



# Technical Service Manual

## TVR LX Systems

*Medium Static Pressure Duct Units with DC Fan Motor*  
*220-240V/50-60Hz/1ph*



August 2015

# Medium Static Pressure Duct Unit With DC Fan Motor

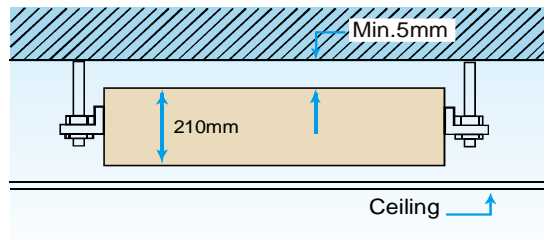
<b>1. Features</b> .....	<b>2</b>
<b>2. Specifications</b> .....	<b>4</b>
<b>3. Dimensions</b> .....	<b>9</b>
<b>4. Service Spaces</b> .....	<b>11</b>
<b>5. Piping Diagrams</b> .....	<b>12</b>
<b>6. Wiring Diagrams</b> .....	<b>13</b>
<b>7. Fan Performance</b> .....	<b>14</b>
<b>8. Capacity Tables</b> .....	<b>16</b>
<b>9. Electrical Characteristics</b> .....	<b>23</b>
<b>10. Sound Levels</b> .....	<b>24</b>
<b>11. Accessories</b> .....	<b>26</b>

## 1. Features

### 1.1 Compact design



Only 210 mm (15~71 models) or 270mm (80 to 112 models) or 300mm (140 model) in height, these models can be installed in rooms with as little as 240mm~300 mm height between the drop ceiling and ceiling slab.



### 1.2 Capacity range

The capacity ranges from 1.5kW to 14kW, totally eleven models available.

### 1.3 Convenient installation

1.3.1 The EXV is fixed inside the indoor unit, which makes the main body without an extra throttle kit box.

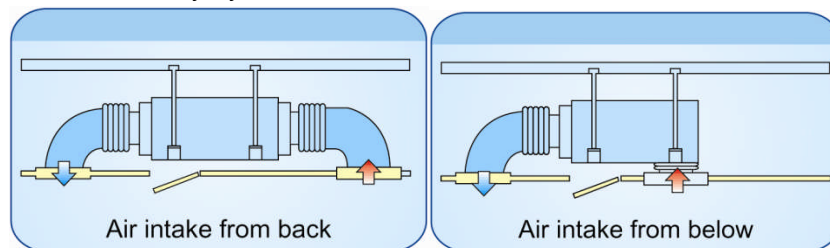
1.3.2 Standard filter with aluminum frame, which is removable downward from the bottom.

1.3.3 Suction chamber is included as standard equipment.

1.3.4 Flange for air in/outlet duct connection is standard.

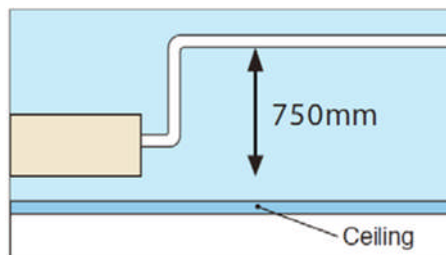
1.3.5 Air inlet from back standard and from bottom optional.

Size of the plate from bottom and flange from back is the same, which makes it possible to convert the air return from back to bottom easily by installer.



### 1.3.6 Standard built-in drain pump

Drain pump is equipped as standard accessory with 750 mm pump head.

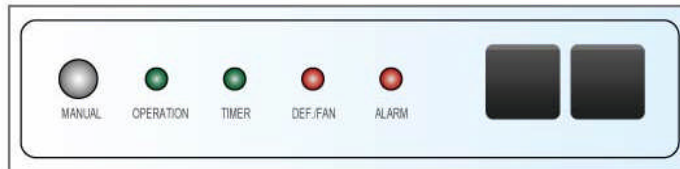


**1.4 Flexible control and convenient for maintenance**

1.4.1 The display board is connected with the E-box in factory, which makes troubleshooting easier by LED display.



15~71 models

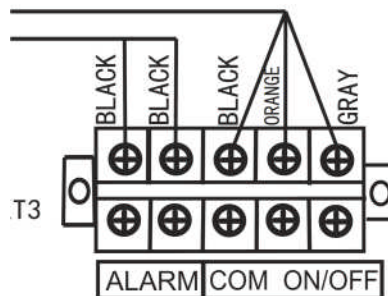


80~140 models

1.4.2 The electrical control box is possible to remove 1m far away from the main unit, which is suitable for the small space hard to maintain. ( It should be required by client in advance and done by Midea CAC in factory)

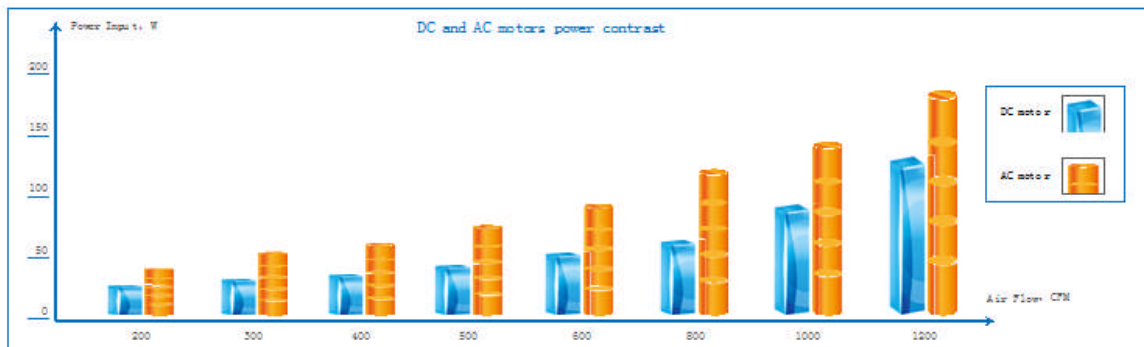
1.4.3 The EXV is fixed inside the indoor unit, which is weld connection and convenient for installation.

1.4.4 Standard functional port such as Remote On/Off Dry contact switch, and Alarm signal output (220V).



**1.5 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%.



**1.6 Meet CE certification requirements**

Thanks to the DC fan motor, this concealed duct (A5 type) indoor unit can meet the latest CE certification requirements.

## 2. Specifications

Model			4TVD0005DF000AA	4TVD0007DF000AA	4TVD0009DF000AA
Power supply		V-Hz-Ph	220-240V~50/60Hz		
Cooling	Capacity	kW	1.5	2.2	2.8
		Btu/h	5100	7500	9600
	Input	W	39	39	39
	Rated current	A	0.31	0.31	0.31
Heating	Capacity	kW	1.7	2.6	3.2
		Btu/h	5800	8900	10900
	Input	W	39	39	39
	Rated current	A	0.31	0.31	0.31
Indoor fan motor	Model		WZDK100-38GS	WZDK100-38GS	WZDK100-38GS
	Type		DC motor	DC motor	DC motor
	Brand		Panasonic/Nidec/Welling	Panasonic/Nidec/Welling	Panasonic/Nidec/Welling
	Input	W	20	22	22
	Speed (H/M/L)	r/min	950/820/750	980/850/750	980/850/750
Indoor coil	Number of rows		2	2	2
	Tube pitch(a) × row pitch(b)	in(mm)	13/16×17/32 (21×13.37)	13/16×17/32 (21×13.37)	13/16×17/32 (21×13.37)
	Fin spacing	in(mm)	1/16 (1.5)	1/16 (1.5)	1/16 (1.5)
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside diameter and type	in(mm)	9/32 (Φ7) Inner groove tube	9/32(Φ7) Inner groove tube	9/32(Φ7) Inner groove tube
	Coil length x height	in(mm)	20-9/32×5-25/32 (515×147)	20-9/32×5-25/32 (515×147)	20-9/32×5-25/32 (515×147)
	Number of circuits		2	3	4
Indoor air flow (H/M/L)		m <sup>3</sup> /h	509/420/370	521/450/380	521/450/380
		CFM	300/247/218	307/265/224	307/265/224
Indoor external static pressure (H)		Pa	10(10~30)	10(10~30)	10(10~30)
Indoor noise level (H/M/L)		dB(A)	35/33/31	35/34/31	36/34/31
Indoor unit	Dimension (W×H×D)	mm	740×210×500	740×210×500	740×210×500
	Packing (W×H×D)	mm	870×285×525	870×285×525	870×285×525
	Net/Gross weight	kg	17.5/20.5	17.5/20	17.5/20
Fresh Air intake hole diameter (round)		mm	Φ92	Φ92	Φ92
Refrigerant type			R410A	R410A	R410A
Throttle	Type		EXV	EXV	EXV
	Model		BD20FKS(L)	BD20FKS(L)	BD20FKS(L)
Design pressure(H/L)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Refrigerant piping	Liquid / Gas	mm	Φ6.35/ Φ12.7	Φ6.35/ Φ12.7	Φ6.35/ Φ12.7
Connecting wiring	Power wiring	mm <sup>2</sup>	3×2.5(L≤20m); 3×3.5(L≤50m)	3×2.5(L≤20m); 3×3.5(L≤50m)	3×2.5(L≤20m); 3×3.5(L≤50m)
	Signal wiring	mm <sup>2</sup>	3×0.75	3×0.75	3×0.75
Drainage water pipe diameter		mm	OD Φ25	OD Φ25	OD Φ25

**Notes:** 1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB/19°CWB, outdoor temperature:35°CDB, equivalent piping: 8m(horizontal).

2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature:7°CDB/6°CWB, equivalent piping: 8m(horizontal).

3. 1.5kW model is only available for V4 Plus system and MINI VRF system.

Model			4TVD0012DF000AA	4TVD0015DF000AA
Power supply		V-Hz-Ph	220-240V~50/60Hz	
Cooling	Capacity	kW	3.6	4.5
		Btu/h	12300	15400
	Input	W	45	58
	Rated current	A	0.33	0.36
Heating	Capacity	kW	4.0	5
		Btu/h	13600	17100
	Input	W	45	58
	Rated current	A	0.33	0.36
Indoor fan motor	Model		WZDK100-38GS	WZDK100-38GS-2
	Type		DC motor	DC motor
	Brand		Panasonic/Nidec/Welling	Panasonic/Nidec/Welling
	Input	W	26	35
	Speed (H/M/L)	r/min	1060/960/820	1060/900/830
Indoor coil	Number of rows		2	2
	Tube pitch(a) x row pitch(b)	in(mm)	13/16x17/32 (21x13.37)	13/16x17/32 (21x13.37)
	Fin spacing	in(mm)	1/16 (1.5)	(3/64)1.3
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside diameter and type	in(mm)	9/32 (Φ7) Inner groove tube	9/32(Φ7) Inner groove tube
	Coil length x height	in(mm)	20-9/32x5-25/32 (515x147)	28-57/64x5-25/32 (735x147)
	Number of circuits		4	6
Indoor air flow (H/M/L)		m <sup>3</sup> /h	592/541/426	748/640/550
		CFM	348/318/251	440/377/324
Indoor external static pressure (H)		Pa	10(10~30)	10(10~30)
Indoor noise level (H/M/L)		dB(A)	37/36/33	38/37/33
Indoor unit	Dimension (WxHxD)	mm	740x210x500	960x210x500
	Packing (WxHxD)	mm	870x285x525	1115x285x525
	Net/Gross weight	kg	17.5/20	22.5/26
Fresh Air intake hole diameter (round)		mm	Φ92	Φ92
Refrigerant type			R410A	R410A
Throttle		Type	EXV	EXV
		Model	BD20FKS(L)	BD20FKS(L)
Design pressure(H/L)		MPa	4.4/2.6	4.4/2.6
Refrigerant piping	Liquid / Gas	mm	Φ6.35/ Φ12.7	Φ6.35/ Φ12.7
Connecting wiring	Power wiring	mm <sup>2</sup>	3x2.5(L≤20m); 3x3.5(L≤50m)	3x2.5(L≤20m); 3x3.5(L≤50m)
	Signal wiring	mm <sup>2</sup>	3x0.75	3x0.75
Drainage water pipe diameter		mm	OD Φ25	OD Φ25

**Notes:** 1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB/ 19°CWB, outdoor temperature:35°CDB, equivalent piping: 8m(horizontal).

