

# *PHPH Series Packaged Heat Pumps*



*Bulletin # 055/2003 (NEW)*



## Contents

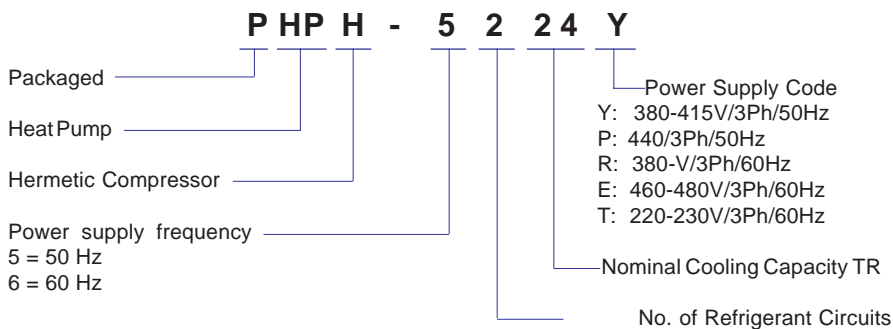
Introduction .....	2	Component Air Pressure Drop .....	16
Legend .....	2	Electric Heating .....	16
Nomenclature .....	2	Field Connections .....	17
General Features .....	3	Typical Wiring Diagram .....	17
Component Features .....	3	Electrical Data .....	19
Optional Features .....	4	Filter Section .....	20
Engineering Specifications 50Hz .....	5	Dimensional Data .....	21
Engineering Specifications 60Hz .....	6	Space & Location Requirements .....	22
Capacity Ratings .....	7	Protective Coatings .....	22
Fan Performance Data .....	15	Guide Specifications .....	23

## Legend

The following legends are used throughout this manual:

AFR ..... Air Flow Rate	L/s ..... Liters per second
BPF ..... By-pass Factor	MBH ..... BTHU x 1000
C.Cap .... Cooling Capacity	PH ..... Phase
CFM ..... Cubic feet per minute	Pa ..... Pascal
EER ..... Energy Efficiency Ratio	PD ..... Pressure Drop
Hz ..... Hertz	PI ..... Compressor power input in kW
in.wg .... inches of water gauge	RPM ..... Rotations per minute
KW ..... Kilowatt	RPS ..... Rated Power Supply
Kg ..... Kilogram	TR ..... Tons of refrigeration = 12 MBH
lbs ..... Pounds weight (British units)	V ..... Volts

## Nomenclature



## Introduction

SKM PHPH Series Packaged Air - Air Heat Pumps are designed to give outstanding heating and cooling all year round, with high efficiency, extensive energy saving and ease of installation and maintenance.

The high efficiency PHPH series from SKM, absorb and transfer heat from outdoors to indoor for heating and from indoors to outdoor for cooling.

SKM PHPH Series are available in 14 different sizes from :

### 50 Hz

5.0 to 24.2 nominal TR (18 to 85.2 kW) for cooling applications and,  
4.6 to 22 nominal TR (16.2 to 77.4 kW) for heating

### 60Hz

5.5 to 26.7 nominal TR (19.3 to 94 kW) for cooling applications and,  
5.3 to 25.5 nominal TR (18.6 to 89.7 kW) for heating.

PHPH units are designed and rated in accordance with ARI-340 - 360/93 and 210/240-94 standards.

PHPH series Packaged Heat Pumps are completely assembled, internally wired, charged with refrigerant at factory, tested before despatch and ready for installation. All that is required on site is connecting ducting and power supply. This greatly reduces installation work and costs. They are designed for ducted systems which will enable them to be installed on roof tops or on the ground.

PHPH series Packaged Heat Pumps are yet another quality product from SKM, which are



**Built in the Gulf... for the world.**

## General Features

The PHPH series Packaged Heat Pumps are yet another new unique series from SKM incorporating high efficiency and heavy duty components resulting in an extremely rugged, long-life, energy efficient, self-contained unit that will provide cooling / heating at higher efficiency over a long and extended life. Compared to the traditional units available in the market, the PHPH series Packaged Heat Pumps are very low on energy consumption.

## Component Features

The common standard features of all PHPH Series Heat Pumps include the following :

### Compressor

Compressors used in the PHPH Series Heat Pumps are hermetically sealed reciprocating type.

Compressors conform to internationally recognized standards like NF, VDE, CSA & UL.

All compressors are refrigerant gas cooled and provided with built-in protection comprising an internal overload device and internal pressure relief valve for long life quiet operation.



The compressors, incorporating a built-in muffler, are mounted on springs within a heavy gauge steel housing to give a low noise level. In addition, the compressors are provided with vibration isolators to further minimize noise and vibration.

The compressors are selected for their extremely high energy efficiency and heavy duty industrial / commercial usage with economy of operation.

### Coils

Coils are manufactured from seamless copper tubes mechanically bonded to aluminium fins to ensure optimum heat transfer. All coils are tested against leakage by air pressure of 450 psig (3100 KPa) under water. All standard coils are 3 or 4 rows and 12 fpi for outdoor coil and 10 fpi for indoor coil, 3/8" (9.5mm) O.D. tubes.

For different application requirements, other optional coil fin materials are available as listed under options.



All models of the PHPH series Heat Pumps are restricted to a 12fpi or 144 fins per foot (2.1 mm fin spacing) outdoor coil. Gulf dust storms and the general level of available maintenance in Gulf countries ensures this coil design shall provide long life and maintenance-free service with the least possibility of blockage on the coil.

The cross wave fin and staggered tube design uses the coil surface effectively by creating uniform air turbulence and optimum heat transfer over the entire finned surface.

Coils are rated in accordance with ARI - 410/91.

The fin thickness of a standard SKM PHPH Series Heat Pump is atleast 20% more than the competition.

The coils thus, are better able to withstand the Gulf environment.

### Propeller Fan Assembly

The outdoor fans are propeller type, aluminium alloy blades, directly driven by electric motors. Motors are Totally Enclosed Air Over (TEAO) six pole with class 'F' insulation and minimum IP55 protection.

The TEAO and class 'F' insulation features ensure long life and are unique to SKM. The motors are factory wired using wires specially selected for high ambients operation, to unit control panel where the motor contactors are

located to control the operation of these motors.



The outdoor fans are individually statically and dynamically balanced at the factory. Complete fan assembly is provided with suitable acrylic coated fan guard.

### Centrifugal Fan Assembly

Standard indoor fan is forward curved centrifugal DIDW, statically and dynamically balanced complete with shaft, self-aligning, lubricated for life ball bearings.

PHPH Series models 5215 & 6216 onwards have dual fans mounted on a single heavy duty shaft. The fan(s) are driven by a single electric motor, Class F insulated, IP55 protected & are totally enclosed 4 pole motor rated for continuous operation at design conditions.

The motor is fitted with an adjustable vee-belt drive, as standard. Shaft ends insert into oversized, tapered lock self-aligning, long-life bearings. Motor is factory wired to the control panel where the motor contactors are located.

### Refrigerant Circuit

PHPH Series Heat Pumps come complete, as standard, with correctly sized and piped refrigerant lines including bi-directional filter drier, thermostatic expansion valve with bypass device, shut-off valve, 4 way reverse valve, heat exchanger suction accumulator and a full operating charge of R - 22 in each circuit.

Piping is fabricated from ACR grade copper piping. Suction line is insulated with 1/2" (12mm) thickness closed cell pipe insulation.

### Casing / Structure

The unit casing used in PHPH Heat Pumps is made of zinc coated galvanized steel sheets conforming to JIS-G 3302 and ASTM A525 which is phosphatized before application of an

electrostatic powder coat of approximately 60 microns and then oven-baked for a tough and lasting weather resistant finish. This finish and coating can pass a 1000 hour in 5% salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117 - 95.

The entire casing panels are designed to ensure that rain water cannot enter the interior. The indoor section is sealed with vinyl gaskets.

The standard indoor air section is insulated from all sides with black-neoprene faced heavy density 1" thick fiber glass insulation. The insulation-cum-sound liner meets the fire requirements of NFPA90A & 90B and is secured with mechanical fasteners in addition to water resistant adhesive.

For applications requiring an inner skin in the evaporator section, option DSE provides an 0.8mm galvanized inner skin. Suitable isolation to ensure no cold-bridges and no condensation on the exterior of the units is provided.

The condensate drain pan is heavily insulated to ensure condensation does not occur. Stainless steel condensate drain pans are available on request.

## Control Panel

The unit mounted control panel is an IP 55 enclosure and incorporates all starting, operating and safety controls. Safety and operating controls are arranged for easy accessibility. All wiring is sized as per NEC regulations, articles 430 & 440. Wiring is fully ferruled enabling ease of proper identification.

The standard IP 55 control panel in the PHPH Series incorporates the following :

- Individual compressor, condenser fan motor and evaporator fan motor contactors.
- Condenser fan motor and evaporator fan motor overload relays.
- 24 volts transformer.
- Control circuit disconnect switch
- Power & control circuit terminal blocks.

## Microprocessor Based Control

The controller consists of a display unit and relay boards. The display is mounted in a space/room and the relay card(s) are mounted in the unit control panel. Both are connected by a 6 - core shielded cable (cable supplied by others). Power contactors, pressure switches and control circuit MCBs and terminals are wired to the control board in the unit control panel. The sensor is directly connected to the relay board and is placed in the return air path.

Main features of the controls are :

- Built in anti recycle timer to prevent compressor short cycling.
- Auto lead-lag of the compressor.
- General alarm volt free contact is available for any remote indication use.

Following main indications are available on the controller display :

- Digital indication of return air temperature.
- High & low pressure alarm indications.
- Evaporator fan motor trip indication.
- Auto defrost cycle feature available to prevent freezing on coils.

## Optional Features

PHPH Series heavy duty packaged Heat Pumps are available with a multitude of optional features which makes design and selection extremely easy and capable of matching the most stringent of requirements.

### Alternative Coil Material

Made of copper tubes and alternative fin material and/or protective coating.

- For Copper Fins specify **FC**
- For Copper Fins electrotinned specify **FCT**
- For Pre Coated Aluminum Fins specify option **FAP**

### Outer Air Coil Guard (CGP/CGG)

Coil wire mesh guard, in painted or galvanized finish for outer air coil. Recommended on ground level installations where coil needs to be protected against vandalism.

### Double Skin Indoor Air Section (DSE)

Inner skin of 0.8mm galvanized sheet in the indoor air section provided with no cold bridges.

### Supplementary Electric Heating (HC1)

Heating, when required, can be provided. See page 16 for available sizes and types.

### Filter Section (FFS/VFS/BFS)

Can be provided for flat filters or vee filters configuration for relatively higher or lower, respectively, face velocities on the filters.

Bag filter section can be provided, additionally, if required. Flat filter sections can accommodate 1" or 2" thick cleanable media aluminium or synthetic filters for particle/dust removal.

The Bag Filter section can house 22", 30" or 36" deep bag filters to meet specific requirements of efficiencies or contaminants in the air stream.

### Galvanised Frame & Base (GFB)

Hot dip galvanised after manufacture, steel frame and base. Recommended for highly corrosive environments.

### Pressure Gauges (SDG)

Suction and discharge indication of each refrigerant circuit. Gauges mounted **outside** the Control Panel.

### Run Hour Meter(s) (RHM)

To monitor operating hours of each compressor.

### Stainless Steel Drain Pan (SSP)

Heavy gauge 316 stainless steel drain pan under both coils. Insulation under drain pan as per SKM standard.

### Voltage Monitoring Module (VMM)

To prevent operation in the event of:  
Phase burn-out  
Phase reversal  
Under voltage on the incoming line voltage.

### Extra Ball Valve (XBV)

To fully isolate refrigerant filter drier, additional ball valve(s) can be incorporated in the liquid line.

### Fans with polyglycoating (PGF)

**Outdoor fan motors with anti-condensation heaters built-in (CFM-ACH)**  
Where application so requires.

### Isolated Propeller Fan Motors (CMS)

For elimination of extraneous noise and vibration from propeller fan motor, the motors are individually isolated from the frame.

### Circuit Breaker for Compressor (CBC)

For those electrical specifications which require additional protection.

### Manual Reset Type Hi Pressure Switch (MHP)

Adjustable type can be used to replace the factory set non-adjustable, standard hi-pressure switch.

### Anti Spark Fan and Belt (SPF)

## Options for Field Installations

### Anti-vibration Mounts (CAVM)

Recommended for roof mounted units or other locations in the vicinity of occupied spaces, where noise may be objectionable.

### High and Low Pressure Gauges (CSDG)

Without piping or isolating pet cocks.

## Engineering Specifications - 50Hz

Model		PHPH	5105	5106	5107	5108	5109	5210	5111	
Cooling Capacity		TR	5.0	5.3	6.2	7.4	9.1	9.7	10.8	
		kW	17.6	18.6	21.8	25.9	32.0	34.3	37.9	
Heating Capacity		TR	4.6	4.9	5.7	6.7	8.6	9.1	10.0	
		kW	16.0	17.3	20.2	23.6	30.1	31.9	35.0	
Compressor	Type	Fully Hermetic Reciprocating								
	Code		MH - 6	MH - 7	MH - 8	MH - 10	MH - 12	MH - 6	MH - 14	
	Quantity	No.	1	1	1	1	1	2	1	
Oil Charge per Compressor		US Gal Liter	0.5 1.9	0.5 1.9	0.5 1.9	1.1 4.2	1.1 4.2	0.5 1.9	1.1 4.2	
Condenser	Coil	Type	Air Cooled Copper Tubes Aluminum Fins							
		Face Area	sq. ft. sq. m.	9.7 0.9	9.7 0.9	12.2 1.1	12.2 1.1	14.7 1.4	19.4 1.8	14.7 1.4
	Fan	Type	Propeller Direct Drive Aluminum Blade							
		Code / Quantity		628 / 1	628 / 1	723 / 1	729 / 1	823 / 1	628 / 2	823 / 1
	Air Flow Rate		cfm l/s	4530 2138	4530 2138	6720 3171	6720 3171	9140 4313	9060 4275	8790 4148
	Motor	Type	Totally Enclosed, Air Over, Class F Insulation, 6 Pole, IP55							
Size		kW	0.37	0.37	0.75	1.10	1.50	2 x 0.37	1.50	
Evaporator	Coil	Type	Direct Expansion, Cross Wave Fin, Staggered Tubes							
		Face Area	sq. ft. sq. m.	4.7 0.4	4.7 0.4	5.5 0.5	6.6 0.6	7.7 0.7	8.6 0.8	9.6 0.9
	Fan	Type	Centrifugal Double Inlet, Double Width Belt Drive							
		Code / Quantity		N10 / 1	N10 / 1	N10 / 1	N12 / 1	N15 / 1	N15 / 1	N15 / 1
	Air Flow Rate		cfm l/s	2200 1038	2400 1133	2750 1298	3300 1558	3830 1808	4170 1968	4800 2266
	Motor	Type	Totally Enclosed, Class F Insulation, IP55							
Size		kW	1.1	1.1	1.1	1.5	2.2	2.2	2.2	
Refrigerant Operating Charge (R22)		lbs kg	22.4 10.2	23.5 10.7	25.0 11.4	25.9 11.7	32.5 14.7	2 x 22.4 2 x 10.2	38.0 17.2	
Number of Refrigerant Circuits		No.	1	1	1	1	1	2	1	
Approximate Machine Weight		lbs kg	728 330	730 331	838 380	952 432	1116 506	1270 576	1190 540	

Model		PHPH	5211	5112	5213	5215	5219	5222	5224	
Cooling Capacity		TR	10.6	11.6	12.3	14.6	19.3	22.2	24.2	
		kW	37.4	40.9	43.4	51.4	67.8	78.0	85.0	
Heating Capacity		TR	9.8	10.9	11.5	13.4	17.4	20.0	22.0	
		kW	34.6	38.5	40.3	47.1	61.1	70.2	77.6	
Compressor	Type	Fully Hermetic Reciprocating								
	Code		MH - 7	MH - 16	MH - 8	MH - 10	MH - 12	MH - 14	MH - 16	
	Quantity	No.	2	1	2	2	2	2	2	
Oil Charge per Compressor		US Gal Liter	0.5 1.9	1.1 4.2	0.5 1.9	1.1 4.2	1.1 4.2	1.1 4.2	1.1 4.2	
Condenser	Coil	Type	Air Cooled Copper Tubes Aluminum Fins							
		Face Area	sq. ft. sq. m.	19.4 1.8	17.2 1.6	24.4 2.3	24.4 2.3	29.4 2.7	29.4 2.7	34.4 3.2
	Fan	Type	Propeller Direct Drive Aluminum Blade							
		Code / Quantity		628 / 2	823 / 1	723 / 2	729 / 2	823 / 2	823 / 2	823 / 2
	Air Flow Rate		cfm l/s	9060 4275	9130 4308	13440 6342	14900 7031	18280 8626	17580 8296	18260 8617
	Motor	Type	Totally Enclosed, Air Over, Class F Insulation, 6 Pole, IP55							
Size		kW	2 x 0.37	1.50	2 x 0.75	2 x 1.1	2 x 1.5	2 x 1.5	2 x 1.5	
Evaporator	Coil	Type	Direct Expansion, Cross Wave Fin, Staggered Tubes							
		Face Area	sq. ft. sq. m.	9.6 0.9	10.0 0.9	10.9 1.0	13.6 1.3	15.0 1.4	18.0 1.7	18.0 1.7
	Fan	Type	Centrifugal Double Inlet, Double Width Belt Drive							
		Code / Quantity		N15 / 1	N15 / 1	N15 / 1	N12 / 2	N12 / 2	N15 / 2	N15 / 2
	Air Flow Rate		cfm l/s	4800 2266	5000 2360	5450 2572	6000 2832	7000 3304	8000 3776	9000 4248
	Motor	Type	Totally Enclosed, Class F Insulation, IP55							
Size		kW	2.2	2.2	3.0	3.0	3.0	3.0	4.0	
Refrigerant Operating Charge (R22)		lbs kg	2 x 23.5 2 x 10.7	41.3 18.7	2 x 25 2 x 11.4	2 x 25.9 2 x 11.7	2 x 32.5 2 x 14.7	2 x 38 2 x 17.2	2 x 41.3 2 x 18.7	
Number of Refrigerant Circuits		No.	2	1	2	2	2	2	2	
Approximate Machine Weight		lbs kg	1285 583	1251 567	1446 656	1653 750	1883 854	2068 938	2152 976	

**Notes :**

Capacity rating in accordance with ARI standard 210/240-94 & 340/360-93.

