	361	361
	Level difference (IDU in highest position)		Max.	ft	361	361
Wiring Connection	Transmission Cable	Min.		AWG	18	18
		Remark		-	F1, F2	F1, F2
Refrigerant	4) Type			-	R32	R32
	Factory Charge			lbs	50.2	54.6
Sound Level	5) Sound Pressure Level		Cooling	dB(A)	65	65
			Heating	dB(A)	68	68
	6) Sound Power Level		Cooling	dB(A)	87	87
External Dimension	Net Weight			lbs	582x2+844x1	582x1+622x1+844x1
	Shipping Weight			lbs	619x2+902x1	619x1+659x1+902x1
	Net Dimensions		W x H x D	mm	(1,295 x 1,695 x 765) x 2 +(1,860 x 1,695 x 765) x 1	(1,295 x 1,695 x 765) x 2 +(1,860 x 1,695 x 765) x 1
				in	(51 x 66-3/4 x 30-1/8) x 2 +(73-1/4 x 66-3/4 x 30-1/8) x 1	(51 x 66-3/4 x 30-1/8) x 1 +(51 x 66-3/4 x 30-1/8) x1 +(73-1/4 x 66-3/4 x 30-1/8) x 1
	Shipping Dimensions		W x H x D	mm	(1,363 x 1,887 x 829) x 2 +(1,928 x 1,887 x 829) x 1	(1,363 x 1,887 x 829) x 2 +(1,928 x 1,887 x 829) x 1
				in	(53-11/16 x 74-5/16 x 32-5/8) x 2 +(75-7/8 x 74-5/16x 32-5/8) x 1	(53-11/16 x 74-5/16 x 32-5/8) x 2 +(75-7/8 x 74-5/16 x 32-5/8) x 1
7) Operating Temp. Range	Cooling		Min. ~ Max.	°F	5 ~ 126	5 ~ 126
	Heating		Min. ~ Max.	°F	-22 ~ 75	-22 ~ 75

NOTE

- Specification may be subject to change without prior notice.
  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. VRF design software supports designing over 130% based on system design. Refer to the "Design Procedure & Combination Ratio" section of this document for details
  3) If 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 R32 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 combination 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.

3. Electric Characteristics

VRD High Efficiency Heat Recovery Outdoor Units (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	VRD072S6M-5Y	60	208~230	4.6	-	28.0	35.0	-	-	-	-	-	-	-	-
8	VRD096S6M-5Y	60	208~230	4.2	4.2	36.0	40.0	-	-	-	-	-	-	-	-
10	VRD120S6M-5Y	60	208~230	4.2	4.2	40.8	45.0	-	-	-	-	-	-	-	-
12	VRD144S6M-5Y	60	208~230	4.2	4.2	52.6	60.0	-	-	-	-	-	-	-	-
14	VRD168S6M-5Y	60	208~230	4.2	4.2	54.4	60.0	-	-	-	-	-	-	-	-
16	VRD192S6M-5Y	60	208~230	4.6	4.6	60.0	70.0	-	-	-	-	-	-	-	-
18	VRD216S6M-5Y	60	208~230	4.6	4.6	64.0	80.0	-	-	-	-	-	-	-	-
20	VRD240S6M-5Y	60	208~230	4.6	4.6	68.0	80.0	-	-	-	-	-	-	-	-
22	VRD264S6M-5Y	60	208~230	4.2	4.2	36.0	40.0	4.2	4.2	54.4	60.0	-	-	-	-
24	VRD288S6M-5Y	60	208~230	4.2	4.2	36.0	40.0	4.6	4.6	60.0	70.0	-	-	-	-
26	VRD312S6M-5Y	60	208~230	4.2	4.2	36.0	40.0	4.6	4.6	64.0	80.0	-	-	-	-
28	VRD336S6M-5Y	60	208~230	4.2	4.2	36.0	40.0	4.6	4.6	68.0	80.0	-	-	-	-
30	VRD360S6M-5Y	60	208~230	4.2	4.2	40.8	45.0	4.6	4.6	68.0	80.0	-	-	-	-
32	VRD384S6M-5Y	60	208~230	4.6	4.6	60.0	70.0	4.6	4.6	60.0	70.0	-	-	-	-
34	VRD408S6M-5Y	60	208~230	4.6	4.6	60.0	70.0	4.6	4.6	64.0	80.0	-	-	-	-
36	VRD432S6M-5Y	60	208~230	4.2	4.2	40.8	45.0	4.2	4.2	40.8	45.0	4.6	4.6	60.0	70.0
38	VRD456S6M-5Y	60	208~230	4.2	4.2	40.8	45.0	4.2	4.2	52.6	60.0	4.6	4.6	60.0	70.0

VRD High Efficiency Heat Recovery Outdoor Units (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	VRD072S6M-5G	60	460	2.3	-	15.0	20.0	-	-	-	-	-	-	-	
8	VRD096S6M-5G	60	460	2.1	2.1	18.0	20.0	-	-	-	-	-	-	-	-
10	VRD120S6M-5G	60	460	2.1	2.1	19.4	25.0	-	-	-	-	-	-	-	-
12	VRD144S6M-5G	60	460	2.1	2.1	26.2	35.0	-	-	-	-	-	-	-	-
14	VRD168S6M-5G	60	460	2.1	2.1	29.0	35.0	-	-	-	-	-	-	-	-
16	VRD192S6M-5G	60	460	2.3	2.3	34.0	40.0	-	-	-	-	-	-	-	-
18	VRD216S6M-5G	60	460	2.3	2.3	38.0	50.0	-	-	-	-	-	-	-	-
20	VRD240S6M-5G	60	460	2.3	2.3	40.0	50.0	-	-	-	-	-	-	-	-
22	VRD264S6M-5G	60	460	2.1	2.1	18.0	25.0	2.1	2.1	29.0	35.0	-	-	-	-
24	VRD288S6M-5G	60	460	2.1	2.1	18.0	25.0	2.3	2.3	34.0	40.0	-	-	-	-
26	VRD312S6M-5G	60	460	2.1	2.1	18.0	25.0	2.3	2.3	38.0	50.0	-	-	-	-
28	VRD336S6M-5G	60	460	2.1	2.1	18.0	25.0	2.3	2.3	40.0	50.0	-	-	-	-
30	VRD336S6M-5G	60	460	2.1	2.1	19.4	25.0	2.3	2.3	40.0	50.0	-	-	-	-
32	VRD384S6M-5G	60	460	2.3	2.3	34.0	50.0	2.3	2.3	34.0	40.0	-	-	-	-
34	VRD408S6M-5G	60	460	2.3	2.3	34.0	50.0	2.3	2.3	38.0	50.0	-	-	-	-
36	VRD432S6M-5G	60	460	2.1	2.1	19.4	25.0	2.1	2.1	19.4	25.0	2.3	2.3	34.0	40.0
38	VRD456S6M-5G	60	460	2.1	2.1	19.4	25.0	2.1	2.1	26.2	35.0	2.3	2.3	34.0	40.0

NOTE

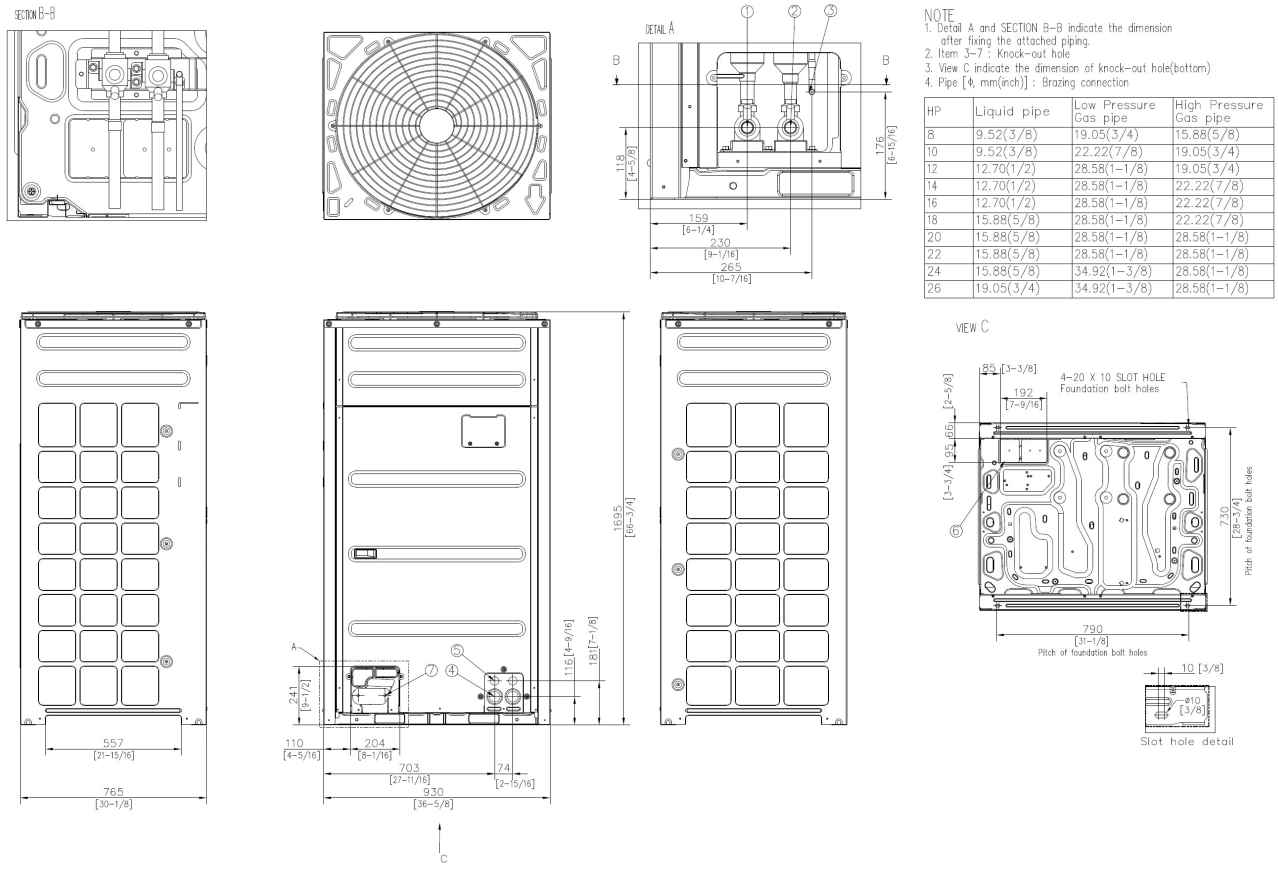
- MCA : Minimum circuit amperes (A)
- MOP : Maximum Overcurrent Protective Device (A)
- FLA : Full load amperes
- Select wire size based on the value of MCA

4. Dimensional Drawing

Outdoor unit

- VRD072S6M-5Y, VRD072S6M-5G

Unit: mm [inch]



NOTE
1. Detail A and SECTION B-B indicate the dimension after fixing the attached piping.
2. Item 3-7 : Knock-out hole
3. View C indicate the dimension of knock-out hole(bottom)
4. Pipe [ø, mm(inch)] : Brazing connection

HP	Liquid pipe	Low Pressure Gas pipe	High Pressure Gas pipe
8	9.52(3/8)	19.05(3/4)	15.88(5/8)
10	9.52(3/8)	22.22(7/8)	19.05(3/4)
12	12.70(1/2)	28.58(1-1/8)	19.05(3/4)
14	12.70(1/2)	28.58(1-1/8)	22.22(7/8)
16	12.70(1/2)	28.58(1-1/8)	22.22(7/8)
18	15.88(5/8)	28.58(1-1/8)	22.22(7/8)
20	15.88(5/8)	28.58(1-1/8)	28.58(1-1/8)
22	15.88(5/8)	28.58(1-1/8)	28.58(1-1/8)
24	15.88(5/8)	34.92(1-3/8)	28.58(1-1/8)
26	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)

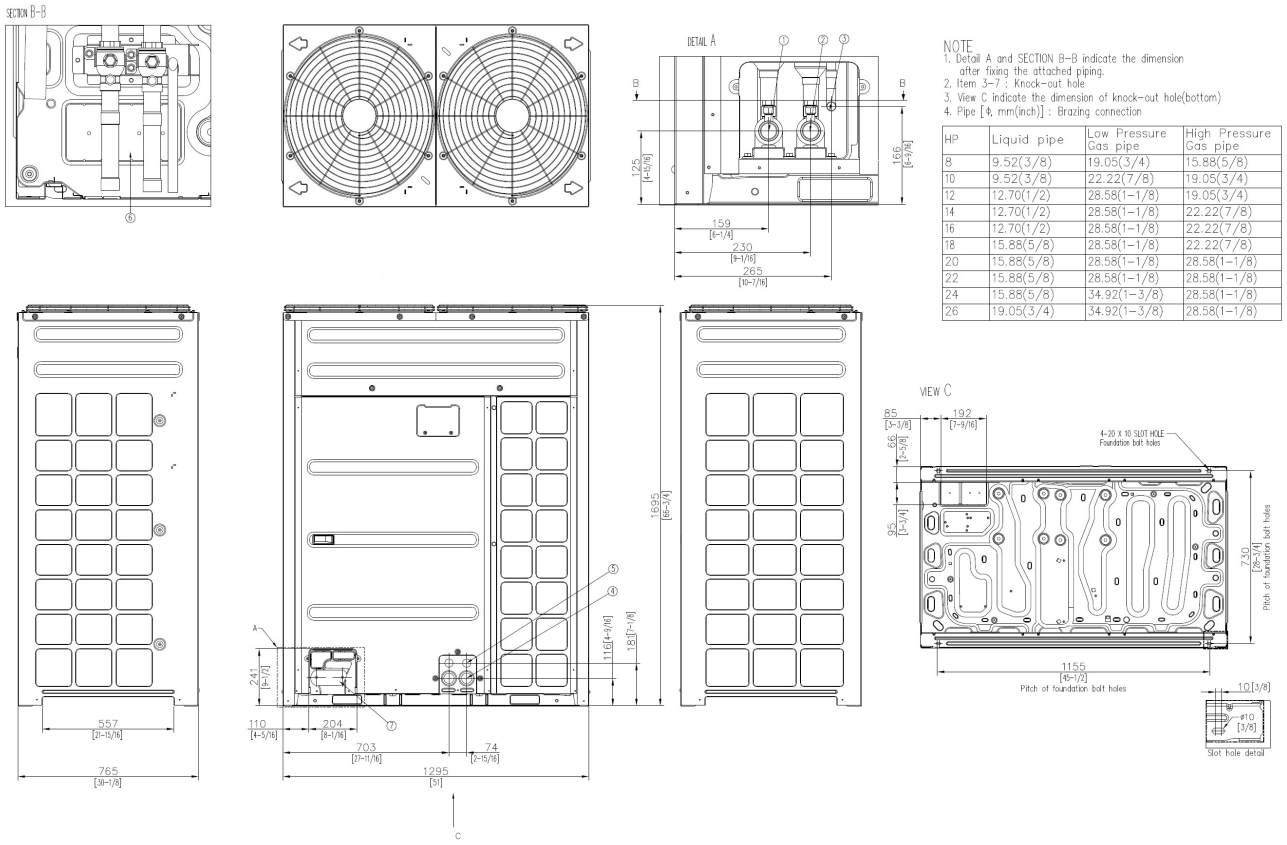
NO	Table of descriptions	Remark	NO	Table of descriptions	Remark
1	Low Pressure Gas Ref.pipe	See NOTE 4.	5	Communication wiring conduit	Ø34
2	High Pressure Ref.pipe	See NOTE 4.	6	Knock-out Hole for Ref.Piping (bottom)	
3	Liquid Ref.pipe	See NOTE 4.	7	Knock-out Hole for Ref.Piping (front)	
4	Power wiring conduit	Ø44			

4. Dimensional Drawing

Outdoor unit

- VRD096/120/144/168S6M-5Y, VRD096/120/144/168S6M-5G

Unit: mm [inch]



HP	Liquid pipe	Low Pressure Gas pipe	High Pressure Gas pipe
8	9.52(3/8)	19.05(3/4)	15.88(5/8)
10	9.52(3/8)	22.22(7/8)	19.05(3/4)
12	12.70(1/2)	28.58(1-1/8)	19.05(3/4)
14	12.70(1/2)	28.58(1-1/8)	22.22(7/8)
16	12.70(1/2)	28.58(1-1/8)	22.22(7/8)
18	15.88(5/8)	28.58(1-1/8)	22.22(7/8)
20	15.88(5/8)	28.58(1-1/8)	28.58(1-1/8)
22	15.88(5/8)	28.58(1-1/8)	28.58(1-1/8)
24	15.88(5/8)	34.92(1-3/8)	28.58(1-1/8)
26	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)

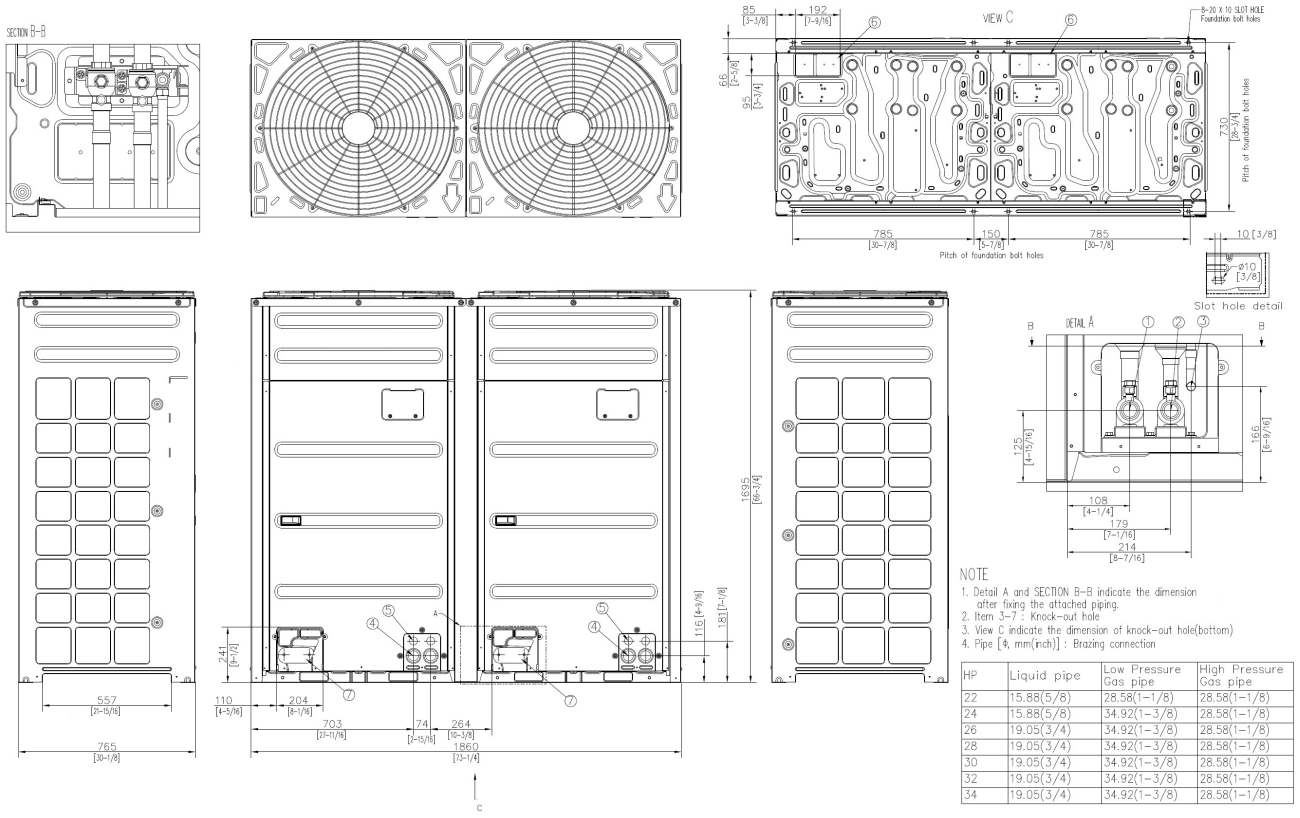
NO	Table of descriptions	Remark	NO	Table of descriptions	Remark
1	Low Pressure Gas Ref.pipe	See NOTE 4.	5	Communication wiring conduit	Ø34
2	High Pressure Ref.pipe	See NOTE 4.	6	Knock-out Hole for Ref.Piping (bottom)	
3	Liquid Ref.pipe	See NOTE 4.	7	Knock-out Hole for Ref.Piping (front)	
4	Power wiring conduit	Ø44			

4. Dimensional Drawing

Outdoor unit

- VRD192/216/240S6M-5Y, VRD192/216/240S6M-5G

Unit: mm [inch]