2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature:7°CDB/6°CWB, equivalent piping: 8m(horizontal).

3. 1.5kW model is only available for V4 Plus system and MINI VRF system.

Medium Static Pressure Duct Unit with DC Fan Motor

Model			4TVD0018DF000AA	4TVD0024DF000AA
Power supply		V-Hz-Ph	220-240V~50/60Hz	
Cooling	Capacity	kW	5.6	7.1
		Btu/h	19100	24200
	Input	W	89	68
	Rated current	A	0.36	0.47
Heating	Capacity	kW	6.3	8
		Btu/h	21500	27300
	Input	W	89	68
	Rated current	A	0.36	0.47
Indoor fan motor	Model		WZDK100-38GS-2	WZDK100-38GS-1
	Type		DC motor	DC motor
	Brand		Panasonic/Nidec/Welling	Panasonic/Nidec/Welling
	Input	W	43	43
	Speed (H/M/L)	r/min	1120/900/830	1070/980/840
Indoor coil	Number of rows		2	2
	Tube pitch(a) x row pitch(b)	in(mm)	13/16x17/32 (21x13.37)	13/16x17/32 (21x13.37)
	Fin spacing	in(mm)	(3/64)1.3	(3/64)1.3
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside diameter and type	in(mm)	9/32(Φ7) Inner groove tube	9/32(Φ7) Inner groove tube
	Coil length x height	in(mm)	28-57/64x5-25/32 (735x147)	37-31/64x5-25/32 (952x147)
	Number of circuits		6	6
Indoor air flow (H/M/L)		m <sup>3</sup> /h	821/640/566	1021/940/778
		CFM	483/377/333	601/553/458
Indoor external static pressure (H)		Pa	10(10~30)	10(10~30)
Indoor noise level (H/M/L)		dB(A)	38/37/33	40/38/34
Indoor unit	Dimension (WxHxD)	mm	960x210x500	1180x210x500
	Packing (WxHxD)	mm	1115x285x525	1335x285x525
	Net/Gross weight	kg	22.5/26	28/31.5
Fresh Air intake hole diameter (round)		mm	Φ92	Φ92
Refrigerant type			R410A	R410A
Throttle	Type		EXV	EXV
	Model		BD20FKS(L)	BD20FKS(L)
Design pressure(H/L)		MPa	4.4/2.6	4.4/2.6
Refrigerant piping	Liquid / Gas	mm	Φ9.53/Φ15.9	Φ9.53/Φ15.9
Connecting wiring	Power wiring	mm <sup>2</sup>	3x2.5(L≤20m); 3x3.5(L≤50m)	3x2.5(L≤20m); 3x3.5(L≤50m)
	Signal wiring	mm <sup>2</sup>	3x0.75	3x0.75
Drainage water pipe diameter		mm	OD Φ25	OD Φ25

**Notes:** 1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB/ 19°CWB, outdoor temperature:35°CDB, equivalent piping: 8m(horizontal).

2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature:7°CDB/6°CWB, equivalent piping: 8m(horizontal).

3. 1.5kW model is only available for V4 Plus system and MINI VRF system.

Model			4TVD0027DF000AA	4TVD0030DF000AA
Power supply		V- Ph-Hz	220-240V~50/60Hz	
Cooling	Capacity	kW	8	9
		Btu/h	27300	30700
	Input	W	98	108
	Rated current	A	1.0	1.0
Heating	Capacity	kW	9	10
		Btu/h	30700	34100
	Input	W	98	108
	Rated current	A	1.0	1.0
Indoor fan motor	Model		WZDK150-38GS	WZDK150-38GS
	Type		DC motor	DC motor
	Brand		Panasonic/Nidec/Welling	Panasonic/Nidec/Welling
	Input	W	61	62
	Speed (H/M/L)	r/min	820/720/620	820/720/620
Indoor coil	Number of rows		4	4
	Tube pitch(a) xrow pitch(b)	in(mm)	13/16x17/32 (21x13.37)	13/16x17/32 (21x13.37)
	Fin spacing	in(mm)	1/16 (1.5)	1/16 (1.5)
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside diameter and type	in(mm)	9/32(Φ7)	9/32(Φ7)
			inner groove tube	inner groove tube
Coil length x height	in(mm)	37-19/32x13-7/32 (955x336)	37-19/32x13-7/32(955x336)	
		Number of circuits		5
Indoor air flow (H/M/L)		m <sup>3</sup> /h	1290/1090/940	1290/1090/940
		CFM	759/642/553	759/642/553
Indoor external static pressure (H)		Pa	20(10~50)	20(10~50)
Indoor noise level (H/M/L)		dB(A)	44/38/37	44/38/37
Indoor unit	Dimension (WxHxD)	mm	1180x270x775	1180x270x775
	Packing (WxHxD)	mm	1355x350x795	1355x350x795
	Net/Gross weight	kg	38/46.5	40/48
Fresh Air intake hole diameter (round)		mm	Φ125	Φ125
Refrigerant type			R410A	R410A
Throttle		Type	EXV	EXV
		Model	BD24FKS(L)	BD24FKS(L)
Design pressure (H/L)		MPa	4.4/2.6	4.4/2.6
Refrigerant piping	Liquid / Gas	mm	Φ9.53/Φ15.9	9.53/Φ15.9
Connecting wiring	Power wiring	mm <sup>2</sup>	3x2.5(L≤20m); 3x3.5(L≤50m)	3x2.5(L≤20m); 3x3.5(L≤50m)
	Signal wiring	mm <sup>2</sup>	3x0.75	3x0.75
Drainage water pipe diameter			OD Φ25	OD Φ25

**Notes:** 1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB/ 19°CWB, outdoor temperature:35°CDB, equivalent piping: 8m(horizontal).

2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature:7°CDB/6°CWB, equivalent piping: 8m(horizontal).

3. 1.5kW model is only available for V4 Plus system and MINI VRF system.



Medium Static Pressure Duct Unit with DC Fan Motor

Model			4TVD0038DF000AA	4TVD0048DF000AA
Power supply		V- Ph-Hz	220-240V~50/60Hz	
Cooling	Capacity	kW	11.2	14
		Btu/h	38200	47800
	Input	W	178	204
	Rated current	A	1.8	1.55
Heating	Capacity	kW	12.5	15.5
		Btu/h	42700	13300
	Input	W	178	204
	Rated current	A	1.8	1.55
Indoor fan motor	Model		WZDK150-38GS	WZDK240-38GS
	Type		DC motor	DC motor
	Brand		Panasonic/Nidec/Welling	Panasonic/Nidec/Welling
	Input	W	170	142
	Speed (H/M/L)	r/min	1030/860/760	1030/860/760
Indoor coil	Number of rows		4	4
	Tube pitch(a) x row pitch(b)	in(mm)	13/16x17/32 (21x13.37)	1x55/64(25.4x22)
	Fin spacing	in(mm)	1/16 (1.5)	1/16 (1.5)
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside diameter and type	in(mm)	9/32(Φ7)	9/32(Φ7)
			inner groove tube	inner groove tube
	Coil length x height	in(mm)	37-19/32x13-7/32(955x336)	40-9/16x18 (1030x457.2)
Number of circuits		8	8	
Indoor air flow (H/M/L)		m <sup>3</sup> /h	1780/1550/1352	1950/1600/1400
		CFM	1048/912/796	1148/942/824
Indoor external static pressure (H)		Pa	40(10~80)	40(10~100)
Indoor noise level (H/M/L)		dB(A)	47/41/37	47/42/38
Indoor unit	Dimension (WxHxD)	mm	1180x270x775	1240x300x865
	Packing (WxHxD)	mm	1355x350x795	1400x375x925
	Net/Gross weight	kg	40/48	49/58
Fresh Air intake hole diameter (round)		mm	Φ125	Φ125
Refrigerant type			R410A	R410A
Throttle		Type	EXV	EXV
		Model	BD24FKS(L)	BD24FKS(L)
Design pressure (H/L)		MPa	4.4/2.6	4.4/2.6
Refrigerant piping	Liquid / Gas	mm	Φ9.53/Φ15.9	Φ9.53/Φ15.9
Connecting wiring	Power wiring	mm <sup>2</sup>	3x2.5(L≤20m); 3x3.5(L≤50m)	3x2.5(L≤20m); 3x3.5(L≤50m)
	Signal wiring	mm <sup>2</sup>	3x0.75	3x0.75
Drainage water pipe diameter			OD Φ25	OD Φ25

**Notes:** 1. Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB/ 19°CWB, outdoor temperature:35°CDB, equivalent piping: 8m(horizontal).

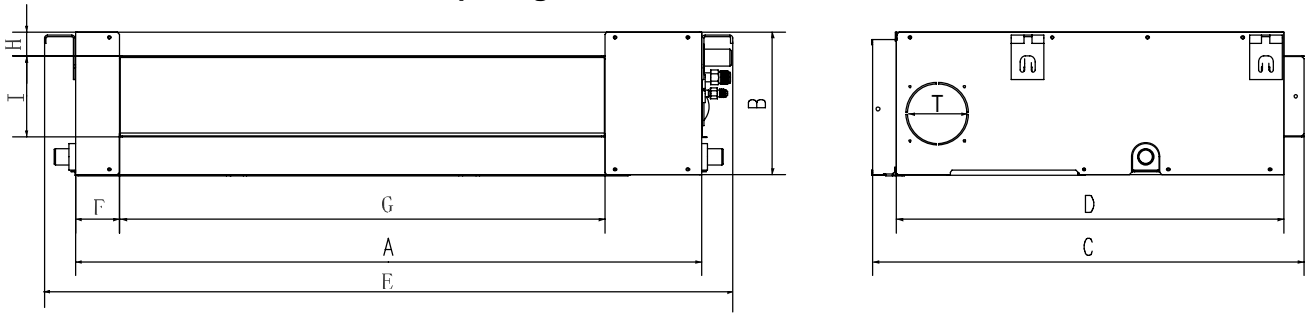
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature:7°CDB/6°CWB, equivalent piping: 8m(horizontal).