## Engineering Specifications - 60Hz

Model		PHPH	6106	6107	6108	6109	6110	6211	6112	
Cooling Capacity		TR	5.5	5.8	6.8	8.1	10.0	10.7	11.9	
		kW	19.5	20.6	24.1	28.5	35.2	37.8	41.9	
Heating Capacity		TR	5.3	5.7	6.6	7.7	9.8	10.5	11.5	
		kW	18.6	20.0	23.3	27.1	34.6	36.8	40.3	
Compressor	Type	Fully Hermetic Reciprocating								
	Code	MH - 6		MH - 7	MH - 8	MH - 10	MH - 12	MH - 6	MH - 14	
	Quantity	No.	1	1	1	1	1	2	1	
Oil Charge per Compressor		US Gal	0.5	0.5	0.5	1.1	1.1	0.5	1.1	
		Liter	1.9	1.9	1.9	4.2	4.2	1.9	4.2	
Condenser	Coil	Type	Air Cooled Copper Tubes Aluminum Fins							
		Face Area	sq. ft.	9.7	9.7	12.2	12.2	14.7	19.4	14.7
			sq. m.	0.9	0.9	1.1	1.1	1.4	1.8	1.4
	Fan	Type	Propeller Direct Drive Aluminum Blade							
		Code / Quantity	628 / 1		628 / 1	723 / 1	729 / 1	823 / 1	628 / 2	823 / 1
	Air Flow Rate		cfm	5500	5500	7970	8840	11120	11000	10700
		l/s	2595	2595	3741	4172	5248	5191	5049	
Motor	Type	Totally Enclosed, Air Over, Class F Insulation, 6 Pole, IP55								
	Size	kW	0.55	0.55	1.10	1.50	2.20	2 x 0.55	2.20	
Evaporator	Coil	Type	Direct Expansion, Cross Wave Fin, Staggered Tubes							
		Face Area	sq. ft.	4.7	4.7	5.5	6.6	7.7	8.6	9.6
			sq. m.	0.4	0.4	0.5	0.6	0.7	0.8	0.9
	Fan	Type	Centrifugal Double Inlet, Double Width Belt Drive							
		Code / Quantity	N10 / 1		N10 / 1	N10 / 1	N12 / 1	N15 / 1	N15 / 1	N15 / 1
	Air Flow Rate		cfm	2200	2400	2750	3300	3830	4170	4800
		l/s	1038	1133	1298	1558	1808	1968	2266	
Motor	Type	Totally Enclosed, Class F Insulation, IP55								
	Size	kW	1.1	1.1	1.1	1.5	2.2	2.2	2.2	
Refrigerant Operating Charge (R22)		lbs	22.4	23.5	25.0	25.9	32.5	2 x 22.4	38.0	
		kg	10.2	10.7	11.4	11.7	14.7	2 x 10.2	17.2	
Number of Refrigerant Circuits		No.	1	1	1	1	1	2	1	
Approximate Machine Weight		lbs	728	730	838	952	1116	1270	1190	
		kg	330	331	380	432	506	576	540	

Model		PHPH	6212	6113	6214	6216	6221	6224	6227	
Cooling Capacity		TR	11.8	12.8	13.6	16.1	21.2	24.5	26.7	
		kW	41.4	45.1	47.9	56.5	74.8	86.3	93.9	
Heating Capacity		TR	11.4	12.6	13.2	15.3	19.9	23.0	25.5	
		kW	40.0	44.4	46.6	53.9	70.1	80.8	89.6	
Compressor	Type	Fully Hermetic Reciprocating								
	Code	MH - 7		MH - 16	MH - 8	MH - 10	MH - 12	MH - 14	MH - 16	
	Quantity	No.	2	1	2	2	2	2	2	
Oil Charge per Compressor		US Gal	0.5	1.1	0.5	1.1	1.1	1.1	1.1	
		Liter	1.9	4.2	1.9	4.2	4.2	4.2	4.2	
Condenser	Coil	Type	Air Cooled Copper Tubes Aluminum Fins							
		Face Area	sq. ft.	19.4	17.2	24.4	24.4	29.4	29.4	34.4
			sq. m.	1.8	1.6	2.3	2.3	2.7	2.7	3.2
	Fan	Type	Propeller Direct Drive Aluminum Blade							
		Code / Quantity	628 / 2		823 / 1	723 / 2	729 / 2	823 / 2	823 / 2	823 / 2
	Air Flow Rate		cfm	11000	11110	15940	17680	22240	21400	22220
		l/s	5191	5243	7522	8343	10495	10099	10486	
Motor	Type	Totally Enclosed, Air Over, Class F Insulation, 6 Pole, IP55								
	Size	kW	2 x 0.55	2.20	2 x 1.1	2 x 1.5	2 x 2.2	2 x 2.2	2 x 2.2	
Evaporator	Coil	Type	Direct Expansion, Cross Wave Fin, Staggered Tubes							
		Face Area	sq. ft.	9.6	10.0	10.9	13.6	15.0	18.0	18.0
			sq. m.	0.9	0.9	1.0	1.3	1.4	1.7	1.7
	Fan	Type	Centrifugal Double Inlet, Double Width Belt Drive							
		Code / Quantity	N15 / 1		N15 / 1	N15 / 1	N12 / 2	N12 / 2	N15 / 2	N15 / 2
	Air Flow Rate		cfm	4800	5000	5450	6000	7000	8000	9000
		l/s	2266	2360	2572	2832	3304	3776	4248	
Motor	Type	Totally Enclosed, Class F Insulation, IP55								
	Size	kW	2.2	2.2	3.0	3.0	3.0	3.0	4.0	
Refrigerant Operating Charge (R22)		lbs	2 x 23.5	41.3	2 x 25	2 x 25.9	2 x 32.5	2 x 38	2 x 41.3	
		kg	2 x 10.7	18.7	2 x 11.4	2 x 11.7	2 x 14.7	2 x 17.2	2 x 18.7	
Number of Refrigerant Circuits		No.	2	1	2	2	2	2	2	
Approximate Machine Weight		lbs	1285	1251	1446	1653	1883	2068	2152	
		kg	583	567	656	750	854	938	976	

**Notes :**

Capacity rating in accordance with ARI standard 210/240-94 & 340/360-93.

## Capacity Ratings - 50Hz (Cooling)

Mode I PHPH	AFR cfm l/s [BPF]	Evaporator r Entering WBT °F °C	Condenser Entering Air Temperature																							
			95°F (35°C)						105°F (40°C)						115°F (46°C)						125°F (52°C)					
			Total Capacity			Sensible Capacity			PI	Total Capacity			Sensible Capacity			PI	Total Capacity			Sensible Capacity			PI			
			MBH	kW	MBH	kW	kW	MBH		kW	kW	MBH	kW	kW	MBH		kW	kW	MBH	kW	kW					
5105	1600	62	16.7	51.6	15.1	41.8	12.3	4.9	49.5	14.5	40.9	12.0	5.2	47.4	13.9	40.0	11.7	5.6	45.1	13.2	39.0	11.4	6.0			
	755	67	19.4	56.6	16.6	35.3	10.3	5.1	54.3	15.9	34.5	10.1	5.5	52.0	15.2	33.6	9.8	5.9	49.5	14.5	32.6	9.6	6.3			
	0.26	72	22.2	61.3	18.0	28.5	8.4	5.3	58.9	17.3	27.7	8.1	5.7	56.4	16.5	26.8	7.9	6.1	53.7	15.7	26.0	7.6	6.6			
	2200	62	16.7	54.8	16.0	48.6	14.3	5.0	52.4	15.4	47.7	14.0	5.4	50.0	14.7	46.7	13.7	5.8	47.5	13.9	45.7	13.4	6.2			
	1038	67	19.4	60.1	17.6	40.4	11.8	5.2	57.6	16.9	39.5	11.6	5.6	55.0	16.1	38.6	11.3	6.1	52.3	15.3	37.6	11.0	6.5			
	0.31	72	22.2	65.1	19.1	31.9	9.3	5.4	62.5	18.3	31.0	9.1	5.8	59.7	17.5	30.1	8.8	6.3	56.8	16.7	29.2	8.6	6.8			
	2420	62	16.7	55.6	16.3	50.9	14.9	5.1	53.2	15.6	50.0	14.7	5.4	50.8	14.9	49.0	14.4	5.8	48.2	14.1	48.0	14.1	6.2			
	1142	67	19.4	61.0	17.9	42.1	12.3	5.3	58.5	17.1	41.2	12.1	5.7	55.8	16.4	40.3	11.8	6.1	53.0	15.5	39.3	11.5	6.6			
	0.32	72	22.2	66.2	19.4	33.0	9.7	5.4	63.4	18.6	32.1	9.4	5.9	60.6	17.8	31.2	9.2	6.3	57.6	16.9	30.3	8.9	6.8			
	1730	62	16.7	54.8	16.1	44.4	13.0	5.4	52.6	15.4	43.4	12.7	5.9	50.3	14.7	42.5	12.4	6.3	47.8	14.0	41.4	12.1	6.8			
	816	67	19.4	59.9	17.5	37.4	11.0	5.7	57.5	16.8	36.5	10.7	6.1	55.0	16.1	35.5	10.4	6.7	52.3	15.3	34.5	10.1	7.2			
	0.27	72	22.2	64.6	18.9	30.1	8.8	5.9	62.1	18.2	29.2	8.6	6.4	59.3	17.4	28.3	8.3	7.0	57.9	17.0	27.8	8.2	7.4			
2400	62	16.7	58.0	17.0	51.7	15.2	5.6	55.6	16.3	50.8	14.9	6.0	53.0	15.5	49.7	14.6	6.5	50.3	14.7	48.7	14.3	7.0				
1133	67	19.4	63.5	18.6	42.9	12.6	5.8	60.8	17.8	41.9	12.3	6.3	58.0	17.0	40.9	12.0	6.9	56.5	16.6	40.4	11.8	7.3				
0.32	72	22.2	68.5	20.1	33.7	9.9	6.1	65.7	19.3	32.8	9.6	6.6	62.7	18.4	31.8	9.3	7.2	61.1	17.9	31.3	9.2	7.6				
2640	62	16.7	58.8	17.2	54.2	15.9	5.6	56.3	16.5	53.2	15.6	6.1	53.7	15.7	52.2	15.3	6.6	50.9	14.9	50.9	14.9	7.1				
1246	67	19.4	64.4	18.9	44.7	13.1	5.9	61.6	18.1	43.7	12.8	6.4	58.8	17.2	42.7	12.5	6.9	57.3	16.8	42.2	12.4	7.4				
0.34	72	22.2	69.5	20.4	34.9	10.2	6.1	66.6	19.5	33.9	9.9	6.7	63.5	18.6	33.0	9.7	7.2	61.9	18.1	32.5	9.5	7.7				
2000	62	16.7	64.1	18.8	51.7	15.2	5.9	61.5	18.0	50.6	14.8	6.4	58.9	17.3	49.5	14.5	7.0	56.1	16.4	48.4	14.2	7.5				
944	67	19.4	70.1	20.5	43.6	12.8	6.2	67.3	19.7	42.6	12.5	6.7	64.5	18.9	41.5	12.2	7.3	61.4	18.0	40.4	11.8	7.9				
0.26	72	22.2	75.7	22.2	35.2	10.3	6.4	72.8	21.3	34.2	10.0	7.0	69.7	20.4	33.1	9.7	7.6	66.4	19.5	32.0	9.4	8.2				
2750	62	16.7	67.9	19.9	60.1	17.6	6.1	65.0	19.1	58.9	17.3	6.6	62.1	18.2	57.8	16.9	7.2	59.0	17.3	56.5	16.6	7.7				
1298	67	19.4	74.3	21.8	49.9	14.6	6.4	71.3	20.9	48.8	14.3	6.9	68.1	20.0	47.6	14.0	7.5	64.7	19.0	46.4	13.6	8.1				
0.31	72	22.2	80.4	23.6	39.3	11.5	6.6	77.1	22.6	38.3	11.2	7.2	73.7	21.6	37.2	10.9	7.8	70.0	20.5	36.0	10.6	8.4				
3025	62	16.7	68.8	20.2	62.9	18.4	6.1	66.0	19.3	61.8	18.1	6.7	63.0	18.5	60.6	17.8	7.2	59.8	17.5	59.3	17.4	7.8				
1427	67	19.4	75.4	22.1	52.0	15.2	6.4	72.3	21.2	50.9	14.9	7.0	69.0	20.2	49.7	14.6	7.6	65.6	19.2	48.5	14.2	8.2				
0.33	72	22.2	81.6	23.9	40.7	11.9	6.7	78.2	22.9	39.6	11.6	7.3	74.7	21.9	38.5	11.3	7.9	71.0	20.8	37.3	10.9	8.5				
2310	62	16.7	75.6	22.1	60.7	17.8	6.9	72.2	21.2	59.2	17.4	7.4	68.8	20.2	57.8	16.9	8.0	65.2	19.1	56.3	16.5	8.6				
1090	67	19.4	82.7	24.2	51.3	15.0	7.1	79.2	23.2	49.9	14.6	7.7	75.6	22.2	48.6	14.2	8.3	71.6	21.0	47.1	13.8	9.0				
0.26	72	22.2	89.5	26.2	41.5	12.2	7.3	85.8	25.1	40.2	11.8	8.0	81.9	24.0	38.9	11.4	8.7	77.6	22.8	37.4	11.0	9.4				
3300	62	16.7	80.7	23.6	71.8	21.0	7.1	77.0	22.6	70.3	20.6	7.6	73.2	21.5	68.8	20.2	8.2	69.1	20.3	67.2	19.7	8.8				
1557	67	19.4	88.5	25.9	59.6	17.5	7.3	84.6	24.8	58.2	17.1	7.9	80.5	23.6	56.7	16.6	8.6	76.0	22.3	55.2	16.2	9.3				
0.31	72	22.2	95.8	28.1	47.0	13.8	7.5	91.7	26.9	45.6	13.4	8.2	87.3	25.6	44.2	13.0	8.9	82.5	24.2	42.7	12.5	9.6				
3630	62	16.7	81.8	24.0	75.2	22.0	7.1	78.1	22.9	73.7	21.6	7.7	74.2	21.7	72.2	21.1	8.3	70.0	20.5	70.0	20.5	8.9				
1713	67	19.4	89.8	26.3	62.1	18.2	7.4	85.8	25.1	60.7	17.8	8.0	81.6	23.9	59.2	17.4	8.7	77.0	22.6	57.6	16.9	9.3				
0.33	72	22.2	97.3	28.5	48.6	14.2	7.5	93.0	27.3	47.2	13.8	8.2	88.5	26.0	45.8	13.4	9.0	83.6	24.5	44.3	13.0	9.7				
2680	62	16.7	93.3	27.3	72.8	21.3	9.0	89.2	26.2	71.1	20.8	9.7	85.1	24.9	69.3	20.3	10.4	80.5	23.6	67.3	19.7	11.1				
1265	67	19.4	101.9	29.9	61.8	18.1	9.4	97.6	28.6	60.1	17.6	10.1	93.1	27.3	58.4	17.1	10.9	88.1	25.8	56.5	16.6	11.7				
0.26	72	22.2	110.1	32.3	50.3	14.7	9.8	105.5	30.9	48.7	14.3	10.5	100.4	29.4	46.9	13.8	11.3	95.0	27.8	45.1	13.2	12.2				
3830	62	16.7	99.9	29.3	85.8	25.2	9.3	95.3	27.9	84.0	24.6	10.0	90.6	26.6	82.1	24.1	10.7	85.5	25.0	80.0	23.5	11.5				
1807	67	19.4	109.3	32.0	71.6	21.0	9.7	104.4	30.6	69.8	20.5	10.5	99.1	29.1	67.9	19.9	11.2	93.4	27.4	65.9	19.3	12.1				
0.31	72	22.2	118.2	34.6	56.8	16.6	10.1	112.8	33.1	55.0	16.1	10.9	106.8	31.3	53.1	15.6	11.8	103.7	30.4	52.1	15.3	12.6				
4215	62	16.7	101.4	29.7	89.8	26.3	9.4	96.7	28.4	88.0	25.8	10.1	91.9	26.9	86.0	25.2	10.8	86.6	25.4	84.0	24.6	11.6				
1989	67	19.4	111.0	32.5	74.5	21.8	9.8	106.0	31.1	72.7	21.3	10.5	100.5	29.5	70.8	20.8	11.3	94.6	27.7	68.7	20.1	12.2				
0.33	72	22.2	120.0	35.2	58.7	17.2	10.2	114.4	33.5	56.9	16.7	11.0	108.2	31.7	54.9	16.1	11.9	105.0	30.8	53.9	15.8	12.7				
3000	62	16.7	100.1	29.3	79.6	23.3	9.7	96.1	28.2	77.9	22.8	10.3	92.0	27.0	76.2	22.3	11.0	87.6	25.7	74.3	21.8	11.8				
1416	67	19.4	109.6	32.1	67.5	19.8	10.1	105.4	30.9	65.8	19.3	10.8	101.0	29.6	64.1	18.8	11.6	96.3	28.2	62.4	18.3	12.5				
0.26	72	22.2	118.6	34.8	54.7	16.0	10.4	114.1	33.5	53.1	15.6	11.2	109.4	32.1	51.5	15.1	12.1	104.4	30.6	49.8	14.6	13.0				
4170	62	16.7	106.6	31.2	93.0	27.2	9.9	102.2	29.9	91.2	26.7	10.6	97.6	28.6	89.3	26.2	11.4	92.7	27.2	87.4	25.6	12.2				
1968	67	19.4	116.9	34.3	77.4	22.7	10.3	112.2	32.9	75.7	22.2	11.1	107.2	31.4	73.9	21.7	11.9	102.0	29.9	72.1	21.1	12.9				
0.31	72	22.2	126.6	37.1	61.3	18.0	10.7	121.6	35.6	59.7	17.5	11.5	116.3	34.1	58.0	17.0	12.4	110.7	32.5	56.2	16.5	13.4				
4730	62	16.7	108.7	31.9	98.8	29.0	10.0	104.1	30.5	97.0	28.4	10.7	99.4	29.1	95.1	27.9	11.5	94.4	27.7	93.1	27.3	12.3				
2232	67	19.4	119.3	35.0	81.8	24.0	10.4	114.4	33.5	80.0	23.5	11.2	109.3	32.0	78.2	22.9	12.1	103.9	30.5	76.3	22.4	13.0				
0.33	72	22.2	129.3	37.9	64.1	18.8	10.8	124.0	36.4	62.5	18.3	11.6	118.5	34.7	60.7	17.8	12.5	112.8	33.1	58.9	17.3	13.5				
3350	62	16.7	110.7	32.4	88.5	25.9	10.3	105.4	30.9	86.2	25.3	11.0	99.8	29.3	83.8	24.6	11.8	93.9	27.5	81.4	23.8	12.7				
1581	67	19.4	121.0	35.5	74.8	21.9	10.7	115.4	33.8	72.6	21.3	11.5	109.3	32.1	70.3	20.6	12.4	103.0	30.2	68.0	19.9	13.4				
0.26	72	22.2	130.8	38.3	60.5	17.7	11.0	124.8	36.6	58.4	17.1	11.9	118.3	34												

