KENTATSU

DK13-01.01.02

TECHNICAL SERVICE MANUAL

Rooftop package

Models:

KRFM220C(H)FAN3
KRFM260C(H)FAN3
KRFM300C(H)FAN3
KRFM350C(H)FAN3
KRFM530C(H)FAN3
KRFM600C(H)FAN3
KRFM700C(H)FAN3
KRFM970C(H)FAN3

Contents

※ Manufacture reserves the right to discontinue, or change at any time, specifications or designs without notices and without incurring obligations.

1. Product List

Nominal capacity Ton	Model name	Function	Controller	Refrigerant	Power supply V, ph, Hz
6,2	KRFM220CFAN3	Cooling	KWC-22	R410A	380-400V 3N ~50Hz
6,2	KRFM220HFAN3	Heating & Cooling	KWC-22		
7,5	KRFM260CFAN3	Cooling	KWC-22		
7,5	KRFM260HFAN3	Heating & Cooling	KWC-22		
8,5	KRFM300CFAN3	Cooling	KWC-22		
8,5	KRFM300HFAN3	Heating & Cooling	KWC-22		
10,0	KRFM350CFAN3	Cooling	KWC-22		
10,0	KRFM350HFAN3	Heating & Cooling	KWC-22		
15,0	KRFM530CFAN3	Cooling	KWC-22		
15,0	KRFM530HFAN3	Heating & Cooling	KWC-22		
17,5	KRFM600CFAN3	Cooling	KWC-22		
17,5	KRFM600HFAN3	Heating & Cooling	KWC-22		
20,0	KRFM700CFAN3	Cooling	KWC-22		
20,0	KRFM700HFAN3	Heating & Cooling	KWC-22		
30,0	KRFM970CFAN3	Cooling	KWC-22		
30,0	KRFM970HFAN3	Heating & Cooling	KWC-22		

2. External Appearance

6.2& 7.5Ton

8.5&10 Ton

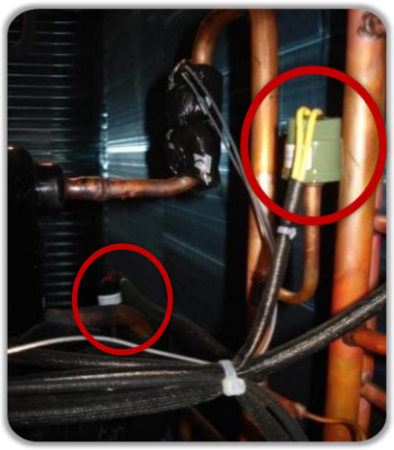
15&17.5&20 Ton

30 Ton

3. Features

1. The adoption of anticorrosive-box

The reinforced anticorrosion by using galvanization armor plate and coated with man-composed paint. The appearance is stylish and be easy for maintenance.
(Has been passed 1000 hours salt spray test)



2. The adoption of credible protection system

2.1 The protection of compressor

High-pressure protection, low-pressure protection, compressor's current protection and so on.The series' protectors can ensure compressor operating normally.

It adopts independent system, except for protection of sequence and wired controller output, any related protection to its corresponding compressor. Once a compressor protection energized, the corresponding compressor will stop, the others working still.

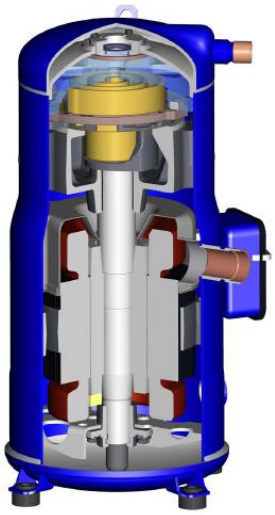
2.2 Fan motor

The fan motors for evaporator have over-heat protection and over-current protection function. The fan motors for condenser have the temperature controller protection function.

3. Energy saving design

3.1 High efficiency compressor

Using professional compressor, heat exchanger and optimum connection pipe, the compressor can startup under low power input. Provide maximum reliability, efficiency and quiet operation.



Two refrigerant circuits on larger units (above 12.5ton) provide efficient part load performance.

Standard low and high pressure safety switches.

Well compressor control

Compressor staging is controlled directly by the control temperature. When the control temperature is warmer than the cooling set point, cooling is staged up; when the control temperature is cooler than the cooling set point, cooling is staged down. However, a stage change can only occur when the control temperature is outside the dead band. Staging is constrained by an inter-stage delay timer. These constraints protect the compressors from short cycling while eliminating temperature variations near the diffusers.

3.2 Condenser

By using high-efficient thin wing, the condenser has high-efficient heat exchanger, the energy waste decreases greatly.

3.3 Evaporator

By using the high-efficient, super thin wing and inner grooved copper pipe, the evaporators get the higher capacity and the lower noise level.

3.4 The heat insulation of indoor unit

The heat insulation of indoor unit can availably decrease heat loss.

3.5 The control and refrigerant cycle system

There are two independent refrigerant cycle systems, the capacity output is adjusted automatically by

different demand, save energy when one control system is in running according to low capacity output.

4. Optional collocation

4.1 Operation in high temperature

The air-conditioner designed for high temperature can run, despite the ambient temperature reaches up to 52℃（125℉）.

4.2 Strong air flow

Large air volume from the air inlet is forced ventilating by the condenser fan.

4.3 Minimum installation arrangement

The installation is fast and low cost with the easy installation and ready operation.

4.4 Pre-drilled duct flange

Flanges are prepared at the supply and return duct connections so that they can reduce duct connection work at site.

4.5 Quiet operation

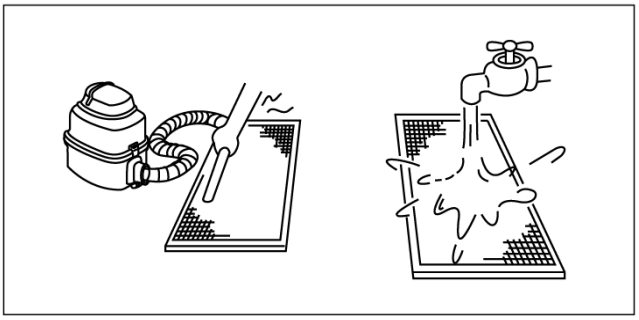
Noise and vibration have been effectively reduced by adopting new style hermetic compressor. The centrifugal fan and fan casing are optimum shaped for efficient and low noise operation.

5. Cabinet

5.1 Sloped drain pan and drain pipe.

5.2 Cabinets have forklift and lifting holes for easy transportation.

5.3 Cabinets have fresh air function, and the filter can be washable.



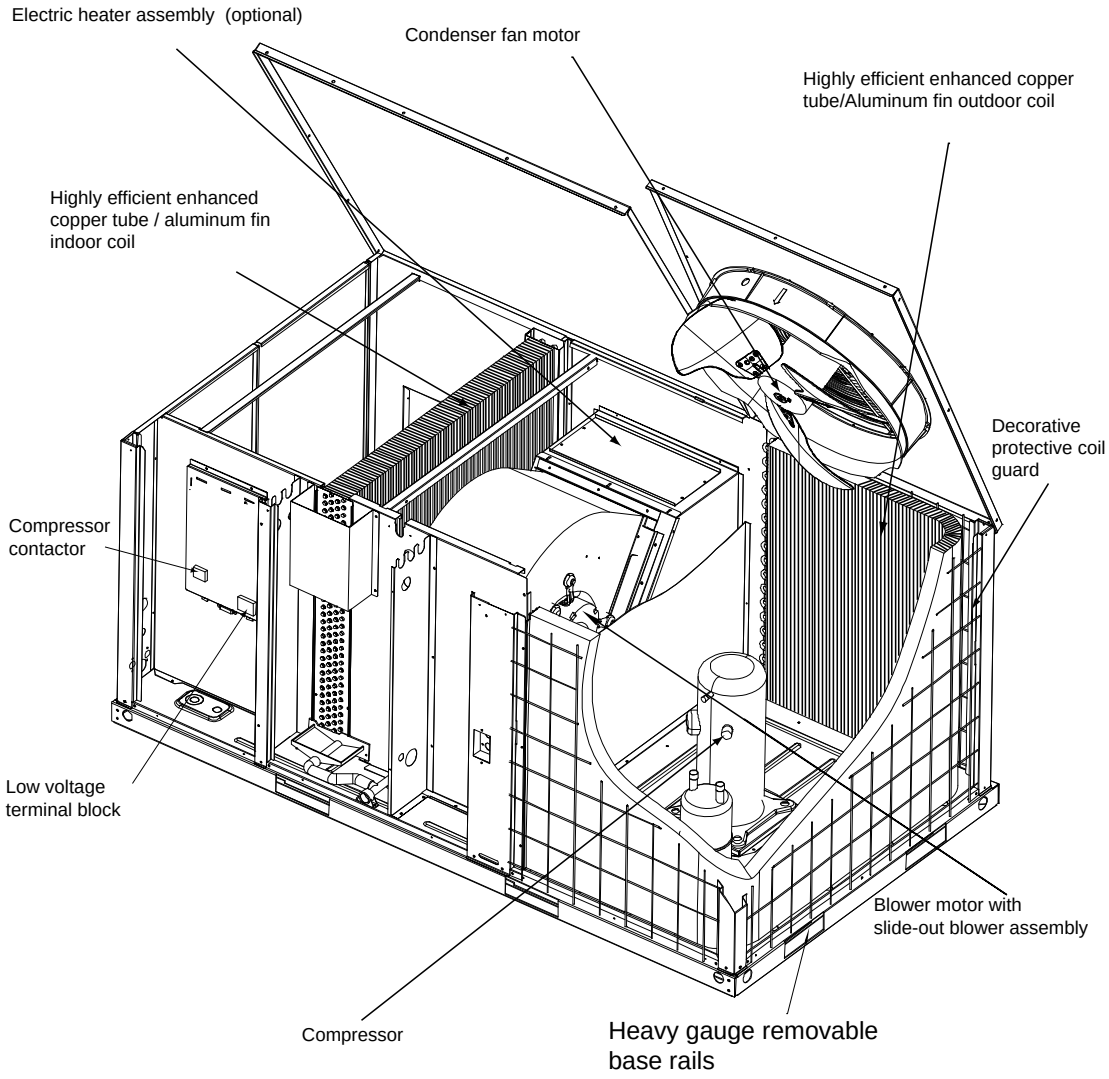
5.4 External pressure gauge ports.

With the gauge ports mounted externally, an accurate diagnostic of system operation can be performed quickly and easily without disrupting airflow.

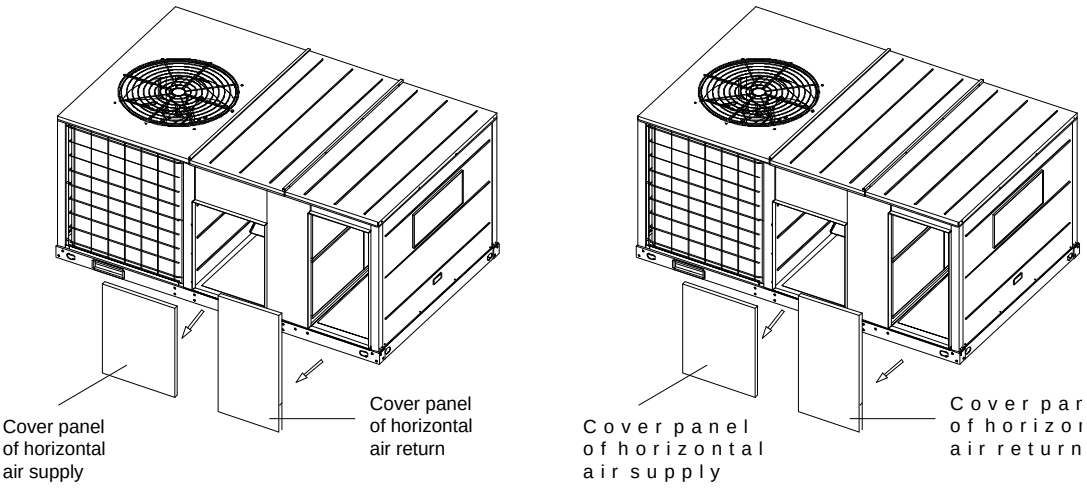
5.5 Durable construction.

Weather-resistant construction with capped seams and sloped top panels.

G90 galvanized heavy gauge plate conforming to ASTM-A-653, Zinc content of galvanized plate is 275 g/m^2 **.**



6. Optional supply/return airflow design, from side or bottom, It could be flexibly applied to multi-position. The rooftop and ground installation are optional.



7. Certificate of compressor

The compressors have CE certified, UL certified.

4. List of Functions

4.1 Standard specifications

A. General

Packaged cooling or combination heating and cooling units suitable for mounting on the roof or ground. The packaged unit consists of scroll compressors, evaporator coil, condenser coil, control wiring and interconnecting piping- all factory assembled and mounted on heavy gauge G-90 galvanized steel sheet press formed base, ready for field connection to utilities and ducts. The packaged unit is of rigid construction with holes provided in the base rails for overhead rigging. The unit is provided with an integral weather resistant control panel.

B. Unit enclosure

Panels are of heavy gauge, G-90 galvanized steel sheet with removable access panels, completely weatherized for outdoor installation and properly reinforced and brazed. Panels and access door are provided for inspection and access for all internal parts. Enclosures are provided with adequately reinforced points of support for setting in the unit. Steel sheet panels are zinc-coated and galvanized by the hot dip process of lock forming quality conforming to ASTM A 653 commercial weight G-90, followed by baked on electrostatic polyester dry powder coat paint, on all external panel.

C. Compressor

Compressors are scroll for all the models. They are provided with all the standard controls and accessories necessary for safe operation. These are equipped with internal motor protector; factory installed crank case heater and rubber vibration isolator for quiet and efficient operation.

D. Air-cooled condensing section

1. The air-cooled condensing section is enclosed within the unit housing and consists of condenser coil, fan(s) electric motor(s) and inherently protected compressor(s). Inner grooved copper tubes with wall thickness of 0.3mm, mechanically bonded to enhanced louvered aluminum fins are standard for all condenser coils. As an option, enhanced coated aluminum fins may be provided. Tube support sheets are galvanized steel, formed to provide structural strength.
2. Fans are propeller type, direct driven, upward discharge and provided with fan grille mounted on the casing.
3. Motors are totally enclosed air-over type with class F insulation. Inherent thermal protection is automatic reset type.

E. Evaporator coil section

1. All cooling coils are of enhanced louvered fins and inner grooved copper tubes with wall thickness of 0.3mm, mechanically bonded to aluminum fins. As option, enhanced coated aluminum fins may be provided. Tube support sheets are galvanized steel, formed to provide structural strength.
2. Drainage pan: An insulated drainage pan made of G-90 galvanized steel is provided, for additional corrosion protection.
3. Insulation: Insulation is supplied in adequate density and thickness for all units to prevent condensation from forming on the unit casing. Insulation meets the requirements of NFPA 90A and is protected against deterioration and erosion from air currents.

F. Evaporator fan

Evaporator fan is of centrifugal forward-curved blade design capable of handling total required CFM and static pressure in the low and the medium ranges. Casings are made of galvanized steel. Blower motors are of open drip proof type (totally enclosed types are optional) and conform to NEMA MG-1 and MG-2.

Blower motor is mounted on adjustable base and secured by locking device. Pillow block bearing are selected for at 200,000 hours average life at design operating conditions. Shaft is turned, ground and polished from solid steel. Fans and pulleys are keyed to shaft and designed for continuous operation at maximum motor horse power and fan speed. All rotating components and assemblies are statically and dynamically balanced and every unit is vibration tested before shipment from the factory.

G. Electronic thermostats

General information: A dedicated electronic thermostat is supplied with unit controls as standard. This thermostat controls one or two stage heating and cooling applications. The thermostat normally displays room temperature and mode of operation.

The temperature can be set by up/down buttons for both cooling and heating cycles. The thermostat also allows you to select continuous fan operation, or have the fan on intermittent operation with the equipment. It also displays the status of unit, thus providing maximum information for the end user.

4.2 Electric auxiliary heater

Electric auxiliary heaters are the resistance open coil type and conform to the requirements of UL 573 or equivalent. Electrical characteristics, kW capacities and number of stages are as indicated. Airflow switches, fusible links and overheat limit thermostats are provided to shut-off power in case of airflow failure/overheat. Electric heater kit is installed as an externally mounted kit at the supply opening.

4.3 Standard features/options/accessories

Description	Standard features	Option (factory installed)	Accessory (field installed)
Horizontal discharge			
Compressor crankcase heaters			
Evaporator fan-belt driven			
Evaporator fan motor-ODP type(TEFC type optional)			
Condenser fan-direct drive, propeller type(Except 5ton)			
Condenser fan-direct drive, axial type(Only 5ton)			
Condenser fan motor-totally enclosed air-over type			
Electric auxiliary heater			
Filter, Nylon(Thickness 10&12.5mm, except 5ton)			
Filter, aluminum(Thickness 25mm)			
Compressor overload protection			
Low &high pressure switch			
Cooling & heating thermostat			
Condenser fan guard			
Condenser coil guard			
Wired controller KWC-22			
Wired controller KFC-13			
Wired controller KFC-14			
Drainage pipe			
Drainage outlet			
Snap ring			

5. Specifications

Model			KRFM220CFAN3	KRFM220HFAN3	KRFM260CFAN3
Power supply		V-Ph-Hz	380-400V-3N~50Hz	380-400V-3N~50Hz	380-400V-3N~50Hz
Cooling	Capacity	Btu/h	75000	75000	89000
	Input	W	7700	7700	9200
	EER	Btu/w.h	9,7	9,7	9,7
Heating	Capacity	Btu/h	/	89000	/
	Input	W	/	7600	/
	COP	Btu/w.h	/	11,6	/
Max. input consumption		W	10900	10900	13000
Max. current		A	20,1	21	25
Starting current		A	60	60	80
Compressor	Model		SH090A4ALC	SH090A4ALC	SH105A4ALC
	Type		Scroll	Scroll	Scroll
	Brand		Danfoss	Danfoss	Danfoss
	Capacity	Btu/h	76090	76090	91500
	Input	W	7185	7185	8472
	Rated current(RLA)	A	14,3	14,3	16.4
	Locked rotor Amp(LRA)	A	20	20	142
	Thermal protector		YES	YES	inner
	Capacitor	uF	no	no	no
	Refrigerant oil	ml	3000	3000	3300
Indoor fan motor	Model		YFD90L-4-1.5KW	YFD90L-4-1.5KW	YFD90L-4-1.5KW
	Type		asynchronism	asynchronism	asynchronism
	Brand		DONGGUAN	DONGGUAN	DONGGUAN
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	input	W	1340	1340	1830
	Capacitor	uF	no	no	no
	Speed	r/min	1400	1400	1400
Indoor coil	a.Number of rows		2	2	2
	b.Tube pitch(a)x row pitch(b)	mm	22x19.05	22x19.05	22x19.05
	c.Fin spacing	mm	1,6	1,6	1,6
	d.Fin type (code)		hydrophilc	hydrophilc	hydrophilc
	e.Tube outside dia.and type	mm	7,94	7,94	7,94
			inner groove	inner groove	inner groove
	f.Coil length x height x width	mm	880X847x45	880X847x45	880X847x45
	g.Number of circuits		10	10	10
Indoor air flow		m3/h	4426	4426	4936
Indoor external static pressure (Hi)		Pa	60	60	60
Indoor noise level (Sound pressure)(Hi)		dB(A)	74,7	74,7	83
Outdoor fan motor	Model		YS600-6P	YS600-6P	YS600-6P
	Brand		YONGAN	YONGAN	YONGAN
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	Input	W	850	850	850
	Capacitor	uF	no	no	no
	Speed	r/min	930	930	930
Outdoor coil	Number of rows		3	3	3
	Tube pitch(a)x row pitch(b)	mm	22X19.05	22X19.05	22X19.05
	Fin spacing	mm	1,6	1,6	1,6
	Fin type (code)		inner groove	inner groove	inner groove
	Tube outside dia.and type	mm	7,94	7,94	7,94
			hydrophilc	hydrophilc	hydrophilc
	Coil length x height x width	mm	1404X968x65.15	1404X968x65.15	1404X968x65.15
	Number of circuits		21	21	21
Unit	Dimension(W*H*D)	mm	1630X1065X1068	1630X1065X1068	1630X1065X1068
	Packing (W*H*D)	mm	1700X1110X1160	1700X1110X1160	1700X1110X1160
	Net/Gross weight	Kg	315/335	320/340	315/335
Refrigerant type			R410A/5.2kg	R410A/5.2kg	R410A/5.6kg
Throttle type			Capillary	Capillary	Capillary
Design pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Connection wiring	Power wiring	mm2	3x10mm2+2x6mm2	3x10mm2+2x6mm2	3×16mm2+2×10mm2
	Signal wiring	mm2	5x0.75mm2	5x0.75mm2	5×0.75mm2
Controller			wire controlller	wire controlller	wire controlller
Operation temp		℃	17~30	17~30	17~30
Ambient temp (cooling/heating)		℃	18~52/ -	18~52 / -10~24	18~52/ -

Model			KRFM260HFAN3	KRFM300CFAN3	KRFM300HFAN3
Power supply		V-Ph-Hz	380-400V-3N~50Hz	380-400V-3N~50Hz	380-400V-3N~50Hz
Cooling	Capacity	Btu/h	89000	103000	103000
	Input	W	9200	10400	10400
	EER	Btu/w.h	9,7	9,8	9,8
Heating	Capacity	Btu/h	102000	/	120000
	Input	W	8800	/	10100
	COP	Btu/w.h	11,6	/	11,6
Max. input consumption		W	13000	14000	14000
Max. current		A	24	26,3	27.5
Starting current		A	80	80	80
Compressor	Model		SH105A4ALC	SH120A4ALC	SH120A4ALC
	Type		Scroll	Scroll	Scroll
	Brand		Danfoss	Danfoss	Danfoss
	Capacity	Btu/h	91500	102200	102200
	Input	W	8472	9462	9462
	Rated current(RLA)	A	16.4	20.7	20.7
	Locked rotor Amp(LRA)	A	142	142	142
	Thermal protector		inner	inner	inner
	Capacitor	uF	no	no	no
	Refrigerant oil	ml	3300	3300	3300
Indoor fan motor	Model		YFD90L-4-1.5KW	YFD90L-4-1.5KW	YFD90L-4-1.5KW
	Type		asynchronism	asynchronism	asynchronism
	Brand		DONGGUAN	DONGGUAN	DONGGUAN
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	input	W	1865	1700	1700
	Capacitor	uF	no	no	no
	Speed	r/min	1400	1400	1400
Indoor coil	a.Number of rows		2	3	3
	b.Tube pitch(a)x row pitch(b)	mm	22x19.05	22X19.05	22X19.05
	c.Fin spacing	mm	1,6	1.4	1.4
	d.Fin type (code)		hydrophilc	hydrophilc	hydrophilc
	e.Tube outside dia.and type	mm	7,94	7,94	7,94
			inner groove	inner groove	inner groove
	f.Coil length x height x width	mm	880X847x45	1117X792x65.15	1117X792x65.15
	g.Number of circuits		10	18	18
Indoor air flow		m3/h	4936	6128	6128
Indoor external static pressure (Hi)		Pa	60	75	75
Indoor noise level (Sound pressure)(Hi)		dB(A)	75.1	71.3	76,8
Outdoor fan motor	Model		YS600-6P	YS1100-6	YS1100-6
	Brand		YONGAN	YONGAN / WEILING	YONGAN / WEILING
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	Input	W	850	1300	1300
	Capacitor	uF	no	no	no
	Speed	r/min	930	944	944
Outdoor coil	Number of rows		3	3	3
	Tube pitch(a)x row pitch(b)	mm	22X19.05	22X19.05	22X19.05
	Fin spacing	mm	1,6	1,6	1,6
	Fin type (code)		inner groove	inner groove	inner groove
	Tube outside dia.and type	mm	7,94	7,94	7,94
			hydrophilc	hydrophilc	hydrophilc
	Coil length x height x width	mm	1404X968x65.15	1748X880x65.15	1748X880x65.15
	Number of circuits		21	20	20
Unit	Dimension(W*H*D)	mm	1630X1065X1068	2165X1021X1335	2165X1021X1335
	Packing (W*H*D)	mm	1700X1110X1160	2220X1140X1415	2220X1165X1415
	Net/Gross weight	Kg	320/340	445/458	450/463
Refrigerant type			R410A/6kg	R410A/6.5kg	R410A/6.8kg
Throttle type			Capillary	Capillary	Capillary
Design pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Connection wiring	Power wiring	mm2	3×10mm2+2×6mm2	3x10mm2+2x6mm2	3x10mm2+2x6mm2
	Signal wiring	mm2	5×0.75mm2	5x0.75mm2	5x0.75mm2
Controller			wire controlller	wire controlller	wire controlller
Operation temp		℃	17~30	17~30	17~30
Ambient temp (cooling/heating)		℃	18~52/ -10~24	18~52/ -	18~52/ -10~24

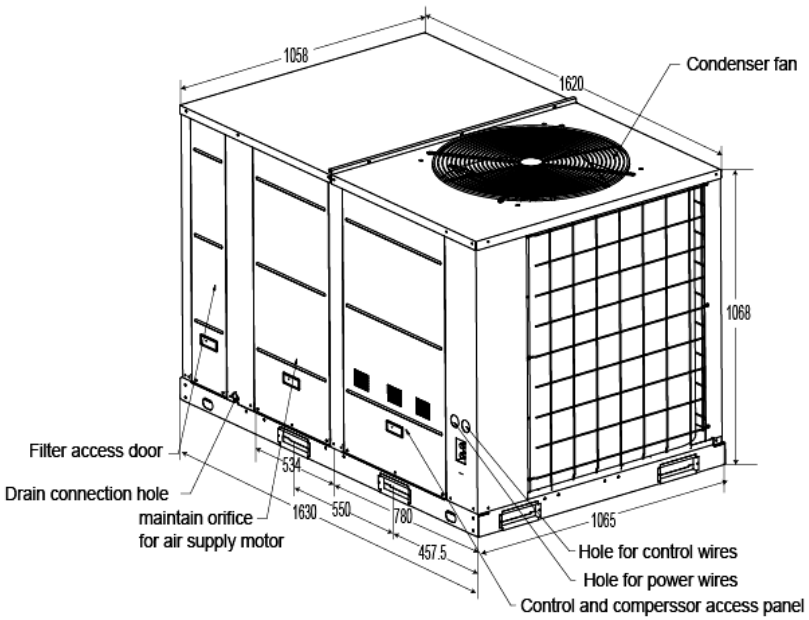
Model			KRFM350CFAN3	KRFM350HFAN3	KRFM530CFAN3
Power supply		V-Ph-Hz	380-400V-3N~50Hz	380-400V-3N~50Hz	380-400V-3N~50Hz
Cooling	Capacity	Btu/h	120000	120000	180000
	Input	W	11800	11800	18600
	EER	Btu/w.h	10,2	10,2	9,7
Heating	Capacity	Btu/h	/	126000	/
	Input	W	/	10900	/
	COP	Btu/w.h	/	11,6	/
Max. input consumption		W	17700	17000	27000
Max. current		A	30	31	53
Starting current		A	90	120	200
Compressor	Model		SH140A4ALC	SH140A4ALC	SH105A4ALC*2
	Type		Scroll	Danfoss	Scroll
	Brand		Danfoss	Danfoss	Danfoss
	Capacity	Btu/h	119000	119000	91500
	Input	W	10862	10862	8472
	Rated current(RLA)	A	21.4	21.4	16.4
	Locked rotor Amp(LRA)	A	147	147	142
	Thermal protector		inner	inner	inner
	Capacitor	uF	no	no	no
	Refrigerant oil	ml	3300	3300	3300
Indoor fan motor	Model		YFD90L-4-1.5KW	YFD90L-4-1.5KW	YFD132S-4-5.5KW
	Type		asynchronism	asynchronism	asynchronism
	Brand		DONGGUAN	DONGGUAN	DONGGUAN
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	input	W	1985	2000	5105
	Capacitor	uF	no	no	no
	Speed	r/min	1400	1400	1440
Indoor coil	a.Number of rows		3	3	3
	b.Tube pitch(a)x row pitch(b)	mm	22X19.05	22X19.05	22*19.05
	c.Fin spacing	mm	1.4	1.4	1.4
	d.Fin type (code)		hydrophilc	hydrophilc	hydrophilc
	e.Tube outside dia.and type	mm	7,94	7,94	7,94
			inner groove	inner groove	inner groove
	f.Coil length x height x width	mm	1117X792x65.15	1117X792x65.15	1607x880x65.15
	g.Number of circuits		18	18	10+10(2 systems)
Indoor air flow		m3/h	6860	6860	10455
Indoor external static pressure (Hi)		Pa	75	75	90
Indoor noise level (Sound pressure)(Hi)		dB(A)	75,7	77,2	86,1
Outdoor fan motor	Model		YS1100-6	YS1100-6	YS600-6P*2
	Brand		YONGAN / WEILING	YONGAN	YONGAN
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	Input	W	1060	1300	800*2
	Capacitor	uF	no	no	no
	Speed	r/min	944	944	930
Outdoor coil	Number of rows		3.5	3.5	3
	Tube pitch(a)x row pitch(b)	mm	22X19.05	22X19.05	22X19.05
	Fin spacing	mm	1,6	1.6	1.6
	Fin type (code)		inner groove	inner groove	Hydrophilic aluminium
	Tube outside dia.and type	mm	7,94	7,94	Φ7.94
			hydrophilc	hydrophilc	innergroove tube
	Coil length x height x width	mm	1748X880x84.2	1748X880x84.2	2179x1100x65.15
	Number of circuits		20	20	12+12(2 systems)
Unit	Dimension(W*H*D)	mm	2165X1021X1335	2165X1021X1335	2230X1245X1824
	Packing (W*H*D)	mm	2220X1140X1415	2220X1165X1415	2236X1280X1855
	Net/Gross weight	Kg	445/458	450/463	710/730
Refrigerant type			R410A/6.7kg	R410A/7.5kg	R410A/5.8kg*2
Throttle type			Capillary	Capillary	Capillary
Design pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Connection wiring	Power wiring	mm2	3×16mm2+2×10mm2	3×16mm2+2×10mm2	3×25mm2+2×10mm2
	Signal wiring	mm2	5×0.75mm2	5×0.75mm2	5x0.75mm2
Controller			wire controlller	wire controlller	wire controlller
Operation temp		℃	17~30	17~30	17~30
Ambient temp (cooling/heating)		℃	18~52/ -	18~52/ -10~24	18~52/ -

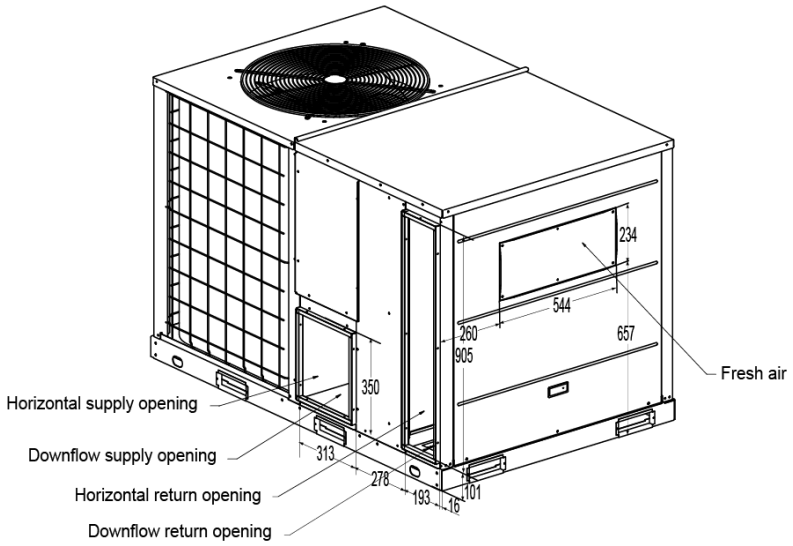
Model			KRFM530HFAN3	KRFM600CFAN3	KRFM600HFAN3
Power supply		V-Ph-Hz	380-400V-3N~50Hz	380-400V-3N~50Hz	380-400V-3N~50Hz
Cooling	Capacity	Btu/h	180000	205000	180000
	Input	W	18600	20000	18600
	EER	Btu/w.h	9,7	10,2	10,2
Heating	Capacity	Btu/h	191000	/	191000
	Input	W	17500	/	19800
	COP	Btu/w.h	11	/	11,5
Max. input consumption		W	27000	29000	29000
Max. current		A	45	65	65
Starting current		A	130	180	180
Compressor	Model		SH105A4ALC *2	SH120A4ALC*2	SH120A4ALC*2
	Type		Scroll	Scroll	Scroll
	Brand		Danfoss	Danfoss	Danfoss
	Capacity	Btu/h	91500	102200	102200
	Input	W	8472	9462	9462
	Rated current(RLA)	A	16.4	20.7	20.7
	Locked rotor Amp(LRA)	A	142	142	142
	Thermal protector		inner	inner	inner
	Capacitor	uF	no	no	no
	Refrigerant oil	ml	3300	3300	3300
Indoor fan motor	Model		YFD132S-4-5.5KW	YFD132S-4-5.5KW	YFD132S-4-5.5KW
	Type		asynchronism	asynchronism	asynchronism
	Brand		DONGGUAN	DONGGUAN	DONGGUAN
	Insulation class		F	F	F
	Safe class		IP54	IP54	IP54
	input	W	4300	5100	5100
	Capacitor	uF	no	no	no
	Speed	r/min	1440	1440	1440
Indoor coil	a.Number of rows		3	3	3
	b.Tube pitch(a)x row pitch(b)	mm	22*19.05	22*19.05	22*19.05
	c.Fin spacing	mm	1.4	1.4	1.4
	d.Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	e.Tube outside dia.and type	mm	Φ7.94	Φ7.94	Φ7.94
			innergroove tube	innergroove tube	innergroove tube
	f.Coil length x height x width	mm	1607x880x65.15	1607x880x65.15	1607x880x65.15
	g.Number of circuits		10+10(2 systems)	10+10(2 systems)	10+10(2 systems)
Indoor air flow		m3/h	10455	12428	12428
Indoor external static pressure (Hi)		Pa	90	100	100
Indoor noise level (Sound pressure)(Hi)		dB(A)	77,4	80.7	80.7
Outdoor fan motor	Model		YS600-6P*2	YS1100-6*2	YS1100-6*2
	Brand		YONGAN	YongAn	YongAn
	Insulation class		F	F	F
	Safe class		IP54	IPX4	IPX4
	Input	W	850*2	1300*2	1300*2
	Capacitor	uF	no	no	no
	Speed	r/min	930	944	944
Outdoor coil	Number of rows		3	3	3
	Tube pitch(a)x row pitch(b)	mm	22X19.05	22X19.05	22X19.05
	Fin spacing	mm	1.6	1.6	1.6
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	Φ7.94	Φ7.94	Φ7.94
			innergroove tube	innergroove tube	innergroove tube
	Coil length x height x width	mm	2179x1100x65.15	2179x1100x65.15	2179x1100x65.15
	Number of circuits		12+12(2 systems)	12+12(2 systems)	12+12(2 systems)
Unit	Dimension(W*H*D)	mm	2230X1824X1245	2229X1245X1824	2229X1245X1824
	Packing (W*H*D)	mm	2236X1855X1280	2236X1280X1855	2236X1280X1855
	Net/Gross weight	Kg	730/750	730/750	750/770
Refrigerant type			R410A/6.5kg*2	R410A/5.2kg*2	R410A/5.6kg*2
Throttle type			Capillary	Capillary	Capillary
Design pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Connection wiring	Power wiring	mm2	3×25mm2+2×10mm2	3x25mm2+2x10mm2	3x25mm2+2x10mm2
	Signal wiring	mm2	5×0.75mm2	5×0.75mm2	5×0.75mm2
Controller			wire controlller	wire controlller	wire controlller
Operation temp		℃	17~30	17~30	17~30
Ambient temp (cooling/heating)		℃	18~52/ -10~24	18~52/ -	18~52/ -10~24

