

**50LC WeatherExpert™ Series**  
**Ultra High Efficient**  
**Single Package Rooftop and Single Zone VAV**  
**Cooling Only with Optional Electric Heat**  
**Sizes 14 - 26 with Puron® (R- 410A) Refrigerant**  
**12.5 - 23 Ton**



## Product Data



Unit shown with economizer and power exhaust

C14120

**PERFORMANCE, INNOVATION, RELIABILITY**

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## 50LC

Carrier’s new Electric Heat / Electric Cooling and Cooling only WeatherExpert™ 12.5 to 23 ton Commercial Package Rooftop models are designed to provide total low cost of ownership by providing some of the highest cooling efficiencies in the industry with low installed costs, low maintenance costs, and high reliability. These models focus on providing high IEER’s (Integrated Energy Efficiency Ratios) which are a measurement of cooling part load performance and where actual buildings operate nearly all of the time. These high part load values are achieved by using Carrier’s Comfort Control Logic that strategically sequences compressor stages, indoor fan motor and condenser fan motor speeds. These models are in addition to the 3 to 5 ton models with SEERs up to 17.5 and 6 to 10 ton models with IEERs up to 21.0 to provide a full range offering.

### Ultra high efficiency:

With IEER’s up to 19.3, these new WeatherExpert models well exceed the latest efficiency standards for ASHRAE 90.1, Energy Star, and exceeds Consortium for Energy Efficiency (CEE) Tier 2 criteria. These models help to contribute in LEED credits and help qualify for rebates. The high IEER efficiencies are achieved by utilizing a proven staged compressor design on a single refrigerant circuit that provides three stages of cooling capacity control. The indoor fan motors are high efficiency belt drive and controlled by a VFD (Variable Frequency Drive) system that matches the cooling capacity stages for optimum comfort and efficient control. Models also have multi heat capacities.

### Easy to install:

Units are designed for dedicated factory-supplied vertical or horizontal air flow duct configuration. No special field kits are required. Designed to fit on pre-installed curbs by another manufacturer, these units also fit on past designed Carrier installed curbs with an authorized adapter curb. The cabinet design also integrates a large control box that gives you room to work and room to mount Carrier accessory controls.

### Easy to maintain:

Easy access door handles by Carrier provide quick access to all normally serviced components. Our “no-strip” screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit’s metal. Units come with accessible 2 inch filter that have a dedicate access door for easy replacement. Optional hinged panels allow easy access with pull tabs and quarter turn latches.

### Reliability:

Carrier conducts rigorous testing to insure your unit will perform as designed. Extensive rain testing is conducted in special designed test areas and under conditions that simulate actual job sites. In addition, units are both shake tested and driven around the country to make sure not only the packaging holds up, but the unit components within. Condensate pans are made of non corrosive – composite material, motors are permanently lubricated and compressors use crankcase heaters, all to further strengthen the units reliability.



## UNIT FEATURES

- Three stage cooling capacity control with staged scroll compressors design. Each stage is different in capacity output to better match typical building load profiles.
- Single refrigerant circuit design with precision sized TXV refrigerant metering devices to provide optimum operation through the entire operating range.
- Single full faced evaporator coil for full surface utilization, even at part load operation.
- Crankcase heater on each compressor designed to cycle off during the on cycle.
- IEER up to 19.3 and EER's up to 12.6.
- High efficient permanently lubricated belt driven evaporator- fan motor with VFD (Variable Frequency Drive) controller.
- Electro-Mechanical Control board that provides:
  - Thermostat controls
  - Compressor staging
  - Indoor fan motor staging
  - Field and factory wiring connections
  - Outdoor fan motor staging
  - Crank case heater control
- Sound levels as low as 84 dB.
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or bottom drain.
- Single point electrical connections
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection.
- Fully insulated with foil faced insulation throughout the entire cabinet.
- High ambient cooling operation and ratings up to 125°F (52°C).
- Low ambient mechanical cooling operation down to 40°F (4°C). An economizer shall be the source of cooling in low ambient conditions. When the outside air temperature is below 40°F (4°C), to improve system reliability, reduce energy usage, and improve system efficiency: mechanical cooling shall not be utilized.
- Access panels with easy grip handles.
- Innovative , easy starting, no-strip screw feature on unit access panels.
- Two-inch disposable return air filters.
- Tool-less filter access door.
- Dedicated vertical and horizontal airflow models available ordered as factory option. No special kits required.
- Provisions for thru-the-bottom power entry capability as standard.
- Full perimeter base rail with built-in rigging adapters and fork truck slots.
- 24-volt control circuit protected with resettable circuit breaker.
- Totally enclosed high efficient ECM outdoor fan motor with permanently lubricated bearings.
- Low Pressure switch and high-pressure switch protection.
- High capacity liquid line filter drier.
- Factory-installed Humidi-MiZer<sup>®</sup> Adaptive Dehumidification System on all sizes.
- Standard Limited Parts Warranty: 5 yr. electric heat, 5 yr. compressor, 1 yr. parts.

# MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
5	0	L	C	D	0	2	4	A	2	A	5	-	0	A	0	A	0

## Unit Type

50 = Electric Cooling  
Packaged Rooftop

## Model Series- WeatherExpert

LC = Ultra High Efficiency

## Heat Size

0 = Standard No Electric Heat  
D = Low Electric Heat  
E = Medium Electric Heat  
F = High Electric Heat

## Refrig. System Options

0 = Three stage cooling capacity control with TXV  
A = Three stage cooling capacity control with TXV  
and Humidi- MiZer®

## Nominal Cooling Tons

14 = 12.5 Ton  
17 = 15 Ton  
20 = 17.5 Ton  
24 = 20 Ton  
26 = 23 Ton

## Sensor Options

A = None  
B = RA smoke detector  
C = SA smoke detector  
D = RA & SA smoke detector  
E = CO<sub>2</sub> sensor  
F = RA smoke detector & CO<sub>2</sub>  
G = SA smoke detector & CO<sub>2</sub>  
H = RA & SA smoke detector & CO<sub>2</sub>

## Indoor Fan Options

1 = Standard Static Vertical Supply Return Air Flow  
2 = Medium Static Vertical Supply Return Air Flow  
3 = High Static Vertical Supply Return Air Flow  
4 = Ultra High Static Vertical Supply Return Air Flow  
5 = Standard Static Horizontal supply Return Air Flow  
6 = Medium Static Horizontal supply Return Air Flow  
7 = High Static Horizontal supply Return Air Flow  
8 = Ultra High Static Horizontal supply Return Air Flow

## Brand / Packaging

0 = Standard  
1 = LTL

## Electrical Options

A = None  
B - HACR breaker  
C = Non- fused disconnect

## Service Options

0 = None  
1 = Unpowered convenience outlet  
2 = Powered convenience outlet  
3 = Hinged panels  
4 = Hinged panels, unpwr'd conv outlet  
5 = Hinged panels, pwr'd conv outlet

## Air Intake / Exhaust Options

A = None  
B = Temp Standard Leak Econo w/Baro relief  
C = Temp Standard Leak Econo w/PE(cent) -  
Vertical Only  
E = Enthalpy Standard Leak Econo w/Baro re-  
lief  
F = Enthalpy Standard Leak Econo w/PE(cent)  
- Vertical Only  
N = Temp ultra low leak econo w/ baro relief  
P = Temp ultra low leak econo w/PE vert only  
R = Enthalpy ultra low leak econo w/ baro relief  
S = Enthalpy ultra low leak econo w/PE vert only