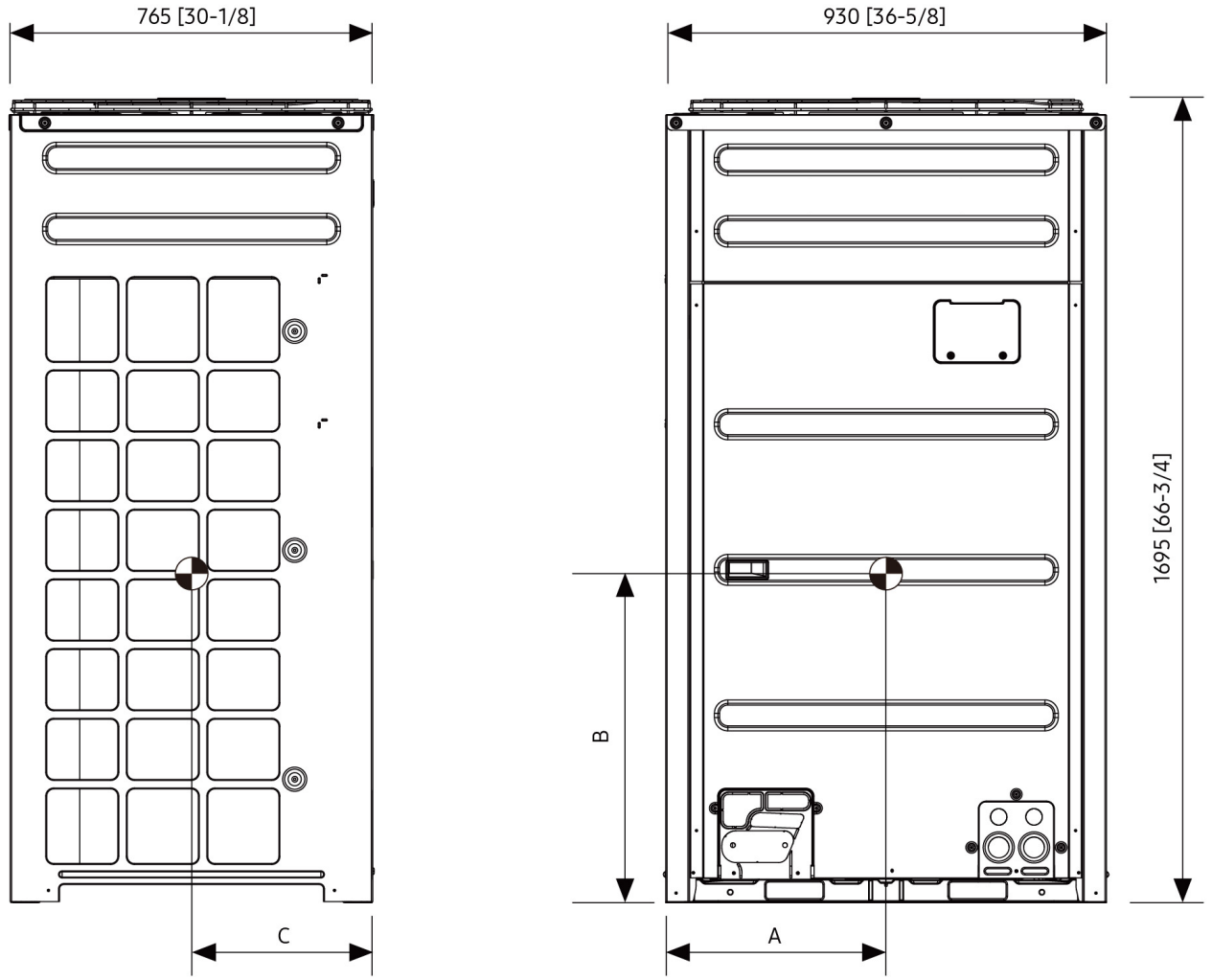
HP	Liquid pipe	Low Pressure Gas pipe	High Pressure Gas pipe
22	15.88(5/8)	28.58(1-1/8)	28.58(1-1/8)
24	15.88(5/8)	34.92(1-3/8)	28.58(1-1/8)
26	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)
28	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)
30	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)
32	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)
34	19.05(3/4)	34.92(1-3/8)	28.58(1-1/8)

NO	Table of descriptions	Remark	NO	Table of descriptions	Remark
1	Low Pressure Gas Ref.pipe	See NOTE 4.	5	Communication wiring conduit	Ø34
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			

5. Center of Gravity

Outdoor unit

Unit: mm (inches)

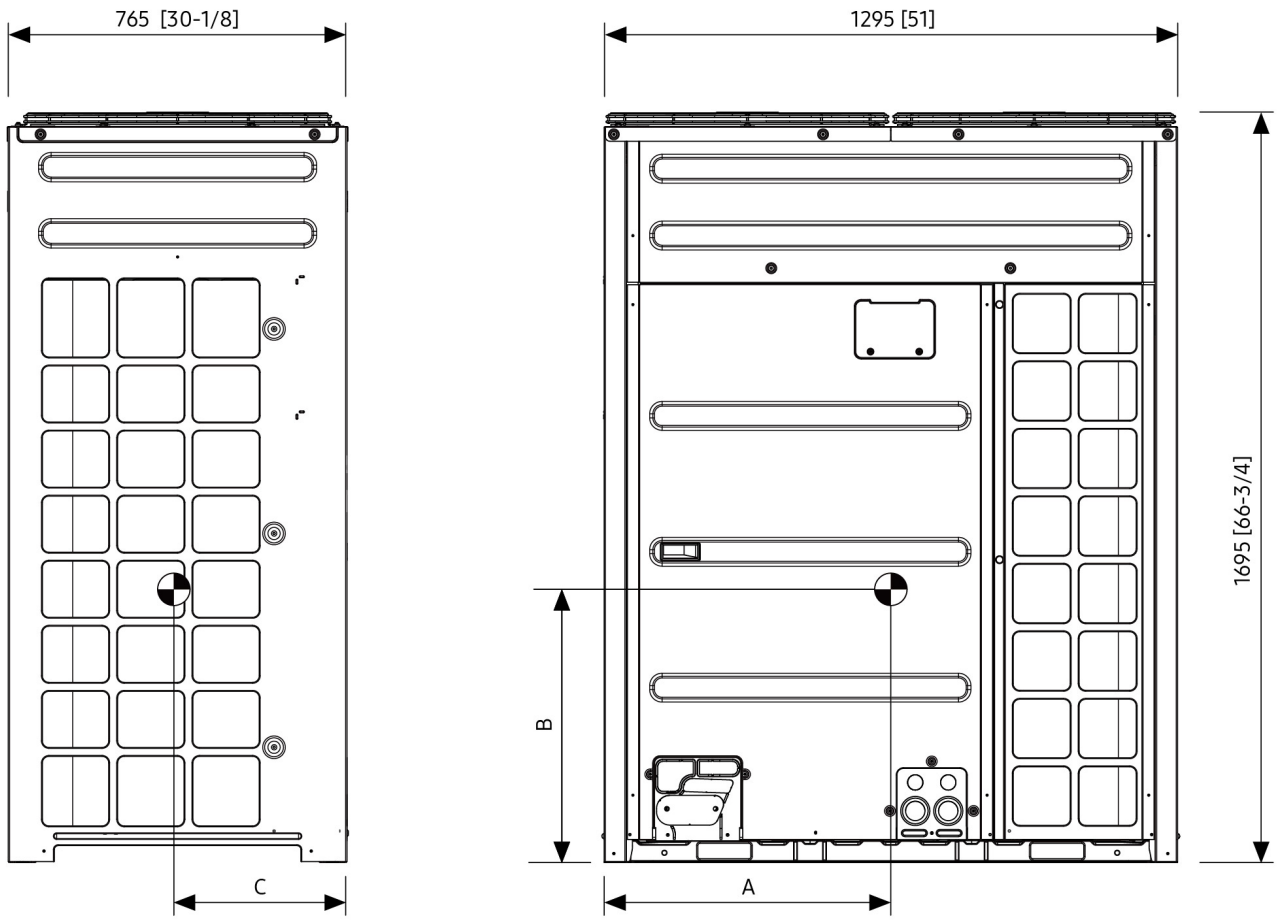


Model	A	B	C
VRD072S6M-5*	463 [18 - 1/4]	715 [28 - 1/8]	358 [14 - 1/8]

5. Center of Gravity

Outdoor unit

Unit: mm (inches)

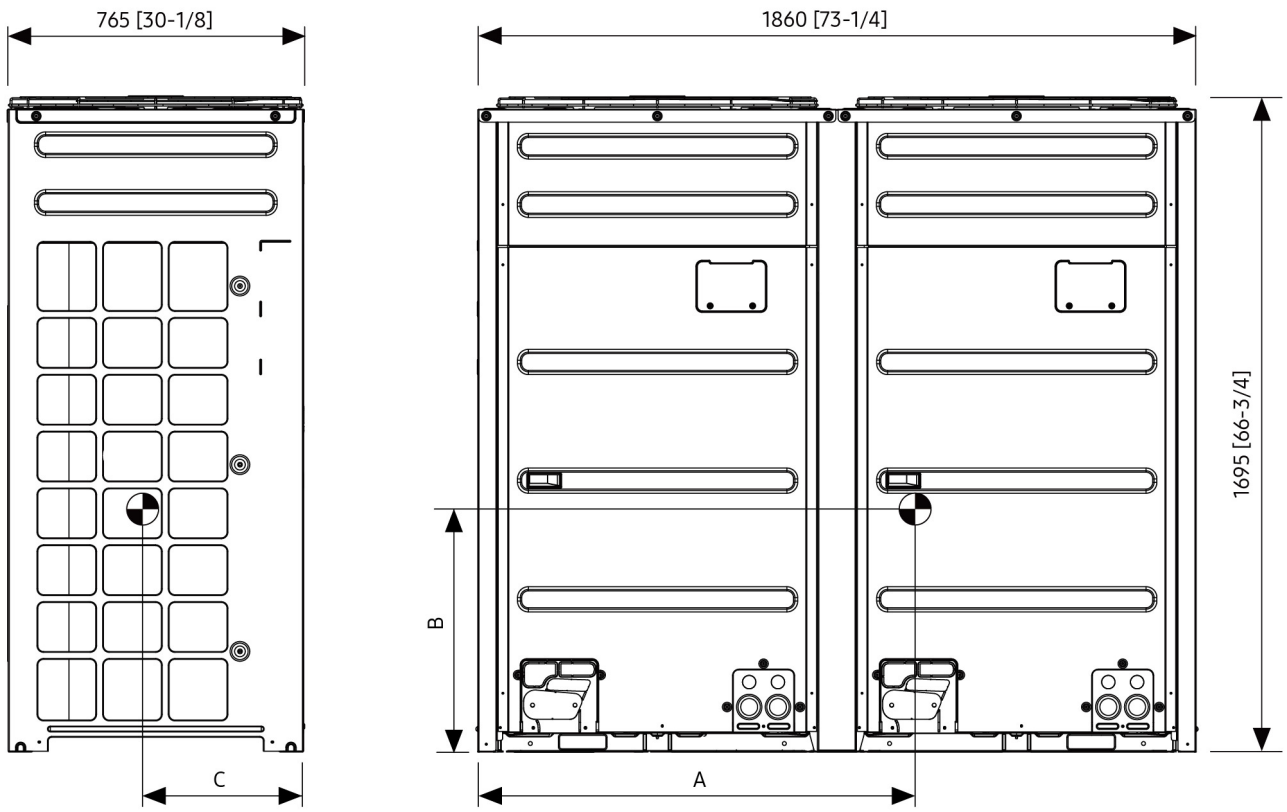


Model	A	B	C
VRD096S6M-5* VRD120S6M-5* VRD144S6M-5* VRD168S6M-5*	520 [20 - 1/2]	678 [26 - 11/16]	324 [12 - 3/4]

5. Center of Gravity

Outdoor unit

Unit: mm (inches)

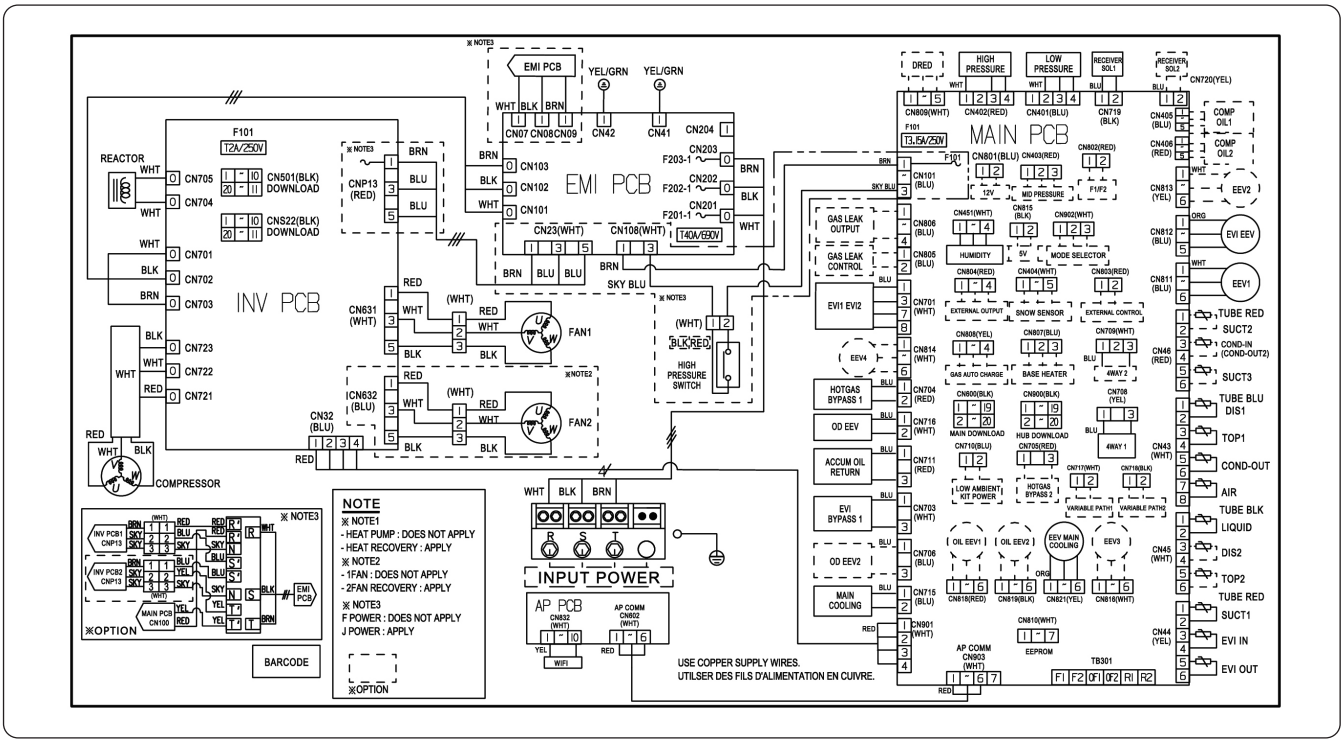


Model	A	B	C
VRD192S6M-5* VRD216S6M-5* VRD240S6M-5*	1,130 [44 - 1/2]	688 [27 - 1/16]	350 [13 - 3/4]

6. Electrical Wiring Diagrams

Outdoor unit

VRD072S6M-5Y, VRD072S6M-5G



INV PCB1	Printed circuit board (inverter1)	SNOW SENSOR	SNOW SENSOR	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
EMI PCB1	Printed circuit board (emi1)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
MAIN PCB	Printed circuit board (main)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
AP PCB	Printed circuit board (main)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
WIFI	WIFI MODULE	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
COMPRSSOR1	Motor (compressor1)	SUCT3(10K)	Thermistor (Suction Temp.2_10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
FAN1	Motor (fan1)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	OD EEV2 V/V	Electronic expansion valve (Outdoor EEV)
FAN2	Motor (fan2)	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	F101	FUSE (INV PCB)
EVI V/V1	Solenode valve (EVI1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	690V/40A	FUSE (EMI PCB)
EVI V/V2	Solenode valve (EVI2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
EVI EEV	Electronic expansion valve (EVI)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
EEV1	Electronic expansion valve 1	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
EEV2	Electronic expansion valve 2	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	F1/F2	Communication
EEV3	Electronic expansion valve 3	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)	HIGH PRESSURE	PRESSURE SENSOR
EEV4	Electronic expansion valve 4	REACTOR	REACTOR	MID PRESSURE	PRESSURE SENSOR
4WAY1 V/V	Solenoid valve (4 Way valve1)	EEPROM	Printed circuit board(EEPROM PCB)	LOW PRESSURE	PRESSURE SENSOR
4WAY2 V/V	Solenoid valve (4 Way valve2)	VARIABLE PATH1	Solenoid valve(VARIABLE PATH1)	RECEIVER SOL1	Solenoid valve(RECEIVER1)
OIL EEV1	Electronic expansion valve(OIL1)	VARIABLE PATH2	Solenoid valve(VARIABLE PATH2)	RECEIVER SOL2	Solenoid valve(RECEIVER2)
OIL EEV2	Electronic expansion valve(OIL2)	HUMIDITY	SENSOR(HUMIDITY)	BASE HEATER	HEATER
EEV MAIN COOLING	Electronic expansion valve (EEV MAIN COOLING)	DRED	Printed circuit board(DRED PCB)	AP COMM	Communication

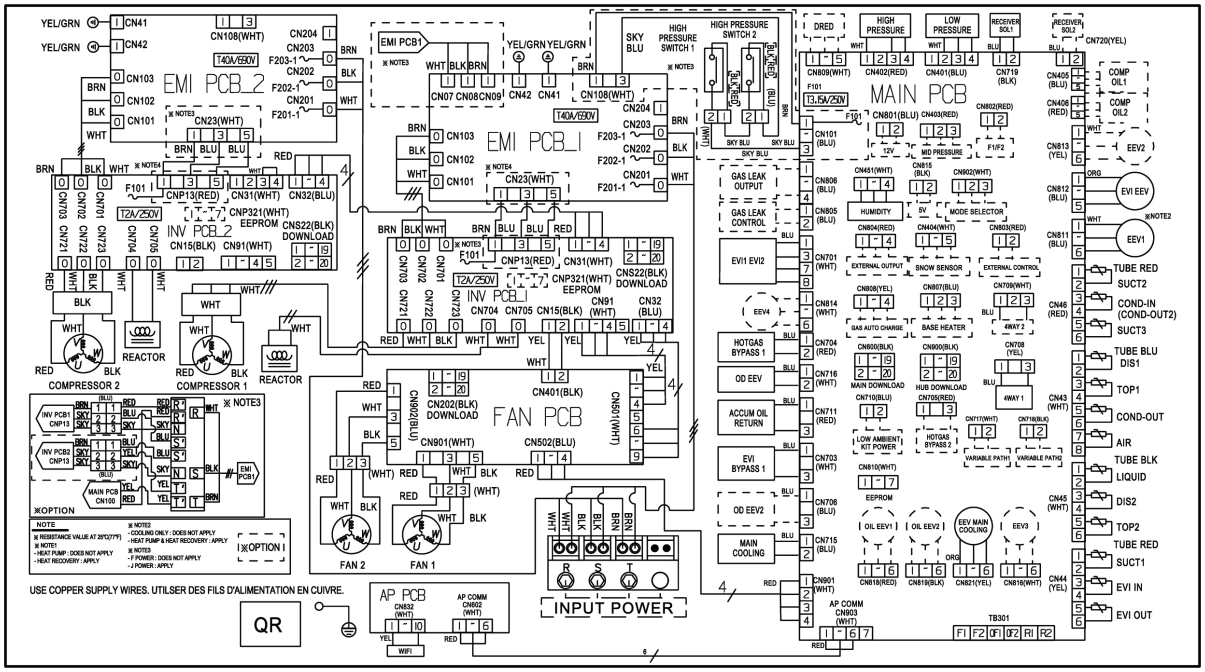
NOTE

- 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, : The wire quantity

6. Electrical Wiring Diagrams

Outdoor unit

VRD096/120/144S6M-5Y, VRD096/120/144/168S6M-5G



INV PCB1	Printed circuit board (inverter1)	SNOW SENSOR	SNOW SENSOR	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter2)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (emi1)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
EMI PCB2	Printed circuit board (emi2)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
FAN PCB	Printed circuit board (fan)	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
MAIN PCB	Printed circuit board (main)	SUCT3(10K)	Thermistor (Suction Temp.2_10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
AP PCB	Printed circuit board (main)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	OD EEV2 V/V	Electronic expansion valve (Outdoor EEV)
WIFI	WIFI MODULE	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	F101	FUSE (INV PCB)
COMPRSSOR1	Motor (compressor1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	690V/40A	FUSE (EMI PCB)
COMPRSSOR2	Motor (compressor2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
FAN1	Motor (fan1)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
FAN2	Motor (fan2)	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
EVI V/V1	Solenode valve (EVI1)	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	F1/F2	Communication
EVI V/V2	Solenode valve (EVI2)	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)	HIGH PRESSURE	PRESSURE SENSOR(HIGH)
EVI EEV	Electronic expansion valve (EVI)	REACTOR	REACTOR	MID PRESSURE	PRESSURE SENSOR(MID)
EEV1	Electronic expansion valve 1	EEPROM	Printed circuit board(EEPROM PCB)	LOW PRESSURE	PRESSURE SENSOR(LOW)
EEV2	Electronic expansion valve 2	VARIABLE PATH1	Solenoid valve(VARIABLE PATH1)	RECEIVER SOL1	Solenoid valve(RECEIVER1)
EEV3	Electronic expansion valve 3	VARIABLE PATH2	Solenoid valve(VARIABLE PATH2)	RECEIVER SOL2	Solenoid valve(RECEIVER2)
EEV4	Electronic expansion valve 4	HUMIDITY	SENSOR(HUMIDITY)	BASE HEATER	HEATER
4WAY1 V/V	Solenoid valve (4 Way valve1)	DRED	Printed circuit board(DRED PCB)	AP COMM	Communication
4WAY2 V/V	Solenoid valve (4 Way valve2)	OIL EEV1	Electronic expansion valve(OIL1)		
EEV MAIN COOLING	Electronic expansion valve (EEV MAIN COOLING)	OIL EEV2	Electronic expansion valve(OIL2)		

