MUNDOCLIMA®

MVD

Cassette 4 Ways MVD DC

Service manual

CL23320 to CL23328

English

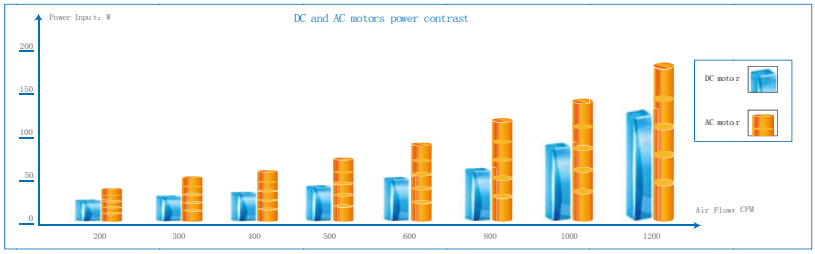
www.mundoclima.com

Content

1. Features

External appearance

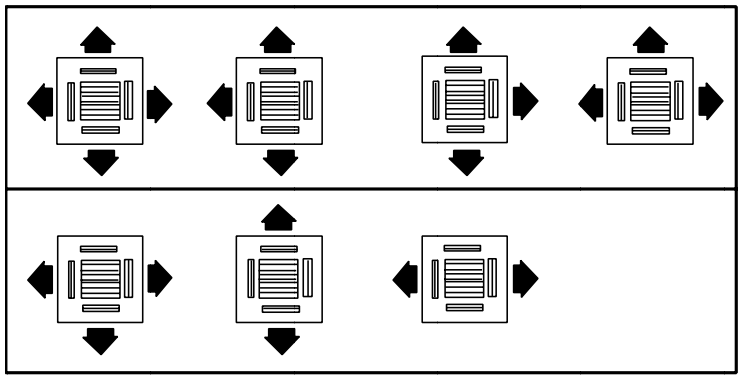
- **Regardless of difference in capacity, all indoor units feature the same panel size and design, in consideration or harmonized interior decoration.**
- **Four way uniform airflow**
  Four air discharge ports provide strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature. High airflow mode can maximize the conditioning effect in rooms that are over 3m high.
- **Ultra-thin machine body to easy installation and maintenance**
  2.8kW~8.0kW models in 230mm height and 9.0kW~14kW models in 300mm height which can be installed in narrow false ceilings.
- **Higher efficiency**
  Adopting DC fan motor, efficiency can be up to 90%. Contrast with the AC fan motor, the power consumption of DC fan motor can reduce up to 30%.



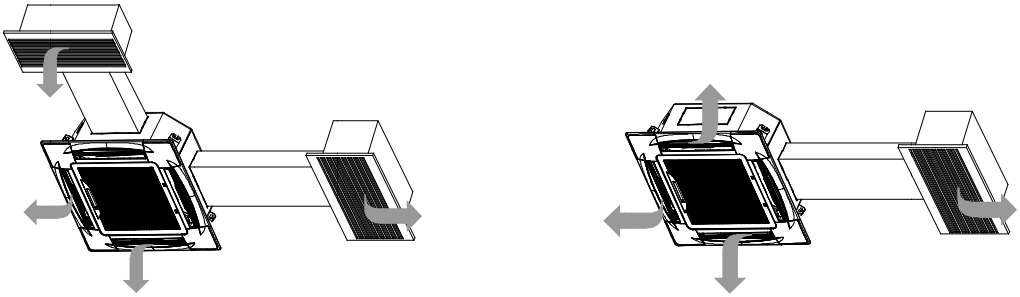
- **DC fan motor**
  The motor adopts fully enclosed structure design. The motor bearing can operate 80,000 hours continuously and easy for maintenance.

- **Flexible air distribution type**

a) 7 discharge patterns in 2 to 4 directions can be selected to suit the requirements of installation site or the shape of the room.

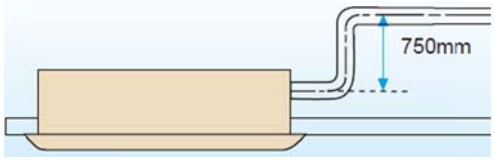


b) Duct connection is possible.



- **Fresh air makes life healthier and more comfortable.**

- **Provided with high lift 700mm drain water pump.**



- **Meet CE certification requirements**

  Thanks to the DC fan motor, this four-way cassette indoor unit can meet the latest CE certification requirements.

2. Specifications

Model			MVD-28Q4/DHN1-D	MVD-36Q4/DHN1-D	MVD-45Q4/DHN1-D
Power supply			220-240V~50/60Hz		
Cooling	Capacity	kW	2.8	3.6	4.5
		Btu/h	9600	12300	15400
	Power input	W	25	25	31
Heating	Capacity	kW	3.2	4.0	5.0
		Btu/h	10900	13600	17100
	Power input	W	25	25	31
Indoor fan motor	Model		WZDK80-38G		
	Type		DC motor		
	Brand		Shibaura		
	Insulation class		E		
	Safe class		IP20		
	Input	W	42	42	44
	Output	W	33	33	35
Indoor fan	Material		Plastic		
	Type		Centrifugal fan		
	Diameter	in. (mm)	18-3/4 (476)		
	Height	in. (mm)	5-3/8 (137)		
Indoor coil	Number of rows		1	1	2
	Tube pitch(a)× row pitch(b)	in. (mm)	13/16×17/32 (21×13.37)		
	Fin spacing	in. (mm)	1/16 (1.5)		
	Fin type		Hydrophilic aluminium		
	Tube size	in. (mm)	Φ9/32 (7)		
	Tube type		Innergroove tube		
	Coil length×height	in. (mm)	76×6-5/8 (1930×168)		77-13/64×6-5/8 (1961×168)
	Number of circuits		4		8
Indoor air flow (H/M/L)		m^3/h	982/832/677	982/832/677	1029/857/704
		CFM	578/490/398	578/490/398	606/504/414
Sound pressure level (H/M/L)		dB(A)	42/37/32	42/37/32	43/38/34
Indoor unit body	Net dimension (W×H×D)	inch	35-19/32×9-1/16×33-5/64		
		mm	904×230×840		
	Packing size (W×H×D)	inch	37-19/32×10-15/64×37-19/32		
		mm	955×260×955		
	Net/Gross weight	lbs	48/60.7	48/60.7	52.8/64.9
		kg	21.8/27.6	21.8/27.6	24/29.5
Indoor unit panel	Model		T-MBQ-02C1		
	Net dimension (W×H×D)	inch	37-13/32×2-9/64×37-13/32		
		mm	950×54.5×950		
	Packing size (W×H×D)	inch	40-3/4×3-35/64×40-3/4		
		mm	1035×90×1035		
	Net/Gross weight	lbs	11.0/17.6		
		kg	5/8		
Refrigerant type			R410A		
Throttle type			EXV		
Design pressure (H/L)		MPa	4.4/2.6		
Pipe connections	Liquid pipe	in. (mm)	Φ1/4 (6.35)		
	Gas pipe	in. (mm)	Φ1/2 (12.7)		
	Drain pipe	in. (mm)	Φ1-1/4 (32)		
Controller			Wireless remote controller (RM05/BG(T)E-A)		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 80.6°F (27°C) DB / 66.2°F (19°C) WB; Outdoor temperature 95°F (35°C) DB / 75.2°F (24°C) WB.
Heating: Indoor temperature 68°F (20°C) DB / 59°F (15°C) WB; Outdoor temperature 44.6°F (7°C) DB / 42.8°F (6°C) WB.
Piping length: Interconnecting piping length is 26.25ft. (8m), level difference is 0ft. (0m).
Sound values are measured in a semi-anechoic room, at a position 4.59ft. (1.4m) downward from the unit center.

