

PACKAGE HEAT PUMP UNIT

R-410A SINGLE PACKAGE ROOFTOP 3 – 12.5 TONS (1 & 3-Phase)

BUILT TO LAST, EASY TO INSTALL AND SERVICE

- R-410A HFC refrigerant
- ASHRAE 90.1 Energy Compliant
- SEERs up to 13.4, EERs up to 11.2
- IEER's up to 12.2
- HSPF's up to 7.7 and COP's up to 3.3
- Single stage cooling capacity control on 036-072 models
- Two-stage cooling capacity control on 090 to 150 models
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- Convertible from vertical to horizontal airflow for slab mounting
- Copper tube aluminum fin coils with optional corrosion resistant coils
- Pre-painted exterior panels and tested to 500 hours salt spray protection
- Fixed orifice refrigerant metering system
- Cooling operating range up to 115F (46C) and down to 25F (-4C)
- Solid-state control board and easy access terminal board
- Refrigerant filter drier and accumulator on each refrigerant circuit
- Automatic changeover when used with auto-changeover thermostat
- Rated in accordance with AHRI Standards 210/240 (036-060) and 340/360 (072-150)
- Designed in accordance with Underwriters' Laboratories Std 1995
- Listed by UL and UL, Canada or ETL and ETL, Canada

MAINTENANCE FEATURES

- Access panels with easy grip handles
- Innovative, easy starting, no strip screw features on unit access panels.
- Two-inch disposable return air filters with tool-less filter access door
- Belt drive evaporator-fan motor and pulley combinations available on all sizes to meet any application
- Direct Drive X13 (5 speed/torque) indoor motor on 036-060 models
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement

INSTALLATION FEATURES

- Thru-the-bottom power entry capability standard

- Single point electric connections
- Full perimeter base rail with built-in rigging adapters & fork truck slots

RELIABILITY FEATURES

- Scroll compressors with internal line break overload protection
- Dependable Time / Temperature defrost board and logic
- 24-volt control circuit protected with resettable circuit breaker
- Permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings
- Loss of charge, freeze protection, and high-pressure switches

FACTORY OPTIONS INCLUDING BUT NOT LIMITED TO:

- 115-volt convenience outlet (Non-powered)
- Non-fused disconnect switch
- Economizer with db, enthalpy or CO2 control options
- Corrosion resistant coil options for evaporator and condenser
- Multiple indoor fan motors for expanded airflow capability(3ph)
- Accessory electric heat (field-installed option only)
- 2 speed indoor fan motor on 2 stage cooling models.
- Integrated economizer system. Standard and Ultra Low leak versions available.

WARRANTY

- 5 Year compressor limited warranty
- 1 Year parts limited warranty



RHS036-072



RHS090-102



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



UNIT PERFORMANCE DATA

BASE MODEL	Nominal Tons	COOLING			HEATING			Unit Dimensions H x W x L	Unit Weight lbs (kg)
		Net Cap. (Btuh)	SEER	EER	High Cap. (Btuh)	HSPF	COP		
RHS036*0XA0AAA	3	37,000	13.4	11.00	35,600	7.7	N/A	33-3/8" x 46-3/4" x 74-3/8"	505 (229)
RHS048*0XA0AAA	4	47,000	13.1	11.20	45,500	7.7	N/A	33-3/8" x 46-3/4" x 74-3/8"	510 (231)
RHS060*0XA0AAA	5	61,500	13.2	11.15	58,000	7.7	N/A	41-3/8" x 46-3/4" x 74-3/8"	590 (268)
RHS072*0AA0AAA	6	70,000	N/A	11.10	67,000	N/A	3.3	41-3/8" x 46-3/4" x 74-3/8"	630 (286)
RHS090*0AA0AAA	7 1/2	88,000	N/A	11.20	86,000	N/A	3.4	49-3/8" x 59-1/2" x 88-1/8"	885 (401)
RHS102*0AA0AAA	8 1/2	99,000	N/A	11.20	96,000	N/A	3.3	49-3/8" x 59-1/2" x 88-1/8"	910 (413)
RHS120*0AA0AAA	10	117,000	N/A	11.00	116,000	N/A	3.4	49-3/8" x 59-1/2" x 88-1/8"	1050 (476)
RHS150*0AA0AAA	12.5	142,000	N/A	10.60	142,000	N/A	3.2	57-3/8" x 63-3/8" x 115-7/8"	1370 (623)

* Indicates Unit voltage: K = 208/230-1-60, H = 208/230-3-60, L = 460-3-60, S = 575-3-60

MODEL NUMBER NOMENCLATURE

MODEL SERIES	R	H	S	0	9	0	H	0	A	A	0	A	A	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
R = Rooftop														
H = Heat Pump														
Type														
S = Standard ASHRAE 90.1-2010														
Efficiency														
036 = 3 Tons														
048 = 4 Tons														
060 = 5 Tons														
072 = 6 Tons														
090 = 7.5 Tons (Dual Compressor)														
102 = 8.5 Tons (Dual Compressor)														
120 = 10 Tons (Dual Compressor)														
150 = 12.5 Tons (Dual Compressor)														
Nominal Cooling Capacity														
K = 208/230-1-60														
H = 208/230-3-60														
L = 460-3-60														
S = 575-3-60														
Voltage														
0 = No Heat														
Heating Capacity														
X = Direct drive ECM (3-5 Ton)														
A = Standard Static Option - Belt Drive (6-12.5 Ton -1 speed IFM, 7.5-12.5 Ton -2 speed IFM)														
C = Medium Static Option (Belt Drive) (3-12.5 Ton -1 speed IFM, 7.5-12.5 Ton -2 speed IFM)														
B = High Static Option (Belt Drive) (3-10 Ton -1 speed IFM, 7.5-12.5 Ton -2 speed IFM)														
E = High Static Option High Efficiency Motor (12.5 Ton -1 speed IFM)														
Motor Option														
A = None														
B = Economizer w/Bara-relief, OA Temp sensor														
E = Economizer w/Bara-relief + CO2 Sensor, OA Temp sensor														
H = Economizer w/Bara-relief, enthalpy sensor														
L = Economizer w/Bara-relief + CO2 Sensor, enthalpy sensor														
U = Temp Ultra Low Leak Economixer w/Baro Relief														
W = Enthalpy Ultra Low Leak Economixer w/Baro Relief														
P = 2-Position damper w/Baro-relief														
Outdoor Air Options / Control														
0A = No Options														
4B = Non-Fused Disconnect														
AT = Non-powered 115v C.O.														
BR = Supply Air Smoke Detector														
AA = Easy Access Hinged Panels														
Factory Installed Options														
A = Aluminum / Cu Cond & Evap Coil														
B = Precoat Alum/Cu Cond & Alum / Cu Evap (3 phase only)														
C = E-Coated Alum/Cu Cond & Alum / Cu Evap (3 phase only)														
D = E-Coated Alum / Cu Cond & Evap (3 phase only)														
E = Cu / Cu Cond & Alum / Cu Evap (3 phase only)														
F = Cu/Cu Cond & Evap (3 phase only)														
Condenser / Evaporator Coil Configuration														
A = Standard Single Speed Indoor Fan Motor. For W7212 controls														
A = Standard Single Speed Indoor Fan Motor. For W7220 controls														
T = 2 Speed Indoor Fan VFD Controller (For 2-stage units only)														
Motor Type Option														

FACTORY OPTIONS AND/OR ACCESSORIES

Table 1 – FACTORY-INSTALLED OPTIONS AND FIELD-INSTALLED ACCESSORIES

CATEGORY	ITEM	FACTORY IN- STALLED OPTION	FIELD INSTALLED ACCESSORY
Cabinet	Thru-the-base electrical connections		X
	Disconnect Switch Bracket (Available 150 size only)		X
	Supply Duct Cover (Available 150 size only)		X
Coil Options	Cu/Cu indoor and/or outdoor coils ⁵	X	
	Pre-coated outdoor coils ⁵	X	
	Premium, E-coated outdoor coils ⁵	X	
Condenser Protection	Condenser coil hail guard (louvered design) ⁵	X	X
Controls	Thermostats, temperature sensors, and subbases		X
	Smoke detector (supply and/or return air)	X	
	Time Guard II compressor delay control circuit		X
	Phase Monitor		X
Economizers & Outdoor Air Dampers	EconoMi\$er IV (for electro-mechanical controlled – Non FDD, Standard air leak damper models) ^{5,6}	X	X
	EconoMi\$er 2 for DDC controls, complies with FDD (Standard and Ultra Low Leak air damper models) ^{5,7}	X	X
	Motorized 2 position outdoor air damper	X	X
	Manual outdoor air damper (25% and 50%)		X
	Barometric relief ¹	X	X
	Power exhaust		X
Economizer Sensors & IAQ Devices	EconoMi\$er for electro-mechanical controls, complies with FDD (Standard and Ultra Low Leak air damper controls) ^{5,6}	X	X
	Single dry bulb temperature sensors ²	X	X
	Differential dry bulb temperature sensors ²		X
	Single enthalpy sensors ²	X	X
	Differential enthalpy sensors ²		X
Electric Heat	CO ₂ sensor (wall, duct, or unit mounted) ²	X	X
	Electric Resistance Heaters		X
Indoor Motor & Drive	Single Point Kit		X
	Multiple motor and belt drive packages	X	
	Electric Drive, X13, 5-speed/torque (3-5 ton)	X	
	2-Speed Indoor Fan Motor system w/VFD controller (2-stage cool only with electrical mechanical controls)	X	
Low Ambient Control	Display Kit for 2-speed indoor fan motor system with VFD		X
	Motormaster head pressure controller ³		X
Power Options	Convenience outlet (unpowered)	X	
	Non-fused disconnect ⁴	X	
Roof Curbs	Roof curb 14-in. (356mm)		X
	Roof curb 24-in. (610mm)		X

NOTES:

1. Included with economizer.
2. Sensors for optimizing economizer.
3. See application data for assistance.
4. Available on size 04-12 units with MOCs of 80 amps or less and on size 150 units with MOCs of 100 amps or less.
5. Not available as a factory installed option on single phase (208/230/1/60) models. Use field-install accessory where available.
6. FDD – (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.

FACTORY OPTIONS AND/OR ACCESSORIES (cont.)

Economizer

Economizers save money. They bring in fresh, outside air for ventilation; and provide cool, outside air to cool your building. This is the preferred method of low ambient cooling. When coupled to CO₂ sensors, Economizers can provide even more savings by coupling the ventilation air to only that amount required.

Economizers are available, installed and tested by the factory, with either enthalpy or dry bulb temperature inputs. There are also models for electromechanical as well as direct digital controllers. Additional sensors are available as accessories to optimize the economizers.

Economizers include gravity controlled, barometric relief which equalizes building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization.

CO₂ Sensor

Improves productivity and saves money by working with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO₂ sensor detects their presence through increasing CO₂ levels, and opens the economizer appropriately.

When the occupants leave, the CO₂ levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called Demand Control Ventilation (DCV) reduces the overall load on the rooftop, saving money.

Smoke Detectors

Trust the experts. Smoke detectors make your application safer and your job easier. ICP smoke detectors immediately shut down the rooftop unit when smoke is detected. They are available, installed by the factory, for supply air, return air, or both.

Louvered Hail Guards

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact.

Convenience Outlet (un-powered)

Lower service bills by including a convenience outlet in your specification. ICP will install this service feature at our factory, powered. Provides a convenient, 15 amp, 115V GFCI receptacle.

Non-fused Disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop.

Power Exhaust Pressure Relief

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

Time Guard II Control Circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required with authorized commercial thermostats.

Filter or Fan Status Switches

Use these differential pressure switches to detect a filter clog or indoor fan motor failure. When used in conjunction with a compatible unit controller/thermostat, the switches will activate an alarm to warn the appropriate personnel.

Motorized 2-Position Damper

The new ICP 2-position, motorized outdoor air damper admits up to 100% outside air. Using reliable, gear-driven technology, the 2-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration. Not available with 2-Speed Indoor Fan Motor.

Manual OA Damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions. Not available with 2-Speed Indoor Fan Motor.

2-Speed Indoor Fan Motor Indoor Fan Speed System

ICP's 2-Speed Indoor Fan Motor system saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 2/3rd of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 2/3rd of total cfm.

Compared to single speed indoor fan motor systems, ICP's 2-speed indoor fan motor system can save substantial energy, 25%+*, versus single speed indoor fan motor systems.

The VFD used in ICP's 2-speed indoor fan motor system has soft start capabilities to slowly ramp up the speeds, thus eliminating any high inrush air volume during initial start-up. It also has internal over current protection for the fan motor and a field installed display kit that allows adjustment and in depth diagnostics of the VFD.

This 2-speed indoor fan motor system is available on models with 2-stage cooling operation with electrical mechanical controls. Both space sensor and conventional thermostats controls can be used to provide accurate control in any application.

FACTORY OPTIONS AND/OR ACCESSORIES (cont.)

The 2-speed indoor fan motor system is very flexible for initial fan performance set up and adjustment. The standard factory shipped VFD is pre-programmed to automatically stage the fan speed between the first and second stage of cooling. The unit fan performance static pressure and cfm can be easily adjusted using the traditional means of pulley adjustments. The other means to adjust the unit static and cfm performance is to utilize the field installed Display Kit and adjust the frequency and voltage in the VFD to required performance requirements. In either case, once set up, the VFD will automatically adjust the speed between the cooling stage operations.

*Data based on .10 (\$/kWh) in an office application utilizing ICP's HAP 4.6 simulation software program

Motormaster Head Pressure Controller

The Motormaster motor controller is a low ambient, head pressure controller kit that is designed to maintain the unit's condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling not when economizer usage is either not appropriate or desired. The Motormaster will either cycle the outdoor fan motors or operate them at reduced speed to maintain the unit operation, depending on the model.

Alternate Motors and Drives

Some applications need larger horsepower motors, some need more airflow, and some need both. Regardless of the case, your ICP expert has a factory installed combination to meet your application. A wide selection of motors and pulleys (drives) are available, factory installed, to handle nearly any application.

Thru-the-Base Connections

Thru-the-base connections, available as either an accessory or as a factory option, are necessary to ensure proper connection and seal when routing wire and piping through the rooftop's basepan and curb. These couplings eliminate roof penetration and should be considered for gas lines, main power lines, as well as control power.

Disconnect Switch Bracket

Provides a pre-engineered and sized mounting bracket for applications requiring a unit mounted fused disconnect of greater than 100 amps. Bracket assures that no damage will occur to coils when mounting with screws and other fasteners.

Supply Duct Cover

This supply duct cover is required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One is required per unit. (150 size only.)

Electric Heaters

ICP offers a full line of field-installed accessory heaters. The heaters are very easy to use and install. All are pre-engineered and certified.

Thru-the-Base Connections

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Table 2 – AHRI COOLING RATING TABLES

Cooling Mode							
RHS	COOLING STAGES	Nominal Capacity (tons)	Net Cooling Capacity (btuH)	Total Power (kw)	SEER	EER	leer
036	1	3	37,000	3.30	13.40*	11.00	N/A
048	1	4	47,000	4.10	13.10*	11.20	N/A
060	1	5	61,500	5.50	13.20*	11.15	N/A
072	1	6	70,000	6.30	N/A	11.10	12.20

Cooling Mode								
RHS	COOLING STAGES	Nominal Capacity (tons)	Net Cooling Capacity (btuH)	Total Power (kw)	SEER	EER	leer WITH SINGLE SPEED INDOOR MOTOR	leer WITH 2-SPEED INDOOR MOTOR
090	2	7.5	88,000	7.80	N/A	11.20	12.2	12.5
102	2	8.5	99,000	8.80	N/A	11.20	12.2	12.5
120	2	10	117,000	10.60	N/A	11.00	11.3	12.5
150	2	12.5	142,000	13.30	N/A	10.60	10.7	12.0

NOTES:

* Electric Drive (direct drive) X13 5 speed/torque motor. SEER rating is 13.0 for belt drive.

NANot applicable

Heating Mode					
RHS	HSPF	Heating, Low AT 17°F (-8°C) AMBIENT		Heating, High AT 47°F (8°C) AMBIENT	
		Capacity (btuh)	COP	Capacity (btuh)	COP
036	7.70	18,200	n/a	35,600	n/a
048	7.70	23,600	n/a	45,500	n/a
060	7.70	31,200	n/a	58,000	n/a
072	n/a	34,800	2.25	67,000	3.30
090	n/a	48,000	2.25	86,000	3.40
102	n/a	54,500	2.25	96,000	3.30
120	n/a	62,300	2.25	116,000	3.40
150	n/a	76,000	2.05	142,000	3.20

LEGEND

- AHRI – Air Conditioning, Heating and Refrigeration Institute
- ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
- COP – Coefficient of Performance
- EER – Energy Efficiency Ratio
- HSPF – Heating Seasonal Performance Factor
- IEER – Integrated Energy Efficiency Ratio
- SEER – Seasonal Energy Efficiency Ratio

NOTES:

1. Rated and certified under AHRI Standard 210/240 or 340/360, as appropriate.
2. Ratings are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F db outdoor air temp.
IEER Standard: A measure that expresses cooling part-load EER efficiency for commercial unitary air conditioning and heat pump equipment on the basis of weighted operation at variable load capacities.
3. All RHS units comply with ASHRAE 90.1 Energy Standard for minimum SEER and EER requirements.



Table 3 – MINIMUM – MAXIMUM AIRFLOWS ELECTRIC HEAT

Unit	Cooling		Electric Heaters	
	Minimum	Maximum	Minimum	Maximum
RHS*036	900	1500	900	1500
RHS*048	1200	2000	1200	2000
RHS*060	1500	2500	1500	2500
RHS*072	1800	3000	1800	3000
RHS*090	2250 (1508)	3750	2250*	3750
RHS*102	2550 (1869)	4250	2550*	4250
RHS*120	3000 (1960)	5000	3000	5000
RHS*150	3750 (2680)	6250	3750	6250

() With 2-Speed Indoor Fan Motor 2-speed indoor fan motor system only. Values are minimum for VFD controller at 40Hz.

* Minimum electric heat CFM exceptions :

Unit	Unit voltage	Heater kW	Unit Configuration	Required Minimum CFM
RHS*090	575	17.0	Horizontal or Vertical	2800
RHS*102		34.0		2350

Table 4 – SOUND PERFORMANCE TABLE

RHS	Outdoor Sound (dB)								
	A-Weighted	63	125	250	500	1000	2000	4000	8000
036	77	78.9	81.7	74.9	72.5	70.3	65.6	65.6	62.6
048	80	90.4	84.6	77.6	77.5	74.8	70.6	68.0	64.2
060	80	92.7	84.9	79.0	76.7	73.8	69.6	66.4	62.8
072	78	88.0	79.5	76.2	75.8	72.5	68.6	65.7	62.4
090	82	89.7	81.5	80.5	79.2	77.1	73.2	70.2	67.4
102	84	90.8	85.2	81.6	79.5	78.1	74.0	70.4	66.5
120	87	88.1	90.0	85.9	83.0	81.6	78.5	76.4	75.5
150	83	89.3	85.2	80.3	78.0	77.0	74.4	73.7	68.9

LEGEND

dB – Decibel

NOTES:

1. Outdoor sound data is measured in accordance with AHRI standard 270.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound

pressure accounts for specific environmental factors which do not match individual applications. Sound power values are independent of the environment and therefore more accurate.

3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of an "average" human ear. A-weighted measurements for ICP units are taken in accordance with 270.

Table 5 – PHYSICAL DATA

(COOLING)

3 – 6 TONS

	RHS036	RHS048	RHS060	RHS072	
Refrigeration System					
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll	
R-410A refrig. charge per circuit A/B (lbs-oz)	9 – 8 / –	10 – 3 / –	12 – 13 / –	17 – 10 / –	
Metering Device	Acutrol	Acutrol	Acutrol	Acutrol	
High pressure Trip / Reset (psig)	630 / 505	630 / 505	630 / 505	630 / 505	
Loss of Charge Pressure Trip / Reset (psig)	27 / 44	27 / 44	27 / 44	27 / 44	
Compressor Capacity Staging (%)	100%	100%	100%	100%	
Evap. Coil					
Material – Tube / Fin	Cu / Al	Cu / Al	Cu / Al	Cu / Al	
Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	
Rows / FPI	3 / 15	3 / 15	4/ 15	4/ 15	
Total Face Area (ft ²)	5.5	5.5	7.3	7.3	
Condensate Drain Conn. Size	3/4-in	3/4-in	3/4-in	3/4-in	
Evap. Fan and Motor					
Standard Static 1 phase	Motor Qty / Drive Type	1 / Direct	1 / Direct	1 / Direct	N/A
	Max BHP	1.0	1.0	1.0	N/A
	RPM Range	600–1200	600–1200	600–1200	N/A
	Motor Frame Size	48	48	48	N/A
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	N/A
	Fan Diameter x Length (in)	10 x 10	10 x 10	11 x 10	N/A
Standard Static 3 phase	Motor Qty / Drive Type	1 / Direct	1 / Direct	1 / Direct	1 / Belt
	Max BHP	1.0	1.0	1.0	1.5
	RPM Range	600–1200	600–1200	600–1200	878–1192
	Motor Frame Size	48	48	48	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter x Length (in)	10 x 10	10 x 10	11 x 10	10 x 10
Medium Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.5	1.5	2.0	2.9
	RPM Range	819–1251	920–1303	1066–1380	1066–1380
	Motor Frame Size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter x Length (in)	10 x 10	10 x 10	10 x 10	10 x 10
High Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.0	2.0	2.9	2.9
	RPM Range	1035–1466	1035–1466	1208–1639	1208–1639
	Motor Frame Size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter x Length (in)	10 x 10	10 x 10	10 x 10	10 x 10
Cond. Coil					
Material – Tube / Fin	Cu / Al	Cu / Al	Cu / Al	Cu / Al	
Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	
Rows / FPI	2 / 17	2 / 17	2 / 17	2 / 17	
Total Face Area (ft ²)	10.7	12.7	15	21.3	
Cond. fan / motor					
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct	1 / Direct	
Motor HP / RPM	1/8 / 825	1/4 / 1100	1/4 / 1100	1/4 / 1100	
Fan diameter (in)	22	22	22	22	
Filters					
RA Filter # / Size (in)	2 / 16 x 25 x 2	2 / 16 x 25 x 2	4 / 16 x 16 x 2	4 / 16 x 16 x 2	
OA inlet screen # / Size (in)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	

Table 6 – RHS036

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	040A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		104B00	10.5	7.9/9.6	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
208/ 230-3-60	STD DD	101A00	4.4	3.3/4.0	-	-
		102A00	6.5	4.9/6.0	-	-
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
	MED BD	101A00	4.4	3.3/4.0	-	-
		102A00	6.5	4.9/6.0	-	-
		103B00	8.7	6.5/8.0	-	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
	HIGH BD	101A00	4.4	3.3/4.0	-	-
		102A00	6.5	4.9/6.0	-	-
		103B00	8.7	6.5/8.0	-	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
	MED BD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
	HIGH BD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Electric Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 7 – RHS048

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	101A00	4.4	3.3/4.0	037A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
		103B00,103B00	17.4	13.1/16.0	041A00	041A00
		104B00,104B00	21.0	15.8/19.3	041A00	041A00
208/ 230-3-60	STD DD	102A00	6.5	4.9/6.0	-	-
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	-	-
		103B00	8.7	6.5/8.0	-	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	-	-
		103B00	8.7	6.5/8.0	-	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Electric Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 8 – RHS060

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	102A00	6.5	4.9/6.0	040A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
		103B00,103B00	17.4	13.1/16.0	041A00	041A00
		104B00,104B00	21.0	15.8/19.3	041A00	041A00
208/ 230-3-60	STD DD	102A00	6.5	4.9/6.0	-	-
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	-	-
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	-	-
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Electric Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 9 – RHS072

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-3-60	STD	102A00	6.5	4.9/6.0	-	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	MED	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	HIGH	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
460-3-60	STD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 10 – PHYSICAL DATA

(COOLING)

7.5 – 12.5 TONS

		RHS090	RHS102	RHS120	RHS150
Refrigeration System					
# Circuits / # Comp. / Type		2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
R-410A refrig. charge per circuit A/B (lbs-oz)		10 – 3 / 10 – 3	11 – 2 / 11 – 2	12 – 2 / 11 – 2	14 – 8 / 13 – 8
Metering Device		Acutrol	Acutrol	Acutrol	Acutrol
High pressure Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505
Loss of Charge Pressure Trip / Reset (psig)		27 / 44	27 / 44	27 / 44	27 / 44
Compressor Capacity Staging (%)		50% / 100%	50% / 100%	50% / 100%	50% / 100%
Evap. Coil					
Material – Tube / Fin		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
Rows / FPI		3 / 15	4 / 15	4 / 15	3 / 15
Total Face Area (ft ²)		11.1	11.1	11.1	17.5
Condensate Drain Conn. Size		3/4"	3/4"	3/4"	3/4"
Evap. Fan and Motor					
Standard Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.2	1.2	1.2	2.9
	RPM Range	460–652	460–652	460–652	507–676
	Motor Frame Size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter x Length (in)	15 x 15	15 x 15	15 x 15	18 x 18
Medium Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9	2.9	2.9	2.9
	RPM Range	591–838	591–838	591–838	634–833
	Motor Frame Size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter x Length (in)	15 x 15	15 x 15	15 x 15	18 x 18
High Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9	2.9	2.9	6.1
	RPM Range	838–1084	838–1084	838–1084	792–971
	Motor Frame Size	56	56	56	S184T
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter x Length (in)	15 x 15	15 x 15	15 x 15	18 x 18
Cond. Coil					
Material – Tube / Fin		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
Rows / FPI		2 / 17	2 / 17	3 / 17	2 / 17
Total Face Area (ft ²)		25.1	25.1	25.1	36.1
Cond. fan / motor					
Qty / Motor Drive Type		2 / Direct	2 / Direct	1 / Direct	3 / Direct
Motor HP / RPM		1/4 / 1100	1/4 / 1100	1 / 1175	1/4 / 1100
Fan diameter (in)		22	22	30	22
Filters					
RA Filter # / Size (in)		4 / 20 x 20 x 2	4 / 20 x 20 x 2	4 / 20 x 20 x 2	6 / 18 x 24 x 2
OA inlet screen # / Size (in)		1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	2 / 24 x 27 x 1 (Vertical) 1 / 30 x 39 x 1 (Horizontal)

Table 11 – RHS036

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	040A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		104B00	10.5	7.9/9.6	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
208/ 230-3-60	STD DD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
	MED BD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
	HIGH BD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
460-3-60	STD BD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
	MED BD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
	HIGH DD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 12 – RHS048

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	101A00	4.4	3.3/4.0	037A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
		103B00,103B00	17.4	13.1/16.0	041A00	041A00
		104B00,104B00	21.0	15.8/19.3	041A00	041A00
208/ 230-3-60	STD DD	102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	037A00	-
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 13 – RHS060

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwr fr/ unit)
208/ 230-1-60	STD DD	102A00	6.5	4.9/6.0	040A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
		103B00,103B00	17.4	13.1/16.0	041A00	041A00
		104B00,104B00	21.0	15.8/19.3	041A00	041A00
208/ 230-3-60	STD DD	102A00	6.5	4.9/6.0	038A00	038A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	038A00	038A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	038A00	038A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 14 – RHS072

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-3-60	STD BD	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
460-3-60	STD BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 15 – RHS036

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	040A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		104B00	10.5	7.9/9.6	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
208/ 230-3-60	STD DD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
	MED BD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
	HIGH BD	101A00	4.4	3.3/4.0	037A00	037A00
		102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
	MED BD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
	HIGH BD	106A00	6.0	5.5	-	-
		107A00	8.8	8.1	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 16 – RHS048

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-1-60	STD DD	101A00	4.4	3.3/4.0	037A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
		103B00,103B00	17.4	13.1/16.0	041A00	041A00
		104B00,104B00	21.0	15.8/19.3	041A00	041A00
208/ 230-3-60	STD DD	102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	037A00	037A00
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	037A00	-
		103B00	8.7	6.5/8.0	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 17 – RHS060

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwr fr/ unit)
208/ 230-1-60	STD DD	102A00	6.5	4.9/6.0	040A00	040A00
		103B00	8.7	6.5/8.0	040A00	040A00
		102A00,102A00	13.0	9.8/11.9	041A00	041A00
		103B00,103B00	17.4	13.1/16.0	041A00	041A00
		104B00,104B00	21.0	15.8/19.3	041A00	041A00
208/ 230-3-60	STD DD	102A00	6.5	4.9/6.0	038A00	038A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	038A00	038A00
		104B00	10.5	7.9/9.6	037A00	037A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	038A00	038A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
460-3-60	STD DD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 18 – RHS072

**ELECTRIC HEAT – ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN
AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230-3-60	STD BD	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	MED BD	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
	HIGH BD	102A00	6.5	4.9/6.0	037A00	037A00
		104B00	10.5	7.9/9.6	038A00	038A00
		105A00	16.0	12.0/14.7	038A00	038A00
		104B00,104B00	21.0	15.8/19.3	039A00	039A00
		104B00,105A00	26.5	19.9/24.3	039A00	039A00
460-3-60	STD BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH BD	106A00	6.0	5.5	-	-
		108A00	11.5	10.6	-	-
		109A00	14.0	12.9	-	-
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 19 – RHS090

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwr fr/unit)
208/ 230-3-60	STD BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	MED BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	HIGH BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
111A00		24.8	18.6/22.8	051A00	051A00	
112A00		32.0	24.0/29.4	051A00	051A00	
112A00,117A00		42.4	31.8/38.9	053A00	053A00	
460-3-60	STD BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	MED BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	050A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	HIGH BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
114A00		27.8	25.5	050A00	050A00	
115A00		33.0	30.3	050A00	050A00	
114A00,116A00		41.7	38.3	052A00	052A00	
575-3-60	STD BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	MED BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	HIGH BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 20 – RHS090

**ELECTRIC HEAT – ELECTRICAL DATA
2–STAGE COOLING WITH AND WITHOUT 2–SPEED
INDOOR FAN AND FACTORY INSTALLED NON–FUSED DISCONNECT SWITCH**

NOM. V–Ph–Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 230–3–60	STD BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	MED BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	HIGH BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
111A00		24.8	18.6/22.8	051A00	051A00	
112A00		32.0	24.0/29.4	051A00	051A00	
112A00,117A00		42.4	31.8/38.9	053A00	053A00	
460–3–60	STD BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	MED BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	050A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	HIGH BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
114A00		27.8	25.5	050A00	050A00	
115A00		33.0	30.3	050A00	050A00	
114A00,116A00		41.7	38.3	052A00	052A00	
575–3–60	STD BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	MED BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	HIGH BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00

LEGEND

- No Single Point Kit required
- APP PWR – 208 / 230V / 460V / 575V
- BD – Belt drive motor
- C.O. – Convenience outlet
- DD – Drive X13 5 speed/torque motor
- FLA – Full load amps
- IFM – Indoor fan motor
- NOM PWR – 240V / 480V / 600V
- P.E. – Power exhaust
- UNPWRD – Unpowered convenience outlet

Table 21 – RHS102

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/unit)
208/ 230-3-60	STD BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	MED BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	HIGH BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
111A00		24.8	18.6/22.8	051A00	051A00	
112A00		32.0	24.0/29.4	051A00	051A00	
112A00,117A00		42.4	31.8/38.9	053A00	053A00	
460-3-60	STD BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	050A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	MED BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	050A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	HIGH BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
114A00		27.8	25.5	050A00	050A00	
115A00		33.0	30.3	050A00	050A00	
114A00,116A00		41.7	38.3	052A00	052A00	
575-3-60	STD BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	MED BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	HIGH BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 22 – RHS102

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING WITH AND WITHOUT 2-SPEED
INDOOR FAN AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/ unit)
208/ 203-3-60	STD BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	MED BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	051A00	051A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
	HIGH BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
111A00		24.8	18.6/22.8	051A00	051A00	
112A00		32.0	24.0/29.4	051A00	051A00	
112A00,117A00		42.4	31.8/38.9	053A00	053A00	
460-3-60	STD BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	050A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	MED BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	050A00	050A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
	HIGH BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
114A00		27.8	25.5	050A00	050A00	
115A00		33.0	30.3	050A00	050A00	
114A00,116A00		41.7	38.3	052A00	052A00	
575-3-60	STD BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	MED BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
	HIGH BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 23 – RHS120

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/unit)
208/ 230-3-60	STD BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
		112A00,110A00	50.0	37.6/45.9	053A00	053A00
	MED BD	117A00	10.4	7.8/9.6	049A00	051A00
		110A00	16.0	12.0/14.7	049A00	051A00
		112A00	32.0	24.0/29.4	051A00	053A00
		112A00,117A00	42.4	31.8/38.9	053A00	054A00
		112A00,110A00	50.0	37.6/45.9	053A00	054A00
	HIGH BD	117A00	10.4	7.8/9.6	049A00	051A00
		110A00	16.0	12.0/14.7	049A00	051A00
112A00		32.0	24.0/29.4	051A00	053A00	
112A00,117A00		42.4	31.8/38.9	053A00	054A00	
112A00,110A00		50.0	37.6/45.9	053A00	054A00	
460-3-60	STD BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
		115A00,113A00	50.0	45.9	052A00	052A00
	MED BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
		115A00,113A00	50.0	45.9	052A00	052A00
	HIGH BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
115A00		33.0	30.3	050A00	050A00	
114A00,116A00		41.7	38.3	052A00	052A00	
115A00,113A00		50.0	45.9	052A00	052A00	
575-3-60	STD BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
		118A00,119A00	51.0	51.0	052A00	052A00
	MED BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
		118A00,119A00	51.0	51.0	052A00	052A00
	HIGH BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
		118A00,119A00	51.0	51.0	052A00	052A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 24 – RHS120

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING WITH AND WITHOUT 2-SPEED
INDOOR FAN AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/unit)
208/ 230-3-60	STD BD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	051A00	051A00
		112A00,117A00	42.4	31.8/38.9	053A00	053A00
		112A00,110A00	50.0	37.6/45.9	053A00	053A00
	MED BD	117A00	10.4	7.8/9.6	049A00	051A00
		110A00	16.0	12.0/14.7	049A00	051A00
		112A00	32.0	24.0/29.4	051A00	053A00
		112A00,117A00	42.4	31.8/38.9	053A00	054A00
		112A00,110A00	50.0	37.6/45.9	053A00	054A00
	HIGH BD	117A00	10.4	7.8/9.6	049A00	051A00
		110A00	16.0	12.0/14.7	049A00	051A00
112A00		32.0	24.0/29.4	051A00	053A00	
112A00,117A00		42.4	31.8/38.9	053A00	054A00	
112A00,110A00		50.0	37.6/45.9	053A00	054A00	
460-3-60	STD BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
		115A00,113A00	50.0	45.9	052A00	052A00
	MED BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	050A00	050A00
		114A00,116A00	41.7	38.3	052A00	052A00
		115A00,113A00	50.0	45.9	052A00	052A00
	HIGH BD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
115A00		33.0	30.3	050A00	050A00	
114A00,116A00		41.7	38.3	052A00	052A00	
115A00,113A00		50.0	45.9	052A00	052A00	
575-3-60	STD BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
		118A00,119A00	51.0	51.0	052A00	052A00
	MED BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
		118A00,119A00	51.0	51.0	052A00	052A00
	HIGH BD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	050A00	050A00
		118A00,119A00	51.0	51.0	052A00	052A00

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- BD - Belt drive motor
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 25 – RHS150

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwr fr/unit)
208/ 230-3-60	STD BD	291A00	16.5	12.4/15.2	051A00	051A00
		288A00,291A00	26.5	19.9/24.3	053A00	053A00
		294A00	33.5	25.2/30.8	053A00	053A00
		288A00,294A00	43.5	32.7/40.0	054A00	054A00
		291A00,294A00	50.0	37.6/45.9	054A00	054A00
	MED BD	291A00	16.5	12.4/15.2	051A00	051A00
		288A00,291A00	26.5	19.9/24.3	053A00	053A00
		294A00	33.5	25.2/30.8	053A00	053A00
		288A00,294A00	43.5	32.7/40.0	054A00	054A00
		291A00,294A00	50.0	37.6/45.9	054A00	054A00
	HIGH BD	291A00	16.5	12.4/15.2	051A00	051A00
		288A00,291A00	26.5	19.9/24.3	053A00	053A00
294A00		33.5	25.2/30.8	053A00	053A00	
288A00,294A00		43.5	32.7/40.0	054A00	054A00	
291A00,294A00		50.0	37.6/45.9	054A00	054A00	
460-3-60	STD BD	292A00	16.5	15.2	047A00	047A00
		289A00,292A00	26.5	24.3	050A00	050A00
		295A00	33.5	30.8	050A00	050A00
		289A00,295A00	43.5	40.0	052A00	052A00
		292A00,295A00	50.0	45.9	052A00	052A00
	MED BD	292A00	16.5	15.2	047A00	047A00
		289A00,292A00	26.5	24.3	050A00	050A00
		295A00	33.5	30.8	050A00	050A00
		289A00,295A00	43.5	40.0	052A00	052A00
		292A00,295A00	50.0	45.9	052A00	052A00
	HIGH BD	292A00	16.5	15.2	050A00	050A00
		289A00,292A00	26.5	24.3	050A00	050A00
295A00		33.5	30.8	050A00	050A00	
289A00,295A00		43.5	40.0	052A00	052A00	
292A00,295A00		50.0	45.9	052A00	052A00	
575-3-60	STD BD	293A00	16.5	15.2	047A00	047A00
		290A00,293A00	26.5	24.3	047A00	047A00
		296A00	33.5	30.8	050A00	050A00
		290A00,296A00	43.5	40.0	052A00	052A00
		293A00,296A00	50.0	45.9	052A00	052A00
	MED BD	293A00	16.5	15.2	047A00	047A00
		290A00,293A00	26.5	24.3	047A00	047A00
		296A00	33.5	30.8	050A00	050A00
		290A00,296A00	43.5	40.0	052A00	052A00
		293A00,296A00	50.0	45.9	052A00	052A00
	HIGH BD	293A00	16.5	15.2	047A00	047A00
		290A00,293A00	26.5	24.3	050A00	050A00
296A00		33.5	30.8	050A00	050A00	
290A00,296A00		43.5	40.0	052A00	052A00	
293A00,296A00		50.0	45.9	052A00	052A00	

LEGEND

- No Single Point Kit required
- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenience outlet
- DD - Drive X13 5 speed/torque motor
- FLA - Full load amps
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- UNPWRD - Unpowered convenience outlet

Table 26 – RHS150

**ELECTRIC HEAT – ELECTRICAL DATA
2-STAGE COOLING WITH AND WITHOUT 2-SPEED
INDOOR FAN AND FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH**

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE *****	
					WITHOUT C.O. or UNPWRD C.O.	
					WITHOUT P.E.	w/ P.E. (pwrd fr/unit)
208/ 230-3-60	STD BD	291A00	16.5	12.4/15.2	051A00	051A00
		288A00,291A00	26.5	19.9/24.3	053A00	053A00
		294A00	33.5	25.2/30.8	053A00	053A00
		288A00,294A00	43.5	32.7/40.0	054A00	054A00
		291A00,294A00	50.0	37.6/45.9	054A00	054A00
	MED BD	291A00	16.5	12.4/15.2	051A00	051A00
		288A00,291A00	26.5	19.9/24.3	053A00	053A00
		294A00	33.5	25.2/30.8	053A00	053A00
		288A00,294A00	43.5	32.7/40.0	054A00	054A00
		291A00,294A00	50.0	37.6/45.9	054A00	054A00
	HIGH BD	291A00	16.5	12.4/15.2	051A00	051A00
		288A00,291A00	26.5	19.9/24.3	053A00	053A00
294A00		33.5	25.2/30.8	053A00	053A00	
288A00,294A00		43.5	32.7/40.0	054A00	054A00	
291A00,294A00		50.0	37.6/45.9	054A00	054A00	
460-3-60	STD BD	292A00	16.5	15.2	047A00	047A00
		289A00,292A00	26.5	24.3	050A00	050A00
		295A00	33.5	30.8	050A00	050A00
		289A00,295A00	43.5	40.0	052A00	052A00
		292A00,295A00	50.0	45.9	052A00	052A00
	MED BD	292A00	16.5	15.2	047A00	047A00
		289A00,292A00	26.5	24.3	050A00	050A00
		295A00	33.5	30.8	050A00	050A00
		289A00,295A00	43.5	40.0	052A00	052A00
		292A00,295A00	50.0	45.9	052A00	052A00
	HIGH BD	292A00	16.5	15.2	050A00	050A00
		289A00,292A00	26.5	24.3	050A00	050A00
295A00		33.5	30.8	050A00	050A00	
289A00,295A00		43.5	40.0	052A00	052A00	
292A00,295A00		50.0	45.9	052A00	052A00	
575-3-60	STD BD	293A00	16.5	15.2	047A00	047A00
		290A00,293A00	26.5	24.3	047A00	050A00
		296A00	33.5	30.8	050A00	050A00
		290A00,296A00	43.5	40.0	052A00	052A00
		293A00,296A00	50.0	45.9	052A00	052A00
	MED BD	293A00	16.5	15.2	047A00	047A00
		290A00,293A00	26.5	24.3	047A00	050A00
		296A00	33.5	30.8	050A00	050A00
		290A00,296A00	43.5	40.0	052A00	052A00
		293A00,296A00	50.0	45.9	052A00	052A00
	HIGH BD	293A00	16.5	15.2	047A00	047A00
		290A00,293A00	26.5	24.3	050A00	050A00
296A00		33.5	30.8	050A00	050A00	
290A00,296A00		43.5	40.0	052A00	052A00	
293A00,296A00		50.0	45.9	052A00	052A00	

LEGEND

- APP PWR –208 / 230V / 460V / 575V
- C.O. –Convenience outlet
- DD –Drive X13 5 speed/torque motor
- FLA –Full load amps
- IFM –Indoor fan motor
- NOM PWR –240V / 480V / 600V
- P.E. –Power exhaust
- UNPWRD –Unpowered convenience outlet

WEIGHTS & DIMENSIONS

CONNECTION SIZES	
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2" [51] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [44] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
G	2 1/2" [64] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRETINP0001A01		
W	THREADED CONDUIT SIZE	REQ'D HOLE SIZES (MAX.)
X	1/2"	7/8" [22.2]
Y	3/4"	1 1/8" [28.4]

FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED.

* SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE

- NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. CENTER OF GRAVITY
 3. DIRECTION OF AIR FLOW

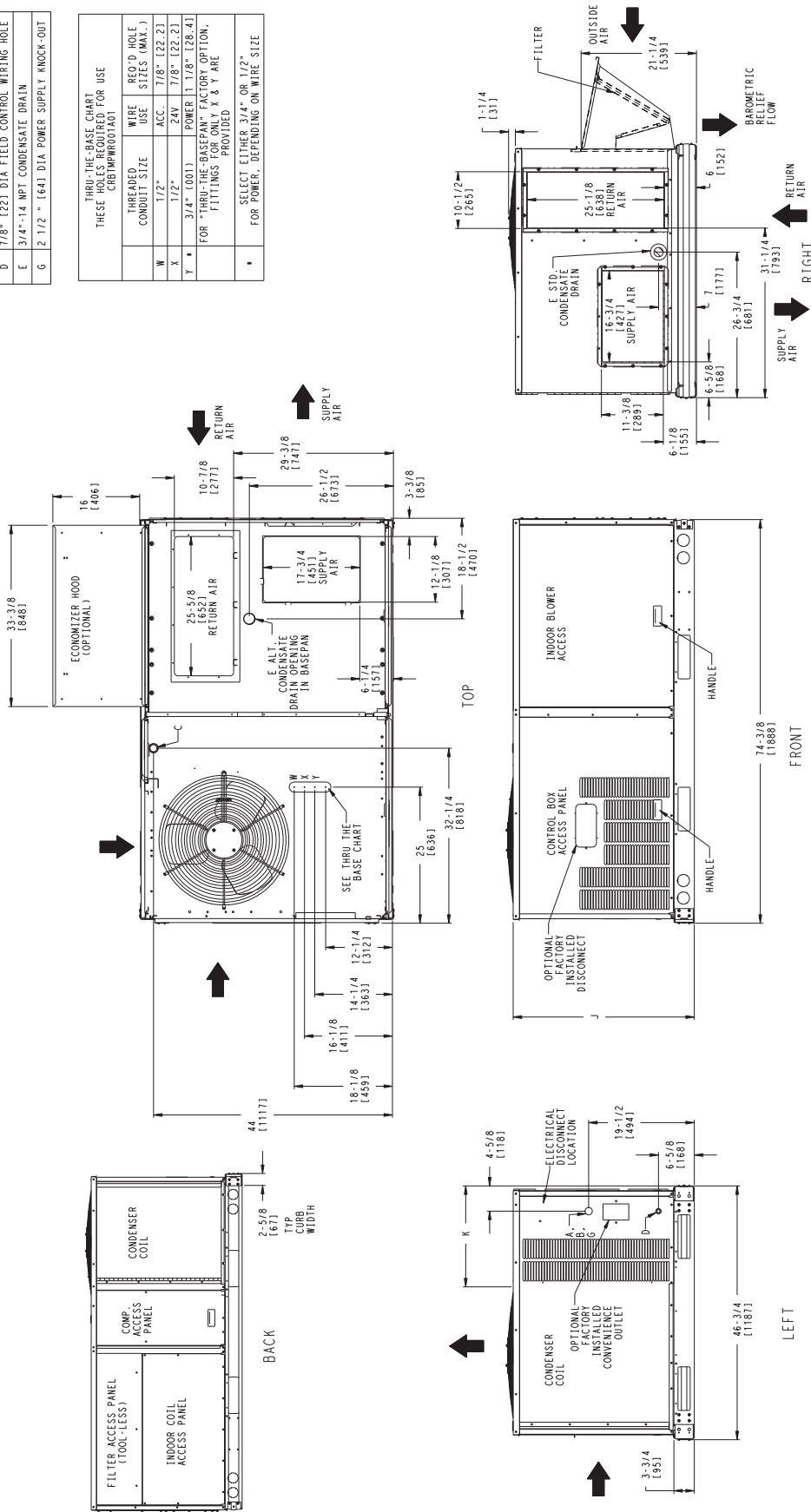


Fig. 1 – Dimensions RHS 036–072

C150189

WEIGHTS & DIMENSIONS (cont.)

UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C. G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RHS036	505	229	136	62	130	59	117	53	123	56	36 1/4 [921]	22 1/8 [562]	16 3/8 [416]
RHS048	510	231	138	63	131	59	118	54	124	56	36 1/4 [921]	22 1/8 [562]	16 1/2 [419]
RHS060	590	268	159	72	146	66	137	62	149	68	35 5/8 [905]	22 5/8 [575]	20 1/8 [511]
RHS072	630	286	166	75	166	75	149	68	149	68	37 1/4 [946]	22 1/8 [562]	20 3/4 [527]

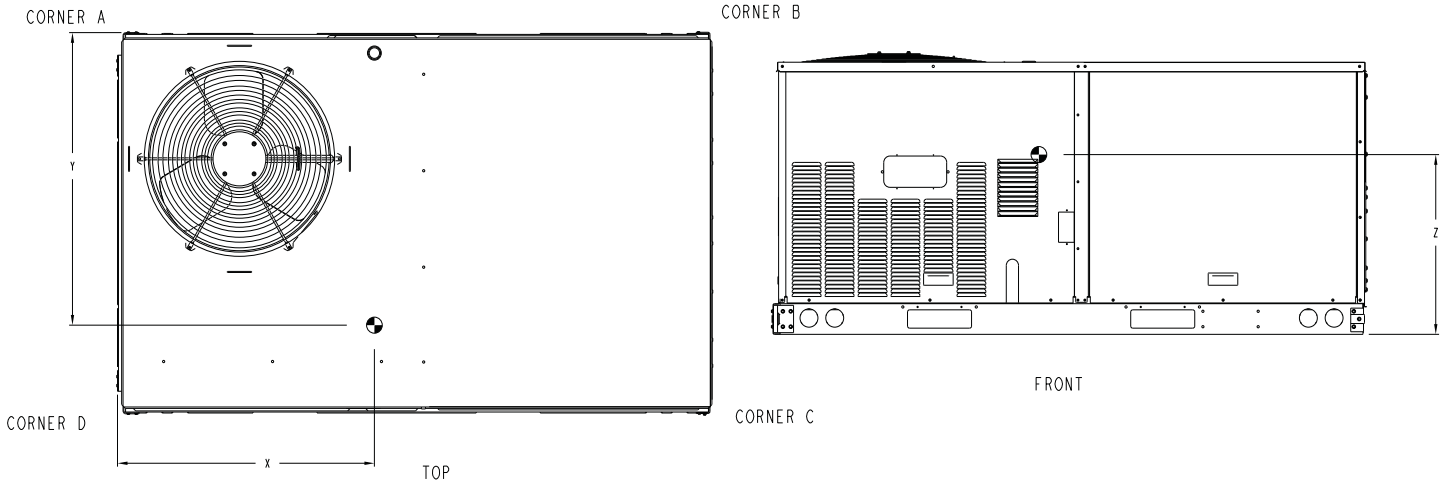


Fig. 2 - Dimensions RHS 036-072

C150188

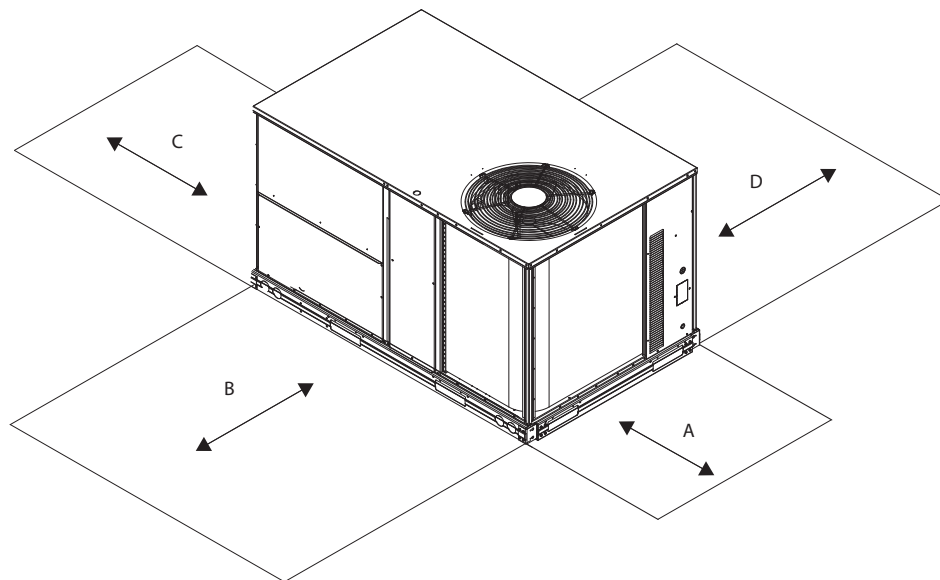


Fig. 3 - Service Clearance

C08337

LOC	DIMENSION	CONDITION
A	48-in. (1219 mm)	Unit disconnect is mounted on panel
	18-in. (457 mm)	No disconnect, convenience outlet option
	18-in. (457 mm)	Recommended service clearance
	12-in. (305 mm)	Minimum clearance
B	42-in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in. (914 mm) Special	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass) Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in. (914 mm)	Side condensate drain is used
	18-in. (457 mm)	Minimum clearance
D	42-in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in. (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

WEIGHTS & DIMENSIONS (cont.)

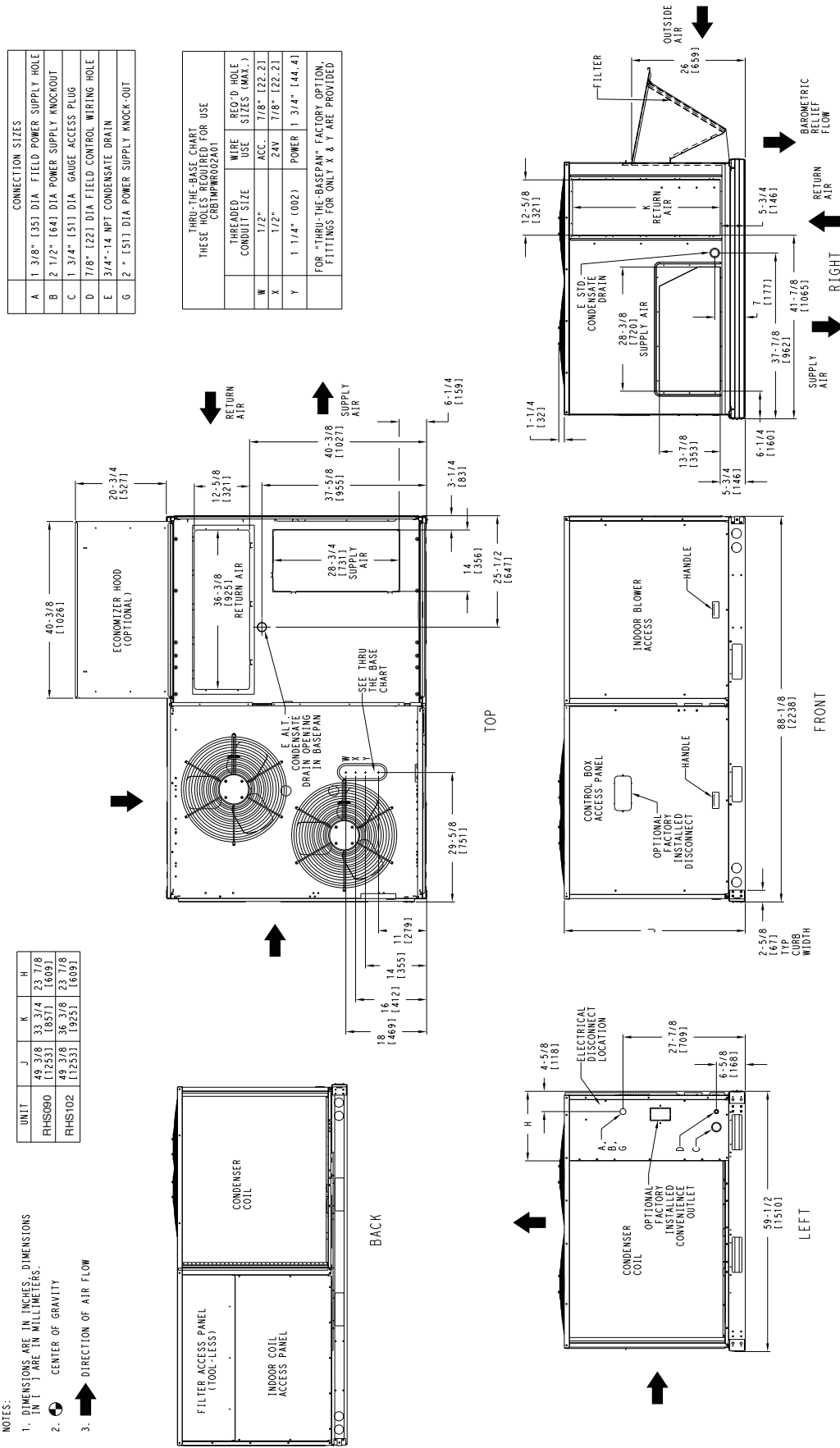


Fig. 5 - Dimensions RHS 090-102

C150187

WEIGHTS & DIMENSIONS (cont.)

UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RHS090	885	401	187	85	158	72	247	112	293	133	39 15/16 [1014]	35 1/4 [895]	23 1/2 [597]
RHS102	910	413	200	91	166	75	247	112	297	135	39 5/8 [1006]	34 1/2 [876]	23 1/2 [597]

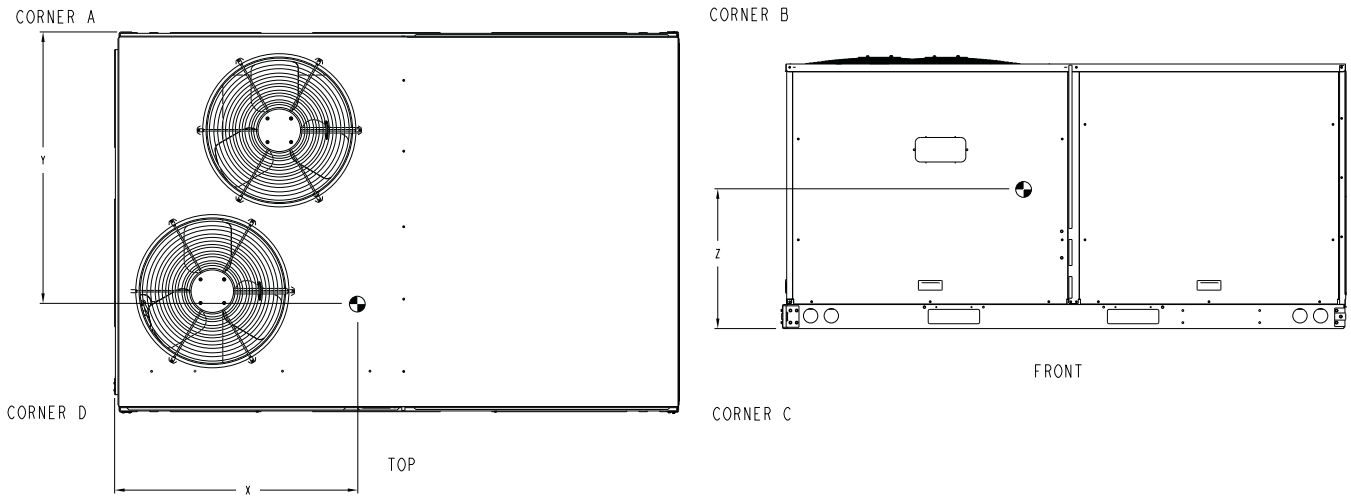


Fig. 6 - Dimensions RHS 090-102

C150186

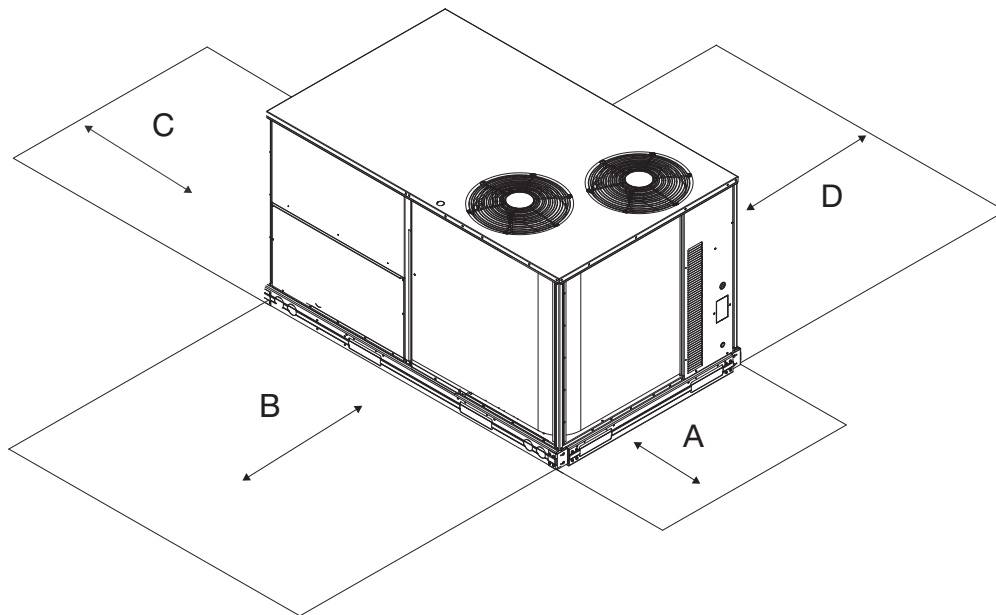


Fig. 7 - Service Clearance

C11247

LOC	DIMENSION	CONDITION
A	48-in. (1219 mm)	Unit disconnect is mounted on panel
	18-in. (457 mm)	No disconnect, convenience outlet option
	18-in. (457 mm)	Recommended service clearance
	12-in. (305 mm)	Minimum clearance
B	42-in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in. (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in. (914 mm)	Side condensate drain is used
	18-in. (457 mm)	Minimum clearance
D	42-in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in. (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

WEIGHTS & DIMENSIONS (cont.)

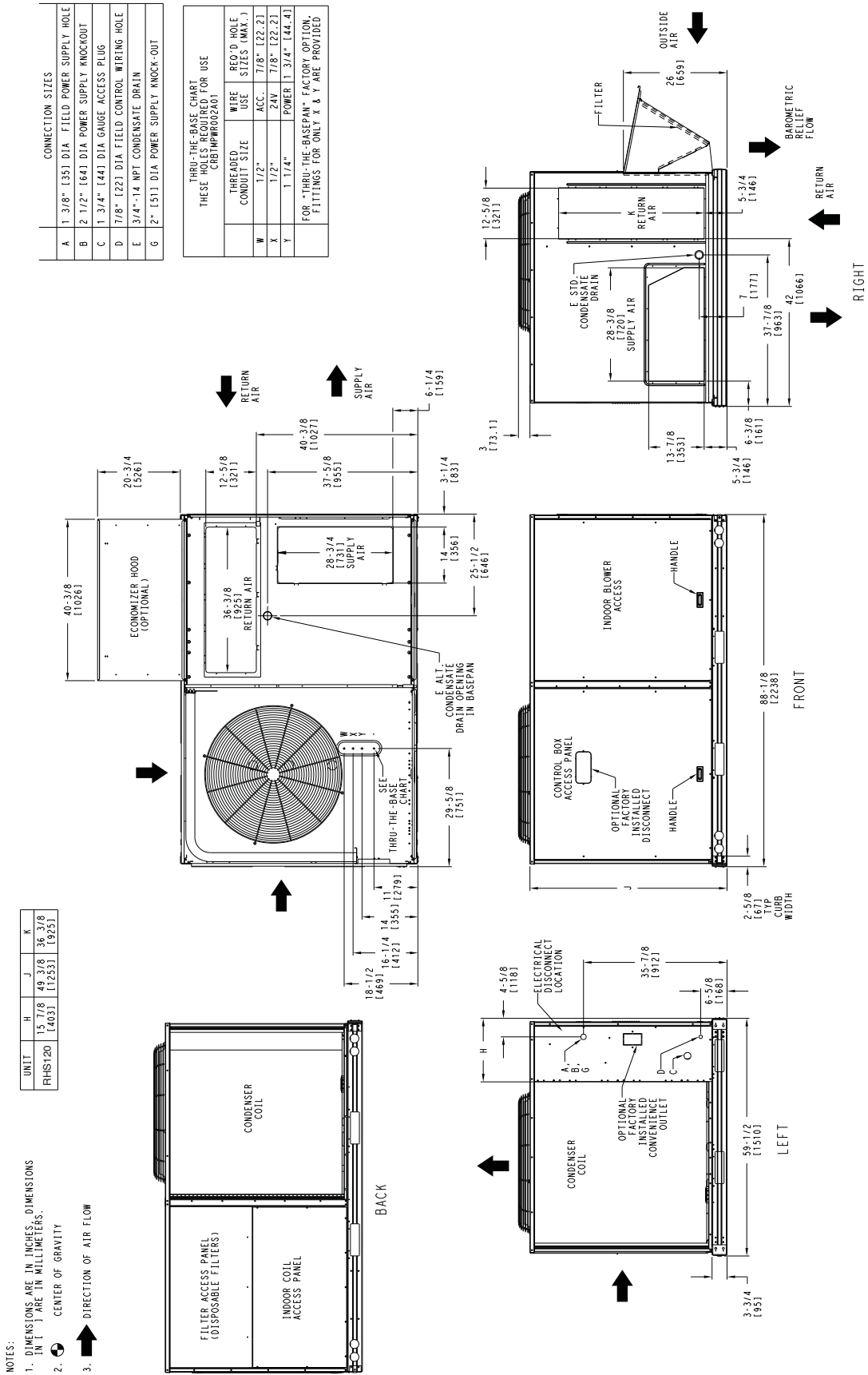


Fig 8 - Dimensions RHS 120

C150190

WEIGHTS & DIMENSIONS (cont.)

UNIT	STD. UNIT WEIGHT*		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RHS120	1050	476	284	129	201	91	234	106	331	150	36 1/2 (927)	32 (813)	23 1/2 (597)

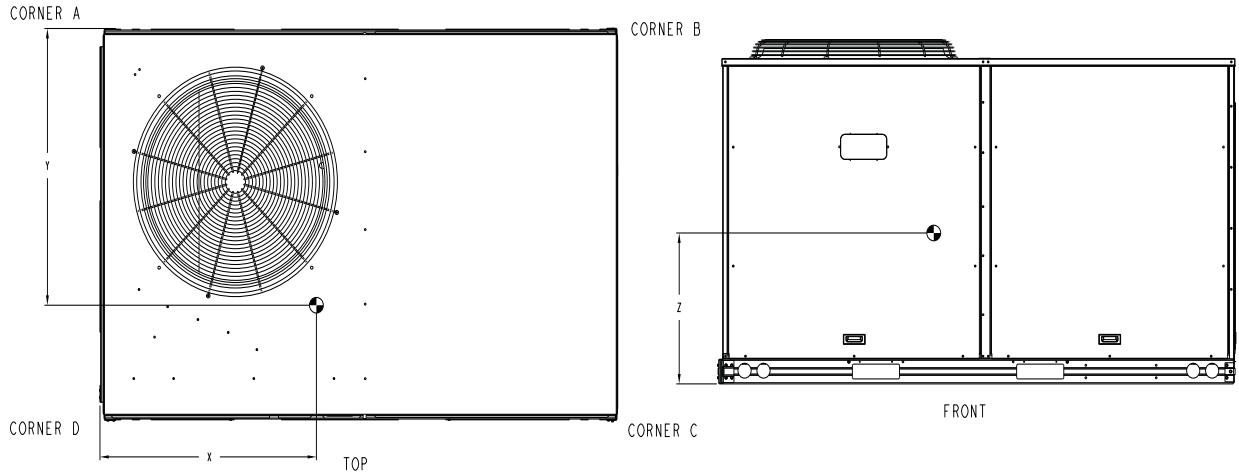


Fig. 9 – Dimensions RHS 120

C150185

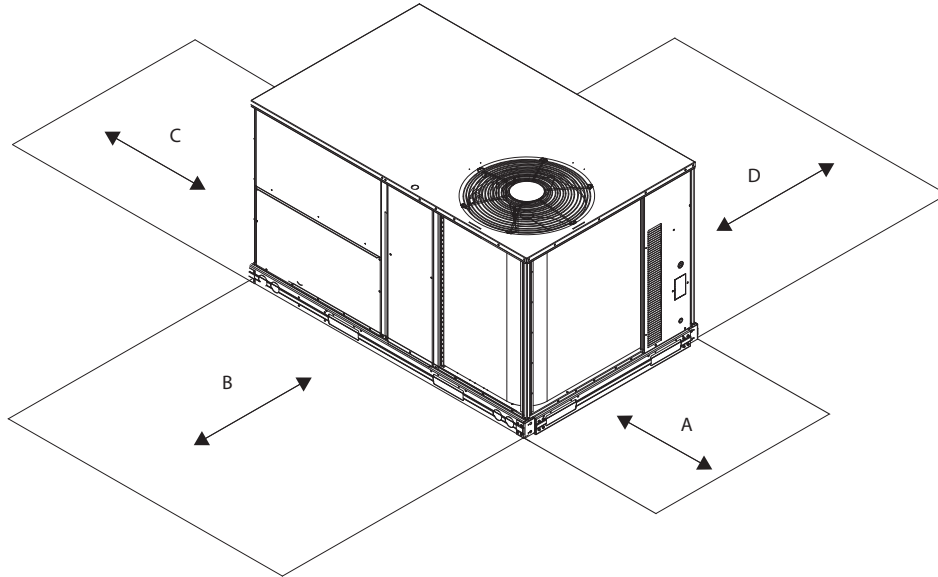


Fig. 10 – Service Clearance

C08337

LOC	DIMENSION	CONDITION
A	48-in. (1219 mm)	Unit disconnect is mounted on panel
	18-in. (457 mm)	No disconnect, convenience outlet option
	18-in. (457 mm)	Recommended service clearance
	12-in. (305 mm)	Minimum clearance
B	42-in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in. (914 mm) Special	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass) Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in. (914 mm)	Side condensate drain is used
	18-in. (457 mm)	Minimum clearance
D	42-in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in. (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

WEIGHTS & DIMENSIONS (cont.)

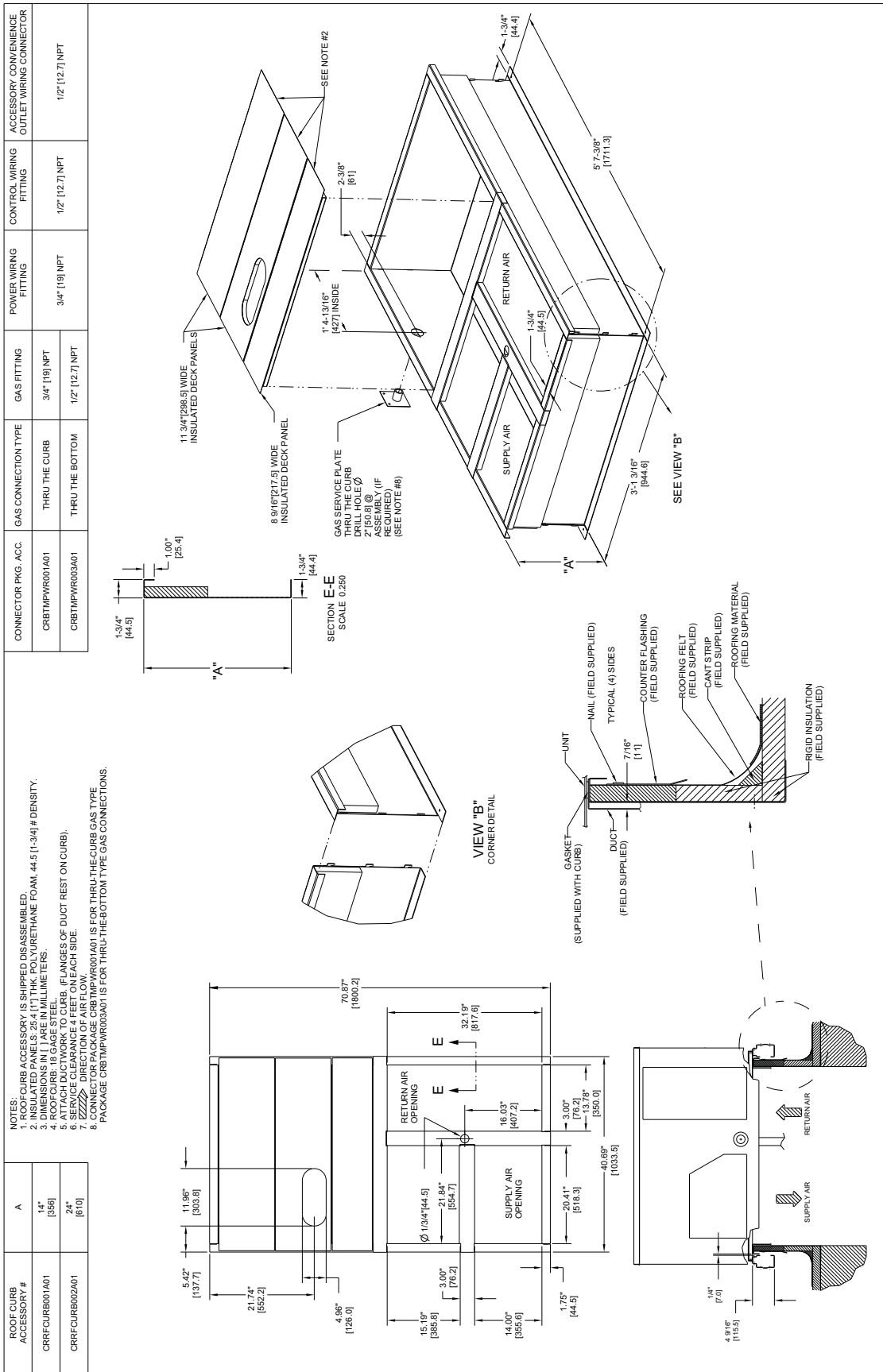


Fig. 11 – Curb Dimensions RHS 090-120

C13311

WEIGHTS & DIMENSIONS (cont.)

- NOTES:
1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. CENTER OF GRAVITY
 3. DIRECTION OF AIR FLOW

CONNECTION SIZES		
B	2 1/2" - 1641	DIA POWER SUPPLY HOLE
D	7/8" - 1221	DIA FIELD CONTROL WIRING HOLE
E	3/4" - 14	NPT CONDENSATE DRAIN
F	7/8" - 1221	DIA FIELD CONVENIENCE OUTLET HOLE

THRU-THE-BASE CHART THESE HOLES REQUIRE FOR USE CBBTMR000.5A00.006A00.007A00			
ACCESSORY NO.	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
005	1/2"	24V ACC.	7/8" [22.2]
	1/2"	24V POWER	1 1/2" [38.1]
	1/2"	24V ACC.	7/8" [22.2]
006	1/2"	24V POWER	2" [50.8]
	1/2"	24V ACC.	7/8" [22.2]
	1/2"	24V POWER	2 1/2" [63.5]
007	1/2"	24V ACC.	7/8" [22.2]
	1/2"	24V POWER	2 1/2" [63.5]
	1/2"	24V ACC.	7/8" [22.2]

FOR "THRU-THE-BASE" FACTORY OPTION, FITTINGS FOR X, Y, ARE PROVIDED AS SPECIFIED ON "006".

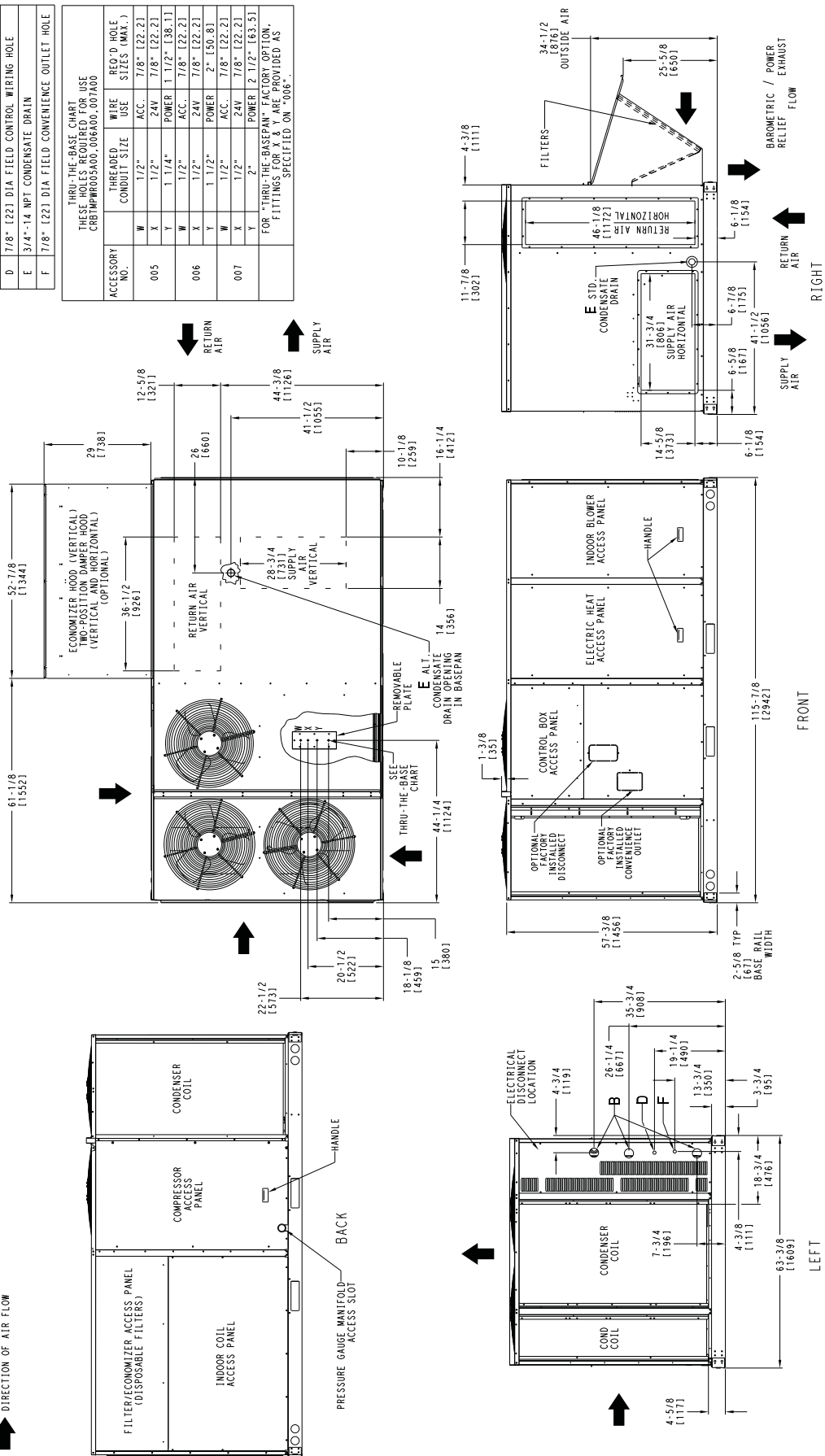
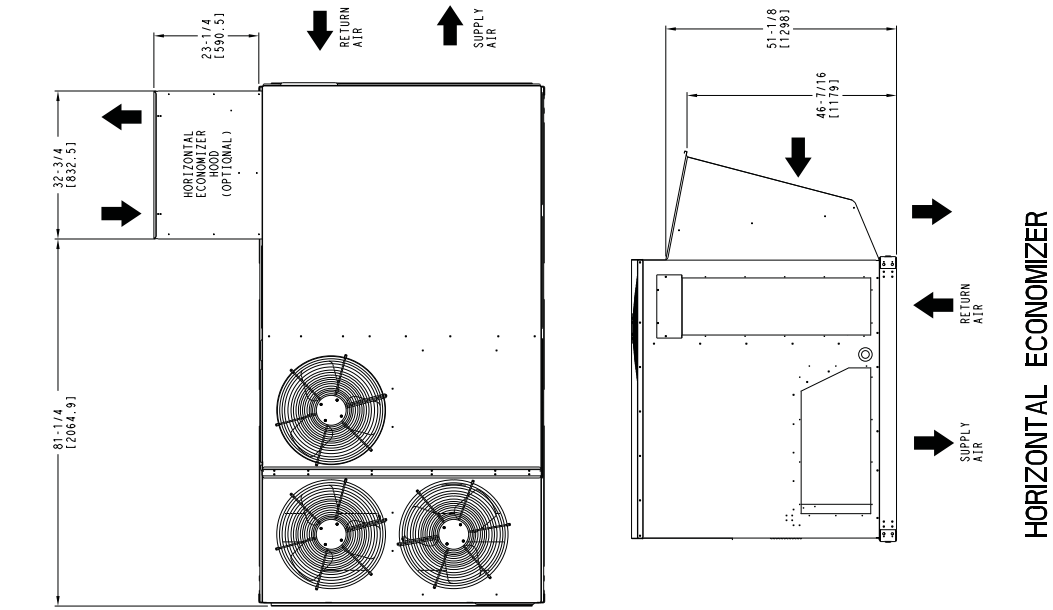


Fig. 12 – Dimensions RHS 150

Specifications subject to change without notice.

