Midea LC3 Series
DC Inverter Air Conditioner
Technical Service Manual

Applicable Model:

Indoor unit	Outdoor unit
IDR3-X 26M	MCR3-X 26M
IDR3-X 35M	MCR3-X 35M
IDR3-X 53M	MCR3-X 53M
IDR3-X 71M	MCR3-X 71M
IDR3-X 90M	MCR3-X 90M
IDR3-X 105M	MCR3-X 105M
IDR3-X 140M	MCR3-X 140M
IDR3-X 160M	MCR3-X 160M

Content

Part. 1 General information

1. Model Names of Indoor/Outdoor Units

Indoor unit		Outdoor unit	
Model	Power supply	Model	Power supply
IDR3-X 26M	220-240V~, 1Ph, 50/60Hz	MCR3-X 26M	220-240V~, 1Ph, 50/60Hz
IDR3-X 35M	220-240V~, 1Ph, 50/60Hz	MCR3-X 35M	220-240V~, 1Ph, 50/60Hz
IDR3-X 53M	220-240V~, 1Ph, 50/60Hz	MCR3-X 53M	220-240V~, 1Ph, 50/60Hz
IDR3-X 71M	220-240V~, 1Ph, 50/60Hz	MCR3-X 71M	220-240V~, 1Ph, 50/60Hz
IDR3-X 90M	220-240V~, 1Ph, 50/60Hz	MCR3-X 90M	220-240V~, 1Ph, 50/60Hz
IDR3-X 105M	220-240V~, 1Ph, 50/60Hz	MCR3-X 105M	220-240V~, 1Ph, 50/60Hz
IDR3-X 140M	220-240V~, 1Ph, 50/60Hz	MCR3-X 140M	220-240V~, 1Ph, 50/60Hz
IDR3-X 160M	220-240V~, 1Ph, 50/60Hz	MCR3-X 160M	220-240V~, 1Ph, 50/60Hz

2. External Appearance

2.1 Indoor units

IDR3-X 26M / IDR3-X 35M/ IDR3-X 53M/ IDR3-X 71M/ IDR3-X 90M/ IDR3-X 105M

IDR3-X 140M/ IDR3-X 160M


2.2 Outdoor unit

MCR3-X 26M/ MCR3-X 35M/ MCR3-X 53M

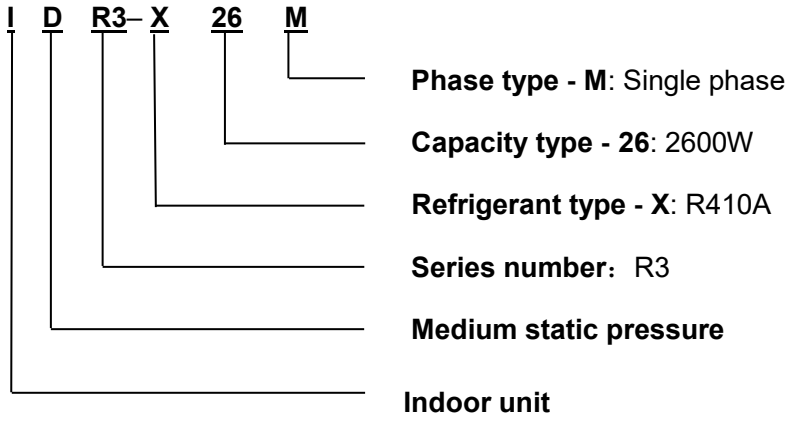
MCR3-X 71M/ MCR3-X 90M

MCR3-X 105M/ MCR3-X 140M

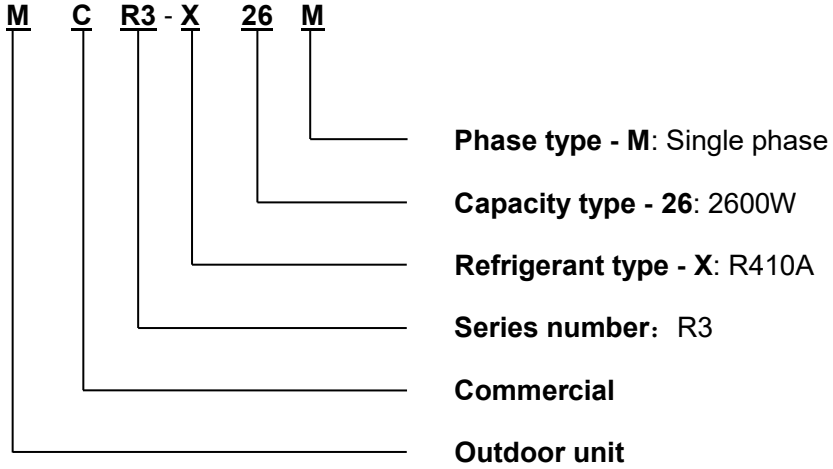
MCR3-X 160M


3. Nomenclature

3.1 Indoor unit



3.2 Outdoor unit



Part. 2 Outdoor Unit

1. Specifications

Table 1.1: MCR3-X 26(35,53,71)M specifications

kW			**2.6**	**3.5**	**5.3**	**7.1**
Model name			MCR3-X 26M	MCR3-X 35M	MCR3-X 53M	MCR3-X 71M
Power supply			1-phase, 220-240V, 50/60Hz			
Cooling	Capacity	W	2600(700~3500)	3500(700~4000)	5300(1000~6000)	7200(2400~8200)
	Power input	W	715(170~1420)	1020(190~1460)	1500(250~2370)	2180(450~3280)
Heating	Capacity	W	3600(700~3800)	4150 (800~4600)	6200(1200~6800)	8600W(2100~9600)
	Power input	W	920(170~1360)	1200(190~1570)	1650(300~2460)	2400(400~3650)
Compressor	Type		ASN98D22UFZ		ASM135D23UFZ	ATF235D22UMT
	Quantity		1	1	1	1
	Oil type		ESTER OIL VG74		ESTER OIL VG74 450ML	POE(VG74) 670ML
	Start-up method		soft start			
Fan	Type		ZKFN-20-8-1	ZKFN-34-8-1	WZDK56-38G-W	WZDK80-38G-W(A)
	Motor type		DC motor			
	Quantity		1			
	Motor output	kW	0.02	0.034	0.056	0.08
	Static pressure	Pa	/			
	Airflow rate	m^3/h	1718	1718	2283	3715
	Drive type		External Drive			
Refrigerant	Type		R410A			
	Factory charge	g	850	1050	1600	1800
Throttle type	\		Throttle valve throttling			
Pipe connections	Liquid pipe	mm	Φ6.4			
	Gas pipe	mm	Φ9.5		Φ12.7	Φ15.9
Sound pressure level		dB(A)	50		54	55
Net dimensions (W×H×D)		mm	722×555×260	795×555×287	795×555×287	910×712×345
Packed dimensions (W×H×D)		mm	845×610×390	915×610×420	915×610×420	1045×800×485
Net weight		kg	27	29.5	35	53
Gross weight		kg	30	32.5	38	58
Ambient temp. operation range	Cooling	℃	10~55			
	Heating	℃	-15~24			
Controller			WDC-86E/KD			

Note:

1. The design implementation standard of this unit is GB/T 18836-2017.
2. The parameters in the table are the nominal values tested under the rated working conditions specified in GB/T 18836-2017, and actual operating parameters will vary with the working conditions.
3. The above parameters may change due to product improvement. Please refer to the nameplate parameters of the product.

Table 1.2: MCR3-X (90,105,140,160)M specifications

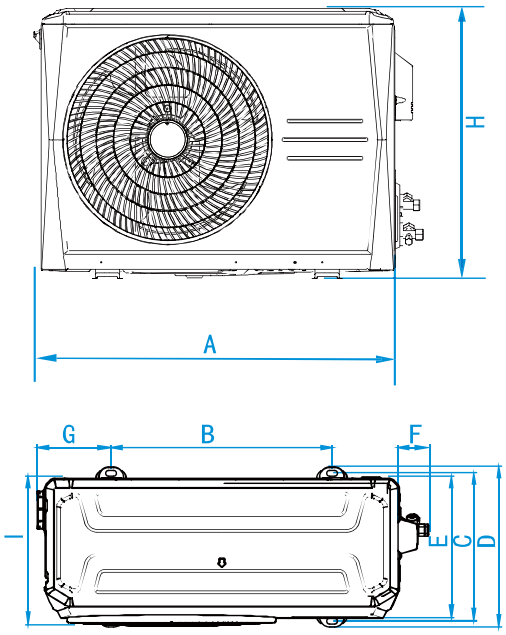
kW			**9.0**	**10.5**	**14.0**	**16.0**
Model name			MCR3-X 90M	MCR3-X 105M	MCR3-X 140M	MCR3-X 160M
Power supply			1-phase, 220-240V, 50/60Hz			
Cooling	Capacity	W	9000	10500	14000	16000
	Power input	W	2750	3000	4650	5500
Heating	Capacity	W	10000	11600	16000	18000
	Power input	W	2900	3000	4500	5350
Compressor	Type		KTM240D57UMT	KTM240D57UMT	ATF400D64UMTC	ATF400D64UMV
	Quantity		1	1	1	1
	Oil type		ESTER OIL VG74 670ml	ESTER OIL VG74 670ml	POE(VG74) 800ML	POE(VG74) 1000ML
	Start-up method		soft start			
Fan	Type		ZKFN-80-8-3	WZDK170-38G-1	WZDK170-38G-1	ZKSP-170-8-9
	Motor type		DC motor			
	Quantity		1			
	Motor output	kW	0.08	0.17	0.17	0.17
	Static pressure	Pa	/			
	Airflow rate	m^3/h	3715	5086	5086	5395
	Drive type		External Drive	Built-in Drive	Built-in Drive	Built-in Drive
Refrigerant	Type		R410A			
	Factory charge	g	1900	3000	3200	3800
Throttle type	\		Throttle valve throttling			
Pipe connections	Liquid pipe	mm	Φ9.5	Φ9.5	Φ9.5	Φ9.5
	Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Sound pressure level		dB(A)	55	59	59	59
Net dimensions (W×H×D)		mm	910x712x345	950x840x360	950x840x360	1040x865x410
Packed dimensions (W×H×D)		mm	1045×810×485	1025×950×510	1025×950×510	1120×980×560
Net weight		kg	48	68	78.5	91
Gross weight		kg	53	76.5	87	101
Ambient temp. operation range	Cooling	℃	10~55			
	Heating	℃	-15~24			
Controller			WDC-86E/KD			

Note:

1. The design implementation standard of this unit is GB/T 18836-2017.
2. The parameters in the table are the nominal values tested under the rated working conditions specified in GB/T 18836-2017, and actual operating parameters will vary with the working conditions.
3. The above parameters may change due to product improvement. Please refer to the nameplate parameters of the product.

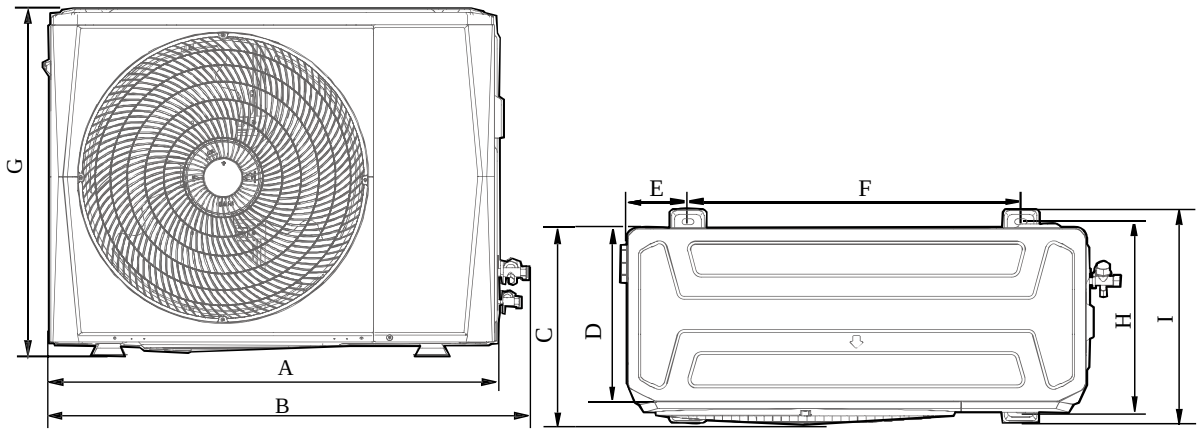
2. Dimension (Unit: mm)

MCR3-X 26M/ MCR3-X 35M/ MCR3-X 53M



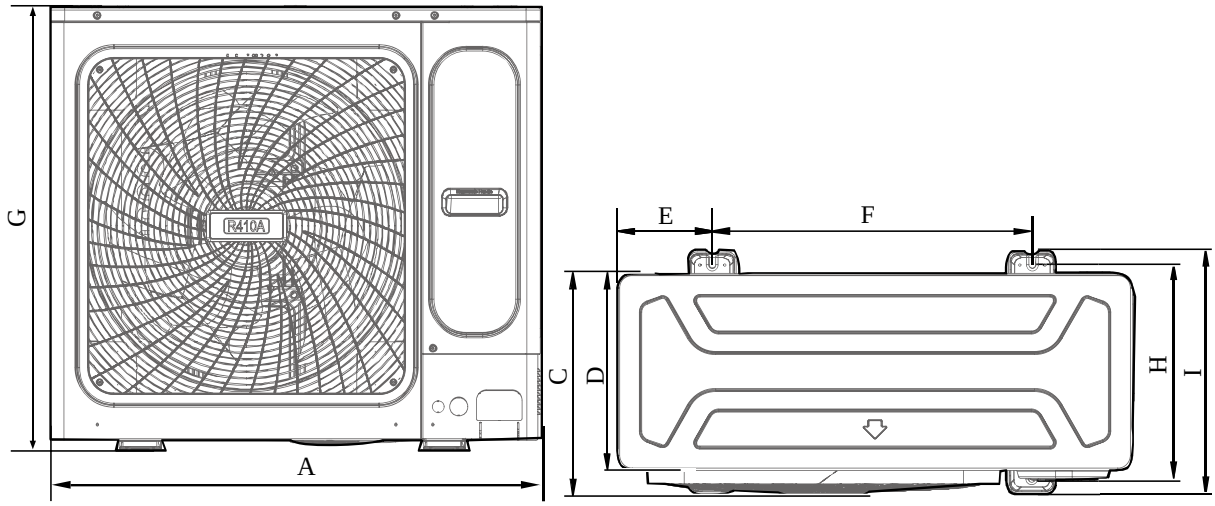
Model	A	B	C	D	E	F	G	H	I
26	722	453	302	327	260	50	135	555	300
35/53	795	514	340	365	287	50	125	555	330

MCR3-X 71M/ MCR3-X 90M



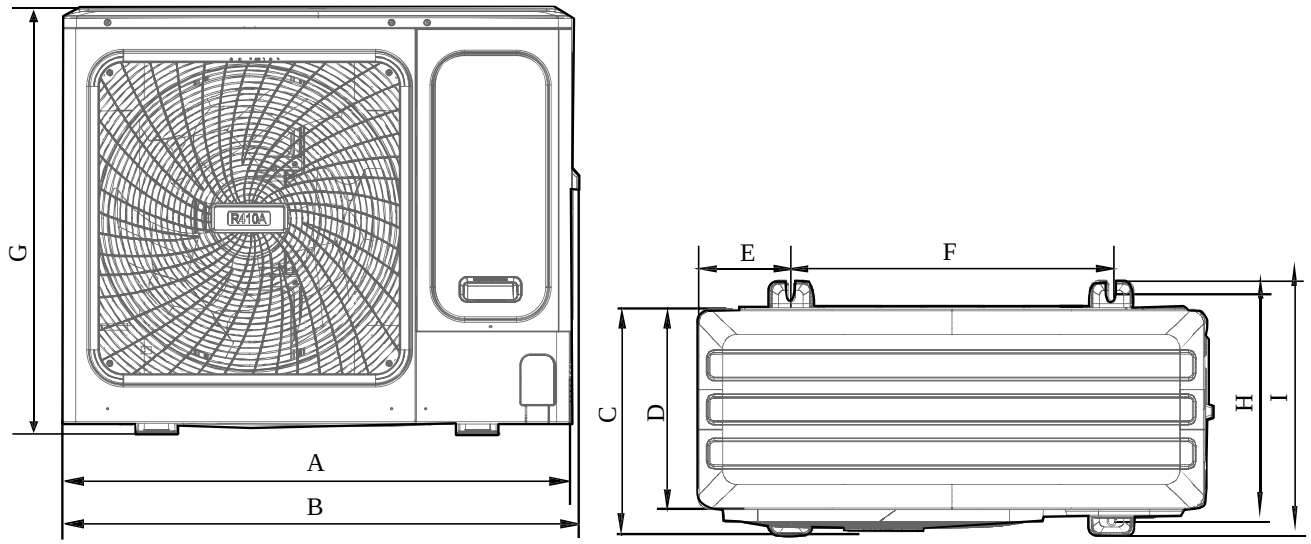
Model	A	B	C	D	E	F	G	H	I
71/90	910	982	390	345	120	663	712	375	426

MCR3-X 105M/ MCR3-X 140M



Model	A	B	C	D	E	F	G	H	I
105/140	900	/	406	360	175	590	840	390	440

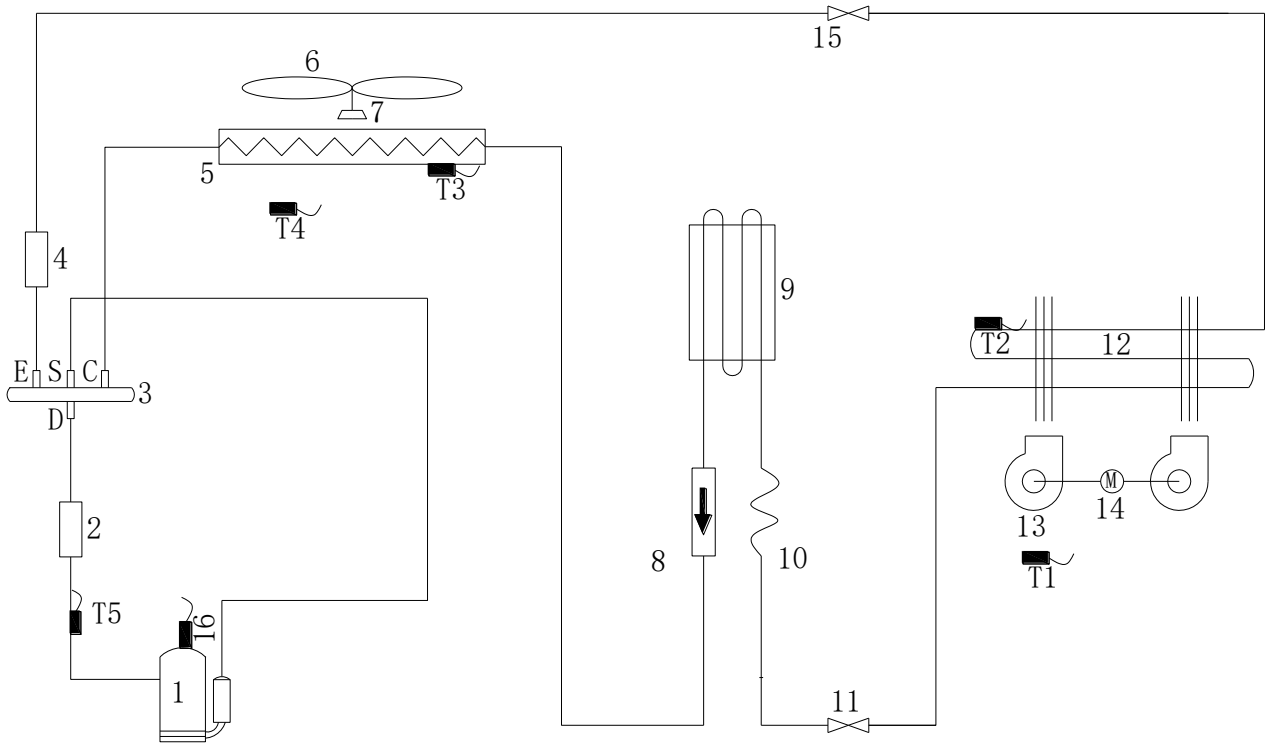
MCR3-X 160M



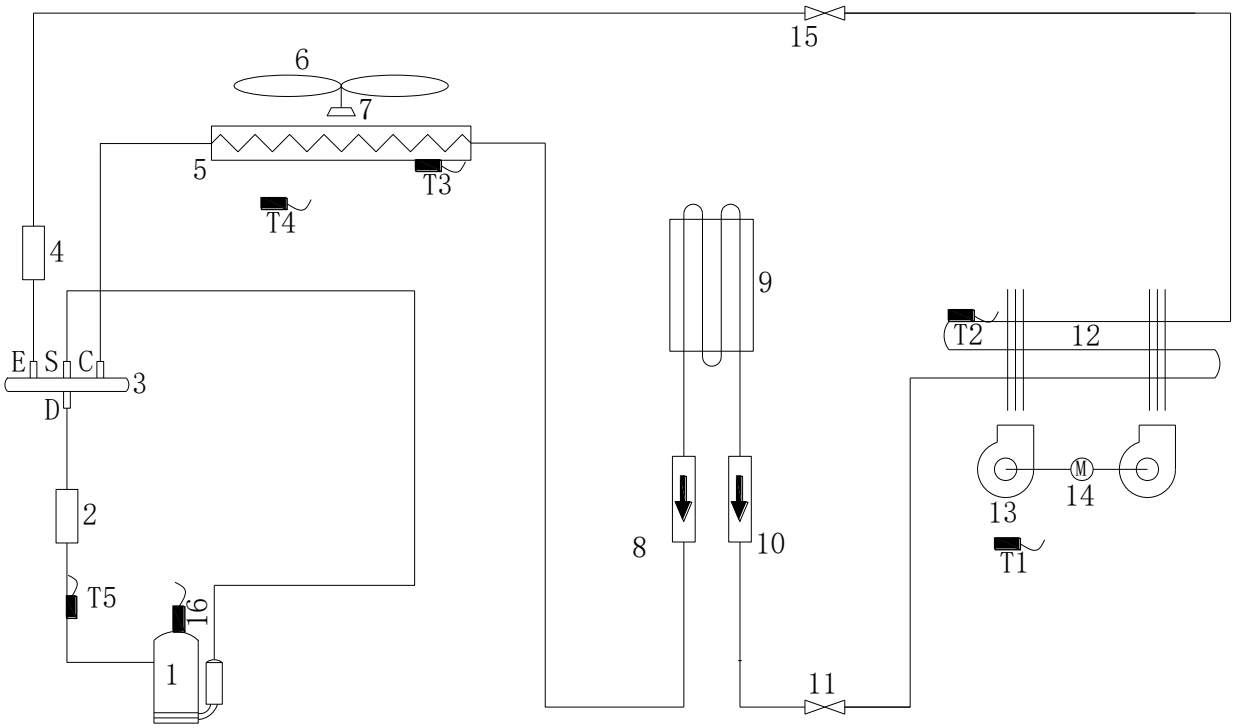
Model	A	B	C	D	E	F	G	H	I
160	1040	1053	452	410	191	656	865	563	523

3. Refrigerant circuit

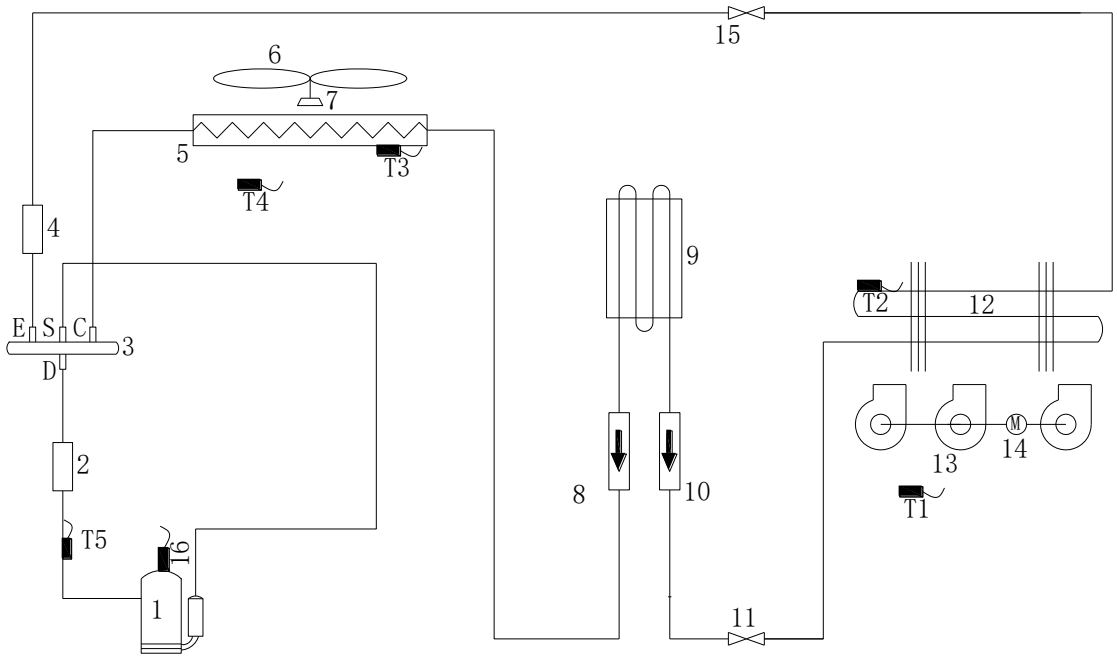
MCR3-X 26M / MCR3-X 35M



1	Compressor
2	Silencer
3	Four-way reversing valve
4	Silencer
5	Condenser
6	Fan blade
7	Motor
8	Heating spool
9	Refrigerant cooling module
10	Throttling capillary
11	Stop valve (liquid side)
12	Evaporator
13	Indoor unit wind wheel
14	Indoor unit motor
15	Stop valve (gas side)
16	Temperature control switch
T1	Indoor temperature sensor
T2	Temperature sensor in the middle of evaporator
T3	Condenser outlet temperature sensor
T4	Outdoor temperature sensor
T5	Exhaust temperature sensor

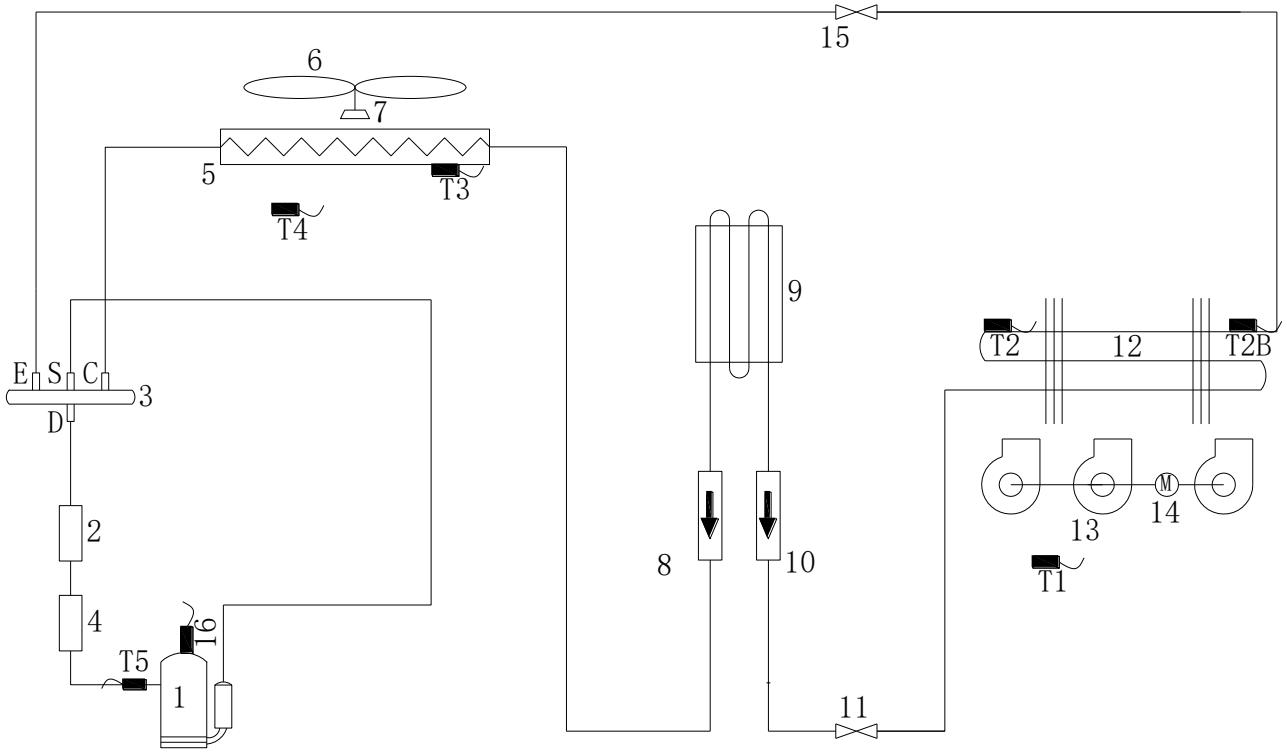


1	Compressor
2	Silencer
3	Four-way reversing valve
4	Silencer
5	Condenser
6	Fan blade
7	Motor
8	Heating spool
9	Refrigerant cooling module
10	Refrigeration spool
11	Stop valve (liquid side)
12	Evaporator
13	Indoor unit wind wheel
14	Indoor unit motor
15	Stop valve (gas side)
16	Temperature control switch
T1	Indoor temperature sensor
T2	Temperature sensor in the middle of evaporator
T3	Condenser outlet temperature sensor
T4	Outdoor temperature sensor
T5	Exhaust temperature sensor

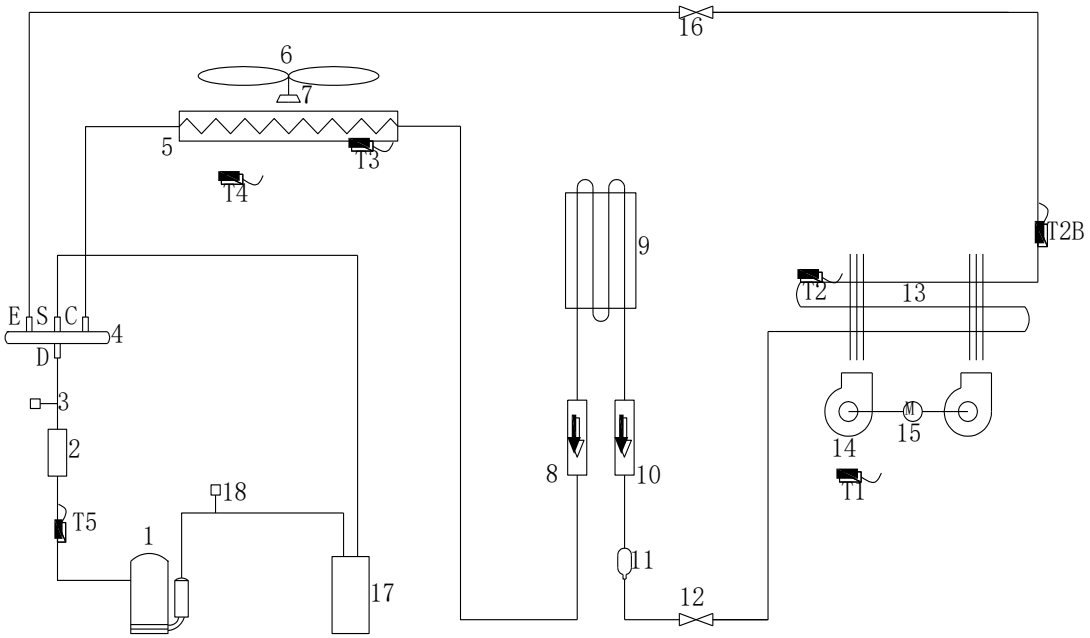


1	Compressor
2	Silencer
3	Four-way reversing valve
4	Silencer
5	Condenser
6	Fan blade
7	Motor
8	Heating spool
9	Refrigerant cooling module
10	Refrigeration spool
11	Stop valve (liquid side)
12	Evaporator
13	Indoor unit wind wheel
14	Indoor unit motor
15	Stop valve (gas side)
16	Temperature control switch
T1	Indoor temperature sensor
T2	Temperature sensor in the middle of evaporator
T3	Condenser outlet temperature sensor
T4	Outdoor temperature sensor
T5	Exhaust temperature sensor

MCR3-X 90M



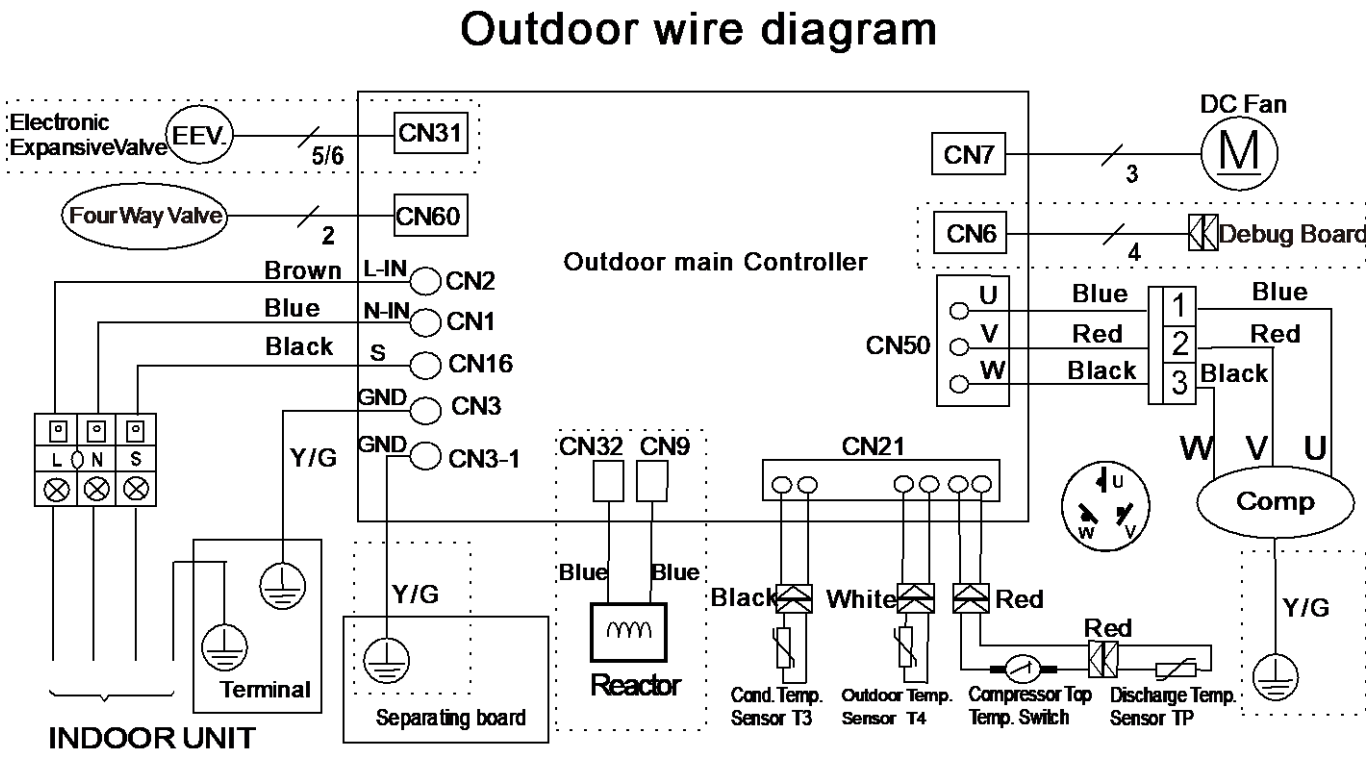
1	Compressor
2	Silencer
3	Four-way reversing valve
4	Silencer
5	Condenser
6	Fan blade
7	Motor
8	Heating spool
9	Refrigerant cooling module
10	Refrigeration spool
11	Stop valve (liquid side)
12	Evaporator
13	Indoor unit wind wheel
14	Indoor unit motor
15	Stop valve (gas side)
16	Temperature control switch
T1	Indoor temperature sensor
T2	Temperature sensor in the middle of evaporator
T2B	Temperature sensor in the Evaporator outlet
T3	Condenser outlet temperature sensor
T4	Outdoor temperature sensor
T5	Exhaust temperature sensor



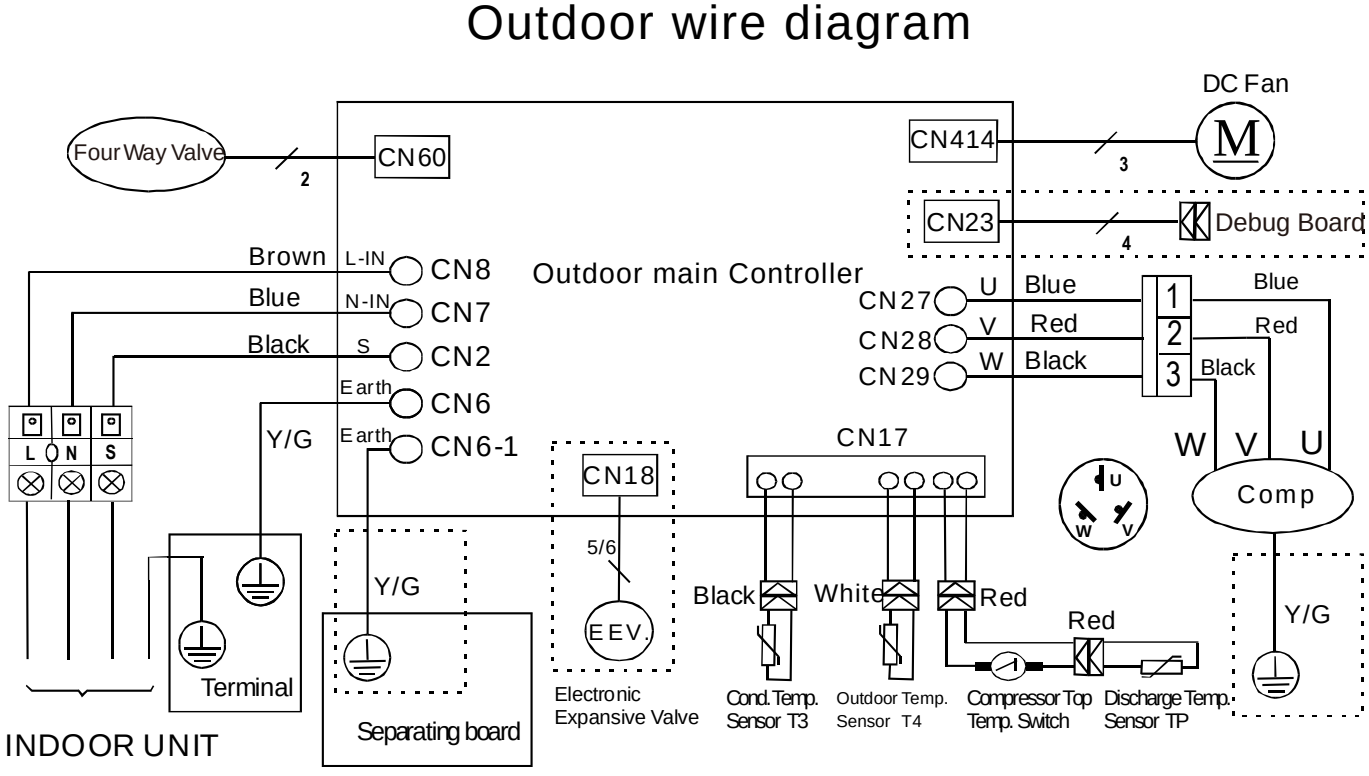
1	Compressor
2	Silencer
3	High pressure switch
4	Four-way reversing valve
5	Condenser
6	Fan blade
7	Motor
8	Heating spool
9	Refrigerant cooling module
10	Refrigeration spool
11	Filter
12	Stop valve (liquid side)
13	Evaporator
14	Indoor unit wind wheel
15	Indoor unit motor
16	Stop valve (gas side)
17	Gas-liquid separator
18	Low pressure switch
T1	Indoor temperature sensor
T2	Indoor temperature sensor
T2B	Temperature sensor in the Evaporator outlet
T3	Condenser outlet temperature sensor
T4	Outdoor temperature sensor
T5	Exhaust temperature sensor