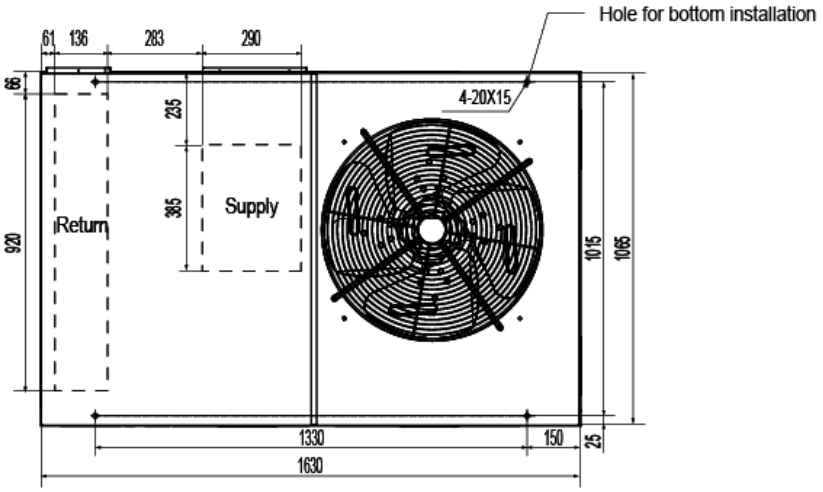
Model			KRFM700CFAN3	KRFM700HFAN3	KRFM970CFAN3	KRFM970HFAN3
Power supply		V-Ph-Hz	380-400V-3N~50Hz	380-400V-3N~50Hz	380-400V-3N~50Hz	380-400V-3N~50Hz
Cooling	Capacity	Btu/h	240000	240000	331000	331000
	Input	W	23600	23600	33000	33000
	EER	Btu/w.h	10,1	10,1	10	10
Heating	Capacity	Btu/h	/	256000	/	358000
	Input	W	/	23400	/	34800
	COP	Btu/w.h	/	11	/	10,3
Max. input consumption		W	36000	36000	48000	49000
Max. current		A	66	75	92	86,5
Starting current		A	200	200	250	250
Compressor	Model		SH140A4ALC*2	SH140A4ALC*2	SH184A4ALC*2	SH184A4ALC*2
	Type		Danfoss	Danfoss	SCROLL	SCROLL
	Brand		Danfoss	Danfoss	Danfoss	Danfoss
	Capacity	Btu/h	119000	119000	152426	152426
	Input	W	10862	10862	13732	13732
	Rated current(RLA)	A	21.4	21.4	27,6	27,6
	Locked rotor Amp(LRA)	A	147	147	197	197
	Thermal protector		inner	inner	inner	inner
	Capacitor	uF	no	no	no	no
	Refrigerant oil	ml	3300	3300	3600	3600
Indoor fan motor	Model		YFD132S-4-5.5KW	YFD132S-4-5.5KW	Y(2)132M-4-7.5KW	Y(2)132M-4-7.5KW
	Type		asynchronism	asynchronism	asynchronism	asynchronism
	Brand		DONGGUAN	DONGGUAN	BEIDE	BEIDE
	Insulation class		F	F	F	F
	Safe class		IP54	IP54	IP54	IP54
	input	W	6000	6000	6260	6260
	Capacitor	uF	no	no	no	no
	Speed	r/min	1440	1440	1440	1440
Indoor coil	a.Number of rows		3	3	3	3
	b.Tube pitch(a)x row pitch(b)	mm	22*19.05	22*19.05	21*13.37	21*13.37
	c.Fin spacing	mm	1.6	1.6	1.5	1.5
	d.Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	e.Tube outside dia.and type	mm	Φ7.94	Φ7.94	Φ7	Φ7
			innergroove tube	innergroove tube	innergroove tube	innergroove tube
	f.Coil length x height x width	mm	1882X1012x65.15	1882X1012x65.15	1882X1428x68.51	1882X1428x68.51
	g.Number of circuits		11+12(2 systems)	11+12(2 systems)	17+17(2 systems)	17+17(2 systems)
Indoor air flow		m3/h	14280	14280	20400	20400
Indoor external static pressure (Hi)		Pa	100	100	250	250
Indoor noise level (Sound pressure)(Hi)		dB(A)	86.2	83.2	84.4	84.4
Outdoor fan motor	Model		YS1500-6*2	YS1500-6*2	YS1500-6*2	YS1500-6*2
	Brand		YONGAN	YONGAN	YONGAN	YONGAN
	Insulation class		F	F	F	F
	Safe class		IP54	IP54	IP54	IP54
	Input	W	1700*2	1690*2	1690*2	1690*2
	Capacitor	uF	no	no	no	no
	Speed	r/min	910	910	910	910
Outdoor coil	Number of rows		3.57	3.57	3.57	3.57
	Tube pitch(a)x row pitch(b)	mm	22*19.05	22*19.05	21*13.37	21*13.37
	Fin spacing	mm	1.6	1.6	1.5	1.5
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	Φ7.94	Φ7.94	Φ7	Φ7
			innergroove tube	innergroove tube	innergroove tube	innergroove tube
	Coil length x height x width	mm	2650X1100x65.15	2650X1100x65.15	2650*1512*65.15	2650*1512*65.15
	Number of circuits		11+12(2 systems)	11+12(2 systems)	12+12(2 systems)	12+12(2 systems)
Unit	Dimension(W*H*D)	mm	2753X2157X1245	2753X2157X1245	2753*1674*2153	2753*1674*2153
	Packing (W*H*D)	mm	2755X2180X1300	2760X2175X1280	2755*1690*2180	2755*1690*2180
	Net/Gross weight	Kg	925/940	940/955	1130/1150	1130/1150
Refrigerant type			R410A/8.1kg*2	R410A/8.8kg*2	R410A/9.4kg*2	R410A/9.4kg*2
Throttle type			Capillary	Capillary	Capillary	Capillary
Design pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Connection wiring	Power wiring	mm2	3×25mm2+2×10mm2	3×25mm2+2×10mm2	3×25mm2+2×10mm2	3×25mm2+2×10mm2
	Signal wiring	mm2	5×0.75mm2	5×0.75mm2	5×0.75mm2	5×0.75mm2
Controller			wire controlller	wire controlller	wire controlller	wire controlller
Operation temp		℃	17~30	17~30	17~30	17~30
Ambient temp (cooling/heating)		℃	18~52/ -	18~52/ -10~24	18~52/ -	18~52/ -10~24

6. Dimensional drawings

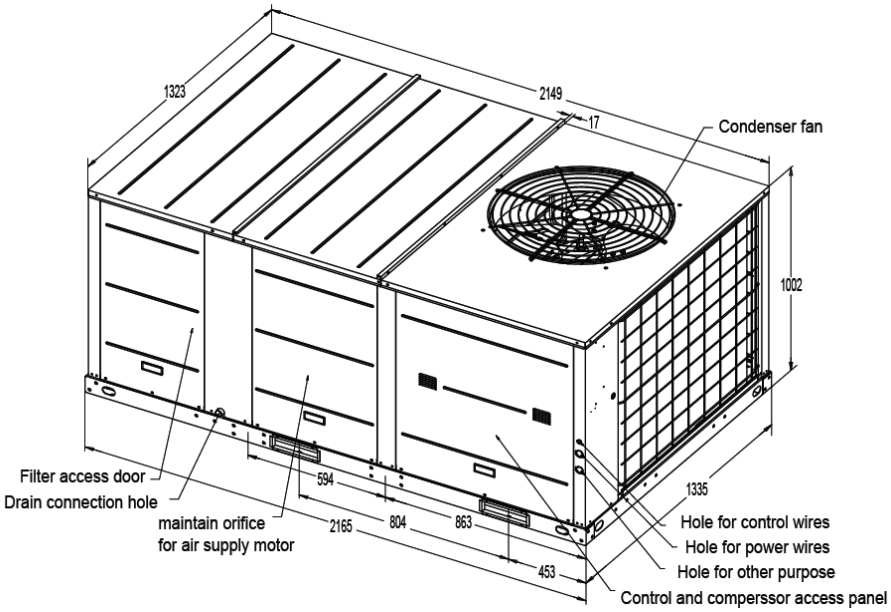
6.1 6.2&7.5ton

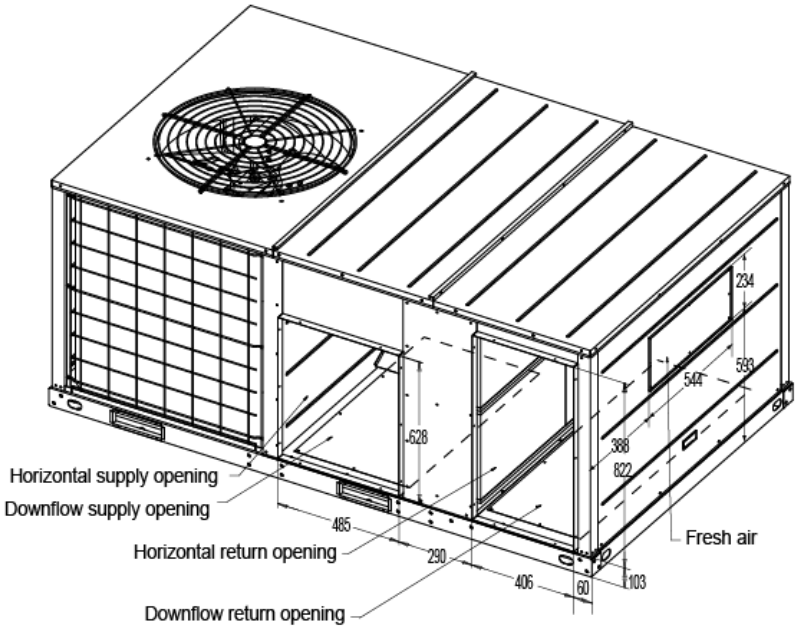


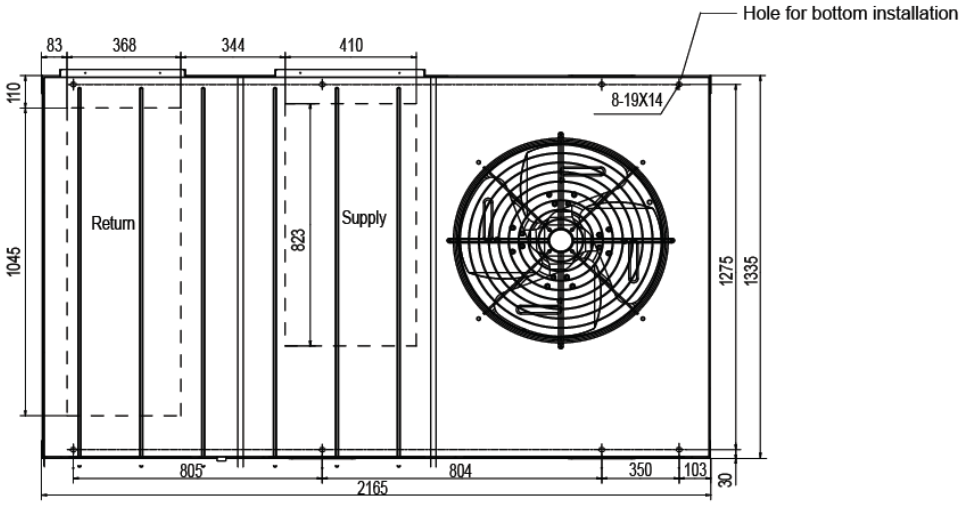




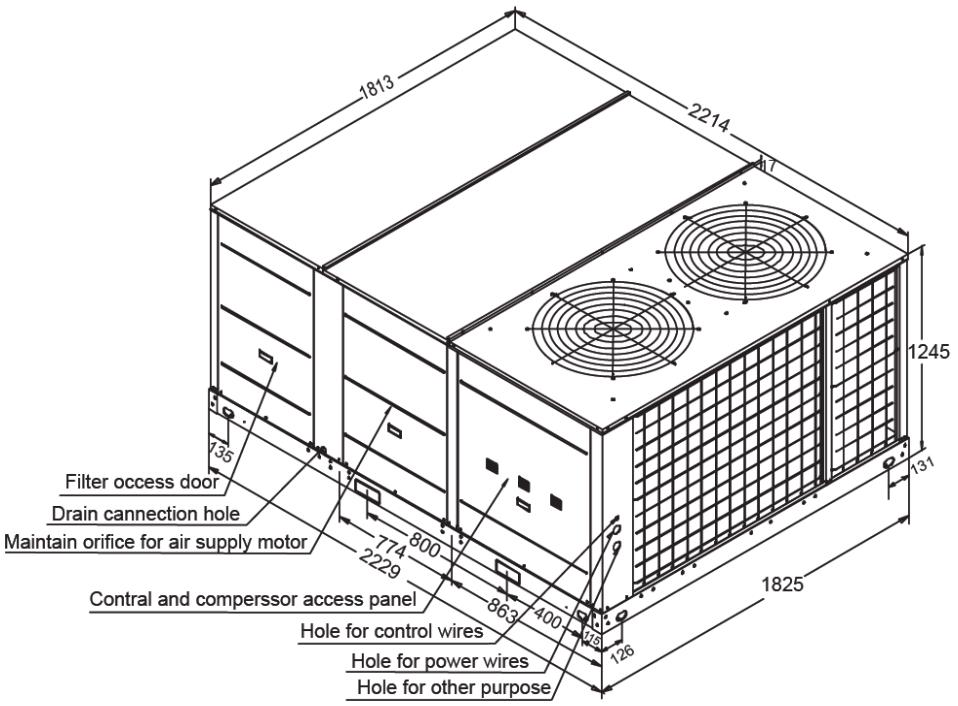
6.2 8.5&10ton

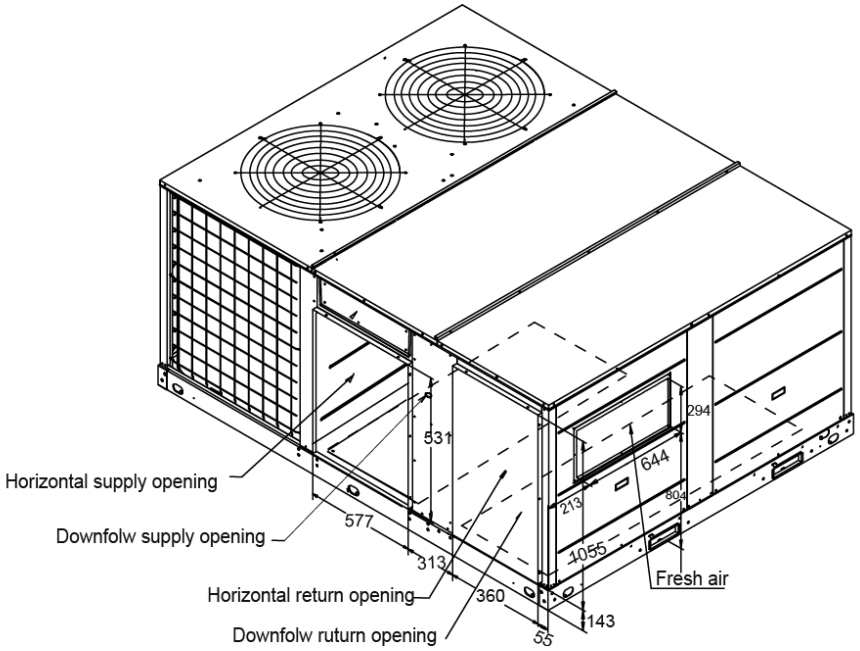

1323
2149
17
Condenser fan
1002
Filter access door
Drain connection hole
maintain orifice
for air supply motor
594
2165
804
863
453
1335
Hole for control wires
Hole for power wires
Hole for other purpose
Control and comperssor access panel

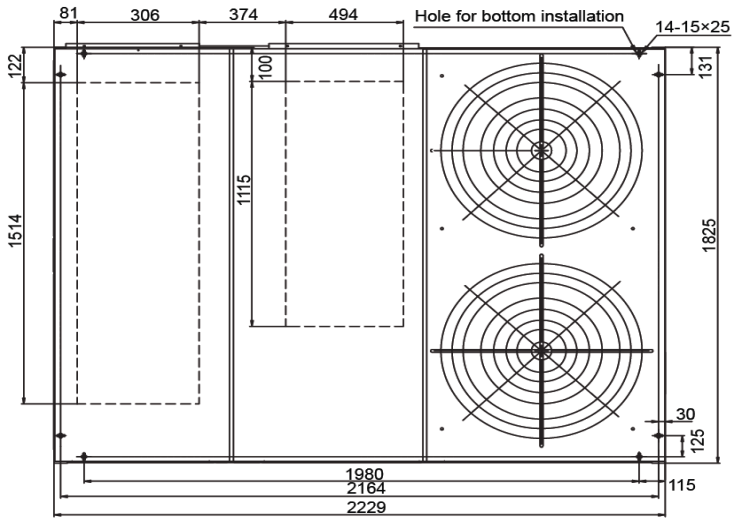

234
544
583
628
368
622
Horizontal supply opening
Downflow supply opening
485
Horizontal return opening
290
406
60
103
Fresh air
Downflow return opening


Hole for bottom installation
83
368
344
410
110
8-19X14
Return
Supply
823
1045
1275
1335
805
804
350
103
30
2165

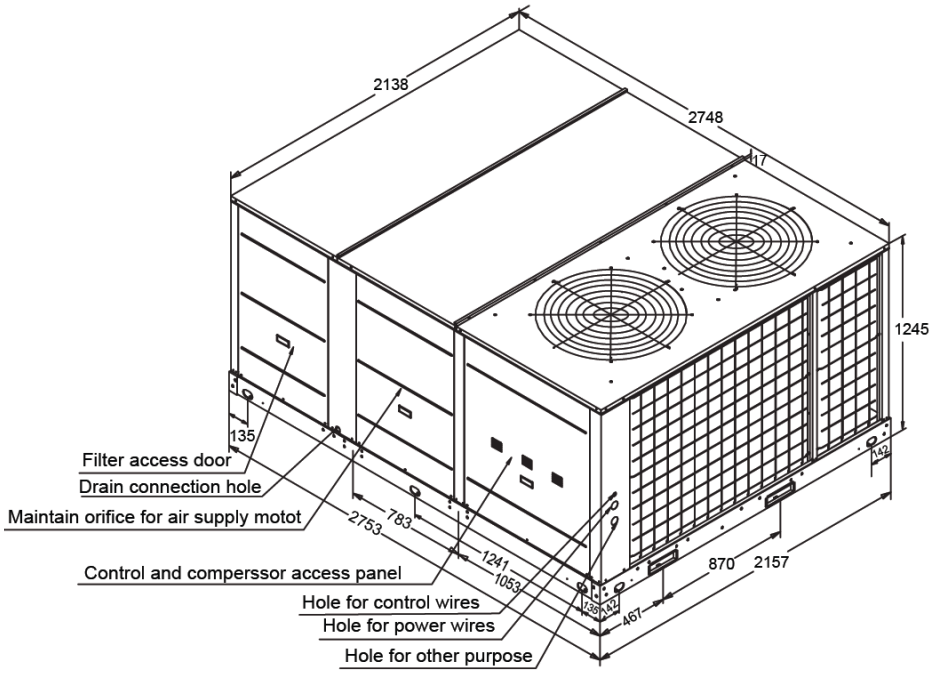
6.3 15&17.5ton

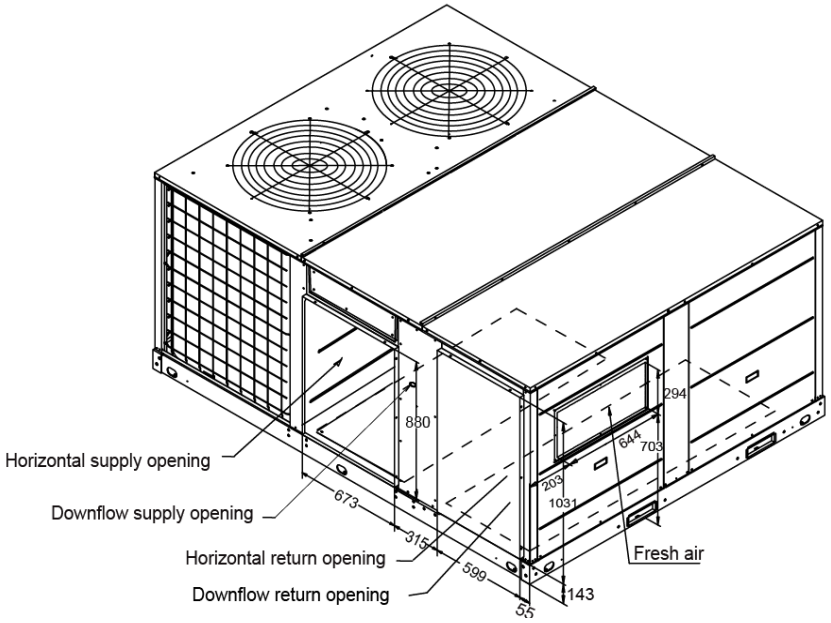

1813
2214
1245
135
131
Filter occess door
Drain cannection hole
Maintain orifice for air supply motor
774
800
2229
863
400
1825
Contral and comperssor access panel
Hole for control wires
Hole for power wires
Hole for other purpose
126

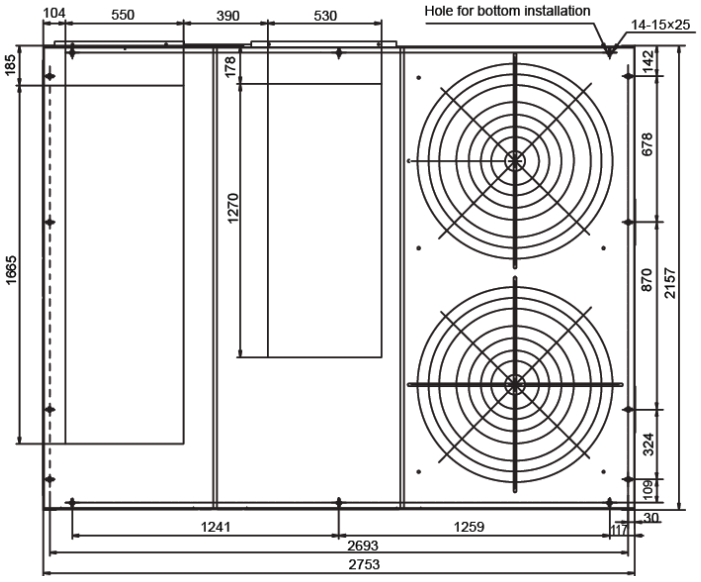

Horizontal supply opening
Downfolw supply opening
531
577
313
294
644
213
804
1055
Fresh air
Horizontal return opening
360
143
Downfolw ruturn opening
55


81
306
374
494
Hole for bottom installation
14-15×25
122
100
131
1115
1514
1825
30
125
1980
2164
2229
115

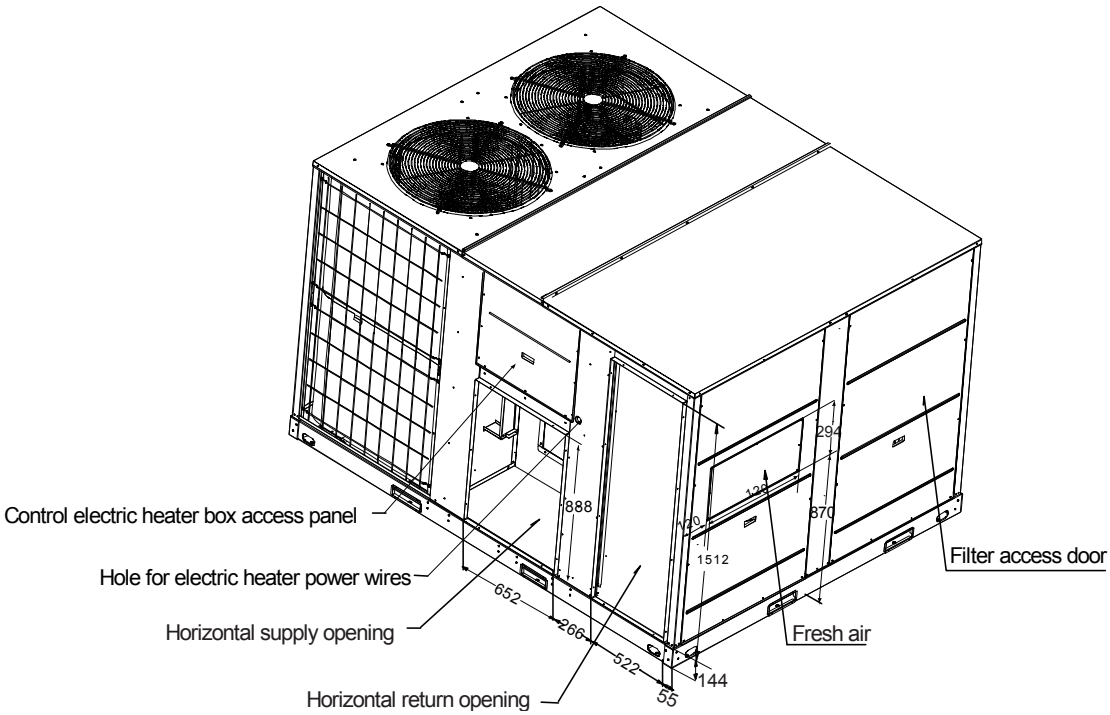
6.4 20ton

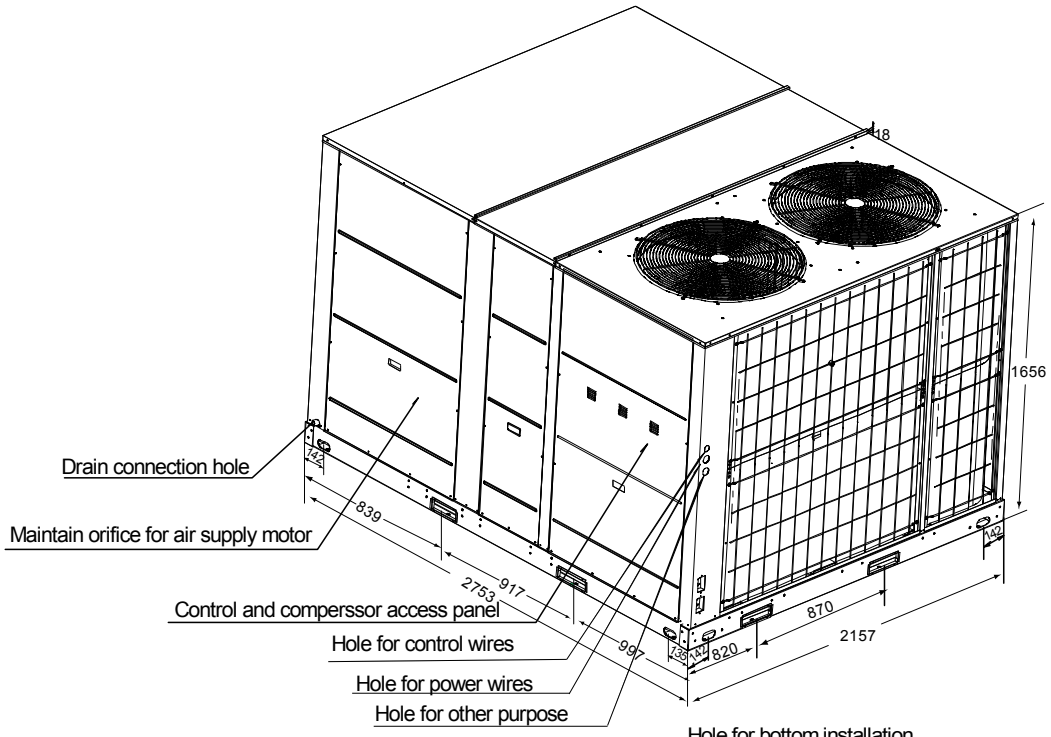

2138
2748
117
1245
135
Filter access door
Drain connection hole
Maintain orifice for air supply motot
2753
783
1241
1053
Control and comperssor access panel
Hole for control wires
Hole for power wires
Hole for other purpose
870
2157
142
467

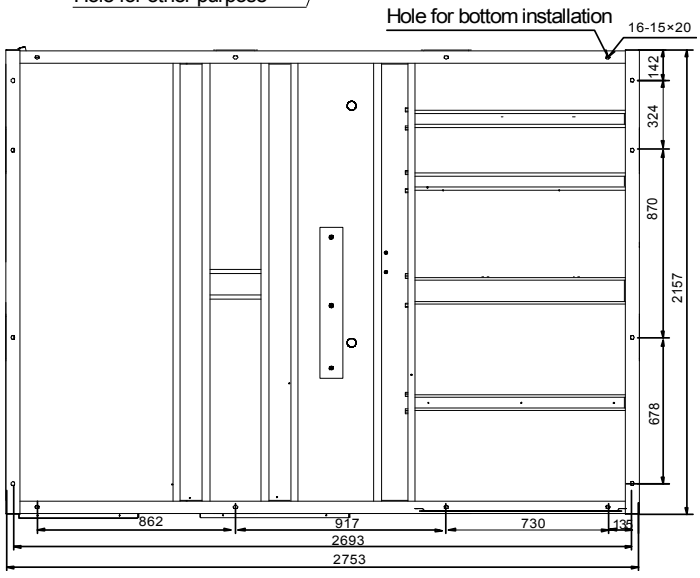

Horizontal supply opening
Downflow supply opening
Horizontal return opening
Downflow return opening
830
673
315
599
55
143
294
64A
703
203
1031
Fresh air


104
550
390
530
Hole for bottom installation
14-15x25
185
178
142
678
1270
1665
870
2157
324
109
30
117
1241
1259
2693
2753

6.5 30ton


Control electric heater box access panel
Hole for electric heater power wires
Horizontal supply opening
Horizontal return opening
Filter access door
Fresh air
888
652
266
522
55
144
1512
870
294
20

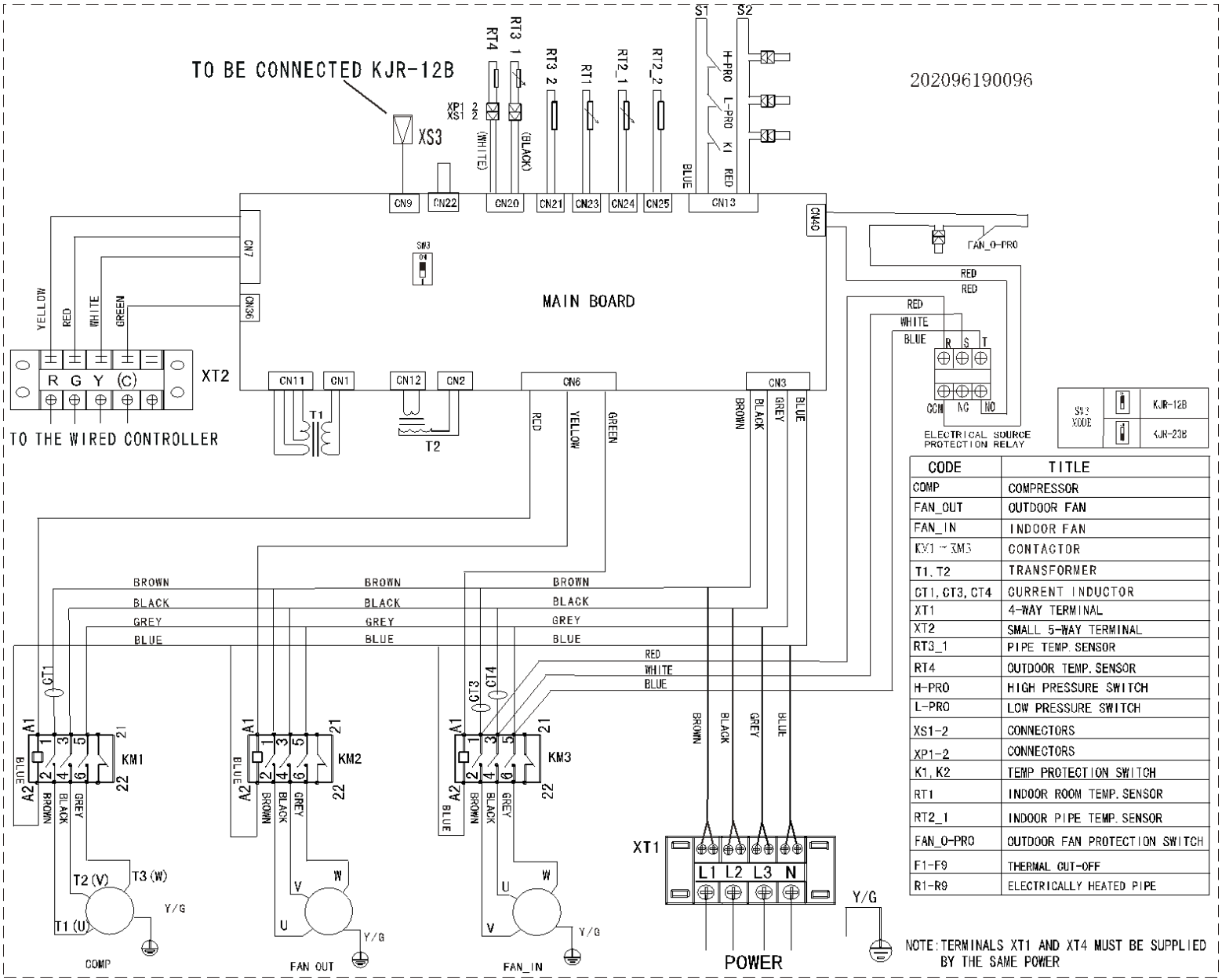

Drain connection hole
Maintain orifice for air supply motor
Control and comperssor access panel
Hole for control wires
Hole for power wires
Hole for other purpose
1656
839
917
2753
997
820
870
2157
18


Hole for bottom installation
16-15×20
142
324
870
2157
678
862
917
730
135
2693
2753

7. Wiring Diagrams

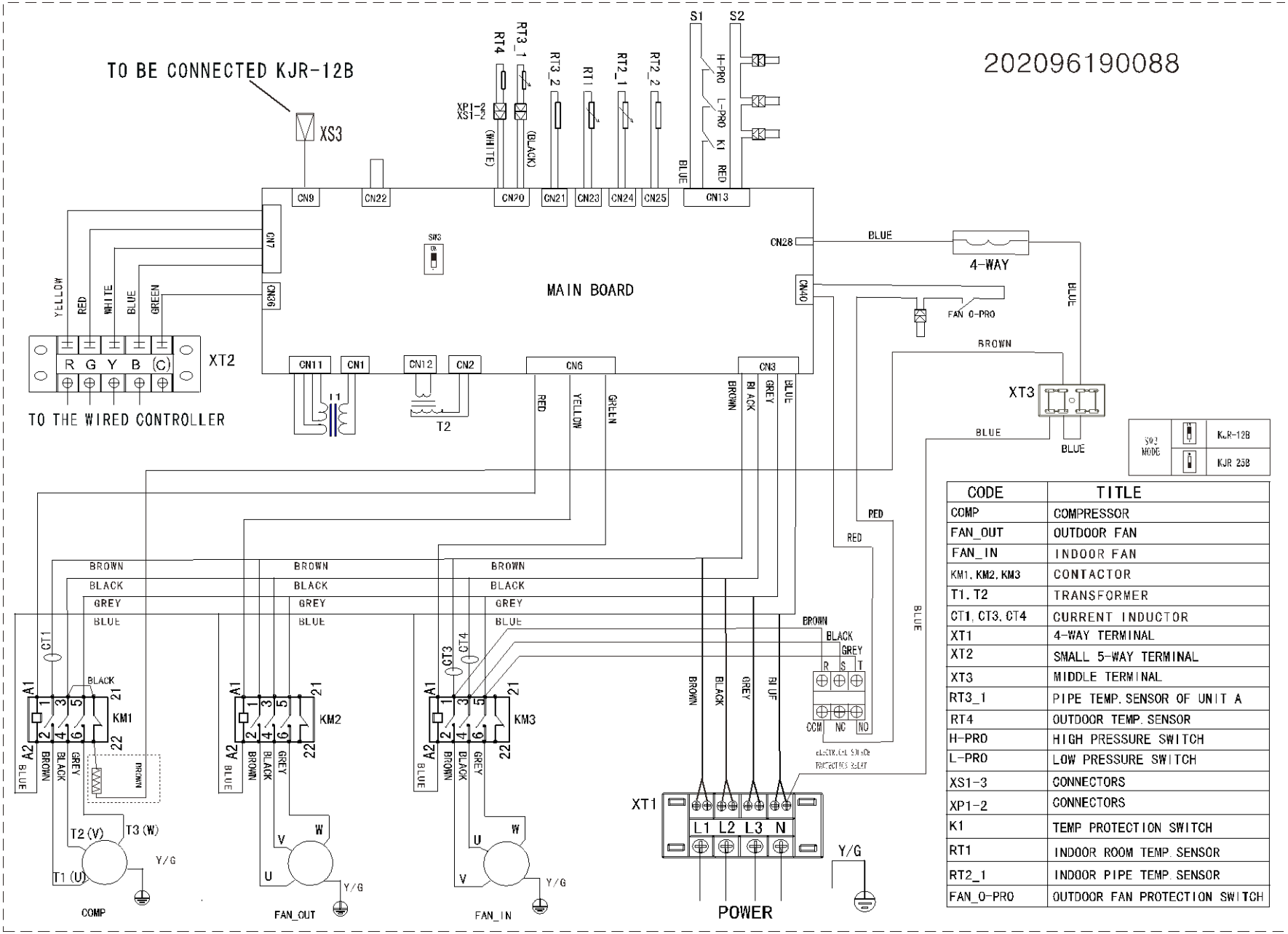
7.1 6.2ton

KRFM220CFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1 ~ KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1, CT3, CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1	PIPE TEMP. SENSOR
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-2	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH
F1-F9	THERMAL CUT-OFF
R1-R9	ELECTRICALLY HEATED PIPE