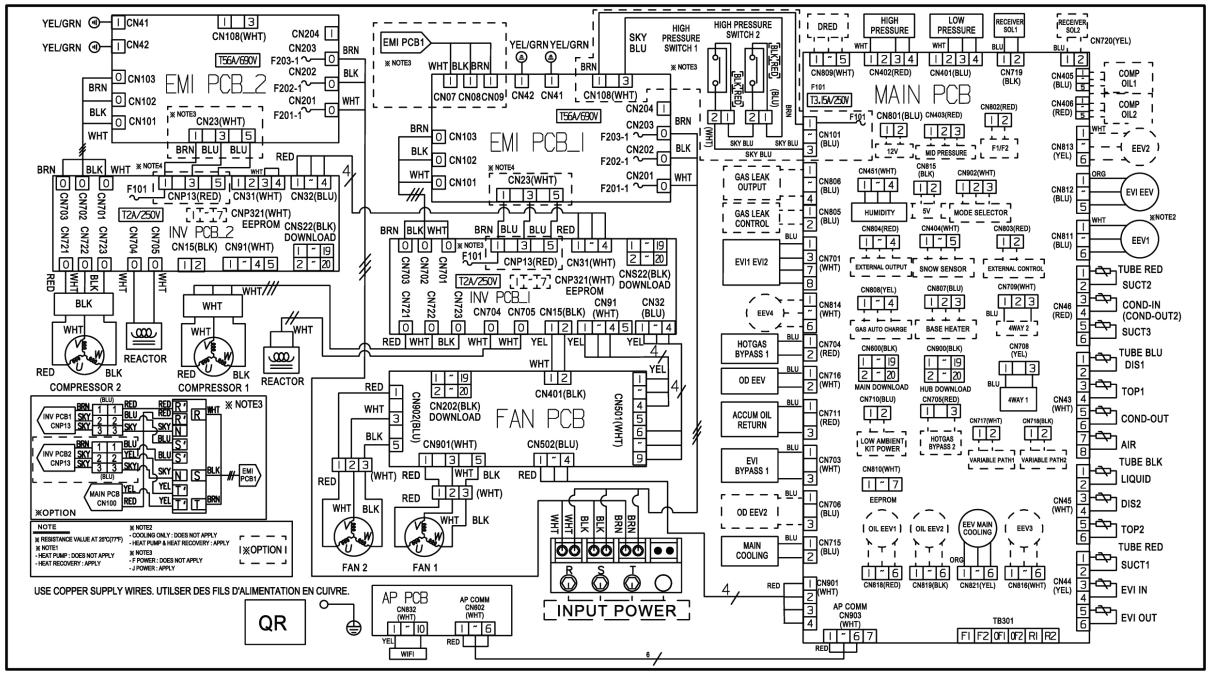
NOTE

- 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, : The wire quantity

6. Electrical Wiring Diagrams

Outdoor unit

VRD168S6M-5Y



INV PCB1	Printed circuit board (inverter1)	SNOW SENSOR	SNOW SENSOR	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter2)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (emi1)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
EMI PCB2	Printed circuit board (emi2)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
FAN PCB	Printed circuit board (fan)	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
MAIN PCB	Printed circuit board (main)	SUCT3(10K)	Thermistor (Suction Temp.2_10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
AP PCB	Printed circuit board (main)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	OD EEV2 V/V	Electronic expansion valve (Outdoor EEV)
WIFI	WIFI MODULE	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	F101	FUSE (INV PCB)
COMPRSSOR1	Motor (compressor1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	690V/40A	FUSE (EMI PCB)
COMPRSSOR2	Motor (compressor2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
FAN1	Motor (fan1)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
FAN2	Motor (fan2)	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
EVI V/V1	Solenode valve (EVI1)	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	F1/F2	Communication
EVI V/V2	Solenode valve (EVI2)	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)	HIGH PRESSURE	PRESSURE SENSOR(HIGH)
EVI EEV	Electronic expansion valve (EVI)	REACTOR	REACTOR	MID PRESSURE	PRESSURE SENSOR(MID)
EEV1	Electronic expansion valve 1	EEPROM	Printed circuit board(EEPROM PCB)	LOW PRESSURE	PRESSURE SENSOR(LOW)
EEV2	Electronic expansion valve 2	VARIABLE PATH1	Solenoid valve(VARIABLE PATH1)	RECEIVER SOL1	Solenoid valve(RECEIVER1)
EEV3	Electronic expansion valve 3	VARIABLE PATH2	Solenoid valve(VARIABLE PATH2)	RECEIVER SOL2	Solenoid valve(RECEIVER2)
EEV4	Electronic expansion valve 4	HUMIDITY	SENSOR(HUMIDITY)	BASE HEATER	HEATER
4WAY1 V/V	Solenoid valve (4 Way valve1)	DRED	Printed circuit board(DRED PCB)	AP COMM	Communication
4WAY2 V/V	Solenoid valve (4 Way valve2)	OIL EEV1	Electronic expansion valve(OIL1)		
EEV MAIN COOLING	Electronic expansion valve (EEV MAIN COOLING)	OIL EEV2	Electronic expansion valve(OIL2)		

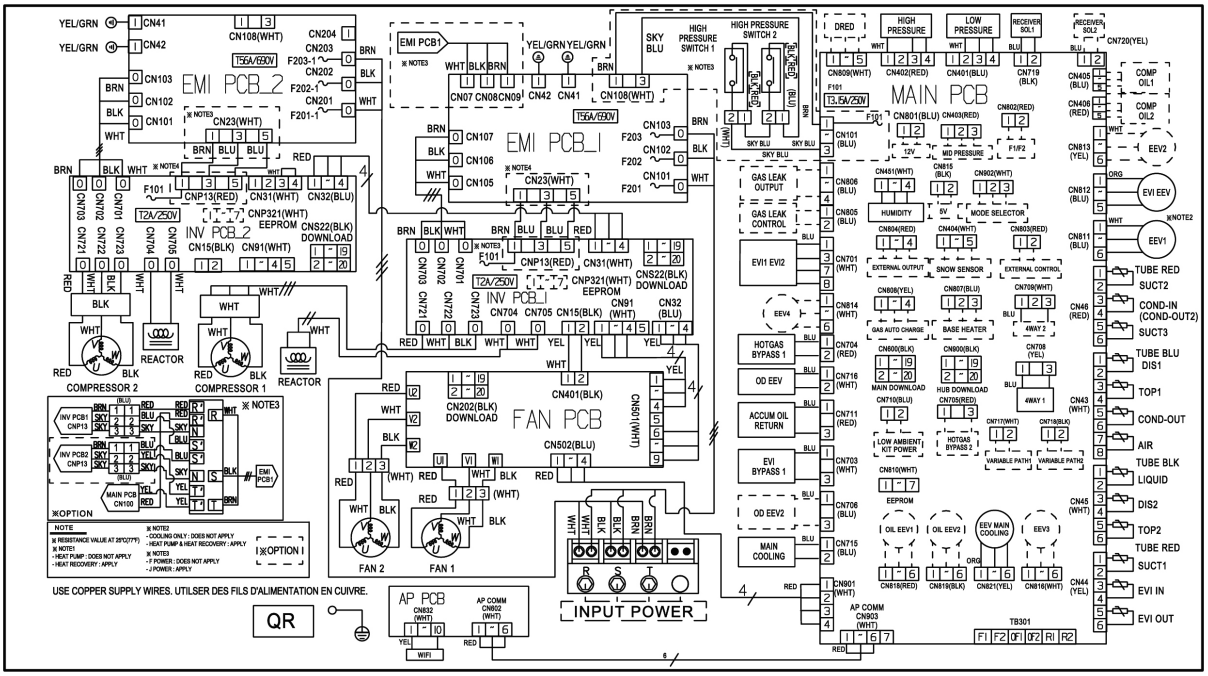
NOTE

- 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, : The wire quantity

6. Electrical Wiring Diagrams

Outdoor unit

VRD192/216/240S6M-5Y, VRD216/240S6M-5G



INV PCB1	Printed circuit board (inverter1)	SNOW SENSOR	SNOW SENSOR	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter2)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (emi1)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
EMI PCB2	Printed circuit board (emi2)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
FAN PCB	Printed circuit board (fan)	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
MAIN PCB	Printed circuit board (main)	SUCT3(10K)	Thermistor (Suction Temp.2_10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
AP PCB	Printed circuit board (main)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	OD EEV2 V/V	Electronic expansion valve (Outdoor EEV)
WIFI	WIFI MODULE	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	F101	FUSE (INV PCB)
COMPRSSOR1	Motor (compressor1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	690V/40A	FUSE (EMI PCB)
COMPRSSOR2	Motor (compressor2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
FAN1	Motor (fan1)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
FAN2	Motor (fan2)	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
EVI V/V1	Solenode valve (EVI1)	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	F1/F2	Communication
EVI V/V2	Solenode valve (EVI2)	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)	HIGH PRESSURE	PRESSURE SENSOR(HIGH)
EVI EEV	Electronic expansion valve (EVI)	REACTOR	REACTOR	MID PRESSURE	PRESSURE SENSOR(MID)
EEV1	Electronic expansion valve 1	EEPROM	Printed circuit board(EEPROM PCB)	LOW PRESSURE	PRESSURE SENSOR(LOW)
EEV2	Electronic expansion valve 2	VARIABLE PATH1	Solenoid valve(VARIABLE PATH1)	RECEIVER SOL1	Solenoid valve(RECEIVER1)
EEV3	Electronic expansion valve 3	VARIABLE PATH2	Solenoid valve(VARIABLE PATH2)	RECEIVER SOL2	Solenoid valve(RECEIVER2)
EEV4	Electronic expansion valve 4	HUMIDITY	SENSOR(HUMIDITY)	BASE HEATER	HEATER
4WAY1 V/V	Solenoid valve (4 Way valve1)	DRED	Printed circuit board(DRED PCB)	AP COMM	Communication
4WAY2 V/V	Solenoid valve (4 Way valve2)	OIL EEV1	Electronic expansion valve(OIL1)		
EEV MAIN COOLING	Electronic expansion valve (EEV MAIN COOLING)	OIL EEV2	Electronic expansion valve(OIL2)		

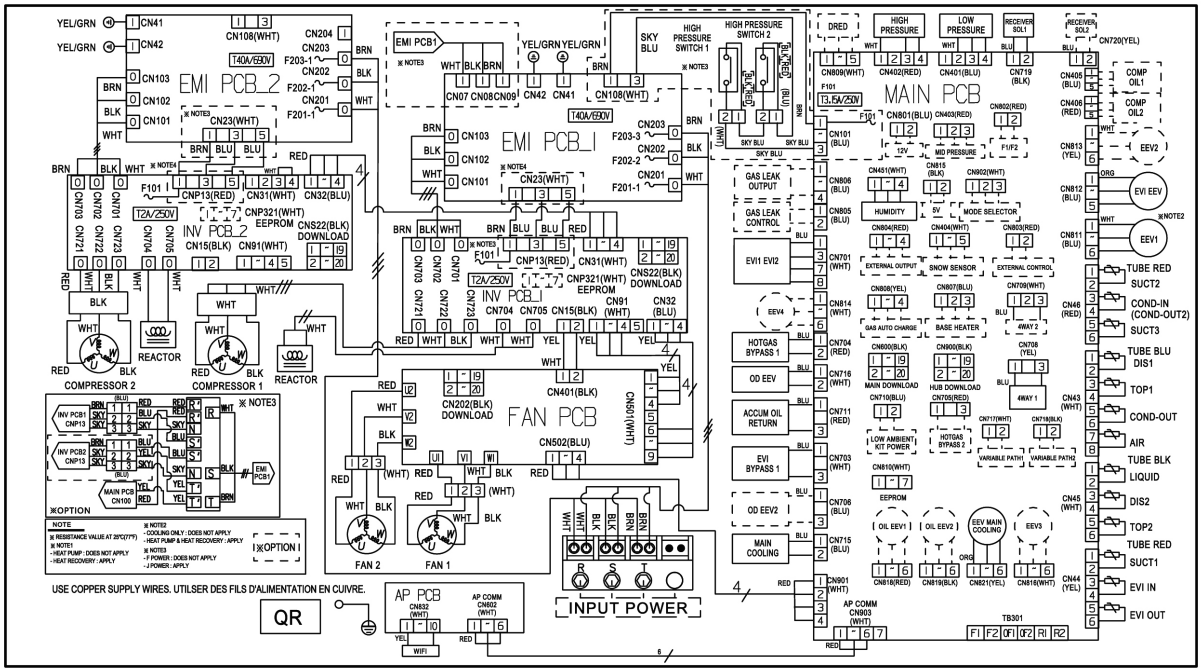
NOTE

- 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, : The wire quantity

6. Electrical Wiring Diagrams

Outdoor unit

VRD192S6M-5G



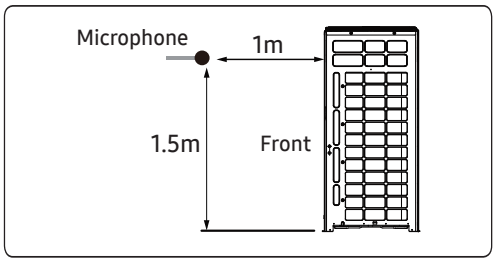
INV PCB1	Printed circuit board (inverter1)	SNOW SENSOR	SNOW SENSOR	HOTGAS1 BYPASS V/V	Solenoid valve (Hot Gas Bypass1)
INV PCB2	Printed circuit board (inverter2)	EVI-OUT(10K)	Thermistor (EVI-out_10kohm)	EVI BYPASS1 V/V	Solenoid valve (EVI BYPASS)
EMI PCB1	Printed circuit board (emi1)	EVI-IN(10K)	Thermistor (EVI-in_10kohm)	ACCUM OIL RETURN V/V	Solenoid valve (Accumulator Oil Return)
EMI PCB2	Printed circuit board (emi2)	SUCT1(10K)	Thermistor (Suction Temp.1_10Kohm)	MAIN COOLING	Solenoid valve (Main cooling)
FAN PCB	Printed circuit board (fan)	SUCT2(10K)	Thermistor (Suction Temp.2_10Kohm)	HOTGAS2 BYPASS V/V	Solenoid valve (Hot Gas Bypass2)
MAIN PCB	Printed circuit board (main)	SUCT3(10K)	Thermistor (Suction Temp.2_10Kohm)	OD EEV V/V	Electronic expansion valve (Outdoor EEV)
AP PCB	Printed circuit board (main)	COND IN(10K)	Thermistor (Cond In Temp._10Kohm)	OD EEV2 V/V	Electronic expansion valve (Outdoor EEV)
WIFI	WIFI MODULE	AIR(10K)	Thermistor (Ambient Temp._10Kohm)	F101	FUSE (INV PCB)
COMPRSSOR1	Motor (compressor1)	COND(10K)	Thermistor (Cond Out Temp._10Kohm)	690V/40A	FUSE (EMI PCB)
COMPRSSOR2	Motor (compressor2)	TOP1(200K)	Thermistor (Compressor Top 1_200Kohm)	MODE SELECTOR	Connector (Remote switching cool/heat selector)
FAN1	Motor (fan1)	TOP2(200K)	Thermistor (Compressor Top 2_200Kohm)	EXTERNAL CONTROL	Connector (Output EXTERNAL CONTROL)
FAN2	Motor (fan2)	DIS1(200K)	Thermistor (Discharge Temp.1_200Kohm)	EXTERNAL OUTPUT	Connector (Output EXTERNAL)
EVI V/V1	Solenode valve (EVI1)	DIS2(200K)	Thermistor (Discharge Temp.2_200Kohm)	F1/F2	Communication
EVI V/V2	Solenode valve (EVI2)	LIQUID(10K)	Thermistor (Liquid Tube Temp._10Kohm)	HIGH PRESSURE	PRESSURE SENSOR(HIGH)
EVI EEV	Electronic expansion valve (EVI)	REACTOR	REACTOR	MID PRESSURE	PRESSURE SENSOR(MID)
EEV1	Electronic expansion valve 1	EEPROM	Printed circuit board(EEPROM PCB)	LOW PRESSURE	PRESSURE SENSOR(LOW)
EEV2	Electronic expansion valve 2	VARIABLE PATH1	Solenoid valve(VARIABLE PATH1)	RECEIVER SOL1	Solenoid valve(RECEIVER1)
EEV3	Electronic expansion valve 3	VARIABLE PATH2	Solenoid valve(VARIABLE PATH2)	RECEIVER SOL2	Solenoid valve(RECEIVER2)
EEV4	Electronic expansion valve 4	HUMIDITY	SENSOR(HUMIDITY)	BASE HEATER	HEATER
4WAY1 V/V	Solenoid valve (4 Way valve1)	DRED	Printed circuit board(DRED PCB)	AP COMM	Communication
4WAY2 V/V	Solenoid valve (4 Way valve2)	OIL EEV1	Electronic expansion valve(OIL1)		
EEV MAIN COOLING	Electronic expansion valve (EEV MAIN COOLING)	OIL EEV2	Electronic expansion valve(OIL2)		

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, : The wire quantity

7. Sound Data

Sound Pressure level

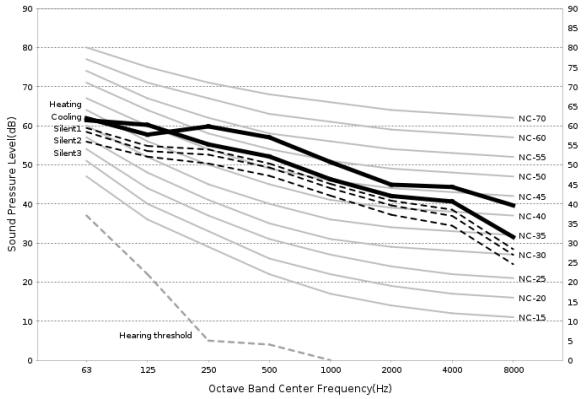


Unit: dB(A)

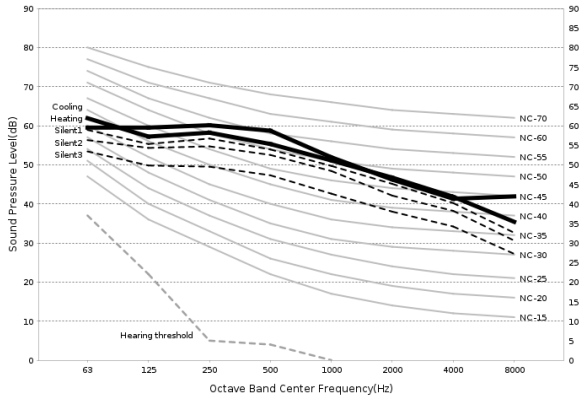
Model	Cooling				Heating
		Silent 1	Silent 2	Silent 3	
VRD072S6M-5Y	54	52	51	49	58
VRD096S6M-5Y	57	56	54	49	59
VRD120S6M-5Y	57	56	54	49	60
VRD144S6M-5Y	60	56	54	49	63

