

Westair

PACKAGED UNITS



WPH SERIES (3.5 - 25 Ton)

EFFICIENT, RELIABLE AND DURABLE NEW SERIES. . . .

*Baked Paint Galvanized Steel Panels

Corrosion Resistant Cabinet – The weather proof characteristics of the panels have been significantly reinforced by the adoption of galvanized steel panels which have been coated with synthetic resin paint through our unique baking process. The resistant panels ensure a long-lasting fine appearance and minimized maintenance work.

*Reliable Protection System

Compressor Protection – Each compressor is protected with a high pressure switch, an overcurrent relay, a crankcase heater, an internal thermostat (only for model of 30HP), a discharge gas thermostat (for models 4HP to 25HP), a reverse phase protection relay, and a cycling protection timer relay. This wide variety of protection devices provides perfect compressor guarding functions, assuring fewer service calls from customers.

Fan Motor – The evaporator fan motors are protected with a thermal overcurrent relay and the condenser fan motors are protected with an internal thermostat.

*Energy-Saving Design

Highly-Efficient Compressor – Low power input is achieved by specially developed compressors and heat exchangers and their suitable combinations.

Condenser – The adoption of a highly efficient super-slit fin heat exchanger provides a low operation cost.

Evaporator – Highly efficient super-slit fin coils and inner grooved tubes have been applied to provide a large cooling capacity with low noise.

Insulated Indoor Compartment – This insulation compartment effectively eliminates heat loss.

Capacity control (Dual circuit units) – Each unit is equipped with two compressors and two independent refrigeration cycles so that one compressor operation can reduce the operation cost against a half load of one large compressor (60% load operation is available for WPH-13)

EFFECTIVELY MATCHED SELECTION FOR INDIVIDUAL APPLICATIONS. . . .

*Optimally Matched Choice

High Temperature Operation – Designed for high outdoor temperatures, these units guarantee reliable operation even under conditions of up to an ambient temperature of 52°C(125°F)

Attractive Fan Performance – Adequate external static pressure by the evaporator fan can be obtained for individual ducting applications.

*Minimum Installation Arrangement

Easy Installation – This easy-to-install and ready-to-operate unit ensures rapid and low cost installation work.

Pre-Drilled Duct Flange – Flanges are prepared at the supply and return duct connections so that they can reduce duct connection work at the site.

Factory-Completed – Only system connection work is required, excluding the installation work for auxiliary equipment.

*Quiet Operation

Compressor – Noise and vibration have been effectively reduced by the adoption of a hermetic compressor.

Condenser Fan – This direct drive propeller fan is dynamically balanced to ensure smooth airflow.

Evaporator Fan – The centrifugal fan and fan casing are optimally shaped for efficient and low noise operation.

*Reduced Maintenance Work

Easy Maintenance – Large service spaces and rapidly removable service panels have been provided for easy maintenance work.

OPTIONAL ACCESSORIES

Filter Box and Filter

Optional specifications (see page 4)

Unit General Data

Models			WPH-4	WPH-5	WPH-6	WPH-8	WPH-10
Nominal Cooling Capacity at 35°C out door temperature*	kcal/h		10,100	12,500	15,500	18,600	26,300
	W		11,700	14,600	18,000	21,700	30,600
	Btu/h		40,100	49,700	61,500	73,900	104,500
Nominal Cooling Capacity at 46°C out door temperature**	kcal/h		8,900	11,300	14,000	16,700	23,700
	W		10,400	13,200	16,300	19,400	27,600
	Btu/h		35,300	44,900	55,600	66,300	94,100
Capacity Control	%		100,0	100,0	100,0	100,0	100,0
Cabinet Color (MUNSELL CODE)			Synthetic Resin Paint Baked on Galvanized Steel Plates Beige(2.5Y 8/2)				
Outer Dimensions	Height	mm (in.)	630 (24-13/16)	630 (24-13/16)	730 (28-3/4)	730 (28-3/4)	900 (35-7/16)
	Width	mm (in.)	1,020 (40-3/16)	1,020 (40-3/16)	1,020 (40-3/16)	1,020 (40-3/16)	1,020 (40-3/16)
	Depth	mm (in.)	1,460 (57-1/2)	1,460 (57-1/2)	1,660 (65-3/8)	1,660 (65-3/8)	1,660 (65-3/8)
Net Weight		kg (lbs.)	195 (430)	195 (430)	230 (507)	280 (617)	310 (682)
Refrigerant Flow Control Number of Circuits			R-22 Capillary Tube 1				
Compressor			Hermetic Scroll				
Model			400DH	500DH	600DH	750EL	1000EL
Motor	kW (hp)		3.0 (4)	3.75 (5)	4.4 (6)	5.5 (7.5)	7.5 (10)
Quantity			1	1	1	1	1
Condenser			Multi-Pass Cross-Finned Tube				
Fan			Propeller Fan				
Air Flow	m ³ /min		120	120	135	135	160
Motor	kW (hp)		0.3 (2/5)	0.3 (2/5)	0.45 (3/5)	0.45 (3/5)	0.4 (1/2)
Quantity			1	1	1	1	1
Evaporator			Multi-Pass Cross-Finned Tube				
Fan			Multi-Blade Centrifugal Fan (Double Suction)				
Nominal Air Flow	m ³ /min		37	46	65	69	90
	m ³ /s		0.62	0.77	1.08	1.15	1.5
	L/s		620	770	1,080	1,150	1,500
Motor	kW (hp)		0.35 (1/2)	0.55 (3/4)	0.75 (1)	0.75 (1)	1.5 (2)
Quantity			1	1	1	1	1
Connections Condensate Drain			Female Piping Thread Screw				
Size	FTP		3/4	3/4	3/4	3/4	3/4
Quantity			1	1	1	1	1
Wiring Hole Main			Knockout Hole				
Control	mm (in.)		Ø52 (2-1/16)	Ø52 (2-1/16)	Ø52 (2-1/16)	Ø52 (2-1/16)	Ø52 (2-1/16)
	mm (in.)		Ø26.1 (1-1/32)	Ø26.1 (1-1/32)	Ø26.1 (1-1/32)	Ø26.1 (1-1/32)	Ø26.1 (1-1/32)
	mm (in.)		Ø26.1 (1-1/32)	Ø26.1 (1-1/32)	Ø26.1 (1-1/32)	Ø26.1 (1-1/32)	Ø26.1 (1-1/32)
Shipping Weight		kg (lbs.)	220 (484)	220 (484)	260 (573)	310 (683)	345 (759)
Approximate Packing List	Height	mm (in.)	785 (30-14/16)	785 (30-14/16)	885 (34-13/16)	885 (34-13/16)	1,055 (41-9/16)
	Width	mm (in.)	1,080 (42-1/2)	1,080 (42-1/2)	1,080 (42-1/2)	1,080 (42-1/2)	1,080 (42-1/2)
	Depth	mm (in.)	1,525 (60)	1,525 (60)	1,725 (67-15/16)	1,725 (67-15/16)	1,725 (67-15/16)
Measurements		m ³	1.29	1.29	1.65	1.65	1.97

Unit General Data (Continued)

Models			WPH-13		WPH-15		WPH-20		WPH-25		WPH-30	
Nominal Cooling Capacity at 35°C out door temperature*		kcal/h	31,300		38,800		52,700		61,000		78,100	
		W	36,400		45,100		61,300		70,930		90,800	
		Btu/h	124,300		154,100		209,300		242,050		310,100	
Nominal Cooling Capacity at 46°C outdoor temperature**		kcal/h	28,300		35,000		47,500		53,800		70,400	
		W	32,900		40,700		55,200		62,560		81,900	
		Btu/h	112,300		139,000		188,600		213,480		279,500	
Capacity Control		%	100.60.0		100.50.0		100.50.0		100.50.0		100.50.0	
Cabinet Color (MUNSELL CODE)			Synthetic Resin Paint Baked on Galvanized Steel Plates Beige(2.5Y 8/2)									
Outer Dimensions	Height	mm (in)	980 (38-19/32)		980 (38-19/32)		1,500 (59-1/16)		1,500 (59-1/16)		1,500 (59-1/16)	
	Width	mm (in)	1,400 (55-1/8)		1,400 (55-1/8)		1,900 (74-13/16)		1,900 (74-13/16)		1,900 (74-13/16)	
	Depth	mm (in)	2,135 (84)		2,135 (84)		1,954 (76-9/16)		2,425 (95-1/2)		2,425 (95-1/2)	
Net Weight		kg (lbs.)	495 (1,089)		565 (1,243)		800 (1,760)		950 (2,094)		985 (2,167)	
Refrigerant Flow Control Number of Circuits			R-22 Capillary Tube 2									
Compressor			Hermetic Scroll									
Model Motor			750EL/500DH		750EL		1000EL		1200EL		ZR19M3	
		kW (hp)	5.5/3.75 (7.5)/(5)		5.5 (7.5)		7.5 (10)		9.0 (12)		10.8 (15)	
Quantity			2		2		2		2		2	
Condenser			Multi-Pass Cross-Finned Tube									
Fan			Direct Driven Propeller Fan									
Air Flow		m³/min	255		270		320		480		480	
Motor		kW (hp)	0.3/0.4 (2/5)/(1/2)		0.4 (1/2)		0.3 (2/5)		0.3 (2/5)		0.3 (2/5)	
Quantity			2		2		2		3		3	
Evaporator			Multi-Pass Cross-Finned Tube									
Fan			Multi-Blade Centrifugal Fan (Double Suction)									
Nominal Air Flow		m³/min	110		130		180		234		260	
		m³/s	1.83		2.17		3		3.9		4.33	
		L/s	1830		2170		3,000		3,900		4,330	
Motor		kW (hp)	2.2 (3)		2.2 (3)		3.7 (5)		5.5 (7.5)		5.5 (7.5)	
Quantity			1		1		1		1		1	
Connections Condensate Drain			Female Piping Thread Screw									
Size		FTP	3/4		3/4		1		1		1	
Quantity			2		2		2		2		2	
Wiring Hole Main			Knockout Hole									
		mm (in.)	ø52 (2-1/16)		ø52 (2-1/16)		ø52 (2-1/16)		ø52 (2-1/16)		ø52 (2-1/16)	
Control		mm (in.)	ø26.1 (1-1/32)		ø26.1 (1-1/32)		ø32.5 (1-1/4)		ø32.5 (1-1/4)		ø32.5 (1-1/4)	
Shipping Weight		kg (lbs.)	610 (1342)		680 (1490)		960 (2112)		1140 (2513)		1175 (2585)	
Approximate Packing List	Height	mm (in.)	1075 (42-5/16)		1075 (42-5/16)		1680 (66-1/8)		1680 (66-1/8)		1680 (66-1/8)	
	Width	mm (in.)	1,525 (60-1/16)		1,525 (60-1/16)		2100 (82-11/16)		2100 (82-11/16)		2100 (82-11/16)	
	Depth	mm (in.)	2220 (87-3/8)		2220 (87-3/8)		2045 (80-1/2)		2510 (98-13/16)		2510 (98-13/16)	
Measurements		m³	3.64		3.64		7.2		8.86		8.86	

Notes :

1. The capacities are gross capacities, which include the effect of evaporator fan motor heat.

Evaporator Air Inlet Temperature

27°C DB (80°F DB)

19°C WB (66°F WB)

Condenser Air Inlet Temperature:

*35°C DB (95°F DB)

**46°C DB (115°F DB)

Standard Power Supply:

Main (AC3Ø)	Control (AC 1Ø)
380V 50Hz	220V 50Hz
415V 50Hz	240V 50Hz

The control circuit voltage is decreased to AC 1Ø 24V by the transformer provided in the unit, and the following electric components are connected with the 24V circuit:

coils of the magnetics switches, and timer, and whole components for the control center.

Working Range:

Models	Condenser Air Inlet Temperature		Evaporator Air Inlet Temperature	
	Maximum	Minimum	Maximum	Minimum
WPH-4	52°C DB 125°F DB	20°C DB 68°F DB	35°C DB/21.5°C WB (95°F DB/70.5°F WB)	19.5°C DB/14°C WB (67°F DB/57°F WB)
WPH-5				
WPH-6				
WPH-8				
WPH-10				
WPH-13				
WPH-15				
WPH-20	52°C DB 125°F DB	10°C DB 50°F DB		
WPH-25 WPH-30	52°C DB 125°F DB	14°C DB 57°F DB		

NOTES:

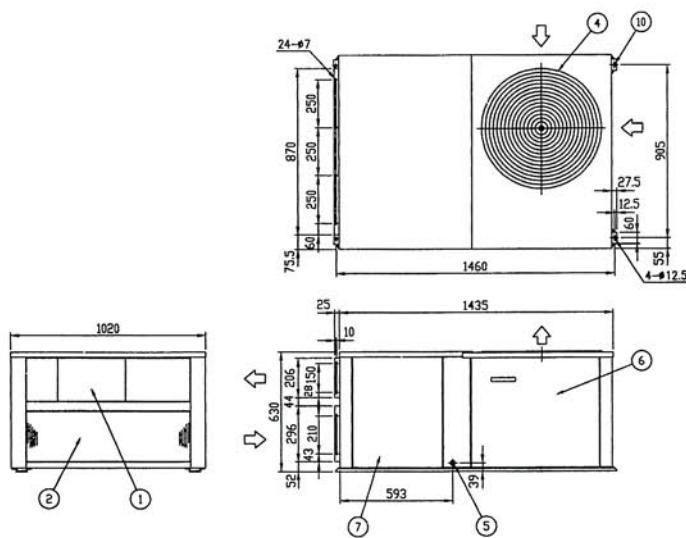
1. When the unit is operating at a condenser air inlet temperature of 52°C DB (125°F DB), the maximum evaporator air inlet temperature shall be 18°C WB (64.4°F WB).
2. The indoor temperature ranges are based on the following air flow.
Air Flow:80% to 120% of Nominal Air Flow.

Optional Specifications for WPH-13~30

- (1) Low Pressure Switch (Auto reset with Lockout Relay)
- (2) Thermostatic Expansion Valve
- (3) Double Skin Cabinet
- (4) Single Phase Preventer
- (5) Filter Dryer
- (6) Sight Glass

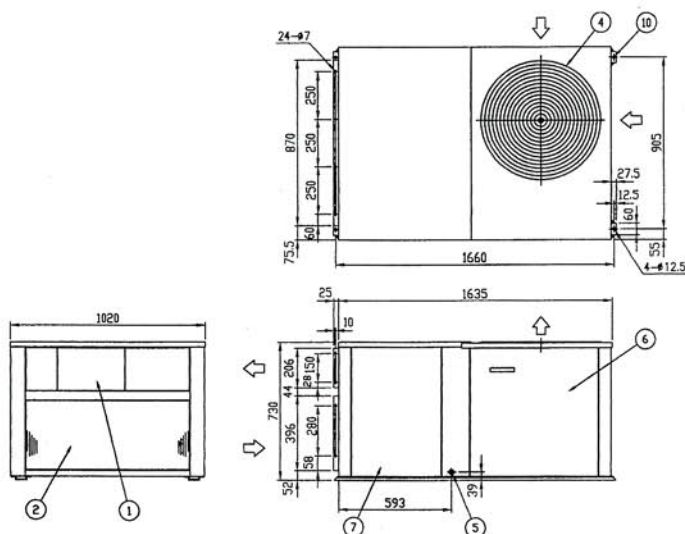
Unit Dimensions

WPH-4 and WPH-5



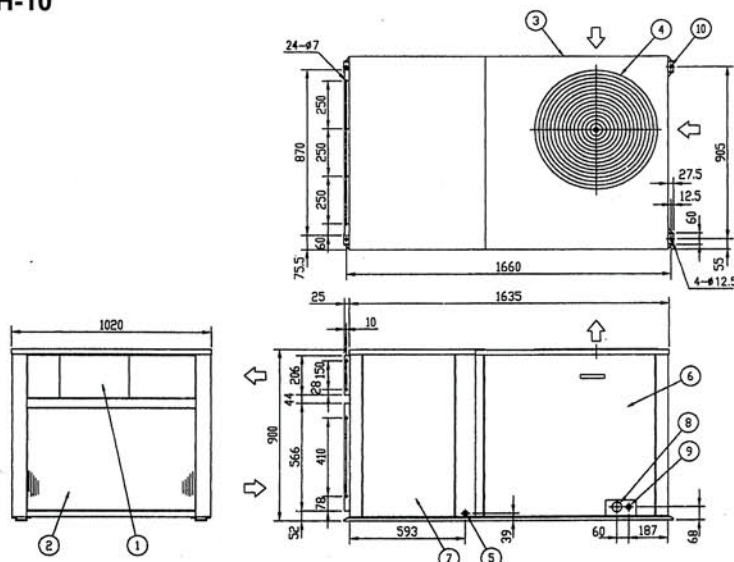
Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 3/4)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (φ 52)
9	Knockout Hole for Operation Circuit Wiring (φ 26.1)
10	Mounting Holes

WPH-6 and WPH-8



Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 3/4)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (φ 52)
9	Knockout Hole for Operation Circuit Wiring (φ 26.1)
10	Mounting Holes