WEIGHTS & DIMENSIONS (cont.)



UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.					
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z			
RHS150	1370	623	369	168	361	164	316	144	324	147	57 1/2	11460	29 1/2	1750	24	1610

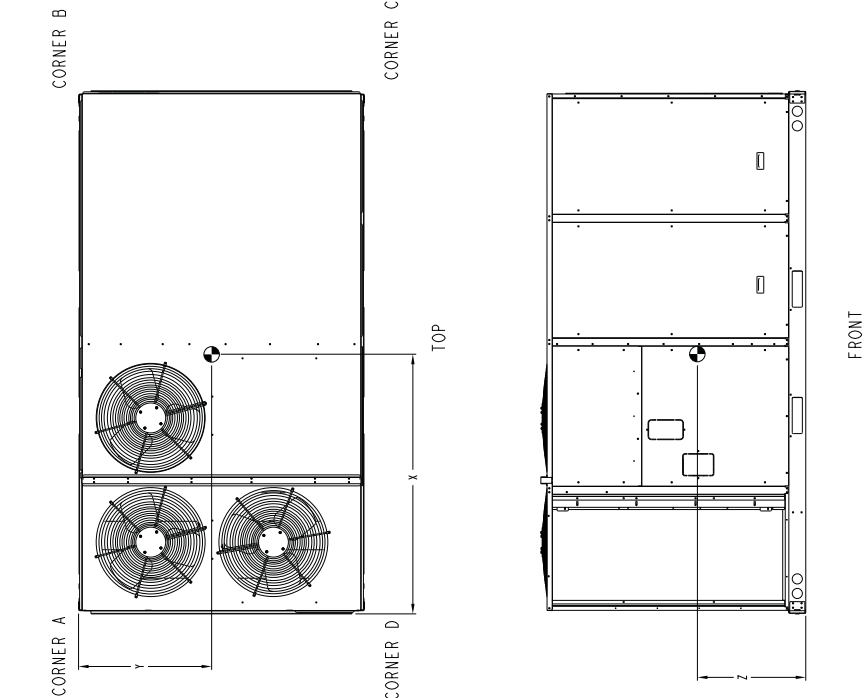


Fig. 13 – Dimensions RHS 150

C150183

WEIGHTS & DIMENSIONS (cont.)

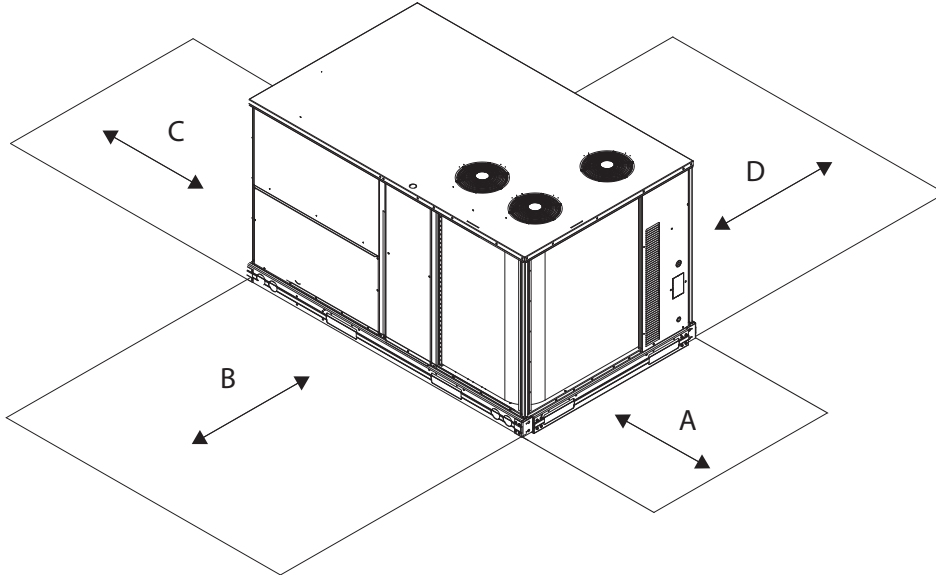


Fig. 14 – Service Clearance

C10578B

LOC	DIMENSION	CONDITION
A	48-in. (1219 mm) 18-in. (457 mm) 18-in. (457 mm) 12-in. (305 mm)	Unit disconnect is mounted on panel No disconnect, convenience outlet option Recommended service clearance Minimum clearance
B	42-in. (1067 mm) 36-in. (914 mm) Special	Surface behind servicer is grounded (e.g., metal, masonry wall) Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass) Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in. (914 mm) 18-in. (457 mm)	Side condensate drain is used Minimum clearance
D	42-in. (1067 mm) 36-in. (914 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit) Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

WEIGHTS & DIMENSIONS (cont.)

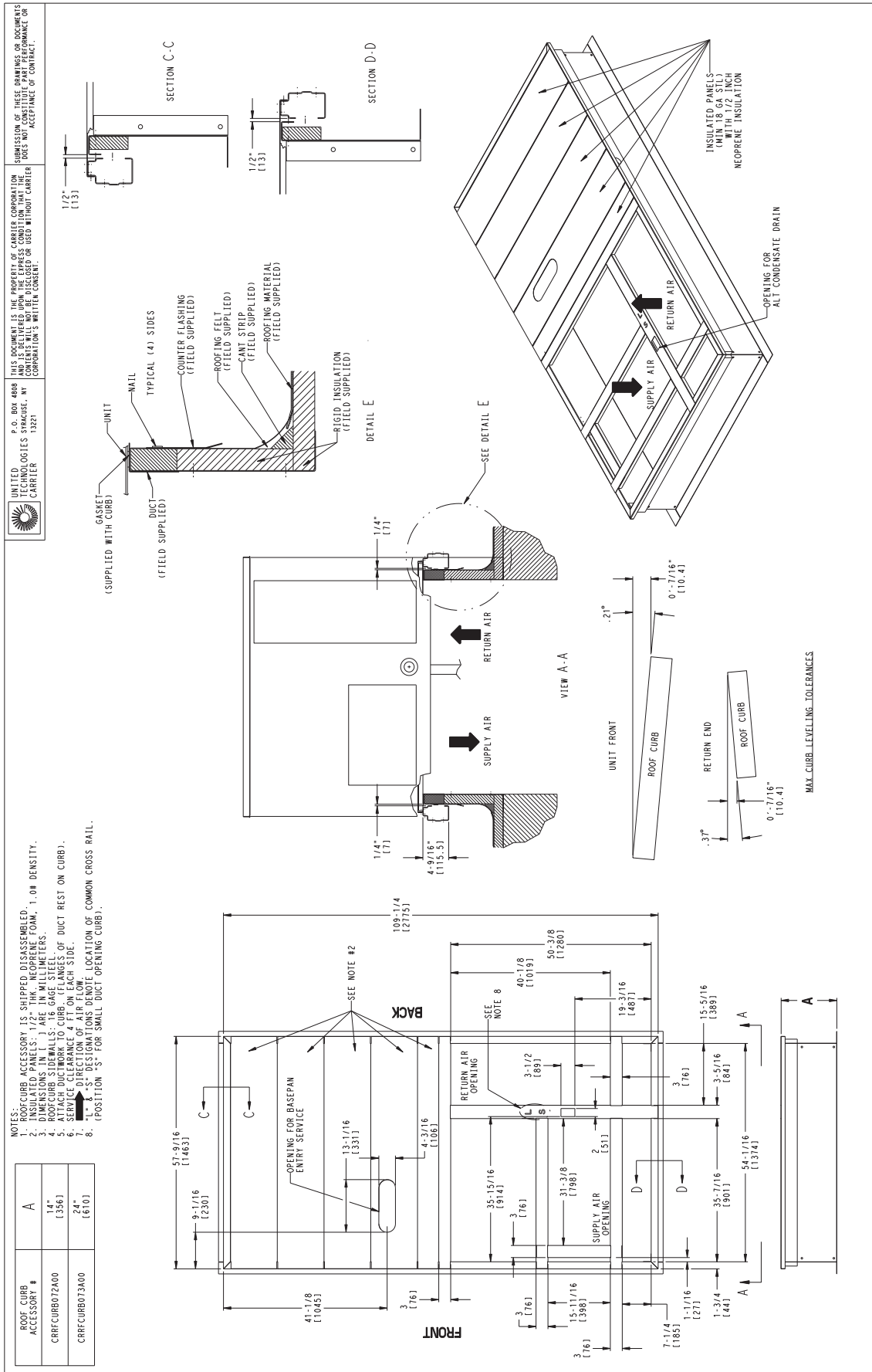


Fig. 15 - Curb Dimensions RHS 150

C10365

OPTION / ACCESSORY WEIGHTS

Option / Accessory	OPTION / ACCESSORY WEIGHTS															
	04		05		06		07		08		09		12		14	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Power Exhaust – vertical	50	23	50	23	50	23	50	23	75	34	75	34	75	34	85	39
Power Exhaust – horizontal	30	14	30	14	30	14	30	14	30	14	30	14	30	14	75	34
EconoMi\$er (IV, X or 2)	50	23	50	23	50	23	50	23	75	34	75	34	75	34	115	52
Two Position damper	39	18	39	18	39	18	39	18	58	26	58	26	58	26	65	29
Manual Dampers	12	5	12	5	12	5	12	5	18	8	18	8	18	8	25	11
Hail Guard (louvered)	16	7	16	7	16	7	16	7	34	15	34	15	34	15	45	20
Cu/Cu Condenser Coil	35	16	35	16	35	16	95	43	95	43	95	43	170	77	190	86
Cu/Cu Cond. & Evaporator Coils	60	27	60	27	90	41	165	75	140	64	195	88	270	122	280	127
Roof Curb (14-in. curb)	115	52	115	52	115	52	115	52	143	65	143	65	143	65	180	82
Roof Curb (24-in. curb)	197	89	197	89	197	89	197	89	245	111	245	111	245	111	255	116
CO ₂ sensor	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Electric Heater	30	14	30	14	30	14	30	14	45	20	45	20	45	20	25	11
Single Point Kit	10	5	10	5	10	5	10	5	12	5	12	5	12	5	25	11
Optional Indoor Motor / Drive	10	5	10	5	10	5	10	5	15	7	15	7	15	7	45	20
Motormaster Controller	35	16	35	16	35	16	35	16	35	16	35	16	35	16	35	16
Return Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Supply Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Non-Fused Disconnect	15	7	15	7	15	7	15	7	15	7	15	7	15	7	15	7
Non-Powered Convenience outlet	5	2	5	2	5	2	5	2	5	2	5	2	5	2	4	2
Enthalpy Sensor	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
Differential Enthalpy Sensor	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1
2-speed indoor fan motor System with VFD	-	-	-	-	-	-	-	-	20	9	20	9	20	9	20	9

NOTE: Where multiple variations are available, the heaviest combination is listed.
 - Not Available

APPLICATION DATA

Min operating ambient temp (cooling):

In mechanical cooling mode, your ICP rooftop can safely operate down to an outdoor ambient temperature of 25°F (-4°C). It is possible to provide cooling at lower outdoor ambient temperatures by using less outside air, economizers, and/or accessory low ambient kits.

Max operating ambient temp (cooling):

The maximum operating ambient temperature for cooling mode is 115°F (46°C). While cooling operation above 115°F (46°C) may be possible, it could cause either a reduction in performance, reliability, or a protective action by the unit's internal safety devices.

Min and max airflow (cooling mode):

To maintain safe and reliable operation of your rooftop, operate within the cooling airflow limits. Operating above the max may cause blow-off, undesired airflow noise, or airflow related problems with the rooftop unit. Operating below the min may cause problems with coil freeze-up.

Airflow:

All units are draw-through in cooling mode.

Outdoor air application strategies:

Economizers reduce operating expenses and compressor run time by providing a free source of cooling and a means of ventilation to match application changing needs. In fact, they should be considered for most applications. Also, consider the various economizer control methods and their benefits, as well as sensors required to accomplish your application goals. Please contact your local ICP representative for assistance.

Motor limits, Brake horsepower (BHP):

Due to ICP's internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in this manual, can be used with the utmost confidence. There is no need for extra safety factors, as ICP's motors are designed and rigorously tested to use the entire, listed BHP range without either nuisance tripping or premature motor failure.

Sizing a rooftop

Bigger isn't necessarily better. While an air conditioner needs to have enough capacity to meet the load, it doesn't need excess capacity. In fact, having excess capacity typically results in very poor part load performance and humidity control.

APPLICATION DATA (CONT.)

Using higher design temperatures than ASHRAE recommends for your location, adding “safety factors” to the calculated load, and rounding up to the next largest unit, are all signs of oversizing air conditioners. Oversizing can cause short-cycling, and short cycling leads to poor humidity control, reduced efficiency, higher utility bills, drastic indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, wise contractors and engineers “right-size” or even slightly undersize air conditioners. Correctly sizing an air conditioner controls humidity better; promotes efficiency; reduces utility bills; extends equipment life, and maintains even, comfortable temperatures.

Low ambient applications

When equipped with a ICP economizer, your rooftop unit can cool your space by bringing in fresh, cool outside air. In fact, when so equipped, accessory low ambient kit may not be necessary. In low ambient conditions, unless the outdoor air is excessively humid or contaminated, economizer-based “free cooling” is the preferred less costly and energy conscious method.

In low ambient applications where outside air might not be desired (such as contaminated or excessively humid outdoor environments), your ICP rooftop can operate at ambient temperatures down to -20°F (-29°C) using the recommended accessory Motormaster low ambient controller.

RHS – 2-Speed Indoor Fan Motor – Variable Frequency Drive (VFD) HP Rating

Unit Size	VOLTAGE	STATIC OPTION	VFD HP RATING
090	208/230, 460, 575	STD	3
	208/230, 460	MED	3
	575	MED	5
	208/230, 460	HIGH	3
	575	HIGH	5
102	208/230, 460, 575	STD	3
	208/230, 460	MED	3
	575	MED	5
	208/230, 460	HIGH	3
	575	HIGH	5
120	208/230, 460, 575	STD	3
	208/230, 460, 575	MED	5
	208/230, 460, 575	HIGH	7.5
150	208/230, 460	STD	3
	575	STD	5
	208/230, 460	MED	3
	575	MED	5
	208/230, 460, 575	HIGH	7.5

SELECTION PROCEDURE (WITH RHS072 EXAMPLE)

(Selection software by ICP saves time by performing many of the steps below.)

I. Determine cooling and heating loads.

Given:

Mixed Air Drybulb	80°F (27°C)
Mixed Air Wetbulb	67°F (19°C)
Ambient Drybulb	95°F (35°C)
TC _{Load}	65.0 MBH
SHC _{Load}	46.0 MBH
HC _{Load}	45.0 MBH
Outdoor-Air Winter Design Temp	0°F (-18°C)
Indoor Air Winter Design Temp	70°F (21°C)
Vertical Supply Air	2100 CFM
External Static Pressure	0.66 in.wg
Electrical Characteristics	230-3-60

II. Make an initial guess at cooling tons.

Refrig. tons = TC_{Load} / 12 MBH per ton

Refrig. tons = 65.0 / 12 = 5.42 tons

In this case, start by looking at the RHS072.

III. Look up the rooftop's TC and SHC.

Table 22 shows that, at the application's supply air CFM, mixed air and ambient temperatures, the RHS072 supplies:

TC_{Load} = 69.0 MBH

SHC_{Load} = 50.7 MBH.

IV. Calculate RTU Latent Heat Capacity

LC_{Load} = TC_{Load} - SHC_{Load}

LC_{Load} = 65.0 MBH - 46.0 MBH = 19.0 MBH

V. Select electric heat.

Enter the Instantaneous and Integrated Heating Ratings, Table 30 at 2100 cfm. At 70°F (21°C return indoor air and 0°F (-18°C) air entering outdoor coil, the integrated heating capacity after interpolation, is 24,300 BTUH. (Select integrated heating capacity value since deductions for outdoor-coil frost and defrosting have already been made. No correction is required.)

The required heating capacity is 45,000 Btuh. Therefore, 20,700 Btuh (45,000 - 24,300) additional electric heat is required. Determine additional electric heat capacity in kW.

$$\frac{20,700 \text{ Btuh}}{3413 \text{ Btuh/kW}} = 6.1 \text{ kW of heat required.}$$

Enter the Electric Heating Capacities table for RHS072 at 208/230, 3-phase. The 6.5-kW heater at 230V most closely satisfies the heating required.

$$6.5 \text{ kW} \times 3413 = 22,185 \text{ Btuh}$$

Total unit heating capacity is 46,485 Btuh (22,185 + 24,300).

VI. Calculate RTU Latent Heat Capacity

LC = TC - SHC

LC = 69.0 MBH - 50.7 MBH = 18.3 MBH

VII. Compare RTU capacities to loads.

Compare the rooftop's SHC and LC to the building's Sensible and Latent Heat Loads.

See Notes 1 and 2.

VIII. Select factory options (FIOP)

Local code requires an economizer for any unit with TC larger than 65.0 MBH.

IX. Calculate the total static pressure.

External static pressure 0.66 in. wg

Sum of FIOP/Accessory static +0.14 in. wg

Total Static Pressure 0.80 in. wg

X. Look up the Indoor Fan RPM & BHP.

Table 56 shows, at 2100 CFM & ESP = 0.8, RPM = 1268 & BHP = 1.52

XI. Determine electrical requirements

ELECTRICAL INFORMATION shows the MCA and MOCP of a RHS072 (without convenience outlet) with 6.5 kW electric heater as:

MCA = 52.3 amps & MOCP = 60 amps

Min. Disconnect Size: FLA = 50 & LRA = 199.

NOTES:

1. Selecting a unit with a SHC slightly lower than the SHC_{Load} is often better than oversizing. Slightly lower SHC's will help control indoor humidity, and prevent temperature swings.

2. If the rooftop's capacity meets the Sensible Heat Load, but not the Latent Heat Load.

LEGEND:	
BHP – Brake horsepower	MCA – Minimum circuit ampacity
FLA – Full load amps	MOCP – Maximum over-current protection
HC – Heating Capacities	RPM – Revolutions per minute
LC – Latent capacity	RTU – Rooftop unit
LRA – Lock rotor amp	SHC – Sensible heat capacity
MBH – (1,000) BTUH	THC – Total capacity

Table 27 – COOLING CAPACITIES

1-STAGE COOLING

3 TONS

RHS036				Ambient Temperature											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
900 Cfm	EAT (wb)	58	THC	31.4	31.4	35.7	29.6	29.6	33.6	27.6	27.6	31.5	25.6	25.6	29.1
			SHC	27.1	31.4	35.7	25.5	29.6	33.6	23.8	27.6	31.5	22.0	25.6	29.1
		62	THC	33.5	33.5	34.4	30.9	30.9	33.2	28.3	28.3	31.9	25.7	25.7	30.4
			SHC	24.8	29.6	34.4	23.6	28.4	33.2	22.3	27.1	31.9	20.9	25.7	30.4
		67	THC	38.0	38.0	38.0	35.3	35.3	35.3	32.4	32.4	32.4	29.4	29.4	29.4
			SHC	21.0	25.8	30.7	19.8	24.6	29.5	18.6	23.4	28.2	17.3	22.2	27.0
		72	THC	42.1	42.1	42.1	39.7	39.7	39.7	37.1	37.1	37.1	34.0	34.0	34.0
			SHC	16.7	21.6	26.4	15.8	20.6	25.5	14.7	19.6	24.4	13.6	18.4	23.2
		76	THC	-	44.9	44.9	-	43.0	43.0	-	40.5	40.5	-	37.5	37.5
			SHC	-	17.8	22.7	-	17.1	22.0	-	16.2	21.1	-	15.2	20.1
1050 Cfm	EAT (wb)	58	THC	33.7	33.7	38.3	31.7	31.7	36.0	29.6	29.6	33.6	27.4	27.4	31.2
			SHC	29.1	33.7	38.3	27.3	31.7	36.0	25.5	29.6	33.6	23.6	27.4	31.2
		62	THC	35.0	35.0	38.1	32.3	32.3	36.7	29.7	29.7	35.1	27.4	27.4	32.5
			SHC	26.9	32.5	38.1	25.6	31.2	36.7	24.2	29.7	35.1	22.4	27.4	32.5
		67	THC	39.4	39.4	39.4	36.7	36.7	36.7	33.7	33.7	33.7	30.5	30.5	30.5
			SHC	22.4	28	33.6	21.2	26.8	32.4	20.0	25.6	31.2	18.7	24.3	29.9
		72	THC	43.3	43.3	43.3	41.0	41.0	41.0	38.3	38.3	38.3	35.2	35.2	35.2
			SHC	17.2	22.8	28.4	16.4	22.0	27.7	15.3	21.0	26.6	14.2	19.8	25.4
		76	THC	-	45.8	45.8	-	44.0	44.0	-	41.6	41.6	-	38.6	38.6
			SHC	-	18.4	24.2	-	17.8	23.5	-	16.9	22.7	-	15.9	21.6
1200 Cfm	EAT (wb)	58	THC	35.7	35.7	40.5	33.5	33.5	38.1	31.3	31.3	35.6	28.9	28.9	32.9
			SHC	30.8	35.7	40.5	28.9	33.5	38.1	27.0	31.3	35.6	24.9	28.9	32.9
		62	THC	36.3	36.3	41.5	33.6	33.6	39.7	31.3	31.3	37.1	29.0	29.0	34.3
			SHC	28.9	35.2	41.5	27.4	33.6	39.7	25.6	31.3	37.1	23.6	29.0	34.3
		67	THC	40.4	40.4	40.4	37.8	37.8	37.8	34.7	34.7	34.7	31.4	31.4	32.6
			SHC	23.6	30.0	36.4	22.5	28.9	35.3	21.3	27.6	34.0	19.9	26.3	32.6
		72	THC	44.1	44.1	44.1	42.0	42.0	42.0	39.2	39.2	39.2	36.0	36.0	36.0
			SHC	17.7	23.9	30.2	16.9	23.3	29.6	15.9	22.3	28.6	14.7	21.1	27.5
		76	THC	-	46.6	46.6	-	44.4	44.4	-	42.3	42.3	-	39.4	39.4
			SHC	-	19.0	25.5	-	18.3	24.7	-	17.6	24.0	-	16.6	23.1
1350 Cfm	EAT (wb)	58	THC	37.5	37.5	42.6	35.1	35.1	40.0	32.8	32.8	37.3	30.3	30.3	34.5
			SHC	32.4	37.5	42.6	30.3	35.1	40.0	28.3	32.8	37.3	26.1	30.3	34.5
		62	THC	37.6	37.6	44.4	35.2	35.2	41.6	32.8	32.8	38.8	30.3	30.3	35.9
			SHC	30.7	37.6	44.4	28.8	35.2	41.6	26.8	32.8	38.8	24.8	30.3	35.9
		67	THC	41.2	41.2	41.2	38.6	38.6	38.6	35.6	35.6	36.7	32.2	32.2	35.3
			SHC	24.8	31.9	39	23.7	30.8	38.0	22.5	29.6	36.7	21.1	28.2	35.3
		72	THC	44.7	44.7	44.7	42.7	42.7	42.7	39.9	39.9	39.9	36.7	36.7	36.7
			SHC	18.0	24.9	31.8	17.3	24.4	31.5	16.3	23.5	30.6	15.2	22.3	29.5
		76	THC	-	47.2	47.2	-	44.9	44.9	-	42.9	42.9	-	39.9	39.9
			SHC	-	19.5	26.6	-	18.7	25.7	-	18.1	25.2	-	17.2	24.4
1500 Cfm	EAT (wb)	58	THC	38.8	38.8	44.1	36.6	36.6	41.6	34.1	34.1	38.8	31.5	31.5	35.8
			SHC	33.5	38.8	44.1	31.6	36.6	41.6	29.4	34.1	38.8	27.2	31.5	35.8
		62	THC	38.8	38.8	45.9	36.6	36.6	43.3	34.1	34.1	40.4	31.6	31.6	37.3
			SHC	31.7	38.8	45.9	29.9	36.6	43.3	27.9	34.1	40.4	25.8	31.6	37.3
		67	THC	41.8	41.8	41.8	39.2	39.2	40.6	36.3	36.3	39.3	32.8	32.8	37.9
			SHC	25.8	33.6	41.4	24.9	32.7	40.6	23.7	31.5	39.3	22.3	30.1	37.9
		72	THC	45.2	45.2	45.2	43.2	43.2	43.2	40.5	40.5	40.5	37.2	37.2	37.2
			SHC	18.4	25.8	33.3	17.7	25.4	33.2	16.8	24.6	32.5	15.6	23.5	31.4
		76	THC	-	47.6	47.6	-	45.2	45.2	-	43.2	43.2	-	40.3	40.3
			SHC	-	19.9	27.5	-	19.1	26.7	-	18.6	26.3	-	17.7	25.6

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 28 – COOLING CAPACITIES

1-STAGE COOLING

4 TONS

RHS048				Ambient Temperature											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1200 Cfm	EAT (wb)	58	THC	41.7	41.7	46.9	39.9	39.9	45.1	37.8	37.8	43.1	35.6	35.6	41.0
			SHC	36.5	41.7	46.9	34.7	39.9	45.1	32.5	37.8	43.1	30.3	35.6	41.0
		62	THC	44.1	44.1	44.1	42.0	42.0	43.1	39.4	39.4	41.9	36.7	36.7	40.6
			SHC	33.7	38.9	44.1	32.6	37.8	43.1	31.3	36.6	41.9	29.8	35.2	40.6
		67	THC	48.8	48.8	48.8	46.4	46.4	46.4	43.7	43.7	43.7	40.9	40.9	40.9
			SHC	28.2	33.4	38.6	27.1	32.4	37.6	25.9	31.3	36.6	24.6	30.0	35.4
		72	THC	53.2	53.2	53.2	50.7	50.7	50.7	48.1	48.1	48.1	45.2	45.2	45.2
			SHC	22.3	27.5	32.7	21.3	26.5	31.8	20.2	25.5	30.8	18.9	24.4	29.8
		76	THC	-	56.2	56.2	-	53.8	53.8	-	51.1	51.1	-	48.0	48.0
			SHC	-	22.5	27.7	-	21.7	27.0	-	20.8	26.1	-	19.7	25.1
1400 Cfm	EAT (wb)	58	THC	44.1	44.1	50.2	42.2	42.2	48.3	40.2	40.2	46.4	38.0	38.0	44.3
			SHC	38.1	44.1	50.2	36.1	42.2	48.3	34.0	40.2	46.4	31.7	38.0	44.3
		62	THC	45.8	45.8	48.3	43.3	43.3	47.1	40.8	40.8	45.8	38.0	38.0	44.3
			SHC	36.2	42.3	48.3	34.9	41.0	47.1	33.4	39.6	45.8	31.7	38.0	44.3
		67	THC	50.2	50.2	50.2	47.7	47.7	47.7	44.9	44.9	44.9	42.0	42.0	42.0
			SHC	29.7	35.8	41.9	28.7	34.8	40.9	27.5	33.7	39.9	26.2	32.5	38.8
		72	THC	54.4	54.4	54.4	52.0	52.0	52.0	49.2	49.2	49.2	46.2	46.2	46.2
			SHC	22.9	28.9	35.0	21.9	28.0	34.1	20.8	27.0	33.2	19.5	25.8	32.2
		76	THC	-	57.1	57.1	-	54.8	54.8	-	52.0	52.0	-	48.7	48.7
			SHC	-	23.3	29.4	-	22.5	28.6	-	21.5	27.7	-	20.3	26.7
1600 Cfm	EAT (wb)	58	THC	46.1	46.1	53.1	44.0	44.0	51.0	41.9	41.9	48.9	39.6	39.6	46.8
			SHC	39.2	46.1	53.1	37.1	44.0	51.0	34.8	41.9	48.9	32.4	39.6	46.8
		62	THC	46.9	46.9	52.1	44.6	44.6	50.5	42.0	42.0	49.0	39.6	39.6	46.8
			SHC	38.2	45.2	52.1	36.5	43.5	50.5	34.9	42.0	49.0	32.4	39.6	46.8
		67	THC	51.2	51.2	51.2	48.7	48.7	48.7	45.9	45.9	45.9	42.8	42.8	42.8
			SHC	31.1	38.0	45.0	30.1	37.1	44.0	28.9	35.9	43.0	27.5	34.7	42.0
		72	THC	55.3	55.3	55.3	52.9	52.9	52.9	50.0	50.0	50.0	46.9	46.9	46.9
			SHC	23.2	30.1	37.1	22.3	29.3	36.3	21.2	28.3	35.4	19.9	27.1	34.4
		76	THC	-	57.8	57.8	-	55.4	55.4	-	52.6	52.6	-	49.3	49.3
			SHC	-	23.9	30.8	-	23.1	30.1	-	22.1	29.2	-	20.9	28.2
1800 Cfm	EAT (wb)	58	THC	47.7	47.7	55.5	45.6	45.6	53.5	43.4	43.4	51.3	41.0	41.0	49.1
			SHC	39.9	47.7	55.5	37.8	45.6	53.5	35.4	43.4	51.3	32.8	41.0	49.1
		62	THC	47.9	47.9	55.7	45.7	45.7	53.5	43.4	43.4	51.4	41.0	41.0	49.1
			SHC	40.1	47.9	55.7	37.8	45.7	53.5	35.5	43.4	51.4	32.9	41.0	49.1
		67	THC	52.0	52.0	52.0	49.4	49.4	49.4	46.6	46.6	46.6	43.5	43.5	45.0
			SHC	32.3	40.1	47.9	31.3	39.2	47.1	30.1	38.1	46.0	28.7	36.9	45.0
		72	THC	55.9	55.9	55.9	53.5	53.5	53.5	50.6	50.6	50.6	47.4	47.4	47.4
			SHC	23.4	31.3	39.1	22.6	30.5	38.3	21.5	29.5	37.4	20.1	28.3	36.4
		76	THC	-	58.3	58.3	-	55.9	55.9	-	53.1	53.1	-	49.6	49.6
			SHC	-	24.4	32.2	-	23.6	31.5	-	22.6	30.6	-	21.4	29.6
2000 Cfm	EAT (wb)	58	THC	49.1	49.1	57.7	46.9	46.9	55.7	44.6	44.6	53.5	42.1	42.1	51.1
			SHC	40.4	49.1	57.7	38.2	46.9	55.7	35.8	44.6	53.5	33.1	42.1	51.1
		62	THC	49.1	49.1	57.7	47.0	47.0	55.7	44.7	44.7	53.5	42.2	42.2	51.2
			SHC	40.4	49.1	57.7	38.2	47.0	55.7	35.8	44.7	53.5	33.1	42.2	51.2
		67	THC	52.6	52.6	52.6	50.0	50.0	50.0	47.1	47.1	49.0	44.0	44.0	47.9
			SHC	33.4	42.0	50.7	32.5	41.2	49.9	31.2	40.1	49.0	29.8	38.8	47.9
		72	THC	56.4	56.4	56.4	53.9	53.9	53.9	51.1	51.1	51.1	47.8	47.8	47.8
			SHC	23.6	32.2	40.9	22.8	31.5	40.3	21.7	30.6	39.4	20.3	29.3	38.4
		76	THC	-	58.6	58.6	-	56.3	56.3	-	53.4	53.4	-	49.9	49.9
			SHC	-	24.8	33.5	-	24.0	32.8	-	23.1	32.0	-	21.8	30.9

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 29 – COOLING CAPACITIES

1-STAGE COOLING

5 TONS

RHS060				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1500 Cfm	EAT (wb)	58	THC	52.7	52.7	59.2	49.9	49.9	56.5	46.9	46.9	53.6	43.6	43.6	50.4
			SHC	46.2	52.7	59.2	43.4	49.9	56.5	40.3	46.9	53.6	36.8	43.6	50.4
		62	THC	55.5	55.5	55.8	52.1	52.1	54.3	48.1	48.1	52.4	43.7	43.7	50.3
			SHC	42.8	49.3	55.8	41.1	47.7	54.3	39.2	45.8	52.4	36.7	43.5	50.3
		67	THC	61.7	61.7	61.7	58.1	58.1	58.1	54.1	54.1	54.1	49.6	49.6	49.6
			SHC	35.6	42.1	48.6	34.0	40.5	47.1	32.2	38.8	45.5	30.2	37.0	43.8
		72	THC	68.0	68.0	68.0	64.3	64.3	64.3	60.1	60.1	60.1	55.5	55.5	55.5
			SHC	27.9	34.4	40.9	26.4	33.0	39.6	24.7	31.4	38.1	22.8	29.7	36.5
		76	THC	-	72.9	72.9	-	69.0	69.0	-	64.5	64.5	-	59.5	59.5
			SHC	-	28.0	34.5	-	26.6	33.2	-	25.1	31.8	-	23.4	30.2
1750 Cfm	EAT (wb)	58	THC	56.0	56.0	63.6	53.0	53.0	60.7	49.9	49.9	57.7	46.5	46.5	54.5
			SHC	48.4	56.0	63.6	45.4	53.0	60.7	42.2	49.9	57.7	38.6	46.5	54.5
		62	THC	57.6	57.6	61.6	54.1	54.1	59.9	50.1	50.1	57.6	46.6	46.6	54.5
			SHC	46.4	54.0	61.6	44.6	52.2	59.9	42.1	49.8	57.6	38.7	46.6	54.5
		67	THC	63.6	63.6	63.6	59.9	59.9	59.9	55.7	55.7	55.7	51.1	51.1	51.1
			SHC	38.0	45.6	53.2	36.4	44.0	51.7	34.5	42.3	50.1	32.5	40.5	48.4
		72	THC	69.9	69.9	69.9	66.0	66.0	66.0	61.7	61.7	61.7	56.9	56.9	56.9
			SHC	29.0	36.6	44.2	27.5	35.2	42.8	25.7	33.5	41.3	23.7	31.7	39.7
		76	THC	-	74.6	74.6	-	70.6	70.6	-	65.8	65.8	-	60.5	60.5
			SHC	-	29.2	36.8	-	27.8	35.5	-	26.1	34.0	-	24.3	32.3
2000 Cfm	EAT (wb)	58	THC	58.8	58.8	67.4	55.8	55.8	64.5	52.5	52.5	61.4	48.8	48.8	57.9
			SHC	50.1	58.8	67.4	47.0	55.8	64.5	43.6	52.5	61.4	39.7	48.8	57.9
		62	THC	59.3	59.3	66.9	55.9	55.9	64.6	52.5	52.5	61.4	48.8	48.8	57.9
			SHC	49.5	58.2	66.9	47.1	55.9	64.6	43.6	52.5	61.4	39.8	48.8	57.9
		67	THC	65.1	65.1	65.1	61.3	61.3	61.3	56.9	56.9	56.9	52.2	52.2	52.8
			SHC	40.2	48.9	57.6	38.6	47.3	56.1	36.7	45.6	54.5	34.6	43.7	52.8
		72	THC	71.3	71.3	71.3	67.3	67.3	67.3	62.8	62.8	62.8	57.8	57.8	57.8
			SHC	29.9	38.6	47.3	28.3	37.1	45.9	26.5	35.5	44.4	24.5	33.6	42.7
		76	THC	-	75.9	75.9	-	71.7	71.7	-	66.6	66.6	-	61.2	61.2
			SHC	-	30.2	38.9	-	28.7	37.6	-	27.0	36.0	-	25.1	34.3
2250 Cfm	EAT (wb)	58	THC	61.0	61.0	70.8	57.9	57.9	67.8	54.5	54.5	64.5	50.7	50.7	60.9
			SHC	51.3	61.0	70.8	48.1	57.9	67.8	44.5	54.5	64.5	40.5	50.7	60.9
		62	THC	61.1	61.1	70.8	58.0	58.0	67.8	54.6	54.6	64.6	50.7	50.7	61.0
			SHC	51.3	61.1	70.8	48.1	58.0	67.8	44.6	54.6	64.6	40.5	50.7	61.0
		67	THC	66.2	66.2	66.2	62.3	62.3	62.3	57.9	57.9	58.8	53.1	53.1	57.0
			SHC	42.3	52.0	61.8	40.6	50.5	60.4	38.7	48.7	58.8	36.6	46.8	57.0
		72	THC	72.3	72.3	72.3	68.3	68.3	68.3	63.7	63.7	63.7	58.5	58.5	58.5
			SHC	30.6	40.4	50.2	29.1	39.0	48.9	27.2	37.3	47.3	25.0	35.3	45.5
		76	THC	-	76.9	76.9	-	72.5	72.5	-	67.4	67.4	-	61.8	61.8
			SHC	-	31.1	40.9	-	29.6	39.5	-	27.9	37.9	-	25.9	36.2
2500 Cfm	EAT (wb)	58	THC	63.0	63.0	73.8	59.8	59.8	70.7	56.2	56.2	67.3	52.3	52.3	63.7
			SHC	52.1	63.0	73.8	48.8	59.8	70.7	45.1	56.2	67.3	41.0	52.3	63.7
		62	THC	63.0	63.0	73.9	59.8	59.8	70.8	56.3	56.3	67.4	52.4	52.4	63.7
			SHC	52.2	63.0	73.9	48.9	59.8	70.8	45.2	56.3	67.4	41.0	52.4	63.7
		67	THC	67.2	67.2	67.2	63.1	63.1	64.5	58.7	58.7	62.8	53.8	53.8	61.0
			SHC	44.2	55.0	65.9	42.5	53.5	64.5	40.6	51.7	62.8	38.3	49.6	61.0
		72	THC	73.2	73.2	73.2	69.0	69.0	69.0	64.3	64.3	64.3	59.0	59.0	59.0
			SHC	31.3	42.2	53.1	29.7	40.7	51.7	27.8	38.9	50.1	25.5	36.9	48.3
		76	THC	-	77.7	77.7	-	73.1	73.1	-	67.9	67.9	-	62.2	62.2
			SHC	-	32.0	42.9	-	30.5	41.5	-	28.6	39.8	-	26.6	38.0