## Capacity Ratings - 50Hz (Cooling)

Mode I PHPH	AFR cfm l/s [BPF]	Evaporator or Entering °F °C	Condenser Entering Air Temperature																							
			95°F (35°C)						105°F (40°C)						115°F (46°C)						125°F (52°C)					
			Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI				
			MBH	kW	MBH	kW	kW	MBH	kW	MBH	kW	kW	MBH	kW	MBH	kW	kW	MBH	kW	MBH	kW	kW				
5211	3350	62	16.7	109.5	32.1	87.9	25.8	10.8	105.1	30.8	86.0	25.2	11.7	100.5	29.5	84.1	24.7	12.7	95.6	28.0	82.0	24.0	13.7			
	1581	67	19.4	119.6	35.1	74.2	21.8	11.3	114.9	33.7	72.4	21.2	12.3	109.8	32.2	70.5	20.7	13.3	104.5	30.6	68.5	20.1	14.3			
	0.26	72	22.2	129.1	37.8	59.9	17.6	11.8	124.0	36.3	58.1	17.0	12.8	118.6	34.8	56.3	16.5	13.9	115.7	33.9	55.3	16.2	14.8			
	4800	62	16.7	116.7	34.2	104.1	30.5	11.2	111.8	32.8	102.2	29.9	12.1	106.6	31.3	100.1	29.3	13.1	101.1	29.6	97.9	28.7	14.1			
	2265	67	19.4	127.7	37.4	86.3	25.3	11.7	122.3	35.9	84.4	24.7	12.7	116.7	34.2	82.4	24.1	13.8	113.7	33.3	81.3	23.8	14.7			
	0.32	72	22.2	137.9	40.4	67.8	19.9	12.2	132.1	38.7	66.0	19.3	13.3	126.0	36.9	64.0	18.8	14.4	122.8	36.0	63.0	18.5	15.3			
	5270	62	16.7	118.3	34.7	109.0	31.9	11.2	113.3	33.2	106.9	31.3	12.2	108.0	31.6	104.9	30.7	13.2	102.3	30.0	102.3	30.0	14.2			
	2487	67	19.4	129.5	38.0	89.9	26.3	11.8	124.0	36.3	87.9	25.8	12.8	118.2	34.6	85.9	25.2	13.9	115.1	33.7	84.8	24.9	14.8			
	0.33	72	22.2	139.9	41.0	70.1	20.6	12.3	133.9	39.3	68.2	20.0	13.4	127.6	37.4	66.3	19.4	14.5	124.4	36.5	65.3	19.1	15.3			
	5112	3600	62	16.7	119.9	35.1	95.1	27.9	11.4	114.7	33.6	92.9	27.2	12.3	109.3	32.0	90.6	26.6	13.1	103.4	30.3	88.2	25.8	14.1		
		1699	67	19.4	131.1	38.4	80.6	23.6	11.9	125.6	36.8	78.4	23.0	12.8	119.7	35.1	76.2	22.3	13.7	113.1	33.2	73.7	21.6	14.8		
		0.26	72	22.2	141.8	41.6	65.3	19.1	12.4	135.8	39.8	63.2	18.5	13.3	129.2	37.9	60.9	17.9	14.3	122.0	35.7	58.5	17.2	15.5		
5000		62	16.7	127.5	37.4	110.9	32.5	11.8	121.7	35.7	108.6	31.8	12.6	115.7	33.9	106.1	31.1	13.5	109.1	32.0	103.5	30.3	14.5			
2360		67	19.4	139.7	40.9	92.3	27.1	12.3	133.4	39.1	90.0	26.4	13.2	126.7	37.1	87.6	25.7	14.2	119.3	35.0	85.0	24.9	15.3			
0.31		72	22.2	151.1	44.3	73.1	21.4	12.8	144.2	42.3	70.8	20.8	13.8	136.5	40.0	68.4	20.0	14.8	128.4	37.6	65.8	19.3	16.0			
5500		62	16.7	129.4	37.9	116.1	34.0	11.9	123.5	36.2	113.7	33.3	12.7	117.3	34.4	111.2	32.6	13.6	110.5	32.4	108.6	31.8	14.6			
2595		67	19.4	141.8	41.6	96.2	28.2	12.4	135.4	39.7	93.9	27.5	13.3	128.4	37.6	91.4	26.8	14.3	120.8	35.4	88.7	26.0	15.4			
0.33		72	22.2	153.5	45.0	75.6	22.2	12.9	146.3	42.9	73.3	21.5	13.9	138.2	40.5	70.7	20.7	14.9	130.0	38.1	68.2	20.0	16.2			
5213		3925	62	16.7	127.4	37.3	102.3	30.4	11.8	122.4	35.9	100.2	29.4	12.8	117.2	34.3	98.0	28.7	13.9	111.6	32.7	95.7	28.0	15.0		
		1852	67	19.4	139.3	40.8	86.4	25.3	12.4	133.9	39.3	84.3	24.7	13.4	128.3	37.6	82.2	24.1	14.6	122.2	35.8	79.9	23.4	15.7		
		0.26	72	22.2	150.6	44.1	69.8	20.5	12.8	144.8	42.4	67.8	19.9	14.0	138.7	40.6	65.7	19.3	15.2	132.2	38.7	63.5	18.6	16.4		
	5450	62	16.7	135.2	39.6	119.4	35.0	12.2	129.6	38.0	117.1	34.3	13.2	123.9	36.3	114.8	33.6	14.3	117.7	34.5	112.3	32.9	15.4			
	2572	67	19.4	148.1	43.4	99.1	29.1	12.7	142.1	41.6	96.9	28.4	13.8	135.7	39.8	94.7	27.8	15.0	129.0	37.8	92.3	27.1	16.2			
	0.31	72	22.2	160.1	46.9	78.2	22.9	13.2	153.7	45.0	76.1	22.3	14.4	146.8	43.0	73.9	21.7	15.6	139.6	40.9	71.6	21.0	16.8			
	6000	62	16.7	137.2	40.2	125.0	36.6	12.3	131.5	38.5	122.7	36.0	13.3	125.5	36.8	120.4	35.3	14.4	119.2	34.9	112.3	32.9	15.4			
	2831	67	19.4	150.3	44.0	103.3	30.3	12.8	144.1	42.2	101.1	29.6	13.9	137.6	40.3	98.9	29.0	15.1	130.7	38.3	96.5	28.3	16.3			
	0.33	72	22.2	162.6	47.6	80.9	23.7	13.3	155.9	45.7	78.8	23.1	14.5	148.9	43.6	76.6	22.4	15.7	141.5	41.5	74.2	21.8	16.9			
	5215	4900	62	16.7	154.0	45.1	125.5	36.8	13.9	147.1	43.1	122.7	36.0	14.9	140.1	41.1	119.7	35.1	16.0	132.5	38.8	116.6	34.2	17.3		
		2312	67	19.4	168.6	49.4	105.9	31.0	14.4	161.4	47.3	103.1	30.2	15.5	153.9	45.1	100.3	29.4	16.8	145.7	42.7	97.2	28.5	18.2		
		0.26	72	22.2	182.5	53.5	85.3	25.0	14.8	174.8	51.2	82.6	24.2	16.1	166.8	48.9	79.9	23.4	17.5	158.0	46.3	77.0	22.6	18.9		
6000		62	16.7	159.9	46.9	138.2	40.5	14.1	152.6	44.7	135.2	39.6	15.2	145.2	42.6	132.2	38.7	16.3	137.1	40.2	128.9	37.8	17.6			
2831		67	19.4	175.3	51.4	115.3	33.8	14.6	167.6	49.1	112.4	33.0	15.8	159.6	46.8	109.5	32.1	17.1	150.8	44.2	106.4	31.2	18.5			
0.29		72	22.2	189.9	55.7	91.5	26.8	15.0	181.7	53.3	88.8	26.0	16.3	173.1	50.7	86.1	25.2	17.8	163.7	48.0	83.0	24.3	19.2			
6600		62	16.7	162.5	47.6	144.7	42.4	14.2	155.0	45.4	141.6	41.5	15.3	147.4	43.2	138.6	40.6	16.5	139.1	40.8	135.3	39.6	17.7			
3115		67	19.4	178.2	52.2	120.1	35.2	14.7	170.3	49.9	117.2	34.4	15.9	162.1	47.5	114.3	33.5	17.2	153.1	44.8	111.1	32.6	18.6			
0.31		72	22.2	193.1	56.6	94.7	27.7	15.0	184.7	54.1	92.0	27.0	16.4	175.8	51.5	89.1	26.1	17.9	166.1	48.7	86.0	25.2	19.3			
5219		5400	62	16.7	198.9	58.3	161.4	47.3	18.6	190.0	55.7	157.5	46.1	20.0	180.6	52.9	153.4	45.0	21.4	170.4	49.9	149.0	43.7	22.9		
		2548	67	19.4	217.7	63.8	136.6	40.0	19.4	208.0	61.0	132.7	38.9	20.9	197.6	57.9	128.6	37.7	22.4	186.3	54.6	124.3	36.4	24.2		
		0.17	72	22.2	235.4	69.0	110.5	32.4	20.2	224.7	65.9	106.7	31.3	21.7	212.9	62.4	102.6	30.1	23.5	206.7	60.6	100.4	29.4	25.1		
	7000	62	16.7	210.9	61.8	184.1	53.9	19.1	201.0	58.9	179.9	52.7	20.5	190.4	55.8	175.5	51.5	22.0	179.1	52.5	170.9	50.1	23.6			
	3303	67	19.4	231.2	67.8	153.7	45.0	20.0	220.2	64.5	149.6	43.8	21.5	208.2	61.0	145.0	42.5	23.1	201.9	59.2	142.7	41.8	24.7			
	0.20	72	22.2	250.1	73.3	121.9	35.7	20.8	237.6	69.7	117.7	34.5	22.4	223.8	65.6	113.2	33.2	24.3	216.8	63.5	110.9	32.5	26.1			
	7700	62	16.7	214.8	63.0	193.3	56.7	19.3	204.5	59.9	189.0	55.4	20.7	193.6	56.7	184.6	54.1	22.2	181.8	53.3	179.8	52.7	23.8			
	3634	67	19.4	235.5	69.0	160.5	47.1	20.2	224.1	65.7	156.2	45.8	21.7	211.6	62.0	151.7	44.5	23.4	205.0	60.1	149.3	43.8	25.0			
	0.22	72	22.2	254.8	74.7	126.4	37.1	21.0	241.7	70.9	122.1	35.8	22.7	227.2	66.6	117.4	34.4	24.6	219.9	64.4	115.0	33.7	26.4			
	5222	6300	62	16.7	230.1	67.4	187.9	55.1	20.9	218.8	64.1	182.9	53.6	22.4	206.8	60.6	177.7	52.1	24.1	194.3	56.9	172.4	50.5	25.9		
		2973	67	19.4	251.8	73.8	158.8	46.6	21.7	239.7	70.3	154.0	45.1	23.4	226.9	66.5	149.0	43.7	25.3	213.5	62.6	143.9	42.2	27.3		
		0.17	72	22.2	272.3	79.8	128.3	37.6	22.5	259.3	76.0	123.7	36.3	24.4	245.7	72.0	119.0	34.9	26.4	231.5	67.9	114.1	33.4	28.6		
8000		62	16.7	242.8	71.2	212.2	62.2	21.3	230.5	67.5	207.0	60.7	23.0	217.4	63.7	201.6	59.1	24.7	203.7	59.7	196.0	57.4	26.6			
3775		67	19.4	266.1	78.0	177.1	51.9	22.3	252.8	74.1	172.1	50.5	24.1	238.7	70.0	166.8	48.9	26.0	224.2	65.7	161.5	47.3	28.1			
0.20		72	22.2	287.9	84.4	140.5	41.2	23.1	273.7	80.2	135.7	39.8	25.1	258.8	75.8	130.8	38.3	27.2	243.4	71.4	125.8	36.9	29.4			
8800		62	16.7	247.4	72.5	222.9	65.3	21.5	234.6	68.8	217.6	63.8	23.2	221.1	64.8	212.1	62.2	24.9	207.1	60.7	206.4	60.5	26.8			
4153		67	19.4	271.2	79.5	185.1	54.3	22.5	257.5	75.5	179.9	52.7	24.3	243.0	71.2	174.6	51.2	26.2	228.0	66.8	169.2	49.6	28.3			
0.21		72	22.2	293.6	86.0	145.8																				

## Capacity Ratings - 60Hz (Cooling)

Mode I PHPH	AFR cfm l/s [BPF]	Evaporator r Entering WBT °F °C		Condenser Entering Air Temperature																							
				95°F (35°C)						105°F (40°C)						115°F (46°C)						125°F (52°C)					
				Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI				
				MBH	kW	MBH	kW		MBH	kW	MBH	kW		MBH	kW	MBH	kW		MBH	kW	MBH	kW		MBH	kW		
6106	1600	62	16.7	56.9	16.7	44.1	12.9	5.7	54.7	16.0	43.1	12.6	6.1	52.4	15.4	42.1	12.4	6.5	50.0	14.6	41.1	12.0	7.0				
	755	67	19.4	62.3	18.2	37.5	11.0	6.0	59.9	17.6	36.6	10.7	6.4	57.4	16.8	35.6	10.4	6.9	54.8	16.1	34.6	10.1	7.4				
	0.26	72	22.2	67.3	19.7	30.6	9.0	6.2	64.8	19.0	29.7	8.7	6.7	62.2	18.2	28.8	8.4	7.2	59.4	17.4	27.9	8.2	7.7				
	2200	62	16.7	60.7	17.8	51.1	15.0	5.9	58.2	17.1	50.0	14.7	6.3	55.7	16.3	49.0	14.4	6.8	52.9	15.5	47.9	14.0	7.2				
	1038	67	19.4	66.4	19.5	42.8	12.5	6.2	63.8	18.7	41.8	12.2	6.6	61.1	17.9	40.8	11.9	7.1	58.1	17.0	39.7	11.6	7.5				
	0.31	72	22.2	71.9	21.1	34.1	10.0	6.4	69.1	20.3	33.2	9.7	6.9	66.1	19.4	32.2	9.4	7.4	64.6	18.9	31.7	9.3	7.9				
6107	2420	62	16.7	61.7	18.1	53.4	15.7	6.0	59.1	17.3	52.4	15.4	6.4	56.5	16.6	51.3	15.0	6.8	53.7	15.7	50.2	14.7	7.3				
	1142	67	19.4	67.6	19.8	44.5	13.0	6.2	64.9	19.0	43.5	12.7	6.7	62.0	18.2	42.5	12.5	7.2	59.0	17.3	41.4	12.1	7.7				
	0.32	72	22.2	73.1	21.4	35.3	10.3	6.4	70.2	20.6	34.3	10.1	6.9	67.2	19.7	33.3	9.8	7.5	65.6	19.2	32.8	9.6	8.0				
	1730	62	16.7	60.4	17.7	46.8	13.7	6.3	58.2	17.0	45.8	13.4	6.8	55.8	16.3	44.8	13.1	7.4	53.1	15.6	43.7	12.8	8.0				
	816	67	19.4	65.9	19.3	39.7	11.6	6.6	63.5	18.6	38.8	11.4	7.2	60.8	17.8	37.7	11.1	7.8	58.0	17.0	36.7	10.7	8.4				
	0.27	72	22.2	71.1	20.8	32.3	9.5	6.9	68.4	20.1	31.4	9.2	7.5	65.6	19.2	30.4	8.9	8.1	64.1	18.8	29.9	8.8	8.7				
6108	2400	62	16.7	64.3	18.9	54.3	15.9	6.5	61.8	18.1	53.3	15.6	7.1	59.0	17.3	52.2	15.3	7.7	56.1	16.4	51.0	14.9	8.2				
	1133	67	19.4	70.2	20.6	45.3	13.3	6.8	67.4	19.8	44.3	13.0	7.4	64.5	18.9	43.2	12.7	8.1	62.9	18.4	42.7	12.5	8.6				
	0.32	72	22.2	75.8	22.2	36.0	10.6	7.1	72.8	21.3	35.1	10.3	7.8	69.6	20.4	34.0	10.0	8.4	67.9	19.9	33.5	9.8	8.9				
	2640	62	16.7	65.3	19.1	56.8	16.6	6.6	62.7	18.4	55.7	16.3	7.1	59.9	17.5	54.6	16.0	7.7	56.9	16.7	53.4	15.7	8.3				
	1246	67	19.4	71.3	20.9	47.2	13.8	6.9	68.4	20.1	46.1	13.5	7.5	65.4	19.2	45.1	13.2	8.1	63.8	18.7	44.5	13.0	8.6				
	0.34	72	22.2	76.9	22.5	37.2	10.9	7.2	73.8	21.6	36.2	10.6	7.8	70.5	20.7	35.2	10.3	8.5	68.8	20.2	34.6	10.2	9.0				
6109	2000	62	16.7	70.6	20.7	54.5	16.0	6.9	67.9	19.9	53.4	15.6	7.5	65.2	19.1	52.2	15.3	8.2	62.2	18.2	50.9	14.9	8.8				
	944	67	19.4	77.1	22.6	46.4	13.6	7.3	74.2	21.7	45.2	13.3	7.9	71.2	20.9	44.1	12.9	8.6	68.0	19.9	42.8	12.6	9.3				
	0.26	72	22.2	83.2	24.4	37.8	11.1	7.6	80.1	23.5	36.7	10.8	8.2	76.9	22.5	35.6	10.4	8.9	73.4	21.5	34.4	10.1	9.6				
	2750	62	16.7	75.1	22.0	63.0	18.5	7.2	72.1	21.1	61.8	18.1	7.8	69.1	20.2	60.6	17.8	8.4	65.7	19.3	59.2	17.4	9.1				
	1298	67	19.4	82.1	24.1	52.7	15.5	7.5	78.9	23.1	51.5	15.1	8.2	75.5	22.1	50.3	14.7	8.8	71.9	21.1	49.0	14.4	9.5				
	0.31	72	22.2	88.6	26.0	42.0	12.3	7.8	85.2	25.0	40.9	12.0	8.5	81.6	23.9	39.7	11.6	9.2	77.7	22.8	38.5	11.3	9.9				
6110	3025	62	16.7	76.3	22.4	65.9	19.3	7.2	73.2	21.5	64.7	19.0	7.8	70.1	20.5	63.4	18.6	8.5	66.7	19.5	62.0	18.2	9.2				
	1427	67	19.4	83.4	24.4	54.8	16.1	7.6	80.1	23.5	53.6	15.7	8.2	76.6	22.5	52.4	15.4	8.9	72.9	21.4	51.1	15.0	9.6				
	0.33	72	22.2	90.1	26.4	43.4	12.7	7.9	86.5	25.4	42.3	12.4	8.6	82.8	24.3	41.1	12.0	9.3	78.8	23.1	39.8	11.7	10.0				
	2310	62	16.7	82.9	24.3	63.9	18.7	8.2	79.4	23.3	62.3	18.3	8.7	75.9	22.2	60.8	17.8	9.3	71.9	21.1	59.1	17.3	10.0				
	1090	67	19.4	90.7	26.6	54.4	15.9	8.5	87.0	25.5	52.9	15.5	9.1	83.1	24.4	51.4	15.1	9.8	78.8	23.1	49.8	14.6	10.6				
	0.26	72	22.2	97.9	28.7	44.4	13.0	8.7	94.0	27.6	43.0	12.6	9.4	89.9	26.4	41.6	12.2	10.2	85.3	25.0	40.0	11.7	11.0				
6111	3300	62	16.7	89.0	26.1	75.2	22.0	8.4	85.1	24.9	73.6	21.6	9.0	81.0	23.8	71.9	21.1	9.7	76.6	24.4	70.1	20.6	10.4				
	1557	67	19.4	97.4	28.5	62.9	18.4	8.7	93.3	27.3	61.3	18.0	9.4	88.9	26.1	59.7	17.5	10.1	84.1	24.6	58.0	17.0	10.9				
	0.31	72	22.2	105.3	30.9	50.1	14.7	9.0	100.9	29.6	48.6	14.3	9.7	96.3	28.2	47.1	13.8	10.6	93.7	27.5	46.3	13.6	11.3				
	3630	62	16.7	90.4	26.5	78.6	23.0	8.5	86.4	25.3	77.0	22.6	9.1	82.2	24.1	75.3	22.1	9.7	77.7	22.8	73.5	21.5	10.5				
	1713	67	19.4	99.0	29.0	65.4	19.2	8.8	94.7	27.8	63.9	18.7	9.5	90.2	26.4	62.3	18.3	10.2	85.3	25.0	60.5	17.7	11.0				
	0.33	72	22.2	107.0	31.4	51.7	15.2	9.0	102.5	30.1	50.3	14.7	9.8	97.7	28.6	48.7	14.3	10.7	95.1	27.9	47.9	14.0	11.4				
6112	2680	62	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.5	27.4	72.9	21.4	12.2	88.7	26.0	70.8	20.8	13.0				
	1265	67	19.4	111.5	32.7	65.6	19.2	11.1	107.0	31.4	63.8	18.7	11.9	102.2	30.0	61.9	18.2	12.7	97.0	28.4	59.9	17.6	13.7				
	0.26	72	22.2	120.3	35.2	53.9	15.8	11.5	115.5	33.8	52.2	15.3	12.3	110.3	32.3	50.4	14.8	13.2	107.6	31.5	49.4	14.5	14.1				
	3830	62	16.7	110.0	32.2	90.0	26.4	11.0	105.2	30.8	88.1	25.8	11.8	100.2	29.4	86.0	25.2	12.6	94.7	27.8	83.8	24.6	13.5				
	1807	67	19.4	120.1	35.2	75.6	22.2	11.5	115.0	33.7	73.7	21.6	12.3	109.6	32.1	71.7	21.0	13.2	106.6	31.3	70.6	20.7	14.0				
	0.31	72	22.2	129.7	38.0	60.6	17.8	11.9	124.2	36.4	58.7	17.2	12.8	118.1	34.6	56.8	16.6	13.8	114.9	33.7	55.7	16.3	14.7				
6211	4215	62	16.7	111.8	32.8	94.1	27.6	11.1	106.9	31.3	92.1	27.0	11.9	101.7	29.8	90.0	26.4	12.7	96.1	28.2	87.7	25.7	13.6				
	1989	67	19.4	122.1	35.8	78.6	23.0	11.5	116.9	34.2	76.7	22.5	12.4	111.2	32.6	74.6	21.9	13.3	108.2	31.7	73.5	21.6	14.2				
	0.33	72	22.2	131.9	38.6	62.6	18.3	12.0	126.1	37.0	60.7	17.8	12.9	119.9	35.1	58.7	17.2	13.9	116.5	34.2	57.6	16.9	14.9				
	3000	62	16.7	0.0	0.0	0.0	0.0	0.0	105.9	31.1	82.2	24.1	12.1	101.6	29.8	80.3	23.5	12.9	97.0	28.4	78.3	23.0	13.8				
	1416	67	19.4	120.4	35.3	71.7	21.0	11.8	115.9	34.0	69.9	20.5	12.6	111.3	32.6	68.1	20.0	13.5	106.3	31.2	66.2	19.4	14.5				
	0.26	72	22.2	130.1	38.1	58.7	17.2	12.2	125.4	36.7	57.0	16.7	13.1	120.4	35.3	55.3	16.2	14.1	115.1	33.7	53.5	15.7	15.2				
6212	4170	62	16.7	117.8	34.5	97.6	28.6	11.7	113.1	33.2	95.7	28.0	12.5	108.3	31.7	93.7	27.5	13.3	103.1	30.2	91.6	26.8	14.3				
	1968	67	19.4	128.9	37.8	81.9	24.0	12.2	124.0	36.3	80.0	23.5	13.0	118.7	34.8	78.1	22.9	14.0	113.1	33.2	76.1	22.3	15.1</				

