

MSB SVB

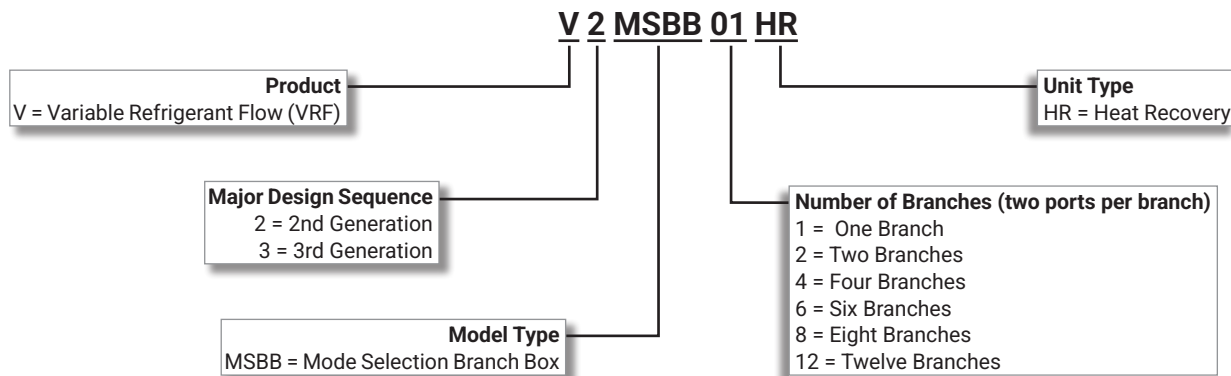
Mode Selection Boxes | Shut-Off Valve Boxes | 208/230V | **R-32** | 60Hz

COMMERCIAL PRODUCT SPECIFICATIONS (EHB)

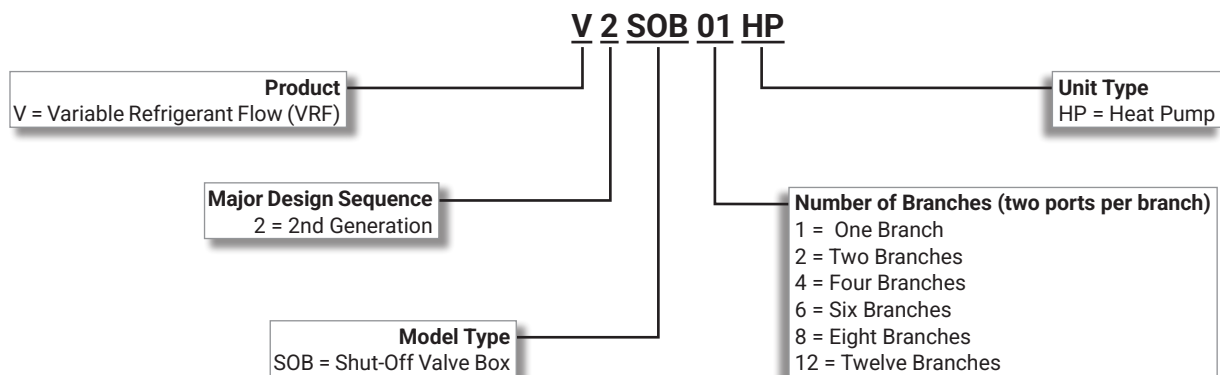


MODEL NUMBER IDENTIFICATION

MODE SELECTION BOX



SHUT-OFF VALVE BOX



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1. MSB (Mode Selection Box)

Specification

Type				MSB			
Model				V2MSBB01HR	V2MSBB02HR	V2MSBB04HR	
Power Supply			Φ # V Hz	1 2 208-230 60	1 2 208-230 60	1 2 208-230 60	
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery	
Power	Current	MCA	A	0.5	0.5	0.5	
		MFA	A	-	-	-	
		MOP	A	15	15	15	
Maximum number of connectable indoor units			EA	8	16	32	
Maximum number of connectable indoor unit per branch			EA	8	8		
Number of branches			EA	1	2	4	
Maximum capacity of connectable indoor units			kW	16	32	61.6	
			Btu/h	54,000	108,000	216,000	
			MBH	54	108	216	
Maximum capacity of connectable indoor units per branch		-	kW	16	16	16	
			Btu/h	54,000	54,000	54,000	
			MBH	54	54	54	
		Y-Joint	kW	-	32	32	
			Btu/h	-	108,000	108,000	
			MBH	-	108	108	
Piping Connections	Outdoor unit	Liquid Pipe	Φ, mm	15.88	15.88	15.88	
			Φ, inch	5/8	5/8	5/8	
		Gas Pipe	Φ, mm	22.22	22.22	22.22	
			Φ, inch	7/8	7/8	7/8	
	High Pressure Gas Pipe	Φ, mm	22.22	22.22	22.22		
		Φ, inch	7/8	7/8	7/8		
		Indoor unit	Liquid Pipe	Φ, mm	9.52	9.52	9.52
				Φ, inch	3/8	3/8	3/8
Gas Pipe	Φ, mm		15.88	15.88	15.88		
	Φ, inch		5/8	5/8	5/8		
Wiring Connection	Power Source Wire		mm ²	2.5	2.5	2.5	
	Transmission Cable		mm ²	0.75	0.75	0.75	
Refrigerant Calculation		Additional	kg	0.3	0.3	0.3	
Sound Pressure	Stable cooling Operation		dB(A)	30	30	32	
	Heating-to-Cooling Change over		dB(A)	45	45	45	
External Dimension	Net Weight		kg	24	26	30	
			lbs	52.91	57.32	66.14	
	Shipping Weight		kg	31	33	37	
			lbs	68.34	72.75	81.57	
	Net Dimensions	W	mm	492	492	492	
			in	19.37	19.37	19.37	
		H	mm	271	271	271	
			in	10.67	10.67	10.67	
		D	mm	780	780	780	
			in	30.71	30.71	30.71	
	Shipping Dimensions	W	mm	1,022	1,022	1,022	
			in	40.24	40.24	40.24	
		H	mm	353	353	353	
			in	13.90	13.90	13.90	
		D	mm	982	982	982	
			in	38.66	38.66	38.66	
Installation	-15 °C operation	1 port	Max.	kW	5	5	
				MBH	17	17	
		2 port	Min.	kW	-	5	
				MBH	-	17	
			Max.	kW	-	16	
				MBH	-	54	54

※ If the sum of the connected indoor unit capacity connected to the MSB is greater than 67.2kW, performance may vary depending on operating conditions.

※ The incoming pipe diameters supplying refrigerant to the MSB are determined based on the sum of the connected indoor units.

If these pipe diameters are different than the MSB pipe diameters, use the provided reducers to connect to the MSB.

If the provided reducers are not the correct size, field supplied reducers must be used.

1. MSB (Mode Selection Box)

Specification

Type				MSB			
Model				V3MSBB06HR	V2MSBB08HR	V2MSBB12HR	
Power Supply			Φ # V Hz	1 2 208-230 60	1 2 208-230 60	1 2 208-230 60	
Mode			-	Heat Recovery	Heat Recovery	Heat Recovery	
Power	Current	MCA	A	1	1	1.5	
		MFA	A	-	-	-	
		MOP	A	15	15	15	
Maximum number of connectable indoor units			EA	32	64	64	
Maximum number of connectable indoor unit per branch			EA	8	8		
Number of branches			EA	6	8	12	
Maximum capacity of connectable indoor units			kW	61.6	85	85	
			Btu/h	216,000	290,000	290,000	
			MBH	216	290	290	
Maximum capacity of connectable indoor units per branch		-	kW	16	16	16	
			Btu/h	54,000	54,000	54,000	
			MBH	54	54	54	
		Y-Joint	kW	32	32	32	
			Btu/h	108,000	108,000	108,000	
			MBH	108	108	108	
Piping Connections	Outdoor unit	Liquid Pipe	Φ, mm	15.88	15.88	15.88	
			Φ, inch	5/8	5/8	5/8	
		Gas Pipe	Φ, mm	22.22	22.22	22.22	
			Φ, inch	7/8	7/8	7/8	
	High Pressure Gas Pipe	Φ, mm	22.22	22.22	22.22		
		Φ, inch	7/8	7/8	7/8		
		Indoor unit	Liquid Pipe	Φ, mm	9.52	9.52	9.52
				Φ, inch	3/8	3/8	3/8
Gas Pipe	Φ, mm		15.88	15.88	15.88		
	Φ, inch		5/8	5/8	5/8		
Wiring Connection	Power Source Wire		mm ²	2.5	2.5	2.5	
	Transmission Cable		mm ²	0.75	0.75	0.75	
Refrigerant Calculation		Additional	kg	0.65	0.65	1	
Sound Pressure	Stable cooling Operation		dB(A)	32	35	35	
	Heating-to-Cooling Change over		dB(A)	45	45	45	
External Dimension	Net Weight		kg	48.5	53	75.5	
			lbs	106.92	116.85	166.45	
	Shipping Weight		kg	57	61.5	86	
			lbs	125.66	135.58	189.60	
	Net Dimensions	W	mm	937	937	1382	
			in	36.89	36.89	54.41	
		H	mm	271	271	271	
			in	10.67	10.67	10.67	
		D	mm	780	780	780	
			in	30.71	30.71	30.71	
	Shipping Dimensions	W	mm	1,457	1,457	1,902	
			in	57.36	57.36	74.88	
		H	mm	353	360	353	
			in	13.90	14.17	13.90	
		D	mm	982	982	982	
			in	38.66	38.66	38.66	
Installation	-15 °C operation	1 port	Max.	kW	5	5	
				MBH	17	17	17
		2 port	Min.	kW	5	5	
				MBH	17	17	17
			Max.	kW	16	16	16
				MBH	54	54	54

※ If the sum of the connected indoor unit capacity connected to the MSB is greater than 67.2kW, performance may vary depending on operating conditions.

※ The incoming pipe diameters supplying refrigerant to the MSB are determined based on the sum of the connected indoor units.

If these pipe diameters are different than the MSB pipe diameters, use the provided reducers to connect to the MSB.

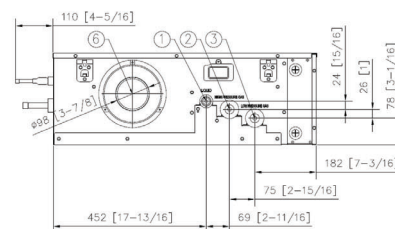
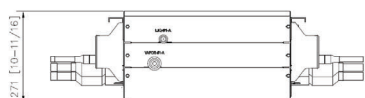
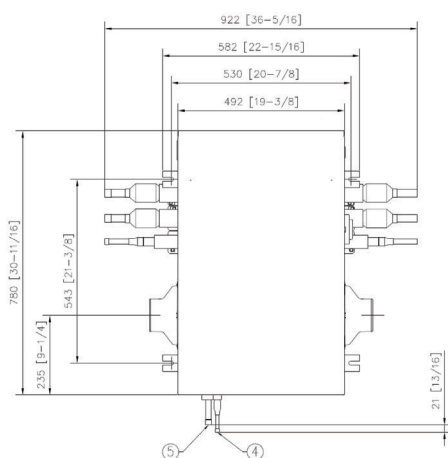
If the provided reducers are not the correct size, field supplied reducers must be used.

1. MSB (Mode Selection Box)

Dimensional drawings

V2MSBB01HR

Unit: mm [inch]



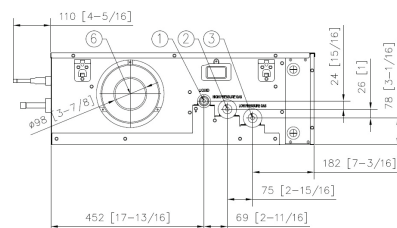
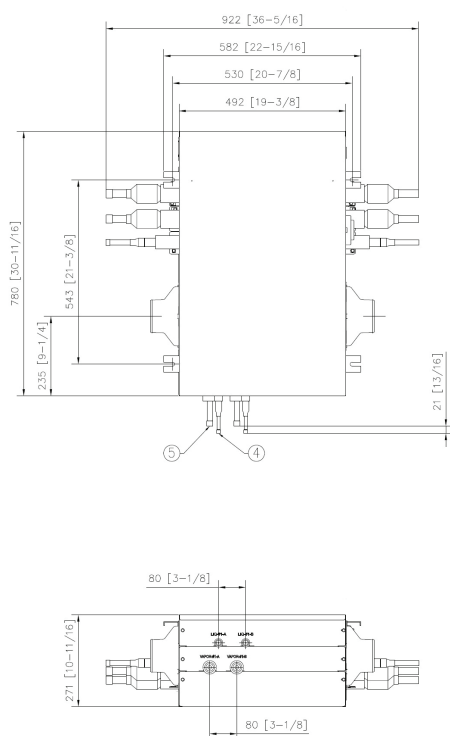
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

1. MSB (Mode Selection Box)

Dimensional drawings

V2MSBB02HR

Unit: mm [inch]



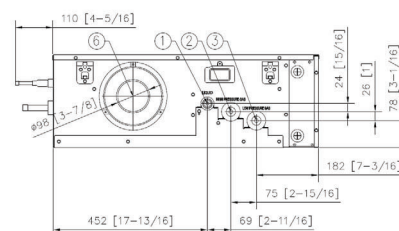
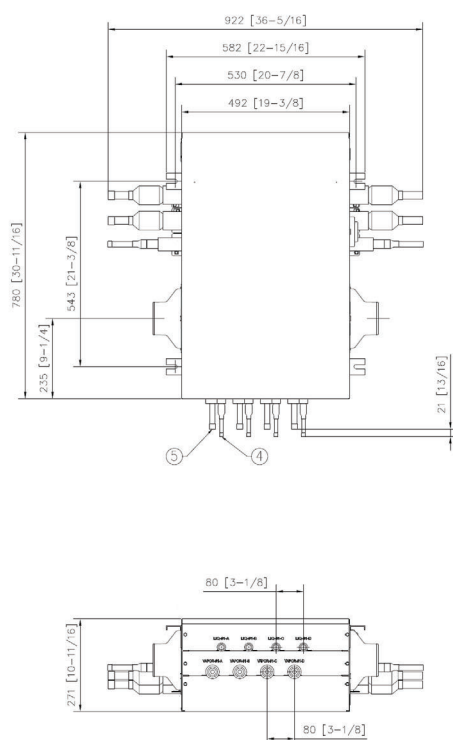
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

1. MSB (Mode Selection Box)

Dimensional drawings

V2MSBB04HR

Unit: mm [inch]



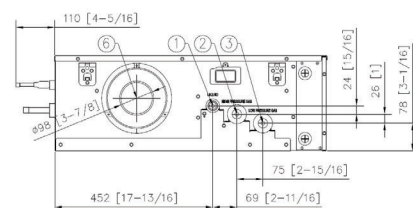
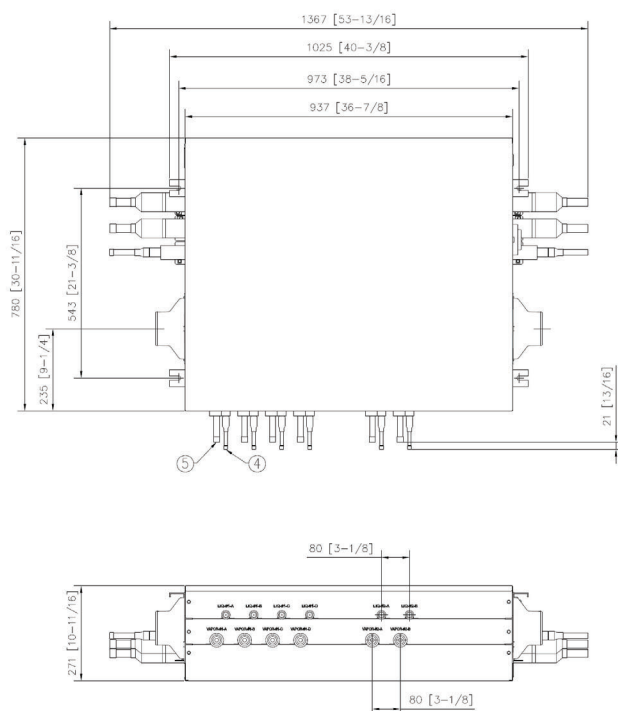
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