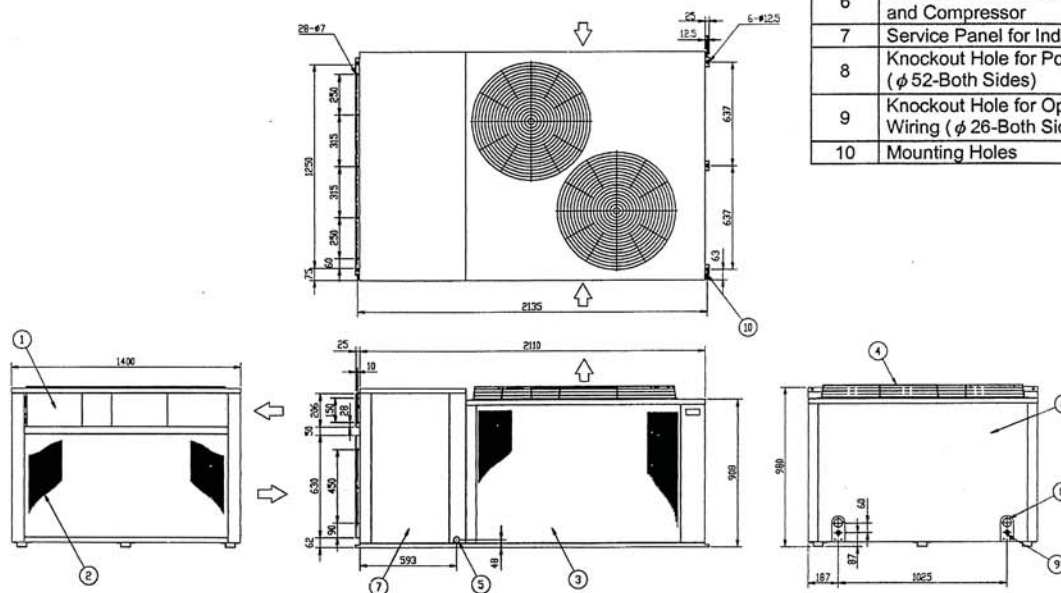
WPH-10



Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 3/4)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (φ 52)
9	Knockout Hole for Operation Circuit Wiring (φ 26.1)
10	Mounting Holes

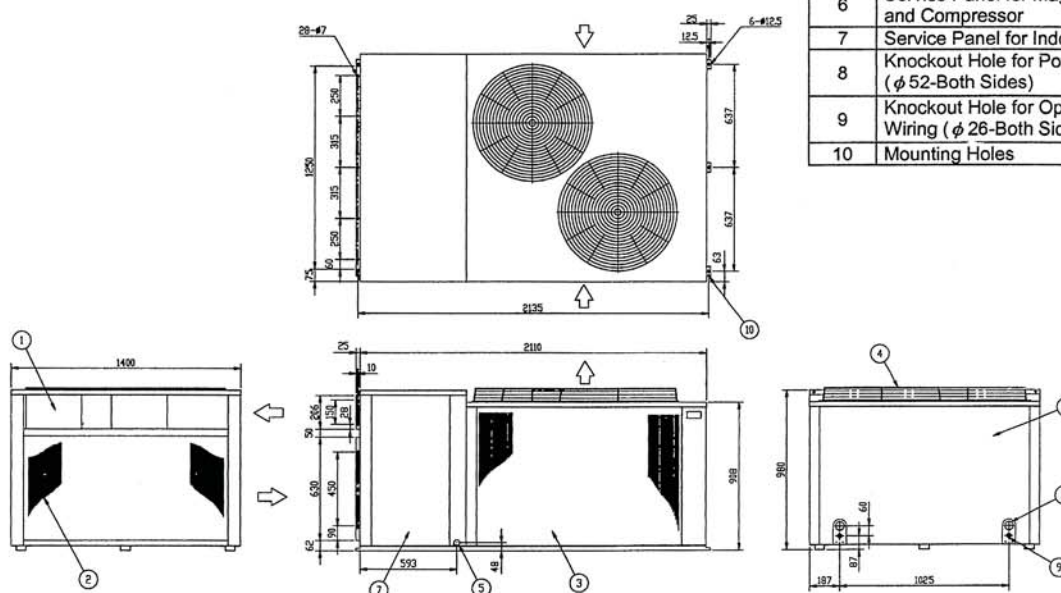
Unit Dimensions (Continued)

WPH-13



Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 3/4-Both Sides)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (φ 52-Both Sides)
9	Knockout Hole for Operation Circuit Wiring (φ 26-Both Sides)
10	Mounting Holes

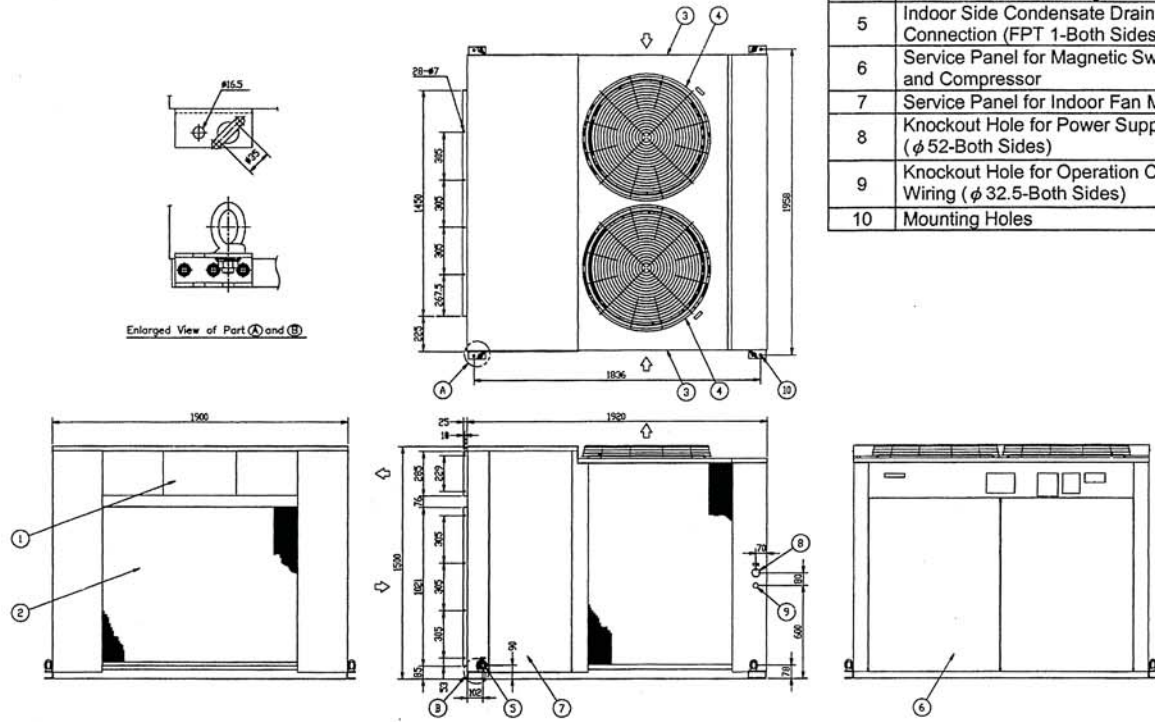
WPH-15



Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 3/4-Both Sides)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (φ 52-Both Sides)
9	Knockout Hole for Operation Circuit Wiring (φ 26-Both Sides)
10	Mounting Holes

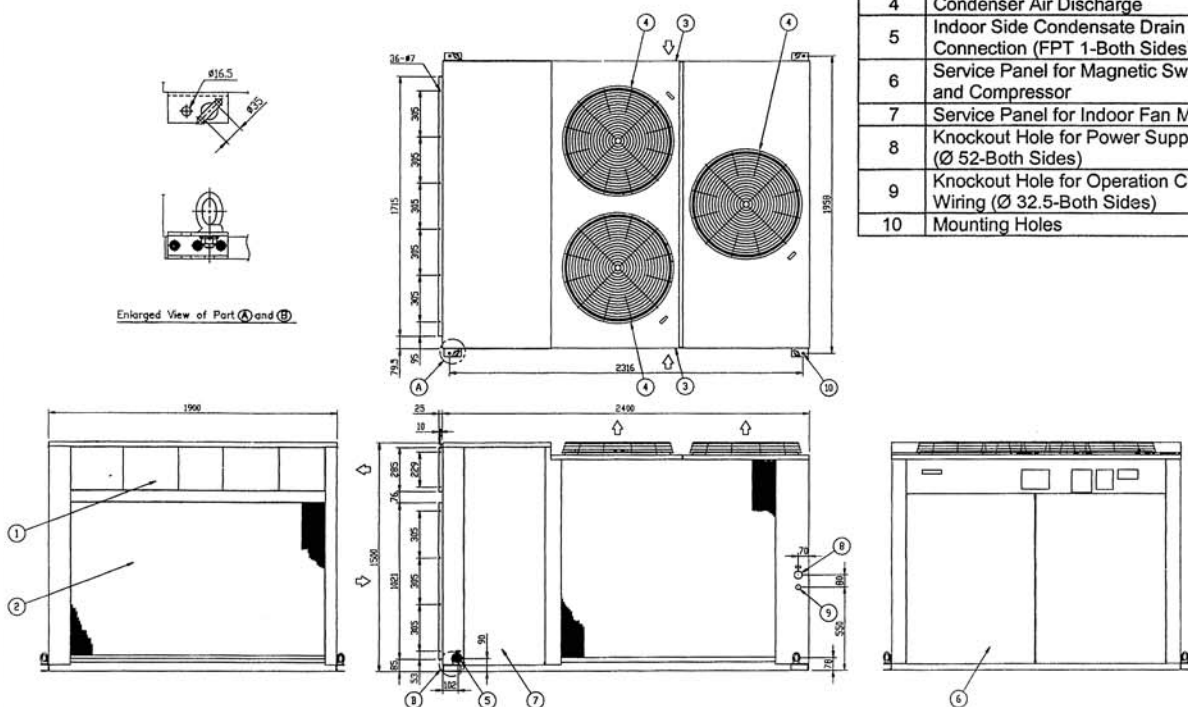
Unit Dimensions (Continued)

WPH-20



Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 1-Both Sides)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (φ 52-Both Sides)
9	Knockout Hole for Operation Circuit Wiring (φ 32.5-Both Sides)
10	Mounting Holes

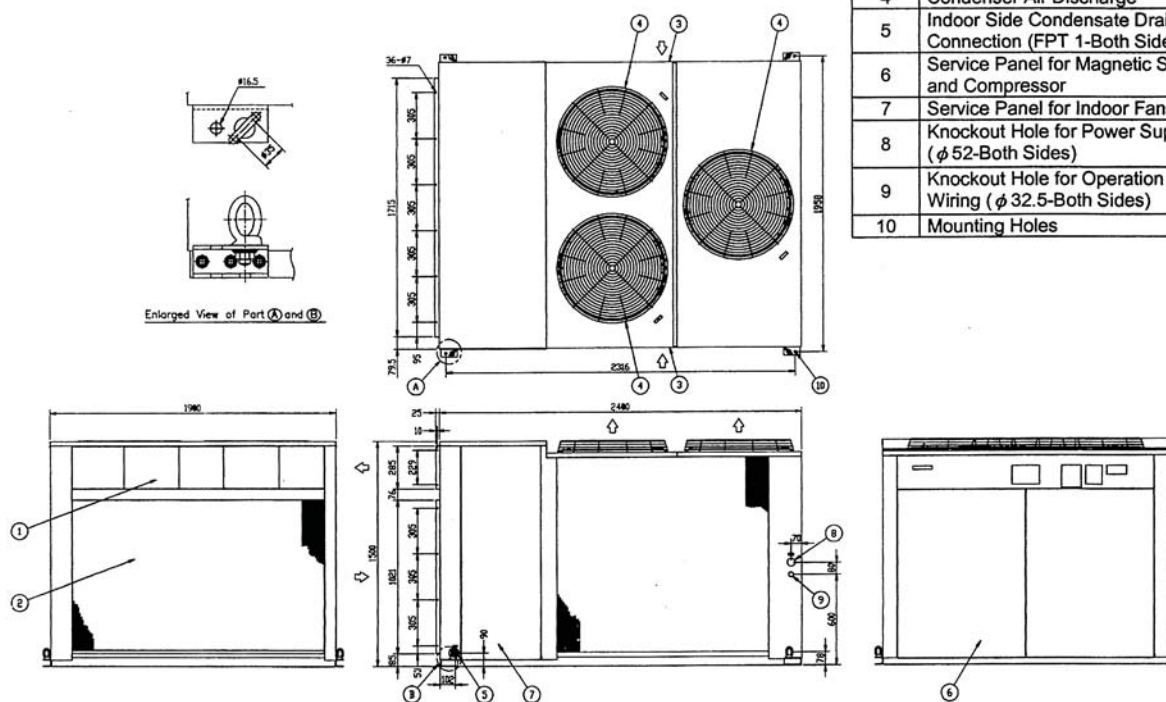
WPH-25



Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 1-Both Sides)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (Ø 52-Both Sides)
9	Knockout Hole for Operation Circuit Wiring (Ø 32.5-Both Sides)
10	Mounting Holes

WPH-30

Mark	Name
1	Supply Air Connection
2	Return Air Connection
3	Condenser Air Intake (Both Sides)
4	Condenser Air Discharge
5	Indoor Side Condensate Drain Connection (FPT 1-Both Sides)
6	Service Panel for Magnetic Switch Box and Compressor
7	Service Panel for Indoor Fan Motor
8	Knockout Hole for Power Supply Wiring (ϕ 52-Both Sides)
9	Knockout Hole for Operation Circuit Wiring (ϕ 32.5-Both Sides)
10	Mounting Holes



Cooling Capacities (Continued)