4. Wiring Diagrams

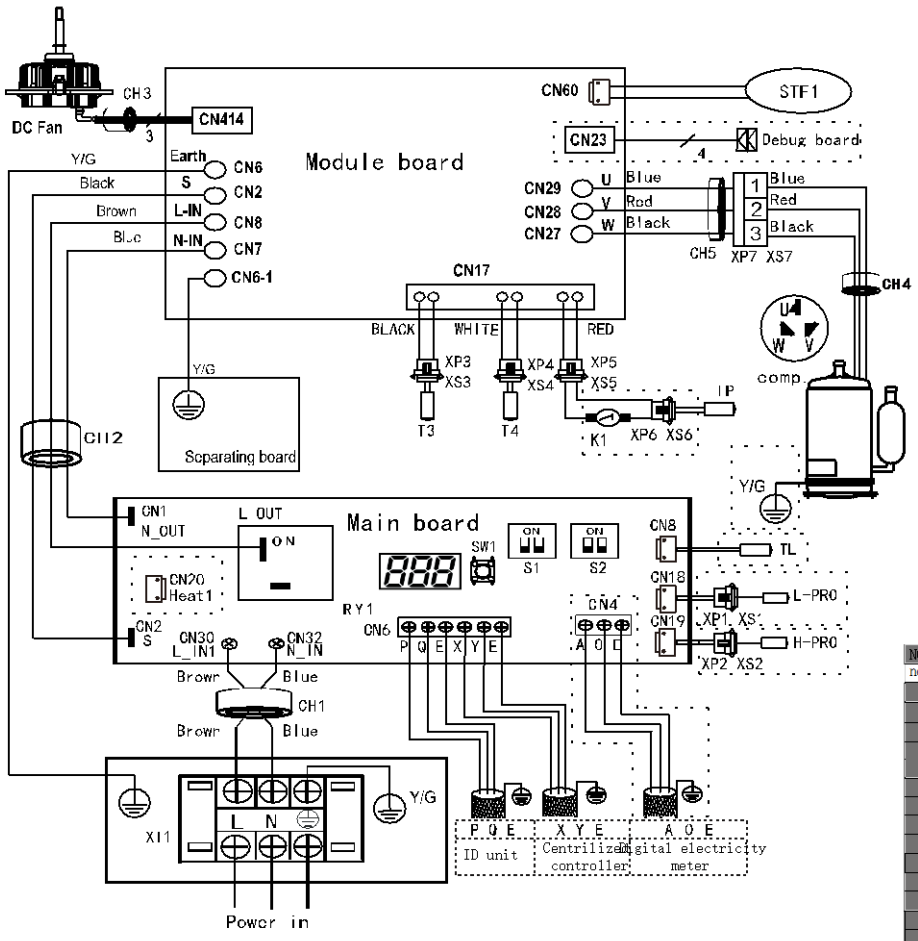
MCR3-X 26M / MCR3-X 35M



MCR3-X 53M / MCR3-X 71M



Outdoor wiring diagrams

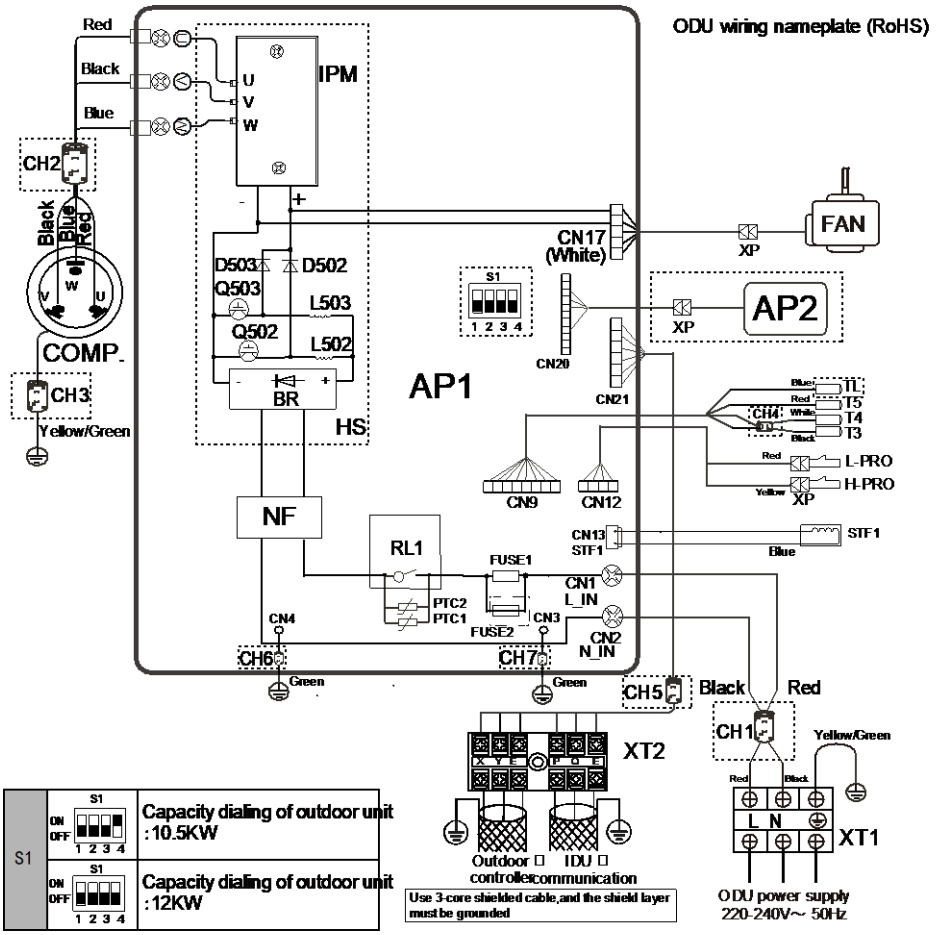


Error Code	
EE	Module board stop abnormally
E2	Communication error between indoor and outdoor unit
E43	Outdoor heat exchanger temperature sensor (T3) error or
E44	Outdoor ambient temperature sensor (T4) error
E45	Discharge temperature sensor error
E5	Input voltage protection
E6	DC fan protection
E9	EEPROM mismatch
E.9.	Compressor parameters mismatch
Eb	E6 errors occur more than six times in an hour
EF	PFC error (reserved)
EP	Cooling ambient temperature is below 10 degrees Celsius
H0	Communication error between main board and module board
HF	Indoor mismatch error
H4	L0 errors occur three times in an hour
L0	IPM module protection
L1	DC bus low voltage protection
L2	DC bus high voltage protection
L4	MCE error (reserved)
L5	Zero speed protection
L7	Phase sequence error
LA	Compressor overcurrent protection
LC	Compressor current sampling circuit error (reserved)
LH	Compressor startup error (reserved)
PL	Radiator surface high temperature protection
P1	System high voltage protection (reserved)
P3	Overcurrent protection
P4	Discharge temperature protection
P5	Outdoor heat exchanger temperature(T3) protection
P8	Typhoon protection
PE	T2 indoor unit evaporator temperature protection

CODE	NAME	CODE	NAME
CH1-CH5	Magnetic ring	RY1	Relay
COMP.	Compressor	STF1	Four-way valve
K1	Compressor top thermostat	TP	Outdoor discharge temperature sensor
DCFAN	DC fan	TL	Heat exchanger temperature sensor
H-PRO	High pressure on/off switch	XT1	Three way terminal
L-PRO	Low pressure on/off switch	T4	Outdoor ambient temperture sensor
XP1-XP7 XS1-XS7	Intermediate connector	T3	Outdoor heat exchanger temperture sensor

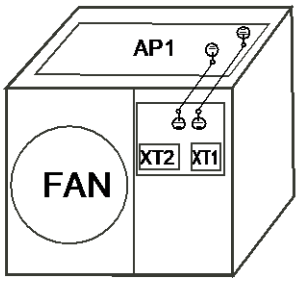
NO.		Remarks
normal	display	Operating frequency
1	1	Operating mode
2	2	Operating fan speed and level
3	3	Total capacity requirment of indoor unit
4	4	Total corrected capacity requirment of outdoor unit
5	5	Main heat exchanger pipe (T3) temperature (° C)
6	6	Outdoor ambient (T4) temperature (° C)
7	7	Outdoor discharge(TP) temperature sensor
8	8	Rediator temperature
9	9	TL Heat exchanger temperature sensor
10	10	Input current value
11	11	Input voltage value
12	12	DC voltage value
13	13	T2/T2B average temperature
14	14	Model index
15	15	System address
16	16	Progress version number
17	17	Last error or protection code
18	18	Display"—"

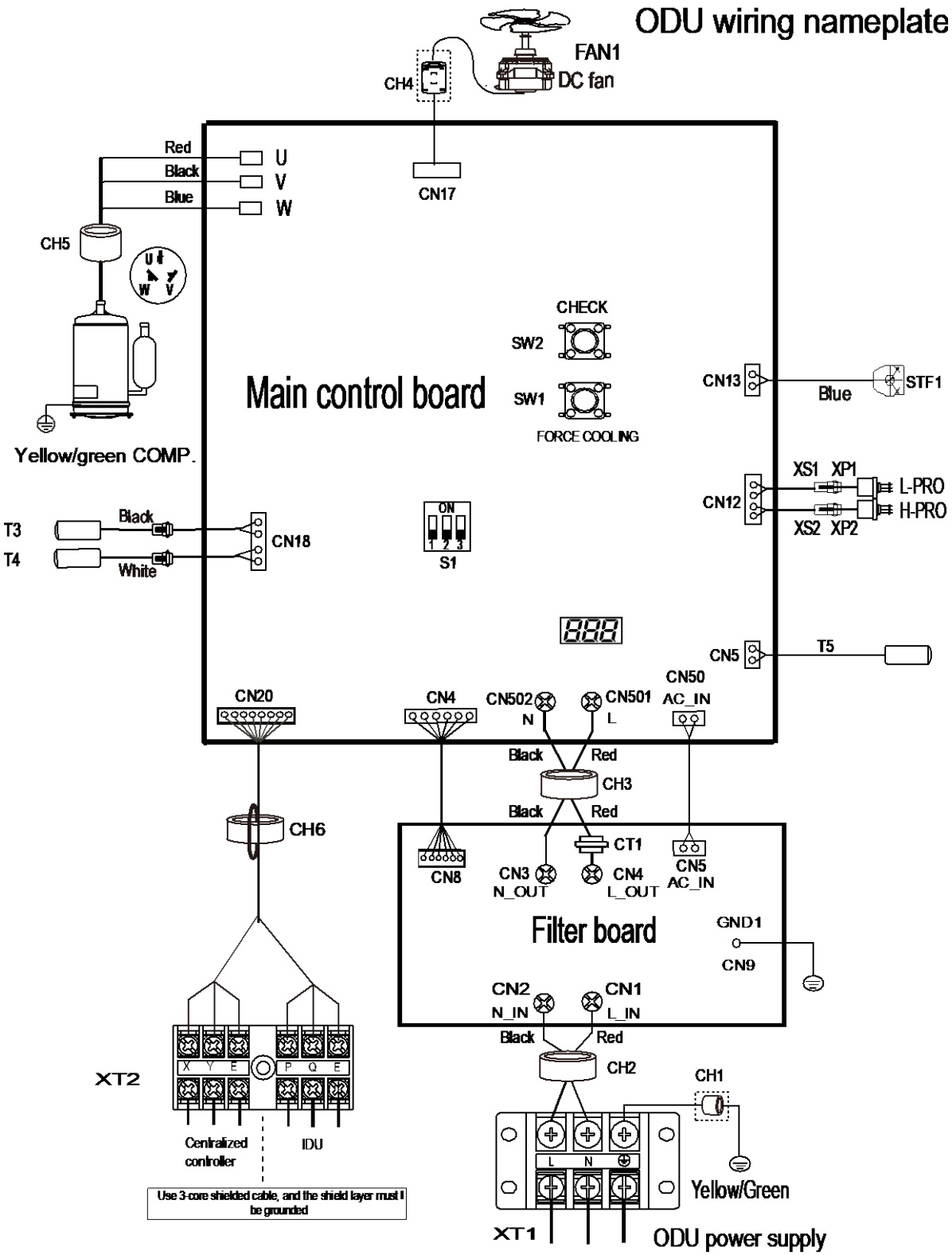
MCR3-X 105M / MCR3-X 140M



S1		
	S1 ON OFF 1 2 3 4	Capacity dialing of outdoor unit :10.5KW
	S1 ON OFF 1 2 3 4	Capacity dialing of outdoor unit :12KW

Component code	Name	Component code	Name
BR	Rectifier bridge stacking	RL1	Main relay
CH1-CH7	Magnetic ring	STF1	4-way valve
COMP.	Compressor	T3	Outdoor condenser temperature sensor
D502,D503	Fast recovery diode	T4	Outdoor ambient temperature sensor
AP2	Spot check module	T5	Discharge temperature sensor
FAN	DC fan	NF	Filter assembly
FUSE1-FUSE2	Fuse	AP1	Main control board
HS	Radiator	XT1	3-slot power supply terminal
H-PRO	High pressure protection switch	XT2	6-slot power supply terminal
L-PRO	Low pressure protection switch	XP,XS	Connecting terminal
L502,L503	PFC inductance	Q502,Q503	IGBT
IPM	Inverter module	TL	Refrigerant radiator temperature sensor (connected if there is any)




ODU wiring nameplate
FAN1
DC fan
CH4
CN17
Red
Black
Blue
U
V
W
CH5
Yellow/green COMP.
CHECK
SW2
SW1
FORCE COOLING
Main control board
CN13
Blue
STF1
XS1 XP1
L-PRO
H-PRO
XS2 XP2
CN12
T3
T4
Black
White
CN18
ON
1 2 3
S1
T5
CN5
CN20
CN4
CN502
N
CN501
L
CN50
AC_IN
Black
Red
CH3
CH6
CT1
CN8
CN3
N_OUT
CN4
L_OUT
CN5
AC_IN
Filter board
GND1
CN9
CN2
N_IN
CN1
L_IN
CH2
CH1
XT2
X Y E
P Q E
Centralized controller
IDU
Use 3-core shielded cable, and the shield layer must I be grounded
L N
Yellow/Green
XT1
ODU power supply

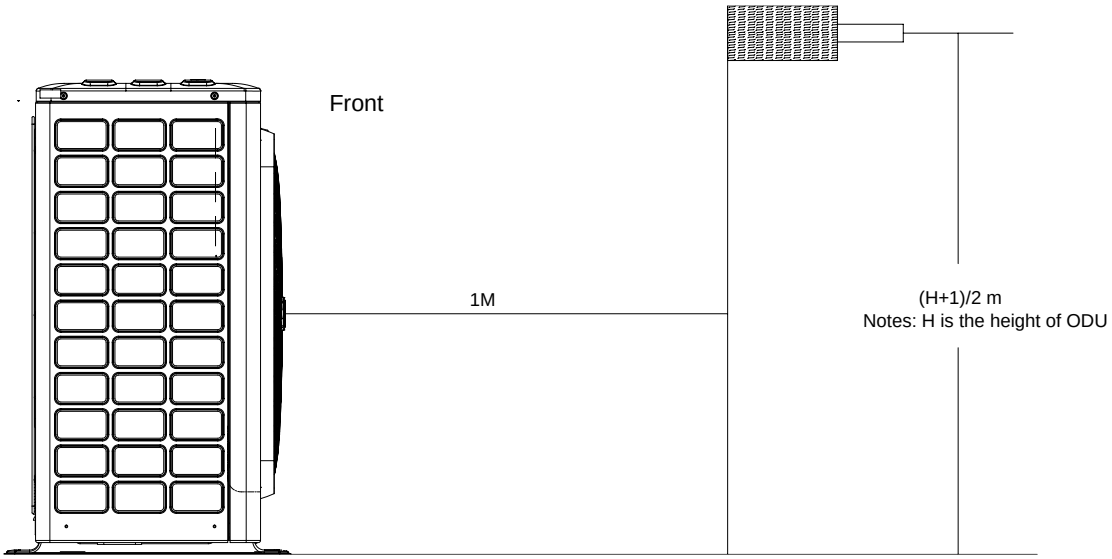
5. Electric Characteristics

Model	Power Supply[1]							Compressor		OFM	
Capacity	Hz	Volts	Min.volts	Max.volts	MCA[2]	TOCA[3]	MFA[4]	MSC[5]	RLA[6]	kW	FLA
26	50/60	220-240	198	264	8.8	11.5	16	/	6.1	0.02	0.44
35	50/60	220-240	198	264	9.7	12.5	16	/	6.7	0.034	0.44
53	50/60	220-240	198	264	13.4	15.8	20	/	11.9	0.056	0.71
71	50/60	220-240	198	264	18.9	20.9	25	/	15	0.08	0.84
90	50/60	220-240	198	264	17.9	20.9	32	/	12.8	0.17	1.52
105	50/60	220-240	198	264	20.6	28.5	32	/	12.3	0.17	1.52
140	50/60	220-240	198	264	29.5	36.7	40	/	19.8	0.17	1.52
160	50/60	220-240	198	264	35.1	36.7	40	/	22.3	0.17	1.52

Abbreviations:
MCA: Minimum Circuit Amps; TOCA: Total Over-current Amps; MFA: Maximum Fuse Amps; MSC: Maximum Starting Current (A); RLA: Rated Load Amps; FLA: Full Load Amps

Notes:
1. Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits. Maximum allowable voltage variation between phases is 2%.
2. Select wire size based on the value of MCA.
3. TOCA indicates the total overcurrent amps value of each OC set.
4. MFA is used to select overcurrent circuit breakers and residual-current circuit breakers.
5. MSC indicates the maximum current on compressor start-up in amps.
6. RLA is based on the following conditions: indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB.

6. Sound Levels



Model	Noise level under three speeds of fan (dB(A))
MCR3-X 26M	50
MCR3-X 35M	50
MCR3-X 53M	54
MCR3-X 71M	55
MCR3-X 90M	55
MCR3-X 105M	59
MCR3-X 140M	59
MCR3-X 160M	59

7. Accessories

Accessory name of outdoor unit	Qty.	Purpose
Seal ring	1	For drainage of ODU
Water outlet joint	1	

Part. 3 Indoor Unit

1. Specifications

Table 1.1: IDR3-X 26(35,53)M specifications

Model name			IDR3-X 26M	IDR3-X 35M	IDR3-X 53M
Power supply			1-phase, 220-240V, 50/60Hz		
Cooling	Capacity	W	2600(700~3500)	3500 (700~4000)	5300(1000~6000)
	Input(IDU+ODU)	W	715(170~1420)	1020(190~1460)	1500(250~2370)
	Input(IDU)	W	60	70	80
	EER	/	3.64	3.43	3.53
Heating	Capacity	W	3600(700~3800)	4150(800~4600)	6200(1200~6800)
	Input (IDU+ODU)	W	920(170~1360)	1200(190~1570)	1650(300~2460)
	Input(IDU)	W	60	70	80
	COP	/	3.91	3.46	3.76
Fan motor	Model		ZKSP-30-8-3L	ZKSP-30-8-3L	ZKSP-30-8-3L
	Type		DC motor		
	Brand		Welling/Match Well/Xin jun		
	Speed (H/M/L)	r/min	1080/830/700/620	1120/910/770/660	1120/970/840/700
Coil	Number of rows		2	2	2
	Tube pitch × row pitch	mm	21×17	21×17	21×17
	Fin spacing	mm	1.4	1.4	1.3
	Fin type		Arc shutter		
	Tube OD and type	mm	ø7,Copper pipe with internal thread		
	Dimensions (L×H ×W)	mm	515×147×26.74		735×147×26.74
	Number of circuits		4	4	5
Airflow rate		m^3/h	480	550	750
External static pressure		Pa	25(0-40)	25(0-40)	25(0-60)
Sound pressure level		dB(A)	34/33/19	35/34/21	36/35/24
Unit	Net dimensions(W×H×D)	mm	700×210×450		920×210×450
	Packed dimensions (W×H×D)	mm	870×285×525		1115×285×525
	Net/Gross weight	kg	17/20		21/24.5
Refrigerant type			R410A		
Throttle		Type	/		
		Model	/		
Design pressure (H/L)		MPa	4.2/1.5		4.2/1.5
Pipe connections	Liquid/Gas pipe	mm	Φ6.4/Φ9.5	Φ6.4/Φ9.5	Φ6.4/Φ12.7
	Drain pipe	mm	/	/	/
Piping Length		m	15	15	25
Level Difference		m	10	10	15
Controller			WDC-86E/K		

Note:

1. The design implementation standard of this unit is GB/T 18836-2017.
2. The parameters in the table are the nominal values tested under the rated working conditions specified in GB/T 18836-2017, and actual operating parameters will vary with the working conditions.
3. The above parameters may change due to product improvement. Please refer to the nameplate parameters of the product.

Table 1.2: IDR3-X 71(90)M specifications

Model name			IDR3-X 71M	IDR3-X 90M
Power supply			1-phase, 220-240V, 50/60Hz	
Cooling	Capacity	W	7200(2400~8200)	9000
	Input(IDU+ODU)	W	2180(450~3280)	2750
	Input(IDU)	W	100	170
	EER	/	3.30	3.27
Heating	Capacity	W	8600(2100~9600)	10000
	Input (IDU+ODU)	W	2400(400~3650)	2900
	Input(IDU)	W	100	170
	COP	/	3.58	3.45
Fan motor	Model		ZKSP-60-8-2	WZDK150-38GS
	Type		DC motor	
	Brand		Welling/Match Well/Xin jun	Shibaura/Welling
	Speed (H/M/L)	r/min	1220/960/810/720	958/889/794/725
Coil	Number of rows		2	3
	Tube pitch × row pitch	mm	21×13.37	21×13.37
	Fin spacing	mm	1.3	1.5
	Fin type		Arc shutter	Hydrophilic aluminum
	Tube OD and type	mm	Φ7 Inner groove	
	Dimensions (L×H ×W)	mm	955×147×26.74	955×336×58.2
	Number of circuits		5	8
Airflow rate		m^3/h	1000	1500
External static pressure		Pa	25(0-60)	25(0-100)
Sound pressure level		dB(A)	39/37/29	43/39/36
Unit	Net dimensions(W×H×D)	mm	1140×210×450	1140×270×775
	Packed dimensions (W×H×D)	mm	1335×285×530	1370×365×855
	Net/Gross weight	kg	25.5/40	39/45.5
Refrigerant type			R410A	
Throttle		Type	/	Electronic expansion valve
		Model	/	BD20FKS(L)
Design pressure (H/L)		MPa	4.2/1.5	4.5/1.7
Pipe connections	Liquid/Gas pipe	mm	Φ6.4/Φ15.9	Φ9.5/Φ15.9
	Drain pipe	mm	/	OD Φ19
Piping Length		m	25	30
Level Difference		m	15	20
Controller			WDC-86E/K	

Note:

1. The design implementation standard of this unit is GB/T 18836-2017.
2. The parameters in the table are the nominal values tested under the rated working conditions specified in GB/T 18836-2017, and actual operating parameters will vary with the working conditions.
3. The above parameters may change due to product improvement. Please refer to the nameplate parameters of the product.

Table 1.3: IDR3-X 105(140,160)M specifications

Model name			IDR3-X 105M	IDR3-X 140M	IDR3-X 160M
Power supply			1-phase, 220-240V, 50/60Hz		
Cooling	Capacity	W	10500	14000	16000
	Input(IDU+ODU)	W	3000	4650	5500
	Input(IDU)	W	291	700	700
	EER	/	3.50	3.01	2.91
Heating	Capacity	W	11600	16000	18000
	Input (IDU+ODU)	W	3000	4500	5350
	Input(IDU)	W	291	700	700
	COP	/	3.87	3.56	3.36
Fan motor	Model		YSK140-4P	WZDK750-38GS-W	WZDK750-38GS-W
	Type		DC motor	DC motor	DC motor
	Brand		Nidec/Welling/Match-Well	Panasonic/ Welling	
	Speed (H/M/L)	r/min	1030/960/870/770	1010/920/780/680	1050/960/860/760
Coil	Number of rows		4	4	4
	Tube pitch×row pitch	mm	21×13.37	25.4×22	25.4×22
	Fin spacing	mm	1.5	1.6	1.6
	Fin type		Hydrophilic aluminum		
	Tube OD and type	mm	Φ7 Inner groove	Φ9.53 Inner groove	
	Dimensions(L×H×W)	mm	1030×378×58	996×356×88	
	Number of circuits		8	7	7
Airflow rate		m^3/h	2200	2900	3300
External static pressure		Pa	37(0-100)	50(0-200)	50(0-200)
Sound pressure level		dB(A)	43/39/36	49/46/45	52/49/47
Unit	Net dimensions(W×H×D)	mm	1200×300×865	1370×420×691	1370×420×691
	Packed dimensions (W×H×D)	mm	1400×375×925	1436×440×768	1436×440×768
	Net/Gross weight	kg	43.5/50	68/76	68/76
Refrigerant type			R410A		
Throttle		Type	Electronic expansion valve		
		Model	BD24FKS(L)	BD20FKS(L)	
Design pressure (H/L)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Pipe connections	Liquid/Gas pipe	mm	Φ9.5/Φ15.9	Φ9.5/Φ15.9	Φ9.5/Φ15.9
	Drain pipe	mm	OD Φ25	OD Φ25	OD Φ25
Piping Length		m	30	50	50
Level Difference		m	20	25	25
Controller			WDC-86E/K		

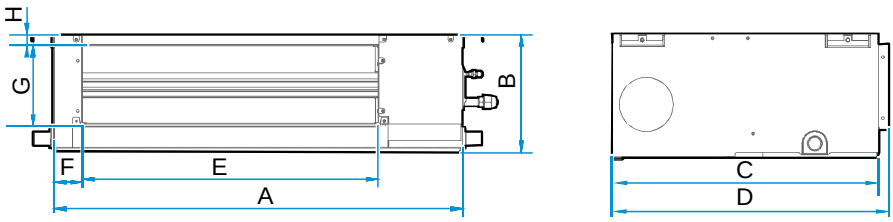
Note:

1. The design implementation standard of this unit is GB/T 18836-2017.
2. The parameters in the table are the nominal values tested under the rated working conditions specified in GB/T 18836-2017, and actual operating parameters will vary with the working conditions.
3. The above parameters may change due to product improvement. Please refer to the nameplate parameters of the product.

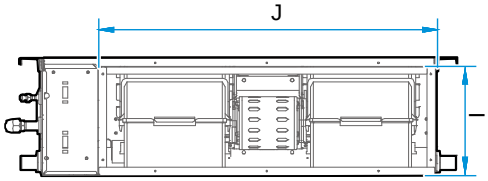
2. Dimensions (Unit: mm)

IDR3-X 26M/ IDR3-X 35M/ IDR3-X 53M/ IDR3-X 71M

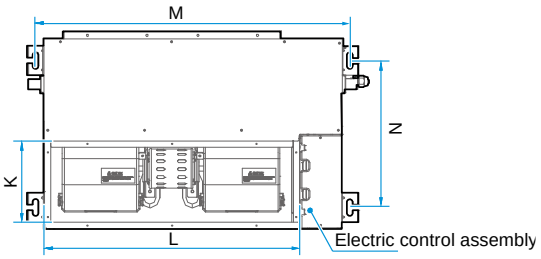
External dimensions and size of air outlet duct



Size of return air inlet (back return air mode)



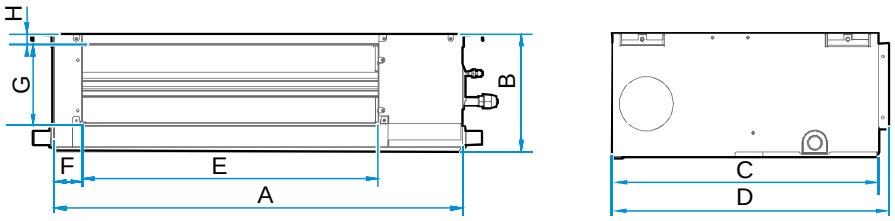
Size of return air inlet (bottom return air mode), and the distance between the lugs



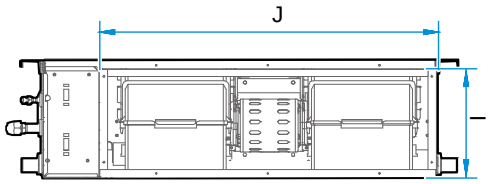
Model		26,35	53	71
External dimension	A	700	920	1140
	B	210	210	210
	C	450	450	450
	D	470	470	470
Size of Air Outlet	E	512	732	952
	F	45	45	45
	G	145	145	145
	H	17	17	17
Size of Return Air Inlet	I	180	177	177
	J	600	820	1040
	K	175	180	180
	L	570	790	1010
Spacing Between Lugs	M	740	960	1180
	N	350	350	350

IDR3-X 90M

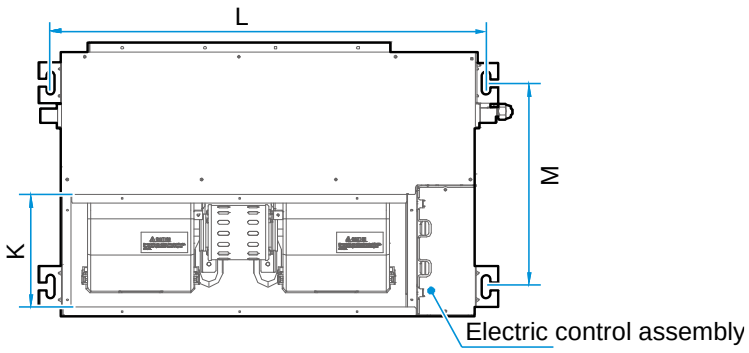
External dimensions and size of air outlet duct



Size of return air inlet (back return air mode)



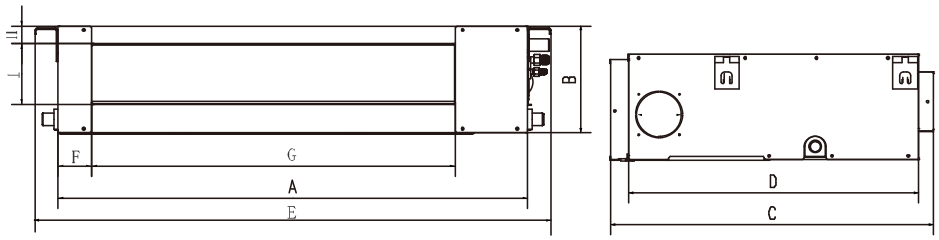
Size of return air inlet (bottom return air mode), and the distance between the lugs



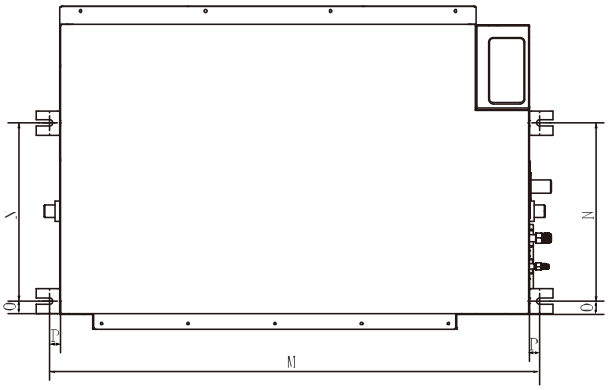
Model	External dimension				Size of Air Outlet				Size of Return Air Inlet			Spacing Between Lugs	
	A	B	C	D	E	F	G	H	I	J	K	L	M
90	1140	270	710	775	933	65	179	35	260	1035	256	1180	490

IDR3-X 105M

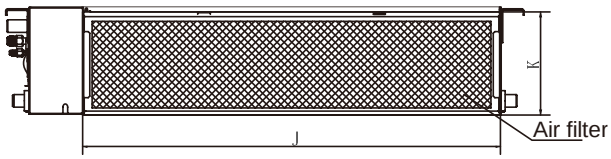
External dimensions and size of air outlet opening



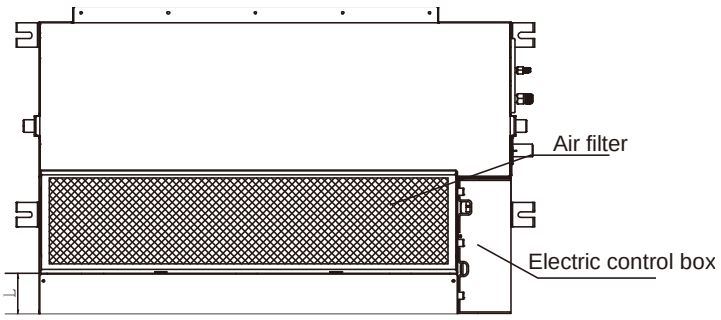
Distance between the lugs



Size of air inlet opening (air intake from rear)

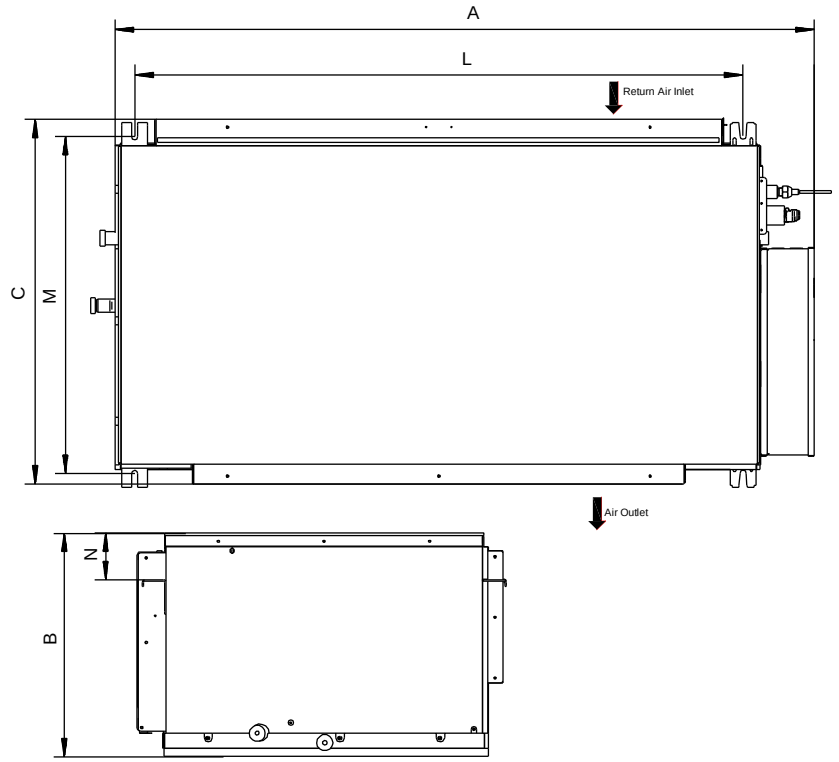


Size of air inlet opening (air intake from below)

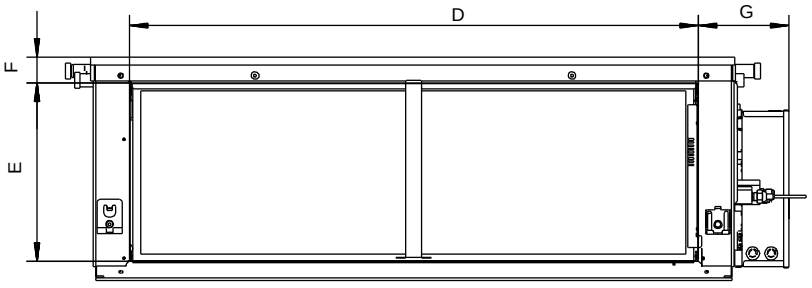


Model	External dimension					Size of Air Outlet				Size of Return Air Inlet			Spacing Between Lugs				Fresh air inlet diameter
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T
105	1200	300	865	800	1290	85	969	40	204	1094	288	45	1240	500	26	20	Φ125