## Capacity Ratings - 60Hz (Cooling)

Model PHPH	AFR cfm l/s [BPF]	Evaporator r Entering WBT °F °C		Condenser Entering Air Temperature																				
				95°F (35°C)				105°F (40°C)				115°F (46°C)				125°F (52°C)								
				Total Capacity		Sensible Capacity		Total Capacity		Sensible Capacity		Total Capacity		Sensible Capacity		Total Capacity		Sensible Capacity						
				MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW					
6212	3350	62	16.7	120.8	35.4	92.8	27.2	12.6	116.2	34.1	90.8	26.6	13.7	111.4	32.7	88.8	26.0	14.8	106.2	31.1	86.5	25.4	15.9	
	1581	67	19.4	131.7	38.6	79.0	23.2	13.2	126.8	37.2	77.0	22.6	14.3	121.5	35.6	75.0	22.0	15.6	115.8	33.9	72.8	21.3	16.8	
	0.26	72	22.2	142.1	41.6	64.4	18.9	13.8	136.7	40.1	62.6	18.3	15.0	131.0	38.4	60.6	17.8	16.3	128.0	37.5	59.5	17.4	17.3	
	4800	62	16.7	129.5	38.0	109.3	32.0	13.1	124.3	36.4	107.2	31.4	14.2	118.8	34.8	105.0	30.8	15.4	112.9	33.1	102.6	30.1	16.5	
	2265	67	19.4	141.4	41.4	91.3	26.8	13.7	135.7	39.8	89.2	26.1	14.9	129.7	38.0	87.0	25.5	16.2	126.6	37.1	85.9	25.2	17.2	
	0.32	72	22.2	152.5	44.7	72.6	21.3	14.3	146.1	42.9	70.6	20.7	15.6	139.9	41.0	68.5	20.1	16.9	136.5	40.0	67.4	19.8	17.9	
	5270	62	16.7	131.2	38.5	114.2	33.5	13.2	126.1	37.0	112.1	32.8	14.3	120.4	35.3	109.8	32.2	15.5	114.3	33.5	107.4	31.5	16.6	
	2487	67	19.4	143.5	42.1	94.9	27.8	13.8	137.7	40.4	92.8	27.2	15.0	131.5	38.6	90.6	26.6	16.3	128.3	37.6	89.5	26.2	17.3	
	0.33	72	22.2	154.9	45.4	75.0	22.0	14.4	148.6	43.6	72.9	21.4	15.7	141.9	41.6	70.8	20.7	17.0	138.4	40.6	69.7	20.4	18.1	
	6113	3600	62	16.7	0.0	0.0	0.0	0.0	0.0	126.4	37.1	98.0	28.7	14.3	120.7	35.4	95.5	28.0	15.3	114.6	33.6	92.8	27.2	16.4
		1699	67	19.4	144.0	42.2	85.6	25.1	13.9	138.1	40.5	83.3	24.4	15.0	132.1	38.7	80.9	23.7	16.0	125.3	36.7	78.3	22.9	17.2
		0.26	72	22.2	155.4	45.5	70.1	20.5	14.5	149.2	43.7	67.9	19.9	15.5	142.6	41.8	65.6	19.2	16.7	135.1	39.6	63.0	18.5	18.0
5000		62	16.7	140.9	41.3	116.4	34.1	13.8	134.8	39.5	113.9	33.4	14.8	128.5	37.6	111.3	32.6	15.8	121.5	35.6	108.5	31.8	16.9	
2360		67	19.4	154.0	45.1	97.6	28.6	14.4	147.5	43.2	95.2	27.9	15.5	140.5	41.2	92.6	27.2	16.6	132.8	38.9	89.8	26.3	17.8	
0.31		72	22.2	166.4	48.8	78.1	22.9	15.0	159.3	46.7	75.8	22.2	16.1	151.6	44.4	73.2	21.5	17.3	147.4	43.2	71.9	21.1	18.5	
5500		62	16.7	143.2	42.0	121.6	35.7	13.9	136.9	40.1	119.1	34.9	14.9	130.4	38.2	116.5	34.1	15.9	123.2	36.1	113.6	33.3	17.1	
2595		67	19.4	156.5	45.9	101.5	29.8	14.5	149.8	43.9	99.1	29.0	15.6	142.7	41.8	96.5	28.3	16.7	134.6	39.5	93.6	27.4	18.0	
0.33		72	22.2	169.2	49.6	80.7	23.6	15.1	161.9	47.4	78.3	23.0	16.2	153.8	45.1	75.7	22.2	17.4	149.5	43.8	74.3	21.8	18.6	
6214		3925	62	16.7	0.0	0.0	0.0	0.0	0.0	135.0	39.6	105.6	31.0	15.0	129.6	38.0	103.3	30.3	16.3	123.2	36.3	100.7	29.5	17.6
		1852	67	19.4	153.2	44.9	91.8	26.9	14.5	147.5	43.2	89.6	26.3	15.7	141.6	41.5	87.3	25.6	17.1	135.2	39.6	84.8	24.9	18.5
		0.26	72	22.2	165.3	48.4	74.9	22.0	15.1	159.2	46.7	72.8	21.3	16.4	152.8	44.8	70.6	20.7	17.8	146.0	42.8	68.2	20.0	19.2
	5450	62	16.7	149.6	43.9	125.3	36.7	14.3	143.7	42.1	122.8	36.0	15.5	137.6	40.3	120.3	35.3	16.8	131.0	38.4	117.7	34.5	18.2	
	2572	67	19.4	163.5	47.9	104.8	30.7	15.0	157.2	46.1	102.4	30.0	16.3	150.5	44.1	100.0	29.3	17.7	143.3	42.0	97.4	28.5	19.0	
	0.31	72	22.2	176.6	51.8	83.5	24.5	15.6	169.8	49.8	81.3	23.8	17.0	162.6	47.6	79.0	23.1	18.4	154.9	45.4	76.5	22.4	19.8	
	6000	62	16.7	152.0	44.6	131.0	38.4	14.4	145.9	42.8	128.5	37.7	15.7	139.6	40.9	126.0	36.9	17.0	132.9	38.9	123.3	36.1	18.3	
	2831	67	19.4	166.1	48.7	109.0	32.0	15.1	159.6	46.8	106.7	31.3	16.4	152.7	44.8	104.2	30.5	17.8	145.4	42.6	101.6	29.8	19.2	
	0.33	72	22.2	179.5	52.6	86.3	25.3	15.7	172.4	50.5	84.1	24.6	17.1	165.0	48.4	81.7	23.9	18.6	157.1	46.0	79.2	23.2	20.0	
	6216	4900	62	16.7	169.3	49.6	132.1	38.7	16.5	162.0	47.5	129.0	37.8	17.6	154.6	45.3	125.8	36.9	18.9	146.4	42.9	122.4	35.9	20.2
		2312	67	19.4	185.1	54.2	112.2	32.9	17.1	177.4	52.0	109.2	32.0	18.4	169.4	49.7	106.2	31.1	19.8	160.6	47.1	102.8	30.1	21.3
		0.26	72	22.2	200.0	58.6	91.3	26.8	17.6	191.9	56.2	88.5	25.9	19.0	183.4	53.7	85.5	25.1	20.6	173.8	50.9	82.3	24.1	22.3
6000		62	16.7	176.4	51.7	145.0	42.5	16.7	168.6	49.4	141.8	41.6	17.9	160.7	47.1	138.5	40.6	19.2	151.9	44.5	134.9	39.5	20.7	
2831		67	19.4	192.9	56.5	121.9	35.7	17.3	184.7	54.1	118.8	34.8	18.7	176.2	51.6	115.6	33.9	20.2	166.7	48.9	112.1	32.9	21.8	
0.29		72	22.2	208.6	61.1	97.7	28.6	17.9	199.9	58.6	94.8	27.8	19.4	190.8	55.9	91.8	26.9	21.1	185.8	54.5	90.2	26.4	22.5	
6600		62	16.7	179.4	52.6	151.6	44.4	16.8	171.5	50.3	148.3	43.5	18.1	163.3	47.9	145.0	42.5	19.4	154.2	45.2	141.3	41.4	20.8	
3115		67	19.4	196.3	57.5	126.7	37.1	17.5	187.9	55.1	123.6	36.2	18.8	179.1	52.5	120.4	35.3	20.4	169.3	49.6	116.9	34.3	22.0	
0.31		72	22.2	212.3	62.2	101.0	29.6	18.0	203.4	59.6	98.0	28.7	19.5	194.0	56.9	95.0	27.8	21.2	188.9	55.4	93.3	27.4	22.7	
6221		5400	62	16.7	219.1	64.2	170.5	50.0	21.9	209.6	61.4	166.1	48.7	23.5	199.6	58.5	161.7	47.4	25.1	188.8	55.3	156.9	46.0	26.9
		2548	67	19.4	239.2	70.1	145.3	42.6	22.9	229.1	67.1	141.2	41.4	24.5	218.3	64.0	136.8	40.1	26.3	212.4	62.3	134.5	39.4	28.0
		0.17	72	22.2	258.2	75.7	118.8	34.8	23.7	247.3	72.5	114.8	33.6	25.5	235.3	69.0	110.5	32.4	27.5	228.9	67.1	108.2	31.7	29.3
	7000	62	16.7	233.2	68.4	193.6	56.7	22.6	222.7	65.3	189.0	55.4	24.2	211.6	62.0	184.3	54.0	25.9	199.4	58.4	179.2	52.5	27.8	
	3303	67	19.4	255.0	74.8	162.8	47.7	23.6	243.6	71.4	158.4	46.4	25.3	231.3	67.8	153.7	45.1	27.2	224.7	65.9	151.2	44.3	29.0	
	0.20	72	22.2	275.5	80.8	130.7	38.3	24.5	262.9	77.0	126.3	37.0	26.4	248.9	73.0	121.5	35.6	28.5	241.7	70.8	119.1	34.9	30.5	
	7700	62	16.7	237.9	69.7	202.9	59.5	22.8	227.0	66.5	198.3	58.1	24.4	215.4	63.1	193.6	56.7	26.1	202.8	59.4	188.3	55.2	28.0	
	3634	67	19.4	260.2	76.3	169.9	49.8	23.8	248.3	72.8	165.4	48.5	25.6	235.4	69.0	160.5	47.0	27.5	228.6	67.0	157.9	46.3	29.3	
	0.22	72	22.2	281.2	82.4	135.3	39.7	24.8	267.9	78.5	130.8	38.3	26.7	253.2	74.2	125.9	36.9	28.8	245.7	72.0	123.4	36.2	30.9	
	6224	6300	62	16.7	254.1	74.5	198.7	58.2	24.5	242.2	71.0	193.3	56.6	26.3	229.4	67.2	187.6	55.0	28.2	215.9	63.3	181.6	53.2	30.3
		2973	67	19.4	277.5	81.3	169.2	49.6	25.5	264.6	77.6	164.0	48.1	27.5	251.0	73.6	158.5	46.5	29.6	236.6	69.3	152.8	44.8	31.9
		0.17	72	22.2	299.5	87.8	138.1	40.5	26.4	285.9	83.8	133.1	39.0	28.6	271.3	79.5	127.9	37.5	30.9	263.8	77.3	125.3	36.7	33.0
8000		62	16.7	269.3	78.9	223.5	65.5	25.2	256.1	75.0	217.8	63.8	27.0											