Specifications

Model			MVD-56Q4/DHN1-D	MVD-71Q4/DHN1-D	MVD-80Q4/DHN1-D
Power supply			220-240V~50/60Hz		
Cooling	Capacity	kW	5.6	7.1	8.0
		Btu/h	19100	24200	27300
	Power input	W	31	46	48
Heating	Capacity	kW	6.3	8.0	9.0
		Btu/h	21500	27300	30700
	Power input	W	31	46	48
Indoor fan motor	Model		WZDK80-38G		
	Type		DC motor		
	Brand		Shibaura		
	Insulation class		E		
	Safe class		IP20		
	Input	W	44	55	55
	Output	W	35	44	44
Indoor fan	Material		Plastic		
	Type		Centrifugal fan		
	Diameter	in. (mm)	18-3/4 (476)		
	Height	in. (mm)	5-3/8 (137)		
Indoor coil	Number of rows		2		
	Tube pitch(a)× row pitch(b)	in. (mm)	13/16×17/32 (21×13.37)		
	Fin spacing	in. (mm)	1/16 (1.5)		
	Fin type		Hydrophilic aluminium		
	Tube size	in. (mm)	Φ9/32 (7)		
	Tube type		Innergroove tube		
	Coil length×height	in. (mm)	77-13/64×6-5/8 (1961×168)		
	Number of circuits		8		
Indoor air flow (H/M/L)		m^3/h	1029/857/704	1200/996/748	1264/1055/811
		CFM	606/504/414	706/586/440	744/621/477
Sound pressure level (H/M/L)		dB(A)	43/38/34	45/39/34	46/40/35
Indoor unit body	Net dimension (W×H×D)	inch	35-19/32×9-1/16×33-5/64		
		mm	904×230×840		
	Packing size (W×H×D)	inch	37-19/32×10-15/64×37-19/32		
		mm	955×260×955		
	Net/Gross weight	lbs	52.8/64.9		
		kg	24/29.5		
Indoor unit panel	Model		T-MBQ-02C1		
	Net dimension (W×H×D)	inch	37-13/32×2-9/64×37-13/32		
		mm	950×54.5×950		
	Packing size (W×H×D)	inch	40-3/4×3-35/64×40-3/4		
		mm	1035×90×1035		
	Net/Gross weight	lbs	11.0/17.6		
		kg	5/8		
Refrigerant type			R410A		
Throttle type			EXV		
Design pressure (H/L)		MPa	4.4/2.6		
Pipe connections	Liquid pipe	in. (mm)	Φ3/8 (9.53)		
	Gas pipe	in. (mm)	Φ5/8 (15.9)		
	Drain pipe	in. (mm)	Φ1-1/4 (32)		
Controller			Wireless remote controller (RM05/BG(T)E-A)		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 80.6°F (27°C) DB / 66.2°F (19°C) WB; Outdoor temperature 95°F (35°C) DB / 75.2°F (24°C) WB.
Heating: Indoor temperature 68°F (20°C) DB / 59°F (15°C) WB; Outdoor temperature 44.6°F (7°C) DB / 42.8°F (6°C) WB.
Piping length: Interconnecting piping length is 26.25ft. (8m), level difference is 0ft. (0m).
Sound values are measured in a semi-anechoic room, at a position 4.59ft. (1.4m) downward from the unit center.

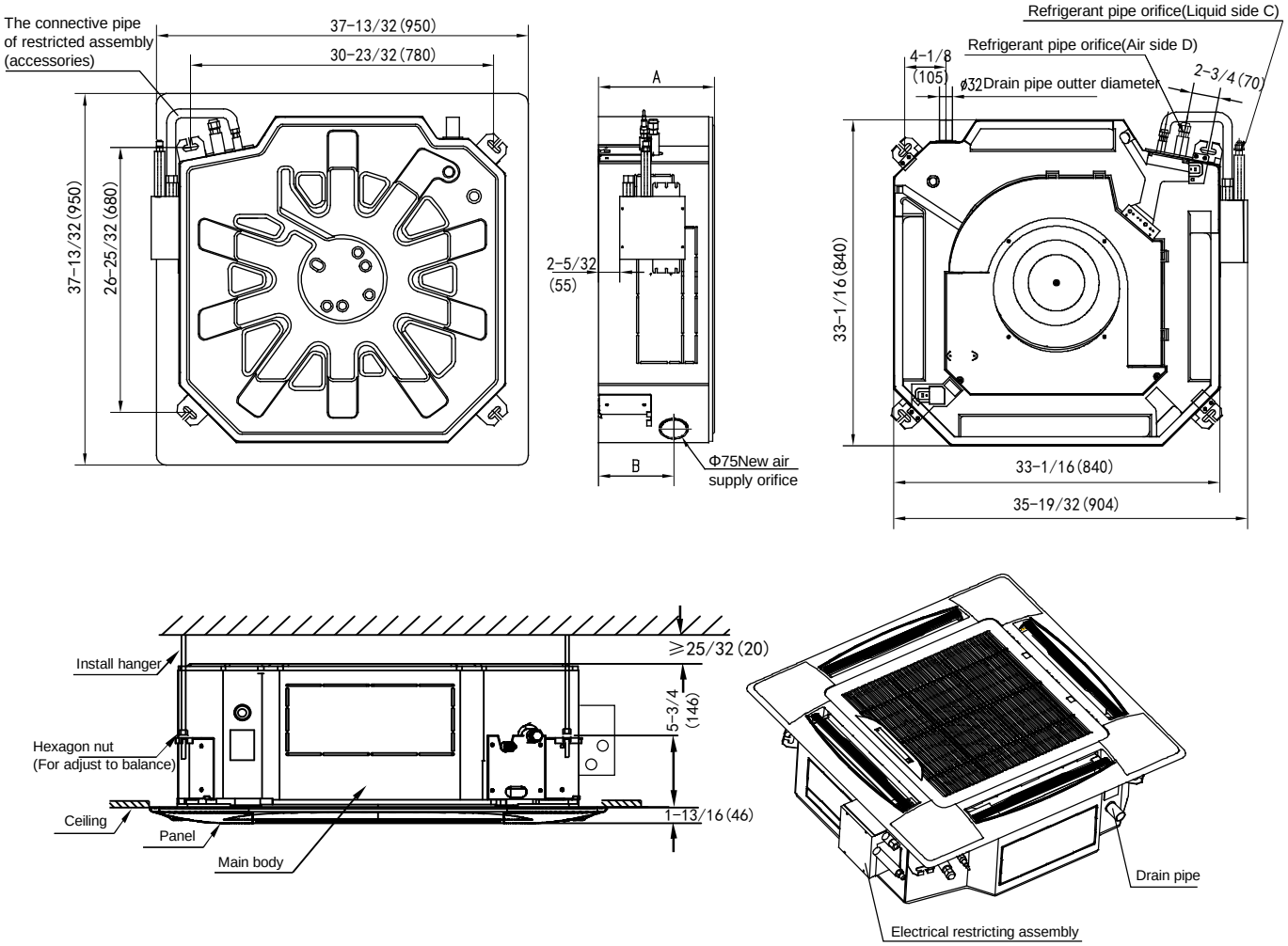
Specifications

Model			MVD -90Q4/DHN1-D	MVD -100Q4/DHN1-D	MVD -112Q4/DHN1-D	MVD -140Q4/DHN1-D
Power supply			220-240V~50/60Hz			
Cooling	Capacity	kW	9.0	10.0	11.2	14.0
		Btu/h	30700	34100	38200	47800
	Power input	W	75	75	75	94
Heating	Capacity	kW	10.0	11.1	12.5	15.0
		Btu/h	34100	37900	42700	51200
	Power input	W	75	75	75	94
Indoor fan motor	Model		WZDK90-38G			
	Type		DC motor			
	Brand		Shibaura			
	Insulation class		E			
	Safe class		IP20			
	Input	W	110	110	110	120
	Output	W	88	88	88	90
Indoor fan	Material		Plastic			
	Type		Centrifugal fan			
	Diameter	in.	18-3/4 (476)			
	Height	in.	6-11/16 (170)			
Indoor coil	Number of rows		2	2	2	3
	Tube pitch(a)× row pitch(b)	in. (mm)	13/16×17/32 (21×13.37)			
	Fin spacing	in.	1/16 (1.5)			
	Fin type		Hydrophilic aluminium			
	Tube size	in.	Φ9/32 (7)			
	Tube type		Innergroove tube			
	Coil	in.	76-31/32×9-29/32 (1955×252)			
	Number of circuits		8			12
Indoor air flow (H/M/L)		m^3/h	1596/1239/1030	1596/1239/1030	1596/1239/1030	1727/1426/1220
		CFM	939/729/609	939/729/609	939/729/609	1017/839/720
Sound pressure level (H/M/L)		dB(A)	47/41/36	47/41/36	47/41/36	50/45/35
Indoor unit body	Net dimension (W×H×D)	in.	35-19/32×11-13/16×33-5/64			
		mm	904×300×840			
	Packing size (W×H×D)	in.	37-19/32×13×37-19/32			
		mm	955×330×955			
	Net/Gross weight	lbs	60.3/73	60.3/73	60.3/73	66/78.8
		kg	27.4/33.2	27.4/33.2	27.4/33.2	30/35.8
Indoor unit panel	Model		T-MBQ-02C1			
	Net dimension (W×H×D)	in.	37-13/32×2-9/64×37-13/32			
		mm	950×54.5×950			
	Packing size (W×H×D)	in.	40-3/4×3-35/64×40-3/4			
		mm	1035×90×1035			
	Net/Gross weight	lbs	11.0/17.6			
		kg	5/8			
Refrigerant type			R410A			
Throttle type			EXV			
Design pressure		MPa	4.4/2.6			
Pipe connections	Liquid pipe	in.	Φ3/8 (9.53)			
	Gas pipe	in.	Φ5/8 (15.9)			
	Drain pipe	in.	Φ1-1/4 (32)			
Controller			Wireless remote controller (RM05/BG(T)E-A)			

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 80.6°F (27°C) DB / 66.2°F (19°C) WB; Outdoor temperature 95°F (35°C) DB / 75.2°F (24°C) WB.
Heating: Indoor temperature 68°F (20°C) DB / 59°F (15°C) WB; Outdoor temperature 44.6°F (7°C) DB / 42.8°F (6°C) WB.
Piping length: Interconnecting piping length is 26.25ft. (8m), level difference is 0ft. (0m).
Sound values are measured in a semi-anechoic room, at a position 4.59ft. (1.4m) downward from the unit center.

