

PACKAGE CHILLER



TRUST AIR CONDITIONING EQUIPMENT CO.
Prepared By: Engineering & R & D Department.

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توجه:

شرکت تراست حق تغییر مشخصات دستگاه‌ها را در جهت بهبود و ارتقای کیفیت برای خود محفوظ می‌دارد.

2009-09

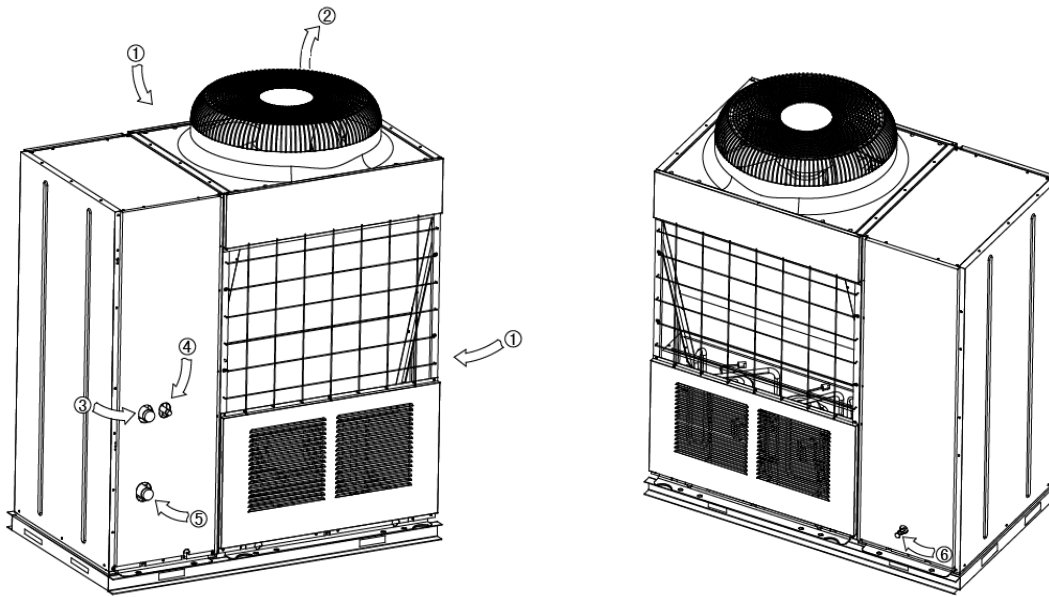
1. Product Schedule

No.	Model	Refrigerant	Net dimension		Net weight	Power supply
			(L×W×H)	(unit: mm)		
1	TMCHUF-30H410W	R410A	1514×850×1845		392	380-415V/3ph/50Hz
2	TMCHUD-30H410W	R410A	1514×850×1845		392	380-415V/3ph/50Hz

External appearance:



Main parts of the unit:

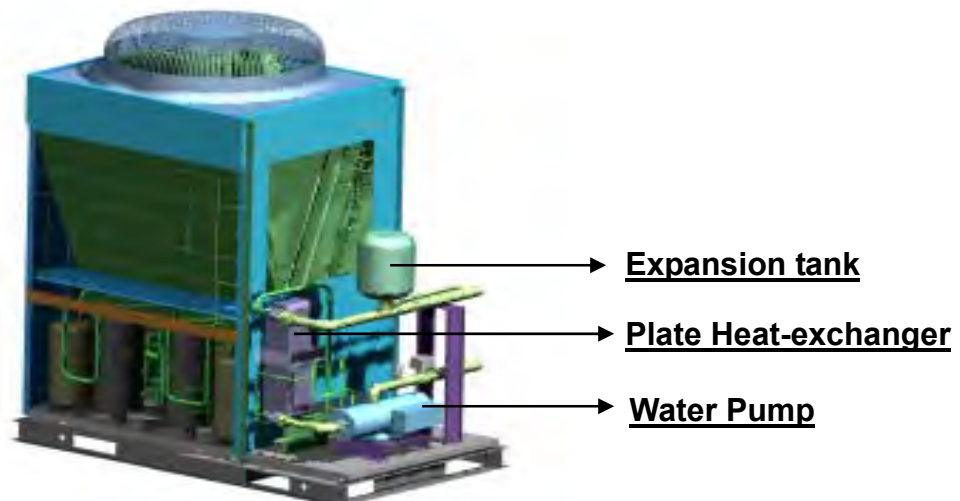


No.	1	2	3	4	5	6
Name	Air inlet	Air outlet	Water inlet	Replenishing orifice	Water outlet	Drain

2. Features

- **Environmental-friendly refrigerant R410A will not destroy the ozoneosphere.**
- **Simplified design, convenient for installation.**

The Packaged air-cooled modular chiller itself built in with water pump, expansion tank, plate heat-exchanger; it is very simple for installer to install such kind of system.



- **Adopts digital scroll compressor, the capacity can be realized stepless adjustment.**
- **Chilled water outlet temperature adjustable.**
Chilled water outlet temperature can be adjusted by wire controller according to customer's demand. In cooling mode, the adjustable range from 5°C-17°C, and in heating mode, it ranges from 45°C-50°C.
- **High reliability and efficiency.**
Digital and constant module unit can be combined into one group water pipe system and control system. The capacity output can be adjusted by control system.
- **Strong micro-computer intelligent control and monitor function.**
 - Stepless capacity modulation, more efficiency.
 - Operation mode control.
 - Automatic and uniform adjusting function among multi compressors.
 - Anti-frost and anti-cold air functions in heating mode.
 - Anti-freezing function of water system in winter.
 - Self-protection and Self-diagnosis function.
 - Realize auto-restart function with wired controller.
 - Built-in remote ON-OFF switch.