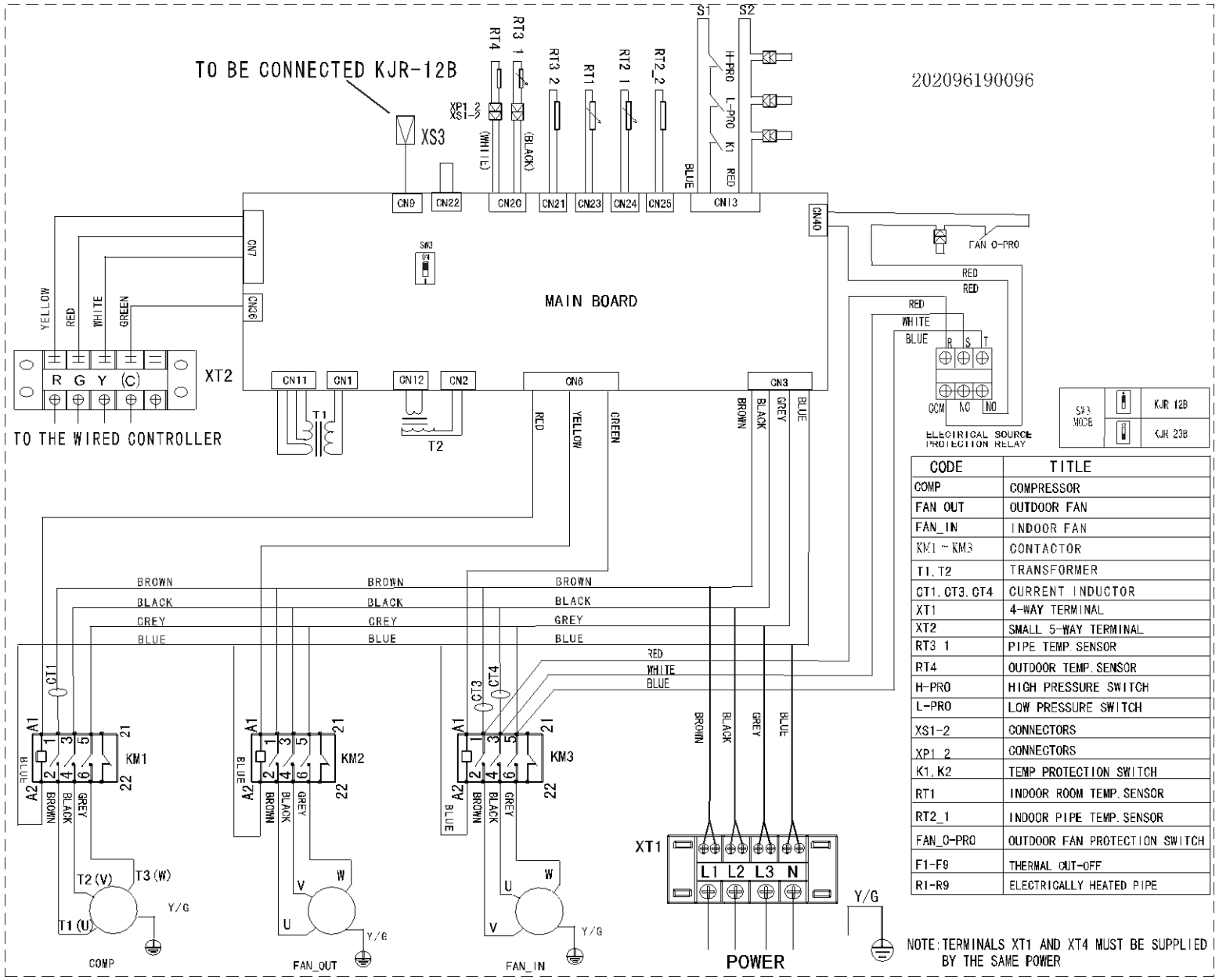
KRFM220HFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1, KM2, KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1, CT3, CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
XT3	MIDDLE TERMINAL
RT3_1	PIPE TEMP. SENSOR OF UNIT A
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH

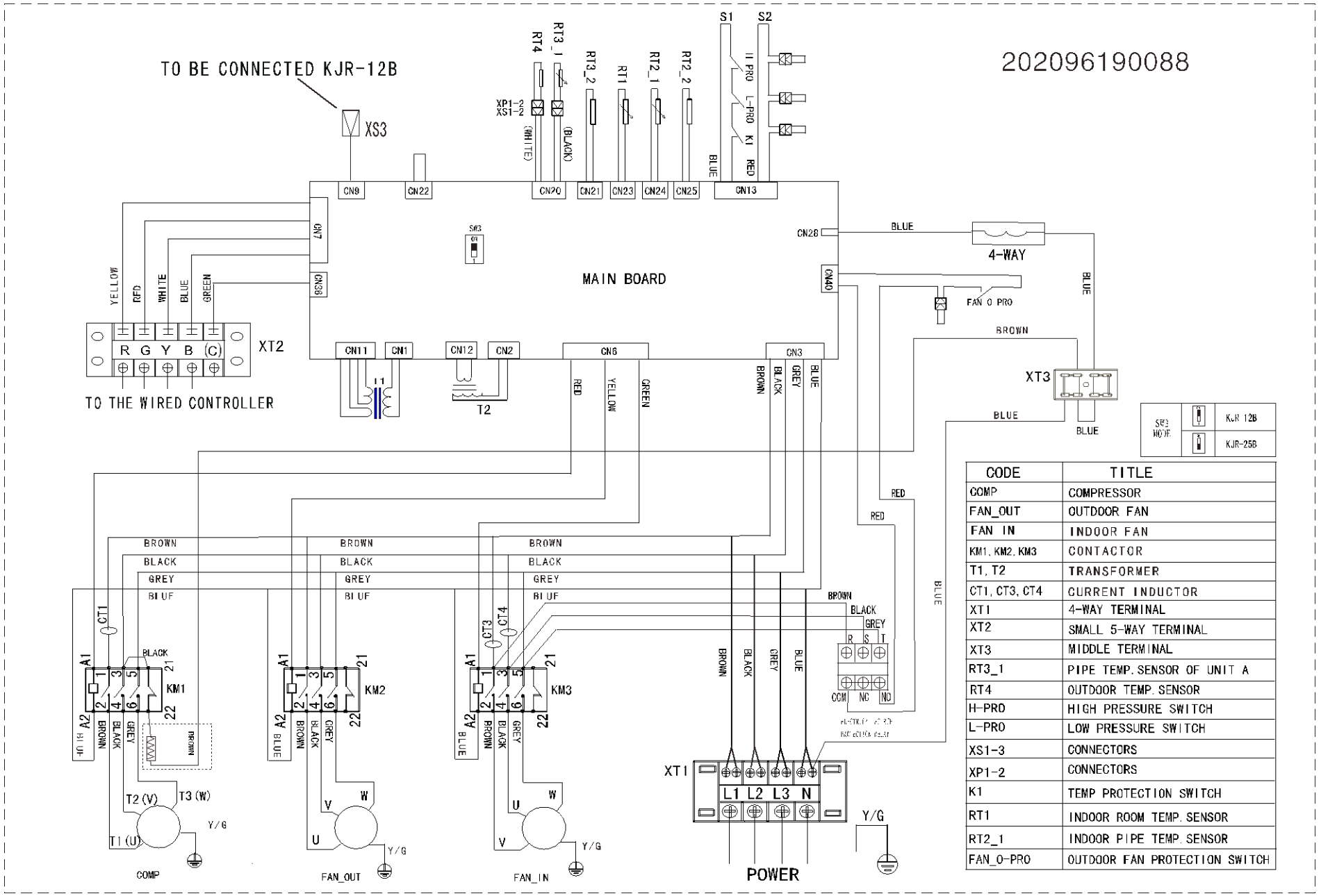
7.2 7.5ton

KRFM260CFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN OUT	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1 ~ KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1, CT3, CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3 1	PIPE TEMP. SENSOR
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-2	CONNECTORS
XP1_2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH
F1-F9	THERMAL CUT-OFF
R1-R9	ELECTRICALLY HEATED PIPE

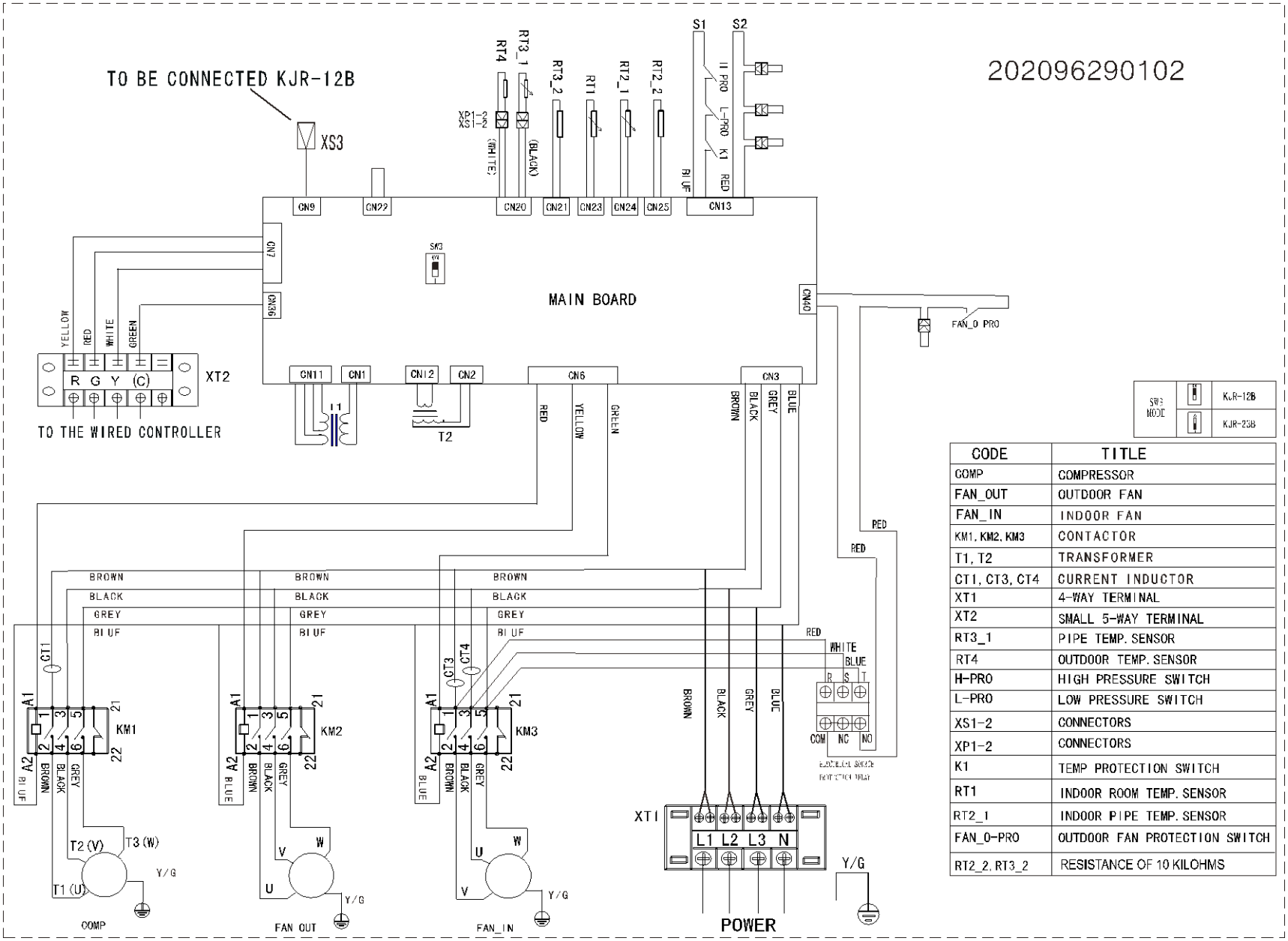
KRFM260HFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN IN	INDOOR FAN
KM1, KM2, KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1, CT3, CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
XT3	MIDDLE TERMINAL
RT3_1	PIPE TEMP. SENSOR OF UNIT A
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH

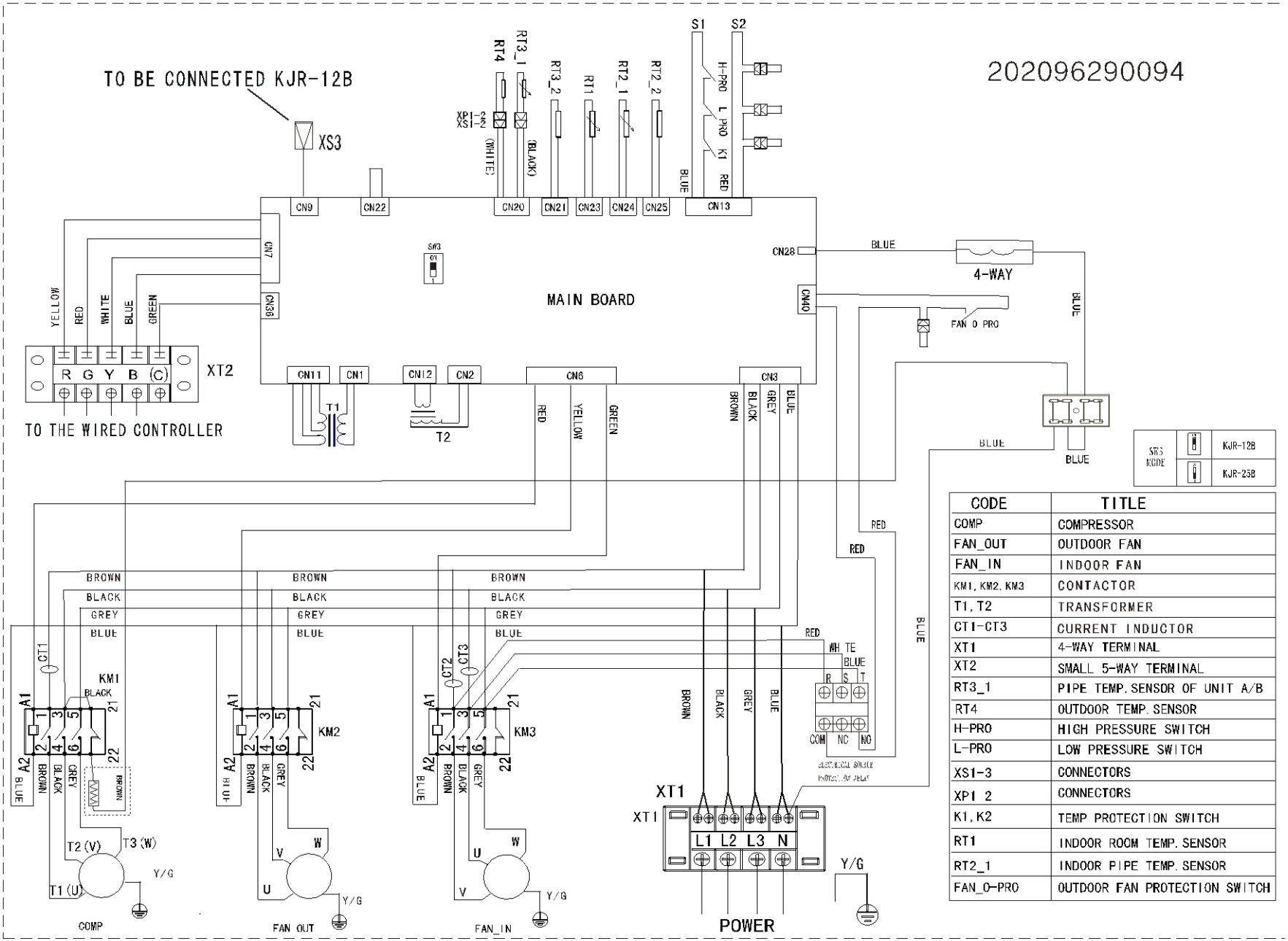
7.3 8.5ton

KRFM300CFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1, KM2, KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1, CT3, CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1	PIPE TEMP. SENSOR
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-2	CONNECTORS
XP1-2	CONNECTORS
K1	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH
RT2_2, RT3_2	RESISTANCE OF 10 KILOHMS

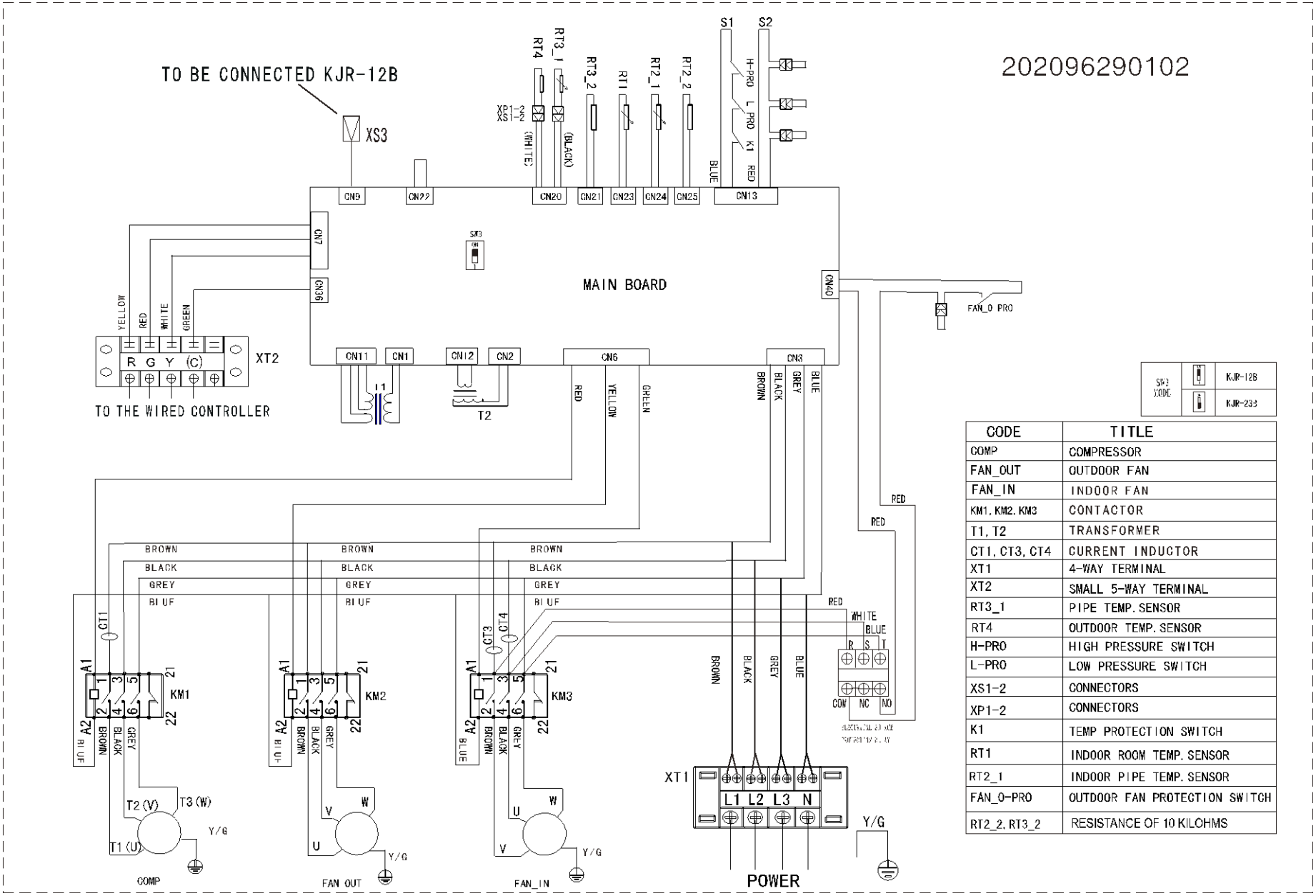
KRFM300HFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1, KM2, KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1-CT3	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1	PIPE TEMP. SENSOR OF UNIT A/B
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1 2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH

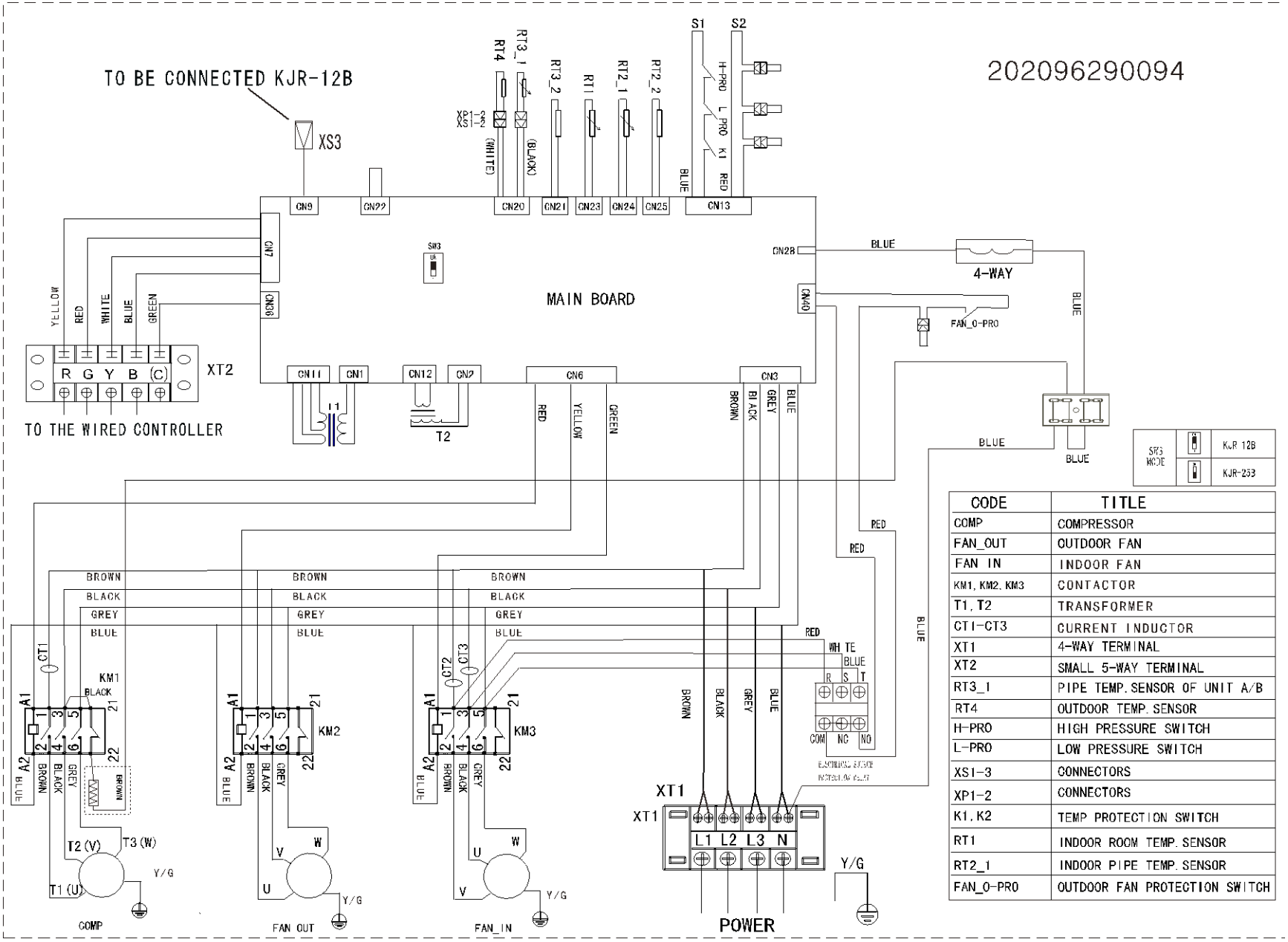
7.4 10ton

KRFM350CFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1, KM2, KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1, CT3, CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1	PIPE TEMP. SENSOR
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-2	CONNECTORS
XP1-2	CONNECTORS
K1	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH
RT2_2, RT3_2	RESISTANCE OF 10 KILOHMS

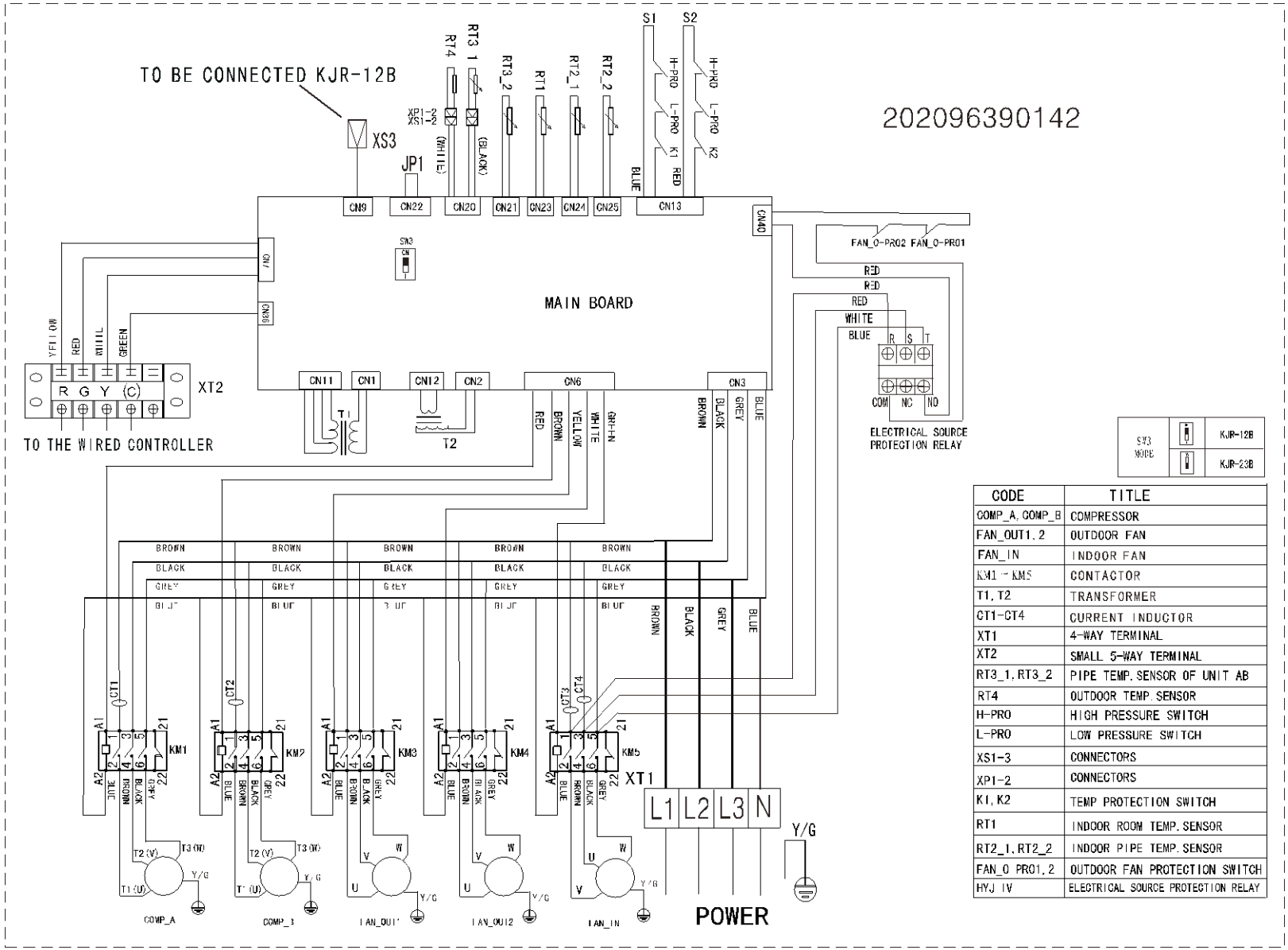
KRFM350HFAN3



CODE	TITLE
COMP	COMPRESSOR
FAN_OUT	OUTDOOR FAN
FAN IN	INDOOR FAN
KM1, KM2, KM3	CONTACTOR
T1, T2	TRANSFORMER
CT1-CT3	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1	PIPE TEMP. SENSOR OF UNIT A/B
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO	OUTDOOR FAN PROTECTION SWITCH

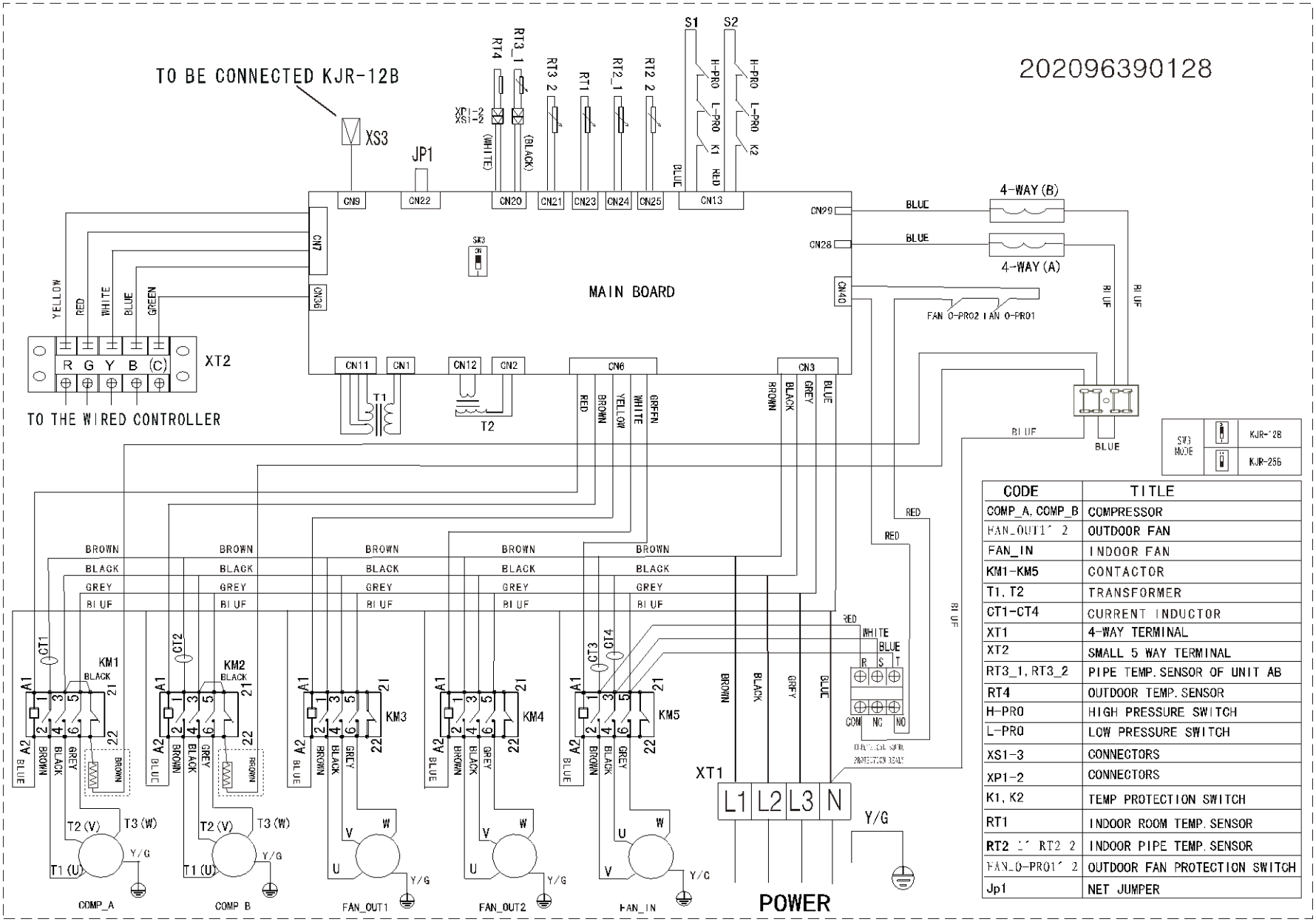
7.5 15ton

KRFM530CFAN3



CODE	TITLE
COMP_A, COMP_B	COMPRESSOR
FAN_OUT1, 2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1 ~ KM5	CONTACTOR
T1, T2	TRANSFORMER
CT1-CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1, RT3_2	PIPE TEMP. SENSOR OF UNIT AB
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1, RT2_2	INDOOR PIPE TEMP. SENSOR
FAN_O PRO1, 2	OUTDOOR FAN PROTECTION SWITCH
HYJ IV	ELECTRICAL SOURCE PROTECTION RELAY