- **NC CURVE**

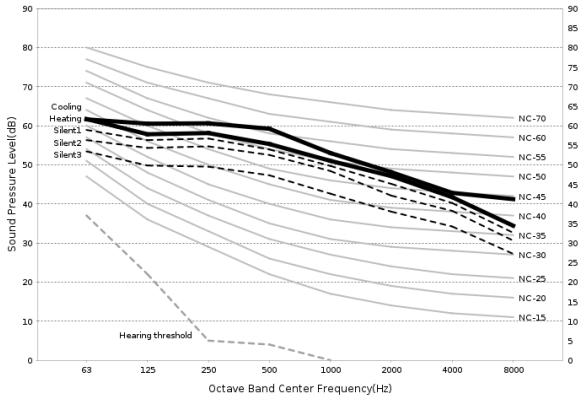
(1) VRD072S6M-5Y



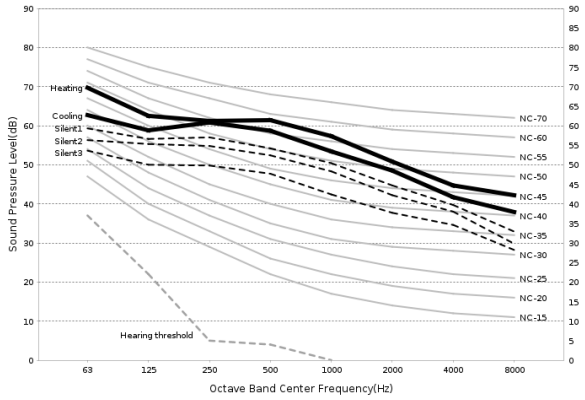
(2) VRD096S6M-5Y



(3) VRD120S6M-5Y



(4) VRD144S6M-5Y

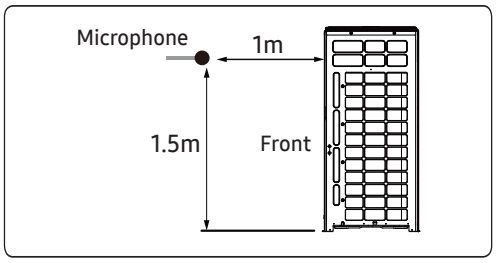


NOTE

- 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

7. Sound Data

Sound Pressure level

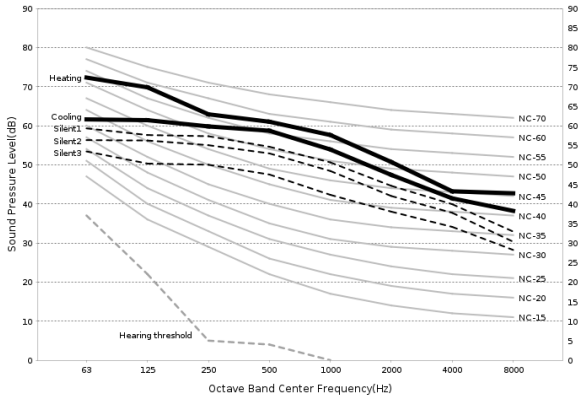


Unit: dB(A)

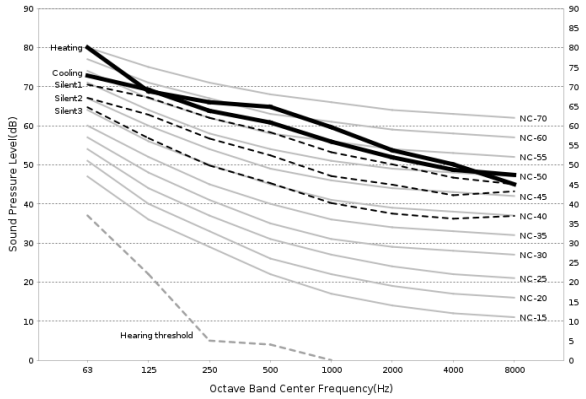
Model	Cooling				Heating
		Silent 1	Silent 2	Silent 3	
VRD168S6M-5Y	60	57	55	49	63
VRD192S6M-5Y	63	61	56	49	66
VRD216S6M-5Y	64	61	56	49	67
VRD240S6M-5Y	66	61	56	49	68

- **NC CURVE**

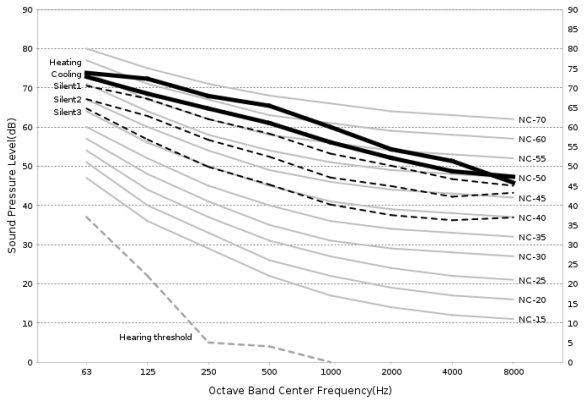
(1) VRD168S6M-5Y



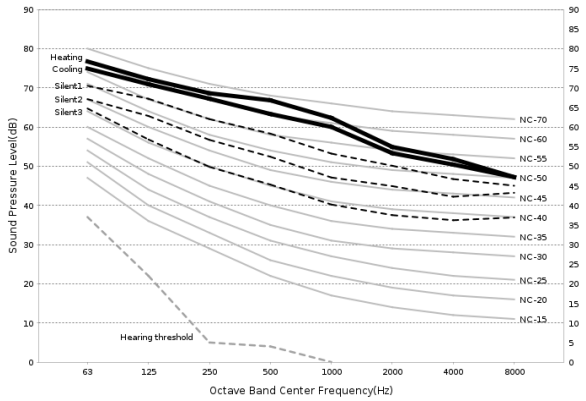
(2) VRD192S6M-5Y



(3) VRD216S6M-5Y



(4) VRD240S6M-5Y

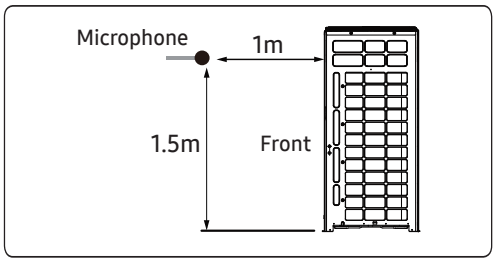


NOTE

- 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

7. Sound Data

Sound Pressure level

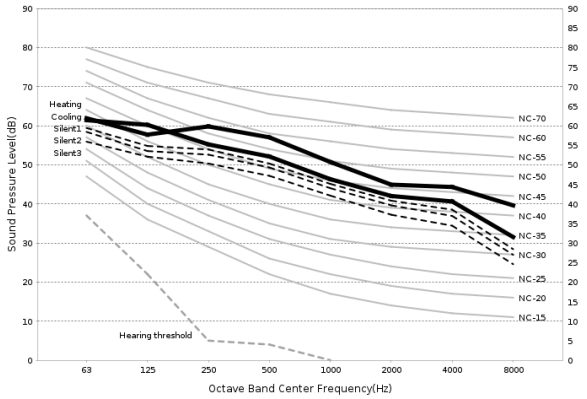


Unit: dB(A)

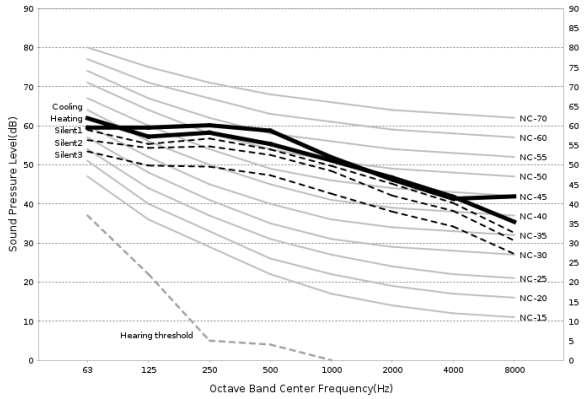
Model	Cooling				Heating
		Silent 1	Silent 2	Silent 3	
VRD072S6M-5G	54	52	51	49	58
VRD096S6M-5G	57	56	54	49	59
VRD120S6M-5G	57	56	54	49	60
VRD144S6M-5G	60	56	54	49	63

- **NC CURVE**

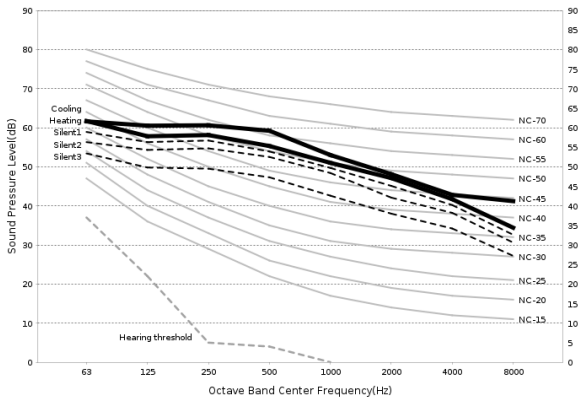
(1) VRD072S6M-5G



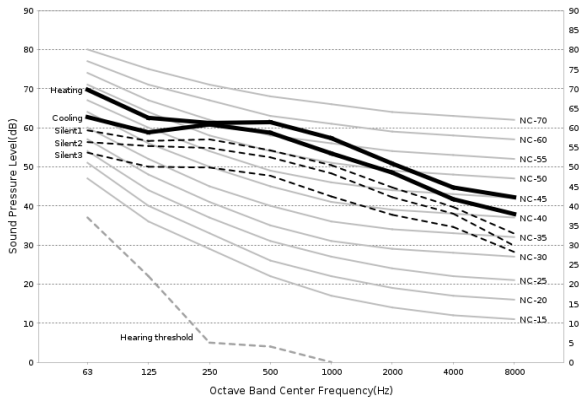
(2) VRD096S6M-5G



(3) VRD120S6M-5G



(4) VRD144S6M-5G

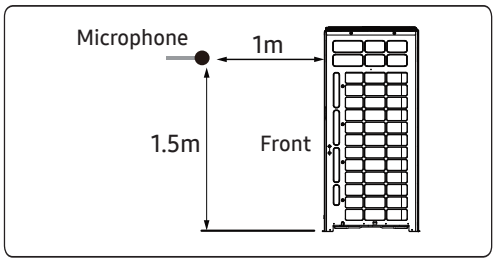


NOTE

- 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

7. Sound Data

Sound Pressure level

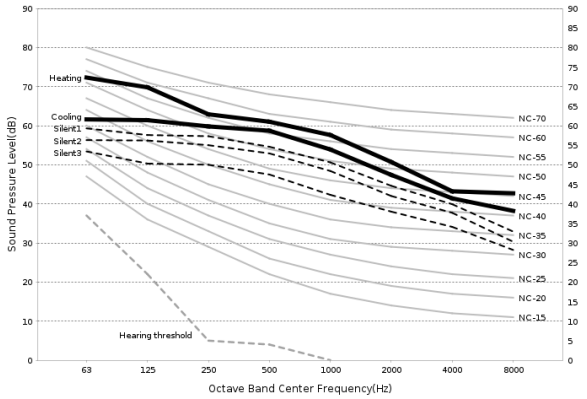


Unit: dB(A)

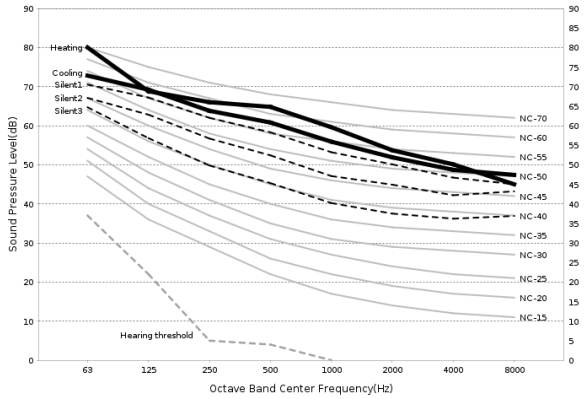
Model	Cooling				Heating
		Silent 1	Silent 2	Silent 3	
VRD168S6M-5G	60	57	55	49	63
VRD192S6M-5G	63	61	56	49	66
VRD216S6M-5G	64	61	56	49	67
VRD240S6M-5G	66	61	56	49	68

- **NC CURVE**

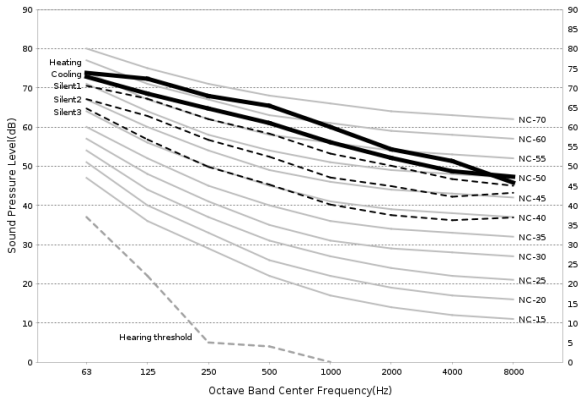
(1) VRD168S6M-5G



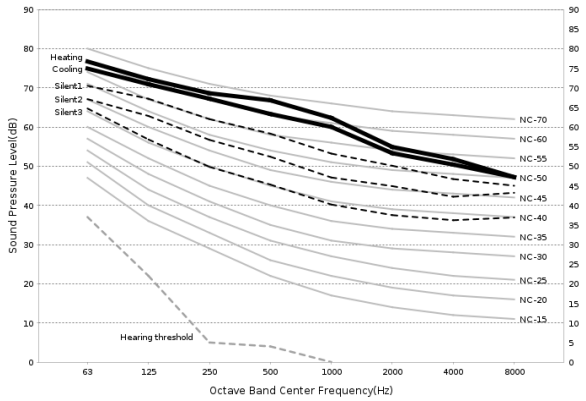
(2) VRD192S6M-5G



(3) VRD216S6M-5G



(4) VRD240S6M-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

7. Sound Data

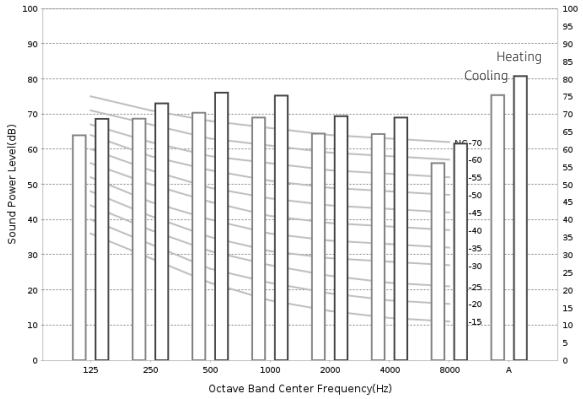
Sound Power level

Unit: dB(A)

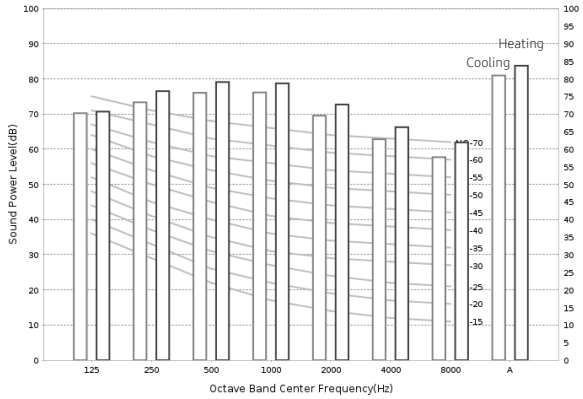
Model	Cooling	Heating
VRD072S6M-5Y	75	80
VRD096S6M-5Y	79	83
VRD120S6M-5Y	79	83
VRD144S6M-5Y	81	84

- **NC CURVE**

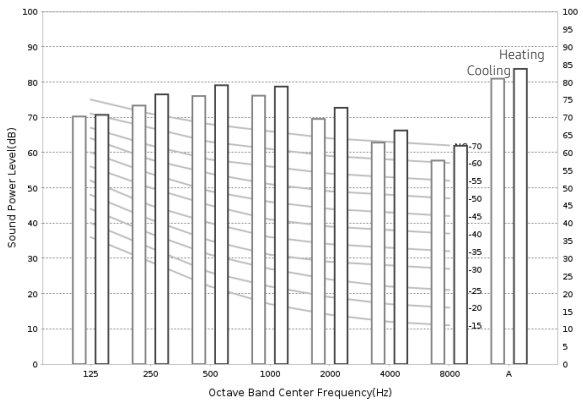
(1) VRD072S6M-5Y



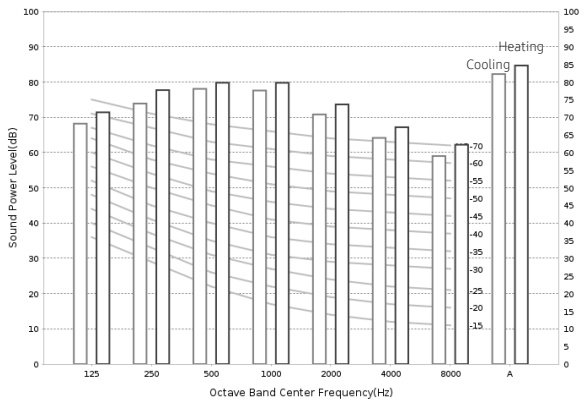
(2) VRD096S6M-5Y



(3) VRD120S6M-5Y



(4) VRD144S6M-5Y



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.

7. Sound Data

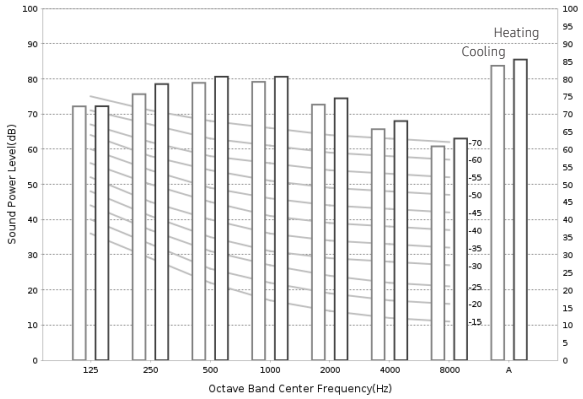
Sound Power level

Unit: dB(A)

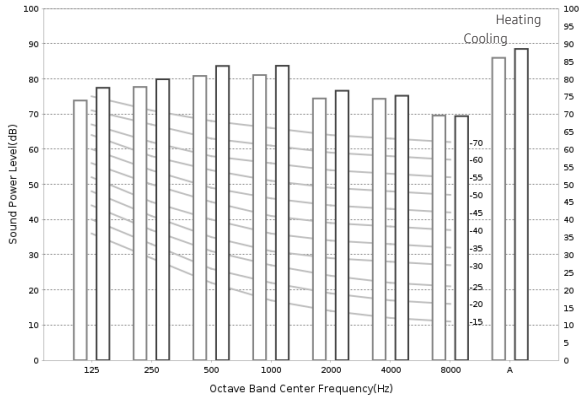
Model	Cooling	Heating
VRD168S6M-5Y	83	85
VRD192S6M-5Y	85	88
VRD216S6M-5Y	85	88
VRD240S6M-5Y	86.5	90

- **NC CURVE**

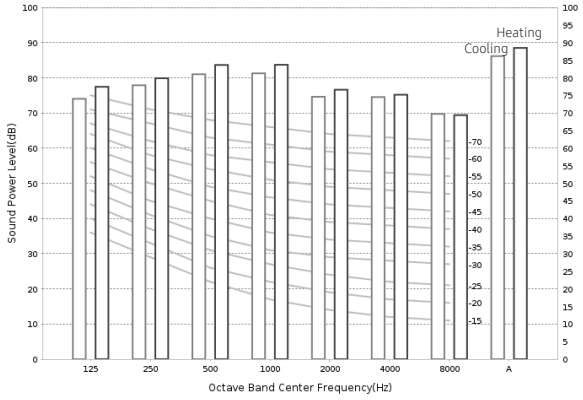
(1) VRD168S6M-5Y



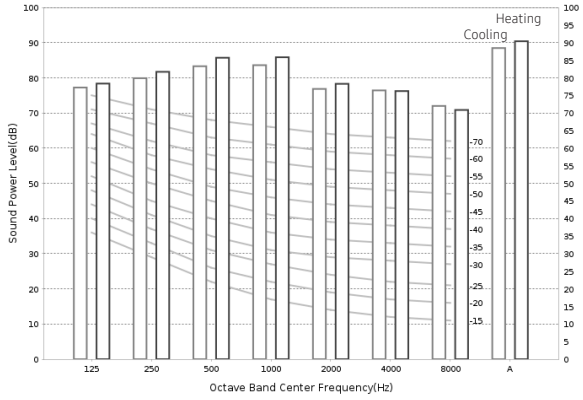
(2) VRD192S6M-5Y



(3) VRD216S6M-5Y



(4) VRD240S6M-5Y



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.