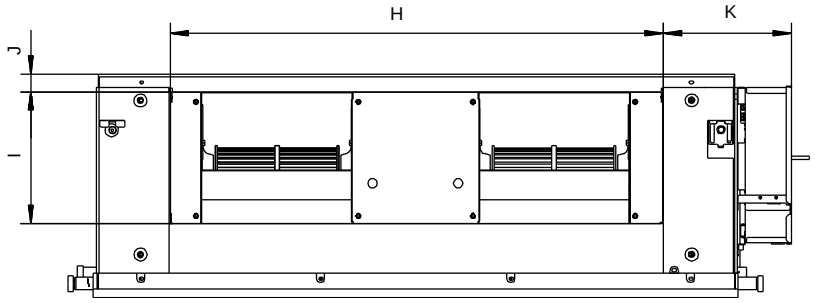
IDR3-X 140M/ IDR3-X 160M



Size of Air Outlet



Size of Return Air Inlet

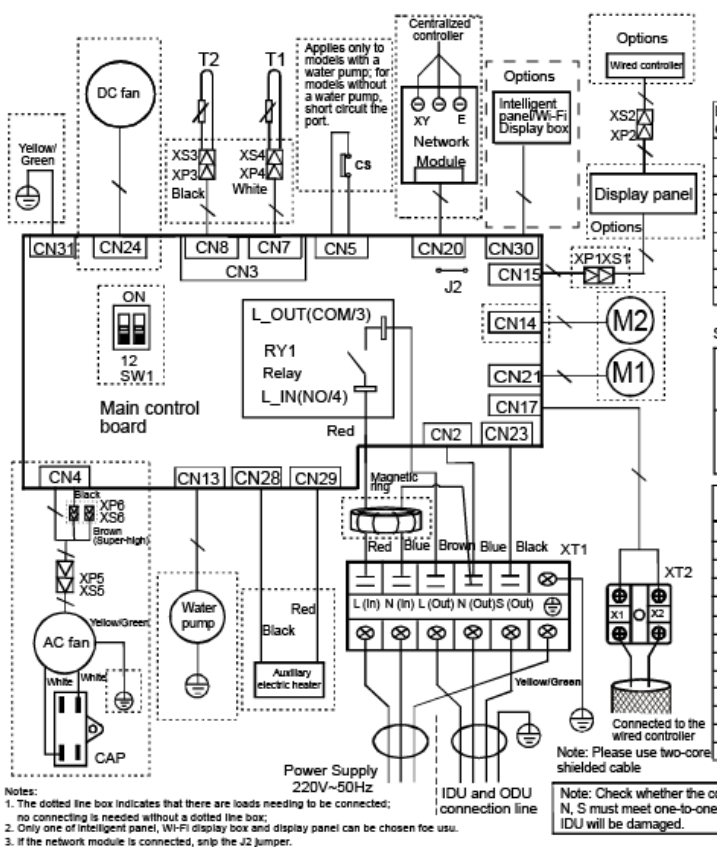


Model	External dimension			Size of Air Outlet				Size of Return Air Inlet				Spacing Between Lugs		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
140/160	1322	423	662	1076	338	49	171	933	250	34	243	1151	638	88

3. Wiring Diagrams

IDR3-X 26M/ IDR3-X 35M/ IDR3-X 53M/ IDR3-X 71M

Error Code	Error Code Description(1)
E0	IDU EEPROM fault
E1	ODU communication fault
E3	IDU fan stall fault
E5	ODU temperature sensor or EEPROM fault
E50	ODU temperature sensor fault
E51	ODU EEPROM fault
E52	Outdoor coil T3 temperature sensor fault
E53	Outdoor environment T4 temperature sensor fault
E54	Outdoor discharge temperature sensor fault
E55	Outdoor air return temperature sensor fault
E6	IDU temperature sensor fault
E60	IDU room temperature T1 sensor error
E61	IDU pipe temperature T2 sensor error
E7	ODU DC fan stall fault
E71	Outdoor fan over-current (external driving)
E72	Outdoor fan stall (external driving)
E73	Outdoor fan phase loss (external driving)
E74	Outdoor fan zero speed (external driving)
EE	Water level alarm error
P0	ODU IPM module protection
P1	Voltage protection
P10	Low voltage protection
P11	High voltage protection
P12	Outdoor DC-side voltage protection
P2	Temperature protection for compressor top
P4	ODU compressor feedback protection
P40	Main control chip and driver chip communication fault
P41	Compressor current sampling circuit fault
P42	Compressor start-up fault
P43	Compressor phase loss protection
P44	Compressor zero speed protection
P45	ODU electric control power down protection
P46	Compressor stall protection
P47	Compressor lock protection
P48	Compressor out-synchronous protection
P49	Compressor over-current protection
P6	Compressor high discharge temperature protection
P8	Outdoor electric control current protection
P80	IDU current protection
P81	ODU current protection
P82	Input AC current sampling circuit fault
PA	High temperature protection of condenser
PF	PFC module switch power-off



Error Code	Error Code Description (2)
P9	Evaporator high and low temperature protection
P90	Evaporator high temperature protection
P91	Evaporator low temperature protection
L0	Evaporator high and low temperature frequency limit
L1	Condenser high temperature frequency limit
L2	Compressor high discharge temperature frequency limit
L3	Current frequency limit
L5	Voltage frequency limit
L6	PFC module fault frequency limit

SW1 Static pressure selection (only for SW model):

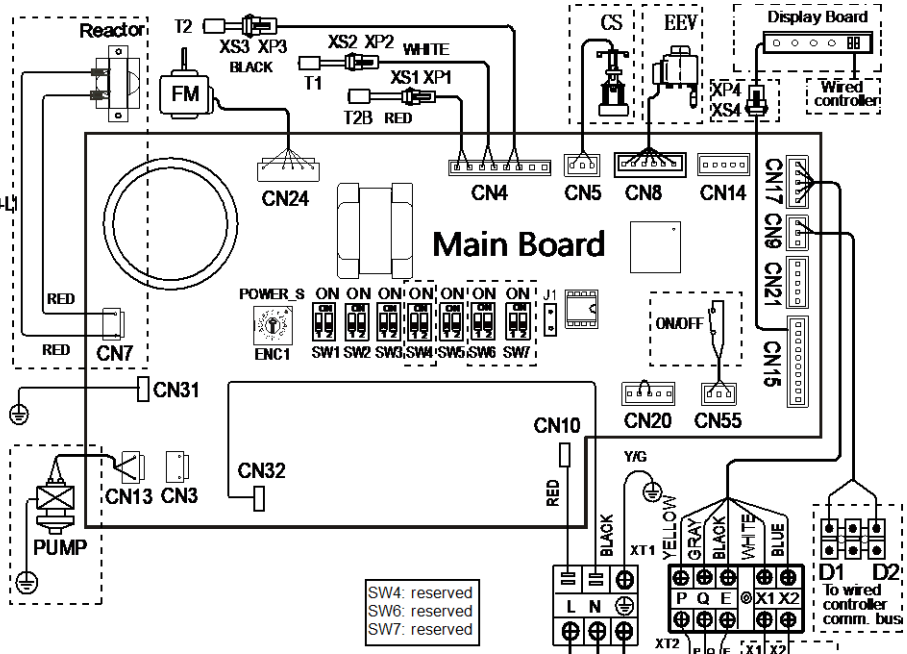
ON 12	0Pa	ON 12	20Pa
ON 12	10Pa	ON 12	30Pa

Item	Name
RY1	Relay
T1	Room temperature sensor
T2	Pipe temperature sensor
XP1-XP6	Intermediate plug
XS1-XS6	Intermediate plug
XT1	Terminal block
XT2	Terminal block
CS	Water level switch
M1	Swing motor 1
M2	Swing motor 2
L_IN	Power live wire input
L_OUT	Power live wire output
CAP	Indoor fan capacitance

Note: Check whether the connection line between IDU/ODU is correct. L, N, S must meet one-to-one correspondence; otherwise, the main board of IDU will be damaged.

IDR3-X 90M

Error code	Error or protection definition
HF	IDU mismatching error
H4	L (L0/L1) error occurs three times in one hour reporting H4, and this error is not recoverable. After H4 error, post check may be performed on the latest three errors (not limited to L0, L1). For example: report L0-L4-L8-L9-L0-L1 within one hour and report H4 error. The errors for spot check are L9, L0, and L1.
E7	IDU EEPROM error
E8	ODU EEPROM error
E9	Wrong compressor model in parameter memory EPROM
H0	Communication error between main control board and IR341
E1	Communication error between IDU and ODU
E2	T1 sensor error
E3	T2 sensor error
E4	T2B sensor error
E43	T3 sensor error
E44	T4 sensor error
E45	T5 sensor error
E5	Voltage protection error
E6	ODU DC fan error
EE	Water level alarm error
EH	TL sensor error
Eb	E6 error occurs six times in one hour, requiring power failure recovery
EF	PFC feedback resistance failure
PL	Heat sink TF high temperature protection
P1	High pressure protection
P2	Low pressure protection
P3	Input current protection
P4	Discharge temperature protection
P5	Outdoor condenser T3 high temperature protection
PE	Evaporator T2 high temperature protection
L0	Module protection is triggered
L1	DC bus low voltage protection
L2	DC bus high voltage protection
L4	MCE error
L5	Zero speed protection
L7	Phase loss
L8	Protection when the previous and next speed change is > 15Hz
L9	Protection for a difference of > 15Hz between the set speed and operating speed
F1	Detected DC bus voltage (PN voltage) < 200VDC for 5S after power-on
P8	Typhoon protection
EP	Ambient temperature less than or equal to 10°C in cooling mode



ENC1	Toggle Switch	Set horsepower
	Code	Capacity
	5	7100W
	7	9000W
	8	10500W
	9	14000W
	A	16000W

Code	Title
FM	Indoor fan motor
PUMP	Pump motor
T1	Indoor ambient temp. sensor
T2B	Indoor heat exchanger outlet temp. sensor
T2	Indoor heat exchanger mid-point temp. sensor
EEV	Electronic expansion valve
XT1-2	Terminal
CS	Water level switch
XP1-4 XS1-4	Connectors

SW2_1 definition

SW2 [0]	The electric heat operating condition is T4≤0℃ in automatic operation mode (default)
SW2 [1]	The electric heat operating condition is T4≤15℃ in automatic operation mode

SW2_2 definition

SW2 [0]	In heating mode fan does not run when indoor heat exchanger mid-point temperature is 24℃ or below (default)
SW2 [1]	In heating mode fan does not run when indoor heat exchanger mid-point temperature is 15℃ or below

SW3_1 definition

SW3 [0]	No electric heat
SW3 [1]	Electric heat

SW3_2 definition

SW3 [0]	Reserved (default)

SW1_1 definition

SW1 [0]	Cooling mode temperature compensation is 0℃ (default)
SW1 [1]	Cooling mode temperature compensation is 2℃

SW1_2 definition

SW1 [0]	In automatic mode, judge the running mode every 30 minutes (default)
SW1 [1]	In automatic mode, judge the running mode every 15 minutes

SW5 definition

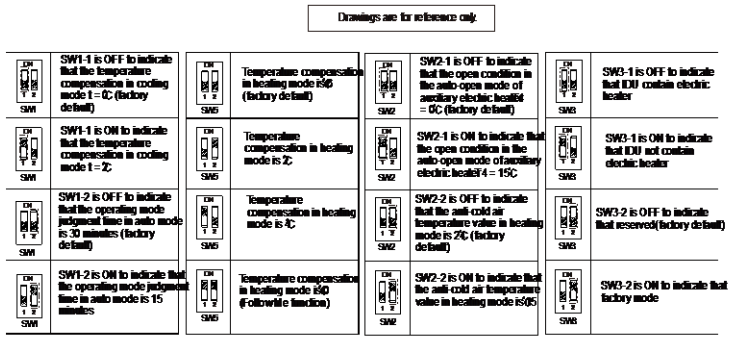
SW5 [00]	Heating mode temperature compensation is 6℃ (default)
SW5 [01]	Heating mode temperature compensation is 2℃
SW5 [10]	Heating mode temperature compensation is 4℃
SW5 [11]	Heating mode temperature compensation is 0℃ (use follow me function)

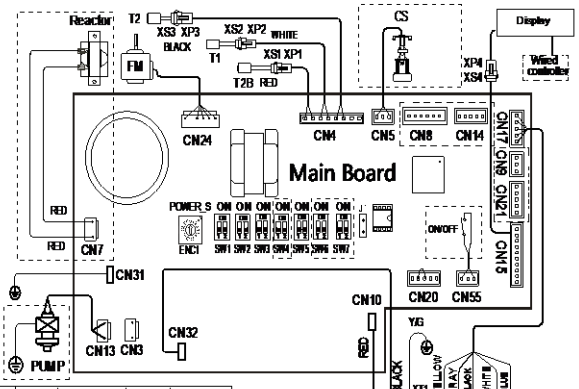
0/1 definition of each dial code switch:

ON 1	means 0
ON 1	means 1

J1 definition

J1	Auto restart function enabled
J1	Auto restart function disabled





Error code	Error or protection definition	Error Code	Error or protection definition
HF	IDU mismatching error	P1	High pressure protection
E7	IDU EEPROM error	P2	Low pressure protection
E9	ODU EEPROM error	P3	Input current protection
E.9.	Wrong compressor model in EPROM	P4	Discharge temperature protection
H0	Communication error between main control board and IR341	P5	Outdoor condensing3 high temperature protection
E1	Communication error between IDU and ODU	PE	Evaporator2 high temperature protection
E2	T1 sensor error	L0	Module protection is triggered
E3	T2 sensor error	L1	DC bus low voltage protection
E4	T2B sensor error	L2	DC bus high voltage protection
E43	T3 sensor error	L4	MCE error
E44	T4 sensor error	L5	Zero speed protection
E45	T5 sensor error	L7	Phase loss
E5	Voltage protection error	L8	Protection when the previous and next speed change is> 15 Hz
E6	ODU DC fan error	L9	Protection for a difference of > 15 Hz between the set speed and operating speed
EE	Water level alarm error	F1	Detected DC bus voltage (PN voltage) < 200 VDC for 5S after power-on
Eb	E6 error occurs six times in one hour, requiring power failure recovery	P8	Typhoon protection
Ed	Rest of ODU error(EE,LA,LC,LH etc)	EP	Ambient temperature less than or equal to 10℃ in cooling mode
EF	PFC feedback resistance failure	H4	L (L0/L1) error occurs three times in one hour, repotting H4, and this error is not recoverable
PL	Heat sink(IF high temperature protection		

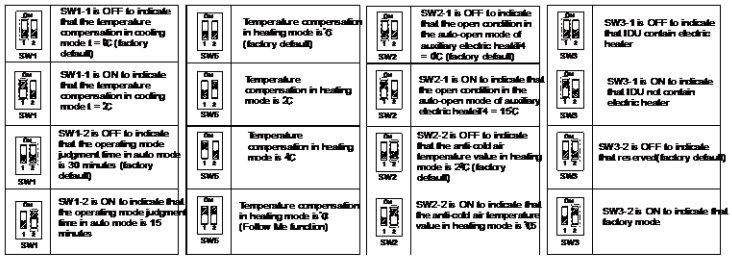
ENC1	Toggle Switch Code	Set Horsepower Capacity	Toggle Switch Code	Set Horsepower Capacity	Toggle Switch Code	Set Horsepower Capacity
	5	7100W	8	10500W	A	16000W
	7	9000W	9	14000W		

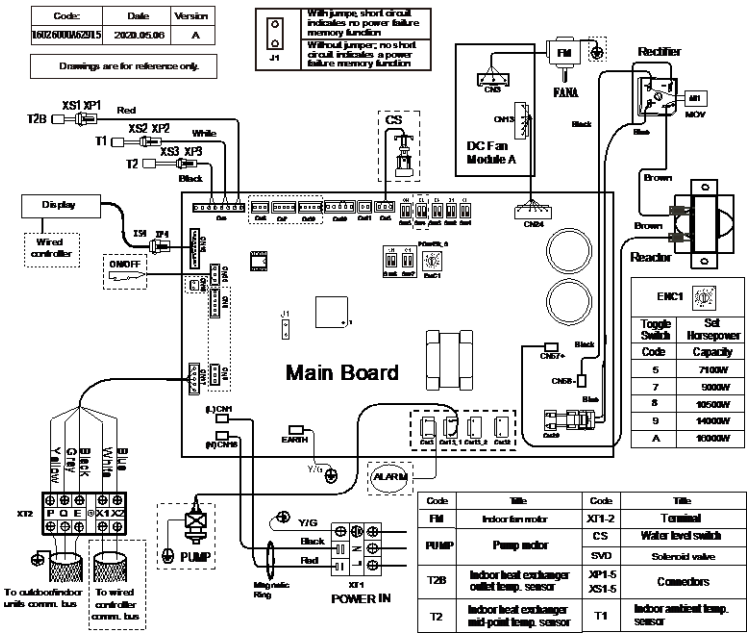
No.	Displayed contents	No.	Displayed contents
1	Operating mode (0 - Standby; 1 -Air supply; 2 - Cooling; 3 - Heating; 4 - Forced cooling; 6 - Dry)	14	EXV opening
2	Operating fan speed (0:1-Sleep; 2-Weak; 3-Low; 4-Medium; 5-High; 6-Super High; 7-Strong)	15	Actual current value
3	Capacity HP of indoor unit	16	Comp. current
4	Total IDU capacity requirement	17	Actual voltage
5	Capacity requirement for the modified ODU	18	DC bus voltage
6	Ts set temperature	19	Model
7	T1 indoor temperature	20	IDU network address (0—63)
8	T2 or T2B temperature (T2 displayed for heating, T2B displayed for others)	21	ODU address in the centralized control system (reserved)
9	T3 tube temperature	22	IDU program version No.
10	T4 ambient temperature	23	ODU program version No.
11	T5 discharge temperature	24	Last error or protection code (if N/A, display "E-")
12	TF module temperature	25	Display –
13	Reserved	26	IDU SN code reading

Code	Title
FM	Indoor fan motor
PUMP	Pump motor
T1	Indoor ambient temp. sensor
T2B	Indoor heat exchanger outlet temp. sensor
T2	Indoor heat exchanger mid-point temp. sensor
XS1-4 XP1-4	Connectors
XT1-2	Terminal
CS	Water level switch

J1	With jumper, short circuit indicates no power failure memory function
	Without jumper, no short circuit indicates a power failure memory function

IDR3-X 140M / IDR3-X 160M





Code	Title	Code	Title
FM	Indoor fan motor	XT1-2	Terminal
PUMP	Pump motor	CS	Water level switch
		SVD	Solenoid valve
T2B	Indoor heat exchanger outlet temp. sensor	XP1-5 XS1-5	Connectors
T2	Indoor heat exchanger mid-point temp. sensor	T1	Indoor ambient temp. sensor

No.	Displayed contents	No.	Displayed contents
1	Operating mode (0 - Standby; 1 -Air supply; 2 - Cooling; 3 - Heating; 4 - Forced cooling; 6 - Dry)	14	EXV opening
2	Operating fan speed (0-8) 1-Sleep; 2Weak; 3-Low; 4-Medium; 5-High; 6-Super High; 7-Strong)	15	Actual current value
3	Capacity HP of indoor unit	16	Comp. current
4	Total IDU capacity requirement	17	Actual voltage
5	Capacity requirement for the modified ODU	18	DC bus voltage
6	Ts set temperature	19	Model
7	T1 indoor temperature	20	IDU network address [0—63]
8	T2 or T2B temperature (T2 displayed for heating, T2B displayed for others)	21	ODU address in the centralized control system (reserved)
9	T3 tube temperature	22	IDU program version No.
10	T4 ambient temperature	23	ODU program version No.
11	T5 discharge temperature	24	Last error or protection code (if N/A, display "E
12	TF module temperature	25	Display –
13	Reserved	26	IDU SN code reading

Error code	Error or protection definition	Error Code	Error or protection definition
HF	IDU mismatching error	P1	High pressure protection
E7	IDU EEPROM error	P2	Low pressure protection
E9	ODU EEPROM error	P3	Input current protection
E.9.	Wrong compressor model in EPROM	P4	Discharge temperature protection
H0	Communication error between main control board and IR341	P5	Outdoor condenser/T3 high temperature protection
E1	Communication error between IDU and ODU	PE	Evaporator/T2 high temperature protection
E2	T1 sensor error	L0	Module protection is triggered
E3	T2 sensor error	L1	DC bus low voltage protection
E4	T2B sensor error	L2	DC bus high voltage protection
E43	T3 sensor error	L4	MCE error
E44	T4 sensor error	L5	Zero speed protection
E45	T5 sensor error	L7	Phase loss
E5	Voltage protection error	L8	Protection when the previous and next speed change is > 15 Hz
E6	ODU DC fan error	L9	Protection for a difference of > 15 Hz between the set speed and operating speed
EE	Water level alarm error	F1	Detected DC bus voltage (PN voltage) < 200 VDC for 55 after power-on
Ed	Rest of ODU error(EE,LA,LC,LH etc)	P8	Typhoon protection
Eb	E6 error occurs six times in one hour, requiring power failure recovery	EP	Ambient temperature less than or equal to 10C in cooling mode
EF	PFC feedback resistance failure	H4	L (L0/L1) error occurs three times in one hour, reporting H4, and this error is not recoverable
PL	Heat sink/TF high temperature protection		

4. Capacity Table

Model 26

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
520.0	10.00	3.26	2.21	3.45	2.28	3.64	2.35	3.71	2.32	3.77	2.43	3.90	2.58	4.03	2.74
	12.00	3.18	2.19	3.38	2.26	3.57	2.33	3.64	2.30	3.70	2.41	3.83	2.56	3.96	2.72
	14.00	3.11	2.16	3.30	2.24	3.50	2.30	3.56	2.28	3.63	2.39	3.76	2.54	3.89	2.70
	16.00	3.04	2.13	3.23	2.21	3.42	2.28	3.49	2.26	3.55	2.37	3.68	2.52	3.81	2.68
	18.00	2.96	2.10	3.16	2.18	3.35	2.26	3.42	2.24	3.48	2.34	3.61	2.50	3.74	2.65
	20.00	2.89	2.08	3.09	2.16	3.28	2.23	3.34	2.21	3.41	2.32	3.54	2.47	3.67	2.63
	21.00	2.86	2.07	3.05	2.15	3.24	2.23	3.31	2.21	3.37	2.32	3.50	2.47	3.63	2.63
	23.00	2.78	2.04	2.98	2.13	3.17	2.20	3.23	2.19	3.30	2.29	3.43	2.45	3.56	2.61
	25.00	2.71	2.01	2.90	2.10	3.10	2.18	3.16	2.16	3.23	2.27	3.35	2.42	3.48	2.58
	27.00	2.64	1.97	2.83	2.06	3.02	2.15	3.09	2.13	3.15	2.24	3.28	2.39	3.41	2.55
	29.00	2.56	1.94	2.76	2.03	2.95	2.12	3.01	2.11	3.08	2.21	3.21	2.36	3.34	2.52
	31.00	2.49	1.90	2.68	2.00	2.88	2.09	2.94	2.08	3.01	2.18	3.13	2.33	3.26	2.49
	33.00	2.42	1.87	2.61	1.96	2.80	2.05	2.87	2.04	2.93	2.15	3.06	2.30	3.19	2.46
	35.00	2.34	1.83	2.54	1.93	2.73	2.02	2.80	2.01	2.86	2.12	2.99	2.27	3.12	2.43
	37.00	2.24	1.76	2.43	1.86	2.62	1.96	2.69	1.95	2.75	2.06	2.88	2.21	3.01	2.37
	39.00	2.13	1.69	2.32	1.80	2.52	1.90	2.58	1.89	2.64	2.00	2.77	2.15	2.90	2.31
	42.00	1.97	1.58	2.16	1.69	2.35	1.79	2.42	1.79	2.48	1.89	2.61	2.04	2.74	2.20
	44.00	1.86	1.51	2.05	1.62	2.25	1.73	2.31	1.73	2.38	1.83	2.50	1.98	2.63	2.14
	46.00	1.75	1.44	1.95	1.55	2.14	1.66	2.20	1.67	2.27	1.76	2.40	1.91	2.53	2.07
	48.00	1.64	1.36	1.84	1.48	2.03	1.59	2.10	1.60	2.16	1.69	2.29	1.84	2.26	1.87
	50.00	1.54	1.28	1.73	1.41	1.92	1.52	1.99	1.53	2.05	1.63	2.18	1.77	2.31	1.93
	52.00	1.43	1.20	1.62	1.33	1.82	1.45	1.88	1.46	1.95	1.56	2.07	1.70	2.20	1.86
	55.00	1.27	1.08	1.46	1.21	1.66	1.34	1.72	1.35	1.78	1.44	1.91	1.59	2.04	1.74
480.0	10.00	3.03	2.06	3.21	2.12	3.39	2.18	3.45	2.16	3.51	2.26	3.63	2.40	3.75	2.54
	12.00	2.96	2.03	3.14	2.10	3.32	2.16	3.38	2.14	3.44	2.24	3.56	2.38	3.68	2.53
	14.00	2.89	2.01	3.07	2.08	3.25	2.14	3.31	2.12	3.37	2.22	3.49	2.36	3.61	2.51
	16.00	2.83	1.98	3.01	2.06	3.19	2.12	3.25	2.10	3.31	2.20	3.43	2.34	3.55	2.49
	18.00	2.76	1.96	2.94	2.03	3.12	2.10	3.18	2.08	3.24	2.18	3.36	2.32	3.48	2.47
	20.00	2.69	1.93	2.87	2.01	3.05	2.08	3.11	2.06	3.17	2.16	3.29	2.30	3.41	2.45
	21.00	2.66	1.93	2.84	2.00	3.02	2.08	3.08	2.06	3.14	2.16	3.26	2.30	3.38	2.45
	23.00	2.59	1.90	2.77	1.98	2.95	2.05	3.01	2.04	3.07	2.13	3.19	2.28	3.31	2.43
	25.00	2.52	1.87	2.70	1.95	2.88	2.02	2.94	2.01	3.00	2.11	3.12	2.25	3.24	2.40
	27.00	2.45	1.84	2.63	1.92	2.81	2.00	2.87	1.99	2.93	2.08	3.05	2.23	3.17	2.38
	29.00	2.38	1.80	2.56	1.89	2.74	1.97	2.80	1.96	2.86	2.06	2.98	2.20	3.10	2.35
	31.00	2.32	1.77	2.50	1.86	2.68	1.94	2.74	1.93	2.80	2.03	2.92	2.17	3.04	2.32
	33.00	2.25	1.74	2.43	1.83	2.61	1.91	2.67	1.90	2.73	2.00	2.85	2.14	2.97	2.29
	35.00	2.18	1.70	2.36	1.79	2.54	1.88	2.60	1.87	2.66	1.97	2.78	2.11	2.90	2.26
	37.00	2.08	1.64	2.26	1.73	2.44	1.82	2.50	1.82	2.56	1.91	2.68	2.06	2.80	2.21
	39.00	1.98	1.58	2.16	1.67	2.34	1.77	2.40	1.76	2.46	1.86	2.58	2.00	2.70	2.15
	42.00	1.83	1.47	2.01	1.57	2.19	1.67	2.25	1.67	2.31	1.76	2.43	1.90	2.55	2.05
	44.00	1.73	1.40	1.91	1.51	2.09	1.61	2.15	1.61	2.21	1.70	2.33	1.84	2.45	1.99

	46.00	1.63	1.33	1.81	1.44	1.99	1.55	2.05	1.55	2.11	1.64	2.23	1.78	2.35	1.92
	48.00	1.53	1.27	1.71	1.38	1.89	1.48	1.95	1.49	2.01	1.58	2.13	1.72	2.10	1.74
	50.00	1.43	1.19	1.61	1.31	1.79	1.42	1.85	1.43	1.91	1.51	2.03	1.65	2.15	1.79
	52.00	1.33	1.12	1.51	1.24	1.69	1.35	1.75	1.36	1.81	1.45	1.93	1.58	2.05	1.73
	55.00	1.18	1.00	1.36	1.13	1.54	1.24	1.60	1.26	1.66	1.34	1.78	1.47	1.90	1.62
280.0	10.00	2.02	1.37	2.14	1.41	2.26	1.45	2.30	1.44	2.34	1.51	2.42	1.60	2.50	1.70
	12.00	1.97	1.36	2.09	1.40	2.21	1.44	2.25	1.43	2.29	1.49	2.37	1.59	2.45	1.68
	14.00	1.93	1.34	2.05	1.39	2.17	1.43	2.21	1.42	2.25	1.48	2.33	1.58	2.41	1.67
	16.00	1.88	1.32	2.00	1.37	2.12	1.41	2.16	1.40	2.20	1.47	2.28	1.56	2.36	1.66
	18.00	1.84	1.31	1.96	1.35	2.08	1.40	2.12	1.39	2.16	1.45	2.24	1.55	2.32	1.65
	20.00	1.79	1.29	1.91	1.34	2.03	1.38	2.07	1.37	2.11	1.44	2.19	1.53	2.27	1.63
	21.00	1.77	1.28	1.89	1.34	2.01	1.38	2.05	1.37	2.09	1.44	2.17	1.53	2.25	1.63
	23.00	1.73	1.27	1.85	1.32	1.97	1.37	2.01	1.36	2.05	1.42	2.13	1.52	2.21	1.62
	25.00	1.68	1.24	1.80	1.30	1.92	1.35	1.96	1.34	2.00	1.41	2.08	1.50	2.16	1.60
	27.00	1.63	1.22	1.75	1.28	1.87	1.33	1.91	1.32	1.95	1.39	2.03	1.48	2.11	1.58
	29.00	1.59	1.20	1.71	1.26	1.83	1.31	1.87	1.31	1.91	1.37	1.99	1.47	2.07	1.57
	31.00	1.54	1.18	1.66	1.24	1.78	1.29	1.82	1.29	1.86	1.35	1.94	1.45	2.02	1.55
	33.00	1.50	1.16	1.62	1.22	1.74	1.27	1.78	1.27	1.82	1.33	1.90	1.43	1.98	1.53
	35.00	1.45	1.13	1.57	1.20	1.69	1.25	1.73	1.25	1.77	1.31	1.85	1.41	1.93	1.51
	37.00	1.39	1.09	1.51	1.16	1.63	1.22	1.67	1.21	1.71	1.28	1.79	1.37	1.87	1.47
	39.00	1.32	1.05	1.44	1.12	1.56	1.18	1.60	1.18	1.64	1.24	1.72	1.33	1.80	1.43
	42.00	1.22	0.98	1.34	1.05	1.46	1.11	1.50	1.11	1.54	1.17	1.62	1.27	1.70	1.37
	44.00	1.15	0.94	1.27	1.01	1.39	1.07	1.43	1.07	1.47	1.13	1.55	1.23	1.63	1.32
	46.00	1.09	0.89	1.21	0.96	1.33	1.03	1.37	1.03	1.41	1.09	1.49	1.19	1.57	1.28
	48.00	1.02	0.84	1.14	0.92	1.26	0.99	1.30	0.99	1.34	1.05	1.42	1.14	1.40	1.16
	50.00	0.95	0.80	1.07	0.87	1.19	0.94	1.23	0.95	1.27	1.01	1.35	1.10	1.43	1.20
	52.00	0.89	0.75	1.01	0.83	1.13	0.90	1.17	0.91	1.21	0.96	1.29	1.06	1.37	1.15
	55.00	0.79	0.67	0.91	0.75	1.03	0.83	1.07	0.84	1.11	0.89	1.19	0.98	1.27	1.08

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
610.0	-15.30	**-15.00**	2.53	2.36	2.19	2.11	2.02	1.85
	-13.00	**-12.60**	2.71	2.54	2.37	2.28	2.20	2.03
	-11.00	**-10.50**	2.87	2.70	2.53	2.44	2.35	2.18
	-10.00	**-9.50**	2.94	2.77	2.60	2.51	2.43	2.26
	-9.10	**-8.50**	3.01	2.84	2.67	2.59	2.50	2.33
	-7.60	**-7.00**	3.13	2.96	2.79	2.70	2.62	2.45
	-5.60	**-5.00**	3.27	3.10	2.93	2.85	2.76	2.59
	-3.70	**-3.00**	3.53	3.36	3.19	3.10	3.02	2.85
	-0.70	**0.00**	3.72	3.55	3.38	3.30	3.21	3.04
	2.20	**3.00**	3.91	3.74	3.57	3.49	3.40	3.23
	4.10	**5.00**	4.04	3.87	3.70	3.61	3.53	3.36
	6.00	**7.00**	4.17	4.00	3.83	3.74	3.66	3.49
	7.90	**9.00**	4.27	4.10	3.93	3.85	3.76	3.59
	9.80	**11.00**	4.38	4.21	4.04	3.95	3.87	3.70
	11.80	**13.00**	4.49	4.32	4.15	4.06	3.98	3.81
	13.70	**15.00**	4.59	4.42	4.25	4.17	4.08	3.91
	15.60	**17.00**	4.70	4.53	4.36	4.27	4.19	4.02
	17.56	**19.00**	4.81	4.64	4.47	4.38	4.30	4.13
	19.48	**21.00**	4.91	4.74	4.57	4.49	4.40	4.23
	21.41	**23.00**	5.02	4.85	4.68	4.59	4.51	4.34
	22.37	**24.00**	5.07	4.90	4.73	4.65	4.56	4.39
570.0	-15.30	**-15.00**	2.38	2.22	2.06	1.98	1.90	1.74
	-13.00	**-12.60**	2.55	2.39	2.23	2.15	2.07	1.91
	-11.00	**-10.50**	2.70	2.54	2.38	2.30	2.22	2.06
	-10.00	**-9.50**	2.77	2.61	2.45	2.37	2.29	2.13
	-9.10	**-8.50**	2.84	2.68	2.52	2.44	2.36	2.20
	-7.60	**-7.00**	2.94	2.78	2.62	2.54	2.46	2.30
	-5.60	**-5.00**	3.08	2.92	2.76	2.68	2.60	2.44
	-3.70	**-3.00**	3.32	3.16	3.00	2.92	2.84	2.68
	-0.70	**0.00**	3.50	3.34	3.18	3.10	3.02	2.86
	2.20	**3.00**	3.68	3.52	3.36	3.28	3.20	3.04
	4.10	**5.00**	3.80	3.64	3.48	3.40	3.32	3.16
	6.00	**7.00**	3.92	3.76	3.60	3.52	3.44	3.28
	7.90	**9.00**	4.02	3.86	3.70	3.62	3.54	3.38
	9.80	**11.00**	4.12	3.96	3.80	3.72	3.64	3.48
	11.80	**13.00**	4.22	4.06	3.90	3.82	3.74	3.58
	13.70	**15.00**	4.32	4.16	4.00	3.92	3.84	3.68
	15.60	**17.00**	4.42	4.26	4.10	4.02	3.94	3.78
	17.56	**19.00**	4.52	4.36	4.20	4.12	4.04	3.88
	19.48	**21.00**	4.62	4.46	4.30	4.22	4.14	3.98
	21.41	**23.00**	4.72	4.56	4.40	4.32	4.24	4.08
	22.37	**24.00**	4.77	4.61	4.45	4.37	4.29	4.13
370.0	-15.30	**-15.00**	1.71	1.60	1.48	1.42	1.37	1.25
	-13.00	**-12.60**	1.83	1.72	1.60	1.55	1.49	1.37
	-11.00	**-10.50**	1.94	1.82	1.71	1.65	1.59	1.48
	-10.00	**-9.50**	1.99	1.87	1.76	1.70	1.64	1.53
	-9.10	**-8.50**	2.04	1.92	1.81	1.75	1.69	1.58

	-7.60	**-7.00**	2.11	2.00	1.88	1.83	1.77	1.65
	-5.60	**-5.00**	2.22	2.10	1.99	1.93	1.87	1.76
	-3.70	**-3.00**	2.39	2.27	2.16	2.10	2.04	1.93
	-0.70	**0.00**	2.52	2.40	2.29	2.23	2.17	2.06
	2.20	**3.00**	2.65	2.53	2.42	2.36	2.30	2.19
	4.10	**5.00**	2.73	2.62	2.50	2.45	2.39	2.27
	6.00	**7.00**	2.82	2.70	2.59	2.53	2.47	2.36
	7.90	**9.00**	2.89	2.78	2.66	2.60	2.55	2.43
	9.80	**11.00**	2.96	2.85	2.73	2.68	2.62	2.50
	11.80	**13.00**	3.04	2.92	2.81	2.75	2.69	2.58
	13.70	**15.00**	3.11	2.99	2.88	2.82	2.76	2.65
	15.60	**17.00**	3.18	3.06	2.95	2.89	2.83	2.72
	17.56	**19.00**	3.25	3.14	3.02	2.96	2.91	2.79
	19.48	**21.00**	3.32	3.21	3.09	3.04	2.98	2.86
	21.41	**23.00**	3.40	3.28	3.16	3.11	3.05	2.93
	22.37	**24.00**	3.43	3.32	3.20	3.14	3.09	2.97