## Capacity Ratings - 50Hz (Heating)

Model PPH	AFR cfm l/s [BPF]	Indoor Entering Air Temperature		Outdoor Entering Air Temperature											
				47°F (8.3°C)				55°F (12.7°C)				60°F (15.5°C)			
				Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise
				MBH	kW	kW	°F	MBH	kW	kW	°F	MBH	kW	kW	°F
5105	1600	70	21.1	53.5	15.7	4.5	30.8	62.9	18.4	5.1	36.2	72.7	21.3	5.7	41.9
	755	73	22.8	53.0	15.5	4.6	30.5	62.4	18.3	5.2	35.9	72.2	21.1	5.8	41.6
	0.26	75	23.9	52.7	15.5	4.6	30.4	62.1	18.2	5.2	35.8	71.8	21.0	5.9	41.3
	2200	70	21.1	54.7	16.0	4.3	22.9	64.6	18.9	4.8	27.1	74.9	21.9	5.3	31.4
	1038	73	22.8	54.3	15.9	4.3	22.7	64.1	18.8	4.9	26.8	74.3	21.8	5.4	31.1
	0.32	75	23.9	54.0	15.8	4.4	22.6	63.7	18.7	4.9	26.7	73.9	21.7	5.5	31.0
	2420	70	21.1	55.0	16.1	4.2	21.0	65.0	19.0	4.7	24.7	75.4	22.1	5.2	28.7
	1142	73	22.8	54.6	16.0	4.3	20.8	64.5	18.9	4.8	24.6	74.8	21.9	5.3	28.5
	0.32	75	23.9	54.3	15.9	4.3	20.7	64.1	18.8	4.9	24.4	74.4	21.8	5.4	28.4
5106	1730	70	21.1	57.7	16.9	4.9	30.7	67.8	19.9	5.6	36.1	78.0	22.9	6.4	41.6
	816	73	22.8	57.3	16.8	5.0	30.5	67.3	19.7	5.7	35.9	77.5	22.7	6.6	41.3
	0.27	75	23.9	57.1	16.7	5.0	30.4	67.0	19.6	5.8	35.7	77.1	22.6	6.6	41.1
	2400	70	21.1	59.0	17.3	4.6	22.6	69.3	20.3	5.3	26.6	80.0	23.5	5.9	30.7
	1133	73	22.8	58.5	17.1	4.7	22.5	68.8	20.2	5.4	26.4	79.5	23.3	6.0	30.5
	0.32	75	23.9	58.2	17.1	4.8	22.3	68.5	20.1	5.4	26.3	79.1	23.2	6.1	30.4
	2640	70	21.1	59.3	17.4	4.6	20.7	69.7	20.4	5.2	24.3	80.5	23.6	5.8	28.1
	1246	73	22.8	58.8	17.2	4.7	20.5	69.2	20.3	5.3	24.2	79.9	23.4	5.9	27.9
	0.34	75	23.9	58.5	17.1	4.7	20.4	68.9	20.2	5.4	24.0	79.6	23.3	6.0	27.8
5107	2000	70	21.1	67.3	19.7	5.6	31.0	79.2	23.2	6.4	36.5	91.3	26.8	7.4	42.1
	944	73	22.8	66.9	19.6	5.7	30.8	78.6	23.0	6.6	36.2	90.6	26.6	7.5	41.8
	0.26	75	23.9	66.6	19.5	5.8	30.7	78.3	22.9	6.7	36.1	90.2	26.4	7.6	41.6
	2750	70	21.1	68.8	20.2	5.3	23.1	81.1	23.8	6.0	27.2	93.8	27.5	6.8	31.4
	1298	73	22.8	68.2	20.0	5.4	22.9	80.5	23.6	6.1	27.0	93.1	27.3	6.9	31.2
	0.31	75	23.9	67.9	19.9	5.5	22.7	80.1	23.5	6.2	26.8	92.7	27.2	7.0	31.1
	3025	70	21.1	69.2	20.3	5.2	21.1	81.5	23.9	5.9	24.8	94.4	27.7	6.6	28.8
	1427	73	22.8	68.6	20.1	5.3	20.9	80.9	23.7	6.0	24.7	93.7	27.5	6.8	28.6
	0.33	75	23.9	68.2	20.0	5.4	20.8	80.5	23.6	6.1	24.5	93.3	27.3	6.9	28.4
5108	2310	70	21.1	77.7	22.8	6.5	31.0	90.7	26.6	7.2	36.2	104.4	30.6	8.0	41.6
	1090	73	22.8	76.9	22.5	6.6	30.7	89.9	26.3	7.3	35.9	103.5	30.3	8.2	41.3
	0.26	75	23.9	76.4	22.4	6.6	30.5	89.3	26.2	7.4	35.6	103.0	30.2	8.3	41.1
	3300	70	21.1	80.4	23.6	6.2	22.4	93.8	27.5	6.8	26.2	107.9	31.6	7.4	30.1
	1557	73	22.8	79.4	23.3	6.3	22.2	92.9	27.2	6.9	25.9	107.1	31.4	7.6	29.9
	0.31	75	23.9	78.9	23.1	6.4	22.0	92.3	27.0	7.0	25.8	106.5	31.2	7.7	29.7
	3630	70	21.1	81.0	23.7	6.1	20.6	94.5	27.7	6.7	24.0	108.7	31.9	7.3	27.6
	1713	73	22.8	80.0	23.5	6.2	20.3	93.5	27.4	6.8	23.7	107.8	31.6	7.4	27.4
	0.33	75	23.9	79.4	23.3	6.3	20.2	92.9	27.2	6.9	23.6	107.2	31.4	7.5	27.2
5109	2680	70	21.1	99.5	29.2	8.7	34.2	115.9	34.0	9.8	39.8	132.6	38.9	11.1	45.6
	1265	73	22.8	98.6	28.9	8.8	33.9	114.8	33.7	10.0	39.5	131.4	38.5	11.3	45.2
	0.26	75	23.9	98.0	28.7	8.9	33.7	114.1	33.4	10.1	39.2	130.5	38.3	11.4	44.9
	3830	70	21.1	102.8	30.1	8.3	24.7	120.1	35.2	9.2	28.9	138.0	40.5	10.2	33.2
	1807	73	22.8	101.8	29.8	8.4	24.5	119.0	34.9	9.4	28.6	136.9	40.1	10.4	32.9
	0.31	75	23.9	101.2	29.7	8.5	24.3	118.3	34.7	9.5	28.5	136.1	39.9	10.5	32.7
	4215	70	21.1	103.6	30.4	8.2	22.6	120.9	35.4	9.1	26.4	139.2	40.8	10.1	30.4
	1989	73	22.8	102.5	30.1	8.3	22.4	119.9	35.1	9.2	26.2	138.0	40.4	10.2	30.2
	0.33	75	23.9	101.9	29.9	8.4	22.3	119.2	34.9	9.3	26.1	137.2	40.2	10.4	30.0
5210	3000	70	21.1	106.0	31.1	9.1	32.6	124.5	36.5	10.4	38.3	143.8	42.1	11.8	44.2
	1416	73	22.8	105.1	30.8	9.2	32.3	123.5	36.2	10.5	37.9	142.6	41.8	12.0	43.8
	0.26	75	23.9	104.5	30.6	9.3	32.1	122.8	36.0	10.6	37.7	141.9	41.6	12.1	43.6
	4170	70	21.1	108.7	31.9	8.7	24.0	128.1	37.6	9.8	28.3	148.4	43.5	10.9	32.8
	1968	73	22.8	107.8	31.6	8.8	23.8	127.1	37.3	9.9	28.1	147.3	43.2	11.1	32.6
	0.31	75	23.9	107.2	31.4	8.9	23.7	126.4	37.1	10.0	27.9	146.6	43.0	11.3	32.4
	4730	70	21.1	109.5	32.1	8.5	21.3	129.2	37.9	9.6	25.2	149.8	43.9	10.7	29.2
	2232	73	22.8	108.6	31.8	8.7	21.2	128.2	37.6	9.8	25.0	148.7	43.6	10.9	29.0
	0.33	75	23.9	108.0	31.6	8.8	21.0	127.5	37.4	9.9	24.8	147.9	43.4	11.0	28.8
5111	3350	70	21.1	115.6	33.9	9.6	31.8	134.4	39.4	10.7	37.0	154.0	45.1	12.1	42.4
	1581	73	22.8	114.4	33.5	9.7	31.5	133.0	39.0	10.9	36.6	152.4	44.7	12.3	41.9
	0.26	75	23.9	113.6	33.3	9.8	31.3	132.1	38.7	11.0	36.4	151.4	44.4	12.5	41.7
	4800	70	21.1	119.4	35.0	9.1	22.9	139.5	40.9	10.1	26.8	160.5	47.0	11.2	30.8
	2265	73	22.8	118.2	34.6	9.3	22.7	138.1	40.5	10.3	26.5	158.9	46.6	11.4	30.5
	0.32	75	23.9	117.4	34.4	9.4	22.5	137.2	40.2	10.4	26.3	157.9	46.3	11.5	30.3
	5270	70	21.1	120.2	35.2	9.0	21.0	140.5	41.2	10.0	24.6	161.8	47.4	11.0	28.3
	2487	73	22.8	119.0	34.9	9.2	20.8	139.2	40.8	10.1	24.3	160.2	47.0	11.2	28.0
	0.33	75	23.9	118.2	34.6	9.3	20.7	138.2	40.5	10.3	24.2	159.2	46.7	11.3	27.8

Shaded capacities are as per ARI standards 210/240 - 94.

## Capacity Ratings - 50Hz (Heating)

Model PPH	AFR cfm l/s [BPF]	Indoor Entering Air Temperature °F °C		Outdoor Entering Air Temperature											
				47°F (8.3°C)				55°F (12.7°C)				60°F (15.5°C)			
				Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise
				MBH	kW	kW	°F	MBH	kW	kW	°F	MBH	kW	kW	°F
5211	3350	70	21.1	115.3	33.8	9.8	31.7	135.3	39.7	11.3	37.2	155.7	45.6	12.9	42.8
	1581	73	22.8	114.5	33.6	10.0	31.5	134.5	39.4	11.5	37.0	154.7	45.3	13.2	42.6
	0.26	75	23.9	114.0	33.4	10.1	31.4	133.9	39.2	11.7	36.8	153.9	45.1	13.4	42.4
	4800	70	21.1	118.1	34.6	9.3	22.7	138.8	40.7	10.5	26.7	160.2	47.0	11.8	30.8
	2265	73	22.8	117.1	34.3	9.4	22.5	137.8	40.4	10.7	26.5	159.2	46.7	12.0	30.6
	0.32	75	23.9	116.5	34.1	9.5	22.4	137.2	40.2	10.8	26.3	158.5	46.4	12.2	30.4
	5270	70	21.1	118.7	34.8	9.2	20.8	139.5	40.9	10.3	24.4	161.2	47.2	11.6	28.2
	2487	73	22.8	117.7	34.5	9.3	20.6	138.5	40.6	10.5	24.2	160.1	46.9	11.8	28.0
	0.33	75	23.9	117.1	34.3	9.4	20.5	137.9	40.4	10.7	24.1	159.4	46.7	12.0	27.9
5112	3600	70	21.1	127.6	37.4	10.8	32.7	148.5	43.5	12.2	38.0	170.5	50.0	13.8	43.7
	1699	73	22.8	126.3	37.0	11.0	32.3	147.2	43.1	12.4	37.7	168.9	49.5	14.0	43.2
	0.26	75	23.9	125.5	36.8	11.1	32.1	146.3	42.9	12.5	37.5	167.8	49.2	14.1	43.0
	5000	70	21.1	131.4	38.5	10.3	24.2	153.3	44.9	11.5	28.3	176.9	51.8	12.9	32.6
	2360	73	22.8	130.1	38.1	10.5	24.0	151.9	44.5	11.7	28.0	175.3	51.4	13.1	32.3
	0.31	75	23.9	129.2	37.9	10.6	23.8	151.0	44.3	11.9	27.8	174.3	51.1	13.2	32.1
	5500	70	21.1	132.3	38.8	10.2	22.2	154.4	45.3	11.4	25.9	178.3	52.3	12.7	29.9
	2595	73	22.8	131.0	38.4	10.4	21.9	153.0	44.8	11.6	25.6	176.8	51.8	12.9	29.6
	0.33	75	23.9	130.1	38.1	10.5	21.8	152.1	44.6	11.7	25.5	175.7	51.5	13.0	29.4
5213	3925	70	21.1	134.4	39.4	11.2	31.6	158.1	46.3	12.9	37.1	182.2	53.4	14.8	42.8
	1852	73	22.8	133.5	39.1	11.5	31.3	157.0	46.0	13.2	36.9	180.8	53.0	15.1	42.5
	0.26	75	23.9	132.9	39.0	11.6	31.2	156.2	45.8	13.4	36.7	179.9	52.7	15.3	42.3
	5450	70	21.1	137.5	40.3	10.6	23.2	162.0	47.5	12.1	27.4	187.4	54.9	13.6	31.7
	2572	73	22.8	136.3	40.0	10.8	23.1	160.8	47.1	12.3	27.2	186.1	54.5	13.9	31.5
	0.31	75	23.9	135.6	39.8	10.9	22.9	160.0	46.9	12.5	27.1	185.2	54.3	14.1	31.3
	6000	70	21.1	138.3	40.5	10.5	21.2	162.9	47.7	11.9	25.0	188.6	55.3	13.3	29.0
	2831	73	22.8	137.1	40.2	10.7	21.1	161.7	47.4	12.1	24.8	187.3	54.9	13.6	28.8
	0.33	75	23.9	136.3	40.0	10.8	20.9	160.9	47.2	12.3	24.7	186.4	54.6	13.8	28.6
5215	4900	70	21.1	157.4	46.1	12.9	29.6	183.8	53.9	14.2	34.6	211.8	62.1	15.9	39.8
	2312	73	22.8	155.7	45.6	13.1	29.3	182.1	53.4	14.5	34.3	210.0	61.6	16.2	39.5
	0.26	75	23.9	154.6	45.3	13.2	29.1	181.1	53.1	14.6	34.1	208.9	61.2	16.4	39.3
	6000	70	21.1	160.6	47.1	12.6	24.7	187.5	55.0	13.7	28.8	216.0	63.3	15.1	33.2
	2831	73	22.8	158.8	46.5	12.8	24.4	185.7	54.4	14.0	28.5	214.3	62.8	15.4	32.9
	0.33	75	23.9	157.6	46.2	12.9	24.2	184.6	54.1	14.1	28.3	213.1	62.5	15.6	32.7
	6600	70	21.1	162.0	47.5	12.4	22.6	189.0	55.4	13.5	26.4	217.8	63.8	14.8	30.4
	3115	73	22.8	160.1	46.9	12.6	22.4	187.2	54.9	13.8	26.1	216.0	63.3	15.1	30.2
	0.31	75	23.9	158.9	46.6	12.7	22.2	186.0	54.5	13.9	26.0	214.8	62.9	15.3	30.0
5219	5400	70	21.1	203.3	59.6	16.8	34.7	237.1	69.5	18.8	40.5	272.3	79.8	21.1	46.5
	2548	73	22.8	201.3	59.0	17.1	34.4	235.0	68.9	19.2	40.1	269.9	79.1	21.4	46.1
	0.17	75	23.9	200.1	58.6	17.3	34.1	233.6	68.5	19.4	39.9	268.3	78.6	21.7	45.8
	7000	70	21.1	208.4	61.1	16.1	27.4	243.4	71.3	17.9	32.1	280.2	82.1	19.8	36.9
	3303	73	22.8	206.3	60.5	16.4	27.2	241.3	70.7	18.2	31.8	277.9	81.4	20.2	36.6
	0.20	75	23.9	204.9	60.1	16.6	27.0	239.8	70.3	18.4	31.6	276.3	81.0	20.4	36.4
	7700	70	21.1	210.1	61.6	15.9	25.1	245.4	71.9	17.6	29.4	282.7	82.8	19.4	33.8
	3634	73	22.8	207.9	60.9	16.2	24.9	243.2	71.3	17.9	29.1	280.3	82.1	19.8	33.5
	0.22	75	23.9	206.5	60.5	16.4	24.7	241.7	70.8	18.2	28.9	278.7	81.7	20.1	33.4
5222	6300	70	21.1	234.0	68.6	18.8	34.2	272.6	79.9	21.0	39.9	312.7	91.7	23.5	45.8
	2973	73	22.8	231.6	67.9	19.1	33.9	269.8	79.1	21.4	39.5	309.7	90.8	23.9	45.3
	0.17	75	23.9	230.0	67.4	19.3	33.7	268.0	78.5	21.6	39.2	307.6	90.2	24.2	45.0
	8000	70	21.1	239.5	70.2	18.1	27.6	280.0	82.1	20.1	32.3	322.1	94.4	22.2	37.1
	3775	73	22.8	237.1	69.5	18.4	27.3	277.2	81.3	20.4	31.9	319.1	93.5	22.6	36.8
	0.20	75	23.9	235.5	69.0	18.6	27.1	275.4	80.7	20.7	31.7	317.1	92.9	22.9	36.5
	8800	70	21.1	241.3	70.7	17.9	25.3	282.4	82.8	19.8	29.6	325.3	95.3	21.7	34.1
	4153	73	22.8	239.0	70.0	18.2	25.0	279.7	82.0	20.1	29.3	322.3	94.4	22.1	33.8
	0.21	75	23.9	237.4	69.6	18.4	24.9	277.9	81.4	20.3	29.1	320.2	93.8	22.4	33.5
5224	7200	70	21.1	259.5	76.0	21.1	33.2	302.5	88.7	23.6	38.7	348.4	102.1	26.5	44.6
	3398	73	22.8	256.9	75.3	21.5	32.9	299.8	87.9	24.0	38.4	345.2	101.2	26.9	44.2
	0.18	75	23.9	255.3	74.8	21.7	32.7	298.0	87.3	24.3	38.1	343.1	100.6	27.2	43.9
	9000	70	21.1	264.8	77.6	20.4	27.1	309.1	90.6	22.7	31.7	357.0	104.6	25.3	36.6
	4247	73	22.8	262.2	76.8	20.8	26.9	306.3	89.8	23.1	31.4	353.9	103.7	25.7	36.2
	0.21	75	23.9	260.5	76.3	21.0	26.7	304.5	89.2	23.4	31.2	351.8	103.1	26.0	36.0
	9900	70	21.1	266.8	78.2	20.1	24.8	311.6	91.3	22.3	29.0	360.1	105.5	24.8	33.5
	4672	73	22.8	264.1	77.4	20.5	24.6	308.7	90.5	22.7	28.7	357.0	104.6	25.3	33.2
	0.23	75	23.9	262.4	76.9	20.7	24.4	306.9	89.9	23.0	28.6	354.9	104.0	25.6	33.0

Shaded capacities are as per ARI standards 210/240 - 94.