TRUST New Codes:

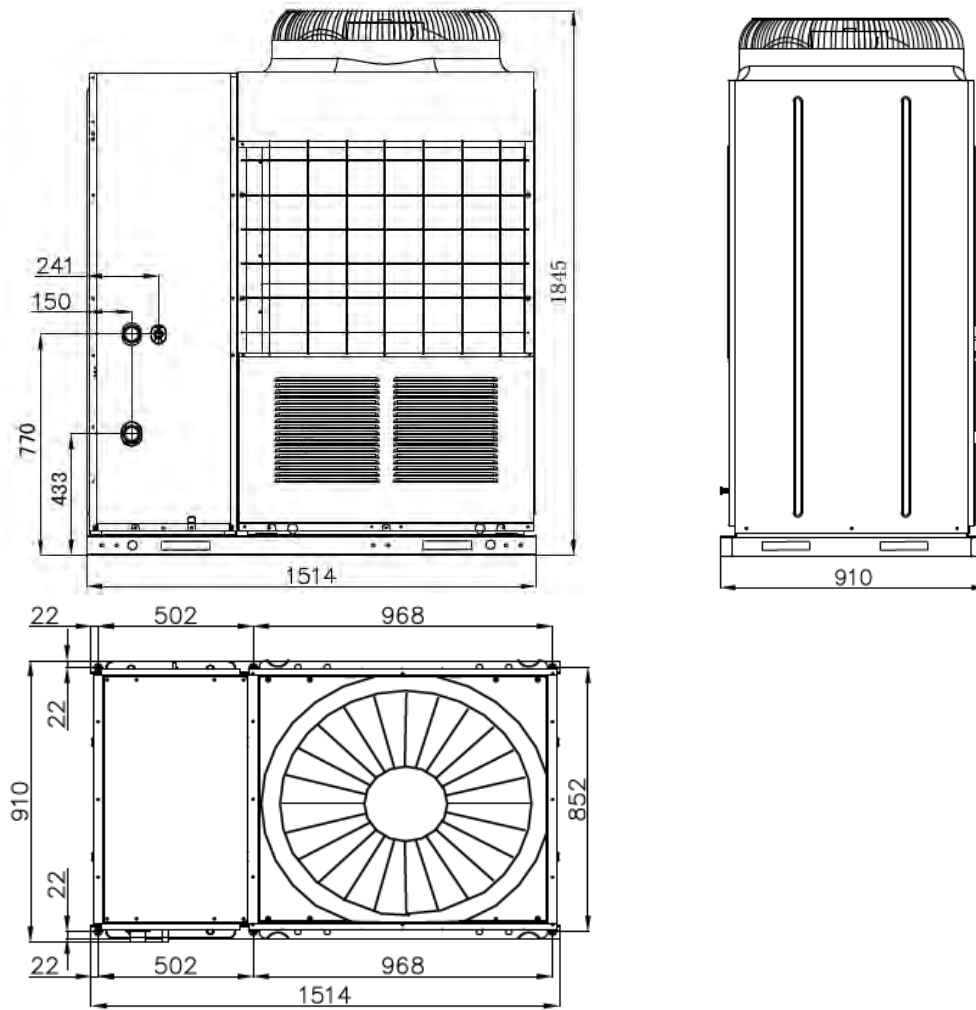
Old Model	New Code
TMCHUF(D)-30H410W	CC03- TMUM30F(D)3W2/4AT1PB

3. Specification

Model			TMCHUF-30H410W	TMCHUD-30H410W
Power supply		V-Ph-Hz	380-415, 3, 50	380-415, 3, 50
Cooling	Capacity	kW	30	30
	Input	W	10000	10000
Heating	Capacity	kW	32	32
	Input	W	9800	9800
Max. input consumption		W	12615	14075
Max. input current		A	20.5	22.7
Starting current		A	85	95
Compressor	Model		ZP67KCE-TFD-522	ZP67KCE-TFD-522 + ZPD72KCE-TFD-532
	Type		Scroll (2 fixed speed)	Scroll (1 digital scroll plus 1 fixed speed)
	Brand		Copeland	Copeland
	Capacity	Btu/h	55000	57500
	Input	W	5200	5750
	Rated current (RLA)	A	9.1	9.8
	Locked rotor Amp (LRA)	A	74	82.4
	Thermal protector		Inner	Inner
Refrigerant oil	ml	POE OIL, 1656	POE OIL, 1893	
Outdoor fan motor	Model		YDK400-8-YA	YDK400-8-YA
	Type		AC motor	AC motor
	Brand		Welling	Welling
	Input (Hi/Lo)	W	670	670
	Capacitor	uF	25	25
	Speed (Hi/Lo)	r/min	670/550	670/550
Outdoor coil	Number of rows		2	2
	Tube pitch(a)× row pitch(b)	mm	22×19.05	22×19.05
	Fin spacing	mm	1.6	1.6
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside dia. and type	mm	φ7.94 Innergroove tube	φ7.94 Innergroove tube
	Coil length xheight x width	mm	885×880	885×880
Water pump	Number of circuits		2×8	2×8
	Type		DJLXB4-50(C)	DJLXB4-50(C)
	Rated flow	m ³ /h	3.3	3.3
	Pumping head	m	35	35
Outdoor air flow		m ³ /h	11500	11500
Throttle			Electric Expansive valve	Electric Expansive valve
Outdoor noise level (sound pressure)		dB(A)	60	60
Water pipe system	Waterflow volume	m ³ /h	5.2	
	Hydraulic resistance loss	kPa	75	
	Water side heat exchange		Brazing and stainless plate-type heat exchange	
	Max. pressure	MPa	1.0	
	Inlet/outlet pipe's dia.	mm	48	
Outdoor unit	Dimension (W×H×D)	mm	1514×1845×850	1514×1845×850
	Packing (W×H×D)	mm	1620×2065×1000	1620×2065×1000
	Net/ Gross weight	kg	392/401	392/401
Refrigerant type/Quantity	Type		R410A	R410A
	Charged volume	g	3100×2	3100×2
Connection wiring	Power wiring	mm ² ×No.	10×5-core	10×5-core
	Signal wiring (connect to wired control)	mm ² ×No.	0.75×3-core	0.75×3-core
Control			Wired controller	Wired controller
Ambient temp.		°C	Cooling: 17~43	Heating: -10~21
Operation water temp.		°C	Cooling: 5~17	Heating: 45~50