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Model 35

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
580.0	10.00	4.13	2.80	4.39	2.90	4.64	2.99	4.72	2.96	4.80	3.09	4.97	3.29	5.14	3.49
	12.00	4.05	2.78	4.30	2.88	4.55	2.96	4.64	2.94	4.72	3.07	4.89	3.27	5.06	3.47
	14.00	3.97	2.75	4.22	2.85	4.47	2.94	4.55	2.92	4.64	3.05	4.80	3.25	4.97	3.45
	16.00	3.88	2.72	4.13	2.83	4.39	2.92	4.47	2.90	4.55	3.03	4.72	3.23	4.89	3.43
	18.00	3.80	2.70	4.05	2.80	4.30	2.90	4.39	2.87	4.47	3.01	4.64	3.21	4.80	3.41
	20.00	3.71	2.67	3.97	2.77	4.22	2.87	4.30	2.85	4.39	2.99	4.55	3.18	4.72	3.39
	21.00	3.67	2.66	3.92	2.77	4.18	2.87	4.26	2.85	4.34	2.99	4.51	3.19	4.68	3.39
	23.00	3.59	2.63	3.84	2.74	4.09	2.85	4.18	2.83	4.26	2.96	4.43	3.16	4.60	3.37
	25.00	3.50	2.60	3.76	2.71	4.01	2.82	4.09	2.80	4.18	2.94	4.34	3.14	4.51	3.34
	27.00	3.42	2.56	3.67	2.68	3.92	2.79	4.01	2.77	4.09	2.91	4.26	3.11	4.43	3.32
	29.00	3.34	2.52	3.59	2.64	3.84	2.76	3.92	2.74	4.01	2.88	4.18	3.08	4.34	3.29
	31.00	3.25	2.49	3.50	2.61	3.76	2.72	3.84	2.71	3.92	2.85	4.09	3.05	4.26	3.26
	33.00	3.17	2.45	3.42	2.57	3.67	2.69	3.76	2.68	3.84	2.81	4.01	3.02	4.18	3.22
	35.00	3.08	2.41	3.34	2.54	3.59	2.66	3.67	2.64	3.76	2.78	3.92	2.98	4.09	3.19
	37.00	2.96	2.33	3.21	2.46	3.46	2.59	3.55	2.58	3.63	2.71	3.80	2.92	3.97	3.12
	39.00	2.83	2.25	3.08	2.39	3.34	2.52	3.42	2.51	3.50	2.64	3.67	2.85	3.84	3.05
	42.00	2.64	2.12	2.90	2.27	3.15	2.40	3.23	2.40	3.32	2.53	3.48	2.73	3.65	2.93
	44.00	2.52	2.04	2.77	2.19	3.02	2.33	3.11	2.33	3.19	2.45	3.36	2.65	3.52	2.86
	46.00	2.39	1.96	2.64	2.11	2.90	2.25	2.98	2.25	3.06	2.38	3.23	2.58	3.40	2.78
	48.00	2.27	1.87	2.52	2.03	2.77	2.17	2.85	2.18	2.94	2.30	3.11	2.50	3.12	2.58
	50.00	2.14	1.79	2.39	1.95	2.64	2.09	2.73	2.10	2.81	2.23	2.98	2.42	3.15	2.63
	52.00	2.01	1.70	2.27	1.86	2.52	2.01	2.60	2.02	2.69	2.15	2.85	2.34	3.02	2.55
	55.00	1.83	1.55	2.08	1.72	2.33	1.88	2.41	1.89	2.50	2.01	2.66	2.21	2.83	2.41
550.0	10.00	3.94	2.67	4.18	2.76	4.42	2.85	4.50	2.82	4.58	2.95	4.74	3.13	4.90	3.33
	12.00	3.86	2.65	4.10	2.74	4.34	2.83	4.42	2.80	4.50	2.93	4.66	3.12	4.82	3.31
	14.00	3.78	2.62	4.02	2.72	4.26	2.81	4.34	2.78	4.42	2.91	4.58	3.10	4.74	3.29
	16.00	3.70	2.60	3.94	2.69	4.18	2.78	4.26	2.76	4.34	2.89	4.50	3.08	4.66	3.27
	18.00	3.62	2.57	3.86	2.67	4.10	2.76	4.18	2.74	4.26	2.87	4.42	3.06	4.58	3.25
	20.00	3.54	2.54	3.78	2.64	4.02	2.74	4.10	2.72	4.18	2.85	4.34	3.03	4.50	3.23
	21.00	3.50	2.54	3.74	2.64	3.98	2.74	4.06	2.72	4.14	2.85	4.30	3.04	4.46	3.24
	23.00	3.42	2.51	3.66	2.61	3.90	2.71	3.98	2.69	4.06	2.82	4.22	3.01	4.38	3.21
	25.00	3.34	2.47	3.58	2.58	3.82	2.69	3.90	2.67	3.98	2.80	4.14	2.99	4.30	3.19
	27.00	3.26	2.44	3.50	2.55	3.74	2.66	3.82	2.64	3.90	2.77	4.06	2.96	4.22	3.16
	29.00	3.18	2.41	3.42	2.52	3.66	2.63	3.74	2.61	3.82	2.74	3.98	2.93	4.14	3.13
	31.00	3.10	2.37	3.34	2.49	3.58	2.60	3.66	2.58	3.74	2.71	3.90	2.90	4.06	3.10
	33.00	3.02	2.33	3.26	2.45	3.50	2.56	3.58	2.55	3.66	2.68	3.82	2.87	3.98	3.07
	35.00	2.94	2.29	3.18	2.42	3.42	2.53	3.50	2.52	3.58	2.65	3.74	2.84	3.90	3.04
	37.00	2.82	2.22	3.06	2.35	3.30	2.47	3.38	2.46	3.46	2.59	3.62	2.78	3.78	2.98
	39.00	2.70	2.15	2.94	2.28	3.18	2.40	3.26	2.39	3.34	2.52	3.50	2.71	3.66	2.91

	42.00	2.52	2.02	2.76	2.16	3.00	2.29	3.08	2.28	3.16	2.41	3.32	2.60	3.48	2.80
	44.00	2.40	1.95	2.64	2.09	2.88	2.22	2.96	2.22	3.04	2.34	3.20	2.53	3.36	2.73
	46.00	2.28	1.87	2.52	2.01	2.76	2.14	2.84	2.15	2.92	2.27	3.08	2.46	3.24	2.65
	48.00	2.16	1.79	2.40	1.93	2.64	2.07	2.72	2.08	2.80	2.20	2.96	2.38	2.97	2.46
	50.00	2.04	1.70	2.28	1.85	2.52	2.00	2.60	2.00	2.68	2.12	2.84	2.31	3.00	2.50
	52.00	1.92	1.62	2.16	1.77	2.40	1.92	2.48	1.93	2.56	2.05	2.72	2.23	2.88	2.43
	55.00	1.74	1.48	1.98	1.64	2.22	1.79	2.30	1.81	2.38	1.92	2.54	2.10	2.70	2.30
360.0	10.00	2.85	1.93	3.02	2.00	3.20	2.06	3.26	2.04	3.31	2.13	3.43	2.27	3.55	2.41
	12.00	2.79	1.92	2.97	1.98	3.14	2.05	3.20	2.03	3.26	2.12	3.37	2.26	3.49	2.39
	14.00	2.74	1.90	2.91	1.97	3.08	2.03	3.14	2.01	3.20	2.11	3.31	2.24	3.43	2.38
	16.00	2.68	1.88	2.85	1.95	3.02	2.01	3.08	2.00	3.14	2.09	3.26	2.23	3.37	2.37
	18.00	2.62	1.86	2.79	1.93	2.97	2.00	3.02	1.98	3.08	2.08	3.20	2.21	3.31	2.35
	20.00	2.56	1.84	2.74	1.91	2.91	1.98	2.97	1.97	3.02	2.06	3.14	2.20	3.26	2.34
	21.00	2.53	1.84	2.71	1.91	2.88	1.98	2.94	1.97	3.00	2.06	3.11	2.20	3.23	2.34
	23.00	2.47	1.81	2.65	1.89	2.82	1.96	2.88	1.95	2.94	2.04	3.05	2.18	3.17	2.32
	25.00	2.42	1.79	2.59	1.87	2.76	1.94	2.82	1.93	2.88	2.02	3.00	2.16	3.11	2.31
	27.00	2.36	1.77	2.53	1.85	2.71	1.92	2.76	1.91	2.82	2.00	2.94	2.14	3.05	2.29
	29.00	2.30	1.74	2.47	1.82	2.65	1.90	2.71	1.89	2.76	1.98	2.88	2.12	3.00	2.27
	31.00	2.24	1.71	2.42	1.80	2.59	1.88	2.65	1.87	2.71	1.96	2.82	2.10	2.94	2.25
	33.00	2.19	1.69	2.36	1.77	2.53	1.86	2.59	1.85	2.65	1.94	2.76	2.08	2.88	2.22
	35.00	2.13	1.66	2.30	1.75	2.47	1.83	2.53	1.82	2.59	1.92	2.71	2.06	2.82	2.20
	37.00	2.04	1.61	2.21	1.70	2.39	1.78	2.45	1.78	2.50	1.87	2.62	2.01	2.74	2.15
	39.00	1.95	1.55	2.13	1.65	2.30	1.74	2.36	1.73	2.42	1.82	2.53	1.96	2.65	2.11
	42.00	1.82	1.47	2.00	1.56	2.17	1.65	2.23	1.65	2.29	1.74	2.40	1.88	2.52	2.02
	44.00	1.74	1.41	1.91	1.51	2.08	1.60	2.14	1.60	2.20	1.69	2.32	1.83	2.43	1.97
	46.00	1.65	1.35	1.82	1.46	2.00	1.55	2.06	1.55	2.11	1.64	2.23	1.78	2.34	1.92
	48.00	1.56	1.29	1.74	1.40	1.91	1.50	1.97	1.50	2.03	1.59	2.14	1.73	2.15	1.78
	50.00	1.48	1.23	1.65	1.34	1.82	1.44	1.88	1.45	1.94	1.54	2.06	1.67	2.17	1.81
	52.00	1.39	1.17	1.56	1.28	1.74	1.39	1.79	1.40	1.85	1.48	1.97	1.62	2.08	1.76
	55.00	1.26	1.07	1.43	1.19	1.61	1.30	1.66	1.31	1.72	1.39	1.84	1.52	1.95	1.66

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
660.0	-15.30	**-15.00**	2.64	2.45	2.26	2.17	2.08	1.89
	-13.00	**-12.60**	2.86	2.68	2.49	2.39	2.30	2.11
	-11.00	**-10.50**	3.06	2.87	2.69	2.59	2.50	2.31
	-10.00	**-9.50**	3.15	2.97	2.78	2.69	2.59	2.40
	-9.10	**-8.50**	3.25	3.06	2.87	2.78	2.69	2.50
	-7.60	**-7.00**	3.39	3.20	3.01	2.92	2.83	2.64
	-5.60	**-5.00**	3.58	3.39	3.20	3.11	3.01	2.83
	-3.70	**-3.00**	3.66	3.47	3.29	3.19	3.10	2.91
	-0.70	**0.00**	3.76	3.58	3.39	3.30	3.20	3.01
	2.20	**3.00**	3.87	3.68	3.49	3.40	3.31	3.12
	4.10	**5.00**	4.29	4.10	3.91	3.82	3.72	3.54
	6.00	**7.00**	4.70	4.52	4.33	4.23	4.14	3.95
	7.90	**9.00**	4.81	4.62	4.43	4.34	4.24	4.06
	9.80	**11.00**	4.91	4.72	4.54	4.44	4.35	4.16
	11.80	**13.00**	5.02	4.83	4.64	4.55	4.45	4.27
	13.70	**15.00**	5.12	4.93	4.75	4.65	4.56	4.37
	15.60	**17.00**	5.22	5.04	4.85	4.76	4.66	4.47
	17.56	**19.00**	5.33	5.14	4.95	4.86	4.77	4.58
	19.48	**21.00**	5.43	5.25	5.06	4.96	4.87	4.68
	21.41	**23.00**	5.54	5.35	5.16	5.07	4.97	4.79
	22.37	**24.00**	5.59	5.40	5.21	5.12	5.03	4.84
630.0	-15.30	**-15.00**	2.53	2.35	2.17	2.08	1.99	1.81
	-13.00	**-12.60**	2.75	2.57	2.39	2.30	2.21	2.03
	-11.00	**-10.50**	2.94	2.76	2.58	2.49	2.40	2.22
	-10.00	**-9.50**	3.03	2.85	2.67	2.58	2.49	2.31
	-9.10	**-8.50**	3.12	2.94	2.76	2.67	2.58	2.40
	-7.60	**-7.00**	3.25	3.07	2.89	2.80	2.71	2.53
	-5.60	**-5.00**	3.43	3.25	3.07	2.98	2.89	2.71
	-3.70	**-3.00**	3.51	3.33	3.15	3.06	2.97	2.79
	-0.70	**0.00**	3.61	3.43	3.25	3.16	3.07	2.89
	2.20	**3.00**	3.71	3.53	3.35	3.26	3.17	2.99
	4.10	**5.00**	4.11	3.93	3.75	3.66	3.57	3.39
	6.00	**7.00**	4.51	4.33	4.15	4.06	3.97	3.79
	7.90	**9.00**	4.61	4.43	4.25	4.16	4.07	3.89
	9.80	**11.00**	4.71	4.53	4.35	4.26	4.17	3.99
	11.80	**13.00**	4.81	4.63	4.45	4.36	4.27	4.09
	13.70	**15.00**	4.91	4.73	4.55	4.46	4.37	4.19
	15.60	**17.00**	5.01	4.83	4.65	4.56	4.47	4.29
	17.56	**19.00**	5.11	4.93	4.75	4.66	4.57	4.39
	19.48	**21.00**	5.21	5.03	4.85	4.76	4.67	4.49

	21.41	**23.00**	5.31	5.13	4.95	4.86	4.77	4.59
	22.37	**24.00**	5.36	5.18	5.00	4.91	4.82	4.64
390.0	-15.30	**-15.00**	1.76	1.63	1.51	1.45	1.38	1.26
	-13.00	**-12.60**	1.91	1.78	1.66	1.60	1.53	1.41
	-11.00	**-10.50**	2.04	1.92	1.79	1.73	1.67	1.54
	-10.00	**-9.50**	2.10	1.98	1.85	1.79	1.73	1.60
	-9.10	**-8.50**	2.17	2.04	1.92	1.85	1.79	1.67
	-7.60	**-7.00**	2.26	2.13	2.01	1.95	1.88	1.76
	-5.60	**-5.00**	2.38	2.26	2.13	2.07	2.01	1.88
	-3.70	**-3.00**	2.44	2.32	2.19	2.13	2.06	1.94
	-0.70	**0.00**	2.51	2.38	2.26	2.20	2.13	2.01
	2.20	**3.00**	2.58	2.45	2.33	2.27	2.20	2.08
	4.10	**5.00**	2.86	2.73	2.61	2.54	2.48	2.36
	6.00	**7.00**	3.14	3.01	2.89	2.82	2.76	2.63
	7.90	**9.00**	3.21	3.08	2.95	2.89	2.83	2.70
	9.80	**11.00**	3.27	3.15	3.02	2.96	2.90	2.77
	11.80	**13.00**	3.34	3.22	3.09	3.03	2.97	2.84
	13.70	**15.00**	3.41	3.29	3.16	3.10	3.04	2.91
	15.60	**17.00**	3.48	3.36	3.23	3.17	3.11	2.98
	17.56	**19.00**	3.55	3.43	3.30	3.24	3.18	3.05
	19.48	**21.00**	3.62	3.50	3.37	3.31	3.25	3.12
	21.41	**23.00**	3.69	3.57	3.44	3.38	3.32	3.19
	22.37	**24.00**	3.73	3.60	3.48	3.41	3.35	3.23

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Model 53

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
805	10.00	7.21	4.58	7.47	4.68	7.65	4.73	7.83	4.91	8.04	5.10	8.25	5.29	8.36	5.42
	12.00	7.05	4.53	7.32	4.64	7.49	4.68	7.67	4.86	7.88	5.05	8.09	5.24	8.20	5.37
	14.00	6.90	4.48	7.16	4.59	7.34	4.64	7.52	4.80	7.73	4.99	7.94	5.18	8.04	5.31
	16.00	6.74	4.43	7.01	4.54	7.18	4.59	7.36	4.74	7.57	4.93	7.78	5.13	7.89	5.25
	18.00	6.58	4.37	6.85	4.49	7.03	4.54	7.21	4.68	7.42	4.87	7.63	5.07	7.73	5.20
	20.00	6.43	4.32	6.70	4.44	6.87	4.49	7.05	4.62	7.26	4.81	7.47	5.01	7.58	5.14
	21.00	6.35	4.31	6.62	4.43	6.80	4.49	6.97	4.61	7.18	4.80	7.39	5.00	7.50	5.13
	23.00	6.20	4.25	6.46	4.37	6.64	4.43	6.82	4.54	7.03	4.74	7.24	4.93	7.34	5.06
	25.00	6.04	4.19	6.31	4.31	6.48	4.37	6.66	4.48	6.87	4.67	7.08	4.87	7.19	5.00
	27.00	5.88	4.12	6.15	4.25	6.33	4.31	6.51	4.41	6.72	4.60	6.93	4.80	7.03	4.93
	29.00	5.73	4.06	6.00	4.19	6.17	4.25	6.35	4.34	6.56	4.53	6.77	4.73	6.88	4.86
	31.00	5.57	3.99	5.84	4.12	6.02	4.19	6.20	4.27	6.41	4.46	6.62	4.66	6.72	4.79
	33.00	5.42	3.92	5.68	4.05	5.77	4.06	6.04	4.19	6.25	4.39	6.46	4.59	6.57	4.72
	35.00	5.26	3.84	5.53	3.98	5.71	4.05	5.88	4.12	6.10	4.32	6.31	4.52	6.41	4.64
	37.00	5.16	3.80	5.42	3.94	5.60	4.02	5.78	4.08	5.99	4.27	6.20	4.47	6.31	4.60
	39.00	5.05	3.76	5.32	3.90	5.49	3.98	5.67	4.03	5.88	4.23	6.09	4.43	6.20	4.56
	42.00	4.89	3.68	5.16	3.82	5.33	3.90	5.51	3.95	5.72	4.15	5.93	4.35	6.04	4.48
	44.00	4.45	3.38	4.72	3.53	4.89	3.61	5.07	3.66	5.28	3.86	5.49	4.06	5.60	4.18
	46.00	4.12	3.16	4.39	3.32	4.57	3.40	4.74	3.45	4.95	3.65	5.17	3.85	5.27	3.97
	48.00	3.90	3.02	4.16	3.18	4.34	3.27	4.52	3.32	4.73	3.51	4.94	3.71	5.15	3.91
	50.00	3.80	2.97	4.06	3.13	4.24	3.22	4.42	3.27	4.63	3.46	4.84	3.66	4.95	3.78
	52.00	3.64	2.87	3.91	3.04	4.09	3.13	4.26	3.18	4.47	3.37	4.69	3.57	4.79	3.69
	55.00	3.40	2.70	3.66	2.88	3.84	2.97	4.02	3.02	4.23	3.21	4.44	3.41	4.55	3.53
725	10.00	6.49	4.12	6.73	4.22	6.89	4.26	7.05	4.42	7.24	4.59	7.43	4.77	7.53	4.88
	12.00	6.35	4.08	6.59	4.18	6.75	4.22	6.91	4.37	7.10	4.54	7.29	4.72	7.39	4.83
	14.00	6.21	4.03	6.45	4.13	6.61	4.18	6.77	4.32	6.96	4.49	7.15	4.67	7.25	4.78
	16.00	6.07	3.99	6.31	4.09	6.47	4.13	6.63	4.27	6.82	4.44	7.01	4.62	7.11	4.73
	18.00	5.93	3.94	6.17	4.04	6.33	4.09	6.49	4.22	6.68	4.39	6.87	4.56	6.97	4.68
	20.00	5.79	3.89	6.03	3.99	6.19	4.04	6.35	4.16	6.54	4.33	6.73	4.51	6.83	4.63
	21.00	5.72	3.88	5.96	3.99	6.12	4.04	6.28	4.15	6.47	4.32	6.66	4.50	6.76	4.62
	23.00	5.58	3.83	5.82	3.94	5.98	3.99	6.14	4.09	6.33	4.27	6.52	4.44	6.62	4.56
	25.00	5.44	3.77	5.68	3.89	5.84	3.94	6.00	4.03	6.19	4.21	6.38	4.39	6.48	4.50
	27.00	5.30	3.71	5.54	3.83	5.70	3.89	5.86	3.97	6.05	4.15	6.24	4.32	6.34	4.44
	29.00	5.16	3.65	5.40	3.77	5.56	3.83	5.72	3.91	5.91	4.08	6.10	4.26	6.20	4.38
	31.00	5.02	3.59	5.26	3.71	5.42	3.77	5.58	3.84	5.77	4.02	5.96	4.20	6.06	4.31
	33.00	4.88	3.53	5.12	3.65	5.20	3.66	5.44	3.78	5.63	3.95	5.82	4.13	5.92	4.25
	35.00	4.74	3.46	4.98	3.59	5.14	3.65	5.30	3.71	5.49	3.89	5.68	4.07	5.78	4.18
	37.00	4.64	3.42	4.88	3.55	5.04	3.62	5.20	3.67	5.39	3.85	5.58	4.03	5.68	4.14
	39.00	4.55	3.39	4.79	3.52	4.95	3.58	5.11	3.63	5.30	3.81	5.49	3.99	5.58	4.11

	42.00	4.40	3.31	4.64	3.44	4.80	3.51	4.96	3.56	5.15	3.74	5.34	3.92	5.44	4.03
	44.00	4.01	3.04	4.25	3.18	4.41	3.25	4.57	3.30	4.76	3.48	4.95	3.66	5.04	3.77
	46.00	3.71	2.85	3.95	2.99	4.11	3.07	4.27	3.11	4.46	3.29	4.65	3.46	4.75	3.57
	48.00	3.51	2.72	3.75	2.86	3.91	2.94	4.07	2.99	4.26	3.16	4.45	3.34	4.64	3.52
	50.00	3.42	2.67	3.66	2.82	3.82	2.90	3.98	2.94	4.17	3.12	4.36	3.30	4.46	3.41
	52.00	3.28	2.59	3.52	2.74	3.68	2.82	3.84	2.86	4.03	3.04	4.22	3.21	4.32	3.32
	55.00	3.06	2.43	3.30	2.59	3.46	2.68	3.62	2.72	3.81	2.89	4.00	3.07	4.10	3.18
	10.00	4.83	3.07	5.01	3.14	5.13	3.17	5.25	3.29	5.39	3.42	5.53	3.55	5.60	3.64
	12.00	4.73	3.04	4.91	3.11	5.03	3.14	5.15	3.26	5.29	3.38	5.43	3.51	5.50	3.60
	14.00	4.63	3.01	4.80	3.08	4.92	3.11	5.04	3.22	5.18	3.35	5.33	3.48	5.40	3.56
	16.00	4.52	2.97	4.70	3.05	4.82	3.08	4.94	3.18	5.08	3.31	5.22	3.44	5.29	3.52
	18.00	4.42	2.93	4.60	3.01	4.71	3.05	4.83	3.14	4.98	3.27	5.12	3.40	5.19	3.49
	20.00	4.31	2.90	4.49	2.98	4.61	3.01	4.73	3.10	4.87	3.23	5.01	3.36	5.08	3.44
	21.00	4.26	2.89	4.44	2.97	4.56	3.01	4.68	3.09	4.82	3.22	4.96	3.35	5.03	3.44
	23.00	4.16	2.85	4.33	2.93	4.45	2.97	4.57	3.05	4.71	3.18	4.86	3.31	4.93	3.40
	25.00	4.05	2.81	4.23	2.89	4.35	2.93	4.47	3.00	4.61	3.13	4.75	3.27	4.82	3.35
	27.00	3.95	2.77	4.13	2.85	4.25	2.89	4.36	2.96	4.51	3.09	4.65	3.22	4.72	3.31
	29.00	3.84	2.72	4.02	2.81	4.14	2.85	4.26	2.91	4.40	3.04	4.54	3.18	4.61	3.26
540	31.00	3.74	2.67	3.92	2.76	4.04	2.81	4.16	2.86	4.30	2.99	4.44	3.13	4.51	3.21
	33.00	3.63	2.63	3.81	2.72	3.87	2.72	4.05	2.81	4.19	2.95	4.33	3.08	4.41	3.16
	35.00	3.53	2.58	3.71	2.67	3.83	2.72	3.95	2.76	4.09	2.90	4.23	3.03	4.30	3.11
	37.00	3.46	2.55	3.64	2.65	3.76	2.69	3.88	2.73	4.02	2.87	4.16	3.00	4.23	3.09
	39.00	3.39	2.52	3.57	2.62	3.69	2.67	3.80	2.71	3.95	2.84	4.09	2.97	4.16	3.06
	42.00	3.28	2.47	3.46	2.57	3.58	2.62	3.70	2.65	3.84	2.78	3.98	2.92	4.05	3.00
	44.00	2.99	2.27	3.16	2.37	3.28	2.42	3.40	2.46	3.54	2.59	3.69	2.72	3.76	2.81
	46.00	2.76	2.12	2.94	2.23	3.06	2.28	3.18	2.32	3.32	2.45	3.46	2.58	3.54	2.66
	48.00	2.61	2.02	2.79	2.13	2.91	2.19	3.03	2.22	3.17	2.35	3.31	2.49	3.46	2.62
	50.00	2.55	1.99	2.73	2.10	2.85	2.16	2.96	2.19	3.11	2.32	3.25	2.46	3.32	2.54
	52.00	2.44	1.93	2.62	2.04	2.74	2.10	2.86	2.13	3.00	2.26	3.14	2.39	3.21	2.48
	55.00	2.28	1.81	2.46	1.93	2.58	1.99	2.70	2.02	2.84	2.15	2.98	2.29	3.05	2.37

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
910	-15.30	**-15.00**	3.48	3.26	3.04	2.95	2.87	2.69
	-13.00	**-12.60**	3.88	3.66	3.45	3.36	3.27	3.10
	-11.00	**-10.50**	4.24	4.02	3.80	3.71	3.63	3.45
	-10.00	**-9.50**	4.41	4.19	3.97	3.88	3.80	3.62
	-9.10	**-8.50**	4.57	4.36	4.14	4.05	3.96	3.79
	-7.60	**-7.00**	4.83	4.61	4.39	4.30	4.22	4.04
	-5.60	**-5.00**	5.17	4.95	4.73	4.64	4.56	4.38
	-3.70	**-3.00**	5.18	4.96	4.74	4.65	4.57	4.39
	-0.70	**0.00**	5.39	5.17	4.95	4.87	4.78	4.60
	2.20	**3.00**	6.04	5.82	5.60	5.51	5.43	5.25
	4.10	**5.00**	6.62	6.40	6.18	6.09	6.00	5.83
	6.00	**7.00**	7.19	6.97	6.76	6.67	6.58	6.41
	7.90	**9.00**	7.32	7.11	6.89	6.80	6.71	6.54
	9.80	**11.00**	7.45	7.24	7.02	6.93	6.84	6.67
	11.80	**13.00**	7.59	7.37	7.15	7.06	6.97	6.80
	13.70	**15.00**	7.72	7.50	7.28	7.19	7.11	6.93
	15.60	**17.00**	7.85	7.63	7.41	7.32	7.24	7.06
	17.56	**19.00**	7.98	7.76	7.54	7.45	7.37	7.19
	19.48	**21.00**	8.11	7.89	7.67	7.59	7.50	7.32
	21.41	**23.00**	8.24	8.02	7.80	7.72	7.63	7.45
	22.37	**24.00**	8.30	8.09	7.87	7.78	7.69	7.52
835	-15.30	**-15.00**	3.19	2.99	2.79	2.71	2.63	2.47
	-13.00	**-12.60**	3.56	3.36	3.16	3.08	3.00	2.84
	-11.00	**-10.50**	3.89	3.69	3.49	3.41	3.33	3.17
	-10.00	**-9.50**	4.04	3.84	3.64	3.56	3.48	3.32
	-9.10	**-8.50**	4.20	4.00	3.80	3.72	3.64	3.48
	-7.60	**-7.00**	4.43	4.23	4.03	3.95	3.87	3.71
	-5.60	**-5.00**	4.74	4.54	4.34	4.26	4.18	4.02
	-3.70	**-3.00**	4.75	4.55	4.35	4.27	4.19	4.03
	-0.70	**0.00**	4.95	4.75	4.55	4.47	4.39	4.23
	2.20	**3.00**	5.54	5.34	5.14	5.06	4.98	4.82
	4.10	**5.00**	6.07	5.87	5.67	5.59	5.51	5.35
	6.00	**7.00**	6.60	6.40	6.20	6.12	6.04	5.88
	7.90	**9.00**	6.72	6.52	6.32	6.24	6.16	6.00
	9.80	**11.00**	6.84	6.64	6.44	6.36	6.28	6.12
	11.80	**13.00**	6.96	6.76	6.56	6.48	6.40	6.24
	13.70	**15.00**	7.08	6.88	6.68	6.60	6.52	6.36
	15.60	**17.00**	7.20	7.00	6.80	6.72	6.64	6.48
	17.56	**19.00**	7.32	7.12	6.92	6.84	6.76	6.60
	19.48	**21.00**	7.44	7.24	7.04	6.96	6.88	6.72

	21.41	**23.00**	7.56	7.36	7.16	7.08	7.00	6.84
	22.37	**24.00**	7.62	7.42	7.22	7.14	7.06	6.90
640	-15.30	**-15.00**	2.45	2.29	2.14	2.08	2.02	1.89
	-13.00	**-12.60**	2.73	2.58	2.42	2.36	2.30	2.18
	-11.00	**-10.50**	2.98	2.83	2.67	2.61	2.55	2.43
	-10.00	**-9.50**	3.10	2.95	2.79	2.73	2.67	2.55
	-9.10	**-8.50**	3.22	3.06	2.91	2.85	2.79	2.67
	-7.60	**-7.00**	3.40	3.24	3.09	3.03	2.97	2.84
	-5.60	**-5.00**	3.63	3.48	3.33	3.27	3.20	3.08
	-3.70	**-3.00**	3.64	3.49	3.33	3.27	3.21	3.09
	-0.70	**0.00**	3.79	3.64	3.48	3.42	3.36	3.24
	2.20	**3.00**	4.25	4.09	3.94	3.88	3.82	3.69
	4.10	**5.00**	4.65	4.50	4.35	4.28	4.22	4.10
	6.00	**7.00**	5.06	4.91	4.75	4.69	4.63	4.51
	7.90	**9.00**	5.15	5.00	4.84	4.78	4.72	4.60
	9.80	**11.00**	5.24	5.09	4.94	4.87	4.81	4.69
	11.80	**13.00**	5.33	5.18	5.03	4.97	4.91	4.78
	13.70	**15.00**	5.43	5.27	5.12	5.06	5.00	4.87
	15.60	**17.00**	5.52	5.37	5.21	5.15	5.09	4.97
	17.56	**19.00**	5.61	5.46	5.30	5.24	5.18	5.06
	19.48	**21.00**	5.70	5.55	5.40	5.33	5.27	5.15
	21.41	**23.00**	5.79	5.64	5.49	5.43	5.37	5.24
	22.37	**24.00**	5.84	5.69	5.53	5.47	5.41	5.29

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Model 71

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
1140	10.00	10.28	6.35	10.55	6.43	10.73	6.44	10.92	6.65	11.19	6.90	11.46	7.15	11.60	7.32
	12.00	10.06	6.29	10.33	6.37	10.52	6.39	10.70	6.58	10.97	6.82	11.25	7.08	11.38	7.24
	14.00	9.84	6.22	10.12	6.30	10.30	6.33	10.48	6.50	10.76	6.75	11.03	7.00	11.17	7.17
	16.00	9.63	6.15	9.90	6.24	10.08	6.26	10.27	6.42	10.54	6.67	10.81	6.92	10.95	7.09
	18.00	9.41	6.08	9.68	6.17	9.87	6.20	10.05	6.34	10.32	6.59	10.60	6.84	10.73	7.01
	20.00	9.19	6.01	9.47	6.10	9.65	6.13	9.83	6.26	10.11	6.51	10.38	6.76	10.52	6.93
	21.00	9.09	6.00	9.36	6.09	9.54	6.12	9.72	6.24	10.00	6.49	10.27	6.75	10.41	6.92
	23.00	8.87	5.92	9.14	6.02	9.33	6.05	9.51	6.15	9.78	6.41	10.05	6.66	10.19	6.83
	25.00	8.65	5.84	8.93	5.94	9.11	5.97	9.29	6.07	9.56	6.32	9.84	6.57	9.98	6.74
	27.00	8.44	5.75	8.71	5.85	8.89	5.89	9.07	5.97	9.35	6.23	9.62	6.48	9.76	6.65
	29.00	8.22	5.66	8.49	5.77	8.68	5.81	8.86	5.88	9.13	6.13	9.41	6.39	9.54	6.56
	31.00	8.00	5.57	8.28	5.68	8.46	5.72	8.64	5.78	8.91	6.04	9.19	6.29	9.33	6.46
	33.00	7.79	5.47	8.06	5.59	8.15	5.57	8.42	5.68	8.70	5.94	8.97	6.19	9.11	6.36
	35.00	7.57	5.37	7.84	5.49	8.03	5.54	8.21	5.58	8.48	5.84	8.76	6.09	8.89	6.26
	37.00	7.43	5.33	7.71	5.45	7.89	5.50	8.07	5.53	8.34	5.79	8.62	6.05	8.76	6.21
	39.00	7.30	5.28	7.57	5.40	7.75	5.46	7.93	5.48	8.21	5.74	8.48	6.00	8.62	6.16
	42.00	7.09	5.19	7.36	5.31	7.55	5.36	7.73	5.38	8.00	5.64	8.28	5.90	8.41	6.07
	44.00	6.61	4.88	6.89	5.01	7.07	5.07	7.25	5.09	7.52	5.34	7.80	5.60	7.93	5.76
	46.00	6.25	4.66	6.52	4.79	6.70	4.86	6.89	4.87	7.16	5.12	7.43	5.38	7.57	5.54
	48.00	5.44	4.09	5.71	4.24	5.89	4.31	6.08	4.33	6.35	4.58	6.62	4.83	6.93	5.11
	50.00	5.38	4.09	5.65	4.24	5.84	4.31	6.02	4.32	6.29	4.57	6.57	4.83	6.70	4.98
	52.00	5.20	3.99	5.47	4.14	5.65	4.21	5.84	4.22	6.11	4.47	6.38	4.73	6.52	4.88
	55.00	5.04	3.90	5.31	4.05	5.49	4.13	5.68	4.14	5.95	4.39	6.22	4.64	6.36	4.80
1000	10.00	9.02	5.57	9.26	5.64	9.42	5.65	9.58	5.83	9.82	6.05	10.06	6.27	10.18	6.42
	12.00	8.83	5.51	9.07	5.58	9.23	5.60	9.39	5.77	9.63	5.99	9.87	6.21	9.99	6.35
	14.00	8.64	5.46	8.88	5.53	9.04	5.55	9.20	5.70	9.44	5.92	9.68	6.14	9.80	6.29
	16.00	8.45	5.40	8.69	5.47	8.85	5.49	9.01	5.63	9.25	5.85	9.49	6.07	9.61	6.22
	18.00	8.26	5.33	8.50	5.41	8.66	5.43	8.82	5.56	9.06	5.78	9.30	6.00	9.42	6.15
	20.00	8.07	5.27	8.31	5.35	8.47	5.37	8.63	5.49	8.87	5.71	9.11	5.93	9.23	6.08
	21.00	7.97	5.26	8.21	5.34	8.37	5.37	8.53	5.48	8.77	5.70	9.01	5.92	9.13	6.07
	23.00	7.78	5.19	8.02	5.28	8.18	5.31	8.34	5.40	8.58	5.62	8.82	5.84	8.94	5.99
	25.00	7.59	5.12	7.83	5.21	7.99	5.24	8.15	5.32	8.39	5.54	8.63	5.77	8.75	5.91
	27.00	7.40	5.04	7.64	5.13	7.80	5.17	7.96	5.24	8.20	5.46	8.44	5.69	8.56	5.83
	29.00	7.21	4.97	7.45	5.06	7.61	5.09	7.77	5.16	8.01	5.38	8.25	5.60	8.37	5.75
	31.00	7.02	4.88	7.26	4.98	7.42	5.02	7.58	5.07	7.82	5.29	8.06	5.52	8.18	5.67
	33.00	6.83	4.80	7.07	4.90	7.15	4.88	7.39	4.98	7.63	5.21	7.87	5.43	7.99	5.58
	35.00	6.64	4.71	6.88	4.82	7.04	4.86	7.20	4.90	7.44	5.12	7.68	5.35	7.80	5.49
	37.00	6.52	4.68	6.76	4.78	6.92	4.82	7.08	4.85	7.32	5.08	7.56	5.30	7.68	5.45
	39.00	6.40	4.63	6.64	4.74	6.80	4.79	6.96	4.81	7.20	5.03	7.44	5.26	7.56	5.41

	42.00	6.22	4.55	6.46	4.66	6.62	4.70	6.78	4.72	7.02	4.95	7.26	5.17	7.38	5.32
	44.00	5.80	4.28	6.04	4.40	6.20	4.45	6.36	4.46	6.60	4.69	6.84	4.91	6.96	5.06
	46.00	5.48	4.09	5.72	4.20	5.88	4.26	6.04	4.27	6.28	4.49	6.52	4.72	6.64	4.86
	48.00	4.77	3.59	5.01	3.72	5.17	3.78	5.33	3.80	5.57	4.02	5.81	4.24	6.08	4.49
	50.00	4.72	3.59	4.96	3.72	5.12	3.78	5.28	3.79	5.52	4.01	5.76	4.23	5.88	4.37
	52.00	4.56	3.50	4.80	3.63	4.96	3.70	5.12	3.70	5.36	3.92	5.60	4.15	5.72	4.28
	55.00	4.42	3.42	4.66	3.56	4.82	3.63	4.98	3.63	5.22	3.85	5.46	4.07	5.58	4.21
	10.00	6.67	4.12	6.85	4.17	6.97	4.18	7.09	4.32	7.26	4.48	7.44	4.64	7.53	4.75
	12.00	6.53	4.08	6.71	4.13	6.83	4.15	6.94	4.27	7.12	4.43	7.30	4.59	7.39	4.70
	14.00	6.39	4.04	6.57	4.09	6.69	4.11	6.80	4.22	6.98	4.38	7.16	4.54	7.25	4.65
	16.00	6.25	3.99	6.43	4.05	6.55	4.06	6.66	4.17	6.84	4.33	7.02	4.49	7.11	4.60
	18.00	6.11	3.95	6.29	4.00	6.40	4.02	6.52	4.12	6.70	4.28	6.88	4.44	6.97	4.55
	20.00	5.97	3.90	6.15	3.96	6.26	3.98	6.38	4.06	6.56	4.22	6.74	4.39	6.83	4.50
	21.00	5.90	3.89	6.08	3.96	6.19	3.97	6.31	4.05	6.49	4.21	6.67	4.38	6.76	4.49
	23.00	5.76	3.84	5.93	3.91	6.05	3.93	6.17	4.00	6.35	4.16	6.53	4.32	6.62	4.43
	25.00	5.62	3.79	5.79	3.85	5.91	3.88	6.03	3.94	6.21	4.10	6.39	4.27	6.48	4.38
	27.00	5.48	3.73	5.65	3.80	5.77	3.82	5.89	3.88	6.07	4.04	6.25	4.21	6.33	4.32
	29.00	5.34	3.67	5.51	3.74	5.63	3.77	5.75	3.82	5.93	3.98	6.11	4.15	6.19	4.26
740	31.00	5.19	3.61	5.37	3.69	5.49	3.71	5.61	3.75	5.79	3.92	5.96	4.08	6.05	4.19
	33.00	5.05	3.55	5.23	3.63	5.29	3.61	5.47	3.69	5.65	3.85	5.82	4.02	5.91	4.13
	35.00	4.91	3.49	5.09	3.56	5.21	3.59	5.33	3.62	5.51	3.79	5.68	3.96	5.77	4.06
	37.00	4.82	3.46	5.00	3.54	5.12	3.57	5.24	3.59	5.42	3.76	5.59	3.92	5.68	4.03
	39.00	4.74	3.43	4.91	3.51	5.03	3.54	5.15	3.56	5.33	3.72	5.51	3.89	5.59	4.00
	42.00	4.60	3.37	4.78	3.45	4.90	3.48	5.02	3.49	5.19	3.66	5.37	3.83	5.46	3.94
	44.00	4.29	3.17	4.47	3.25	4.59	3.29	4.71	3.30	4.88	3.47	5.06	3.64	5.15	3.74
	46.00	4.06	3.02	4.23	3.11	4.35	3.15	4.47	3.16	4.65	3.33	4.82	3.49	4.91	3.60
	48.00	3.53	2.66	3.71	2.75	3.83	2.80	3.94	2.81	4.12	2.97	4.30	3.14	4.50	3.32
	50.00	3.49	2.65	3.67	2.75	3.79	2.80	3.91	2.81	4.08	2.97	4.26	3.13	4.35	3.23
	52.00	3.37	2.59	3.55	2.69	3.67	2.74	3.79	2.74	3.97	2.90	4.14	3.07	4.23	3.17
	55.00	3.27	2.53	3.45	2.63	3.57	2.68	3.69	2.69	3.86	2.85	4.04	3.01	4.13	3.12