7. Sound Data

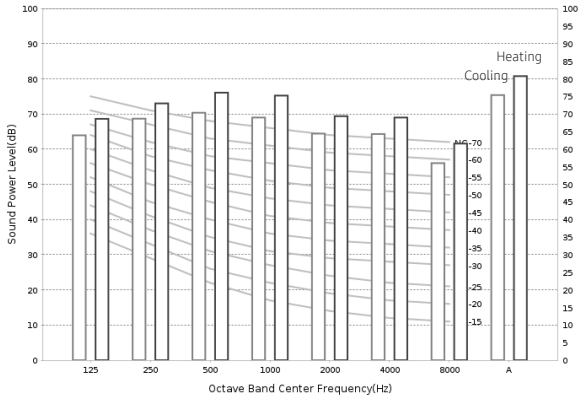
Sound Power level

Unit: dB(A)

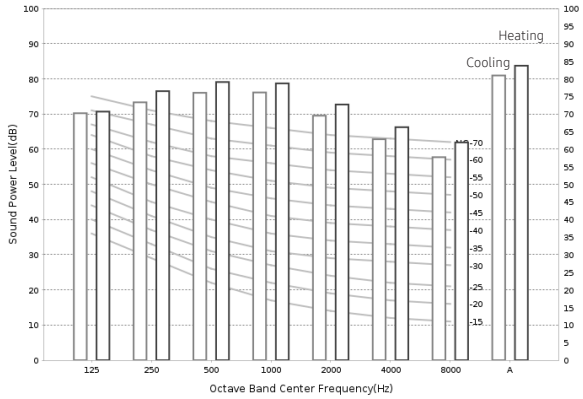
Model	Cooling	Heating
VRD072S6M-5G	75	80
VRD096S6M-5G	79	83
VRD120S6M-5G	79	83
VRD144S6M-5G	81	84

- **NC CURVE**

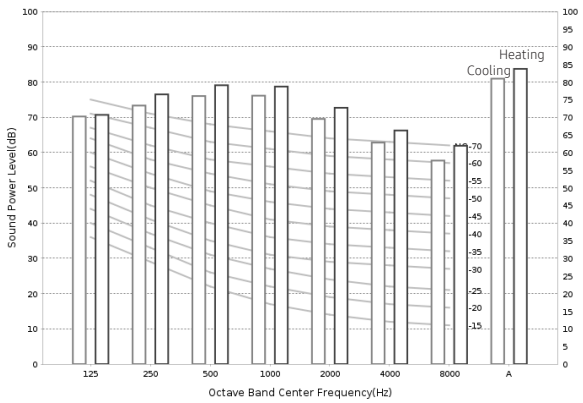
(1) VRD072S6M-5G



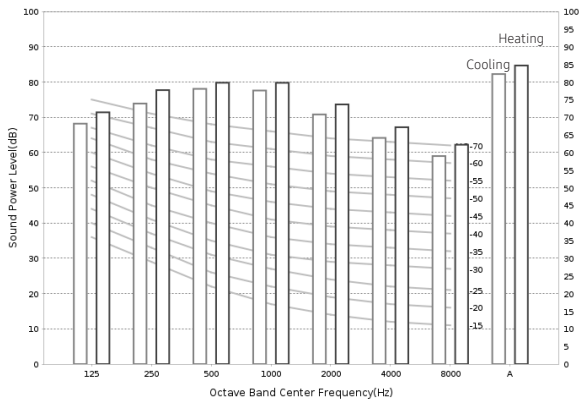
(2) VRD096S6M-5G



(3) VRD120S6M-5G



(4) VRD144S6M-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.

7. Sound Data

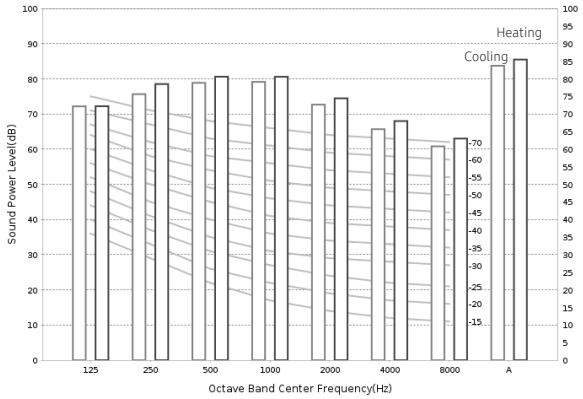
Sound Power level

Unit: dB(A)

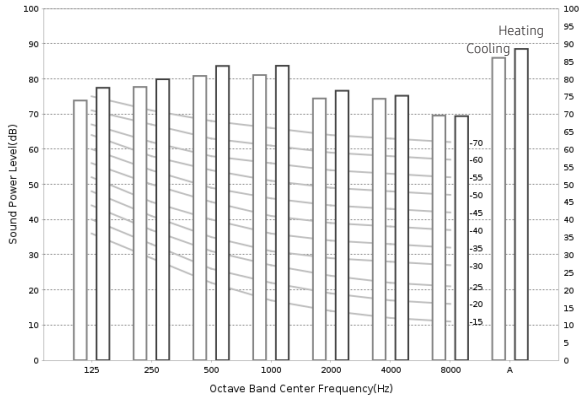
Model	Cooling	Heating
VRD168S6M-5G	83	85
VRD192S6M-5G	85	88
VRD216S6M-5G	85	88
VRD240S6M-5G	86.5	90

- **NC CURVE**

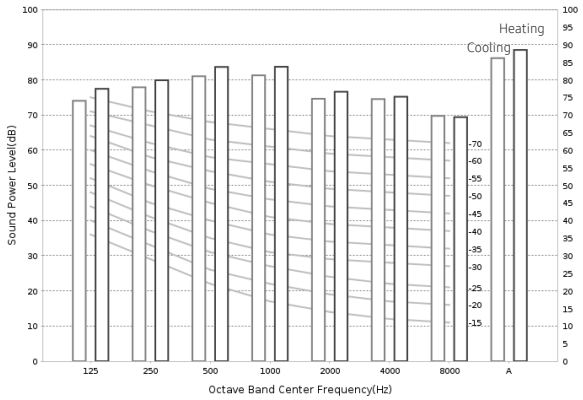
(1) VRD168S6M-5G



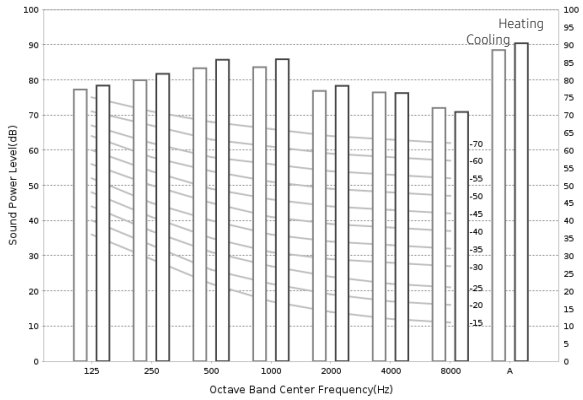
(2) VRD192S6M-5G



(3) VRD216S6M-5G



(4) VRD240S6M-5G



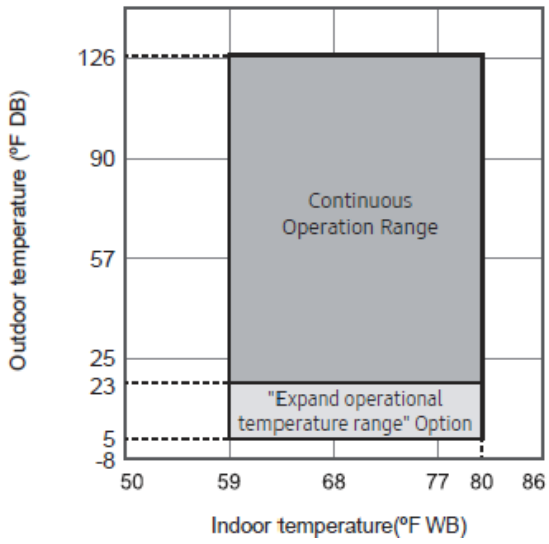
NOTE

- 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.

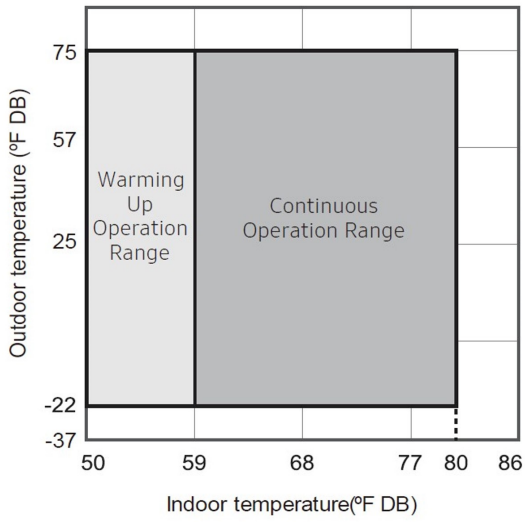
8. Operation Range

Outdoor unit

- **Cooling**



- **Heating**



(1) The operating range is shown in these figures

(2) The assumed installation conditions 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 heating mode, operating is possible under warming up operation range. However continuous operating is impossible due to a protection control

8. 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 :

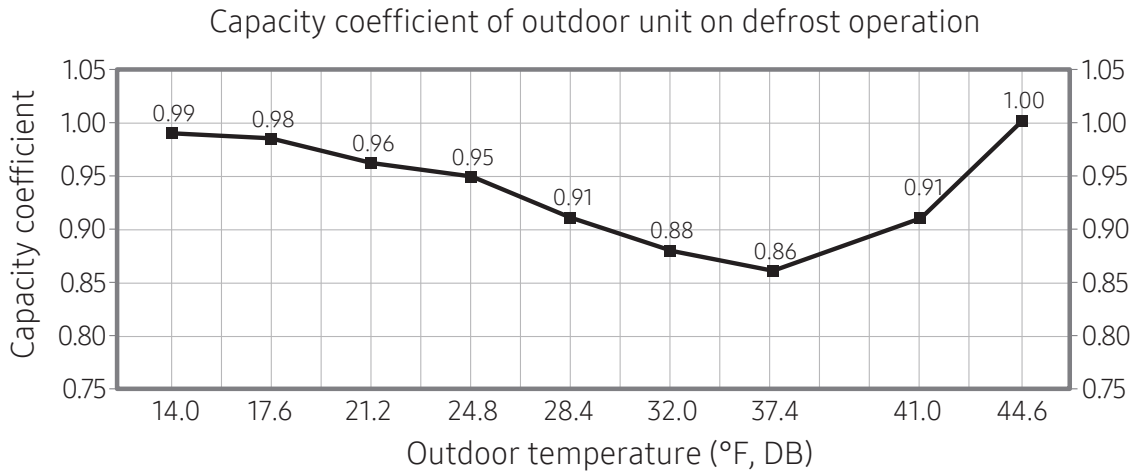
Formula : A = B × C

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

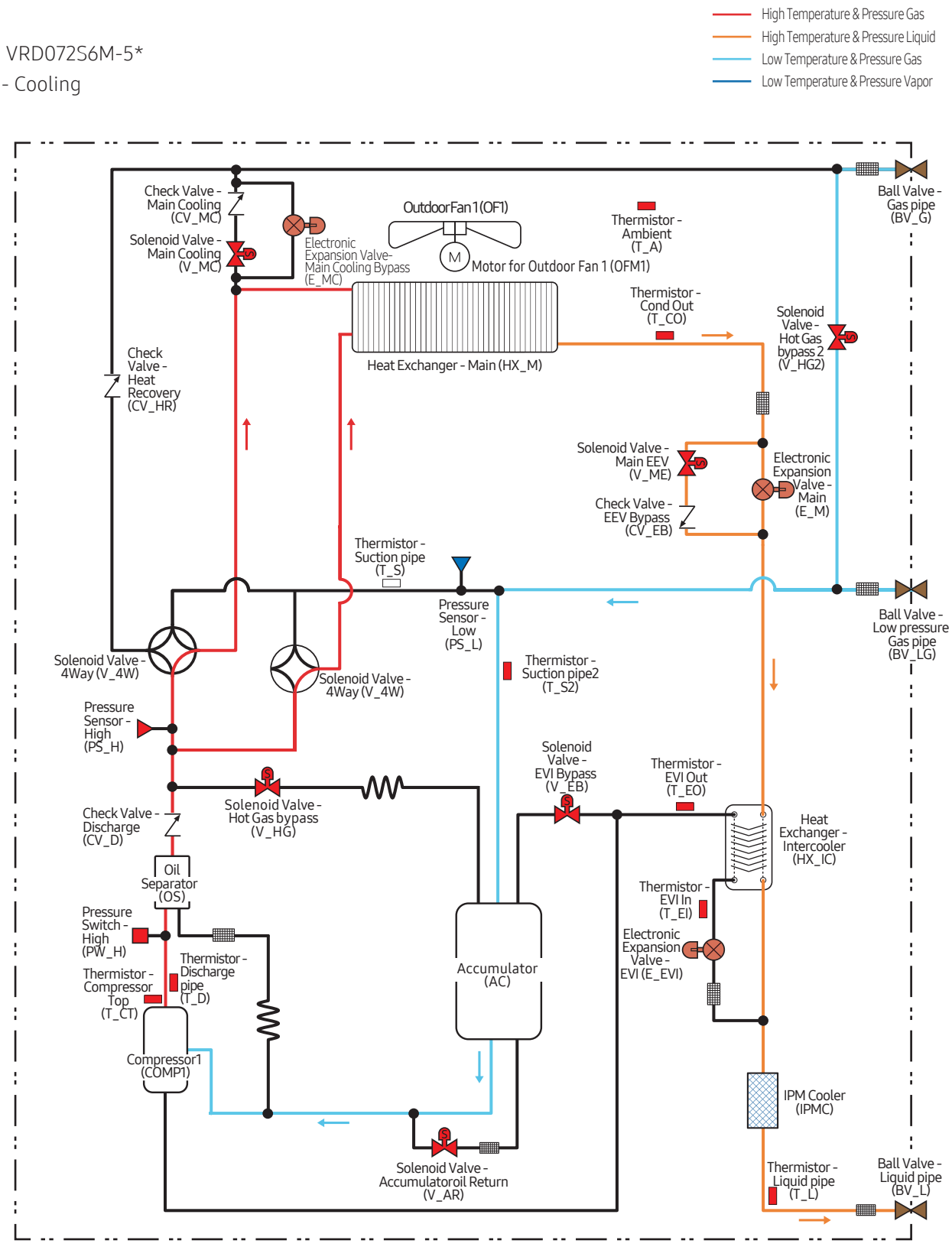
In outdoor conditions below 0 °C(32 °F), frost conditions reflect the actual entering the defrost opration because heating performance is improved