3. Dimensions

Unit：in. (mm)

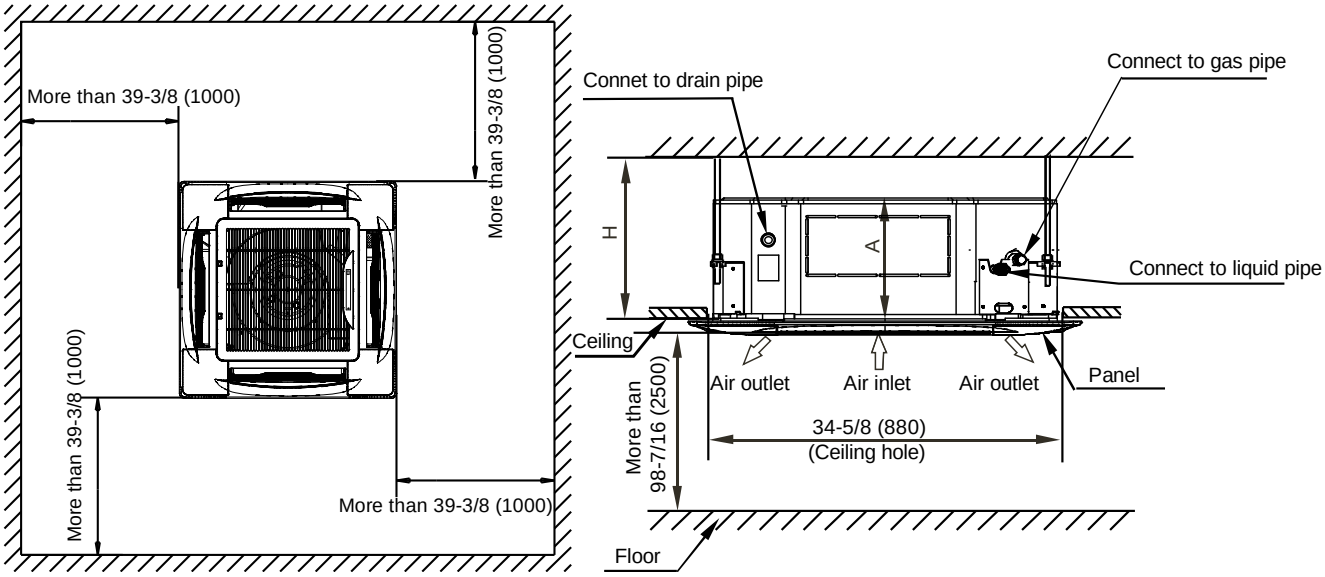


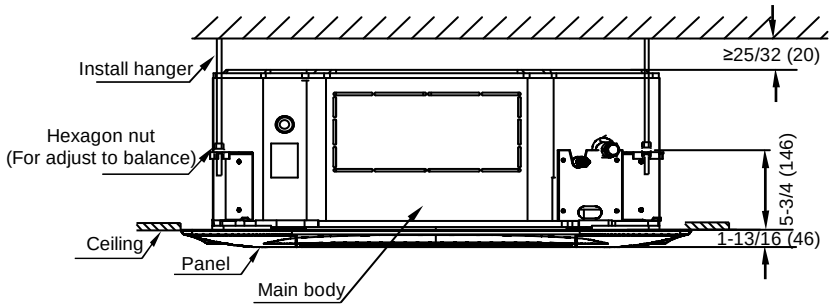
Indoor unit model	A in(mm)	B in(mm)	C in(mm)	D in(mm)
2.8-4.5kW	9-1/16(230)	6-11/16(170)	1/4(Φ6.35)	1/2(Φ12.7)
5.6-8.0kW	9-1/16(230)	6-11/16(170)	3/8(Φ9.53)	5/8(Φ15.9)
9.0-14.0kW	11-13/16(300)	7-15/32(190)	3/8(Φ9.53)	5/8(Φ15.9)

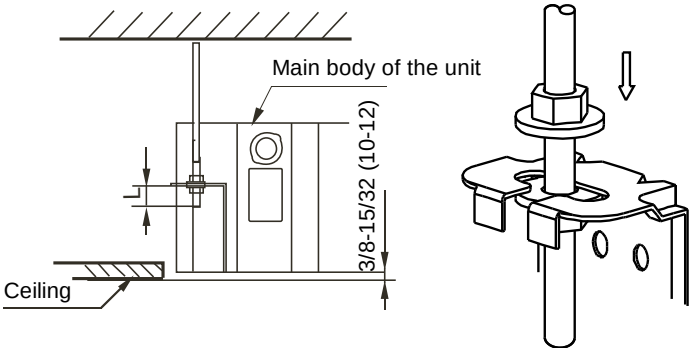
4. Service spaces

1) There is enough room for installation and maintenance.
2) The ceiling is horizontal, and its structure can endure the weight of the indoor unit.
3) The outlet and the inlet are not impeded, and the influence of external air is the least.
4) The air flow can reach throughout the room.
5) The connecting pipe and drainpipe could be extracted out easily.
6) There is no direct radiation from heaters.

Unit: in. (mm)

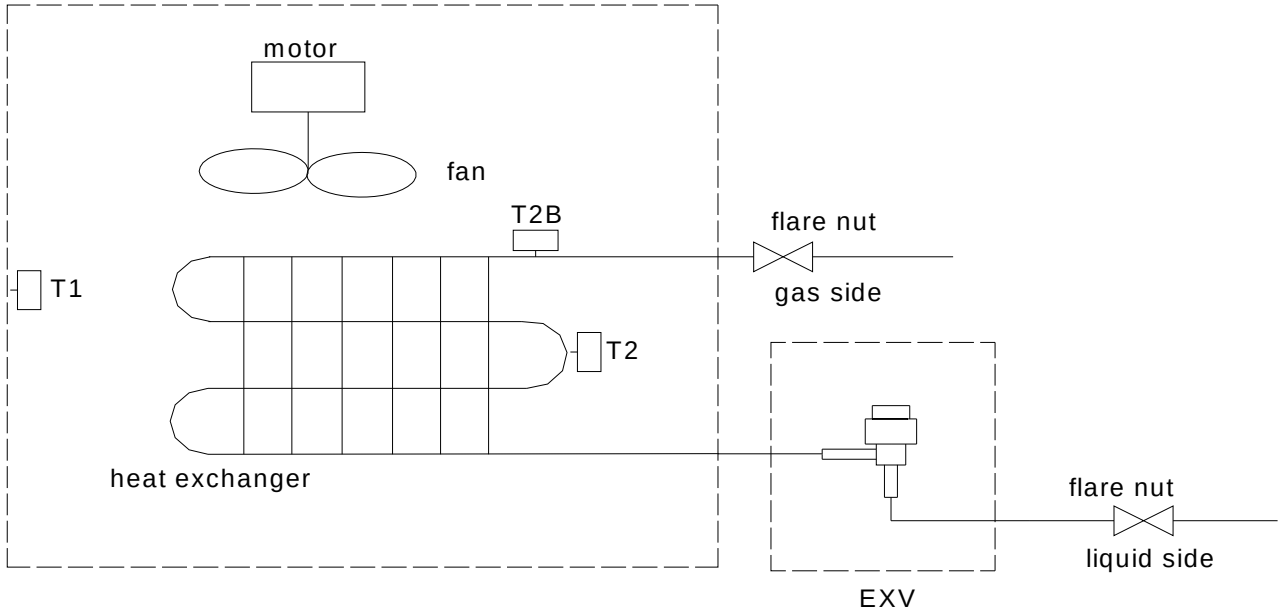






Model	A in. (mm)	H in.(mm)
≤8kW	9-1/16 (230)	More than 10-1/4 (260)
≥9kW	11-13/16 (300)	More than 13 (330)

5. Piping diagrams



T1: Room temperature;
T2: Temperature of middle evaporator;
T2B: Temperature of evaporator outlet.