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
1290	-15.30	**-15.00**	6.34	6.12	5.89	5.81	5.72	5.54
	-13.00	**-12.60**	6.74	6.52	6.29	6.21	6.12	5.94
	-11.00	**-10.50**	7.09	6.87	6.64	6.56	6.47	6.29
	-10.00	**-9.50**	7.26	7.03	6.81	6.72	6.63	6.46
	-9.10	**-8.50**	7.42	7.20	6.98	6.89	6.80	6.62
	-7.60	**-7.00**	7.67	7.45	7.23	7.14	7.05	6.87
	-5.60	**-5.00**	8.01	7.78	7.56	7.47	7.38	7.21
	-3.70	**-3.00**	9.68	9.45	9.23	9.14	9.05	8.87
	-0.70	**0.00**	9.37	9.15	8.93	8.84	8.75	8.57
	2.20	**3.00**	9.52	9.30	9.07	8.99	8.90	8.72
	4.10	**5.00**	9.76	9.54	9.32	9.23	9.14	8.96
	6.00	**7.00**	10.01	9.79	9.56	9.47	9.39	9.21
	7.90	**9.00**	10.12	9.90	9.68	9.59	9.50	9.32
	9.80	**11.00**	10.23	10.01	9.79	9.70	9.61	9.43
	11.80	**13.00**	10.34	10.12	9.90	9.81	9.72	9.54
	13.70	**15.00**	10.45	10.23	10.01	9.92	9.83	9.65
	15.60	**17.00**	10.56	10.34	10.12	10.03	9.94	9.76
	17.56	**19.00**	10.68	10.45	10.23	10.14	10.05	9.88
	19.48	**21.00**	10.79	10.56	10.34	10.25	10.16	9.99
	21.41	**23.00**	10.90	10.68	10.45	10.36	10.28	10.10
	22.37	**24.00**	10.95	10.73	10.51	10.42	10.33	10.15
1160	-15.30	**-15.00**	5.70	5.50	5.30	5.22	5.14	4.98
	-13.00	**-12.60**	6.06	5.86	5.66	5.58	5.50	5.34
	-11.00	**-10.50**	6.38	6.18	5.98	5.90	5.82	5.66
	-10.00	**-9.50**	6.53	6.33	6.13	6.05	5.97	5.81
	-9.10	**-8.50**	6.68	6.48	6.28	6.20	6.12	5.96
	-7.60	**-7.00**	6.90	6.70	6.50	6.42	6.34	6.18
	-5.60	**-5.00**	7.20	7.00	6.80	6.72	6.64	6.48
	-3.70	**-3.00**	8.70	8.50	8.30	8.22	8.14	7.98
	-0.70	**0.00**	8.43	8.23	8.03	7.95	7.87	7.71
	2.20	**3.00**	8.56	8.36	8.16	8.08	8.00	7.84
	4.10	**5.00**	8.78	8.58	8.38	8.30	8.22	8.06
	6.00	**7.00**	9.00	8.80	8.60	8.52	8.44	8.28
	7.90	**9.00**	9.10	8.90	8.70	8.62	8.54	8.38
	9.80	**11.00**	9.20	9.00	8.80	8.72	8.64	8.48
	11.80	**13.00**	9.30	9.10	8.90	8.82	8.74	8.58
	13.70	**15.00**	9.40	9.20	9.00	8.92	8.84	8.68
	15.60	**17.00**	9.50	9.30	9.10	9.02	8.94	8.78
	17.56	**19.00**	9.60	9.40	9.20	9.12	9.04	8.88
	19.48	**21.00**	9.70	9.50	9.30	9.22	9.14	8.98
	21.41	**23.00**	9.80	9.60	9.40	9.32	9.24	9.08

	22.37	**24.00**	9.85	9.65	9.45	9.37	9.29	9.13
890	-15.30	**-15.00**	4.37	4.22	4.07	4.01	3.94	3.82
	-13.00	**-12.60**	4.65	4.50	4.34	4.28	4.22	4.10
	-11.00	**-10.50**	4.89	4.74	4.58	4.52	4.46	4.34
	-10.00	**-9.50**	5.01	4.85	4.70	4.64	4.58	4.45
	-9.10	**-8.50**	5.12	4.97	4.81	4.75	4.69	4.57
	-7.60	**-7.00**	5.29	5.14	4.99	4.93	4.86	4.74
	-5.60	**-5.00**	5.52	5.37	5.22	5.16	5.09	4.97
	-3.70	**-3.00**	6.68	6.52	6.37	6.31	6.25	6.12
	-0.70	**0.00**	6.47	6.31	6.16	6.10	6.04	5.92
	2.20	**3.00**	6.57	6.41	6.26	6.20	6.14	6.02
	4.10	**5.00**	6.74	6.58	6.43	6.37	6.31	6.18
	6.00	**7.00**	6.91	6.75	6.60	6.54	6.48	6.35
	7.90	**9.00**	6.98	6.83	6.68	6.61	6.55	6.43
	9.80	**11.00**	7.06	6.91	6.75	6.69	6.63	6.51
	11.80	**13.00**	7.14	6.98	6.83	6.77	6.71	6.58
	13.70	**15.00**	7.21	7.06	6.91	6.84	6.78	6.66
	15.60	**17.00**	7.29	7.14	6.98	6.92	6.86	6.74
	17.56	**19.00**	7.37	7.21	7.06	7.00	6.94	6.81
	19.48	**21.00**	7.44	7.29	7.14	7.07	7.01	6.89
	21.41	**23.00**	7.52	7.37	7.21	7.15	7.09	6.97
	22.37	**24.00**	7.56	7.40	7.25	7.19	7.13	7.00

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Model 90

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
1400.0	10.00	10.38	7.13	10.86	7.28	11.34	7.40	11.50	7.30	11.66	7.61	11.98	8.03	12.30	8.45
	12.00	10.18	7.08	10.66	7.22	11.14	7.35	11.30	7.26	11.46	7.56	11.78	7.98	12.10	8.41
	14.00	9.98	7.02	10.46	7.17	10.94	7.30	11.10	7.21	11.26	7.52	11.58	7.94	11.90	8.37
	16.00	9.78	6.95	10.26	7.11	10.74	7.25	10.90	7.16	11.06	7.47	11.38	7.89	11.70	8.32
	18.00	9.58	6.89	10.06	7.05	10.54	7.19	10.70	7.11	10.86	7.41	11.18	7.83	11.50	8.27
	20.00	9.38	6.82	9.86	6.98	10.34	7.13	10.50	7.05	10.66	7.36	10.98	7.78	11.30	8.21
	21.00	9.28	6.82	9.76	6.99	10.24	7.14	10.40	7.06	10.56	7.37	10.88	7.79	11.20	8.23
	23.00	9.08	6.74	9.56	6.92	10.04	7.08	10.20	7.00	10.36	7.30	10.68	7.73	11.00	8.17
	25.00	8.88	6.66	9.36	6.85	9.84	7.01	10.00	6.94	10.16	7.24	10.48	7.67	10.80	8.11
	27.00	8.68	6.58	9.16	6.77	9.64	6.94	9.80	6.87	9.96	7.17	10.28	7.60	10.60	8.04
	29.00	8.48	6.50	8.96	6.69	9.44	6.87	9.60	6.80	9.76	7.10	10.08	7.53	10.40	7.97
	31.00	8.28	6.41	8.76	6.61	9.24	6.79	9.40	6.72	9.56	7.03	9.88	7.46	10.20	7.90
	33.00	8.08	6.32	8.56	6.53	9.04	6.71	9.20	6.65	9.36	6.95	9.68	7.38	10.00	7.82
	35.00	7.88	6.23	8.36	6.44	8.84	6.63	9.00	6.57	9.16	6.87	9.48	7.30	9.80	7.74
	37.00	7.38	5.89	7.86	6.11	8.34	6.32	8.50	6.27	8.66	6.56	8.98	6.98	9.30	7.42
	39.00	6.88	5.54	7.36	5.78	7.84	6.00	8.00	5.96	8.16	6.24	8.48	6.66	8.80	7.09
	42.00	6.13	5.11	6.61	5.38	7.09	5.62	7.25	5.60	7.41	5.57	7.73	5.65	8.05	5.72
	44.00	5.63	4.74	6.11	5.02	6.59	5.28	6.75	5.27	6.91	5.25	7.23	5.34	7.55	5.42
	46.00	5.13	4.36	5.61	4.65	6.09	4.92	6.25	4.92	6.41	4.91	6.73	5.02	7.05	5.11
	48.00	4.63	3.98	5.11	4.28	5.59	4.56	5.75	4.57	5.91	4.57	6.23	4.69	6.40	4.68
	50.00	4.13	3.58	4.61	3.90	5.09	4.19	5.25	4.21	5.41	4.23	5.73	4.35	6.05	4.47
	52.00	3.63	3.18	4.11	3.51	4.59	3.82	4.75	3.85	4.91	3.87	5.23	4.01	5.55	4.14
	55.00	2.88	2.54	3.36	2.89	3.84	3.22	4.00	3.27	4.16	3.31	4.48	3.47	4.80	3.61
1200.0	10.00	9.05	6.22	9.46	6.34	9.88	6.45	10.02	6.36	10.16	6.63	10.44	6.99	10.72	7.37
	12.00	8.87	6.17	9.29	6.29	9.71	6.41	9.85	6.33	9.99	6.59	10.27	6.96	10.54	7.33
	14.00	8.70	6.11	9.12	6.25	9.53	6.36	9.67	6.28	9.81	6.55	10.09	6.92	10.37	7.29
	16.00	8.52	6.06	8.94	6.20	9.36	6.32	9.50	6.24	9.64	6.51	9.92	6.87	10.20	7.25
	18.00	8.35	6.00	8.77	6.14	9.18	6.27	9.32	6.19	9.46	6.46	9.74	6.83	10.02	7.20
	20.00	8.17	5.94	8.59	6.09	9.01	6.22	9.15	6.15	9.29	6.41	9.57	6.78	9.85	7.16
	21.00	8.09	5.94	8.51	6.09	8.92	6.22	9.06	6.15	9.20	6.42	9.48	6.79	9.76	7.17
	23.00	7.91	5.88	8.33	6.03	8.75	6.17	8.89	6.10	9.03	6.36	9.31	6.74	9.59	7.12
	25.00	7.74	5.81	8.16	5.97	8.57	6.11	8.71	6.04	8.85	6.31	9.13	6.68	9.41	7.06
	27.00	7.56	5.74	7.98	5.90	8.40	6.05	8.54	5.98	8.68	6.25	8.96	6.62	9.24	7.01
	29.00	7.39	5.66	7.81	5.83	8.23	5.98	8.37	5.92	8.51	6.19	8.78	6.56	9.06	6.94
	31.00	7.22	5.59	7.63	5.76	8.05	5.92	8.19	5.86	8.33	6.12	8.61	6.50	8.89	6.88
	33.00	7.04	5.51	7.46	5.69	7.88	5.85	8.02	5.79	8.16	6.06	8.44	6.43	8.71	6.82
	35.00	6.87	5.42	7.29	5.61	7.70	5.78	7.84	5.73	7.98	5.99	8.26	6.36	8.54	6.75
	37.00	6.43	5.13	6.85	5.33	7.27	5.51	7.41	5.46	7.55	5.72	7.83	6.09	8.10	6.47
	39.00	6.00	4.83	6.41	5.04	6.83	5.23	6.97	5.19	7.11	5.44	7.39	5.80	7.67	6.18

	42.00	5.34	4.46	5.76	4.69	6.18	4.90	6.32	4.88	6.46	4.86	6.74	4.93	7.02	4.99
	44.00	4.91	4.13	5.32	4.37	5.74	4.60	5.88	4.59	6.02	4.57	6.30	4.65	6.58	4.72
	46.00	4.47	3.80	4.89	4.06	5.31	4.29	5.45	4.29	5.59	4.28	5.86	4.37	6.14	4.45
	48.00	4.03	3.46	4.45	3.73	4.87	3.98	5.01	3.98	5.15	3.99	5.43	4.09	5.58	4.08
	50.00	3.60	3.12	4.02	3.40	4.44	3.65	4.58	3.67	4.71	3.68	4.99	3.79	5.27	3.89
	52.00	3.16	2.77	3.58	3.06	4.00	3.33	4.14	3.35	4.28	3.37	4.56	3.49	4.84	3.60
	55.00	2.51	2.22	2.93	2.52	3.35	2.81	3.49	2.85	3.63	2.88	3.90	3.02	4.18	3.15
1000.0	10.00	8.01	5.50	8.38	5.61	8.75	5.71	8.87	5.63	8.99	5.87	9.24	6.19	9.49	6.52
	12.00	7.85	5.46	8.22	5.57	8.59	5.67	8.72	5.60	8.84	5.83	9.09	6.16	9.33	6.49
	14.00	7.70	5.41	8.07	5.53	8.44	5.63	8.56	5.56	8.69	5.80	8.93	6.12	9.18	6.45
	16.00	7.54	5.36	7.91	5.48	8.29	5.59	8.41	5.52	8.53	5.76	8.78	6.08	9.03	6.42
	18.00	7.39	5.31	7.76	5.44	8.13	5.55	8.25	5.48	8.38	5.72	8.62	6.04	8.87	6.38
	20.00	7.24	5.26	7.61	5.39	7.98	5.50	8.10	5.44	8.22	5.67	8.47	6.00	8.72	6.34
	21.00	7.16	5.26	7.53	5.39	7.90	5.51	8.02	5.45	8.15	5.68	8.39	6.01	8.64	6.35
	23.00	7.00	5.20	7.37	5.34	7.75	5.46	7.87	5.40	7.99	5.63	8.24	5.96	8.49	6.30
	25.00	6.85	5.14	7.22	5.28	7.59	5.41	7.71	5.35	7.84	5.58	8.08	5.91	8.33	6.25
	27.00	6.70	5.08	7.07	5.22	7.44	5.35	7.56	5.30	7.68	5.53	7.93	5.86	8.18	6.20
	29.00	6.54	5.01	6.91	5.16	7.28	5.30	7.41	5.24	7.53	5.48	7.78	5.81	8.02	6.15
	31.00	6.39	4.95	6.76	5.10	7.13	5.24	7.25	5.19	7.37	5.42	7.62	5.75	7.87	6.09
	33.00	6.23	4.87	6.60	5.03	6.97	5.18	7.10	5.13	7.22	5.36	7.47	5.69	7.71	6.03
	35.00	6.08	4.80	6.45	4.97	6.82	5.11	6.94	5.07	7.07	5.30	7.31	5.63	7.56	5.97
	37.00	5.69	4.54	6.06	4.72	6.43	4.87	6.56	4.83	6.68	5.06	6.93	5.39	7.17	5.72
	39.00	5.31	4.28	5.68	4.46	6.05	4.63	6.17	4.60	6.29	4.82	6.54	5.14	6.79	5.47
	42.00	4.73	3.95	5.10	4.15	5.47	4.34	5.59	4.32	5.72	4.30	5.96	4.36	6.21	4.41
	44.00	4.34	3.66	4.71	3.87	5.08	4.07	5.21	4.06	5.33	4.05	5.58	4.12	5.82	4.18
	46.00	3.96	3.37	4.33	3.59	4.70	3.80	4.82	3.80	4.94	3.79	5.19	3.87	5.44	3.94
	48.00	3.57	3.07	3.94	3.30	4.31	3.52	4.44	3.53	4.56	3.53	4.81	3.62	4.94	3.61
	50.00	3.19	2.76	3.56	3.01	3.93	3.24	4.05	3.25	4.17	3.26	4.42	3.36	4.67	3.45
	52.00	2.80	2.45	3.17	2.71	3.54	2.94	3.66	2.97	3.79	2.99	4.03	3.09	4.28	3.19
	55.00	2.22	1.96	2.59	2.23	2.96	2.49	3.09	2.52	3.21	2.55	3.46	2.67	3.70	2.78

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
1550.0	-15.30	**-15.00**	5.46	5.20	4.94	4.81	4.68	4.42
	-13.00	**-12.60**	6.01	5.75	5.49	5.36	5.23	4.97
	-11.00	**-10.50**	6.50	6.24	5.98	5.85	5.72	5.46
	-10.00	**-9.50**	6.73	6.47	6.21	6.08	5.95	5.69
	-9.10	**-8.50**	6.96	6.70	6.44	6.31	6.18	5.92
	-7.60	**-7.00**	7.30	7.04	**6.78**	6.65	6.52	6.26
	-5.60	**-5.00**	7.56	7.30	7.04	6.91	6.78	6.52
	-3.70	**-3.00**	8.12	7.86	7.60	7.47	7.34	7.08
	-0.70	**0.00**	8.32	8.06	7.80	7.67	7.54	7.28
	2.20	**3.00**	8.52	8.26	**8.00**	7.87	7.74	7.48
	4.10	**5.00**	9.52	9.26	9.00	8.87	8.74	8.48
	6.00	**7.00**	10.52	10.26	**10.00**	9.87	9.74	9.48
	7.90	**9.00**	10.68	10.42	10.16	10.03	9.90	9.64
	9.80	**11.00**	10.84	10.58	10.32	10.19	10.06	9.80
	11.80	**13.00**	11.00	10.74	10.48	10.35	10.22	9.96
	13.70	**15.00**	11.16	10.90	10.64	10.51	10.38	10.12
	15.60	**17.00**	11.32	11.06	10.80	10.67	10.54	10.28
	17.56	**19.00**	11.48	11.22	10.96	10.83	10.70	10.44
	19.48	**21.00**	11.64	11.38	11.12	10.99	10.86	10.60
	21.41	**23.00**	11.80	11.54	11.28	11.15	11.02	10.76
	22.37	**24.00**	11.88	11.62	11.36	11.23	11.10	10.84
1350.0	-15.30	**-15.00**	4.83	4.60	4.37	4.25	4.14	3.91
	-13.00	**-12.60**	5.31	5.08	4.85	4.74	4.62	4.39
	-11.00	**-10.50**	5.74	5.51	5.28	5.17	5.05	4.82
	-10.00	**-9.50**	5.94	5.71	5.48	5.37	5.25	5.02
	-9.10	**-8.50**	6.15	5.92	5.69	5.57	5.46	5.23
	-7.60	**-7.00**	6.45	6.22	5.99	5.88	5.76	5.53
	-5.60	**-5.00**	6.68	6.45	6.22	6.11	5.99	5.76
	-3.70	**-3.00**	7.18	6.95	6.72	6.60	6.49	6.26
	-0.70	**0.00**	7.35	7.12	6.89	6.78	6.66	6.43
	2.20	**3.00**	7.53	7.30	7.07	6.96	6.84	6.61
	4.10	**5.00**	8.41	8.18	7.95	7.84	7.73	7.50
	6.00	**7.00**	9.30	9.07	8.84	8.72	8.61	8.38
	7.90	**9.00**	9.44	9.21	8.98	8.87	8.75	8.52
	9.80	**11.00**	9.58	9.35	9.12	9.01	8.89	8.66
	11.80	**13.00**	9.72	9.49	9.26	9.15	9.03	8.80
	13.70	**15.00**	9.86	9.63	9.40	9.29	9.17	8.94
	15.60	**17.00**	10.01	9.78	9.55	9.43	9.32	9.09
	17.56	**19.00**	10.15	9.92	9.69	9.57	9.46	9.23
	19.48	**21.00**	10.29	10.06	9.83	9.71	9.60	9.37
	21.41	**23.00**	10.43	10.20	9.97	9.86	9.74	9.51

	22.37	**24.00**	10.50	10.27	10.04	9.93	9.81	9.58
1150.0	-15.30	**-15.00**	4.33	4.13	3.92	3.82	3.71	3.51
	-13.00	**-12.60**	4.77	4.56	4.36	4.26	4.15	3.95
	-11.00	**-10.50**	5.15	4.95	4.74	4.64	4.54	4.33
	-10.00	**-9.50**	5.34	5.13	4.92	4.82	4.72	4.51
	-9.10	**-8.50**	5.52	5.31	5.11	5.00	4.90	4.69
	-7.60	**-7.00**	5.79	5.59	5.38	5.28	5.17	4.97
	-5.60	**-5.00**	6.00	5.79	5.59	5.48	5.38	5.17
	-3.70	**-3.00**	6.44	6.24	6.03	5.93	5.82	5.62
	-0.70	**0.00**	6.60	6.40	6.19	6.09	5.98	5.78
	2.20	**3.00**	6.76	6.55	6.35	6.25	6.14	5.94
	4.10	**5.00**	7.55	7.35	7.14	7.04	6.94	6.73
	6.00	**7.00**	8.35	8.14	7.94	7.83	7.73	7.52
	7.90	**9.00**	8.48	8.27	8.06	7.96	7.86	7.65
	9.80	**11.00**	8.60	8.40	8.19	8.09	7.98	7.78
	11.80	**13.00**	8.73	8.52	8.32	8.21	8.11	7.90
	13.70	**15.00**	8.86	8.65	8.44	8.34	8.24	8.03
	15.60	**17.00**	8.98	8.78	8.57	8.47	8.36	8.16
	17.56	**19.00**	9.11	8.90	8.70	8.59	8.49	8.28
	19.48	**21.00**	9.24	9.03	8.82	8.72	8.62	8.41
	21.41	**23.00**	9.36	9.16	8.95	8.85	8.74	8.54
	22.37	**24.00**	9.43	9.22	9.01	8.91	8.81	8.60

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Model 105

Cooling mode:

Indoor Airflow m3/h	Outdoor air temperature (°C DB)	Indoor air temperature (°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
2200	10.00	12.80	8.28	13.10	8.34	13.30	8.33	13.50	8.57	13.90	8.95	14.30	9.33	14.50	9.59
	12.00	12.56	8.24	12.86	8.30	13.06	8.30	13.26	8.52	13.66	8.90	14.06	9.28	14.26	9.54
	14.00	12.32	8.19	12.62	8.26	12.82	8.26	13.02	8.46	13.42	8.84	13.82	9.22	14.02	9.48
	16.00	12.08	8.14	12.38	8.21	12.58	8.21	12.78	8.40	13.18	8.78	13.58	9.17	13.78	9.43
	18.00	11.84	8.09	12.14	8.16	12.34	8.17	12.54	8.33	12.94	8.71	13.34	9.10	13.54	9.36
	20.00	11.60	8.03	11.90	8.11	12.10	8.12	12.30	8.26	12.70	8.65	13.10	9.04	13.30	9.30
	21.00	11.48	8.06	11.78	8.14	11.98	8.14	12.18	8.27	12.58	8.66	12.98	9.05	13.18	9.32
	23.00	11.24	7.99	11.54	8.07	11.74	8.08	11.94	8.19	12.34	8.58	12.74	8.98	12.94	9.24
	25.00	11.00	7.92	11.30	8.01	11.50	8.02	11.70	8.11	12.10	8.51	12.50	8.91	12.70	9.17
	27.00	10.76	7.85	11.06	7.94	11.26	7.95	11.46	8.03	11.86	8.43	12.26	8.83	12.46	9.09
	29.00	10.52	7.77	10.82	7.86	11.02	7.88	11.22	7.94	11.62	8.34	12.02	8.74	12.22	9.01
	31.00	10.28	7.69	10.58	7.79	10.78	7.81	10.98	7.86	11.38	8.25	11.78	8.66	11.98	8.92
	33.00	10.04	7.60	10.34	7.70	10.44	7.65	10.74	7.76	11.14	8.16	11.54	8.57	11.74	8.83
	35.00	9.80	7.51	10.10	7.62	10.30	7.64	10.50	7.67	10.90	8.07	11.30	8.48	11.50	8.74
	37.00	9.36	7.26	9.66	7.37	9.86	7.40	10.06	7.42	10.46	7.82	10.86	8.23	11.06	8.49
	39.00	8.92	7.00	9.22	7.12	9.42	7.16	9.62	7.16	10.02	7.56	10.42	7.97	10.62	8.23
	42.00	8.26	6.55	8.56	6.69	8.76	6.73	8.96	6.74	9.36	7.13	9.76	7.54	9.96	7.80
	44.00	7.72	6.20	8.02	6.34	8.22	6.39	8.42	6.39	8.82	6.79	9.22	7.19	9.42	7.45
	46.00	7.18	5.83	7.48	5.98	7.68	6.04	7.88	6.04	8.28	6.43	8.68	6.84	8.88	7.09
	48.00	6.74	5.53	7.04	5.69	7.24	5.76	7.44	5.76	7.84	6.15	8.24	6.55	8.44	6.80
	50.00	6.20	5.15	6.50	5.31	6.70	5.39	6.90	5.39	7.30	5.78	7.70	6.18	7.90	6.42
	52.00	5.66	4.75	5.96	4.93	6.16	5.01	6.36	5.01	6.76	5.40	7.16	5.80	7.36	6.04
	55.00	5.00	4.24	5.30	4.43	5.50	4.52	5.70	4.54	6.10	4.92	6.50	5.31	6.70	5.55
1800	10.00	10.89	7.04	11.19	7.12	11.39	7.13	11.59	7.36	11.99	7.72	12.39	8.09	12.59	8.33
	12.00	10.65	6.98	10.95	7.07	11.15	7.08	11.35	7.29	11.75	7.65	12.15	8.02	12.35	8.26
	14.00	10.41	6.92	10.71	7.01	10.91	7.03	11.11	7.22	11.51	7.58	11.91	7.95	12.11	8.19
	16.00	10.17	6.86	10.47	6.95	10.67	6.97	10.87	7.14	11.27	7.51	11.67	7.88	11.87	8.12
	18.00	9.93	6.79	10.23	6.88	10.43	6.90	10.63	7.06	11.03	7.43	11.43	7.80	11.63	8.04
	20.00	9.69	6.71	9.99	6.81	10.19	6.84	10.39	6.98	10.79	7.35	11.19	7.72	11.39	7.96
	21.00	9.57	6.72	9.87	6.82	10.07	6.84	10.27	6.97	10.67	7.34	11.07	7.72	11.27	7.97
	23.00	9.33	6.63	9.63	6.74	9.83	6.77	10.03	6.88	10.43	7.26	10.83	7.64	11.03	7.88
	25.00	9.09	6.55	9.39	6.66	9.59	6.69	9.79	6.79	10.19	7.16	10.59	7.55	10.79	7.79
	27.00	8.85	6.45	9.15	6.57	9.35	6.61	9.55	6.69	9.95	7.07	10.35	7.45	10.55	7.70
	29.00	8.61	6.36	8.91	6.48	9.11	6.52	9.31	6.59	9.71	6.97	10.11	7.36	10.31	7.60
	31.00	8.37	6.26	8.67	6.38	8.87	6.42	9.07	6.49	9.47	6.87	9.87	7.26	10.07	7.50
	33.00	8.13	6.15	8.43	6.28	8.53	6.25	8.83	6.38	9.23	6.76	9.63	7.15	9.83	7.40
	35.00	7.89	6.04	8.19	6.18	8.39	6.23	8.59	6.27	8.99	6.65	9.39	7.04	9.59	7.29
	37.00	7.45	5.78	7.75	5.91	7.95	5.97	8.15	6.01	8.55	6.39	8.95	6.78	9.15	7.02
	39.00	7.01	5.50	7.31	5.64	7.51	5.71	7.71	5.74	8.11	6.12	8.51	6.51	8.71	6.75

	42.00	6.35	5.04	6.65	5.20	6.85	5.27	7.05	5.30	7.45	5.68	7.85	6.06	8.05	6.30
	44.00	5.81	4.66	6.11	4.83	6.31	4.91	6.51	4.94	6.91	5.32	7.31	5.70	7.51	5.94
	46.00	5.27	4.28	5.57	4.45	5.77	4.54	5.97	4.58	6.37	4.95	6.77	5.33	6.97	5.56
	48.00	4.83	3.97	5.13	4.15	5.33	4.24	5.53	4.28	5.93	4.65	6.33	5.03	6.53	5.26
	50.00	4.49	3.73	4.79	3.92	4.99	4.01	5.19	4.05	5.59	4.43	5.99	4.81	6.19	5.03
	52.00	4.05	3.40	4.35	3.60	4.55	3.70	4.75	3.75	5.15	4.12	5.55	4.50	5.75	4.72
	55.00	3.79	3.22	4.09	3.42	4.29	3.53	4.49	3.57	4.89	3.95	5.29	4.33	5.49	4.55
1400	10.00	8.48	5.48	8.78	5.59	8.98	5.62	9.18	5.83	9.58	6.17	9.98	6.51	10.18	6.73
	12.00	8.28	5.43	8.58	5.54	8.78	5.58	8.98	5.77	9.38	6.11	9.78	6.46	9.98	6.68
	14.00	8.08	5.37	8.38	5.49	8.58	5.53	8.78	5.71	9.18	6.05	9.58	6.40	9.78	6.62
	16.00	7.88	5.31	8.18	5.43	8.38	5.47	8.58	5.64	8.98	5.98	9.38	6.33	9.58	6.55
	18.00	7.68	5.25	7.98	5.37	8.18	5.42	8.38	5.57	8.78	5.91	9.18	6.27	9.38	6.49
	20.00	7.48	5.18	7.78	5.30	7.98	5.35	8.18	5.49	8.58	5.84	8.98	6.20	9.18	6.42
	21.00	7.38	5.18	7.68	5.31	7.88	5.36	8.08	5.49	8.48	5.84	8.88	6.20	9.08	6.42
	23.00	7.18	5.11	7.48	5.24	7.68	5.29	7.88	5.41	8.28	5.76	8.68	6.12	8.88	6.35
	25.00	6.98	5.03	7.28	5.16	7.48	5.22	7.68	5.33	8.08	5.68	8.48	6.04	8.68	6.27
	27.00	6.78	4.95	7.08	5.08	7.28	5.14	7.48	5.24	7.88	5.60	8.28	5.96	8.48	6.19
	29.00	6.58	4.86	6.88	5.00	7.08	5.07	7.28	5.16	7.68	5.51	8.08	5.88	8.28	6.11
	31.00	6.38	4.77	6.68	4.92	6.88	4.98	7.08	5.07	7.48	5.43	7.88	5.79	8.08	6.02
	33.00	6.18	4.68	6.48	4.83	6.58	4.83	6.88	4.97	7.28	5.33	7.68	5.70	7.88	5.93
	35.00	5.98	4.58	6.28	4.74	6.48	4.81	6.68	4.88	7.08	5.24	7.48	5.61	7.68	5.84
	37.00	5.62	4.36	5.92	4.52	6.12	4.60	6.32	4.66	6.72	5.02	7.12	5.39	7.32	5.62
	39.00	5.26	4.13	5.56	4.29	5.76	4.38	5.96	4.44	6.36	4.80	6.76	5.17	6.96	5.40
	42.00	4.72	3.75	5.02	3.92	5.22	4.01	5.42	4.08	5.82	4.44	6.22	4.81	6.42	5.03
	44.00	4.26	3.42	4.56	3.60	4.76	3.70	4.96	3.77	5.36	4.13	5.76	4.49	5.96	4.71
	46.00	3.80	3.09	4.10	3.28	4.30	3.38	4.50	3.45	4.90	3.81	5.30	4.18	5.50	4.39
	48.00	3.54	2.91	3.84	3.11	4.04	3.21	4.24	3.28	4.64	3.64	5.04	4.01	5.24	4.22
	50.00	3.18	2.64	3.48	2.85	3.68	2.96	3.88	3.03	4.28	3.39	4.68	3.76	4.88	3.97
	52.00	2.82	2.37	3.12	2.58	3.32	2.70	3.52	2.78	3.92	3.13	4.32	3.50	4.52	3.71
	55.00	2.58	2.19	2.88	2.41	3.08	2.53	3.28	2.61	3.68	2.97	4.08	3.34	4.28	3.55

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor Airflow m3/h	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
2200	-15.30	-15.00	6.74	6.42	6.10	5.95	5.80	5.50
	-13.00	-12.60	7.34	7.02	6.70	6.55	6.40	6.10
	-11.00	-10.50	7.87	7.55	7.23	7.08	6.93	6.63
	-10.00	-9.50	8.12	7.80	7.48	7.33	7.18	6.88
	-9.10	-8.50	8.37	8.05	7.73	7.58	7.43	7.13
	-7.60	-7.00	8.74	8.42	8.10	7.95	7.80	7.50
	-5.60	-5.00	9.24	8.92	8.60	8.45	8.30	8.00
	-3.70	-3.00	10.24	9.92	9.60	9.45	9.30	9.00
	-0.70	0.00	10.48	10.16	9.84	9.69	9.54	9.24
	2.20	3.00	11.12	10.80	10.48	10.33	10.18	9.88
	4.10	5.00	11.68	11.36	11.04	10.89	10.74	10.44
	6.00	7.00	12.24	11.92	11.60	11.45	11.30	11.00
	7.90	9.00	12.44	12.12	11.80	11.65	11.50	11.20
	9.80	11.00	12.64	12.32	12.00	11.85	11.70	11.40
	11.80	13.00	12.84	12.52	12.20	12.05	11.90	11.60
	13.70	15.00	13.04	12.72	12.40	12.25	12.10	11.80
	15.60	17.00	13.24	12.92	12.60	12.45	12.30	12.00
	17.56	19.00	13.44	13.12	12.80	12.65	12.50	12.20
	19.48	21.00	13.64	13.32	13.00	12.85	12.70	12.40
	21.41	23.00	13.84	13.52	13.20	13.05	12.90	12.60
	22.37	24.00	13.94	13.62	13.30	13.15	13.00	12.70
1800	-15.30	-15.00	4.63	4.31	3.99	3.84	3.69	3.39
	-13.00	-12.60	5.23	4.91	4.59	4.44	4.29	3.99
	-11.00	-10.50	5.76	5.44	5.12	4.97	4.82	4.52
	-10.00	-9.50	6.01	5.69	5.37	5.22	5.07	4.77
	-9.10	-8.50	6.26	5.94	5.62	5.47	5.32	5.02
	-7.60	-7.00	6.63	6.31	5.99	5.84	5.69	5.39
	-5.60	-5.00	7.13	6.81	6.49	6.34	6.19	5.89
	-3.70	-3.00	8.13	7.81	7.49	7.34	7.19	6.89
	-0.70	0.00	8.37	8.05	7.73	7.58	7.43	7.13
	2.20	3.00	9.01	8.69	8.37	8.22	8.07	7.77
	4.10	5.00	9.57	9.25	8.93	8.78	8.63	8.33
	6.00	7.00	10.13	9.81	9.49	9.34	9.19	8.89
	7.90	9.00	10.33	10.01	9.69	9.54	9.39	9.09
	9.80	11.00	10.53	10.21	9.89	9.74	9.59	9.29
	11.80	13.00	10.73	10.41	10.09	9.94	9.79	9.49
	13.70	15.00	10.93	10.61	10.29	10.14	9.99	9.69
	15.60	17.00	11.13	10.81	10.49	10.34	10.19	9.89
	17.56	19.00	11.33	11.01	10.69	10.54	10.39	10.09
	19.48	21.00	11.53	11.21	10.89	10.74	10.59	10.29

	21.41	23.00	11.73	11.41	11.09	10.94	10.79	10.49
	22.37	24.00	11.83	11.51	11.19	11.04	10.89	10.59
1400	-15.30	-15.00	3.62	3.30	2.98	2.83	2.68	2.38
	-13.00	-12.60	4.10	3.78	3.46	3.31	3.16	2.86
	-11.00	-10.50	4.52	4.20	3.88	3.73	3.58	3.28
	-10.00	-9.50	4.72	4.40	4.08	3.93	3.78	3.48
	-9.10	-8.50	4.92	4.60	4.28	4.13	3.98	3.68
	-7.60	-7.00	5.22	4.90	4.58	4.43	4.28	3.98
	-5.60	-5.00	5.62	5.30	4.98	4.83	4.68	4.38
	-3.70	-3.00	6.02	5.70	5.38	5.23	5.08	4.78
	-0.70	0.00	6.26	5.94	5.62	5.47	5.32	5.02
	2.20	3.00	6.90	6.58	6.26	6.11	5.96	5.66
	4.10	5.00	7.46	7.14	6.82	6.67	6.52	6.22
	6.00	7.00	8.02	7.70	7.38	7.23	7.08	6.78
	7.90	9.00	8.22	7.90	7.58	7.43	7.28	6.98
	9.80	11.00	8.42	8.10	7.78	7.63	7.48	7.18
	11.80	13.00	8.62	8.30	7.98	7.83	7.68	7.38
	13.70	15.00	8.82	8.50	8.18	8.03	7.88	7.58
	15.60	17.00	9.02	8.70	8.38	8.23	8.08	7.78
	17.56	19.00	9.22	8.90	8.58	8.43	8.28	7.98
	19.48	21.00	9.42	9.10	8.78	8.63	8.48	8.18
	21.41	23.00	9.62	9.30	8.98	8.83	8.68	8.38
	22.37	24.00	9.72	9.40	9.08	8.93	8.78	8.48