3. 1.5kW model is only available for V4 Plus system and MINI VRF system.

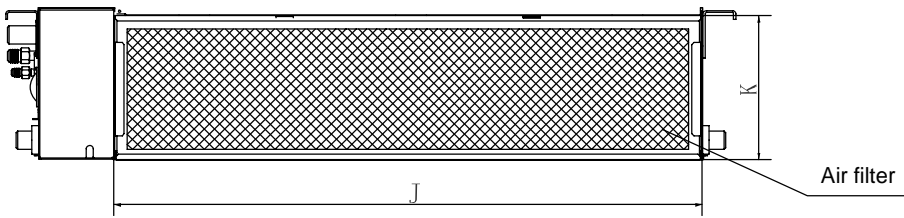
### 3. Dimensions

Outline dimension and air outlet opening size:

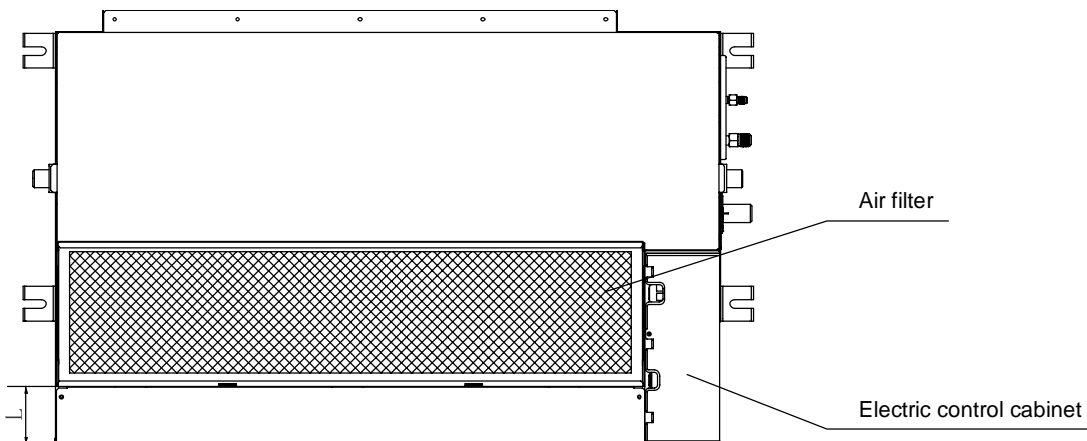
(Unit: mm)



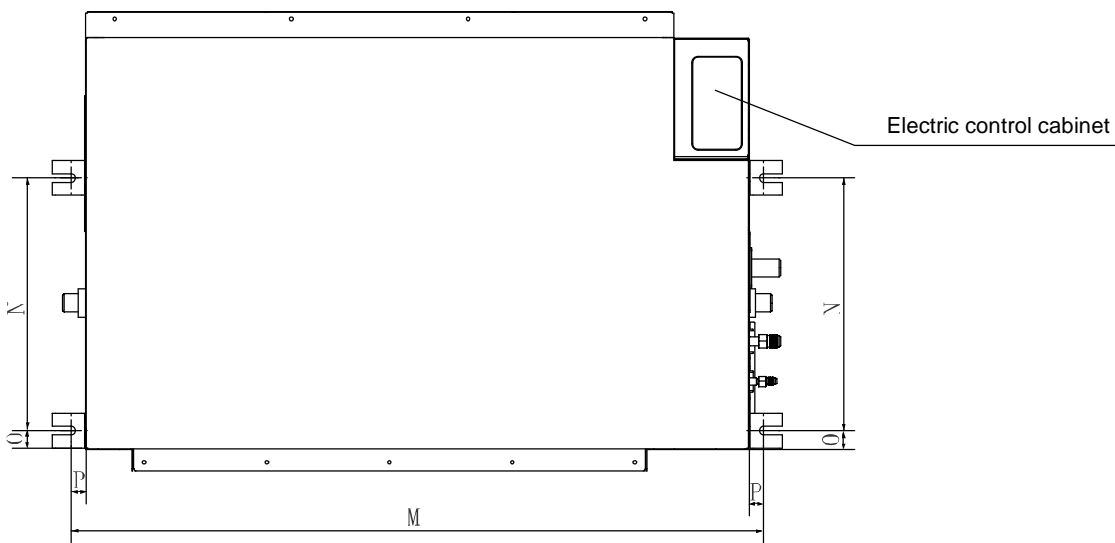
Air return opening size:



Position size of declensional ventilation opening:



Size of mounted lug:



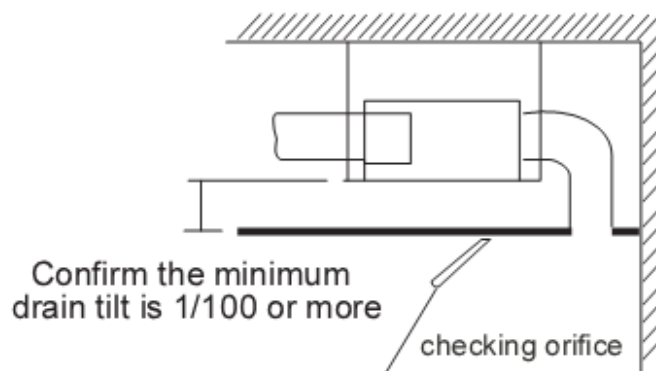
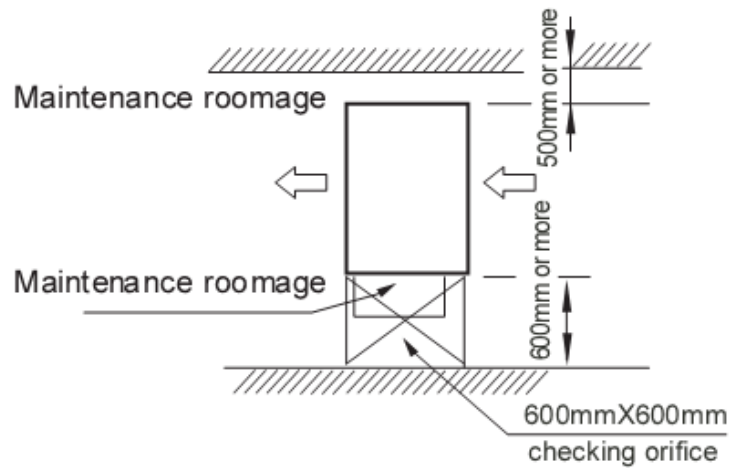
MBH	Outline dimension					Air outlet opening size		
	A	B	C	D	E	F	G	H
5~12	700	210	500	450	780	45	512	17
15~19	920	210	500	450	1000	45	732	17
24	1140	210	500	450	1220	45	732	17
27~38	1140	270	775	710	1230	65	933	35
48	1200	300	865	800	1290	80	969	40

MBH	Air return opening size				Size of mounted lug			
	I	J	K	L	M	N	O	P
5~12	145	600	196	-	740	350	50	20
15~19	145	820	200	-	960	350	50	20
24	145	1040	200	-	1180	350	50	20
27~38	179	1035	260	20	1180	490	26	20
48	204	1094	288	45	1240	500	26	20

#### 4. Service Spaces

- Ensure the needed spaces for installation and maintenance.
- The ceiling is horizontal and its structure can endure the weight of the indoor unit.
- The outlet and the inlet are not impeded, and the influence of external air is the least.
- The air flow can reach throughout the room.
- The connecting pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.

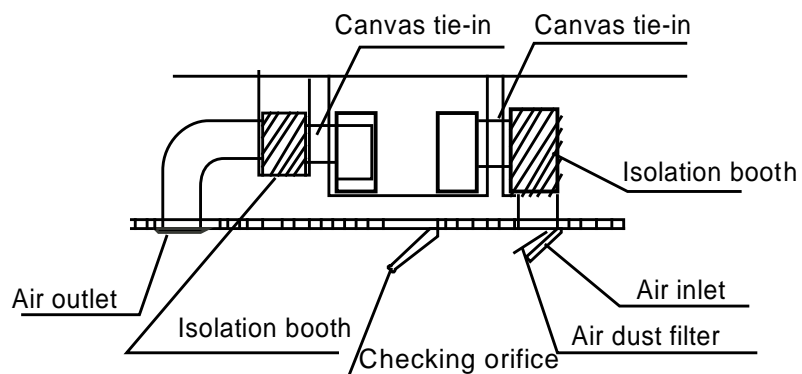
Confirm that there is enough room for installation and maintenance:



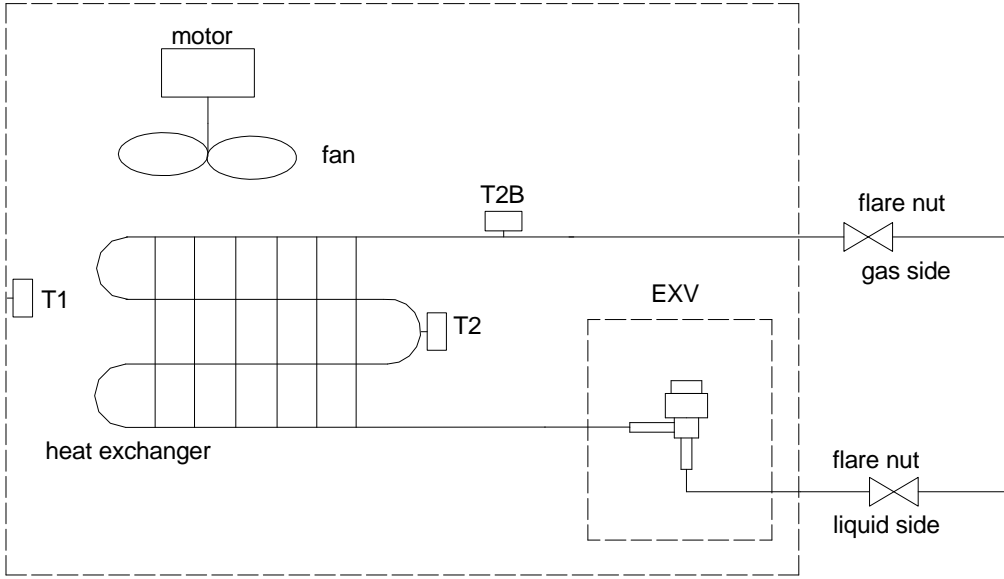
(1) Air inlet and air outlet duct should be apart far enough to prevent air outlet entering air inlet.

(2) There is dust filter on the indoor unit.