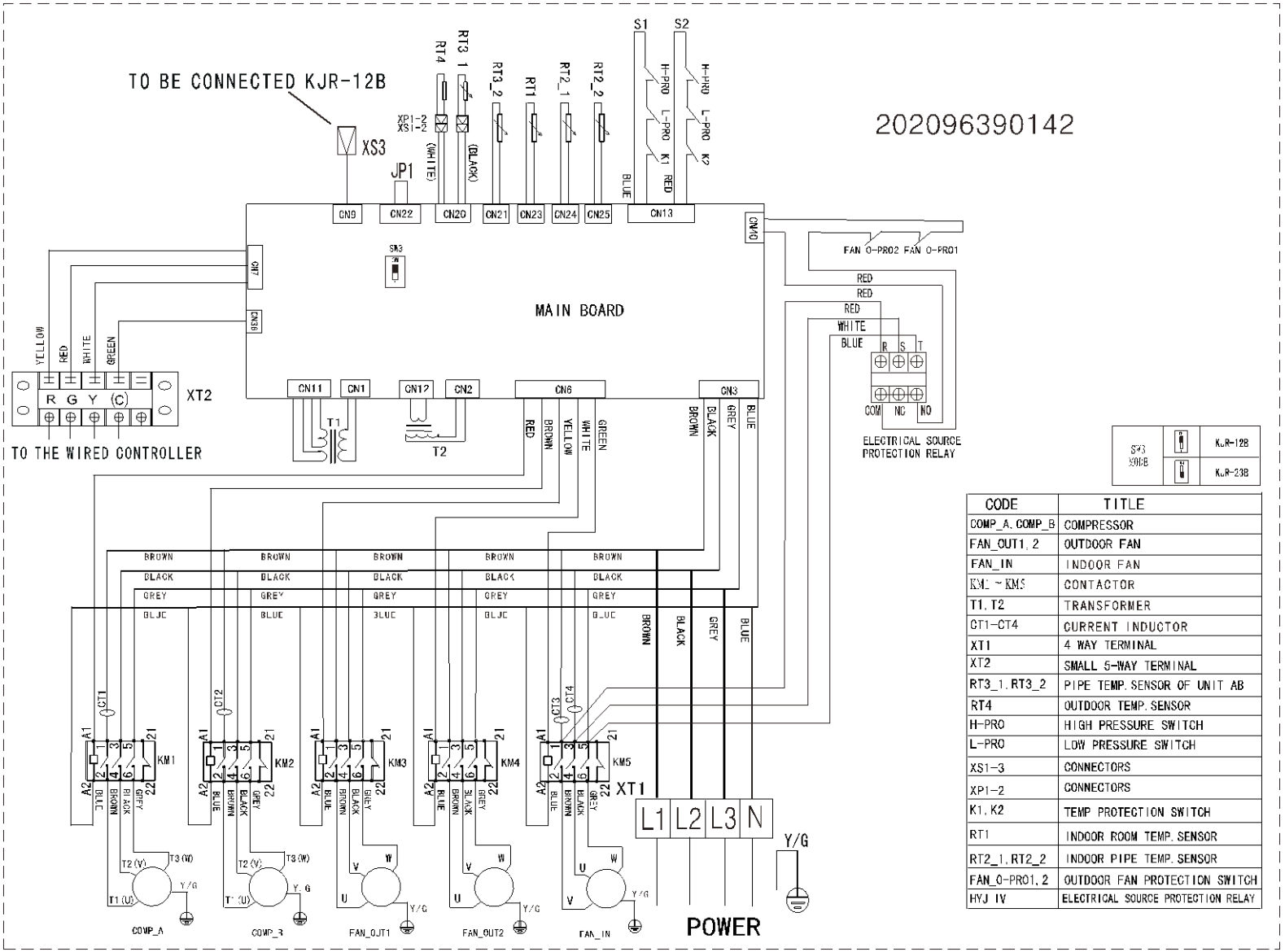
KRFM530HFAN3



CODE	TITLE
COMP_A, COMP_B	COMPRESSOR
FAN_OUT1, 2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1-KM5	CONTACTOR
T1, T2	TRANSFORMER
CT1-CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5 WAY TERMINAL
RT3_1, RT3_2	PIPE TEMP. SENSOR OF UNIT AB
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2, RT2_2	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO1, 2	OUTDOOR FAN PROTECTION SWITCH
Jp1	NET JUMPER

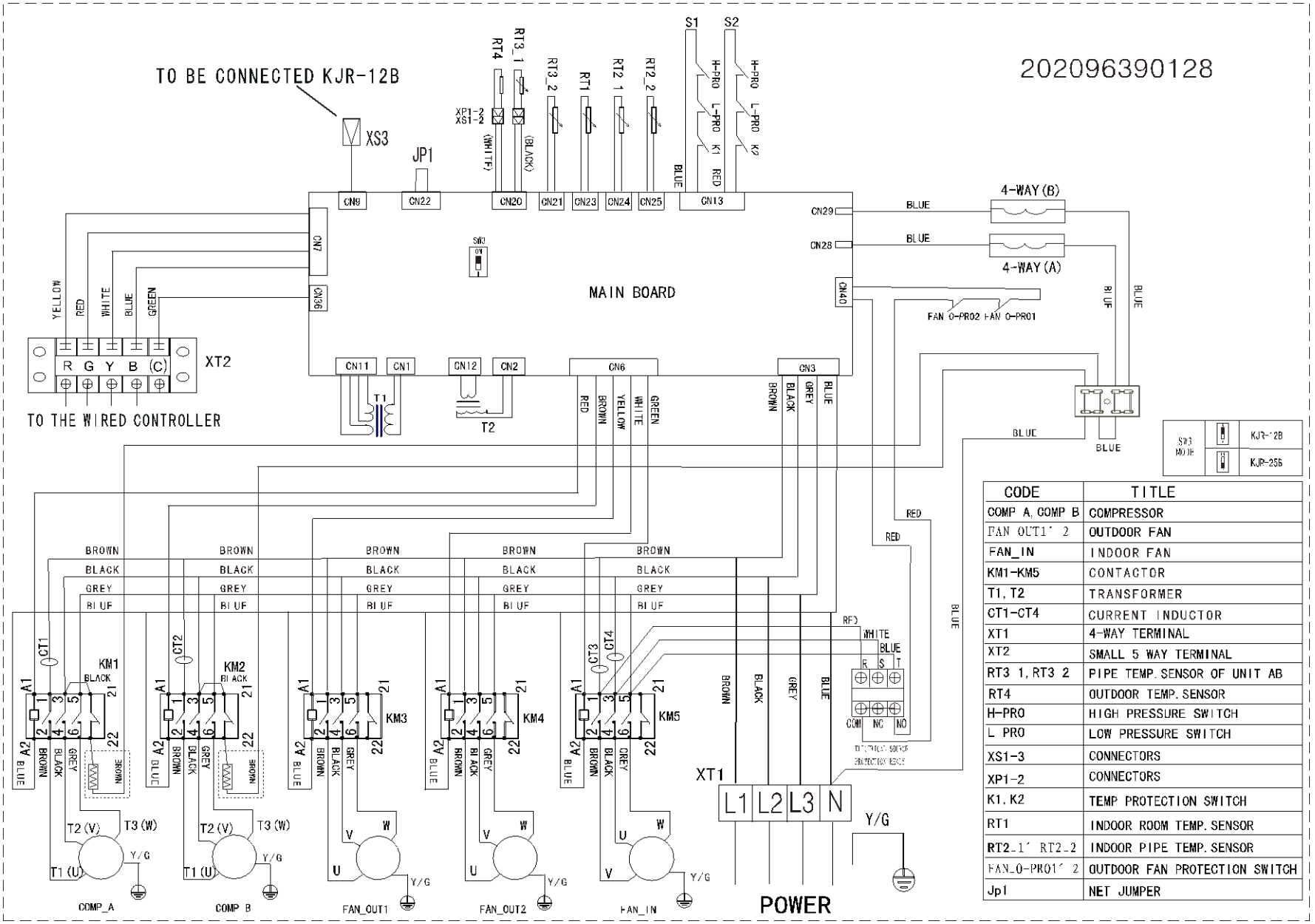
7.6 17.5ton

KRFM600CFAN3



CODE	TITLE
COMP_A.COMP_B	COMPRESSOR
FAN_OUT1.2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1 ~ KM5	CONTACTOR
T1.T2	TRANSFORMER
CT1-CT4	CURRENT INDUCTOR
XT1	4 WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1.RT3_2	PIPE TEMP.SENSOR OF UNIT AB
RT4	OUTDOOR TEMP.SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1.K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP.SENSOR
RT2_1.RT2_2	INDOOR PIPE TEMP.SENSOR
FAN_O-PRO1.2	OUTDOOR FAN PROTECTION SWITCH
HYJ IV	ELECTRICAL SOURCE PROTECTION RELAY

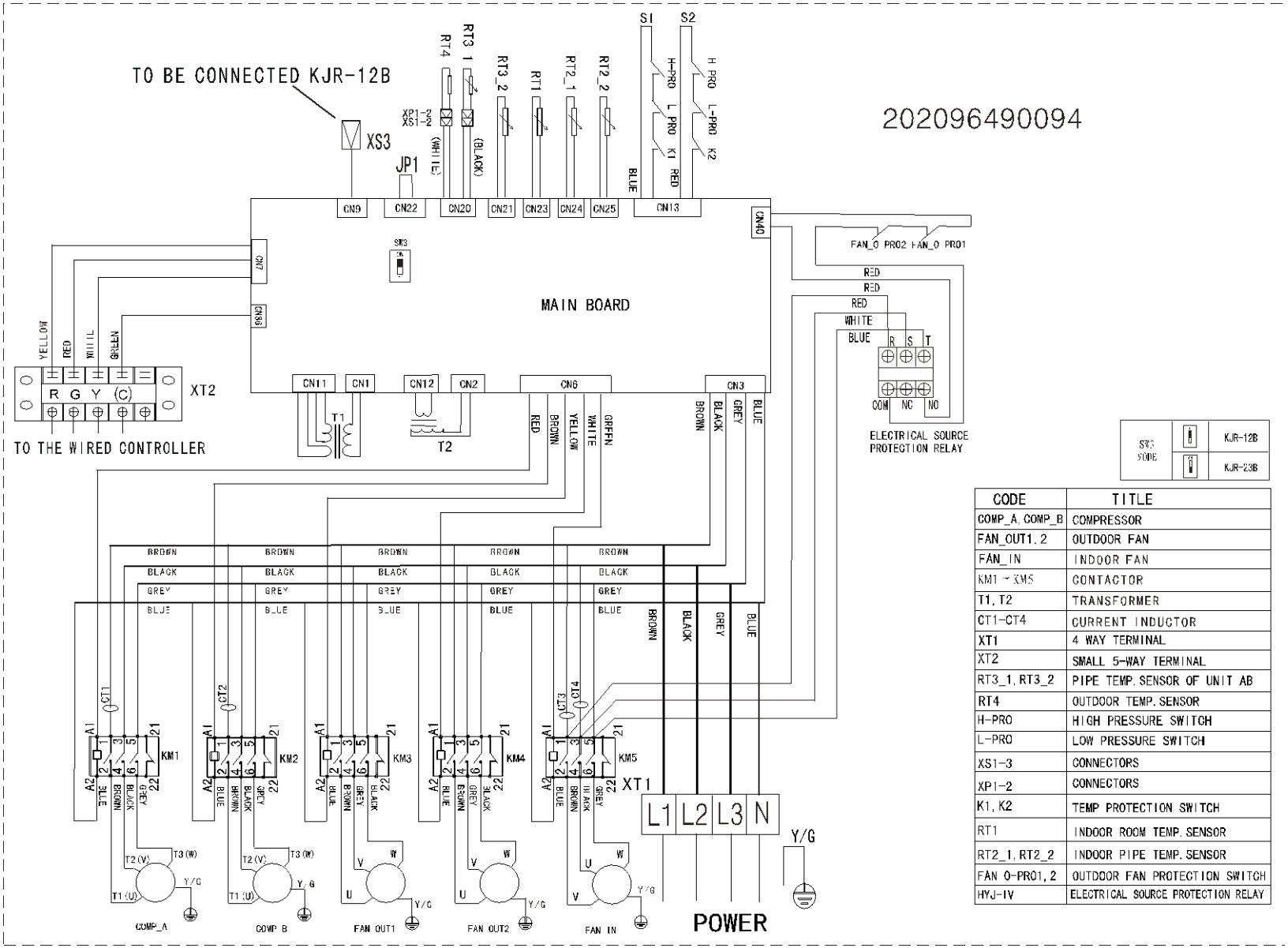
KRFM600HFAN3



CODE	TITLE
COMP A, COMP B	COMPRESSOR
FAN OUT1´ 2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1-KM5	CONTACTOR
T1, T2	TRANSFORMER
CT1-CT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5 WAY TERMINAL
RT3 1, RT3 2	PIPE TEMP. SENSOR OF UNIT AB
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1´ RT2_2	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO1´ 2	OUTDOOR FAN PROTECTION SWITCH
Jp1	NET JUMPER

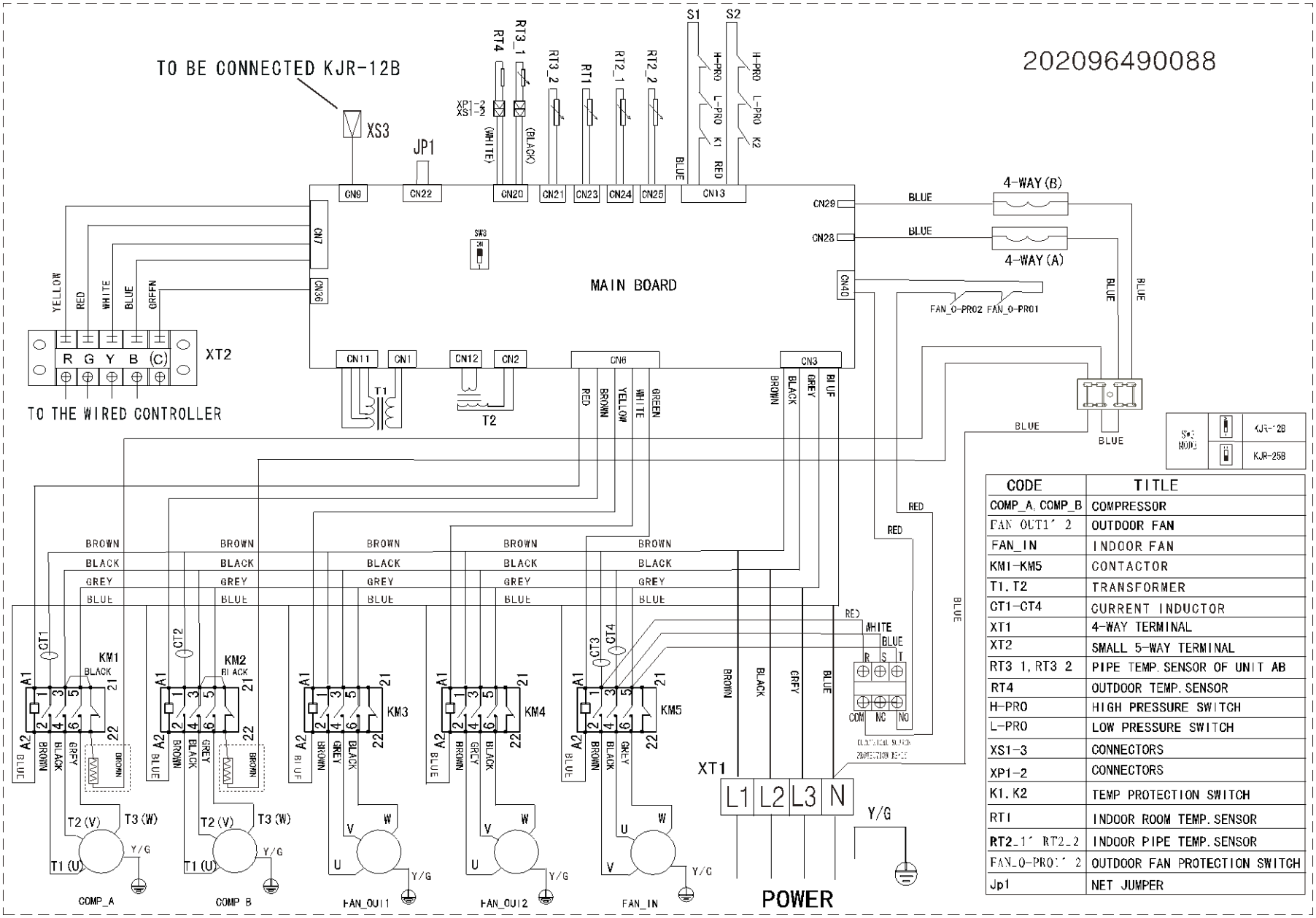
7.7 20ton

KRFM700CFAN3



CODE	TITLE
COMP_A, COMP_B	COMPRESSOR
FAN_OUT1, 2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1 ~ KM5	CONTACTOR
T1, T2	TRANSFORMER
CT1-CT4	CURRENT INDUCTOR
XT1	4 WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1, RT3_2	PIPE TEMP. SENSOR OF UNIT AB
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1, RT2_2	INDOOR PIPE TEMP. SENSOR
FAN O-PRO1, 2	OUTDOOR FAN PROTECTION SWITCH
HYJ-IV	ELECTRICAL SOURCE PROTECTION RELAY

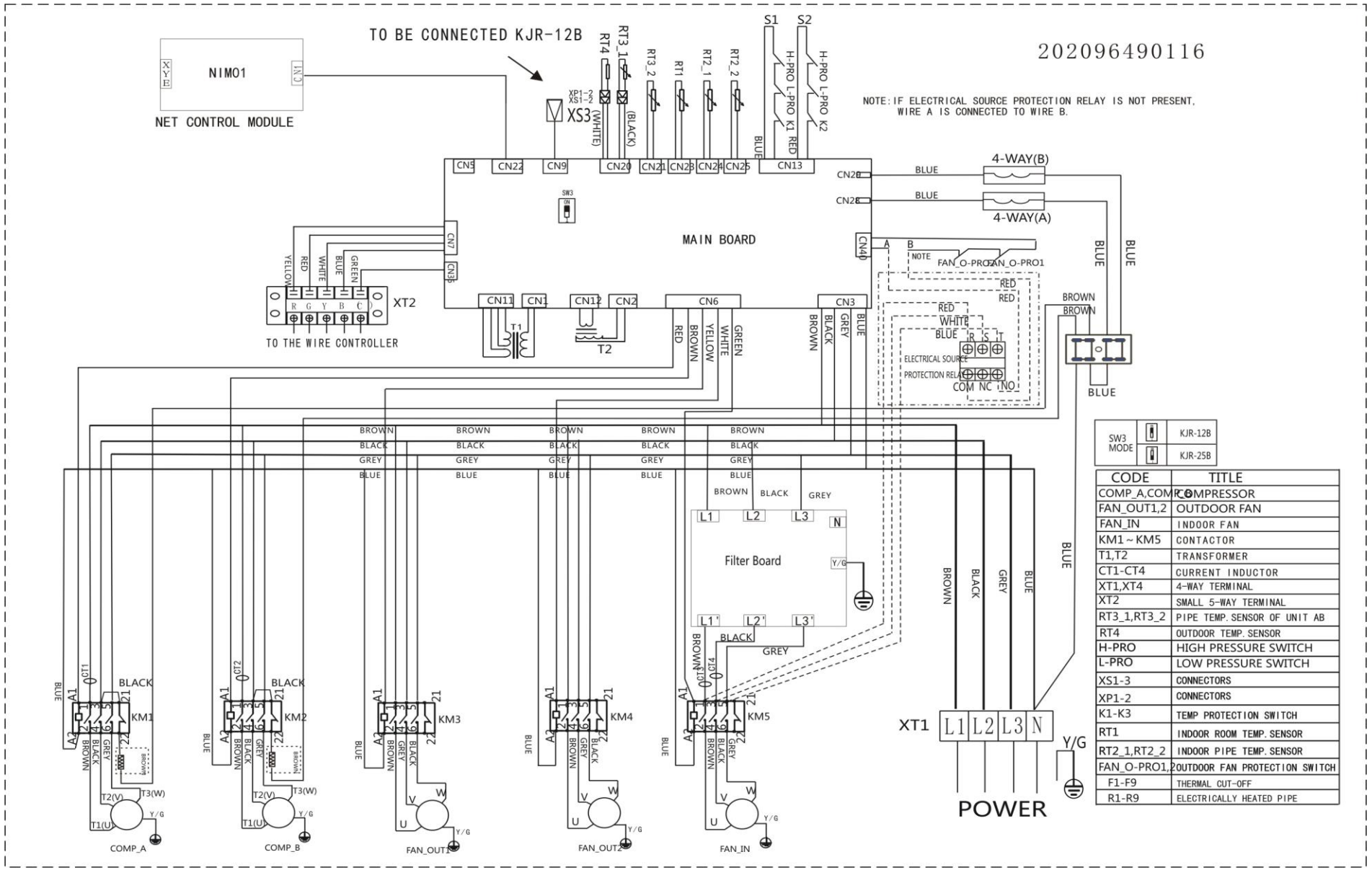
KRFM700HFAN3



CODE	TITLE
COMP_A, COMP_B	COMPRESSOR
FAN OUT1' 2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1-KM5	CONTACTOR
T1, T2	TRANSFORMER
GT1-GT4	CURRENT INDUCTOR
XT1	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3 1, RT3 2	PIPE TEMP. SENSOR OF UNIT AB
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1, K2	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1' RT2_2	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO1' 2	OUTDOOR FAN PROTECTION SWITCH
Jp1	NET JUMPER

7.8 30ton

KRFM970HFAN3



CODE	TITLE
COMP_A,COMP_B	COMPRESSOR
FAN_OUT1,2	OUTDOOR FAN
FAN_IN	INDOOR FAN
KM1～KM5	CONTACTOR
T1,T2	TRANSFORMER
CT1-CT4	CURRENT INDUCTOR
XT1,XT4	4-WAY TERMINAL
XT2	SMALL 5-WAY TERMINAL
RT3_1,RT3_2	PIPE TEMP. SENSOR OF UNIT AB
RT4	OUTDOOR TEMP. SENSOR
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
XS1-3	CONNECTORS
XP1-2	CONNECTORS
K1-K3	TEMP PROTECTION SWITCH
RT1	INDOOR ROOM TEMP. SENSOR
RT2_1,RT2_2	INDOOR PIPE TEMP. SENSOR
FAN_O-PRO1,2	OUTDOOR FAN PROTECTION SWITCH
F1-F9	THERMAL CUT-OFF
R1-R9	ELECTRICALLY HEATED PIPE

8. Performance Data

8.1 Cooling capacity for 6.2Ton:

		Air Flow		CFM	2400				2600				2800			
		Ent DB		(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	Entering Wet Bulb(°F)	61	TGC	73.9	75.3	76.8	78.4	75.6	77.1	78.6	80.2	77.0	78.5	80.1	81.7
				SHC	65.5	71.3	74.6	77.1	69.4	71.5	74.4	78.1	72.9	76.4	79.1	80.6
			67	TGC	81.1	82.8	84.4	86.1	81.8	83.4	85.1	86.8	82.3	83.9	85.6	87.4
				SHC	49.1	61.4	72.3	81.5	50.3	62.4	74.6	84.7	51.4	64.1	76.7	85.3
			73	TGC	83.9	85.6	87.3	89.0	84.1	85.8	87.5	89.3	84.4	86.1	87.7	89.5
				SHC	31.6	42.9	52.7	63.5	32.0	46.4	53.6	63.8	32.4	48.0	54.3	65.0
	95		61	TGC	68.5	69.9	71.3	72.8	70.5	71.9	73.4	74.8	72.2	73.6	75.1	76.6
				SHC	61.2	66.5	68.7	72.2	63.6	67.1	70.7	73.4	70.9	72.0	73.8	75.6
			67	TGC	73.7	75.2	77.4	79.8	74.1	75.6	77.9	80.2	78.9	83.0	85.4	86.2
				SHC	47.6	60.6	73.2	77.3	49.7	63.5	76.8	77.8	51.7	66.1	80.0	81.1
			73	TGC	83.2	84.9	86.6	88.3	83.5	85.2	86.9	88.6	83.4	85.1	86.8	88.5
				SHC	30.6	43.3	54.2	65.4	31.1	44.0	55.5	67.0	31.6	47.0	56.6	68.6
	105		61	TGC	63.0	64.2	65.5	66.8	64.7	66.0	67.4	68.7	66.3	67.7	69.0	70.4
				SHC	60.2	61.3	64.6	66.3	63.7	64.7	65.9	68.0	64.4	66.5	67.9	69.8
			67	TGC	73.0	74.5	76.0	77.5	74.3	75.8	77.3	78.9	75.4	76.9	78.4	80.0
				SHC	45.4	56.0	71.9	76.4	47.6	62.0	76.7	78.1	49.8	65.3	76.2	78.2
			73	TGC	80.6	82.2	83.8	85.5	81.8	83.4	85.1	86.8	82.2	83.8	85.5	87.2
				SHC	28.9	42.6	55.5	66.7	30.0	44.2	56.9	68.5	30.4	45.2	58.3	70.7
	115		61	TGC	56.9	58.0	59.1	60.3	59.1	60.2	61.4	62.7	61.0	62.2	63.5	64.7
				SHC	51.8	54.4	57.2	58.5	56.9	58.5	60.1	61.9	59.5	60.2	62.3	64.1
			67	TGC	66.4	67.8	69.1	70.5	63.1	65.0	66.3	68.3	69.0	70.3	71.8	73.2
				SHC	42.7	55.8	66.3	69.5	44.9	59.4	61.2	63.0	47.1	63.0	69.5	72.4
			73	TGC	72.8	74.2	75.7	77.3	78.6	80.2	81.8	83.4	79.2	80.8	82.4	84.0
				SHC	27.9	41.0	53.7	66.1	28.5	42.6	56.4	69.6	29.0	44.4	58.7	72.7
	125		61	TGC	52.2	53.2	54.2	55.3	54.2	55.3	56.4	57.5	55.9	57.1	58.2	59.4
				SHC	47.5	49.9	52.5	53.6	52.2	53.6	55.1	56.9	54.6	55.3	57.1	58.8
			67	TGC	60.9	62.2	63.4	64.6	62.2	63.5	64.7	66.0	63.3	64.6	65.8	67.1
				SHC	39.2	51.3	60.8	63.7	41.2	54.5	63.7	65.7	43.2	57.8	63.7	66.4
			73	TGC	66.8	68.1	69.5	70.8	72.1	73.5	75.1	76.5	72.7	74.1	75.6	77.1
				SHC	25.6	37.6	49.3	60.7	26.1	39.1	51.7	63.9	26.7	40.8	53.9	66.7

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 6.2Ton:

Outdoor Temp(° F) 70% RH	Net Capacities(kW)-2600 CFM							
	Peak Net Heating(kW) at Indicated Dry Bulb(° F)				Peak Total Power (kW) at Indicated Dry Bulb(° F)			
	59	68	75.2	80.6	59	68	75.2	80.6
23	15.7	15.2	14.8	14.3	6.0	6.3	6.5	6.7
26.6	17.4	16.9	16.4	15.9	6.3	6.6	6.8	7.0
32	19.3	18.8	18.2	17.7	6.7	6.9	7.2	7.4
37.4	22.8	22.1	21.4	20.8	7.0	7.3	7.5	7.8
44.6	26.8	26.0	25.2	24.5	7.4	7.6	7.9	8.2
48.2	28.7	27.8	27.0	26.2	7.5	8.3	8.8	9.3
53.6	30.4	29.5	28.6	27.7	7.8	8.7	9.1	9.7
59	32.2	31.3	30.3	29.4	7.9	8.9	9.3	9.9
64.4	34.1	33.1	32.1	31.2	8.2	9.0	9.6	10.2
69.8	36.2	35.1	34.1	33.0	8.3	9.2	9.7	10.2
75.2	38.3	37.2	36.1	35.0	8.5	9.3	10.1	10.4

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.2 Cooling capacity for 7.5Ton:

		Air Flow		CFM	2800				3000				3200			
		Ent DB		(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	Entering Wet Bulb(°F)	61	TGC	82.5	84.2	85.8	87.5	87.3	89	90.8	92.6	89.3	91.1	92.9	94.8
				SHC	72.7	80.4	85.3	87.5	77.4	84.3	88.2	91.1	82	84.5	87.9	92.3
			67	TGC	94.8	96.7	98.6	100.6	95.9	97.8	99.8	101.8	96.7	98.6	100.6	102.6
				SHC	55.6	68.8	81.8	94.3	58	72.6	85.4	96.3	59.5	73.8	83.2	100.1
			73	TGC	98.6	100.6	102.6	104.6	99.2	101.2	103.2	105.2	99.4	101.4	103.4	105.5
				SHC	36.8	51	62	72.4	37.3	50.7	62.3	75.1	37.8	54.8	63.3	75.4
	95		61	TGC	78.6	80.2	81.8	83.4	81	82.6	84.3	86	83.3	85	86.7	88.4
				SHC	69.6	75.6	78	81.4	72.3	78.6	81.2	85.3	75.2	79.3	83.5	86.7
			67	TGC	85.6	87.3	89.1	90.8	87.1	89	96.6	98	91.4	96.2	98.1	99.8
				SHC	53.9	67.7	81.6	86.2	56.3	71.6	86.5	91.3	58.7	75	90.8	92
			73	TGC	97.8	99.8	101.8	103.8	98.3	100.3	102.3	104.3	98.7	100.7	102.7	104.7
				SHC	35.7	50.2	62.3	74.5	36.2	51.2	64.1	77.3	36.8	52	65.6	79.2
	105		61	TGC	72.1	73.5	75	76.5	74.4	75.9	77.4	79	76.5	78	79.6	81.2
				SHC	66.4	68.3	71.3	73.2	71.2	72.4	76.3	78.4	75.3	76.5	77.9	80.4
			67	TGC	84.4	86.1	87.8	89.6	86.3	88	89.8	91.6	87.8	89.6	91.3	93.2
				SHC	51	65	79.2	86.3	53.7	66.2	85	90.3	56.3	73.3	90.6	92.3
			73	TGC	95.3	97.2	99.2	101.1	95.2	97.1	99	101	96.7	98.6	100.6	102.6
				SHC	34.2	48.9	64.2	76.8	34.1	50.4	65.6	78.8	35.4	52.2	67.2	80.9
	115		61	TGC	65.3	66.6	67.9	69.3	67.2	68.5	69.9	71.3	69.8	71.2	72.6	74.1
				SHC	63.2	64.6	66.4	68.6	61.2	64.3	67.6	69.1	67.3	69.1	71	73.2
			67	TGC	76.7	78.2	79.8	81.4	78.5	80.1	81.7	83.3	80.1	817	83.3	85
				SHC	47.8	62.1	75.4	80.2	50.5	66	78.3	82.1	53.1	70.2	82.1	84.6
			73	TGC	90.8	92.6	94.5	96.4	86	87.7	89.5	91.3	92.9	94.8	96.7	98.6
				SHC	32.4	46.3	61.2	76.4	33	48.4	63.5	78.1	33.7	50.4	66.6	82.3
	125		61	TGC	59.9	61.1	62.3	63.6	61.7	62.9	64.1	65.4	64	65.3	66.6	68
				SHC	58	59.3	60.9	62.9	56.1	59	62	63.4	61.7	63.4	65.1	67.2
			67	TGC	70.4	71.8	73.2	74.7	72	73.5	74.9	76.4	73.5	75	76.5	78
				SHC	43.9	57	69.2	73.6	46.3	60.6	71.8	75.3	48.7	64.4	75.3	77.6
			73	TGC	83.3	85	86.7	88.4	78.9	80.5	82.1	83.7	85.2	86.9	88.7	90.4
				SHC	29.7	42.5	56.1	70.1	30.3	44.4	58.3	71.7	30.9	46.2	61.1	75.5

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 7.5Ton:

Net Capacities(kW)-3000 CFM								
Outdoor Temp(℉) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(℉)				Peak Total Power(KW) at Indicated Dry Bulb(℉)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	14.9	14.0	13.7	13.4	6.9	7.6	8.0	8.5
10.4	16.0	15.3	15.0	14.9	7.1	7.7	8.1	8.6
15.8	17.0	16.5	16.4	16.4	7.1	7.8	8.2	8.8
21.2	17.8	17.3	17.1	16.9	7.2	7.9	8.3	8.9
26.6	18.8	18.5	18.4	18.1	7.3	8.0	8.5	9.1
32	20.3	20.0	19.7	19.4	7.4	8.1	8.6	9.2
37.4	23.3	23.1	22.7	22.4	7.5	8.3	8.8	9.3
44.6	30.3	30	29.6	29.2	7.8	8.8	9.1	9.6
48.2	30.5	30.2	29.9	29.6	8.1	9.0	9.5	10.1
53.6	32.4	33.5	33.4	33.1	8.4	9.4	9.9	10.5
59	35.0	34.4	34.2	33.8	8.6	9.6	10.1	10.7
64.4	37.1	36.4	36.0	35.7	8.9	9.8	10.4	11.0
69.8	39.8	38.9	38.4	37.9	9.0	10.0	10.5	11.0
75.2	42.0	40.9	40.2	39.8	9.2	10.1	10.9	11.3

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.3 Cooling capacity for 8.5Ton:

		Air Flow		CFM	3000				3300				3600			
		Ent DB		(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	Entering Wet Bulb(°F)	61	TGC	91.6	95.5	99.3	102.4	96.5	100.7	104.5	107.8	98.6	102.8	106.7	110.2
				SHC	71.4	82.1	90.1	94.9	76.8	88.1	96.6	101.7	80.8	92.8	101.7	107.1
			67	TGC	101.4	103.2	104.7	105.6	106.7	108.6	110.2	111.4	109	110.9	112.5	113.7
				SHC	54.1	67.9	81.7	90.6	58.1	72.8	87.7	97.3	61.2	76.6	92.3	102.6
			73	TGC	103.2	104.8	106.4	107.7	108.6	109.5	111.2	113.5	112.4	114.1	115.8	117.1
				SHC	23.9	44.5	61.6	74.9	25.8	48.3	67.9	86.1	27.2	56.3	74.6	97.8
	95		61	TGC	88.5	92.3	95.8	99.0	93.1	97.1	100.8	104.2	95.1	99.2	102.9	106.3
				SHC	72.6	83.2	91.7	96.3	78.2	89.8	98.6	103.7	82.4	94.6	98.1	102.1
			67	TGC	97.8	99.6	101.0	102.3	99.8	101.8	104.3	105.4	101.1	103.0	105.5	107.7
				SHC	55.2	68.7	83.4	92.4	59.2	74.3	89.4	99.8	62.4	78.1	94.1	104.5
			73	TGC	104.1	106	107.5	109.1	110.7	111.8	112.9	114.1	113.2	114.6	116.3	118.7
				SHC	26.4	55.2	67.8	88.9	26.1	48.9	69.8	82.3	30.8	67.2	94.3	106.7
	105		61	TGC	83.7	87.5	90.8	93.8	88.1	91.9	95.4	98.5	90.1	93.8	97.4	100.6
				SHC	69.7	80.0	87.7	92.3	74.7	85.8	94.1	98.5	78.7	90.4	93.5	96.5
			67	TGC	92.6	94.2	95.8	97.1	97.4	99.1	100.5	101.7	99.5	101.2	102.7	103.8
				SHC	52.8	66.1	79.5	88.4	56.6	70.8	86.1	98.3	59.6	74.7	89.9	99.8
			73	TGC	94.5	96.1	97.8	99.4	104.1	105.6	107.2	108.6	106.9	108.3	109.7	111.2
				SHC	23.3	44.7	59.8	72.6	82.3	87.1	90.6	99.8	31.2	67.4	98.6	106.8
	115		61	TGC	78.3	81.6	84.7	87.6	82.3	86.1	89.6	92.3	84.1	87.7	92.1	94.0
				SHC	67.2	77.1	83.5	86.6	72	82.7	89.1	92.0	75.8	87.1	91.0	92.7
			67	TGC	76.5	78.1	79.3	80.6	81	82.6	84.0	85.4	89.9	91.6	95.4	99.5
				SHC	50.9	63.7	76.7	85.2	54.5	68.7	82.3	94.6	57.4	71.9	86.6	96.2
			73	TGC	95.1	96.4	97.8	99.8	97.8	99.3	101.4	103.6	99.9	101.3	103.4	105.2
				SHC	22.5	41.8	57.7	70.5	28.3	53.2	89.1	101.6	32.1	68.4	98.9	103.6
	125		61	TGC	71.2	74.2	77.0	79.6	74.8	78.3	81.5	83.9	76.5	79.7	83.7	85.5
				SHC	61.1	70.1	76.8	78.5	65.5	75.2	81.0	83.6	68.9	79.2	82.7	84.3
			67	TGC	78.6	80.1	81.2	82.4	82.7	84.2	85.5	86.7	84.5	86.0	87.3	88.3
				SHC	46.3	57.9	69.7	77.5	49.5	62.5	74.8	86.0	52.2	65.4	78.7	87.5
			73	TGC	86.5	87.6	88.9	90.7	88.9	90.3	92.2	94.2	90.8	92.1	94.0	95.6
				SHC	20.5	38.0	52.5	64.1	25.7	48.4	81.0	92.4	29.2	62.2	89.9	94.2

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 8.5Ton:

Net Capacities(kW)-3600 CFM								
Outdoor Temp(℉) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(℉)				Peak Total Power(KW) at Indicated Dry Bulb(℉)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	18.7	17.6	17.2	16.9	8.6	8.8	9.2	9.7
10.4	20.1	19.3	18.9	18.7	8.8	8.9	9.4	9.9
15.8	21.4	20.8	20.6	20.6	8.9	9.1	9.6	10.1
21.2	22.4	21.8	21.6	21.3	9.0	9.3	9.9	10.3
26.6	23.7	23.4	23.2	22.8	9.1	9.6	10.1	10.5
32	25.5	25.2	24.8	24.5	9.2	9.8	10.3	10.8
37.4	29.4	29.1	28.7	28.3	9.4	10.0	10.5	11.0
44.6	35.4	35.0	33.0	32.8	9.7	10.2	10.7	11.2
48.2	38.5	38.0	37.7	37.3	9.9	10.4	10.9	11.5
53.6	40.9	42.3	42.1	41.7	10.1	10.6	11.1	11.7
59	44.1	43.4	43.1	42.7	10.3	10.9	11.4	12.1
64.4	46.7	45.9	45.4	45.0	10.5	11.1	11.7	12.3
69.8	50.1	49.1	48.4	47.8	10.9	11.4	11.9	12.5
75.2	53.0	51.6	50.7	50.1	11.1	11.6	12.2	12.8