4. Dimension

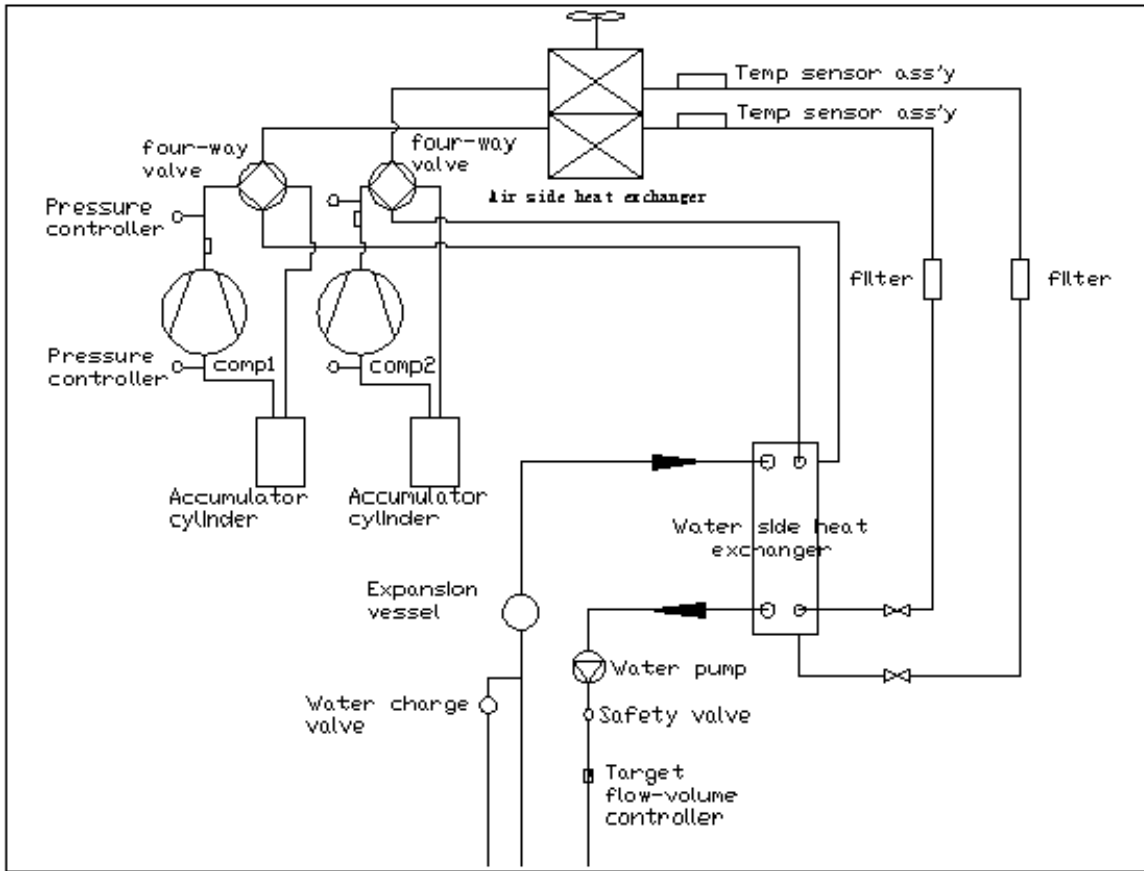
TMCHUF-30H410W TMCHUD-30H410W



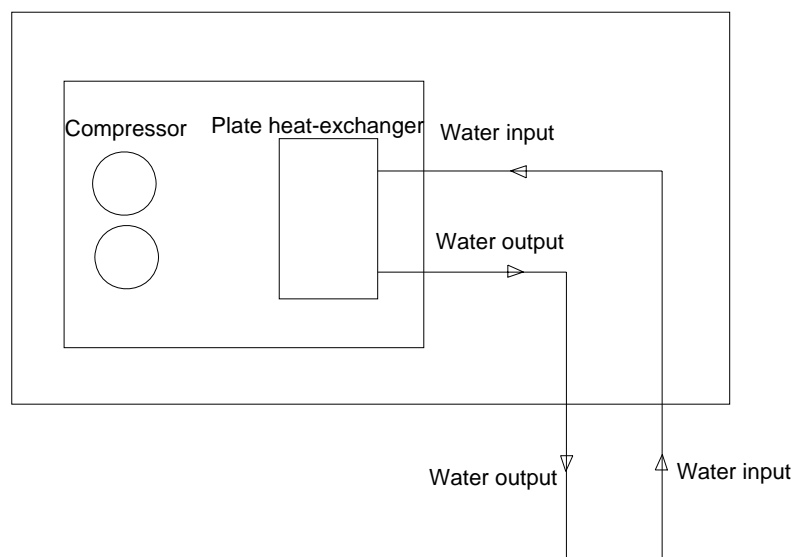
5. Piping Diagrams & Pipe Connection Drawing

5.1 Refrigeration system sketch drawing

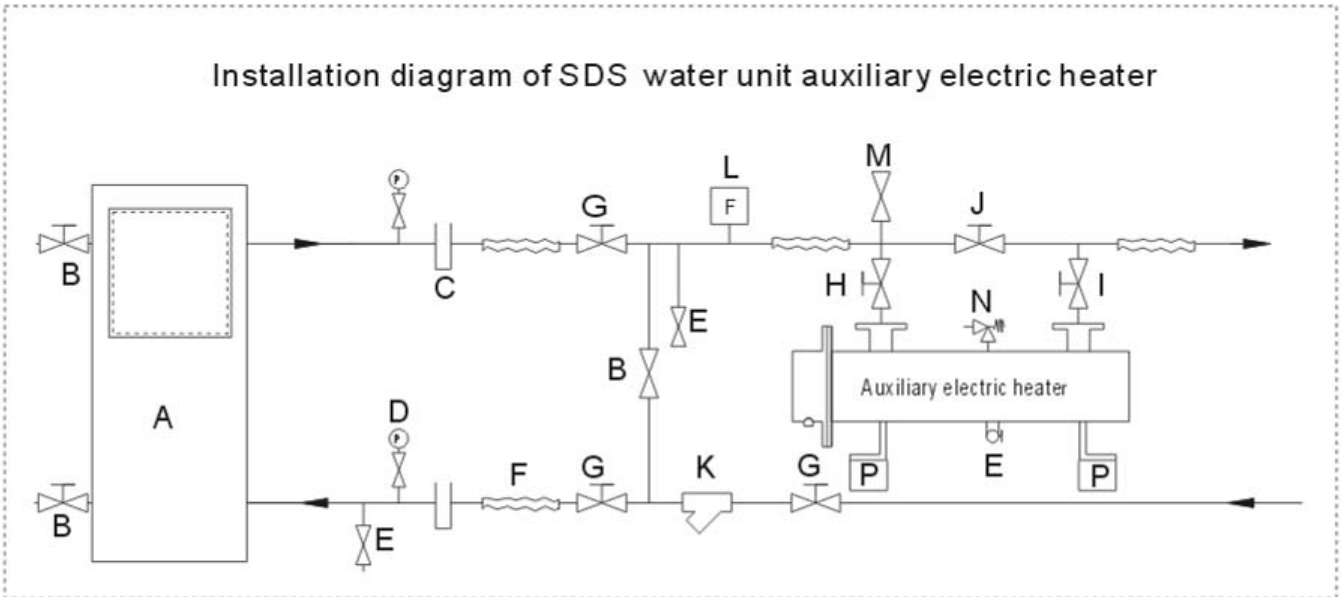
TMCHUF-30H410W / TMCHUD-30H410W has two separate refrigeration systems (system A and system B), each system consists of one compressor and the two systems share one double-system plate exchanger.