Recommended duct connection:



### 5. Piping Diagrams



## 6. Wiring Diagrams

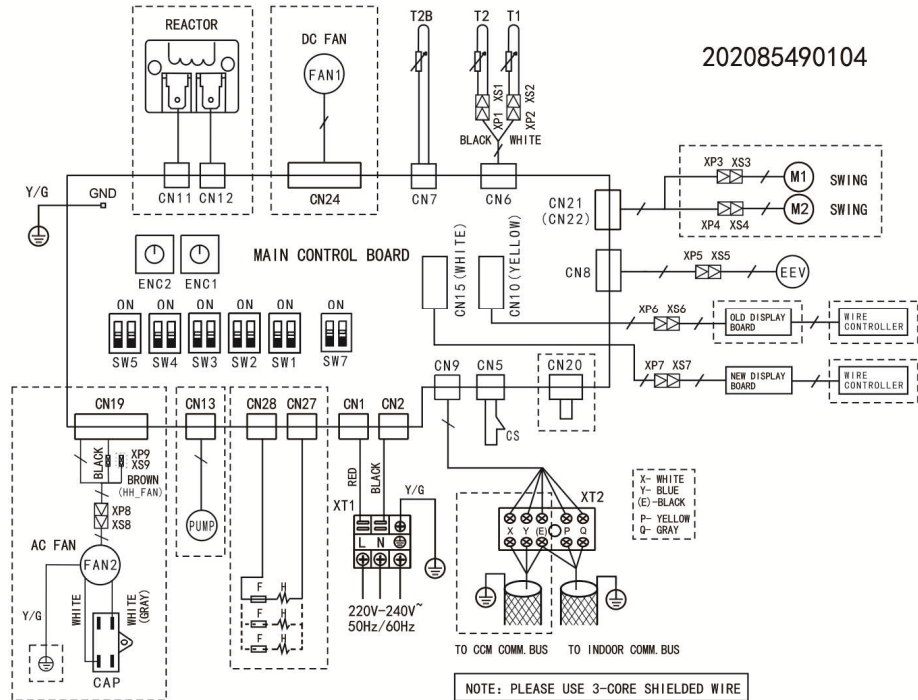
For models:

### WIRING DIAGRAM (INDOOR UNIT)

202085490104

CODE	TITLE
FAN1	DC FAN MOTOR
FAN2	AC FAN MOTOR
T1	ROOM TEMP.
T2	MIDDLE PIPE TEMP.
T2B	OUTER PIPE TEMP.
M1 M2	SWING MOTOR
EEV	ELECTRONIC EXPANSION VALVE
XP1-XP9	CONNECTOR
XS1-SX9	CONNECTOR
CS	WATER LEVEL SWITCH
XT1	TERMINAL
XT2	TERMINAL
F	FUSE
H	AUXILIARY HEATER
PUMP	PUMP MOTOR
CAP	FAN CAPACITANCE

EMC1	Toggle switch	For set horsepower
	Code	Capacity
	0	1800W
		2200W
	1	2800W
	2	3600W
	3	4500W
	4	5600W
	5	7100W
	6	8000W
	7	9000W
8	11200W	
9	14000W	
F	1500W	



NOTE: PLEASE USE 3-CORE SHIELDED WIRE

NOTE:  
1. The functions in the dashed rectangle are available for particular Air-conditioner.  
2. SW1-SW5, SW7 must be setted as this diagram.

**SW1 Difinition**

SW1 ON	●1 means factory test mode ●0 means auto addressing mode default setting
SW1 ON	●1 means DC fan is chosen ●0 means AC fan is chosen

**SW2 Difinition**

SW2 ON	●00 means shutting down the unit to "stop cold air" at 15
SW2 ON	●01 means shutting down the unit to "stop cold air" at 20
SW2 ON	●10 means shutting down the unit to "stop cold air" at 24
SW2 ON	●11 means shutting down the unit to "stop cold air" at 26

**SW3 Difinition**

SW3 ON	●00 means the time of stopping TERMAL fan is 4 mintues
SW3 ON	●01 means the time of stopping TERMAL fan is 8 mintues
SW3 ON	●10 means the time of stopping TERMAL fan is 12 mintues
SW3 ON	●11 means the time of stopping TERMAL fan is 16 mintues

**SW4 Difinition**

SW4 ON	●00 means temp. compensation value is 6 under heat mode
SW4 ON	●01 means temp. compensation value is 2 under heat mode
SW4 ON	●10 means temp. compensation value is 4 under heat mode
SW4 ON	●11 means temp. compensation value is 8 under heat mode

**SW5 Difinition**

SW5 ON	●1 means old display penal ●0 means new display penal
SW5 ON	●1 means auto air blow under auto mode ●0 means auto air blow under non-auto mode

**J1J2 Difinition**

J1	● without jumper "J1" for auto restart function
J1	● with jumper "J1" for non-auto restart function
J2	● reserved

**SW7 Difinition 0/1 Difinition**

SW7 ON	● standard configuration	ON	● means
SW7 ON	● last unit of the network	ON	● means

**Error code & indication**

● No address when first time power on	Timer LED and run LED flash together, or show "FE"
● M_Home non-matching	4 LED flash together or show "H0"
● Mode conflict	Defrost LED flash or show "E0"
● Communication error between indoor and outdoor unit	Timer LED flash or show "E1"
● Temp. sensor (T1) error	Run LED flash or show "E2"
● Temp. sensor T2 error	Run LED flash or show "E3"
● Temp. sensor T2B error	Run LED flash or show "E4"
● DC FAN error	Timer LED flash slowly or show "E6"
● EEPROM error	Defrost LED flash slowly or show "E7"
● Outdoor unit error	Alarm LED flash slowly or show "Ed"
● Water level alarm	Alarm LED flash or show "EE"

## 7. Fan Performance

### How to read the diagram

For static pressure dial code, please see the following Table:

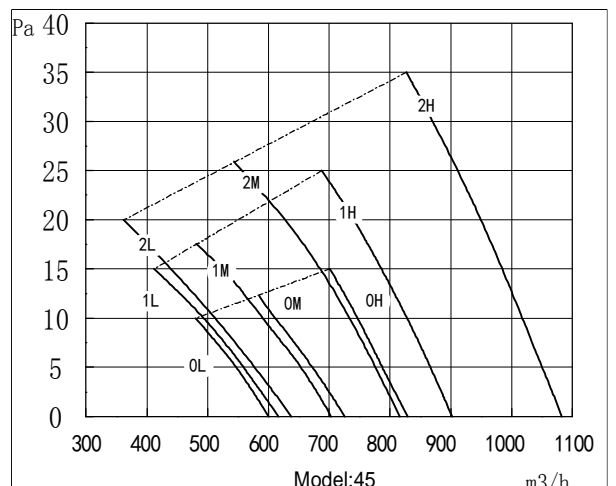
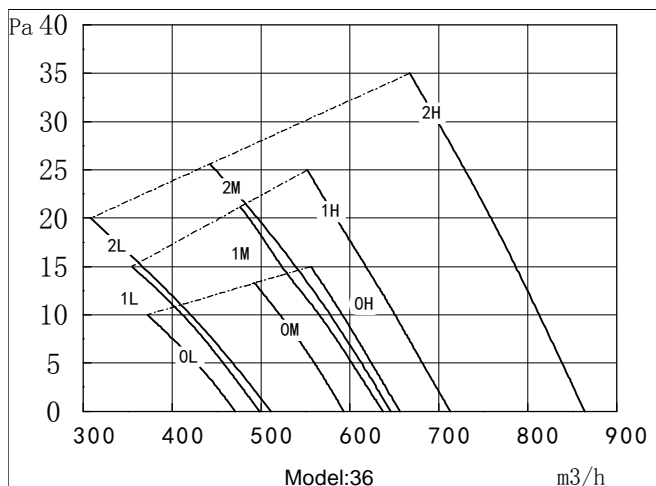
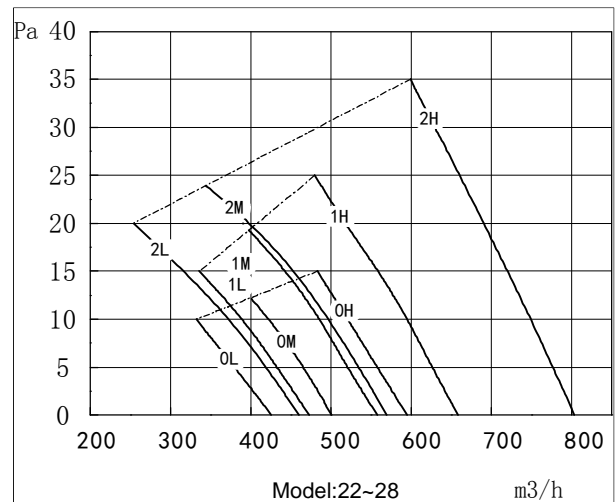
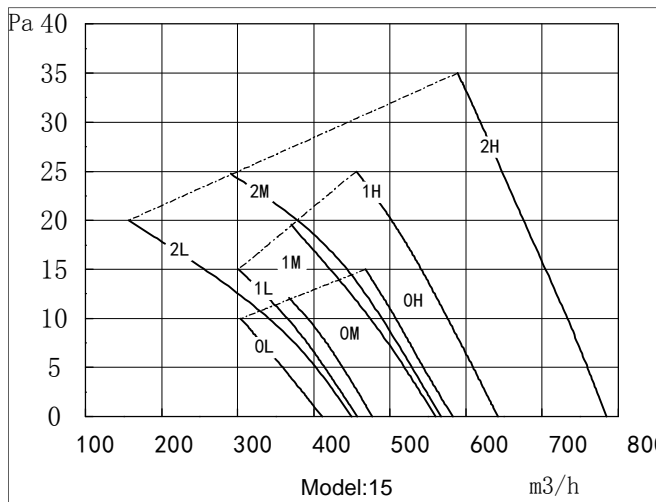
ENC2	Low static pressure	Medium static pressure	High static pressure
Model			
15~71	0~15Pa	10~25Pa	15~30Pa
80~90	0~25Pa	20~35Pa	30~50Pa
112	0~50Pa	40~70Pa	60~80Pa
140	0~50Pa	40~80Pa	70~100Pa