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 30 – COOLING CAPACITIES

1-STAGE COOLING

6 TONS

RHS072				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1800 Cfm	EAT (wb)	58	THC	61.1	61.1	68.9	58.3	58.3	66.1	55.2	55.2	63.2	51.8	51.8	59.9
			SHC	53.3	61.1	68.9	50.4	58.3	66.1	47.2	55.2	63.2	43.7	51.8	59.9
		62	THC	64.1	64.1	65.2	60.5	60.5	63.6	56.5	56.5	61.8	52.1	52.1	59.7
			SHC	49.6	57.4	65.2	47.8	55.7	63.6	45.8	53.8	61.8	43.4	51.6	59.7
		67	THC	70.8	70.8	70.8	67.2	67.2	67.2	63.1	63.1	63.1	58.6	58.6	58.6
	SHC		40.7	48.5	56.3	39.1	47.0	54.9	37.3	45.3	53.3	35.3	43.5	51.7	
	72	THC	77.4	77.4	77.4	73.7	73.7	73.7	69.5	69.5	69.5	64.9	64.9	64.9	
		SHC	31.1	38.9	46.7	29.6	37.5	45.5	27.9	36.0	44.0	26.0	34.2	42.5	
	76	THC	-	82.0	82.0	-	78.4	78.4	-	73.9	73.9	-	68.8	68.8	
		SHC	-	30.9	38.8	-	29.7	37.6	-	28.1	36.2	-	26.4	34.6	
2100 Cfm	EAT (wb)	58	THC	64.6	64.6	73.7	61.6	61.6	70.8	58.4	58.4	67.7	54.8	54.8	64.3
			SHC	55.5	64.6	73.7	52.5	61.6	70.8	49.1	58.4	67.7	45.3	54.8	64.3
		62	THC	66.1	66.1	71.7	62.5	62.5	69.9	58.5	58.5	67.8	54.9	54.9	64.4
			SHC	53.4	62.5	71.7	51.5	60.7	69.9	49.2	58.5	67.8	45.3	54.9	64.4
		67	THC	72.8	72.8	72.8	69.0	69.0	69.0	64.8	64.8	64.8	60.2	60.2	60.2
	SHC		43.1	52.2	61.3	41.5	50.7	59.9	39.7	49.1	58.4	37.7	47.3	56.8	
	72	THC	79.2	79.2	79.2	75.4	75.4	75.4	71.0	71.0	71.0	66.2	66.2	66.2	
		SHC	31.9	41.1	50.2	30.5	39.7	49.0	28.7	38.1	47.5	26.7	36.3	45.9	
	76	THC	-	83.1	83.1	-	79.8	79.8	-	75.1	75.1	-	69.7	69.7	
		SHC	-	32.0	41.2	-	30.7	39.9	-	29.1	38.5	-	27.3	36.9	
2400 Cfm	EAT (wb)	58	THC	67.4	67.4	77.8	64.4	64.4	74.9	61.0	61.0	71.7	57.3	57.3	68.2
			SHC	57.0	67.4	77.8	53.9	64.4	74.9	50.3	61.0	71.7	46.4	57.3	68.2
		62	THC	67.8	67.8	77.4	64.4	64.4	74.9	61.0	61.0	71.7	57.3	57.3	68.3
			SHC	56.5	66.9	77.4	53.9	64.4	74.9	50.3	61.0	71.7	46.4	57.3	68.3
		67	THC	74.3	74.3	74.3	70.4	70.4	70.4	66.1	66.1	66.1	61.4	61.4	61.7
	SHC		45.3	55.7	66.1	43.7	54.2	64.7	41.9	52.6	63.3	39.9	50.8	61.7	
	72	THC	80.4	80.4	80.4	76.6	76.6	76.6	72.1	72.1	72.1	67.1	67.1	67.1	
		SHC	32.6	43.0	53.4	31.2	41.7	52.3	29.3	40.1	50.8	27.2	38.2	49.2	
	76	THC	-	84.0	84.0	-	80.7	80.7	-	76.0	76.0	-	70.4	70.4	
		SHC	-	32.6	43.1	-	31.6	42.2	-	30.0	40.8	-	28.1	39.1	
2700 Cfm	EAT (wb)	58	THC	69.7	69.7	81.5	66.6	66.6	78.5	63.1	63.1	75.2	59.3	59.3	71.6
			SHC	58.0	69.7	81.5	54.8	66.6	78.5	51.1	63.1	75.2	47.0	59.3	71.6
		62	THC	69.8	69.8	81.5	66.6	66.6	78.4	63.2	63.2	75.2	59.4	59.4	71.7
			SHC	58.0	69.8	81.5	54.8	66.6	78.4	51.2	63.2	75.2	47.1	59.4	71.7
		67	THC	75.4	75.4	75.4	71.4	71.4	71.4	67.1	67.1	67.9	62.3	62.3	66.4
	SHC		47.2	59.0	70.7	45.7	57.6	69.4	43.9	55.9	67.9	41.8	54.1	66.4	
	72	THC	81.3	81.3	81.3	77.5	77.5	77.5	72.9	72.9	72.9	67.8	67.8	67.8	
		SHC	33.0	44.8	56.5	31.7	43.6	55.5	29.8	41.9	54.0	27.7	40.0	52.4	
	76	THC	-	84.9	84.9	-	81.3	81.3	-	76.6	76.6	-	70.8	70.8	
		SHC	-	33.4	45.2	-	33.0	44.9	-	30.8	43.0	-	28.8	41.3	
3000 Cfm	EAT (wb)	58	THC	71.7	71.7	84.7	68.5	68.5	81.7	64.9	64.9	78.3	61.0	61.0	74.7
			SHC	58.7	71.7	84.7	55.4	68.5	81.7	51.6	64.9	78.3	47.3	61.0	74.7
		62	THC	71.7	71.7	84.8	68.6	68.6	81.7	65.0	65.0	78.3	61.0	61.0	74.7
			SHC	58.7	71.7	84.8	55.4	68.6	81.7	51.6	65.0	78.3	47.4	61.0	74.7
		67	THC	76.4	76.4	76.4	72.3	72.3	73.8	67.9	67.9	72.4	63.0	63.0	70.8
	SHC		49.0	62.1	75.1	47.5	60.7	73.8	45.7	59	72.4	43.4	57.1	70.8	
	72	THC	82.0	82.0	82.0	78.2	78.2	78.2	73.5	73.5	73.5	68.2	68.2	68.2	
		SHC	33.4	46.5	59.5	32.1	45.3	58.5	30.2	43.6	57.1	28.0	41.7	55.5	
	76	THC	-	85.5	85.5	-	81.8	81.8	-	77.1	77.1	-	71.3	71.3	
		SHC	-	34.2	47.2	-	33.0	46.3	-	31.6	45.1	-	29.5	43.3	

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 31 – COOLING CAPACITIES

2-STAGE COOLING

7.5 TONS

RHS090				Ambient Temperature											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EAT (wb)	58	THC	77.4	77.4	87.8	74.1	74.1	84.1	69.8	69.8	79.2	65.2	65.2	74.1
			SHC	66.9	77.4	87.8	64.0	74.1	84.1	60.3	69.8	79.2	56.4	65.2	74.1
		62	THC	81.8	81.8	83.7	77.2	77.2	81.4	71.9	71.9	78.9	66.6	66.6	75.9
			SHC	60.6	72.1	83.7	58.4	69.9	81.4	55.9	67.4	78.9	53.2	64.5	75.9
		67	THC	90.6	90.6	90.6	86.0	86.0	86.0	80.8	80.8	80.8	75.1	75.1	75.1
			SHC	50.4	62.0	73.5	48.4	60.0	71.6	46.2	57.8	69.3	43.9	55.4	67.0
		72	THC	99.4	99.4	99.4	94.7	94.7	94.7	89.5	89.5	89.5	83.8	83.8	83.8
			SHC	39.6	51.3	62.9	37.7	49.4	61.0	35.8	47.4	59.0	33.6	45.2	56.8
		76	THC	-	105.7	105.7	-	100.8	100.8	-	95.5	95.5	-	89.7	89.7
			SHC	-	42.1	54.5	-	40.4	52.8	-	38.6	50.9	-	36.5	48.8
2625 Cfm	EAT (wb)	58	THC	81.8	81.8	92.8	78.0	78.0	88.6	74.1	74.1	84.2	69.5	69.5	78.9
			SHC	70.7	81.8	92.8	67.5	78.0	88.6	64.1	74.1	84.2	60.1	69.5	78.9
		62	THC	84.7	84.7	91.7	79.9	79.9	89.2	75.2	75.2	86.2	69.8	69.8	81.6
			SHC	65.2	78.5	91.7	62.9	76.1	89.2	60.3	73.3	86.2	56.8	69.2	81.6
		67	THC	93.4	93.4	93.4	88.6	88.6	88.6	83.2	83.2	83.2	77.4	77.4	77.4
			SHC	53.4	66.7	80.1	51.4	64.7	78.1	49.2	62.5	75.9	46.8	60.2	73.5
		72	THC	101.9	101.9	101.9	97.1	97.1	97.1	91.8	91.8	91.8	86.0	86.0	86.0
			SHC	40.8	54.1	67.5	38.9	52.3	65.6	36.9	50.3	63.6	34.8	48.1	61.5
		76	THC	-	107.7	107.7	-	102.6	102.6	-	97.2	97.2	-	91.2	91.2
			SHC	-	43.7	58.1	-	41.9	56.0	-	39.9	53.9	-	37.9	51.6
3000 Cfm	EAT (wb)	58	THC	85.6	85.6	97.2	81.8	81.8	92.9	77.6	77.6	88.0	72.9	72.9	82.8
			SHC	74.1	85.6	97.2	70.7	81.8	92.9	67.1	77.6	88.0	63.0	72.9	82.8
		62	THC	87.0	87.0	98.9	82.5	82.5	95.4	78.0	78.0	90.5	73.3	73.3	85.6
			SHC	69.4	84.1	98.9	66.6	81.0	95.4	63.1	76.8	90.5	59.6	72.6	85.6
		67	THC	95.5	95.5	95.5	90.5	90.5	90.5	85.1	85.1	85.1	79.0	79.0	79.6
			SHC	56.1	71.2	86.2	54.1	69.2	84.2	51.9	67.0	82.1	49.5	64.6	79.6
		72	THC	103.8	103.8	103.8	98.8	98.8	98.8	93.4	93.4	93.4	87.5	87.5	87.5
			SHC	41.8	56.7	71.6	39.9	54.8	69.8	37.9	52.9	67.8	35.8	50.7	65.7
		76	THC	-	109.1	109.1	-	104.0	104.0	-	98.3	98.3	-	92.2	92.2
			SHC	-	44.9	60.6	-	43.1	58.6	-	41.1	56.4	-	39.0	54.2
3375 Cfm	EAT (wb)	58	THC	88.9	88.9	100.9	84.9	84.9	96.4	80.5	80.5	91.4	75.7	75.7	86.0
			SHC	76.9	88.9	100.9	73.4	84.9	96.4	69.6	80.5	91.4	65.5	75.7	86.0
		62	THC	89.6	89.6	103.8	85.1	85.1	100.4	81.0	81.0	94.1	75.8	75.8	89.5
			SHC	72.4	88.1	103.8	69.7	85.0	100.4	65.6	79.8	94.1	62.1	75.8	89.5
		67	THC	97.1	97.1	97.1	92.1	92.1	92.1	86.5	86.5	87.9	80.3	80.3	85.4
			SHC	58.7	75.3	92.0	56.7	73.4	90.1	54.5	71.2	87.9	52.0	68.7	85.4
		72	THC	105.2	105.2	105.2	100.0	100.0	100.0	94.5	94.5	94.5	88.5	88.5	88.5
			SHC	42.6	59.0	75.3	40.7	57.1	73.5	38.8	55.2	71.6	36.6	53.1	69.5
		76	THC	-	110.1	110.1	-	105.0	105.0	-	99.2	99.2	-	92.9	92.9
			SHC	-	45.9	62.8	-	44.1	60.9	-	42.1	58.7	-	40.0	56.4
3750 Cfm	EAT (wb)	58	THC	91.6	91.6	104.0	87.5	87.5	99.4	83.0	83.0	94.3	78.1	78.1	88.7
			SHC	79.2	91.6	104.0	75.7	87.5	99.4	71.8	83.0	94.3	67.6	78.1	88.7
		62	THC	91.7	91.7	108.3	87.7	87.7	103.5	83.1	83.1	98.1	78.2	78.2	92.3
			SHC	75.2	91.7	108.3	71.8	87.7	103.5	68.1	83.1	98.1	64.1	78.2	92.3
		67	THC	98.4	98.4	98.4	93.3	93.3	95.6	87.7	87.7	93.4	81.5	81.5	90.9
			SHC	61.1	79.3	97.5	59.1	77.3	95.6	56.9	75.2	93.4	54.5	72.7	90.9
		72	THC	106.2	106.2	106.2	101.0	101.0	101.0	95.4	95.4	95.4	89.3	89.3	89.3
			SHC	43.4	61.1	78.8	41.5	59.2	76.9	39.5	57.3	75.0	37.4	55.2	73.0
		76	THC	-	111.0	111.0	-	105.8	105.8	-	99.8	99.8	-	93.5	93.5
			SHC	-	46.8	64.9	-	45.1	63.1	-	43.0	60.8	-	40.9	58.4

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 32 – COOLING CAPACITIES

2-STAGE COOLING

8.5 TONS

RHS102				Ambient Temperature											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2550 Cfm	EAT (wb)	58	THC	91.1	91.1	102.9	86.4	86.4	97.5	81.2	81.2	91.7	75.7	75.7	85.5
			SHC	79.4	91.1	102.9	75.2	86.4	97.5	70.8	81.2	91.7	66.0	75.7	85.5
		62	THC	96.0	96.0	99.4	89.2	89.2	96.4	83.0	83.0	93.4	76.5	76.5	88.0
			SHC	72.7	86.0	99.4	69.6	83.0	96.4	66.7	80.0	93.4	62.4	75.2	88.0
		67	THC	106.4	106.4	106.4	100.4	100.4	100.4	92.9	92.9	92.9	86.0	86.0	86.0
			SHC	60.4	73.8	87.2	57.7	71.1	84.5	54.7	68.1	81.6	51.8	65.2	78.6
		72	THC	117.3	117.3	117.3	111.2	111.2	111.2	104.3	104.3	104.3	97.0	97.0	97.0
			SHC	47.4	60.9	74.4	45.1	58.5	72.0	42.4	55.9	69.4	39.7	53.1	66.6
		76	THC	-	126.1	126.1	-	119.9	119.9	-	113.0	113.0	-	105.6	105.6
			SHC	-	50.3	64.3	-	48.0	61.8	-	45.6	59.4	-	43.0	56.7
2975 Cfm	EAT (wb)	58	THC	96.5	96.5	109.0	91.7	91.7	103.5	86.7	86.7	97.9	80.5	80.5	90.9
			SHC	84.1	96.5	109.0	79.9	91.7	103.5	75.5	86.7	97.9	70.1	80.5	90.9
		62	THC	98.2	98.2	109.0	92.9	92.9	105.4	87.0	87.0	100.5	80.6	80.6	94.5
			SHC	78.1	93.6	109.0	75.1	90.2	105.4	71.3	85.9	100.5	66.7	80.6	94.5
		67	THC	109.5	109.5	109.5	103.0	103.0	103.0	96.3	96.3	96.3	87.6	87.6	87.6
			SHC	64.1	79.6	95.2	61.4	76.9	92.5	58.7	74.3	89.8	55.3	70.9	86.5
		72	THC	120.6	120.6	120.6	114.2	114.2	114.2	107.3	107.3	107.3	99.5	99.5	99.5
			SHC	49.1	64.7	80.3	46.7	62.3	77.9	44.1	59.7	75.3	41.3	56.9	72.5
		76	THC	-	129.2	129.2	-	122.9	122.9	-	115.7	115.7	-	108.1	108.1
			SHC	-	52.3	68.4	-	50.0	65.8	-	47.6	63.5	-	45.0	60.8
3400 Cfm	EAT (wb)	58	THC	101.0	101.0	114.0	96.7	96.7	109.1	90.9	90.9	102.6	84.9	84.9	95.8
			SHC	88.0	101.0	114.0	84.2	96.7	109.1	79.2	90.9	102.6	74.0	84.9	95.8
		62	THC	102.3	102.3	116.5	96.9	96.9	112.5	90.7	90.7	106.3	84.6	84.6	99.1
			SHC	82.9	99.7	116.5	79.7	96.1	112.5	75.1	90.7	106.3	70.0	84.6	99.1
		67	THC	112.1	112.1	112.1	105.5	105.5	105.5	98.4	98.4	98.4	90.8	90.8	94.2
			SHC	67.7	85.3	102.9	65.1	82.7	100.2	62.2	79.8	97.3	59.2	76.7	94.2
		72	THC	123.0	123.0	123.0	116.5	116.5	116.5	109.4	109.4	109.4	101.6	101.6	101.6
			SHC	50.5	68.2	85.9	48.2	65.8	83.5	45.6	63.2	80.8	42.8	60.4	78.1
		76	THC	-	131.5	131.5	-	124.9	124.9	-	117.7	117.7	-	109.9	109.9
			SHC	-	54.1	72.1	-	51.8	69.7	-	49.4	67.2	-	46.8	64.6
3825 Cfm	EAT (wb)	58	THC	104.5	104.5	118.0	99.8	99.8	112.6	94.4	94.4	106.6	87.9	87.9	99.2
			SHC	91.1	104.5	118.0	86.9	99.8	112.6	82.3	94.4	106.6	76.6	87.9	99.2
		62	THC	105.0	105.0	123.0	100.3	100.3	117.5	93.4	93.4	109.5	87.3	87.3	102.3
			SHC	86.9	105.0	123.0	83.0	100.3	117.5	77.4	93.4	109.5	72.3	87.3	102.3
		67	THC	114.1	114.1	114.1	107.4	107.4	107.6	99.4	99.4	104.6	92.0	92.0	101.3
			SHC	71.2	90.8	110.4	68.5	88.1	107.6	65.4	85.0	104.6	62.4	81.9	101.3
		72	THC	124.9	124.9	124.9	118.2	118.2	118.2	111.0	111.0	111.0	103.1	103.1	103.1
			SHC	51.9	71.5	91.1	49.5	69.1	88.7	47.0	66.6	86.2	44.2	63.8	83.4
		76	THC	-	133.3	133.3	-	126.5	126.5	-	119.2	119.2	-	111.2	111.2
			SHC	-	55.7	75.6	-	53.5	73.3	-	51.1	70.8	-	48.5	68.1
4250 Cfm	EAT (wb)	58	THC	108.6	108.6	122.6	102.7	102.7	115.9	97.4	97.4	110.0	90.8	90.8	102.5
			SHC	94.6	108.6	122.6	89.5	102.7	115.9	84.9	97.4	110.0	79.1	90.8	102.5
		62	THC	109.0	109.0	126.4	103.4	103.4	121.2	97.5	97.5	114.2	91.3	91.3	106.9
			SHC	89.5	107.9	126.4	85.6	103.4	121.2	80.7	97.5	114.2	75.6	91.3	106.9
		67	THC	115.6	115.6	117.4	108.9	108.9	114.7	101.6	101.6	111.4	93.6	93.6	108.1
			SHC	74.3	95.9	117.4	71.7	93.2	114.7	68.7	90.1	111.4	65.6	86.8	108.1
		72	THC	126.4	126.4	126.4	119.7	119.7	119.7	112.3	112.3	112.3	104.2	104.2	104.2
			SHC	53.1	74.6	96.1	50.8	72.3	93.8	48.2	69.8	91.4	45.4	67.0	88.5
		76	THC	-	134.6	134.6	-	127.8	127.8	-	120.3	120.3	-	112.3	112.3
			SHC	-	57.2	78.8	-	55.0	76.6	-	52.6	74.1	-	50.0	71.5

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 33 – COOLING CAPACITIES

2-STAGE COOLING

10 TONS

RHS120				Ambient Temperature											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EAT (wb)	58	THC	102.8	102.8	121.0	96.3	96.3	115.8	90.1	90.1	109.5	83.5	83.5	102.9
			SHC	82.1	101.5	121.0	76.8	96.3	115.8	70.6	90.1	109.5	64.0	83.5	102.9
		62	THC	108.0	108.0	114.3	100.4	100.4	111.1	92.1	92.1	107.1	84.2	84.2	102.0
			SHC	75.4	94.9	114.3	72.2	91.7	111.1	68.1	87.6	107.1	63.1	82.5	102.0
		67	THC	120.5	120.5	120.5	113.5	113.5	113.5	104.9	104.9	104.9	95.2	95.2	95.2
	SHC		60.2	79.7	99.2	57.7	77.2	96.7	54.4	73.9	93.4	50.8	70.3	89.7	
	72	THC	132.8	132.8	132.8	126.5	126.5	126.5	118.6	118.6	118.6	109.3	109.3	109.3	
		SHC	44.5	64.0	83.4	42.2	61.7	81.2	39.5	59.0	78.5	36.4	55.9	75.3	
	76	THC	-	142.0	142.0	-	136.0	136.0	-	129.1	129.1	-	120.3	120.3	
		SHC	-	50.9	70.4	-	48.8	68.2	-	46.6	66.0	-	43.7	63.2	
3500 Cfm	EAT (wb)	58	THC	108.2	108.2	130.9	102.5	102.5	125.2	95.5	95.5	118.2	88.3	88.3	111.0
			SHC	85.5	108.2	130.9	79.8	102.5	125.2	72.8	95.5	118.2	65.6	88.3	111.0
		62	THC	111.4	111.4	125.8	104.6	104.6	122.1	96.3	96.3	117.0	88.7	88.7	110.7
			SHC	80.4	103.1	125.8	76.7	99.4	122.1	71.6	94.3	117.0	65.3	88.0	110.7
		67	THC	123.4	123.4	123.4	116.3	116.3	116.3	107.9	107.9	107.9	97.5	97.5	98.9
	SHC		62.6	85.3	108.0	60.1	82.9	105.6	57.2	79.9	102.6	53.5	76.2	98.9	
	72	THC	135.4	135.4	135.4	129.2	129.2	129.2	121.2	121.2	121.2	112.0	112.0	112.0	
		SHC	44.2	67.0	89.7	42.2	64.9	87.6	39.5	62.2	85.0	36.5	59.3	82.0	
	76	THC	-	144.6	144.6	-	138.4	138.4	-	131.3	131.3	-	-	-	
		SHC	-	51.9	74.6	-	50.0	72.7	-	47.8	70.5	-	-	-	
4000 Cfm	EAT (wb)	58	THC	112.7	112.7	138.7	106.9	106.9	132.9	99.9	99.9	125.9	92.3	92.3	118.2
			SHC	86.7	112.7	138.7	81.0	106.9	132.9	74.0	99.9	125.9	66.3	92.3	118.2
		62	THC	114.0	114.0	135.3	107.6	107.6	131.3	100.4	100.4	125.5	92.3	92.3	118.3
			SHC	83.4	109.3	135.3	79.3	105.3	131.3	73.6	99.6	125.5	66.4	92.3	118.3
		67	THC	125.4	125.4	125.4	118.2	118.2	118.2	109.5	109.5	111.2	99.1	99.1	107.7
	SHC		64.5	90.5	116.4	62.2	88.1	114.1	59.3	85.3	111.2	55.8	81.8	107.7	
	72	THC	137.2	137.2	137.2	130.7	130.7	130.7	122.8	122.8	122.8	113.5	113.5	113.5	
		SHC	43.6	69.6	95.5	41.7	67.6	93.6	39.2	65.1	91.1	36.3	62.2	88.2	
	76	THC	-	146.3	146.3	-	139.9	139.9	-	132.5	132.5	-	-	-	
		SHC	-	52.8	78.7	-	50.8	76.8	-	48.6	74.6	-	-	-	
4500 Cfm	EAT (wb)	58	THC	115.9	115.9	145.2	110.4	110.4	139.6	103.4	103.4	132.6	95.4	95.4	124.6
			SHC	86.7	115.9	145.2	81.2	110.4	139.6	74.2	103.4	132.6	66.2	95.4	124.6
		62	THC	116.6	116.6	143.2	110.4	110.4	139.4	103.9	103.9	131.8	95.4	95.4	124.6
			SHC	84.8	114.0	143.2	81.0	110.2	139.4	73.4	102.6	131.8	66.2	95.4	124.6
		67	THC	126.5	126.5	126.5	119.5	119.5	122.2	110.6	110.6	119.6	100.2	100.2	116.1
	SHC		65.9	95.1	124.3	63.8	93.0	122.2	61.2	90.4	119.6	57.7	86.9	116.1	
	72	THC	138.0	138.0	138.0	131.5	131.5	131.5	123.9	123.9	123.9	114.2	114.2	114.2	
		SHC	42.7	71.9	101.1	40.8	70.0	99.2	38.5	67.7	96.9	35.6	64.8	94.0	
	76	THC	-	147.3	147.3	-	140.6	140.6	-	-	-	-	-	-	
		SHC	-	53.3	82.6	-	51.4	80.6	-	-	-	-	-	-	
5000 Cfm	EAT (wb)	58	THC	118.4	118.4	150.9	112.9	112.9	145.4	105.9	105.9	138.4	97.8	97.8	130.2
			SHC	86.0	118.4	150.9	80.5	112.9	145.4	73.5	105.9	138.4	65.3	97.8	130.2
		62	THC	118.5	118.5	150.7	113.5	113.5	144.5	106.0	106.0	138.4	97.9	97.9	130.3
			SHC	85.8	118.3	150.7	79.6	112.0	144.5	73.5	106.0	138.4	65.4	97.9	130.3
		67	THC	126.9	126.9	131.8	120.0	120.0	130.0	111.1	111.1	127.4	100.8	100.8	123.9
	SHC		66.9	99.4	131.8	65.1	97.5	130.0	62.5	94.9	127.4	59.0	91.4	123.9	
	72	THC	138.4	138.4	138.4	131.6	131.6	131.6	124.0	124.0	124.0	114.2	114.2	114.2	
		SHC	41.4	73.8	106.3	39.5	71.9	104.4	37.3	69.8	102.2	34.6	67.0	99.5	
	76	THC	-	147.7	147.7	-	140.9	140.9	-	-	-	-	-	-	
		SHC	-	53.6	86.1	-	51.7	84.2	-	-	-	-	-	-	

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 34 – COOLING CAPACITIES

2-STAGE COOLING

12.5 TONS

RHS150			Ambient Temperature											
			85			95			105			115		
			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
			75	80	85	75	80	85	75	80	85	75	80	85
3750 Cfm	58	THC	126.4	126.4	143.6	119.1	119.1	135.3	111.8	111.8	127.0	104.0	104.0	118.2
		SHC	109.2	126.4	143.6	102.9	119.1	135.3	96.5	111.8	127.0	89.8	104.0	118.2
	62	THC	134.5	134.5	138.4	124.7	124.7	133.4	114.9	114.9	128.1	105.8	105.8	120.8
		SHC	100.3	119.4	138.4	95.5	114.4	133.4	90.5	109.3	128.1	84.6	102.7	120.8
	67	THC	149.6	149.6	149.6	140.5	140.5	140.5	130.0	130.0	130.0	118.8	118.8	118.8
		SHC	83.5	102.5	121.4	79.8	98.9	118.1	75.4	94.6	113.7	70.8	89.9	109.1
	72	THC	161.4	161.4	161.4	155.2	155.2	155.2	146.4	146.4	146.4	135.7	135.7	135.7
		SHC	64.5	83.5	102.5	62.1	81.2	100.4	58.8	78.1	97.3	54.8	74.1	93.3
	76	THC	-	169.5	169.5	-	163.1	163.1	-	156.8	156.8	-	147.7	147.7
		SHC	-	68.1	88.7	-	65.7	86.2	-	63.4	83.7	-	60.3	80.3
4375 Cfm	58	THC	134.6	134.6	152.9	126.8	126.8	144.1	118.8	118.8	135.0	110.5	110.5	125.6
		SHC	116.3	134.6	152.9	109.6	126.8	144.1	102.7	118.8	135.0	95.5	110.5	125.6
	62	THC	139.9	139.9	151.3	130.0	130.0	145.7	120.7	120.7	138.1	111.2	111.2	130.1
		SHC	107.9	129.6	151.3	102.8	124.2	145.7	96.7	117.4	138.1	90.4	110.3	130.1
	67	THC	153.7	153.7	153.7	145.2	145.2	145.2	134.5	134.5	134.5	122.9	122.9	122.9
		SHC	87.9	109.4	131.0	84.8	106.8	128.8	80.6	102.6	124.7	75.8	97.9	120.0
	72	THC	164.6	164.6	164.6	158.2	158.2	158.2	150.5	150.5	150.5	139.9	139.9	139.9
		SHC	66.0	87.2	108.5	63.6	85.1	106.5	60.9	82.8	104.8	57.0	79.1	101.2
	76	THC	-	172.4	172.4	-	165.7	165.7	-	159.3	159.3	-	150.8	150.8
		SHC	-	70.2	93.5	-	67.8	91.0	-	65.7	88.8	-	62.8	85.8
5000 Cfm	58	THC	141.4	141.4	160.6	133.5	133.5	151.6	125.0	125.0	142.0	116.2	116.2	132.0
		SHC	122.1	141.4	160.6	115.3	133.5	151.6	108.0	125.0	142.0	100.4	116.2	132.0
	62	THC	144.4	144.4	162.1	135.4	135.4	155.1	125.9	125.9	147.1	116.4	116.4	137.6
		SHC	114.3	138.2	162.1	108.5	131.8	155.1	102.2	124.6	147.1	95.3	116.4	137.6
	67	THC	156.6	156.6	156.6	148.8	148.8	148.8	138.1	138.1	138.1	126.3	126.3	130.2
		SHC	91.7	115.6	139.5	89.3	113.9	138.6	85.3	110.2	135.0	80.6	105.4	130.2
	72	THC	167.0	167.0	167.0	160.5	160.5	160.5	153.3	153.3	153.3	142.9	142.9	142.9
		SHC	67.3	90.6	113.9	64.9	88.6	112.2	62.5	87.0	111.4	58.9	83.7	108.5
	76	THC	-	174.6	174.6	-	167.5	167.5	-	160.7	160.7	-	152.9	152.9
		SHC	-	72.2	98.1	-	69.8	95.6	-	67.4	92.9	-	64.8	90.2
5625 Cfm	58	THC	146.6	146.6	166.6	139.0	139.0	157.9	130.3	130.3	148.1	121.2	121.2	137.7
		SHC	126.6	146.6	166.6	120.0	139.0	157.9	112.6	130.3	148.1	104.7	121.2	137.7
	62	THC	148.4	148.4	169.8	139.9	139.9	163.3	130.5	130.5	154.3	121.3	121.3	143.4
		SHC	118.8	144.3	169.8	113.5	138.4	163.3	106.8	130.5	154.3	99.2	121.3	143.4
	67	THC	158.8	158.8	158.8	151.5	151.5	151.5	140.9	140.9	144.6	129.1	129.1	140.0
		SHC	95.1	121.2	147.3	93.3	120.4	147.4	89.6	117.1	144.6	85.0	112.5	140.0
	72	THC	168.9	168.9	168.9	162.1	162.1	162.1	155.3	155.3	155.3	145.1	145.1	145.1
		SHC	68.4	93.7	118.9	66.1	91.7	117.3	63.9	90.6	117.3	60.6	87.9	115.2
	76	THC	-	176.2	176.2	-	168.9	168.9	-	161.7	161.7	-	154.3	154.3
		SHC	-	73.9	101.8	-	71.3	98.8	-	68.8	96.1	-	66.6	94.1
6250 Cfm	58	THC	150.6	150.6	171.1	143.5	143.5	163.1	134.9	134.9	153.3	125.5	125.5	142.6
		SHC	130.0	150.6	171.1	123.9	143.5	163.1	116.5	134.9	153.3	108.4	125.5	142.6
	62	THC	151.4	151.4	176.1	143.7	143.7	169.9	135.1	135.1	159.7	125.6	125.6	148.5
		SHC	122.6	149.3	176.1	117.6	143.7	169.9	110.5	135.1	159.7	102.7	125.6	148.5
	67	THC	160.4	160.4	160.4	153.4	153.4	155.3	143.2	143.2	153.4	131.3	131.3	148.7
		SHC	98.2	126.4	154.5	96.8	126.0	155.3	93.6	123.5	153.4	88.9	118.8	148.7
	72	THC	170.3	170.3	170.3	163.4	163.4	163.4	156.7	156.7	156.7	146.8	146.8	146.8
		SHC	69.5	96.5	123.5	67.1	94.5	121.9	65.1	93.8	122.5	62.0	91.7	121.3
	76	THC	-	177.5	177.5	-	170.1	170.1	-	162.7	162.7	-	155.4	155.4
		SHC	-	75.2	104.7	-	72.6	101.8	-	70.2	99.2	-	68.2	97.7

LEGEND

- Do not operate in this region (Points are outside SST and SDT permissible operating range)
- Cfm - Cubic feet per minute (supply air)
- EAT(db) - Entering air temperature (dry bulb)
- EAT(wb) - Entering air temperature (wet bulb)
- SHC - Sensible heat capacity
- THC - Total capacity

Table 35 – HEATING CAPACITIES

3 TONS

RHS036											
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db AT 70% RH)								
			-10	0	10	17	30	40	47	50	60
55	900	Capacity	11.6	15.1	18.9	21.7	27.6	32.7	36.0	37.1	41.8
		Int. Cap.	10.7	13.9	17.4	19.8	24.2	32.7	36.0	37.1	41.8
	1200	Capacity	12.0	15.5	19.4	22.3	28.4	33.5	36.7	37.8	42.7
		Int. Cap.	11.1	14.3	17.8	20.3	24.9	33.5	36.7	37.8	42.7
	1500	Capacity	12.6	16.3	20.2	23.1	29.5	34.2	37.5	38.6	43.5
		Int. Cap.	11.6	15.0	18.5	21.1	25.8	34.2	37.5	38.6	43.5
70	900	Capacity	9.8	13.3	17.2	20.0	25.6	30.4	34.5	35.5	40.2
		Int. Cap.	9.0	12.3	15.7	18.2	22.5	30.4	34.5	35.5	40.2
	1200	Capacity	10.1	13.8	17.7	20.7	26.6	31.7	35.4	36.5	41.2
		Int. Cap.	9.3	12.7	16.3	18.8	23.3	31.7	35.4	36.5	41.2
	1500	Capacity	10.8	14.6	18.6	21.5	27.7	33.0	36.4	37.4	42.0
		Int. Cap.	10.0	13.4	17.1	19.6	24.3	33.0	36.4	37.4	42.0
80	900	Capacity	8.3	11.9	15.7	18.6	24.1	29.0	32.7	34.1	39.0
		Int. Cap.	7.7	10.9	14.4	16.9	21.2	29.0	32.7	34.1	39.0
	1200	Capacity	8.6	12.4	16.3	19.3	25.1	30.2	34.3	35.4	40.1
		Int. Cap.	8.0	11.4	15.0	17.6	22.0	30.2	34.3	35.4	40.1
	1500	Capacity	9.3	13.2	17.2	20.2	26.2	31.4	35.5	36.5	41.1
		Int. Cap.	8.6	12.1	15.8	18.4	23.0	31.4	35.5	36.5	41.1

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 36 – HEATING CAPACITIES

4 TONS

RHS048											
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db AT 70% RH)								
			-10	0	10	17	30	40	47	50	60
55	1200	Capacity	17.5	22.0	26.6	30.0	36.8	42.6	47.1	48.9	55.3
		Int. Cap.	16.2	20.2	24.4	27.3	32.2	42.6	47.1	48.9	55.3
	1600	Capacity	17.5	22.1	26.7	30.2	37.3	43.5	47.9	49.8	56.1
		Int. Cap.	16.2	20.3	24.5	27.5	32.7	43.5	47.9	49.8	56.1
	2000	Capacity	18.5	23.1	27.8	31.3	38.7	44.9	49.1	50.9	57.1
		Int. Cap.	17.1	21.3	25.5	28.6	33.9	44.9	49.1	50.9	57.1
70	1200	Capacity	15.8	20.3	25.0	28.3	35.0	40.5	44.7	46.7	53.0
		Int. Cap.	14.6	18.7	22.9	25.8	30.6	40.5	44.7	46.7	53.0
	1600	Capacity	15.9	20.5	25.3	28.7	35.6	41.3	45.8	47.8	53.9
		Int. Cap.	14.7	18.9	23.2	26.1	31.2	41.3	45.8	47.8	53.9
	2000	Capacity	17.0	21.7	26.5	29.9	36.9	42.9	47.3	49.1	55.2
		Int. Cap.	15.7	20.0	24.3	27.3	32.4	42.9	47.3	49.1	55.2
80	1200	Capacity	14.2	18.8	23.5	26.9	33.6	39.0	43.2	45.1	51.4
		Int. Cap.	13.1	17.3	21.6	24.6	29.4	39.0	43.2	45.1	51.4
	1600	Capacity	14.4	19.1	23.9	27.4	34.2	39.8	44.2	46.1	52.4
		Int. Cap.	13.3	17.6	22.0	25.0	30.0	39.8	44.2	46.1	52.4
	2000	Capacity	15.5	20.3	25.2	28.7	35.6	41.4	45.9	47.8	53.8
		Int. Cap.	14.3	18.7	23.1	26.1	31.2	41.4	45.9	47.8	53.8

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 37 – HEATING CAPACITY

5 TONS

RHS060											
Return Air (°F db)	CFM (Standard Air)		Temperature Air Entering Outdoor Coil (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	1500	Capacity	22.7	28.3	34.2	38.6	47.4	54.3	60.0	62.6	70.3
		Int. Cap.	21.0	26.1	31.4	35.2	41.5	54.3	60.0	62.6	70.3
	2000	Capacity	22.8	28.5	34.4	38.9	47.9	55.3	60.9	63.1	70.9
		Int. Cap.	21.1	26.2	31.6	35.4	42.0	55.3	60.9	63.1	70.9
	2500	Capacity	24.2	30.0	35.9	40.4	49.6	56.9	62.3	64.4	72.0
		Int. Cap.	22.4	27.6	33.0	36.8	43.5	56.9	62.3	64.4	72.0
70	1500	Capacity	19.9	25.8	31.9	36.3	45.2	51.7	57.6	60.0	67.9
		Int. Cap.	18.4	23.7	29.3	33.1	39.6	51.7	57.6	60.0	67.9
	2000	Capacity	20.1	26.1	32.3	36.7	45.8	52.9	58.4	61.0	68.8
		Int. Cap.	18.6	24.0	29.6	33.5	40.1	52.9	58.4	61.0	68.8
	2500	Capacity	21.5	27.6	33.8	38.3	47.5	54.7	60.4	62.7	70.2
		Int. Cap.	19.9	25.4	31.1	35.0	41.6	54.7	60.4	62.7	70.2
80	1500	Capacity	17.6	23.7	30.0	34.6	43.5	50.2	55.7	58.2	66.1
		Int. Cap.	16.3	21.9	27.6	31.5	38.1	50.2	55.7	58.2	66.1
	2000	Capacity	17.8	24.1	30.5	35.1	44.3	51.2	56.6	59.4	67.2
		Int. Cap.	16.5	22.2	28.0	32.0	38.8	51.2	56.6	59.4	67.2
	2500	Capacity	19.3	25.6	32.1	36.8	46.0	53.1	58.8	61.1	68.8
		Int. Cap.	17.8	23.6	29.4	33.5	40.3	53.1	58.8	61.1	68.8

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 38 – HEATING CAPACITY

6 TONS

RHS072											
Return Air (°F db)	CFM (Standard Air)		Temperature Air Entering Outdoor Coil (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	1800	Capacity	22.4	29.8	37.1	42.5	53.5	62.4	68.6	71.2	80.3
		Int. Cap.	20.7	27.4	34.1	38.8	46.9	62.4	68.6	71.2	80.3
	2400	Capacity	24.6	32.1	39.6	45.1	56.4	65.6	71.5	74.2	83.8
		Int. Cap.	22.7	29.5	36.3	41.1	49.4	65.6	71.5	74.2	83.8
	3000	Capacity	27.4	35.0	42.5	48.2	59.5	68.6	74.5	77.2	86.8
		Int. Cap.	25.3	32.2	39.0	43.9	52.1	68.6	74.5	77.2	86.8
70	1800	Capacity	17.7	25.5	33.2	38.6	49.5	58.5	65.0	67.7	76.5
		Int. Cap.	16.4	23.5	30.5	35.2	43.4	58.5	65.0	67.7	76.5
	2400	Capacity	19.9	27.9	35.8	41.4	52.7	62.0	68.4	71.0	80.3
		Int. Cap.	18.4	25.7	32.9	37.7	46.2	62.0	68.4	71.0	80.3
	3000	Capacity	22.8	30.9	38.9	44.5	56.1	65.5	71.7	74.4	83.9
		Int. Cap.	21.1	28.4	35.7	40.6	49.2	65.5	71.7	74.4	83.9
80	1800	Capacity	13.9	21.9	29.9	35.5	46.2	55.3	62.0	64.9	73.7
		Int. Cap.	12.8	20.2	27.4	32.3	40.5	55.3	62.0	64.9	73.7
	2400	Capacity	16.0	24.4	32.6	38.4	49.6	59.0	65.8	68.6	77.5
		Int. Cap.	14.8	22.5	29.9	35.0	43.5	59.0	65.8	68.6	77.5
	3000	Capacity	18.8	27.4	35.8	41.6	53.1	62.7	69.4	72.1	81.4
		Int. Cap.	17.4	25.2	32.8	37.9	46.6	62.7	69.4	72.1	81.4