Conversion Multiplier: 1kcal/h = 1.163 W
= 3.968 Btu/h

Models	Evaporator Air Inlet			Condenser Air Inlet Temperature (°C)																							
	QA -CR-	WB	DB* (°C)	20			25			30			35			40			46			52					
				TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT			
WPH-4	29.6 -0.474-	18	25	10.0	7.1	2.8	9.7	7.0	3.0	9.3	6.8	3.2	8.9	6.6	3.3	8.4	6.5	3.6	7.9	6.2	3.9	7.2	5.9	4.1			
		20	27	10.7	7.1	2.9	10.4	7.0	3.1	10.0	6.8	3.3	9.5	6.6	3.4	9.0	6.4	3.7	8.4	6.2	4.0	7.7	5.9	4.2			
		22	30	11.2	7.4	3.0	10.8	7.3	3.2	10.4	7.1	3.4	9.9	6.9	3.5	9.4	6.7	3.8	8.8	6.5	4.1	8.1	6.3	4.3			
	33.3 -0.522-	16	23	9.6	7.5	2.8	9.2	7.4	3.0	8.9	7.2	3.2	8.5	7.0	3.3	8.0	6.8	3.5	7.5	6.6	3.8	6.8	6.3	4.0			
		18	25	10.4	7.6	2.9	10.0	7.4	3.1	9.6	7.2	3.3	9.2	7.1	3.4	8.7	6.9	3.6	8.1	6.6	3.9	7.4	6.3	4.2			
		20	27	11.1	7.5	2.9	10.7	7.4	3.1	10.3	7.2	3.3	9.8	7.0	3.5	9.3	6.8	3.7	8.7	6.6	4.0	8.0	6.3	4.3			
	22	30	11.6	7.9	3.0	11.2	7.7	3.2	10.7	7.6	3.4	10.2	7.4	3.6	9.7	7.2	3.8	9.1	7.0	4.1	8.4	6.7	4.4				
	37.0 -0.567-	14	20	9.0	7.3	2.7	8.7	7.1	2.9	8.3	7.0	3.1	7.9	6.8	3.2	7.5	6.6	3.5	7.0	6.4	3.7	6.4	6.1	3.9			
		16	23	9.9	7.9	2.8	9.5	7.8	3.0	9.2	7.6	3.2	8.8	7.4	3.3	8.3	7.3	3.6	7.7	7.0	3.8	7.1	6.7	4.1			
		18	25	10.7	8.0	2.9	10.4	7.8	3.1	9.9	7.7	3.3	9.5	7.5	3.4	9.0	7.3	3.7	8.4	7.0	4.0	7.7	6.7	4.2			
		20	27	11.5	8.0	3.0	11.1	7.8	3.2	10.6	7.6	3.4	10.2	7.4	3.5	9.7	7.2	3.8	9.0	7.0	4.1	8.2	6.7	4.3			
	22	30	12.0	8.3	3.1	11.6	8.2	3.3	11.1	8.0	3.5	10.6	7.8	3.6	10.1	7.6	3.9	9.4	7.4	4.2	8.7	7.1	4.4				
	40.7 -0.610-	14	20	9.2	7.6	2.7	8.9	7.5	2.9	8.6	7.3	3.1	8.2	7.2	3.2	7.8	7.0	3.5	7.3	6.7	3.8	6.6	6.4	4.0			
		16	23	10.2	8.4	2.8	9.8	8.2	3.0	9.5	8.0	3.2	9.0	7.8	3.3	8.6	7.6	3.6	8.0	7.4	3.9	7.3	7.1	4.1			
		18	25	11.1	8.4	2.9	10.7	8.2	3.1	10.3	8.1	3.3	9.8	7.9	3.4	9.3	7.7	3.7	8.7	7.4	4.0	7.9	7.1	4.2			
		20	27	11.9	8.4	3.0	11.4	8.2	3.2	11.0	8.0	3.4	10.5	7.8	3.5	10.0	7.6	3.8	9.3	7.4	4.1	8.5	7.1	4.4			
	22	30	12.4	8.8	3.1	11.9	8.6	3.3	11.4	8.4	3.5	10.9	8.3	3.6	10.4	8.1	3.9	9.7	7.8	4.2	8.9	7.6	4.5				
	44.4 -0.650-	14	20	9.5	8.0	2.8	9.2	7.8	3.0	8.9	7.7	3.2	8.5	7.5	3.2	8.0	7.3	3.5	7.5	7.1	3.8	6.9	6.8	4.0			
		16	23	10.5	8.7	2.9	10.2	8.6	3.1	9.8	8.4	3.3	9.3	8.2	3.4	8.8	8.0	3.7	8.2	7.8	3.9	7.5	7.5	4.2			
		18	25	11.4	8.8	3.0	11.0	8.6	3.2	10.6	8.4	3.4	10.1	8.3	3.5	9.6	8.0	3.8	8.9	7.8	4.0	8.1	7.5	4.3			
20		27	12.2	8.7	3.0	11.8	8.6	3.2	11.3	8.4	3.5	10.8	8.2	3.6	10.3	8.0	3.9	9.6	7.7	4.1	8.8	7.4	4.4				
22	30	12.8	9.2	3.1	12.3	9.0	3.3	11.8	8.8	3.5	11.3	8.7	3.6	10.7	8.5	4.0	10.0	8.2	4.3	9.2	7.9	4.5					
WPH-5	36.8 -0.589-	18	25	12.7	9.0	3.7	12.2	8.8	4.0	11.7	8.5	4.2	11.2	8.3	4.5	10.6	8.1	4.7	9.9	7.8	5.1	9.0	7.4	5.4			
		20	27	13.5	8.9	3.8	13.1	8.7	4.1	12.6	8.5	4.3	12.0	8.3	4.6	11.4	8.0	4.8	10.6	7.7	5.2	9.7	7.4	5.5			
		22	30	14.1	9.3	3.9	13.6	9.1	4.2	13.1	8.9	4.4	12.5	8.7	4.7	11.9	8.4	5.0	11.1	8.1	5.3	10.2	7.8	5.7			
	41.4 -0.648-	16	23	12.1	9.4	3.6	11.6	9.2	3.9	11.2	9.0	4.2	10.7	8.8	4.4	10.1	8.6	4.6	9.4	8.3	5.0	8.6	7.9	5.3			
		18	25	13.1	9.5	3.8	12.6	9.3	4.0	12.1	9.1	4.3	11.6	8.8	4.5	11.0	8.6	4.8	10.2	8.3	5.1	9.3	7.9	5.4			
		20	27	14.0	9.4	3.8	13.5	9.2	4.1	13.0	9.0	4.4	12.4	8.8	4.6	11.8	8.6	4.9	11.0	8.2	5.3	10.1	7.9	5.6			
		22	30	14.6	9.9	4.0	14.1	9.7	4.2	13.5	9.5	4.5	12.9	9.2	4.7	12.3	9.0	5.0	11.5	8.7	5.4	10.6	8.4	5.7			
	46.0 -0.705-	14	20	11.3	9.1	3.6	10.9	8.9	3.8	10.5	8.7	4.1	10.0	8.5	4.3	9.5	8.3	4.5	8.9	8.0	4.9	8.1	7.6	5.2			
		16	23	12.5	10.0	3.7	12.0	9.8	3.9	11.5	9.5	4.2	11.0	9.3	4.4	10.5	9.1	4.7	9.7	8.8	5.0	8.9	8.4	5.3			
		18	25	13.5	10.0	3.8	13.1	9.8	4.1	12.5	9.6	4.3	12.0	9.4	4.6	11.4	9.1	4.8	10.6	8.8	5.2	9.6	8.4	5.5			
		20	27	14.5	10.0	3.9	14.0	9.8	4.2	13.4	9.5	4.4	12.8	9.3	4.7	12.2	9.1	5.0	11.3	8.7	5.3	10.4	8.4	5.6			
		22	30	15.1	10.4	4.0	14.6	10.2	4.3	14.0	10.0	4.5	13.4	9.8	4.8	12.7	9.6	5.1	11.8	9.2	5.5	10.9	8.9	5.8			
	50.6 -0.758-	14	20	11.6	9.6	3.6	11.3	9.4	3.9	10.8	9.2	4.1	10.3	9.0	4.3	9.8	8.7	4.6	9.1	8.4	4.9	8.4	8.1	5.2			
		16	23	12.8	10.5	3.7	12.4	10.3	4.0	11.9	10.0	4.2	11.4	9.8	4.5	10.8	9.6	4.7	10.1	9.2	5.1	9.2	8.9	5.4			
		18	25	14.0	10.5	3.8	13.5	10.3	4.1	13.0	10.1	4.4	12.4	9.8	4.6	11.8	9.6	4.9	10.9	9.3	5.2	10.0	8.9	5.6			
		20	27	14.9	10.5	3.9	14.4	10.3	4.2	13.8	10.0	4.5	13.2	9.8	4.7	12.6	9.5	5.0	11.7	9.2	5.4	10.7	8.9	5.7			
		22	30	15.6	11.0	4.0	15.0	10.8	4.3	14.4	10.6	4.6	13.8	10.3	4.9	13.1	10.1	5.1	12.2	9.8	5.5	11.3	9.4	5.9			
	55.2 -0.808-	14	20	12.0	10.0	3.6	11.6	9.8	3.9	11.2	9.6	4.1	10.7	9.4	4.4	10.1	9.1	4.6	9.4	8.8	5.0	8.6	8.5	5.3			
		16	23	13.2	11.0	3.8	12.8	10.7	4.0	12.3	10.5	4.3	11.8	10.3	4.5	11.2	10.0	4.8	10.4	9.7	5.1	9.5	9.3	5.5			
		18	25	14.4	11.0	3.9	13.9	10.8	4.1	13.4	10.6	4.4	12.8	10.3	4.7	12.1	10.1	4.9	11.3	9.7	5.3	10.3	9.3	5.6			
20		27	15.3	11.0	4.0	14.9	10.7	4.3	14.3	10.5	4.5	13.7	10.3	4.8	13.0	10.0	5.1	12.1	9.7	5.4	11.1	9.3	5.8				
22		30	16.0	11.5	4.1	15.5	11.3	4.4	14.9	11.1	4.6	14.2	10.8	4.9	13.5	10.6	5.2	12.6	10.3	5.6	11.6	9.9	5.9				
WPH-6	52.0 -0.832-	18	25	15.7	11.7	4.2	15.1	11.4	4.5	14.5	11.2	4.8	13.9	10.9	5.1	13.2	10.6	5.4	12.3	10.2	5.9	11.2	9.8	6.2			
		20	27	16.8	11.6	4.3	16.2	11.4	4.6	15.5	11.1	4.9	14.9	10.9	5.3	14.1	10.6	5.7	13.1	10.2	6.2	12.0	9.8	6.6			
		22	30	17.5	12.2	4.4	16.9	12.0	4.7	16.2	11.7	5.0	15.5	11.4	5.4	14.7	11.2	5.9	13.7	10.8	6.4	12.6	10.5	6.8			
	58.5 -0.916-	16	23	14.9	12.4	4.1	14.4	12.1	4.4	13.8	11.9	4.7	13.2	11.6	5.0	12.6	11.3	5.4	11.7	10.9	5.9	10.7	10.5	6.2			
		18	25	16.2	12.4	4.2	15.7	12.2	4.5	15.0	11.9	4.8	14.4	11.6	5.2	13.6	11.3	5.6	12.7	11.0	6.1	11.6	10.5	6.3			
		20	27	17.4	12.4	4.3	16.8	12.1	4.7	16.1	11.9	4.9	15.4	11.6	5.3	14.6	11.3	5.8	13.6	10.9	6.4	12.5	10.5	6.7			
		22	30	18.1	13.0	4.5	17.5	12.8	4.8	16.8	12.5	5.1	16.0	12.2	5.5	15.2	12.0	6.0	14.2	11.6	6.6	13.1	11.2	6.9			
		65.0 -0.996-	14	20	14.0	11.9	4.0	13.5	11.7	4.3	13.0	11.5	4.6	12.4	11.2	4.9	11.8	10.9	5.3	11.0	10.6	5.9	10.0	10.0	6.2		
	16		23	15.4	13.1	4.2	14.9	12.9	4.5	14.3	12.6	4.7	13.7	12.3	5.1	13.0	12.0	5.5	12.1	11.6	6.2	11.1	11.1	6.4			
	18		25	16.8	13.1	4.3	16.2	12.9	4.6	15.5	12.6	4.9	14.9	12.3	5.2	14.1	12.0	5.7	13.1	11.6	6.4	12.0	11.2	6.6			
	20		27	18.0	13.1	4.4	17.3	12.8	4.7	16.6	12.6	5.0	15.9	12.3	5.4	15.1	12.0	5.9	14.0	11.7	6.6	12.9	11.2	6.9			
	22		30	18.7	13.8	4.5	18.1	13.5	4.8	17.3	13.3	5.1	16.6	13.0	5.5	15.7	12.7	6.1	14.7	12.3	6.7	13.5	12.0	7.0			
	71.5 -1.08-	14	20	14.5	12.6	4.1	14.0	12.3	4.4	13.4	12.1	4.6	12.8	11.8	5.0	12.2	11.5	5.4	11.3	11.2	6.0	10.4	10.4	6.3			
		16	23	15.9	13.8	4.2	15.4	13.5	4.5	14.8	13.3	4.8	14.1	13.0	5.1	13.4	12.7	5.5	12.5	12.3	6.1	11.4	11.4	6.5			
		18	25	17.3	13.8	4.3	16.7	13.6	4.6	16.1	13.3	4.9	15.3	13.0	5.3	14.6	12.7	5.8	13.5	12.3	6.3	12.3	11.9	6.7			
20		27	18.5	13.8	4.4	17.9	13.5	4.8	17.2	13.3	5.1	16.4	13.0	5.4	15.6	12.7	5.9	14.5	12.3	6.6	13.3	11.8	6.9				
22		30	19.3	14.5	4.6	18.6	14.3	4.9	17.9	14.0	5.2	17.1	13.7	5.6	16.2	13.4	6.2	15.1</									

Cooling Capacities (Continued)

Conversion Multiplier: 1kcal/h = 1.163 W
= 3.968 Btu/h

Models	Evaporator Air Inlet			Condenser Air Inlet Temperature (°C)																							
	QA -CR-	WB DB*(°C)		20			25			30			35			40			46			52					
				TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT			
WPH-8	55.2 -0.883-	18	25	18.8	13.3	5.4	18.1	13.0	5.8	17.4	12.7	6.1	16.7	12.4	6.5	15.8	12.0	6.9	14.7	11.6	7.4	13.4	11.1	7.8			
		20	27	20.1	13.3	5.5	19.4	13.0	5.9	18.7	12.7	6.3	17.8	12.3	6.6	16.9	12.0	7.0	15.7	11.5	7.6	14.4	11.4	8.0			
		22	30	20.9	13.8	5.7	20.3	13.6	6.1	19.4	13.2	6.5	18.6	12.9	6.8	17.6	12.6	7.2	16.4	12.2	7.8	15.2	11.7	8.2			
	62.1 -0.972-	16	23	17.9	14.1	5.3	17.3	13.8	5.7	16.6	13.5	6.0	15.9	13.1	6.4	15.1	12.8	6.7	14.0	12.3	7.2	12.8	11.8	7.7			
		18	25	19.5	14.1	5.4	18.8	13.8	5.8	18.0	13.5	6.2	17.2	13.2	6.5	16.4	12.8	6.9	15.2	12.4	7.5	13.9	11.8	7.9			
		20	27	20.8	14.1	5.6	20.1	13.8	6.0	19.3	13.5	6.4	18.4	13.1	6.7	17.5	12.8	7.1	16.3	12.3	7.6	14.9	11.8	8.1			
	69.0 -1.06-	14	20	16.8	13.6	5.2	16.2	13.3	5.5	15.6	13.0	5.9	14.9	12.7	6.2	14.1	12.3	6.6	13.2	11.9	7.1	12.0	11.4	7.5			
		16	23	18.5	14.8	5.3	17.9	14.5	5.7	17.2	14.2	6.1	16.4	13.9	6.4	15.6	13.5	6.8	14.5	13.1	7.3	13.3	12.5	7.8			
		18	25	20.1	14.9	5.5	19.4	14.6	5.9	18.6	14.3	6.3	17.8	14.0	6.6	16.9	13.6	7.0	15.7	13.1	7.5	14.3	12.6	8.0			
	75.9 -1.14-	20	27	21.5	14.8	5.6	20.8	14.6	6.0	19.9	14.2	6.4	19.1	13.9	6.8	18.1	13.5	7.2	16.8	13.0	7.7	15.4	12.5	8.2			
		22	30	22.5	15.5	5.8	21.7	15.3	6.2	20.8	14.9	6.6	19.9	14.6	7.0	18.9	14.3	7.4	17.6	13.8	7.9	16.2	13.3	8.4			
		14	20	17.3	14.3	5.2	16.8	14.0	5.6	16.1	13.7	5.9	15.4	13.3	6.3	14.6	13.0	6.7	13.6	12.5	7.1	12.4	12.0	7.6			
	82.8 -1.22-	16	23	19.1	15.6	5.4	18.4	15.3	5.8	17.7	15.0	6.2	16.9	14.6	6.5	16.1	14.3	6.9	14.9	13.8	7.4	13.7	13.3	7.8			
		18	25	20.8	15.7	5.6	20.0	15.4	6.0	19.3	15.0	6.3	18.4	14.7	6.7	17.5	14.3	7.1	16.2	13.8	7.6	14.8	13.3	8.1			
		20	27	22.2	15.6	5.7	21.5	15.3	6.1	20.6	15.0	6.5	19.7	14.6	6.9	18.7	14.2	7.3	17.4	13.7	7.8	16.0	13.2	8.3			
WPH-10	72.0 -1.16-	22	30	23.2	16.4	5.9	22.4	16.1	6.3	21.5	15.7	6.7	20.5	15.4	7.0	19.5	15.0	7.5	18.2	14.6	8.0	16.7	14.1	8.5			
		14	20	17.9	14.9	5.3	17.3	14.6	5.6	16.6	14.3	6.0	15.9	14.0	6.3	15.0	13.6	6.7	14.0	13.2	7.2	12.8	12.6	7.7			
		16	23	19.7	16.3	5.4	19.0	16.0	5.8	18.3	15.7	6.2	17.5	15.3	6.6	16.6	15.0	6.9	15.4	14.5	7.5	14.1	13.9	7.9			
	81.0 -1.27-	18	25	21.4	16.4	5.6	20.7	16.1	6.0	19.9	15.8	6.4	19.0	15.4	6.8	18.0	15.0	7.2	16.7	14.5	7.7	15.3	13.9	8.2			
		20	27	22.9	16.3	5.8	22.1	16.0	6.2	21.2	15.7	6.6	20.3	15.3	6.9	19.3	14.9	7.3	17.9	14.4	7.9	16.5	13.9	8.4			
		22	30	23.9	17.2	5.9	23.1	16.8	6.3	22.1	16.5	6.7	21.1	16.2	7.1	20.1	15.8	7.5	18.7	15.3	8.1	17.3	14.8	8.6			
	90.0 -1.38-	14	20	17.9	14.9	5.3	17.3	14.6	5.6	16.6	14.3	6.0	15.9	14.0	6.3	15.0	13.6	6.7	14.0	13.2	7.2	12.8	12.6	7.7			
		16	23	19.7	16.3	5.4	19.0	16.0	5.8	18.3	15.7	6.2	17.5	15.3	6.6	16.6	15.0	6.9	15.4	14.5	7.5	14.1	13.9	7.9			
		18	25	21.4	16.4	5.6	20.7	16.1	6.0	19.9	15.8	6.4	19.0	15.4	6.8	18.0	15.0	7.2	16.7	14.5	7.7	15.3	13.9	8.2			
	99.0 -1.49-	20	27	22.9	16.3	5.8	22.1	16.0	6.2	21.2	15.7	6.6	20.3	15.3	6.9	19.3	14.9	7.3	17.9	14.4	7.9	16.5	13.9	8.4			
		22	30	23.9	17.2	5.9	23.1	16.8	6.3	22.1	16.5	6.7	21.1	16.2	7.1	20.1	15.8	7.5	18.7	15.3	8.1	17.3	14.8	8.6			
		14	20	17.9	14.9	5.3	17.3	14.6	5.6	16.6	14.3	6.0	15.9	14.0	6.3	15.0	13.6	6.7	14.0	13.2	7.2	12.8	12.6	7.7			
108.0 -1.59-	16	23	19.7	16.3	5.4	19.0	16.0	5.8	18.3	15.7	6.2	17.5	15.3	6.6	16.6	15.0	6.9	15.4	14.5	7.5	14.1	13.9	7.9				
	18	25	21.4	16.4	5.6	20.7	16.1	6.0	19.9	15.8	6.4	19.0	15.4	6.8	18.0	15.0	7.2	16.7	14.5	7.7	15.3	13.9	8.2				
	20	27	22.9	16.3	5.8	22.1	16.0	6.2	21.2	15.7	6.6	20.3	15.3	6.9	19.3	14.9	7.3	17.9	14.4	7.9	16.5	13.9	8.4				
WPH-13	88.0 -1.41-	22	30	23.9	17.2	5.9	23.1	16.8	6.3	22.1	16.5	6.7	21.1	16.2	7.1	20.1	15.8	7.5	18.7	15.3	8.1	17.3	14.8	8.6			
		14	20	17.9	14.9	5.3	17.3	14.6	5.6	16.6	14.3	6.0	15.9	14.0	6.3	15.0	13.6	6.7	14.0	13.2	7.2	12.8	12.6	7.7			
		16	23	19.7	16.3	5.4	19.0	16.0	5.8	18.3	15.7	6.2	17.5	15.3	6.6	16.6	15.0	6.9	15.4	14.5	7.5	14.1	13.9	7.9			
	99.0 -1.55-	18	25	21.4	16.4	5.6	20.7	16.1	6.0	19.9	15.8	6.4	19.0	15.4	6.8	18.0	15.0	7.2	16.7	14.5	7.7	15.3	13.9	8.2			
		20	27	22.9	16.3	5.8	22.1	16.0	6.2	21.2	15.7	6.6	20.3	15.3	6.9	19.3	14.9	7.3	17.9	14.4	7.9	16.5	13.9	8.4			
		22	30	23.9	17.2	5.9	23.1	16.8	6.3	22.1	16.5	6.7	21.1	16.2	7.1	20.1	15.8	7.5	18.7	15.3	8.1	17.3	14.8	8.6			
	110.0 -1.69-	14	20	17.9	14.9	5.3	17.3	14.6	5.6	16.6	14.3	6.0	15.9	14.0	6.3	15.0	13.6	6.7	14.0	13.2	7.2	12.8	12.6	7.7			
		16	23	19.7	16.3	5.4	19.0	16.0	5.8	18.3	15.7	6.2	17.5	15.3	6.6	16.6	15.0	6.9	15.4	14.5	7.5	14.1	13.9	7.9			
		18	25	21.4	16.4	5.6	20.7	16.1	6.0	19.9	15.8	6.4	19.0	15.4	6.8	18.0	15.0	7.2	16.7	14.5	7.7	15.3	13.9	8.2			
	121.0 -1.82-	20	27	22.9	16.3	5.8	22.1	16.0	6.2	21.2	15.7	6.6	20.3	15.3	6.9	19.3	14.9	7.3	17.9	14.4	7.9	16.5	13.9	8.4			
		22	30	23.9	17.2	5.9	23.1	16.8	6.3	22.1	16.5	6.7	21.1	16.2	7.1	20.1	15.8	7.5	18.7	15.3	8.1	17.3	14.8	8.6			
		14	20	17.9	14.9	5.3	17.3	14.6	5.6	16.6	14.3	6.0	15.9	14.0	6.3	15.0	13.6	6.7	14.0	13.2	7.2	12.8	12.6	7.7			
	132.0 -1.94-	16	23	19.7	16.3	5.4	19.0	16.0	5.8	18.3	15.7	6.2	17.5	15.3	6.6	16.6	15.0	6.9	15.4	14.5	7.5	14.1	13.9	7.9			
		18	25	21.4	16.4	5.6	20.7	16.1	6.0	19.9	15.8	6.4	19.0	15.4	6.8	18.0	15.0	7.2	16.7	14.5	7.7	15.3	13.9	8.2			
		20	27	22.9	16.3	5.8	22.1	16.0	6.2	21.2	15.7	6.6	20.3	15.3	6.9	19.3	14.9	7.3	17.9	14.4	7.9	16.5	13.9	8.4			