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Model 140

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
2900	10.00	16.80	10.86	17.10	10.88	17.30	10.83	17.50	11.11	17.90	11.52	18.30	11.94	18.50	12.23
	12.00	16.52	10.83	16.82	10.86	17.02	10.81	17.22	11.06	17.62	11.47	18.02	11.89	18.22	12.19
	14.00	16.24	10.80	16.54	10.82	16.74	10.78	16.94	11.01	17.34	11.42	17.74	11.84	17.94	12.13
	16.00	15.96	10.76	16.26	10.79	16.46	10.75	16.66	10.95	17.06	11.36	17.46	11.79	17.66	12.08
	18.00	15.68	10.71	15.98	10.75	16.18	10.71	16.38	10.88	16.78	11.30	17.18	11.73	17.38	12.02
	20.00	15.40	10.66	15.70	10.70	15.90	10.67	16.10	10.81	16.50	11.23	16.90	11.66	17.10	11.96
	21.00	15.26	10.71	15.56	10.75	15.76	10.71	15.96	10.84	16.36	11.26	16.76	11.69	16.96	11.99
	23.00	14.98	10.65	15.28	10.69	15.48	10.66	15.68	10.76	16.08	11.19	16.48	11.62	16.68	11.92
	25.00	14.70	10.58	15.00	10.63	15.20	10.60	15.40	10.68	15.80	11.11	16.20	11.54	16.40	11.84
	27.00	14.42	10.52	14.72	10.57	14.92	10.54	15.12	10.60	15.52	11.03	15.92	11.46	16.12	11.76
	29.00	14.14	10.44	14.44	10.50	14.64	10.47	14.84	10.51	15.24	10.94	15.64	11.38	15.84	11.68
	31.00	13.86	10.36	14.16	10.42	14.36	10.40	14.56	10.42	14.96	10.85	15.36	11.29	15.56	11.59
	33.00	13.58	10.28	13.88	10.34	13.98	10.25	14.28	10.32	14.68	10.75	15.08	11.20	15.28	11.50
	35.00	13.30	10.19	13.60	10.25	13.80	10.24	14.00	10.22	14.40	10.66	14.80	11.10	15.00	11.40
	37.00	12.68	9.83	12.98	9.90	13.18	9.90	13.38	9.87	13.78	10.30	14.18	10.74	14.38	11.04
	39.00	12.06	9.46	12.36	9.54	12.56	9.54	12.76	9.50	13.16	9.93	13.56	10.37	13.76	10.67
	42.00	11.13	8.83	11.43	8.93	11.63	8.94	11.83	8.89	12.23	9.32	12.63	9.76	12.83	10.04
	44.00	10.41	8.36	10.71	8.46	10.91	8.48	11.11	8.43	11.51	8.86	11.91	9.29	12.11	9.57
	46.00	9.69	7.87	9.99	7.98	10.19	8.01	10.39	7.96	10.79	8.38	11.19	8.81	11.39	9.09
	48.00	9.07	7.45	9.37	7.57	9.57	7.61	9.77	7.56	10.17	7.98	10.57	8.40	10.77	8.68
	50.00	8.35	6.93	8.65	7.07	8.85	7.12	9.05	7.07	9.45	7.48	9.85	7.90	10.05	8.17
	52.00	7.63	6.41	7.93	6.55	8.13	6.61	8.33	6.57	8.73	6.98	9.13	7.40	9.33	7.66
	55.00	6.70	5.69	7.00	5.85	7.20	5.92	7.40	5.89	7.80	6.29	8.20	6.70	8.40	6.96
2100	10.00	12.44	8.04	12.74	8.11	12.94	8.10	13.14	8.34	13.54	8.72	13.94	9.09	14.14	9.35
	12.00	12.20	8.00	12.50	8.07	12.70	8.07	12.90	8.29	13.30	8.66	13.70	9.04	13.90	9.29
	14.00	11.96	7.95	12.26	8.02	12.46	8.02	12.66	8.22	13.06	8.60	13.46	8.98	13.66	9.24
	16.00	11.72	7.90	12.02	7.97	12.22	7.98	12.42	8.16	12.82	8.54	13.22	8.92	13.42	9.18
	18.00	11.48	7.84	11.78	7.92	11.98	7.93	12.18	8.09	12.58	8.47	12.98	8.86	13.18	9.11
	20.00	11.24	7.78	11.54	7.86	11.74	7.87	11.94	8.02	12.34	8.40	12.74	8.79	12.94	9.05
	21.00	11.12	7.80	11.42	7.89	11.62	7.90	11.82	8.02	12.22	8.41	12.62	8.80	12.82	9.06
	23.00	10.88	7.73	11.18	7.82	11.38	7.83	11.58	7.94	11.98	8.33	12.38	8.73	12.58	8.99
	25.00	10.64	7.66	10.94	7.75	11.14	7.77	11.34	7.86	11.74	8.25	12.14	8.65	12.34	8.91
	27.00	10.40	7.58	10.70	7.68	10.90	7.70	11.10	7.78	11.50	8.17	11.90	8.57	12.10	8.83
	29.00	10.16	7.50	10.46	7.60	10.66	7.62	10.86	7.69	11.26	8.08	11.66	8.48	11.86	8.74
	31.00	9.92	7.41	10.22	7.52	10.42	7.54	10.62	7.60	11.02	7.99	11.42	8.39	11.62	8.65
	33.00	9.68	7.32	9.98	7.43	10.08	7.39	10.38	7.50	10.78	7.90	11.18	8.30	11.38	8.56
	35.00	9.44	7.23	9.74	7.34	9.94	7.37	10.14	7.40	10.54	7.80	10.94	8.20	11.14	8.46
	37.00	8.94	6.93	9.24	7.05	9.44	7.09	9.64	7.11	10.04	7.50	10.44	7.91	10.64	8.17
	39.00	8.44	6.62	8.74	6.75	8.94	6.79	9.14	6.80	9.54	7.20	9.94	7.60	10.14	7.86

	42.00	7.69	6.10	7.99	6.24	8.19	6.29	8.39	6.31	8.79	6.70	9.19	7.10	9.39	7.35
	44.00	7.09	5.69	7.39	5.84	7.59	5.90	7.79	5.91	8.19	6.30	8.59	6.70	8.79	6.95
	46.00	6.49	5.27	6.79	5.43	6.99	5.50	7.19	5.51	7.59	5.90	7.99	6.29	8.19	6.53
	48.00	5.99	4.92	6.29	5.08	6.49	5.16	6.69	5.18	7.09	5.56	7.49	5.95	7.69	6.19
	50.00	5.59	4.64	5.89	4.81	6.09	4.90	6.29	4.91	6.69	5.30	7.09	5.69	7.29	5.93
	52.00	5.09	4.27	5.39	4.45	5.59	4.54	5.79	4.56	6.19	4.95	6.59	5.34	6.79	5.57
	55.00	4.44	3.77	4.74	3.96	4.94	4.06	5.14	4.09	5.54	4.47	5.94	4.85	6.14	5.08
	10.00	9.52	6.16	9.82	6.25	10.02	6.28	10.22	6.49	10.62	6.84	11.02	7.19	11.22	7.42
	12.00	9.32	6.11	9.62	6.21	9.82	6.24	10.02	6.44	10.42	6.79	10.82	7.14	11.02	7.37
	14.00	9.12	6.07	9.42	6.17	9.62	6.20	9.82	6.38	10.22	6.73	10.62	7.09	10.82	7.32
	16.00	8.92	6.02	9.22	6.12	9.42	6.15	9.62	6.32	10.02	6.68	10.42	7.04	10.62	7.27
	18.00	8.72	5.96	9.02	6.07	9.22	6.11	9.42	6.26	9.82	6.62	10.22	6.98	10.42	7.21
	20.00	8.52	5.90	8.82	6.01	9.02	6.05	9.22	6.19	9.62	6.55	10.02	6.92	10.22	7.15
	21.00	8.42	5.91	8.72	6.03	8.92	6.07	9.12	6.19	9.52	6.55	9.92	6.92	10.12	7.16
	23.00	8.22	5.85	8.52	5.96	8.72	6.01	8.92	6.12	9.32	6.49	9.72	6.86	9.92	7.09
	25.00	8.02	5.78	8.32	5.90	8.52	5.95	8.72	6.05	9.12	6.41	9.52	6.79	9.72	7.02
	27.00	7.82	5.71	8.12	5.83	8.32	5.88	8.52	5.97	8.92	6.34	9.32	6.71	9.52	6.95
	29.00	7.62	5.63	7.92	5.76	8.12	5.81	8.32	5.89	8.72	6.26	9.12	6.64	9.32	6.87
1600	31.00	7.42	5.55	7.72	5.68	7.92	5.74	8.12	5.81	8.52	6.18	8.92	6.56	9.12	6.80
	33.00	7.22	5.47	7.52	5.61	7.62	5.59	7.92	5.73	8.32	6.10	8.72	6.48	8.92	6.71
	35.00	7.02	5.38	7.32	5.52	7.52	5.58	7.72	5.64	8.12	6.01	8.52	6.39	8.72	6.63
	37.00	6.62	5.13	6.92	5.28	7.12	5.35	7.32	5.40	7.72	5.77	8.12	6.15	8.32	6.39
	39.00	6.22	4.88	6.52	5.04	6.72	5.11	6.92	5.16	7.32	5.53	7.72	5.91	7.92	6.14
	42.00	5.62	4.46	5.92	4.63	6.12	4.71	6.32	4.76	6.72	5.13	7.12	5.50	7.32	5.73
	44.00	5.12	4.11	5.42	4.29	5.62	4.37	5.82	4.42	6.22	4.79	6.62	5.17	6.82	5.39
	46.00	4.62	3.75	4.92	3.94	5.12	4.03	5.32	4.08	5.72	4.45	6.12	4.82	6.32	5.05
	48.00	4.32	3.55	4.62	3.74	4.82	3.84	5.02	3.89	5.42	4.25	5.82	4.63	6.02	4.85
	50.00	3.92	3.26	4.22	3.45	4.42	3.56	4.62	3.61	5.02	3.98	5.42	4.35	5.62	4.57
	52.00	3.52	2.96	3.82	3.16	4.02	3.27	4.22	3.33	4.62	3.70	5.02	4.07	5.22	4.29
	55.00	3.12	2.65	3.42	2.86	3.62	2.98	3.82	3.04	4.22	3.41	4.62	3.78	4.82	4.00

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
2900	-15.30	-15.00	10.92	10.60	10.28	10.13	9.98	9.68
	-13.00	-12.60	11.54	11.22	10.90	10.75	10.60	10.30
	-11.00	-10.50	12.09	11.77	11.45	11.30	11.15	10.85
	-10.00	-9.50	12.35	12.03	11.71	11.56	11.41	11.11
	-9.10	-8.50	12.61	12.29	11.97	11.82	11.67	11.37
	-7.60	-7.00	13.00	12.68	12.36	12.21	12.06	11.76
	-5.60	-5.00	13.52	13.20	12.88	12.73	12.58	12.28
	-3.70	-3.00	14.54	14.22	13.90	13.75	13.60	13.30
	-0.70	0.00	14.81	14.49	14.17	14.02	13.87	13.57
	2.20	3.00	15.48	15.16	14.84	14.69	14.54	14.24
	4.10	5.00	16.06	15.74	15.42	15.27	15.12	14.82
	6.00	7.00	16.64	16.32	16.00	15.85	15.70	15.40
	7.90	9.00	16.86	16.54	16.22	16.07	15.92	15.62
	9.80	11.00	17.08	16.76	16.44	16.29	16.14	15.84
	11.80	13.00	17.30	16.98	16.66	16.51	16.36	16.06
	13.70	15.00	17.52	17.20	16.88	16.73	16.58	16.28
	15.60	17.00	17.74	17.42	17.10	16.95	16.80	16.50
	17.56	19.00	17.96	17.64	17.32	17.17	17.02	16.72
	19.48	21.00	18.18	17.86	17.54	17.39	17.24	16.94
	21.41	23.00	18.40	18.08	17.76	17.61	17.46	17.16
	22.37	24.00	18.51	18.19	17.87	17.72	17.57	17.27
2100	-15.30	-15.00	6.51	6.19	5.87	5.72	5.57	5.27
	-13.00	-12.60	7.13	6.81	6.49	6.34	6.19	5.89
	-11.00	-10.50	7.68	7.36	7.04	6.89	6.74	6.44
	-10.00	-9.50	7.94	7.62	7.30	7.15	7.00	6.70
	-9.10	-8.50	8.20	7.88	7.56	7.41	7.26	6.96
	-7.60	-7.00	8.59	8.27	7.95	7.80	7.65	7.35
	-5.60	-5.00	9.11	8.79	8.47	8.32	8.17	7.87
	-3.70	-3.00	10.13	9.81	9.49	9.34	9.19	8.89
	-0.70	0.00	10.40	10.08	9.76	9.61	9.46	9.16
	2.20	3.00	11.07	10.75	10.43	10.28	10.13	9.83
	4.10	5.00	11.65	11.33	11.01	10.86	10.71	10.41
	6.00	7.00	12.23	11.91	11.59	11.44	11.29	10.99
	7.90	9.00	12.45	12.13	11.81	11.66	11.51	11.21
	9.80	11.00	12.67	12.35	12.03	11.88	11.73	11.43
	11.80	13.00	12.89	12.57	12.25	12.10	11.95	11.65
	13.70	15.00	13.11	12.79	12.47	12.32	12.17	11.87
	15.60	17.00	13.33	13.01	12.69	12.54	12.39	12.09
	17.56	19.00	13.55	13.23	12.91	12.76	12.61	12.31
	19.48	21.00	13.77	13.45	13.13	12.98	12.83	12.53
	21.41	23.00	13.99	13.67	13.35	13.20	13.05	12.75

	22.37	24.00	14.10	13.78	13.46	13.31	13.16	12.86
1600	-15.30	-15.00	4.41	4.09	3.77	3.62	3.47	3.17
	-13.00	-12.60	4.96	4.64	4.32	4.17	4.02	3.72
	-11.00	-10.50	5.44	5.12	4.80	4.65	4.50	4.20
	-10.00	-9.50	5.67	5.35	5.03	4.88	4.73	4.43
	-9.10	-8.50	5.90	5.58	5.26	5.11	4.96	4.66
	-7.60	-7.00	6.25	5.93	5.61	5.46	5.31	5.01
	-5.60	-5.00	6.71	6.39	6.07	5.92	5.77	5.47
	-3.70	-3.00	7.37	7.05	6.73	6.58	6.43	6.13
	-0.70	0.00	7.64	7.32	7.00	6.85	6.70	6.40
	2.20	3.00	8.31	7.99	7.67	7.52	7.37	7.07
	4.10	5.00	8.89	8.57	8.25	8.10	7.95	7.65
	6.00	7.00	9.47	9.15	8.83	8.68	8.53	8.23
	7.90	9.00	9.69	9.37	9.05	8.90	8.75	8.45
	9.80	11.00	9.91	9.59	9.27	9.12	8.97	8.67
	11.80	13.00	10.13	9.81	9.49	9.34	9.19	8.89
	13.70	15.00	10.35	10.03	9.71	9.56	9.41	9.11
	15.60	17.00	10.57	10.25	9.93	9.78	9.63	9.33
	17.56	19.00	10.79	10.47	10.15	10.00	9.85	9.55
	19.48	21.00	11.01	10.69	10.37	10.22	10.07	9.77
	21.41	23.00	11.23	10.91	10.59	10.44	10.29	9.99
	22.37	24.00	11.34	11.02	10.70	10.55	10.40	10.10

Notes:

1.Capacity decreases by 1.5% every 5m with the increase of piping length

2.DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3.TC = Total Capacity (kW)

4.SC = Sensible Capacity (kW)

Model 160

Cooling mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C DB)	Indoor air temperature (°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
3300	10.00	19.55	12.64	19.85	12.63	20.05	12.56	20.25	12.86	20.65	13.29	21.05	13.74	21.25	14.05
	12.00	19.21	12.60	19.51	12.59	19.71	12.52	19.91	12.79	20.31	13.23	20.71	13.67	20.91	13.98
	14.00	18.87	12.55	19.17	12.55	19.37	12.48	19.57	12.71	19.97	13.15	20.37	13.60	20.57	13.91
	16.00	18.53	12.49	18.83	12.49	19.03	12.43	19.23	12.63	19.63	13.07	20.03	13.52	20.23	13.84
	18.00	18.19	12.43	18.49	12.44	18.69	12.37	18.89	12.55	19.29	12.99	19.69	13.44	19.89	13.76
	20.00	17.85	12.36	18.15	12.37	18.35	12.31	18.55	12.46	18.95	12.90	19.35	13.35	19.55	13.67
	21.00	17.68	12.41	17.98	12.42	18.18	12.36	18.38	12.48	18.78	12.92	19.18	13.38	19.38	13.70
	23.00	17.34	12.33	17.64	12.34	17.84	12.28	18.04	12.38	18.44	12.83	18.84	13.28	19.04	13.60
	25.00	17.00	12.24	17.30	12.26	17.50	12.21	17.70	12.27	18.10	12.72	18.50	13.18	18.70	13.50
	27.00	16.66	12.15	16.96	12.17	17.16	12.12	17.36	12.17	17.76	12.62	18.16	13.08	18.36	13.40
	29.00	16.32	12.05	16.62	12.08	16.82	12.03	17.02	12.05	17.42	12.50	17.82	12.96	18.02	13.28
	31.00	15.98	11.95	16.28	11.98	16.48	11.93	16.68	11.93	17.08	12.39	17.48	12.85	17.68	13.17
	33.00	15.64	11.84	15.94	11.87	16.04	11.76	16.34	11.81	16.74	12.26	17.14	12.73	17.34	13.05
	35.00	15.30	11.72	15.60	11.76	15.80	11.72	16.00	11.68	16.40	12.14	16.80	12.60	17.00	12.92
	37.00	14.68	11.38	14.98	11.43	15.18	11.40	15.38	11.34	15.78	11.79	16.18	12.26	16.38	12.57
	39.00	14.06	11.03	14.36	11.09	14.56	11.06	14.76	10.99	15.16	11.44	15.56	11.90	15.76	12.22
	42.00	13.13	10.42	13.43	10.49	13.63	10.48	13.83	10.40	14.23	10.85	14.63	11.30	14.83	11.61
	44.00	12.41	9.96	12.71	10.04	12.91	10.04	13.11	9.95	13.51	10.40	13.91	10.85	14.11	11.15
	46.00	11.69	9.49	11.99	9.58	12.19	9.59	12.39	9.50	12.79	9.94	13.19	10.39	13.39	10.69
	48.00	11.07	9.09	11.37	9.19	11.57	9.20	11.77	9.11	12.17	9.55	12.57	9.99	12.77	10.29
	50.00	10.35	8.59	10.65	8.70	10.85	8.73	11.05	8.63	11.45	9.07	11.85	9.51	12.05	9.80
	52.00	9.63	8.08	9.93	8.21	10.13	8.24	10.33	8.14	10.73	8.58	11.13	9.02	11.33	9.30
	55.00	8.70	7.38	9.00	7.52	9.20	7.56	9.40	7.48	9.80	7.90	10.20	8.34	10.40	8.62
2550	10.00	15.91	10.29	16.21	10.32	16.41	10.28	16.61	10.55	17.01	10.95	17.41	11.36	17.61	11.65
	12.00	15.57	10.21	15.87	10.25	16.07	10.21	16.27	10.45	16.67	10.86	17.07	11.27	17.27	11.55
	14.00	15.23	10.13	15.53	10.17	15.73	10.13	15.93	10.35	16.33	10.76	16.73	11.17	16.93	11.45
	16.00	14.89	10.04	15.19	10.08	15.39	10.05	15.59	10.25	15.99	10.65	16.39	11.07	16.59	11.35
	18.00	14.55	9.94	14.85	9.99	15.05	9.96	15.25	10.13	15.65	10.54	16.05	10.96	16.25	11.24
	20.00	14.21	9.84	14.51	9.89	14.71	9.87	14.91	10.02	15.31	10.43	15.71	10.84	15.91	11.13
	21.00	14.04	9.85	14.34	9.91	14.54	9.88	14.74	10.01	15.14	10.42	15.54	10.84	15.74	11.13
	23.00	13.70	9.74	14.00	9.80	14.20	9.78	14.40	9.88	14.80	10.30	15.20	10.72	15.40	11.00
	25.00	13.36	9.62	13.66	9.68	13.86	9.67	14.06	9.75	14.46	10.17	14.86	10.59	15.06	10.88
	27.00	13.02	9.50	13.32	9.56	13.52	9.55	13.72	9.62	14.12	10.03	14.52	10.46	14.72	10.74
	29.00	12.68	9.37	12.98	9.44	13.18	9.43	13.38	9.48	13.78	9.89	14.18	10.32	14.38	10.60
	31.00	12.34	9.23	12.64	9.30	12.84	9.30	13.04	9.33	13.44	9.75	13.84	10.18	14.04	10.46
	33.00	12.00	9.08	12.30	9.17	12.40	9.09	12.70	9.18	13.10	9.60	13.50	10.03	13.70	10.31
	35.00	11.66	8.93	11.96	9.02	12.16	9.03	12.36	9.03	12.76	9.45	13.16	9.87	13.36	10.16
	37.00	11.04	8.56	11.34	8.66	11.54	8.67	11.74	8.66	12.14	9.08	12.54	9.50	12.74	9.78
	39.00	10.42	8.18	10.72	8.28	10.92	8.30	11.12	8.28	11.52	8.70	11.92	9.12	12.12	9.40

	42.00	9.49	7.53	9.79	7.65	9.99	7.68	10.19	7.66	10.59	8.07	10.99	8.49	11.19	8.76
	44.00	8.77	7.04	9.07	7.17	9.27	7.21	9.47	7.19	9.87	7.60	10.27	8.01	10.47	8.28
	46.00	8.05	6.54	8.35	6.68	8.55	6.73	8.75	6.71	9.15	7.11	9.55	7.52	9.75	7.78
	48.00	7.43	6.10	7.73	6.25	7.93	6.31	8.13	6.29	8.53	6.69	8.93	7.10	9.13	7.36
	50.00	6.91	5.74	7.21	5.90	7.41	5.96	7.61	5.95	8.01	6.35	8.41	6.75	8.61	7.00
	52.00	6.29	5.28	6.59	5.45	6.79	5.52	6.99	5.51	7.39	5.91	7.79	6.31	7.99	6.56
	55.00	5.46	4.64	5.76	4.82	5.96	4.90	6.16	4.90	6.56	5.29	6.96	5.69	7.16	5.93
1880	10.00	12.67	8.19	12.97	8.25	13.17	8.24	13.37	8.49	13.77	8.86	14.17	9.24	14.37	9.50
	12.00	12.33	8.08	12.63	8.15	12.83	8.15	13.03	8.37	13.43	8.74	13.83	9.12	14.03	9.38
	14.00	11.99	7.97	12.29	8.04	12.49	8.04	12.69	8.24	13.09	8.62	13.49	9.00	13.69	9.26
	16.00	11.65	7.85	11.95	7.93	12.15	7.93	12.35	8.11	12.75	8.49	13.15	8.87	13.35	9.13
	18.00	11.31	7.72	11.61	7.81	11.81	7.81	12.01	7.98	12.41	8.35	12.81	8.74	13.01	8.99
	20.00	10.97	7.59	11.27	7.68	11.47	7.69	11.67	7.83	12.07	8.21	12.47	8.60	12.67	8.86
	21.00	10.80	7.57	11.10	7.66	11.30	7.68	11.50	7.80	11.90	8.19	12.30	8.58	12.50	8.83
	23.00	10.46	7.43	10.76	7.53	10.96	7.54	11.16	7.65	11.56	8.04	11.96	8.43	12.16	8.68
	25.00	10.12	7.28	10.42	7.38	10.62	7.40	10.82	7.50	11.22	7.88	11.62	8.28	11.82	8.53
	27.00	9.78	7.13	10.08	7.23	10.28	7.26	10.48	7.34	10.88	7.73	11.28	8.12	11.48	8.37
	29.00	9.44	6.97	9.74	7.08	9.94	7.11	10.14	7.18	10.54	7.56	10.94	7.96	11.14	8.21
	31.00	9.10	6.80	9.40	6.91	9.60	6.95	9.80	7.01	10.20	7.39	10.60	7.79	10.80	8.04
	33.00	8.76	6.63	9.06	6.75	9.16	6.71	9.46	6.83	9.86	7.22	10.26	7.61	10.46	7.87
	35.00	8.42	6.45	8.72	6.57	8.92	6.62	9.12	6.65	9.52	7.04	9.92	7.44	10.12	7.69
	37.00	7.96	6.17	8.26	6.30	8.46	6.35	8.66	6.38	9.06	6.77	9.46	7.16	9.66	7.41
	39.00	7.50	5.88	7.80	6.02	8.00	6.07	8.20	6.10	8.60	6.49	9.00	6.88	9.20	7.13
	42.00	6.81	5.40	7.11	5.55	7.31	5.62	7.51	5.64	7.91	6.03	8.31	6.42	8.51	6.66
	44.00	6.25	5.01	6.55	5.17	6.75	5.25	6.95	5.27	7.35	5.65	7.75	6.04	7.95	6.28
	46.00	5.69	4.62	5.99	4.78	6.19	4.86	6.39	4.89	6.79	5.27	7.19	5.66	7.39	5.89
	48.00	5.33	4.37	5.63	4.55	5.83	4.63	6.03	4.66	6.43	5.04	6.83	5.43	7.03	5.66
	50.00	4.87	4.04	5.17	4.22	5.37	4.32	5.57	4.35	5.97	4.72	6.37	5.11	6.57	5.34
	52.00	4.41	3.70	4.71	3.89	4.91	3.99	5.11	4.02	5.51	4.40	5.91	4.78	6.11	5.01
	55.00	3.92	3.32	4.22	3.52	4.42	3.63	4.62	3.67	5.02	4.05	5.42	4.43	5.62	4.65

Notes:

1. Capacity decreases by 2% every 5m with the increase of piping length

2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

4. SC = Sensible Capacity (kW)

Heating mode:

Indoor airflow rate (m^3/h)	Outdoor air temperature (°C)		Indoor air temperature (°C DB)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
3300	-15.30	-15.00	12.74	12.40	12.06	11.90	11.74	11.42
	-13.00	-12.60	13.39	13.05	12.71	12.55	12.39	12.07
	-11.00	-10.50	13.96	13.62	13.28	13.12	12.96	12.64
	-10.00	-9.50	14.23	13.89	13.55	13.39	13.23	12.91
	-9.10	-8.50	14.50	14.16	13.82	13.66	13.50	13.18
	-7.60	-7.00	14.90	14.56	14.22	14.06	13.90	13.58
	-5.60	-5.00	15.44	15.10	14.76	14.60	14.44	14.12
	-3.70	-3.00	16.58	16.24	15.90	15.74	15.58	15.26
	-0.70	0.00	16.85	16.51	16.17	16.01	15.85	15.53
	2.20	3.00	17.52	17.18	16.84	16.68	16.52	16.20
	4.10	5.00	18.10	17.76	17.42	17.26	17.10	16.78
	6.00	7.00	18.68	18.34	18.00	17.84	17.68	17.36
	7.90	9.00	18.90	18.56	18.22	18.06	17.90	17.58
	9.80	11.00	19.12	18.78	18.44	18.28	18.12	17.80
	11.80	13.00	19.34	19.00	18.66	18.50	18.34	18.02
	13.70	15.00	19.56	19.22	18.88	18.72	18.56	18.24
	15.60	17.00	19.78	19.44	19.10	18.94	18.78	18.46
	17.56	19.00	20.00	19.66	19.32	19.16	19.00	18.68
	19.48	21.00	20.22	19.88	19.54	19.38	19.22	18.90
	21.41	23.00	20.44	20.10	19.76	19.60	19.44	19.12
	22.37	24.00	20.55	20.21	19.87	19.71	19.55	19.23
2550	-15.30	-15.00	8.65	8.31	7.97	7.81	7.65	7.33
	-13.00	-12.60	9.30	8.96	8.62	8.46	8.30	7.98
	-11.00	-10.50	9.86	9.52	9.18	9.02	8.86	8.54
	-10.00	-9.50	10.13	9.79	9.45	9.29	9.13	8.81
	-9.10	-8.50	10.40	10.06	9.72	9.56	9.40	9.08
	-7.60	-7.00	10.81	10.47	10.13	9.97	9.81	9.49
	-5.60	-5.00	11.35	11.01	10.67	10.51	10.35	10.03
	-3.70	-3.00	12.49	12.15	11.81	11.65	11.49	11.17
	-0.70	0.00	12.76	12.42	12.08	11.92	11.76	11.44
	2.20	3.00	13.43	13.09	12.75	12.59	12.43	12.11
	4.10	5.00	14.01	13.67	13.33	13.17	13.01	12.69
	6.00	7.00	14.59	14.25	13.91	13.75	13.59	13.27
	7.90	9.00	14.81	14.47	14.13	13.97	13.81	13.49
	9.80	11.00	15.03	14.69	14.35	14.19	14.03	13.71
	11.80	13.00	15.25	14.91	14.57	14.41	14.25	13.93
	13.70	15.00	15.47	15.13	14.79	14.63	14.47	14.15
	15.60	17.00	15.69	15.35	15.01	14.85	14.69	14.37
	17.56	19.00	15.91	15.57	15.23	15.07	14.91	14.59
	19.48	21.00	16.13	15.79	15.45	15.29	15.13	14.81
	21.41	23.00	16.35	16.01	15.67	15.51	15.35	15.03

	22.37	24.00	16.46	16.12	15.78	15.62	15.46	15.14
1880	-15.30	-15.00	4.99	4.65	4.31	4.15	3.99	3.67
	-13.00	-12.60	5.64	5.30	4.96	4.80	4.64	4.32
	-11.00	-10.50	6.21	5.87	5.53	5.37	5.21	4.89
	-10.00	-9.50	6.48	6.14	5.80	5.64	5.48	5.16
	-9.10	-8.50	6.75	6.41	6.07	5.91	5.75	5.43
	-7.60	-7.00	7.15	6.81	6.47	6.31	6.15	5.83
	-5.60	-5.00	7.69	7.35	7.01	6.85	6.69	6.37
	-3.70	-3.00	8.83	8.49	8.15	7.99	7.83	7.51
	-0.70	0.00	9.10	8.76	8.42	8.26	8.10	7.78
	2.20	3.00	9.77	9.43	9.09	8.93	8.77	8.45
	4.10	5.00	10.35	10.01	9.67	9.51	9.35	9.03
	6.00	7.00	10.93	10.59	10.25	10.09	9.93	9.61
	7.90	9.00	11.15	10.81	10.47	10.31	10.15	9.83
	9.80	11.00	11.37	11.03	10.69	10.53	10.37	10.05
	11.80	13.00	11.59	11.25	10.91	10.75	10.59	10.27
	13.70	15.00	11.81	11.47	11.13	10.97	10.81	10.49
	15.60	17.00	12.03	11.69	11.35	11.19	11.03	10.71
	17.56	19.00	12.25	11.91	11.57	11.41	11.25	10.93
	19.48	21.00	12.47	12.13	11.79	11.63	11.47	11.15
	21.41	23.00	12.69	12.35	12.01	11.85	11.69	11.37
	22.37	24.00	12.80	12.46	12.12	11.96	11.80	11.48

Notes:

1. Capacity decreases by 1.5% every 5m with the increase of piping length

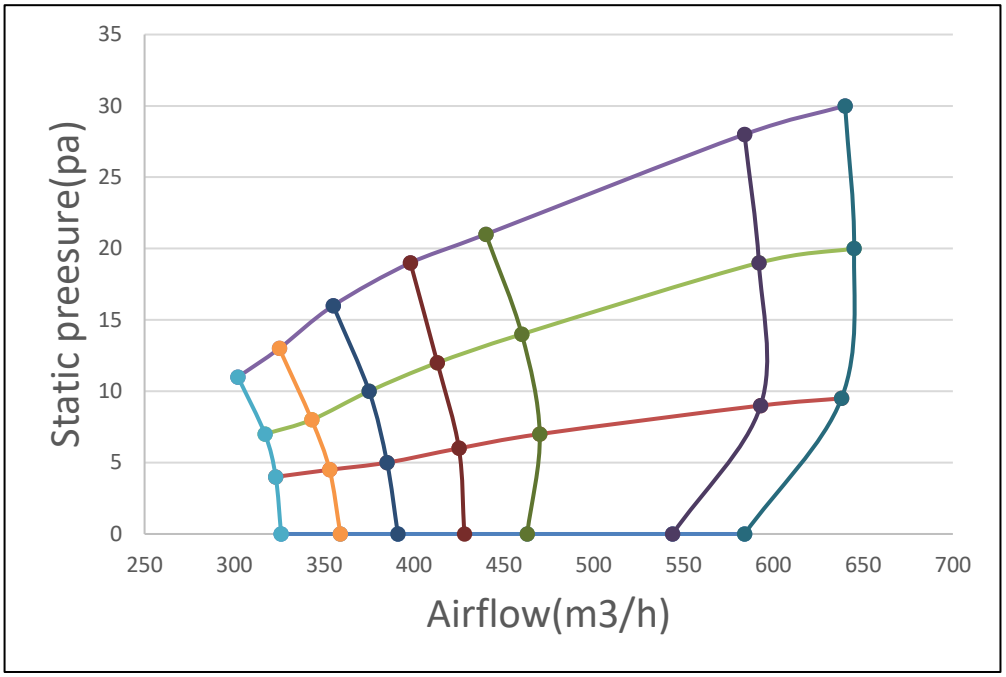
2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)

3. TC = Total Capacity (kW)

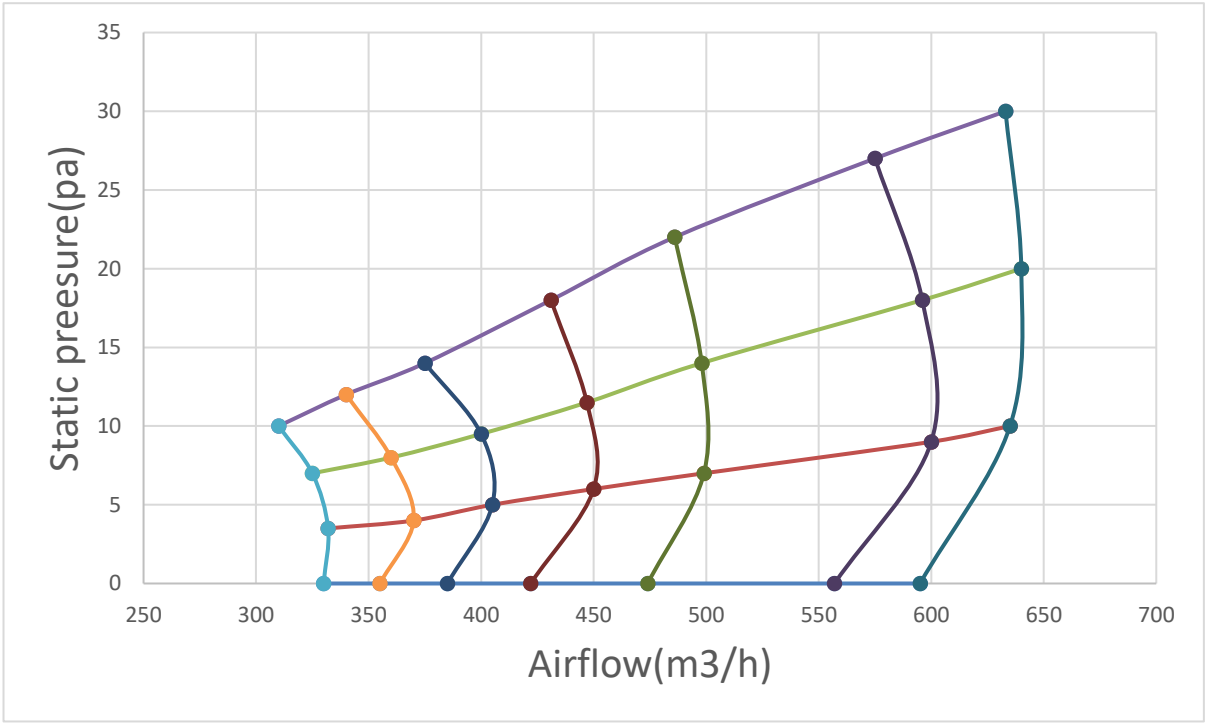
4. SC = Sensible Capacity (kW)