## Base Unit Controls

0 = Electro- Mechanical Control  
1 = RTU Open Multi=Protocol Controller

## Design Revision

- Factory design revision

## Voltage

1 = 575/3/60  
5 = 208- 230/3/60  
6 = 460/3/60

## Coil Options (Outdoor- Indoor- Hailguard)

A = Al/Cu - Al/Cu  
B = Precoat Al/Cu - Al/Cu  
C = E coat Al/Cu - Al/Cu  
D = E coat Al/Cu- E coat Al/Cu  
E = Cu/Cu- Al/Cu  
F = Cu/Cu- Cu/Cu  
M = Al/Cu - Al/Cu - Louvered Hail Guard  
N = Precoat Al/Cu - Al/Cu - Louvered Hail Guard  
P = E- coat Al/Cu - Al/Cu - Louvered Hail Guard  
Q = E- coat Al/Cu - E- coat Al/Cu - Louvered Hail Guard  
R = Cu/Cu- Al/Cu- Louvered Hail Guard  
S = Cu/Cu- Cu/Cu- Louvered Hail Guard

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

CATEGORY	ITEM	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
<b>Cabinet</b>	Hinged access panels	X	
<b>Coil Options</b>	Cu/Cu indoor and/or outdoor coils	X	
	Pre- coated outdoor coils	X	
	Premium, E- coated outdoor coils	X	
<b>Humidity Control</b>	Humidi- MiZer <sup>®</sup> Adaptive Dehumidification System	X	
<b>Condenser Protection</b>	Condenser coil hail guard (louvered design)	X	X
<b>Controls</b>	Thermostats, temperature sensors, and subbases		X
	Smoke detector (supply and/or return air)	X	X
	Time Guard II compressor delay control circuit		X
	Phase Monitor		X
<b>Economizers &amp; Outdoor Air Dampers</b>	EconoMi\$er X for electromechanical controls, complies with FDD. (Standard and Ultra Low Leak air damper models) <sup>6</sup>	X	X
	EconoMi\$er 2 for DDC controls, complies with FDD. (Standard and Ultra Low Leak air damper models) <sup>6</sup>	X	X
	Barometric relief <sup>1</sup>	X	X
	Power exhaust	X	X
<b>Economizer Sensors &amp; IAQ Devices</b>	Single dry bulb temperature sensors <sup>2</sup>	X	X
	Differential dry bulb temperature sensors <sup>2</sup>		X
	Single enthalpy sensors <sup>2</sup>	X	X
	Differential enthalpy sensors <sup>2</sup>		X
	CO <sub>2</sub> sensor (wall, duct, or unit mounted) <sup>2</sup>	X	X
<b>Electric Heat</b>	Electric Resistance Heaters	X	X
	Single Point Kit	X	X
<b>Indoor Motor &amp; Drive</b>	Multiple motor and drive packages	X	
<b>Power Options</b>	Convenience outlet (powered)	X	
	Convenience outlet (unpowered)	X	
	HACR Circuit Breaker <sup>3, 5</sup>	X	
	Non- fused disconnect <sup>4,5</sup>	X	
<b>Roof Curbs</b>	Roof curb 14- in (356mm)		X
	Roof curb 24- in (610mm)		X

**NOTES:**

- 1 Included with economizer.
- 2 Sensors used to optimize economizer performance.
- 3 On 575V applications, HACR breaker can only be used with WYE power distribution systems. Using on Delta power distribution systems is prohibited.
- 4 On 208/230- 460 units with FIOP Non- Fused Disconnect, and Single Point Box accessory may be required. Refer to Electric Heat-Electrical Data Table for more information.
- 5 When selecting a factory installed HACR breaker or non- fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate any field items such as power exhaust devices etc.
- 6 FDD - (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.

# FACTORY OPTIONS AND/OR ACCESSORIES

## **Economizer**

Economizers save energy, money and improve comfort levels in the conditioned space. They bring in fresh, outside air for ventilation; and provide cool outside air to cool your building. This also is the preferred method of low ambient cooling. When integrated with CO<sub>2</sub> sensors, economizers can provide even more savings by coupling the ventilation air to only that amount required based on space occupancy.

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

Economizers include gravity controlled barometric relief that helps equalize building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization. Economizers are available in Ultra Low Leak and standard low leak versions.

## **CO<sub>2</sub> 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 CO<sub>2</sub> sensor detects their presence through increasing CO<sub>2</sub> levels, and opens the economizer appropriately.

When the occupants leave, the CO<sub>2</sub> 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. Carrier 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 (powered or un-powered)**

Reduce service and/or installation costs by including a convenience outlet in your specification. Carrier will install this service feature at our factory. Provides a convenient, 15 amp, 115v GFCI receptacle with “Wet in Use” cover. The “powered” option allows the installer to power the outlet from the line side of the disconnect or load side as required by code. The “unpowered” option is to be powered from a separate 115/120v power source.

## **Non-fused Disconnect**

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

When selecting a factory installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate any field items such as power exhaust devices etc.

## **Power Exhaust**

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 if built into thermostat or building management system.

## **Hinged Access Panels**

Allows access to unit's major components with specifically designed hinged access panels. Panels are: filter, control box, fan motor and compressor. Comes with quarter turn latches and lift tabs.

## **Alternate Motors and Drives**

Some applications need larger horsepower motors, some need more airflow, and some need both. Regardless of the case, your Carrier 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.

## FACTORY OPTIONS AND/OR ACCESSORIES (cont.)

### Electric Heaters

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

### HACR Breaker

These manual reset devices provide overload and short circuit protection for the unit. Factory wired and mounted with the units with access cover to help provide environment protection.

When selecting a factory installed HACR breaker, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate any field items such as power exhaust devices etc.

On 575V applications, HACR breaker can only be used with WYE power distribution systems. Use on Delta power distribution systems is prohibited.

### Thermostat

Due to the three stage cooling capacity design of these units, a three stage cooling thermostat is required for the unit to perform at listed operating efficiencies.

Carrier offers a Honeywell branded T7350D (3 Cool/3 Heat) Commercial Programmable Thermostat.

This provides:

- 7-day programmable
- 365-day clock with holiday programming
- Automatic Daylight Saving Time adjustment
- Backlit display
- Changeover selections: automatic or manual
- Fan configurable: continuous or intermittent during occupied

### Optional Humidi-MiZer<sup>®</sup> Adaptive Dehumidification System

Carrier's Humidi-MiZer adaptive dehumidification system is an all-inclusive factory installed option that can be ordered with any 50LC WeatherExpert™ rooftop unit.

This system expands the envelope of operation of Carrier's WeatherExpert rooftop products to provide unprecedented flexibility to meet year round comfort conditions.

The Humidi-MiZer adaptive dehumidification system has the industry's only dual dehumidification mode setting. The Humidi-MiZer system provides greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode.

The 50LC WeatherExpert rooftop coupled with the Humidi-MiZer system is capable of operating in normal design cooling mode, subcooling mode, and hot gas reheat mode. Normal design cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions.

Subcooling mode will operate to satisfy part load type conditions when the space requires combined sensible and a higher proportion of latent load control. Hot Gas Reheat mode will operate when outdoor temperatures diminish and the need for latent capacity is required for sole humidity control. Hot Gas Reheat mode will provide neutral air for maximum dehumidification operation.

**Table 2 – AHRI COOLING RATING TABLE**

**208V**

50LC UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (KW)	EER	IEER
14	3	12.5	146.0	11.7	12.5	19.3
17	3	15	172.0	13.7	12.6	18.5
20	3	17.5	194.0	15.9	12.2	17.9
24	3	20	232.0	19.0	12.2	18.2
26	3	23	274.0	23.6	11.6	18.3

**Table 3 – AHRI COOLING RATING TABLE**

**230/460/575V**

50LC UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (KW)	EER	IEER
14	3	12.5	146.0	11.6	12.6	19.3
17	3	15	174.0	13.8	12.6	18.5
20	3	17.5	194.0	15.9	12.2	17.7
24	3	20	234.0	19.2	12.2	18.2
26	3	23	274.0	23.6	11.6	18.3

**LEGEND**

- - Not Applicable
- AHRI - Air Conditioning, Heating and Refrigeration Institute Test Standard
- ASHRAE - American Society of Heating, Refrigerating and Air Conditioning, Inc.
- EER - Energy Efficiency Ratio
- IEER - Integrated Energy Efficiency Ratio

**NOTES:**

- 1 Rated in accordance with AHRI Standards.
- 2 Ratings are based on:  
**Cooling Standard:** 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F (35°C) db outdoor air temp.
- 3 All 50LC units comply with ASHRAE 90.1 Energy Star and CEE Energy Standard for minimum IEER and EER requirements.
- 4 50LC units comply with US Energy Policy Act. To evaluate code compliance requirements, refer to state and local codes.