## Capacity Ratings - 60Hz (Heating)

Model PPPH	AFR cfm /s [BPF]	Indoor Entering Air Temperature		Outdoor Entering Air Temperature											
				47°F (8.3°C)				55°F (12.7°C)				60°F (15.5°C)			
				Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Tempera Rise
				MBH	kW	kW	°F	MBH	kW	kW	°F	MBH	kW	kW	°F
6106	1600	70	21.1	61.7	18.1	5.5	35.5	72.3	21.2	6.3	41.6	83.2	24.4	7.3	47.9
	755	73	22.8	61.2	17.9	5.6	35.3	71.7	21.0	6.4	41.3	82.6	24.2	7.4	47.6
	0.26	75	23.9	60.9	17.8	5.7	35.1	71.3	20.9	6.5	41.1	82.2	24.1	7.5	47.3
	2200	70	21.1	63.4	18.6	5.3	26.5	74.5	21.8	6.0	31.2	86.0	25.2	6.7	36.0
	1038	73	22.8	62.8	18.4	5.4	26.3	73.9	21.7	6.1	31.0	85.4	25.0	6.8	35.8
	0.32	75	23.9	62.5	18.3	5.4	26.2	73.5	21.5	6.1	30.8	84.9	24.9	6.9	35.6
	2420	70	21.1	63.7	18.7	5.2	24.3	75.0	22.0	5.9	28.6	86.7	25.4	6.6	33.0
	1142	73	22.8	63.2	18.5	5.3	24.1	74.4	21.8	6.0	28.4	86.0	25.2	6.7	32.8
	0.32	75	23.9	62.9	18.4	5.4	24.0	74.1	21.7	6.1	28.2	85.6	25.1	6.8	32.6
6107	1730	70	21.1	66.9	19.6	6.1	35.6	78.3	22.9	7.1	41.7	89.5	26.2	8.2	47.7
	816	73	22.8	66.5	19.5	6.3	35.5	77.8	22.8	7.3	41.4	88.9	26.0	8.4	47.3
	0.27	75	23.9	66.3	19.4	6.4	35.3	77.4	22.7	7.4	41.2	88.4	25.9	8.4	47.1
	2400	70	21.1	68.2	20.0	5.7	26.2	80.1	23.5	6.6	30.8	92.1	27.0	7.5	35.4
	1133	73	22.8	67.8	19.9	5.9	26.0	79.6	23.3	6.7	30.6	91.6	26.8	7.7	35.2
	0.32	75	23.9	67.5	19.8	5.9	25.9	79.3	23.2	6.8	30.5	91.2	26.7	7.8	35.0
	2640	70	21.1	68.6	20.1	5.7	23.9	80.6	23.6	6.5	28.1	92.7	27.2	7.4	32.4
	1246	73	22.8	68.1	20.0	5.8	23.8	80.1	23.5	6.6	28.0	92.1	27.0	7.5	32.2
	0.34	75	23.9	67.8	19.9	5.9	23.7	79.7	23.4	6.7	27.8	91.7	26.9	7.6	32.0
6108	2000	70	21.1	77.9	22.8	7.0	35.9	91.2	26.7	8.2	42.0	104.4	30.6	9.4	48.1
	944	73	22.8	77.5	22.7	7.2	35.7	90.6	26.5	8.3	41.7	103.6	30.4	9.5	47.7
	0.26	75	23.9	77.1	22.6	7.3	35.6	90.1	26.4	8.4	41.5	103.1	30.2	9.6	47.5
	2750	70	21.1	79.5	23.3	6.6	26.7	93.5	27.4	7.6	31.3	107.7	31.6	8.6	36.1
	1298	73	22.8	79.0	23.2	6.7	26.5	92.9	27.2	7.7	31.1	107.0	31.4	8.8	35.9
	0.31	75	23.9	78.7	23.1	6.8	26.4	92.5	27.1	7.8	31.0	106.5	31.2	8.9	35.7
	3025	70	21.1	80.0	23.4	6.5	24.4	94.1	27.6	7.4	28.7	108.5	31.8	8.4	33.1
	1427	73	22.8	79.4	23.3	6.6	24.2	93.4	27.4	7.6	28.5	107.8	31.6	8.6	32.8
	0.33	75	23.9	79.1	23.2	6.7	24.1	93.0	27.3	7.7	28.3	107.3	31.4	8.7	32.7
6109	2310	70	21.1	89.3	26.2	8.0	35.6	104.0	30.5	9.0	41.5	119.3	35.0	10.3	47.6
	1090	73	22.8	88.4	25.9	8.1	35.3	103.1	30.2	9.2	41.1	118.3	34.7	10.5	47.2
	0.26	75	23.9	87.9	25.8	8.2	35.1	102.5	30.0	9.2	40.9	117.6	34.5	10.6	46.9
	3300	70	21.1	92.5	27.1	7.7	25.8	107.9	31.6	8.4	30.1	124.0	36.3	9.4	34.6
	1557	73	22.8	91.6	26.8	7.8	25.6	106.9	31.3	8.6	29.9	123.0	36.1	9.6	34.4
	0.31	75	23.9	90.9	26.7	7.9	25.4	106.3	31.2	8.7	29.7	122.4	35.9	9.7	34.2
	3630	70	21.1	93.2	27.3	7.6	23.7	108.7	31.9	8.3	27.6	124.9	36.6	9.2	31.7
	1713	73	22.8	92.2	27.0	7.7	23.4	107.7	31.6	8.5	27.4	124.0	36.3	9.4	31.5
	0.33	75	23.9	91.6	26.8	7.8	23.3	107.1	31.4	8.6	27.2	123.3	36.1	9.5	31.3
6110	2680	70	21.1	113.8	33.4	10.8	39.1	131.9	38.7	12.3	45.4	149.9	43.9	14.0	51.6
	1265	73	22.8	112.8	33.1	10.9	38.8	130.7	38.3	12.5	45.0	148.5	43.5	14.2	51.1
	0.26	75	23.9	112.1	32.9	11.0	38.6	130.0	38.1	12.6	44.7	147.6	43.3	14.4	50.8
	3830	70	21.1	117.9	34.6	10.2	28.4	137.3	40.2	11.5	33.0	157.0	46.0	12.8	37.8
	1807	73	22.8	116.8	34.2	10.4	28.1	136.1	39.9	11.6	32.8	155.6	45.6	13.1	37.5
	0.31	75	23.9	116.1	34.0	10.5	27.9	135.3	39.7	11.8	32.6	154.7	45.3	13.2	37.2
	4215	70	21.1	118.8	34.8	10.1	26.0	138.4	40.6	11.3	30.3	158.4	46.4	12.6	34.6
	1989	73	22.8	117.7	34.5	10.2	25.7	137.2	40.2	11.5	30.0	157.1	46.0	12.8	34.3
	0.33	75	23.9	117.0	34.3	10.3	25.6	136.4	40.0	11.6	29.8	156.2	45.8	13.0	34.1
6211	3000	70	21.1	122.2	35.8	11.3	37.5	142.9	41.9	12.9	43.9	164.3	48.2	15.0	50.5
	1416	73	22.8	121.2	35.5	11.4	37.2	141.7	41.5	13.1	43.5	163.1	47.8	15.2	50.1
	0.26	75	23.9	120.5	35.3	11.5	37.0	141.0	41.3	13.3	43.3	162.3	47.6	15.4	49.9
	4170	70	21.1	125.7	36.8	10.8	27.8	147.6	43.3	12.2	32.6	170.3	49.9	13.8	37.6
	1968	73	22.8	124.7	36.5	10.9	27.6	146.5	42.9	12.4	32.4	169.0	49.5	14.0	37.4
	0.31	75	23.9	124.0	36.3	11.0	27.4	145.7	42.7	12.5	32.2	168.2	49.3	14.2	37.2
	4730	70	21.1	126.8	37.1	10.6	24.7	149.1	43.7	12.0	29.0	172.1	50.4	13.4	33.5
	2232	73	22.8	125.7	36.8	10.7	24.5	147.9	43.3	12.1	28.8	170.8	50.1	13.7	33.3
	0.33	75	23.9	125.0	36.6	10.9	24.4	147.1	43.1	12.3	28.7	169.9	49.8	13.8	33.1
6112	3350	70	21.1	132.4	38.8	11.9	36.4	153.2	44.9	13.4	42.1	174.5	51.2	15.3	48.0
	1581	73	22.8	131.1	38.4	12.0	36.1	151.6	44.4	13.7	41.7	172.8	50.7	15.6	47.6
	0.26	75	23.9	130.2	38.1	12.1	35.8	150.6	44.1	13.8	41.4	171.7	50.3	15.7	47.2
	4800	70	21.1	137.4	40.3	11.3	26.4	159.8	46.8	12.6	30.7	182.9	53.6	14.1	35.1
	2265	73	22.8	136.0	39.9	11.4	26.1	158.3	46.4	12.8	30.4	181.1	53.1	14.3	34.8
	0.32	75	23.9	135.1	39.6	11.5	25.9	157.2	46.1	12.9	30.2	180.0	52.7	14.5	34.6
	5270	70	21.1	138.4	40.6	11.1	24.2	161.2	47.2	12.4	28.2	184.6	54.1	13.8	32.3
	2487	73	22.8	137.0	40.2	11.3	24.0	159.6	46.8	12.6	27.9	182.8	53.6	14.1	32.0
	0.33	75	23.9	136.1	39.9	11.4	23.8	158.5	46.5	12.7	27.7	181.7	53.2	14.2	31.8

Shaded capacities are as per ARI standards 210/240 - 94.

## Capacity Ratings - 60Hz (Heating)

Model PHPH	AFR cfm l/s [BPF]	Indoor Entering Air Temperature		Outdoor Entering Air Temperature											
				47°F (8.3°C)				55°F (12.7°C)				60°F (15.5°C)			
				Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise	Total Capacity		Compress Power	Temperatu Rise
				MBH	kW	kW	°F	MBH	kW	kW	°F	MBH	kW	kW	°F
6212	3350	70	21.1	133.6	39.2	12.3	36.8	156.2	45.8	14.4	43.0	178.6	52.3	16.5	49.1
	1581	73	22.8	132.9	39.0	12.6	36.6	155.2	45.5	14.6	42.7	177.3	52.0	16.8	48.8
	0.26	75	23.9	132.4	38.8	12.8	36.4	154.5	45.3	14.8	42.5	176.4	51.7	17.0	48.5
	4800	70	21.1	136.6	40.0	11.5	26.2	160.5	47.0	13.2	30.8	184.6	54.1	15.0	35.4
	2265	73	22.8	135.7	39.8	11.7	26.1	159.5	46.7	13.4	30.6	183.4	53.7	15.3	35.2
	0.32	75	23.9	135.2	39.6	11.8	26.0	158.8	46.5	13.6	30.5	182.6	53.5	15.5	35.1
	5270	70	21.1	137.3	40.3	11.3	24.0	161.4	47.3	12.9	28.2	185.7	54.4	14.6	32.5
	2487	73	22.8	136.4	40.0	11.5	23.9	160.3	47.0	13.2	28.0	184.6	54.1	15.0	32.3
	0.33	75	23.9	135.8	39.8	11.7	23.7	159.7	46.8	13.4	27.9	183.8	53.9	15.2	32.1
6113	3600	70	21.1	146.6	43.0	13.5	37.5	170.1	49.8	15.3	43.5	193.8	56.8	17.4	49.6
	1699	73	22.8	145.2	42.6	13.7	37.2	168.6	49.4	15.6	43.2	191.9	56.2	17.7	49.1
	0.26	75	23.9	144.3	42.3	13.8	36.9	167.5	49.1	15.7	42.9	190.6	55.9	17.9	48.8
	5000	70	21.1	151.5	44.4	12.8	27.9	176.3	51.7	14.4	32.5	202.2	59.3	16.2	37.3
	2360	73	22.8	150.1	44.0	13.0	27.7	174.7	51.2	14.6	32.2	200.4	58.7	16.4	36.9
	0.31	75	23.9	149.2	43.7	13.2	27.5	173.7	50.9	14.8	32.0	199.2	58.4	16.6	36.7
	5500	70	21.1	152.7	44.8	12.7	25.6	177.7	52.1	14.2	29.8	204.1	59.8	15.9	34.2
	2595	73	22.8	151.2	44.3	12.9	25.3	176.1	51.6	14.4	29.5	202.3	59.3	16.2	33.9
	0.33	75	23.9	150.3	44.0	13.0	25.2	175.1	51.3	14.6	29.3	201.1	58.9	16.3	33.7
6214	3925	70	21.1	155.6	45.6	14.1	36.5	181.9	53.3	16.4	42.7	208.2	61.0	18.9	48.9
	1852	73	22.8	154.6	45.3	14.4	36.3	180.7	53.0	16.7	42.4	206.6	60.5	19.2	48.5
	0.26	75	23.9	154.0	45.1	14.6	36.2	179.9	52.7	17.0	42.2	205.5	60.2	19.4	48.2
	5450	70	21.1	158.9	46.6	13.2	26.9	186.8	54.7	15.2	31.6	215.2	63.1	17.3	36.4
	2572	73	22.8	157.9	46.3	13.5	26.7	185.5	54.4	15.5	31.4	213.7	62.6	17.7	36.1
	0.31	75	23.9	157.2	46.1	13.6	26.6	184.7	54.1	15.7	31.2	212.7	62.3	17.9	36.0
	6000	70	21.1	159.8	46.8	13.0	24.5	187.9	55.1	14.9	28.9	216.7	63.5	16.9	33.3
	2831	73	22.8	158.7	46.5	13.2	24.4	186.7	54.7	15.2	28.7	215.3	63.1	17.3	33.1
	0.33	75	23.9	158.0	46.3	13.4	24.3	185.8	54.5	15.4	28.5	214.3	62.8	17.5	32.9
6216	4900	70	21.1	180.0	52.8	15.9	33.9	209.9	61.5	17.7	39.5	240.9	70.6	20.1	45.3
	2312	73	22.8	178.3	52.3	16.1	33.5	208.1	61.0	18.0	39.1	238.9	70.0	20.5	44.9
	0.26	75	23.9	177.2	51.9	16.3	33.3	206.9	60.6	18.2	38.9	237.6	69.6	20.7	44.7
	6000	70	21.1	183.8	53.9	15.5	28.2	214.4	62.8	17.1	32.9	246.3	72.2	19.1	37.8
	2831	73	22.8	182.0	53.3	15.7	28.0	212.5	62.3	17.4	32.6	244.4	71.6	19.4	37.5
	0.33	75	23.9	180.7	53.0	15.8	27.8	211.3	61.9	17.5	32.5	243.1	71.2	19.7	37.3
	6600	70	21.1	185.4	54.3	15.3	25.9	216.2	63.4	16.8	30.2	248.5	72.8	18.7	34.7
	3115	73	22.8	183.5	53.8	15.5	25.6	214.3	62.8	17.1	29.9	246.5	72.3	19.0	34.4
	0.31	75	23.9	182.2	53.4	15.7	25.4	213.0	62.4	17.3	29.7	245.2	71.9	19.3	34.2
6221	5400	70	21.1	232.9	68.3	20.8	39.7	270.8	79.4	23.5	46.2	309.0	90.6	26.5	52.7
	2548	73	22.8	230.8	67.6	21.1	39.4	268.4	78.7	23.9	45.8	306.3	89.8	26.9	52.3
	0.17	75	23.9	229.4	67.2	21.3	39.2	266.9	78.2	24.1	45.5	304.5	89.2	27.2	52.0
	7000	70	21.1	239.2	70.1	20.0	31.5	278.7	81.7	22.3	36.7	319.3	93.6	24.8	42.0
	3303	73	22.8	236.9	69.4	20.3	31.2	276.3	81.0	22.6	36.4	316.6	92.8	25.2	41.7
	0.20	75	23.9	235.5	69.0	20.5	31.0	274.7	80.5	22.9	36.2	314.8	92.3	25.5	41.5
	7700	70	21.1	241.2	70.7	19.7	28.9	281.2	82.4	21.9	33.7	322.4	94.5	24.3	38.6
	3634	73	22.8	238.9	70.0	20.0	28.6	278.8	81.7	22.3	33.4	319.7	93.7	24.7	38.3
	0.22	75	23.9	237.4	69.6	20.2	28.4	277.2	81.2	22.5	33.2	317.9	93.2	25.0	38.1
6224	6300	70	21.1	268.5	78.7	23.3	39.3	311.2	91.2	26.3	45.5	355.2	104.1	29.7	52.0
	2973	73	22.8	265.8	77.9	23.6	38.9	308.1	90.3	26.7	45.1	351.7	103.1	30.2	51.5
	0.17	75	23.9	264.0	77.4	23.8	38.6	306.0	89.7	26.9	44.8	349.5	102.4	30.6	51.1
	8000	70	21.1	275.7	80.8	22.4	31.8	320.9	94.1	25.0	37.0	367.3	107.7	27.9	42.3
	3775	73	22.8	273.0	80.0	22.7	31.4	317.8	93.1	25.4	36.6	363.9	106.6	28.4	41.9
	0.20	75	23.9	271.2	79.5	23.0	31.2	315.7	92.5	25.7	36.4	361.5	106.0	28.7	41.7
	8800	70	21.1	278.1	81.5	22.1	29.1	324.2	95.0	24.6	34.0	371.4	108.9	27.3	38.9
	4153	73	22.8	275.4	80.7	22.4	28.8	321.0	94.1	25.0	33.6	368.0	107.8	27.8	38.5
	0.21	75	23.9	273.6	80.2	22.7	28.7	318.9	93.5	25.3	33.4	365.6	107.2	28.1	38.3
6227	7200	70	21.1	298.8	87.6	26.2	38.3	347.2	101.8	29.6	44.4	397.3	116.4	33.4	50.9
	3398	73	22.8	296.0	86.8	26.6	37.9	344.2	100.9	30.1	44.1	393.6	115.4	33.9	50.4
	0.18	75	23.9	294.1	86.2	26.9	37.7	342.1	100.3	30.4	43.8	391.2	114.6	34.3	50.1
	9000	70	21.1	305.7	89.6	25.3	31.3	355.8	104.3	28.3	36.4	408.7	119.8	31.7	41.9
	4247	73	22.8	302.8	88.7	25.7	31.0	352.7	103.4	28.8	36.1	405.2	118.8	32.2	41.5
	0.21	75	23.9	300.9	88.2	26.0	30.8	350.6	102.8	29.1	35.9	402.8	118.0	32.6	41.2
	9900	70	21.1	308.2	90.3	25.0	28.7	358.9	105.2	27.8	33.4	412.8	121.0	31.1	38.4
	4672	73	22.8	305.3	89.5	25.4	28.4	355.8	104.3	28.3	33.1	409.3	119.9	31.6	38.1
	0.23	75	23.9	303.3	88.9	25.6	28.2	353.7	103.7	28.6	32.9	406.9	119.2	32.0	37.9

Shaded capacities are as per ARI standards 210/240 - 94.



## Component Air Pressure Drop

Component		Coil Face Velocity							
		fpm	300	350	400	450	500	550	600
		m/s	1.5	1.8	2	2.3	2.5	2.8	3
Flat filters	1" cleanable aluminium flat	in.wg.	0.02	0.03	0.05	0.06	0.07	0.09	0.12
		Pa	5	8	13	15	18	23	31
	2" cleanable aluminium flat	in.wg.	0.05	0.07	0.1	0.12	0.18	0.22	0.26
		Pa	13	18	25	31	46	56	66
	1"activated filter (disposable)	in.wg.	0.13	0.16	0.2	0.26	N.R.	N.R.	N.R.
	Pa	33	40	51	66	N.R.	N.R.	N.R.	
	2"activated filter (disposable)	in.wg.	0.1	0.12	0.16	0.2	0.25	N.R.	N.R.
	Pa	25	31	41	51	64	N.R.	N.R.	
Vee filters	1" cleanable aluminium flat	in.wg.	0.01	0.015	0.025	0.03	0.035	0.045	0.06
		Pa	3	4	6	8	19	11	15
	2" cleanable aluminium flat	in.wg.	0.025	0.035	0.05	0.06	0.09	0.11	0.13
		Pa	6	9	13	15	23	28	33
	1"activated filter (disposable)	in.wg.	0.065	0.08	0.1	0.13	0.16	0.21	0.26
	Pa	17	20	25	33	41	53	66	
	2"activated filter (disposable)	in.wg.	0.05	0.06	0.08	0.1	0.125	0.16	0.21
	Pa	13	15	20	25	32	41	53	
Bag filters*	22" depth	in.wg.	0.22	0.3	0.38	0.49	0.6	0.73	0.86
		Pa	56	76	97	124	152	185	218
	30" depth	in.wg.	0.2	0.27	0.35	0.45	0.55	0.67	0.79
		Pa	51	69	89	114	140	170	201
	36" depth	in.wg.	0.18	0.25	0.32	0.41	0.5	0.61	0.72
		Pa	46	64	81	104	127	155	183
Electric Heater		in.wg.	0.01	0.02	0.024	0.028	0.035	0.04	0.045
		Pa	3	5	6	7	9	10	11
Casing	All units	in.wg.	0.15	0.15	0.15	0.15	0.15	0.15	0.15
		Pa	38	38	38	38	38	38	38
Interior Coil 3R-10FPI	BPF		0.24	0.26	0.28	0.3	0.32	0.33	0.35
	PD dry	in.wg.	0.07	0.1	0.12	0.15	0.18	0.21	0.25
		Pa	18	25	31	38	46	53	64
	PD wet	in.wg.	0.09	0.13	0.16	0.2	0.23	0.27	0.33
Pa		23	33	41	51	58	69	84	
Interior Coil 4R-10FPI	BPF		0.15	0.17	0.19	0.2	0.22	0.23	0.24
	PD dry	in.wg.	0.1	0.13	0.16	0.2	0.24	0.28	0.33
		Pa	25	33	41	51	61	71	84
	PD wet	in.wg.	0.13	0.17	0.21	0.26	0.31	0.36	0.43
		Pa	33	43	53	66	79	91	109

\* Initial pressure drop based on 95% bag filter dust spot efficiency

NR = Not recommended for use at these velocities.