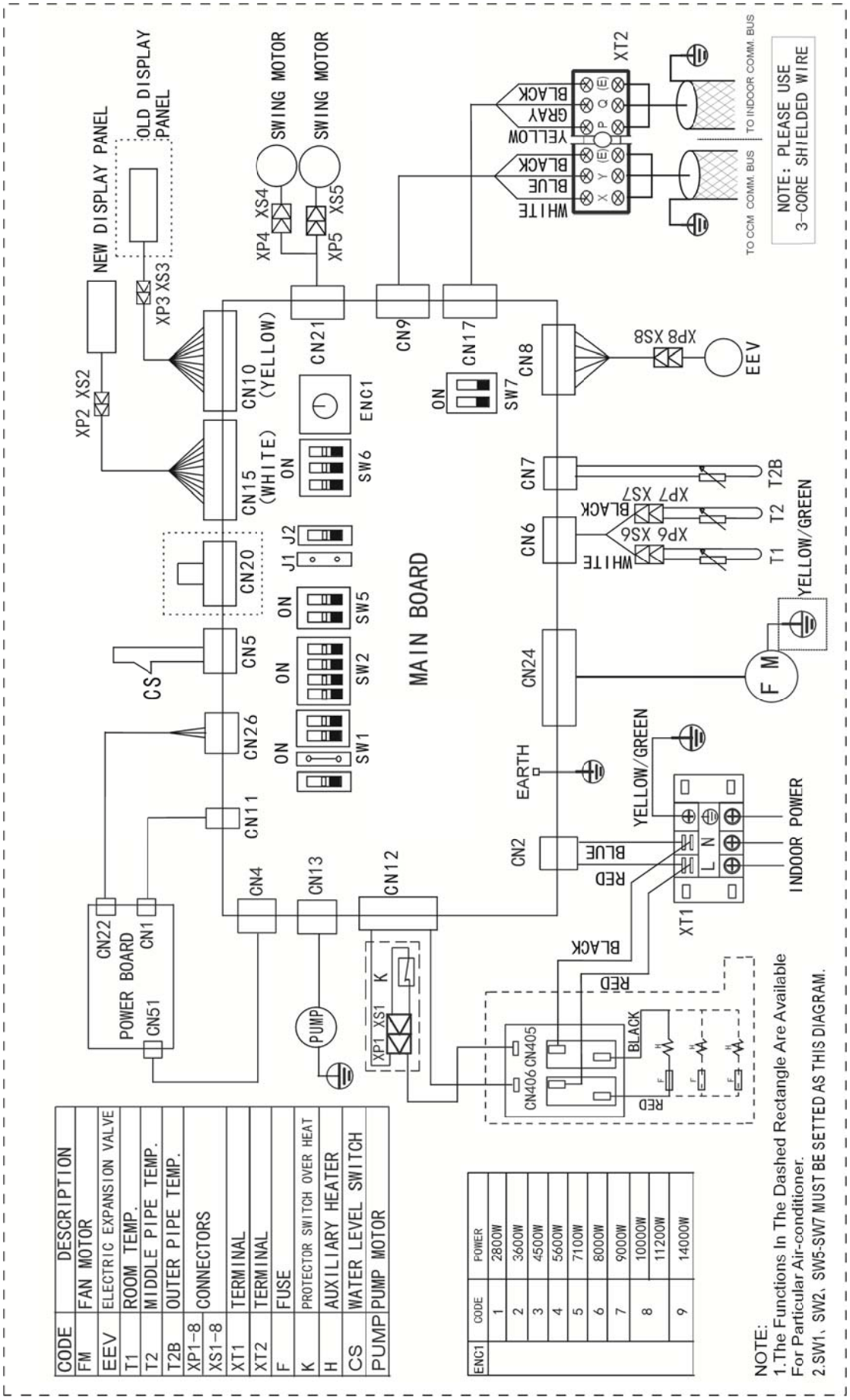
Refrigerant pipe connection port diameters

in. (mm)

Model	Gas pipe	Liquid pipe
2.8-4.5kW	Φ1/2 (12.7)	Φ1/4 (6.35)
5.6-14kW	Φ5/8 (15.9)	Φ3/8 (9.53)

6. Wiring diagrams

Models: 2.8-14kW



7. Capacity tables

7.1 Cooling capacity tables

TC: Total Cooling Capacity; **SC:** Sensible Cooling Capacity

Unit size (kW)	Outdoor air temp. (°C DB)	Indoor air temp. (°C WB/DB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2.8	10	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.7	2.0
	12	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.6	2.0
	14	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.6	2.0
	16	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.5	1.9
	18	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.5	1.9
	20	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.4	1.9
	21	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.4	1.9
	23	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.3	2.0	3.4	1.9
	25	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.2	1.9	3.3	1.9
	27	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.2	1.9	3.3	1.9
	29	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.1	1.8	3.2	1.8
	31	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.1	1.8	3.2	1.7
	33	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	3.0	1.9	3.1	1.8	3.1	1.7
	35	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	2.9	1.9	3.0	1.8	3.1	1.7
	37	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	2.9	1.9	3.0	1.8	3.0	1.7
	39	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	2.9	1.9	3.0	1.9	3.0	1.7
	42	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	2.9	1.9	3.0	1.9	3.0	1.7
	44	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	2.9	1.9	3.0	1.9	3.0	1.7
	46	1.9	1.6	2.3	1.8	2.6	1.9	2.8	1.9	2.9	1.9	3.0	1.9	3.0	1.7
3.6	10	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.7	2.5
	12	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.7	2.5
	14	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.6	2.4
	16	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.5	2.4
	18	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.5	2.4
	20	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.4	2.3
	21	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.3	2.4	4.4	2.3
	23	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.1	2.3	4.3	2.2
	25	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.1	2.3	4.2	2.2
	27	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.0	2.2	4.2	2.2
	29	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.0	2.2	4.1	2.2
	31	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.2	2.6	4.1	2.2
	33	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.2	2.6	3.9	2.1
	35	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.8	2.5	4.2	2.6	3.9	2.1
	37	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.7	2.4	3.8	2.3	3.9	2.1
	39	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.7	2.4	3.8	2.3	3.8	2.1
	42	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.7	2.4	3.8	2.3	3.8	2.1
	44	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.7	2.4	3.8	2.3	3.8	2.1
	46	2.5	1.9	2.9	2.1	3.4	2.3	3.6	2.4	3.7	2.4	3.8	2.3	3.8	2.1
4.5	10	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.9	3.0
	12	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.9	3.0
	14	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.8	3.0
	16	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.6	3.0
	18	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.7	3.0
	20	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.7	3.0
	21	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.6	3.0
	23	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.3	3.4	5.5	3.0
	25	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.2	3.0	5.4	2.9
	27	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.1	3.0	5.2	2.8
	29	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.1	2.9	5.2	2.8
	31	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	5.0	2.9	5.1	2.7
	33	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	4.9	2.8	5.1	2.7
	35	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	4.8	2.8	5.0	2.7
	37	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.8	3.0	4.8	2.9	4.9	2.6
	39	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.6	2.8	4.7	2.8	4.8	2.6
	42	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.6	2.8	4.7	2.8	4.8	2.6
	44	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.6	2.8	4.7	2.8	4.8	2.6
	46	3.1	2.4	3.7	2.6	4.2	2.8	4.5	2.9	4.6	2.8	4.7	3.1	4.8	2.6

Cooling capacity tables

TC: Total Cooling Capacity; **SC:** Sensible Cooling Capacity

Unit size (kW)	Outdoor air temp. (°C DB)	Indoor air temp. (°C WB/DB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5.6	10	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	7.3	3.5
	12	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	7.2	3.5
	14	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	7.1	3.5
	16	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	7.0	3.4
	18	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	6.8	3.4
	20	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	6.7	3.3
	21	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	6.6	3.3
	23	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	6.6	3.3
	25	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.6	3.6	6.5	3.2
	27	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.4	3.5	6.4	3.2
	29	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.3	3.5	6.4	3.3
	31	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.2	3.4	6.2	3.2
	33	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.2	3.4	6.2	3.2
	35	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	6.0	3.3	6.0	3.1
	37	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.9	3.5	5.9	3.2	6.0	3.1
	39	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.7	3.4	5.8	3.2	6.0	3.1
	42	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.7	3.4	5.8	3.2	6.0	3.1
	44	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.7	3.4	5.8	3.2	6.0	3.1
	46	3.9	2.7	4.6	3.0	5.3	3.3	5.6	3.4	5.7	3.7	5.8	3.2	6.0	3.1
7.1	10	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	9.2	4.6
	12	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	9.1	4.5
	14	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	9.0	4.5
	16	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	8.9	4.4
	18	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	8.7	4.3
	20	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	8.5	4.2
	21	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	8.4	4.2
	23	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	8.3	4.1
	25	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.4	4.5	8.2	4.1
	27	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.4	8.1	4.3	8.2	4.1
	29	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.5	8.0	4.3	8.1	4.1
	31	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.5	7.9	4.3	7.8	4.0
	33	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.5	7.8	4.2	7.8	4.0
	35	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.5	4.5	7.6	4.1	7.7	4.0
	37	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.4	4.4	7.5	4.1	7.6	4.0
	39	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.2	4.3	7.4	4.1	7.6	4.0
	42	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.2	4.3	7.4	4.1	7.6	4.0
	44	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.2	4.3	7.4	4.1	7.6	4.0
	46	4.9	3.6	5.8	4.0	6.7	4.3	7.1	4.5	7.2	4.3	7.4	4.1	7.6	4.0
8.0	10	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	10.4	5.6
	12	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	10.2	5.5
	14	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	10.2	5.5
	16	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	10.0	5.4
	18	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	9.8	5.3
	20	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	9.6	5.2
	21	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	9.4	5.1
	23	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	9.4	5.1
	25	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.4	5.5	9.3	5.1
	27	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.4	9.1	5.3	9.2	5.1
	29	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.5	9.0	5.3	9.1	5.0
	31	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.5	8.9	5.2	8.8	4.9
	33	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.5	8.8	5.2	8.8	4.9
	35	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.5	8.6	5.1	8.6	4.8
	37	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.3	5.4	8.4	5.0	8.6	4.8
	39	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.1	5.3	8.3	5.0	8.6	4.8
	42	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.1	5.3	8.3	5.0	8.6	4.8
	44	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.1	5.3	8.3	5.0	8.6	4.8
	46	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.1	5.3	8.3	5.0	8.6	4.8