**Table 4 – COOLING MINIMUM - MAXIMUM AIRFLOW RATINGS**

LC SIZE	COOLING STAGE	MAX CFM	MIN CFM	MAX OD AMBIENT TEMPERATURE °F	MIN OD AMBIENT TEMPERATURE °F
14	Stage- 3	6250	3150	125°	40°
	Stage- 2	3750	1900		
	Stage- 1	2500	1250		
17	Stage- 3	7500	3750	125°	40°
	Stage- 2	4500	2250		
	Stage- 1	3000	1500		
20	Stage- 3	8750	4400	125°	40°
	Stage- 2	5400	2700		
	Stage- 1	4600	2300		
24	Stage- 3	10000	5000	125°	40°
	Stage- 2	5700	2850		
	Stage- 1	4300	2150		
26	Stage- 3	11250	5650	125°	40°
	Stage- 2	8100	4050		
	Stage- 1	6750	3400		



**Table 5 – HEATING MINIMUM / MAXIMUM CFM TABLE**

UNIT	MIN AIR FLOW (CFM)	MAX AIR FLOW (CFM)
50LC*14	3,750	6,250
50LC*17	4,500	7,500
50LC*20	5,250	8,750
50LC*24	6,000	10,000
50LC*26	6,750	11,250

**Table 6 – SOUND PERFORMANCE TABLE**

50LC	Cooling Stages	OUTDOOR SOUND (dB) AT 60 HZ									
		A- Weighted	31.5	63	125	250	500	1000	2000	4000	8000
14	3	84	92.6	92.2	83.9	80.4	81.8	78.7	76.5	72.2	65.4
17	3	86	101.3	97.1	88.3	84.4	83.3	80.7	77.4	73.4	67.3
20	3	86	101.3	97.1	88.3	84.4	83.3	80.7	77.4	73.4	67.3
24	3	86	101.3	97.1	88.3	84.4	83.3	80.7	77.4	73.4	67.3
26	3	86	101.3	97.1	88.3	84.4	83.3	80.7	77.4	73.4	67.3

**LEGEND**

dB - Decibel

**NOTES:**

- 1 Outdoor sound data is measure in accordance with AHRI.
- 2 Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally 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 "average" human ear. A- weighted measurements for Carrier units are taken in accordance with AHRI.

Table 7 – PHYSICAL DATA

(COOLING)

12.5- 23 TONS

		50LC*14	50LC*17	50LC*20	50LC*24	50LC*26
<b>Refrigeration System</b>						
# Circuits / # Comp. / Type		1 / 2 / Scroll	1 / 2 / Scroll	1/2/Scroll	1 / 2 / Scroll	1 / 2 / Scroll
R- 410a charge (lbs - oz)		32- 0	33- 6	35- 6	40- 10	43- 4
Alternate (Humidi- MiZer) R- 410a charge (lbs - oz)		40- 0	50- 7	49- 0	57- 7	54- 0
Metering device		TXV	TXV	TXV	TXV	TXV
High- press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505	630 / 505
Low- press. Trip / Reset (psig)		54 / 117	54 / 117	54/117	54 / 117	54 / 117
<b>Evap. Coil</b>						
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF
Coil Length (in)		72	72	72	72	72
Coil Height (in)		44	52	52	52	52
Rows / FPI		4 /15	4 /15	4 /15	4 /15	4 /15
Total Face Area (ft2)		22.0	26.0	26.0	26.0	26.0
Condensate drain conn. size		3/4"	3/4"	3/4"	3/4"	3/4"
<b>Humidi- MiZer Coil</b>						
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF
Coil Length (in)		72	72	72	72	72
Coil Height (in)		44	52	52	52	52
Rows / FPI		1 /18	1 /18	2 /18	3 /18	4 /18
Total Face Area (ft2)		22.0	26.0	26.0	26.0	26.0
<b>Evap. fan and motor</b>						
<b>VERTICAL</b>						
Standard Static	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9	2.9	2.9	7.4	7.4
	RPM range	498- 676	498- 676	555- 753	583- 717	651- 818
	Motor Frame Size	56	56	56HZ	184T	184T
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal
	Fan Diameter (in)	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15
Medium Static	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	4.9	7.4	7.4	7.4	9.9
	RPM range	682- 861	651- 818	707- 888	707- 888	804- 970
	Motor Frame Size	145TZ	184T	184T	184T	213T
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal
	Fan Diameter (in)	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15x 15	15 x 15 / 15 x 15
High Static	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / 2 Belt
	Max BHP	7.4	9.9	9.9	9.9	13.6
	RPM range	782- 963	804- 970	872- 1053	872- 1053	948- 1190
	Motor Frame Size	184T	213T	213T	213T	215T
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal
	Fan Diameter (in)	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15
Ultra High Static	Motor Qty / Drive type	1 / Belt	1 / 2 Belt	1 / 2 Belt	1 / 2 Belt	N/A
	Max BHP (208/230/460/575v)	9.9	13.6	13.6	13.6	N/A
	RPM range	933- 1113	948- 1190	948- 1190	1049- 1291	N/A
	Motor Frame Size	213T	215T	215T	215T	N/A
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	N/A
	Fan Diameter (in)	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	15 x 15 / 15 x 15	N/A

		50LC*14	50LC*17	50LC*20	50LC*24	50LC*26
<b>Evap. fan and motor (cont.)</b>						
<b>HORIZONTAL</b>						
<b>Standard Static</b>	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9	2.9	2.9	7.4	7.4
	RPM range	498- 676	498- 676	555- 753	583- 717	707- 888
	Motor Frame Size	56	56	56HZ	184T	184T
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal
	Fan Diameter (in)	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11
<b>Medium Static</b>	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	4.9	7.4	7.4	7.4	9.9
	RPM range	644- 808	651- 818	651- 818	707- 888	859- 1026
	Motor Frame Size	184T	213T	213T	213T	213T
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal
	Fan Diameter (in)	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11
<b>High Static</b>	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / 2 Belt
	Max BHP	7.4	9.9	9.9	9.9	13.6
	RPM range	707- 888	804- 970	804- 970	872- 1053	948- 1190
	Motor Frame Size	184T	213T	213T	213T	215T
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal
	Fan Diameter (in)	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11
<b>Ultra High Static</b>	Motor Qty / Drive type	1 / Belt	1 / 2 Belt	1 / 2 Belt	1 / 2 Belt	N/A
	Max BHP (208/230/460/575v)	9.9	13.6	13.6	13.6	N/A
	RPM range	872- 1053	948- 1190	948- 1190	948- 1190	N/A
	Motor frame size	213T	215T	215T	215T	N/A
	Fan Qty / Type	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	2 / Centrifugal	N/A
	Fan Diameter (in)	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	18 x 15 / 15 X 11	N/A
<b>Cond. Coil 1</b>						
	Material	Cu / Al	Cu / Al	Cu / Al	Cu / Al	Cu / Al
	Coil type	5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF
	Coil Length (in)	68	82	82	98	98
	Coil Height (in)	44	52	52	52	52
	Rows / FPI	2/18	2 / 18	2/18	2 / 18	2 / 18
	Total Face Area (ft2)	20.8	29.6	29.6	35.4	35.4
<b>Cond. Coil 2</b>						
	Material	Cu / Al	Cu / Al	Cu / Al	Cu / Al	Cu / Al
	Coil type	5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF	5/16" RTPF
	Coil Length (in)	68	82	82	98	98
	Coil Height (in)	44	52	52	52	52
	Rows / FPI	2/18	2 / 18	2/18	2 / 18	2 / 18
	Total Face Area (ft2)	20.8	29.6	29.6	35.4	35.4
<b>Cond. fan / motor</b>						
	Qty / Motor drive type	3 / direct	4 / direct	4 / direct	6 / direct	6 / Direct
	Motor HP / RPM	1/3 / 1000	1/3 / 1000	1/3 /1000	1/3 / 1000	1/3 /1000
	Fan diameter (in)	22	22	22	22	22
<b>Filters</b>						
	RA Filter # / size (in)	6 / 20 x 25 x 2	9 / 16x25x2	9 / 16x25x2	9 / 16x25x2	9 / 16x25x2
	OA inlet screen # / size (in)	4 / 16 x 25 x 1	4 / 16x25x1	4 / 16x25x1	4 / 16x25x1	4 / 16x25x1