9. Piping Diagram

Outdoor unit

(1) VRD072S6M-5*

- Cooling

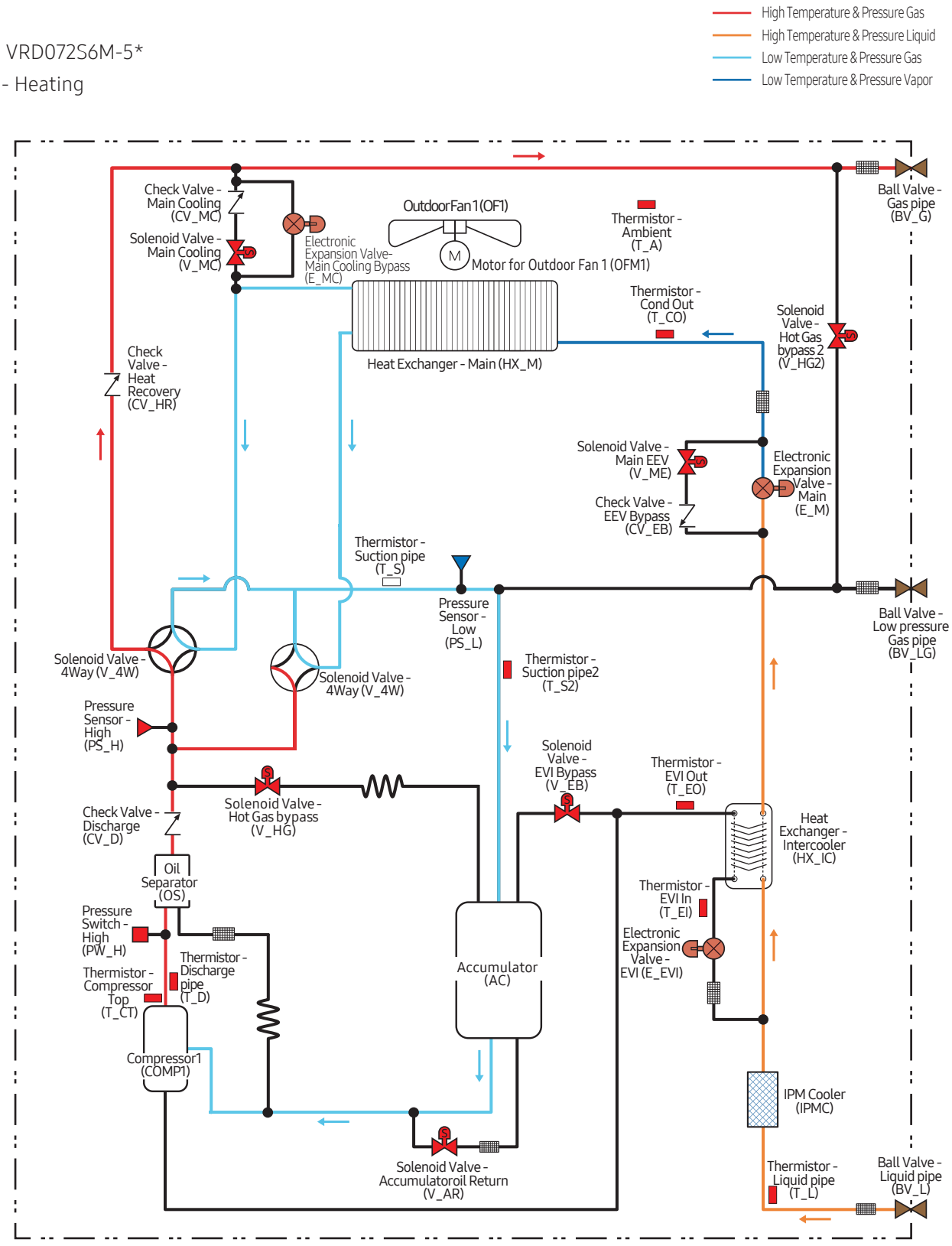


9. Piping Diagram

Outdoor unit

(1) VRD072S6M-5*

- Heating

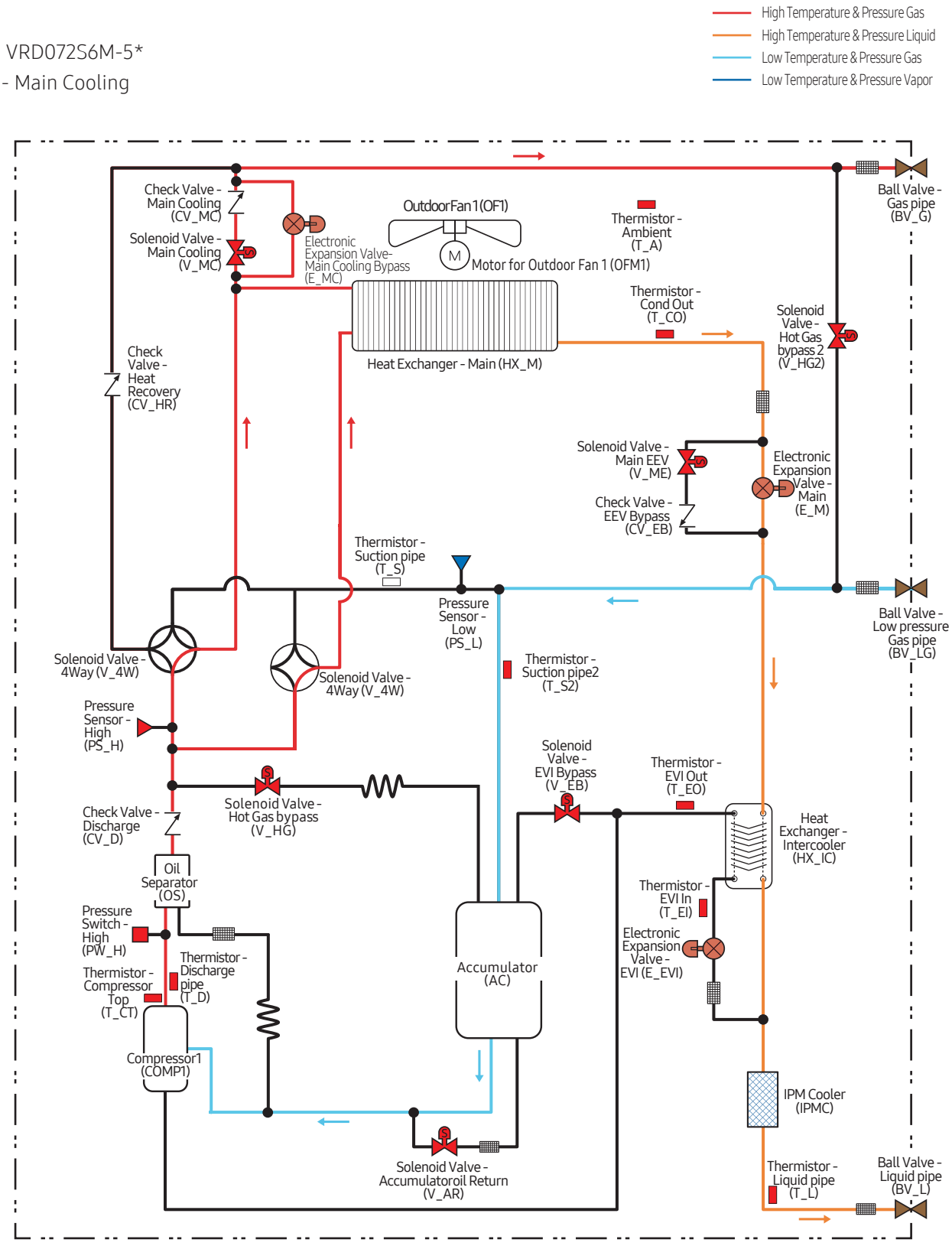


9. Piping Diagram

Outdoor unit

(1) VRD072S6M-5*

- Main Cooling

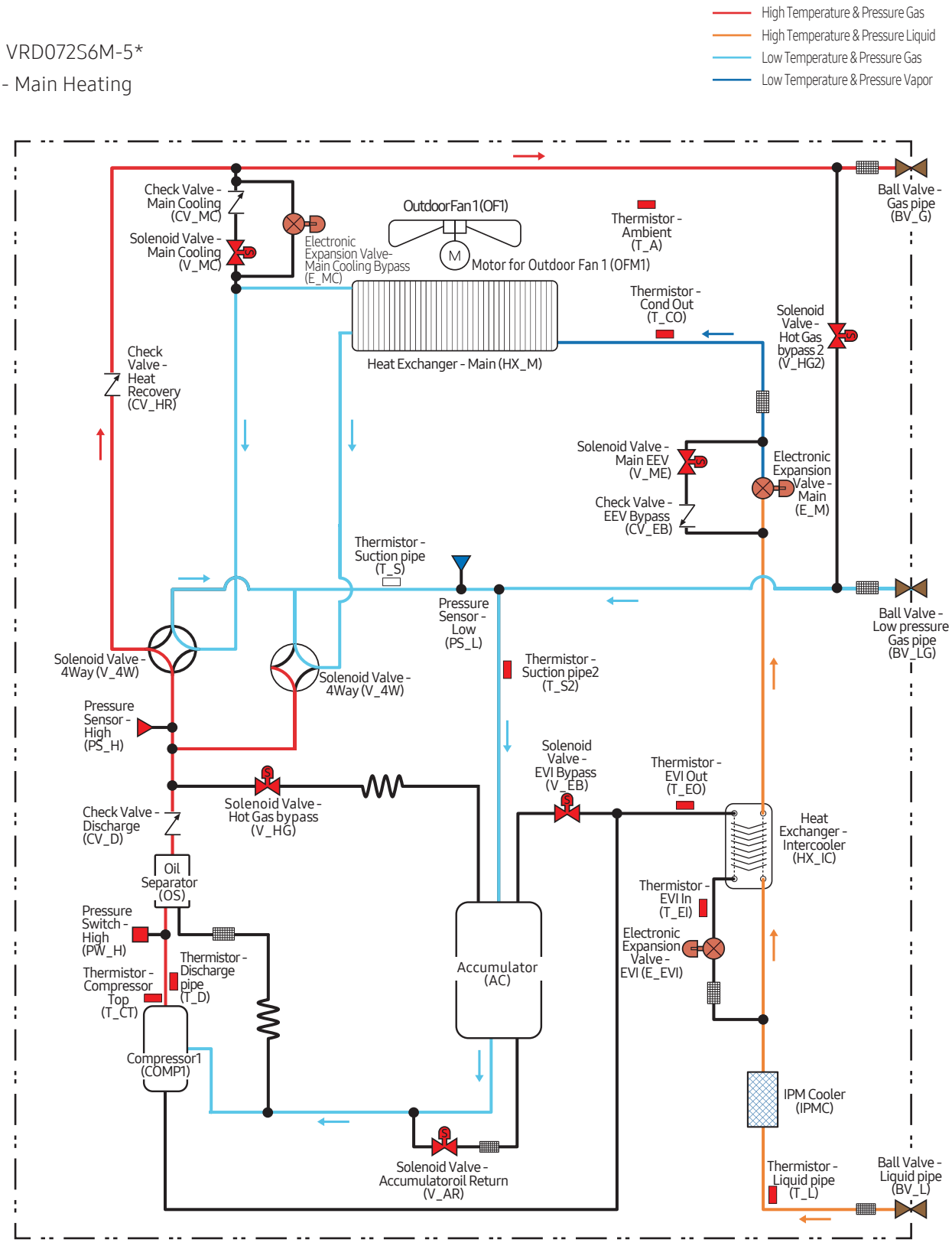


9. Piping Diagram

Outdoor unit

(1) VRD072S6M-5*

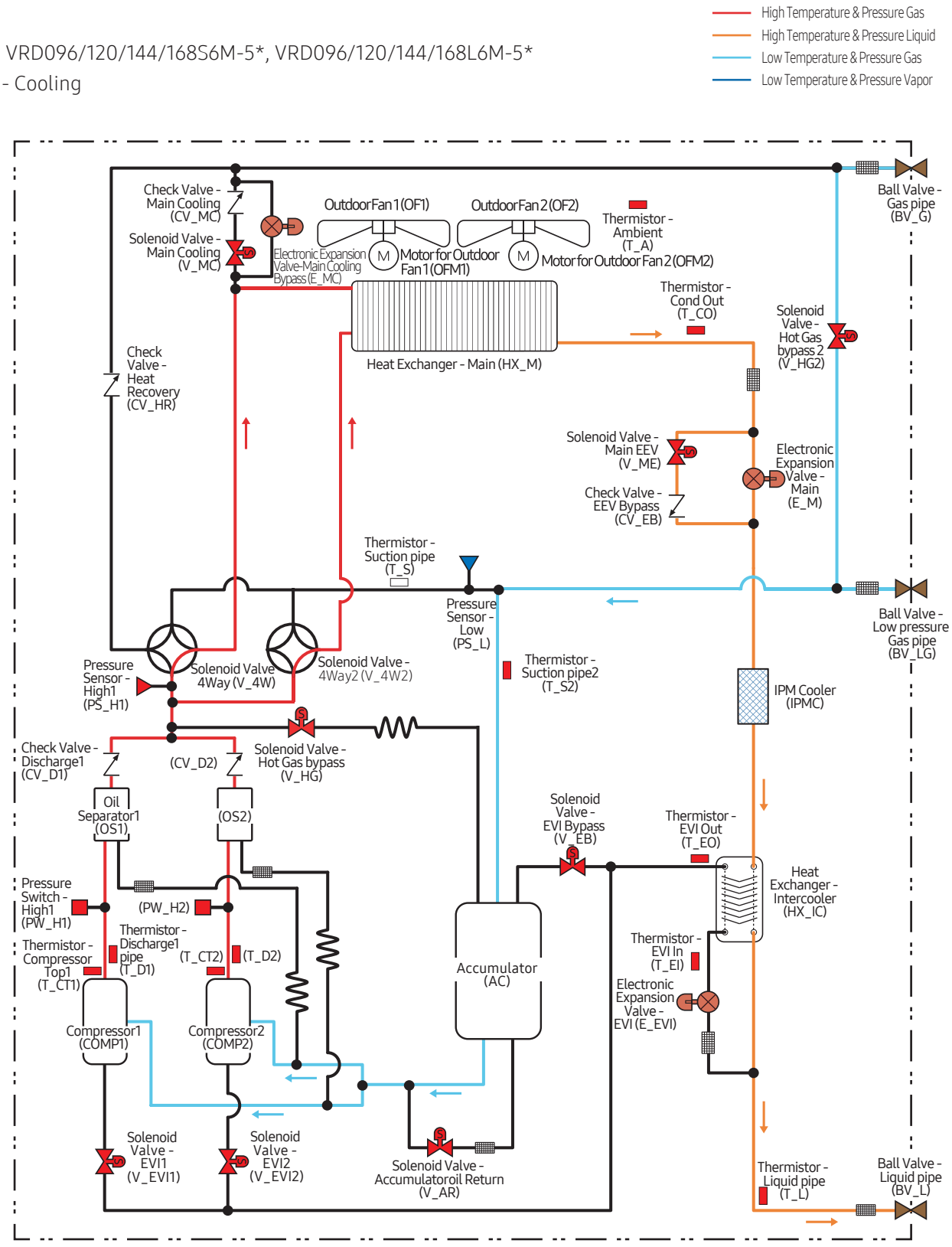
- Main Heating



9. Piping Diagram

Outdoor unit

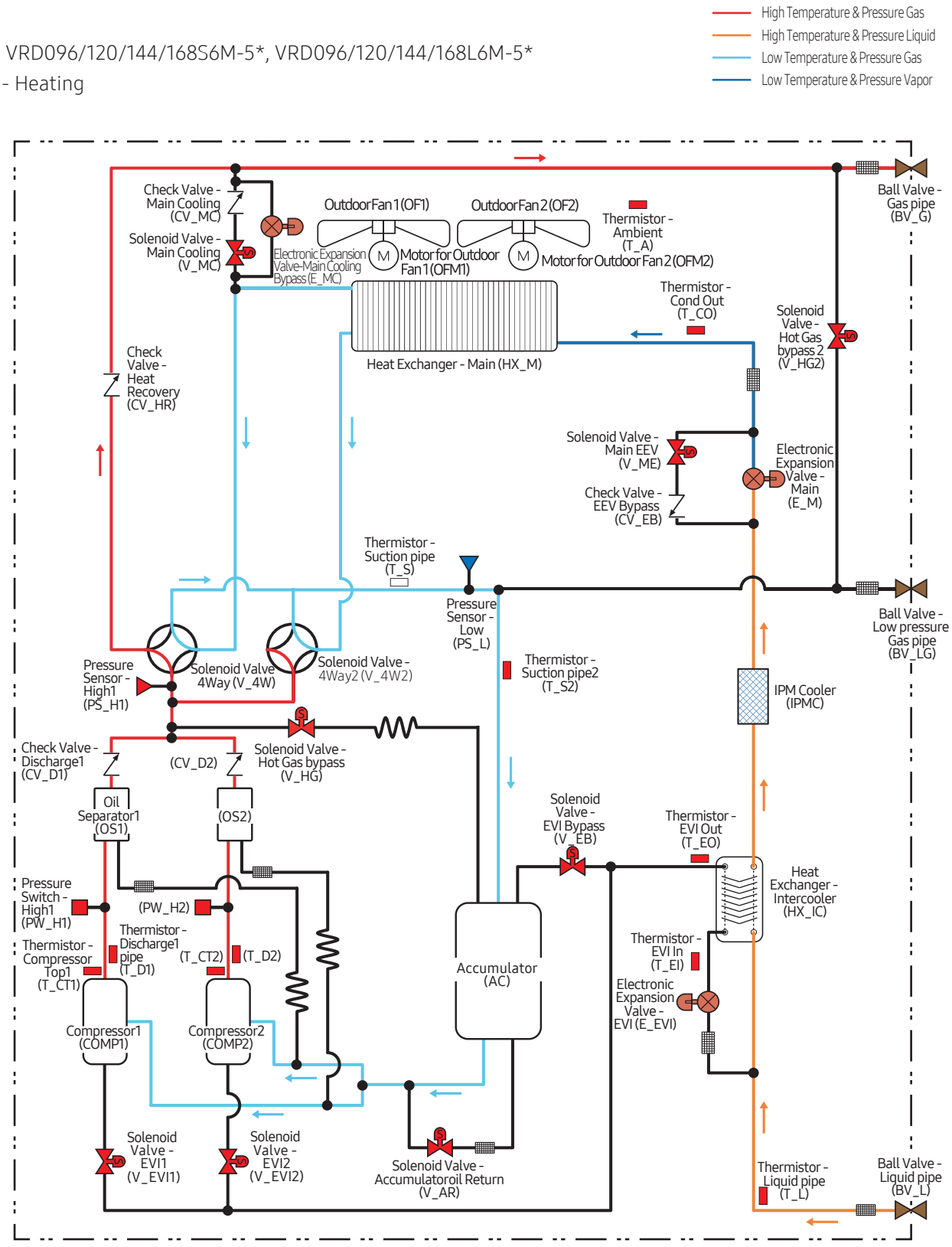
(2) VRD096/120/144/168S6M-5*, VRD096/120/144/168L6M-5*
- Cooling



9. Piping Diagram

Outdoor unit

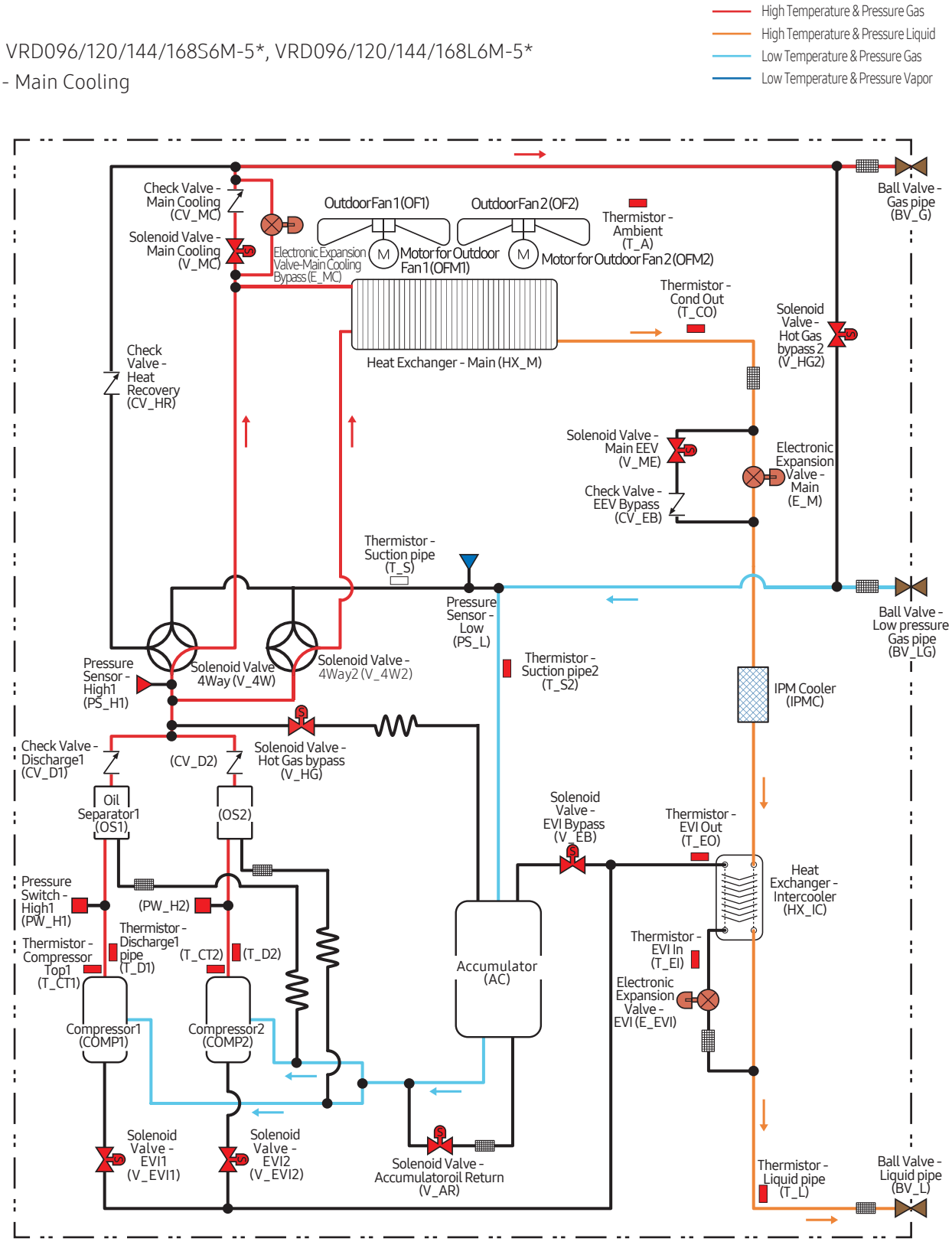
(2) VRD096/120/144/168S6M-5*, VRD096/120/144/168L6M-5*
- Heating



9. Piping Diagram

Outdoor unit

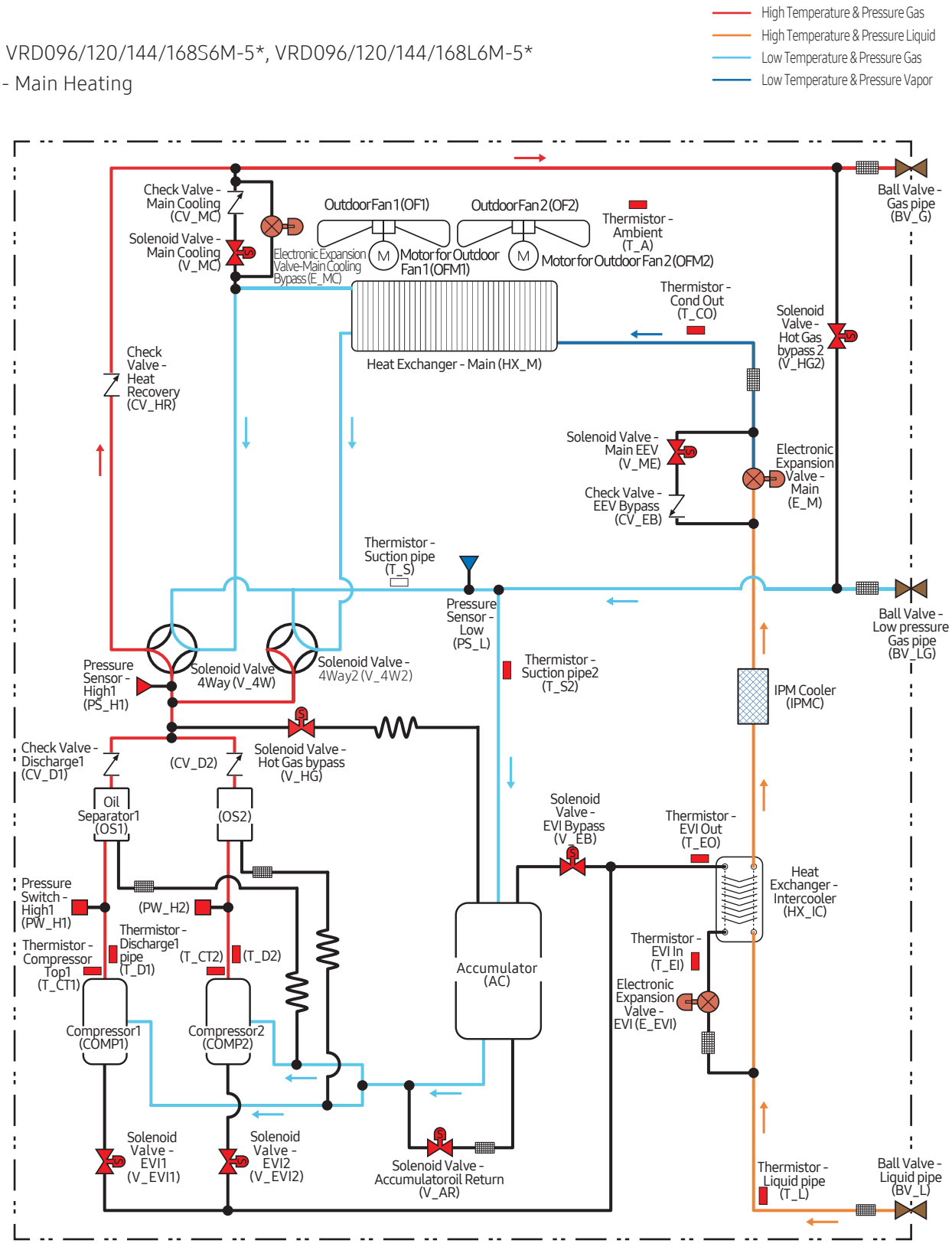
(2) VRD096/120/144/168S6M-5*, VRD096/120/144/168L6M-5*
- Main Cooling