1. MSB (Mode Selection Box)

Dimensional drawings

V3MSBB06HR

Unit: mm [inch]



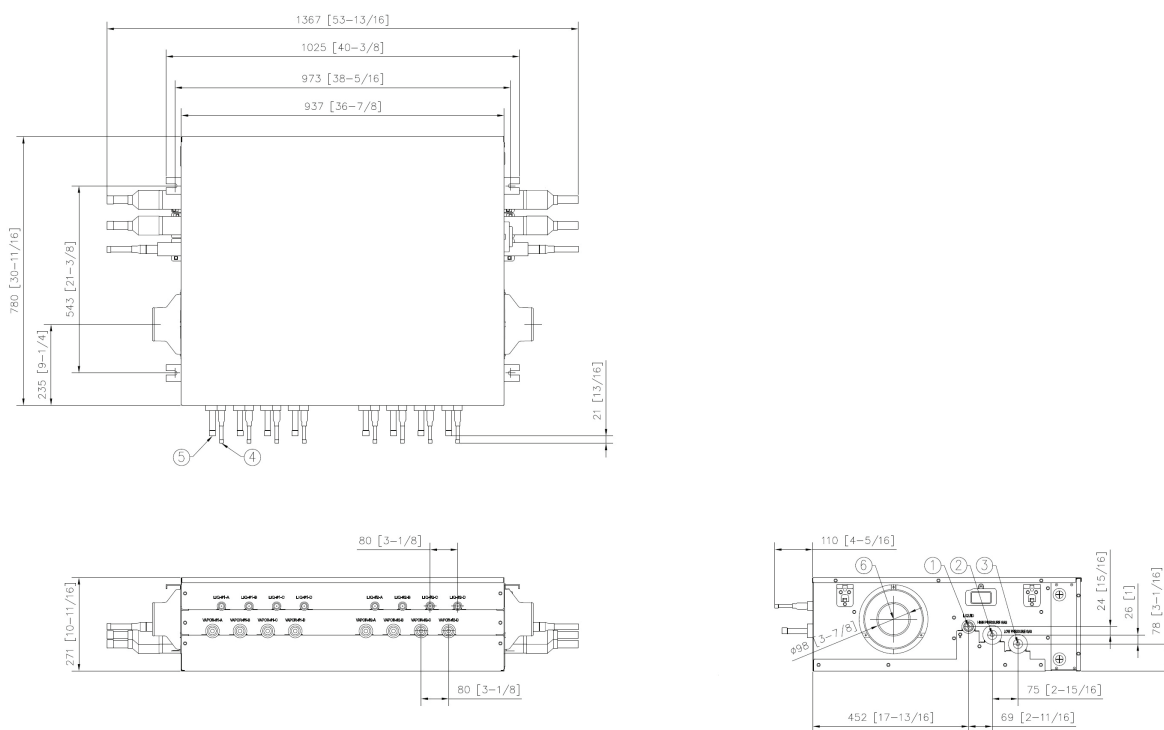
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

1. MSB (Mode Selection Box)

Dimensional drawings

V2MSBB08HR

Unit: mm [inch]



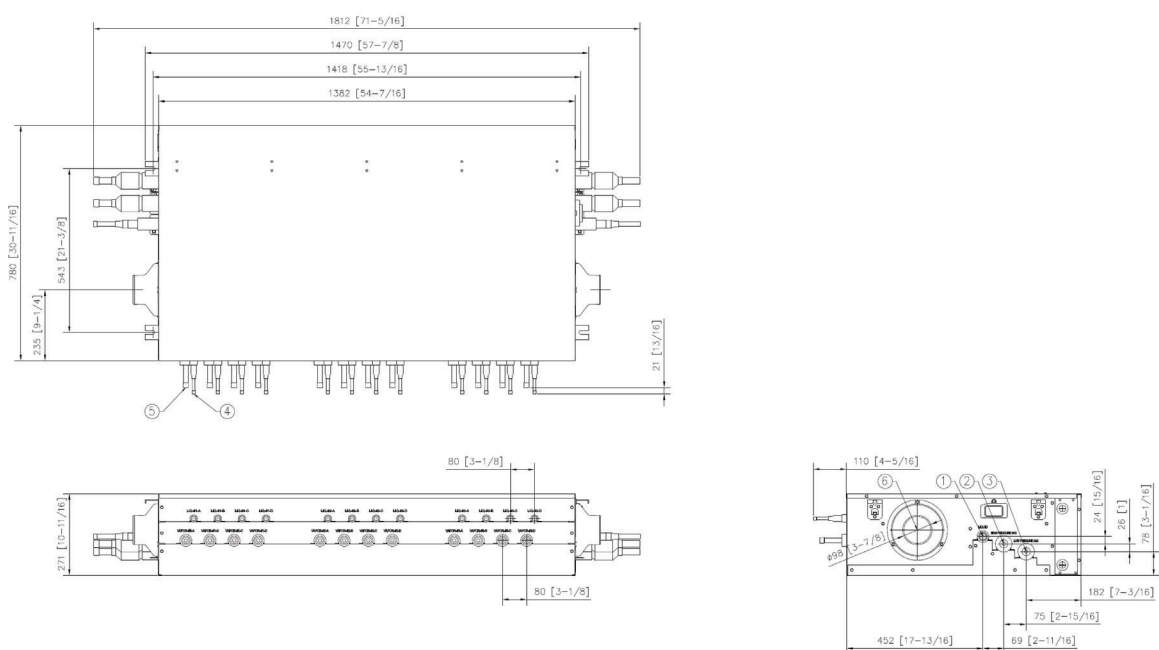
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

1. MSB (Mode Selection Box)

Dimensional drawings

V2MSBB12HR

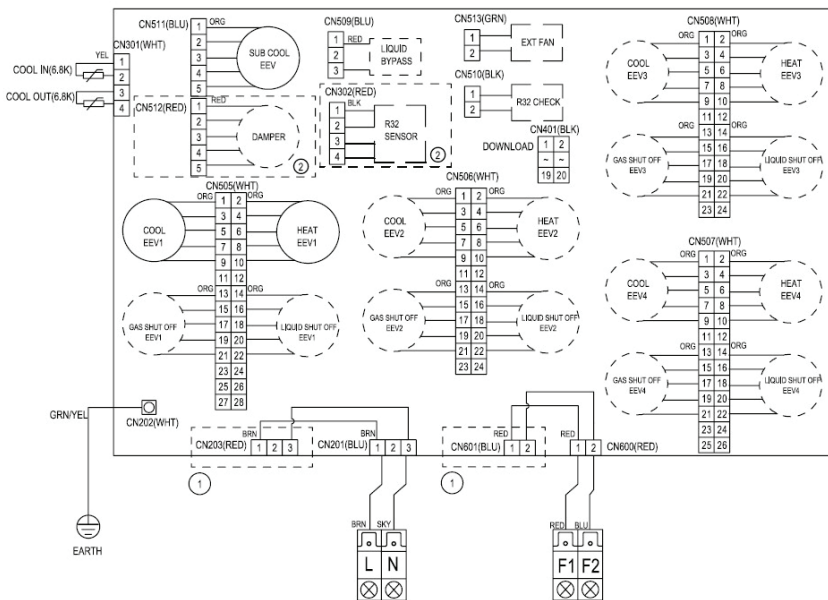
Unit: mm [inch]



No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

1. MSB (Mode Selection Box)

Electrical Wiring Diagram



USE COPPER SUPPLY WIRES.
UTILISER DES FILS D'ALIMENTATION EN CUIVRE.

1	OPTION	6,8,12 INDOOR MCU APPLY
2	OPTION	1,2,4 INDOOR MCU ALWAYS APPLY
		6,8 INDOOR MCU 2nd PBA APPLY
		12 INDOOR MCU 3rd PBA APPLY

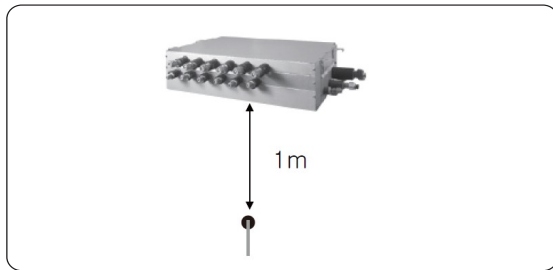
ERROR	DESCRIPTION
E686	R32 sensor short/open
E687	2nd refrigerant leak detection error
E688	Refrigerant leak sensor failure error
E689	Refrigerant leak sensor replacement notification error
E690	Refrigerant leak sensor lifetime expiration error
E694	Installation combination of indoor unit and wired remote control Error
E695	Refrigerant leak sensor lifetime unpredictable error
E696	1st refrigerant leak detection error
E697	2nd refrigerant leak detection error
E698	Refrigerant leak sensor failure error
E699	Refrigerant leak sensor replacement notification error
E700	Refrigerant leak sensor lifetime expiration error

NOTE

- This wiring diagram applies only to the MSB kits.
- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue, GRN: green
- For connection wiring indoor-outdoor transmission F1-F2.
- ⏏ Protective earth(screw), CN* : connector, $\frac{N}{\times}$: The wire quantity

1. MSB (Mode Selection Box)

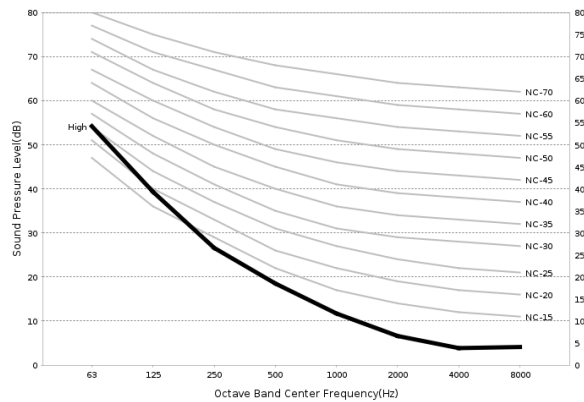
Sound pressure level



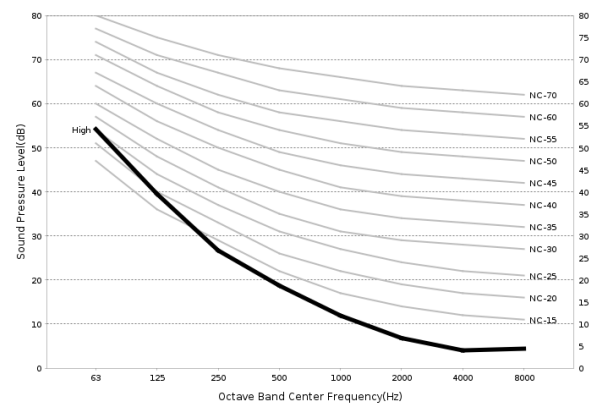
Model	Sound Level (dBA)
V2MSBB01HR	30
V2MSBB02HR	30
V2MSBB04HR	32
V3MSBB06HR	32

• NC Curve

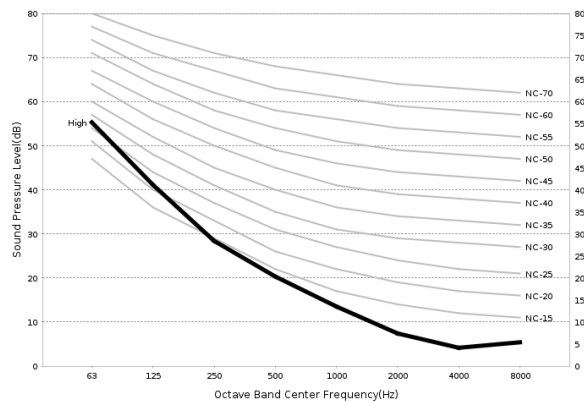
1) V2MSBB01HR



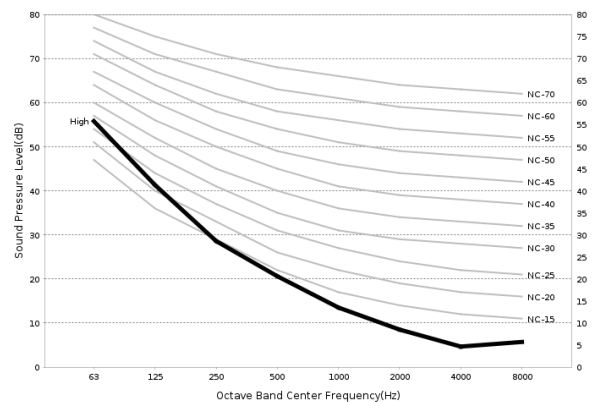
2) V2MSBB02HR



3) V2MSBB04HR



4) V3MSBB06HR

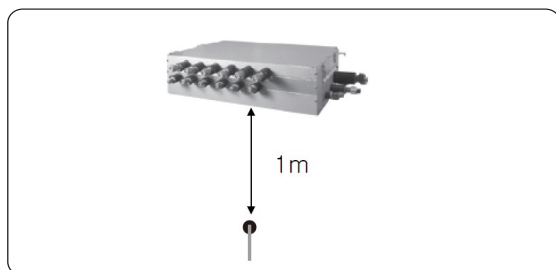


NOTE

- This value was measured at steady state in anechoic chamber and may vary depending on operating condition.
- Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

1. MSB (Mode Selection Box)

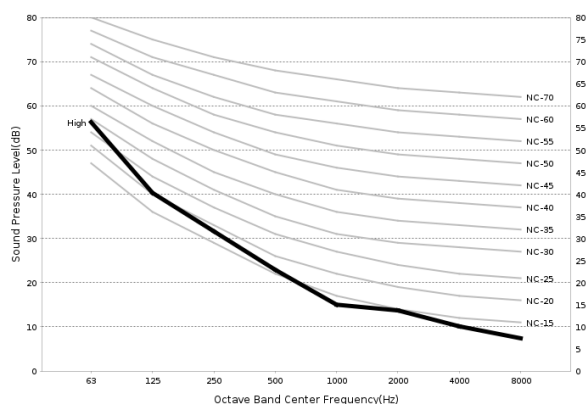
Sound pressure level



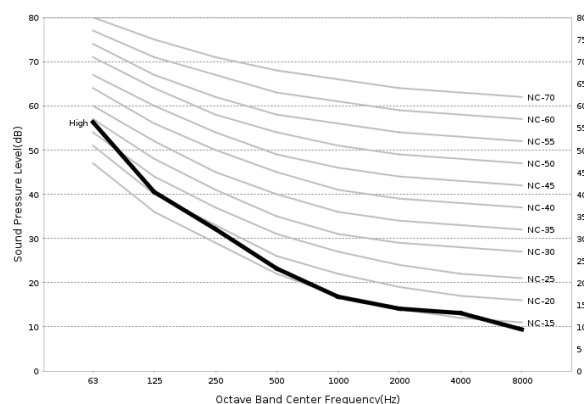
Model	Sound Level (dBA)
V2MSBB08HR	35
V2MSBB12HR	35