UNIT 50LC	NOM. V- Ph- Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER***A00 VERT/HORZ	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXA00			
						NO C.O. or UNPWRD C.O.		w/PWRD C.O.	
						NO P.E.	w/ P.E. (pwrd fr/unit)	NO P.E.	w/ P.E. (pwrd fr/unit)
14	208/ 230- 3- 60	STD	302/305A00	15.0	11.3/13.8	-	-	-	-
			279/270A00	25.0	18.8/23.0	-	-	-	-
			309/312A00	50.0	37.6/45.9	056	056	056	056
		MED	302/305A00	15.0	11.3/13.8	-	-	-	-
			279/270A00	25.0	18.8/23.0	-	-	-	-
			309/312A00	50.0	37.6/45.9	056	056	056	056
		HIGH	302/305A00	15.0	11.3/13.8	-	-	-	-
			279/270A00	25.0	18.8/23.0	-	-	-	-
			309/312A00	50.0	37.6/45.9	056	056	056	056
		ULTRA HIGH	302/305A00	15.0	11.3/13.8	-	-	-	-
			279/270A00	25.0	18.8/23.0	-	-	-	056
			309/312A00	50.0	37.6/45.9	056	056	056	056
	460- 3- 60	STD	303/306A00	15.0	13.8	-	-	-	-
			282/273A00	25.0	23.0	-	-	-	-
			310/313A00	50.0	45.9	-	057	057	057
		MED	303/306A00	15.0	13.8	-	-	-	-
			282/273A00	25.0	23.0	-	-	-	-
			310/313A00	50.0	45.9	057	057	057	057
		HIGH	303/306A00	15.0	13.8	-	-	-	-
			282/273A00	25.0	23.0	-	-	-	-
			310/313A00	50.0	45.9	057	057	057	057
		ULTRA HIGH	303/306A00	15.0	13.8	-	-	-	-
			282/273A00	25.0	23.0	-	-	-	-
			310/313A00	50.0	45.9	057	057	057	057
	575- 3- 60	STD	304/307A00	15.0	13.8	-	-	-	-
			285/276A00	24.8	22.8	-	-	-	-
			311/314A00	49.6	45.6	-	057	-	057
		MED	304/307A00	15.0	13.8	-	-	-	-
			285/276A00	24.8	22.8	-	-	-	-
			311/314A00	49.6	45.6	-	057	-	057
HIGH		304/307A00	15.0	13.8	-	-	-	-	
		285/276A00	24.8	22.8	-	-	-	-	
		311/314A00	49.6	45.6	-	057	057	057	
ULTRA HIGH		304/307A00	15.0	13.8	-	-	-	-	
		285/276A00	24.8	22.8	-	-	-	-	
		311/314A00	49.6	45.6	057	057	057	057	

**LEGEND**

- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenient outlet
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- PWRD - Powered convenient outlet
- UNPWRD - Unpowered convenient outlet

UNIT 50LC	NOM. V- Ph- Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER***A00 VERT/HORZ	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXA00			
						NO C.O. or UNPWRD C.O.		w/PWRD C.O.	
						NO P.E.	w/ P.E. (pwrd fr/unit)	NO P.E.	w/ P.E. (pwrd fr/unit)
17	208/ 230- 3- 60	STD	279/270A00	25.0	18.8/23.0	-	-	-	-
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		MED	279/270A00	25.0	18.8/23.0	-	-	-	-
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		HIGH	279/270A00	25.0	18.8/23.0	-	-	-	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		ULTRA HIGH	279/270A00	25.0	18.8/23.0	-	056	056	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
	460- 3- 60	STD	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	-	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		MED	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		HIGH	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		ULTRA HIGH	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
	575- 3- 60	STD	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	-	057	-	057
			287/278A00	74.4	68.3	057	057	057	057
		MED	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	-	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		HIGH	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		ULTRA HIGH	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057

**LEGEND**

APP PWR - 208 / 230V / 460V / 575V

C.O. - Convenient outlet

IFM - Indoor fan motor

NOM PWR - 240V / 480V / 600V

P.E. - Power exhaust

PWRD - Powered convenient outlet

UNPWRD - Unpowered convenient outlet

UNIT 50LC	NOM. V- Ph- Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER***A00 VERT/HORZ	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXA00			
						NO C.O. or UNPWRD C.O.		w/PWRD C.O.	
						NO P.E.	w/ P.E. (pwrd fr/unit)	NO P.E.	w/ P.E. (pwrd fr/unit)
20	208/ 230- 3- 60	STD	279/270A00	25.0	18.8/23.0	-	-	-	-
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		MED	279/270A00	25.0	18.8/23.0	-	-	-	-
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		HIGH	279/270A00	25.0	18.8/23.0	-	-	-	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		ULTRA HIGH	279/270A00	25.0	18.8/23.0	-	056	056	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
	460- 3- 60	STD	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		MED	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		HIGH	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		ULTRA HIGH	282/273A00	25.0	23.0	-	-	-	-
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
	575- 3- 60	STD	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	-	057	-	057
			287/278A00	74.4	68.3	057	057	057	057
		MED	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	-	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		HIGH	285/276A00	24.8	22.8	-	-	-	-
			286A/27700	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		ULTRA HIGH	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057

**LEGEND**

APP PWR - 208 / 230V / 460V / 575V

C.O. - Convenient outlet

IFM - Indoor fan motor

NOM PWR - 240V / 480V / 600V

P.E. - Power exhaust

PWRD - Powered convenient outlet

UNPWRD - Unpowered convenient outlet

UNIT 50LC	NOM. V- Ph- Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER***A00 VERT/HORZ	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXA00			
						NO C.O. or UNPWRD C.O.		w/PWRD C.O.	
						NO P.E.	w/ P.E. (pwrd fr/unit)	NO P.E.	w/ P.E. (pwrd fr/unit)
24	208/ 230- 3- 60	STD	279/270A00	25.0	18.8/23.0	-	-	-	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		MED	279A/27000	25.0	18.8/23.0	-	-	-	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		HIGH	279/270A00	25.0	18.8/23.0	-	056	-	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		ULTRA HIGH	279/270A00	25.0	18.8/23.0	056	056	056	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
	460- 3- 60	STD	282/273A00	25.0	23.0	-	057	-	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		MED	282/273A00	25.0	23.0	-	057	-	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		HIGH	282/273A00	25.0	23.0	-	057	057	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		ULTRA HIGH	282/273A00	25.0	23.0	057	057	057	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
	575- 3- 60	STD	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	-	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		MED	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	-	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		HIGH	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		ULTRA HIGH	285/276A00	24.8	22.8	-	-	-	-
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057