9. Piping Diagram

Outdoor unit

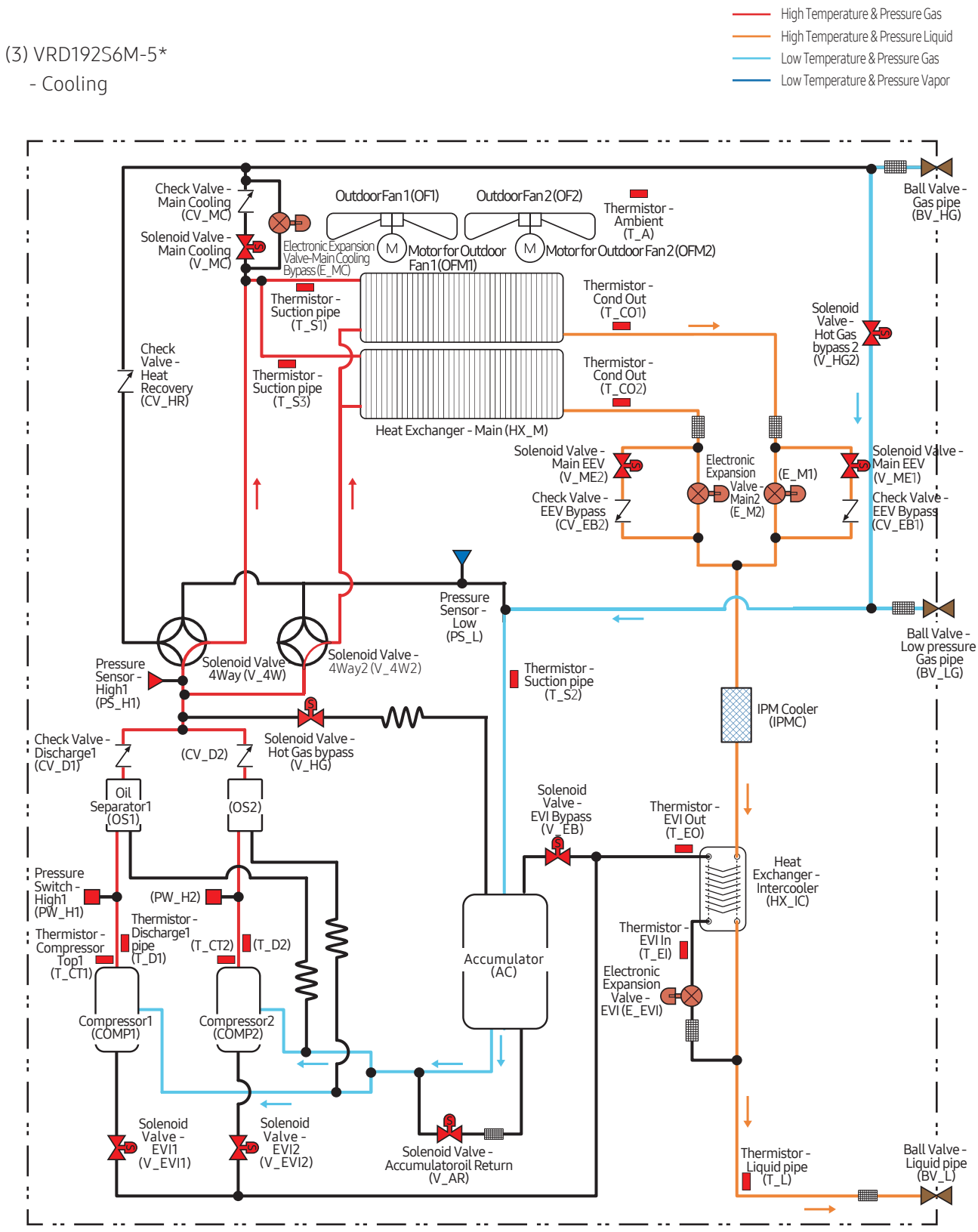
(2) VRD096/120/144/168S6M-5*, VRD096/120/144/168L6M-5*
- Main Heating