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 39 – HEATING CAPACITY

7.5 TONS

RHS090												
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db AT 70% RH)									
			-10	0	10	17	30	40	47	50	60	
55	2250	Capacity	/			46.9	53.5	66.3	77.2	86.2	89.4	103.3
		Int. Cap.				43.1	48.7	58.1	77.2	86.2	89.4	103.3
	3000	Capacity	/			/		68.5	80.2	89.8	93.1	106.7
		Int. Cap.						60.0	80.2	89.8	93.1	106.7
	3750	Capacity	/			58.9	72.5	84.6	94.5	97.6	110.6	
		Int. Cap.				53.7	63.5	84.6	94.5	97.6	110.6	
70	2250	Capacity	25.9	34.6	43.6	50.2	62.7	73.0	81.4	84.5	98.0	
		Int. Cap.	23.9	31.8	40.0	45.7	55.0	73.0	81.4	84.5	98.0	
	3000	Capacity	27.4	36.2	45.5	52.2	65.1	75.9	85.0	88.2	102.1	
		Int. Cap.	25.3	33.4	41.8	47.6	57.0	75.9	85.0	88.2	102.1	
	3750	Capacity	31.0	40.0	49.3	56.1	69.1	80.4	89.8	93.2	106.5	
		Int. Cap.	28.6	36.8	45.3	51.1	60.6	80.4	89.8	93.2	106.5	
80	2250	Capacity	22.5	31.5	40.7	47.3	60.1	70.3	78.2	81.2	94.3	
		Int. Cap.	20.8	29.0	37.3	43.1	52.6	70.3	78.2	81.2	94.3	
	3000	Capacity	24.1	33.3	42.7	49.5	62.5	73.1	81.6	84.7	98.6	
		Int. Cap.	22.3	30.6	39.2	45.2	54.8	73.1	81.6	84.7	98.6	
	3750	Capacity	27.8	37.1	46.6	53.5	66.7	77.5	86.4	89.7	103.4	
		Int. Cap.	25.7	34.1	42.8	48.8	58.4	77.5	86.4	89.7	103.4	

/ – Indicates operation not permissible

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db– Dry Bulb

Table 40 – HEATING CAPACITY

8.5 TONS

RHS102											
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db AT 70% RH)								
			-10	0	10	17	30	40	47	50	60
55	2550	Capacity	33.1	42.7	52.7	60.0	75.6	87.4	97.5	100.6	113.8
		Int. Cap.	30.7	39.3	48.3	54.7	66.2	87.4	97.5	100.6	113.8
	3400	Capacity	34.4	44.0	54.2	61.8	77.5	89.9	100.2	103.1	115.7
		Int. Cap.	31.8	40.5	49.8	56.4	67.9	89.9	100.2	103.1	115.7
	4250	Capacity	38.0	47.7	58.0	65.8	81.5	94.2	103.9	106.6	118.2
		Int. Cap.	35.2	43.9	53.2	60.0	71.4	94.2	103.9	106.6	118.2
70	2550	Capacity	29.0	38.6	48.6	55.9	70.7	83.5	93.1	96.2	109.5
		Int. Cap.	26.8	35.5	44.6	51.0	61.9	83.5	93.1	96.2	109.5
	3400	Capacity	30.3	40.2	50.4	58.0	73.5	86.1	96.5	99.2	111.9
		Int. Cap.	28.0	37.0	46.3	52.9	64.4	86.1	96.5	99.2	111.9
	4250	Capacity	34.0	44.0	54.4	62.1	77.8	90.5	100.5	103.3	115.2
		Int. Cap.	31.5	40.5	50.0	56.6	68.2	90.5	100.5	103.3	115.2
80	2550	Capacity	25.3	35.0	45.2	52.6	67.1	80.0	90.0	93.2	106.5
		Int. Cap.	23.4	32.2	41.5	48.0	58.8	80.0	90.0	93.2	106.5
	3400	Capacity	26.6	36.7	47.2	54.8	69.8	83.0	93.1	96.2	109.2
		Int. Cap.	24.6	33.8	43.3	50.0	61.2	83.0	93.1	96.2	109.2
	4250	Capacity	30.4	40.6	51.2	59.0	74.4	87.7	97.7	100.7	112.8
		Int. Cap.	28.1	37.4	47.0	53.8	65.1	87.7	97.7	100.7	112.8

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 41 – HEATING CAPACITY

10 TONS

RHS120											
RETURN AIR (°F db)	CFM (STANDARD AIR)		Temperature Air Entering Outdoor Coil (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	3000	Capacity	41.8	52.4	64.1	72.8	90.4	105.3	118.0	121.9	140.3
		Int. Cap.	38.7	48.2	58.8	66.3	79.2	105.3	118.0	121.9	140.3
	4000	Capacity	43.3	54.0	66.0	74.5	92.7	107.8	120.2	124.1	142.1
		Int. Cap.	40.0	49.7	60.6	68.0	81.2	107.8	120.2	124.1	142.1
	5000	Capacity	46.9	57.7	69.7	78.2	96.6	111.5	123.5	127.3	142.3
		Int. Cap.	43.3	53.1	64.0	71.3	84.6	111.5	123.5	127.3	142.3
70	3000	Capacity	37.4	48.2	59.7	68.5	86.2	100.6	113.0	117.1	135.3
		Int. Cap.	34.6	44.4	54.8	62.4	75.5	100.6	113.0	117.1	135.3
	4000	Capacity	39.0	49.9	61.6	70.7	88.5	103.3	115.9	119.8	137.6
		Int. Cap.	36.1	45.9	56.6	64.5	77.5	103.3	115.9	119.8	137.6
	5000	Capacity	42.6	53.7	65.5	74.8	92.5	107.5	119.6	123.4	140.6
		Int. Cap.	39.4	49.4	60.1	68.2	81.1	107.5	119.6	123.4	140.6
80	3000	Capacity	33.9	44.8	56.5	65.1	83.2	97.3	109.5	113.4	131.6
		Int. Cap.	31.4	41.3	51.8	59.3	72.9	97.3	109.5	113.4	131.6
	4000	Capacity	35.5	46.6	58.5	67.3	85.5	100.0	112.5	116.5	134.2
		Int. Cap.	32.8	42.9	53.7	61.4	75.0	100.0	112.5	116.5	134.2
	5000	Capacity	39.1	50.4	62.3	71.3	89.6	104.3	116.6	120.4	137.5
		Int. Cap.	36.2	46.4	57.2	65.0	78.5	104.3	116.6	120.4	137.5

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 42 – HEATING CAPACITY

12.5 TONS

RHS150											
Return Air (°F db)	CFM (Standard Air)		Temperature Air Entering Outdoor Coil (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	3750	Capacity	33.7	47.5	69.8	83.1	109.3	131.7	149.7	155.6	180.1
		Int. Cap.	31.2	43.7	64.0	75.8	95.8	131.7	149.7	155.6	180.1
	5000	Capacity	35.7	49.7	72.4	85.8	112.9	136.1	152.9	158.1	178.7
		Int. Cap.	33.0	45.7	66.5	78.2	99.0	136.1	152.9	158.1	178.7
	6250	Capacity	38.9	53.0	76.2	89.5	117.1	139.4	153.5	158.0	175.6
		Int. Cap.	36.0	48.8	70.0	81.6	102.6	139.4	153.5	158.0	175.6
70	3750	Capacity	24.4	38.2	59.4	73.1	99.8	121.2	138.5	144.5	169.7
		Int. Cap.	22.6	35.2	54.5	66.7	87.4	121.2	138.5	144.5	169.7
	5000	Capacity	26.4	40.4	62.1	76.6	103.2	125.4	143.0	148.6	170.3
		Int. Cap.	24.4	37.2	57.0	69.8	90.4	125.4	143.0	148.6	170.3
	6250	Capacity	29.6	43.8	65.9	80.7	107.3	129.8	145.5	150.4	169.1
		Int. Cap.	27.3	40.3	60.5	73.6	94.0	129.8	145.5	150.4	169.1
80	3750	Capacity	17.5	31.4	52.6	65.6	93.3	114.2	131.1	137.0	162.4
		Int. Cap.	16.2	28.9	48.3	59.8	81.8	114.2	131.1	137.0	162.4
	5000	Capacity	19.3	33.4	55.2	68.7	96.6	118.2	135.7	141.5	164.0
		Int. Cap.	17.8	30.8	50.7	62.6	84.6	118.2	135.7	141.5	164.0
	6250	Capacity	22.4	40.3	58.8	72.7	100.6	122.6	139.3	144.3	163.8
		Int. Cap.	20.7	37.1	54.0	66.3	88.2	122.6	139.3	144.3	163.8

LEGEND

- Capacity – Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat @AHRI static conditions
- Int. Cap. – Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
- RH – Relative Humidity
- db – Dry Bulb

Table 43 – STATIC PRESSURE ADDERS (FACTORY OPTIONS AND/OR ACCESSORIES)

Economizer

3 – 6 TONS											
CFM (in. wg)	600	800	1000	1250	1500	1750	2000	2250	2500	2750	3000
Vertical Econo- mizer	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.26
Horizontal Economizer	0.02	0.03	0.04	0.06	0.08	0.10	0.13	0.15	0.18	0.23	0.28

7.5 – 12.5 TONS																
CFM (in. wg)	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
Vertical Econo- mizer	0.06	0.08	0.09	0.12	0.13	0.15	0.17	0.20	0.22	0.25	0.29	0.33	0.36	0.40	0.44	0.48
Horizontal Economizer	0.08	0.10	0.13	0.15	0.18	0.21	0.25	0.28	0.30	0.34	0.39	0.43	0.47	0.51	0.56	0.60

Electric Heaters

3 – 6 TONS											
CFM (in. wg)	600	900	1200	1400	1600	1800	2000	2200	2400	2600	
1 Electric Heater Module	0.03	0.05	0.07	0.09	0.09	0.10	0.11	0.11	0.12	0.13	
2 Electric Heater Modules	0.13	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	

7.5 – 10 TONS																
CFM (in. wg)	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
1 Electric Heater Module	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.18
2 Electric Heater Modules	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.19	0.20

12.5 TONS													
CFM (in. wg)	2813	3125	3438	3750	4063	4375	4688	5000	5313	5625	5938	6250	
Vertical – 1 Electric Heater Module	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	
Vertical – 2 Electric Heater Modules	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	
Horizontal – 1 Electric Heater Module	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.09	
Horizontal – 2 Electric Heater Modules	0.02	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	

ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE

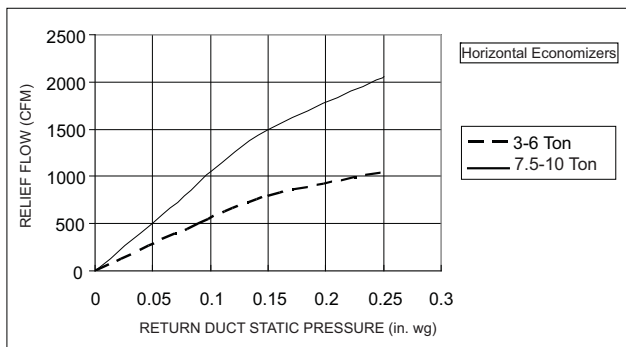


Fig. 16 – Barometric Relief Flow Capacity

C09879

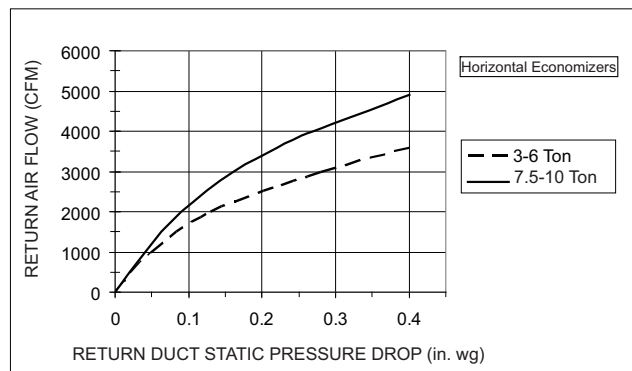
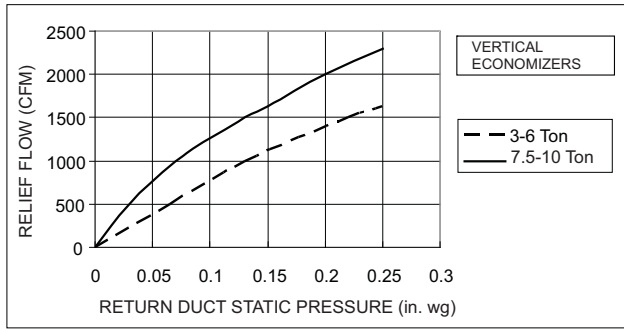


Fig. 17 – Return Air Pressure Drop

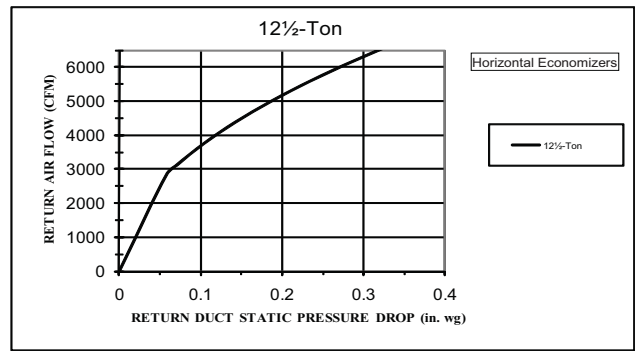
C09881

ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE (cont.)



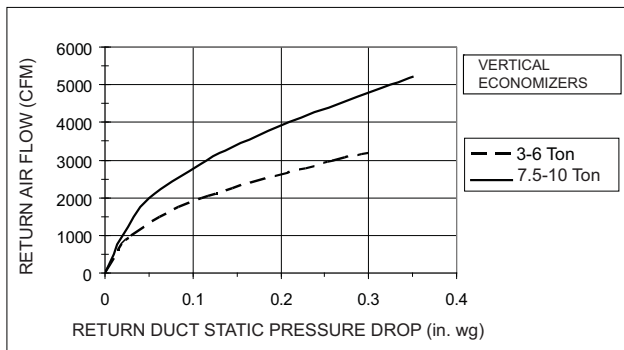
C09883

Fig. 18 – Barometric Relief Flow Capacity



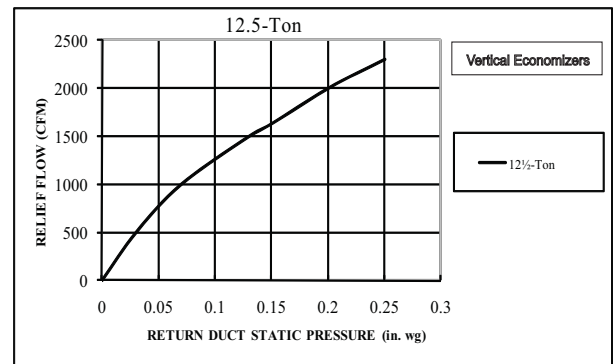
C150192

Fig. 21 – Return Air Flow



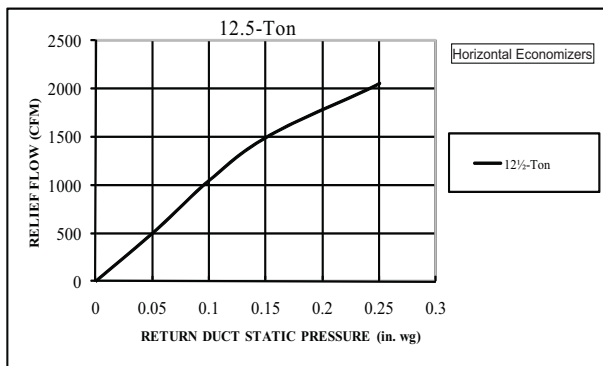
C09885

Fig. 19 – Return Air Pressure Drop



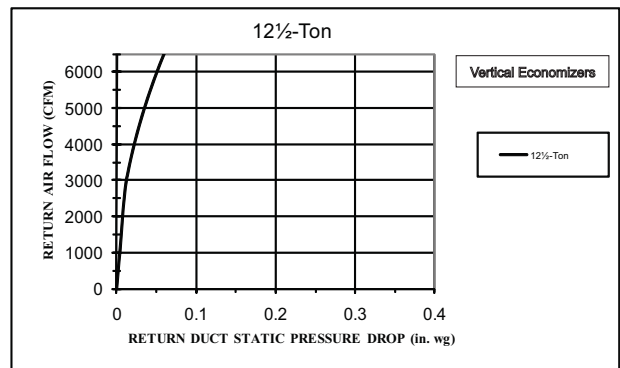
C150193

Fig. 22 – Relief Flow



C150191

Fig. 20 – Relief Flow



C150194

Fig. 23 – Return Air Flow

GENERAL FAN PERFORMANCE NOTES

1. Interpolation is permissible. Do not extrapolate.
2. External static pressure is the static pressure difference between the return duct and the supply duct plus the static pressure caused by any FIOPs or accessories.
3. Tabular data accounts for pressure loss due to clean filters, unit casing, and wet coils. Factory options and accessories may add static pressure losses, as shown in Table 43. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, ICP recommended the lower horsepower option.
5. For information on the electrical properties of ICP motors, please see the Electrical information section of this book.
6. For more information on the performance limits of ICP motors, see the application data section of this book.

FAN PERFORMANCE

Table 44 – RHS036 ELECTRIC DRIVE, X13 MOTOR, 3 TON HORIZONTAL SUPPLY

Speed (Torque) tap	CFM	ESP	BHP
1	900	0.70	0.31
	975	0.60	0.30
	1050	0.50	0.29
	1125	0.39	0.27
	1200	0.29	0.26
	1275	0.21	0.24
	1350	0.12	0.23
	1425	0.03	0.21
	1500	-	-
2	900	0.85	0.37
	975	0.76	0.36
	1050	0.66	0.36
	1125	0.55	0.34
	1200	0.46	0.34
	1275	0.36	0.32
	1350	0.27	0.31
	1425	0.17	0.29
	1500	0.07	0.27
3	900	1.02	0.44
	975	0.94	0.45
	1050	0.86	0.45
	1125	0.79	0.45
	1200	0.71	0.45
	1275	0.61	0.44
	1350	0.51	0.43
	1425	0.40	0.41
	1500	0.29	0.39
4	900	1.12	0.49
	975	1.06	0.50
	1050	1.00	0.52
	1125	0.95	0.53
	1200	0.89	0.54
	1275	0.80	0.53
	1350	0.70	0.52
	1425	0.57	0.50
	1500	0.46	0.49
5	900	1.18	0.52
	975	1.14	0.54
	1050	1.10	0.56
	1125	1.06	0.58
	1200	1.02	0.60
	1275	0.98	0.63
	1350	0.94	0.65
	1425	0.90	0.68
	1500	0.87	0.71

Table 45 – RHS036 ELECTRIC DRIVE, X13 MOTOR, 3 TON VERTICAL SUPPLY

Speed (Torque) tap	CFM	ESP	BHP
1	900	0.44	0.22
	975	0.35	0.21
	1050	0.24	0.20
	1125	0.15	0.19
	1200	0.08	0.19
	1275	0.02	0.18
	1350	-	-
	1425	-	-
	1500	-	-
2	900	0.64	0.30
	975	0.53	0.29
	1050	0.42	0.28
	1125	0.32	0.27
	1200	0.24	0.26
	1275	0.15	0.25
	1350	0.07	0.24
	1425	-	-
	1500	-	-
3	900	0.93	0.42
	975	0.80	0.41
	1050	0.68	0.39
	1125	0.57	0.38
	1200	0.47	0.37
	1275	0.35	0.36
	1350	0.26	0.34
	1425	0.13	0.33
	1500	0.08	0.32
4	900	1.04	0.47
	975	0.92	0.46
	1050	0.80	0.45
	1125	0.71	0.45
	1200	0.62	0.45
	1275	0.52	0.44
	1350	0.43	0.44
	1425	0.27	0.42
	1500	0.22	0.41
5	900	1.10	0.50
	975	1.00	0.49
	1050	0.90	0.49
	1125	0.82	0.50
	1200	0.75	0.51
	1275	0.70	0.54
	1350	0.67	0.57
	1425	0.60	0.60
	1500	0.62	0.64

FAN PERFORMANCE (cont.)

Table 46 – RHS048 ELECTRIC DRIVE, X13 MOTOR, 4 TON HORIZONTAL SUPPLY

Speed (Torque) tap	CFM	ESP	BHP
1	1200	0.75	0.48
	1300	0.63	0.46
	1400	0.48	0.44
	1500	0.33	0.41
	1600	0.19	0.39
	1700	0.05	0.36
	1800	-	-
	1900	-	-
	2000	-	-
2	1200	0.97	0.58
	1300	0.88	0.59
	1400	0.77	0.59
	1500	0.64	0.59
	1600	0.50	0.57
	1700	0.36	0.54
	1800	0.21	0.52
	1900	0.06	0.49
	2000	-	-
3	1200	0.98	0.59
	1300	0.91	0.60
	1400	0.82	0.62
	1500	0.71	0.62
	1600	0.58	0.61
	1700	0.45	0.60
	1800	0.31	0.58
	1900	0.16	0.56
	2000	0.03	0.52
4	1200	0.98	0.59
	1300	0.92	0.62
	1400	0.86	0.64
	1500	0.79	0.66
	1600	0.70	0.68
	1700	0.62	0.70
	1800	0.52	0.71
	1900	0.37	0.69
	2000	0.21	0.67
5	1200	1.02	0.60
	1300	0.97	0.64
	1400	0.92	0.67
	1500	0.87	0.71
	1600	0.82	0.75
	1700	0.77	0.79
	1800	0.71	0.84
	1900	0.65	0.88
	2000	0.58	0.92

Table 47 – RHS048 ELECTRIC DRIVE, X13 MOTOR, 4 TON VERTICAL SUPPLY

Speed (Torque) tap	CFM	ESP	BHP
1	1200	0.50	0.39
	1300	0.36	0.37
	1400	0.19	0.35
	1500	0.10	0.33
	1600	0.02	0.32
	1700	-	-
	1800	-	-
	1900	-	-
	2000	-	-
2	1200	0.80	0.55
	1300	0.69	0.55
	1400	0.50	0.54
	1500	0.38	0.52
	1600	0.24	0.50
	1700	0.13	0.48
	1800	0.01	0.46
	1900	-	-
	2000	-	-
3	1200	0.89	0.59
	1300	0.78	0.61
	1400	0.59	0.60
	1500	0.46	0.58
	1600	0.31	0.56
	1700	0.20	0.54
	1800	0.07	0.52
	1900	-	-
	2000	-	-
4	1200	0.89	0.60
	1300	0.80	0.63
	1400	0.67	0.64
	1500	0.57	0.65
	1600	0.43	0.65
	1700	0.31	0.66
	1800	0.23	0.65
	1900	0.12	0.63
	2000	0.01	0.62
5	1200	0.94	0.62
	1300	0.85	0.65
	1400	0.73	0.68
	1500	0.65	0.70
	1600	0.55	0.72
	1700	0.47	0.75
	1800	0.42	0.78
	1900	0.39	0.82
	2000	0.38	0.88

FAN PERFORMANCE (cont.)

Table 48 – RHS060 ELECTRIC DRIVE, X13 MOTOR, 5 TON HORIZONTAL SUPPLY

Speed (Torque) tap	CFM	ESP	BHP
1	1500	1.19	0.74
	1625	1.01	0.73
	1750	0.82	0.70
	1875	0.60	0.66
	2000	0.38	0.62
	2125	0.16	0.57
	2250	-	-
	2375	-	-
	2500	-	-
2	1500	1.40	0.86
	1625	1.25	0.88
	1750	1.08	0.86
	1875	0.90	0.84
	2000	0.67	0.80
	2125	0.44	0.75
	2250	0.20	0.71
	2375	-	-
	2500	-	-
3	1500	1.41	0.87
	1625	1.28	0.89
	1750	1.13	0.89
	1875	0.96	0.88
	2000	0.74	0.85
	2125	0.51	0.80
	2250	0.27	0.75
	2375	0.02	0.70
	2500	-	-
4	1500	1.44	0.89
	1625	1.35	0.93
	1750	1.24	0.96
	1875	1.11	0.98
	2000	0.90	0.96
	2125	0.69	0.92
	2250	0.43	0.86
	2375	0.17	0.81
	2500	-	-
5	1500	1.49	0.90
	1625	1.38	0.95
	1750	1.28	1.00
	1875	1.18	1.05
	2000	1.11	1.09
	2125	0.97	1.11
	2250	0.72	1.07
	2375	0.47	1.02
	2500	0.20	0.96

Table 49 – RHS060 ELECTRIC DRIVE, X13 MOTOR, 5 TON VERTICAL SUPPLY

Speed (Torque) tap	CFM	ESP	BHP
1	1500	1.00	0.70
	1625	0.72	0.65
	1750	0.46	0.60
	1875	0.28	0.55
	2000	0.14	0.51
	2125	0.00	0.52
	2250	-	-
	2375	-	-
	2500	-	-
2	1500	1.18	0.88
	1625	1.00	0.90
	1750	0.75	0.87
	1875	0.51	0.83
	2000	0.30	0.79
	2125	0.13	0.75
	2250	-	-
	2375	-	-
	2500	-	-
3	1500	1.19	0.88
	1625	1.03	0.91
	1750	0.80	0.90
	1875	0.56	0.87
	2000	0.35	0.83
	2125	0.19	0.80
	2250	0.01	0.77
	2375	-	-
	2500	-	-
4	1500	1.25	0.89
	1625	1.09	0.93
	1750	0.89	0.96
	1875	0.65	0.94
	2000	0.45	0.93
	2125	0.26	0.89
	2250	0.12	0.86
	2375	-	-
	2500	-	-
5	1500	1.26	0.90
	1625	1.16	0.96
	1750	0.99	1.01
	1875	0.80	1.05
	2000	0.67	1.07
	2125	0.48	1.07
	2250	0.26	1.03
	2375	0.11	1.00
	2500	-	-

FAN PERFORMANCE (cont.)

Table 50 – RHS036

3 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	574	0.13	707	0.23	817	0.34	913	0.47	999	0.61
975	597	0.15	727	0.25	835	0.37	929	0.50	1015	0.64
1050	621	0.18	747	0.28	853	0.40	946	0.53	1030	0.68
1125	646	0.20	768	0.31	872	0.43	964	0.57	1047	0.72
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76
1275	696	0.26	812	0.38	912	0.51	1001	0.65	1082	0.81
1350	723	0.30	835	0.42	933	0.55	1020	0.70	1100	0.86
1425	749	0.34	859	0.46	955	0.60	1040	0.75	1119	0.91
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97

Med static – 819–1251 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	1078	0.77	1151	0.93	1220	1.11	1284	1.30	1346	1.49
975	1093	0.80	1165	0.97	1233	1.15	1297	1.33	1358	1.53
1050	1108	0.84	1180	1.01	1247	1.19	1311	1.38	1371	1.58
1125	1123	0.88	1195	1.05	1261	1.23	1325	1.42	1385	1.62
1200	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1275	1157	0.97	1226	1.15	1292	1.33	1354	1.53	1414	1.73
1350	1174	1.02	1243	1.20	1308	1.39	1370	1.59	1429	1.80
1425	1192	1.08	1260	1.26	1325	1.45	1386	1.65	1444	1.86
1500	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93

Med static – 819–1251 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

Table 51 – RHS036

3 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	594	0.15	740	0.25	867	0.37	981	0.52	1084	0.68
975	618	0.17	758	0.28	881	0.40	991	0.55	1092	0.71
1050	642	0.19	777	0.30	896	0.43	1003	0.58	1102	0.75
1125	668	0.22	797	0.34	912	0.47	1017	0.62	1113	0.79
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83
1275	722	0.29	841	0.41	949	0.55	1048	0.71	1140	0.88
1350	750	0.33	864	0.46	968	0.60	1065	0.76	1155	0.93
1425	778	0.37	888	0.50	989	0.65	1083	0.81	1171	0.99
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05

Med static – 819–1251 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	1180	0.86	1269	1.05	1354	1.25	1434	1.47	1511	1.70
975	1186	0.89	1275	1.08	1358	1.29	1437	1.51	1513	1.74
1050	1194	0.92	1281	1.12	1363	1.32	1441	1.54	1516	1.78
1125	1204	0.97	1289	1.16	1370	1.37	1447	1.59	1520	1.82
1200	1215	1.01	1298	1.21	1378	1.42	1454	1.64	1526	1.87
1275	1227	1.06	1309	1.26	1387	1.47	1462	1.69	1533	1.92
1350	1240	1.12	1321	1.32	1397	1.53	1471	1.75	1541	1.99
1425	1254	1.18	1333	1.38	1409	1.59	1481	1.82	-	-
1500	1270	1.24	1347	1.45	1421	1.66	1492	1.89	-	-

Med static – 819–1251 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

Bold Face indicates field-supplied drive

Recommend using field-supplied fan pulley (part no. KR11AD561), motor pulley (part no. KR11HY181) and belt (part no. KR29AF041).

FAN PERFORMANCE (cont.)

Table 52 – RHS048

4 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76
1300	705	0.28	820	0.39	919	0.52	1007	0.67	1088	0.82
1400	740	0.33	851	0.45	947	0.58	1034	0.73	1113	0.89
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97
1600	813	0.45	916	0.58	1007	0.73	1089	0.89	1165	1.05
1700	851	0.52	949	0.66	1038	0.81	1118	0.97	1192	1.15
1800	888	0.60	984	0.75	1069	0.90	1148	1.07	1221	1.25
1900	927	0.69	1019	0.84	1102	1.00	1179	1.18	1250	1.36
2000	965	0.78	1054	0.94	1135	1.11	1210	1.29	1280	1.48

Med static – 920–1303 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1300	1162	0.99	1232	1.16	1297	1.35	1360	1.55	1419	1.75
1400	1186	1.06	1254	1.24	1319	1.43	1381	1.63	1439	1.84
1500	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93
1600	1236	1.23	1302	1.42	1365	1.62	1425	1.82	1483	2.04
1700	1262	1.33	1328	1.52	1390	1.72	1449	1.93	1505	2.15
1800	1289	1.44	1354	1.63	1415	1.84	1473	2.05	1529	2.27
1900	1317	1.55	1380	1.75	1441	1.96	1498	2.18	-	-
2000	1345	1.68	1408	1.88	1467	2.10	1524	2.32	-	-

Med static – 920–1303 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

Bold Face indicates field-supplied drive

Recommend using field-supplied fan pulley (part no. KR11AD561), motor pulley (part no. KR11HY181) and belt (part no. KR29AF041).

Table 53 – RHS048

4 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83
1300	731	0.30	849	0.43	955	0.57	1053	0.72	1145	0.89
1400	769	0.36	880	0.49	982	0.63	1077	0.79	1166	0.97
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05
1600	847	0.49	948	0.63	1042	0.79	1130	0.96	1213	1.14
1700	887	0.57	983	0.72	1073	0.88	1158	1.06	1239	1.24
1800	928	0.66	1020	0.82	1106	0.98	1188	1.16	1266	1.35
1900	969	0.76	1057	0.92	1140	1.09	1219	1.28	1295	1.48
2000	1010	0.87	1095	1.04	1175	1.21	1251	1.41	1325	1.61

Med static – 920–1303 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1215	1.01	1298	1.21	1378	1.42	1454	1.64	1526	1.87
1300	1231	1.08	1313	1.28	1390	1.49	1465	1.71	1536	1.94
1400	1249	1.16	1329	1.36	1405	1.57	1478	1.79	-	-
1500	1270	1.24	1347	1.45	1421	1.66	1492	1.89	-	-
1600	1292	1.34	1367	1.54	1440	1.76	1509	1.99	-	-
1700	1315	1.44	1389	1.65	1459	1.88	1527	2.11	-	-
1800	1341	1.56	1412	1.77	1481	2.00	-	-	-	-
1900	1367	1.68	1437	1.90	1504	2.13	-	-	-	-
2000	1395	1.82	1463	2.04	1528	2.28	-	-	-	-

Med static – 920–1303 RPM, Max BHP 1.5

High static – 1035–1466 RPM, Max BHP 2.0

Bold Face indicates field-supplied drive

Recommend using field-supplied fan pulley (part no. KR11AD561), motor pulley (part no. KR11HY181) and belt (part no. KR29AF041).

FAN PERFORMANCE (cont.)

Table 54 – RHS060

5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	725	0.33	840	0.46	937	0.60	1023	0.75	1101	0.90
1625	765	0.40	876	0.54	970	0.68	1054	0.84	1131	1.00
1750	806	0.48	912	0.63	1004	0.78	1087	0.94	1162	1.11
1875	847	0.57	950	0.72	1039	0.88	1120	1.05	1194	1.23
2000	889	0.66	988	0.83	1075	1.00	1154	1.18	1226	1.36
2125	931	0.78	1027	0.95	1112	1.13	1189	1.31	1260	1.50
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66
2375	1018	1.03	1107	1.23	1187	1.43	1261	1.63	1329	1.84
2500	1061	1.19	1148	1.39	1226	1.59	1297	1.81	1364	2.02

Med static – 1066–1380 RPM, Max BHP 2.0

High static – 1208–1639 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1172	1.06	1239	1.23	1302	1.40	1361	1.58	1418	1.77
1625	1201	1.16	1267	1.34	1329	1.52	1388	1.71	1444	1.90
1750	1231	1.28	1296	1.46	1358	1.65	1416	1.84	1472	2.04
1875	1262	1.41	1326	1.60	1387	1.79	1445	1.99	1499	2.20
2000	1294	1.55	1357	1.74	1417	1.95	1474	2.15	1528	2.36
2125	1326	1.70	1388	1.90	1447	2.11	1504	2.33	1557	2.55
2250	1359	1.87	1420	2.08	1479	2.29	1534	2.51	1587	2.74
2375	1393	2.05	1453	2.27	1511	2.49	1566	2.72	1618	2.95
2500	1427	2.24	1487	2.47	1543	2.70	1597	2.94	1649	3.18

Med static – 1066–1380 RPM, Max BHP 2.0

High static – 1208–1639 RPM, Max BHP 2.9

Table 55 – RHS060

5 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	794	0.41	902	0.55	993	0.69	1074	0.85	1147	1.00
1625	840	0.49	945	0.64	1034	0.80	1113	0.96	1185	1.13
1750	888	0.59	988	0.75	1075	0.92	1153	1.09	1223	1.26
1875	936	0.70	1033	0.87	1117	1.05	1193	1.23	1263	1.41
2000	984	0.82	1078	1.00	1160	1.19	1235	1.39	1303	1.58
2125	1033	0.96	1124	1.15	1204	1.35	1277	1.56	1343	1.76
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96
2375	1133	1.28	1217	1.50	1293	1.72	1363	1.95	1427	2.17
2500	1183	1.47	1265	1.70	1339	1.93	1406	2.17	1470	2.41

Med static – 1066–1380 RPM, Max BHP 2.0

High static – 1208–1639 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1214	1.16	1277	1.33	1336	1.50	1392	1.67	1445	1.85
1625	1251	1.30	1313	1.47	1371	1.65	1427	1.83	1479	2.02
1750	1289	1.44	1350	1.63	1407	1.81	1462	2.01	1514	2.20
1875	1327	1.60	1387	1.80	1444	1.99	1498	2.19	1550	2.40
2000	1366	1.78	1426	1.98	1482	2.19	1535	2.40	1586	2.61
2125	1406	1.97	1464	2.18	1520	2.40	1573	2.62	1623	2.84
2250	1446	2.18	1504	2.40	1559	2.62	1611	2.85	1661	3.09
2375	1487	2.40	1544	2.63	1598	2.87	1650	3.11	-	-
2500	1529	2.64	1585	2.89	1638	3.13	-	-	-	-

Med static – 1066–1380 RPM, Max BHP 2.0

High static – 1208–1639 RPM, Max BHP 2.9

FAN PERFORMANCE (cont.)

Table 56 – RHS072

6 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	822	0.51	927	0.66	1018	0.82	1100	0.98	1174	1.15
1950	872	0.62	973	0.79	1061	0.95	1140	1.13	1213	1.31
2100	923	0.75	1019	0.92	1104	1.10	1182	1.29	1253	1.48
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66
2400	1026	1.06	1115	1.26	1195	1.46	1268	1.66	1336	1.87
2550	1079	1.25	1164	1.46	1241	1.67	1312	1.88	1379	2.10
2700	1132	1.46	1214	1.67	1289	1.90	1358	2.12	1422	2.35
2850	1186	1.69	1264	1.92	1336	2.15	1404	2.39	1467	2.63
3000	1240	1.94	1315	2.18	1385	2.43	1451	2.68	1512	2.93

Std static – 878–1192 RPM, Max BHP 1.5
 Med static – 1066–1380 RPM, Max BHP 2.9
 High static – 1208–1639 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	1244	1.33	1308	1.51	1369	1.70	1427	1.90	1483	2.10
1950	1281	1.49	1345	1.68	1405	1.88	1462	2.09	1517	2.30
2100	1320	1.67	1382	1.87	1441	2.08	1498	2.29	1552	2.51
2250	1359	1.87	1420	2.08	1479	2.29	1534	2.51	1587	2.74
2400	1400	2.09	1460	2.31	1517	2.53	1572	2.76	1624	2.99
2550	1441	2.33	1500	2.55	1557	2.79	1610	3.03	1662	3.27
2700	1483	2.59	1541	2.83	1597	3.07	1650	3.32	-	-
2850	1527	2.87	1583	3.12	1638	3.37	-	-	-	-
3000	1571	3.18	1626	3.44	1680	3.70	-	-	-	-

Std static – 878–1192 RPM, Max BHP 1.5
 Med static – 1066–1380 RPM, Max BHP 2.9
 High static – 1208–1639 RPM, Max BHP 2.9

Table 57 – RHS072

6 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	907	0.63	1006	0.80	1092	0.97	1169	1.14	1239	1.32
1950	965	0.77	1060	0.95	1143	1.13	1218	1.32	1287	1.51
2100	1024	0.93	1115	1.12	1195	1.32	1268	1.52	1335	1.72
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96
2400	1143	1.32	1227	1.54	1302	1.76	1371	1.99	1435	2.22
2550	1203	1.55	1284	1.78	1357	2.02	1424	2.26	1487	2.50
2700	1264	1.81	1342	2.06	1412	2.31	1478	2.56	1539	2.82
2850	1326	2.09	1400	2.36	1469	2.62	1532	2.89	1592	3.16
3000	1387	2.41	1459	2.69	1525	2.97	1587	3.25	1646	3.53

Std static – 878–1192 RPM, Max BHP 1.5
 Med static – 1066–1380 RPM, Max BHP 2.9
 High static – 1208–1639 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	1304	1.51	1365	1.69	1422	1.88	1477	2.08	1528	2.28
1950	1350	1.71	1410	1.91	1467	2.11	1520	2.31	1572	2.52
2100	1398	1.93	1457	2.14	1512	2.35	1565	2.57	1616	2.79
2250	1446	2.18	1504	2.40	1559	2.62	1611	2.85	1661	3.09
2400	1496	2.45	1552	2.68	1606	2.92	1658	3.16	-	-
2550	1546	2.75	1601	2.99	1654	3.24	-	-	-	-
2700	1597	3.07	1651	3.33	-	-	-	-	-	-
2850	1648	3.43	-	-	-	-	-	-	-	-
3000	-	-	-	-	-	-	-	-	-	-

Std static – 878–1192 RPM, Max BHP 1.5
 Med static – 1066–1380 RPM, Max BHP 2.9
 High static – 1208–1639 RPM, Max BHP 2.9

FAN PERFORMANCE (cont.)