**LEGEND**

APP PWR - 208 / 230V / 460V / 575V

C.O. - Convenient outlet

IFM - Indoor fan motor

NOM PWR - 240V / 480V / 600V

P.E. - Power exhaust

PWRD - Powered convenient outlet

UNPWRD - Unpowered convenient outlet

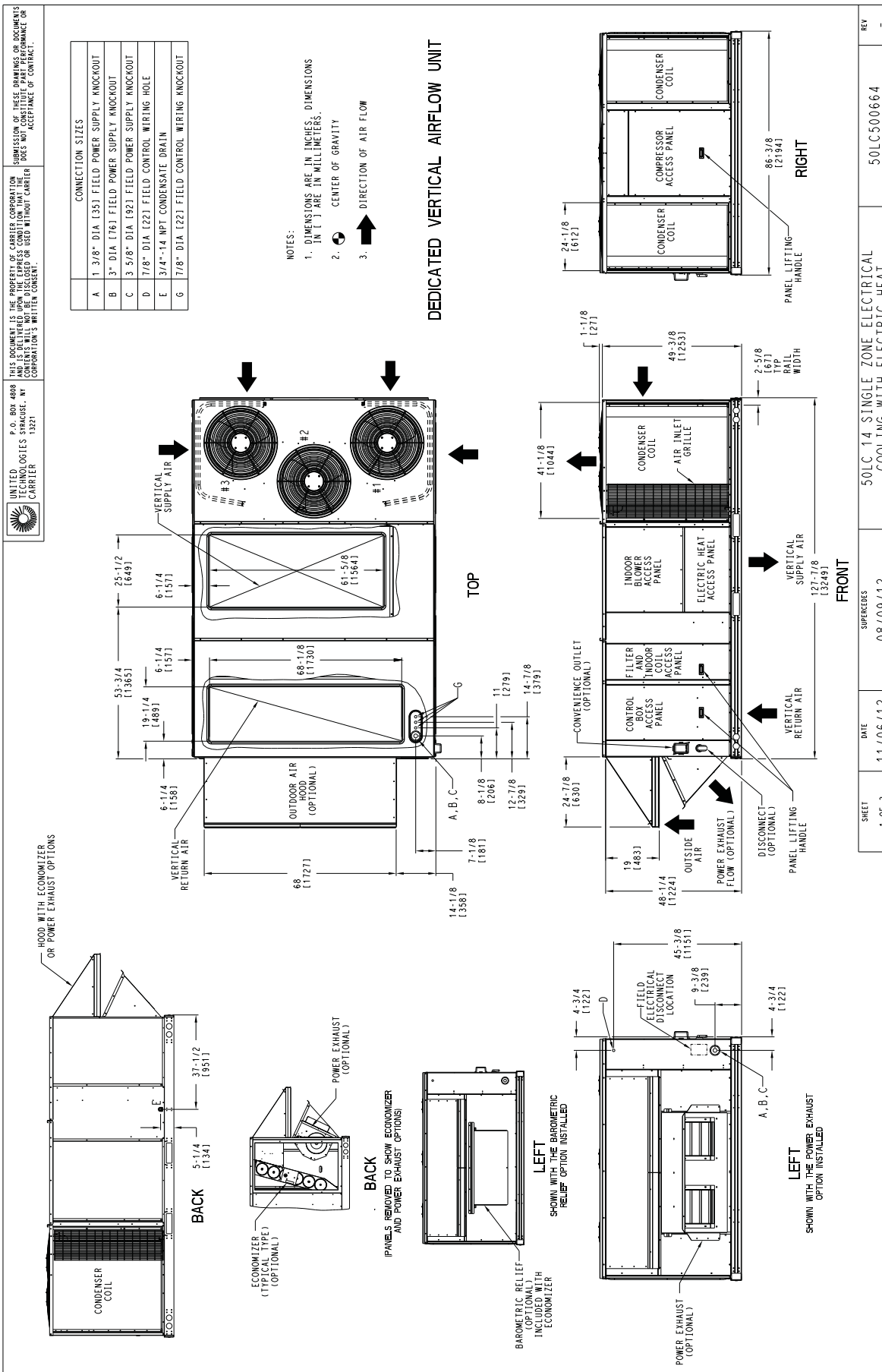
UNIT 50LC	NOM. V- Ph- Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER***A00 VERT/HORZ	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXA00			
						NO C.O. or UNPWRD C.O.		w/PWRD C.O.	
						NO P.E.	w/ P.E. (pwrd fr/unit)	NO P.E.	w/ P.E. (pwrd fr/unit)
26	208/ 230- 3- 60	STD	279/270A00	25.0	18.8/23.0	056	056	056	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		MED	279/270A00	25.0	18.8/23.0	056	056	056	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
		HIGH	279/270A00	25.0	18.8/23.0	056	056	056	056
			280/271A00	50.0	37.6/45.9	056	056	056	056
			281/272A00	75.0	56.3/68.9	056	056	056	056
	460- 3- 60	STD	282/273A00	25.0	23.0	057	057	057	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		MED	282/273A00	25.0	23.0	057	057	057	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
		HIGH	282/273A00	25.0	23.0	057	057	057	057
			283/274A00	50.0	45.9	057	057	057	057
			284/275A00	75.0	68.9	057	057	057	057
	575- 3- 60	STD	285/276A00	24.8	22.8	-	-	-	057
			286/277A00	49.6	45.6	-	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		MED	285/276A00	24.8	22.8	-	057	-	057
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057
		HIGH	285/276A00	24.8	22.8	057	057	057	057
			286/277A00	49.6	45.6	057	057	057	057
			287/278A00	74.4	68.3	057	057	057	057

**LEGEND**

- APP PWR - 208 / 230V / 460V / 575V
- C.O. - Convenient outlet
- IFM - Indoor fan motor
- NOM PWR - 240V / 480V / 600V
- P.E. - Power exhaust
- PWRD - Powered convenient outlet
- UNPWRD - Unpowered convenient outlet



# UNIT: DIMENSIONS, WEIGHTS & CURBS



SHEET 1 OF 3	DATE 11/06/12	SUPERSEDES 08/09/12	50LC 14 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	REV 50LC500664
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Fig. 1 - Dimensions 50LC\*14



# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

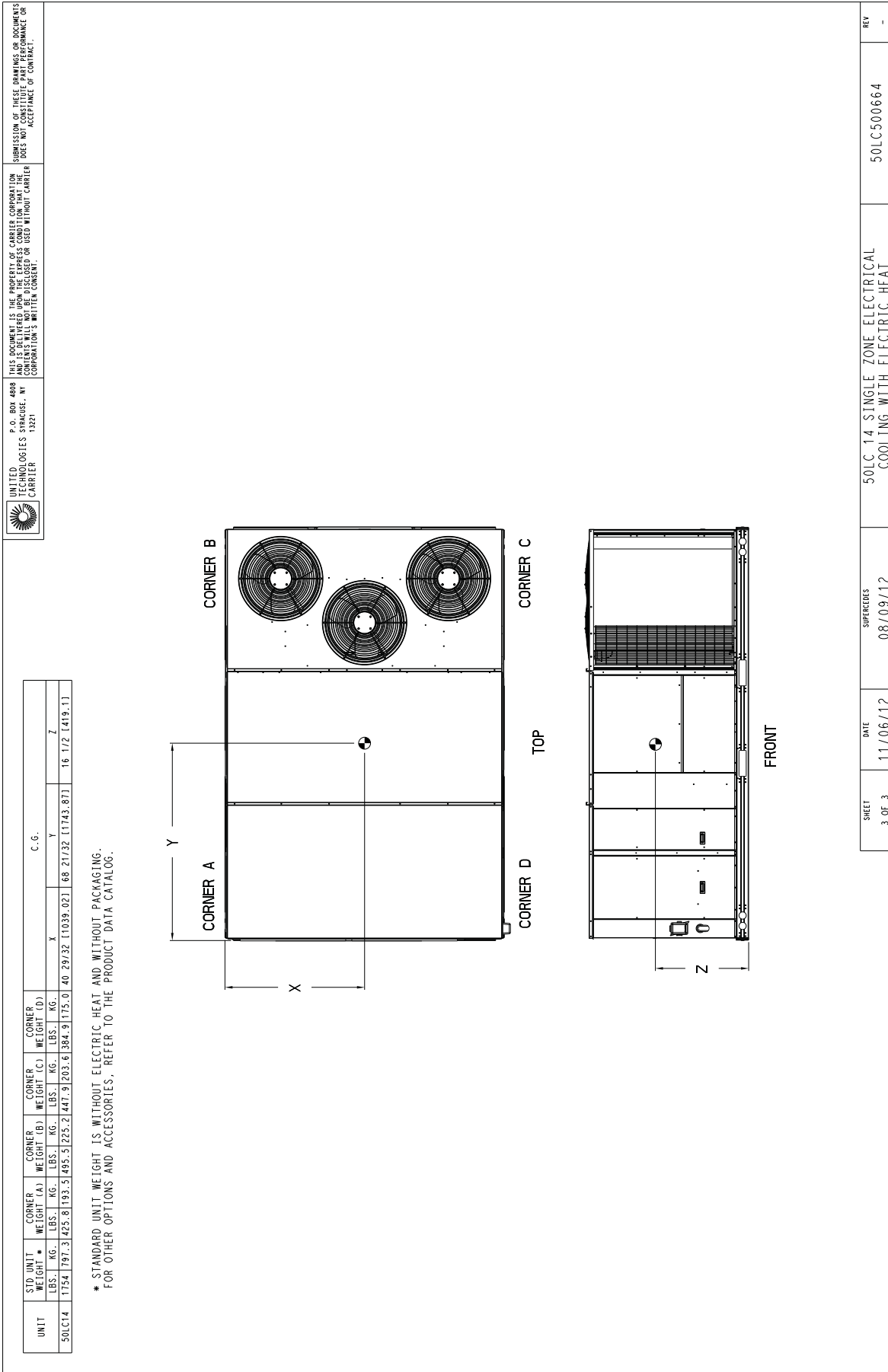
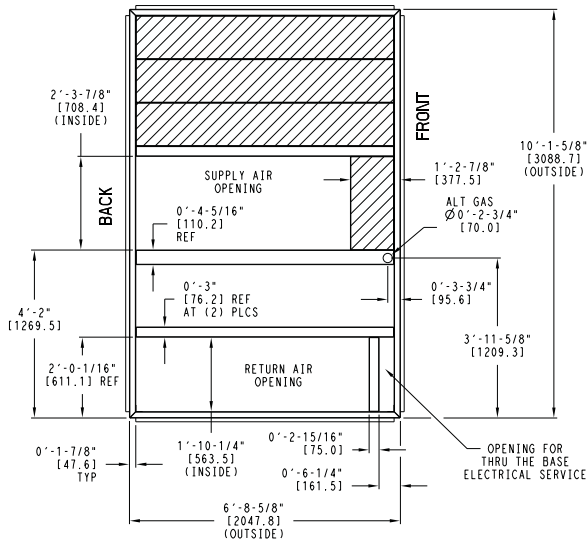


Fig. 3 - Dimensions 50LC\*14

# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

UNIT SIZE	"A"	ROOF CURB ACCESSORY
14	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB045A00 CRRFCURB046A00



NOTES:

- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
- 2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.
- 3 ROOF CURB GALVANIZED STEEL.
- 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
- 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW

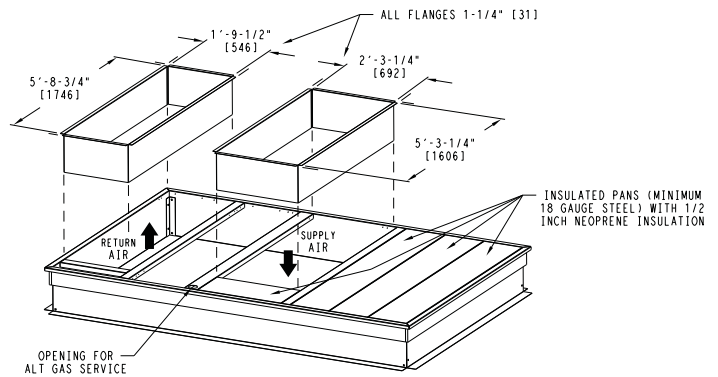
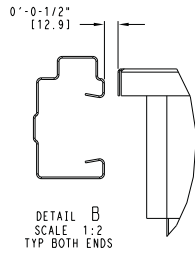
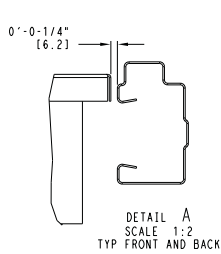
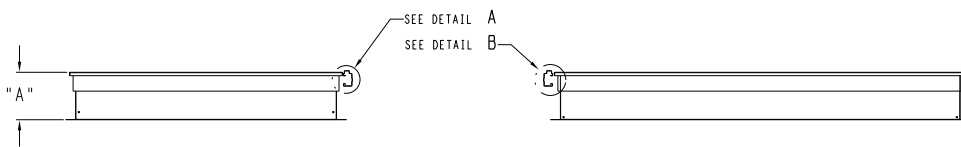
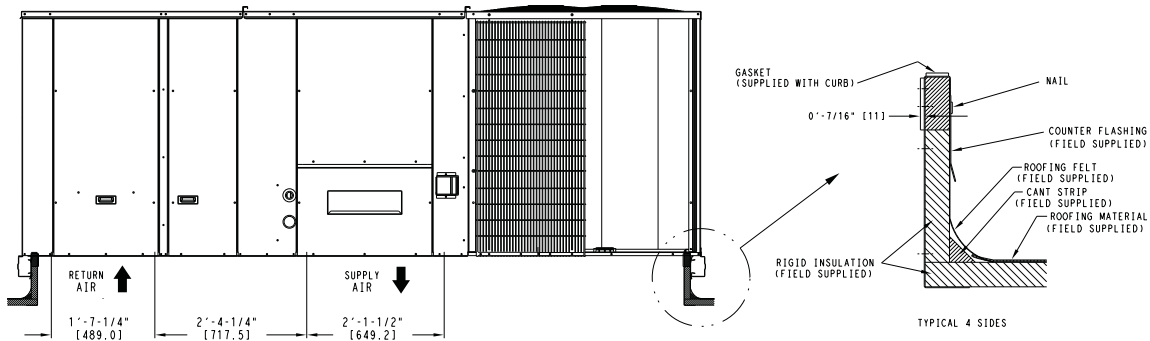
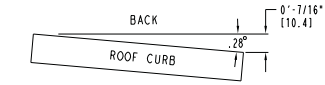