9. Piping Diagram

Outdoor unit

(3) VRD192S6M-5*
- Cooling

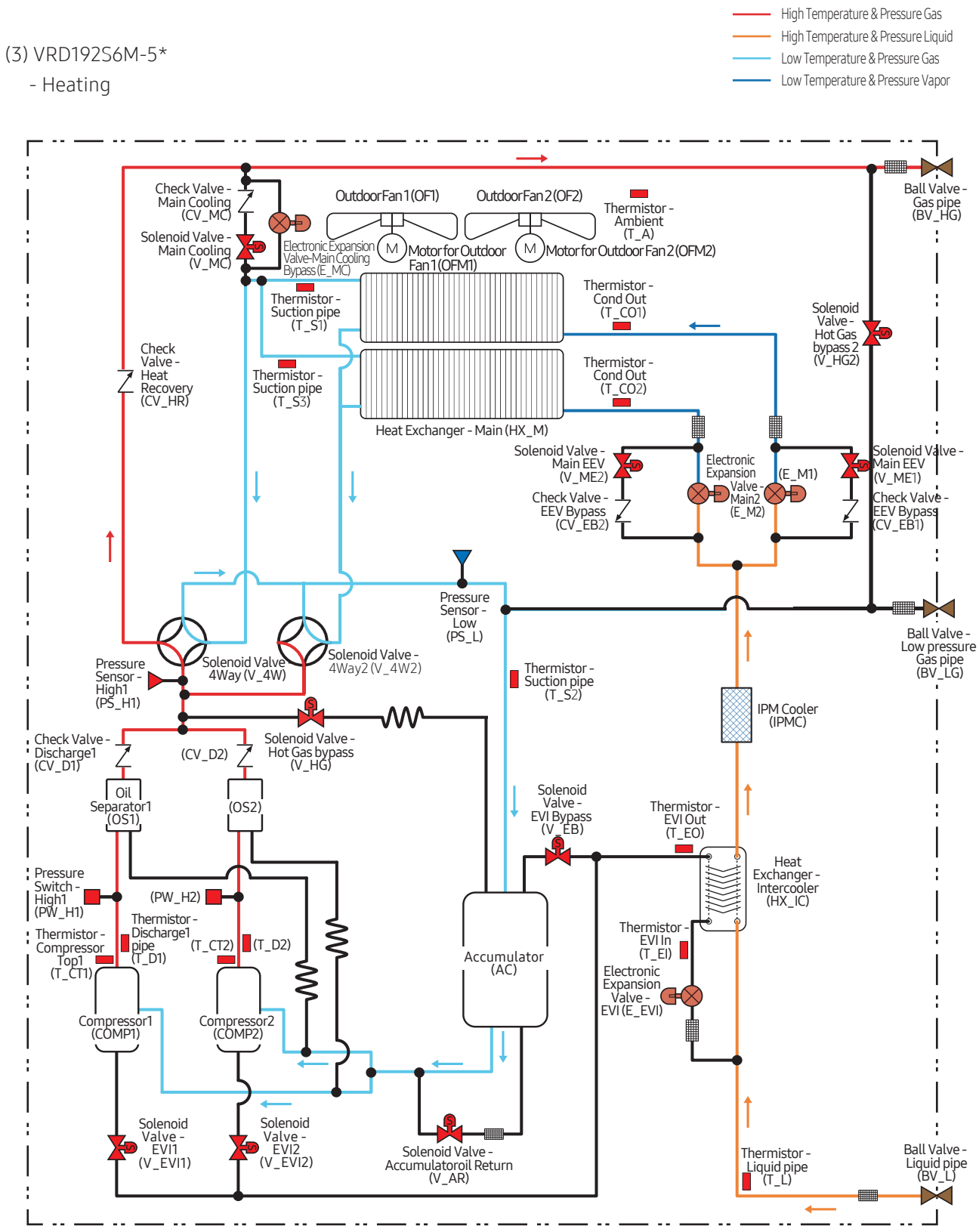


9. Piping Diagram

Outdoor unit

(3) VRD192S6M-5*

- Heating

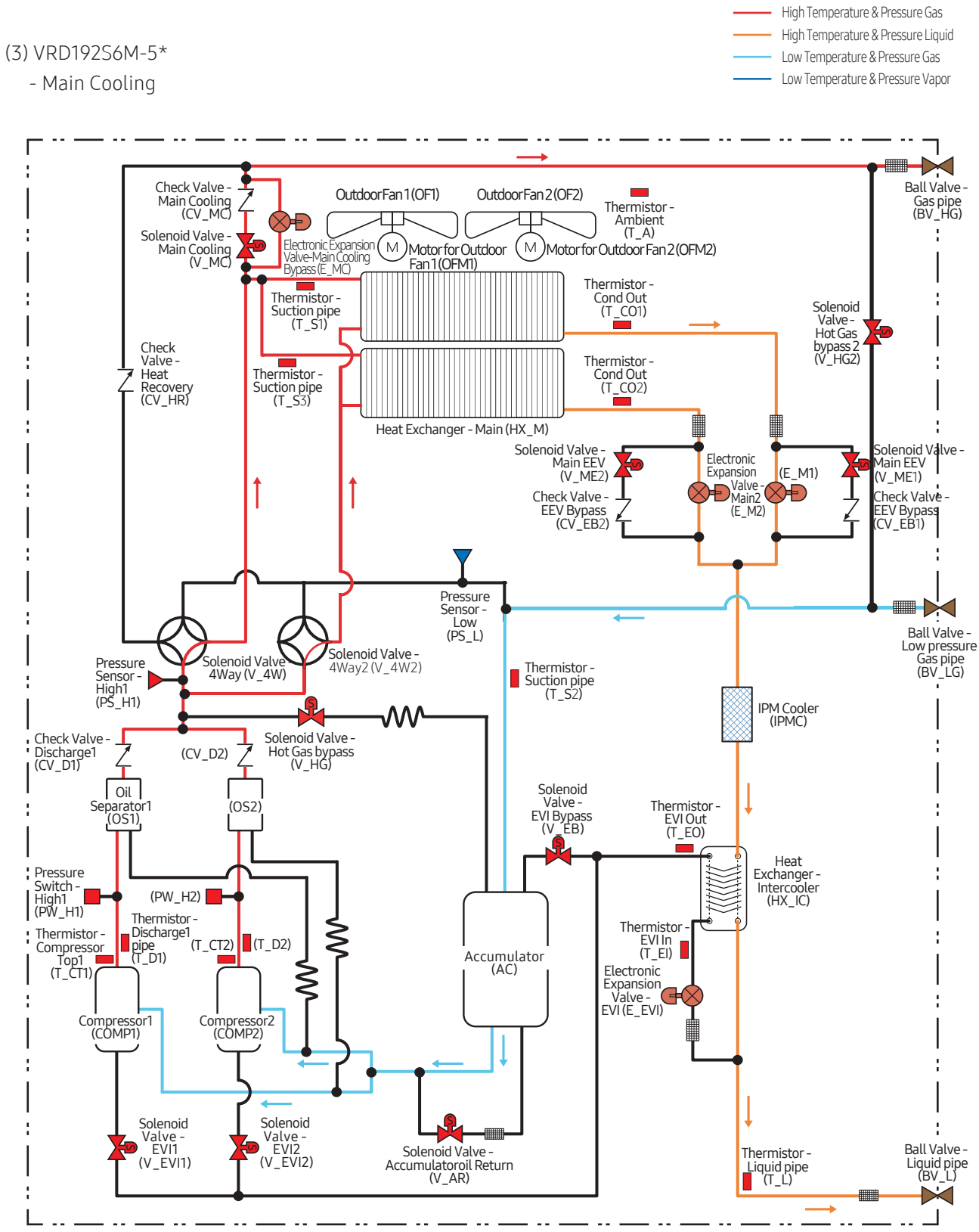


9. Piping Diagram

Outdoor unit

(3) VRD192S6M-5*

- Main Cooling

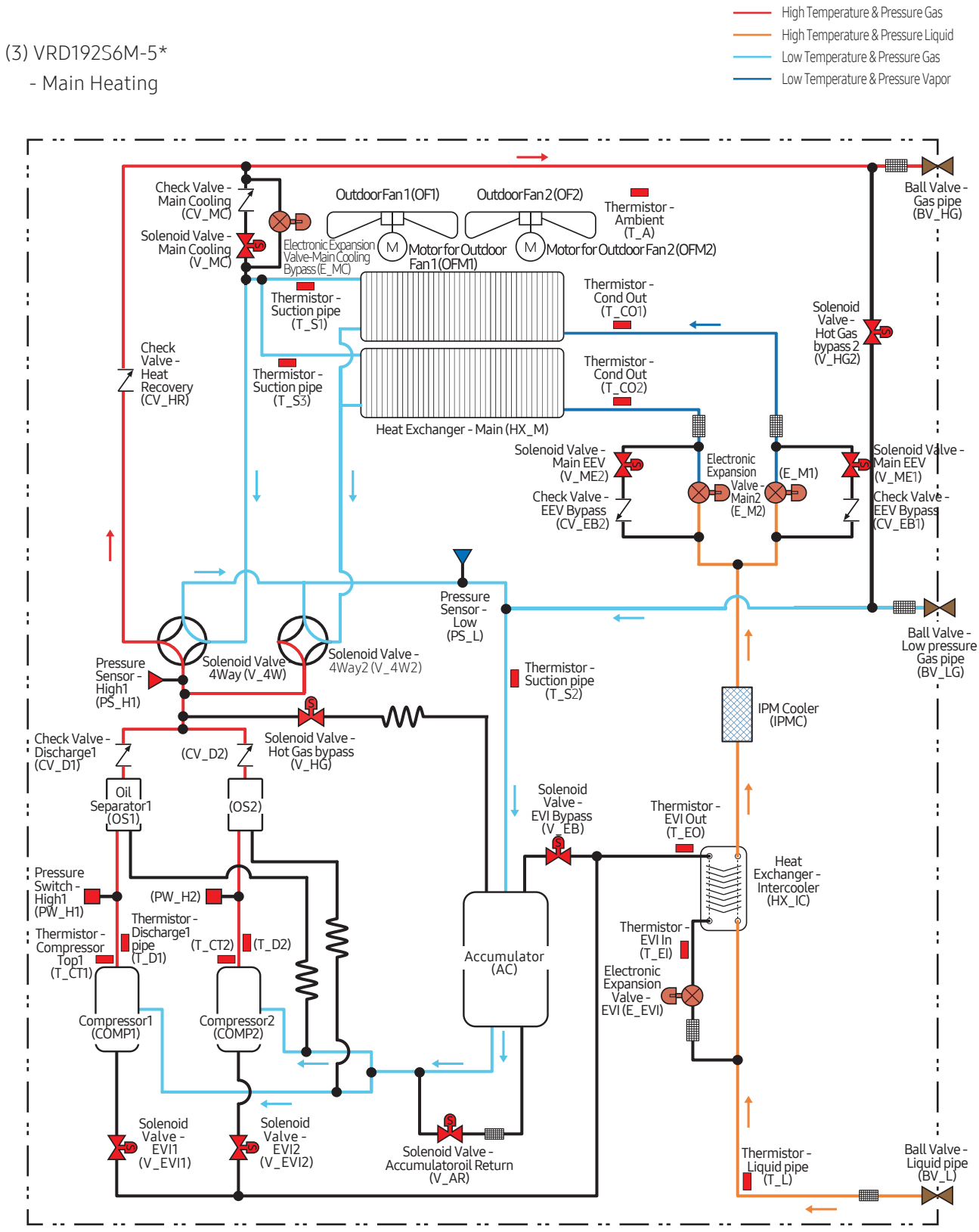


9. Piping Diagram

Outdoor unit

(3) VRD192S6M-5*

- Main Heating

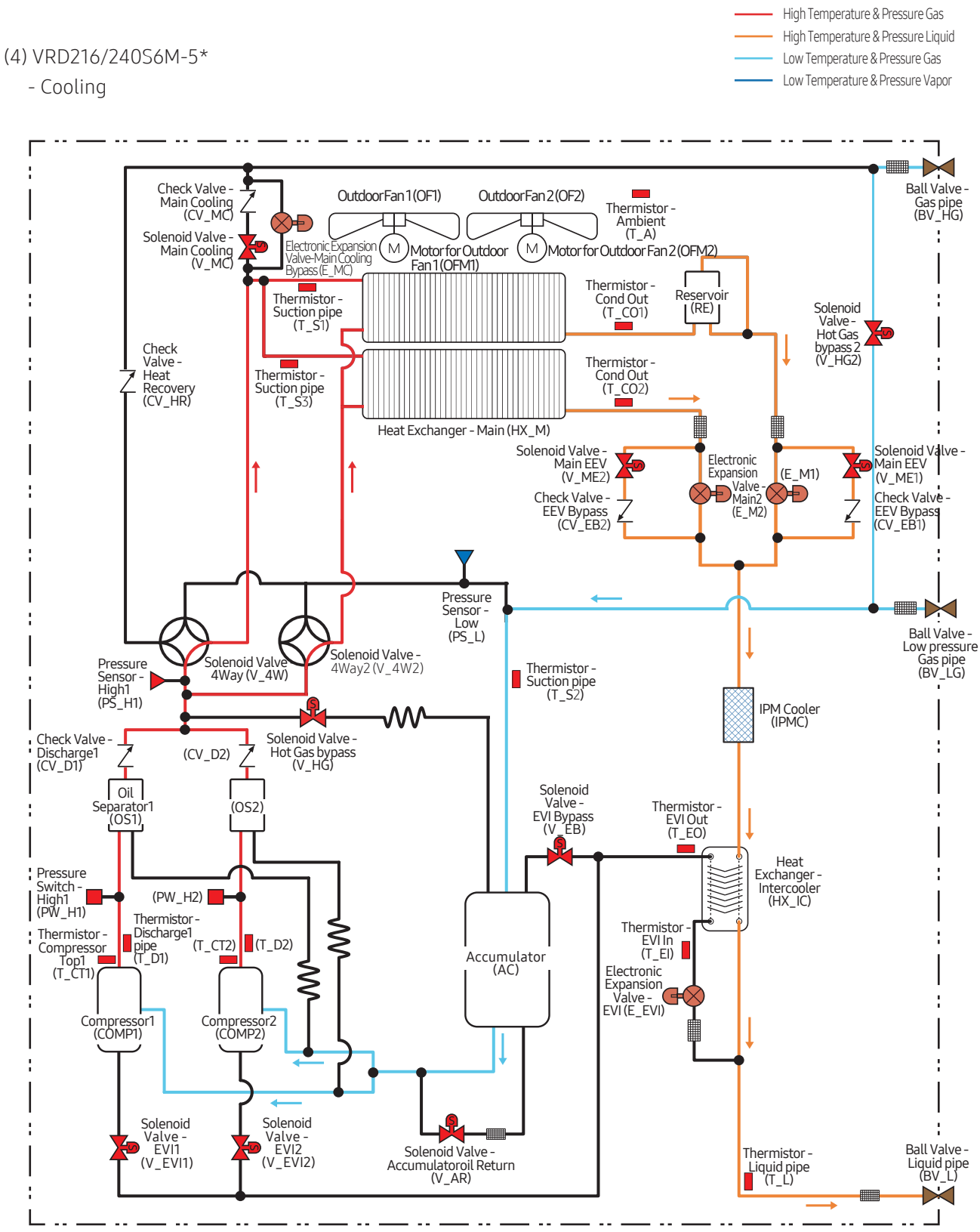


9. Piping Diagram

Outdoor unit

(4) VRD216/240S6M-5*

- Cooling

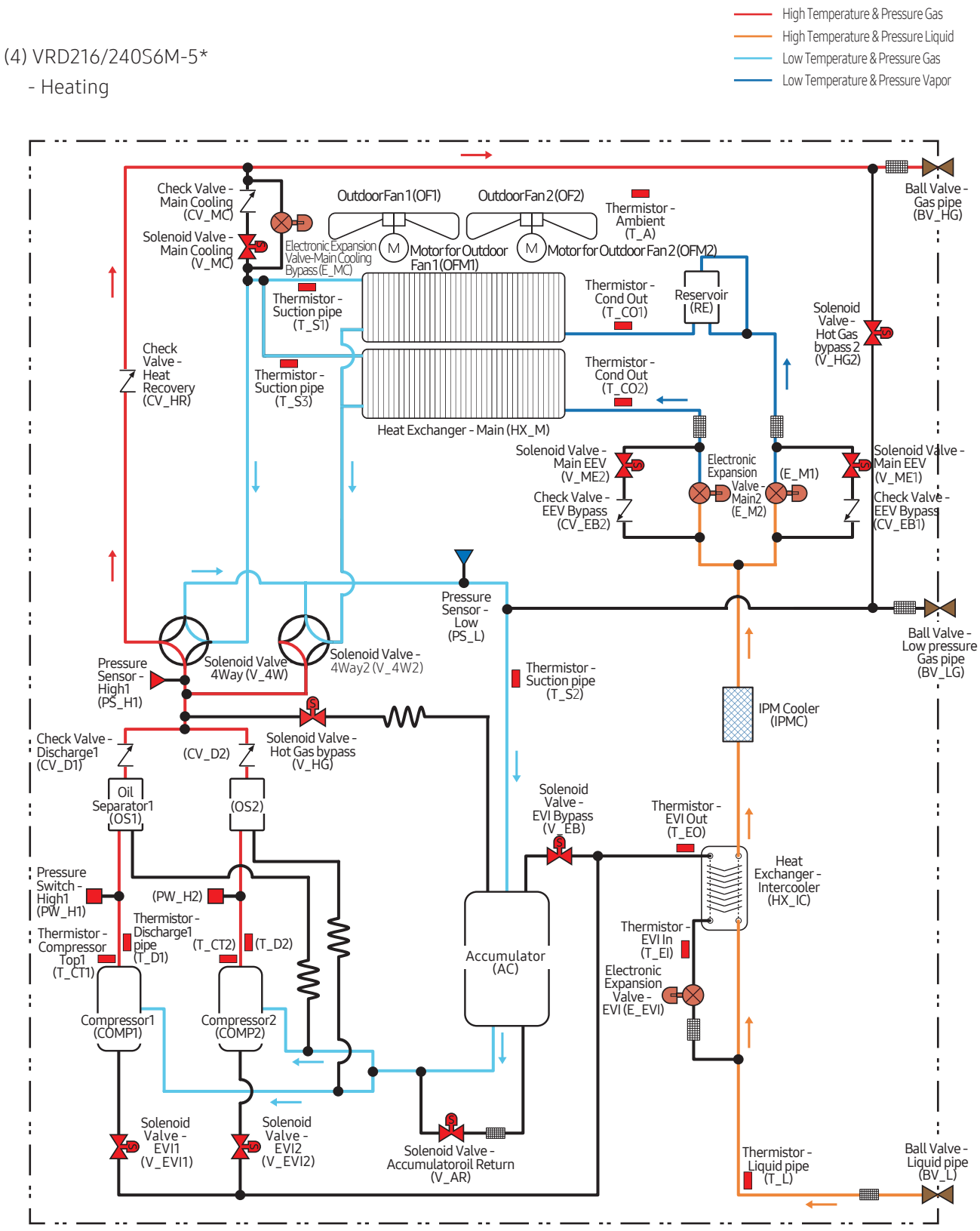


9. Piping Diagram

Outdoor unit

(4) VRD216/240S6M-5*

- Heating

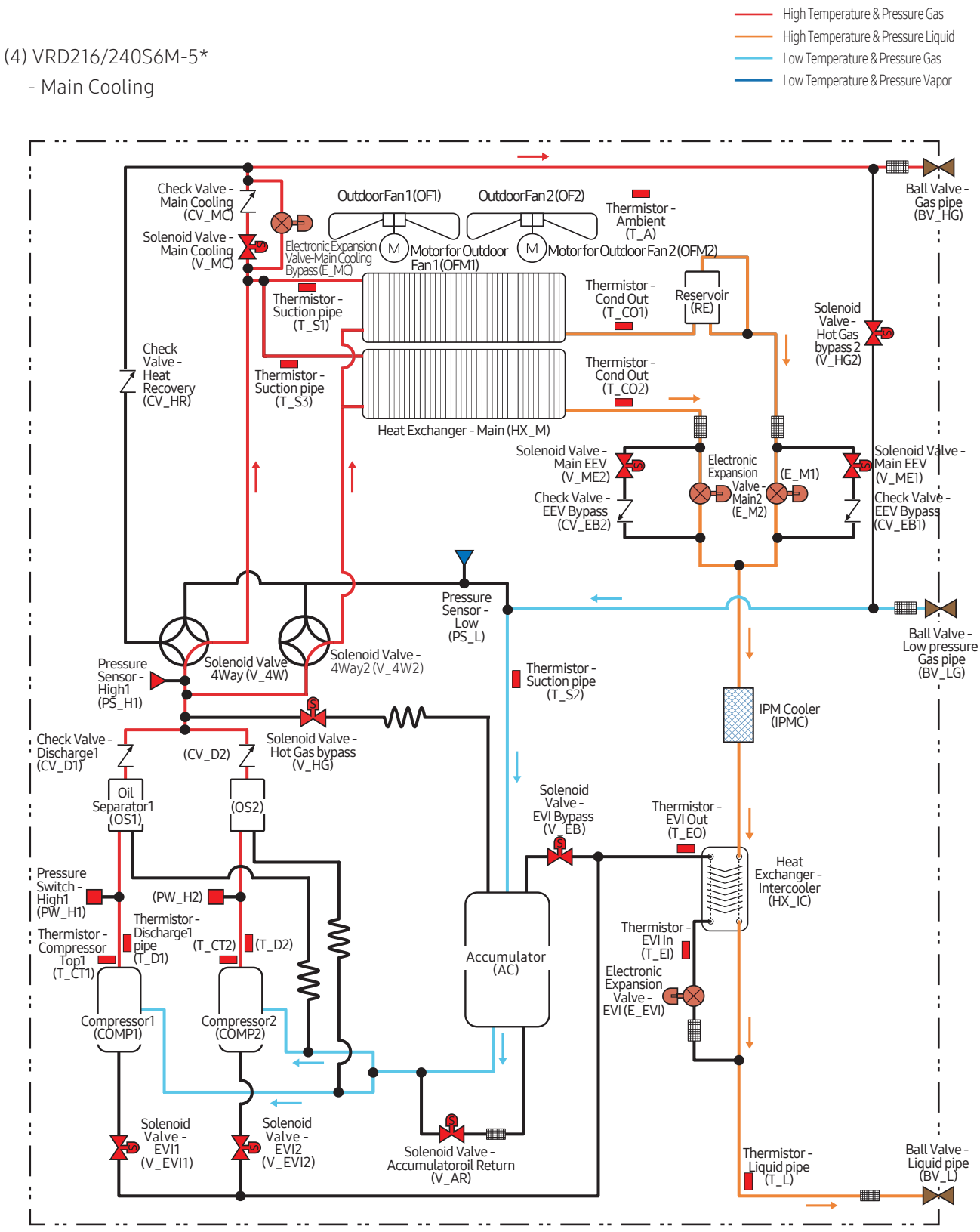


9. Piping Diagram

Outdoor unit

(4) VRD216/240S6M-5*

- Main Cooling

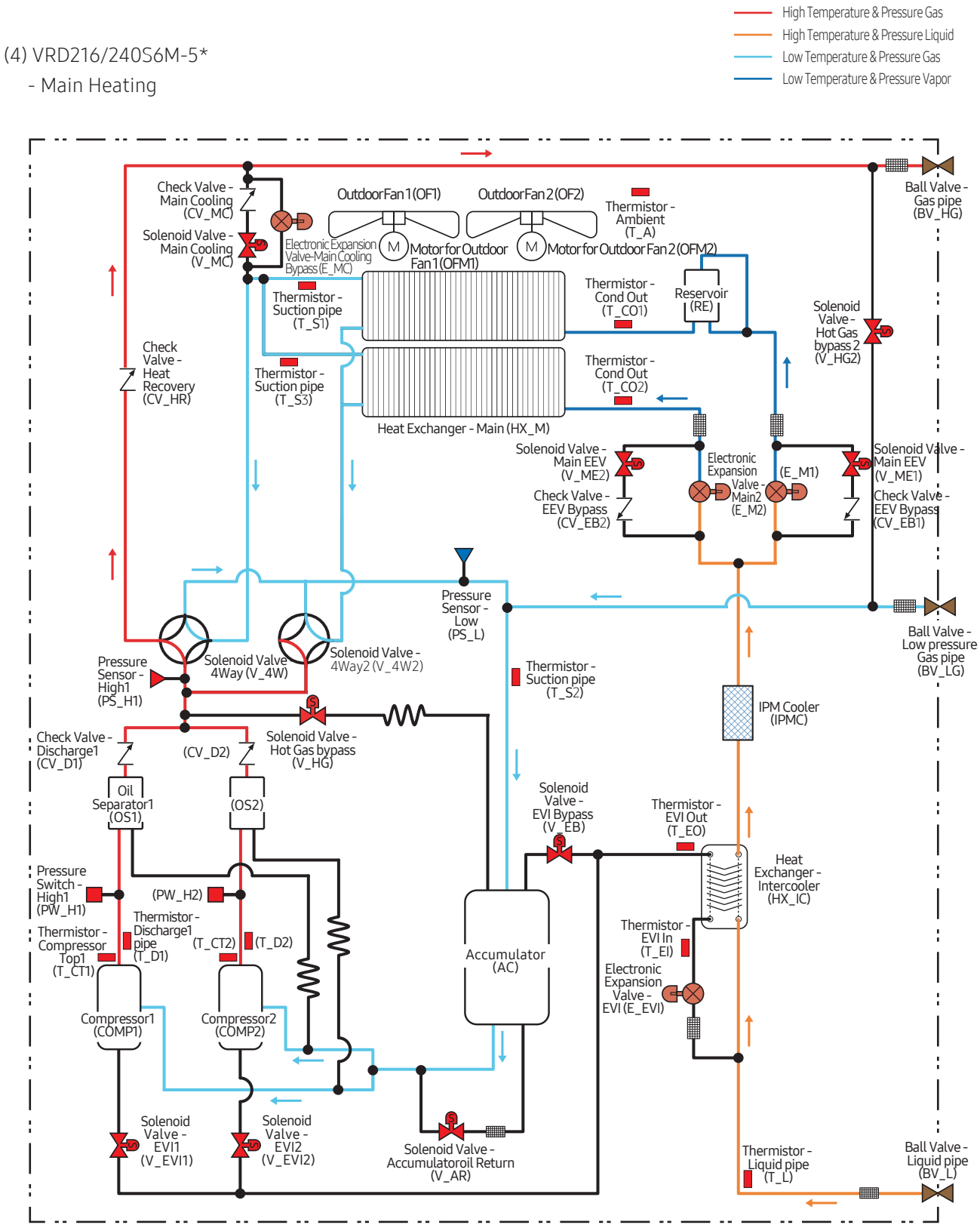


9. Piping Diagram

Outdoor unit

(4) VRD216/240S6M-5*

- Main Heating



Installation Clearances

Choosing the installation location

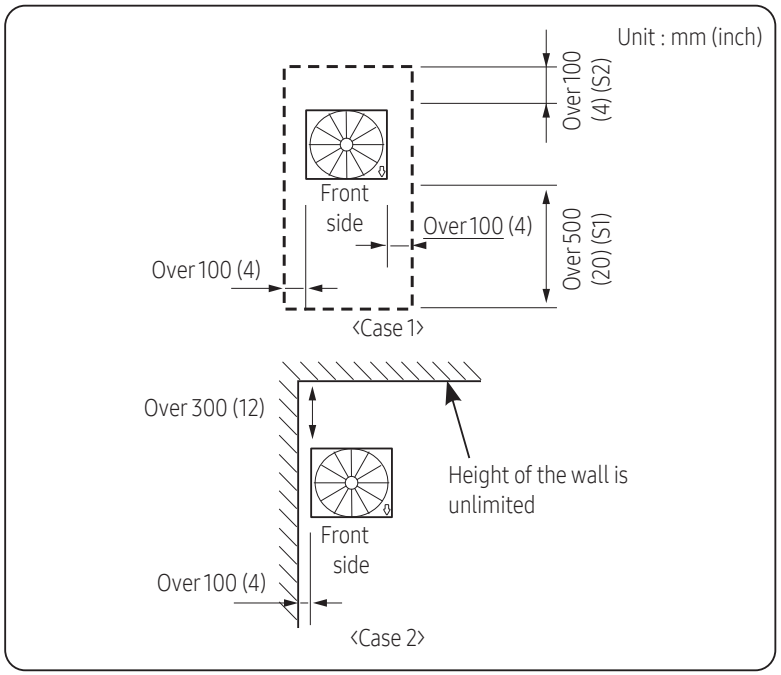
- Depending on the condition of power supply, unstable power or voltage any cause malfunction of the parts or control system. (At the ship or places using power supply from electric generator...etc)
- Heat Recovery systems require installation of MSB(s).
- Heat Pump systems require installation of SVB(s)

  ※ SVB(Shut-off Valve Box): An auxiliary device installed to reduce the indoor refrigerant leakage when installing a H/P model for R-32 refrigerant
- During operation, MSBs may create noise. When selecting the MSB installation location, make sure to install in an area where potential noise will not be an issue.

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.

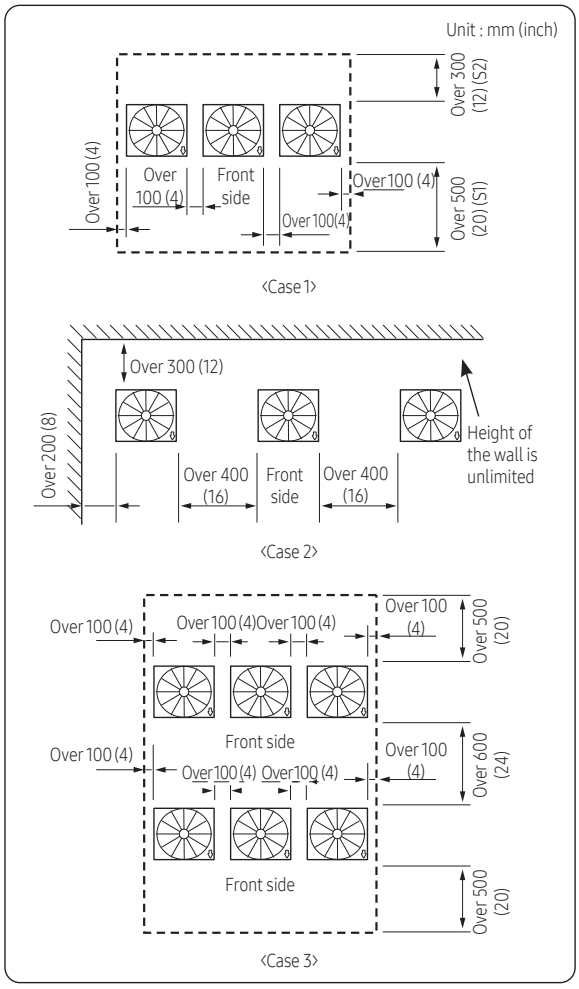
Single installation



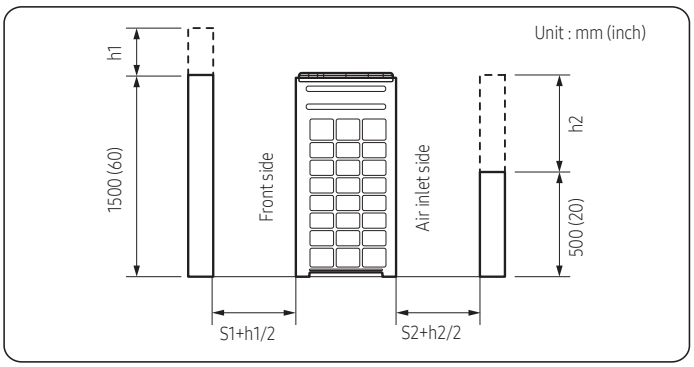
Installation Clearances

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).



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
VRD072S6M-5Y	69,000	77,000	11.00	11.60	24.18	23.30	23.74	3.93	3.90	3.92	2.70	2.84	27.17	25.08
VRD096S6M-5Y	92,000	103,000	12.15	12.20	27.98	24.10	26.04	4.21	3.94	4.08	2.92	2.75	30.50	25.84
VRD120S6M-5Y	114,000	129,000	11.15	11.70	25.92	22.60	24.26	3.85	3.80	3.83	2.81	2.80	29.55	25.18
VRD144S6M-5Y	138,000	154,000	11.30	11.80	25.16	22.19	23.68	3.65	3.68	3.67	2.69	2.70	26.41	24.70
VRD168S6M-5Y	160,000	180,000	10.15	10.60	22.91	21.19	22.05	3.55	3.67	3.61	2.51	2.56	25.94	24.23
VRD192S6M-5Y	184,000	206,000	10.20	11.00	22.50	22.10	22.30	3.20	3.55	3.38	2.22	2.65	25.65	24.04
VRD216S6M-5Y	206,000	232,000	10.10	10.15	21.50	20.60	21.05	3.20	3.45	3.33	2.18	2.60	25.08	22.71
VRD240S6M-5Y	228,000	258,000	9.90	9.95	21.44	20.30	20.87	3.24	3.25	3.25	2.39	2.45	25.08	22.52
VRD264S6M-5Y	252,000	283,000	10.55	10.85	21.76	19.18	20.47	3.49	3.61	3.55	2.44	2.41	24.42	23.56
VRD288S6M-5Y	276,000	309,000	10.25	10.75	22.70	20.04	21.37	3.33	3.55	3.44	2.26	2.41	23.28	22.52
VRD312S6M-5Y	298,000	335,000	9.75	10.45	21.15	19.62	20.39	3.31	3.50	3.41	2.32	2.36	23.18	20.14
VRD336S6M-5Y	320,000	361,000	9.65	10.20	22.05	19.42	20.74	3.30	3.45	3.38	2.46	2.31	22.42	19.67
VRD360S6M-5Y	342,000	387,000	9.45	9.65	21.86	18.93	20.40	3.24	3.40	3.32	2.33	2.30	22.23	19.38
VRD384S6M-5Y	368,000	412,000	9.60	9.60	19.47	17.68	18.58	3.30	3.30	3.30	2.20	2.35	22.04	18.72
VRD408S6M-5Y	390,000	438,000	9.50	9.20	19.26	17.46	18.36	3.25	3.30	3.28	2.15	2.35	21.28	18.24
VRD432S6M-5Y	412,000	464,000	8.85	9.15	18.32	17.84	18.08	3.30	3.25	3.28	2.17	2.35	21.28	18.62
VRD456S6M-5Y	436,000	489,000	9.10	9.10	18.02	17.00	17.51	3.29	3.20	3.25	2.10	2.25	21.19	18.53
VRD072S6M-5G	69,000	77,000	11.00	11.60	24.18	23.30	23.74	3.93	3.90	3.92	2.70	2.84	27.17	25.08
VRD096S6M-5G	92,000	103,000	12.15	12.20	27.98	24.10	26.04	4.21	3.94	4.08	2.92	2.75	30.50	25.84
VRD120S6M-5G	114,000	129,000	11.15	11.70	25.92	22.60	24.26	3.85	3.80	3.83	2.81	2.80	29.55	25.18
VRD144S6M-5G	138,000	154,000	11.30	11.80	25.16	22.19	23.68	3.65	3.68	3.67	2.69	2.70	26.41	24.70
VRD168S6M-5G	160,000	180,000	10.15	10.60	22.91	21.19	22.05	3.55	3.67	3.61	2.51	2.56	25.94	24.23
VRD192S6M-5G	184,000	206,000	10.20	11.00	22.50	22.10	22.30	3.20	3.55	3.38	2.22	2.65	25.65	24.04
VRD216S6M-5G	206,000	232,000	10.10	10.15	21.50	20.60	21.05	3.20	3.45	3.33	2.18	2.60	25.08	22.71
VRD240S6M-5G	228,000	258,000	9.90	9.95	21.44	20.30	20.87	3.24	3.25	3.25	2.39	2.45	25.08	22.52
VRD264S6M-5G	252,000	283,000	10.55	10.85	21.76	19.18	20.47	3.49	3.61	3.55	2.44	2.41	24.42	23.56
VRD288S6M-5G	276,000	309,000	10.25	10.75	22.70	20.04	21.37	3.33	3.55	3.44	2.26	2.41	23.28	22.52
VRD312S6M-5G	298,000	335,000	9.75	10.45	21.15	19.62	20.39	3.31	3.50	3.41	2.32	2.36	23.18	20.14
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VRD432S6M-5G	412,000	464,000	8.85	9.15	18.32	17.84	18.08	3.30	3.25	3.28	2.17	2.35	21.28	18.62
VRD456S6M-5G	436,000	489,000	9.10	9.10	18.02	17.00	17.51	3.29	3.20	3.25	2.10	2.25	21.19	18.53

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