Table 58 – RHS090

7.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	423	0.28	509	0.40	587	0.52	659	0.66	725	0.80
2438	444	0.34	525	0.46	600	0.59	669	0.73	733	0.88
2625	465	0.40	543	0.53	614	0.67	680	0.82	743	0.97
2813	487	0.47	561	0.61	629	0.76	693	0.91	753	1.08
3000	510	0.55	580	0.70	646	0.86	707	1.02	765	1.19
3188	534	0.65	600	0.80	663	0.96	722	1.13	779	1.31
3375	557	0.75	621	0.91	681	1.08	738	1.26	793	1.44
3563	582	0.86	642	1.03	700	1.21	755	1.39	808	1.58
3750	606	0.99	664	1.17	720	1.35	773	1.54	824	1.74

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	788	0.94	847	1.09	903	1.25	957	1.41	1009	1.58
2438	794	1.03	852	1.19	907	1.36	959	1.52	1010	1.70
2625	802	1.13	858	1.30	911	1.47	963	1.64	1012	1.82
2813	811	1.24	865	1.41	917	1.59	967	1.77	1016	1.96
3000	821	1.36	874	1.54	925	1.72	974	1.91	1021	2.11
3188	832	1.49	884	1.68	933	1.87	981	2.06	1028	2.26
3375	845	1.63	895	1.82	943	2.02	990	2.22	1035	2.43
3563	858	1.78	907	1.98	954	2.19	1000	2.40	1044	2.61
3750	873	1.94	920	2.15	966	2.36	1011	2.58	1054	2.80

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

Table 59 – RHS090

7.5 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	447	0.31	528	0.43	597	0.54	658	0.66	713	0.78
2438	470	0.37	548	0.50	615	0.62	675	0.75	729	0.88
2625	494	0.45	569	0.58	634	0.71	692	0.85	745	0.99
2813	518	0.53	590	0.67	653	0.82	710	0.96	763	1.11
3000	543	0.62	612	0.77	673	0.93	729	1.08	780	1.24
3188	568	0.72	635	0.89	694	1.05	749	1.21	799	1.38
3375	593	0.84	658	1.01	716	1.19	769	1.36	818	1.53
3563	619	0.97	681	1.15	737	1.33	789	1.52	837	1.70
3750	645	1.11	705	1.30	760	1.49	810	1.68	857	1.88

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	764	0.89	812	1.02	856	1.14	899	1.26	939	1.39
2438	779	1.00	826	1.13	870	1.26	912	1.40	952	1.53
2625	795	1.12	841	1.26	885	1.40	926	1.54	966	1.68
2813	811	1.25	857	1.40	900	1.55	941	1.69	980	1.84
3000	828	1.39	873	1.55	916	1.70	956	1.86	995	2.02
3188	846	1.54	890	1.71	932	1.87	972	2.04	1010	2.21
3375	864	1.70	907	1.88	949	2.05	988	2.23	1026	2.40
3563	882	1.88	925	2.06	966	2.25	1005	2.43	1042	2.62
3750	902	2.07	944	2.26	984	2.45	1022	2.65	1059	2.84

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

FAN PERFORMANCE (cont.)

Table 60 – RHS102

8.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	468	0.39	546	0.52	618	0.66	684	0.80	747	0.96
2763	493	0.47	567	0.61	635	0.76	699	0.91	760	1.07
2975	520	0.57	589	0.72	654	0.87	716	1.03	774	1.20
3188	547	0.68	613	0.83	675	1.00	733	1.17	789	1.34
3400	575	0.80	637	0.96	696	1.14	752	1.31	806	1.50
3613	603	0.94	662	1.11	719	1.29	773	1.48	824	1.67
3825	631	1.09	688	1.27	742	1.46	794	1.66	843	1.86
4038	660	1.26	714	1.45	766	1.65	816	1.85	864	2.06
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	806	1.11	863	1.28	916	1.45	968	1.62	1018	1.80
2763	817	1.24	871	1.41	924	1.59	974	1.77	1022	1.95
2975	829	1.37	882	1.55	932	1.74	981	1.93	1028	2.12
3188	843	1.53	894	1.71	943	1.90	990	2.10	1036	2.30
3400	858	1.69	907	1.88	955	2.09	1001	2.29	1046	2.50
3613	874	1.87	922	2.07	968	2.28	1013	2.49	1057	2.71
3825	891	2.07	938	2.28	983	2.49	1027	2.71	1069	2.94
4038	910	2.28	955	2.50	999	2.72	1041	2.95	1083	3.19
4250	930	2.51	973	2.74	1015	2.97	1057	3.21	1097	3.45

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

Table 61 – RHS102

8.5 VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	495	0.43	570	0.56	634	0.70	693	0.83	746	0.96
2763	524	0.53	595	0.67	657	0.81	714	0.95	766	1.09
2975	552	0.63	620	0.79	681	0.94	736	1.09	787	1.24
3188	582	0.76	647	0.92	705	1.08	759	1.25	808	1.41
3400	611	0.89	674	1.07	730	1.24	782	1.42	831	1.59
3613	641	1.05	701	1.23	756	1.42	806	1.60	854	1.79
3825	672	1.22	729	1.42	782	1.61	831	1.81	877	2.00
4038	702	1.41	758	1.62	809	1.83	857	2.03	901	2.24
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	795	1.09	841	1.23	885	1.36	926	1.50	965	1.64
2763	814	1.24	859	1.38	902	1.53	943	1.68	982	1.82
2975	834	1.40	878	1.55	921	1.71	961	1.86	999	2.02
3188	855	1.57	898	1.74	940	1.90	979	2.07	1017	2.24
3400	876	1.76	919	1.94	960	2.12	998	2.29	1036	2.47
3613	898	1.97	940	2.16	980	2.34	1018	2.53	1055	2.72
3825	921	2.20	962	2.40	1001	2.59	1039	2.79	1075	2.99
4038	944	2.45	984	2.65	1023	2.86	1060	3.07	1096	3.27
4250	968	2.71	1007	2.93	1045	3.15	1081	3.36	1117	3.58

Std static – 460–652 RPM, Max BHP 1.2
 Med static – 591–838 RPM, Max BHP 2.9
 High static – 838–1084 RPM, Max BHP 2.9

FAN PERFORMANCE (cont.)

Table 62 – RHS120

10 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	523	0.58	592	0.73	657	0.88	718	1.05	775	1.22
3250	555	0.71	620	0.87	681	1.04	739	1.21	794	1.39
3500	588	0.86	649	1.03	707	1.21	762	1.39	815	1.58
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79
4000	655	1.23	709	1.42	761	1.61	812	1.82	860	2.03
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29
4500	723	1.69	773	1.90	820	2.12	866	2.35	910	2.57
4750	758	1.96	805	2.19	850	2.42	894	2.65	937	2.89
5000	793	2.26	838	2.50	881	2.74	923	2.98	965	3.23

Std static – 591–839 RPM, Max BHP 1.2

Med static – 733–949 RPM, Max BHP 2.9

High static – 838–1084 RPM, Max BHP 3.7

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3250	847	1.57	897	1.76	946	1.96	993	2.16	1039	2.36
3500	865	1.77	914	1.97	961	2.18	1007	2.38	1051	2.60
3750	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86
4000	907	2.24	952	2.46	996	2.68	1038	2.91	1080	3.14
4250	930	2.51	973	2.74	1015	2.97	1057	3.21	1097	3.45
4500	954	2.81	996	3.05	1037	3.29	1076	3.54	1115	3.79
4750	979	3.13	1019	3.38	1059	3.63	1097	3.89	1135	4.15
5000	1005	3.49	1044	3.74	1082	4.01	1119	4.27	1156	4.55

Std static – 591–839 RPM, Max BHP 2.4

Med static – 733–949 RPM, Max BHP 2.9

High static – 838–1084 RPM, Max BHP 3.7

Table 63 – RHS120

10 VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	556	0.65	623	0.80	684	0.95	738	1.11	789	1.26
3250	590	0.79	655	0.96	713	1.13	766	1.29	815	1.46
3500	625	0.96	687	1.14	742	1.32	794	1.50	841	1.68
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93
4000	697	1.37	753	1.58	804	1.79	852	1.99	897	2.20
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49
4500	770	1.89	821	2.13	869	2.36	914	2.59	956	2.82
4750	807	2.20	856	2.45	902	2.69	945	2.94	986	3.18
5000	844	2.54	891	2.80	936	3.06	978	3.31	1018	3.57

Std static – 591–839 RPM, Max BHP 2.4

Med static – 733–949 RPM, Max BHP 2.9

High static – 838–1084 RPM, Max BHP 3.7

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	836	1.42	881	1.57	923	1.73	963	1.89	1001	2.05
3250	861	1.63	904	1.79	945	1.96	985	2.13	1023	2.30
3500	886	1.86	929	2.04	969	2.22	1008	2.40	1045	2.58
3750	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89
4000	940	2.40	980	2.61	1019	2.81	1056	3.02	1092	3.22
4250	968	2.71	1007	2.93	1045	3.15	1081	3.36	1117	3.58
4500	996	3.05	1035	3.28	1072	3.51	1108	3.74	1142	3.97
4750	1026	3.42	1063	3.66	1100	3.91	1135	4.15	1168	4.39
5000	1056	3.82	1093	4.08	1128	4.34	1162	4.59	-	-

Std static – 591–839 RPM, Max BHP 2.4

Med static – 733–949 RPM, Max BHP 2.9

High static – 838–1084 RPM, Max BHP 3.7

FAN PERFORMANCE (cont.)

Table 64 – RHS150

12.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3750	381	0.53	452	0.74	520	0.98	584	1.26	645	1.56
4063	401	0.63	468	0.86	531	1.11	592	1.39	651	1.69
4375	421	0.75	484	0.99	544	1.25	601	1.53	657	1.85
4688	441	0.89	501	1.14	558	1.40	612	1.70	666	2.02
5000	462	1.04	519	1.30	573	1.58	625	1.88	675	2.21
5313	483	1.21	537	1.49	589	1.77	638	2.08	686	2.42
5625	504	1.40	556	1.69	605	1.99	653	2.31	699	2.65
5938	525	1.61	575	1.91	622	2.22	668	2.55	712	2.90
6250	546	1.84	595	2.15	640	2.48	684	2.82	726	3.17

Std static – 507–676 RPM, Max BHP 2.9

Med static – 634–833 RPM, Max BHP 2.9

High static – 792–971 RPM, 208V: Max BHP 5.0; 230V/460V: Max BHP 6.1; 575V: Max BHP 5.9

Bold Face requires standard static drive package with KR11HY153 (1VP34) motor pulley (338–507)

Italics requires high static drive package with KR11HY186 (1VM50) motor pulley (684–864)

CFM	Available External Static Pressure (in. wg)											
	1.2		1.4		1.6		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3750	703	1.88	757	2.23	808	2.59	855	2.97	878	3.17	900	3.36
4063	707	2.03	760	2.38	810	2.75	857	3.14	880	3.34	902	3.55
4375	711	2.18	763	2.55	812	2.93	859	3.33	882	3.53	904	3.74
4688	717	2.36	767	2.73	815	3.12	862	3.52	884	3.73	906	3.94
5000	725	2.55	773	2.93	820	3.32	865	3.73	887	3.95	908	4.16
5313	734	2.77	780	3.15	825	3.55	869	3.96	890	4.18	912	4.40
5625	744	3.01	788	3.39	832	3.79	874	4.22	895	4.44	916	4.66
5938	755	3.27	798	3.65	840	4.06	881	4.49	901	4.71	921	4.94
6250	768	3.55	808	3.94	849	4.36	888	4.79	908	5.01	927	5.24

Std static – 507–676 RPM, Max BHP 2.9

Med static – 634–833 RPM, Max BHP 2.9

High static – 792–971 RPM, 208V: Max BHP 5.0; 230V/460V: Max BHP 6.1; 575V: Max BHP 5.9

Italics requires high static drive package with KR11HY186 (1VM50) motor pulley (684–864)

Table 65 – RHS150

12.5 VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3750	441	0.65	513	0.88	582	1.15	647	1.45	707	1.78
4063	466	0.78	533	1.03	598	1.30	660	1.61	718	1.95
4375	491	0.94	554	1.19	615	1.48	674	1.80	730	2.14
4688	517	1.11	576	1.38	634	1.68	690	2.00	744	2.36
5000	543	1.31	599	1.59	653	1.90	706	2.23	758	2.59
5313	570	1.54	622	1.82	674	2.14	724	2.48	774	2.85
5625	596	1.78	646	2.08	695	2.41	743	2.76	790	3.14
5938	623	2.06	671	2.37	717	2.71	763	3.07	808	3.45
6250	650	2.36	695	2.69	740	3.03	784	3.40	827	3.80

Std static – 507–676 RPM, Max BHP 2.9

Med static – 634–833 RPM, Max BHP 2.9

High static – 792–971 RPM, 208V: Max BHP 5.0; 230V/460V: Max BHP 6.1; 575V: Max BHP 5.9

Bold Face requires standard static drive package with KR11HY153 (1VP34) motor pulley (338–507)

Italics requires high static drive package with KR11HY186 (1VM50) motor pulley (684–864)

CFM	Available External Static Pressure (in. wg)											
	1.2		1.4		1.6		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3750	764	2.12	816	2.48	866	2.86	912	3.24	935	3.44	956	3.64
4063	773	2.31	825	2.68	874	3.07	921	3.47	943	3.68	965	3.88
4375	784	2.51	835	2.90	883	3.30	929	3.72	951	3.93	973	4.14
4688	795	2.73	845	3.13	893	3.54	938	3.98	960	4.19	981	4.42
5000	808	2.98	856	3.38	903	3.81	947	4.25	969	4.48	990	4.71
5313	822	3.25	868	3.66	914	4.10	957	4.55	978	4.78	999	5.02
5625	837	3.54	882	3.96	925	4.41	968	4.87	989	5.11	1009	5.35
5938	852	3.86	896	4.30	938	4.75	980	5.22	1000	5.46	1020	5.71
6250	869	4.22	911	4.65	952	5.12	992	5.59	1012	5.84	1032	6.09

Std static – 507–676 RPM, Max BHP 2.9

Med static – 634–833 RPM, Max BHP 2.9

High static – 792–971 RPM, 208V: Max BHP 5.0; 230V/460V: Max BHP 6.1; 575V: Max BHP 5.9

Bold Face requires standard static drive package with KR11HY153 (1VP34) motor pulley (338–507)

Italics requires high static drive package with KR11HY186 (1VM50) motor pulley (684–864)

Underline requires high static drive package with KR11HY194 (1VP60) motor pulley (864–1061).

FAN PERFORMANCE (cont.)

Table 66 – PULLEY ADJUSTMENT – BELT DRIVE

Unit		Motor/Drive Combo	Motor Pulley turns open											5.5	6
			0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5		
036	3 phase	Medium Static	1251	1208	1165	1121	1078	1035	992	949	905	862	819	-	-
		High Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035	-	-
048	3 phase	Medium Static	1303	1265	1226	1188	1150	1112	1073	1035	997	958	920	-	-
		High Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035	-	-
060	3 phase	Medium Static	1380	1349	1317	1286	1254	1223	1192	1160	1129	1097	1066	-	-
		High Static	1639	1596	1553	1510	1467	1424	1380	1337	1294	1251	1208	-	-
072	3 phase	Standard Static	1192	1161	1129	1098	1066	1035	1004	972	941	909	878	-	-
		Medium Static	1380	1349	1317	1286	1254	1223	1192	1160	1129	1097	1066	-	-
		High Static	1639	1596	1553	1510	1467	1424	1380	1337	1294	1251	1208	-	-
090	3 phase	Standard Static	652	633	614	594	575	556	537	518	498	479	460	-	-
		Medium Static	838	813	789	764	739	715	690	665	640	616	591	-	-
		High Static	1084	1059	1035	1010	986	961	936	912	887	863	838	-	-
102	3 phase	Standard Static	652	633	614	594	575	556	537	518	498	479	460	-	-
		Medium Static	838	813	789	764	739	715	690	665	640	616	591	-	-
		High Static	1084	1059	1035	1010	986	961	936	912	887	863	838	-	-
120	3 phase	Standard Static	652	633	614	594	575	556	537	518	498	479	460	-	-
		Medium Static	838	813	789	764	739	715	690	665	640	616	591	-	-
		High Static	1084	1059	1035	1010	986	961	936	912	887	863	838	-	-
150	3 phase	Standard Static	676	659	642	625	608	592	575	558	541	524	507	*	*
		Medium Static	**	**	833	813	793	773	753	734	714	694	674	654	634
		High Static	**	**	971	953	935	917	899	882	864	846	828	810	792

NOTE: Do not adjust pulley further than 5 turns open.

■ – Factory settings

* Do not set motor pulley above 5 turns open for A or AX section belts

** Do not set motor pulley below 1 turn open for B or BX section belts

ELECTRICAL INFORMATION

Table 67 – RHS036
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-1-60	187	253	17.9	112	190	0.9	DD-STD	78%	7.4
230-1-60	187	253	17.9	112	190	0.9	DD-STD	78%	7.4
208-3-60	187	253	13.2	88	190	0.9	DD-STD	78%	7.4
							MED	87%	5.2
							HIGH	87%	6.9
230-3-60	187	253	13.2	88	190	0.9	DD-STD	78%	7.4
							MED	87%	4.9
							HIGH	87%	6.7
460-3-60	414	506	6.0	44	190	0.5	DD-STD	78%	4.0
							MED	87%	2.5
							HIGH	87%	3.4
575-3-60	518	633	4.2	30	190	0.4	DD-STD	78%	4.0
							MED	72%	1.6
							HIGH	78%	2.0

Table 68 – RHS048
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-1-60	187	253	21.8	117	325	1.5	DD-STD	78%	7.4
230-1-60	187	253	21.8	117	325	1.5	DD-STD	78%	7.4
208-3-60	187	253	13.7	83	325	1.5	DD-STD	78%	7.4
							MED	87%	5.2
							HIGH	87%	6.9
230-3-60	187	253	13.7	83	325	1.5	DD-STD	78%	7.4
							MED	87%	4.9
							HIGH	87%	6.7
460-3-60	414	506	6.2	41	325	0.8	DD-STD	78%	4.0
							MED	87%	2.5
							HIGH	87%	3.4
575-3-60	518	633	4.8	33	325	0.6	DD-STD	78%	4.0
							MED	72%	1.6
							HIGH	78%	2.0

Table 69 – RHS060
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-1-60	187	253	26.2	134	325	1.5	DD-STD	84%	7.4
230-1-60	187	253	26.2	134	325	1.5	DD-STD	84%	7.4
208-3-60	187	253	15.6	110	325	1.5	DD-STD	84%	7.4
							MED	80%	5.2
							HIGH	81%	7.5
230-3-60	187	253	15.6	110	325	1.5	DD-STD	84%	7.4
							MED	80%	5.2
							HIGH	81%	7.5
460-3-60	414	506	7.7	52	325	0.8	DD-STD	84%	7.6
							MED	80%	2.6
							HIGH	81%	3.4
575-3-60	518	633	5.8	39	325	0.6	DD-STD	84%	4.0
							MED	80%	2.0
							HIGH	81%	2.8

See Legend and Notes for Tables 67-93 on Page 90.

ELECTRICAL INFORMATION (cont.)

Table 70 – RHS072

SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

(Units Produced On or After 02/09/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	19.6	136	325	1.5	STD	80%	5.2
							MED	81%	8.4
							HIGH	81%	8.4
230-3-60	187	253	19.6	136	325	1.5	STD	80%	4.9
							MED	81%	8.3
							HIGH	81%	8.3
460-3-60	414	506	8.2	66	325	0.8	STD	80%	2.5
							MED	81%	4.2
							HIGH	81%	4.2
575-3-60	518	633	6.6	55	325	0.6	STD	80%	1.6
							MED	81%	2.8
							HIGH	81%	2.8

(Units Produced on or Prior to 02/08/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	19.0	123	325	1.5	STD	80%	5.2
							MED	81%	8.4
							HIGH	81%	8.4
230-3-60	187	253	19.0	123	325	1.5	STD	80%	4.9
							MED	81%	8.3
							HIGH	81%	8.3
460-3-60	414	506	9.7	62	325	0.8	STD	80%	2.5
							MED	81%	4.2
							HIGH	81%	4.2
575-3-60	518	633	7.4	50	325	0.6	STD	80%	1.6
							MED	81%	2.8
							HIGH	81%	2.8

Table 71 – RHS090

2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	80%	5.2
									MED	81%	8.4
									HIGH	81%	8.4
230-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	80%	4.9
									MED	81%	8.3
									HIGH	81%	8.3
460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD	80%	2.5
									MED	81%	4.2
									HIGH	81%	4.2
575-3-60	518	633	4.4	33	4.4	33	325	0.6	STD	80%	1.6
									MED	81%	2.8
									HIGH	81%	2.8

See Legend and Notes for Tables 67-93 on Page 90.

ELECTRICAL INFORMATION (cont.)

Table 72 – RHS090

2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	84%	5.8
							325	1.5	MED	85%	8.6
							325	1.5	HIGH	85%	8.6
230-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	84%	5.6
							325	1.5	MED	85%	7.8
							325	1.5	HIGH	85%	7.8
460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD	79%	2.9
							325	0.8	MED	85%	3.8
							325	0.8	HIGH	85%	3.8
575-3-60	518	633	4.4	33	4.4	33	325	0.6	STD	81%	2.8
							325	0.6	MED	84%	4.5
							325	0.6	HIGH	84%	4.5

Table 73 – RHS102

2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (Units Produced On or After 02/09/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	80%	5.2
									MED	80%	8.4
									HIGH	80%	8.4
230-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	80%	4.9
									MED	80%	8.3
									HIGH	80%	8.3
460-3-60	414	506	6.3	55	6.2	41	325	0.8	STD	80%	2.5
									MED	80%	4.2
									HIGH	80%	4.2
575-3-60	518	633	6.0	41	4.8	33	325	0.6	STD	80%	1.6
									MED	80%	2.8
									HIGH	81%	2.8

(Units Produced on or Prior to 02/08/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	16.0	91	13.7	83	325	1.5	STD	90%	5.2
									MED	90%	8.4
									HIGH	90%	8.4
230-3-60	187	253	16.0	91	13.7	83	325	1.5	STD	90%	4.9
									MED	90%	8.3
									HIGH	90%	8.3
460-3-60	414	506	7.0	46	6.2	41	325	0.8	STD	90%	2.5
									MED	90%	4.2
									HIGH	90%	4.2
575-3-60	518	633	5.6	37	4.8	33	325	0.6	STD	90%	1.6
									MED	80%	2.8
									HIGH	80%	2.8

See Legend and Notes for Tables 67-93 on Page 90.

ELECTRICAL INFORMATION (cont.)

Table 74 – RHS102

2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

(Units Produced On or After 02/09/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	84%	5.8
							325	1.5	MED	85%	8.6
							325	1.5	HIGH	85%	8.6
230-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	84%	5.6
							325	1.5	MED	85%	7.8
							325	1.5	HIGH	85%	7.8
460-3-60	414	506	6.3	55	6.2	41	325	0.8	STD	79%	2.9
							325	0.8	MED	85%	3.8
							325	0.8	HIGH	85%	3.8
575-3-60	518	633	6.0	41	4.8	33	325	0.6	STD	81%	2.8
							325	0.6	MED	84%	4.5
							325	0.6	HIGH	84%	4.5

(Units Produced on or Prior to 02/08/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	16.0	91	13.7	83	325	1.5	STD	80%	5.8
							325	1.5	MED	90%	8.6
							325	1.5	HIGH	90%	8.6
230-3-60	187	253	16.0	91	13.7	83	325	1.5	STD	90%	5.6
							325	1.5	MED	90%	7.8
							325	1.5	HIGH	80%	7.8
460-3-60	414	506	7.0	46	6.2	41	325	0.8	STD	80%	2.9
							325	0.8	MED	90%	3.8
							325	0.8	HIGH	90%	3.8
575-3-60	518	633	5.6	37	4.8	33	325	0.6	STD	80%	2.8
							325	0.6	MED	80%	4.5
							325	0.6	HIGH	80%	4.5

Table 75 – RHS120

2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	15.6	110	15.9	110	1070	6.2	STD	80%	6.9
									MED	80%	10.6
									HIGH	80%	13.6
230-3-60	187	253	15.6	110	15.9	110	1070	6.2	STD	80%	6.7
									MED	80%	10.6
									HIGH	80%	12.7
460-3-60	414	506	7.7	52	7.7	52	1070	3.1	STD	80%	3.4
									MED	80%	5.3
									HIGH	80%	6.4
575-3-60	518	633	5.8	39	5.7	39	1070	2.5	STD	80%	2
									MED	80%	2.8
									HIGH	81%	5.6

See Legend and Notes for Tables 67-93 on Page 90.

ELECTRICAL INFORMATION (cont.)

Table 76 – RHS120
2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	15.6	110	15.9	110	1070	6.2	STD	77%	7.1
							1070	6.2	MED	82%	10.8
							1070	6.2	HIGH	84%	13.6
230-3-60	187	253	15.6	110	15.9	110	1070	6.2	STD	77%	6.8
							1070	6.2	MED	82%	9.8
							1070	6.2	HIGH	84%	12.7
460-3-60	414	506	7.7	52	7.7	52	1070	3.1	STD	77%	3.8
							1070	3.1	MED	82%	4.9
							1070	3.1	HIGH	84%	6.4
575-3-60	518	633	5.8	39	5.7	39	1070	2.5	STD	80%	3.5
							1070	2.5	MED	84%	4.5
							1070	2.5	HIGH	83%	6.2

Table 77 – RHS150
2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	22.4	149	22.4	149	280	1.5	STD	90%	8.4
									MED	90%	8.4
									HIGH	90%	17
230-3-60	187	253	22.4	149	22.4	149	280	1.5	STD	90%	8.3
									MED	90%	8.3
									HIGH	90%	15
460-3-60	414	506	10.6	75	10.6	75	280	0.8	STD	90%	4.2
									MED	90%	4.2
									HIGH	80%	7.6
575-3-60	518	633	8.5	54	8.5	54	280	0.7	STD	80%	2.8
									MED	90%	2.8
									HIGH	90%	6.1

Table 78 – RHS150
2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	22.4	149	22.4	149	280	1.5	STD	90%	8.6
							280	1.5	MED	90%	8.6
							280	1.5	HIGH	90%	20.4
230-3-60	187	253	22.4	149	22.4	149	280	1.5	STD	90%	7.8
							280	1.5	MED	90%	7.8
							280	1.5	HIGH	90%	20.4
460-3-60	414	506	10.6	75	10.6	75	280	0.8	STD	90%	3.8
							280	0.8	MED	90%	3.8
							280	0.8	HIGH	90%	10.2
575-3-60	518	633	8.5	54	8.5	54	280	0.7	STD	80%	4.5
							280	0.7	MED	80%	4.5
							280	0.7	HIGH	90%	9.0

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP

Table 79 – RHS036

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS036	208/230-1-60	DD-STD	NONE	-	-	31	45	30	121	-	-	-	-
			101A	3.3/4.4	15.9/18.3	51/54	60/60	48/51	137/139	-	-	-	-
			102A	4.9/6.5	23.5/27.1	61/65	70/70	57/61	145/148	-	-	-	-
			103B	6.5/8.7	31.4/36.3	70/77	70/80	66/72	152/157	-	-	-	-
			104B	7.9/10.5	37.9/43.8	79/86	80/90	74/81	159/165	-	-	-	-
			102A+102A	9.8/13.0	46.9/54.2	90/99	90/100	84/92	215/229	-	-	-	-
	208/230-3-60	DD-STD	NONE	-	-	25	30	25	97	27	30	27	99
			101A	3.3/4.4	9.2/10.6	37/39	45/45	35/37	106/108	39/40	45/50	37/39	108/110
			102A	4.9/6.5	13.6/15.6	42/45	50/50	40/43	111/113	44/47	50/50	43/45	113/115
			103B	6.5/8.7	18.1/20.9	48/51	50/60	46/49	115/118	50/53	50/60	48/51	117/120
			104B	7.9/10.5	21.9/25.3	53/57	60/60	50/54	119/122	55/59	60/60	52/56	121/124
			105A	12.0/16.0	33.4/38.5	67/73	70/80	63/69	130/136	69/75	70/80	65/71	132/138
		MED	NONE	-	-	23/23	30/30	22/22	126	25/25	30/30	24/24	128
			101A	3.3/4.4	9.2/10.6	35/36	45/45	33/34	135/137	36/38	45/45	35/36	137/139
			102A	4.9/6.5	13.6/15.6	40/42	45/50	38/40	140/142	42/44	50/50	40/42	142/144
			103B	6.5/8.7	18.1/20.9	46/49	50/50	43/46	144/147	48/51	50/60	45/48	146/149
			104B	7.9/10.5	21.9/25.3	50/54	50/60	47/51	148/151	52/56	60/60	50/53	150/153
			105A	12.0/16.0	33.4/38.5	65/71	70/80	61/66	159/165	67/73	70/80	63/68	161/167
		HIGH	NONE	-	-	25/25	30/30	24/24	147	27/26	30/30	26/26	149
			101A	3.3/4.4	9.2/10.6	36/38	45/45	35/36	156/158	38/40	45/45	37/38	158/160
			102A	4.9/6.5	13.6/15.6	42/44	50/50	40/42	161/163	44/46	50/50	42/44	163/165
			103B	6.5/8.7	18.1/20.9	47/51	50/60	45/48	165/168	49/53	50/60	47/50	167/170
			104B	7.9/10.5	21.9/25.3	52/56	60/60	49/53	169/172	54/58	60/60	52/55	171/174
			105A	12.0/16.0	33.4/38.5	67/73	70/80	63/68	180/186	68/75	70/80	65/70	182/188
460-3-60	DD-STD	NONE	-	-	12	15	12	49	13	15	13	50	
		106A	6.0	7.2	21	25	20	56	22	25	22	57	
		107A	8.8	10.6	26	30	24	60	27	30	25	61	
		108A	11.5	13.8	30	30	28	63	31	35	29	64	
		109A	14.0	16.8	33	35	31	66	34	35	33	67	
	MED	NONE	-	-	11	15	10	63	12	15	12	64	
		106A	6.0	7.2	20	20	19	70	21	25	20	71	
		107A	8.8	10.6	24	25	23	74	25	25	24	75	
		108A	11.5	13.8	28	30	26	77	29	30	27	78	
		109A	14.0	16.8	32	35	30	80	33	35	31	81	
	HIGH	NONE	-	-	12	15	11	73	13	15	13	74	
		106A	6.0	7.2	21	25	20	80	22	25	21	81	
		107A	8.8	10.6	25	25	24	84	26	30	25	85	
		108A	11.5	13.8	29	30	27	87	30	30	28	88	
		109A	14.0	16.8	33	35	31	90	34	35	32	91	
575-3-60	DD-STD	NONE	-	-	10	15	10	35	12	15	12	37	
	MED	NONE	-	-	8	15	7	38	10	15	9	40	
	HIGH	NONE	-	-	8	15	8	42	10	15	10	44	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 80 – RHS048

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

UNIT	NOM. V—PH—HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS048	208/230—1—60	DD-STD	NONE	—	—	37	50	35	128	—	—	—	—
			101A	3.3/4.4	15.9/18.3	56/59	60/60	54/56	144/146	—	—	—	—
			103B	6.5/8.7	31.4/36.3	76/82	80/90	71/77	159/164	—	—	—	—
			102A+102A	9.8/13.0	46.9/54.2	95/104	100/110	89/98	222/236	—	—	—	—
			103B+103B	13.1/17.4	62.8/72.5	115/127	125/150	108/119	254/273	—	—	—	—
			104B+104B	15.8/21.0	75.8/87.5	131/146	150/150	122/136	280/303	—	—	—	—
	208/230—3—60	DD-STD	NONE	—	—	26	30	26	94	28	40	28	96
			102A	4.9/6.5	13.6/15.6	43/46	50/50	42/44	108/110	45/48	50/50	44/46	110/112
			103B	6.5/8.7	18.1/20.9	49/53	50/60	47/50	112/115	51/55	60/60	49/52	114/117
			105A	12.0/16.0	33.4/38.5	68/75	70/80	64/70	127/133	70/77	70/80	67/72	129/135
			104B+104B	15.8/21.0	43.8/50.5	81/90	90/90	76/84	182/195	83/92	90/100	79/86	184/197
		MED	NONE	—	—	24/24	30/30	23/23	123	26/26	30/30	26/25	125
			102A	4.9/6.5	13.6/15.6	41/43	50/50	39/41	137/139	43/45	50/50	41/43	139/141
			103B	6.5/8.7	18.1/20.9	47/50	50/50	44/47	141/144	49/52	50/60	46/49	143/146
			105A	12.0/16.0	33.4/38.5	66/72	70/80	62/67	156/162	68/74	70/80	64/70	158/164
			104B+104B	15.8/21.0	43.8/50.5	79/87	80/90	74/81	211/224	81/89	90/90	76/83	213/226
		HIGH	NONE	—	—	26/26	30/30	25/25	144	28/28	40/40	28/27	146
			102A	4.9/6.5	13.6/15.6	43/45	50/50	41/43	158/160	45/47	50/50	43/45	160/162
	103B		6.5/8.7	18.1/20.9	49/52	50/60	46/49	162/165	51/54	60/60	48/51	164/167	
	105A		12.0/16.0	33.4/38.5	68/74	70/80	64/69	177/183	70/76	70/80	66/72	179/185	
	104B+104B		15.8/21.0	43.8/50.5	81/89	90/90	76/83	232/245	83/91	90/100	78/85	234/247	
	460—3—60	DD-STD	NONE	—	—	13	15	13	47	14	20	14	48
			106A	6.0	7.2	22	25	21	54	23	25	22	55
			108A	11.5	13.8	30	30	29	61	31	35	30	62
			109A	14.0	16.8	34	35	32	64	35	35	33	65
			108A+108A	23.0	27.7	48	50	45	102	49	50	46	103
		MED	NONE	—	—	12	15	11	61	13	15	12	62
			106A	6.0	7.2	21	25	19	68	22	25	20	69
108A			11.5	13.8	29	30	27	75	30	30	28	76	
109A			14.0	16.8	33	35	30	78	34	35	31	79	
108A+108A			23.0	27.7	46	50	43	116	47	50	44	117	
HIGH		NONE	—	—	12	15	12	71	13	15	13	72	
		106A	6.0	7.2	21	25	20	78	22	25	21	79	
	108A	11.5	13.8	30	30	28	85	31	35	29	86		
	109A	14.0	16.8	33	35	31	88	34	35	32	89		
	108A+108A	23.0	27.7	47	50	44	126	48	50	45	127		
575—3—60	DD-STD	NONE	—	—	11	15	11	39	13	15	13	41	
	MED	NONE	—	—	9	15	8	42	11	15	10	44	
	HIGH	NONE	—	—	9	15	9	46	11	15	11	48	

See Legend and Notes for Tables 67–93 on Page 90.

MCA/MOCP (cont.)

Table 81 – RHS060

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

UNIT	NOM. V – PH – HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS060	208/230–1–60	DD-STD	NONE	–	–	42	60	40	145	–	–	–	–
			102A	4.9/6.5	23.5/27.1	71/76	80/80	67/72	169/172	–	–	–	–
			103B	6.5/8.7	31.4/36.3	81/87	90/100	76/82	176/181	–	–	–	–
			102A+102A	9.8/13.0	46.9/54.2	101/110	110/110	94/103	239/253	–	–	–	–
			103B+103B	13.1/17.4	62.8/72.5	121/133	125/150	113/124	271/290	–	–	–	–
			104B+104B	15.8/21.0	75.8/87.5	137/151	150/175	128/141	297/320	–	–	–	–
	208/230–3–60	DD-STD	NONE	–	–	29	40	28	121	31	45	30	123
			102A	4.9/6.5	13.6/15.6	46/48	50/50	44/46	135/137	48/50	50/60	46/48	137/139
			104B	7.9/10.5	21.9/25.3	56/60	60/70	53/57	143/146	58/62	60/70	56/59	145/148
			105A	12.0/16.0	33.4/38.5	71/77	80/80	67/72	154/160	73/79	80/80	69/75	156/162
			104B+104B	15.8/21.0	43.8/50.5	84/92	90/100	79/86	209/222	86/94	90/100	81/88	211/224
			104B+105A	19.9/26.5	55.2/63.8	98/109	100/110	92/102	231/249	100/111	100/125	94/104	233/251
		MED	NONE	–	–	28/28	40/40	28/27	171	30/30	45/45	30/30	173
			102A	4.9/6.5	13.6/15.6	45/48	50/50	43/45	185/187	47/50	50/60	45/47	187/189
			104B	7.9/10.5	21.9/25.3	56/60	60/60	53/56	193/196	58/62	60/70	55/59	195/198
			105A	12.0/16.0	33.4/38.5	70/76	70/80	66/72	204/210	72/78	80/80	68/74	206/212
			104B+104B	15.8/21.0	43.8/50.5	83/91	90/100	78/85	259/272	85/93	90/100	80/88	261/274
			104B+105A	19.9/26.5	55.2/63.8	97/108	100/110	91/101	281/299	99/110	100/110	93/103	283/301
	HIGH	NONE	–	–	30/30	45/40	29/29	186	32/32	45/45	32/31	188	
		102A	4.9/6.5	13.6/15.6	47/49	50/60	45/47	200/202	49/51	60/60	47/49	202/204	
		104B	7.9/10.5	21.9/25.3	57/61	60/70	55/58	208/211	59/63	60/70	57/60	210/213	
		105A	12.0/16.0	33.4/38.5	72/78	80/80	68/73	219/225	74/80	80/80	70/76	221/227	
		104B+104B	15.8/21.0	43.8/50.5	85/93	90/100	80/87	274/287	87/95	90/100	82/89	276/289	
		104B+105A	19.9/26.5	55.2/63.8	99/110	100/110	93/103	296/314	101/111	110/125	95/105	298/316	
	460–3–60	DD-STD	NONE	–	–	15	20	14	58	16	20	16	59
			106A	6.0	7.2	24	25	23	65	25	30	24	66
			108A	11.5	13.8	32	35	30	72	33	35	31	73
			109A	14.0	16.8	36	40	34	75	37	40	35	76
108A+108A			23.0	27.7	50	50	46	113	51	60	47	114	
108A+109A			25.5	30.7	53	60	50	119	54	60	51	120	
MED		NONE	–	–	14	20	14	82	15	20	15	83	
		106A	6.0	7.2	23	25	22	89	24	25	23	90	
		108A	11.5	13.8	32	35	30	96	33	35	31	97	
		109A	14.0	16.8	35	35	33	99	36	40	34	100	
		108A+108A	23.0	27.7	49	50	46	137	50	50	47	138	
		108A+109A	25.5	30.7	53	60	49	143	54	60	50	144	
HIGH		NONE	–	–	15	20	15	90	16	20	16	91	
		106A	6.0	7.2	24	25	23	97	25	30	24	98	
		108A	11.5	13.8	32	35	30	104	33	35	32	105	
		109A	14.0	16.8	36	40	34	107	37	40	35	108	
		108A+108A	23.0	27.7	50	50	46	145	51	60	48	146	
		108A+109A	25.5	30.7	53	60	50	151	54	60	51	152	
575–3–60	DD-STD	NONE	–	–	12	15	12	45	14	20	14	47	
	MED	NONE	–	–	10	15	10	52	12	15	12	54	
	HIGH	NONE	–	–	11	15	11	63	13	15	13	65	

See Legend and Notes for Tables 67–93 on Page 90.