QA : Evaporator Air Flow (m³/min)
CR : Sensible Heat Correction Factor
WB : Evaporator Air Inlet Wet Bulb (°C)
DB : Evaporator Air Inlet Dry Bulb (°C)
Given for each WB

TC : Total Cooling Capacity (x1,000kcal/h)
SHC : Sensible Heat Capacity (x1,000kcal/h)
Given for each WB and DB*
IPT : Compressor Input Power (kW)

Cooling Capacities (Continued)

Conversion Multiplier: $1 \text{ kcal/h} = 1.163 \text{ W}$
 $= 3.968 \text{ Btu/h}$

Models	Evaporator Air Inlet			Condenser Air Inlet Temperature(°C)																							
	QA -CR-	WB DB* (°C)		20			25			30			35			40			46			52					
				TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT			
WPH-15	104.0 -1.67-	18	25	39.2	26.8	11.2	37.8	26.2	12.0	36.3	25.5	12.8	34.7	24.8	13.5	32.9	24.0	14.3	30.6	23.0	15.4	27.9	21.9	16.3			
		20	27	41.9	26.7	11.5	40.5	26.1	12.3	38.9	25.4	13.1	37.1	24.7	13.8	35.2	23.9	14.6	32.8	22.9	15.7	30.1	21.9	16.7			
		22	30	43.8	27.7	11.8	42.2	27.1	12.6	40.5	26.4	13.4	38.7	25.7	14.2	36.8	25.0	15.0	34.2	24.0	16.2	31.6	23.1	17.2			
	117.0 -1.84-	16	23	37.3	28.1	11.0	36.0	27.5	11.8	34.6	26.8	12.5	33.0	26.1	13.2	31.4	25.4	14.0	29.1	24.4	15.1	26.7	23.3	16.1			
		18	25	40.6	28.3	11.3	39.1	27.7	12.1	37.6	27.0	12.9	35.9	26.3	13.6	34.1	25.5	14.4	31.7	24.5	15.5	28.9	23.3	16.5			
		20	27	43.4	28.2	11.6	41.9	27.6	12.4	40.2	26.9	13.2	38.4	26.1	14.0	36.5	25.4	14.8	33.9	24.4	15.9	31.1	23.3	16.9			
	130.0 -2.00-	22	30	45.3	29.3	11.9	43.7	28.7	12.8	41.9	28.0	13.6	40.0	27.3	14.4	38.0	26.6	15.2	35.4	25.7	16.4	32.7	24.7	17.4			
		14	20	35.0	27.2	10.7	33.8	26.6	11.5	32.4	26.0	12.2	31.0	25.3	12.9	29.4	24.5	13.7	27.4	23.6	14.7	25.1	22.5	15.6			
		16	23	38.6	29.6	11.1	37.2	29.0	11.9	35.7	28.3	12.7	34.2	27.6	13.4	32.4	26.8	14.2	30.1	25.8	15.2	27.6	24.7	16.2			
	143.0 -2.15-	18	25	41.9	29.8	11.4	40.4	29.2	12.3	38.8	28.5	13.1	37.1	27.7	13.8	35.2	27.0	14.6	32.8	25.9	15.7	29.8	24.7	16.7			
		20	27	44.9	29.7	11.7	43.3	29.1	12.6	41.6	28.3	13.4	39.7	27.6	14.1	37.7	26.8	15.0	35.0	25.8	16.1	32.2	24.7	17.1			
		22	30	46.8	31.0	12.1	45.1	30.3	12.9	43.3	29.6	13.7	41.4	28.9	14.5	39.3	28.2	15.4	36.6	27.2	16.5	33.8	26.2	17.5			
	156.0 -2.29-	14	20	36.1	28.5	10.8	34.9	27.9	11.6	33.5	27.3	12.4	32.0	26.5	13.1	30.4	25.8	13.8	28.3	24.8	14.9	25.9	23.7	15.8			
		16	23	39.8	31.1	11.2	38.4	30.5	12.0	36.9	29.8	12.8	35.3	29.0	13.5	33.5	28.2	14.3	31.1	27.2	15.4	28.5	26.1	16.3			
		18	25	43.3	31.3	11.6	41.8	30.6	12.4	40.1	29.9	13.2	38.3	29.2	13.9	36.4	28.4	14.8	33.8	27.3	15.9	30.8	26.1	16.8			
WPH-20	126.0 -2.06-	20	27	46.3	31.1	11.9	44.7	30.5	12.7	42.9	29.8	13.5	41.0	29.0	14.3	38.9	28.2	15.1	36.2	27.2	16.3	33.2	26.0	17.3			
		22	30	48.3	32.5	12.2	46.6	31.9	13.1	44.7	31.2	13.9	42.7	30.5	14.7	40.6	29.7	15.5	37.8	28.7	16.7	34.9	27.7	17.7			
		14	20	37.2	29.8	11.0	36.0	29.2	11.7	34.6	28.5	12.5	33.0	27.8	13.2	31.3	27.0	14.0	29.2	26.0	15.0	26.7	24.9	15.9			
	144.0 -2.31-	16	23	41.1	32.5	11.3	39.6	31.9	12.1	38.1	31.2	12.9	36.4	30.4	13.6	34.5	29.6	14.5	32.1	28.5	15.5	29.4	27.4	16.5			
		18	25	44.7	32.7	11.7	43.1	32.0	12.5	41.4	31.3	13.3	39.5	30.5	14.1	37.5	29.7	14.9	34.9	28.6	16.0	31.8	27.4	17.0			
		20	27	47.8	32.6	12.0	46.1	31.9	12.8	44.3	31.2	13.7	42.3	30.4	14.4	40.1	29.6	15.3	37.3	28.5	16.4	34.3	27.3	17.4			
	162.0 -2.54-	22	30	49.8	34.1	12.3	48.1	33.4	13.2	46.1	32.7	14.0	44.1	31.9	14.8	41.9	31.1	15.7	39.0	30.1	16.9	36.0	29.1	17.9			
		18	25	51.4	34.5	14.0	49.5	33.6	15.0	47.6	32.7	15.9	45.5	31.8	16.8	43.2	30.7	17.8	40.1	29.4	19.2	36.6	27.9	20.3			
		20	27	55.0	34.3	14.3	53.1	33.5	15.3	50.9	32.6	16.3	48.6	31.6	17.2	46.2	30.6	18.3	42.9	29.3	19.6	39.4	27.9	20.8			
	180.0 -2.76-	22	30	57.3	35.5	14.7	55.3	34.7	15.8	53.1	33.8	16.8	50.7	32.9	17.7	48.2	31.9	18.8	44.9	30.7	20.2	41.4	29.4	21.4			
		14	20	53.2	36.6	14.1	51.3	35.7	15.2	49.3	34.8	16.1	47.1	33.9	17.0	44.7	32.9	18.0	41.6	31.5	19.4	37.9	30.0	20.6			
		16	23	56.9	36.4	14.5	55.0	35.6	15.5	52.8	34.7	16.5	50.4	33.7	17.5	47.8	32.7	18.5	44.5	31.4	19.9	40.8	29.9	21.1			
	198.0 -2.97-	22	30	59.4	37.8	14.9	57.3	37.0	16.0	55.0	36.1	17.0	52.5	35.2	17.9	49.9	34.2	19.0	46.5	32.9	20.4	42.9	31.6	21.7			
		16	23	50.7	38.4	13.9	48.9	37.6	14.9	46.9	36.7	15.8	44.9	35.8	16.7	42.6	34.7	17.7	39.6	33.4	19.0	36.2	32.0	20.2			
		18	25	55.1	38.7	14.3	53.1	37.8	15.3	51.0	36.9	16.3	48.7	36.0	17.2	46.3	34.9	18.3	43.0	33.6	19.6	39.2	32.0	20.8			
216.0 -3.17-	20	27	58.9	38.5	14.7	56.9	37.7	15.7	54.6	36.8	16.7	52.1	35.8	17.7	49.5	34.7	18.7	46.0	33.4	20.1	42.3	31.9	21.4				
	22	30	61.5	40.1	15.1	59.3	39.3	16.1	56.9	38.4	17.2	54.3	37.4	18.1	51.6	36.4	19.2	48.1	35.2	20.7	44.3	33.8	21.9				
	14	20	47.5	37.2	13.6	45.9	36.4	14.5	44.0	35.5	15.5	42.1	34.6	16.3	39.9	33.6	17.3	37.2	32.3	18.6	34.0	30.9	19.8				
198.0 -2.97-	16	23	52.4	40.5	14.0	50.5	39.7	15.0	48.5	38.8	16.0	46.4	37.8	16.9	44.0	36.7	17.9	40.9	35.4	19.3	37.5	33.9	20.4				
	18	25	57.0	40.8	14.5	54.9	39.9	15.5	52.7	39.0	16.5	50.4	38.0	17.4	47.8	36.9	18.5	44.5	35.5	19.8	40.5	33.9	21.1				
	20	27	60.9	40.6	14.8	58.8	39.7	15.9	56.4	38.8	16.9	53.9	37.8	17.9	51.2	36.7	18.9	47.6	35.3	20.3	43.7	33.9	21.6				
216.0 -3.17-	22	30	63.5	42.4	15.2	61.3	41.5	16.3	58.8	40.6	17.4	56.2	39.6	18.3	53.4	38.6	19.4	49.7	37.3	20.9	45.8	35.9	22.2				
	14	20	49.0	39.0	13.7	47.4	38.2	14.7	45.5	37.3	15.6	43.5	36.3	16.5	41.2	35.3	17.5	38.4	34.0	18.8	35.1	32.5	20.0				
	16	23	54.1	42.6	14.2	52.2	41.7	15.2	50.1	40.8	16.2	47.9	39.8	17.1	45.4	38.7	18.1	42.2	37.3	19.5	38.7	35.8	20.6				
216.0 -3.17-	18	25	58.8	42.8	14.6	56.7	41.9	15.7	54.5	41.0	16.7	52.0	39.9	17.6	49.4	38.9	18.6	45.9	37.4	20.0	41.8	35.8	21.3				
	20	27	62.9	42.6	15.0	60.7	41.7	16.1	58.3	40.8	17.1	55.7	39.7	18.0	52.8	38.6	19.1	49.1	37.2	20.6	45.1	35.7	21.8				
	22	30	65.6	44.5	15.4	63.3	43.7	16.5	60.7	42.7	17.5	58.0	41.7	18.5	55.1	40.7	19.6	51.4	39.4	21.1	47.3	38.0	22.4				
216.0 -3.17-	14	20	50.6	40.8	13.8	48.9	39.9	14.8	46.9	39.0	15.8	44.8	38.0	16.7	42.5	37.0	17.7	39.6	35.6	19.0	36.3	34.1	20.1				
	16	23	55.8	44.5	14.3	53.8	43.6	15.3	51.7	42.7	16.3	49.4	41.7	17.2	46.9	40.6	18.3	43.5	39.1	19.6	39.9	37.6	20.8				
	18	25	60.7	44.8	14.7	58.5	43.8	15.8	56.2	42.9	16.8	53.6	41.8	17.8	51.0	40.7	18.8	47.4	39.3	20.2	43.2	37.6	21.5				
216.0 -3.17-	20	27	64.9	44.5	15.1	62.6	43.7	16.2	60.1	42.7	17.2	57.4	41.6	18.2	54.5	40.5	19.3	50.7	39.1	20.8	46.5	37.5	22.0				
	22	30	67.7	46.6	15.5	65.3	45.7	16.6	62.6	44.8	17.7	59.8	43.8	18.7	56.8	42.7	19.8	53.0	41.3	21.3	48.8	39.9	22.6				

QA : Evaporator Air Flow (m^3/min)
CR : Sensible Heat Correction Factor
WB : Evaporator Air Inlet Wet Bulb($^{\circ}\text{C}$)
DB : Evaporator Air Inlet Dry Bulb($^{\circ}\text{C}$)
Given for each WB

TC : Total Cooling Capacity (x1,000kcal/h)
 SHC* : Sensible Heat Capacity (x1,000kcal/h)
 Given for each WB and DB*
 IPT : Compressor Input Power (kW)

Cooling Capacities (Continued)