5. Static Pressure Curve

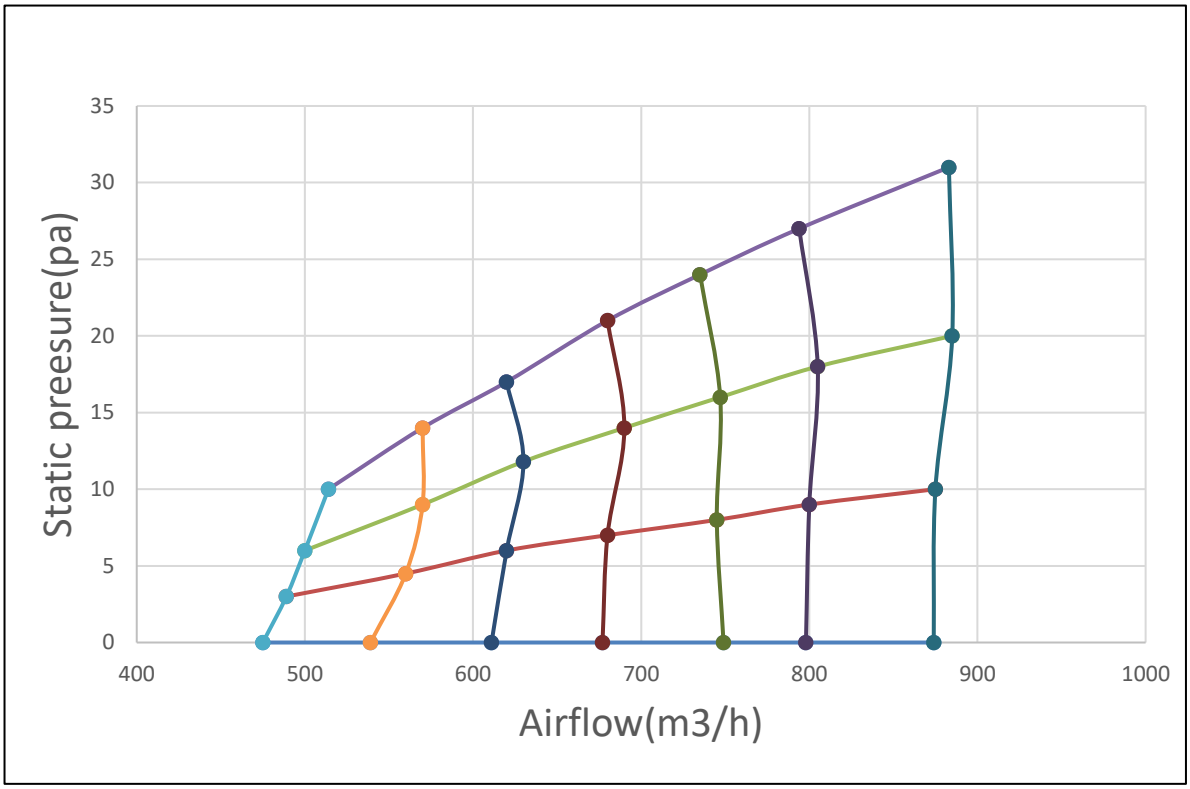
Model 26



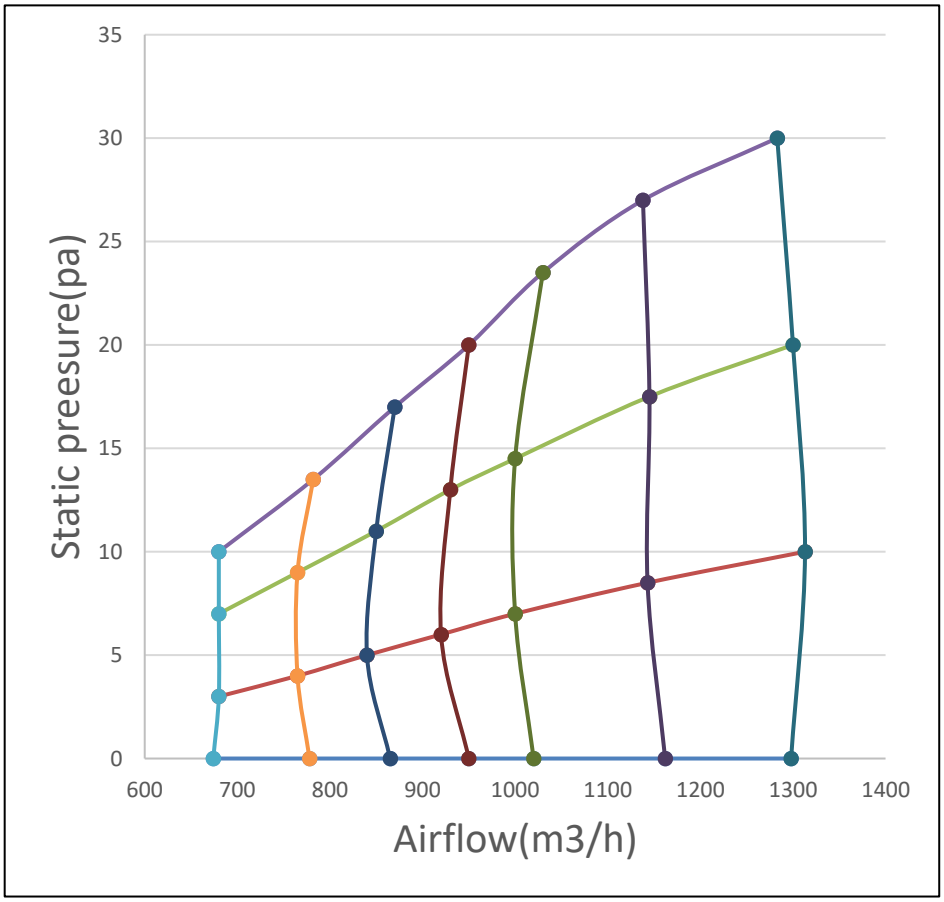
Model 35



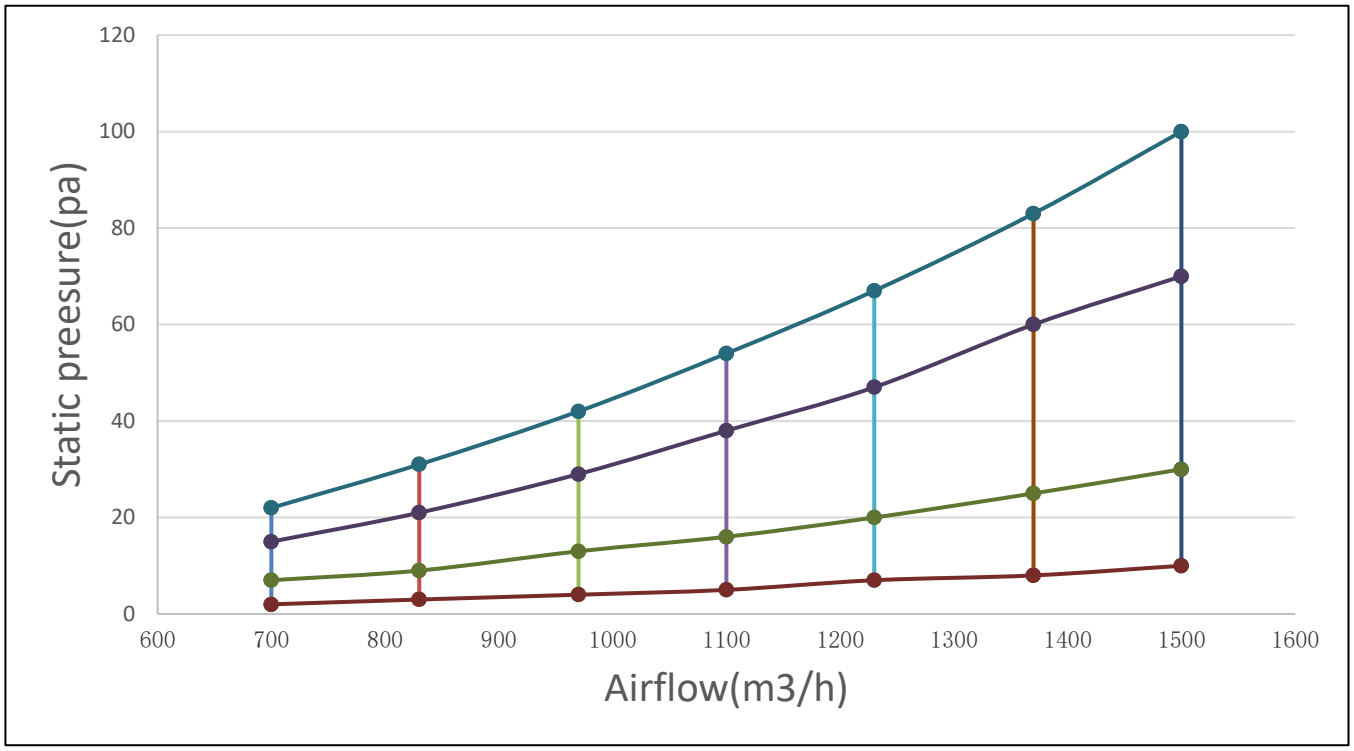
Model 53



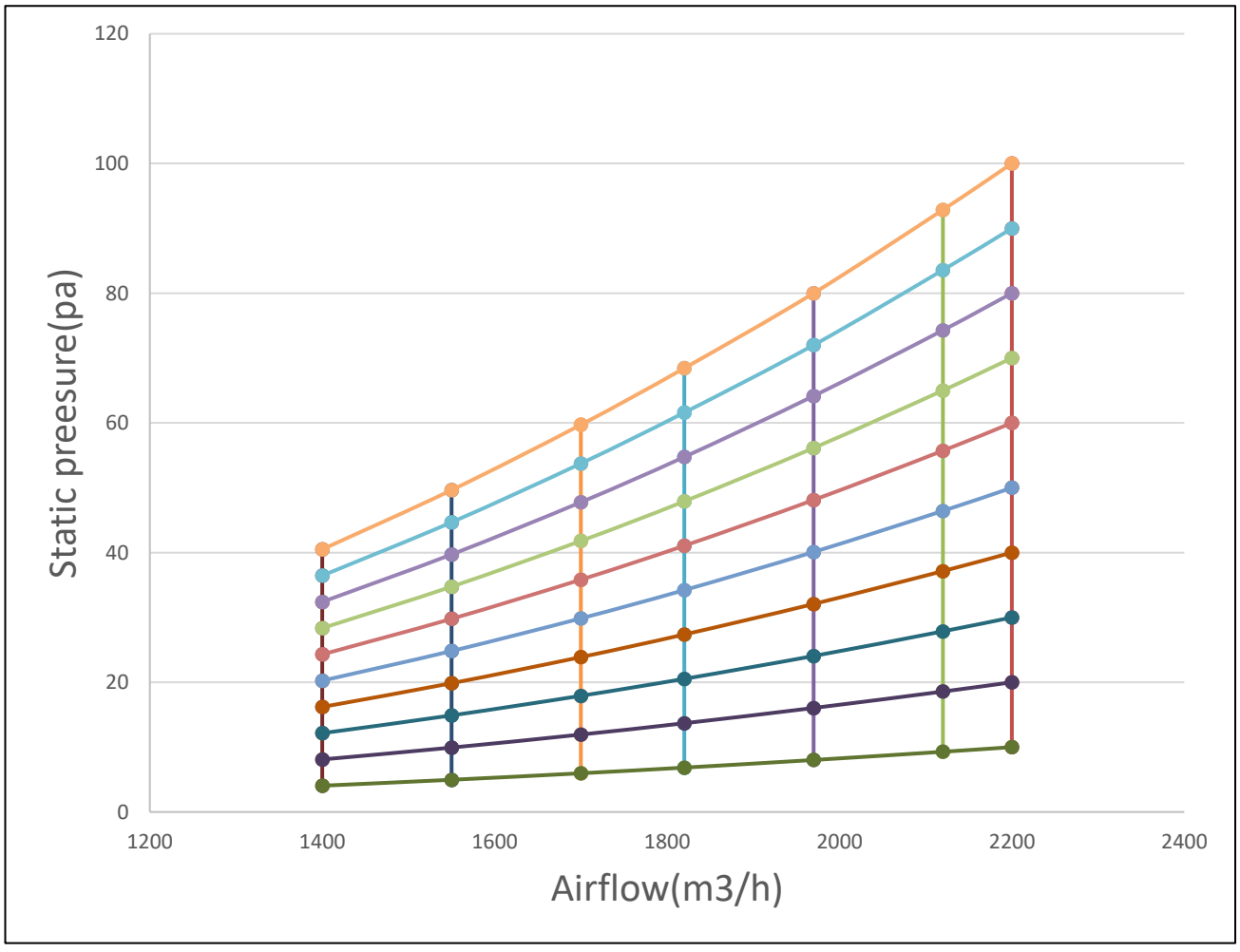
Model 71



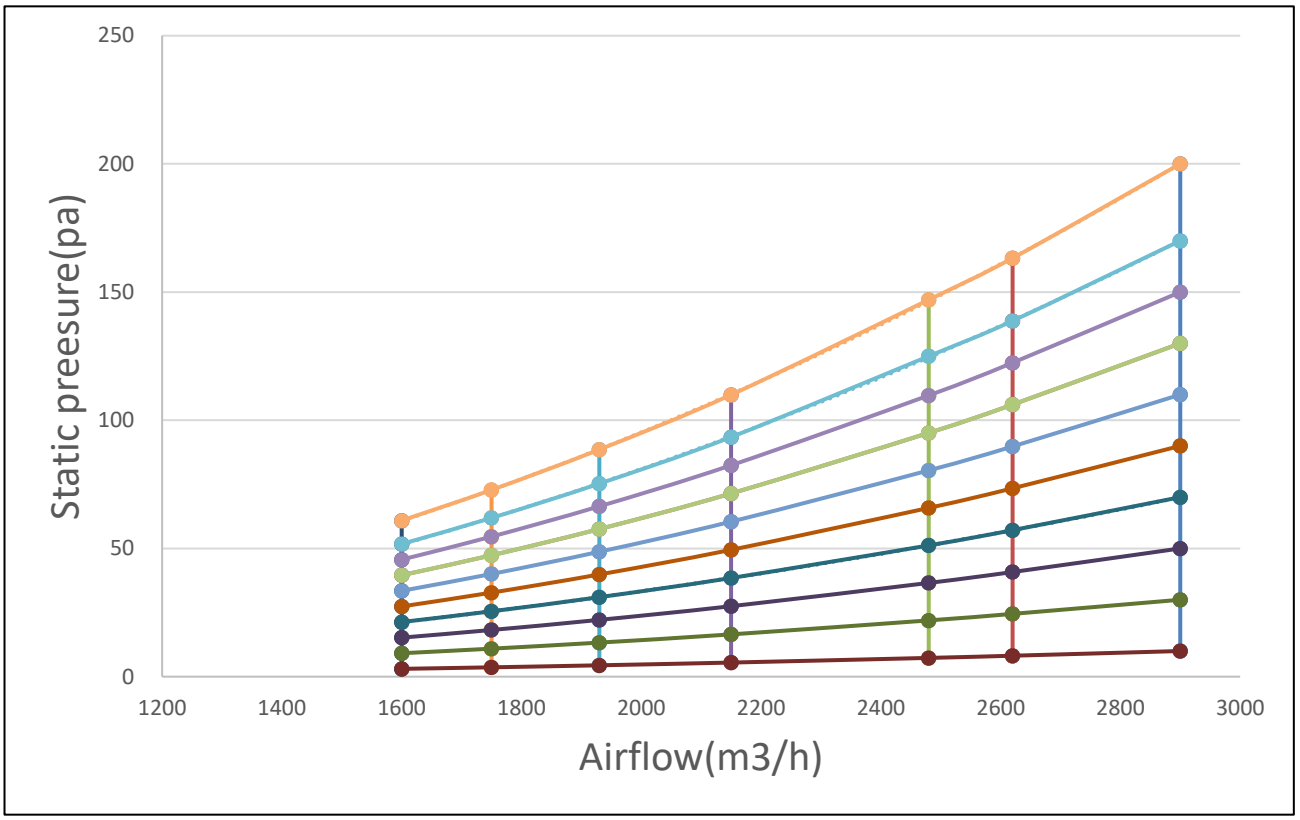
Model 90



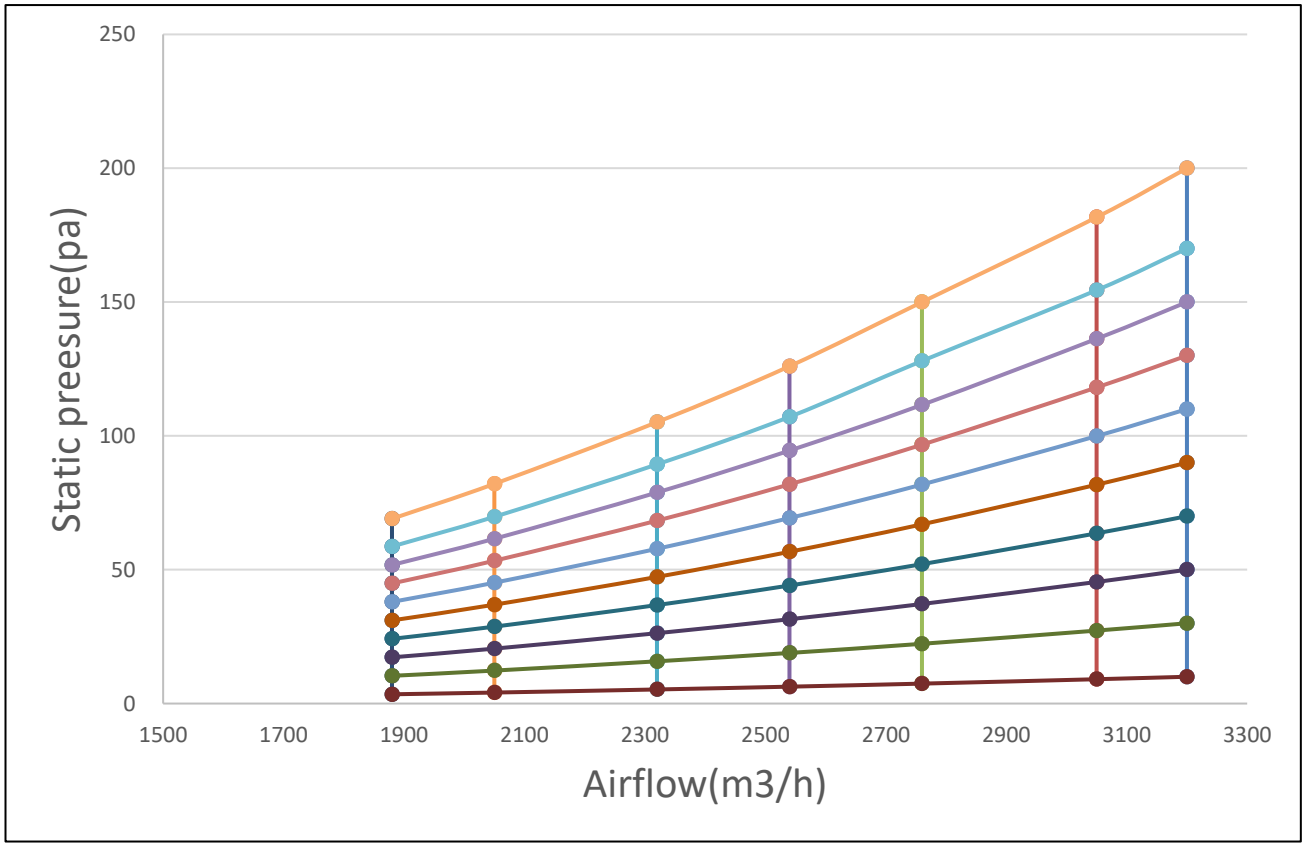
Model 105



Model 140



Model 160

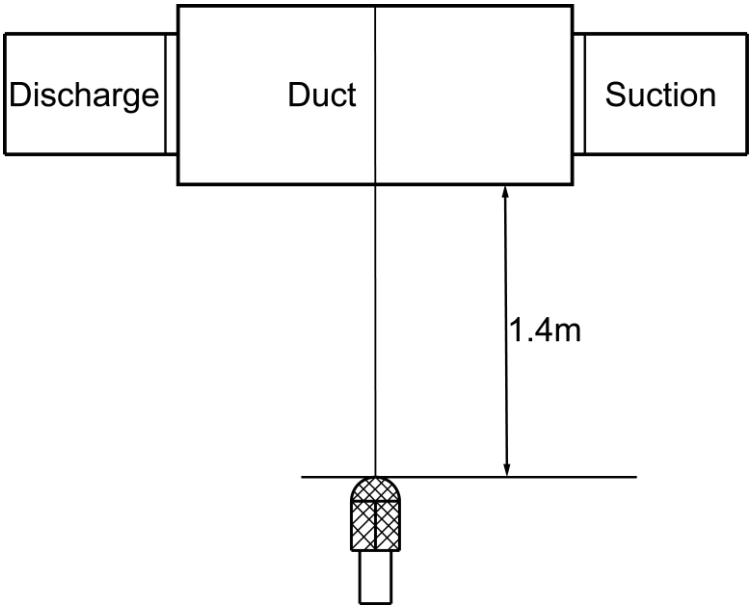


6. Electric Characteristics

Model name	Power supply						Indoor fan motors	
	Hz	Volts	Min. volts	Max. volts	MCA	MFA	Rated motor output (kW)	FLA
IDR3-X 26M	50/60	220-240	198	264	0.425	16	0.03	0.34
IDR3-X 35M	50/60	220-240	198	264	0.45	16	0.03	0.36
IDR3-X 53M	50/60	220-240	198	264	0.75	25	0.03	0.6
IDR3-X 71M	50/60	220-240	198	264	0.875	32	0.06	0.7
IDR3-X 90M	50/60	220-240	198	264	2.25	6	0.15	1.8
IDR3-X 105M	50/60	220-240	198	264	2.6	6	0.24	2.08
IDR3-X 140M	50/60	220-240	198	264	4.5	10	0.34	3.6
IDR3-X 160M	50/60	220-240	198	264	4.7	10	0.56	3.8

Abbreviations:
MCA: Minimum Circuit Amps
MFA: Maximum Fuse Amps
FLA: Full Load Amps

7. Sound Levels



Model	Noise level under three speeds of fan (dB(A))
MCR3-X 26M	34/33/19
MCR3-X 35M	35/34/21
MCR3-X 53M	36/35/24
MCR3-X 71M	38/32/29
MCR3-X 90M	43/39/36
MCR3-X 105M	43/39/36
MCR3-X 140M	49/46/45
MCR3-X 160M	52/49/47

8. Accessories

Accessory name of indoor unit	Qty.	Purpose
Installation Manual	1	Installation instructions
User Manual	1	Operating Instructions of air conditioner
Brass nut	2	For use in the installation of connecting pipe (the quantity is one for models with a process pipe)
Mounting spring	2	Control box fixing assembly
Accessory-sponge	1	/
Water discharge hose	1	For drainage of IDU
Display control box assembly	1	For receiving remote signals
User Service Guide	1	User Service Guide
Insulation piping	2	For insulation of piping connections
Ring clamp	1	For use in the installation works of connecting pipe

Part. 4 Installation & Troubleshooting

1. Notes

1.1 Selecting an installation site for IDU

• Enough space for installation and maintenance.

• The ceiling is level, and the structure is strong enough to support the weight of IDU; take reinforcement measures when necessary.

• Airflow in/out of the machine is not obstructed, and the external air exerts minimum impact.

• Easy to supply airflow to every corner in the room.

• Easy to drain fluids from the connected piping and water discharge piping.

• No direct heat radiation.

• Avoid installation in narrow spaces or where there are more stringent noise requirements.

CAUTION:

Installing the unit in the following places may cause it to malfunction (please enquire if it is unavoidable):

• Places that contain mineral oil such as machine oil for cutting.

• Places with high salt content in the air such as the sea.

• Areas like hot springs where there are corrosive gases like sulphur gases.

• Factories with major voltage fluctuations in the power supplies.

• Places like a car or cabin room.

• Areas filled with cooking oil and gas like kitchens.

• Places where strong electromagnetic waves are present.

• Places where flammable gases or materials are present.

• Areas where there is evaporation of acid or alkaline gases.

• Other special environmental conditions.

1.2 Selecting an installation site for ODU

• Enough space for installation and maintenance.

• Unobstructed airflow in/out of the unit; no strong breeze.

• The site should be dry and well-ventilated.

• The supporting surface should be flat and able to bear the weight of the unit. The ODU should be able to be installed horizontally without increasing vibration and noise. Take reinforcement measures when necessary.

• The operating noise and the discharged air should not affect neighbours.

• There should be no leakage of flammable gas nearby.

• It should be easy to install the connecting pipes and complete electrical connections.

• The level difference of connection pipes and the lengths of connection pipes must be within the allowed ranges.

CAUTION:

• Choose the correct move-in path.

• Carry the device in its original package.

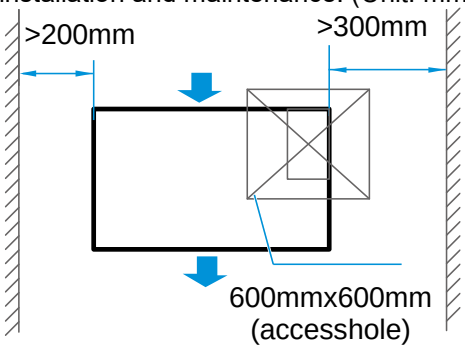
• Electrical insulation measures can be taken in accordance with relevant technical specifications of electrical equipment if the air conditioner is to be installed onto the metal part of a building.

• If the height difference is greater than the allowed level difference, it is recommended to place the ODU above the IDU.

2. Installation of Duct Type Indoor Units

2.1 Installating space

Ensure enough space required for installation and maintenance. (Unit: mm)



2.2 Mount the unit

• Use the Φ10 lifting bolts (four).

• Removing the ceiling: Since the building structure is different, discuss building details with the interior decoration workers.

a. Ceiling treatment: Reinforce the ceiling pedestal to make sure that the ceiling is level and to prevent ceiling vibrations.

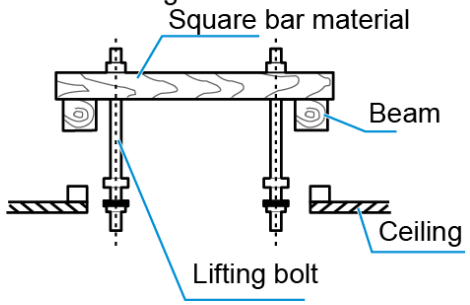
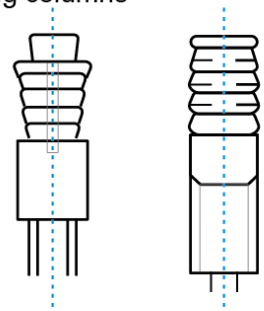
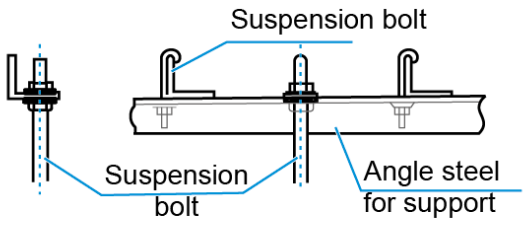
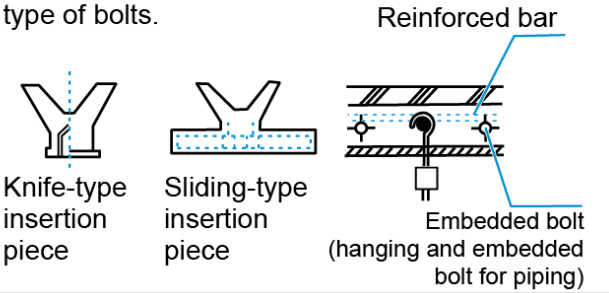
b. Cut off and dismantle the ceiling pedestal.

c. Reinforce the remaining surface after the ceiling is removed. Add further reinforcements to the pedestal on two ends of the ceiling.

d. Once the main unit has been lifted and mounted, carry out the piping and wiring works within the ceiling. Determine the outlet direction of the piping after the installation site has been finalized.

For a site where the ceiling is already available, first connect and put in position the refrigerant piping, water discharge piping, connecting wires of the indoor unit and wired controller before you lift and mount the unit.

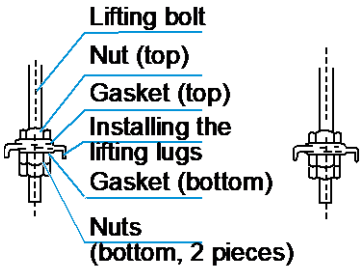
To match the existing structure, set the screw pitch according to the product dimensions shown below.

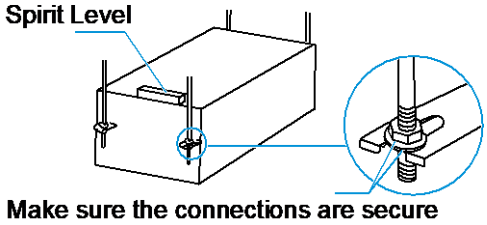
Wooden structure	Original concrete slab structure
Place the square bar by crossing the beams and set the lifting bolts.	Use embedded bolts, embedded pull bolts, and embedded plug columns
	
Steel framework	**Newly set concrete slab structure**
Directly set and use an angle steel for support.	Set using embedded appliances and embedded type of bolts.
	

2.3 Lifting the IDU

• Mount the lifting bolt in the U-shaped groove to install the lifting lugs, lift the machine, and use the gradienter to determine how level the device is.

• Fasten the nuts on the top.



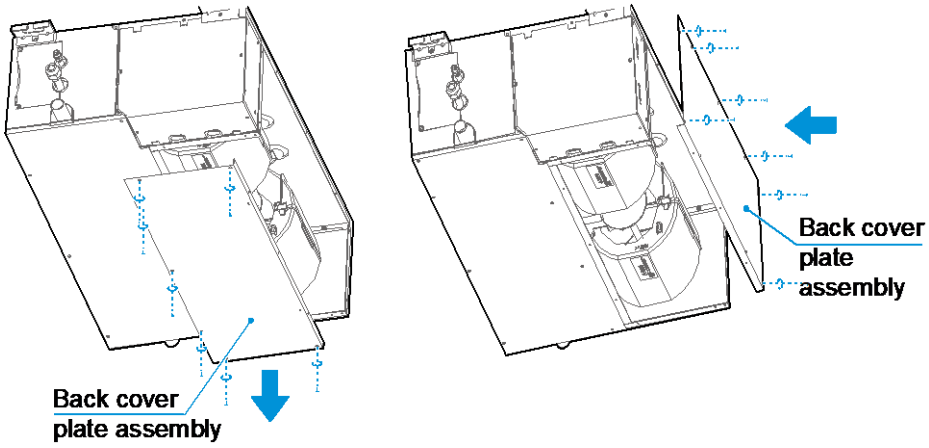


2.4 Air inlet panel for air return plenum

Site adjustment of air return plenum:

There are two kinds of air return modes for this series of models. One is back return air which is the factory default. The other is bottom air return which can be adjusted on-site. Refer to the following diagrams on the adjustment method.

1. Remove back cover plate assembly
2. Install back cover plate assembly



Caution:

• In creating the air return plenum on the air inlet panel, make sure the air inlet grille is angled such that it is parallel to the direction of the air inlet. See Figure 1.

• There should be no angle between the air inlet grille and the direction of the air inlet; otherwise the noise level will increase. Figure 2 shows the incorrect way of making the air inlet panel.

• When the air outlet panel is connected to the air outlet flange of the unit body via the metallic air diffuser, make sure that the sheet metal contact surface is properly sealed and insulated using sponge, as shown in Figure 3.

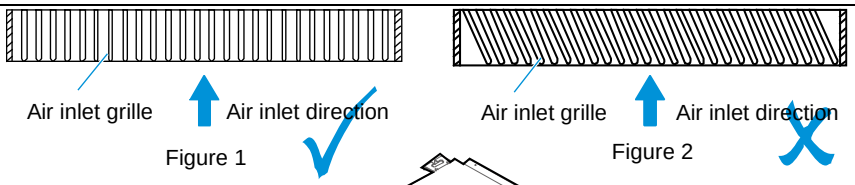


Figure 1 Figure 2

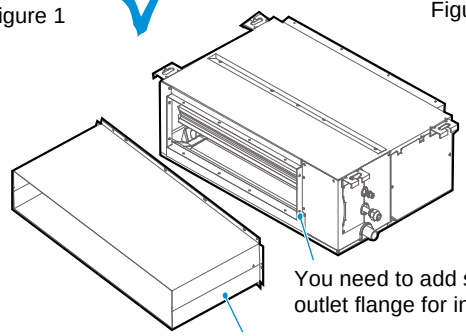


Figure 3

2.5 Steps to dismantle the drain pan

The drain pan must first be removed during the maintenance of the internal unit assembly (make sure that there is no water in the drain pan). Dismantle the drain pan according to the following schematic to prevent water leakage in the unit.

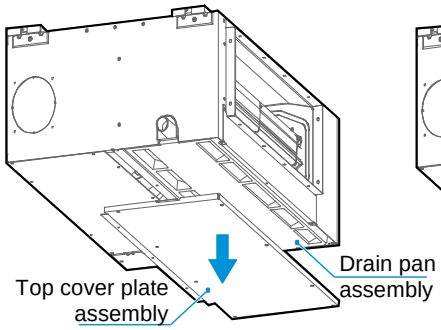


Figure a: Dismantle the top cover plate assembly

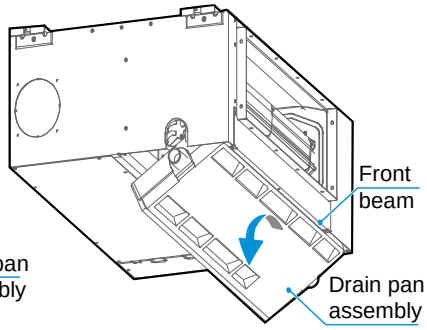


Figure b: Rotate the drain pan assembly by 30 to 45 degrees around the front horizontal beam

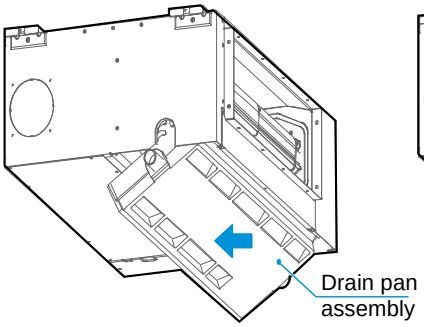


Figure c: Shift the drain pan assembly to the left by more than 30 mm

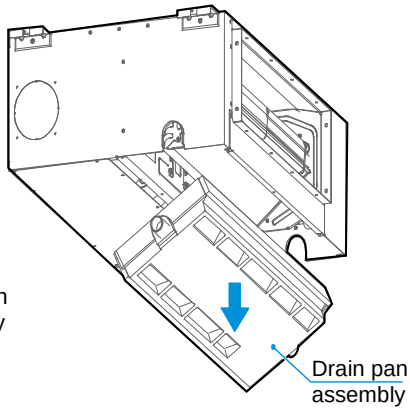
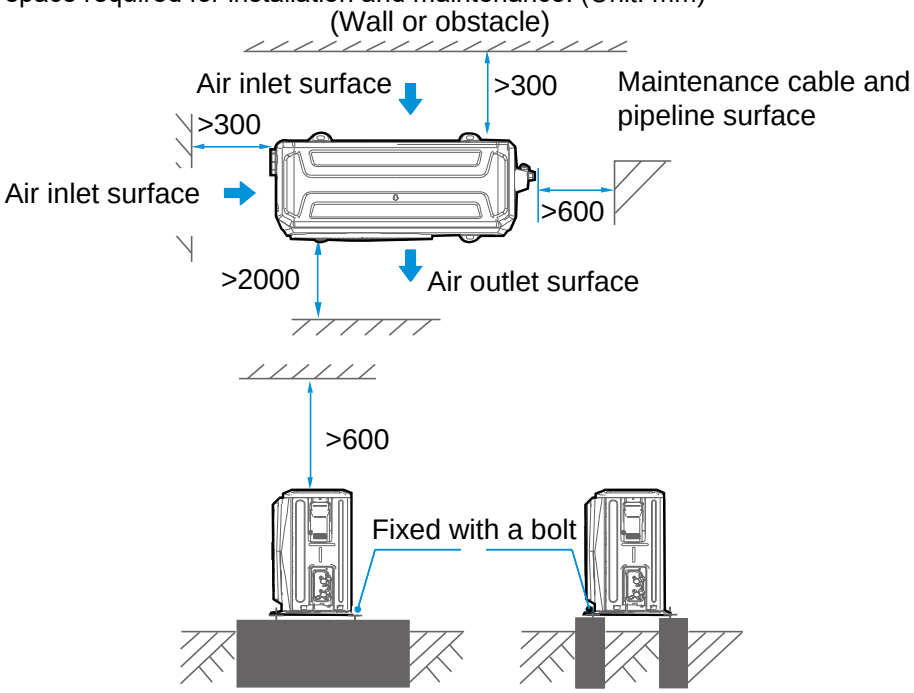


Figure d: Shift the drain pan downwards until the drain pan is removed from the unit body

3. Installation of Outdoor Units

3.1 Installating space

Ensure enough space required for installation and maintenance. (Unit: mm)



3.2 Handling and installation

• Because the center of gravity of the unit is not at the center, be careful when lifting the unit with a hoist cable.

• Do not hold the suction port on the casing; otherwise, it will be deformed.

• Do not touch the blades with your hands or other objects.

• Do not tilt the unit over 45° when carrying it; do not store it horizontally.

• Use M8 or M10 bolts to secure the feet of the unit. The unit must be installed firmly to prevent collapse in the event of an earthquake or a sudden blast.

4. Water discharge piping layout

Note:

Do not exert too much force when installing the suction piping in order not to break the pipes. Wrap both the suction piping and water discharge piping evenly with heat insulation protective casing to prevent water condensation.

4.1 Installation of water discharge piping for the indoor unit

• Use the attached water discharge hose to connect to the drainage outlet and PVC piping of the indoor unit. Use the provided ring clamps to clasp tightly (see Figure 1).

• Use hard PVC adhesives for connecting to other water piping. Check that the connections are tight with no leakage. Use insulation casing to wrap the water suction piping connections and water discharge piping of the main body (especially the indoor portion) tie for the water discharge piping to bind them firmly to make sure air does not enter and condense to form water.

• In order to prevent the back-flow of water into the interior of the air conditioner when the unit stops operating, the water discharge pipe should slope downwards towards the outside (drainage side) at a slope of more than 1/100. Make sure that the water discharge pipe does not swell or store water, otherwise it will cause abnormal sounds.

• When connecting the water discharge piping, do not use force to pull and tug the pipes to prevent the main body from being affected by the force. The distance to pull out the water discharge piping should be within 20m, with supporting points set at every 0.8 to 1.0m to prevent the water discharge piping from bending.

• When concentrating and installing the water discharge piping, arrange the pipes according to the diagram provided in Figure 3.

• The end of the water discharge pipe must be more than 50 mm above the ground or from the base of the water discharge slot. In addition, do not submerge it in water. To discharge the condensed water directly into a ditch, the water discharge pipe must bend upwards to form a U-shaped water plug to stop the odour from entering the room via the water discharge pipe.

Caution:

Make sure all the connections in the piping system are properly sealed to prevent water leakages.

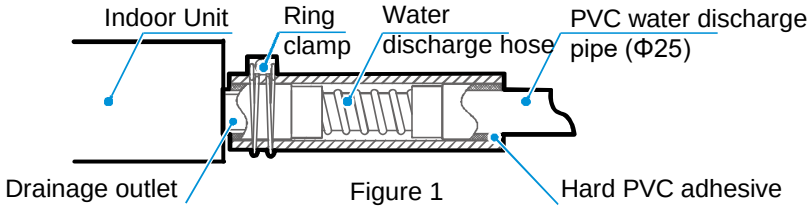


Figure 1

Connection of drainage pipe (see Figures 2 and 3):

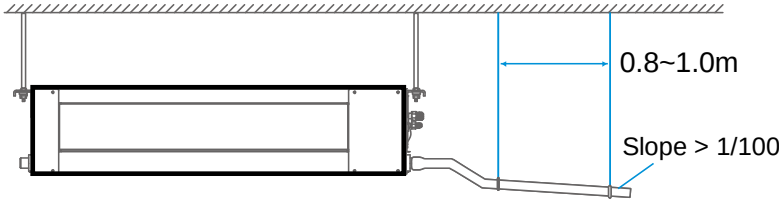


Figure 2 Method to connect the water discharge piping for a single unit

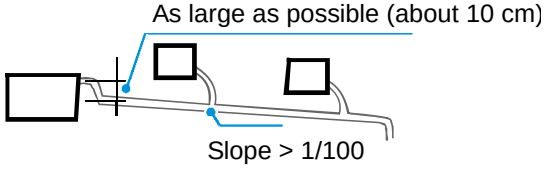


Figure 3 Method for centralised water discharge piping connection

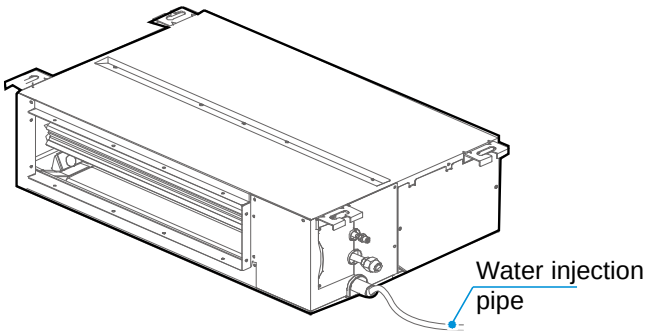
4.2 Water discharge test

1.Before the test, make sure that the water discharge pipeline is smooth, and check that each connection is sealed properly.