MCA/MOCP (cont.)

Table 82 – RHS072

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (Units Produced On or After 02/09/2015)

UNIT	NOM. V-PH-HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS072	208/230-3-60	STD	NONE	-	-	32/31	50/50	30/30	176	34/33	50/50	32/32	178
			102A	4.9/6.5	13.6/15.6	49/51	60/60	46/48	190/192	51/53	60/60	48/50	192/194
			104B	7.9/10.5	21.9/25.3	59/63	60/70	55/59	198/201	61/65	70/70	58/61	200/203
			105A	12.0/16.0	33.4/38.5	73/79	80/80	69/74	209/215	75/81	80/90	71/76	211/217
			104B+104B	15.8/21.0	43.8/50.5	86/94	90/100	81/88	264/277	88/96	90/100	83/90	266/279
			104B+105A	19.9/26.5	55.2/63.8	101/111	110/125	94/103	286/304	103/113	110/125	96/105	288/306
		MED	NONE	-	-	35/35	50/50	34/34	212	37/37	50/50	36/36	214
			102A	4.9/6.5	13.6/15.6	52/54	60/60	50/52	226/228	54/56	60/60	52/54	228/230
			104B	7.9/10.5	21.9/25.3	62/66	70/70	59/63	234/237	64/68	70/80	61/65	236/239
			105A	12.0/16.0	33.4/38.5	77/83	80/90	72/78	245/251	79/85	80/90	75/80	247/253
			104B+104B	15.8/21.0	43.8/50.5	90/98	90/100	84/92	300/313	92/100	100/100	86/94	302/315
			104B+105A	19.9/26.5	55.2/63.8	104/115	110/125	97/107	322/340	106/116	110/125	100/109	324/342
		HIGH	NONE	-	-	35/35	50/50	34/34	212	37/37	50/50	36/36	214
			102A	4.9/6.5	13.6/15.6	52/54	60/60	50/52	226/228	54/56	60/60	52/54	228/230
			104B	7.9/10.5	21.9/25.3	62/66	70/70	59/63	234/237	64/68	70/80	61/65	236/239
	105A		12.0/16.0	33.4/38.5	77/83	80/90	72/78	245/251	79/85	80/90	75/80	247/253	
	104B+104B		15.8/21.0	43.8/50.5	90/98	90/100	84/92	300/313	92/100	100/100	86/94	302/315	
	104B+105A		19.9/26.5	55.2/63.8	104/115	110/125	97/107	322/340	106/116	110/125	100/109	324/342	
	460-3-60	STD	NONE	-	-	14	20	13	86	15	20	14	87
			106A	6.0	7.2	23	25	22	93	24	25	23	94
			108A	11.5	13.8	31	35	29	100	32	35	30	101
			109A	14.0	16.8	35	35	33	103	36	40	34	104
			108A+108A	23.0	27.7	49	50	45	141	50	50	46	142
			108A+109A	25.5	30.7	52	60	49	147	53	60	50	148
MED		NONE	-	-	16	20	15	104	17	20	16	105	
		106A	6.0	7.2	25	30	23	111	26	30	25	112	
		108A	11.5	13.8	33	35	31	118	34	35	32	119	
		109A	14.0	16.8	37	40	35	121	38	40	36	122	
		108A+108A	23.0	27.7	50	50	47	159	51	60	48	160	
		108A+109A	25.5	30.7	54	60	50	165	55	60	52	166	
HIGH		NONE	-	-	16	20	15	104	17	20	16	105	
		106A	6.0	7.2	25	30	23	111	26	30	25	112	
		108A	11.5	13.8	33	35	31	118	34	35	32	119	
		109A	14.0	16.8	37	40	35	121	38	40	36	122	
		108A+108A	23.0	27.7	50	50	47	159	51	60	48	160	
		108A+109A	25.5	30.7	54	60	50	165	55	60	52	166	
575-3-60	STD	NONE	-	-	11	15	10	64	13	15	12	66	
	MED	NONE	-	-	12	15	12	79	14	20	14	81	
	HIGH	NONE	-	-	12	15	12	79	14	20	14	81	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 83 – RHS072

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (Units Produced on or Prior to 02/08/2015)

UNIT	NOM. V-PH-HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS072	208/230-3-60	STD	NONE	-	-	31/31	45/45	30/29	163	33/33	50/50	32/31	165
			102A	4.9/6.5	13.6/15.6	48/50	60/60	45/47	177/179	50/52	60/60	47/49	179/181
			104B	7.9/10.5	21.9/25.3	58/62	60/70	55/58	185/188	60/64	60/70	57/60	187/190
			105A	12.0/16.0	33.4/38.5	73/79	80/80	68/73	196/202	75/81	80/90	70/76	198/204
			104B+104B	15.8/21.0	43.8/50.5	86/94	90/100	80/87	251/264	88/96	90/100	82/89	253/266
		104B+105A	19.9/26.5	55.2/63.8	100/110	100/110	93/103	273/291	102/112	110/125	95/105	275/293	
		MED	NONE	-	-	34/34	50/50	33/33	199	36/36	50/50	35/35	201
			102A	4.9/6.5	13.6/15.6	51/54	60/60	49/51	213/215	53/55	60/60	51/53	215/217
			104B	7.9/10.5	21.9/25.3	61/66	70/70	58/62	221/224	63/68	70/70	61/64	223/226
			105A	12.0/16.0	33.4/38.5	76/82	80/90	72/77	232/238	78/84	80/90	74/80	234/240
			104B+104B	15.8/21.0	43.8/50.5	89/97	90/100	84/91	287/300	91/99	100/100	86/93	289/302
		104B+105A	19.9/26.5	55.2/63.8	103/114	110/125	97/106	309/327	105/116	110/125	99/109	311/329	
		HIGH	NONE	-	-	34/34	50/50	33/33	199	36/36	50/50	35/35	201
			102A	4.9/6.5	13.6/15.6	51/54	60/60	49/51	213/215	53/55	60/60	51/53	215/217
			104B	7.9/10.5	21.9/25.3	61/66	70/70	58/62	221/224	63/68	70/70	61/64	223/226
	105A		12.0/16.0	33.4/38.5	76/82	80/90	72/77	232/238	78/84	80/90	74/80	234/240	
	104B+104B		15.8/21.0	43.8/50.5	89/97	90/100	84/91	287/300	91/99	100/100	86/93	289/302	
	104B+105A	19.9/26.5	55.2/63.8	103/114	110/125	97/106	309/327	105/116	110/125	99/109	311/329		
	460-3-60	STD	NONE	-	-	16	25	15	82	17	25	16	83
			106A	6.0	7.2	25	30	23	89	26	30	24	90
			108A	11.5	13.8	33	35	31	96	34	35	32	97
			109A	14.0	16.8	37	40	34	99	38	40	35	100
			108A+108A	23.0	27.7	51	60	47	137	52	60	48	138
			108A+109A	25.5	30.7	54	60	50	143	55	60	51	144
MED		NONE	-	-	18	25	17	100	19	25	18	101	
		106A	6.0	7.2	27	30	25	107	28	30	26	108	
		108A	11.5	13.8	35	40	33	114	36	40	34	115	
		109A	14.0	16.8	39	40	36	117	40	40	37	118	
		108A+108A	23.0	27.7	52	60	49	155	53	60	50	156	
108A+109A		25.5	30.7	56	60	52	161	57	60	53	162		
HIGH		NONE	-	-	18	25	17	100	19	25	18	101	
		106A	6.0	7.2	27	30	25	107	28	30	26	108	
		108A	11.5	13.8	35	40	33	114	36	40	34	115	
		109A	14.0	16.8	39	40	36	117	40	40	37	118	
		108A+108A	23.0	27.7	52	60	49	155	53	60	50	156	
108A+109A		25.5	30.7	56	60	52	161	57	60	53	162		
575-3-60	STD	NONE	-	-	12	15	11	59	14	20	13	61	
	MED	NONE	-	-	13	20	12	74	15	20	15	76	
	HIGH	NONE	-	-	13	20	12	74	15	20	15	76	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 84 – RHS090

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS090	208/230-3-60	STD	NONE	-	-	38/38	50/50	40/39	210	42/42	50/50	44/44	214
			117A	7.8/10.4	21.7/25.0	65/69	70/70	65/68	232/235	69/73	70/80	69/72	236/239
			110A	12.0/16.0	33.4/38.5	80/86	80/90	78/83	243/249	84/90	90/90	82/88	247/253
			111A	18.6/24.8	51.7/59.7	103/112	110/125	99/108	262/270	107/116	110/125	103/112	266/274
			112A	24.0/32.0	66.7/77.0	122/134	125/150	116/128	277/287	125/138	125/150	121/132	281/291
			112A+117A	31.8/42.4	88.4/102.0	149/165	150/175	141/157	387/414	152/169	175/175	146/161	391/418
		MED	NONE	-	-	41/41	50/50	43/43	246	45/45	50/50	48/47	250
			117A	7.8/10.4	21.7/25.0	68/72	70/80	68/72	268/271	72/76	80/80	73/76	272/275
			110A	12.0/16.0	33.4/38.5	83/89	90/90	82/87	279/285	87/93	90/100	86/92	283/289
	111A		18.6/24.8	51.7/59.7	106/116	110/125	103/112	298/306	110/120	110/125	107/116	302/310	
	112A		24.0/32.0	66.7/77.0	125/137	125/150	120/132	313/323	129/141	150/150	124/136	317/327	
	112A+117A		31.8/42.4	88.4/102.0	152/169	175/175	145/160	423/450	156/173	175/175	149/165	427/454	
	HIGH	NONE	-	-	41/41	50/50	43/43	246	45/45	50/50	48/47	250	
		117A	7.8/10.4	21.7/25.0	68/72	70/80	68/72	268/271	72/76	80/80	73/76	272/275	
		110A	12.0/16.0	33.4/38.5	83/89	90/90	82/87	279/285	87/93	90/100	86/92	283/289	
		111A	18.6/24.8	51.7/59.7	106/116	110/125	103/112	298/306	110/120	110/125	107/116	302/310	
		112A	24.0/32.0	66.7/77.0	125/137	125/150	120/132	313/323	129/141	150/150	124/136	317/327	
		112A+117A	31.8/42.4	88.4/102.0	152/169	175/175	145/160	423/450	156/173	175/175	149/165	427/454	
460-3-60	STD	NONE	-	-	18	20	19	104	20	25	21	106	
		116A	13.9	16.7	39	40	38	121	41	45	40	123	
		113A	16.5	19.8	43	45	42	124	45	45	44	126	
		114A	27.8	33.4	60	60	57	137	62	70	59	139	
		115A	33.0	39.7	68	70	64	144	70	70	66	146	
		114A+116A	41.7	50.2	81	90	76	204	83	90	79	206	
	MED	NONE	-	-	20	25	21	122	22	25	23	124	
		116A	13.9	16.7	41	45	40	139	43	45	42	141	
		113A	16.5	19.8	45	45	43	142	47	50	46	144	
114A		27.8	33.4	62	70	59	155	64	70	61	157		
115A		33.0	39.7	70	70	66	162	71	80	68	164		
114A+116A		41.7	50.2	83	90	78	222	85	90	81	224		
HIGH	NONE	-	-	20	25	21	122	22	25	23	124		
	116A	13.9	16.7	41	45	40	139	43	45	42	141		
	113A	16.5	19.8	45	45	43	142	47	50	46	144		
	114A	27.8	33.4	62	70	59	155	64	70	61	157		
	115A	33.0	39.7	70	70	66	162	71	80	68	164		
	114A+116A	41.7	50.2	83	90	78	222	85	90	81	224		
575-3-60	STD	NONE	-	-	13	15	13	77	17	20	18	81	
		118A	17.0	20.4	39	40	37	97	42	45	41	101	
		119A	34.0	40.9	64	70	60	118	68	70	65	122	
	MED	NONE	-	-	14	20	15	92	18	20	19	96	
		118A	17.0	20.4	40	40	38	112	44	45	43	116	
		119A	34.0	40.9	65	70	62	133	69	70	66	137	
	HIGH	NONE	-	-	14	20	15	92	18	20	19	96	
		118A	17.0	20.4	40	40	38	112	44	45	43	116	
		119A	34.0	40.9	65	70	62	133	69	70	66	137	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 85 – RHS090

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS090	208/230-3-60	STD	NONE	-	-	39/39	50/50	40/40	197	43/42	50/50	45/44	201
			117A	7.8/10.4	21.7/25.0	66/70	70/70	65/69	219/222	70/74	70/80	70/73	223/226
			110A	12.0/16.0	33.4/38.5	80/87	90/90	79/84	230/236	84/90	90/90	83/89	234/240
			111A	18.6/24.8	51.7/59.7	103/113	110/125	100/109	249/257	107/117	110/125	104/113	253/261
			112A	24.0/32.0	66.7/77.0	122/135	125/150	117/129	264/274	126/139	150/150	121/133	268/278
			112A+117A	31.8/42.4	88.4/102.0	149/166	150/175	142/157	374/401	153/170	175/175	146/162	378/405
		MED	NONE	-	-	42/41	50/50	43/43	227	45/45	50/50	48/47	231
			117A	7.8/10.4	21.7/25.0	69/72	70/80	68/71	249/252	72/76	80/80	73/76	253/256
			110A	12.0/16.0	33.4/38.5	83/89	90/90	82/87	260/266	87/93	90/100	86/91	264/270
	111A		18.6/24.8	51.7/59.7	106/115	110/125	103/111	279/287	110/119	110/125	107/116	283/291	
	112A		24.0/32.0	66.7/77.0	125/137	125/150	120/131	294/304	129/141	150/150	125/135	298/308	
	112A+117A		31.8/42.4	88.4/102.0	152/168	175/175	145/160	404/431	156/172	175/175	150/164	408/435	
	HIGH	NONE	-	-	42/41	50/50	43/43	227	45/45	50/50	48/47	231	
		117A	7.8/10.4	21.7/25.0	69/72	70/80	68/71	249/252	72/76	80/80	73/76	253/256	
		110A	12.0/16.0	33.4/38.5	83/89	90/90	82/87	260/266	87/93	90/100	86/91	264/270	
		111A	18.6/24.8	51.7/59.7	106/115	110/125	103/111	279/287	110/119	110/125	107/116	283/291	
		112A	24.0/32.0	66.7/77.0	125/137	125/150	120/131	294/304	129/141	150/150	125/135	298/308	
		112A+117A	31.8/42.4	88.4/102.0	152/168	175/175	145/160	404/431	156/172	175/175	150/164	408/435	
460-3-60	STD	NONE	-	-	19	20	19	97	20	25	21	99	
		116A	13.9	16.7	40	40	38	114	41	45	40	116	
		113A	16.5	19.8	43	45	42	117	45	45	44	119	
		114A	27.8	33.4	60	60	58	130	62	70	60	132	
		115A	33.0	39.7	68	70	65	137	70	70	67	139	
		114A+116A	41.7	50.2	81	90	77	197	83	90	79	199	
	MED	NONE	-	-	20	25	20	113	21	25	22	115	
		116A	13.9	16.7	40	40	39	130	42	45	42	132	
		113A	16.5	19.8	44	45	43	133	46	50	45	135	
114A		27.8	33.4	61	70	59	146	63	70	61	148		
115A		33.0	39.7	69	70	66	153	71	80	68	155		
114A+116A		41.7	50.2	82	90	78	213	84	90	80	215		
HIGH	NONE	-	-	20	25	20	113	21	25	22	115		
	116A	13.9	16.7	40	40	39	130	42	45	42	132		
	113A	16.5	19.8	44	45	43	133	46	50	45	135		
	114A	27.8	33.4	61	70	59	146	63	70	61	148		
	115A	33.0	39.7	69	70	66	153	71	80	68	155		
	114A+116A	41.7	50.2	82	90	78	213	84	90	80	215		
575-3-60	STD	NONE	-	-	14	20	15	79	18	20	19	83	
		118A	17.0	20.4	40	40	38	99	44	45	43	103	
		119A	34.0	40.9	65	70	62	120	69	70	66	124	
	MED	NONE	-	-	16	20	17	92	20	25	21	96	
		118A	17.0	20.4	42	45	40	112	45	45	45	116	
		119A	34.0	40.9	67	70	64	133	71	80	68	137	
	HIGH	NONE	-	-	16	20	17	92	20	25	21	96	
		118A	17.0	20.4	42	45	40	112	45	45	45	116	
		119A	34.0	40.9	67	70	64	133	71	80	68	137	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 86 – RHS102

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (Units Produced On or After 02/09/2015)

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)				
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		
								FLA	LRA			FLA	LRA	
RHS102	208/230-3-60	STD	NONE	-	-	40/40	50/50	42/42	225	44/44	50/50	46/46	229	
			117A	7.8/10.4	21.7/25.0	68/71	70/80	67/70	247/250	71/75	80/80	71/75	251/254	
			110A	12.0/16.0	33.4/38.5	82/88	90/90	80/86	258/264	86/92	90/100	85/90	262/268	
			111A	18.6/24.8	51.7/59.7	105/115	110/125	101/110	277/285	109/119	110/125	106/115	281/289	
			112A	24.0/32.0	66.7/77.0	124/136	125/150	119/130	292/302	128/140	150/150	123/134	296/306	
			112A+117A	31.8/42.4	88.4/102.0	151/168	175/175	144/159	402/429	155/171	175/175	148/163	406/433	
		MED	NONE	-	-	44/44	50/50	46/45	261	47/47	60/60	50/50	265	
			117A	7.8/10.4	21.7/25.0	71/75	80/80	70/74	283/286	75/79	80/80	75/79	287/290	
			110A	12.0/16.0	33.4/38.5	85/92	90/100	84/90	294/300	89/96	90/100	88/94	298/304	
			111A	18.6/24.8	51.7/59.7	108/118	110/125	105/114	313/321	112/122	125/125	109/118	317/325	
			112A	24.0/32.0	66.7/77.0	127/140	150/150	122/134	328/338	131/144	150/150	127/138	332/342	
			112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/163	438/465	158/175	175/175	152/167	442/469	
		HIGH	NONE	-	-	44/44	50/50	46/45	261	47/47	60/60	50/50	265	
			117A	7.8/10.4	21.7/25.0	71/75	80/80	70/74	283/286	75/79	80/80	75/79	287/290	
			110A	12.0/16.0	33.4/38.5	85/92	90/100	84/90	294/300	89/96	90/100	88/94	298/304	
	111A		18.6/24.8	51.7/59.7	108/118	110/125	105/114	313/321	112/122	125/125	109/118	317/325		
	112A		24.0/32.0	66.7/77.0	127/140	150/150	122/134	328/338	131/144	150/150	127/138	332/342		
	112A+117A		31.8/42.4	88.4/102.0	154/171	175/175	147/163	438/465	158/175	175/175	152/167	442/469		
RHS102	460-3-60	STD	NONE	-	-	19	20	19	118	20	25	21	120	
			116A	13.9	16.7	40	40	38	135	41	45	40	137	
			113A	16.5	19.8	43	45	42	138	45	45	44	140	
			114A	27.8	33.4	60	60	58	151	62	70	60	153	
			115A	33.0	39.7	68	70	65	158	70	70	67	160	
			114A+116A	41.7	50.2	81	90	77	218	83	90	79	220	
		MED	NONE	-	-	20	25	21	136	22	25	23	138	
			116A	13.9	16.7	41	45	40	153	43	45	42	155	
			113A	16.5	19.8	45	45	44	156	47	50	46	158	
	HIGH	114A	27.8	33.4	62	70	59	169	64	70	62	171		
		115A	33.0	39.7	70	70	67	176	72	80	69	178		
		114A+116A	41.7	50.2	83	90	79	236	85	90	81	238		
		NONE	-	-	20	25	21	136	22	25	23	138		
		116A	13.9	16.7	41	45	40	153	43	45	42	155		
		113A	16.5	19.8	45	45	44	156	47	50	46	158		
	RHS102	575-3-60	STD	NONE	-	-	16	20	16	85	19	25	20	89
				118A	17.0	20.4	41	45	39	105	45	45	43	109
				119A	34.0	40.9	67	70	63	126	70	80	67	130
MED		NONE	-	-	17	20	17	100	21	25	21	104		
		118A	17.0	20.4	42	45	40	120	46	50	45	124		
		119A	34.0	40.9	68	70	64	141	72	80	68	145		
HIGH		NONE	-	-	17	20	17	100	21	25	21	104		
		118A	17.0	20.4	42	45	40	120	46	50	45	124		
		119A	34.0	40.9	68	70	64	141	72	80	68	145		

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 87 – RHS102

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (Units Produced on or Prior to 02/08/2015)

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)				
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		
								FLA	LRA			FLA	LRA	
RHS102	208/230-3-60	STD	NONE	-	-	40/40	50/50	42/42	225	44/44	50/50	46/46	229	
			117A	7.8/10.4	21.7/25.0	68/71	70/80	67/70	247/250	71/75	80/80	71/75	251/254	
			110A	12.0/16.0	33.4/38.5	82/88	90/90	80/86	258/264	86/92	90/100	85/90	262/268	
			111A	18.6/24.8	51.7/59.7	105/115	110/125	101/110	277/285	109/119	110/125	106/115	281/289	
			112A	24.0/32.0	66.7/77.0	124/136	125/150	119/130	292/302	128/140	150/150	123/134	296/306	
			112A+117A	31.8/42.4	88.4/102.0	151/168	175/175	144/159	402/429	155/171	175/175	148/163	406/433	
		MED	NONE	-	-	44/44	50/50	46/45	261	47/47	60/60	50/50	265	
			117A	7.8/10.4	21.7/25.0	71/75	80/80	70/74	283/286	75/79	80/80	75/79	287/290	
			110A	12.0/16.0	33.4/38.5	85/92	90/100	84/90	294/300	89/96	90/100	88/94	298/304	
			111A	18.6/24.8	51.7/59.7	108/118	110/125	105/114	313/321	112/122	125/125	109/118	317/325	
			112A	24.0/32.0	66.7/77.0	127/140	150/150	122/134	328/338	131/144	150/150	127/138	332/342	
			112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/163	438/465	158/175	175/175	152/167	442/469	
		HIGH	NONE	-	-	44/44	50/50	46/45	261	47/47	60/60	50/50	265	
			117A	7.8/10.4	21.7/25.0	71/75	80/80	70/74	283/286	75/79	80/80	75/79	287/290	
			110A	12.0/16.0	33.4/38.5	85/92	90/100	84/90	294/300	89/96	90/100	88/94	298/304	
	111A		18.6/24.8	51.7/59.7	108/118	110/125	105/114	313/321	112/122	125/125	109/118	317/325		
	112A		24.0/32.0	66.7/77.0	127/140	150/150	122/134	328/338	131/144	150/150	127/138	332/342		
	112A+117A		31.8/42.4	88.4/102.0	154/171	175/175	147/163	438/465	158/175	175/175	152/167	442/469		
RHS102	460-3-60	STD	NONE	-	-	19	20	19	118	20	25	21	120	
			116A	13.9	16.7	40	40	38	135	41	45	40	137	
			113A	16.5	19.8	43	45	42	138	45	45	44	140	
			114A	27.8	33.4	60	60	58	151	62	70	60	153	
			115A	33.0	39.7	68	70	65	158	70	70	67	160	
			114A+116A	41.7	50.2	81	90	77	218	83	90	79	220	
		MED	NONE	-	-	20	25	21	136	22	25	23	138	
			116A	13.9	16.7	41	45	40	153	43	45	42	155	
			113A	16.5	19.8	45	45	44	156	47	50	46	158	
	HIGH	114A	27.8	33.4	62	70	59	169	64	70	62	171		
		115A	33.0	39.7	70	70	67	176	72	80	69	178		
		114A+116A	41.7	50.2	83	90	79	236	85	90	81	238		
		NONE	-	-	20	25	21	136	22	25	23	138		
		116A	13.9	16.7	41	45	40	153	43	45	42	155		
		113A	16.5	19.8	45	45	44	156	47	50	46	158		
	RHS102	575-3-60	STD	NONE	-	-	16	20	16	85	19	25	20	89
				118A	17.0	20.4	41	45	39	105	45	45	43	109
				119A	34.0	40.9	67	70	63	126	70	80	67	130
MED		NONE	-	-	17	20	17	100	21	25	21	104		
		118A	17.0	20.4	42	45	40	120	46	50	45	124		
		119A	34.0	40.9	68	70	64	141	72	80	68	145		
HIGH		NONE	-	-	17	20	17	100	21	25	21	104		
		118A	17.0	20.4	42	45	40	120	46	50	45	124		
		119A	34.0	40.9	68	70	64	141	72	80	68	145		

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 88 – RHS102

**MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O.
2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR**

(Units Produced On or After 02/09/2015)

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS102	208/230-3-60	STD	NONE	-	-	41/41	50/50	43/42	212	45/45	50/50	47/47	216
			117A	7.8/10.4	21.7/25.0	68/72	70/80	68/71	234/237	72/76	80/80	72/75	238/241
			110A	12.0/16.0	33.4/38.5	83/89	90/90	81/87	245/251	87/93	90/100	85/91	249/255
			111A	18.6/24.8	51.7/59.7	106/116	110/125	102/111	264/272	110/119	110/125	106/115	268/276
			112A	24.0/32.0	66.7/77.0	124/137	125/150	119/131	279/289	128/141	150/150	124/135	283/293
			112A+117A	31.8/42.4	88.4/102.0	152/168	175/175	144/160	389/416	155/172	175/175	149/164	393/420
		MED	NONE	-	-	44/43	50/50	46/45	242	48/47	60/60	50/49	246
			117A	7.8/10.4	21.7/25.0	71/74	80/80	71/74	264/267	75/78	80/80	75/78	268/271
			110A	12.0/16.0	33.4/38.5	86/91	90/100	84/89	275/281	89/95	90/100	89/93	279/285
	111A		18.6/24.8	51.7/59.7	109/118	110/125	105/114	294/302	112/122	125/125	110/118	298/306	
	112A		24.0/32.0	66.7/77.0	127/139	150/150	122/133	309/319	131/143	150/150	127/138	313/323	
	112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/162	419/446	158/174	175/175	152/167	423/450		
	HIGH	NONE	-	-	44/43	50/50	46/45	242	48/47	60/60	50/49	246	
		117A	7.8/10.4	21.7/25.0	71/74	80/80	71/74	264/267	75/78	80/80	75/78	268/271	
		110A	12.0/16.0	33.4/38.5	86/91	90/100	84/89	275/281	89/95	90/100	89/93	279/285	
		111A	18.6/24.8	51.7/59.7	109/118	110/125	105/114	294/302	112/122	125/125	110/118	298/306	
		112A	24.0/32.0	66.7/77.0	127/139	150/150	122/133	309/319	131/143	150/150	127/138	313/323	
		112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/162	419/446	158/174	175/175	152/167	423/450	
STD		NONE	-	-	19	25	20	111	21	25	22	113	
		116A	13.9	16.7	40	40	39	128	42	45	41	130	
		113A	16.5	19.8	44	45	42	131	46	50	44	133	
	114A	27.8	33.4	61	70	58	144	63	70	60	146		
	115A	33.0	39.7	69	70	65	151	70	80	67	153		
	114A+116A	41.7	50.2	82	90	77	211	84	90	79	213		
MED	NONE	-	-	20	25	21	127	22	25	23	129		
	116A	13.9	16.7	41	45	40	144	43	45	42	146		
	113A	16.5	19.8	45	45	43	147	46	50	45	149		
	114A	27.8	33.4	62	70	59	160	63	70	61	162		
	115A	33.0	39.7	70	70	66	167	71	80	68	169		
	114A+116A	41.7	50.2	83	90	78	227	84	90	80	229		
HIGH	NONE	-	-	20	25	21	127	22	25	23	129		
	116A	13.9	16.7	41	45	40	144	43	45	42	146		
	113A	16.5	19.8	45	45	43	147	46	50	45	149		
	114A	27.8	33.4	62	70	59	160	63	70	61	162		
	115A	33.0	39.7	70	70	66	167	71	80	68	169		
	114A+116A	41.7	50.2	83	90	78	227	84	90	80	229		
RHS102	460-3-60	STD	NONE	-	-	17	20	17	87	21	25	21	91
			118A	17.0	20.4	42	45	40	107	46	50	45	111
			119A	34.0	40.9	68	70	64	128	72	80	68	132
	MED	NONE	-	-	18	20	19	100	22	25	23	104	
		118A	17.0	20.4	44	45	42	120	48	50	47	124	
		119A	34.0	40.9	70	70	66	141	73	80	70	145	
	HIGH	NONE	-	-	18	20	19	100	22	25	23	104	
		118A	17.0	20.4	44	45	42	120	48	50	47	124	
		119A	34.0	40.9	70	70	66	141	73	80	70	145	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 89 – RHS102

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

(Units Produced on or Prior to 02/08/2015)

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS102	208/230-3-60	STD	NONE	-	-	41/41	50/50	43/42	212	45/45	50/50	47/47	216
			117A	7.8/10.4	21.7/25.0	68/72	70/80	68/71	234/237	72/76	80/80	72/75	238/241
			110A	12.0/16.0	33.4/38.5	83/89	90/90	81/87	245/251	87/93	90/100	85/91	249/255
			111A	18.6/24.8	51.7/59.7	106/116	110/125	102/111	264/272	110/119	110/125	106/115	268/276
			112A	24.0/32.0	66.7/77.0	124/137	125/150	119/131	279/289	128/141	150/150	124/135	283/293
			112A+117A	31.8/42.4	88.4/102.0	152/168	175/175	144/160	389/416	155/172	175/175	149/164	393/420
		MED	NONE	-	-	44/43	50/50	46/45	242	48/47	60/60	50/49	246
			117A	7.8/10.4	21.7/25.0	71/74	80/80	71/74	264/267	75/78	80/80	75/78	268/271
			110A	12.0/16.0	33.4/38.5	86/91	90/100	84/89	275/281	89/95	90/100	89/93	279/285
			111A	18.6/24.8	51.7/59.7	109/118	110/125	105/114	294/302	112/122	125/125	110/118	298/306
			112A	24.0/32.0	66.7/77.0	127/139	150/150	122/133	309/319	131/143	150/150	127/138	313/323
			112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/162	419/446	158/174	175/175	152/167	423/450
	HIGH	NONE	-	-	44/43	50/50	46/45	242	48/47	60/60	50/49	246	
		117A	7.8/10.4	21.7/25.0	71/74	80/80	71/74	264/267	75/78	80/80	75/78	268/271	
		110A	12.0/16.0	33.4/38.5	86/91	90/100	84/89	275/281	89/95	90/100	89/93	279/285	
		111A	18.6/24.8	51.7/59.7	109/118	110/125	105/114	294/302	112/122	125/125	110/118	298/306	
		112A	24.0/32.0	66.7/77.0	127/139	150/150	122/133	309/319	131/143	150/150	127/138	313/323	
		112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/162	419/446	158/174	175/175	152/167	423/450	
	460-3-60	STD	NONE	-	-	19	25	20	111	21	25	22	113
			116A	13.9	16.7	40	40	39	128	42	45	41	130
			113A	16.5	19.8	44	45	42	131	46	50	44	133
			114A	27.8	33.4	61	70	58	144	63	70	60	146
			115A	33.0	39.7	69	70	65	151	70	80	67	153
			114A+116A	41.7	50.2	82	90	77	211	84	90	79	213
MED		NONE	-	-	20	25	21	127	22	25	23	129	
		116A	13.9	16.7	41	45	40	144	43	45	42	146	
		113A	16.5	19.8	45	45	43	147	46	50	45	149	
		114A	27.8	33.4	62	70	59	160	63	70	61	162	
		115A	33.0	39.7	70	70	66	167	71	80	68	169	
		114A+116A	41.7	50.2	83	90	78	227	84	90	80	229	
HIGH		NONE	-	-	20	25	21	127	22	25	23	129	
		116A	13.9	16.7	41	45	40	144	43	45	42	146	
		113A	16.5	19.8	45	45	43	147	46	50	45	149	
		114A	27.8	33.4	62	70	59	160	63	70	61	162	
		115A	33.0	39.7	70	70	66	167	71	80	68	169	
		114A+116A	41.7	50.2	83	90	78	227	84	90	80	229	
575-3-60	STD	NONE	-	-	17	20	17	87	21	25	21	91	
		118A	17.0	20.4	42	45	40	107	46	50	45	111	
		119A	34.0	40.9	68	70	64	128	72	80	68	132	
	MED	NONE	-	-	18	20	19	100	22	25	23	104	
		118A	17.0	20.4	44	45	42	120	48	50	47	124	
		119A	34.0	40.9	70	70	66	141	73	80	70	145	
	HIGH	NONE	-	-	18	20	19	100	22	25	23	104	
		118A	17.0	20.4	44	45	42	120	48	50	47	124	
		119A	34.0	40.9	70	70	66	141	73	80	70	145	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 90 – RHS120

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS120	208/230-3-60	STD	NONE	-	-	49/49	60/60	51/51	309	53/53	60/60	56/55	313
			117A	7.8/10.4	21.7/25.0	76/80	80/80	76/80	331/334	80/84	80/90	81/84	335/338
			110A	12.0/16.0	33.4/38.5	91/97	100/100	90/95	342/348	95/101	100/110	94/100	346/352
			112A	24.0/32.0	66.7/77.0	132/145	150/150	128/140	376/386	136/149	150/150	132/144	380/390
			112A+117A	31.8/42.4	88.4/102.0	160/176	175/200	153/168	486/513	163/180	175/200	157/173	490/517
			112A+110A	37.6/50.0	104.2/120.3	179/169	200/175	171/189	517/550	183/173	200/200	175/194	521/554
		MED	NONE	-	-	53	60	56	338	57	70	60	342
			117A	7.8/10.4	21.7/25.0	80/84	80/90	81/84	360/363	84/88	90/90	85/89	364/367
			110A	12.0/16.0	33.4/38.5	94/101	100/110	94/100	371/377	98/105	100/110	98/104	375/381
			112A	24.0/32.0	66.7/77.0	136/149	150/150	132/144	405/415	140/153	150/175	137/148	409/419
			112A+117A	31.8/42.4	88.4/102.0	163/180	175/200	157/173	515/542	167/184	175/200	162/177	519/546
			112A+110A	37.6/50.0	104.2/120.3	183/173	200/200	175/194	546/579	187/177	200/200	180/198	550/583
		HIGH	NONE	-	-	56/55	60/60	59/58	340	60/59	70/70	63/62	344
			117A	7.8/10.4	21.7/25.0	83/86	90/90	84/87	362/365	87/90	90/90	88/91	366/369
			110A	12.0/16.0	33.4/38.5	97/103	100/110	97/102	373/379	101/107	110/110	102/107	377/383
	112A		24.0/32.0	66.7/77.0	139/151	150/175	136/147	407/417	143/155	150/175	140/151	411/421	
	112A+117A		31.8/42.4	88.4/102.0	166/182	175/200	161/175	517/544	170/186	175/200	165/180	521/548	
	112A+110A		37.6/50.0	104.2/120.3	186/175	200/200	179/196	548/581	190/179	200/200	183/201	552/585	
	460-3-60	STD	NONE	-	-	24	30	25	148	26	30	27	150
			116A	13.9	16.7	45	45	44	165	47	50	46	167
			113A	16.5	19.8	49	50	48	168	51	60	50	170
			115A	33.0	39.7	74	80	71	188	76	80	73	190
			114A+116A	41.7	50.2	87	90	83	248	89	90	85	250
			115A+113A	50.0	60.1	84	90	94	268	86	90	96	270
		MED	NONE	-	-	26	30	27	163	28	30	29	165
			116A	13.9	16.7	47	50	47	180	49	50	49	182
			113A	16.5	19.8	51	60	50	183	53	60	52	185
115A			33.0	39.7	76	80	73	203	78	80	75	205	
114A+116A			41.7	50.2	89	90	85	263	91	100	87	265	
115A+113A			50.0	60.1	86	90	96	283	88	90	99	285	
HIGH		NONE	-	-	27	30	29	164	29	35	31	166	
		116A	13.9	16.7	48	50	48	181	50	50	50	183	
		113A	16.5	19.8	52	60	51	184	54	60	53	186	
		115A	33.0	39.7	77	80	74	204	79	80	76	206	
		114A+116A	41.7	50.2	90	90	86	264	92	100	88	266	
		115A+113A	50.0	60.1	87	90	98	284	89	100	100	286	
575-3-60	STD	NONE	-	-	18	20	18	105	22	25	23	109	
		118A	17.0	20.4	43	45	42	125	47	50	46	129	
		119A	34.0	40.9	69	70	65	146	73	80	70	150	
		118A+119A	51.0	61.3	79	90	89	228	83	90	93	232	
	MED	NONE	-	-	19	20	19	116	23	25	24	120	
		118A	17.0	20.4	44	45	43	136	48	50	47	140	
		119A	34.0	40.9	70	70	66	157	74	80	71	161	
		118A+119A	51.0	61.3	80	90	90	239	84	90	94	243	
	HIGH	NONE	-	-	22	25	23	130	25	30	27	134	
		118A	17.0	20.4	47	50	46	150	51	60	50	154	
		119A	34.0	40.9	73	80	70	171	76	80	74	175	
		118A+119A	51.0	61.3	83	90	93	253	87	90	97	257	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 91 – RHS120