5.2 Water pipe sketch drawing

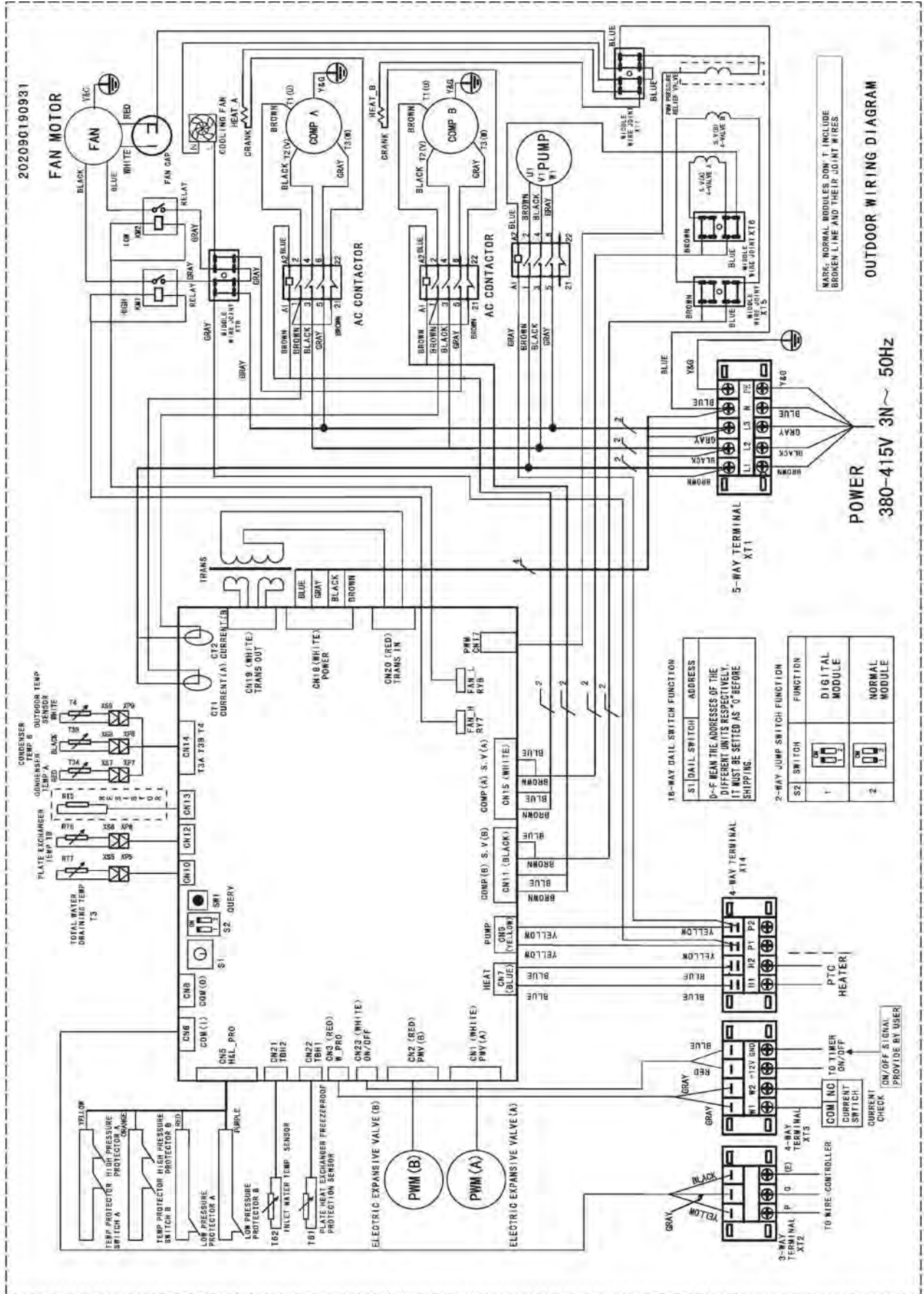


5.3 Sketch drawing of auxiliary electric heater installation



A	Water heater/chiller unit	I	Gate valve 2
B	Back flush valve	J	Gate valve 3
C	Temperature-testing tube	K	Filter
D	Pressure gauge	L	Flow switch
E	Drain valve	M	Exhaust valve
F	Absorbing pipe fittings	N	Safety valve
G	Gate valve	P	Foundation
H	Gate valve 1		

6. Wiring Diagrams



7.. Electric Characteristics

Model	Outdoor Unit				Power Supply			Compressor		OFM	
	Hz	Voltage	Min.	Max.	MCA	TOCA	MFA	MSC	RLA	KW	FLA
TMCHUF-30H410W	50	380	342	418	24.8	29	36	74x2	11.8x2	0.67	3.1
TMCHUD-30H410W	50	380	342	418	24.8	29	36	74/82.4	11.8/12.7	0.67	3.1

Remark:

MCA: Min. Current Amps. (A)

TOCA: Total Over-current Amps. (A)

MFA: Max. Fuse Amps. (A)

MSC: Locked Rotor Amps. (A)

RLA: Rated Load Amps. (A)

OFM: Outdoor Fan Motor.

FLA: Full Load Amps. (A)

KW: Rated Motor Input (kW)