2.Conduct the water discharge test in the new room before the ceiling is paved.

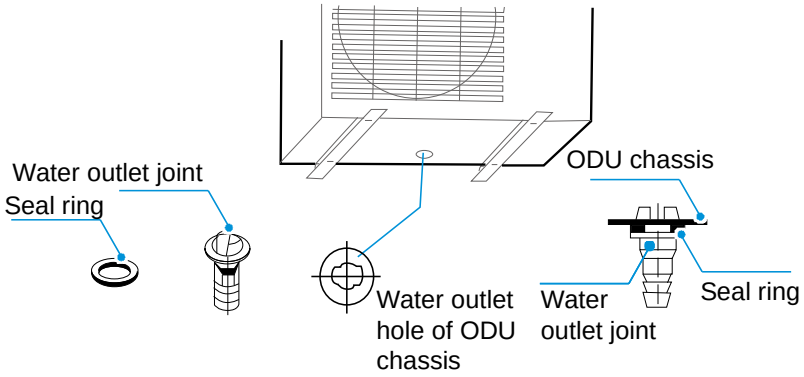
• Use the water injection pipe to fill the drain pan with about 500ml of water through the drain pan outlet (high side) or through the air outlet (if the air outlet duct is not installed).

• Connect the power supply, and set the air conditioner to operate in the cool mode. Check that the water discharge piping outlet discharges water properly (based on the length of the pipe, the discharge may occur at a delay of 1 minute or so), and check for water leakages at each joint. The water injection pipe is marked as shown in the following figure.



4.3 Installation of water discharge piping of ODU

Put the seal ring on the water outlet joint, insert it from the bottom of the ODU into the hole of the chassis and rotate it 90 degrees to make it fit firmly. Connect the water discharge piping (to be purchased by the customer) to the water outlet joint to discharge condensation water from the ODU during heating.



5. Connection of Connecting Pipe

5.1 Length and level difference requirements for the pipe connections of IDU and ODU

Product Model	Maximum length(m)	Maximum level difference(m)	Maximum number of bends(m)
26/35	15	10	5
53/71	25	15	15
90/105	30	20	15
140/160	50	25	15

Notes: If the height difference is greater than the allowed level difference, it is recommended to place ODU above the IDU.

Caution:

• Do not let air, dust, or other particles invade the pipeline system during installation of the connecting pipes.

• Install the connecting pipes only when the indoor and outdoor units are secured.

• Make sure to keep the connecting pipes dry during installation so that no water will enter the piping system.

• Connecting copper pipes must be wrapped with insulation materials (thicker than 10mm, the thickness should be increased if the unit is installed in a closed humid place).

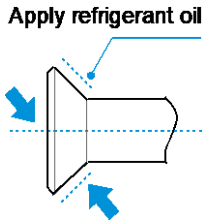
5.2 Steps of pipe connection

Measure the required length of the connecting pipe. Make the connecting pipe using the following method (see the column Pipe Connection for details).

1. Connect the IDUs before the ODU.

• Bend and arrange pipes carefully without damaging the pipes and their insulating layers.

• Before tightening the flare nut, apply refrigerant oil on the outer surface at the pipe flaring position and the conical surface of the connecting nut (the refrigerant oil used must be compatible with the refrigerant of this model), and screw it 3 to 4 turns with your hand to tighten it as shown in the figure below.



• When connecting or removing a pipe, use two wrenches at the same time.

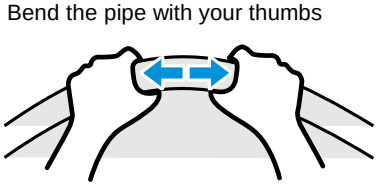
• Do not put the weight of the connecting pipe on the connector of the IDU. Otherwise, the heavy weight will deform the connector and affect the cooling (heating) effect.

2. The check valve of the ODU should be completely closed (e.g. the ex-factory condition). Unscrew nuts from the check valve in each connection, and connect the flared tube immediately (within 5 minutes). When the nut at the check valve is removed and placed for too long, dust and other sundries may enter the pipeline system and cause failures at a later time.

3. After the refrigerant pipe is connected to the IDU and ODU, discharge the air according to the column Air Discharge. After the air is discharged, tighten the service nut.

Precautions for flexible pipes:

• Do not bend a pipe more than 90 degrees (see the figure below).



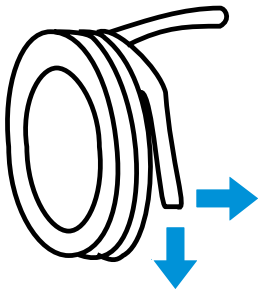
• The bend should be as close as possible to the center of the tube and the bend radius should not be less

than 3.5D (pipe diameter).

• Do not bend the flexible tube back and forth more than 3 times.

Bend a thin-walled connecting pipe (see the figure below):

Method of unwinding the coil:
Straighten the pipe end



• When bending a pipe, cut off the required recess in the insulation pipe at the bend and expose the pipe (wrap the bend with a binding tie after bending).

• Keep the elbow radius as much as possible to prevent flattening or crushing. Use a pipe bender to make tight elbows.

If a copper pipe purchased from the market is used, the heat insulation material of the copper pipe must be the same (thicker than 10mm, the thickness should be increased if the unit is installed in a closed humid place).

5.3 Pipe layout

1. Bend the pipe or drill a hole in the wall as needed. The cross-sectional area of the pipe bending deformation must not exceed 1/3 of the original pipe section. A protective casing should be provided at the wall or floor hole. The weld joint must not be inside the casing. The drill hole on the external wall must be sealed and tightly wrapped with a binding tie to prevent impurities from entering the pipe. The pipe must be insulated with an insulation pipe of suitable size.
2. Insert the bundled piping and wiring from outside the room through the wall opening into the room. Be careful when laying out the pipes. Do not damage them.

Vacuum the connecting pipe.

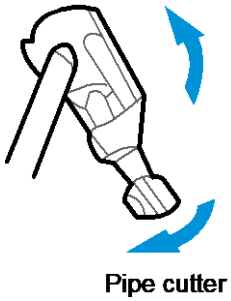
After completing the above steps, the check valve stem of the ODU should be fully opened to ensure that the refrigerant pipeline of the IDU and ODU is unobstructed.

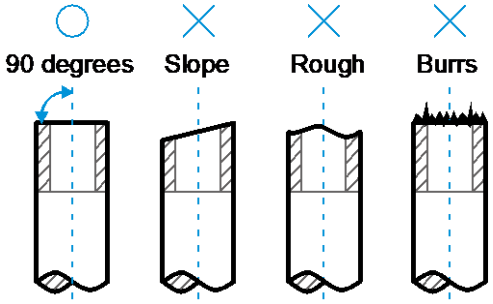
Use a leak detector or soapy water to carefully check for leakage and ensure that there is no leakage. Cover the joint of the IDU with a sound/heat insulation sleeve (accessory) and wrap it tightly with a binding tie to prevent condensation and water leakage.

5.4 Pipe connection

Flaring

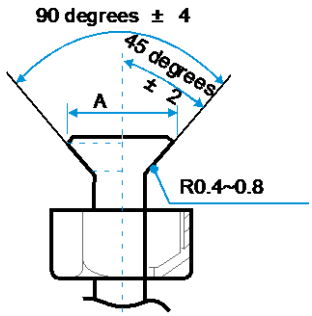
Use a pipe cutter to cut off the pipe, and rotate the pipe cutter repeatedly to cut off the pipe.





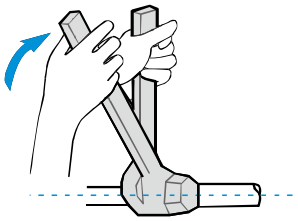
Insert the pipe into the connection nut flare.

Outer diameter(mm)	A(mm)	
	Max.	Min.
Φ6.4	8.7	8.3
Φ9.5	12.4	12.0
Φ12.7	15.8	15.4
Φ15.9	19.0	18.6
Φ19.1	23.3	22.9



5.5 Fasten the nut

Align the connection pipe, tighten the connecting nut with a hand, and tighten them with a wrench as shown in the figure below.



5.6 Air discharge

Use a vacuum pump to discharge the air.

• Loosen and remove the service port nut of check valve A and connect the manifold valve charging hose to the service port of check valve A (check valves A and B are closed).

• Connect the charging hose connector to the vacuum pump.

• Fully open the manifold valve Lo (low pressure) handle.

• Start the vacuum pump. When the vacuum is started, slightly loosen the service port nut of the check valve B to check if the air enters (the vacuum pump noise changes, and the multimeter reading changes from negative to 0). Tighten the service port nut.

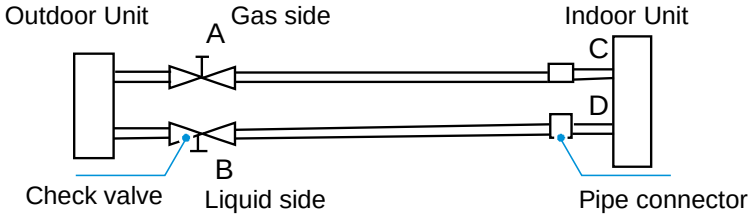
• After the vacuum is complete, fully close the manifold valve low pressure (Lo) handle and stop the vacuum pump.

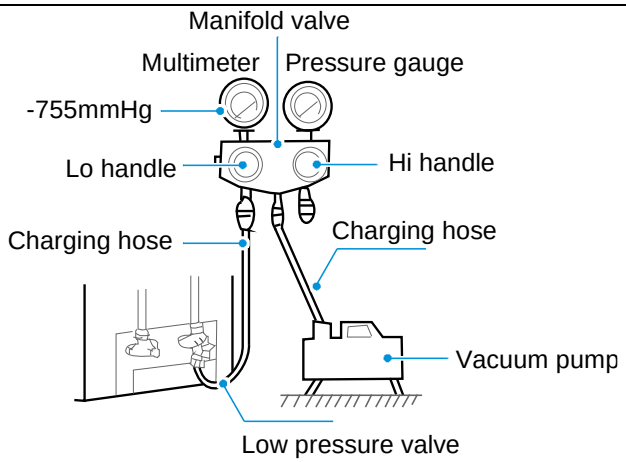
Vacuum the pipe for 15 minutes or more, check whether the multimeter reading is -1.0X10Pa (-755mmHg).

• Loosen and remove the square head covers of check valves A and B, fully open the check valves A and B, and tighten the square head covers of the check valves A and B.

• Remove the charging hose from the service port of check valve A and tighten the nut.

(Refer to its manual for the use of the manifold valve)





Adding Refrigerant

• If the one-way pipe length is less than 5m (including 5m), the refrigerant charging amount is determined according to the nameplate.

• If the one-way pipe length exceeds 5m, it is necessary to calculate the refrigerant charging amount according to the pipe diameter and length of the liquid-side pipes of the IDU and ODU. See the table below for details.

• Record the amount of refrigerant charged and retain the record for use during future maintenance.

Diameter of liquid-side pipe	Refrigerant charging amount	Remarks
Φ6.4	11.5g(L-5)	L is the one-way pipe length

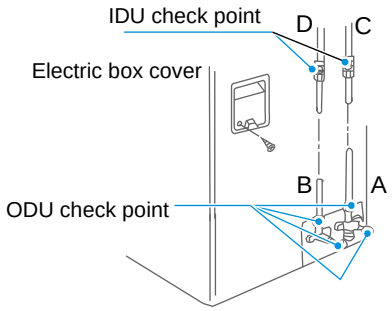
5.7 Leak detection

Use soapy water or a leak detector to check whether air leaks at each joint.

The low pressure check valve is indicated by A in the figure.

B indicates the high pressure side check valve.

C and D indicate IDU connecting pipe ports.



5.8 Check Valve Instructions

• Open the valve plug until it touches the limit block. Do not attempt to continue opening it.

• Use a wrench or similar tool to fasten the valve cap.

• See the torque table for the valve cap fastening torque.

Pipe size	Tightening torque N.m
Φ6.4	14.2～17.2 N.m (144～176 kgf.cm)
Φ9.5	32.7～39.9 N.m (333～407 kgf.cm)
Φ12.7	49.5～60.3 N.m (504～616 kgf.cm)
Φ15.9	61.8～75.4 N.m (630～770 kgf.cm)
Φ19.1	97.2～118.6 N.m (990～1210 kgf.cm)

5.9 Heat insulation

• The exposed flared tube connection portion and the refrigerant tube portion of the liquid pipe and the gas pipe must be wrapped with the heat insulation material with no gap in between.

• Insufficient insulation may cause condensation and water dripping.

6. Electric Connection

6.1 Caution

- Before the installation, check whether the power supply of the user meets the electrical installation requirements of the product (including reliable grounding, power leakage, and wire-diameter electrical load). Do not install the product before the modification if the electrical installation requirements of the product are not met.
- Air conditioners must use a dedicated power supply. The power voltage must conform to the rated voltage.
- The external power supply circuit of the air conditioner must include a grounding line, and the grounding line of the power cable connecting to the indoor unit must be securely connected to the grounding line of the external power supply.
- Electrical wiring work must be carried out by a professional technician, and must comply with the labels stated in the circuit diagram.
- The fixed wiring connected must be equipped with an all-pole disconnection device with a minimum 3mm of contact separation.
- Leakage protection devices must be configured according to national standards for electrical equipment.
- The power cord and signal cables must be neatly and properly arranged without interfering with one another or contacting with any connecting pipes or valves.
- When multiple air conditioners are installed in a centralized manner, ensure load balance of the three-phase power supply, and avoid installing multiple units at the same phase of the three-phase power supply.
- In general, two wires cannot be connected unless the joint is securely welded and wrapped with insulation tape.
- Power the system on only after all the completed wiring operations have been carefully checked.

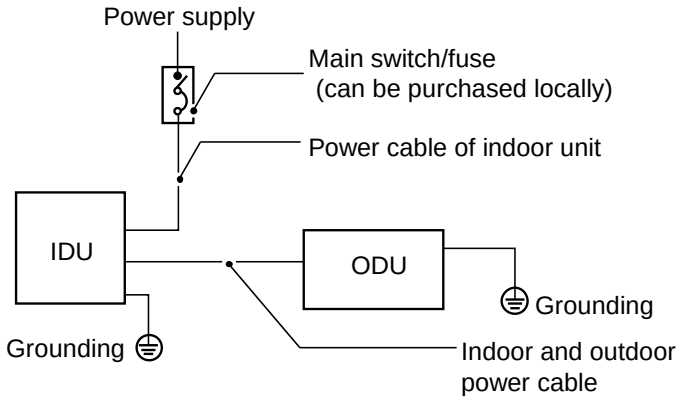
6.2 Power Supply Specifications

26/35/53/71/71*/90/105/140/160

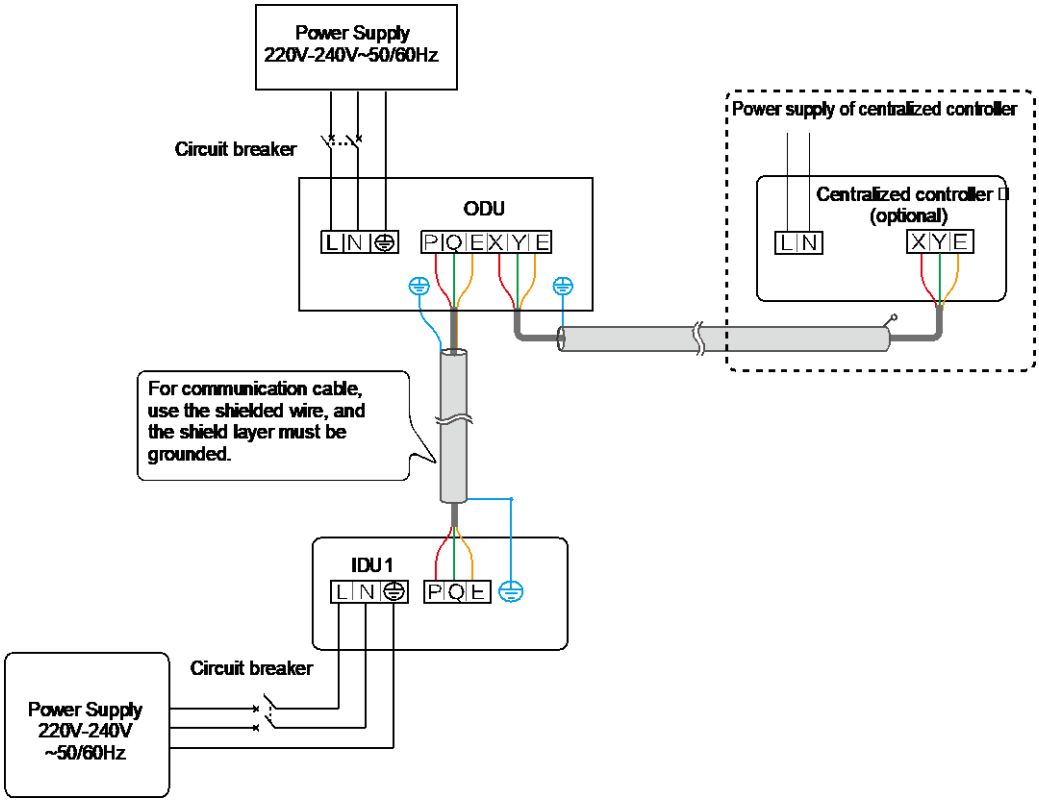
Model	Power supply		Fuse	Power cord dimensions(AWG)	IDU and OUD connection line dimensions(AWG)
	Phase	Voltage and frequency			
MCR3-X 26M/ IDR3-X 26M	1	220V-240V~50Hz	16	3×14	4×14
MCR3-X 35M/ IDR3-X 35M					
MCR3-X 53M/ IDR3-X 53M	1	220V-240V~50Hz	25	3×12	4×12
MCR3-X 71M/ IDR3-X 71M	1	220V-240V~50Hz	32	3×12	4×12
MCR3-X 90M/ IDR3-X 90M	1	220V-240V~50Hz	25	2×18	3×18
MCR3-X 105M/ IDR3-X 105M	1	220V-240V~50Hz	32	2×18	3×18
MCR3-X 140M/ IDR3-X 140M	1	220V-240V~50Hz	40	2×18	3×18
MCR3-X 160M/ IDR3-X 160M	1	220V-240V~50Hz	40	2×18	3×18

6.3 Schematic diagram

26/35/53/71



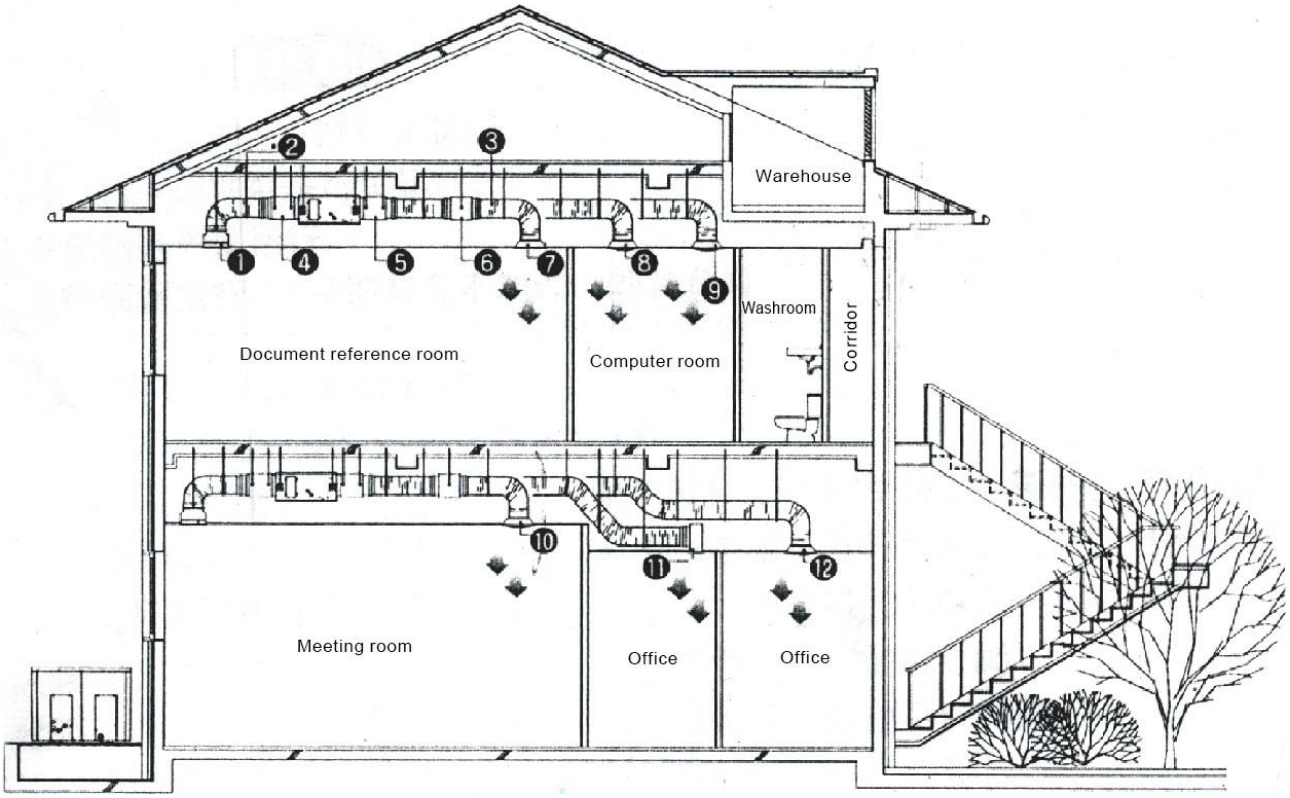
90/105/140/160



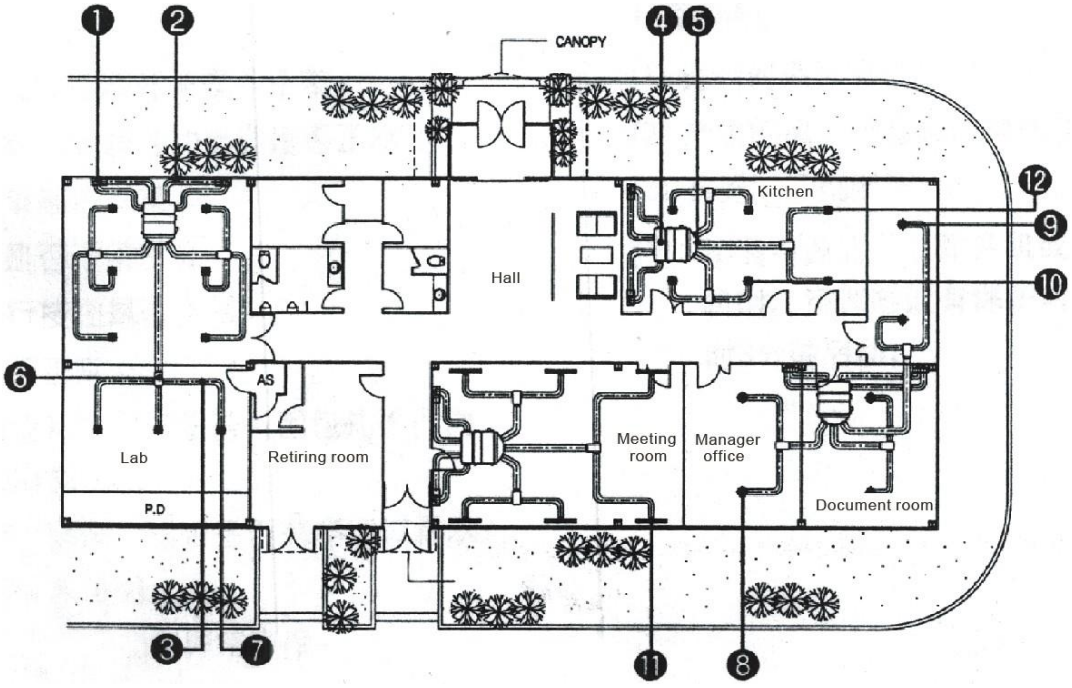
Single-phase ODU electrical control system connection diagram (IDU and ODU use separate power supply)

7. Duct Design Scheme

Examples of construction and ventilation pipeline design scheme (Flowering hidden series.)



Construction and ventilation pipeline design scheme



8. Trial Run

1. Conduct the test run only after all installation tasks have been completed.
2. Check the following items during the test run.

- Indoor and outdoor units are properly installed.
- Piping length, and the amount of refrigerant charged have been recorded.
- Piping and wiring are correct.
- The voltage of the power supply is the same as the rated voltage of the air conditioner.
- No leakage from the refrigerant piping system.
- There is no obstacle at the air inlet and outlet of the IDUs and ODU.
- Water discharge is smooth.
- Open the check valves on the gas and liquid sides.
- Heat insulation is complete.
- Connect to the power supply to let the air conditioner warm up first.
- Grounding cables have been properly connected.

3. Install the remote controller mounting rack according to the user's requirements.
The location of the mounting rack must be such that the remote control signal can be successfully transmitted to the indoor unit.
4. Test Run
Use wired/remote controller to control and operate the air conditioner in the cooling mode. Check the following items according to the manual. If there is any fault, troubleshoot by referring to the section "Fault and Troubleshooting" in the manual.

9. Trouble shooting

9.1 Fault information and codes

1. Error code table(Indoor unit display)

26/35/53/71

Error code	Error definition	Error display
E0	IDU EPROM fault	Immediate display, spot check available
E1	ODU communication fault	Immediate display, spot check available
E3	IDU fan stall fault	Immediate display, spot check available
E5	ODU temperature sensor or EEPROM fault	Immediate display, spot check available
E50	ODU temperature sensor fault	Immediate display, spot check available
E51	ODU EEPROM fault	Immediate display, spot check available
E52	Outdoor coil T3 temperature sensor fault	Immediate display, spot check available
E53	Outdoor ambient T4 temperature sensor fault	Immediate display, spot check available
E54	Outdoor discharge temperature sensor fault	Immediate display, spot check available
E55	Outdoor air return temperature sensor fault	Immediate display, spot check available
E6	IDU temperature sensor fault	Immediate display, spot check available
E60	IDU room temperature T1 sensor fault	Immediate display, spot check available
E61	IDU pipe temperature T2 sensor fault	Immediate display, spot check available
E7	ODU DC fan stall fault	Immediate display, spot check available
E71	Outdoor fan over-current (external driving)	Immediate display, spot check available
E72	Outdoor fan stall (external driving)	Immediate display, spot check available
E73	Outdoor fan phase loss (external driving)	Immediate display, spot check available
E74	Outdoor fan zero speed (external driving)	Immediate display, spot check available
EE	Water level alarm error	Immediate display, spot check available
P0	ODU IPM protection	Immediate display, spot check available
P1	Voltage protection	Immediate display, spot check available
P10	Low voltage protection	Immediate display, spot check available
P11	High voltage protection	Immediate display, spot check available
P12	Outdoor DC-side voltage protection	Immediate display, spot check available
P2	Temperature protection for compressor top	Immediate display, spot check available
P4	ODU compressor feedback protection	Immediate display, spot check available
P40	Main control chip and driver chip communication fault	Immediate display, spot check available
P41	Compressor current sampling circuit fault	Immediate display, spot check available
P42	Compressor start-up fault	Immediate display, spot check available
P43	Compressor phase loss protection	Immediate display, spot check available
P44	Compressor zero speed protection	Immediate display, spot check available
P45	Outdoor 341 main chip drive synchronization fault	Immediate display, spot check available
P46	Compressor stall protection	Immediate display, spot check available
P47	Compressor lock protection	Immediate display, spot check available
P48	Compressor out-synchronous protection	Immediate display, spot check available
P49	Compressor over-current protection	Immediate display, spot check available
P6	Compressor high discharge temperature	Immediate display, spot check available

	protection	
P8	Outdoor electric control current protection	Immediate display, spot check available
P80	IDU current protection	Immediate display, spot check available
P81	ODU current protection	Immediate display, spot check available
P82	Input AC current sampling circuit fault	Immediate display, spot check available
PA	High temperature protection of condenser	Immediate display, spot check available
PF	PFC switch power-off	Immediate display, spot check available
P9	Evaporator high and low temperature protection	Code will not be displayed, but can be queried
P90	Evaporator high temperature protection	Code will not be displayed, but can be queried
P91	Evaporator low temperature protection	Code will not be displayed, but can be queried
L0	Evaporator high and low temperature frequency limit	Code will not be displayed, but can be queried
L1	Condenser high temperature frequency limit	Code will not be displayed, but can be queried
L2	Compressor discharge high temperature frequency limit	Code will not be displayed, but can be queried
L3	Current frequency limit	Code will not be displayed, but can be queried
L4	Voltage frequency limit	Code will not be displayed, but can be queried
L6	PFC fault frequency limit	Code will not be displayed, but can be queried

90

Error code	Error definition	Error display
HF	IDU mismatching error	Immediate display, spot check available
H4	L (L0/L1) error occurs three times in one hour, reporting H4,and this error is not recoverable. After H4 error, spot check may be performed on the latest three L errors (not limited to L0, L1). For example: report L0-L4-L8-L9-L0-L1 within one hour, and report H4 error.The errors for spot check are L9, L0, and L1.	Immediate display, spot check available
E7	IDU EEPROM error	Immediate display, spot check available
E9	ODU EEPROM error	Immediate display, spot check available
E.9.	Wrong compressor model in parameter memory EPROM	Immediate display (Display E9), spot check available
H0	Communication error between main control board and IR341	Immediate display, spot check available
E1	Communication error between IDU and ODU	Immediate display, spot check available
E2	T1 sensor error	Immediate display, spot check available
E3	T2 sensor error	Immediate display, spot check available
E4	T2B sensor error	Immediate display, spot check available
E43	T3 sensor error	Immediate display, spot check available
E44	T4 sensor error	Immediate display, spot check available
E45	T5 sensor error	Immediate display, spot check available
E5	Voltage protection error	Display after 10 minutes, spot check available
E6	ODU DC fan error	Display after 10 minutes, spot check available
EE	Water level alarm error	Immediate display, spot check available
EH	TL sensor error(Only for Model 71* and 90)	Immediate display, spot check available
Eb	E6 error occurs six times in one hour, requiring power failure recovery	Immediate display, spot check available
EF	PFC feedback resistance failure	Display after 10 minutes, spot check available
PL	Heat sink TF high temperature protection	Display after 10 minutes, spot check available
P1	High pressure protection	Display after 10 minutes, spot check available
P2	Low pressure protection	Display after 10 minutes, spot check available
P3	Input current protection	Display after 10 minutes, spot check available
P4	Discharge temperature protection	Display after 10 minutes, spot check available
P5	Outdoor condenser T3 high temperature protection	Display after 10 minutes, spot check available
PE	Evaporator T2 high temperature protection	Display after 10 minutes, spot check available
L0	Module protection is triggered	Display after 10 minutes, spot check available
L1	DC bus low voltage protection	Display after 10 minutes, spot check available
L2	DC bus high voltage protection	Display after 10 minutes, spot check available
L4	MCE error	Display after 10 minutes, spot check available
L5	Zero speed protection	Display after 10 minutes, spot check available
L7	Phase loss	Display after 10 minutes, spot check available
L8	Protection when the previous and next speed change is > 15Hz	Display after 10 minutes, spot check available

L9	Protection for a difference of > 15Hz between the set speed and operating speed	Display after 10 minutes, spot check available
F1	Detected DC bus voltage (PN voltage) < 200VDC for 5S after power-on	Display after 10 minutes, spot check available
P8	Typhoon protection	Display after 10 minutes, spot check available
EP	Ambient temperature less than or equal to 10°C in cooling mode	Display after 10 minutes, spot check available

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Error code	Error definition	Error display
HF	IDU mismatching error	Immediate display, spot check available
H4	L (L0/L1) error occurs three times in one hour, reporting H4,and this error is not recoverable. After H4 error, spot check may be performed on the latest three L errors (not limited to L0, L1). For example: report L0-L4-L8-L9-L0-L1 within one hour, and report H4 error.The errors for spot check are L9, L0, and L1.	Immediate display, spot check available
E7	IDU EEPROM error	Immediate display, spot check available
E9	ODU EEPROM error	Immediate display, spot check available
E.9.	Wrong compressor model in parameter memory EPROM	Immediate display (Display E9), spot check available
H0	Communication error between main control board and IR341	Immediate display, spot check available
E1	Communication error between IDU and ODU	Immediate display, spot check available
E2	T1 sensor error	Immediate display, spot check available
E3	T2 sensor error	Immediate display, spot check available
E4	T2B sensor error	Immediate display, spot check available
E43	T3 sensor error	Immediate display, spot check available
E44	T4 sensor error	Immediate display, spot check available
E45	T5 sensor error	Immediate display, spot check available
E5	Voltage protection error	Display after 10 minutes, spot check available
E6	ODU DC fan error	Display after 10 minutes, spot check available
EE	Water level alarm error	Immediate display, spot check available
Ed	Rest of ODU error(EE,LA,LC,LH etc)	Display after 10 minutes, spot check available
Eb	E6 error occurs six times in one hour, requiring power failure recovery	Immediate display, spot check available
EF	PFC feedback resistance failure	Display after 10 minutes, spot check available
PL	Heat sink TF high temperature protection	Display after 10 minutes, spot check available
P1	High pressure protection	Display after 10 minutes, spot check available
P2	Low pressure protection	Display after 10 minutes, spot check available
P3	Input current protection	Display after 10 minutes, spot check available
P4	Discharge temperature protection	Display after 10 minutes, spot check available
P5	Outdoor condenser T3 high temperature protection	Display after 10 minutes, spot check available
PE	Evaporator T2 high temperature protection	Display after 10 minutes, spot check available
L0	Module protection is triggered	Display after 10 minutes, spot check available
L1	DC bus low voltage protection	Display after 10 minutes, spot check available
L2	DC bus high voltage protection	Display after 10 minutes, spot check available
L4	MCE error	Display after 10 minutes, spot check available
L5	Zero speed protection	Display after 10 minutes, spot check available
L7	Phase loss	Display after 10 minutes, spot check available
L8	Protection when the previous and next speed change is > 15Hz	Display after 10 minutes, spot check available

L9	Protection for a difference of > 15Hz between the set speed and operating speed	Display after 10 minutes, spot check available
F1	Detected DC bus voltage (PN voltage) < 200VDC for 5S after power-on	Display after 10 minutes, spot check available
P8	Typhoon protection	Display after 10 minutes, spot check available
EP	Ambient temperature less than or equal to 10°C in cooling mode	Display after 10 minutes, spot check available

2. Spot check query function (Press the button on the display board to spot check the system parameters)
   26/35/53/71

Sequence number	Spot check parameter contents	Remarks
01	Indoor unit T1 temperature	Actual value, temperature accurate to 0.5 ℃
02	Indoor unit T2 temperature	Actual value, temperature accurate to 0.5 ℃
03	Outdoor unit T3 temperature	Actual value, temperature accurate to 0.5 ℃
04	Outdoor unit T4 temperature	Actual value, temperature accurate to 0.5 ℃
05	Outdoor unit TP temperature	Actual value, it can display three digits such as 101 ℃
06	Outdoor unit IPM temperature	Actual value, temperature accurate to 0.5 ℃
07	Current compressor target frequency	Actual value
08	Current compressor operating frequency	Actual value
09	Current operating wind speed of internal fan	Actual value×10
10	Current operating wind speed of external fan	Actual value×10
11	Opening of electronic expansion valve of outdoor unit	No electronic expansion valve，it shows "0"
12	Voltage	Actual value
13	current	Actual value
14	Indoor unit program version number	
15	Indoor unit EEPROM parameter program version number	
16	Machine model	
17	the last fault code	No fault display “--”
18	the last but one fault code	No fault display “--”
19	the last but two fault code	No fault display “--”
20	nd	End

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Sequence number	Spot check parameter contents	Remarks
01	Operating mode	0:Standby;1:Fan only;2:Cooling;3:Heating;4:Forced Cooling;6:dehumidification
02	Operating wind speed and level	0:OFF;1:Low speed;2:Middle speed;3:High speed
03	The capacity of Indoor unit(HP)	
04	The total capacity demand of indoor unit	
05	The capacity demand after correction of outdoor unit	
06	Ts setting temperature	Actual value
07	T1 Indoor temperature	Actual value
08	T2 or T2B temperature	Actual value (Display T2 in heating mode; display T2B in other modes)
09	T3 piping temperature	Actual value
10	T4 ambient temperature	Actual value
11	T5 discharge temperature	Actual value
12	TF module temperature	Actual value
13	TL refrigerant heat sink pipe temperature	Actual value
14	The opening of EXV	Actual value×8
15	The actual current	
16	The compressor current	
17	The actual voltage	Actual value
18	The DC bus voltage	Actual value
19	Model type	
20	The network address of Indoor unit(0-63)	
21	The address of outdoor unit in centralized control system(reserved)	0-7 is valid
22	The number of Indoor unit program version	
23	The number of outdoor unit program version	
24	The last error code	Display “E-” if not existing
25	Display --	
26	Read indoor unit SN code	

9.2 Fault and troubleshooting

Fault	Cause	Solution
Starting failure	Power failure	Wait for the power supply to be restored.
	Power switch is off	Turn on the power
	The fuse of the power switch is blown.	Replace the burnt fuse.
	The time set for the timed power-on has not arrived.	Replace the batteries.
	The batteries of the remote controller are exhausted.	Wait or cancel the setting.
There is air blowing, but the cooling/ heating effect is poor.	The temperature setting is inappropriate.	Set the temperature properly. Increase or decrease the temperature. Read Operating Methods for details.
	The air inlet or outlet of the IDU or ODU is blocked	Remove the obstacles.
	Doors and windows are open.	Close the doors and windows.
There is air blowing, but the unit cannot supply cold or hot air.	The air inlet or outlet of the IDU or ODU is blocked.	Remove the obstacles and perform the operation again.
	Compressor 3-minute protection	Wait.
	The temperature setting is inappropriate.	Set the temperature properly.