Fig. 4 - Roof Curb Details 50LC\*14

C13054





# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

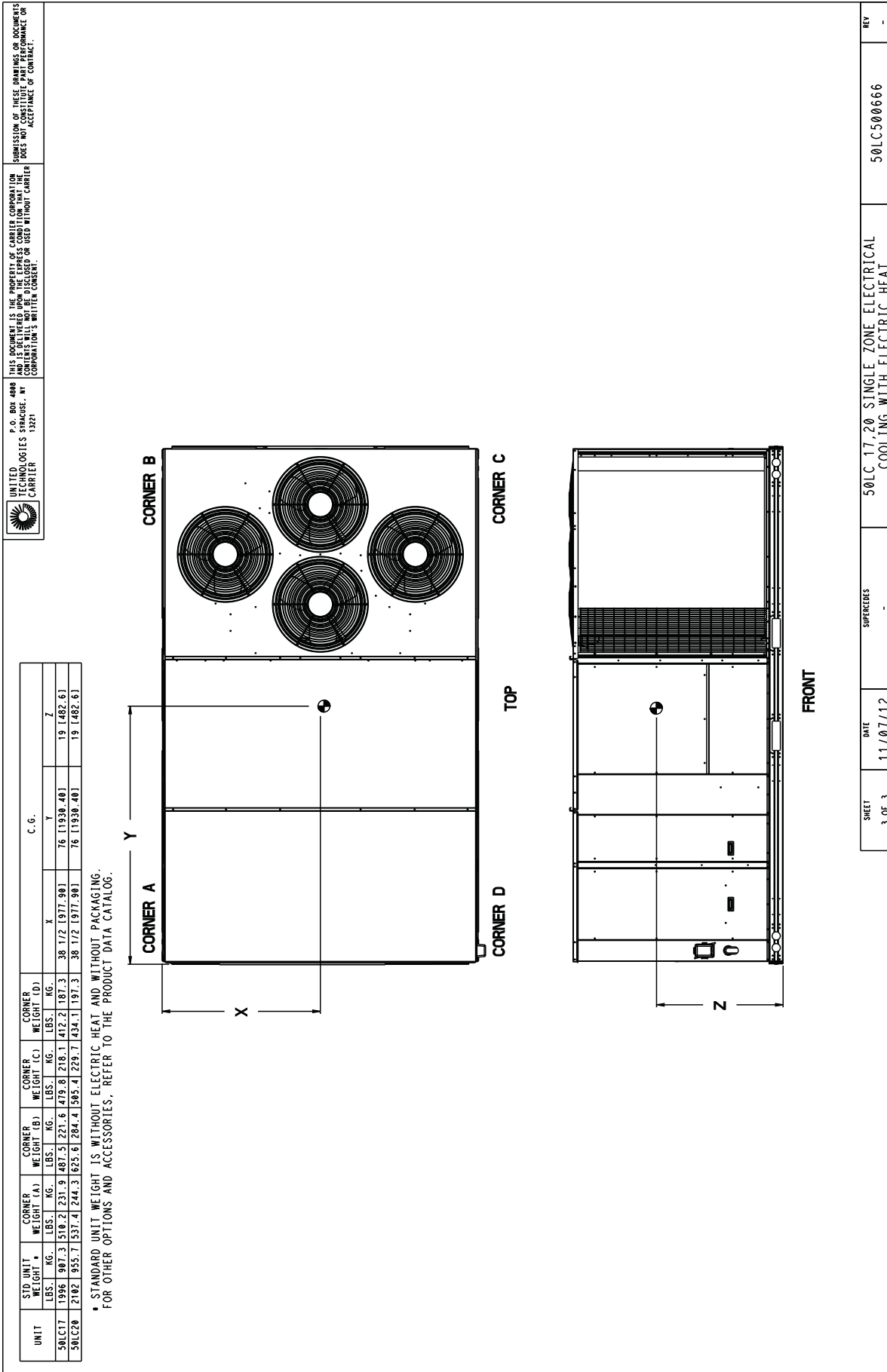
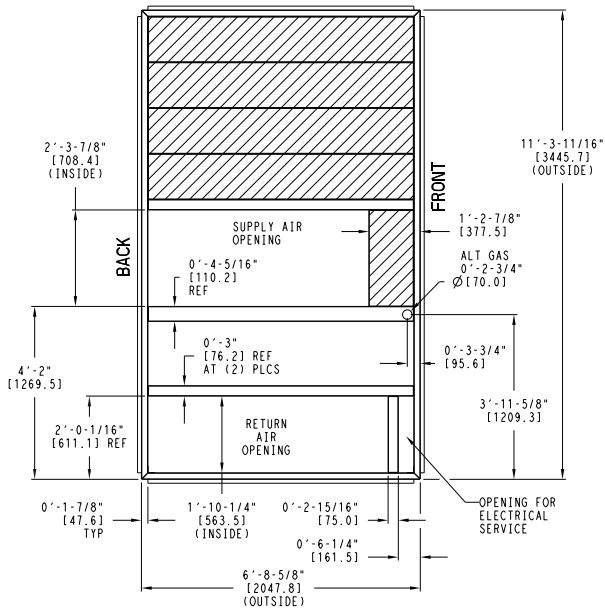


Fig. 7 - Dimensions 50LC\*17 - 20

# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

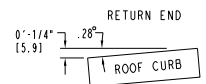
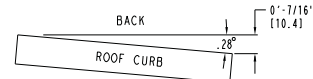
UNIT SIZE	"A"	ROOF CURB ACCESSORY
17, 20	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB047A00 CRRFCURB048A00



**NOTES:**

- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
- 2 DIMENSIONS IN [ ] ARE IN MILLIMETERS.
- 3 ROOF CURB GALVANIZED STEEL.
- 4 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
- 5 SERVICE CLEARANCE 4 FT ON EACH SIDE