Cooling capacity tables

TC: Total Cooling Capacity; **SC:** Sensible Cooling Capacity

Unit size (kW)	Outdoor air temp. (°C DB)	Indoor air temp. (°C WB/DB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
9.0	10	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	11.7	6.0
	12	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	11.5	5.9
	14	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	11.4	5.9
	16	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	11.3	5.8
	18	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	11.0	5.8
	20	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	10.8	5.7
	21	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	10.6	5.6
	23	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	10.5	5.5
	25	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.6	6.1	10.4	5.5
	27	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.3	5.9	10.4	5.4
	29	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.1	5.7	10.3	5.4
	31	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	10.0	5.7	9.9	5.3
	33	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.6	6.0	9.9	5.6	9.9	5.3
	35	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.5	6.0	9.6	5.5	9.7	5.3
	37	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.3	5.8	9.5	5.4	9.6	5.3
	39	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.2	5.7	9.4	5.3	9.6	5.3
	42	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.2	5.7	9.4	5.3	9.6	5.3
	44	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.2	5.7	9.4	5.3	9.6	5.3
	46	6.2	4.9	7.3	5.3	8.4	5.8	9.0	5.9	9.2	5.7	9.4	5.3	9.6	5.3
10.0	10	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	13.0	7.3
	12	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	12.8	7.2
	14	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	12.7	7.1
	16	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	12.5	7.0
	18	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	12.2	6.8
	20	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	12.0	6.7
	21	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.9	7.3	11.8	6.6
	23	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.7	7.3	11.7	6.6
	25	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.6	7.2	11.6	6.5
	27	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.5	7.1	11.5	6.6
	29	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.4	7.1	11.4	6.5
	31	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.3	7.0	11.0	6.3
	33	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.6	7.0	11.2	6.9	11.0	6.3
	35	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.5	6.9	10.8	6.7	10.8	6.3
	37	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.4	6.9	10.8	6.7	10.7	6.2
	39	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.2	6.7	10.4	6.6	10.7	6.3
	42	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.2	6.7	10.4	6.6	10.7	6.3
	44	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.2	6.7	10.4	6.6	10.7	6.3
	46	6.9	5.6	8.1	6.2	9.4	6.9	10.0	7.0	10.2	6.7	10.4	6.6	10.7	6.3
11.2	10	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	15.5	8.2
	12	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	14.4	7.7
	14	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	14.2	7.6
	16	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	14.1	7.5
	18	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	14.0	7.5
	20	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	13.9	7.4
	21	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.3	7.6	13.8	7.4
	23	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.1	7.5	13.7	7.3
	25	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	13.0	7.4	13.6	7.2
	27	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	12.9	7.3	13.4	7.2
	29	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	12.8	7.3	13.3	7.2
	31	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	12.7	7.2	12.8	6.9
	33	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.9	7.4	12.5	7.2	12.5	6.8
	35	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.8	7.4	12.4	7.1	12.3	6.7
	37	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.6	7.3	12.3	7.0	12.1	6.6
	39	7.7	5.9	9.1	6.5	10.5	7.1	11.2	7.2	11.4	7.1	12.2	7.0	11.9	6.6
	42	7.7	6.0	9.1	6.6	10.4	7.2	11.2	7.3	11.4	7.1	11.6	6.6	12.0	6.6
	44	7.7	6.0	9.1	6.6	10.4	7.2	11.2	7.3	11.4	7.1	11.6	6.6	12.0	6.6
	46	7.7	6.0	9.1	6.6	10.4	7.2	11.2	7.3	11.4	7.1	11.6	6.6	12.0	6.6

Cooling capacity tables

TC: Total Cooling Capacity; **SC:** Sensible Cooling Capacity

Unit size (kW)	Outdoor air temp. (°C DB)	Indoor air temp. (°C WB/DB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
14.0	10	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	18.2	9.4
	12	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	17.9	9.2
	14	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	17.8	9.2
	16	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	17.5	9.0
	18	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	17.1	8.8
	20	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	16.8	8.7
	21	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.7	9.3	16.5	8.5
	23	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.4	9.3	16.4	8.4
	25	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.2	9.3	16.2	8.4
	27	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.1	9.2	16.1	8.4
	29	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	16.0	9.1	16.0	8.4
	31	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	15.8	9.0	15.4	8.1
	33	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.8	9.0	15.7	8.9	15.4	8.1
	35	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.7	8.9	15.1	8.6	15.1	8.1
	37	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.6	8.8	15.1	8.6	15.0	8.0
	39	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.3	8.7	14.6	8.4	15.0	8.1
	42	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.3	8.7	14.6	8.4	15.0	8.1
	44	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.3	8.7	14.6	8.4	15.0	8.1
	46	9.7	7.2	11.3	7.9	13.2	8.8	14.0	9.0	14.3	8.7	14.6	8.4	15.0	8.1

7.2 Heating capacity tables

TC: Total Heating Capacity

Unit size (kW)	Outdoor air temp. (°C)		Indoor air temp. (°C DB)					
			16.0	18.0	20.0	21.0	22.0	24.0
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
2.8	-20.0	-19.8	1.79	1.79	1.79	1.79	1.79	1.79
	-19.0	-18.8	1.92	1.92	1.92	1.92	1.92	1.92
	-17.0	-16.7	2.02	2.02	2.02	2.02	2.02	2.02
	-15.0	-14.7	2.08	2.08	2.08	2.08	2.08	2.08
	-13.0	-12.6	2.21	2.21	2.21	2.21	2.21	2.21
	-11.0	-10.5	2.24	2.27	2.27	2.27	2.27	2.27
	-10.0	-9.5	2.34	2.34	2.34	2.34	2.34	2.34
	-9.1	-8.5	2.40	2.40	2.40	2.40	2.40	2.40
	-7.6	-7.0	2.43	2.43	2.43	2.43	2.43	2.43
	-5.6	-5.0	2.53	2.53	2.53	2.53	2.53	2.53
	-3.7	-3.0	2.66	2.66	2.66	2.66	2.66	2.66
	-0.7	0.0	2.85	2.85	2.85	2.85	2.85	2.69
	2.2	3.0	3.01	3.01	3.01	3.01	2.94	2.69
	4.1	5.0	3.10	3.10	3.10	3.10	2.94	2.69
	6.0	7.0	3.20	3.20	3.20	3.10	2.94	2.69
	7.9	9.0	3.30	3.30	3.20	3.10	2.94	2.69
	9.8	11.0	3.39	3.39	3.20	3.10	2.94	2.69
	11.8	13.0	3.52	3.46	3.20	3.10	2.94	2.69
	13.7	15.0	3.62	3.46	3.20	3.10	2.94	2.69