Conversion Multiplier: 1kcal/h = 1.163 W
= 3.968 Btu/h

MODEL	Evaporator Air Inlet				Condenser Air Inlet Temperature (°C)																							
	QA -CR-	WB/DB* (°C)	20			25			30			35			40			46			52							
			TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT	TC	SHC*	IPT					
WPH-25	182.0 -2.58-	18 25	61.4	41.8	15.3	59.2	40.8	16.4	56.9	39.7	17.4	54.3	38.6	18.4	51.6	37.4	19.5	48.0	35.9	21.8	43.7	34.1	24.5					
		20 27	65.7	41.6	15.7	63.4	40.6	16.8	60.9	39.6	17.9	58.1	38.4	18.9	55.2	37.2	20.0	51.3	35.7	22.4	47.1	34.0	25.1					
		22 30	68.5	43.2	16.1	66.1	42.2	17.3	63.4	41.1	18.4	60.6	40.1	19.4	57.6	38.9	20.5	53.6	37.5	23.0	49.4	35.9	25.7					
	208.0 -2.88-	16 23	58.5	44.1	15.0	56.6	43.1	16.1	54.2	42.1	17.2	51.8	41.0	18.1	49.2	39.8	19.2	45.7	38.2	21.6	41.9	36.6	24.1					
		18 25	63.6	44.4	15.5	61.4	43.4	16.6	58.9	42.4	17.7	56.3	41.2	18.6	53.5	40.0	19.8	49.7	38.4	22.2	45.3	36.6	24.9					
		20 27	68.1	44.2	15.9	65.7	43.3	17.0	63.1	42.2	18.1	60.2	41.0	19.1	57.2	39.8	20.3	53.2	38.2	22.7	48.8	36.6	25.4					
	234.0 -3.17-	22 30	71.0	46.0	16.3	68.5	45.1	17.5	65.7	44.0	18.6	62.8	42.9	19.6	59.6	41.7	20.8	55.6	40.3	23.3	51.2	38.7	26.1					
		14 20	54.9	42.9	14.7	53.1	42.0	15.8	51.0	41.0	16.8	48.7	39.9	17.7	46.2	38.7	18.8	43.1	37.3	21.0	39.4	35.6	23.4					
		16 23	60.6	46.7	15.2	58.4	45.7	16.3	56.1	44.7	17.3	53.6	43.6	18.3	50.9	42.3	19.4	47.3	40.8	21.7	43.3	39.0	24.3					
		18 25	65.9	47.0	15.7	63.5	46.0	16.8	61.0	44.9	17.9	58.2	43.8	18.9	55.3	42.5	20.0	51.4	40.9	22.4	46.9	39.1	25.1					
		20 27	70.4	46.8	16.1	68.0	45.8	17.2	65.3	44.7	18.3	62.3	43.6	19.3	59.2	42.3	20.5	55.0	40.7	23.0	50.5	39.0	25.7					
	260.0 -3.44-	22 30	73.5	48.8	16.5	70.9	47.8	17.7	68.0	46.8	18.8	65.0	45.7	19.9	61.7	44.5	21.1	57.5	43.0	23.5	53.0	41.4	26.4					
		14 20	56.7	45.1	14.9	54.9	44.2	15.9	52.6	43.2	16.9	50.3	42.1	17.9	47.7	40.9	19.0	44.5	39.4	21.2	40.7	37.7	23.8					
		16 23	62.6	49.3	15.4	60.4	48.3	16.5	58.0	47.2	17.5	55.4	46.0	18.5	52.6	44.8	19.6	48.9	43.2	21.9	44.8	41.4	24.6					
		18 25	68.1	49.6	15.8	65.6	48.5	17.0	63.0	47.4	18.1	60.2	46.2	19.1	57.2	45.0	20.2	53.2	43.3	22.6	48.4	41.5	25.4					
		20 27	72.8	49.3	16.2	70.3	48.3	17.4	67.5	47.2	18.5	64.4	46.0	19.6	61.2	44.7	20.7	56.9	43.1	23.2	52.2	41.4	26.1					
		22 30	76.0	51.6	16.7	73.2	50.6	17.9	70.3	49.5	19.0	67.1	48.3	20.1	63.8	47.1	21.3	59.5	45.6	23.8	54.8	44.0	26.7					
		286.0 -3.69-	14 20	58.6	47.3	15.0	56.6	46.4	16.1	54.4	45.3	17.1	52.0	44.2	18.1	49.3	43.0	19.2	45.9	41.4	21.4	42.0	39.7	24.1				
			16 23	64.6	51.7	15.5	62.4	50.7	16.7	59.9	49.6	17.7	57.2	48.4	18.7	54.3	47.1	19.8	50.5	45.5	22.2	46.2	43.7	24.9				
			18 25	70.3	52.0	16.0	67.8	50.9	17.2	65.1	49.8	18.3	62.2	48.6	19.3	59.0	47.3	20.4	54.9	45.7	22.9	50.0	43.7	25.6				
			20 27	75.2	51.8	16.4	72.6	50.7	17.6	69.6	49.6	18.7	66.5	48.4	19.8	63.1	47.1	20.9	58.7	45.4	23.4	53.9	43.6	26.3				
			22 30	78.4	54.2	16.9	75.6	53.2	18.1	72.6	52.1	19.2	69.3	50.9	20.3	65.9	49.7	21.5	61.4	48.1	24.0	56.6	46.4	27.0				
		182.0 -2.98-	18 25	76.1	50.7	20.2	73.4	49.4	21.6	70.5	48.1	23.0	67.3	46.6	24.3	64.0	45.1	25.7	59.4	43.1	27.7	54.2	40.9	29.4				
			20 27	81.4	50.5	20.7	78.6	49.2	22.2	75.4	47.9	23.6	72.1	46.4	24.9	68.4	44.9	26.4	63.6	42.9	28.4	58.4	40.8	30.1				
			22 30	84.9	52.2	21.2	81.9	50.9	22.8	78.6	49.6	24.2	75.1	48.2	25.6	71.3	46.8	27.1	66.5	44.9	29.1	61.3	43.0	30.9				
		208.0 -3.33-	18 25	78.9	53.8	20.4	76.0	52.5	21.9	73.1	51.1	23.3	69.8	49.7	24.6	66.3	48.2	26.1	61.6	46.2	28.0	56.1	43.9	29.7				
	20 27		84.4	53.8	20.9	81.4	52.3	22.4	78.2	50.9	23.9	74.7	49.5	25.2	70.9	47.9	26.7	65.9	45.9	28.7	60.5	43.8	30.5					
	22 30		88.0	55.5	21.5	84.9	54.3	23.0	81.4	52.9	24.5	77.8	51.5	25.9	73.9	50.1	27.4	68.9	48.2	29.5	63.5	46.2	31.3					
	234.0 -3.67-	16 23	75.1	56.4	20.1	72.4	55.2	21.5	69.6	53.8	22.9	66.5	52.4	24.1	63.1	50.9	25.6	58.6	48.9	27.5	53.7	46.7	29.2					
		18 25	81.6	56.8	20.7	78.7	55.5	22.2	75.6	54.2	23.6	72.2	52.7	24.9	68.6	51.1	26.4	63.7	49.1	28.4	58.1	46.8	30.1					
20 27		87.3	56.6	21.2	84.3	55.3	22.7	80.9	53.9	24.2	77.3	52.4	25.5	73.3	50.9	27.0	68.2	48.9	29.1	62.6	46.7	30.9						
260.0 -3.99-	22 30	91.1	58.8	21.8	87.8	57.6	23.3	84.3	56.2	24.8	80.5	54.8	26.2	76.5	53.3	27.8	71.3	51.4	29.9	65.7	49.4	31.7						
	14 20	70.3	54.6	19.6	68.0	53.4	21.0	65.3	52.1	22.4	62.4	50.7	23.6	59.2	49.2	25.0	55.1	47.3	26.9	50.4	45.1	28.5						
	16 23	77.6	59.4	20.3	74.9	58.2	21.7	71.9	56.8	23.1	68.7	55.3	24.4	65.2	53.8	25.9	60.6	51.7	27.8	55.5	49.5	29.5						
	18 25	84.4	59.8	20.9	81.3	58.5	22.4	78.1	57.1	23.8	74.6	55.6	25.2	70.9	54.1	26.7	65.9	52.0	28.7	60.0	49.6	30.4						
	20 27	90.2	59.6	21.4	87.1	58.3	23.0	83.6	56.9	24.4	79.9	55.4	25.8	75.8	53.8	27.3	70.5	51.7	29.4	64.7	49.5	31.2						
	22 30	94.1	62.1	22.0	90.8	60.8	23.6	87.1	59.4	25.1	83.2	58.0	26.5	79.1	56.5	28.1	73.7	54.5	30.2	67.9	52.5	32.0						
	286.0 -4.29-	14 20	72.6	57.2	19.8	70.2	56.0	21.2	67.4	54.7	22.6	64.4	53.2	23.8	61.1	51.7	25.3	56.9	49.8	27.2	52.1	47.5	28.8					
16 23		80.1	62.4	20.5	77.3	61.1	22.0	74.2	59.7	23.4	70.9	58.2	24.7	67.3	56.6	26.1	62.5	54.5	28.1	57.3	52.3	29.8						
18 25		87.1	62.8	21.1	84.0	61.4	22.6	80.7	60.0	24.1	77.1	58.5	25.4	73.2	56.9	26.9	68.0	54.8	29.0	62.0	52.3	30.7						
20 27		93.2	62.5	21.6	90.0	61.2	23.2	86.3	59.7	24.7	82.5	58.2	26.1	78.3	56.6	27.6	72.8	54.5	29.7	66.8	52.2	31.5						
22 30		97.2	65.2	22.2	93.7	63.9	23.8	90.0	62.5	25.3	85.9	61.1	26.8	81.7	59.5	28.4	76.1	57.5	30.5	70.1	55.4	32.4						
312.0 -4.57-	14 20	74.9	59.8	20.0	72.4	58.6	21.4	69.5	57.2	22.8	66.4	55.7	24.1	63.0	54.1	25.5	58.7	52.1	27.4	53.7	49.9	29.1						
	16 23	82.6	65.2	20.7	79.7	63.9	22.2	76.6	62.5	23.6	73.2	61.0	24.9	69.4	59.3	26.4	64.5	57.2	28.4	59.1	54.9	30.1						
	18 25	89.9	65.6	21.3	86.6	64.2	22.8	83.2	62.8	24.3	79.5	61.2	25.7	75.5	59.6	27.2	70.2	57.4	29.3	63.9	54.9	31.0						
	20 27	96.1	65.3	21.9	92.8	64.0	23.4	89.0	62.5	24.9	85.1	60.9	26.3	80.7	59.3	27.9	75.1	57.1	30.0	68.9	54.8	31.8						
	22 30	100.3	68.3	22.4	96.8	67.0	24.1	92.8	65.5	25.6	88.6	64.0	27.0	84.2	62.4	28.6	78.5	60.4	30.8	72.3	58.3	32.7						

QA : Evaporator Air Flow (m³/min)
CR : Sensible Heat Correction Factor
WB : Evaporator Air Inlet Wet Bulb (°C)
DB : Evaporator Air Inlet Dry Bulb (°C)
Given for each WB

TC : Total Cooling Capacity (x1,000 kcal/h)
SHC* : Sensible Heat Capacity (x1,000kcal/h)
Given for each WB and DB*
IPT : Compressor Input Power (kW)

Fan Performance Table

Conversion Multiplier : 1mmAq=9.81Pa

Models	Air Flow (m ³ /min)		External Static Pressure (mmAq)															
			0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
WPH- 4	29.6	RPM	600	640	680	720	760	800	850	890	930	970	1000	1040	1070	1110	1150	1180
		BKW	0.05	0.07	0.09	0.12	0.14	0.17	0.19	0.21	0.24	0.26	0.28	0.31	0.34	0.36	0.38	0.40
	33.3	RPM	630	670	710	750	790	830	870	910	950	990	1030	1070	1100	1140	1180	1210
		BKW	0.06	0.09	0.12	0.15	0.17	0.20	0.23	0.25	0.28	0.31	0.34	0.37	0.40	0.42	0.45	0.47
	37.0	RPM	660	700	740	780	820	860	900	940	980	1020	1060	1100	1140	1180	1220	1250
		BKW	0.08	0.11	0.14	0.17	0.20	0.23	0.26	0.29	0.32	0.35	0.39	0.42	0.45	0.48	0.51	0.54
	40.7	RPM	700	740	780	820	860	900	940	980	1020	1060	1100	1140	1180	1220	1260	1300
		BKW	0.12	0.15	0.19	0.22	0.23	0.29	0.32	0.35	0.39	0.43	0.46	0.50	0.53	0.57	0.60	0.64
	44.4	RPM	750	790	830	870	900	950	990	1030	1070	1110	1150	1190	1230	1270	1310	1350
		BKW	0.15	0.19	0.23	0.27	0.29	0.35	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.65	0.69	0.73
WPH- 5	36.8	RPM	720	750	780	800	830	860	890	920	950	980	1000	1030	1060	1090	1110	1140
		BKW	0.05	0.08	0.10	0.13	0.16	0.18	0.21	0.24	0.26	0.29	0.32	0.34	0.37	0.39	0.42	0.45
	41.4	RPM	740	770	800	820	860	880	910	940	970	990	1020	1050	1080	1110	1130	1160
		BKW	0.07	0.10	0.13	0.16	0.19	0.22	0.25	0.27	0.30	0.33	0.36	0.39	0.42	0.45	0.47	0.50
	46.0	RPM	760	790	810	840	870	900	930	960	990	1020	1040	1080	1100	1130	1160	1190
		BKW	0.09	0.13	0.16	0.19	0.22	0.25	0.28	0.31	0.35	0.38	0.41	0.44	0.47	0.50	0.53	0.57
	50.6	RPM	780	810	840	870	890	920	950	980	1010	1040	1070	1100	1130	1150	1180	1210
		BKW	0.12	0.16	0.20	0.23	0.26	0.30	0.33	0.37	0.40	0.44	0.47	0.51	0.54	0.58	0.62	0.65
	55.2	RPM	820	840	860	890	920	950	980	1010	1040	1070	1100	1130	1160	1190	1210	1240
		BKW	0.16	0.19	0.23	0.27	0.31	0.35	0.39	0.43	0.47	0.50	0.54	0.58	0.62	0.66	0.70	0.74
WPH- 6	52.0	RPM	670	700	730	760	790	820	850	870	890	910	940	970	990	1010	1040	1070
		BKW	0.03	0.08	0.11	0.14	0.17	0.20	0.22	0.24	0.29	0.33	0.36	0.38	0.41	0.45	0.48	0.52
	58.5	RPM	700	730	760	790	820	850	870	900	920	950	970	990	1020	1050	1070	1100
		BKW	0.06	0.10	0.15	0.17	0.21	0.25	0.28	0.31	0.37	0.38	0.42	0.48	0.50	0.53	0.59	0.63
	65.0	RPM	730	760	790	820	850	880	910	930	960	980	1000	1030	1060	1080	1110	1140
		BKW	0.10	0.15	0.19	0.24	0.28	0.32	0.36	0.41	0.45	0.48	0.55	0.59	0.63	0.68	0.72	0.79
	71.5	RPM	780	810	840	870	900	920	950	970	1000	1020	1040	1070	1100	1130	1160	1180
		BKW	0.17	0.21	0.28	0.32	0.36	0.45	0.47	0.56	0.58	0.65	0.71	0.78	0.82	0.88	0.93	1.01
	78.0	RPM	840	870	900	930	960	980	1010	1030	1060	1080	1110	1140	1170	1190	1220	1250
		BKW	0.30	0.37	0.45	0.53	0.57	0.68	0.74	0.83	0.88	0.99	1.02	1.26	1.23	1.30	1.38	1.48
WPH-8	55.2	RPM	690	720	750	780	810	840	870	890	910	930	960	990	1010	1030	1060	1090
		BKW	0.06	0.10	0.13	0.16	0.19	0.22	0.25	0.28	0.32	0.35	0.38	0.41	0.44	0.47	0.50	0.53
	62.1	RPM	720	750	780	810	840	870	890	920	940	970	990	1010	1040	1070	1090	1120
		BKW	0.09	0.13	0.17	0.20	0.24	0.28	0.31	0.35	0.39	0.42	0.46	0.50	0.53	0.57	0.61	0.64
	69.0	RPM	750	780	810	840	870	900	930	950	980	1000	1020	1050	1080	1100	1130	1160
		BKW	0.13	0.18	0.22	0.27	0.31	0.35	0.40	0.44	0.49	0.53	0.58	0.62	0.67	0.71	0.75	0.80
	75.9	RPM	800	830	860	890	920	940	970	990	1020	1040	1060	1090	1120	1150	1180	1200
		BKW	0.20	0.25	0.31	0.36	0.42	0.48	0.53	0.59	0.64	0.70	0.75	0.81	0.86	0.92	0.98	1.03
	82.8	RPM	860	890	920	950	980	1000	1030	1050	1080	1100	1130	1160	1190	1210	1240	1270
		BKW	0.35	0.42	0.50	0.58	0.65	0.73	0.81	0.88	0.96	1.04	1.12	1.92	1.27	1.35	1.43	1.50
WPH-10	72.0	RPM	750	770	800	820	850	880	900	920	940	960	990	1010	1030	1060	1080	1100
		BKW	0.10	0.15	0.20	0.25	0.29	0.34	0.39	0.44	0.49	0.54	0.58	0.63	0.68	0.73	0.78	0.83
	81.0	RPM	780	800	820	850	880	900	920	940	960	990	1010	1040	1060	1080	1110	1130
		BKW	0.13	0.18	0.24	0.29	0.34	0.39	0.45	0.50	0.56	0.61	0.66	0.71	0.77	0.82	0.87	0.93
	90.0	RPM	820	840	860	890	910	930	960	980	1000	1020	1050	1080	1100	1120	1150	1180
		BKW	0.18	0.24	0.30	0.36	0.42	0.48	0.54	0.60	0.66	0.72	0.78	0.84	0.90	0.96	1.02	1.08
	99.0	RPM	860	890	910	930	960	980	1000	1030	1060	1080	1110	1140	1160	1190	1210	1240
		BKW	0.25	0.31	0.39	0.46	0.53	0.60	0.66	0.74	0.80	0.87	0.94	1.01	1.08	1.15	1.22	1.29
	108.0	RPM	920	950	980	1000	1020	1050	1080	1110	1130	1160	1190	1220	1250	1280	1310	1340
		BKW	0.38	0.46	0.54	0.63	0.71	0.79	0.88	0.96	1.04	1.13	1.21	1.29	1.38	1.46	1.54	1.63

RPM : Fan Speed (rpm)
BKW : Brake Power (kW)

NOTE :
When the external static pressure exceeds the shaded area,
an oversized fan motor or a fan pulley are required.

Fan Performance Table (Continued)

Conversion Multiplier : 1mmAq=9.81Pa

Models	Air Flow (m ³ /min)		External Static Pressure (mmAq)															
			0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
WPH-13	88.0	RPM	720	750	780	800	830	860	890	910	940	970	1000	1020	1050	1080	1110	1140
		BKW	0.18	0.25	0.31	0.37	0.43	0.49	0.55	0.6	0.67	0.74	0.80	0.86	0.92	0.98	1.04	1.10
	99.0	RPM	760	790	820	850	880	900	930	960	990	1020	1050	1070	1100	1130	1160	1190
		BKW	0.26	0.33	0.40	0.48	0.55	0.63	0.70	0.77	0.85	0.92	0.99	1.07	1.14	1.21	1.28	1.36
	110.0	RPM	800	830	860	890	910	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230
		BKW	0.32	0.40	0.48	0.56	0.64	0.72	0.80	0.88	0.96	1.04	1.12	1.20	1.28	1.36	1.44	1.52
	121.0	RPM	850	880	900	930	970	1000	1020	1050	1080	1110	1140	1180	1210	1240	1270	1300
		BKW	0.45	0.54	0.63	0.72	0.81	0.90	0.99	1.08	1.17	1.26	1.35	1.44	1.53	1.62	1.71	1.80
	132.0	RPM	880	920	950	990	1020	1050	1070	1100	1130	1160	1200	1230	1260	1300	1330	1360
		BKW	0.55	0.65	0.75	0.85	0.95	1.05	1.15	1.25	1.35	1.45	1.55	1.65	1.75	1.85	1.95	2.05
WPH-15	104.0	RPM	740	770	790	820	860	890	920	940	970	995	1020	1050	1070	1100	1120	1150
		BKW	0.23	0.30	0.38	0.46	0.53	0.61	0.69	0.76	0.84	0.91	0.99	1.06	1.14	1.22	1.29	1.37
	117.0	RPM	780	810	850	880	905	930	960	990	1010	1040	1070	1090	1120	1140	1170	1190
		BKW	0.30	0.39	0.48	0.56	0.66	0.74	0.82	0.91	0.99	1.08	1.17	1.25	1.34	1.43	1.51	1.60
	130.0	RPM	860	890	920	940	970	995	1020	1040	1070	1090	1120	1140	1170	1190	1220	1260
		BKW	0.39	0.49	0.59	0.69	0.78	0.88	0.98	1.08	1.17	1.27	1.37	1.47	1.57	1.66	1.76	1.86
	143.0	RPM	940	970	990	1020	1040	1070	1090	1120	1140	1170	1190	1220	1250	1280	1330	—
		BKW	0.52	0.64	0.75	0.87	0.99	1.10	1.22	1.33	1.45	1.56	1.68	1.79	1.91	2.03	2.14	—
	156.0	RPM	1020	1050	1080	1100	1130	1150	1180	1210	1230	1250	1280	—	—	—	—	—
		BKW	0.77	0.91	1.05	1.19	1.33	1.47	1.61	1.75	1.89	2.03	2.17	—	—	—	—	—