• NC Curve

5) V2MSBB08HR



6) V2MSBB12HR



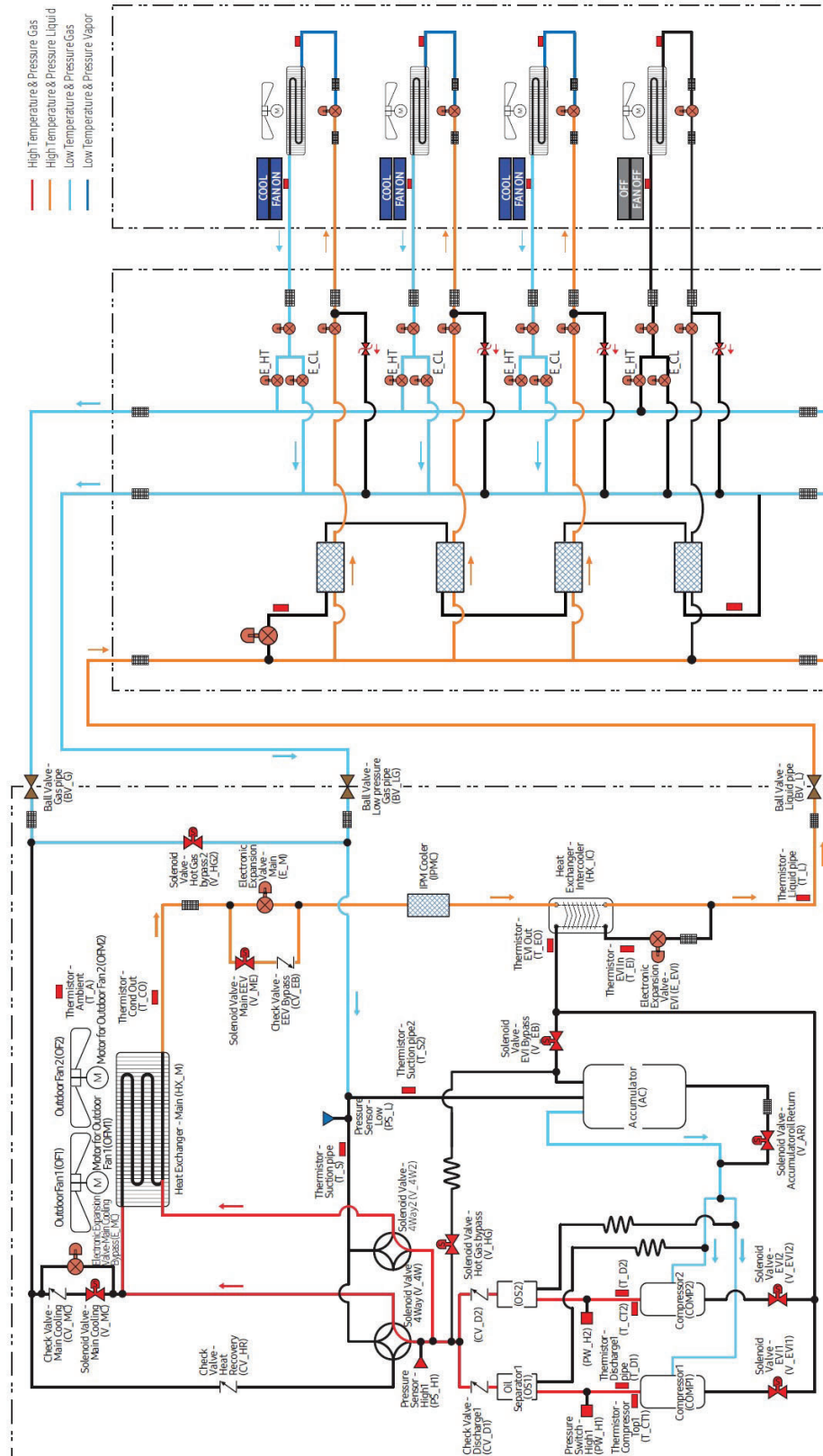
NOTE

- This value was measured at steady state in anechoic chamber and may vary depending on operating condition.
- Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

1. MSB (Mode Selection Box)

Piping diagram

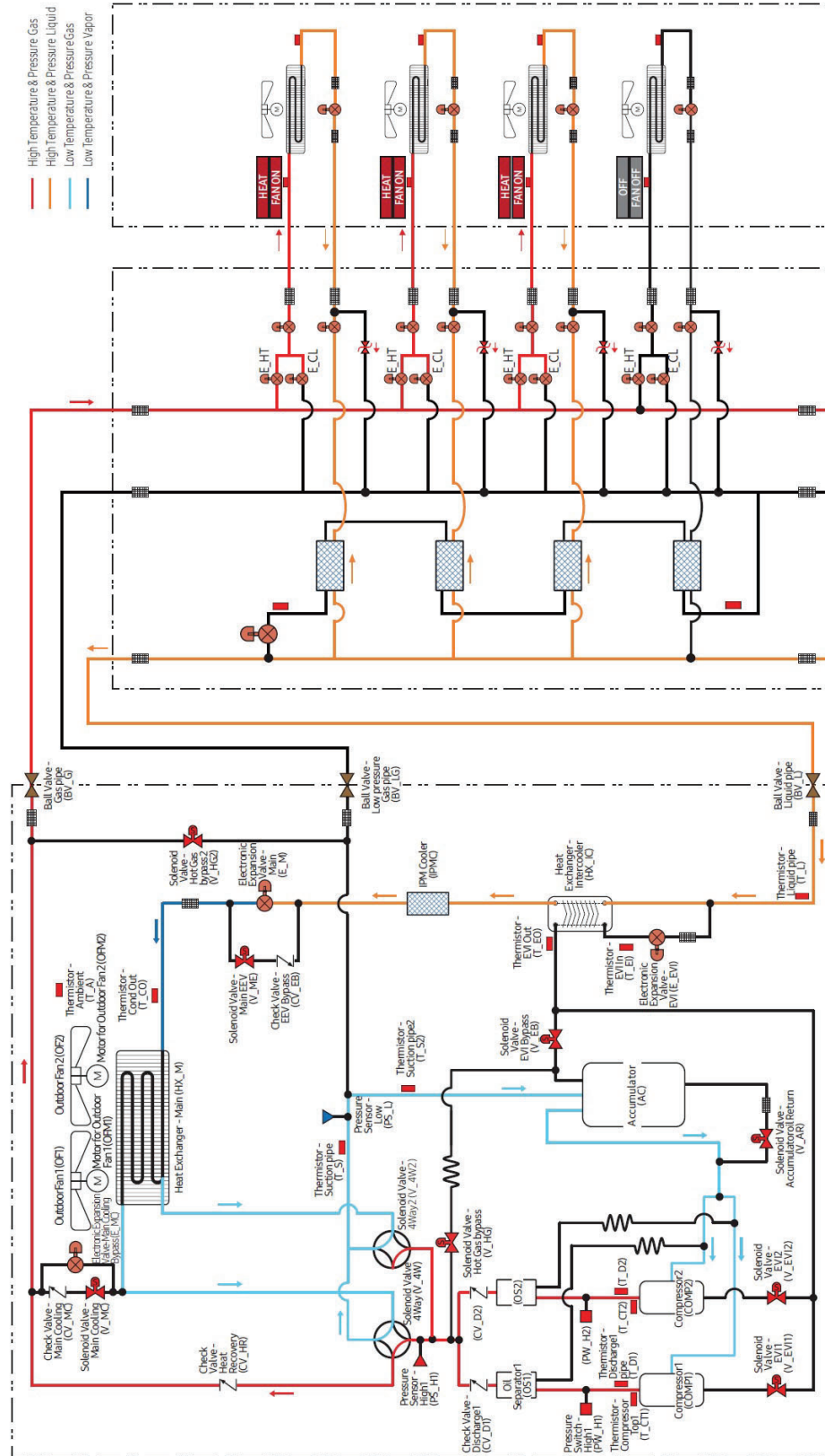
Cooling mode



1. MSB (Mode Selection Box)

Piping diagram

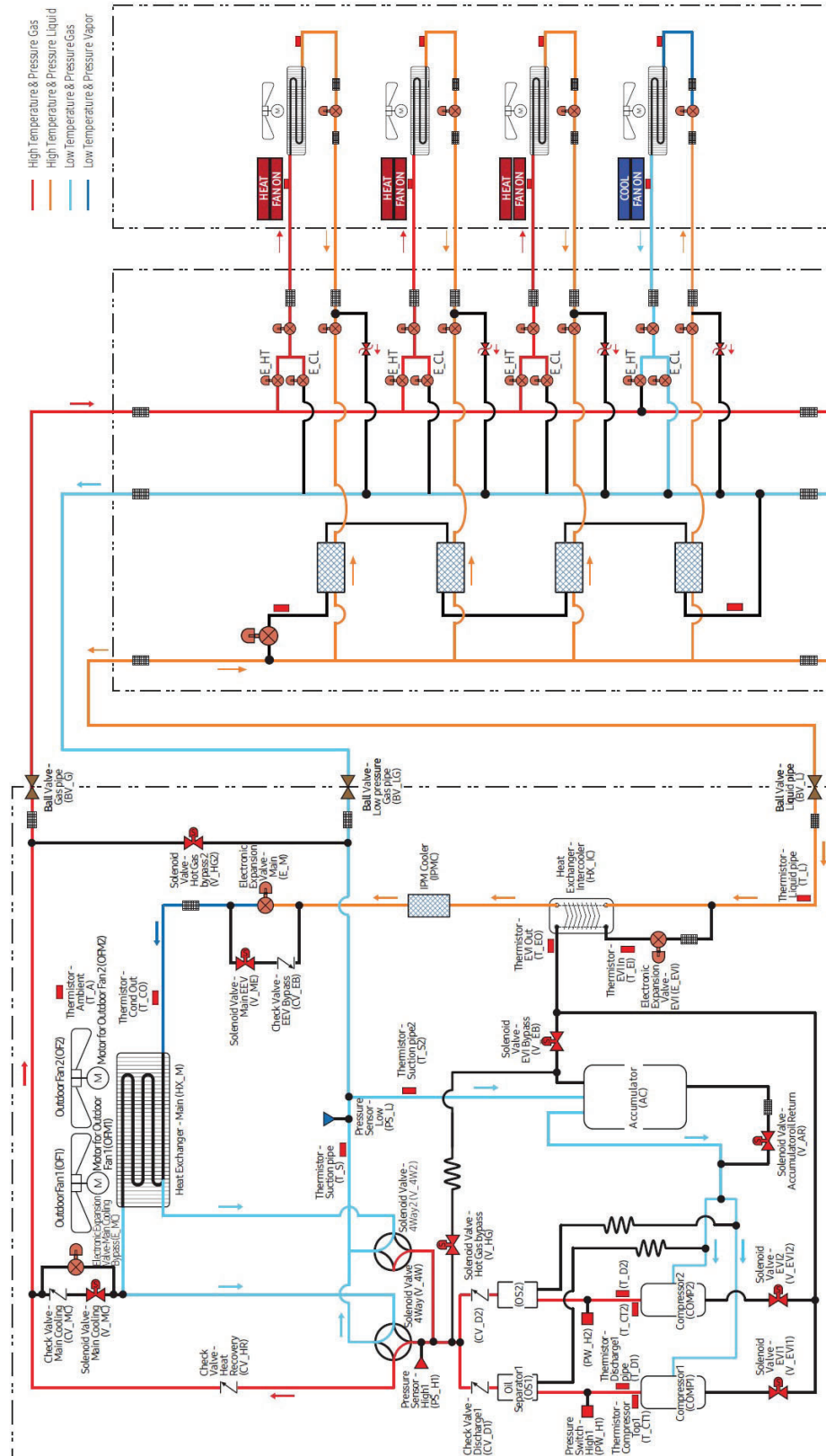
Heating mode



1. MSB (Mode Selection Box)

Piping diagram

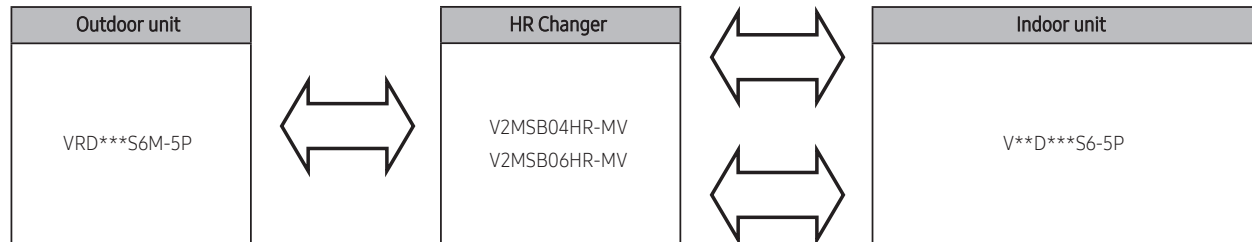
Main Heating mode



2. HR Changer

Indoor/outdoor unit compatible table

Before installing HR Changer, refer to the compatible table below and find the model before installation.



Classification	Model	Description
HR Changer	V2MSB04HR-MV V2MSB06HR-MV	below 22.4 kW (76MBH)

2. HR Changer

Specification

Type					HR Changer		HR Changer		
Model Code					V2MSB04HR-MV		V2MSB06HR-MV		
Power Supply					Φ # V Hz	1 2 220-240 50/60		1 2 220-240 50/60	
Mode					-	Heat Recovery		Heat Recovery	
Power	Current	MCA			A	0.5		0.5	
		MFA(MOP)			A	15		15	
Piping Connections	Outdoor unit	Liquid Pipe	Diameter	mm	15.88		15.88		
				in	5/8		5/8		
		Gas Pipe	Diameter	mm	22.22		22.22		
				in	7/8		7/8		
	Indoor unit	High Pressure Gas Pipe	Diameter	mm	22.22		22.22		
				in	7/8		7/8		
		Liquid Pipe	Diameter	mm	9.52		9.52		
				in	3/8		3/8		
Wiring Connection	Power Source Wire			mm²	2.5		2.5		
				AWG	12		12		
	Transmission Cable			Min.	mm²	0.75		0.75	
				AWG	18		18		
Refrigerant				Type	-		R32		
Refrigerant Calculation				Additional	kg	0.65		0.65	
Sound Level	Sound Pressure Level	Sound Pressure Level			dB(A)	32		32	
		Stable cooling Operation			dB(A)	32		32	
		Heating-to-Cooling Change over			dB(A)	45		45	
	Sound Power Level				dB(A)	48		48	
External Dimension	Net Weight			kg	41		44		
				lbs	90.39		97.00		
	Shipping Weight			kg	49.5		52.5		
				lbs	109.13		115.74		
	Net Dimensions	W	mm	937		937			
			in	36.89		36.89			
		H	mm	271		271			
			in	10.67		10.67			
		D	mm	780		780			
			in	30.71		30.71			
	Shipping Dimensions	W	mm	1457		1457			
			in	57.36		57.36			
		H	mm	353		353			
			in	13.90		13.90			
		D	mm	982		982			
			in	38.66		38.66			
Maximum number of connectable indoor unit per branch					EA	3		3	
Number of branches					EA	4		6	
Maximum capacity of connectable indoor units					kW	61.6		61.6	
					Btu/h	216,000		216,000	
					MBH	216		216	
Maximum capacity of connectable indoor units per branch				-	kW	16		16	
					Btu/h	54,000		54,000	
					MBH	54		54	
				Y-Joint	kW	32		32	
					Btu/h	108,000		108,000	
					MBH	108		108	

※ If the sum of the connected indoor unit capacity connected to the MSB is greater than 67.2kW, performance may vary depending on operating conditions.

※ The incoming pipe diameters supplying refrigerant to the MSB are determined based on the sum of the connected indoor units.