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS120	208/230-3-60	STD	NONE	-	-	49/49	60/60	52/51	279	53/53	60/60	56/56	283
			117A	7.8/10.4	21.7/25.0	76/80	80/80	76/80	301/304	80/84	80/90	81/84	305/308
			110A	12.0/16.0	33.4/38.5	91/97	100/100	90/95	312/318	95/101	100/110	94/100	316/322
			112A	24.0/32.0	66.7/77.0	133/145	150/150	128/140	346/356	136/149	150/150	133/144	350/360
			112A+117A	31.8/42.4	88.4/102.0	160/176	175/200	153/168	456/483	164/180	175/200	158/173	460/487
		112A+110A	37.6/50.0	104.2/120.3	179/169	200/175	171/190	487/520	183/173	200/200	176/194	491/524	
		MED	NONE	-	-	53/52	60/60	56/55	329	57/56	70/60	60/59	333
			117A	7.8/10.4	21.7/25.0	80/83	80/90	81/83	351/354	84/87	90/90	85/88	355/358
			110A	12.0/16.0	33.4/38.5	95/100	100/100	94/99	362/368	98/104	100/110	99/103	366/372
			112A	24.0/32.0	66.7/77.0	136/148	150/150	132/143	396/406	140/152	150/175	137/148	400/410
			112A+117A	31.8/42.4	88.4/102.0	163/179	175/200	157/172	506/533	167/183	175/200	162/176	510/537
		112A+110A	37.6/50.0	104.2/120.3	183/172	200/200	176/193	537/570	187/176	200/200	180/197	541/574	
		HIGH	NONE	-	-	56/55	60/60	59/58	340	60/59	70/70	63/62	344
			117A	7.8/10.4	21.7/25.0	83/86	90/90	84/87	362/365	87/90	90/90	88/91	366/369
			110A	12.0/16.0	33.4/38.5	97/103	100/110	97/102	373/379	101/107	110/110	102/107	377/383
	112A		24.0/32.0	66.7/77.0	139/151	150/175	136/147	407/417	143/155	150/175	140/151	411/421	
	112A+117A		31.8/42.4	88.4/102.0	166/182	175/200	161/175	517/544	170/186	175/200	165/180	521/548	
	112A+110A	37.6/50.0	104.2/120.3	186/175	200/200	179/196	548/581	190/179	200/200	183/201	552/585		
	460-3-60	STD	NONE	-	-	25	30	26	134	26	30	28	136
			116A	13.9	16.7	46	50	45	151	47	50	47	153
			113A	16.5	19.8	49	50	48	154	51	60	50	156
			115A	33.0	39.7	74	80	71	174	76	80	73	176
			114A+116A	41.7	50.2	87	90	83	234	89	90	85	236
		115A+113A	50.0	60.1	85	90	95	254	87	90	97	256	
		MED	NONE	-	-	26	30	27	159	28	30	29	161
			116A	13.9	16.7	47	50	46	176	48	50	48	178
			113A	16.5	19.8	51	60	50	179	52	60	52	181
115A			33.0	39.7	75	80	73	199	77	80	75	201	
114A+116A			41.7	50.2	89	90	85	259	90	90	87	261	
115A+113A		50.0	60.1	86	90	96	279	88	90	98	281		
HIGH	NONE	-	-	27	30	29	164	29	35	31	166		
	116A	13.9	16.7	48	50	48	181	50	50	50	183		
	113A	16.5	19.8	52	60	51	184	54	60	53	186		
	115A	33.0	39.7	77	80	74	204	79	80	76	206		
	114A+116A	41.7	50.2	90	90	86	264	92	100	88	266		
115A+113A	50.0	60.1	87	90	98	284	89	100	100	286			
575-3-60	STD	NONE	-	-	19	25	20	107	23	25	24	111	
		118A	17.0	20.4	45	45	44	127	49	50	48	131	
		119A	34.0	40.9	71	80	67	148	74	80	72	152	
		118A+119A	51.0	61.3	81	90	91	230	85	90	95	234	
	MED	NONE	-	-	20	25	21	116	24	30	26	120	
		118A	17.0	20.4	46	50	45	136	50	50	49	140	
		119A	34.0	40.9	72	80	68	157	75	80	73	161	
		118A+119A	51.0	61.3	82	90	92	239	86	90	96	243	
	HIGH	NONE	-	-	22	25	23	130	26	30	28	134	
		118A	17.0	20.4	48	50	47	150	52	60	51	154	
		119A	34.0	40.9	73	80	70	171	77	80	75	175	
		118A+119A	51.0	61.3	84	90	94	253	87	90	98	257	

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 92 – RHS150

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)				
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		
								FLA	LRA			FLA	LRA	
RHS150	208/230-3-60	STD	NONE	-	-	64/64	80/80	66/66	382	68/67	80/80	71/71	386	
			291A	12.4/16.5	34.4/39.7	107/113	110/125	106/112	416/422	111/117	125/125	110/116	420/426	
			288A+291A	19.9/26.5	55.3/63.8	133/143	150/150	130/140	493/510	137/147	150/150	134/144	497/514	
			294A	25.2/33.5	69.9/80.6	151/164	175/175	147/159	452/463	155/168	175/175	151/163	456/467	
			288A+294A	32.7/43.5	90.7/104.7	177/195	200/200	171/187	563/591	181/198	200/200	175/191	567/595	
		291A+294A	37.6/50.0	104.3/120.3	194/184	200/200	186/205	591/623	198/188	200/200	191/209	595/627		
		MED	NONE	-	-	64/64	80/80	66/66	382	68/67	80/80	71/71	386	
			291A	12.4/16.5	34.4/39.7	107/113	110/125	106/112	416/422	111/117	125/125	110/116	420/426	
			288A+291A	19.9/26.5	55.3/63.8	133/143	150/150	130/140	493/510	137/147	150/150	134/144	497/514	
	294A		25.2/33.5	69.9/80.6	151/164	175/175	147/159	452/463	155/168	175/175	151/163	456/467		
	HIGH	288A+294A	32.7/43.5	90.7/104.7	177/195	200/200	171/187	563/591	181/198	200/200	175/191	567/595		
		291A+294A	37.6/50.0	104.3/120.3	194/184	200/200	186/205	591/623	198/188	200/200	191/209	595/627		
		NONE	-	-	76	90	80	402	80	100	85	406		
		291A	12.4/16.5	34.4/39.7	119/125	125/125	120/126	436/442	123/129	125/150	124/130	440/446		
		288A+291A	19.9/26.5	55.3/63.8	145/156	150/175	144/154	513/530	149/159	150/175	148/158	517/534		
	RHS150	460-3-60	STD	294A	25.2/33.5	69.9/80.6	163/177	175/200	161/173	472/483	167/180	175/200	165/177	476/487
				288A+294A	32.7/43.5	90.7/104.7	189/207	200/225	184/201	583/611	193/210	200/225	189/205	587/615
				291A+294A	37.6/50.0	104.3/120.3	206/196	225/225	200/219	611/643	210/200	225/225	204/223	615/647
NONE				-	-	31	40	32	192	33	40	34	194	
292A				16.5	19.9	56	60	55	212	58	60	57	214	
MED			289A+292A	26.5	31.9	71	80	69	256	73	80	71	258	
			295A	33.5	40.3	81	90	78	232	83	90	80	234	
			289A+295A	43.5	52.3	96	100	92	297	98	100	94	299	
			292A+295A	50.0	60.2	91	100	101	312	93	100	103	314	
HIGH		NONE	-	-	37	45	39	202	39	45	41	204		
		292A	16.5	19.9	62	70	62	222	64	70	64	224		
		289A+292A	26.5	31.9	77	80	76	266	79	80	78	268		
		295A	33.5	40.3	87	90	85	242	89	90	87	244		
		289A+295A	43.5	52.3	102	110	99	307	104	110	101	309		
RHS150		575-3-60	STD	292A+295A	50.0	60.2	97	100	108	322	99	110	110	324
				NONE	-	-	24	30	25	136	28	30	30	140
				293A	16.5	15.9	44	45	43	152	48	50	48	156
				290A+293A	26.5	25.5	56	60	55	187	60	60	59	191
	296A			33.5	32.2	65	70	62	168	69	70	67	172	
	MED		290A+296A	43.5	41.8	77	80	73	220	81	90	78	224	
			293A+296A	50.0	48.1	73	80	81	232	76	80	85	236	
			NONE	-	-	24	30	25	136	28	30	30	140	
			293A	16.5	15.9	44	45	43	152	48	50	48	156	
	HIGH	290A+293A	26.5	25.5	56	60	55	187	60	60	59	191		
		296A	33.5	32.2	65	70	62	168	69	70	67	172		
		290A+296A	43.5	41.8	77	80	73	220	81	90	78	224		
		293A+296A	50.0	48.1	73	80	81	232	76	80	85	236		
		NONE	-	-	31	35	32	148	35	40	37	152		
	293A	16.5	15.9	51	60	51	164	54	60	55	168			
	290A+293A	26.5	25.5	63	70	62	199	66	70	66	203			
	296A	33.5	32.2	71	80	69	180	75	80	74	184			
	290A+296A	43.5	41.8	83	90	80	232	87	90	85	236			
293A+296A	50.0	48.1	79	90	88	244	83	90	92	248				

See Legend and Notes for Tables 67-93 on Page 90.

MCA/MOCP (cont.)

Table 93 – RHS150

MCA/MOCP DETERMINATION NO C.O. OR UNPWRD C.O. 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

UNIT	NOM. V-PH-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								
			CRHEATE R ****00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)				
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		
								FLA	LRA			FLA	LRA	
RHS150	208/230-3-60	STD	NONE	-	-	64/63	80/80	67/66	363	68/67	80/80	71/70	367	
			291A	12.4/16.5	34.4/39.7	107/113	110/125	106/111	397/403	111/117	125/125	111/116	401/407	
			288A+291A	19.9/26.5	55.3/63.8	133/143	150/150	130/139	474/491	137/147	150/150	135/143	478/495	
			294A	25.2/33.5	69.9/80.6	151/164	175/175	147/158	433/444	155/168	175/175	151/163	437/448	
			288A+294A	32.7/43.5	90.7/104.7	177/194	200/200	171/186	544/572	181/198	200/200	175/190	548/576	
		291A+294A	37.6/50.0	104.3/120.3	194/183	200/200	187/204	572/604	198/187	200/200	191/208	576/608		
		MED	NONE	-	-	64/63	80/80	67/66	363	68/67	80/80	71/70	367	
			291A	12.4/16.5	34.4/39.7	107/113	110/125	106/111	397/403	111/117	125/125	111/116	401/407	
			288A+291A	19.9/26.5	55.3/63.8	133/143	150/150	130/139	474/491	137/147	150/150	135/143	478/495	
	294A		25.2/33.5	69.9/80.6	151/164	175/175	147/158	433/444	155/168	175/175	151/163	437/448		
	HIGH	288A+294A	32.7/43.5	90.7/104.7	177/194	200/200	171/186	544/572	181/198	200/200	175/190	548/576		
		291A+294A	37.6/50.0	104.3/120.3	194/183	200/200	187/204	572/604	198/187	200/200	191/208	576/608		
		NONE	-	-	76	90	80	402	80	100	85	406		
		291A	12.4/16.5	34.4/39.7	119/125	125/125	120/126	436/442	123/129	125/150	124/130	440/446		
		288A+291A	19.9/26.5	55.3/63.8	145/156	150/175	144/154	513/530	149/159	150/175	148/158	517/534		
	RHS150	460-3-60	STD	294A	25.2/33.5	69.9/80.6	163/177	175/200	161/173	472/483	167/180	175/200	165/177	476/487
				288A+294A	32.7/43.5	90.7/104.7	189/207	200/225	184/201	583/611	193/210	200/225	189/205	587/615
				291A+294A	37.6/50.0	104.3/120.3	206/196	225/225	200/219	611/643	210/200	225/225	204/223	615/647
NONE				-	-	31	40	32	183	32	40	34	185	
292A				16.5	19.9	55	60	54	203	57	60	56	205	
RHS150	575-3-60		STD	289A+292A	26.5	31.9	70	70	68	247	72	80	70	249
				295A	33.5	40.3	81	90	78	223	83	90	80	225
				289A+295A	43.5	52.3	96	100	92	288	98	100	94	290
				292A+295A	50.0	60.2	91	100	101	303	93	100	103	305
		NONE		-	-	37	45	39	202	39	45	41	204	
RHS150		460-3-60	MED	292A	16.5	19.9	62	70	62	222	64	70	64	224
				289A+292A	26.5	31.9	77	80	76	266	79	80	78	268
				295A	33.5	40.3	87	90	85	242	89	90	87	244
				289A+295A	43.5	52.3	102	110	99	307	104	110	101	309
	292A+295A			50.0	60.2	97	100	108	322	99	110	110	324	
RHS150	575-3-60		HIGH	NONE	-	-	26	30	27	136	30	35	32	140
				293A	16.5	15.9	46	50	45	152	50	50	50	156
				290A+293A	26.5	25.5	58	60	56	187	62	70	61	191
				296A	33.5	32.2	66	70	64	168	70	70	69	172
		290A+296A		43.5	41.8	78	80	75	220	82	90	80	224	
RHS150		575-3-60	STD	293A+296A	50.0	48.1	74	80	82	232	78	80	87	236
				NONE	-	-	26	30	27	136	30	35	32	140
				293A	16.5	15.9	46	50	45	152	50	50	50	156
				290A+293A	26.5	25.5	58	60	56	187	62	70	61	191
	296A			33.5	32.2	66	70	64	168	70	70	69	172	
RHS150	575-3-60		MED	290A+296A	43.5	41.8	78	80	75	220	82	90	80	224
				293A+296A	50.0	48.1	74	80	82	232	78	80	87	236
				NONE	-	-	31	35	32	148	35	40	37	152
				293A	16.5	15.9	51	60	51	164	54	60	55	168
		290A+293A		26.5	25.5	63	70	62	199	66	70	66	203	
RHS150		575-3-60	HIGH	296A	33.5	32.2	71	80	69	180	75	80	74	184
				290A+296A	43.5	41.8	83	90	80	232	87	90	85	236
				293A+296A	50.0	48.1	79	90	88	244	83	90	92	248

See Legend and Notes for Tables 67-93 on Page 90.

LEGEND

- C.O. - Convenience outlet
- DD - Electric Drive X13 Motor
- DISC - Disconnect
- FLA - Full load amps
- IFM - Indoor fan motor
- LRA - Locked rotor amps
- MCA - Minimum circuit amps
- MOCP - Maximum over current protection
- P.E. - Power exhaust
- UNPWRD C.O. - Unpowered Convenience outlet

NOTES:

1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. **Unbalanced 3-Phase Supply Voltage**
 Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Legend and Notes for Tables 67–93.

Example: Supply voltage is 230-3-60



AB = 224V

BC = 231V

AC = 226V

$$\begin{aligned} \text{Average Voltage} &= \frac{(224 + 231 + 226)}{3} = \frac{681}{3} \\ &= 227 \end{aligned}$$

Determine maximum deviation from average voltage.

(AB) 227 – 224 = 3V Maximum deviation is 4V.

(BC) 231 – 227 = 4V Determine percent of voltage imbalance.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{4}{227} \\ &= 1.76\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

SEQUENCE OF OPERATION

Cooling, unit without economizer

Cooling (Single speed indoor fan motor) —

When thermostat calls for cooling, terminals G and Y1 are energized. The indoor fan contactor (IFC), reversing valve solenoid (RVS) and compressor contactor are energized and indoor fan motor, compressor, and outdoor fan starts. The outdoor fan motor runs continuously while unit is cooling.

Two-stage models: If Stage 1 cooling does not satisfy the space load, the space temperature will rise until thermostat calls for Stage 2 cooling (Y2 closes). Defrost Board activates Stage 2 Compressor. Reversing valve 2 switches to Cooling position. Compressor 2 contactor is energized; Compressor 2 starts and Circuit 2 operates in Cooling mode.

When Cooling Stage 2 is satisfied, thermostat Y2 opens. Compressor 2 contactor is de-energized; Compressor 2 stops. Reversing Valve 2 remains energized.

When Cooling Stage 1 is satisfied, thermostat Y1 opens. Compressor 1 contactor is de-energized; Compressor 1 stops. Outdoor fan relay is de-energized; outdoor fans stop. After the Fan Delay period, the Indoor fan contactor is de-energized; indoor fan stops (unless Continuous Fan operation has been selected). Reversing Valve 1 remains energized.

Reversing valve solenoids are energized in Cooling modes. Each solenoid will remain energized until the next Heating mode is initiated for this circuit.

Cooling (2-speed indoor fan motor) —

Per ASHRAE 90.1 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 2/3rd of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%).

Heating, unit without economizer

Upon a request for heating from the space thermostat, terminal W1 will be energized with 24V. The IFC, outdoor fan contactor (OFC), C1, and C2 will be energized. The indoor fan, outdoor fans, and compressor no. 1, and compressor no. 2 are energized and reversing valves are de-energized and switch position.

If the space temperature continues to fall while W1 is energized, W2 will be energized with 24V, and the heater contactor(s) (HC) will be energized, which will energize the electric heater(s).

When the space thermostat is satisfied, W2 will be de-energized first, and the electric heater(s) will be de-energized.

Upon a further rise in space temperature, W1 will be de-energized.

Two compressor models: When the thermostat calls for heating, terminal W1 is energized. Defrost Board de-energizes both reversing valve solenoids and reversing valves move to Heating position. The indoor fan contactor is energized; indoor fan motor starts.

Outdoor fan relay is energized; both outdoor fan motors run. Compressor contactors C1 and C2 are energized; both refrigeration circuits operate in Heating mode.

If Stage 1 heating does not satisfy the space load, the space temperature will fall until thermostat calls for Stage 2 heating (W2 closes). Terminal W2 is energized. Defrost Board issues an output at EHEAT. Heater contactor 1 and heater contactor 2 (if installed) are energized; all electric heaters are energized.

When space heating load is partially satisfied, thermostat terminal W2 is de-energized; heater contactors are de-energized and all electric heat is terminated. Stage 1 heating continues.

When the space heating load is fully satisfied, thermostat terminal W1 is also de-energized.

Reversing valve solenoids remain de-energized until the next call for Cooling mode is initiated.

Cooling, unit with EconoMi\$er IV

When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor air damper is modulated by the EconoMi\$er IV control to provide a 50 to 55°F (10° to 13°C) mixed air temperature into the zone. As the mixed air temperature fluctuates above 55 or below 50°F (13° to 10°C), the dampers will be modulated (open or close) to bring the mixed air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed air temperature to drop below 45°F (7°C), then the outdoor air damper position will be decreased to the minimum position. If the mixed air temperature continues to fall, the outdoor air damper will close. Control returns to normal once the mixed air temperature rises above 48°F (9°C).

If optional power exhaust is installed, as the outdoor air damper opens and closes, the power exhaust fans will be energized and de-energized.

If field-installed accessory CO₂ sensors are connected to the EconoMi\$er IV control, a demand controlled ventilation strategy will begin to operate. As the CO₂ level in the zone increases above the CO₂ setpoint, the minimum position of the damper will be increased proportionally. As the CO₂ level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed.

For EconoMi\$er IV operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

When the EconoMi\$er IV control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi\$er IV damper to the minimum position.

SEQUENCE OF OPERATION (cont.)

On the initial power to the EconoMi\$er IV control, it will take the damper up to 2¹/₂ minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1¹/₂ and 2¹/₂ minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed air temperature setpoint at 50° to 55°F (10° to 13°C).

If there is a further demand for cooling (cooling second stage — Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed air temperature setpoint. The EconoMi\$er IV damper will be open at maximum position. EconoMi\$er IV operation is limited to a single compressor.

2-Speed Note: When operating in ventilation mode only, the indoor fan motor will automatically adjust to 2/3rd of the total cfm established.

Heating, unit with EconoMi\$er

When the room temperature calls for heat through terminal W1, the indoor (evaporator) fan contactor (IFC) and heater contactor no. 1 (HC1) are energized and the reversing valve(s) de-energize and switches position. On units equipped for 2 stages of heat, when additional heat is needed, heater contactor no. 2 is energized through W2. The economizer damper moves to the minimum position. When the thermostat is satisfied, the damper moves to the fully closed position.

Defrost

When the temperature of the outdoor coil drops below 28°F (-2°C) as sensed by the defrost thermostat (DFT2) and the defrost timer is at the end of a timed period (adjustable at 30, 60, 90 or 120 minutes), reversing valve solenoids (RVS1 and RVS2) are energized and the OFC is de-energized. This switches the position of the reversing valves and shuts off the outdoor fan. The electric heaters (if installed) will be energized.

The unit continues to defrost until the coil temperature as measured by DFT2 reaches 65°F (18°C), or the duration of defrost cycle completes a 10-minute period.

During the Defrost mode, if circuit 1 defrosts first, RVS1 will oscillate between Heating and Cooling modes until the Defrost mode is complete.

At the end of the defrost cycle, the electric heaters (if installed) will be de-energized; the reversing valves switch and the outdoor fan motor will be energized. The unit will now operate in the Heating mode.

If the space thermostat is satisfied during a defrost cycle, the unit will continue in the Defrost mode until the time or temperature constraints are satisfied.

Automatic changeover

When the system selection switch is set at AUTO position, unit automatically changes from heating operation to cooling operation when the temperature of the conditioned space rises to the cooling level setting. When the temperature of the conditioned space falls to the heating level setting, unit automatically changes from cooling to heating operation (with a 3°F deadband in between).

Continuous air circulation

Turn unit power on. Set system control at OFF position. Set fan switch at ON position. The indoor fan contactor is energized through the thermostat switch and the indoor fan runs continuously.

Emergency heat

When the switch is on (thermostat is set to the EM HT position), compressor circuit and outdoor thermostats are bypassed, and the second stage of thermostat energizes the indoor blower and the electric resistance heaters.

GUIDE SPECIFICATIONS – RHS036–150

Note about this specification:

ICP created this specification in “Masterformat” as published by the Construction Specification Institute. Please feel free to copy this specification directly into your building specifications.

Rooftop Packaged Heat Pump

HVAC Guide Specifications

Size Range: 3 to 12.5

Nominal Tons

Section Description

23 06 80 Schedules for Decentralized HVAC Equipment

23 06 80.13 Decentralized Unitary HVAC Equipment Schedule

23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

23 07 16 HVAC Equipment Insulation

23 07 16.13 Decentralized, Rooftop Units:

23 07 16.13.A. Evaporator fan compartment:

1. Interior cabinet surfaces shall be insulated with a minimum 1/2-in. thick, minimum 1 1/2 lb density, flexible fiberglass insulation bonded with a phenolic binder, neoprene coated on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 07 16.13.B. Electric heat compartment:

1. Aluminum foil-faced fiberglass insulation shall be used.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 09 13 Instrumentation and Control Devices for HVAC

23 09 13.23 Sensors and Transmitters

23 09 13.23.A. Thermostats

1. Thermostat must
 - a. have capability to energize 2 different stages of cooling, and 2 different stages of heating.
 - b. include capability for occupancy scheduling.

23 09 33 Electric and Electronic Control System for HVAC

23 09 33.13 Decentralized, Rooftop Units:

23 09 33.13.A. General:

1. Shall be complete with self-contained low voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side. Transformer shall have 75VA capability.
2. Shall utilize color-coded wiring.
3. Shall include a central control terminal board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, economizer, thermostat, DDC control options, loss of charge, freeze switch, high pressure switches.
4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.
5. Shall include integrated defrost system to prevent excessive frost accumulation during heating duty, and shall be controlled as follows:
 - a. Defrost shall be initiated on the basis of time and coil temperature.
 - b. A 30,60,90,120 minute timer shall activate the defrost cycle only if the coil temperature is low enough to indicate a heavy frost condition.
 - c. Defrost cycle shall terminate when defrost thermostat is satisfied and shall have a positive termination time of 10 minutes.
6. Defrost system shall also include:
 - a. Defrost Cycle Indicator LED.
 - b. Dip switch selectable defrost time between 30,60,90 and 120 minutes. Factory set at 30 minutes.
 - c. Molded plug connection to insure proper connection.

23 09 33.23.B. Safeties:

1. Compressor overtemperature, overcurrent.
2. Loss of charge switch.

- a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 low and high pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
- b. Loss of charge switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
- 3. High pressure switch.
 - a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 low and high pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
 - b. High pressure switch shall use different color wire than the low pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
- 4. Freeze protection thermostat, evaporator coil.
- 5. Automatic reset, motor thermal overload protector.

23 09 93 Sequence of Operations for HVAC Controls

- 23 09 93.13 Decentralized, Rooftop Units:
- 23 09 93.13 INSERT SEQUENCE OF OPERATION

23 40 13 Panel Air Filters

- 23 40 13.13 Decentralized, Rooftop Units:
- 23 40 13.13.A. Standard filter section
 - 1. Shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
 - 2. Unit shall use only one filter size. Multiple sizes are not acceptable.
 - 3. Filters shall be accessible through an access panel with “no-tool” removal as described in the unit cabinet section of this specification (23 81 19.13.H).

23 81 19 Self-Contained Air Conditioners

- 23 81 19.13 Small-Capacity Self-Contained Air Conditioners (RHS036-150)
- 23 81 19.13.A. General
 - 1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a(n) hermetic scroll compressor(s) for cooling duty and heat pump for heating duty.
 - 2. Factory assembled, single piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field startup.
 - 3. Unit shall use R-410A refrigerant.
 - 4. Unit shall be installed in accordance with the manufacturer’s instructions.
 - 5. Unit must be selected and installed in compliance with local, state, and federal codes.
- 23 81 19.13.B. Quality Assurance
 - 1. Unit meets ASHRAE 90.1 minimum efficiency requirements.
 - 2. Unit shall be rated in accordance with AHRI Standards 210/240 and 340/360.
 - 3. Unit shall be designed to conform to ASHRAE 15.
 - 4. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL or ETL-listed and certified under Canadian standards as a total package for safety requirements.
 - 5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
 - 6. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
 - 7. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
 - 8. Roof curb shall be designed to conform to NRCA Standards.
 - 9. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
 - 10. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
 - 11. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
 - 12. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
 - 13. High Efficient Motors listed shall meet Section 313 of the Energy Independence and Security Act of 2007 (EISA 2007).

23 81 19.13.C. Delivery, Storage, and Handling

- 1. Unit shall be stored and handled per manufacturer’s recommendations.
- 2. Lifted by crane requires either shipping top panel or spreader bars.
- 3. Unit shall only be stored or positioned in the upright position.

23 81 19.13.D. Project Conditions

1. As specified in the contract.

23 81 19.13.E. Operating Characteristics

1. Unit shall be capable of starting and running at 115°F (46°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 210/240 or 340/360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation from 25°F (-4°C), ambient outdoor temperatures. Accessory winter start kit is necessary if mechanically cooling at ambient temperatures below 25°F (-4°C).
3. Unit shall be capable of simultaneous heating duty and defrost cycle operation when using accessory electric heaters.
4. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
5. Unit shall be factory configured for vertical supply & return configurations.
6. Unit shall be field convertible from vertical to horizontal configuration
7. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

23 81 19.13.F. Electrical Requirements

1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.

23 81 19.13.G. Unit Cabinet

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a prepainted baked enamel finish on all externally exposed surfaces.
2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F): 60, Hardness: H-2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 or 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 1/2-in. thick, 1 lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the heat compartment.
4. Base of unit shall have a minimum of three locations for thru-the-base electrical connections (factory-installed or field-installed), standard.
5. Base Rail
 - a. Unit shall have base rails on a minimum of 2 sides.
 - b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
 - c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
 - d. Base rail shall be a minimum of 16 gauge thickness.
6. Condensate pan and connections:
 - a. Shall be a sloped condensate drain pan made of a non-corrosive material.
 - b. Shall comply with ASHRAE Standard 62.
 - c. Shall use a 3/4-in. -14 NPT drain connection, possible either through the bottom or end of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Top panel:
 - a. Shall be a single piece top panel on 036-102 sizes.
8. Electrical Connections
 - a. All unit power wiring shall enter unit cabinet at a single, factory prepared, knockout location.
 - b. Thru-the-base capability.
 - (1.) Standard unit shall have a thru-the-base electrical location (s) using a raised, embossed portion of the unit basepan.
 - (2.) Optional, factory-approved, water-tight connection method must be used for thru-the-base electrical connections.
 - (3.) No basepan penetration, other than those authorized by the manufacturer, is permitted.
9. Component access panels (standard)
 - a. Cabinet panels shall be easily removable for servicing.
 - b. Unit shall have one factory-installed, tool-less, removable, filter access panel.
 - c. Panels covering control box, indoor fan, indoor fan motor, gas components (where applicable), and compressors shall have molded composite handles.
 - d. Handles shall be UV modified, composite. permanently attached, and recessed into the panel.
 - e. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
 - f. Collars shall be removable and easily replaceable using manufacturer recommended parts.

23 81 19.13.H. Coils

1. Standard Aluminum/Copper Coils: on all models.
 - a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
 - c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
2. Optional Pre-coated aluminum fin condenser coils: on all models.
 - a. Shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments.
 - b. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.
 - c. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
3. Optional Copper-fin evaporator and condenser coils: on all models.
 - a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - b. Galvanized steel tube sheets shall not be acceptable.
 - c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.
4. Optional E-coated aluminum-fin evaporator and condenser coils: on all models.
 - a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
 - b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
 - c. Color shall be high gloss black with gloss per ASTM D523-89.
 - d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
 - e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
 - f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
 - g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
 - h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

23 81 19.13.I. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Fixed orifice metering system shall prevent mal-distribution of two-phase refrigerant by including multiple fixed orifice devices in each refrigeration circuit. Each orifice is to be optimized to the coil circuit it serves.
 - b. Refrigerant filter drier.
 - c. Service gauge connections on suction and discharge lines.
 - d. Pressure gauge access through a specially designed access port in the top panel of the unit.
 - e. Suction line accumulator to provide protection in all operating modes from cooling, heating and reverse cycle switching.
2. There shall be gauge line access port in the top of the rooftop, covered by a black, removable plug.
 - a. The plug shall be easy to remove and replace.
 - b. When the plug is removed, the gauge access port shall enable maintenance personnel to route their pressure gauge lines.
 - c. This gauge access port shall facilitate correct and accurate condenser pressure readings by enabling the reading with the compressor access panel on.
 - d. The plug shall be made of a leak proof, UV-resistant, composite material.
3. Compressors
 - a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
 - b. Models shall be available with single compressor designs on 04-07 models, plus additional 2 compressor (stage) models from 090-150 sizes.
 - c. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
 - d. Compressors shall be internally protected from high discharge temperature conditions.
 - e. Compressors shall be protected from an overtemperature and over-ampereage conditions by an internal, motor overload device.
 - f. Compressor shall be factory mounted on rubber grommets.

- g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
- h. Crankcase heaters shall be utilized on all models (except 036 size) to protect compressor with specific refrigerant charge.

23 81 19.13.J. Filter Section

- 1. Filters access is specified in the unit cabinet section of this specification.
- 2. Filters shall be held in place by a pivoting filter tray, facilitating easy removal and installation.
- 3. Shall consist of factory-installed, low velocity, throw-away 2-in. thick fiberglass filters.
- 4. Filters shall be standard, commercially available sizes.
- 5. Only one size filter per unit is allowed.

23 81 19.13.K. Evaporator Fan and Motor

- 1. Evaporator fan motor:
 - a. Shall have permanently lubricated bearings.
 - b. Shall have inherent automatic-reset thermal overload protection or circuit breaker.
 - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
- 2. Electric Drive (Direct Drive) X13 – 5 Speed/Torque Evaporator Fan:
 - a. Multi speed motor with easy quick adjustment settings.
 - b. Blower fan shall be double inlet type with forward curved blades.
 - c. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
 - d. Standard on all 04–06 models.
- 3. Belt-driven Evaporator Fan:
 - a. Belt drive shall include an adjustable pitch motor pulley.
 - b. Shall use sealed, permanently lubricated ball-bearing type.
 - c. Blower fan shall be double inlet type with forward curved blades.
 - d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
 - e. Standard on all 072–150 models. Optional on all 036–060 3-phase models.

23 81 19.13.L. Condenser Fans and Motors

- 1. Condenser fan motors:
 - a. Shall be a totally enclosed motor.
 - b. Shall use permanently lubricated bearings.
 - c. Shall have inherent thermal overload protection with an automatic reset feature.
 - d. Shall use a shaft down design on 04 to 14 models.
- 2. Condenser Fans:
 - a. Shall be a direct driven propeller type fan.
 - b. Shall have aluminum blades riveted to corrosion resistant steel spiders and shall be dynamically balanced.

23 81 19.13.M. Special Features, Options and Accessories

- 1. 2-Speed Indoor Fan Motor for 2-stage cooling models only.
 - a. Evaporator fan motor:
 - (1.) Shall have permanently lubricated bearings.
 - (2.) Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating.
 - (3.) Shall be Variable Frequency duty and 2-speed control.
 - (4.) Shall contain motor shaft grounding ring to prevent electrical bearing fluting damage by safely diverting harmful shaft voltages and bearing currents to ground.
- 2. Variable Frequency Drive (VFD). Only available on 2-speed indoor fan motor option:
 - a. Shall be installed inside the unit cabinet, mounted, wired and tested.
 - b. Shall contain Electromagnetic Interference (EMI) frequency protection.
 - c. Insulated Gate Bi-Polar Transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
 - d. Self diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
 - e. RS485 capability standard.
 - f. Electronic thermal overload protection.
 - g. 5% swinging chokes for harmonic reduction and improved power factor.
 - h. All printed circuit boards shall be conformal coated.

3. Integrated EconoMi\$er IV, EconoMi\$er2, and EconoMi\$er X **standard leak rate models.** (Factory installed on 3 phase models only. Field installed on all 3 and 1 phase models)
 - a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
 - b. Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory installed option.
 - c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
 - d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - f. Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
 - g. Economizer controller on EconoMi\$er IV models shall be Honeywell W7212 that provides:
 - (1.) Combined minimum and DCV maximum damper position potentiometers with compressor staging relay.
 - (2.) Functions with solid state analog enthalpy or dry bulb changeover control sensing.
 - (3.) Contain LED indicates for:
when free cooling is available, when module is in DCV mode, when exhaust fan contact is closed.
 - h. Economizer controller on EconoMi\$er X models shall be the Honeywell W7220 that provides:
 - (1.) 2–line LCD interface screen for setup, configuration and troubleshooting.
 - (2.) On–board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
 - (3.) Sensor failure loss of communication identification
 - (4.) Automatic sensor detection
 - (5.) Capabilities for use with multiple–speed indoor fan systems
 - (6.) Utilize digital sensors: Dry bulb and Enthalpy
 - i. Shall be capable of introducing up to 100% outdoor air.
 - j. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.
 - k. Shall be designed to close damper(s) during loss–of–power situations with spring return built into motor.
 - l. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100F /4 to 38C. Additional sensor options shall be available as accessories.
 - m. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
 - n. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
 - o. Dampers shall be completely closed when the unit is in the unoccupied mode.
 - p. Economizer controller shall accept a 2–10 Vdc CO2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
 - q. Compressor lockout temperature on W7220 is adjustable from –45°F to 80°F, set at a factory default of 32°F. Others shall open at 35°F (2°C) and closes at 50°F (10°C).
 - r. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - s. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
4. Integrated EconoMi\$er2, and EconoMi\$er X **Ultra Low Leak rate models.**(Factory installed on 3 phase models only. Field installed on all 3 and 1 phase models)
 - a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
 - b. Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory installed option.
 - c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.

- d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control
 - f. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE90.1 requirements for 4 cfm per sq.ft. on the outside air dampers and 10 cfm per sq. ft. on the return dampers.
 - g. Economizer controller on EconoMi\$er X models shall be the Honeywell W7220 that provides:
 - (1.) 2–line LCD interface screen for setup, configuration and troubleshooting
 - (2.) On–board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
 - (3.) Sensor failure loss of communication identification
 - (4.) Automatic sensor detection
 - (5.) Capabilities for use with multiple–speed indoor fan systems
 - (6.) Utilize digital sensors: Dry bulb and Enthalpy
 - h. Shall be capable of introducing up to 100% outdoor air.
 - i. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.
 - j. Shall be designed to close damper(s) during loss–of–power situations with spring return built into motor.
 - k. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100° F / 4 to 38° C. Additional sensor options shall be available as accessories.
 - l. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
 - m. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
 - n. Dampers shall be completely closed when the unit is in the unoccupied mode.
 - o. Economizer controller shall accept a 2–10 Vdc CO₂ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
 - p. Compressor lockout temperature on W7220 is adjustable from –45° F to 80° F, set at a factory default of 32° F. Others shall open at 35°F (2°C) and closes at 50°F (10°C).
 - q. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - r. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
5. Two–Position Damper (Factory installed on 3 Phase Models Only. Field installed on all 3 and 1 Phase Models)
- a. Damper shall be a Two–Position Damper. Damper travel shall be from the full closed position to the field adjustable %–open setpoint.
 - b. Damper shall include adjustable damper travel from 25% to 100% (full open).
 - c. Damper shall include single or dual blade, gear driven dampers and actuator motor.
 - d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.
 - e. Damper will admit up to 100% outdoor air for applicable rooftop units.
 - f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
 - g. The damper actuator shall plug into the rooftop unit’s wiring harness plug. No hard wiring shall be required.
 - h. Outside air hood shall include aluminum water entrainment filter
 - i. Not available with 2–Speed Indoor Fan Motor models.
6. Head Pressure Control Package
- a. Controller shall control coil head pressure by condenser fan speed modulation or condenser fan cycling and wind baffles.
 - b. Shall consist of solid state control and condenser coil temperature sensor to maintain condensing temperature between 90° F (32° C) and 110° F (43° C) at outdoor ambient temperatures down to –20° F (–29° C).
7. Condenser Coil Hail Guard Assembly
- a. Shall protect against damage from hail.
 - b. Shall be louvered design.
8. Unit Mounted, Non–Fused Disconnect Switch:

- a. Switch shall be factory-installed, internally mounted.
 - b. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
 - c. Shall be accessible from outside the unit
 - d. Shall provide local shutdown and lockout capability.
9. Convenience Outlet:
- a. Non-Powered convenience outlet.
 - (1.) Outlet shall be powered from a separate 115–120v power source.
 - (2.) A transformer shall not be included.
 - (3.) Outlet shall be factory-installed and internally mounted with easily accessible 115–v female receptacle.
 - (4.) Outlet shall include 15 amp GFI receptacles.
 - (5.) Outlet shall be accessible from outside the unit.
10. Thru-the-Base Connectors:
- a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
 - b. Minimum of three connection locations per unit.
11. Propeller Power Exhaust:
- a. Power exhaust shall be used in conjunction with an integrated economizer.
 - b. Independent modules for vertical or horizontal return configurations shall be available.
 - c. Horizontal power exhaust shall be mounted in return ductwork.
 - d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0–100% adjustable setpoint on the economizer control.
12. Roof Curbs (Vertical):
- a. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
 - b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
 - c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
13. High Static Indoor Fan Motor(s) and Drive(s) (04–14):
- a. High static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
14. Thru-the-Bottom Utility Connectors:
- a. Kit shall provide connectors to permit gas and electrical connections to be brought to the unit through the basepan.
15. Outdoor Air Enthalpy Sensor:
- a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
16. Return Air Enthalpy Sensor:
- a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
17. Indoor Air Quality (CO₂) Sensor:
- a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
 - b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
18. Smoke detectors (Factory-Installed Only):
- a. Shall be a Four-Wire Controller and Detector.
 - b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
 - c. Shall use magnet activated test/reset sensor switches.
 - d. Shall have tool-less connection terminal access.
 - e. Shall have a recessed momentary switch for testing and resetting the detector.
 - f. Controller shall include:
 - (1.) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
 - (2.) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
 - (3.) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
 - (4.) Capable of direct connection to two individual detector modules.

- (5.) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
19. Time Guard
- a. Shall prevent compressor short cycling by providing a 5-minute delay (± 2 minutes) before restarting a compressor after shutdown for any reason.
 - b. One device shall be required per compressor.
20. Electric Heat:
- a. Heating Section
 - (1.) Heater element open coil resistance wire, nickel–chrome alloy, 0.29 inches inside diameter, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
 - (2.) Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermo limit controls, magnetic heater contactors (24V coil) and terminal block all mounted in electric heater control box (minimum 18 ga galvanized steel) attached to end of heater assembly.
21. California OSHPD Seismic Certification Label
- a. Units meet the seismic requirements of the International Code Council Evaluation Service (ICC–ES) document AC156 (Acceptance Criteria for Seismic Qualification by Shake–Table Testing of Nonstructural Components and Systems) and per International Building Code (IBC 2009) at an SDS (g) value of 2.00 $z/h=1.0$, $I_p=1.5$ and certified by independent structural engineers.
 - b. Units shall include a certification label that meets the CA OSHPD Special Seismic Certification pre–approval labeling requirements on the external chassis of the unit.
22. Hinged Access Panels
- a. Shall provide easy access through integrated quarter turn latches.
 - b. Shall be on major panels of: filters, control box, fan motor and compressor.
23. Display Kit for Variable Frequency Drive
- a. Kit allows the ability to access the VFD controller programs to provide special setup capabilities and diagnostics.
 - b. Kit contains display module and communication cable.
 - c. Display Kit can be permanently installed in the unit or used on any 2–speed indoor fan motor system VFD controller as needed.
24. Manual Damper
- a. Manual Damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 25 or 50% outdoor air for year–round ventilation. Not available with 2–Speed Indoor Fan Motor models.