8. Capacity Tables

8.1 Cooling:

TMCHUF-30H410W TMCHUD-30H410W

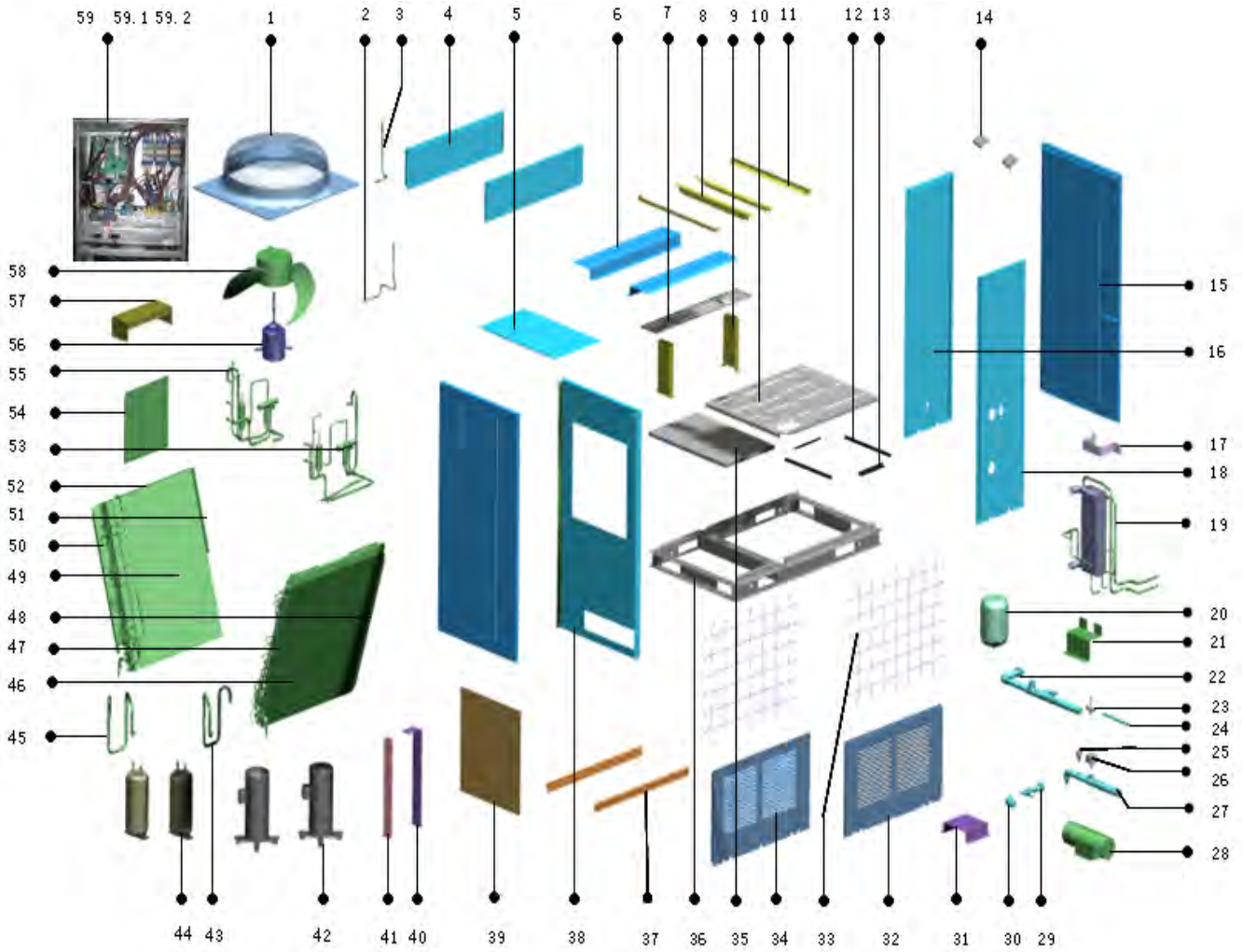
Ambient temp. (°C)	Difference of water inlet and outlet temp. (°C)	Condensed water outlet temp. (°C)											
		5			7			9			12		
		Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW
25	3	31.2	8.9	8.6	33.1	9.5	8.8	34.4	9.9	9.0	35.5	10.2	9.3
	4		6.7			7.1			7.4			7.6	
	5		5.4			5.7			5.9			6.1	
28	3	30.9	8.9	8.8	32.4	9.3	8.9	33.9	9.7	9.1	35.1	10.1	9.4
	4		6.6			7.0			7.3			7.5	
	5		5.3			5.6			5.8			6.0	
30	3	29.9	8.6	9.2	31.5	9.0	9.3	33.0	9.5	9.5	34.7	9.9	9.8
	4		6.4			6.8			7.1			7.4	
	5		5.1			5.4			5.7			6.0	
32	3	29.2	8.4	9.4	31.2	8.9	9.5	32.7	9.4	9.7	34.2	9.8	10.0
	4		6.3			6.7			7.0			7.4	
	5		5.0			5.4			5.6			5.9	
35	3	28.5	8.2	9.7	30.0	8.6	10.0	31.8	9.1	10.3	33.0	9.5	10.5
	4		6.1			6.4			6.8			7.1	
	5		4.9			5.2			5.5			5.7	
38	3	27.6	7.9	10.3	29.1	8.3	10.5	30.6	8.8	10.8	31.8	9.1	10.8
	4		5.9			6.3			6.6			6.8	
	5		4.7			5.0			5.3			5.5	
40	3	27.0	7.7	10.6	28.2	8.1	10.8	29.7	8.5	11.1	31.2	8.9	11.1
	4		5.8			6.1			6.4			6.7	
	5		4.6			4.8			5.1			5.4	

8.2 Heating: TMCHUF-30H410W TMCHUD-30H410W