If these pipe diameters are different than the MSB pipe diameters, use the provided reducers to connect to the MSB.

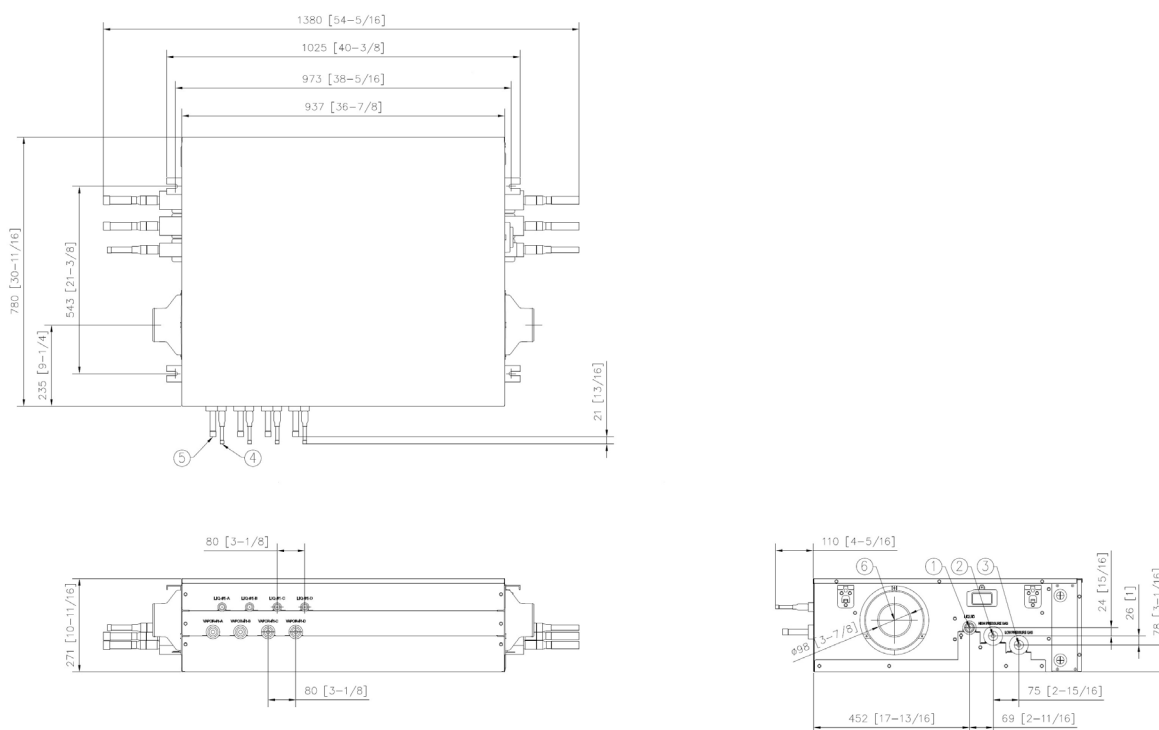
If the provided reducers are not the correct size, field supplied reducers must be used.

2. HR Changer

Dimensional drawings

V2MSB04HR-MV

Unit: mm [inch]



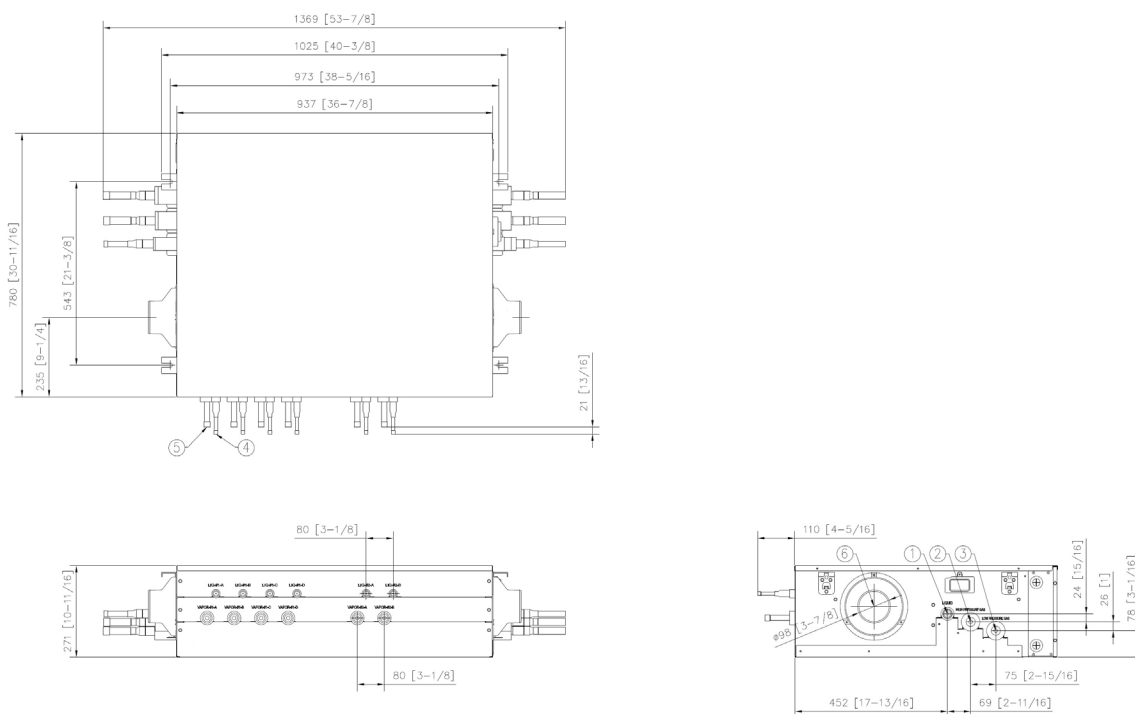
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

2. HR Changer

Dimensional drawings

V2MSB06HR-MV

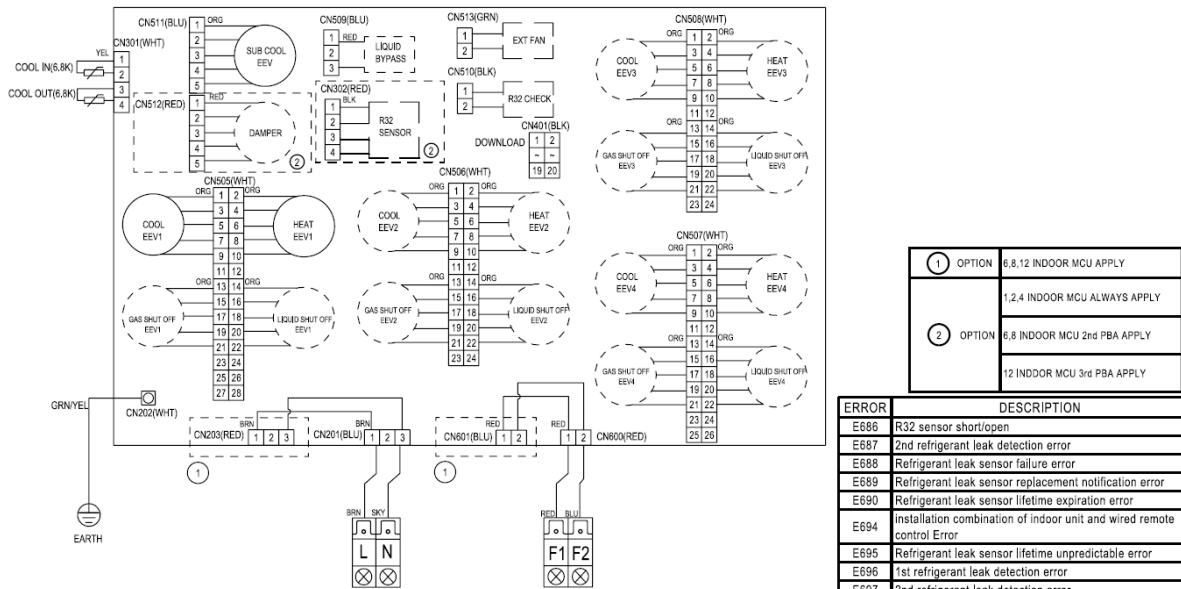
Unit: mm [inch]



No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant High Pressure Gas Pipe	-
3	Refrigerant Low Pressure Gas Pipe	-
4	LIQ (Indoor)	-
5	VAPOR (Indoor)	-
6	Duct	Φ100 [4]

2. HR Changer

Electrical Wiring Diagram



USE COPPER SUPPLY WIRES.
UTILISER DES FILS D'ALIMENTATION EN CUIVRE.

OPTION	DESCRIPTION
1	6,8,12 INDOOR MCU APPLY
2	1,2,4 INDOOR MCU ALWAYS APPLY
3	6,8 INDOOR MCU 2nd PBA APPLY
4	12 INDOOR MCU 3rd PBA APPLY

ERROR	DESCRIPTION
E686	R32 sensor short/open
E687	2nd refrigerant leak detection error
E688	Refrigerant leak sensor failure error
E689	Refrigerant leak sensor replacement notification error
E690	Refrigerant leak sensor lifetime expiration error
E694	Installation combination of indoor unit and wired remote control Error
E695	Refrigerant leak sensor lifetime unpredictable error
E696	1st refrigerant leak detection error
E697	2nd refrigerant leak detection error
E698	Refrigerant leak sensor failure error
E699	Refrigerant leak sensor replacement notification error
E700	Refrigerant leak sensor lifetime expiration error

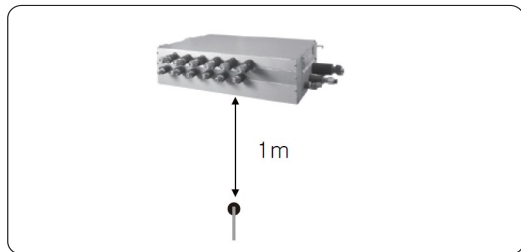
PCB	Printed circuit board (MSB/SVB)	HEAT EEV1	Electronic expansion valve
SUB COOL EEV	Electronic expansion valve	HEAT EEV2	Electronic expansion valve
COOL EEV1	Electronic expansion valve	HEAT EEV3	Electronic expansion valve
COOL EEV2	Electronic expansion valve	HEAT EEV4	Electronic expansion valve
COOL EEV3	Electronic expansion valve	R32 CHECK	Connector (Output R32 CHECK)
COOL EEV4	Electronic expansion valve	R32 SENSOR	SENSOR(R32)
DAMPER	Step motor(DAMPER)	LIQUID SHUT OFF EEV 1	Electronic expansion valve
EXT FAN	Connector (Output EXTERNAL FAN)	LIQUID SHUT OFF EEV 2	Electronic expansion valve
GAS SHUT OFF EEV1	Electronic expansion valve	LIQUID SHUT OFF EEV 3	Electronic expansion valve
GAS SHUT OFF EEV2	Electronic expansion valve	LIQUID SHUT OFF EEV 4	Electronic expansion valve
GAS SHUT OFF EEV3	Electronic expansion valve	COOL IN	Thermistor (COOL IN_6.8kohm)
GAS SHUT OFF EEV4	Electronic expansion valve	COOL OUT	Thermistor (COOL OUT_6.8kohm)

NOTE

- This wiring diagram applies only to the MSB kits.
- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- For connection wiring indoor-outdoor transmission F1-F2
- ⊕ Protective earth(screw), CN *: connector, ¼ The wire quantity

2. HR Changer

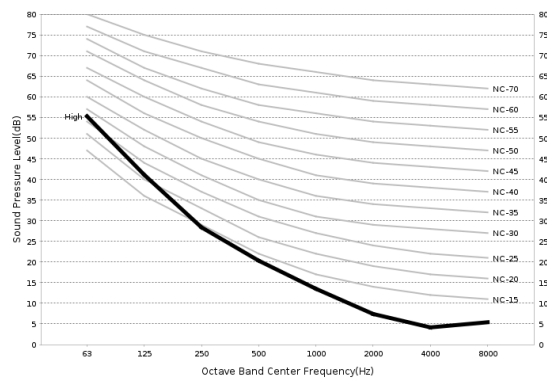
Sound pressure level



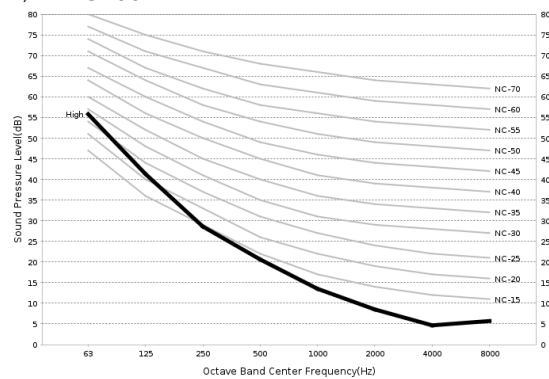
Model	Sound Level (dBA)
V2MSB04HR-MV	32
V2MSB06HR-MV	32

• NC Curve

1) V2MSB04HR-MV



2) V2MSB06HR-MV



NOTE

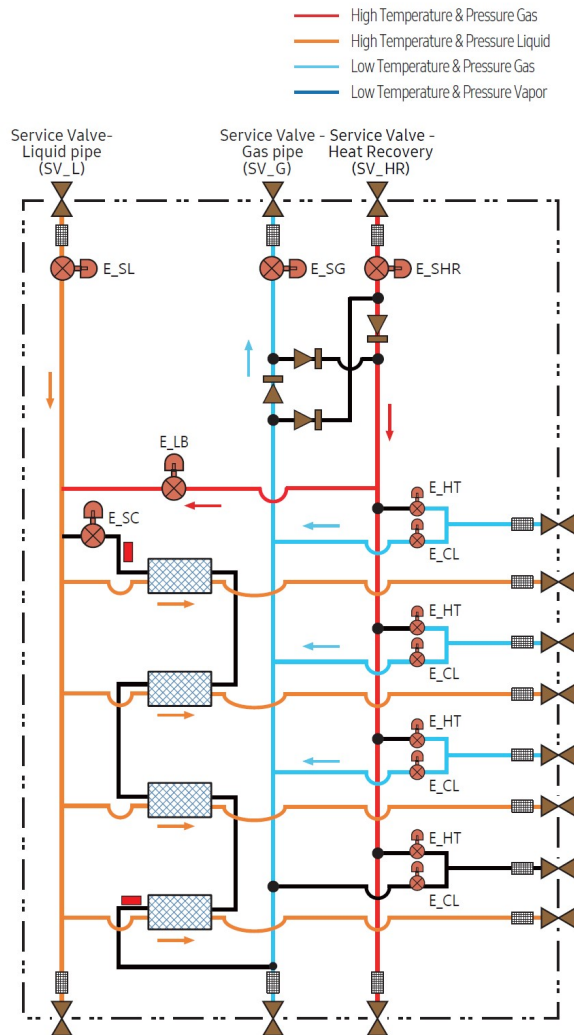
- This value was measured at steady state in anechoic chamber and may vary depending on operating condition.
- Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