Models	Air Flow (m³/min)		External Static Pressure (mmAq)															
			0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	
WPH-20	126.0	RPM	480	550	610	670	720	770	820	870	910	960	1000	1040	1080	—	—	
		BKW	1.14	1.29	1.45	1.60	1.75	1.91	2.06	2.21	2.37	2.52	2.68	2.83	2.98	—	—	
	144.0	RPM	540	610	660	720	770	820	860	910	950	990	1030	1070	1100	1140	1170	
		BKW	1.21	1.39	1.56	1.74	1.91	2.09	2.27	2.44	2.62	2.79	2.97	3.14	3.32	3.49	3.67	
	162.0	RPM	610	670	720	770	820	860	900	950	990	1020	1060	1100	1130	1170	1200	
		BKW	1.42	1.62	1.81	2.01	2.21	2.41	2.60	2.80	3.00	3.20	3.39	3.59	3.79	3.98	4.18	
	180.0	RPM	680	730	780	830	870	900	930	980	1030	1060	1100	1140	1170	1200	1230	
		BKW	1.76	1.98	2.20	2.42	2.64	2.86	3.08	3.30	3.51	3.73	3.95	4.17	4.39	4.61	4.83	
WPH-25	198.0	RPM	750	800	840	880	920	960	1000	1040	1070	1110	1140	1180	1210	1240	—	
		BKW	2.24	2.48	2.72	2.96	3.20	3.44	3.68	3.92	4.17	4.41	4.65	4.89	5.13	5.37	—	
	216.0	RPM	820	860	900	940	980	1020	1050	1090	1120	1150	1190	—	—	—	—	
		BKW	2.85	3.11	3.37	3.64	3.90	4.16	4.42	4.69	4.95	5.21	5.48	—	—	—	—	
	182.0	RPM	600	640	670	710	750	790	840	880	920	960	1000	1050	1090	1130	1160	
		BKW	0.42	0.74	1.03	1.31	1.59	1.87	2.14	2.41	2.68	2.95	3.23	3.49	3.76	4.03	4.31	
	208.0	RPM	640	670	720	750	780	830	870	920	950	990	1030	1070	1110	1140	1170	
		BKW	0.42	0.88	1.21	1.52	1.84	2.14	2.46	2.77	3.07	3.38	3.69	3.99	4.30	4.61	4.92	
WPH-30	234.0	RPM	690	730	760	800	840	880	920	960	990	1030	1060	1100	1140	1170	1200	
		BKW	0.83	1.23	1.60	1.95	2.31	2.66	3.02	3.36	3.71	4.06	4.40	4.74	5.09	5.43	5.78	
	260.0	RPM	740	780	820	860	890	930	960	1000	1040	1070	1110	1140	1180	1210	1250	
		BKW	1.15	1.61	2.04	2.46	2.85	3.25	3.64	4.03	4.42	4.81	5.19	5.58	5.97	6.36	6.74	
	286.0	RPM	820	850	880	920	950	980	1010	1050	1100	1130	1160	1200	1240	—	—	
		BKW	1.79	2.31	2.79	3.25	3.70	4.14	4.57	5.00	5.43	5.87	6.30	6.72	7.17	—	—	
	182.0	RPM	600	640	670	710	750	790	840	880	920	960	1000	1050	1090	1130	1160	
		BKW	0.42	0.74	1.03	1.31	1.59	1.87	2.14	2.41	2.68	2.95	3.23	3.49	3.76	4.03	4.31	
WPH-30	208.0	RPM	640	670	720	750	780	830	870	920	950	990	1030	1070	1110	1140	1170	
		BKW	0.42	0.88	1.21	1.52	1.84	2.14	2.46	2.77	3.07	3.38	3.69	3.99	4.30	4.61	4.92	
	234.0	RPM	690	730	760	800	840	880	920	960	990	1030	1060	1100	1140	1170	1200	
		BKW	0.83	1.23	1.60	1.95	2.31	2.66	3.02	3.36	3.71	4.06	4.40	4.74	5.09	5.43	5.78	
	260.0	RPM	740	780	820	860	890	930	960	1000	1040	1070	1110	1140	1180	1210	1250	
		BKW	1.15	1.61	2.04	2.46	2.85	3.25	3.64	4.03	4.42	4.81	5.19	5.58	5.97	6.36	6.74	
	286.0	RPM	820	850	880	920	950	980	1010	1050	1100	1130	1160	1200	1240	—	—	
		BKW	1.79	2.31	2.79	3.25	3.70	4.14	4.57	5.00	5.43	5.87	6.30	6.72	7.17	—	—	
312.0	RPM	890	920	950	980	1020	1060	1100	1130	1170	1210	—	—	—	—	—		
	BKW	2.66	3.23	3.76	4.27	4.77	5.25	5.74	6.22	6.68	7.30	—	—	—	—	—		

RPM : Fan Speed (rpm)
BKW : Brake Power (kW)

NOTE :

When the external static pressure exceeds the shaded area, an oversized fan motor or a pulley are required.

Electrical Data

Quantity x Value

Model	Unit Main Power		Applicable Voltage		Compressor Motor (Three-Phase)			Evaporator Fan Motor (Three-Phase)		Condenser Fan Motor	
	VOL	Hz	Maximum	Minimum	STC	RNC	IPT	RNC	IPT	RNC	IPT
WPH-4	380/415	50	456	342	55/55	5.8/5.7	3.5	0.9/0.95	0.43	0.95/0.95	0.50
WPH-5	380/415	50	456	342	62/67	7.8/7.6	4.6	1.16/1.3	0.48	0.85	0.45
WPH-6	380/415	50	456	342	60/75	8.9/8.6	5.4	1.3/1.4	0.74/0.81	1.2/1.1	0.69
WPH-8	380/415	50	456	342	100/108	11.3/10.4	6.7	1.3/1.4	0.71/0.78	1.2/1.1	0.69
WPH-10	380/415	50	456	342	123/134	14.1/13.3	8.3	2.1/2.2	1.12/1.23	1.27	0.69
WPH-13	380/415	50	456	342	62/67	11.7/11.8	6.8/6.9	2.8/2.9	1.4/1.6	1.4+1.1 /	0.7+0.56 /
					100/108	7.4/7.5	4.3/4.4			1.4+1.1	0.7+0.56
WPH-15	380/415	50	456	342	100/108	2x11.7 / 2x11.8	2x6.8 / 2x7.0	3.7/3.8	1.9/2.0	2x1.4 / 2x1.4	2x0.7 / 2x0.7
WPH-20	380/415	50	456	342	123/134	2x14.7 / 2x14.8	2x8.6 / 2x8.8	6.0/6.1	3.2/3.4	2x1.3 / 2x1.3	2x0.65 / 2x0.65
WPH-25		50	456	342	134/150	2x16.5 / 2x17.1	2x9.5 / 2x9.6	7.8/7.9	4.1/4.2	3x1.3 / 3x1.3	3x0.65 / 3x0.65
WPH-30	380/415	50	456	342	179/198	2x21.7 / 2x21.8	2x12.6 / 2x12.8	7.8/7.9	4.3/4.4	3x1.3 / 3x1.3	3x0.65 / 3x0.65

VOL :Unit Power Supply Rated (Plated) Voltage (V)

Hz :Frequency (Hz)

STC :Starting Current (A)

RNC :Running Current (A)

IPT :Input (kW)

NOTES :

1. These data based on the following conditions.

Evaporator Air Inlet Temperature 27°C DB , 19°C WB Condenser Air Inlet Temperature 35°CDB.

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 Compressors Unit
Maximum Current	RNC x Max.IPT*/IPT	RNC x Max.IPT*/IPT
Maximum Instantaneous Current	STC	STC+0.5xRNCxMax. 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.

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

Sound Data

Models	Sound Level	Frequency Band (Hz)								
		37.5 ┐ 75	75 ┐ 150	150 ┐ 300	300 ┐ 600	600 ┐ 1200	1200 ┐ 2400	2400 ┐ 4800	4800 ┐ 9600	Over-all
WPH-4	SPL-A	42.8	56.2	56.0	57.0	58.8	51.2	43.7	36.8	63.5
	SPL-C	69.4	71.8	65.4	60.4	59.0	49.6	42.1	34.9	74.6
	PWL	77.0	80.0	73.0	68.0	67.0	58.0	50.0	43.0	83.0
WPH-5	SPL-A	43.4	56.8	56.6	57.5	59.2	51.6	44.0	37.1	64.0
	SPL-C	68.7	72.7	65.2	60.7	59.2	50.2	42.2	35.2	74.9
	PWL	80.2	84.2	76.7	72.2	70.7	61.7	53.7	46.7	86.4
WPH-6	SPL-A	47.0	56.7	61.7	59.6	59.3	51.9	45.1	39.7	66.0
	SPL-C	73.6	72.3	71.1	63.0	59.5	50.3	43.5	37.8	77.5
	PWL	82.0	80.0	79.0	71.0	68.0	58.0	52.0	46.0	85.0
WPH-8	SPL-A	48.6	56.5	63.3	61.2	59.4	52.3	46.7	41.3	67.0
	SPL-C	73.9	72.4	71.9	64.4	59.4	50.9	44.9	39.4	77.8
	PWL	85.4	83.9	83.4	75.9	70.9	62.4	56.4	50.9	89.3
WPH-10	SPL-A	46.5	56.0	57.2	60.6	59.3	52.2	46.6	43.2	65.0
	SPL-C	71.8	71.9	65.8	63.8	59.3	50.8	44.8	41.3	75.7
	PWL	83.3	83.4	77.3	75.3	70.8	62.3	56.3	52.8	87.2
WPH-13	SPL-A	48.7	56.1	57.4	59.8	59.0	54.4	52.8	44.9	65.1
	SPL-C	74.0	72.0	66.0	63.0	59.0	53.0	51.0	43.0	76.8
	PWL	85.0	83.0	77.0	74.0	70.0	64.0	62.0	54.0	87.8
WPH-15	SPL-A	50.7	56.1	58.4	59.8	61.0	56.4	54.8	48.9	66.2
	SPL-C	76.0	72.0	67.0	63.0	61.0	55.0	53.0	47.0	78.0
	PWL	87.0	83.0	78.0	74.0	72.0	66.0	64.0	58.0	89.0
WPH-20	SPL-A	50.7	56.1	58.4	59.8	61.0	56.4	54.8	49.9	66.3
	SPL-C	76.7	72.0	67.0	63.0	61.0	55.0	53.0	48.0	78.0
	PWL	87.0	83.0	78.0	74.0	72.0	66.0	64.0	59.0	89.0
WPH-25	SPL-A	52.7	56.9	58.4	61.9	62.1	58.4	54.6	50.7	67.5
	SPL-C	79.3	72.5	67.8	65.3	62.3	56.8	53.0	48.8	80.6
	PWL	87.0	80.0	76.0	73.0	70.0	65.0	61.0	57.0	89.9
WPH-30	SPL-A	53.7	58.1	59.4	62.8	63.3	59.4	55.8	51.9	68.4
	SPL-C	79.0	74.0	68.0	66.0	63.3	58.0	54.0	50.0	80.7
	PWL	90.0	85.0	79.0	77.0	74.0	69.0	65.0	61.0	91.7

SPL-A : A Scale Sound Pressure Level (dB)

SPL-C : C Scale Sound Pressure Level (dB)

PWL : Sound Power Level (dB)

Sound Power Level of Evaporator Fan

Models	Frequency Band (Hz)								
	37.5 ┐ 75	75 ┐ 150	150 ┐ 300	300 ┐ 600	600 ┐ 1200	1200 ┐ 2400	2400 ┐ 4800	4800 ┐ 9600	Over-all
WPH-4	79.3	76.8	67.8	61.8	61.3	51.3	45.8	36.8	81.5
WPH-5	79.7	77.2	68.2	62.2	61.7	51.7	46.2	37.2	81.9
WPH-6	80.2	78.1	69.6	62.6	60.7	51.7	50.7	42.2	82.5
WPH-8	80.5	78.4	69.9	62.9	60.9	51.9	50.9	42.4	82.8
WPH-10	81.3	79.3	77.3	73.3	59.8	56.3	51.8	43.8	84.7
WPH-13	83.5	81.5	73.0	66.0	64.0	55.0	54.0	45.5	85.9
WPH-15	84.5	82.5	74.0	67.0	65.0	56.0	55.0	46.5	86.9
WPH-20	82.0	80.5	79.0	78.0	77.5	75.0	72.5	62.5	87.1
WPH-25	82.0	83.5	79.5	79.0	72.0	71.0	72.0	67.5	87.7
WPH-30	82.0	83.5	79.5	79.0	72.0	71.0	72.0	67.5	87.7

NOTES :

1. The Measuring point is 1.0 meters from the center of the machine surface and 0.5 meter from the floor level.
2. The units are operating under the standard working conditions.
3. The sound data was measured in an anechoic chamber so that reflected sound should be taken into consideration.

Compressor

Compressor Type Number of Cylinders	Hermetic Scroll							
		1	1	1	1	1	1	1
Revolutions	rpm	2,880	2,880	2,880	2,880	2,880	2,880	2,900
Displacement	m ³ /h	11.09	13.82	15.55	22.12	27.65	31.1	42.1
Air Tight Pressure	kg/cm ² G	30	30	30	30	30	30	28
Discharge	kPa	3040	3040	3040	3040	3040	3040	2,850
Suction	kg/cm ² G kPa	15 1,570	15 1,570	15 1,570	15 1,570	15 1,570	15 1,570	15 1,570
Motor Type	Special Squirrel-Cage Three-Phase Motor							
Starting Method	Direct-On-Line Starting							
Poles		2	2	2	2	2	2	2
Insulation Class		E	E	E	E	E	E	E
Oil Type	SUNISO 4GD1-HT							
Charge	Liters	1.0	1.0	1.0	3.5	3.5	3.5	SUNISO 3GS 4.0

Evaporator and Fan Section

Models		WPH-4	WPH-5	WPH-6	WPH-8	WPH-10
Evaporator coil		Multi-Pass Cross Finned Tube				
Tube Material		Copper Tube				
Outer Diameter	mm	9.53	9.53	9.53	9.53	9.53
Thickness	mm	0.34	0.34	0.34	0.34	0.34
Number of Rows		3	3	3	3	3
Number of Tube per Evaporator		38	38	56	56	78
Fin Material		Aluminum				
Thickness	mm	0.11	0.11	0.11	1.11	0.11
Pitch	mm	2.0	2.0	2.0	2.0	2.0
Number of Evaporator per unit		1	1	1	1	1
Total Face Area	m ²	0.31	0.31	0.44	0.44	0.62
Maximum Applicable Pressure	kg/cm ² G kPa	12.0 1,275	12.0 1,275	12.0 1,275	12.0 1,275	12.0 1,275
Evaporator Fan		Multi-Blade Centrifugal Fan (Double Suction)				
Number of Fans per Unit		1	1	1	1	1
Outer Diameter	mm	264	264	298	298	298
Total Nominal Air Flow	m ³ /min	37	46	65	69	90
	m ³ /s	0.62	0.77	1.08	1.15	1.5
	L/S	620	770	1,080	1,150	1,500
Evaporator Fan Motor		Drip-Proof Type Enclosure				
Starting Method		Direct-On-Line Starting				
Nominal Output	KW	0.35	0.55	0.75	0.75	1.5
Number of Poles		4	4	4	4	4
Number of Motors per Unit		1	1	1	1	1
Insulation Class		E	B	B	B	B

Models		WPH-13	WPH-15	WPH-20	WPH-25	WPH-30
Evaporator coil		Multi-Pass Cross-Finned Tube				
Tube Material		Copper Tube				
Outer Diameter	mm	9.53	9.53	9.53	9.53	9.53
Thickness	mm	0.34	0.34	0.34	0.34	0.34
Number of Rows		3	3	3	3	3
Number of Tubes per Evaporator		90	90	116	116	116
Fin Material		Aluminium				
Thickness	mm	0.11	0.11	0.11	0.11	0.11
Pitch	mm	2.0	2.0	2.0	2.0	2.0
Number of Evaporator per Unit		1	1	1	1	1
Total Face Area	m ²	0.85	0.85	1.45	1.72	1.72
Maximum Applicable Pressure	kg/cm ² G kPa	12 1275	12 1275	12 1275	12 1275	12 1275
Evaporator Fan		Multi-Blade Centrifugal Fan (Double Suction)				
Number of fans per Unit		2	2	2	2	2
Outer Diameter	mm	298	298	385	385	385
TotalNominal Air Flow	m ³ /min	110	130	180	234	260
	m ³ /s	1.83	2.17	3.0	3.9	4.33
	L/S	1830	2170	3000	3900	4330
Evaporator Fan Motor		Drip-Proof Type Enclosure				
Starting Method		Direct-On-Line Starting				
Nominal Output	KW	2.2	2.2	3.7	5.5	5.5
Number of Poles		4	4	4	4	4
Number of Motors per Unit		1	1	1	1	1
Insulation Class		B	B	B	B	B

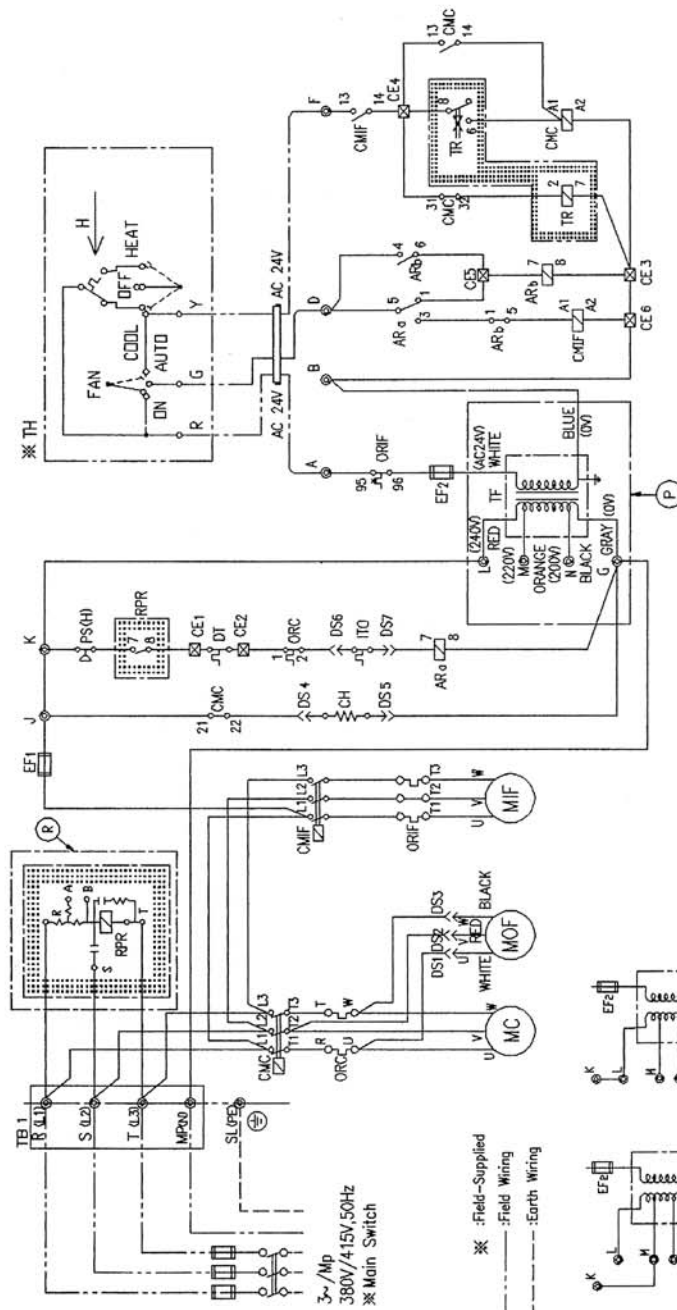
Component Detailed Data (Continued)