Heating capacity tables

TC: Total Heating Capacity

Unit size (kW)	Outdoor air temp. (°C)		Indoor air temp. (°C DB)					
			16.0	18.0	20.0	21.0	22.0	24.0
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
3.6	-20.0	-19.8	2.24	2.24	2.24	2.24	2.24	2.24
	-19.0	-18.8	2.40	2.40	2.40	2.40	2.40	2.40
	-17.0	-16.7	2.52	2.52	2.52	2.52	2.52	2.52
	-15.0	-14.7	2.60	2.60	2.60	2.60	2.60	2.60
	-13.0	-12.6	2.76	2.76	2.76	2.76	2.76	2.76
	-11.0	-10.5	2.80	2.84	2.84	2.84	2.84	2.84
	-10.0	-9.5	2.92	2.92	2.92	2.92	2.92	2.92
	-9.1	-8.5	3.00	3.00	3.00	3.00	3.00	3.00
	-7.6	-7.0	3.04	3.04	3.04	3.04	3.04	3.04
	-5.6	-5.0	3.16	3.16	3.16	3.16	3.16	3.16
	-3.7	-3.0	3.32	3.32	3.32	3.32	3.32	3.32
	-0.7	0.0	3.56	3.56	3.56	3.56	3.56	3.36
	2.2	3.0	3.76	3.76	3.76	3.76	3.68	3.36
	4.1	5.0	3.88	3.88	3.88	3.88	3.68	3.36
	6.0	7.0	4.00	4.00	4.00	3.88	3.68	3.36
	7.9	9.0	4.12	4.12	4.00	3.88	3.68	3.36
	9.8	11.0	4.24	4.24	4.00	3.88	3.68	3.36
	11.8	13.0	4.40	4.32	4.00	3.88	3.68	3.36
	13.7	15.0	4.52	4.32	4.00	3.88	3.68	3.36
4.5	-20.0	-19.8	2.80	2.80	2.80	2.80	2.80	2.80
	-19.0	-18.8	3.00	3.00	3.00	3.00	3.00	3.00
	-17.0	-16.7	3.15	3.15	3.15	3.15	3.15	3.15
	-15.0	-14.7	3.25	3.25	3.25	3.25	3.25	3.25
	-13.0	-12.6	3.45	3.45	3.45	3.45	3.45	3.45
	-11.0	-10.5	3.50	3.55	3.55	3.55	3.55	3.55
	-10.0	-9.5	3.65	3.65	3.65	3.65	3.65	3.65
	-9.1	-8.5	3.75	3.75	3.75	3.75	3.75	3.75
	-7.6	-7.0	3.80	3.80	3.80	3.80	3.80	3.80
	-5.6	-5.0	3.95	3.95	3.95	3.95	3.95	3.95
	-3.7	-3.0	4.15	4.15	4.15	4.15	4.15	4.15
	-0.7	0.0	4.45	4.45	4.45	4.45	4.45	4.20
	2.2	3.0	4.70	4.70	4.70	4.70	4.60	4.20
	4.1	5.0	4.85	4.85	4.85	4.85	4.60	4.20
	6.0	7.0	5.00	5.00	5.00	4.85	4.60	4.20
	7.9	9.0	5.15	5.15	5.00	4.85	4.60	4.20
	9.8	11.0	5.30	5.30	5.00	4.85	4.60	4.20
	11.8	13.0	5.50	5.40	5.00	4.85	4.60	4.20
	13.7	15.0	5.65	5.40	5.00	4.85	4.60	4.20
5.6	-20.0	-19.8	3.53	3.53	3.53	3.53	3.53	3.53
	-19.0	-18.8	3.78	3.78	3.78	3.78	3.78	3.78
	-17.0	-16.7	3.97	3.97	3.97	3.97	3.97	3.97
	-15.0	-14.7	4.10	4.10	4.10	4.10	4.10	4.10
	-13.0	-12.6	4.35	4.35	4.35	4.35	4.35	4.35
	-11.0	-10.5	4.41	4.47	4.47	4.47	4.47	4.47
	-10.0	-9.5	4.60	4.60	4.60	4.60	4.60	4.60
	-9.1	-8.5	4.73	4.73	4.73	4.73	4.73	4.73
	-7.6	-7.0	4.79	4.79	4.79	4.79	4.79	4.79
	-5.6	-5.0	4.98	4.98	4.98	4.98	4.98	4.98
	-3.7	-3.0	5.23	5.23	5.23	5.23	5.23	5.23
	-0.7	0.0	5.61	5.61	5.61	5.61	5.61	5.29
	2.2	3.0	5.92	5.92	5.92	5.92	5.80	5.29
	4.1	5.0	6.11	6.11	6.11	6.11	5.80	5.29
	6.0	7.0	6.30	6.30	6.30	6.11	5.80	5.29
	7.9	9.0	6.49	6.49	6.30	6.11	5.80	5.29
	9.8	11.0	6.68	6.68	6.30	6.11	5.80	5.29
	11.8	13.0	6.93	6.80	6.30	6.11	5.80	5.29
	13.7	15.0	7.12	6.80	6.30	6.11	5.80	5.29

Heating capacity tables

TC: Total Heating Capacity

Unit size (kW)	Outdoor air temp. (°C)		Indoor air temp. (°C DB)					
			16.0	18.0	20.0	21.0	22.0	24.0
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
7.1	-20.0	-19.8	4.48	4.48	4.48	4.48	4.48	4.48
	-19.0	-18.8	4.80	4.80	4.80	4.80	4.80	4.80
	-17.0	-16.7	5.04	5.04	5.04	5.04	5.04	5.04
	-15.0	-14.7	5.20	5.20	5.20	5.20	5.20	5.20
	-13.0	-12.6	5.52	5.52	5.52	5.52	5.52	5.52
	-11.0	-10.5	5.60	5.68	5.68	5.68	5.68	5.68
	-10.0	-9.5	5.84	5.84	5.84	5.84	5.84	5.84
	-9.1	-8.5	6.00	6.00	6.00	6.00	6.00	6.00
	-7.6	-7.0	6.08	6.08	6.08	6.08	6.08	6.08
	-5.6	-5.0	6.32	6.32	6.32	6.32	6.32	6.32
	-3.7	-3.0	6.64	6.64	6.64	6.64	6.64	6.64
	-0.7	0.0	7.12	7.12	7.12	7.12	7.12	6.72
	2.2	3.0	7.52	7.52	7.52	7.52	7.36	6.72
	4.1	5.0	7.76	7.76	7.76	7.76	7.36	6.72
	6.0	7.0	8.00	8.00	8.00	7.76	7.36	6.72
	7.9	9.0	8.24	8.24	8.00	7.76	7.36	6.72
	9.8	11.0	8.48	8.48	8.00	7.76	7.36	6.72
	11.8	13.0	8.80	8.64	8.00	7.76	7.36	6.72
	13.7	15.0	9.04	8.64	8.00	7.76	7.36	6.72
8.0	-20.0	-19.8	5.04	5.04	5.04	5.04	5.04	5.04
	-19.0	-18.8	5.40	5.40	5.40	5.40	5.40	5.40
	-17.0	-16.7	5.67	5.67	5.67	5.67	5.67	5.67
	-15.0	-14.7	5.85	5.85	5.85	5.85	5.85	5.85
	-13.0	-12.6	6.21	6.21	6.21	6.21	6.21	6.21
	-11.0	-10.5	6.30	6.39	6.39	6.39	6.39	6.39
	-10.0	-9.5	6.57	6.57	6.57	6.57	6.57	6.57
	-9.1	-8.5	6.75	6.75	6.75	6.75	6.75	6.75
	-7.6	-7.0	6.84	6.84	6.84	6.84	6.84	6.84
	-5.6	-5.0	7.11	7.11	7.11	7.11	7.11	7.11
	-3.7	-3.0	7.47	7.47	7.47	7.47	7.47	7.47
	-0.7	0.0	8.01	8.01	8.01	8.01	8.01	7.56
	2.2	3.0	8.46	8.46	8.46	8.46	8.28	7.56
	4.1	5.0	8.73	8.73	8.73	8.73	8.28	7.56
	6.0	7.0	9.00	9.00	9.00	8.73	8.28	7.56
	7.9	9.0	9.27	9.27	9.00	8.73	8.28	7.56
	9.8	11.0	9.54	9.54	9.00	8.73	8.28	7.56
	11.8	13.0	9.90	9.72	9.00	8.73	8.28	7.56
	13.7	15.0	10.17	9.72	9.00	8.73	8.28	7.56
9.0	-20.0	-19.8	5.60	5.60	5.60	5.60	5.60	5.60
	-19.0	-18.8	6.00	6.00	6.00	6.00	6.00	6.00
	-17.0	-16.7	6.30	6.30	6.30	6.30	6.30	6.30
	-15.0	-14.7	6.50	6.50	6.50	6.50	6.50	6.50
	-13.0	-12.6	6.90	6.90	6.90	6.90	6.90	6.90
	-11.0	-10.5	7.00	7.10	7.10	7.10	7.10	7.10
	-10.0	-9.5	7.30	7.30	7.30	7.30	7.30	7.30
	-9.1	-8.5	7.50	7.50	7.50	7.50	7.50	7.50
	-7.6	-7.0	7.60	7.60	7.60	7.60	7.60	7.60
	-5.6	-5.0	7.90	7.90	7.90	7.90	7.90	7.90
	-3.7	-3.0	8.30	8.30	8.30	8.30	8.30	8.30
	-0.7	0.0	8.90	8.90	8.90	8.90	8.90	8.40
	2.2	3.0	9.40	9.40	9.40	9.40	9.20	8.40
	4.1	5.0	9.70	9.70	9.70	9.70	9.20	8.40
	6.0	7.0	10.00	10.00	10.00	9.70	9.20	8.40
	7.9	9.0	10.30	10.30	10.00	9.70	9.20	8.40
	9.8	11.0	10.60	10.60	10.00	9.70	9.20	8.40
	11.8	13.0	11.00	10.80	10.00	9.70	9.20	8.40
	13.7	15.0	11.30	10.80	10.00	9.70	9.20	8.40