2. HR Changer

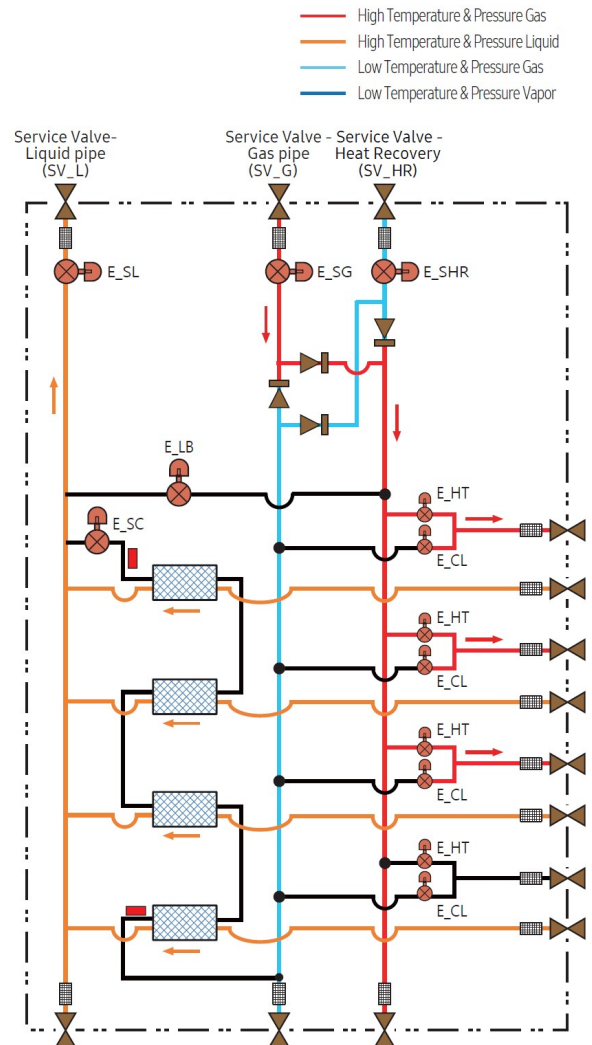
Piping diagram

V2MSB04HR-MV

• Cooling



• Heating

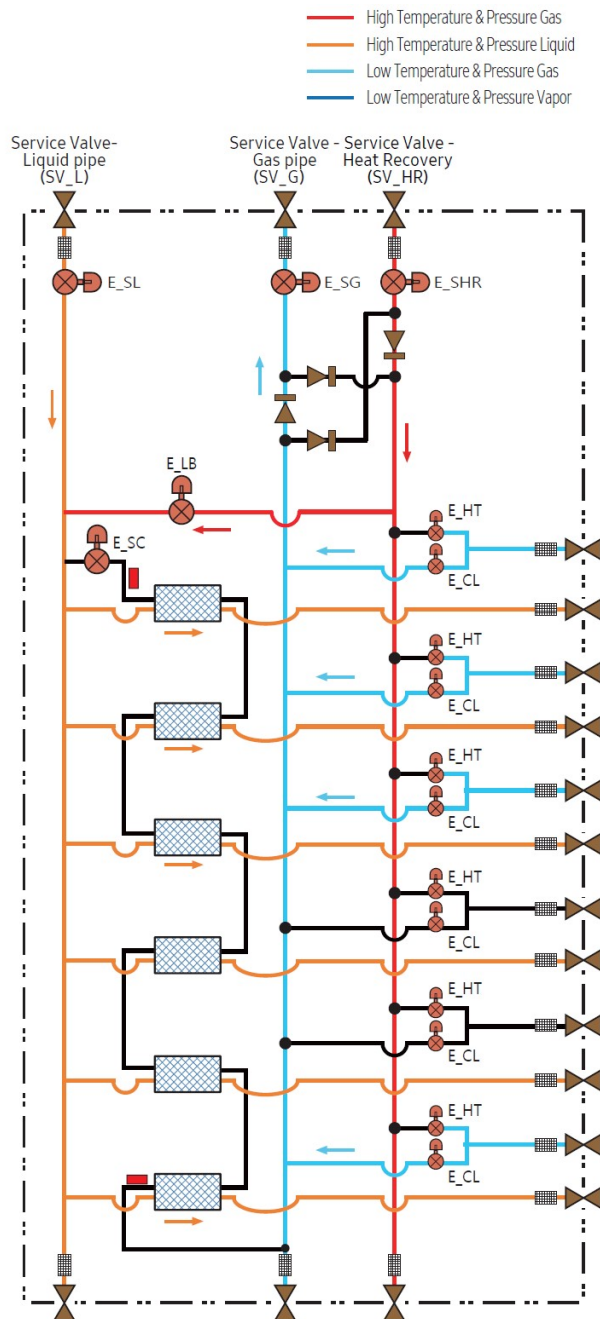


2. HR Changer

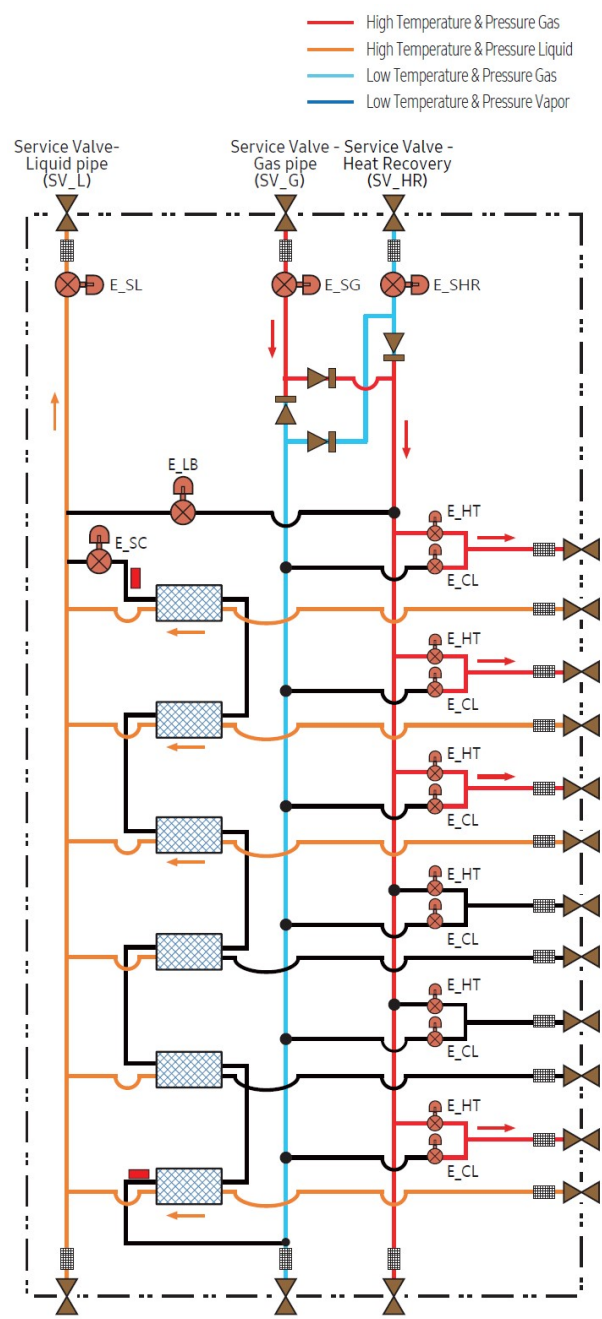
Piping diagram

V2MSB06HR-MV

• Cooling



• Heating



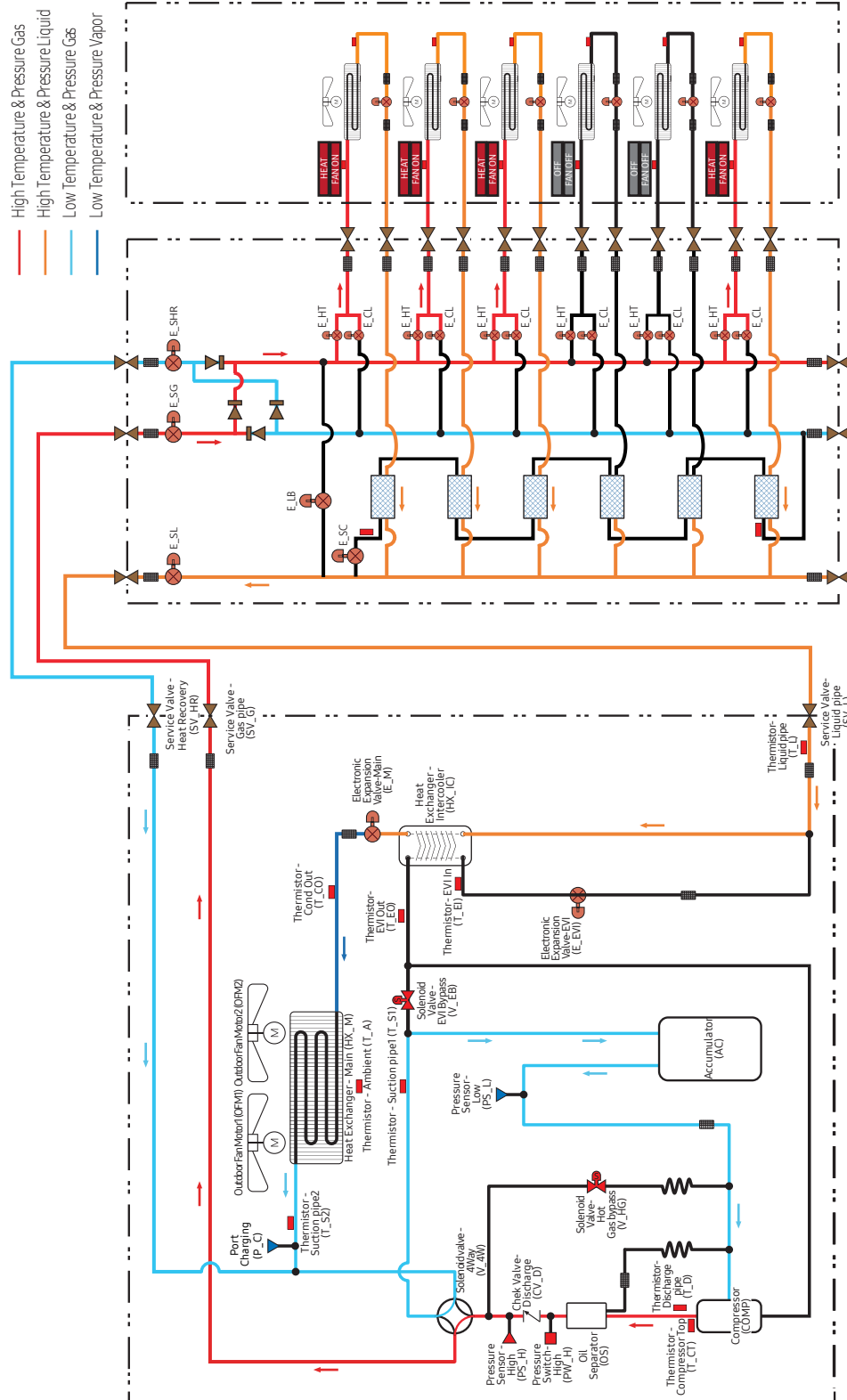
Piping diagram

[illegible]

2. HR Changer

Piping diagram

- Heating

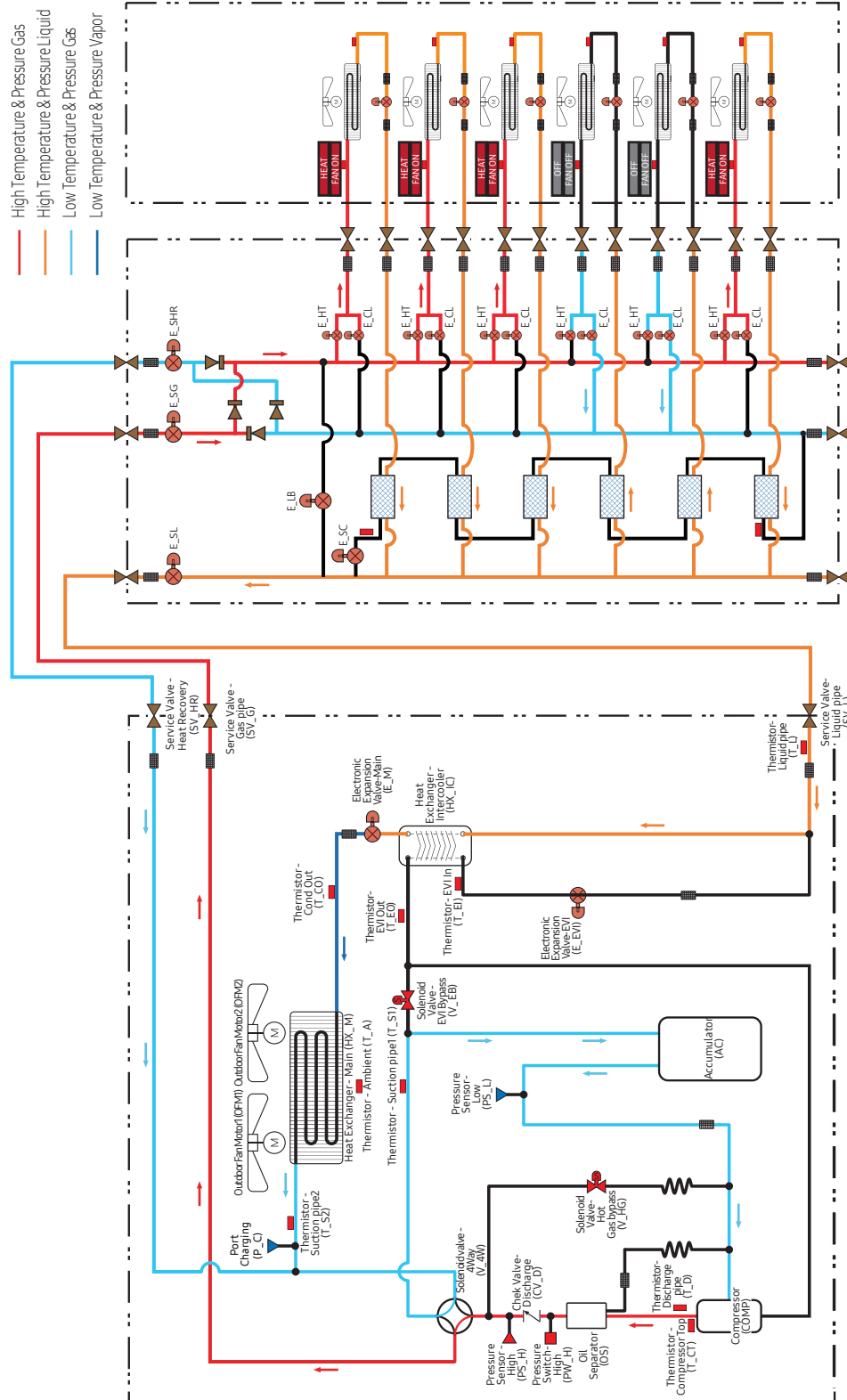


Piping diagram

2. HR Changer

Piping diagram

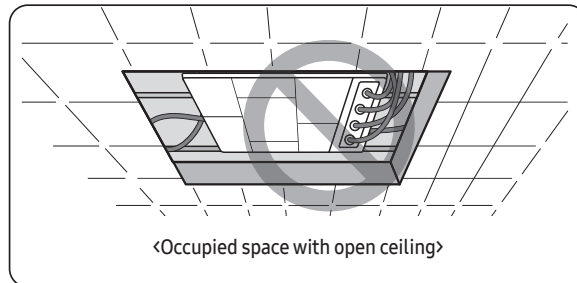
- Main Heating



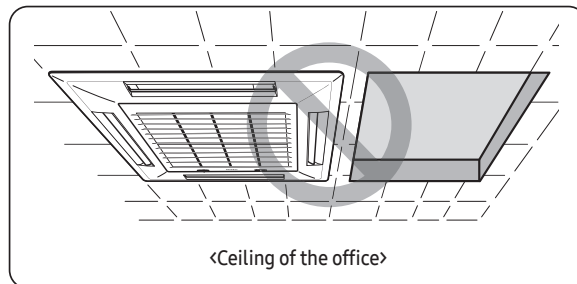
Installation Clearances

Space requirements

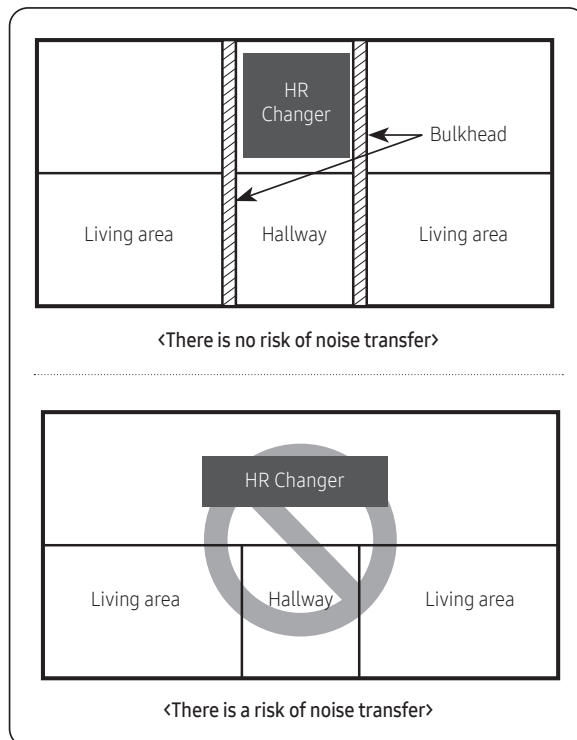
- 1 Refrigerant noise can be generated during HR Changer operation. Do not install the unit in spaces that require silence, such as bedrooms, libraries, hospitals, offices etc.