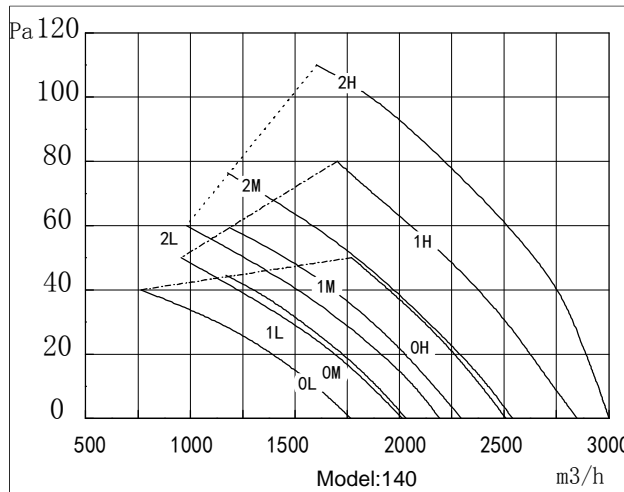
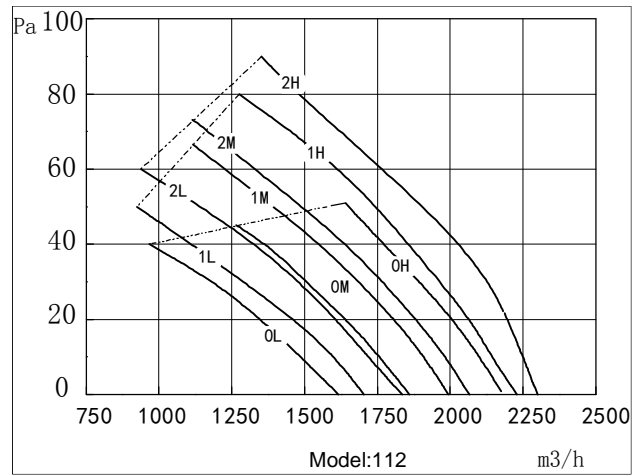
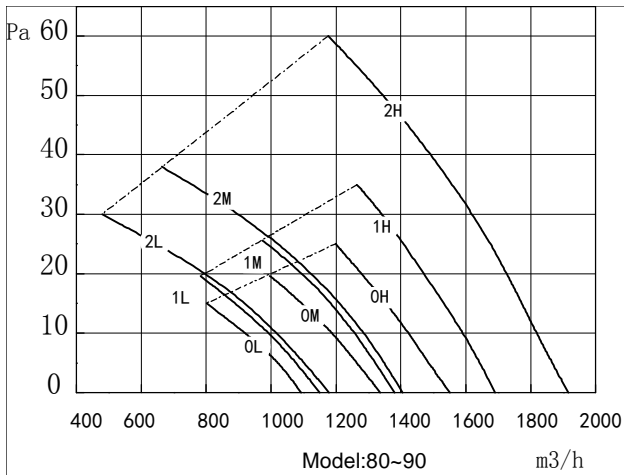
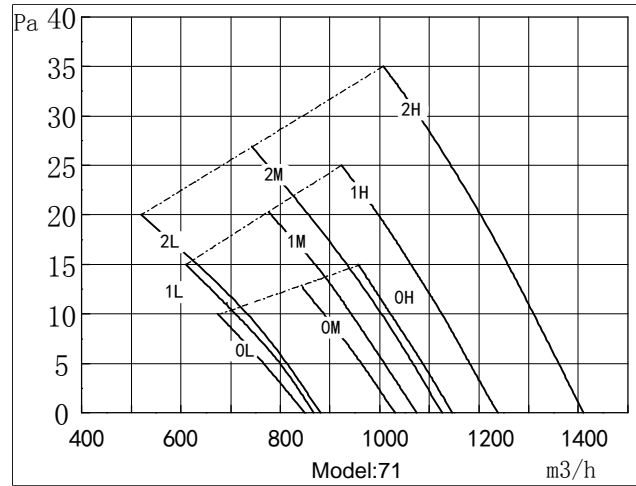
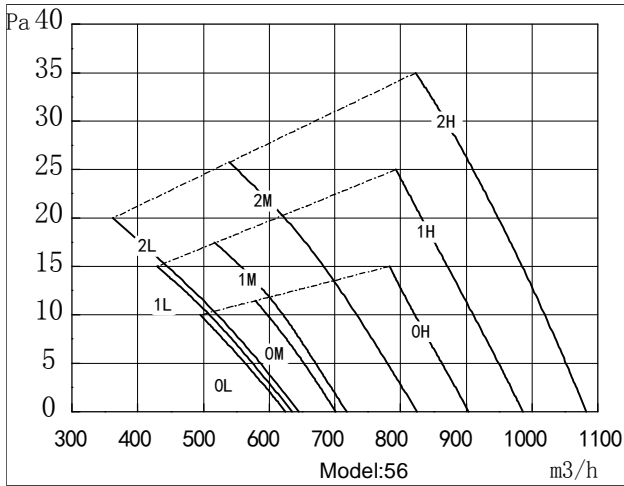
1.The noise is higher when ENC2 is than that when it is , and the noise is higher when ENC2 is than that when it is .

2.In the curve diagram for static pressure air flow volume, 2H means ENC2 is , and the fan in high speed. 2M means ENC2 is , and the fan in medium speed. 2L means ENC2 is , and the fan in low speed.

1H,1M,1L indicate the testing diagram of the fan in high, medium and low speed when ENC2 is .

0H,0M,0L indicate the testing diagram of the fan in high, medium and low speed when ENC2 is .





- If the external static pressure is too great (due to long extension of duct, for example), the air flow volume may drop too low at each air outlet.
- So there's a limit air flow volume line for each speed and it is the min. airflow of this duct unit. At this flow volume, the fan achieves the max. ESP and indoor evaporator may be protected by low temperature.
- As well, there's a limit airflow volume, which is the max. value at each speed. It requests the unit to connect ducts for air inlet and outlet to prevent damage from the high temperature of motor/evaporator.



### 8. Capacity Tables

#### 8.1 Cooling

TC: Total capacity    SC: Sensible capacity    WB: Wet-bulb temperature    DB: Dry-bulb temperature

Indoor Unit size (kW)	Outdoor temperature (°CDB)	Indoor temperature (°CWB/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
1.5	10.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	2.0	1.1
	12.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	1.9	1.0
	14.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	1.9	1.0
	16.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	1.9	1.0
	18.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	1.9	1.0
	20.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	1.8	1.0
	21.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.8	1.1	1.8	1.0
	23.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.7	1.0	1.8	1.0
	25.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.7	1.0	1.8	0.9
	27.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.7	1.0	1.8	0.9
	29.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.7	1.0	1.7	0.9
	31.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.7	1.0	1.7	0.9
	33.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.7	1.0	1.7	1.0
	35.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.6	0.9	1.7	1.0
	37.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.6	1.1	1.6	0.9	1.6	0.9
	39.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.5	1.0	1.6	0.9	1.6	0.9
42.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.5	1.0	1.6	0.9	1.6	0.9	
44.0	1.0	0.9	1.2	0.9	1.4	1.0	1.5	1.0	1.5	1.0	1.6	0.9	1.6	0.9	
46.0	1.0	0.9	1.2	1.0	1.4	1.0	1.5	1.0	1.5	1.0	1.6	0.9	1.6	0.9	
2.2	10.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.9	1.7
	12.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.8	1.6
	14.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.8	1.6
	16.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.8	1.6
	18.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.8	1.6
	20.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.7	1.5
	21.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.6	1.7	2.7	1.5
	23.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.5	1.6	2.7	1.5
	25.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.5	1.6	2.6	1.5
	27.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.5	1.6	2.6	1.5
	29.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.4	1.5	2.5	1.5
	31.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.4	1.5	2.5	1.5
	33.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.4	1.5	2.4	1.5
	35.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.3	1.5	2.4	1.5
	37.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.3	1.5	2.3	1.5
	39.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.2	1.6	2.3	1.5	2.3	1.5
42.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.2	1.6	2.3	1.5	2.3	1.5	
44.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.2	1.6	2.3	1.5	2.3	1.5	
46.0	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.2	1.6	2.3	1.5	2.3	1.5	
2.8	10.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.7	2.2
	12.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.6	2.1
	14.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.6	2.1
	16.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.5	2.1
	18.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.5	2.1
	20.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.4	2.1
	21.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.2	3.4	2.1
	23.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.3	2.1	3.4	2.1
	25.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.2	2.1	3.3	2.0
	27.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.2	2.1	3.3	2.0
	29.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.1	2.0	3.2	1.9
	31.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.1	2.0	3.2	1.9
	33.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.1	2.0	3.1	1.9
	35.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	2.9	2.0	3.0	2.0	3.1	1.9
	37.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	2.9	2.0	3.0	2.0	3.0	1.8
	39.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	2.9	2.0	3.0	2.1	3.0	1.9
42.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	2.9	2.0	3.0	2.1	3.0	1.9	
44.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	2.9	2.0	3.0	2.1	3.0	1.9	
46.0	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	2.9	2.0	3.0	2.1	3.0	1.9	

3.6	10.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.7	2.7
	12.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.7	2.7
	14.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.6	2.6
	16.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.5	2.6
	18.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.5	2.6
	20.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.4	2.5
	21.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.3	2.6	4.4	2.5
	23.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.1	2.5	4.3	2.4
	25.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.1	2.5	4.2	2.4
	27.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.0	2.4	4.2	2.4
	29.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.0	2.4	4.1	2.4
	31.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.2	2.8	4.1	2.4
	33.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.2	2.8	3.9	2.3
	35.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.2	2.8	3.9	2.3
	37.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.7	2.6	3.8	2.5	3.9	2.3
	39.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.7	2.6	3.8	2.5	3.8	2.3
42.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.7	2.6	3.8	2.5	3.8	2.3	
44.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.7	2.6	3.8	2.5	3.8	2.3	
46.0	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.7	2.6	3.8	2.5	3.8	2.3	
4.5	10.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.9	3.3
	12.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.9	3.3
	14.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.8	3.3
	16.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.6	3.2
	18.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.7	3.3
	20.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.7	3.3
	21.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.6	3.3
	23.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.3	3.7	5.5	3.2
	25.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.2	3.3	5.4	3.2
	27.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.1	3.2	5.2	3.0
	29.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.1	3.2	5.2	3.0
	31.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	5.0	3.1	5.1	2.9
	33.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	4.9	3.1	5.1	2.9
	35.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	4.8	3.0	5.0	2.9
	37.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	4.8	3.1	4.9	2.8
	39.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.6	3.1	4.7	3.1	4.8	2.8
41.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.6	3.1	4.7	3.1	4.8	2.8	
43.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.6	3.1	4.7	3.1	4.8	2.8	
45.0	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.6	3.1	4.7	3.1	4.8	2.8	
5.6	10.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	7.3	3.9
	12.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	7.2	3.8
	14.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	7.1	3.8
	16.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	7.0	3.7
	18.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	6.8	3.7
	20.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	6.7	3.6
	21.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	6.6	3.6
	23.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	6.6	3.5
	25.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.6	3.9	6.5	3.5
	27.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.4	3.8	6.4	3.5
	29.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.3	3.8	6.4	3.6
	31.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.2	3.7	6.2	3.4
	33.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.2	3.7	6.2	3.4
	35.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.0	3.6	6.0	3.4
	37.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	5.9	3.5	6.0	3.4
	39.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.7	3.7	5.8	3.5	6.0	3.4
41.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.7	3.7	5.8	3.5	6.0	3.4	
43.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.7	3.7	5.8	3.5	6.0	3.4	
45.0	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.7	3.7	5.8	3.5	6.0	3.4	
7.1	10.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	9.2	5.0
	12.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	9.1	4.9
	14.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	9.0	4.9
	16.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	8.9	4.8
	18.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	8.7	4.7
	20.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	8.5	4.6
	21.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	8.4	4.5
23.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	8.3	4.5	