Ambient temp. (°C)	Difference of water inlet and outlet temp. (°C)	Warm water outlet temp. (°C)														
		39			42			45			48			50		
		Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW	Capacity kW	Water flow m ³ /h	Power kW
13	3	39.4	11.3	9.4	38.7	11.1	9.8	38.1	10.9	10.3	36.8	10.5	10.8	36.2	10.4	11.1
	4		8.5			8.3			8.2			7.9			7.8	
	5		6.8			6.7			6.6			6.3			6.2	
10	3	36.8	10.5	9.2	36.2	10.4	9.6	35.5	10.2	10.0	34.5	9.9	10.4	33.6	9.6	10.8
	4		7.9			7.8			7.6			7.4			7.2	
	5		6.3			6.2			6.1			5.9			5.8	
7	3	33.9	9.7	9.0	33.0	9.5	9.4	32.0	9.2	9.8	31.4	9.0	10.3	30.4	8.7	10.7
	4		7.3			7.1			6.9			6.7			6.5	
	5		5.8			5.7			5.5			5.4			5.2	
2	3	30.1	8.6	8.8	29.2	8.4	9.2	28.2	8.1	9.6	27.2	7.8	10.0	26.3	7.5	10.3
	4		6.5			6.3			6.1			5.8			5.6	
	5		5.2			5.0			4.8			4.7			4.5	
-2	3	25.9	7.4	8.5	25.0	7.2	8.9	24.0	6.9	9.4	23.4	6.7	9.8	22.4	6.4	10.2
	4		5.6			5.4			5.2			5.0			4.8	
	5		4.5			4.3			4.1			4.0			3.9	
-6	3	22.4	6.4	8.3	21.8	6.2	8.7	20.8	6.0	9.2	20.2	5.8	9.6	19.2	5.5	10.0
	4		4.8			4.7			4.5			4.3			4.1	
	5		3.9			3.7			3.6			3.5			3.3	
-10	3	20.5	5.9	8.1	19.9	5.7	8.5	19.2	5.5	9.0	18.3	5.5	9.4	17.3	5.0	9.8
	4		4.4			4.3			4.1			3.9			3.7	
	5		3.5			3.4			3.3			3.1			3.0	