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.4 Cooling capacity for 10Ton:

		Air Flow	CFM	3800				4000				4200			
		Ent DB	(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	Entering Wet Bulb(°F) 61	TGC	110.9	113.1	115.4	117.7	113.8	116.1	118.4	120.8	116.5	118.8	121.2	123.6
			SHC	96.8	98.7	100.7	102.7	103.2	105.3	107.4	109.5	109.2	111.4	113.6	115.9
		67	TGC	123.4	125.9	128.4	131	124.6	127.1	129.6	132.2	125.7	128.2	130.8	133.4
			SHC	73.2	92	108.3	124.8	75.6	94.3	112.8	128.5	78	97.3	116.5	130.4
		73	TGC	127.9	130.5	133.1	135.7	128.3	130.9	133.5	136.2	128.6	131.2	133.8	136.5
			SHC	47.7	64.9	79.6	95.3	48.3	65.8	81.2	96.7	49	72.1	82.4	98.4
	95	61	TGC	102.8	104.9	107	109.1	105.9	108	110.2	112.4	108.9	111.1	113.3	115.6
			SHC	92.7	94.6	96.4	98.4	99.2	101.2	103.2	105.3	105.4	107.5	109.7	111.9
		67	TGC	116.7	117	118.5	121	119.5	121	123.5	126	124	126	128.7	132.3
			SHC	70.8	89.8	108.6	123.4	74.3	94.8	114	124.3	77.4	99.3	120.3	128.4
		73	TGC	126.8	129.3	131.9	134.6	127.1	129.6	132.2	134.9	127.8	130.4	133	135.6
			SHC	46.3	65.4	81.5	97.8	47.2	66.7	84.3	101.9	47.5	67.6	85.8	104.7
	105	61	TGC	94.5	96.4	98.3	100.3	97.8	99.8	101.8	103.8	99.8	101.8	103.8	105.9
			SHC	88.6	90.4	92.2	94	95.2	97.1	99	101	93.4	95.3	97.2	99.1
		67	TGC	110.3	112.5	114.8	117.1	112.9	115.2	117.5	119.8	114.6	116.9	119.2	121.6
			SHC	67.6	86.4	105.9	115.6	71.3	92.1	113.7	117.9	74.2	98.3	115.5	117.6
		73	TGC	123.8	126.3	128.8	131.4	124.6	127.1	129.6	132.2	125.2	127.7	130.3	132.9
			SHC	44.3	63.2	81	98.3	45.2	65.6	85.3	103.7	45.7	67.5	86.9	106.8
	115	61	TGC	86.3	88	89.8	91.6	89.2	91	92.8	94.7	92.3	94.1	96	97.9
			SHC	84.6	86.3	88	89.8	86.2	87.9	89.7	91.5	90.2	92	93.8	95.7
		67	TGC	101.3	103.3	105.4	107.5	103.2	107	107.4	109.5	105.6	107.7	109.9	112.1
			SHC	63.5	83.2	102.1	104.1	67.3	88.2	105.3	107.4	70.8	94.1	107.3	110.5
		73	TGC	119.2	121.6	124	126.5	120.1	122.5	125	127.5	120.8	123.2	125.7	128.2
			SHC	42.2	61.3	80.1	98.7	42.9	64.1	84.3	104.1	43.7	66.8	87.9	109.3
	125	61	TGC	78.5	80	81.6	83.3	81.1	82.7	84.4	86.1	83.9	85.6	87.8	89
			SHC	76.9	78.4	80	81.6	78.4	79.9	81.5	83.2	82	83.6	85.3	87
		67	TGC	92.1	93.9	95.8	97.7	93.8	97.9	98.2	99.6	96	98.1	99.9	101.9
			SHC	57.7	75.6	92.8	94.7	61.2	80.2	95.7	97.6	64.4	85.5	97.7	100.5
		73	TGC	108.4	110.5	112.7	115	109.2	111.4	113.6	115.9	109.8	112	114.3	116.5
			SHC	38.4	55.7	72.8	89.7	39	58.3	76.6	94.6	39.7	60.7	79.9	99.4

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 10Ton:

Net Capacities(kW)-4000 CFM								
Outdoor Temp(℉) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(℉)				Peak Total Power(KW) at Indicated Dry Bulb(℉)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	19.8	18.6	18.2	17.9	9.2	10.1	10.7	11.3
10.4	21.3	20.4	20	19.8	9.4	10.3	10.8	11.5
15.8	22.6	22	21.8	21.8	9.5	10.4	10.9	11.7
21.2	23.7	23	22.8	22.5	9.6	10.5	11.1	11.9
26.6	25.1	24.7	24.5	24.1	9.7	10.6	11.3	12.1
32	27	26.6	26.2	25.9	9.8	10.8	11.5	12.2
37.4	31.1	30.8	30.3	29.9	10	11	11.7	12.4
44.6	37.8	37	36.3	35.7	10.4	10.9	11.9	12.8
48.2	40.7	40.2	39.8	39.4	10.8	12	12.7	13.5
53.6	43.2	44.7	44.5	44.1	11.2	12.5	13.2	14
59	46.6	45.9	45.6	45.1	11.5	12.8	13.5	14.3
64.4	49.4	48.5	48	47.6	11.8	13.1	13.9	14.6
69.8	53	51.9	51.2	50.5	12	13.3	14	14.7
75.2	56	54.5	53.6	53	12.3	13.5	14.5	15

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.5 Cooling capacity for 15Ton:

		Air Flow		CFM	5500				6000				6500			
		Ent DB		(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	Entering Wet Bulb(°F)	61	TGC	163.6	165.6	172.9	182.7	168	171.6	179	188.7	169.9	174.2	185.1	193.6
				SHC	131.5	155.8	166	175.3	138.7	165.6	173.6	183	146.1	167.2	177.7	185.9
			67	TGC	183.3	185.5	187.6	190.2	188.7	190	191.1	192.4	191	192.5	193.6	195.1
				SHC	104.7	127.8	149.8	172.9	109.3	132.7	157.1	180.2	111.2	136.4	162	187.6
			73	TGC	193.6	197.3	199.8	202.2	195.8	198.5	202.2	204.5	198.3	201	203.3	205.8
				SHC	72.2	96.8	117	136.4	73.6	99	119.6	138.6	74.9	99.9	121.6	143.7
	95		61	TGC	153.4	157.1	164.5	175.4	155.3	162	171.7	181.4	160.8	164.5	176.6	186.3
				SHC	125.3	149.8	159.5	170.1	132.7	157.1	166.6	176	140.1	159.5	171.3	180.8
			67	TGC	171.7	174.2	176.6	180.2	179	180	182.7	183.9	185.1	186.5	187.7	188.7
				SHC	99.9	123	146.1	169.2	104.1	129	153.5	179	108.1	132.8	160.8	186.3
			73	TGC	188.8	191.1	193.5	196.1	190.2	192.2	195.2	198.5	191.9	194.3	196.8	198
				SHC	69	93.1	114.8	135.2	70.5	96.3	117.8	140.1	71.8	97.9	120.7	143.7
	105		61	TGC	142.7	146.4	153.8	166.1	147.6	151.3	163.6	171	150.1	156.2	169.7	180.8
				SHC	119.6	140.5	147.6	159.4	127.9	145.2	157	164.1	135.3	151.5	164.6	173.2
			67	TGC	163.6	166.1	169.7	171	164.8	168.5	173.4	175.9	173.4	175.9	178.4	180.8
				SHC	94.6	118.1	141.3	165.7	109	124.2	149.8	170.6	102.6	130.3	157.1	175.4
			73	TGC	185.7	187	188.2	189.4	188.2	189.4	190.7	193.1	190.7	191.9	193.1	194.3
				SHC	65.6	89.2	111.7	132.8	67	92.3	115.5	138.9	68.3	95.3	118.6	142.4
	115		61	TGC	130.4	135.3	147.6	159.9	134.1	141.5	153.8	166.1	137.8	140.4	150.9	172.2
				SHC	114.5	131.2	143.2	155.1	121.6	135.8	147.6	159.4	127.9	136.2	146.9	167
			67	TGC	153.8	156.2	157.4	160.9	155	158.7	161.1	163.6	163.6	166.1	169.7	174
				SHC	98.4	113.4	136.5	159.9	103.3	119.9	145.1	163.6	108.2	125.5	151.3	168.8
			73	TGC	173.4	175.9	178.4	179.6	178.4	180.8	182	183.3	182	183.3	184.5	185.7
				SHC	62.1	85.6	108.9	131.6	63.5	89.8	113.2	136.5	66.4	92.3	118.1	143.9
	125		61	TGC	125.4	130.1	141.9	152.1	128.9	136	147.8	159.7	132.5	140.7	153.8	165.6
				SHC	110.1	126.2	137.7	147.5	117	131.9	143.4	154.9	13	136.5	149.1	160.6
			67	TGC	147.8	150.2	151.4	153.8	149	152.6	154.9	157.3	157.3	159.7	163.2	167.1
				SHC	94.6	109	131.3	153.8	99.3	115.3	139.6	152.6	104.1	120.6	145.5	162.1
			73	TGC	166.8	169.1	171.5	172.7	171.5	173.9	175	176.2	175	176.2	177.4	178.6
				SHC	59.7	82.3	104.7	126.5	61	86.3	108.8	131.3	63.9	88.7	113.5	138.4

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 15Ton:

Net Capacities(kW)-6000 CFM								
Outdoor Temp(℉) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(℉)				Peak Total Power(KW) at Indicated Dry Bulb(℉)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	29.7	27.9	27.3	26.9	13.8	15.2	16.1	17.0
10.4	32.0	30.6	30.0	29.7	14.1	15.5	16.2	17.3
15.8	33.9	33.0	32.7	32.7	14.3	15.6	16.4	17.6
21.2	35.6	34.5	34.2	33.8	14.4	15.8	16.7	17.9
26.6	37.7	37.1	36.8	36.2	14.6	15.9	17.0	18.2
32	40.5	39.9	39.3	38.9	14.7	16.2	17.3	18.3
37.4	46.7	46.2	45.5	44.9	15.0	16.5	17.6	18.6
44.6	56.7	56	54.3	53.7	15.6	17.5	18.2	19.2
48.2	61.1	60.3	59.7	59.1	16.2	18.0	19.1	20.3
53.6	64.8	67.1	66.8	66.2	16.8	18.8	19.8	21.0
59	69.9	68.9	68.4	67.7	17.3	19.2	20.3	21.5
64.4	74.1	72.8	72.0	71.4	17.7	19.7	20.9	21.9
69.8	79.5	77.9	76.8	75.8	18.0	20.0	21.0	22.1
75.2	84.0	81.8	80.4	79.5	18.5	20.3	21.8	22.5

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.6 Cooling capacity for 17.5Ton:

		Air Flow		CFM	6800				7300				7600			
		Ent DB		(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	Entering Wet Bulb(°F)	61	TGC	187.6	189.9	198.3	209.5	192.6	196.8	205.3	216.4	194.8	199.7	212.2	222.0
				SHC	150.8	178.7	190.3	201.0	159.0	189.9	199.1	209.8	167.5	191.7	203.8	213.2
			67	TGC	210.2	212.7	215.1	218.1	216.4	217.9	219.1	220.6	219.0	220.7	222.0	223.7
				SHC	120.1	146.5	171.8	198.3	125.3	152.2	180.1	206.6	127.5	156.4	185.8	215.1
			73	TGC	222.0	226.2	229.1	231.9	224.5	227.6	231.9	234.5	227.4	230.5	233.1	236.0
				SHC	82.8	111.0	134.2	156.4	84.4	113.5	137.1	158.9	85.9	114.6	139.4	164.8
	95		61	TGC	175.9	180.1	188.6	201.1	178.1	185.8	196.9	208.0	184.4	188.6	202.5	213.6
				SHC	143.7	171.8	182.9	195.0	152.2	180.1	191.0	201.8	160.6	182.9	196.4	207.3
			67	TGC	196.9	199.7	202.5	206.6	205.3	206.4	209.5	210.9	212.2	213.9	215.2	216.4
				SHC	114.6	141.0	167.5	194.0	119.4	147.9	176.0	205.3	124.0	152.3	184.4	213.6
			73	TGC	216.5	219.1	221.9	224.9	218.1	220.4	223.8	227.6	220.0	222.8	225.7	227.0
				SHC	79.1	106.8	131.6	155.0	80.8	110.4	135.1	160.6	82.3	112.3	138.4	164.8
	105		61	TGC	163.6	167.9	176.4	190.5	169.2	173.5	187.6	196.1	172.1	179.1	194.6	207.3
				SHC	137.1	161.1	169.2	182.8	146.7	166.5	180.0	188.2	155.1	173.7	188.7	198.6
			67	TGC	187.6	190.5	194.6	196.1	189.0	193.2	198.8	201.7	198.8	201.7	204.6	207.3
				SHC	108.5	135.4	162.0	190.0	125.0	142.4	171.8	195.6	117.6	149.4	180.1	201.1
			73	TGC	212.9	214.4	215.8	217.2	215.8	217.2	218.7	221.4	218.7	220.0	221.4	222.8
				SHC	75.2	102.3	128.1	152.3	76.8	105.8	132.4	159.3	78.3	109.3	136.0	163.3
	115		61	TGC	149.5	155.1	169.2	183.4	153.8	162.3	176.4	190.5	158.0	161.0	173.0	197.5
				SHC	131.3	150.4	164.2	177.8	139.4	155.7	169.2	182.8	146.7	156.2	168.4	191.5
			67	TGC	176.4	179.1	180.5	183.4	177.7	182.0	184.7	187.6	187.6	190.5	194.6	199.5
				SHC	112.8	130.0	156.5	183.4	118.5	137.5	166.4	187.6	124.1	143.9	173.5	193.6
			73	TGC	198.8	201.7	204.6	205.9	204.6	207.3	208.7	210.2	208.7	210.2	211.6	212.9
				SHC	71.2	98.2	124.9	150.9	72.8	103.0	129.8	156.5	76.1	105.8	135.4	165.0
	125		61	TGC	143.8	149.2	162.7	174.4	147.8	155.9	169.5	183.1	151.9	161.3	176.4	189.9
				SHC	126.2	144.7	157.9	169.1	134.2	151.2	164.4	177.6	141.0	156.5	171.0	184.2
			67	TGC	169.5	172.2	173.6	176.4	170.9	175.0	177.6	180.4	180.4	183.1	187.1	191.6
				SHC	100.4	125.0	150.6	176.4	113.5	132.2	160.1	175.0	119.4	138.3	166.8	185.9
			73	TGC	191.3	193.9	196.7	198.0	196.7	199.4	200.7	202.0	200.7	202.0	203.4	204.8
				SHC	68.5	94.4	120.1	145.1	69.9	99.0	124.8	150.6	73.3	101.7	130.1	158.7

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 17.5Ton:

Net Capacities(kW)-7300 CFM								
Outdoor Temp(℉) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(℉)				Peak Total Power(KW) at Indicated Dry Bulb(℉)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	35.6	33.5	32.8	32.3	15.6	17.2	18.2	19.2
10.4	38.4	36.7	36.0	35.6	15.9	17.5	18.3	19.5
15.8	40.7	39.6	39.2	39.2	16.2	17.6	18.5	19.9
21.2	42.7	41.4	41.0	40.6	16.3	17.9	18.9	20.2
26.6	45.2	44.5	44.2	43.4	16.5	18.0	19.2	20.6
32	48.6	47.9	47.2	46.7	16.6	18.3	19.5	20.7
37.4	56.0	55.4	54.6	53.9	17.0	18.6	19.9	21.0
44.6	68.5	67.0	62.9	62.5	17.6	19.8	20.6	21.7
48.2	73.3	72.4	71.6	70.9	18.3	20.3	21.6	22.9
53.6	77.8	80.5	80.2	79.4	19.0	21.2	22.4	23.7
59	83.9	82.7	82.1	81.2	19.5	21.7	22.9	24.3
64.4	88.9	87.4	86.4	85.7	20.0	22.3	23.6	24.7
69.8	95.4	93.5	92.2	91.0	20.3	22.6	23.7	25.0
75.2	100.8	98.2	96.5	95.4	20.9	22.9	24.6	25.4

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.7 Cooling capacity for 20Ton:

		Air Flow	CFM	7700				8400				9000			
		Ent DB	(°F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature(°F)	85	61	TGC	216.1	218.7	228.5	241.3	222.0	226.7	236.4	249.3	224.4	230.1	244.6	255.8
			SHC	173.7	205.9	221.6	234.1	183.3	218.7	229.3	241.8	193.1	223.2	237.2	248.1
		67	TGC	242.1	245.1	247.8	251.2	249.3	251.1	252.5	254.2	252.4	254.3	255.8	257.7
			SHC	138.3	168.8	197.9	228.5	144.5	175.3	207.5	238.1	146.9	180.2	214.0	247.8
		73	TGC	255.8	260.7	263.9	267.2	258.7	262.3	267.2	270.2	262.0	265.5	268.6	271.9
			SHC	95.4	127.9	154.5	180.2	97.2	130.8	158.0	183.1	99.0	132.0	160.7	189.8
	95	61	TGC	202.6	207.5	217.3	231.7	205.2	214.0	226.9	239.7	212.4	217.3	233.4	246.2
			SHC	165.6	197.9	210.7	224.8	175.3	205.5	217.8	230.1	185.1	210.7	226.3	238.8
		67	TGC	226.9	230.1	233.4	238.1	236.4	240.0	241.3	242.9	244.6	246.4	248.0	249.3
			SHC	132.0	162.5	193.1	223.6	137.5	170.5	202.8	236.4	142.8	175.5	212.4	246.2
		73	TGC	249.4	252.5	255.6	259.0	251.2	254.0	257.9	262.3	253.5	256.8	260.0	261.6
			SHC	91.2	123.0	151.6	178.6	93.1	127.2	155.7	185.1	94.9	129.4	159.4	189.8
	105	61	TGC	188.5	193.4	203.1	219.4	195.0	199.9	216.1	225.9	198.3	206.4	224.3	238.9
			SHC	158.0	187.6	197.0	212.8	169.0	193.9	209.6	219.1	178.8	200.2	217.5	231.7
		67	TGC	216.1	219.4	224.3	225.9	217.8	222.6	229.1	232.4	229.1	232.4	235.6	238.9
			SHC	125.0	156.0	186.7	218.9	144.0	164.1	197.9	209.1	135.5	172.1	207.5	238.9
		73	TGC	245.4	247.0	248.6	250.3	248.6	250.3	251.9	255.1	251.9	253.5	255.1	256.8
			SHC	86.6	117.8	147.6	175.5	88.6	122.0	152.6	183.5	90.2	125.9	156.7	188.2
	115	61	TGC	172.3	178.8	195.0	211.3	177.1	186.9	203.1	219.4	182.0	193.4	211.3	227.5
			SHC	151.3	173.4	189.2	204.9	160.7	181.3	197.0	212.8	169.0	187.6	204.9	220.7
		67	TGC	203.1	206.4	208.0	211.3	204.8	209.6	212.9	216.1	216.1	219.4	224.3	227.5
			SHC	130.0	149.8	180.4	211.3	136.5	158.4	191.8	216.1	143.0	165.8	199.9	227.5
		73	TGC	229.1	232.4	235.6	237.3	235.6	238.9	240.5	242.1	240.5	242.1	243.8	245.4
			SHC	82.1	113.1	143.8	173.9	83.9	118.6	149.5	180.4	87.8	121.9	156.0	190.1
	125	61	TGC	162.5	168.6	184.0	199.3	167.1	176.3	191.6	207.0	171.6	182.4	199.3	214.6
			SHC	147.2	163.6	178.4	193.3	151.6	171.0	185.9	200.7	159.4	177.0	193.3	208.2
		67	TGC	191.6	194.7	196.2	210.3	193.2	197.8	200.8	203.9	203.9	207.0	211.6	214.6
			SHC	122.6	141.3	170.2	189.3	128.8	149.5	180.9	199.8	134.9	156.4	188.6	210.3
		73	TGC	216.2	219.2	222.3	223.8	222.3	225.4	226.9	228.4	226.9	228.4	230.0	231.5
			SHC	77.4	106.7	135.7	164.0	79.1	111.9	141.0	170.2	82.8	115.0	147.2	179.4

Entering Wet Bulb(°F)

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 20Ton:

Net Capacities(kW)-8400 CFM								
Outdoor Temp(℉) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(℉)				Peak Total Power(KW) at Indicated Dry Bulb(℉)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	39.6	37.2	36.4	35.8	18.4	20.2	21.4	22.6
10.4	42.6	40.8	40.0	39.6	18.8	20.6	21.6	23.0
15.8	45.2	44.0	43.6	43.6	19.0	20.8	21.8	23.4
21.2	47.4	46.0	45.6	45.0	19.2	21.0	22.2	23.8
26.6	50.2	49.4	49.0	48.2	19.4	21.2	22.6	24.2
32	54.0	53.2	52.4	51.8	19.6	21.6	23.0	24.4
37.4	62.2	61.6	60.6	59.8	20.0	22.0	23.4	24.8
44.6	75.8	75	74.2	73.6	20.8	23.4	24.2	25.6
48.2	81.4	80.4	79.6	78.8	21.6	24.0	25.4	27.0
53.6	86.4	89.4	89.0	88.2	22.4	25.0	26.4	28.0
59	93.2	91.8	91.2	90.2	23.0	25.6	27.0	28.6
64.4	98.8	97.0	96.0	95.2	23.6	26.2	27.8	29.2
69.8	106.0	103.8	102.4	101.0	24.0	26.6	28.0	29.4
75.2	112.0	109.0	107.2	106.0	24.6	27.0	29.0	30.0

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

8.8 Cooling capacity for 30Ton:

		Air Flow (CFM)		11000				12000				13000			
		Ent DB	(F)	75	80	85	90	75	80	85	90	75	80	85	90
Ambient Temperature (°F)	85	61	TGC	289.0	292.9	307.0	326.0	297.5	304.5	318.8	337.6	301.2	309.5	330.6	347.0
			SHC	231.3	278.2	298.0	315.9	245.2	297.2	312.7	324.8	259.5	300.3	320.6	336.4
		67	TGC	327.1	331.4	335.4	340.5	337.6	340.1	342.2	344.7	342.0	344.9	347.0	349.9
			SHC	179.4	224.1	266.6	311.3	188.3	233.6	280.8	325.4	192.0	240.7	290.2	319.7
		73	TGC	347.0	354.2	359.0	363.7	351.3	356.5	363.7	368.1	356.1	361.3	365.8	370.6
			SHC	116.6	164.2	203.2	240.7	119.3	168.4	208.3	245.0	121.8	170.2	212.1	254.8
	95	61	TGC	269.3	276.5	290.8	311.8	273.0	313.2	304.7	323.4	283.6	290.8	314.2	332.9
			SHC	219.3	266.6	285.4	305.9	233.6	276.0	299.1	317.3	247.9	285.4	308.2	326.6
		67	TGC	315.0	319.8	324.5	331.4	329.1	331.0	336.3	338.6	340.9	343.6	345.9	347.9
			SHC	170.2	214.8	259.5	304.1	230.3	278.4	301.8	313.1	233.0	249.8	293.9	319.2
		73	TGC	337.8	342.2	346.8	351.9	340.5	344.3	350.1	356.5	343.7	348.4	353.2	355.5
			SHC	110.4	157.0	199.0	238.4	113.3	163.2	204.8	247.9	115.8	166.3	210.4	254.8
	105	61	TGC	248.6	255.8	270.1	293.9	258.1	265.3	289.0	303.3	262.9	274.7	300.8	322.3
			SHC	208.3	248.7	262.4	285.2	224.3	257.7	280.6	294.3	238.6	269.9	295.3	311.9
		67	TGC	289.0	293.9	300.8	303.3	291.4	298.5	308.0	312.8	308.0	312.8	317.6	322.3
			SHC	159.9	205.4	250.2	297.4	187.8	217.1	266.6	306.9	175.4	228.9	280.8	316.1
		73	TGC	331.8	334.3	336.6	338.9	336.6	338.9	341.4	346.1	341.4	343.7	346.1	348.0
			SHC	103.9	149.5	193.0	233.8	106.6	155.5	200.3	245.6	109.1	161.3	206.3	252.3
	115	61	TGC	234.8	244.3	268.1	291.9	242.0	256.3	280.1	303.9	249.2	254.2	274.5	315.7
			SHC	198.4	230.7	253.9	276.9	212.1	239.6	262.4	285.2	224.3	238.3	251.0	289.9
		67	TGC	290.1	294.7	297.0	301.9	292.4	299.6	302.2	309.0	309.0	313.9	320.8	329.1
			SHC	192.9	221.9	266.5	291.0	202.3	234.4	283.2	287.0	216.8	250.3	290.1	294.0
		73	TGC	308.0	312.8	317.6	320.0	317.6	322.3	324.6	327.1	324.6	327.1	329.4	331.8
			SHC	97.1	142.5	187.6	231.5	102.8	150.6	195.9	240.9	105.4	155.5	205.4	255.2
	125	61	TGC	215.2	224.3	247.1	266.8	221.9	235.7	258.5	281.5	228.9	244.8	270.1	292.9
			SHC	189.9	201.0	223.2	242.2	203.2	232.0	254.3	276.5	214.8	230.9	255.3	285.5
		67	TGC	258.5	263.1	265.4	270.1	260.8	267.8	272.2	276.9	276.9	281.5	288.3	295.8
			SHC	146.4	187.8	230.9	254.4	168.4	199.9	246.9	262.1	178.3	210.2	258.3	286.4
		73	TGC	295.2	299.7	304.3	306.6	304.3	308.9	311.1	313.4	311.1	313.4	315.7	318.0
			SHC	92.4	136.1	179.4	221.6	95.0	143.9	187.4	230.9	100.6	148.5	196.5	244.6

Notes: 1. All capacities are gross and have not considered indoor fan heat. To obtain NET cooling capacity subtract indoor fan heat.
2. TGC=Total Gross Capacity. (Unit: MBtu/h).
3. SHC=Sensible Heat Capacity. (Unit: MBtu/h).

Heating capacity for 30Ton:

Net Capacities(kW)-12000 CFM								
Outdoor Temp(°F) 70% RH	Peak Net Heating(kW) at Indicated Dry Bulb(°F)				Peak Total Power (kW) at Indicated Dry Bulb(°F)			
	59	68	75.2	80.6	59	68	75.2	80.8
5	59.4	55.8	54.6	53.8	27.6	30.4	32.2	34
10.4	64	61.2	60	59.4	28.2	31	32.4	34.6
15.8	67.8	66	65.4	65.4	28.6	31.2	32.8	35.2
21.2	71.2	69	68.4	67.6	28.8	31.6	33.4	35.8
26.6	75.4	74.2	73.6	72.4	29.2	31.8	34	36.4
32	81	79.8	78.6	77.8	29.4	32.4	34.6	36.6
37.4	93.4	92.4	91	89.8	30	33	35.2	37.2
44.6	107.4	105.0	104.8	104.2	31.2	34.8	36.4	38.4
48.2	122.2	120.6	119.4	118.2	32.4	36	38.2	40.6
53.6	129.6	134.2	133.6	132.4	33.6	37.6	39.6	42
59	139.8	137.8	136.8	135.4	34.6	38.4	40.6	43
64.4	148.2	145.6	144	142.8	35.4	39.4	41.8	43.8
69.8	159	155.8	153.6	151.6	36	40	42	44.2
75.2	168	163.6	160.8	159	37	40.6	43.6	45

Notes: 1. For other airflows, see heating capacity correction factor tables.
2. Heating capacities and power are integrated to include the effects of defrost in the frost region.

9. Electrical Data

9 .1 Electrical Data

380-400V/3Ph/50Hz(Tolerance:342V- 440V)

Model	Power Supply			Compressor				Evaporator fan motor			Condenser fan motor		
	MCA	TOCA	MFA	STC	RNC	IPT	Qty	RNC	IPT	Qty	RNC	IPT	Qty
KRFM220CFAN3	23	29	38	98	14.3	7.185	1	3.7	1.5	1	1.7	0.6	1
KRFM220HFAN3	23	29	38	98	14.3	7.185	1	3.7	1.5	1	1.7	0.6	1
KRFM260CFAN3	26	32	42	142	16.4	8.47	1	3.7	1.9	1	1.7	0.85	1
KRFM260HFAN3	26	32	42	142	16.4	8.47	1	3.7	1.9	1	1.7	0.85	1
KRFM300CFAN3	32	39	53	142	20.7	9.5	1	3.4	1.66	1	3.5	1.02	1
KRFM300HFAN3	32	39	53	142	20.7	9.5	1	3.4	1.66	1	3.5	1.02	1
KRFM350CFAN3	33	40	55	147	29.5	10.8	1	3.7	1.9	1	2.7	1.3	1
KRFM350HFAN3	33	40	55	147	29.5	10.8	1	3.7	1.9	1	2.7	1.3	1
KRFM530CFAN3	56	67	89	110	32.8	16.8	2	9.2	4.65	1	1.7	0.85	2
KRFM530HFAN3	56	67	89	110	32.8	16.8	2	9.2	4.65	1	1.7	0.85	2
KRFM600CFAN3	66	79	108	142	20.7	9.5	2	10.3	5.3	1	2.7	1.3	2
KRFM600HFAN3	66	79	108	142	20.7	9.5	2	10.3	5.3	1	2.7	1.3	2
KRFM700CFAN3	72	85	115	140	42.8	21.6	2	11.8	5.5	1	3.3	1.7	2
KRFM700HFAN3	72	85	115	140	42.8	21.6	2	11.8	5.5	1	3.3	1.7	2
KRFM970HFAN3	91	109	146	197	55.2	27.4	2	13	7.0	1	6.5	3.4	2

MCA: Min. Current Amps. (A) TOCA: Total Over-current Amps. (A)

MFA: Max. Fuse Amps. (A) STC: Starting Current (A)

RNC：Running Current (A) IPT: Input (kW)

Note:

1. The item with power supply: 380-415V/3Ph/50Hz(Tolerance:342V-440V);
2. The starting current is indicated for each compressor motor.
3. The maximum currents of the compressor can be estimated as follows.

	One compressor unit	Two compressor unit
Max. current	RNC×Max. IPT×/IPT	RNC×Max. IPT×/IPT
Max. instantaneous current	STC	STC+RNC×0.5×Max. IPT×/IPT

Max. IPT×: Compressor power input from the performance table at the expected maximum condition

STC, IPT, RNC: Compressor data from the above table

11.1 The data in the compressor motor column shall indicate the respective values of the refrigeration cycle.

Voltage imbalance between phases to be <2%.