Medium Static Pressure Duct Unit with DC Fan Motor

	25.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.4	4.9	8.2	4.4
	27.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.1	4.7	8.2	4.5
	29.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	8.0	4.7	8.1	4.5
	31.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	7.9	4.6	7.8	4.3
	33.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	7.8	4.6	7.8	4.3
	35.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	7.6	4.5	7.7	4.2
	37.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.4	4.8	7.5	4.5	7.6	4.3
	39.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.2	4.7	7.4	4.4	7.6	4.3
	42.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.2	4.7	7.4	4.4	7.6	4.3
	44.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.2	4.7	7.4	4.4	7.6	4.3
46.0	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.2	4.7	7.4	4.4	7.6	4.3	
8.0	10.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	10.4	5.6
	12.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	10.2	5.5
	14.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	10.2	5.5
	16.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	10.0	5.4
	18.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	9.8	5.3
	20.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	9.6	5.2
	21.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	9.4	5.1
	23.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	9.4	5.1
	25.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.4	4.6	9.3	5.0
	27.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.1	9.1	4.6	9.2	5.1
	29.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.2	9.0	4.7	9.1	5.0
	31.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.2	8.9	4.7	8.8	4.8
	33.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.2	8.8	4.7	8.8	4.8
	35.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.4	5.2	8.6	4.7	8.6	4.8
	37.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.3	5.2	8.4	4.8	8.6	4.9
	39.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.1	5.2	8.3	4.8	8.6	4.9
42.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.1	5.2	8.3	4.8	8.6	4.9	
44.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.1	5.2	8.3	4.8	8.6	4.9	
46.0	5.5	6.4	6.6	5.9	7.5	5.6	8.0	5.5	8.1	5.2	8.3	4.8	8.6	4.9	
9.0	10.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	11.7	6.6
	12.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	11.5	6.5
	14.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	11.4	6.4
	16.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	11.3	6.3
	18.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	11.0	6.3
	20.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	10.8	6.2
	21.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	10.6	6.1
	23.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	10.5	6.0
	25.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.6	6.6	10.4	6.0
	27.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.3	6.4	10.4	5.9
	29.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.1	6.2	10.3	5.8
	31.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	10.0	6.2	9.9	5.7
	33.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	9.9	6.1	9.9	5.7
	35.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.5	6.5	9.6	6.0	9.7	5.7
	37.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.3	6.3	9.5	5.9	9.6	5.8
	39.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.2	6.2	9.4	5.8	9.6	5.8
42.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.2	6.2	9.4	5.8	9.6	5.8	
44.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.2	6.2	9.4	5.8	9.6	5.8	
46.0	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.2	6.2	9.4	5.8	9.6	5.8	
11.2	10.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	15.5	9.0
	12.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.4	8.4
	14.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.2	8.2
	16.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.1	8.2
	18.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.0	8.1
	20.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	13.9	8.1
	21.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	13.8	8.0
	23.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.1	8.1	13.7	7.9
	25.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.0	8.1	13.6	7.9
	27.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.9	8.0	13.4	7.8
	29.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.8	7.9	13.3	7.9
	31.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.7	7.8	12.8	7.5
	33.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.5	7.8	12.5	7.4
	35.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.8	8.0	12.4	7.7	12.3	7.3
37.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.6	7.9	12.3	7.6	12.1	7.1	
39.0	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.4	7.8	12.2	7.6	11.9	7.1	

14.0	42.0	7.7	6.6	9.1	7.2	10.4	7.8	11.2	8.0	11.4	7.8	11.6	7.2	12.0	7.2
	44.0	7.7	6.6	9.1	7.2	10.4	7.8	11.2	8.0	11.4	7.8	11.6	7.2	12.0	7.2
	46.0	7.7	6.6	9.1	7.2	10.4	7.8	11.2	8.0	11.4	7.8	11.6	7.2	12.0	7.2
	10.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	18.2	10.2
	12.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	17.9	10.0
	14.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	17.8	10.0
	16.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	17.5	9.8
	18.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	17.1	9.6
	20.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	16.8	9.4
	21.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.7	10.2	16.5	9.3
	23.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.4	10.2	16.4	9.2
	25.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.2	10.1	16.2	9.1
	27.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.1	10.0	16.1	9.2
	29.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	16.0	9.9	16.0	9.1
	31.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	15.8	9.8	15.4	8.8
	33.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	15.7	9.7	15.4	8.8
	35.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.7	9.7	15.1	9.4	15.1	8.8
	37.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.6	9.6	15.1	9.4	15.0	8.7
	39.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.3	9.4	14.6	9.2	15.0	8.8
42.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.3	9.4	14.6	9.2	15.0	8.8	
44.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.3	9.4	14.6	9.2	15.0	8.8	
46.0	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.3	9.4	14.6	9.2	15.0	8.8	

8.2 Heating

TC: Total capacity    WB: Wet-bulb temperature    DB: Dry-bulb temperature

Indoor Unit size (kW)	Outdoor temperature (°C)		Indoor temperature (°C DB)					
			16.00	18.00	20.00	21.00	22.00	24.00
	WB	DB	TC kW	TC kW	TC kW	TC kW	TC kW	TC kW
1.5	-20	-20	0.95	0.95	0.95	0.95	0.95	0.95
	-19	-19	1.02	1.02	1.02	1.02	1.02	1.02
	-17	-17	1.07	1.07	1.07	1.07	1.07	1.07
	-15	-15	1.11	1.11	1.11	1.11	1.11	1.11
	-13	-13	1.17	1.17	1.17	1.17	1.17	1.17
	-11	-11	1.19	1.21	1.21	1.21	1.21	1.21
	-10	-10	1.24	1.24	1.24	1.24	1.24	1.24
	-9.1	-9.1	1.28	1.28	1.28	1.28	1.28	1.28
	-7.6	-7.6	1.29	1.29	1.29	1.29	1.29	1.29
	-5.6	-5.6	1.34	1.34	1.34	1.34	1.34	1.34
	-3.7	-3.7	1.41	1.41	1.41	1.41	1.41	1.41
	-0.7	-0.7	1.51	1.51	1.51	1.51	1.51	1.43
	2.2	2.2	1.60	1.60	1.60	1.60	1.56	1.43
	4.1	4.1	1.65	1.65	1.65	1.65	1.56	1.43
	6	6	1.70	1.70	1.70	1.65	1.56	1.43
	7.9	7.9	1.75	1.75	1.70	1.65	1.56	1.43
	9.8	9.8	1.80	1.80	1.70	1.65	1.56	1.43
11.8	11.8	1.87	1.84	1.70	1.65	1.56	1.43	
13.7	13.7	1.92	1.84	1.70	1.65	1.56	1.43	
2.2	-20.00	-19.80	1.46	1.46	1.46	1.46	1.46	1.46
	-19.00	-18.80	1.56	1.56	1.56	1.56	1.56	1.56
	-17.00	-16.70	1.64	1.64	1.64	1.64	1.64	1.64
	-15.00	-14.70	1.69	1.69	1.69	1.69	1.69	1.69
	-13.00	-12.60	1.79	1.79	1.79	1.79	1.79	1.79
	-11.00	-10.50	1.82	1.85	1.85	1.85	1.85	1.85
	-10.00	-9.50	1.90	1.90	1.90	1.90	1.90	1.90
	-9.10	-8.50	1.95	1.95	1.95	1.95	1.95	1.95
	-7.60	-7.00	1.98	1.98	1.98	1.98	1.98	1.98
	-5.60	-5.00	2.05	2.05	2.05	2.05	2.05	2.05
	-3.70	-3.00	2.16	2.16	2.16	2.16	2.16	2.16
	-0.70	0.00	2.31	2.31	2.31	2.31	2.31	2.18
	2.20	3.00	2.44	2.44	2.44	2.44	2.39	2.18
	4.10	5.00	2.52	2.52	2.52	2.52	2.39	2.18
	6.00	7.00	2.60	2.60	2.60	2.52	2.39	2.18
	7.90	9.00	2.68	2.68	2.60	2.52	2.39	2.18
	9.80	11.00	2.76	2.76	2.60	2.52	2.39	2.18
11.80	13.00	2.86	2.81	2.60	2.52	2.39	2.18	

Medium Static Pressure Duct Unit with DC Fan Motor

	13.70	15.00	2.94	2.81	2.60	2.52	2.39	2.18
2.8	-20.00	-19.80	1.79	1.79	1.79	1.79	1.79	1.79
	-19.00	-18.80	1.92	1.92	1.92	1.92	1.92	1.92
	-17.00	-16.70	2.02	2.02	2.02	2.02	2.02	2.02
	-15.00	-14.70	2.02	2.02	2.02	2.02	2.02	2.02
	-13.00	-12.60	2.14	2.14	2.14	2.14	2.14	2.14
	-11.00	-10.50	2.24	2.24	2.24	2.24	2.24	2.24
	-10.00	-9.50	2.34	2.34	2.34	2.34	2.34	2.34
	-9.10	-8.50	2.40	2.40	2.40	2.40	2.40	2.40
	-7.60	-7.00	2.43	2.43	2.43	2.43	2.43	2.43
	-5.60	-5.00	2.53	2.53	2.53	2.53	2.53	2.53
	-3.70	-3.00	2.66	2.66	2.66	2.66	2.66	2.66
	-0.70	0.00	2.85	2.85	2.85	2.85	2.85	2.69
	2.20	3.00	3.01	3.01	3.01	3.01	2.94	2.69
	4.10	5.00	3.10	3.10	3.10	3.10	2.94	2.69
	6.00	7.00	3.20	3.20	3.20	3.10	2.94	2.69
	7.90	9.00	3.30	3.30	3.20	3.10	2.94	2.69
	9.80	11.00	3.39	3.39	3.20	3.10	2.94	2.69
11.80	13.00	3.52	3.46	3.20	3.10	2.94	2.69	
13.70	15.00	3.62	3.46	3.20	3.10	2.94	2.69	
3.6	-20.00	-19.80	2.24	2.24	2.24	2.24	2.24	2.24
	-19.00	-18.80	2.40	2.40	2.40	2.40	2.40	2.4
	-17.00	-16.70	2.52	2.52	2.52	2.52	2.52	2.52
	-15.00	-14.70	2.60	2.60	2.60	2.60	2.60	2.60
	-13.00	-12.60	2.68	2.68	2.68	2.68	2.68	2.68
	-11.00	-10.50	2.80	2.80	2.80	2.80	2.80	2.80
	-10.00	-9.50	2.92	2.92	2.92	2.92	2.92	2.92
	-9.10	-8.50	3.00	3.00	3.00	3.00	3.00	3.00
	-7.60	-7.00	3.04	3.04	3.04	3.04	3.04	3.04
	-5.60	-5.00	3.16	3.16	3.16	3.16	3.16	3.16
	-3.70	-3.00	3.32	3.32	3.32	3.32	3.32	3.32
	-0.70	0.00	3.56	3.56	3.56	3.56	3.56	3.36
	2.20	3.00	3.76	3.76	3.76	3.76	3.68	3.36
	4.10	5.00	3.88	3.88	3.88	3.88	3.68	3.36
	6.00	7.00	4.00	4.00	4.00	3.88	3.68	3.36
	7.90	9.00	4.12	4.12	4.00	3.88	3.68	3.36
	9.80	11.00	4.24	4.24	4.00	3.88	3.68	3.36
11.80	13.00	4.4	4.32	4.00	3.88	3.68	3.36	
13.70	15.00	4.52	4.32	4.00	3.88	3.68	3.36	
4.5	-20.00	-19.80	2.80	2.80	2.80	2.80	2.80	2.80
	-19.00	-18.80	3.00	3.00	3.00	3.00	3.00	3.00
	-17.00	-16.70	3.15	3.15	3.15	3.15	3.15	3.15
	-15.00	-14.70	3.25	3.25	3.25	3.25	3.25	3.25
	-13.00	-12.60	3.45	3.45	3.45	3.45	3.45	3.45
	-11.00	-10.50	3.50	3.55	3.55	3.55	3.55	3.55
	-10.00	-9.50	3.65	3.65	3.65	3.65	3.65	3.65
	-9.10	-8.50	3.75	3.75	3.75	3.75	3.75	3.75
	-7.60	-7.00	3.80	3.80	3.80	3.80	3.80	3.80
	-5.60	-5.00	3.95	3.95	3.95	3.95	3.95	3.95
	-3.70	-3.00	4.15	4.15	4.15	4.15	4.15	4.15
	-0.70	0.00	4.45	4.45	4.45	4.45	4.45	4.20
	2.20	3.00	4.70	4.70	4.70	4.70	4.60	4.20
	4.10	5.00	4.85	4.85	4.85	4.85	4.60	4.20
	6.00	7.00	5.00	5.00	5.00	4.85	4.60	4.20
	7.90	9.00	5.15	5.15	5.00	4.85	4.60	4.20
	9.80	11.00	5.30	5.30	5.00	4.85	4.60	4.20
11.80	13.00	5.50	5.40	5.00	4.85	4.60	4.20	
13.70	15.00	5.65	5.40	5.00	4.85	4.60	4.20	
5.6	-20.00	-19.80	3.53	3.53	3.53	3.53	3.53	3.53
	-19.00	-18.80	3.78	3.78	3.78	3.78	3.78	3.78
	-17.00	-16.70	3.97	3.97	3.97	3.97	3.97	3.97
	-15.00	-14.70	4.10	4.10	4.10	4.10	4.10	4.10
	-13.00	-12.60	4.35	4.35	4.35	4.35	4.35	4.35
	-11.00	-10.50	4.41	4.47	4.47	4.47	4.47	4.47
	-10.00	-9.50	4.60	4.60	4.60	4.60	4.60	4.60