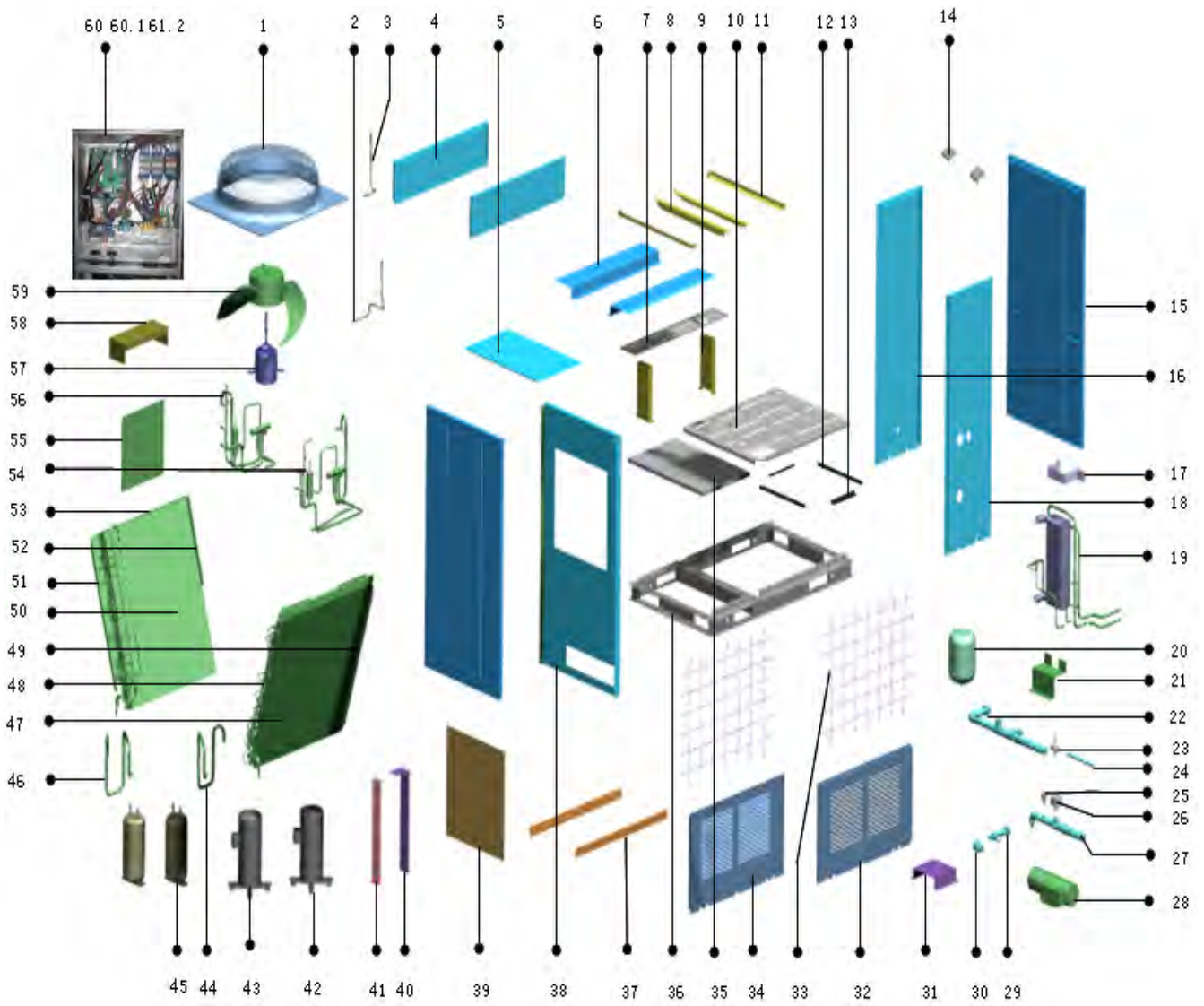
9. Exploded View

VOEJ WH/52J 632Y



No.	Part Name	Quantity	No.	Part Name	Quantity
1	Top cover	1	43	Suction pipe ass'y A	1
2	A unit input connecting pipe	1	44	Accumulator cylinder	2
3	B unit input connecting pipe	1	45	Suction pipe ass'y B	1
4	Cover	2	46	B unit condenser ass'y	1
5	Top cover	1	47	A sealed plate ass'y	1
6	Cover board	2	48	C sealed plate ass'y	1
7	Drainage pan	1	49	A unit condenser ass'y	1
8	Motor bracket	2	50	B sealed plate ass'y	1
9	Drainage pan holder	2	51	D sealed plate ass'y	1
10	Base ass'y	1	52	Motor holder	2
11	Clapboard supporting board	3	53	B unit 4-way valve ass'y	1
12	Bracket ass'y	2	54	E-Part box cover	1
13	Bracket ass'y	2	55	A unit 4-way valve ass'y	1
14	Side sealed board	4	56	Motor	1
15	About clapboard	2	57	Protecting water box	1
16	Front cover	1	58	Axial flow fan	1
17	Plate heat-exchanger clamp	1	59	E-part boxr Ass'y	1
18	Rear cover	1	59.1	E-part boxr Ass'y	1
19	Heat-exchanger ass'y	1	59.2	Fan Cover	1
20	Expansion vessel	1	59.3	Main control board ass'y	1
21	Holder for Plate Heat-exchanger	1	59.4	Wire joint	4
22	Water inlet pipe assy I	1	59.5	Compressor capacitor	1
23	Water charge valve	1	59.6	Terminal label	1
24	Water charge pipe	1	59.7	Wire joint	1
25	Safety valve	1	59.8	Wire joint, 3p	1
26	Target flow-volume controller	1	59.9	Wire joint	1
27	Water outlet pipe assy II	1	59.10	Contactora	2
28	Water pump	1	59.11	Relay	2
29	Water outlet pipe assy I	1	59.12	Contactora	1
30	Water outlet pipe assy IV	1	59.13	Wire joint, 4p	1
31	Drain Pump Holder	1	59.14	Axial flow fan	1
32	Cover	1	60	R410A	6.2
33	Rear—front net	2	61	Capacitor clamp	1
34	Cover	1	62	EEV solenoid	2
35	Base ass'y	1	63	Discharge valve	1
36	Base	1	64	Temp sensor ass'y	6
37	Support board	2	65	Room temp sensor ass'y	1
38	Middle partition plate	1	66	Discharge temp sensor	2
39	Sealed board	1	67	Wire controller	1
40	Water inlet pipe supporting assy I	1	68	Pressure controller	2
41	Water inlet pipe supporting assy II	1	69	Pressure controller	2
42	Compressor	2			

TMCHUD-30H410W



No.	Part Name	Quantity	No.	Part Name	Quantity