Heating capacity tables

TC: Total Heating Capacity

Unit size (kW)	Outdoor air temp. (°C)		Indoor air temp. (°C DB)					
			16.0	18.0	20.0	21.0	22.0	24.0
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
10.0	-20.0	-19.8	6.22	6.22	6.22	6.22	6.22	6.22
	-19.0	-18.8	6.66	6.66	6.66	6.66	6.66	6.66
	-17.0	-16.7	6.99	6.99	6.99	6.99	6.99	6.99
	-15.0	-14.7	7.22	7.22	7.22	7.22	7.22	7.22
	-13.0	-12.6	7.66	7.66	7.66	7.66	7.66	7.66
	-11.0	-10.5	7.77	7.88	7.88	7.88	7.88	7.88
	-10.0	-9.5	8.10	8.10	8.10	8.10	8.10	8.10
	-9.1	-8.5	8.33	8.33	8.33	8.33	8.33	8.33
	-7.6	-7.0	8.44	8.44	8.44	8.44	8.44	8.44
	-5.6	-5.0	8.77	8.77	8.77	8.77	8.77	8.77
	-3.7	-3.0	9.21	9.21	9.21	9.21	9.21	9.21
	-0.7	0.0	9.88	9.88	9.88	9.88	9.88	9.32
	2.2	3.0	10.43	10.43	10.43	10.43	10.21	9.32
	4.1	5.0	10.77	10.77	10.77	10.77	10.21	9.32
	6.0	7.0	11.10	11.10	11.10	10.77	10.21	9.32
	7.9	9.0	11.43	11.43	11.10	10.77	10.21	9.32
	9.8	11.0	11.77	11.77	11.10	10.77	10.21	9.32
	11.8	13.0	12.21	11.99	11.10	10.77	10.21	9.32
	13.7	15.0	12.54	11.99	11.10	10.77	10.21	9.32
11.2	-20.0	-19.8	7.00	7.00	7.00	7.00	7.00	7.00
	-19.0	-18.8	7.50	7.50	7.50	7.50	7.50	7.50
	-17.0	-16.7	7.88	7.88	7.88	7.88	7.88	7.88
	-15.0	-14.7	8.13	8.13	8.13	8.13	8.13	8.13
	-13.0	-12.6	8.63	8.63	8.63	8.63	8.63	8.63
	-11.0	-10.5	8.75	8.88	8.88	8.88	8.88	8.88
	-10.0	-9.5	9.13	9.13	9.13	9.13	9.13	9.13
	-9.1	-8.5	9.38	9.38	9.38	9.38	9.38	9.38
	-7.6	-7.0	9.50	9.50	9.50	9.50	9.50	9.50
	-5.6	-5.0	9.88	9.88	9.88	9.88	9.88	9.88
	-3.7	-3.0	10.38	10.38	10.38	10.38	10.38	10.38
	-0.7	0.0	11.13	11.13	11.13	11.13	11.13	10.50
	2.2	3.0	11.75	11.75	11.75	11.75	11.50	10.50
	4.1	5.0	12.13	12.13	12.13	12.13	11.50	10.50
	6.0	7.0	12.50	12.50	12.50	12.13	11.50	10.50
	7.9	9.0	12.88	12.88	12.50	12.13	11.50	10.50
	9.8	11.0	13.25	13.25	12.50	12.13	11.50	10.50
	11.8	13.0	13.75	13.50	12.50	12.13	11.50	10.50
	13.7	15.0	14.13	13.50	12.50	12.13	11.50	10.50
14.0	-20.0	-19.8	8.40	8.40	8.40	8.40	8.40	8.40
	-19.0	-18.8	9.00	9.00	9.00	9.00	9.00	9.00
	-17.0	-16.7	9.45	9.45	9.45	9.45	9.45	9.45
	-15.0	-14.7	9.75	9.75	9.75	9.75	9.75	9.75
	-13.0	-12.6	10.35	10.35	10.35	10.35	10.35	10.35
	-11.0	-10.5	10.50	10.65	10.65	10.65	10.65	10.65
	-10.0	-9.5	10.95	10.95	10.95	10.95	10.95	10.95
	-9.1	-8.5	11.25	11.25	11.25	11.25	11.25	11.25
	-7.6	-7.0	11.40	11.40	11.40	11.40	11.40	11.40
	-5.6	-5.0	11.85	11.85	11.85	11.85	11.85	11.85
	-3.7	-3.0	12.45	12.45	12.45	12.45	12.45	12.45
	-0.7	0.0	13.35	13.35	13.35	13.35	13.35	12.60
	2.2	3.0	14.10	14.10	14.10	14.10	13.80	12.60
	4.1	5.0	14.55	14.55	14.55	14.55	13.80	12.60
	6.0	7.0	15.00	15.00	15.00	14.55	13.80	12.60
	7.9	9.0	15.45	15.45	15.00	14.55	13.80	12.60
	9.8	11.0	15.90	15.90	15.00	14.55	13.80	12.60
	11.8	13.0	16.50	16.20	15.00	14.55	13.80	12.60
	13.7	15.0	16.95	16.20	15.00	14.55	13.80	12.60

8. Electrical characteristics

Model	Indoor unit				Power supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	kW	FLA
MVD-28Q4/DHN1-D	50/60	220-240	198	254	0.48	5	0.033	0.38
MVD-36Q4/DHN1-D	50/60	220-240	198	254	0.48	5	0.033	0.38
MVD-45Q4/DHN1-D	50/60	220-240	198	254	0.53	5	0.035	0.42
MVD-56Q4/DHN1-D	50/60	220-240	198	254	0.53	5	0.035	0.42
MVD-71Q4/DHN1-D	50/60	220-240	198	254	0.67	5	0.044	0.53
MVD-80Q4/DHN1-D	50/60	220-240	198	254	0.67	5	0.044	0.53
MVD-90Q4/DHN1-D	50/60	220-240	198	254	1.25	5	0.088	1
MVD-100Q4/DHN1-D	50/60	220-240	198	254	1.25	5	0.088	1
MVD-112Q4/DHN1-D	50/60	220-240	198	254	1.25	5	0.088	1
MVD-140Q4/DHN1-D	50/60	220-240	198	254	1.38	5	0.090	1.1

Remarks:

MCA: Min. Current Amps. (A)

MFA: Max. Fuse Amps. (A)

kW: Fan Motor Rated Output (kW)

FLA: Full Load Amps. (A)

IFM: Indoor Fan Motor

Note:

1) Voltage range

Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.

2) Maximum allowable voltage unbalance between phase is 2%.

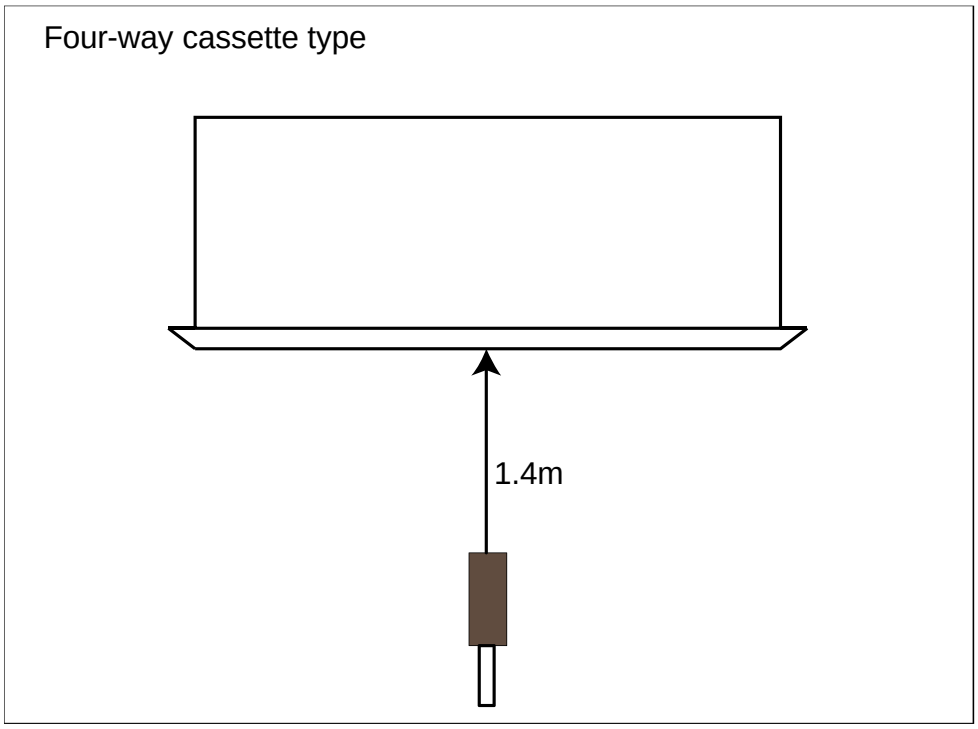
3) MCA

MCA = 1.25 × FLA

4) Select wire size based on the MCA.

5) Instead of fuse, use Circuit Breaker.