	-9.10	-8.50	4.73	4.73	4.73	4.73	4.73	4.73
	-7.60	-7.00	4.79	4.79	4.79	4.79	4.79	4.79
	-5.60	-5.00	4.98	4.98	4.98	4.98	4.98	4.98
	-3.70	-3.00	5.23	5.23	5.23	5.23	5.23	5.23
	-0.70	0.00	5.61	5.61	5.61	5.61	5.61	5.29
	2.20	3.00	5.92	5.92	5.92	5.92	5.80	5.29
	4.10	5.00	6.11	6.11	6.11	6.11	5.80	5.29
	6.00	7.00	6.30	6.30	6.30	6.11	5.80	5.29
	7.90	9.00	6.49	6.49	6.30	6.11	5.80	5.29
	9.80	11.00	6.68	6.68	6.30	6.11	5.80	5.29
	11.80	13.00	6.93	6.80	6.30	6.11	5.80	5.29
13.70	15.00	7.12	6.80	6.30	6.11	5.80	5.29	
7.1	-20.00	-19.80	4.48	4.48	4.48	4.48	4.48	4.48
	-19.00	-18.80	4.80	4.80	4.80	4.80	4.80	4.80
	-17.00	-16.70	5.04	5.04	5.04	5.04	5.04	5.04
	-15.00	-14.70	5.20	5.20	5.20	5.20	5.20	5.20
	-13.00	-12.60	5.36	5.36	5.36	5.36	5.36	5.36
	-11.00	-10.50	5.60	5.60	5.60	5.60	5.60	5.60
	-10.00	-9.50	5.84	5.84	5.84	5.84	5.84	5.84
	-9.10	-8.50	6.00	6.00	6.00	6.00	6.00	6.00
	-7.60	-7.00	6.08	6.08	6.08	6.08	6.08	6.08
	-5.60	-5.00	6.32	6.32	6.32	6.32	6.32	6.32
	-3.70	-3.00	6.64	6.64	6.64	6.64	6.64	6.64
	-0.70	0.00	7.12	7.12	7.12	7.12	7.12	6.72
	2.20	3.00	7.52	7.52	7.52	7.52	7.36	6.72
	4.10	5.00	7.76	7.76	7.76	7.76	7.36	6.72
	6.00	7.00	8.00	8.00	8.00	7.76	7.36	6.72
7.90	9.00	8.24	8.24	8.00	7.76	7.36	6.72	
9.80	11.00	8.48	8.48	8.00	7.76	7.36	6.72	
11.80	13.00	8.8	8.64	8.00	7.76	7.36	6.72	
13.70	15.00	9.04	8.64	8.00	7.76	7.36	6.72	
8.0	-20	-19.8	5.04	5.04	5.04	5.04	5.04	5.04
	-19	-18.8	5.40	5.40	5.40	5.40	5.40	5.40
	-17	-16.7	5.67	5.67	5.67	5.67	5.67	5.67
	-15	-14.7	5.85	5.85	5.85	5.85	5.85	5.85
	-13.00	-12.60	6.21	6.21	6.21	6.21	6.21	6.21
	-11.00	-10.50	6.30	6.39	6.39	6.39	6.39	6.39
	-10.00	-9.50	6.57	6.57	6.57	6.57	6.57	6.57
	-9.10	-8.50	6.75	6.75	6.75	6.75	6.75	6.75
	-7.60	-7.00	6.84	6.84	6.84	6.84	6.84	6.84
	-5.60	-5.00	7.11	7.11	7.11	7.11	7.11	7.11
	-3.70	-3.00	7.47	7.47	7.47	7.47	7.47	7.47
	-0.70	0.00	8.01	8.01	8.01	8.01	8.01	7.56
	2.20	3.00	8.46	8.46	8.46	8.46	8.28	7.56
	4.10	5.00	8.73	8.73	8.73	8.73	8.28	7.56
	6.00	7.00	9.00	9.00	9.00	8.73	8.28	7.56
7.90	9.00	9.27	9.27	9.00	8.73	8.28	7.56	
9.80	11.00	9.54	9.54	9.00	8.73	8.28	7.56	
11.80	13.00	9.90	9.72	9.00	8.73	8.28	7.56	
13.70	15.00	10.17	9.72	9.00	8.73	8.28	7.56	
9.0	-20	-19.8	5.60	5.60	5.60	5.60	5.60	5.60
	-19	-18.8	6.00	6.00	6.00	6.00	6.00	6.00
	-17	-16.7	6.30	6.30	6.30	6.30	6.30	6.30
	-15	-14.7	6.50	6.50	6.50	6.50	6.50	6.50
	-13.00	-12.60	6.90	6.90	6.90	6.90	6.90	6.90
	-11.00	-10.50	7.00	7.10	7.10	7.10	7.10	7.10
	-10.00	-9.50	7.30	7.30	7.30	7.30	7.30	7.30
	-9.10	-8.50	7.50	7.50	7.50	7.50	7.50	7.50
	-7.60	-7.00	7.60	7.60	7.60	7.60	7.60	7.60
	-5.60	-5.00	7.90	7.90	7.90	7.90	7.90	7.90
	-3.70	-3.00	8.30	8.30	8.30	8.30	8.30	8.30
	-0.70	0.00	8.90	8.90	8.90	8.90	8.90	8.40
	2.20	3.00	9.40	9.40	9.40	9.40	9.20	8.40
	4.10	5.00	9.70	9.70	9.70	9.70	9.20	8.40
	6.00	7.00	10.00	10.00	10.00	9.70	9.20	8.40

Medium Static Pressure Duct Unit with DC Fan Motor

	7.90	9.00	10.30	10.30	10.00	9.70	9.20	8.40
	9.80	11.00	10.60	10.60	10.00	9.70	9.20	8.40
	11.80	13.00	11.00	10.80	10.00	9.70	9.20	8.40
	13.70	15.00	11.30	10.80	10.00	9.70	9.20	8.40
11.2	-20	-19.8	7.00	7.00	7.00	7.00	7.00	7.00
	-19	-18.8	7.50	7.50	7.50	7.50	7.50	7.50
	-17	-16.7	7.88	7.88	7.88	7.88	7.88	7.88
	-15	-14.7	8.13	8.13	8.13	8.13	8.13	8.13
	-13.00	-12.60	8.63	8.63	8.63	8.63	8.63	8.63
	-11.00	-10.50	8.75	8.88	8.88	8.88	8.88	8.88
	-10.00	-9.50	9.13	9.13	9.13	9.13	9.13	9.13
	-9.10	-8.50	9.38	9.38	9.38	9.38	9.38	9.38
	-7.60	-7.00	9.50	9.50	9.50	9.50	9.50	9.50
	-5.60	-5.00	9.88	9.88	9.88	9.88	9.88	9.88
	-3.70	-3.00	10.38	10.38	10.38	10.38	10.38	10.38
	-0.70	0.00	11.13	11.13	11.13	11.13	11.13	10.50
	2.20	3.00	11.75	11.75	11.75	11.75	11.50	10.50
	4.10	5.00	12.13	12.13	12.13	12.13	11.50	10.50
	6.00	7.00	12.50	12.50	12.50	12.13	11.50	10.50
	7.90	9.00	12.88	12.88	12.50	12.13	11.50	10.50
	9.80	11.00	13.25	13.25	12.50	12.13	11.50	10.50
11.80	13.00	13.75	13.50	12.50	12.13	11.50	10.50	
13.70	15.00	14.13	13.50	12.50	12.13	11.50	10.50	
14.0	-20	-19.8	8.68	8.68	8.68	8.68	8.68	8.68
	-19	-18.8	9.30	9.30	9.30	9.30	9.30	9.30
	-17	-16.7	9.77	9.77	9.77	9.77	9.77	9.77
	-15	-14.7	10.08	10.08	10.08	10.08	10.08	10.08
	-13.00	-12.60	10.70	10.70	10.70	10.70	10.70	10.70
	-11.00	-10.50	10.85	11.01	11.01	11.01	11.01	11.01
	-10.00	-9.50	11.32	11.32	11.32	11.32	11.32	11.32
	-9.10	-8.50	11.63	11.63	11.63	11.63	11.63	11.63
	-7.60	-7.00	11.78	11.78	11.78	11.78	11.78	11.78
	-5.60	-5.00	12.25	12.25	12.25	12.25	12.25	12.25
	-3.70	-3.00	12.87	12.87	12.87	12.87	12.87	12.87
	-0.70	0.00	13.80	13.80	13.80	13.80	13.80	13.02
	2.20	3.00	14.57	14.57	14.57	14.57	14.26	13.02
	4.10	5.00	15.04	15.04	15.04	15.04	14.26	13.02
	6.00	7.00	15.50	15.50	15.50	15.04	14.26	13.02
	7.90	9.00	15.97	15.97	15.50	15.04	14.26	13.02
	9.80	11.00	16.43	16.43	15.50	15.04	14.26	13.02
11.80	13.00	17.05	16.74	15.50	15.04	14.26	13.02	
13.70	15.00	17.52	16.74	15.50	15.04	14.26	13.02	