9 .2 Motor protection class

Model	Compressor	Indoor fan motor		Indoor coil	Outdoor fan motor		Outdoor coil
	Motor protection	Insulation class	Safe class	Pres sure	Insulation class	Safe class	Pressure
KRFM220CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM220HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM260CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM260HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM300CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM300HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM350CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM350HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM530CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM530HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM600CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM600HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM700CFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM700HFAN3	IOP	F	IP54	250psi	F	IP54	450psi
KRFM970HFAN3	IOP	F	IP54	250psi	F	IP44	450psi

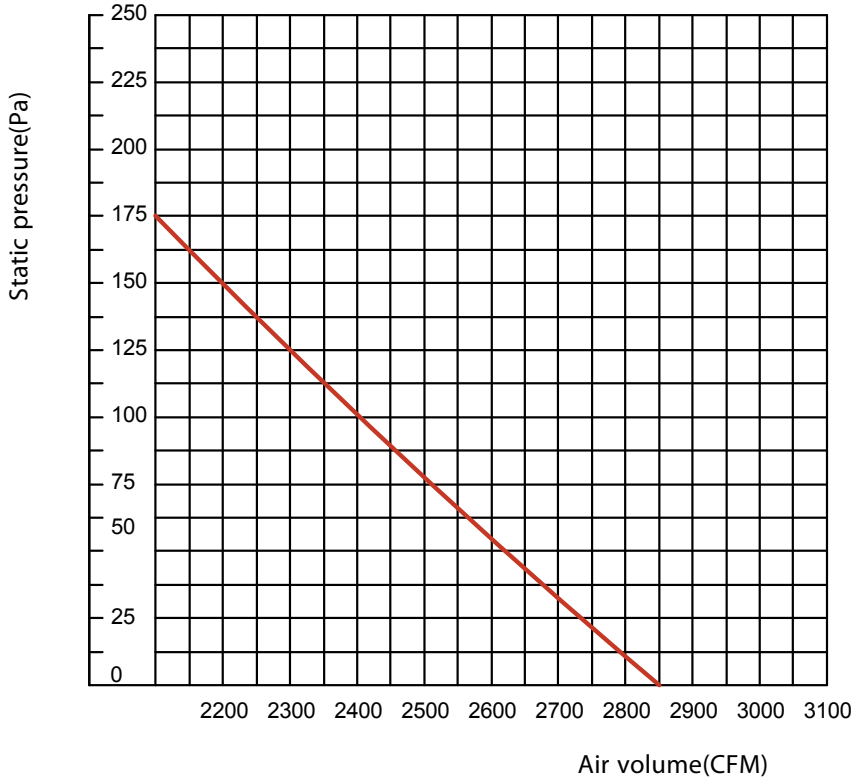
IOP : Internal overload protector

10. Parameter and Pressure Chart for Air Volume

10.1 Model: 6.2 ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	0	25	50	60	75	100	125	150	175
Air flow (CFM)	2853	2754	2632	2602	2522	2413	2310	2236	2108
Brake power (kW)	1.51	1.4	1.36	1.34	1.2	1.14	1.09	1.05	0.98
Fan speed (rpm)	1068	1072	1077	1077	1080	1082	1085	1089	1091



Parameter table for outdoor unit air volume:

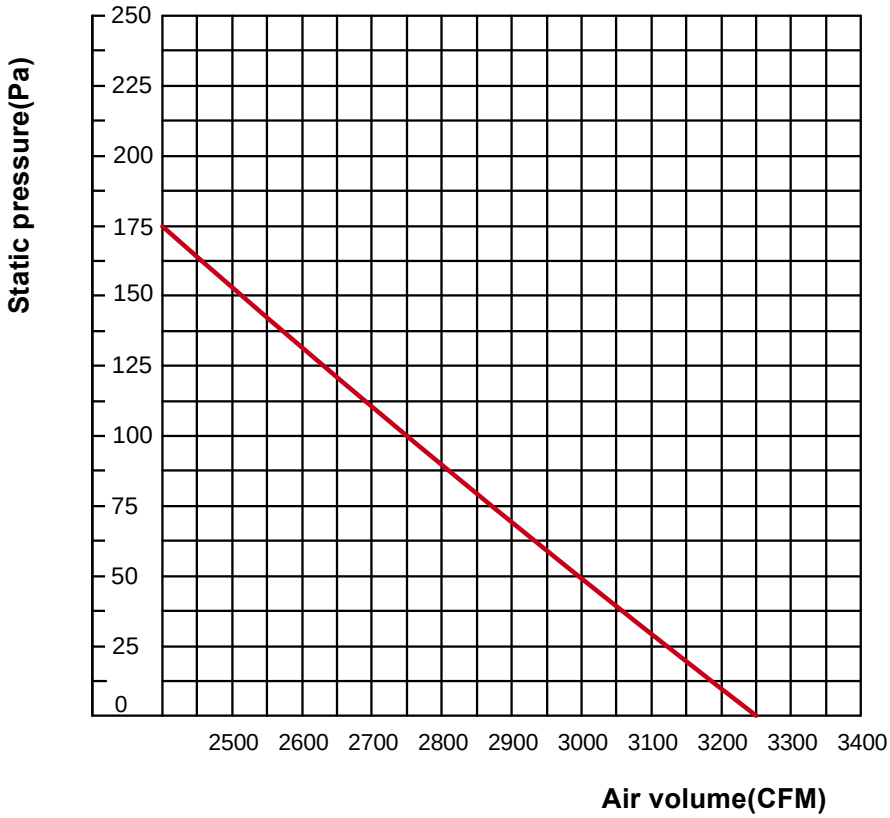
Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
6.2 Ton	0	5880	0.78	900
	10	5647	0.79	889
	20	5411	0.80	875

10.2 Model: 7.5Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	0	20	50	60	75	100	125	150	175
Air flow (CFM)	3240	3149	2996	2941	2886	2782	2664	2540	2411
Brake power (kW)	1.83	1.78	1.70	1.66	1.63	1.58	1.53	1.47	1.41
Fan speed (rpm)	1260	1265	1268	1271	1274	1277	1281	1285	1287

Curve diagram of static pressure, air flow volume:



Parameter table for outdoor unit air volume:

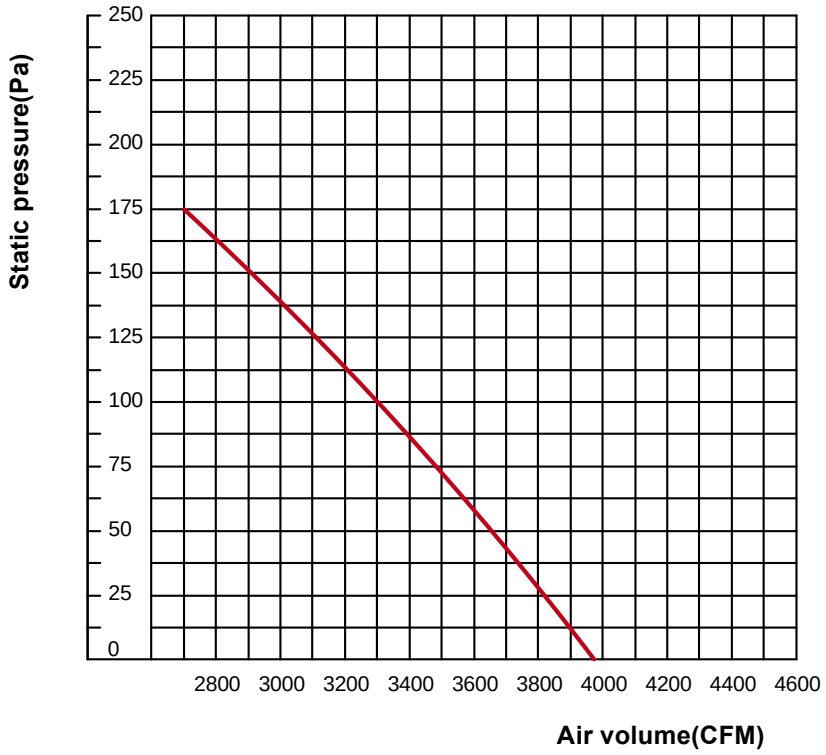
Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
7.5Ton	0	5880	0.78	900
	10	5647	0.79	889
	20	5411	0.80	875

10.3 Model: 8.5Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	0	25	50	75	100	125	150	175
Air flow (CFM)	3940	3785	3612	3451	3302	3130	2955	2759
Brake power (kW)	1.88	1.81	1.73	1.66	1.59	1.51	1.43	1.35
Fan speed (rpm)	933	937	939	944	946	949	952	953

Curve diagram of static pressure, air flow volume:



Parameter table for outdoor unit air volume:

Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
8.5Ton	0	7060	0.78	935
	10	6765	0.79	926
	20	6471	0.80	918

10.4 Model: 10Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	0	25	50	75	100	125	150	175
Air flow (CFM)	4298	4156	3929	3756	3579	3382	3218	3020
Brake power (kW)	2.18	2.1	2.02	1.96	1.86	1.79	1.71	1.62
Fan speed (rpm)	1000	1004	1006	1011	1014	1016	1020	1021

Curve diagram of static pressure, air flow volume:

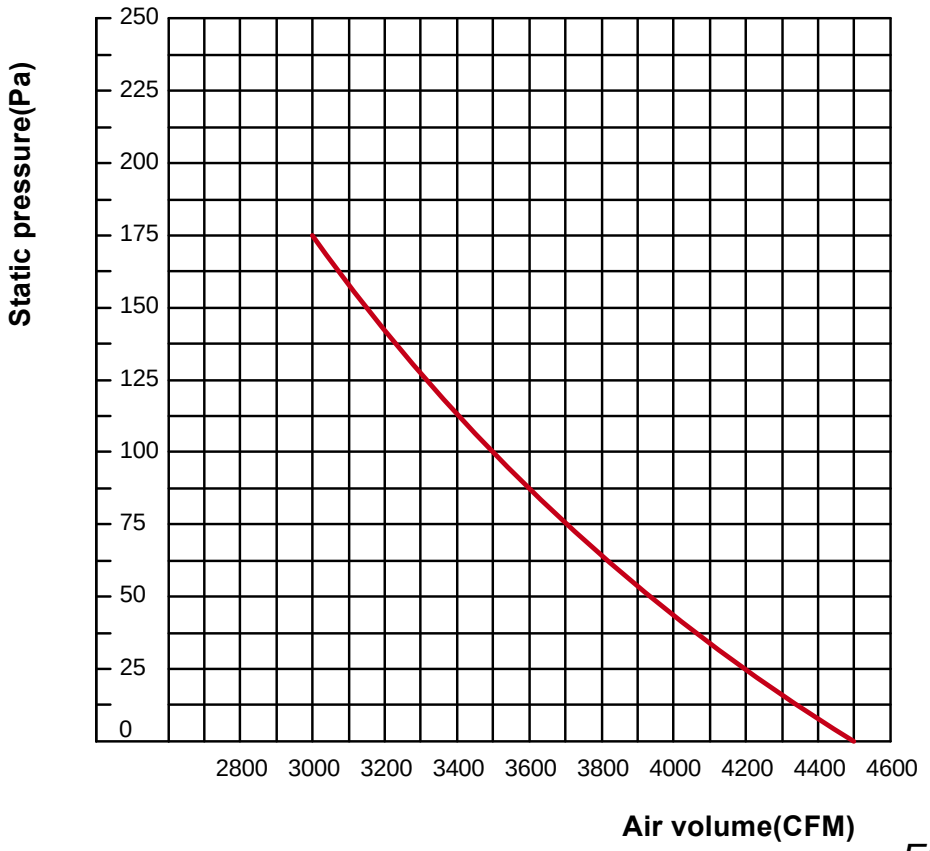


Fig.7-4

Parameter table for outdoor unit air volume:

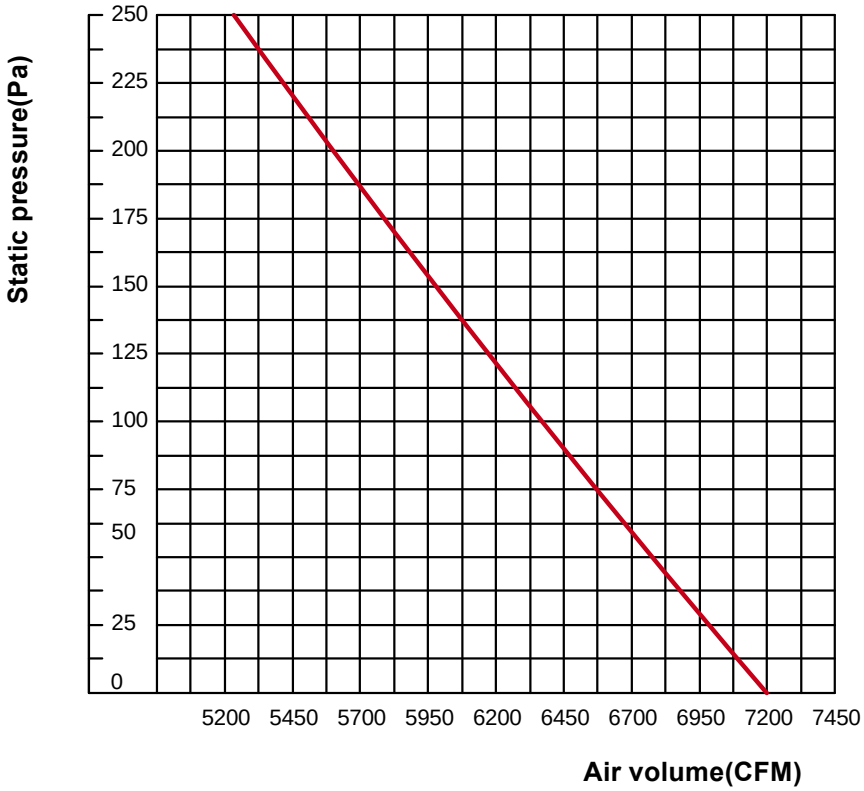
Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
10Ton	0	7060	0.78	935
	10	6765	0.79	926
	20	6471	0.80	918

10.5 Model: 15Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	0	50	75	90	125	150	200	250
Air flow (CFM)	7209	6675	6575	6400	6150	6044	5639	5227
Brake power (kW)	5.11	4.85	4.71	4.65	4.45	4.32	4.08	3.82
Fan speed (rpm)	1029	1029	1030	1031	1031	1032	1033	1034

Curve diagram of static pressure, air flow volume:



Parameter table for outdoor unit air volume:

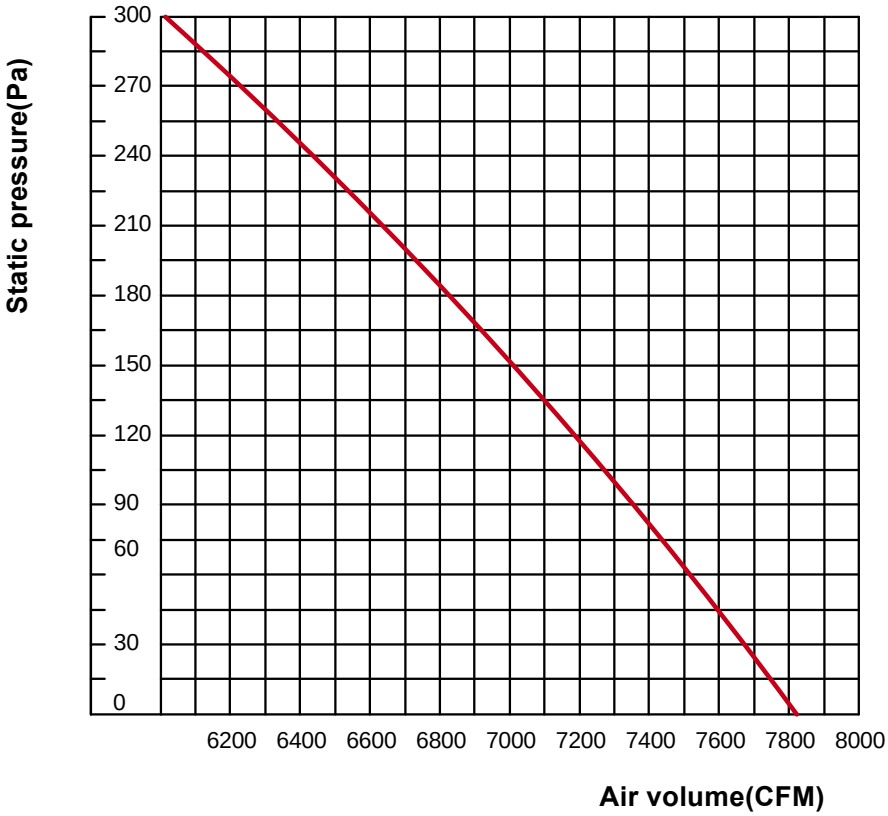
Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
15Ton	0	11000	0.78×2	935
	10	9800	0.79×2	926
	20	9600	0.80×2	918

10.6 Model: 17.5Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	0	25	50	75	100	125	150	175	200	225	250	275	300
Air flow (CFM)	7858	7712	7546	7392	7271	7091	6977	6836	6680	6534	6354	6178	6020
Brake power (kW)	5.76	5.66	5.57	5.36	5.3	5.14	5.05	4.88	4.78	4.67	4.55	4.37	4.12
Fan speed (rpm)	1019	1020	1020	1021	1022	1022	1023	1024	1025	1025	1026	1027	1030

Curve diagram of static pressure, air flow volume:



Parameter table for outdoor unit air volume:

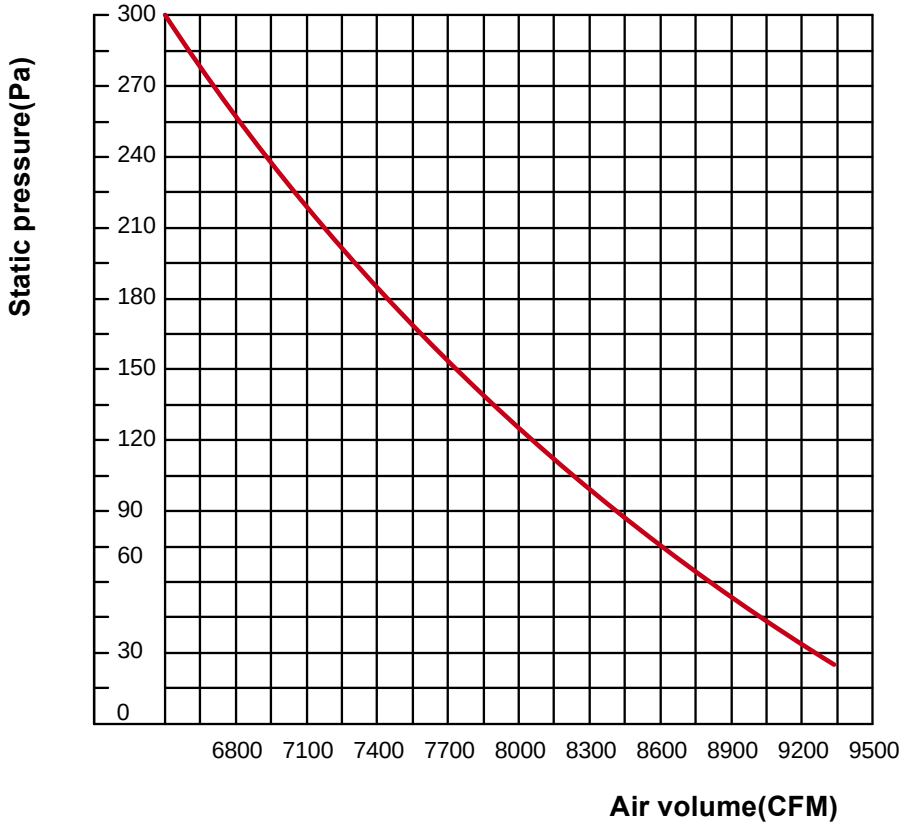
Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
17.5Ton	0	11000	0.78×2	935
	10	9800	0.79×2	926
	20	9600	0.80×2	918

10.7 Model: 20Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	25	50	75	100	125	150	200	250	300
Air flow (CFM)	9296	8782	8452	8289	8179	7826	7388	6955	6555
Brake power (kW)	5.86	5.73	5.59	5.44	5.50	5.27	4.98	4.66	4.32
Fan speed (rpm)	818	819	819	820	820	821	822	823	825

Curve diagram of static pressure, air flow volume:



Parameter table for outdoor unit air volume:

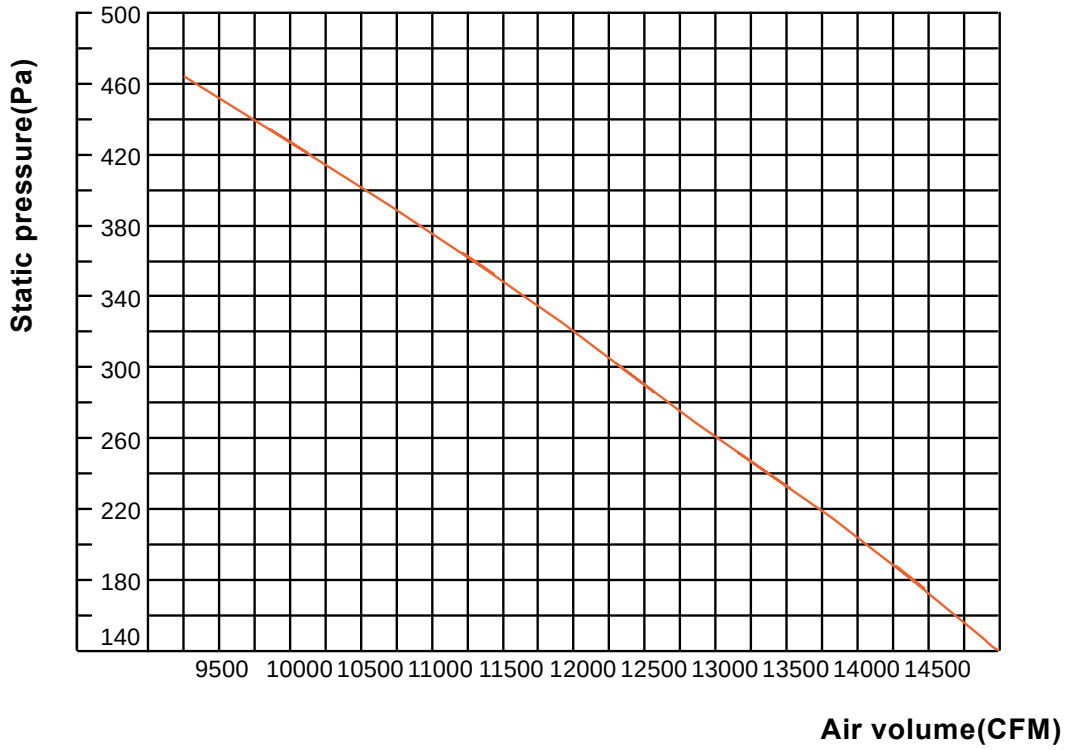
Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
20Ton	0	14000	1.3×2	940
	10	13500	1.4×2	938
	20	13100	1.5×2	930

10.8 Model: 30Ton

Parameter table for indoor unit air volume:

Static pressure (Pa)	150	175	200	225	250	275	300	325	350
Air flow (CFM)	14664	14464	14119	13743	13230	12729	12365	11957	11489
Brake power (kW)	8.91	8.59	8.30	8.01	7.71	7.40	7.07	6.74	6.39
Fan speed (rpm)	775	775	776	777	778	779	780	782	782

Curve diagram of static pressure, air flow volume:



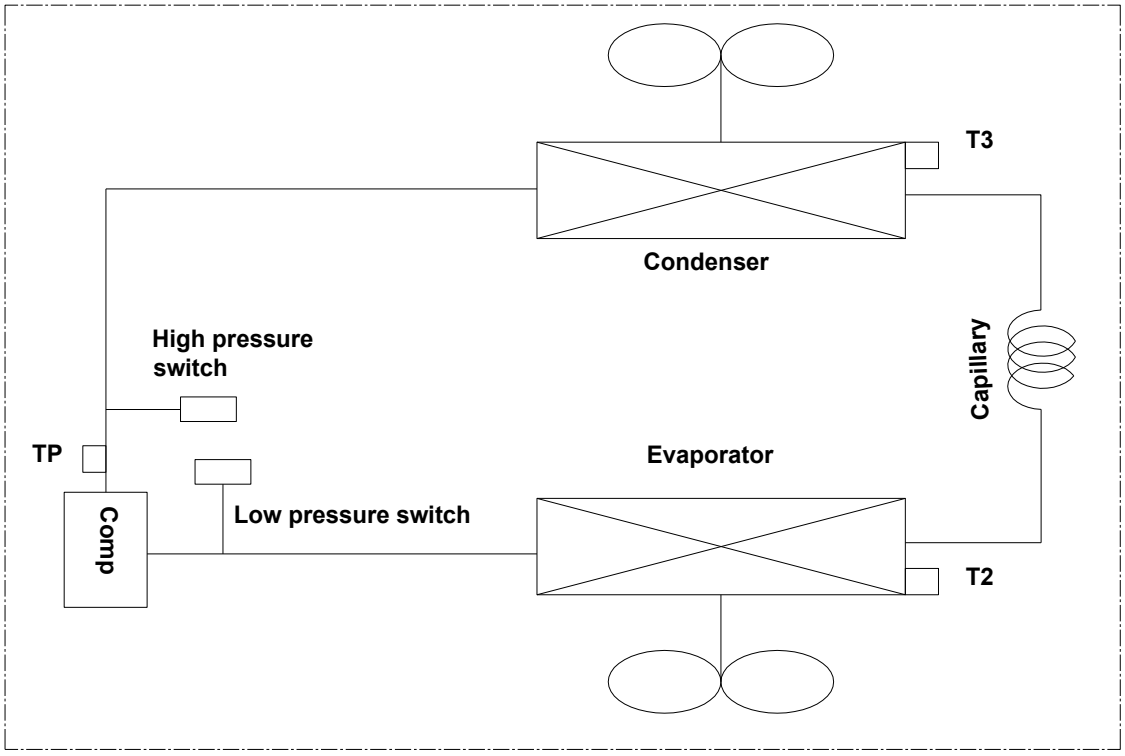
Parameter table for outdoor unit air volume:

Model	Static pressure (Pa)	Air flow (CFM)	Brake power (kW)	Fan speed (rpm)
30Ton	0	14000	1.3×2	940
	10	13500	1.4×2	938
	20	13100	1.5×2	930

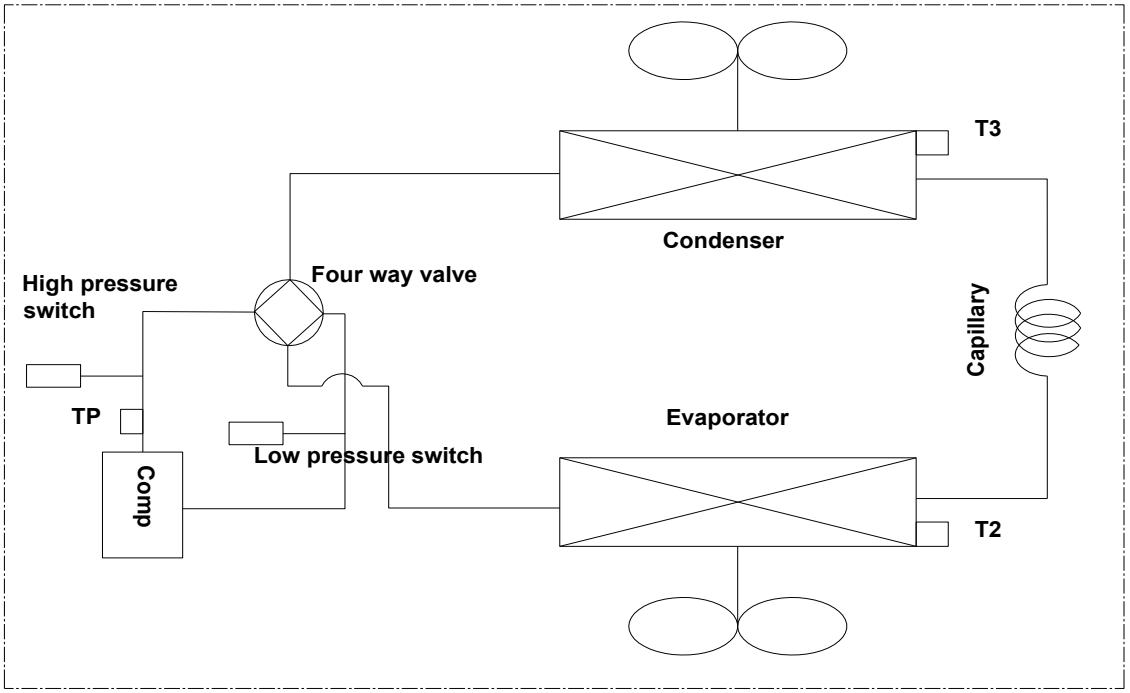
11. Refrigerant Cycle Diagram

11.1 6.2,7.5,8.5,10 ton:

Cooling



Cooling and Heating type:



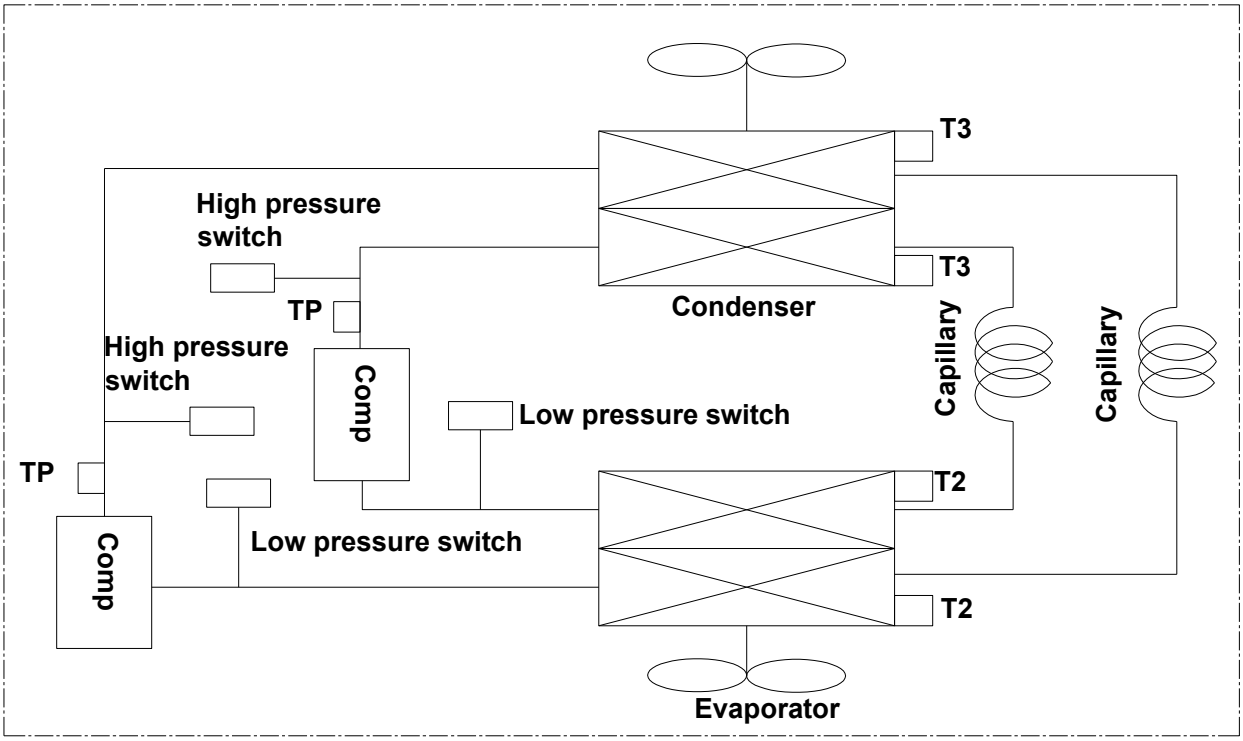
TP: Compressor discharge temperature sensor in system

T2: Indoor coil temperature sensor in system

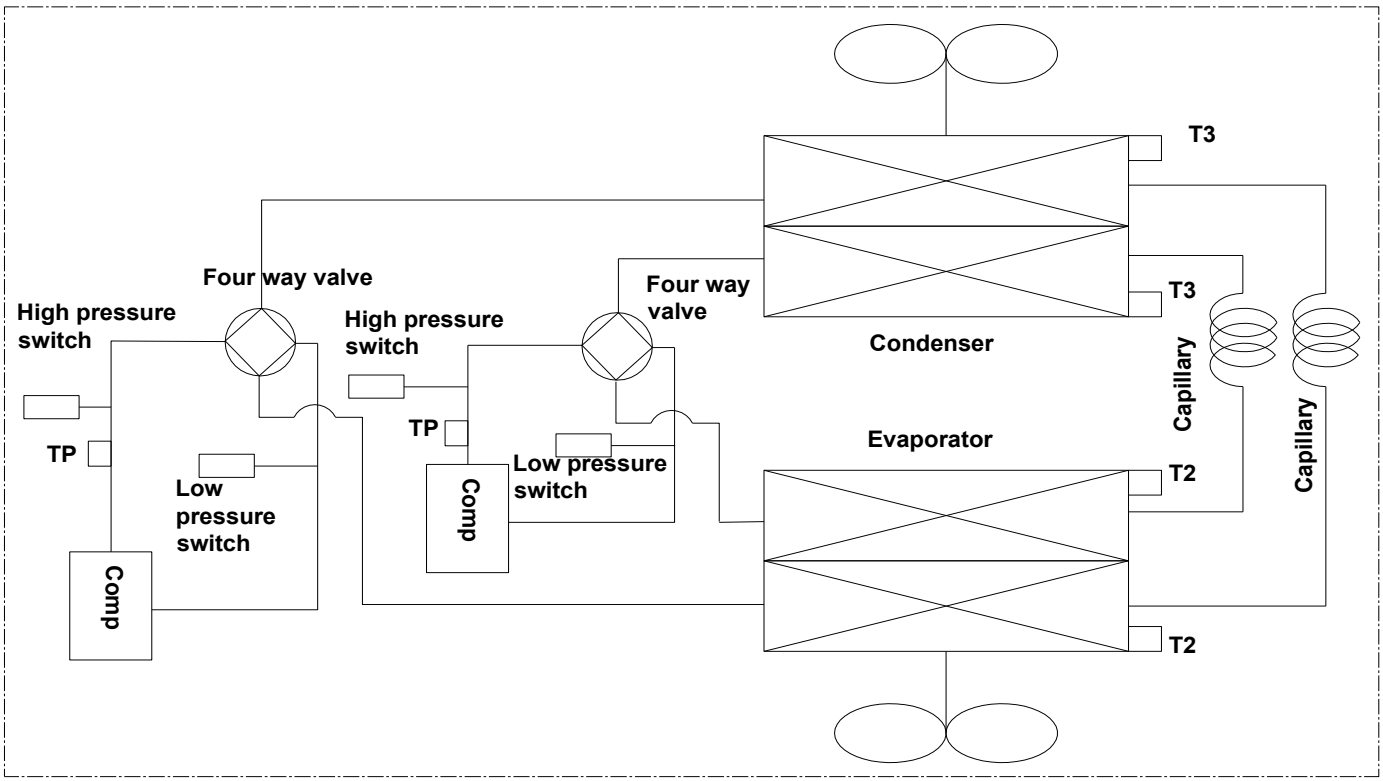
T3: Outdoor coil temperature sensor in system

11.2 15,17.5,20,30 ton:

Cooling



Cooling and Heating type:



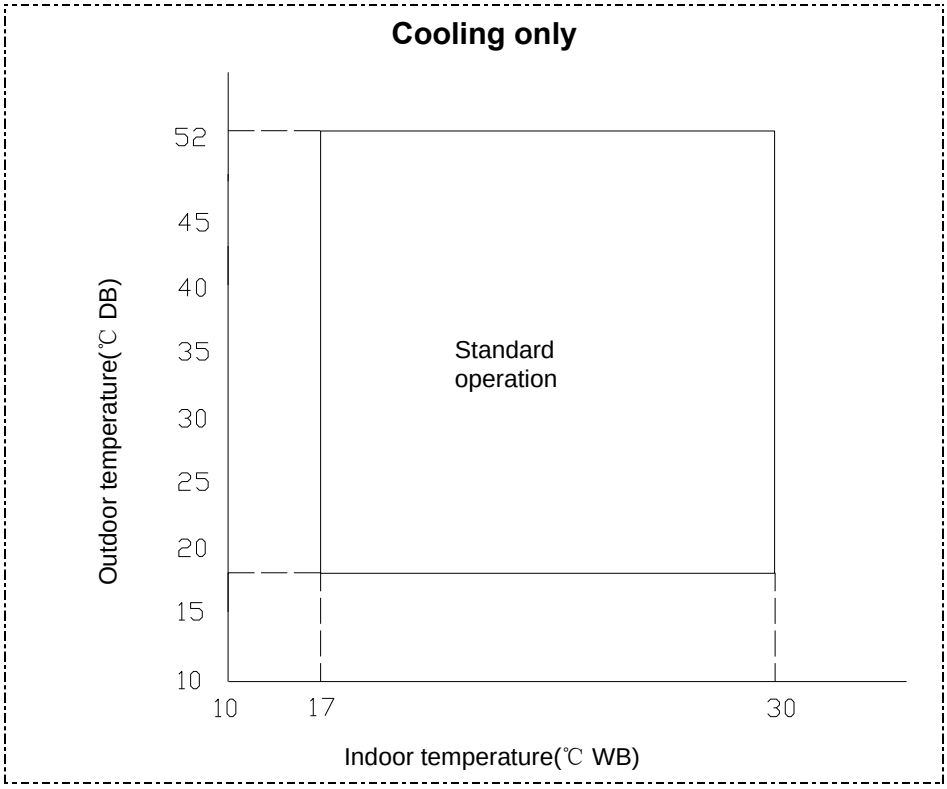
TP: Compressor discharge temperature sensor in system A and B

T2: Indoor coil temperature sensor in system A and B

T3: Outdoor coil temperature sensor in system A and B

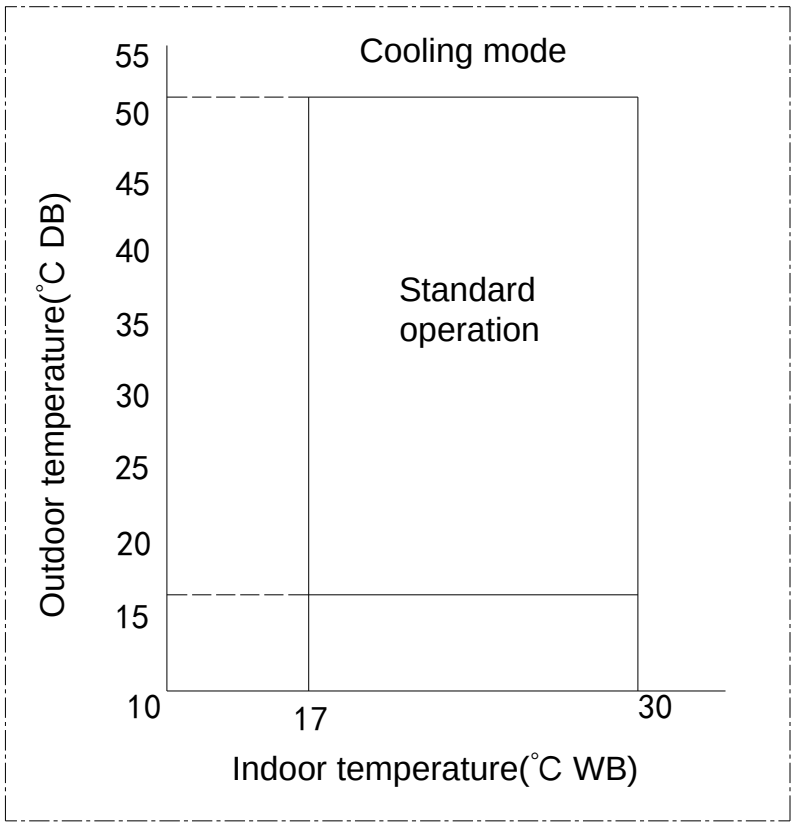
12. Operation Limit

12.1 Cooling only

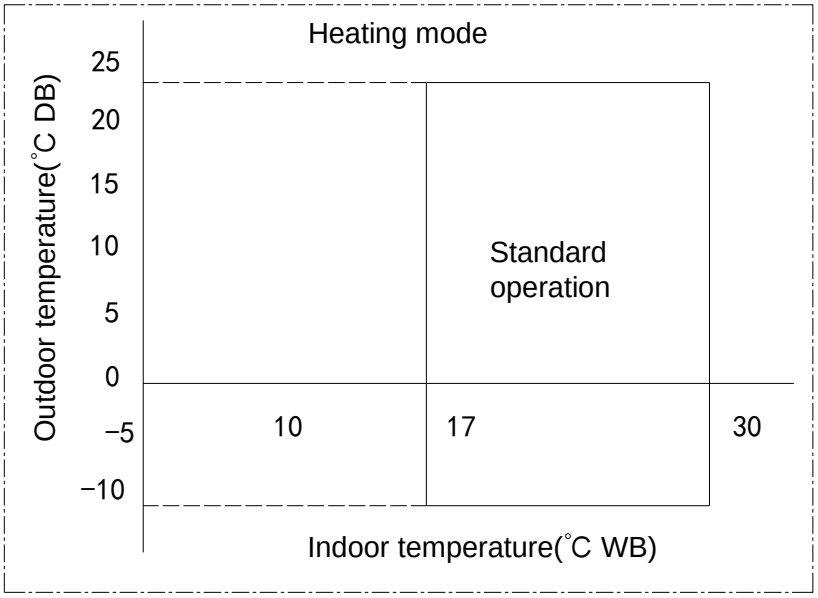


Temperature / Model	Outdoor temperature	Indoor temperature
Cooling mode	18℃～52℃	17℃～30℃

12.2 Cooling and heating



Temperature / Mode	Outdoor temperature	Indoor temperature
Cooling mode	18℃～52℃	17℃～30℃



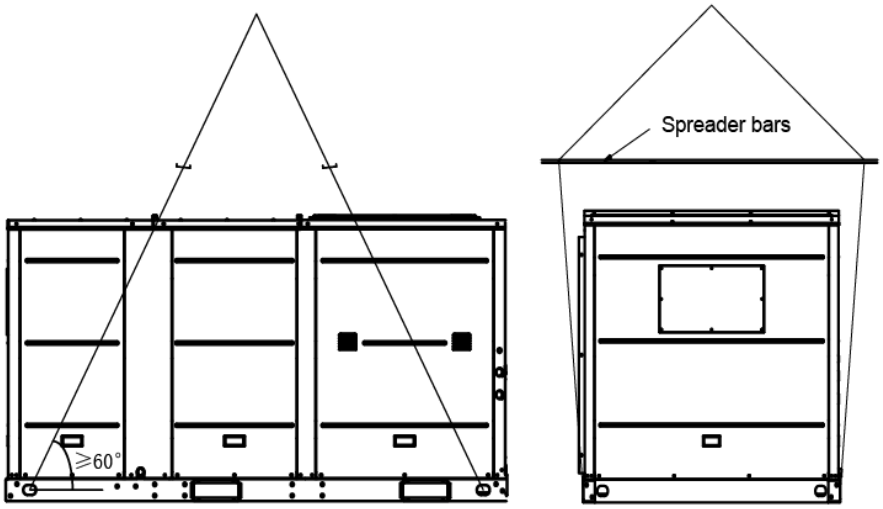
Temperature / Mode	Outdoor temperature	Indoor temperature
Heating mode	-10℃～24℃	17℃～30℃

13. Installation

13.1 Lifting

Rigging cables should have adequate capability to resist 3 times weight of unit. Before lift, please check and ensure that hooks are holding tightly to unit and lifting angles are no less than 60°.