9. Sound levels



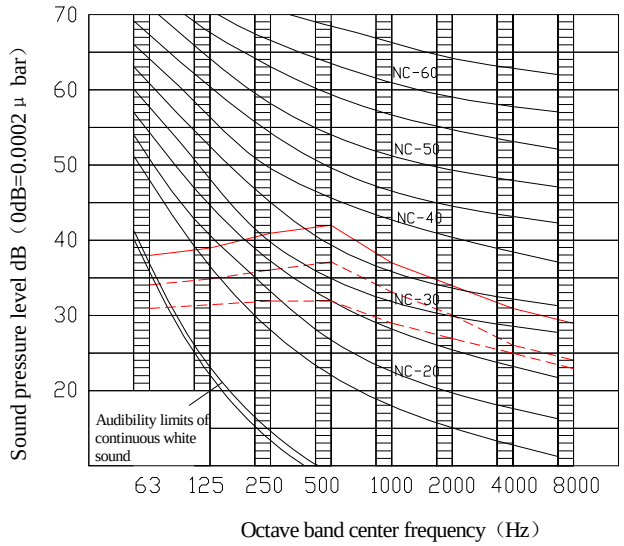
Note:

1. Sound values are measured in a semi-anechoic room, at a position 1.4m downward from the unit center
2. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

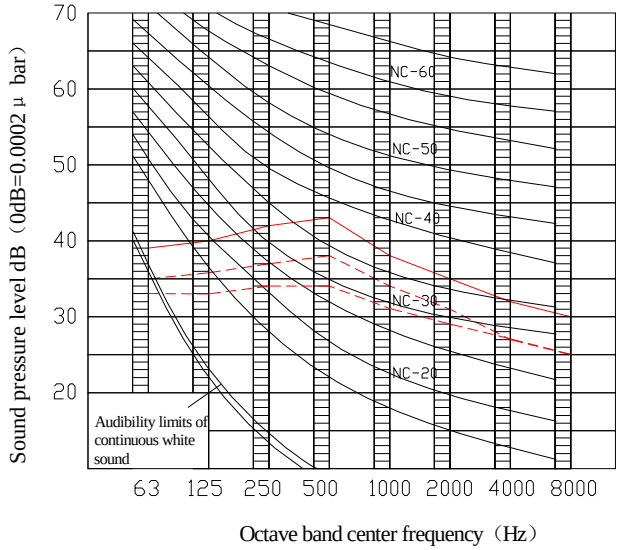
Model	Sound pressure level dB(A)		
	H	M	L
MVD-28Q4/DHN1-D	42	37	32
MVD-36Q4/DHN1-D	42	37	32
MVD-45Q4/DHN1-D	43	38	34
MVD-56Q4/DHN1-D	43	38	34
MVD-71Q4/DHN1-D	45	39	34
MVD-80Q4/DHN1-D	46	40	35
MVD-90Q4/DHN1-D	47	41	36
MVD-100Q4/DHN1-D	47	41	36
MVD-112Q4/DHN1-D	47	41	36
MVD-140Q4/DHN1-D	50	45	35

Octave band level

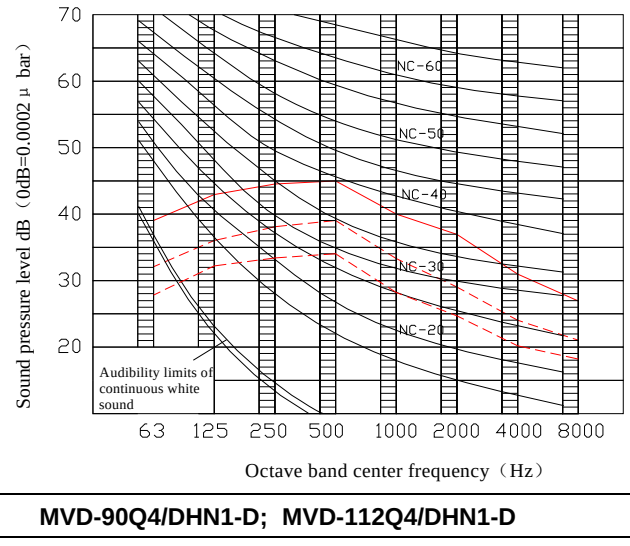
MVD-28Q4/DHN1-D; MVD-36Q4/DHN1-D



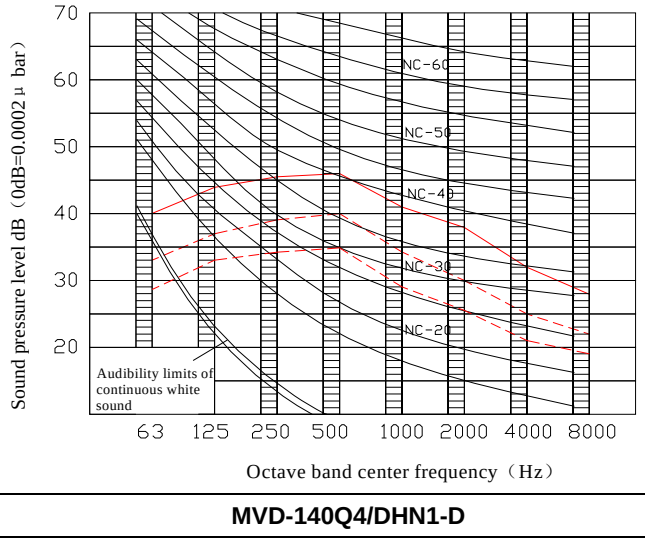
MVD-45Q4/DHN1-D; MVD-56Q4/DHN1-D



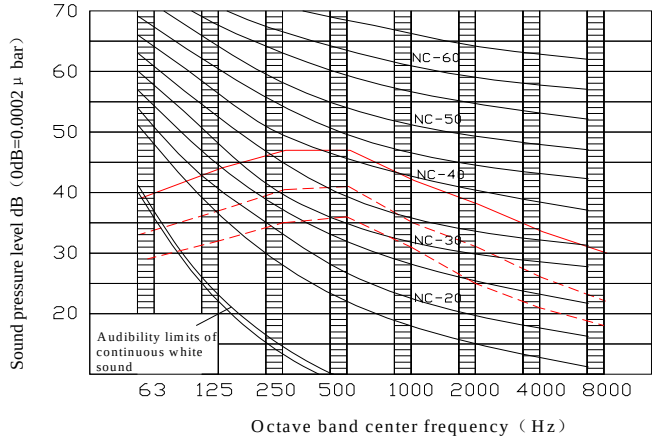
MVD-71Q4/DHN1-D



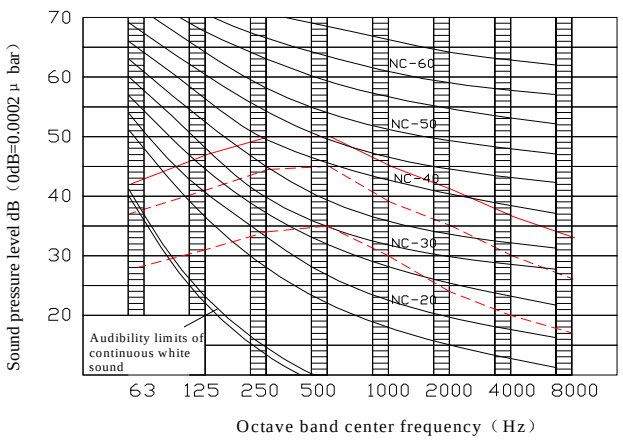
MVD-80Q4/DHN1-D



MVD-90Q4/DHN1-D; MVD-112Q4/DHN1-D



MVD-140Q4/DHN1-D

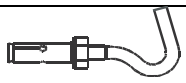


10. Accessories

Attached accessories

Name	Shape	Quantity
Nut		8
Washer		8
Installation paper board		1
Bolt M6		4
Connection pipe		1
Soundproof / insulation sheath		2
Sponge (250×250×10)		1
Sponge (60×100×5)		1
Outlet pipe sheath		1
Outlet pipe clasp		1
Tightening band		5
Flexible hose tube		1
Signal line		1
Remote controller		1
Frame		1
Alkaline dray batteries (AM4)		2
Remote controller operation manual		1
Installation manual		1
Copper (use for pipe connection)		1

Local purchased accessories

Name	Shape	Specification	Quantity	Remark
Copper pipe		Liquid pipe & gas pipe Refer to specifications	According to actual needs	Use for connecting the indoor unit refrigerant system, suggest to use flexible copper pipe (T2M)
PVC pipe		external diameter is about 37～39mm, inner diameter is 32mm	According to actual needs	Use for draining the water in the indoor unit
Heat insulation casing pipe		Inner diameter corresponds with the copper pipe and PVC pipe, the thickness should be 10mm (above), and it should be thicker when in the close humid area.	According to actual needs	Use for preventing the condensate water
Expansible hook		M10	4	Use for the installation of the indoor unit, please purchase from the market
Installation hook		M10	4	Use for the installation of the indoor unit, please purchase from the market

MUNDOCLIMA®

ASK FOR MORE INFORMATION

Phone: (+34) 93 446 27 81

eMail: info@mundoclima.com

TECHNICAL ASSISTANCE

Phone: (+34) 93 652 53 57

www.mundoclima.com