Standard number of rows & fin spacing for models are :

PPH Models	Number of Rows	Fin Spacing (fpi)
5105 to 5215	3	10
6106 to 6216		
5219 to 5224	4	
6221 to 6227		

## Electric Heating

Electric heater batteries are available in finned type elements. Heating elements are constructed from high quality 80/20 nickel chrome resistance wire centered in metal tube by compressed magnesium oxide. Helical fins tightly wound round tubular heating element.

### Standard components include

- 3 pole magnetic contactor per stage
- 1 primary over current protection provided by Auto reset high limit safety cut-out.
- 1 secondary over current protection provided by Manual reset high limit safety cut-out for positive Break
- Terminals for field supplied & installed air flow switch
- Control fuse
- Control relay

Optional items available factory mounted in unit control panel include :

- Air flow switch
- Power fuses per NEC if total load exceeds 48 amperes

Following are the Electrical Heating Optional KW rating, options other than those specified below can be supplied on request. Consult SKM for full details.

PPH		Heater kW	Stages
5105	6106	7.5	1
5106	6107		
5107	6108	9	
5108	6109		
5109	6110	12	
5210	6211		
5111	6112	18	2
5211	6212		
5112	6113		
5213	6214		
5215	6216		
5219	6221		
5222	6224	24	
5224	6227		

## Field Connections

PHPH series self-contained heavy duty Heat Pumps are designed for minimum field interaction.

Every PHPH series package heat pump requires, at most, field installed fused disconnect switches or circuit breakers, and a display terminal.

Refer to typical wiring diagram on pages 17 and

18 for a schematic representation of required field electrical hook-ups for a standard PHPH series packaged heat pump unit.

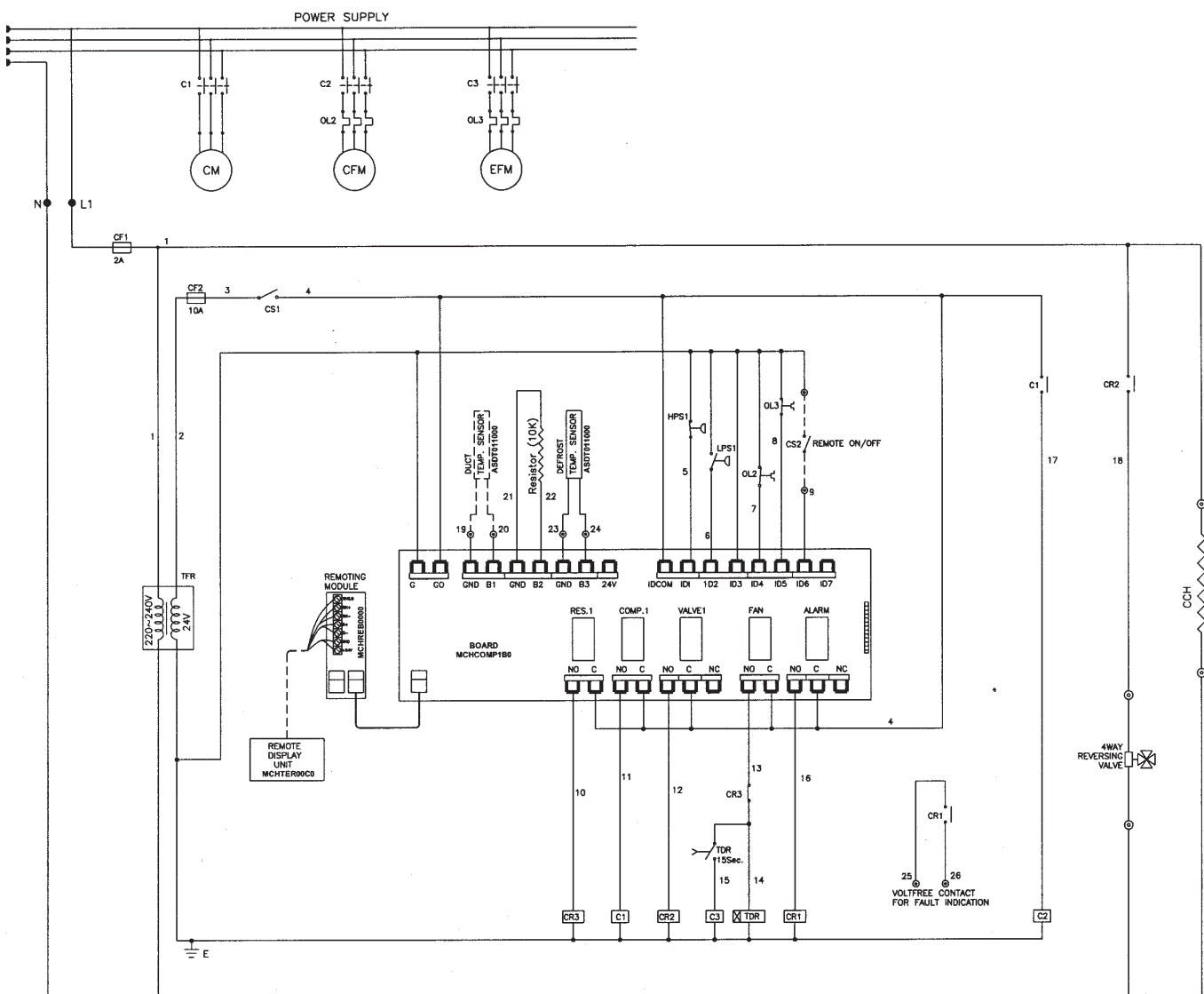
All field wiring must be done in accordance with applicable local and national codes. For maximum recommended fuse sizes and minimum circuit amps for cable sizing, see Page 19 of this bulletin.

Duct work should be connected with flexible connections to the PHPH series. Drains (on larger models), suitably trapped, are required to be connected to the drain outlet of all models of PHPH series.

The PHPH series series is then ready to provide cooling/ heating, on demand. See Installation, Operation and Maintenance Bulletin for full details on field connections and requirements.

## Typical Wiring Diagram

For Single Circuit



\*\* Provide overcurrent, short circuit, earth fault protection & disconnect means as required by local & national electric code.

### Legend

**C** = Contactor  
**CCH** = Crank Case Heater (Self Regulating)

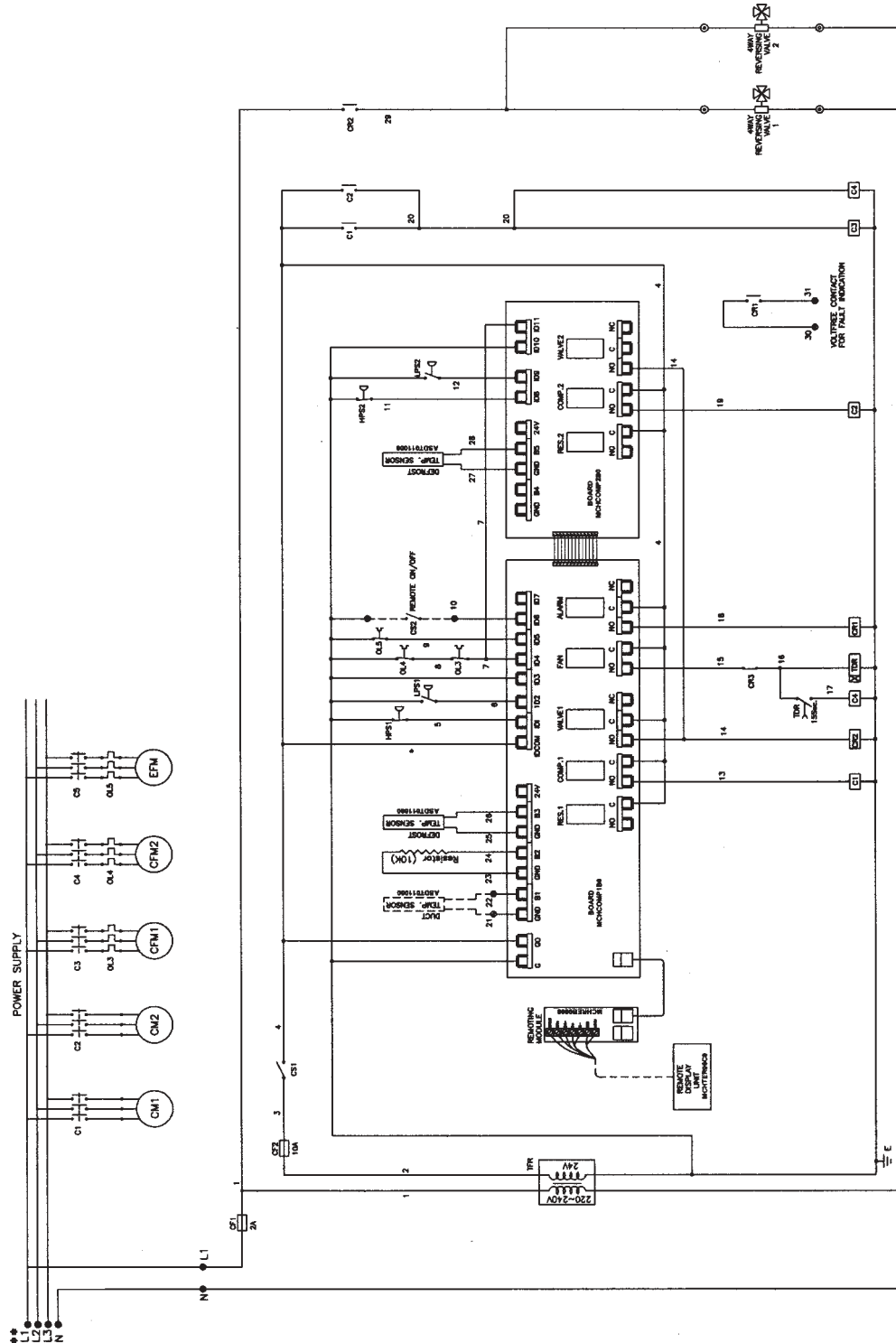
**CFM** = Condenser Fan Motor  
**CM** = Compressor Motor  
**CS** = Control Switch  
**EFM** = Evaporator Fan Motor

**HPS** = High Pressure Switch  
**LPS** = Low Pressure Switch  
**OL** = Overload Relay  
**TDR** = Time Delay Relay

**TFR** = Transformer  
**TH** = Thermostat  
----- = Field Wiring & Field Supplied Devices

## Typical Wiring Diagram

For Double Circuit



\*\* Provide overcurrent, short circuit, earth fault protection & disconnect means as required by local & national electric code.

<b>Legend</b>	<b>CFM</b> = Condenser Fan Motor	<b>HPS</b> = High Pressure Switch	<b>TFR</b> = Transformer
<b>C</b> = Contactor	<b>CM</b> = Compressor Motor	<b>LPS</b> = Low Pressure Switch	<b>TH</b> = Thermostat
<b>CCH</b> = Crank Case Heater (Self Regulating)	<b>CS</b> = Control Switch	<b>OL</b> = Overload Relay	----- = Field Wiring & Field Supplied Devices
	<b>EFM</b> = Evaporator Fan Motor	<b>TDR</b> = Time Delay Relay	

**Electrical Data**

**Power Supply 380 - 415V / 3Ph / 50Hz (Operating Voltage Tolerance = 342 - 440V)**

Model PHPH	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan	
	MFA	MCA	Quantity	MCC Each	RLA Each	LRA Each	Quantity	FLA Each	LRA Each	FLA	LRA
5105	32	19	1	15	10.7	67	1	1.4	4.7	2.6	11.6
5106	32	20	1	15.5	11.1	68	1	1.4	4.7	2.6	11.6
5107	40	23	1	18	12.9	68	1	2.2	8.7	2.6	11.6
5108	40	29	1	22	15.7	78.5	1	3.4	14.4	3.7	17.1
5109	50	36	1	27	19.3	105	1	4.2	18.7	5.2	25.6
5210	50	34	2	15	10.7	67	2	1.4	4.7	5.2	25.6
5111	63	38	1	30	21.4	115	1	4.2	18.7	5.2	25.6
5211	50	35	2	15.5	11.1	68	2	1.4	4.7	5.2	25.6
5112	63	44	1	36	25.7	130	1	4.2	18.7	5.2	25.6
5213	63	43	2	18	12.9	68	2	2.2	8.7	7.1	35.1
5215	63	51	2	22	15.7	78.5	2	3.4	14.4	7.1	35.1
5219	80	61	2	27	19.3	105	2	4.2	18.7	7.1	35.1
5222	100	66	2	30	21.4	115	2	4.2	18.7	7.1	35.1
5224	125	77	2	36	25.7	130	2	4.2	18.7	9.2	49.4

**Power Supply 440V / 3Ph / 50Hz (Operating Voltage Tolerance = 400 - 462V)**

Model PHPH	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan	
	MFA	MCA	Quantity	MCC Each	RLA Each	LRA Each	Quantity	FLA Each	LRA Each	FLA	LRA
5105	32	19	1	15	10.7	73.7	1	1.1	4.3	2.3	11.2
5106	32	19	1	15.5	11.1	74.8	1	1.1	4.3	2.3	11.2
5107	40	22	1	18	12.9	74.8	1	1.9	7.9	2.3	11.2
5108	40	28	1	22	15.7	86.9	1	2.7	13.1	3.2	16
5109	50	34	1	27	19.3	115.5	1	3.6	16	4.7	25
5210	50	33	2	15	10.7	73.7	2	1.1	4.3	4.7	25
5111	63	37	1	30	21.4	126.5	1	3.6	16	4.7	25
5211	50	34	2	15.5	11.1	74.8	2	1.1	4.3	4.7	25
5112	63	42	1	36	25.7	143	1	3.6	16	4.7	25
5213	63	41	2	18	12.9	74.8	2	1.9	7.9	6.5	33.5
5215	63	49	2	22	15.7	86.9	2	2.7	13.1	6.5	33.5
5219	80	59	2	27	19.3	115.5	2	3.6	16	6.5	33.5
5222	100	64	2	30	21.4	126.5	2	3.6	16	6.5	33.5
5224	125	75	2	36	25.7	143	2	3.6	16	8	43

**Power Supply 220V / 3Ph / 60Hz (Operating Voltage Tolerance = 208 - 253V)**

Model PHPH	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan	
	MFA	MCA	Quantity	MCC Each	RLA Each	LRA Each	Quantity	FLA Each	LRA Each	FLA	LRA
6106	63	37	1	31	22.1	128	1	3	9.7	4.5	17.8
6107	63	36	1	30	21.4	128	1	3	9.7	4.5	17.8
6108	80	50	1	42	30	155	1	5.5	21.2	4.5	17.8
6109	80	53	1	43	30.7	157	1	6.7	27.7	5.9	26.5
6110	125	68	1	54	38.6	210	1	9.4	47.6	8.3	39.5
6211	100	66	2	31	22.1	128	2	3	9.7	8.3	39.5
6112	125	77	1	64	45.7	259	1	9.4	47.6	8.3	39.5
6212	100	64	2	30	21.4	128	2	3	9.7	8.3	39.5
6113	125	82	1	70	50	259	1	9.4	47.6	8.3	39.5
6214	160	92	2	42	30	155	2	5.5	21.2	11.3	54.3
6216	160	96	2	43	30.7	157	2	6.7	27.7	11.3	54.3
6221	200	119	2	54	38.6	210	2	9.4	47.6	11.3	54.3
6224	200	135	2	64	45.7	259	2	9.4	47.6	11.3	54.3
6227	200	148	2	70	50	259	2	9.4	47.6	14.7	76.2

**Power Supply 380V / 3Ph / 60Hz (Operating Voltage Tolerance = 342 - 418V)**

Model PHPH	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan	
	MFA	MCA	Quantity	MCC Each	RLA Each	LRA Each	Quantity	FLA Each	LRA Each	FLA	LRA
6106	32	21	1	17	12.1	68	1	1.7	5.6	2.6	10.3
6107	32	22	1	18	12.9	57	1	1.7	5.6	2.6	10.3
6108	40	27	1	22	15.7	85	1	3.2	12.2	2.6	10.3
6109	40	31	1	24	17.1	92	1	3.8	16	3.4	15.3
6110	50	38	1	29	20.7	129	1	5.4	27.5	4.9	22.8
6211	50	38	2	17	12.1	68	2	1.7	5.6	4.9	22.8
6112	63	44	1	36	25.7	143	1	5.4	27.5	4.9	22.8
6212	50	39	2	18	12.9	57	2	1.7	5.6	4.9	22.8
6113	63	44	1	36	25.7	143	1	5.4	27.5	4.9	22.8
6214	63	50	2	22	15.7	85	2	3.2	12.2	6.7	31.3
6216	80	55	2	24	17.1	92	2	3.8	16	6.7	31.3
6221	100	66	2	29	20.7	129	2	5.4	27.5	6.7	31.3
6224	125	77	2	36	25.7	143	2	5.4	27.5	6.7	31.3
6227	125	79	2	36	25.7	143	2	5.4	27.5	8.4	44

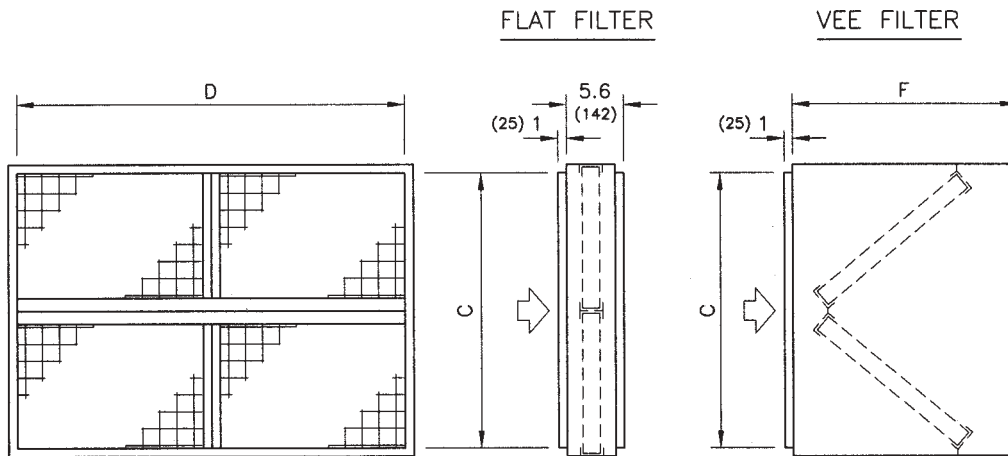
**Power Supply 460V / 3 Ph / 60 Hz (Operating Voltage Tolerance = 414 - 506V)**