## 9. Electrical Characteristics

Model	Indoor Unit				Power Supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
4TVD0005DF000AA	50/60	220-240	187	264	0.25	15	0.016	0.2
4TVD0007DF000AA	50/60	220-240	187	264	0.375	15	0.017	0.3
4TVD0009DF000AA	50/60	220-240	187	264	0.375	15	0.017	0.3
4TVD0012DF000AA	50/60	220-240	187	264	0.375	15	0.02	0.3
4TVD0015DF000AA	50/60	220-240	187	264	0.5	15	0.028	0.4
4TVD0018DF000AA	50/60	220-240	187	264	0.5	15	0.034	0.4
4TVD0024DF000AA	50/60	220-240	187	264	0.5	15	0.034	0.4
4TVD0027DF000AA	50/60	220-240	187	264	0.75	15	0.048	0.6
4TVD0030DF000AA	50/60	220-240	187	264	0.75	15	0.048	0.6
4TVD0038DF000AA	50/60	220-240	187	264	1.75	15	0.135	1.4
4TVD0048DF000AA	50/60	220-240	187	264	1.125	15	0.113	0.9

**Remark:**

MCA: Min. Current Amps. (A)

MFA: Max. Fuse Amps. (A)

KW: Fan Motor Rated Output (kW)

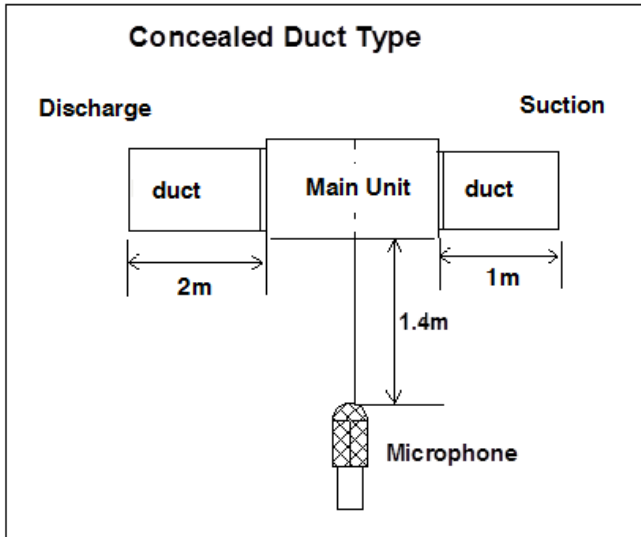
FLA: Full Load Amps. (A)

IFM:Indoor Fan Motor



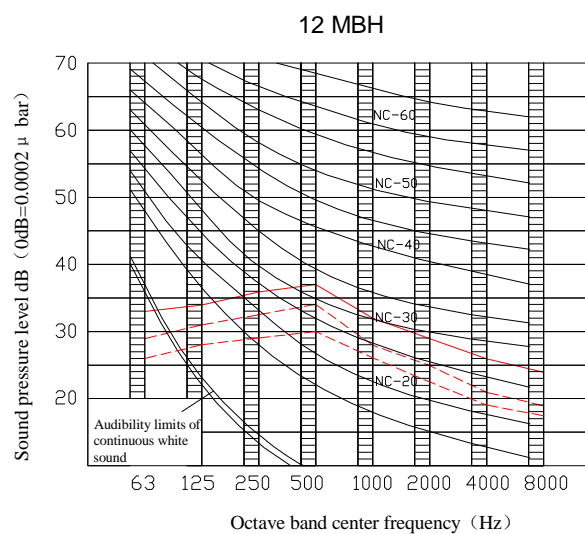
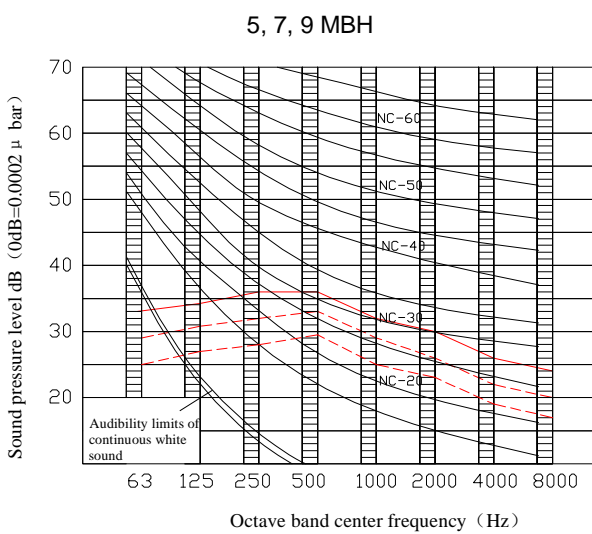
## 10. Sound Levels

### 10.1 Test condition

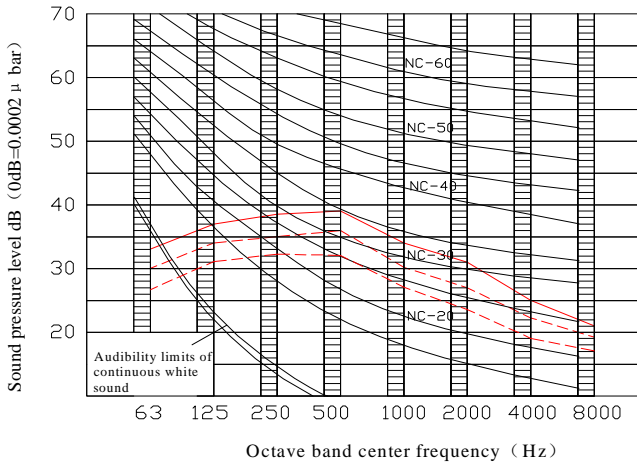


### 10.2 Test value

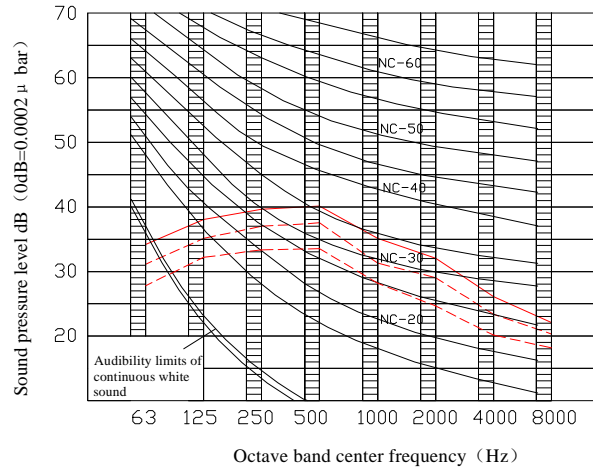
Model	Sound test value dB(A)		
	H	M	L
4TVD0005DF000AA	35	33	31
4TVD0007DF000AA	35	34	31
4TVD0009DF000AA	36	34	31
4TVD0012DF000AA	37	36	33
4TVD0015DF000AA	38	37	33
4TVD0018DF000AA	38	37	33
4TVD0024DF000AA	40	38	34
4TVD0027DF000AA	44	38	37
4TVD0030DF000AA	44	38	37
4TVD0038DF000AA	47	41	37
4TVD0048DF000AA	47	42	38



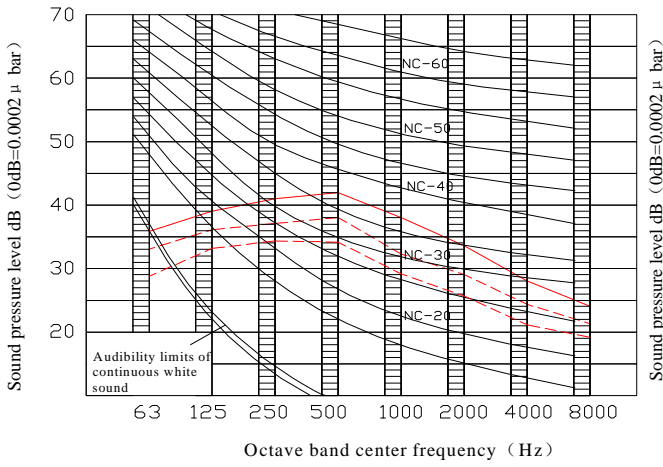
15, 18 MBH



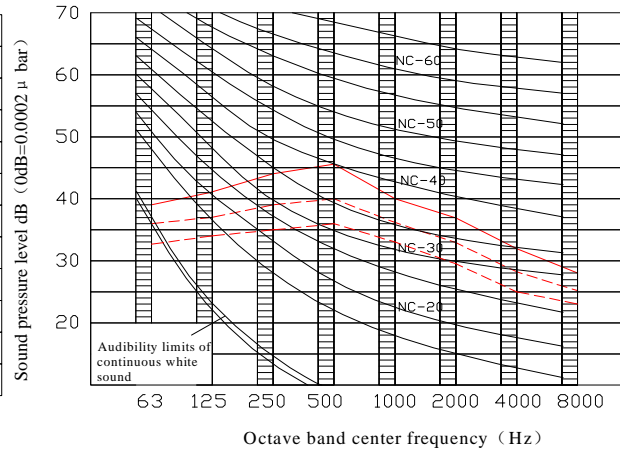
24 MBH



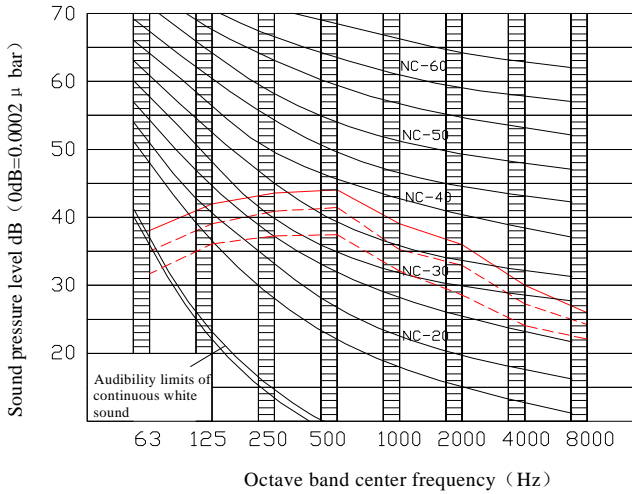
27, 30 MBH



38 MBH









48 MBH



## 11. Accessories

### 11.1 Standard accessories

Name	Quantity	Shape	Usage
Installation manual	1	This manual	/
Wire controller	1		Wire control the air-conditioner
Pipe insulation material	2		Heat insulation
Water outlet joint	1		For drainage
Clasp	1		Chucking the joint which connect the drain hose and the outlet of indoor unit
Network matching wire	1		The indoor unit which at the terminal of communication system should connect a impedance between port P and port Q
Copper nut	1		Use for pipe connection of engineering installation
Sponge	1	/	Sponge seal strip