- 2 Do not install the HR Changer in the ceiling of living spaces. Noise generated from the HR Changer may disrupt occupant comfort.



- 3 It is normally recommended to install HR Changer in a hallway but a bulkhead should be installed to minimize the noise from being transferred to living area. (Refer to the below figure)

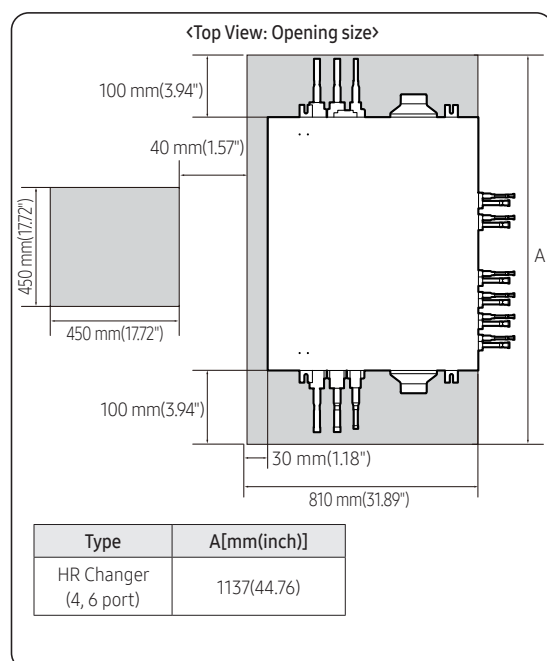
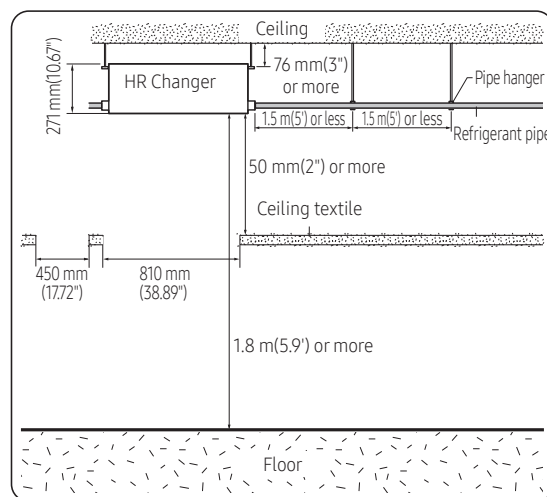


- ※ Soundproof and soundproofing materials
- The place where HR Changer is installed and the interior walls should have a high soundproof ability. (Bricks, Concretes, Cement)

Installation Clearances

Space requirements

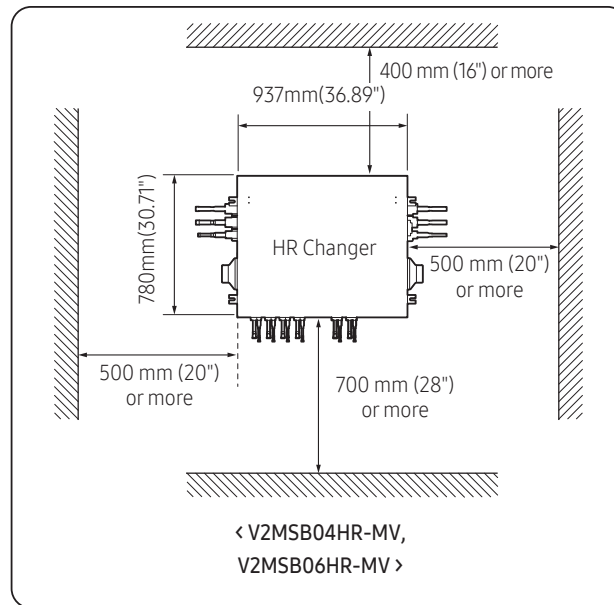
- The ceiling where HR Changer is installed should be coated with quality textile that has a good soundproof function.
 - Minimize the size of the hole between the walls and the pipe connection. After the installation, block the gap to prevent noise from leaking.
- 4 Secure over 0.25m(0.82') of space when HR Changer's being fixed to the concrete of the ceiling.
 - 5 HR Changer may generate noise so don't install it too close to the ceiling textile.
 - 6 Each pipe hanger should be placed at 1.5m(4.92') interval to support its weight firmly.
If the pipe or the hanger isn't fixed firmly, the unit may fall and cause a property damage or loss of life.
 - 7 When 'Low temperature cooling range expansion' option is set for constant cooling operation throughout the year, noise of the HR Changer may get louder during wintertime. Therefore, above installation requirements must be followed.
 - 8 Select a place where the structure can support the weight of the HR Changer and indoor units that also have strong vibration resistance without any slope. If the structure is not strong enough,HR Changer may fall down and cause injury.



Installation Clearances

Space requirements

- 9 Select an installation location with enough space for service and repair.
Leave enough space between adjacent walls and structures. Refer to the examples below.



3. SVB (Shut off Valve Box)

Specification

Model Code	Indoor Unit			-	V2SOB01HP	V2SOB12HP	V2SOB02HP
Power Supply				Φ # V Hz	1 2 208-230 60	1 2 208-230 60	1 2 208-230 60
Mode				-	Heat Pump	Heat Pump	Heat Pump
Connectable indoor units	Maximum number of connectable indoor units			EA	8	64	16
Power	Current	MCA		A	0.50	1.50	0.50
		MFA		A	-	-	-
		MOP		A	15	15	15
Piping Connections	Outdoor unit	Liquid Pipe	Diameter	mm	15.88	15.88	15.88
				in	5/8	5/8	5/8
		Gas Pipe	Diameter	mm	22.22	22.22	22.22
				in	7/8	7/8	7/8
	Indoor unit	Liquid Pipe	Diameter	mm	9.52	9.52	9.52
				in	3/8	3/8	3/8
		Gas Pipe	Diameter	mm	15.88	15.88	15.88
				in	5/8	5/8	5/8
Wiring Connection	Power Source Wire			mm ²	2.5	2.5	2.5
				AWG	12	12	12
	Transmissi on Cable	Min.		mm ²	0.75	0.75	0.75
				AWG	18	18	18
Refrigerant Calculation	Additional			kg	0.300	1.000	0.300
Sound Level	Sound Pressure Level			dB(A)	30.0	35.0	30.0
External Dimension	Net Weight			kg	21.5	62.0	22.5
				lbs	47.4	136.7	49.6
	Shipping Weight			kg	28.5	72.5	29.5
				lbs	62.8	159.8	65.0
	Net Dimensions		W x H x D	mm	492 x 271 x 780	1,382 x 271 x 780	492 x 271 x 780
				in	19-3/8 x 10-11/16 x 30-11/16	54-7/16 x 10-11/16 x 30-11/16	19-3/8 x 10-11/16 x 30-11/16
	Shipping Dimensions		W x H x D	mm	1,022 x 353 x 982	1,902 x 353 x 982	1,022 x 353 x 982
				in	40-1/4 x 13-7/8 x 38-11/16	74-7/8 x 13-7/8 x 38-11/16	40-1/4 x 13-7/8 x 38-11/16
Maximum number of connectable indoor unit per branch				EA	8	8	
Number of branches				EA	1	12	2
Maximum capacity of connectable indoor units				kW	16.00	85.00	32.00
				Btu/h	54,000	290,000	108,000
				MBH	54.00	290.00	108.00
Maximum capacity of connectable indoor units per branch				kW	16.00	16.00	16.00
				Btu/h	54,000	54,000	54,000
				MBH	54.00	54.00	54.00
Maximum capacity of connectable indoor units per branch	Y-Joint			kW	-	32.00	32.00
				Btu/h	-	108,000	108,000
				MBH	-	108.00	108.00

※ If the sum of the connected indoor unit capacity connected to the MSB is greater than 67.2kW, performance may vary depending on operating conditions.

※ The incoming pipe diameters supplying refrigerant to the MSB are determined based on the sum of the connected indoor units.

If these pipe diameters are different than the MSB pipe diameters, use the provided reducers to connect to the MSB.

If the provided reducers are not the correct size, field supplied reducers must be used.

3. SVB (Shut off Valve Box)

Specification

Model Code	Indoor Unit			-	V2SOB04HP	V2SOB06HP	V2SOB08HP
Power Supply				Φ # V Hz	1 2 208-230 60	1 2 208-230 60	1 2 208-230 60
Mode				-	Heat Pump	Heat Pump	Heat Pump
Connectable indoor units	Maximum number of connectable indoor units			EA	32	32	64
Power	Current	MCA		A	0.50	1.00	1.00
		MFA		A	-	-	-
		MOP		A	15	15	15
Piping Connections	Outdoor unit	Liquid Pipe	Diameter	mm	15.88	15.88	15.88
				in	5/8	5/8	5/8
		Gas Pipe	Diameter	mm	22.22	22.22	22.22
				in	7/8	7/8	7/8
	Indoor unit	Liquid Pipe	Diameter	mm	9.52	9.52	9.52
				in	3/8	3/8	3/8
		Gas Pipe	Diameter	mm	15.88	15.88	15.88
				in	5/8	5/8	5/8
Wiring Connection	Power Source Wire			mm²	2.5	2.5	2.5
				AWG	12	12	12
	Transmissi on Cable	Min.		mm²	0.75	0.75	0.75
				AWG	18	18	18
Refrigerant Calculation	Additional			kg	0.300	0.650	0.650
Sound Level	Sound Pressure Level			dB(A)	31.0	32.0	34.0
External Dimension	Net Weight			kg	25.0	41.0	44.0
				lbs	55.1	90.4	97.0
	Shipping Weight			kg	32.0	49.5	52.5
				lbs	70.5	109.1	115.7
	Net Dimensions		W x H x D	mm	492 x 271 x 780	937 x 271 x 780	937 x 271 x 780
				in	19-3/8 x 10-11/16 x 30-11/16	36-7/8 x 10-11/16 x 30-11/16	36-7/8 x 10-11/16 x 30-11/16
	Shipping Dimensions		W x H x D	mm	1,022 x 353 x 982	1,457 x 353 x 982	1,467 x 353 x 982
				in	40-1/4 x 13-7/8 x 38-11/16	57-3/8 x 13-7/8 x 38-11/16	57-3/4 x 13-7/8 x 38-11/16
Maximum number of connectable indoor unit per branch				EA	8	8	
Number of branches				EA	4	6	
Maximum capacity of connectable indoor units				kW	61.60	61.60	85.00
				Btu/h	216,000	216,000	290,000
				MBH	216.00	216.00	290.00
Maximum capacity of connectable indoor units per branch				kW	16.00	16.00	16.00
				Btu/h	54,000	54,000	54,000
				MBH	54.00	54.00	54.00
Maximum capacity of connectable indoor units per branch	Y-Joint			kW	32.00	32.00	32.00
				Btu/h	108,000	108,000	108,000
				MBH	108.00	108.00	108.00

※ If the sum of the connected indoor unit capacity connected to the MSB is greater than 67.2kW, performance may vary depending on operating conditions.

※ The incoming pipe diameters supplying refrigerant to the MSB are determined based on the sum of the connected indoor units.

If these pipe diameters are different than the MSB pipe diameters, use the provided reducers to connect to the MSB.

If the provided reducers are not the correct size, field supplied reducers must be used.

3. SVB (Shut off Valve Box)

Specification

Model Code	Indoor Unit			-	V2SOB01AH	
Power Supply				Φ # V Hz	1 2 208-230 60	
Mode				-	Heat Pump	
Connectable indoor units	Maximum number of connectable indoor units			EA	8	
Power	Current	MCA		A	0.50	
		MFA		A	-	
		MOP		A	15	
Piping Connections	Outdoor unit	Liquid Pipe	Diameter	mm	15.88	
				in	5/8	
		Gas Pipe	Diameter	mm	22.22	
				in	7/8	
	Indoor unit	Liquid Pipe	Diameter	mm	12.7	
				in	1/2	
		Gas Pipe	Diameter	mm	22.22	
				in	7/8	
Wiring Connection	Power Source Wire			mm ²	2.5	
				AWG	12	
	Transmissi on Cable	Min.			mm ²	0.75
					AWG	18
Refrigerant Calculation	Additional			kg	0.300	
Sound Level	Sound Pressure Level			dB(A)	30.0	
External Dimension	Net Weight			kg	22.4	
				lbs	49.4	
	Shipping Weight			kg	29.4	
				lbs	64.8	
	Net Dimensions		W x H x D	mm	492 x 271 x 780	
				in	19-3/8 x 10-11/16 x 30-11/16	
	Shipping Dimensions		W x H x D	mm	1,022 x 353 x 982	
				in	40-1/4 x 13-7/8 x 38-11/16	
Maximum number of connectable indoor unit per branch				EA	8	
Number of branches				EA	1	
Maximum capacity of connectable indoor units				kW	56.00	
				Btu/h	192,000	
				MBH	192.00	
Maximum capacity of connectable indoor units per branch				kW	56.00	
				Btu/h	192,000	
				MBH	192.00	
Maximum capacity of connectable indoor units per branch	Y-Joint			kW	-	
				Btu/h	-	
				MBH	-	

※ If the sum of the connected indoor unit capacity connected to the MSB is greater than 67.2kW, performance may vary depending on operating conditions.

※ The incoming pipe diameters supplying refrigerant to the MSB are determined based on the sum of the connected indoor units.

If these pipe diameters are different than the MSB pipe diameters, use the provided reducers to connect to the MSB.

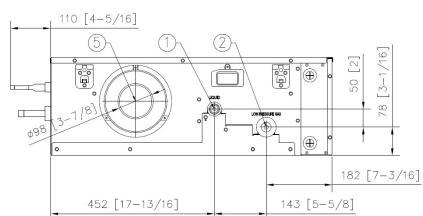
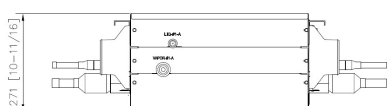
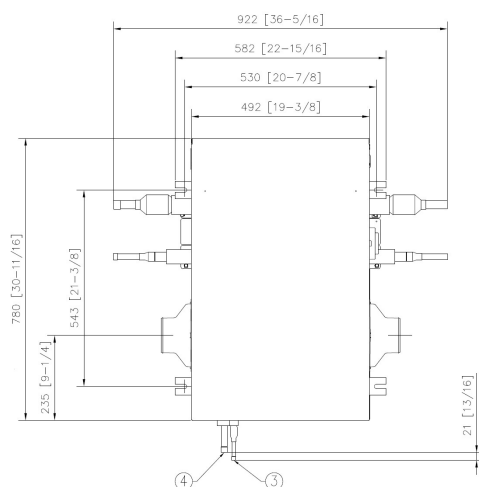
If the provided reducers are not the correct size, field supplied reducers must be used.