1	Top cover	1	44	Suction pipe ass'y A	1
2	A unit input connecting pipe	1	45	Accumulator cylinder	2
3	B unit input connecting pipe	1	46	Suction pipe ass'y D	1
4	Cover	2	47	B unit condenser ass'y	1
5	Top cover	1	48	Condenser left side board A ass'y	1
6	Cover board	2	49	Condenser left side board C ass'y	1
7	Drainage pan	1	50	A unit condenser ass'y	1
8	Motor bracket	2	51	Condenser left side board B ass'y	1
9	Drainage pan holder	2	52	Condenser left side board D ass'y	1
10	Base ass'y	1	53	Motor holder	2
11	Clapboard supporting board	3	54	B unit 4-way valve ass'y	1
12	Bracket ass'y	2	55	E-Part box cover	1
13	Bracket ass'y	2	56	A unit 4-way valve ass'y	1
14	Side sealed board	4	57	Motor	1
15	About clapboard	2	58	Protecting water box	1
16	Front cover	1	59	Axial flow fan	1
17	Plate heat-exchanger clamp	1	60	E-part boxr Ass'y	1
18	Rear cover	1	60.1	E-part boxr Ass'y	1
19	Heat-exchanger ass'y	1	60.2	Cover ass'y	1
20	Expansion vessel	1	60.3	Main control board ass'y	1
21	Holder for Plate Heat-exchanger	1	60.4	Wire joint	4
22	Water inlet pipe assy I	1	60.5	Compressor capacitor	1
23	Water charge valve	1	60.6	Transformer	1
24	Water charge pipe	1	60.7	Wire joint	1
25	Safety valve	1	60.8	Wire joint, 3p	1
26	Target flow-volume controller	1	60.9	Wire joint	1
27	Water outlet pipe assy II	1	60.10	Contactora	2
28	Water pump	1	60.11	Relay	2
29	Water outlet pipe assy I	1	60.12	Contactora	1
30	Water outlet pipe assy IV	1	60.13	Wire joint, 4p	1
31	Drain Pump Holder	1	60.14	Axial flow fan	1
32	Cover	1	61	R410A	6.2
33	Rear—front net	2	62	EEV solenoid	2
34	Cover	1	63	Temp sensor clip	2
35	Base ass'y	1	64	Discharge valve	1
36	Base	1	65	Temp sensor ass'y	6
37	Support board	2	66	Room temp sensor ass'y	1
38	Middle partition plate	1	67	Discharge temp sensor	2
39	Sealed board	1	68	Wire controller	1
40	Water inlet pipe supporting assy I	1	69	Pressure controller	2
41	Water inlet pipe supporting assy II	1	70	Pressure controller	2
42	Compressor	1	71	Capacitor clamp	1
43	Compressor	1			



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برند برتر در اولین جشنواره بین المللی
برترین نام و نشان های تجاری ایران