Condenser and Condenser Fan

Models		WHP-4	WHP-5	WHP-6	WHP-8	WHP-10
Condensor Coil		Multi-Pass Cross-Finned Tube				
Tube Material		Copper Tube				
Outer Diameter	mm	9.52	9.52	9.52	9.52	9.52
Thickness	mm	0.34	0.34	0.34	0.34	0.34
Number of Rows		2	2	3	3	3
Number of Tubes per Condenser		44	44	78	78	96
Fin Material		Aluminium				
Thickness	mm	0.11	0.11	0.11	0.11	0.11
Pitch	mm	2.0	2.0	2.0	2.0	2.0
Maximum Operating Pressure	kg/cm ² G kPa	30.0 3,040	30.0 3,040	30.0 3,040	30.0 3,040	30.0 3,040
Number of Condenser per Unit		1	1	1	1	1
Total Face Area	m ²	0.89	0.89	1.08	1.08	1.45
Condenser Fan		Direct Driven Propeller Fan				
Number of Fans per Unit		1	1	1	1	1
Outer Diameter	mm	Ø610	Ø610	Ø660	Ø660	Ø710
Revolutions	rpm	870	870	885	885	820
Nominal Air Flow per Fan	m ³ /min	120	120	135	135	160
	m ³ /s	2.0	2.0	2.25	2.25	2.67
	L/S	2,000	2,000	2,250	2,250	2,670
Condenser Fan Motor		Drip-Proof Type Enclosure				
Starting Method		Direct-On-Line Starting				
Nominal Output	KW	0.3	0.3	0.45	0.45	0.4
Number of Motors		1	1	1	1	1
Phase		3	3	3	3	3
Number of Poles		6	6	6	6	6
Insulation Class		H	H	H	H	F

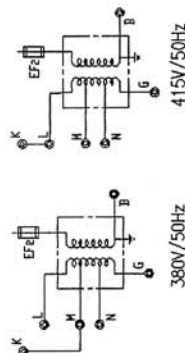
Models		WHP-13	WHP-15	WHP-20	WHP-25	WHP-30
Condenser Coil		Multi-Pass Cross-Finned Tube				
Tube Material		Copper Tube				
Outer Diameter	mm	9.52	9.52	9.52	9.52	9.52
Thickness	mm	0.34	0.34	0.34	0.34	0.34
Number of Rows		3	3	3	3	3
Number of Tubes per Condenser		92	92	132	156	156
Fin Material		Aluminum				
Thickness	mm	0.11	0.11	0.11	0.11	0.11
Pitch	mm	2.0	2.0	2.0	2.0	2.0
Maximum Operating Pressure	kg/cm ² G kPa	30.0 3,040	30.0 3,040	30.0 3,040	30.0 3,040	30.0 3,040
Number of Condenser per Unit		2	2	2	2	2
Total Face Area	m ²	1.82	2.10	2.48	3.78	3.78
Condenser Fan		Direct Driven Propeller Fan				
Number of Fans per Unit		2	2	2	3	3
Outer Diameter	mm	Ø660	Ø660	Ø710	Ø710	Ø710
Revolutions	rpm	810/850	885	810	810	810
Nominal Air Flow per Fan	m ³ /min	225	270	320	480	480
	m ³ /s	4.25	4.5	5.34	8.0	8.0
	L/S	4,250	4,500	5,340	8,000	8,000
Condenser Fan Motor		Drip-Proof Type Enclosure				
Starting Method		Direct-On-Line Starting				
Nominal Output	KW	0.3 / 0.4	0.4	0.3	0.3	0.3
Number of Motors		2	2	2	3	3
Phase		3	3	3	3	3
Number of Poles		6	6	6	6	6
Insulation Class		F / H	H	F	H	H

For Models WPH-4 and WPH-5

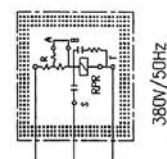


3~ / Mφ
380V/415V, 50Hz
※ Main Switch

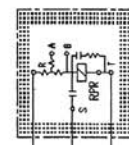
※ : Field-Supplied
--- : Field Wiring
- - - : Earth Wiring



Wiring Connection of Part (P)



380V/50Hz



415V/50Hz

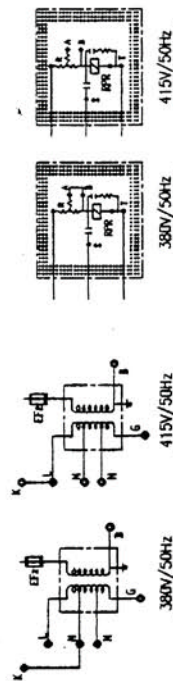
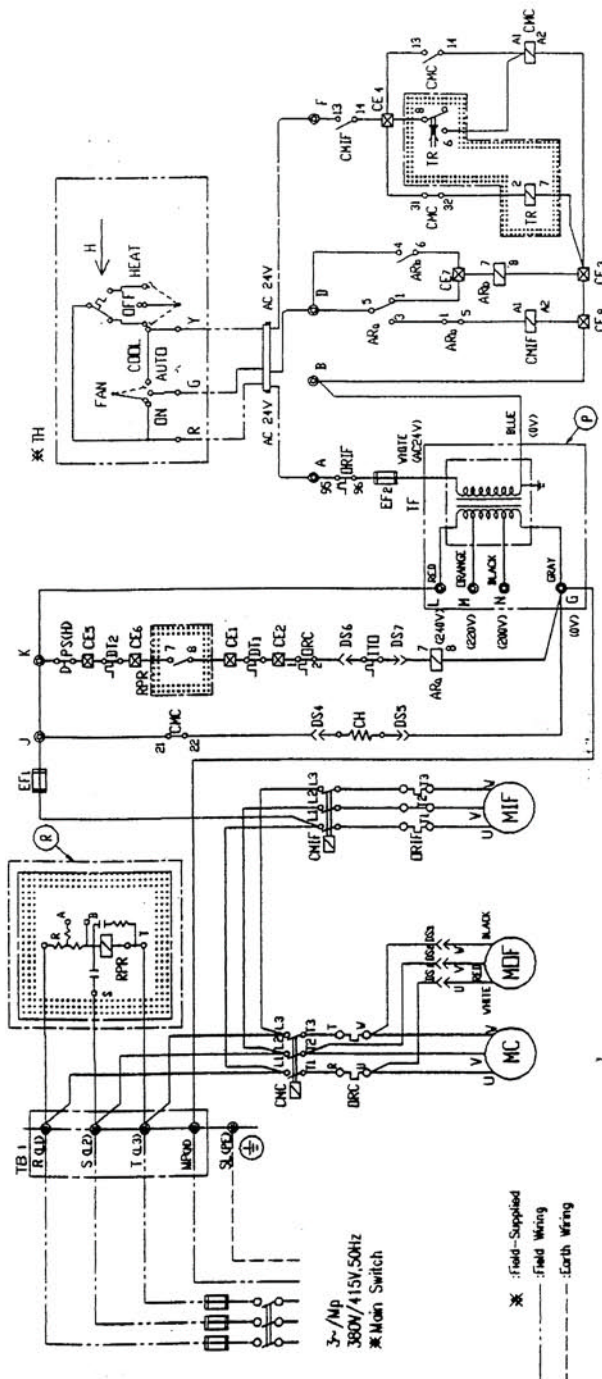
Wiring Connection of Part (R)

Notes:

1. All the field wiring and equipment must comply with national and local codes.
2. For the different power supply please refer of the wiring connection of part (P) diagram to change the wire of the transformer.
3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on (R) diagram.
4. The room thermostat shown in the above diagram is Honeywell thermostat Model T87F2196.

Mark	Auxiliary	Name
AR6,8	Contactor for Compressor Motor	
CMC	Contactor for Indoor Fan Motor	
CMIF	Contactor for Outdoor Fan Motor	
CH	Crankcase Heater	
CE1~6	Connector	
DS	Discharge Gas Thermostat	
DS1~7	Connector	
EF1,2	Fuse	
MC	Motor for Compressor	
MIF	Motor for Indoor Fan	
MOF	Motor for Outdoor Fan	
ORC	Overcurrent Relay for Compressor Motor	
ORIF	Overcurrent Relay for Indoor Fan Motor	
RPR	Reverse Phase Protection Relay	
PS(H)	Pressure Switch (High)	
ITD	Internal Thermostat for Outdoor Fan Motor	
TF	Transformer	
TR	Timer Relay	
TB 1,2	Terminal Base	
	Printed Circuit Board	
◎	Terminals {A,B,...}	
※TH	Room Thermostat	

For Model WPH-6

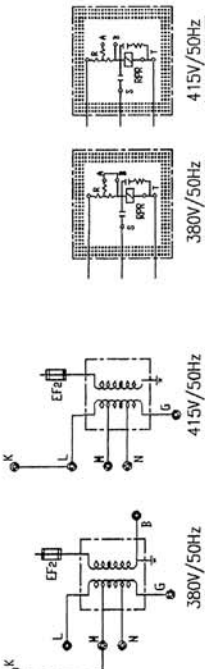
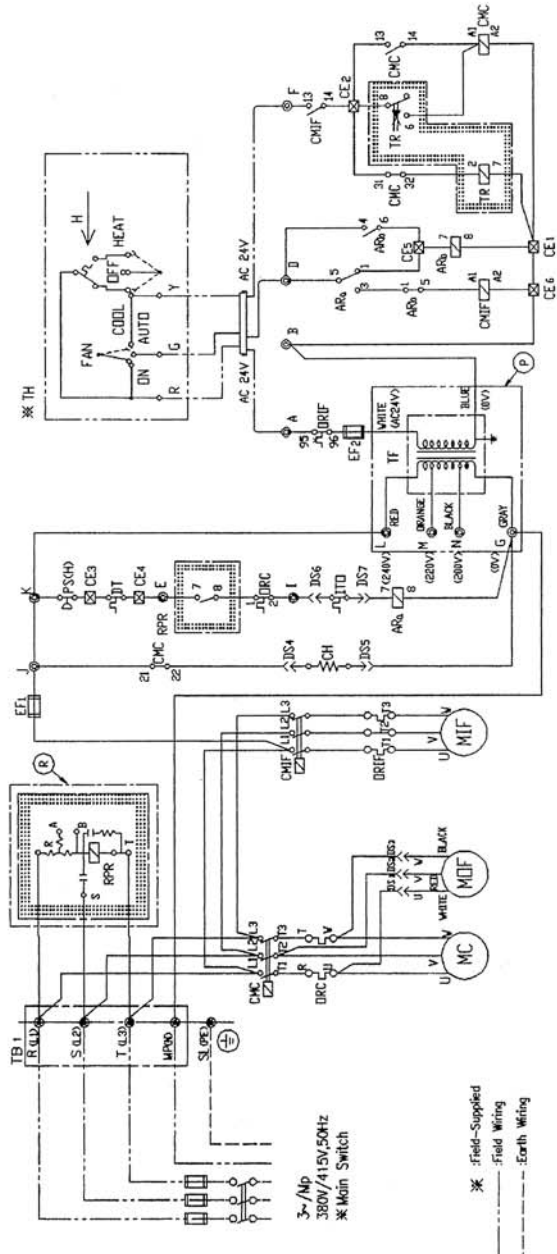


Notes:

1. All the field wiring and equipment must comply with national and local codes.
2. For the different power supply please refer of the wiring connection of part (P) diagram to change the wire of the transformer.
3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on (P) diagram.
4. The room thermostat shown in the above diagram is Honeywell thermostat Model T87F2196.

Mark	Name
ARap	Auxiliary Relay
CMC	Contactor for Compressor Motor
CMIF	Contactor for Indoor Fan Motor
CH	Crackcase Heater
CE1-6	Connector
DT1-2	Discharge Gas Thermostat
DS1-7	Connector
EF1-2	Fuse
MC	Motor for Compressor
MIF	Motor for Indoor Fan
MOF	Motor for Outdoor Fan
ORC	Overcurrent Relay for Compressor Motor
ORIF	Overcurrent Relay for Indoor Fan Motor
RPR	Reverse Phase Protection Relay
PS(H)	Pressure Switch (High)
TTO	Internal Thermostat for Outdoor Fan Motor
TR	Transformer
TR	Timer Relay
TB1-2	Terminal Base
	Printed Circuit Board
⊙	Terminals (A,B,...)
⊗TH	Room Thermostat

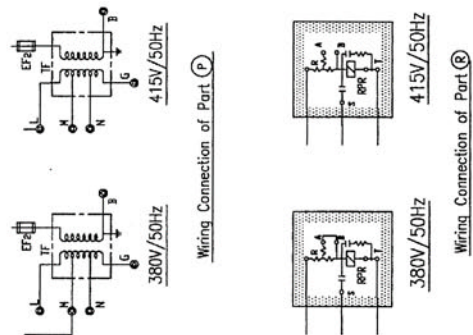
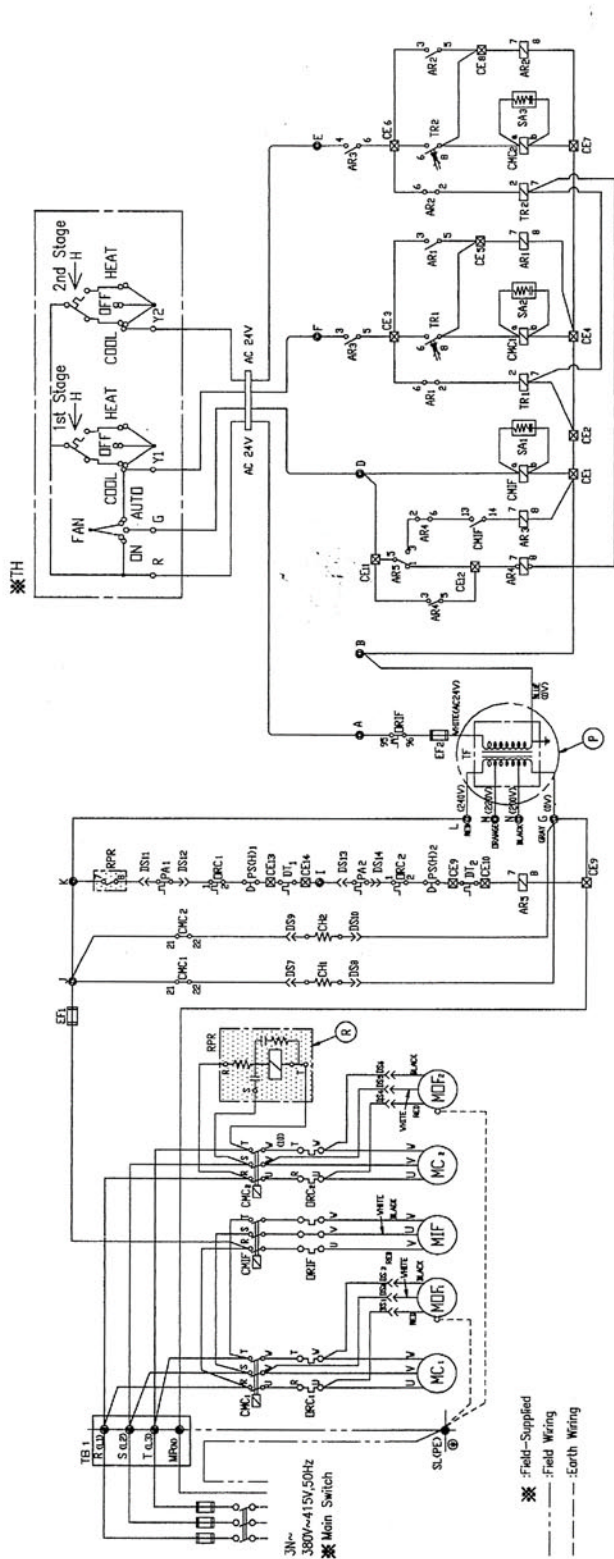
For Models WPH-8 and WPH-10



- Notes:
1. All the field wiring and equipment must comply with national and local codes.
 2. For the different power supply please refer of the wiring connection of part (P) diagram to change the wire of the transformer.
 3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on (R) diagram.
 4. The room thermostat shown in the above diagram is Honeywell thermostat Model T87F2196.