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB01HP

Unit: mm [inch]



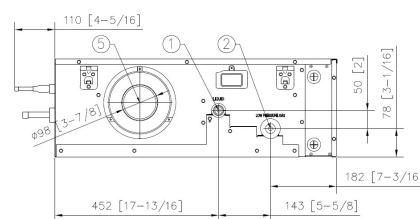
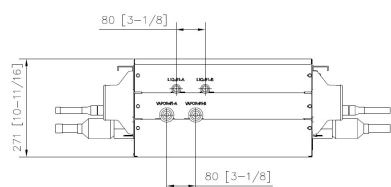
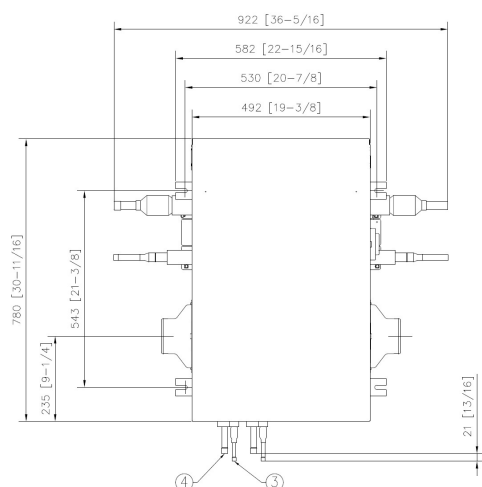
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB02HP

Unit: mm [inch]



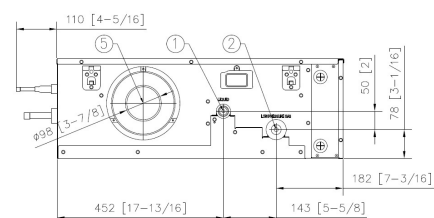
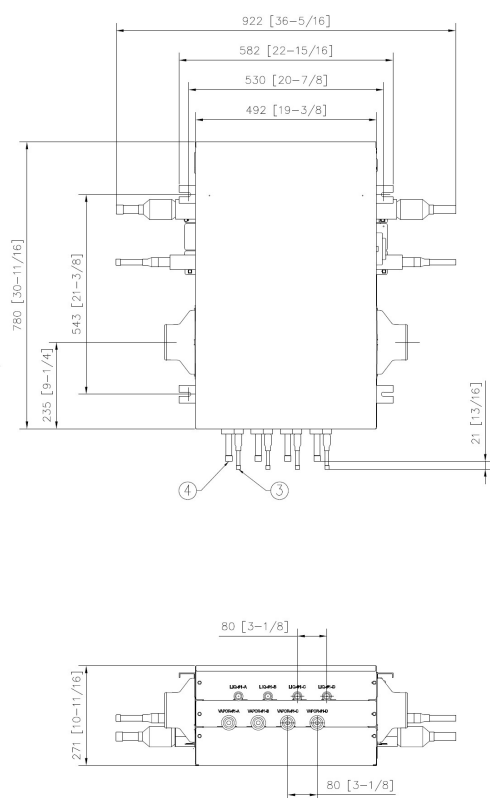
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB04HP

Unit: mm [inch]



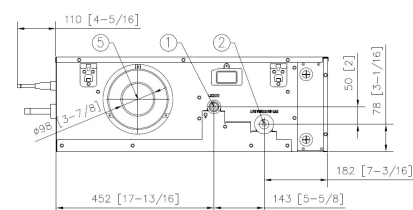
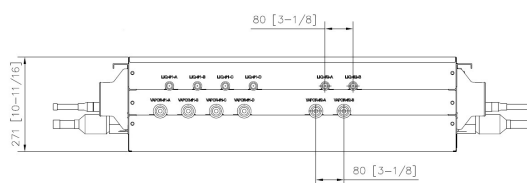
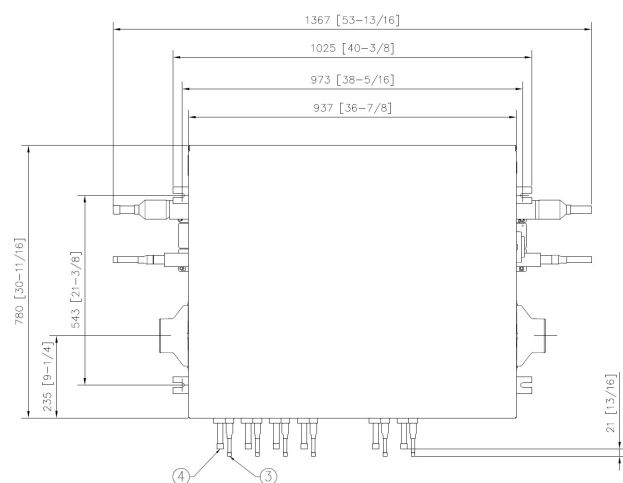
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB06HP

Unit: mm [inch]



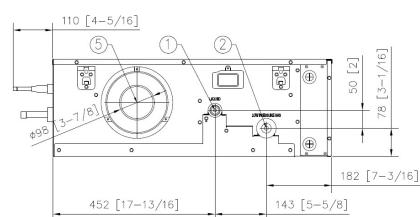
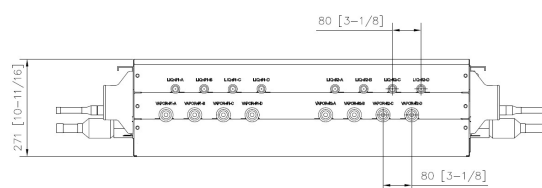
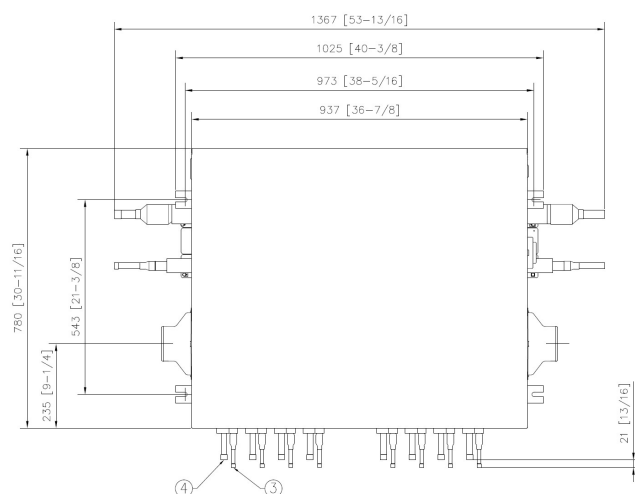
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB08HP

Unit: mm [inch]



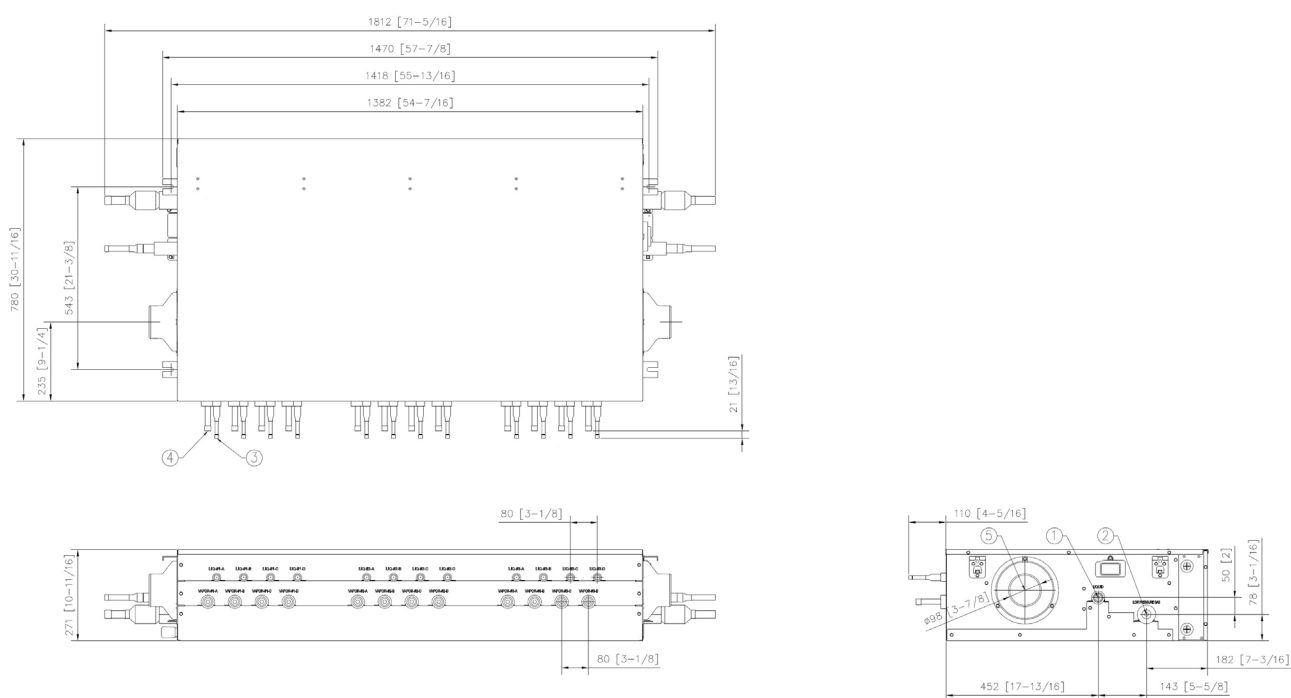
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB12HP

Unit: mm [inch]



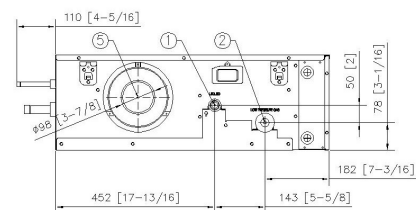
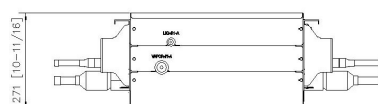
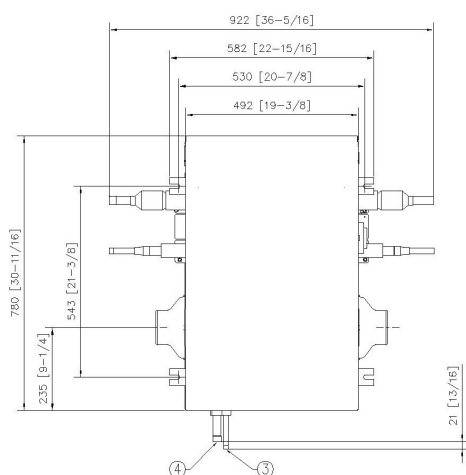
No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Dimensional drawings

V2SOB01AH

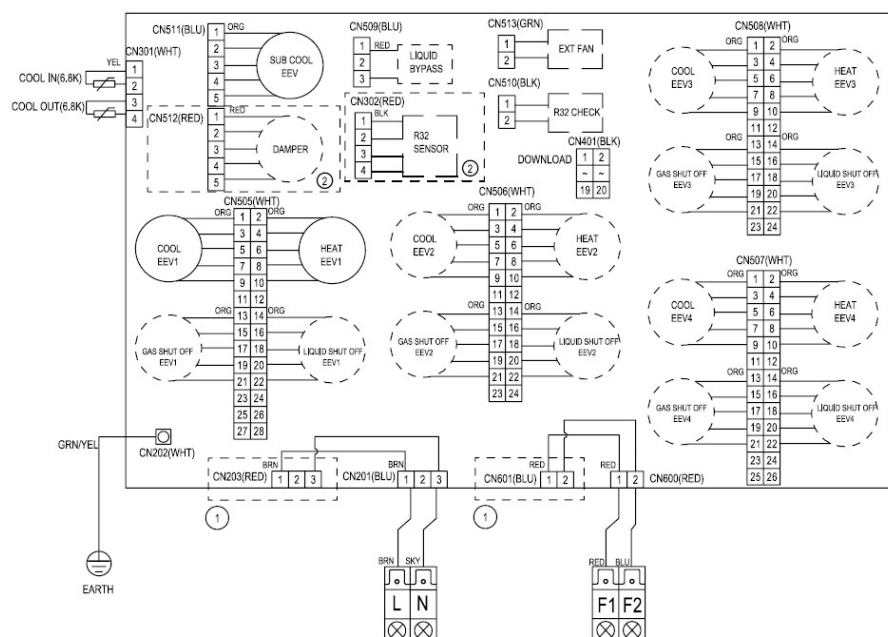
Unit: mm [inch]



No.	Name	Description
1	Refrigerant Liquid Pipe	-
2	Refrigerant Low Pressure Gas Pipe	-
3	LIQ (Indoor)	-
4	VAPOR (Indoor)	-
5	Duct	Φ100 [4]

3. SVB (Shut off Valve Box)

Electrical Wiring Diagram



USE COPPER SUPPLY WIRES.
UTILISER DES FILS D'ALIMENTATION EN CUIVRE.