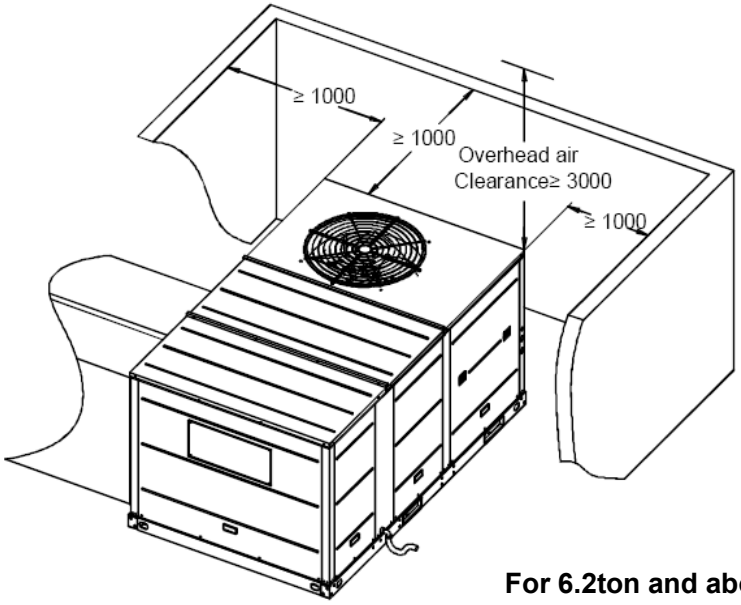
Cloth material or hard-paper should be padded in the contact place between unit and rigging cable. Rigging cable should be entwined a round at the hook for prevent danger by cable slip because of weight unbalance. During lifting, anyone forbidden lingering under the lifting unit.



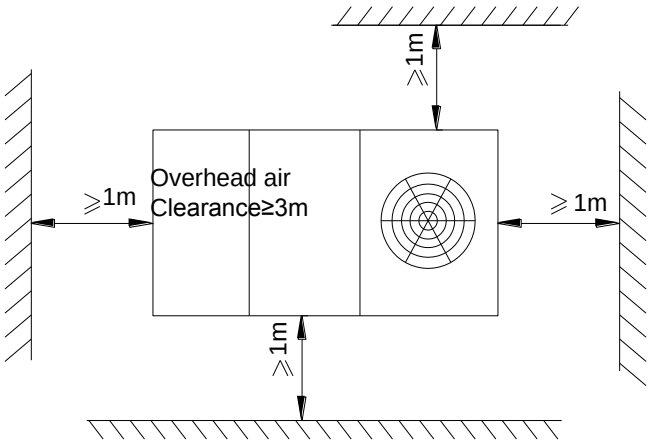
13.2 Service Space

1. The recommended clearances for single-unit installations are illustrated in following *Fig.*

These minimum requirements are not only an important consideration when determining unit placement, but they are also essential to ensure adequate serviceability, maximum capacity, and peak operating efficiency. 2. Any reduction of the unit clearances indicated in these illustrations may result in condenser coil starvation or the recirculation of warm condenser air. Actual clearances which appear to be inadequate should be reviewed with a local engineer.



For 6.2ton and above

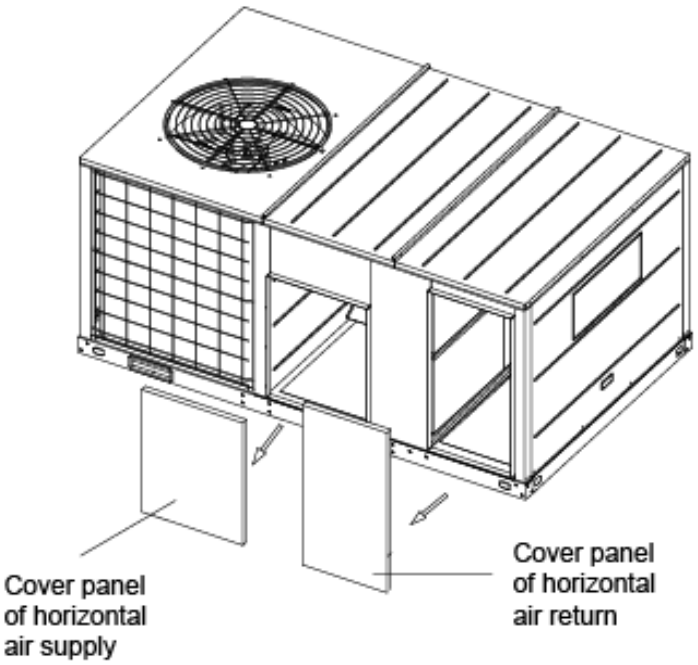


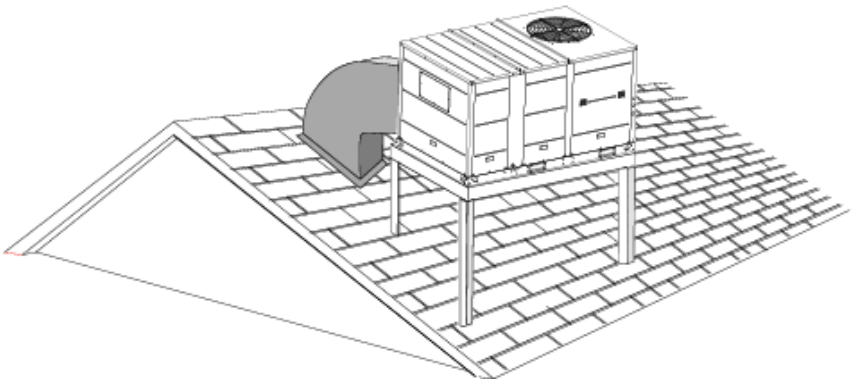
For 6.2ton and above

13.3 Rooftop -- units

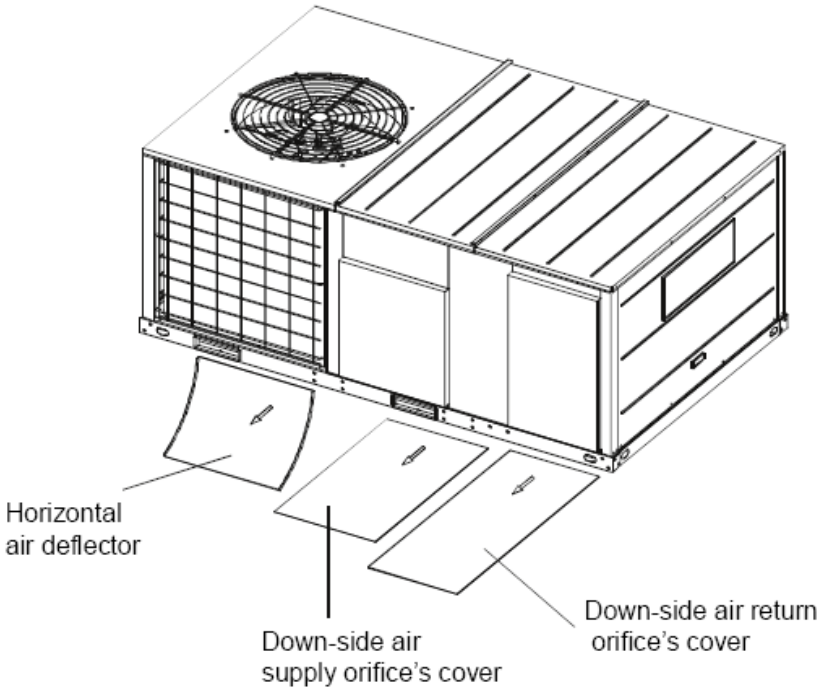
For roof top applications using a field fabricated frame and ducts, according to the following procedure:
1) The frame must be located and secured by bolting or welding to the roof. Flashing is required.
2) The hole in the roof must be prepared in advance of installing the unit.
3) Secure the ducts to the roof.
4) Place the unit on the frame or roof curb.
5) Secure the unit to the frame or roof curb.
6) Insulate any ductwork outside of the structure with at least two (2) inches of insulation and then weatherproof. There must be a weatherproof seal where the duct enters the structure.
7) Complete the installation according to the instructions.

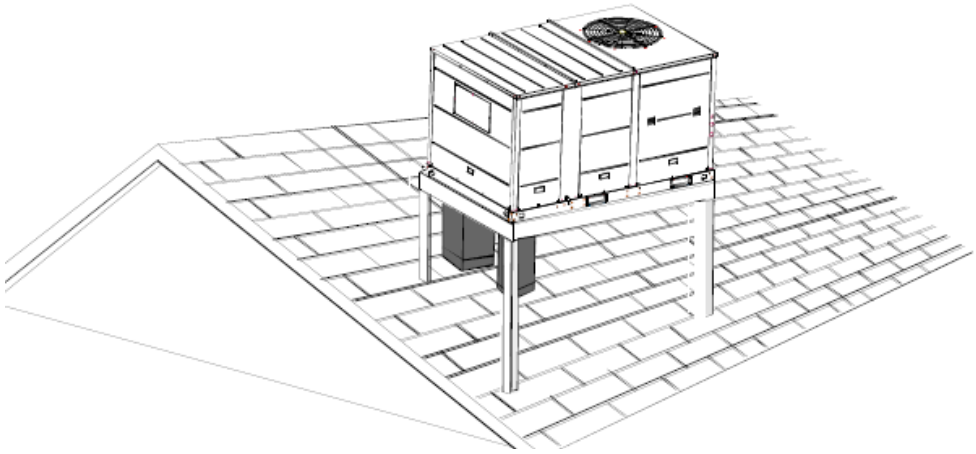
Typical rooftop application with frame:

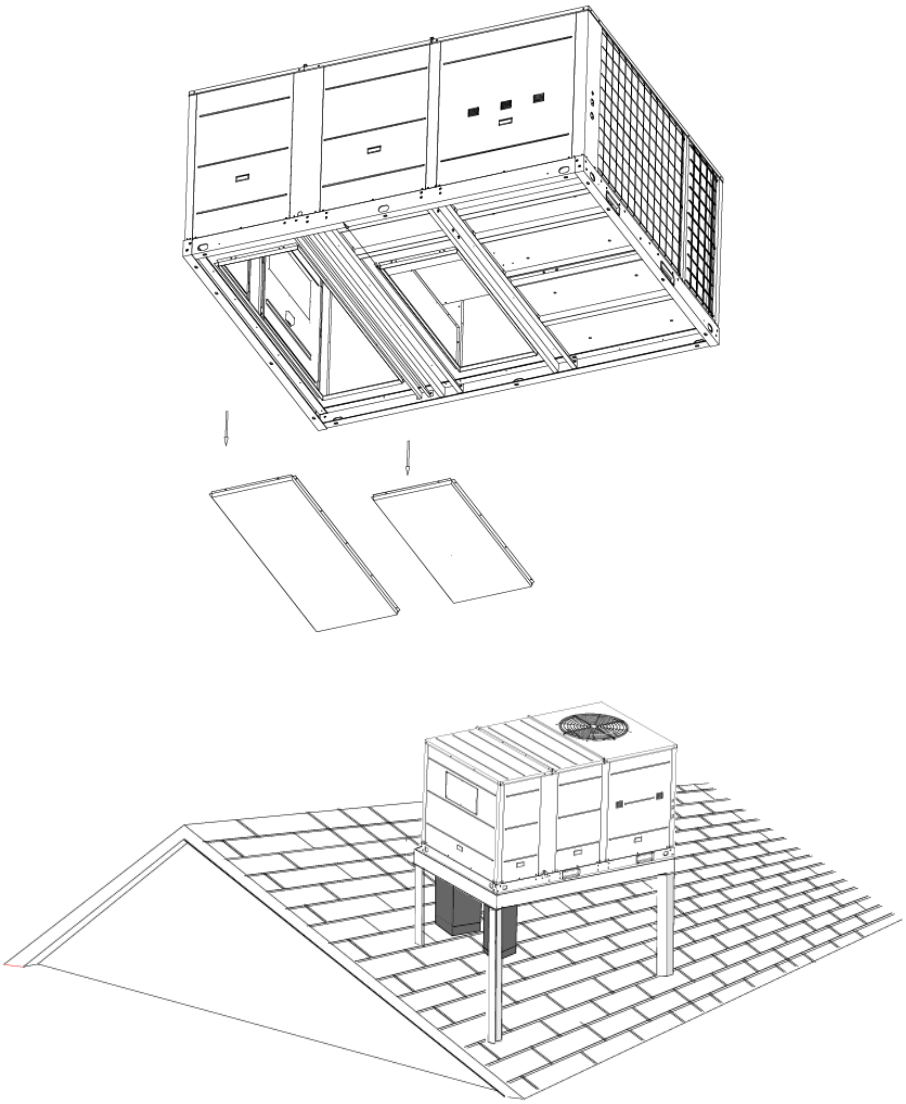




Typical rooftop application with frame:







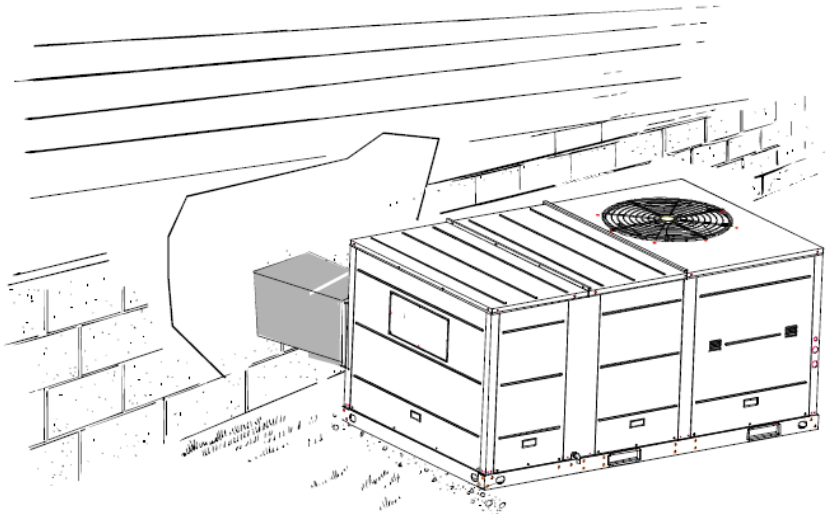
13.4 Ground Level -- Horizontal Units

For ground level installations, the unit should be positioned on a pad the size of the unit or larger. The unit must be level on the pad. The pad must not come in contact with the structure. Be sure the outdoor portion of the supply and return air ducts are as short as possible.

Installation according to the following procedure:

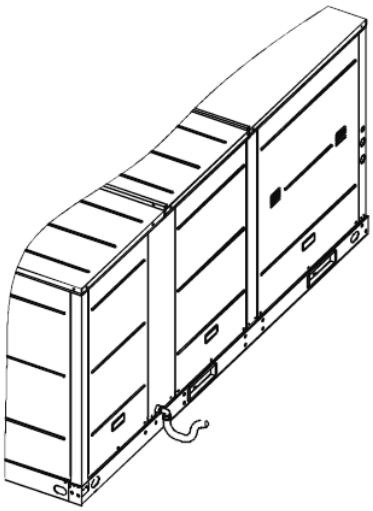
1) Place the unit on the pad.
2) Attach the supply and return air ducts to the unit.
3) Insulate any ductwork outside of the structure with at least 2 inches of insulation and weatherproof. There must be a weatherproof seal where the duct enters the structure.
4) Complete the installation according to the instructions.

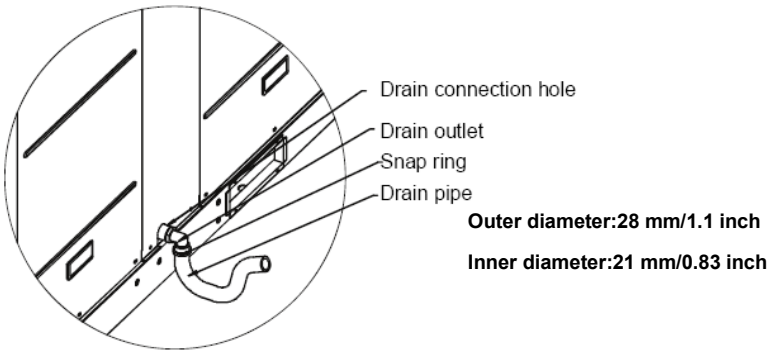
Typical ground level application:



13.5 Installation of condensate drain piping

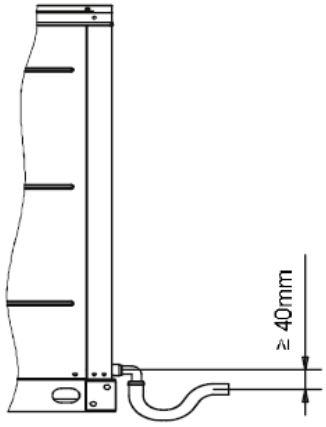
6.2&7.5&8.5&10&15&17.5&20ton:





Outer diameter:28 mm/1.1 inch

Inner diameter:21 mm/0.83 inch



13.6 Ductwork

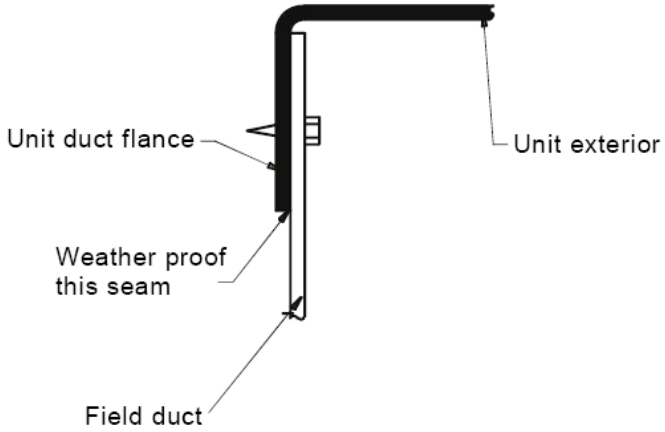
1. Attaching horizontal ductwork to unit

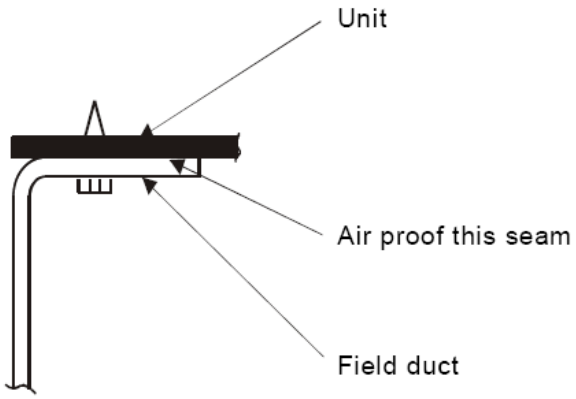
1) All conditioned air ductwork should be insulated to minimize heating and cooling duct losses. Use a minimum of two (2) inches of insulation with a vapor barrier. The outside ductwork must be weatherproofed between the unit and the building.

2) When attaching ductwork to a horizontal unit, provide a flexible watertight connection to prevent noise transmission from the unit to the ducts. The flexible connection must be indoors and made out of heavy canvas.

Note:

Do not draw the canvas taut between the solid ducts.





2. Attaching down flow ductwork to roof curb

Supply and return air flanges are provided on the roof curb for easy duct installation. All ductwork must be run and attached to the curb before the unit is set into place.

Follow these guidelines for ductwork construction:

1) Connections to the unit should be made with three-inch canvas connectors to minimize noise and vibration transmission.

2) Elbows with turning vanes or splitters are recommended to minimize air noise and resistance.

3) The first elbow in the ductwork leaving the unit should be no closer than two feet from the unit, to minimize noise and resistance.

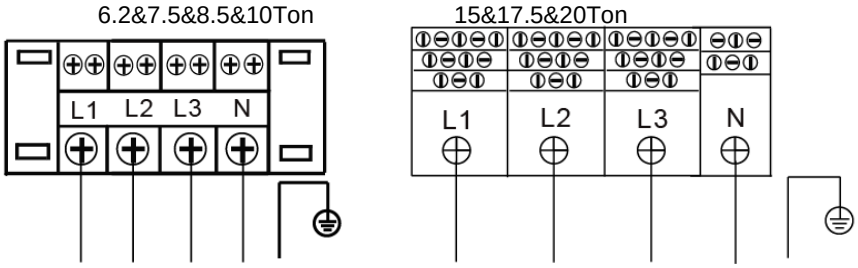
13.7 Wiring provision

Field wiring

The units are internally wired at the factory according to generally accepted electrical technology.

Required field wiring

Main power wiring to the unit control wiring between the control center and the unit, and earth wiring are required in the field.



Required components

The following components are required: main power fuse, conduit coupling, and field supplied room thermostat.

Wire and fuse size selection for main power source.

Wire and fuse size should be selected in accordance with national standard, taking the designed maximum current shall be the total of the compressor maximum current, condenser fan motor current and evaporator fan motor current (refer to “electrical data”).

Wire size between room thermostat and unit.

The wire size between the room thermostat and the unit should be determined according to the following table, because the 24V power source is applied to the control circuit.

	Wiring length between room thermostat and unit(one way)				
	10m	15m	20m	30m	40m
Minimum wire size(mm^2)	0.5	0.5	0.75	0.75	1.0

14. Wired Controller

14.1 Standard wired controller: KWC-22

KWC-22

1. SAFETY PRECAUTIONS

The following contents are stated on the product and the operation manual, including usage, precautions against personal harm and property loss, and the methods of using the product correctly and safely. After fully understanding the following contents (identifiers and icons), read the text body and observe the following rules.

Identifier description

Identifier	Meaning
Warning	Means improper handling may lead to personal death or severe injury.
Caution	Means improper handling may lead to personal injury or property loss.

[Note]: 1. "Harm" means injury, burn and electric shock which need long-term treatment but need no hospitalization

2. "Property loss" means loss of properties and materials.

■ Icon description

Icon	Meaning
	It indicates forbidding. The forbidden subject-matter is indicated in the icon or by images or characters aside.
	It indicates compulsory implementation. The compulsory subject-matter is indicated in the icon or by images or characters aside.

Warning

Warning	Delegate installation	Please entrust the distributor or professionals to install the unit. The installers must have the relevant know-how. Improper installation performed by the user without perm ission may cause fire, electric,shock, personal injury or water leakage.

Usage Warning	Forbid	Do not spray flammable aerosol to the wire controller directly. Otherwise, fire may occur.
	Forbid	Do not operate with wet hands or let water enter the wire controller. Otherwise, electric shock may occur.

2. SUMMARIZE

Usage condition:

①. Power supply: 5V DC.

②. Operation temperature: -15℃-+43℃.

③. Operation humidity: 40%-90%, RH.

3. FUNCTION SUMMARY

Main function:

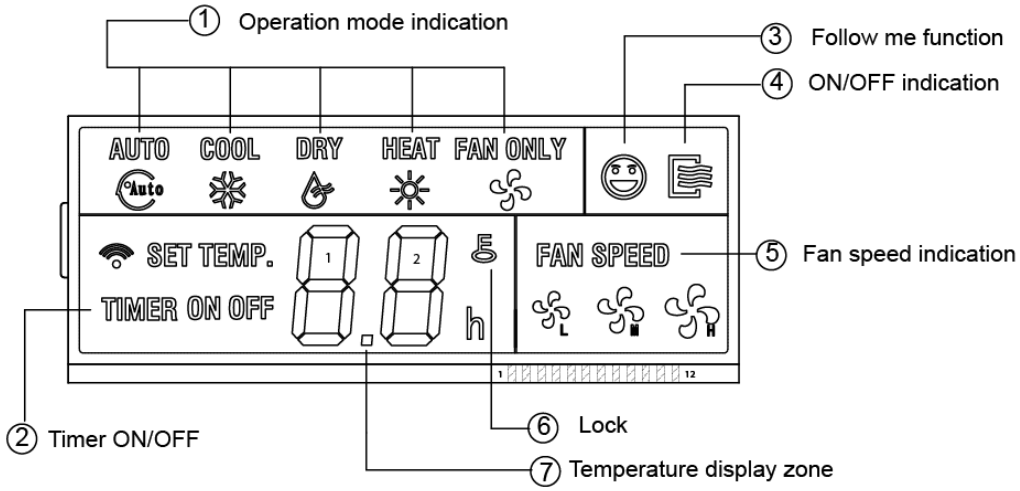
①. Connecting to indoor unit by A, B, C, D, E terminal;

②. Button setting action mode.

③. LCD display.

④. Timer for rest time.

4. NAME AND FUCTION OF INDICATORS ON THE CONTROLLER



① Operation mode indication:

When press " MODE " button, the following mode can be selected in circle. Auto→Cool →Dry→Heat→ Fan only→Auto. For cooling only model,heat mode is skipped.

② Timer :

When adjust setting on time or only on time is set, the "ON" is lighted.

When adjust setting off time or only off time is set, the "OFF" is lighted. If both ‘on’ and ‘off’ timer are set, both the "ON" and "OFF" are lighted.

③ Follow me function:

There is a temperature sensor inside the wire controller, after setting temperature, it will compare the two temperatures, and the space of wire controller will be

the same as setting temperature. It is available under cooling, heating, auto mode.

④ ON/OFF indication :

When it is on, the icon display, otherwise it is extinguished.

⑤ Fan speed indication :

There are four fan modes : low, middle, high, auto. For some models, no middle fan then the middle fan is seen as high speed.

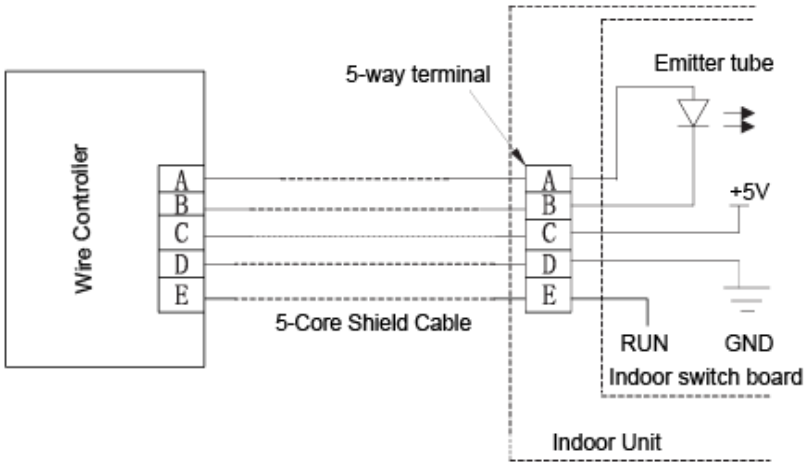
⑥ Lock:

When the " LOCK " button is pressed, the icon appear and other buttons is unable, press again, the icon disappear.

⑦ Temperature display zone:

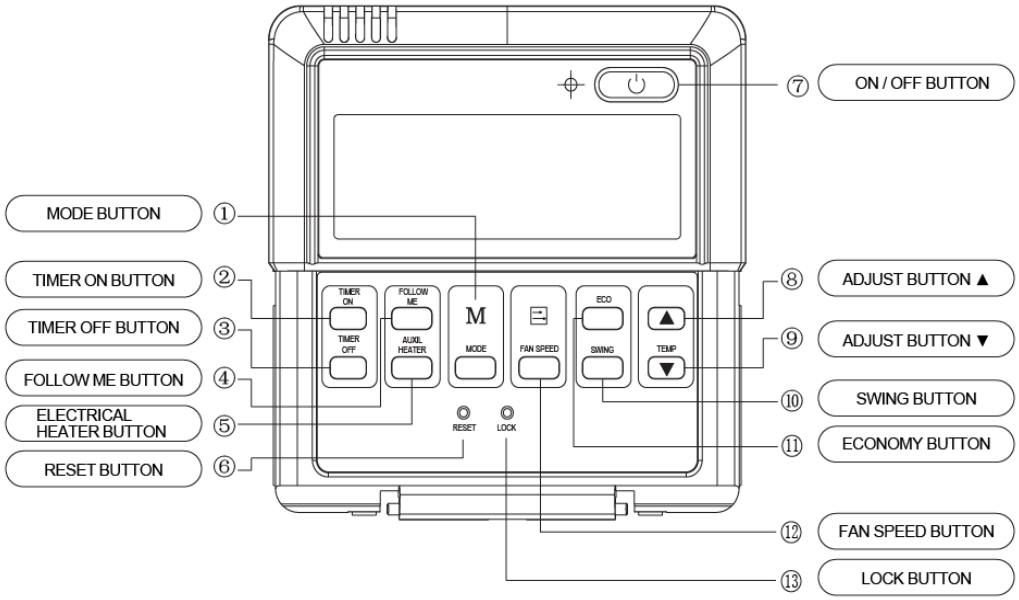
Generally it displays setting temperature, it can be adjusted by press temperature button ▲ and ▼. But in fan mode, no display here.

5. INSTALLATION METHOD



When a wired controller is needed, a small 5-way terminal should be added, fix an infrared emitter with gumwater near the receiver on the switch board. Connect its anode and cathode to A and B, and +5V, GND, RUN to C, D, E on the switch board.

6. NAME AND OPERATION OF THE BUTTON ON THE WIRE CONTROLLER



① Mode button:

When press this button, the operation mode change as the following sequence:

┌→AUTO → COOL→DRY→HEAT→FAN┐

Remark: For the cooling only model, the heating mode is skipped.

② Timer on button :

Press this button, timer on function is active. Then every press, the time increase 0.5h, after 10h, 1h increase after each press. If cancel this Function, just set it to "0.0".

③ Timer off button:

Press this button, timer off function is active. Then every press, the time increase 0.5h, after 10h, per 1h increase after each press. If cancel this function, just set it to "0.0".

④ Follow me button:

When under cool, heat and auto mode, press this button, follow me function is active. Press again, this function is ineffective.

⑤ Electrical heater button :

If press this button in heat mode, electrical heater function become ineffective.

⑥ Reset button(hidden):

Use a 1mm stick to press in the little hole , then the current setting is canceled . The wired controller will enter into original state.

⑦ON/OFF button:

When in off state, press this button, the indicator is on, the wire controller enter into on state, and send setting information to in door PCB. When in on state, press this button, the indicator is off, and send instruction. If timer on or timer off has been set, it cancel this setting then send instruction to stop the machine.

⑧ Adjust button ▲:

Set indoor temperature up. If press and hold on, it will increase at 1 degree per 0.5 second.

⑨ Adjust button ▼ :

Set indoor temperature down. If press and hold on, it will decrease at 1degree per 0.5 second.

⑩ Swing button:

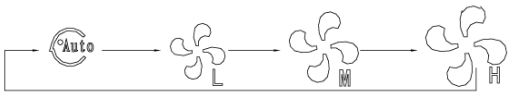
First pressing: start swing function; second pressing: stop swing. (Match to some model with swing function).

⑪ Economy operation button:

Press this button, the indoor unit operates in economy mode, press it again, exit this mode (it may be ineffective for some models)

⑫ Fan speed button:

Press this button consecutively, the fan speed will circle as follow:



⑬ Lock button (hidden):

When you push the LOCK button, all current settings are locked in and the wire controller does not accept any operation except that of the LOCK button. Use the lock mode when you want to prevent setting from being changed accidentally or play fully. Push the LOCK button again when you want to cancel the LOCK mode.

7. USING METHOD

AUTOMATIC OPERATION

Connect to power, indoor operation lamp flash.

①. Press "MODE" button, select " AUTO " ;

②. Press the button "▲" and "▼", set temperature you want, generally it is among 17℃~30℃;

③. Press " ON/OFF" button, operation lamp is on, the air-conditioner work in auto mode, indoor fan is auto, and can not be changed. Auto is displayed on LCD. Press " ON/OFF" button again to stop.

④. Economy operation is valid in auto mode.

COOL/HEAT/FAN MODE OPERATION

①. Press "MODE" button, select "COOL", "HEAT" or "FAN ONLY" mode.

②. Press temperature adjust button to select setting temp..

③. Press "FAN SPEED" button to select high/mid/low/auto.

④. Press "ON/OFF" button, indoor unit operation lamp on, it works in selected mode. Press "ON/OFF" button again, it stops to work.

Remark: When in fan mode, no temperature can be set.

DRY OPERATION

①. Press " MODE " button, select " DRY " mode.
②. Press temperature adjust button to select setting temp.
③. Press " ON/OFF " button, indoor unit operation lamp on, it works in dry mode. Press ON/OFF button again, it stops to work.
④. In dry mode, economy operation and fan speed are ineffective.

TIMER SETTING

Timer on only:
①. Press " TIME ON " button, it display "SET" on LCD, and display " H " and "ON" , it is waiting for timer on setting.
②. Press " timer " on button repeatedly to adjust time setting.
③. If press this button and hold on, the time will increase at 0.5h, after 10h, it increases at 1h.
④. After setting 0.5 second, the wire controller send timer on information, it is finished.
Timer off only:
①. Press "TIME OFF " button, it display "SET" on LCD, and display " H " and ON, it is waiting for timer on setting.
②. Press "TIME OFF" button repeatedly to adjust time setting.
③. If press this button and hold on, the time will increase at 0.5h, after 10h, it increases at 1h.
④. After setting 0.5 second, the wire controller send timer off information, it is finished.

TIMER ON AND TIMER OFF BOTH

①. Set timer on time as the corresponding step1 and 2.
②. Set timer off time as the corresponding step1 and 2.
③. Timer off time must be longer than timer on time.
④. 0.5 second after setting, the wire controller send information, the setting is finished.