Model PACH	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan	
	MFA	MCA	Quantity	MCC Each	RLA Each	LRA Each	Quantity	FLA Each	LRA Each	FLA	LRA
6106	32	19	1	15	10.7	67	1	1.6	6.6	2.3	12
6107	32	20	1	15.5	11.1	68	1	1.6	6.6	2.3	12
6108	40	23	1	18	12.9	68	1	2.9	14.4	2.3	12
6109	40	29	1	22	15.7	78.5	1	3.7	17.3	3.4	18
6110	50	36	1	27	19.3	105	1	5	31.6	4.5	26.4
6211	50	34	2	15	10.7	67	2	1.6	6.6	4.5	26.4
6112	63	38	1	30	21.4	115	1	5	31.6	4.5	26.4
6212	50	35	2	15.5	11.1	68	2	1.6	6.6	4.5	26.4
6113	63	44	1	36	25.7	130	1	5	31.6	4.5	26.4
6214	63	43	2	18	12.9	68	2	2.9	14.4	6.2	36.5
6216	63	51	2	22	15.7	78.5	2	3.7	17.3	6.2	36.5
6221	80	62	2	27	19.3	105	2	5	31.6	6.2	36.5
6224	100	66	2	30	21.4	115	2	5	31.6	6.2	36.5
6227	125	78	2	36	25.7	130	2	5	31.6	7.8	51

Note : For power supply 460V / 3Ph / 60Hz, models 6107 & 6211 have Condenser motor of 0.75 KW instead of 0.55 KW

- MCC** = Maximum Continuous Current corresponding to the cutout amps of internal motor protection  
**RLA** = Rated Load Amps  
**FLA** = Full Load Amps  
**LRA** = Locked Rotor Amps  
**MCA** = Minimum Circuit Amps for wire sizing  
**MFA** = Maximum Fuse Amps for unit fuse sizing

## Filter Sections

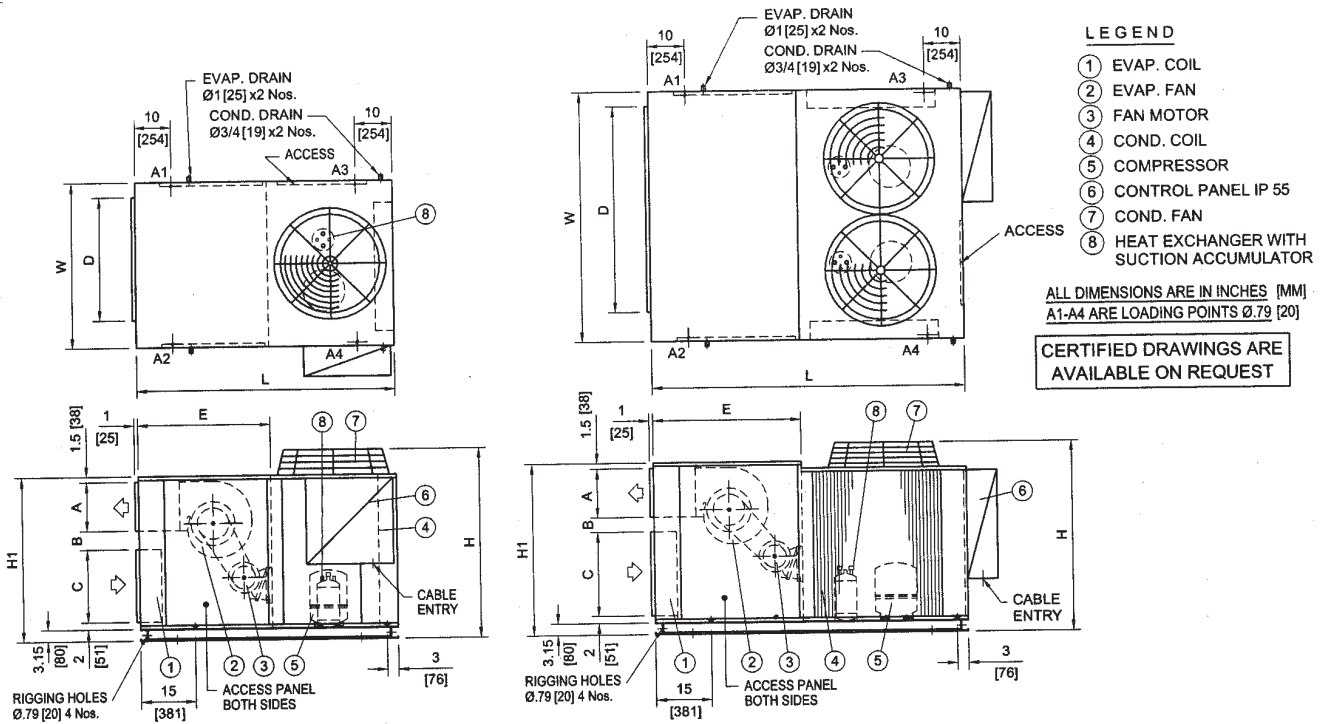


MODEL PPHP-	C	D	F	FLAT FILTER		VEE FILTER	
				SIZE	QTY.	SIZE	QTY.
5105	20	33.6	20	20x16 (508x406)	2	16x16 (406x406)	4
6106	(508)	(853)	(508)				
5106	20	33.6	20	20x16 (508x406)	2	16x16 (406x406)	4
6107	(508)	(853)	(508)				
5107	20	39.6	20	20x20 (508x508)	2	16x20 (406x508)	4
6108	(508)	(1006)	(508)				
5108	24	39.6	22	25x20 (635x508)	2	20x20 (508x508)	4
6109	(610)	(1006)	(559)				
5109	24	46	22	25x25 (635x635)	1	20x25 (508x635)	2
6110	(610)	(1168)	(559)	25x20 (635x508)	1	20x20 (508x508)	2
5210	24	51.6	22	25x20 (635x508)	1	20x20 (508x508)	2
6211	(610)	(1311)	(559)	25x16 (635x406)	2	20x16 (508x406)	4
5111	30	46	26	16x25 (406x635)	2	25x25 (635x635)	2
6112	(762)	(1168)	(660)	16x20 (406x508)	2	25x20 (635x508)	2

MODEL PPHP-	C	D	F	FLAT FILTER		VEE FILTER	
				SIZE	QTY.	SIZE	QTY.
5211	24	57.5	22	25x20 (635x508)	2	20x20 (508x508)	4
6212	(610)	(1460)	(559)	25x16 (635x406)	1	20x16 (508x406)	2
5112	30	48	25	16x25 (406x635)	4	25x25 (635x635)	4
6113	(762)	(1219)	(635)				
5213	24	65.4	22	25x25 (635x635)	2	20x25 (508x635)	4
6214	(610)	(1661)	(559)	25x16 (635x406)	1	20x16 (508x406)	2
5215	30	65.4	25	16x25 (406x635)	4	25x25 (635x635)	4
6216	(762)	(1661)	(635)	16x16 (406x406)	2	25x16 (635x406)	2
5219	30	72	26	16x20 (406x508)	4	25x20 (635x508)	4
6221	(762)	(1829)	(660)	16x16 (406x406)	4	25x16 (635x406)	4
5222	36	72		20x20 (508x508)	2		
6224	(914)	(1829)		20x16 (508x406)	2	20x20 (508x508)	6
5224	36	72	(559)	16x20 (406x508)	2	20x16 (508x406)	6
6227	(914)	(1829)		16x16 (406x406)	2		

ALL DIMENSIONS ARE IN INCHES (MM)

## Dimensional Data



PHPH-5105-5109, 5111, 5112  
PHPH-6106-6110, 6112, 6113

PHPH-5210, 5211, 5213-5224  
PHPH-6211, 6212, 6214-6227

MODEL PHPH-	L	W	H	H1	A	B	C	D	E	LOAD AT EACH POINT Lbs / Kg				TOTAL WEIGHT
										A1	A2	A3	A4	
5105	70	45	52.15	45.15	11.38	7.12	20	33.6	36	139	152	227	310	828
6106	[1778]	[1143]	[1325]	[1147]	[289]	[181]	[508]	[853]	[914]	63	69	103	141	376
5106	70	45	52.15	45.15	11.38	7.12	20	33.6	36	139	152	229	310	830
6107	[1778]	[1143]	[1325]	[1147]	[289]	[181]	[508]	[853]	[914]	63	69	104	141	377
5107	74	56	50.95	45.15	11.38	7.12	20	39.6	36	161	180	253	345	939
6108	[1880]	[1422]	[1294]	[1147]	[289]	[181]	[508]	[1006]	[914]	73	82	115	157	427
5108	74	56	50.95	49.58	13.43	5.5	24	39.6	36	180	198	290	385	1053
6109	[1880]	[1422]	[1294]	[1259]	[341]	[140]	[610]	[1006]	[914]	82	90	132	175	479
5109	82	56	58.95	53.15	15.91	6.59	24	46	40	233	249	304	436	1222
6110	[2083]	[1422]	[1497]	[1350]	[404]	[167]	[610]	[1168]	[1016]	106	113	138	198	555
5210	85	68	52.15	52.06	15.91	5.5	24	51.6	40	255	253	502	422	1432
6211	[2159]	[1727]	[1325]	[1322]	[404]	[140]	[610]	[1311]	[1016]	116	115	228	192	651
5111	82	56	58.95	58.06	15.91	5.5	30	46	40	240	255	332	469	1296
6112	[2083]	[1422]	[1497]	[1475]	[404]	[140]	[762]	[1168]	[1016]	109	116	151	213	589
5211	85	68	52.15	52.06	15.91	5.5	24	57.5	40	260	257	506	425	1448
6212	[2159]	[1727]	[1325]	[1322]	[404]	[140]	[610]	[1460]	[1016]	118	117	230	193	658
5112	82	62	58.95	58.06	15.91	5.5	30	48	40	251	271	354	480	1356
6113	[2083]	[1575]	[1497]	[1475]	[404]	[140]	[762]	[1219]	[1016]	114	123	161	218	616
5213	96	76	50.95	52.06	15.91	5.5	24	65.4	40	326	321	515	447	1609
6214	[2438]	[1930]	[1294]	[1322]	[404]	[140]	[610]	[1661]	[1016]	148	146	234	203	731
5215	92	76	50.95	55.58	13.43	5.5	30	65.4	36	383	352	581	499	1815
6216	[2337]	[1930]	[1294]	[1412]	[341]	[140]	[762]	[1661]	[914]	174	160	264	227	825
5219	92	84	58.95	55.58	13.43	5.5	30	72	36	418	398	658	572	2046
6221	[2337]	[2134]	[1497]	[1412]	[341]	[140]	[762]	[1829]	[914]	190	181	299	260	930
5222	96	84	58.95	63.56	15.91	5	36	72	40	462	438	713	618	2231
6224	[2438]	[2134]	[1497]	[1614]	[404]	[127]	[914]	[1829]	[1016]	210	199	324	281	1014
5224	102	84	58.95	63.56	15.91	5	36	72	40	488	462	730	634	2314
6227	[2591]	[2134]	[1497]	[1614]	[404]	[127]	[914]	[1829]	[1016]	222	210	332	288	1052

## Space & Location Requirements

PHPH series Packaged Heat Pumps should be located on a flat base either on the ground or on a roof top strong enough to hold the operating weight of the selected model.

The unit should be located with free and unhindered provision for supply of ambient air to the condenser coil and removal of heated air from it. The unit should not be located in the vicinity of steam, hot air or fume exhausts.



Site units away from noise sensitive places or consider suitable anti-vibration mounts with other treatment to minimize noise and vibration transmission. Do not duct or obstruct condenser fan discharge in any way.

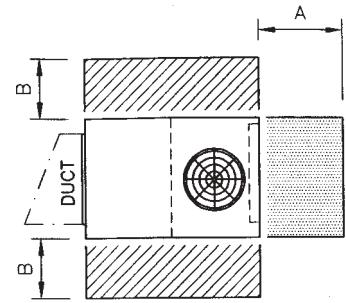
Consider option CGP/CGG if located on ground level where protection against vandalism is desired.

For parallel location of multiple units a minimum clearance between the units must be 50% more than the recommended clearance for single unit installation.

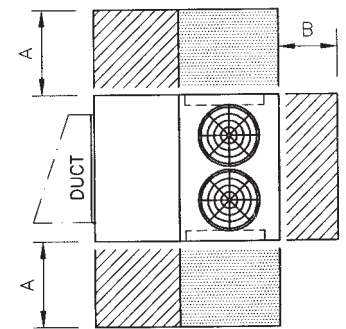
### Recommended Clearances

Model PHPH		A	B
5105	6106	40 (1016)	30 (762)
5106	6107		
5107	6108		
5108	6109	48 (1219)	36 (914)
5109	6110		
5210	6211	40 (1016)	30 (762)
5111	6112	48 (1219)	36 (914)
5211	6212	40 (1016)	30 (762)
5112	6113	48 (1219)	36 (914)
5213	6214	40 (1016)	30 (762)
5215	6216	48 (1219)	36 (914)
5219	6221		
5222	6224		
5224	6227		

-  SPACING FOR SERVICE AND ACCESS
-  SPACING FOR AIR FLOW



5105-5109, 5111, 5112  
6106-6110, 6112, 6113



5210, 5211, 5213-5224  
6211, 6212, 6214-6227

## Pre - Coated Aluminum Fins

The pre - coating is hydrophobic polyurethane resin. It is recommended for heat exchangers as it has a high resistance to corrosion and is designed to give maximum performance in severe and highly corrosive environments.

The special coating (hydrophobic surface) has no affinity for water which gives the heat exchanger a high resistance to corrosion.

This coating is recommended for use in off shore (saline and high humidity) environments, deserts, refineries, sewage treatment plants and other industrial applications.

During laboratory testing, pre - coated aluminum passed a 1000 hour, 5% salt spray test at 95°F (35°C) temperature and 95% RH, according to ASTM - B117.

Properties		
Coating Base		Poly urethane
Colour		Grey
Dry Film Thickness		7 - 10 micron
Resistance to Salt Fog (200 Hours)		Excellent
Resistance to acids	2% HCl	Excellent
	H2SO4	Excellent
Resistance to Water Vapour (121°C for 30 minutes)		Excellent
Resistance to trichloroethylene		Excellent
Resistance to Ultra Violet rays		Excellent
Resistance to Sewage plant atmosphere		Excellent

## GUIDE SPECIFICATIONS

### GENERAL

Packaged air - air heat pumps shall be composed of compressor(s), external & internal coils with fans, refrigerant piping, electrical components & enclosing cabinet in one piece. These units shall be factory assembled, internally wired, fully refrigerant charged with R22, tested under strict quality standards & are suitable for outdoor installation on rooftop or ground level with ducted system.

Units shall be selected in accordance with project requirements and installed as per Installation, Operation & Maintenance Manual.

### COMPRESSOR(S)

Compressor(s) shall be hermetic reciprocating; refrigerant gas cooled, furnished with internal overload protection device, internal pressure relief valve, crankcase heater & shall be mounted on spring vibration isolators.

These compressors conform to internationally recognized standards like NF, VDE, CSA & UL.

### COIL(S)

Coils shall be constructed of seamless copper tubes 3/8" OD mechanically expanded into wavy plate type aluminum fins with maximum 12 fpi (2.1mm) spacing. These coils shall be tested against leakage by air pressure of 450 psig (3100 kPa) under water, cleaned & dehydrated at the factory. Coil shall conform to ARI-410/91.

### EXTERNAL FAN(S) & MOTOR(S)

Unit shall be furnished with a direct driven propeller type, discharging air upward, these fans to be equipped with Aluminum blades, permanently lubricated bearings, and inherent corrosion resistance shaft. Each condenser fan shall be balanced statically and dynamically at the factory. Complete fan assembly is provided with suitable acrylic coated fan guard.

Motor shall be Totally Enclosed Air Over (TEAO), 6 poles, with class F insulation, minimum IP55 protection and factory wired to unit control panel.

### INTERNAL FAN(S) & MOTOR

Fans of evaporators shall be forward curved, double inlet double width (DIDW), centrifugal type, statically &

dynamically balanced, mounted on a single heavy duty shaft with permanently lubricated bearings & driven by V belt with an adjustable variable pitch motor pulley. Motor shall be Totally Enclosed Fan Cooled (TEFC), 4 poles, class-F insulated, minimum IP55 protection & wired to unit control panel.

### REFRIGERANT PIPING

Refrigerant circuit piping shall be fabricated from ACR grade copper including shut-off valve, bi-directional filter drier 4 way valve, heat exchanger suction accumulator, thermostatic expansion valve and bypass device. Suction line shall be insulated with 1/2" (12 mm) wall thickness enclosed cell pipe insulation with maximum k factor 0.28 Btu.in/ft<sup>2</sup> h<sup>o</sup>f.

### CASING

Casing shall be made of hot dip galvanized, phosphatized steel sheets which are then electrostatically polyester powder coated to provide an extremely tough, scratch resistance & excellent anti-corrosive protection. Casing shall pass 1000 hours in 5% salt spray testing at 95°F (35°C) & 95% relative humidity as per ASTM B117-95.

Indoor air section shall be sealed with vinyl gaskets & completely insulated faced with black glass tissue (BGT) heavy density, fire retardant, permanent odorless fiberglass insulation of minimum 1" (25 mm) thickness & 32 kg/m<sup>3</sup> density having maximum k factor 0.23 Btu.in/ft<sup>2</sup> h<sup>o</sup>f. (0.033 W / m °k). Unit casing shall be provided with access panels for easy service & maintenance of all unit parts.

### FILTER SECTION

Air - air heat pump shall be provided with easily accessible cleanable media, minimum 1" (25 mm) thick filter having average arrestance efficiency of 75% as per ASHRAE standard 52 - 76 or equivalent.

### CONTROL PANEL

The panel shall be factory wired in accordance with NEC 430 & 440, and conforms to IP55 requirements.

Control Panel shall contain individual electrical components' contactors, overload relays, transformer, anti-recycling time delay relay, control circuit disconnect switch, power & control circuit terminal blocks and High / low pressure switch.