Mark	Name
ARa	Auxiliary Relay
CMC	Contactor for Compressor Motor
CMIF	Contactor for Indoor Fan Motor
CH	Condenser Heater
CE1~6	Connector
DT	Discharge Gas Thermostat
DS1~7	Disconnect
EF1,2	Fuse
MC	Motor for Compressor
MIF	Motor for Indoor Fan
MOF	Motor for Outdoor Fan
ORC	Overcurrent Relay for Compressor Motor
ORF	Overcurrent Relay for Indoor Fan Motor
RPR	Reverse Phase Protection Relay
PS(H)	Pressure Switch (High)
ITO	Internal Thermostat for Outdoor Fan Motor
TF	Transformer
TR	Timer Relay
TB1,2	Terminal Base
	Printed Circuit Board
⊙	Terminals (A,B,.... R,S,T,Mp)
*TH	Room Thermostat

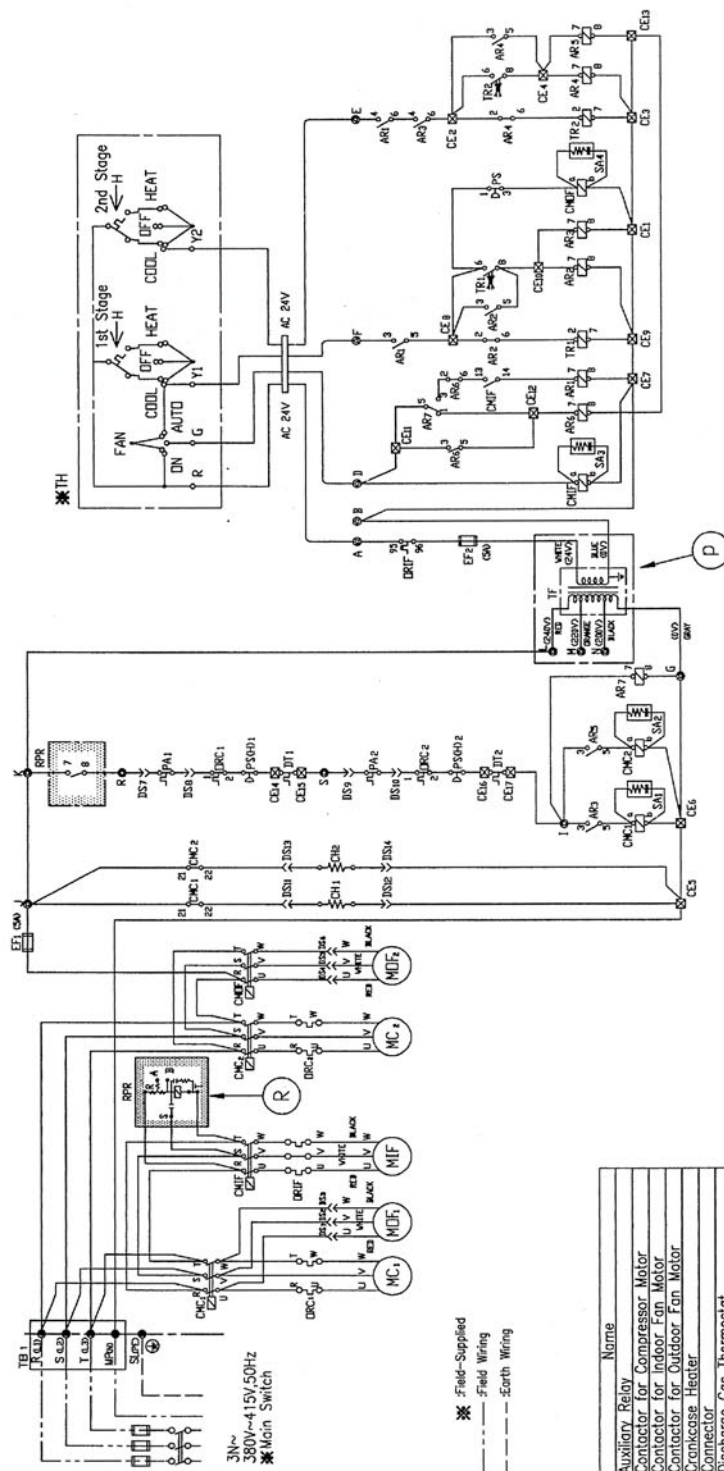
For Model WPH-13 and WPH-15



Mark	Nome
AR1-5	Auxiliary Relay
CMC12	Contact for Compressor Motor
CMF	Contact for Indoor Fan Motor
CH12	Crankcase Heater
CE1-14	Connector
DS1-14	Discharge Gas Thermostat
EF12	Fuse
MC12	Motor for Compressor
MOF12	Motor for Indoor Fan
ORC12	Overcurrent Relay for Compressor Motor
ORF	Overcurrent Relay for Indoor Fan Motor
RPR	Reverse Phase Protection Relay
PS(H)12	Pressure Switch (High)
SA1-3	Surge Absorber
TF	Transformer
TR1-2	Thermal Relay
TS1-2	Terminal Base
TH	Printed Circuit Board
TH	Terminals { A,B,... } { R,S,T,M,p }
TH	Room Thermostat

- Notes:
1. All the field wiring and equipment must comply with national and local codes.
 2. For the different power supply please refer of the wiring connection of part (P) diagram to change the wire of the transformer.
 3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on (P) diagram.
 4. The room thermostat shown in the above diagram is Honeywell thermostat Model T874D1009.

For Model WPH-20

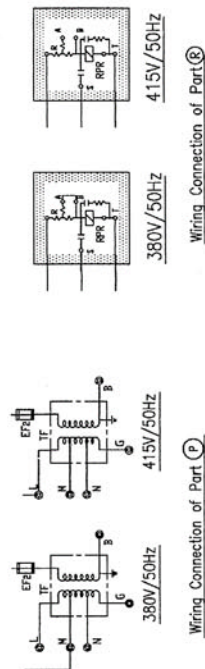


※ Field-Supplied
 --- Field Wiring
 --- Earth Wiring

Mark	Name
AR~7	Auxiliary Relay
CMC1,2	Contactor for Compressor Motor
CMF	Contactor for Indoor Fan Motor
CMOF	Contactor for Outdoor Fan Motor
CH1,2	Crackcase Heater
CE1~17	Connector
DS1~14	Discharge Gas Thermostat
EF1,2	Fuse
MC1,2	Motor for Compressor
MF	Motor for Indoor Fan
MOF1,2	Motor for Outdoor Fan
ORC1,2	Overcurrent Relay for Compressor Motor
ORF	Overcurrent Relay for Indoor Fan Motor
RPR	Reverse Phase Protection Relay
PS	Pressure Switch for Cond. Fan Control
PS(H)1,2	Pressure Switch (High)
RA1,2	Internal Thermostat for Outdoor Fan Motor
SA1~4	Surge Absorber
TF	Transformer
TR1,2	Timer Relay
TH	Room Thermostat
Terminal Base	
Printed Circuit Board	
Terminals {A,B,...,R,S,T,Mp}	
※TH	Room Thermostat

Notes:

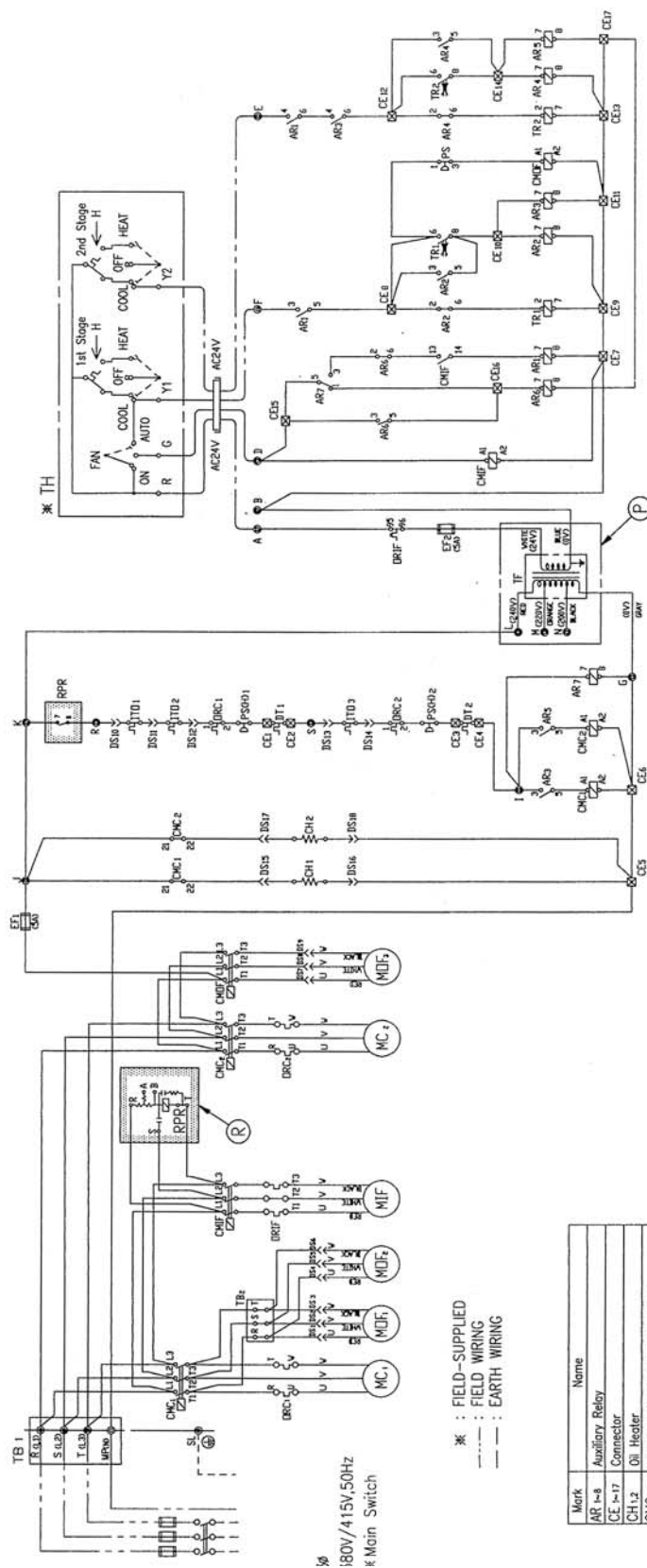
1. All the field wiring and equipment must comply with national and local codes.
2. For the different power supply please refer of the wiring connection of part ② diagram to change the wire of the transformer.
3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on ② diagram.
4. The room thermostat shown in the above diagram is Honeywell thermostat Model T874D1009.



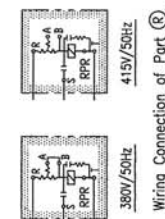
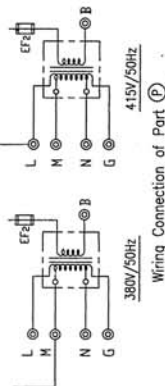
Wiring Connection of Part ②

Wiring Connection of Part ②

For Model WPH-25

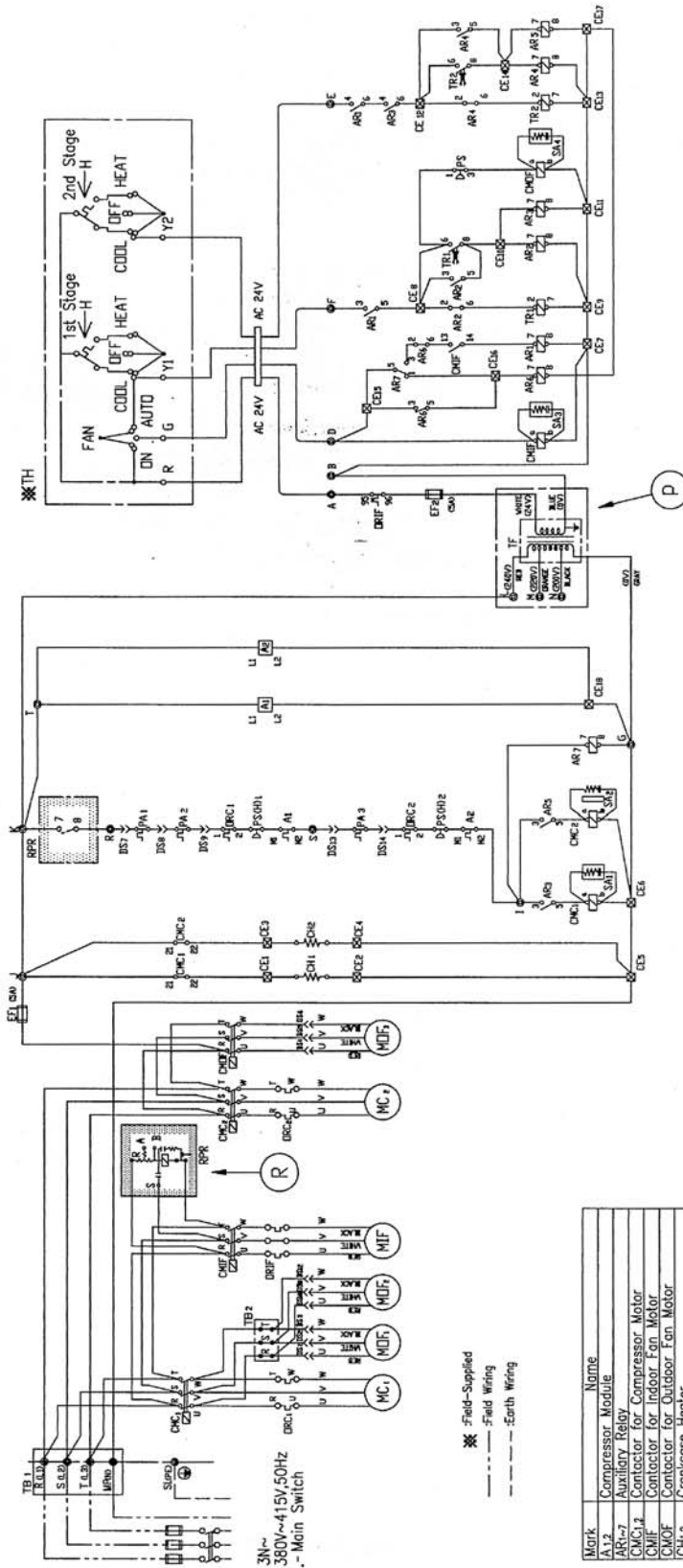


Mark	Name
AR 1-8	Auxiliary Relay
CE 1-17	Connector
CH 1-2	Oil Heater
CMC 1-2	Contactor for Compressor Motor
CMF	Contactor for Indoor Fan Motor
CMOF	Contactor for Outdoor Fan Motor
DS 1-18	Discharge Gas Thermostat
DT 1-2	Fuse
EF 1-2	Internal Thermostat for Outdoor Fan Motor
MC 1-3	Motor for Compressor
MIF	Motor for Indoor Fan
MOF 1-3	Motor for Outdoor Fan
ORC 1-2	Overcurrent Relay for Compressor Motor
ORF	Overcurrent Relay for Indoor Fan Motor
PS(H) 1-2	High-Pressure Protection Relay
RPR	Reverse Phase Protection Relay
TR 1-2	Timer Relay
TF	Transformer
TB 1-3	Terminal Base
⊙	Terminals 1-30 (A, B, R, S, M, P)
* TH	Thermostat



- Notes:
1. All the field wiring and equipment must comply with national and local codes.
 2. For the different power supply please refer of the wiring connection of part (P) diagram to change the wire of the transformer.
 3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on (P) diagram.
 4. The room thermostat shown in the above diagram is Honeywell thermostat Model T874D1009.

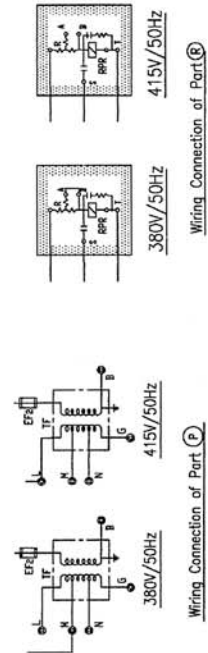
For Model WPH-30



Mark	Name
A1-2	Compressor Module
A1-7	Auxiliary Relay
CMC1,2	Contactors for Compressor Motor
CMF	Contactors for Indoor Fan Motor
CMOF	Contactors for Outdoor Fan Motor
CHI-2	Crankcase Heater
CE-1-18	Connector
DT-12	Discharge Gas Thermostat
DS-1-14	Connector
EF-12	Fuse
MC1,2	Motor for Compressor
MIF	Motor for Indoor Fan
MOF1-3	Motor for Outdoor Fan
ORC1,2	Overcurrent Relay for Compressor Motor
ORF	Overcurrent Relay for Indoor Fan Motor
RPR	Reverse Phase Protection Relay
PS	Pressure Switch for Cond. Fan Control
PS(H)2	Pressure Switch (High)
PA1-2	Internal Thermostat for Outdoor Fan Motor
SA1-4	Surge Absorber
TF	Transformer
TR-12	Timer Relay
TB1-2	Terminal Base
.....	Printed Circuit Board
⊙	Terminals { AR, ... }
.....	Terminals { R, S, T, M, P }
※TH	Room Thermostat

Notes:

1. All the field wiring and equipment must comply with national and local codes.
2. For the different power supply please refer of the wiring connection of part ④ diagram to change the wire of the transformer.
3. When the power supply is 380V, be sure to remove cap on both tabs and connect both tabs with connecting wire as show on ④ diagram.
4. The room thermostat shown in the above diagram is Honeywell thermostat Model T874D1009.



Wiring Connection of Part ④

Wiring Connection of Part ④

Protection and Safety Control

Compressor Protection

All units are equipped with the following compressor protection system, in order to provide a perfect guarding function for the compressor.

High Pressure Switch – Leading the pressure from the compressor discharge line, the switch cuts out the compressor operation when the discharge pressure exceeds the setting.

Two-phase Overcurrent Relay – Equipped in the magnetic switch box, this relay quickly cuts out the compressor operation when the current to the compressor exceeds the setting .

Internal Thermostat (only for model of 30HP) –

Embedded in the compressor motor winding, this thermostat cuts out the compressor operation when the compressor winding temperature exceeding the setting.

Discharge Gas Thermostat (for models from 4HP to 25HP) – Attached on each compressor discharge line, the thermostat cuts out the compressor operation when the discharge gas temperature exceeds the setting.

Crankcase Heater – Bound around the steel chamber for the hermetic scroll compressor, this heater protects against oil foaming during cold starting, as it is energized while the compressor is stopped.

Reverse Phase Protection Relay – The reverse phase protection relay will make the compressor not start, when the power source is incorrectly connected.

Compressor Cycling Protection Timer Relay – This timer relay provides the above combination with the most effective functions by delaying the compressor restarting period (refer to “Operational Sequence Chart”).

Other Protection

Overcurrent Relay for Evaporator Fan Motor – This manual reset type thermal overcurrent relay for the evaporator fan motor interlock system operation.

Internal Thermostat for condenser Fan Motor – Embedded in the fan motor winding, this internal thermostat cuts out the operation of the fan motor when winding temperature exceeds the setting.



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