①	OPTION	6,8,12 INDOOR MCU APPLY
		1,2,4 INDOOR MCU ALWAYS APPLY
②	OPTION	6,8 INDOOR MCU 2nd PBA APPLY
		12 INDOOR MCU 3rd PBA APPLY

ERROR	DESCRIPTION
E686	R32 sensor short/open
E687	2nd refrigerant leak detection error
E688	Refrigerant leak sensor failure error
E689	Refrigerant leak sensor replacement notification error
E690	Refrigerant leak sensor lifetime expiration error
E694	Installation combination of indoor unit and wired remote control Error
E695	Refrigerant leak sensor lifetime unpredictable error
E696	1st refrigerant leak detection error
E697	2nd refrigerant leak detection error
E698	Refrigerant leak sensor failure error
E699	Refrigerant leak sensor replacement notification error
E700	Refrigerant leak sensor lifetime expiration error

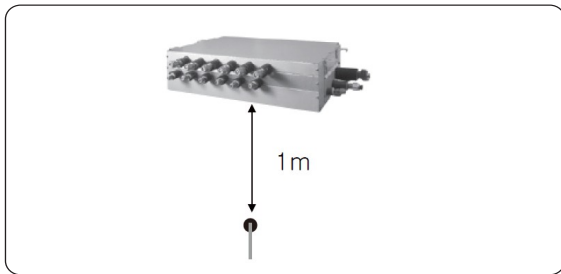
PCB	Printed circuit board (MSB/SVB)	HEAT EEV1	Electronic expansion valve
SUB COOL EEV	Electronic expansion valve	HEAT EEV2	Electronic expansion valve
COOL EEV1	Electronic expansion valve	HEAT EEV3	Electronic expansion valve
COOL EEV2	Electronic expansion valve	HEAT EEV4	Electronic expansion valve
COOL EEV3	Electronic expansion valve	R32 CHECK	Connector (Output R32 CHECK)
COOL EEV4	Electronic expansion valve	R32 SENSOR	SENSOR(R32)
DAMPER	Step motor(DAMPER)	LIQUID SHUT OFF EEV 1	Electronic expansion valve
EXT FAN	Connector (Output EXTERNAL FAN)	LIQUID SHUT OFF EEV 2	Electronic expansion valve
GAS SHUT OFF EEV1	Electronic expansion valve	LIQUID SHUT OFF EEV 3	Electronic expansion valve
GAS SHUT OFF EEV2	Electronic expansion valve	LIQUID SHUT OFF EEV 4	Electronic expansion valve
GAS SHUT OFF EEV3	Electronic expansion valve	COOL IN	Thermistor (COOL IN_6.8kohm)
GAS SHUT OFF EEV4	Electronic expansion valve	COOL OUT	Thermistor (COOL OUT_6.8kohm)

NOTE

- This wiring diagram applies only to the SVB kits.
- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- For connection wiring indoor-outdoor transmission F1-F2.
- ⊕ Protective earth(screw), CN* : connector, $\frac{1}{2}$: The wire quantity

3. SVB (Shut off Valve Box)

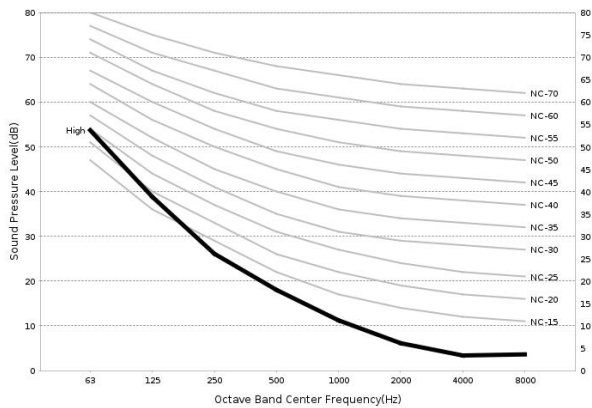
Sound pressure level



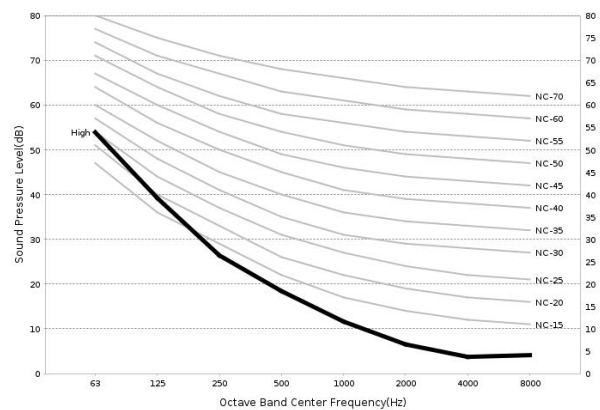
Model	Sound Level (dBA)
V2SOB01HP	30
V2SOB02HP	30
V2SOB04HP	31
V2SOB06HP	32

• NC Curve

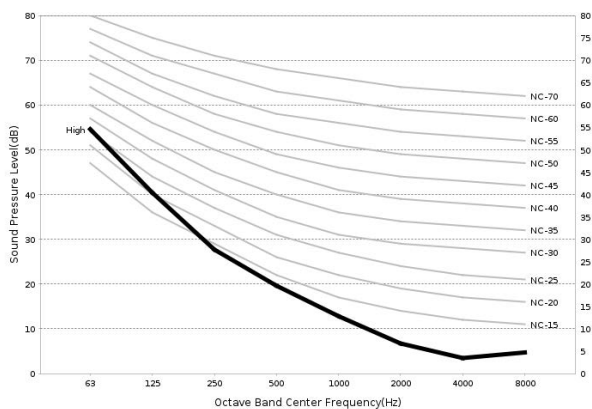
1) V2SOB01HP



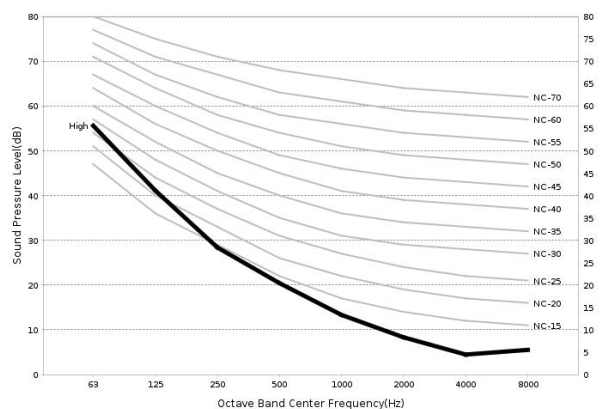
2) V2SOB02HP



3) V2SOB04HP



4) V2SOB06HP

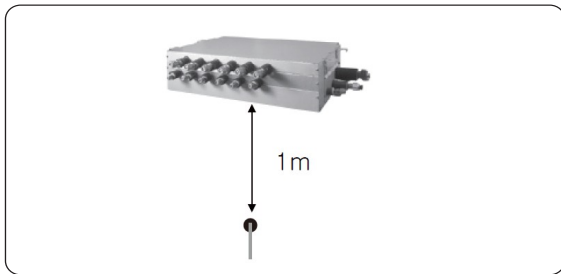


NOTE

- This value was measured at steady state in anechoic chamber and may vary depending on operating condition.
- Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

3. SVB (Shut off Valve Box)

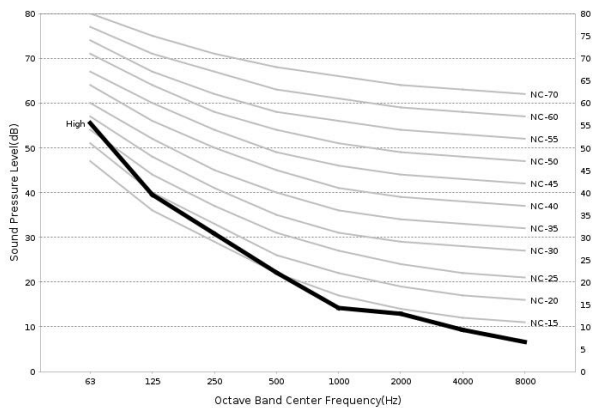
Sound pressure level



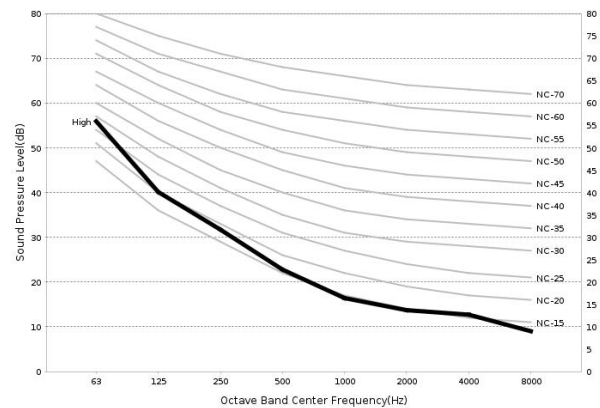
Model	Sound Level (dBA)
V2SOB08HP	34
V2SOB12HP	35
V2SOB01AH	30

• NC Curve

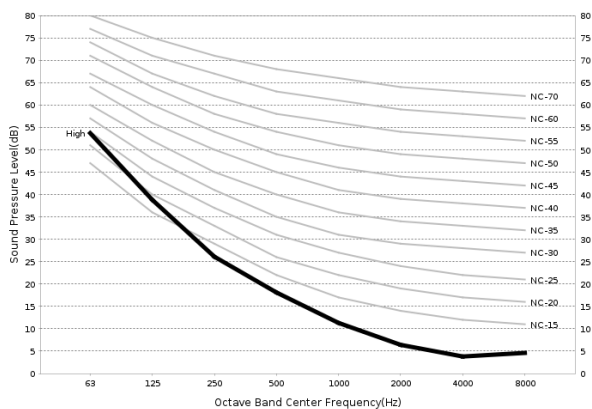
5) V2SOB08HP



6) V2SOB12HP



7) V2SOB01AH



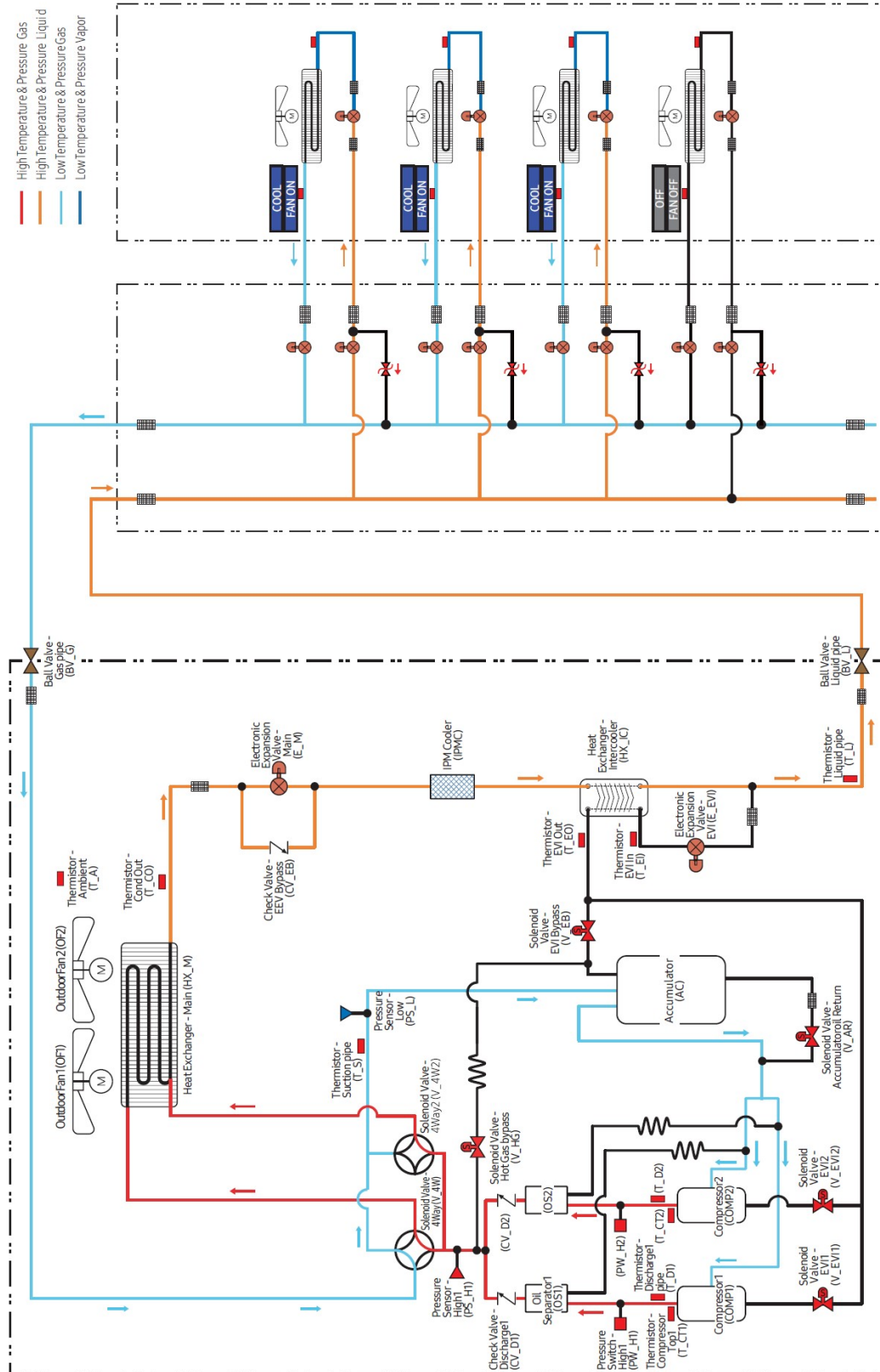
NOTE

- This value was measured at steady state in anechoic chamber and may vary depending on operating condition.
- Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

3. SVB (Shut off Valve Box)

Piping diagram

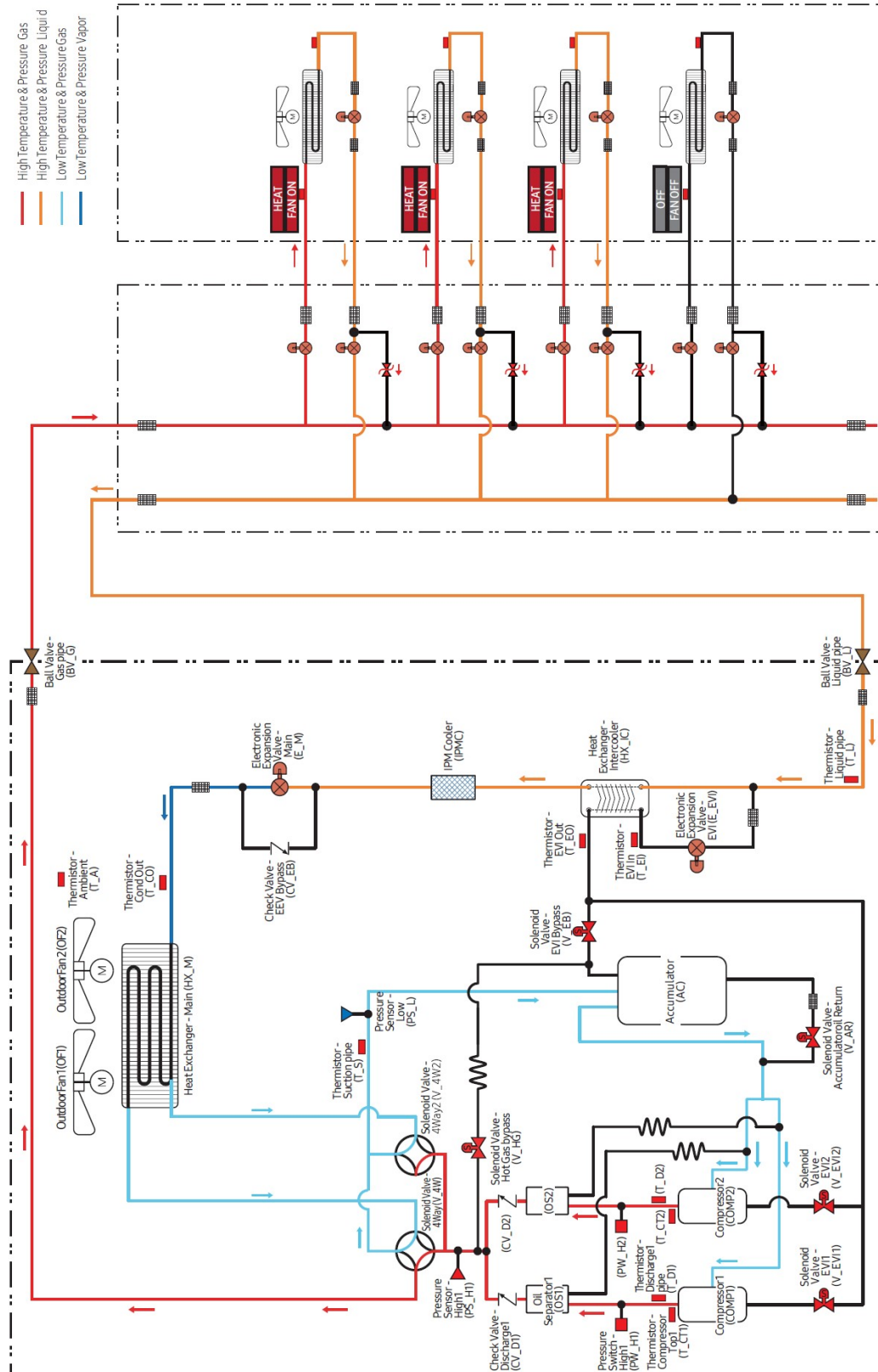
Cooling mode



3. SVB (Shut off Valve Box)

Piping diagram

Heating mode





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