CHANGE TIMER

If there is a timer of changing time to be need, press corresponding button to revise it. If cancel timer, change time to 0.0.

NOTE: The timer time is relative time, that is delay after setting time (i, e: setting time is 8:05 A,M). So when timer is set, the standard time can not be adjusted.

8. TECHNICAL INDICATION AND REQUIREMENT

EMC and EMI comply with the CE certification requirements.

14.2 Optional wired controller:

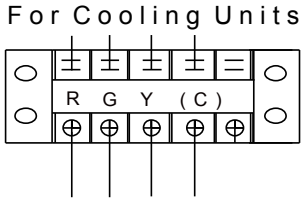
KFC-13: For cooling only and cooling with auxiliary heater

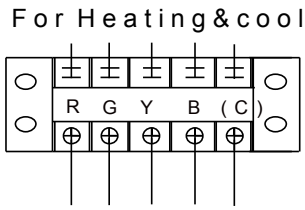
KFC-14： For Cooling and heating

KFC-13 **KFC-14**

14.3 Field wiring

To connect wired controller

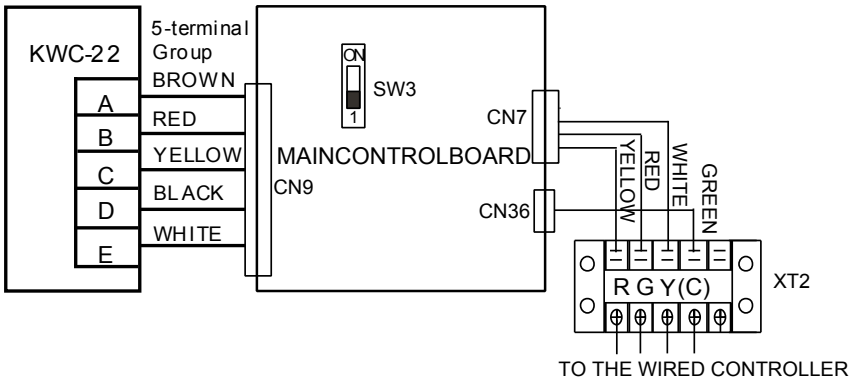




Dial code setting

The wired controller KWC-22 can be used when the SW3 is on "on", if the SW3 is on '1", the wired cotroller KFC-13 or KFC-14 can be used. After setting, please shut off the power supply and then power on it again, otherwise, the new settings function will be invalid.

For Cooling Units



15. Error Code

15.1 Error Code for 6.2ton and abov

Type	Content	Code	Remarks
Normal	Standby	--	
Normal	Constraint cool	On	
Normal	Run	10.	
Error	Compressor phase sequence error or phase default	E0	Manual reset
Error	Outdoor coil temp. sensor in sys. A error	E1	Manual reset
Error	Outdoor coil temp. sensor in sys. B error	E2	Manual reset
Error	Indoor coil temp. sensor in sys. A error	E5	Manual reset
Error	Indoor coil temp. sensor in sys. B error	E6	Manual reset
Error	Indoor temp. sensor error	E9	Manual reset
Error	Outdoor ambient temp. sensor error	EA	Manual reset
Error	Wire controller output error	Eb	Manual reset
Protection	Overcurrent protection in sys. A	P0	Auto reset
Protection	Overcurrent protection in sys. B	P1	Auto reset
Protection	Overcurrent protection for indoor fan	P2	Auto reset
Protection	Comprehensive protection for outdoor fan	P3	Auto reset
Protection	Protection for Hi./Lo. Pressure or exhaust temp. in sys. A	P4	Comprehensive protection in sys. A
Protection	Protection for Hi./Lo. Pressure or exhaust temp. in sys. B	P5	Comprehensive protection in sys. B
Protection	T2 evaporator Hi-temperature protection stop outdoor unit fan	P6	Auto reset
Protection	T2 evaporator Hi- temperature protection then stop outdoor unit fan and compressor	P7	Auto reset
Protection	Protection for condenser Hi-temp. in sys. A	P8	Auto reset
Protection	Protection for condenser Hi-temp. in sys. B	P9	Auto reset
Protection	Anti-freezing protection for evaporator in sys. A	Pc	Auto reset
Protection	Anti-freezing protection for evaporator in sys. B	Pd	Auto reset
Protection	Defrosting	dF	Auto reset

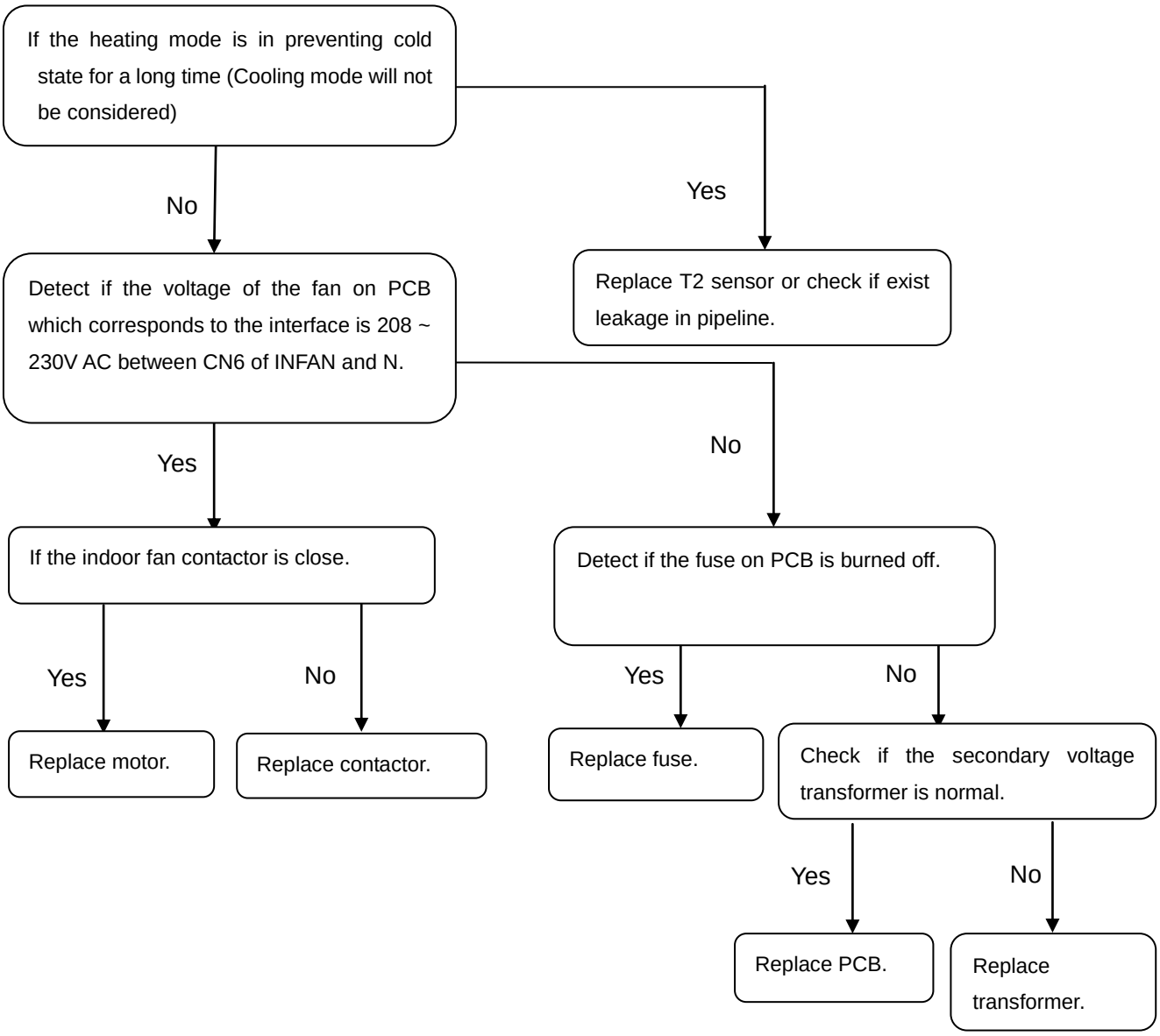
15.2 Troubleshooting

For 6.2ton and above

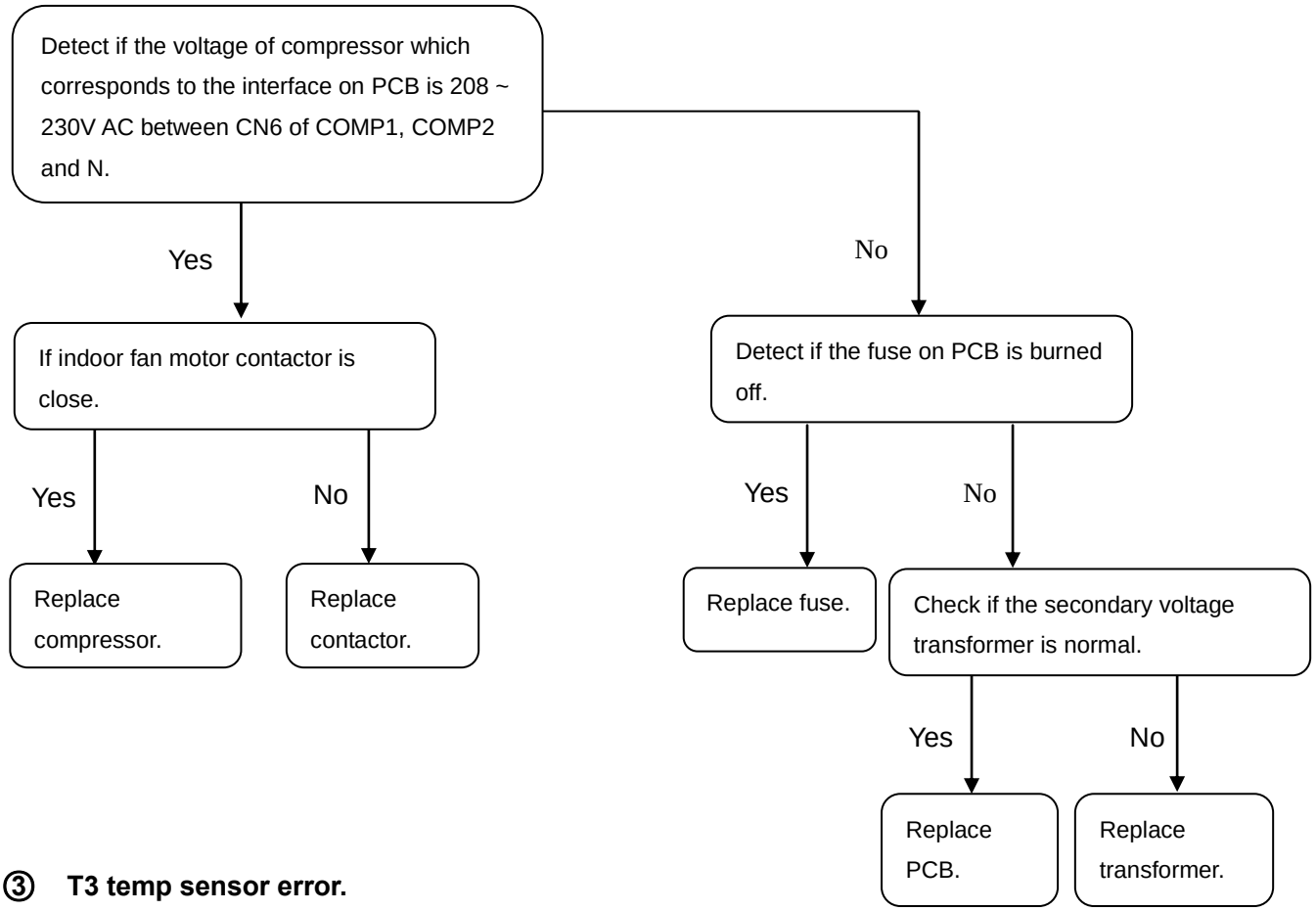
Item	Content	Error code
1	Indoor fan motor didn't run.	--
2	Compressor didn't run.	--
3	T3 temp sensor error.	EA
4	Check if the low pressure protection is normal.	--
5	Outdoor fan motor didn't run.	--
6	Four ways valve didn't work.	--
7	Condenser high temp protection.	P8,P9

① Indoor fan motor don't run.

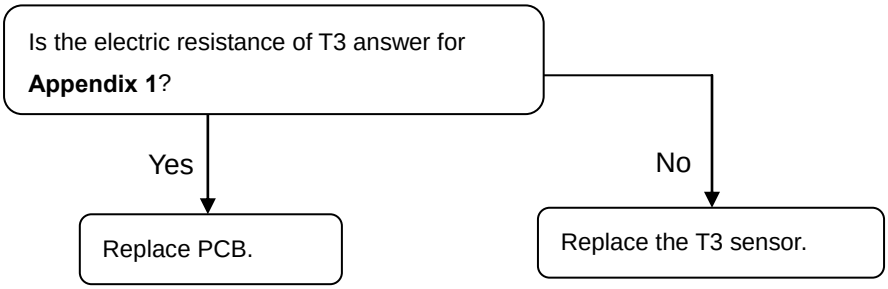
The first check if the power supplier is normal, if all wire connection terminal is loose, if the wired controller set and wire connection are correct, operating as flow process after confirm.



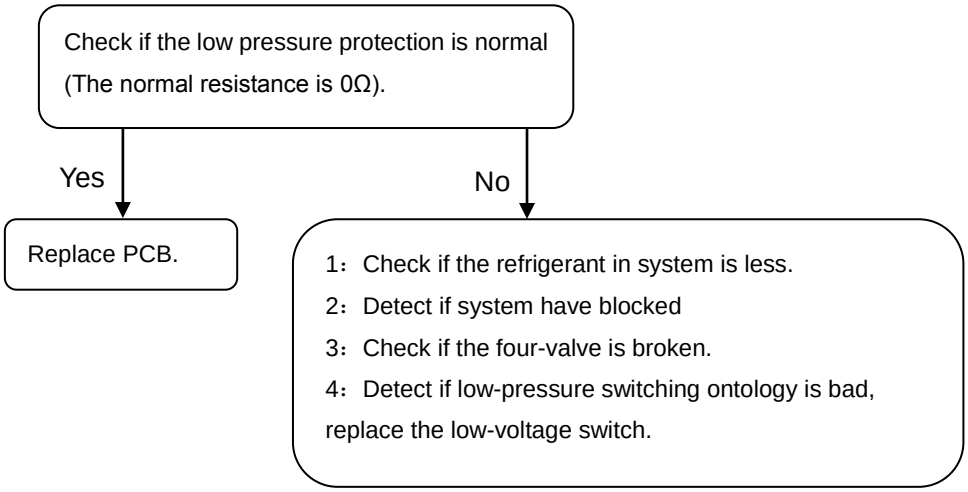
② Compressor don't run (All wires connection are correct and reliable, if power supplier is required range. If compressor don't run, you can analysis as flowing)



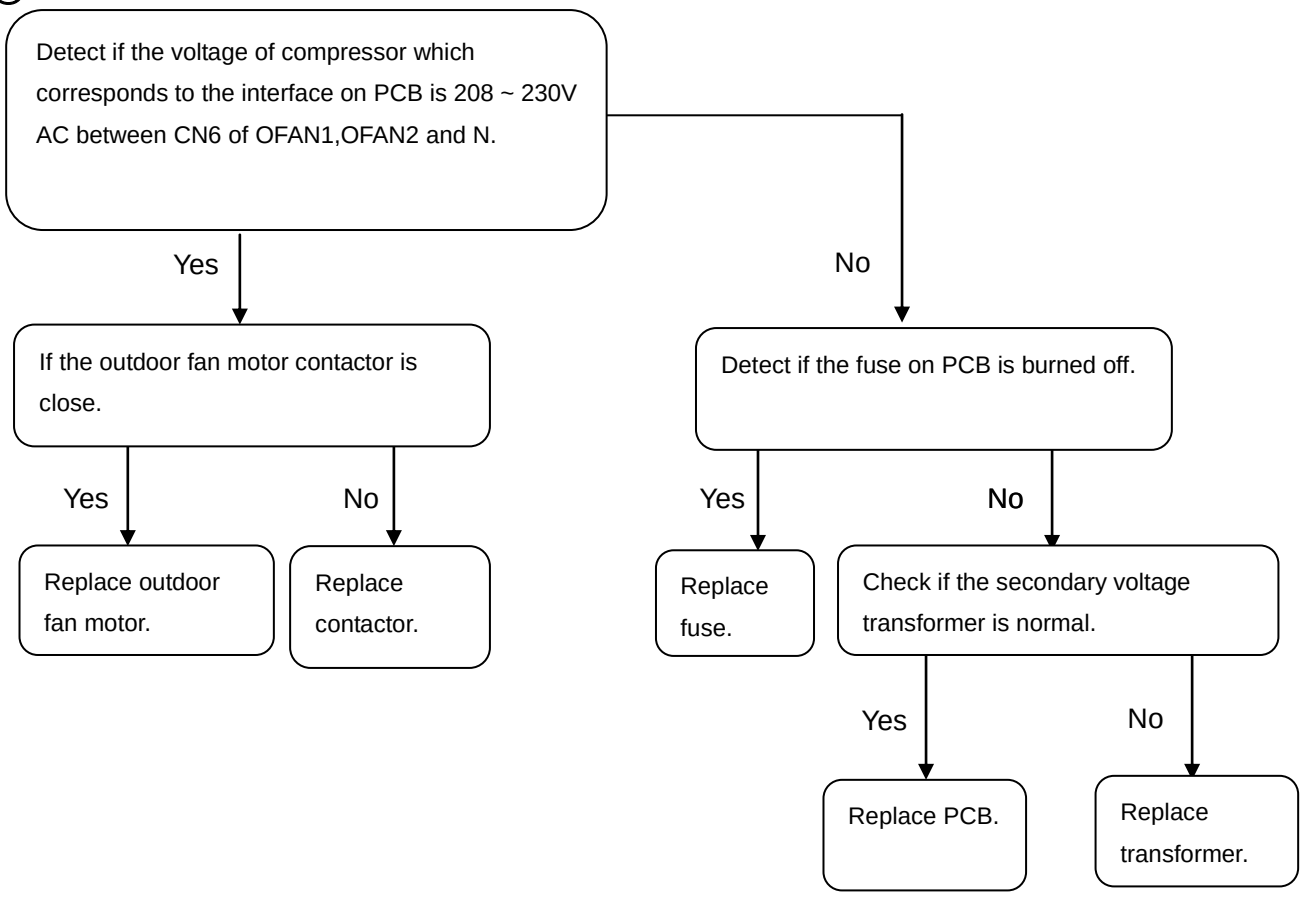
③ T3 temp sensor error.



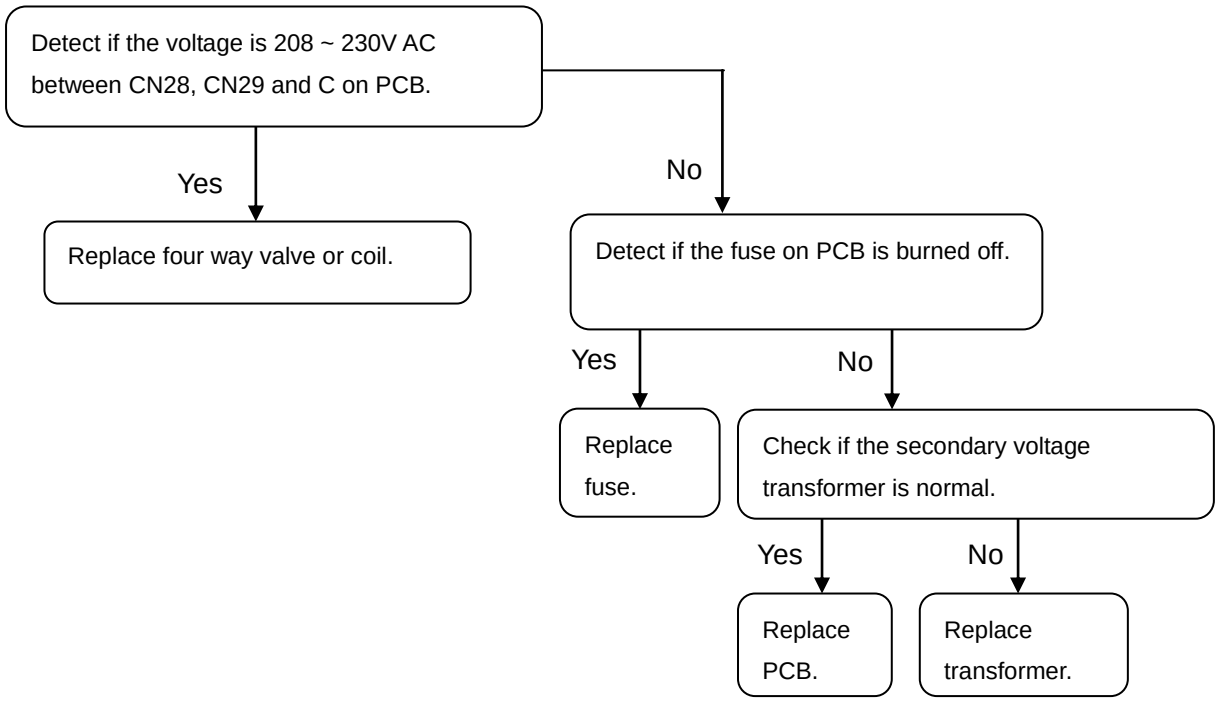
④ Check if the low pressure protection is normal.



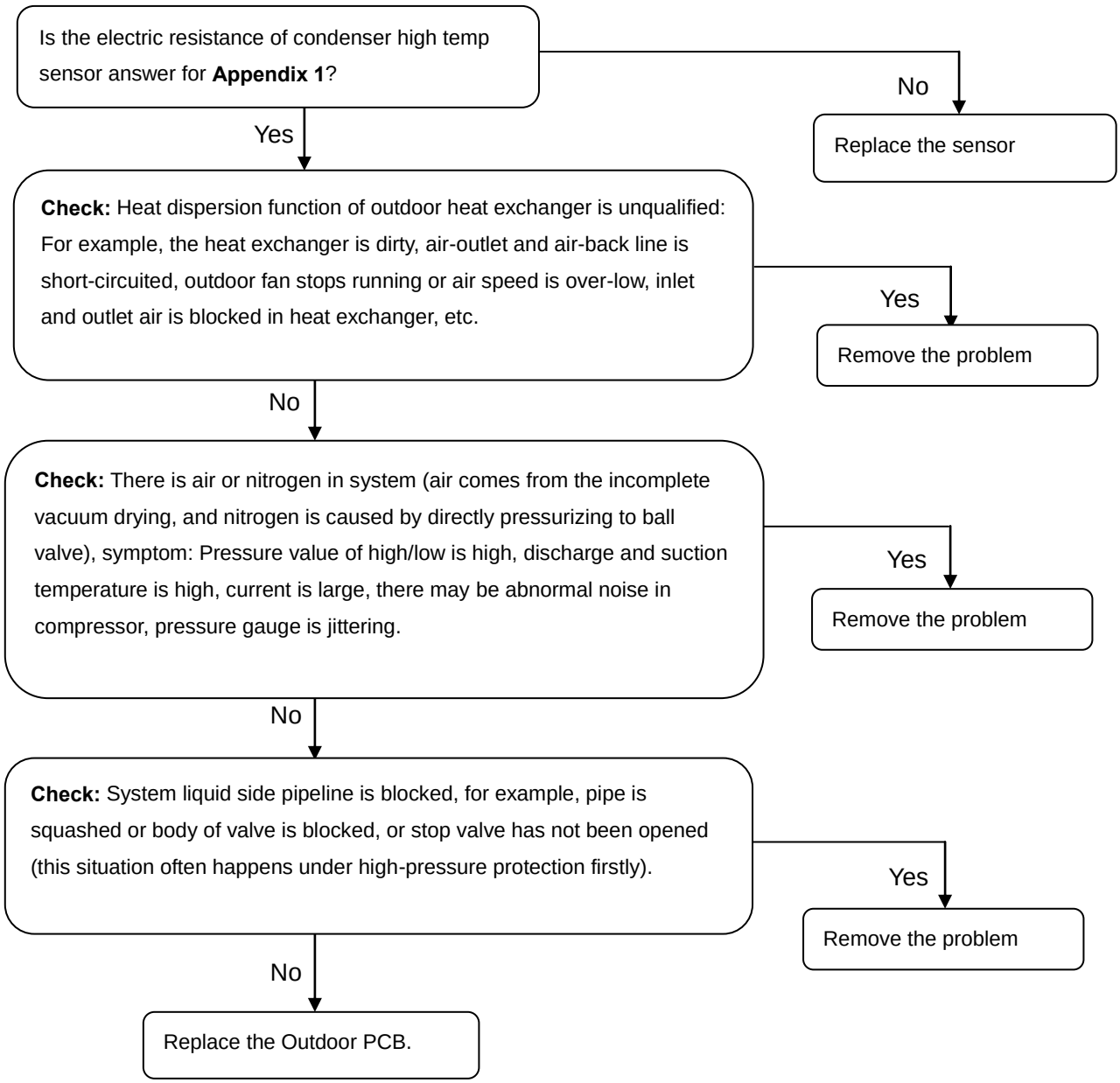
⑤ Outdoor fan motor don't run.



⑥ Four ways valve don't work.



⑦ Condenser high temperature protection

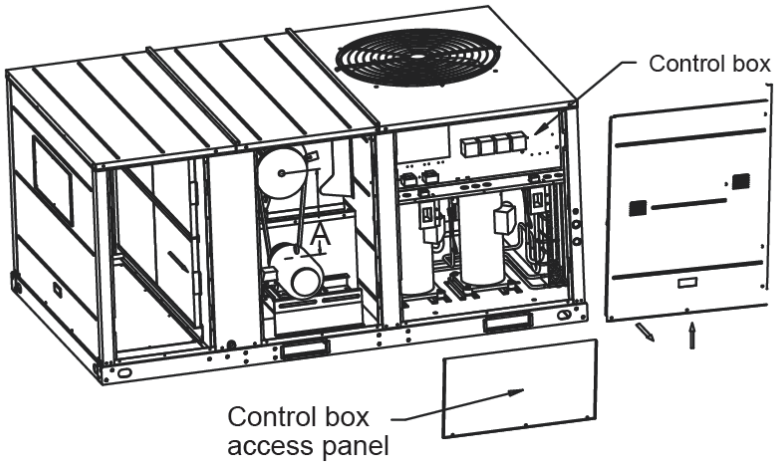


16. Accessories

Name of accessories	Qty	Shape
Manual	1	
Drain outlet	1	
Snap ring	1	
Drain pipe	1	
KJR-12B Wire controller	1	

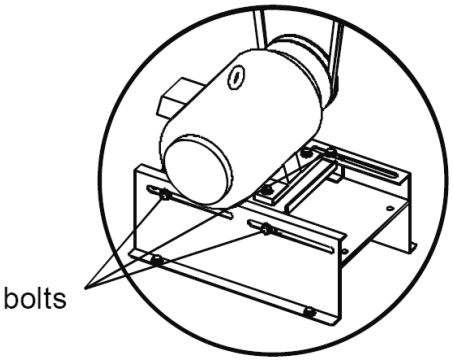
17. Maintenance and Upkeep

Regular maintenance and upkeep
Some regular maintenance and upkeep have been carry on by user, includes: change the one-time dust filter, clean casing, wash condenser and replace a new belt, as well as do some test for the equipment.

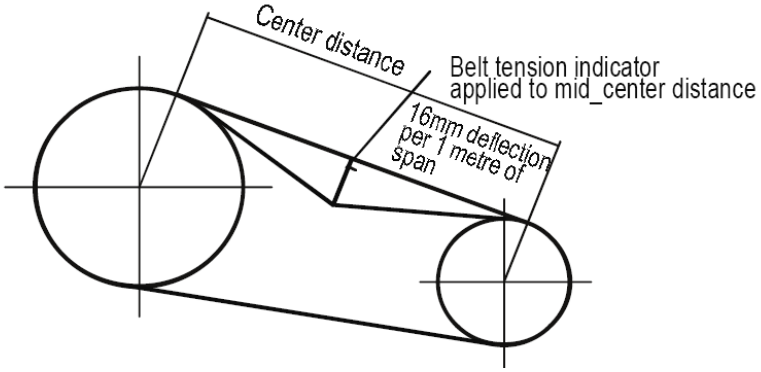


Model	A
6.2 Ton	328mm
7.5 Ton	328mm
8.5Ton	395mm
10 Ton	395mm
15 Ton	576mm
17.5 Ton	576mm
20 Ton	525mm
30Ton	925mm

Note：At least 1m flame resistant layer must be laid at the end of the air duct internal surface.
Regulating belt of rate of tension, inner fan Refer to the following *Fig.* fixed bolt of electric motor's supporting slide was loosened, following electric motor was droved, belt of rate of tension will begin change.



Method of belt tensioning using belt tension indicator
Calculate the deflection in mm on a basis of 16mm per meter of center distance
Center distance (m) ×16=deflection (mm).



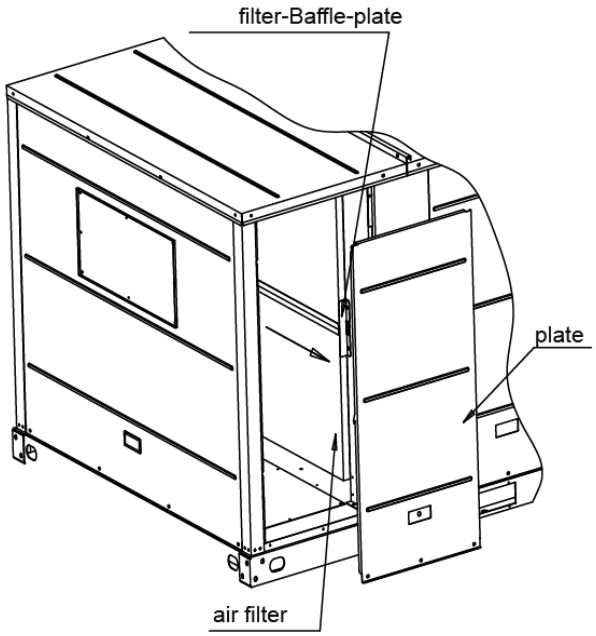
Belt section	For required to deflection belt 16 mm per meter of span		
	Small pulley diameter (mm)	Newton (N)	Kilogram-force (kgf)
SPA	80 to132	25 to 35	2.5 to 3.6
SPB	140 to 224	45 to 65	4.6 to 6.6

NOTE：The belt which is too tight or too loose may generate noise and be harmful to the unit.

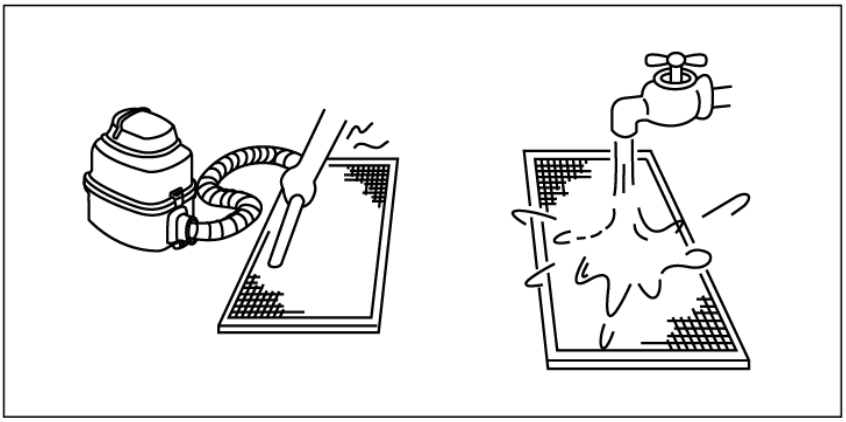
Dismantle the air filter.

Twist of screws and up the plate that is gets out.
Upon loose the filter-baffle-plate, the filter could be pulled out along the supporting slot.

7.5&10&15&20ton



Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filter. If the dust accumulation is too heavy, please use soft brush and mild detergent to clean it and dry out in cool place).



The air-in side should face up when using vacuum cleaner.
The air-in side should face down when using water.
CAUTION: Do not dry out the air filter under direct sunshine or with fire.

Re-install the air filter

Condenser coil

Unfiltered air circulates through the unit's condenser coil and can cause the coil's surface to become clogged with dust, dirt, etc. To clean the coil, vertically (i.e., with the fins) stroke the coil surface with a soft-bristled brush. Be sure to keep all vegetation away from the condenser coil area.

Maintenance performed by serviceman.

To keep your unit operating safely and efficiently, the manufacturer recommends that a qualified serviceman check the entire system at least once each year and any other time that you feel one is needed. Your serviceman should examine these areas of your unit:

Filters
Motors and drive system components
Economizer gaskets (for possible replacement)
Safety controls (for mechanical cleaning)
Electrical components and wiring (for possible replacement and connection tightness)
Condensate drain (for cleaning)
Unit duct connections (to see that they are physically sound and sealed to the unit casing)
Unit mounting support (for structural integrity)
The unit (for obvious unit deterioration)

CAUTION:

Do not operate the unit without the evaporator fan access panel in place. Reinstall the access panel after performing any maintenance. Operating the unit without the access panel may result in severe personal injury or death.

Appendix :

1. Indoor Temp. and Pipe Temp. Sensor Resistance Value Table (6.2ton and above)

℃	K Ohm	℃	K Ohm	℃	K Ohm	℃	K Ohm
-20	115.266	20	12.6431	60	2.35774	100	0.62973
-19	108.146	21	12.0561	61	2.27249	101	0.61148
-18	101.517	22	11.5000	62	2.19073	102	0.59386
-17	96.3423	23	10.9731	63	2.11241	103	0.57683
-16	89.5865	24	10.4736	64	2.03732	104	0.56038
-15	84.2190	25	10.000	65	1.96532	105	0.54448
-14	79.3110	26	9.55074	66	1.89627	106	0.52912
-13	74.5360	27	9.12445	67	1.83003	107	0.51426
-12	70.1698	28	8.71983	68	1.76647	108	0.49989
-11	66.0898	29	8.33566	69	1.70547	109	0.48600
-10	62.2756	30	7.97078	70	1.64691	110	0.47256
-9	58.7079	31	7.62411	71	1.59068	111	0.45957
-8	56.3694	32	7.29464	72	1.53668	112	0.44699
-7	52.2438	33	6.98142	73	1.48481	113	0.43482
-6	49.3161	34	6.68355	74	1.43498	114	0.42304
-5	46.5725	35	6.40021	75	1.38703	115	0.41164
-4	44.0000	36	6.13059	76	1.34105	116	0.40060
-3	41.5878	37	5.87359	77	1.29078	117	0.38991
-2	39.8239	38	5.62961	78	1.25423	118	0.37956
-1	37.1988	39	5.39689	79	1.21330	119	0.36954
0	35.2024	40	5.17519	80	1.17393	120	0.35982
1	33.3269	41	4.96392	81	1.13604	121	0.35042
2	31.5635	42	4.76253	82	1.09958	122	0.3413
3	29.9058	43	4.57050	83	1.06448	123	0.33246
4	28.3459	44	4.38736	84	1.03069	124	0.32390
5	26.8778	45	4.21263	85	0.99815	125	0.31559
6	25.4954	46	4.04589	86	0.96681	126	0.30754
7	24.1932	47	3.88673	87	0.93662	127	0.29974
8	22.5662	48	3.73476	88	0.90753	128	0.29216
9	21.8094	49	3.58962	89	0.87950	129	0.28482
10	20.7184	50	3.45097	90	0.85248	130	0.27770
11	19.6891	51	3.31847	91	0.82643	131	0.27078
12	18.7177	52	3.19183	92	0.80132	132	0.26408
13	17.8005	53	3.07075	93	0.77709	133	0.25757
14	16.9341	54	2.95896	94	0.75373	134	0.25125
15	16.1156	55	2.84421	95	0.73119	135	0.24512
16	15.3418	56	2.73823	96	0.70944	136	0.23916
17	14.6181	57	2.63682	97	0.68844	137	0.23338
18	13.9180	58	2.53973	98	0.66818	138	0.22776
19	13.2631	59	2.44677	99	0.64862	139	0.22231