➔ DIRECTION OF AIR FLOW



MAX CURB LEVELING TOLERANCES

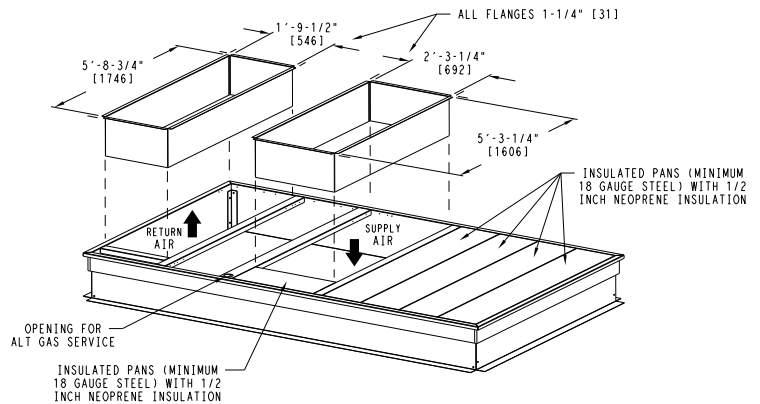
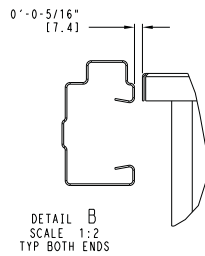
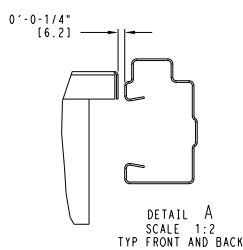
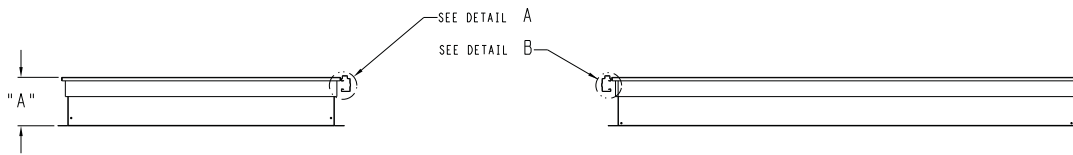
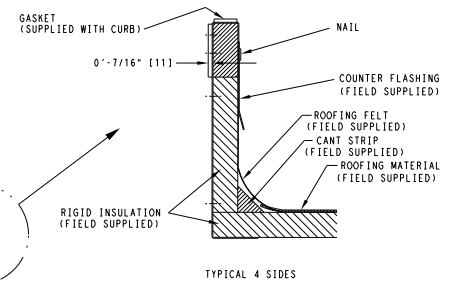
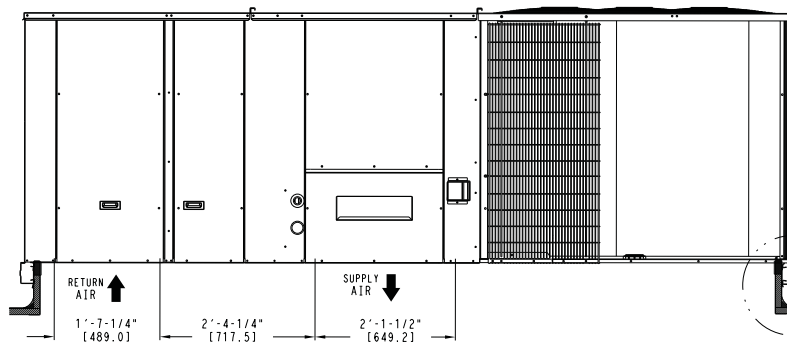
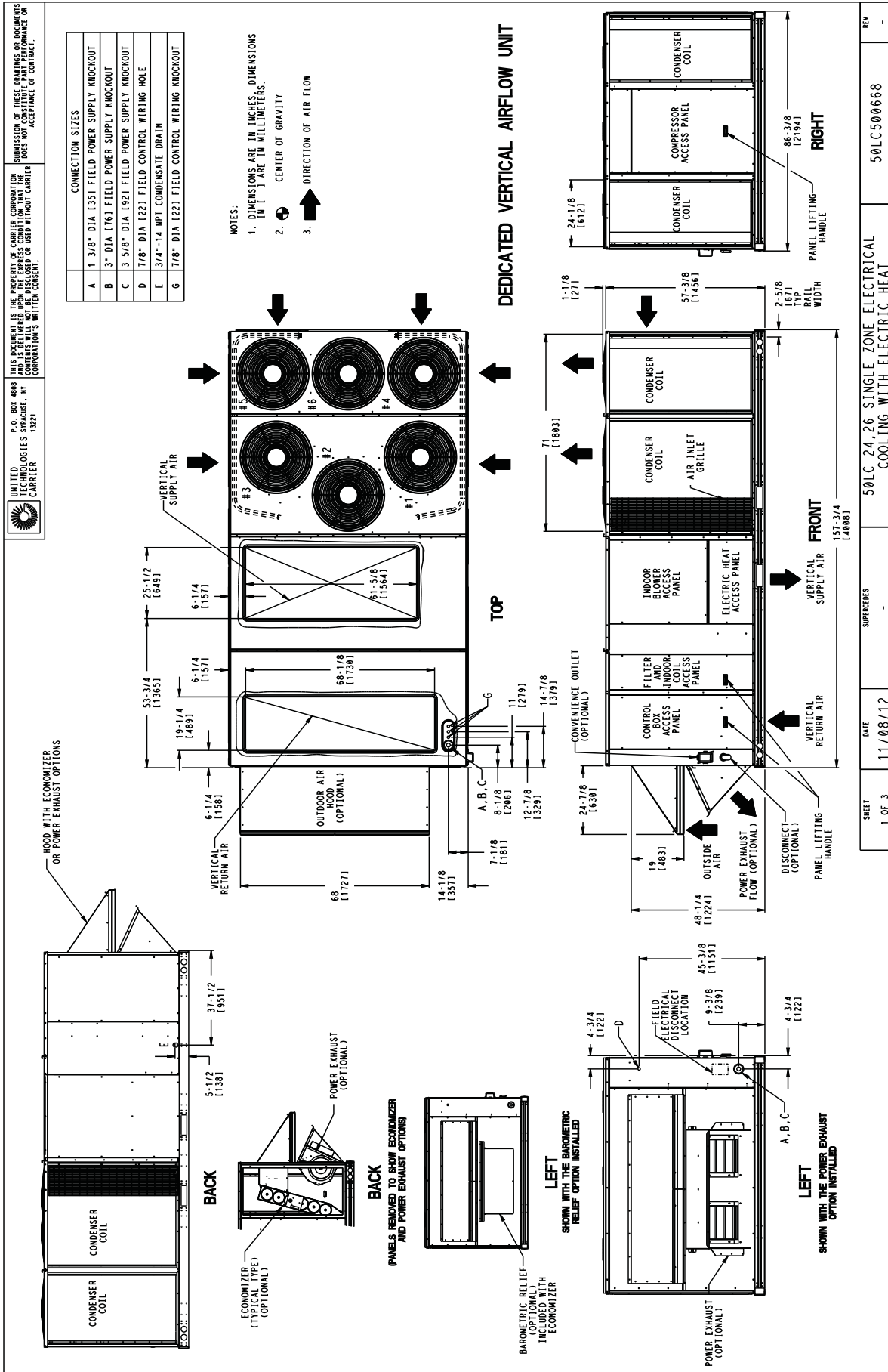


Fig. 8 - Roof Curb Details 50LC\*17-20

C13055



# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)



SHEET 1 OF 3

DATE 11/08/12

SUPERCEDS -

50LC 24, 26 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT

REV -

50LC500668

Fig. 9 - Dimensions 50LC\*24, 26

# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

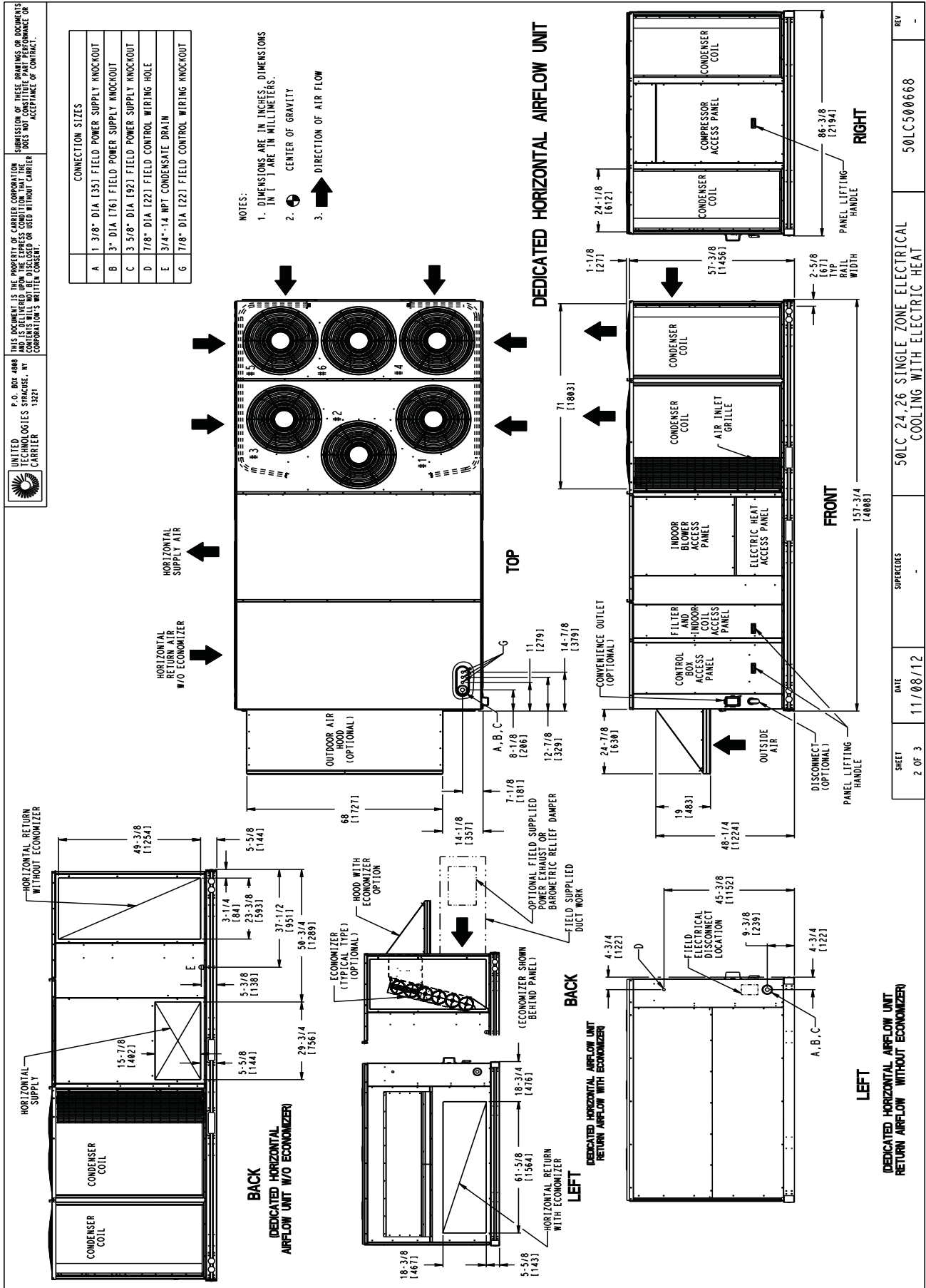


Fig. 10 - Dimensions 50LC\*24, 26

# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

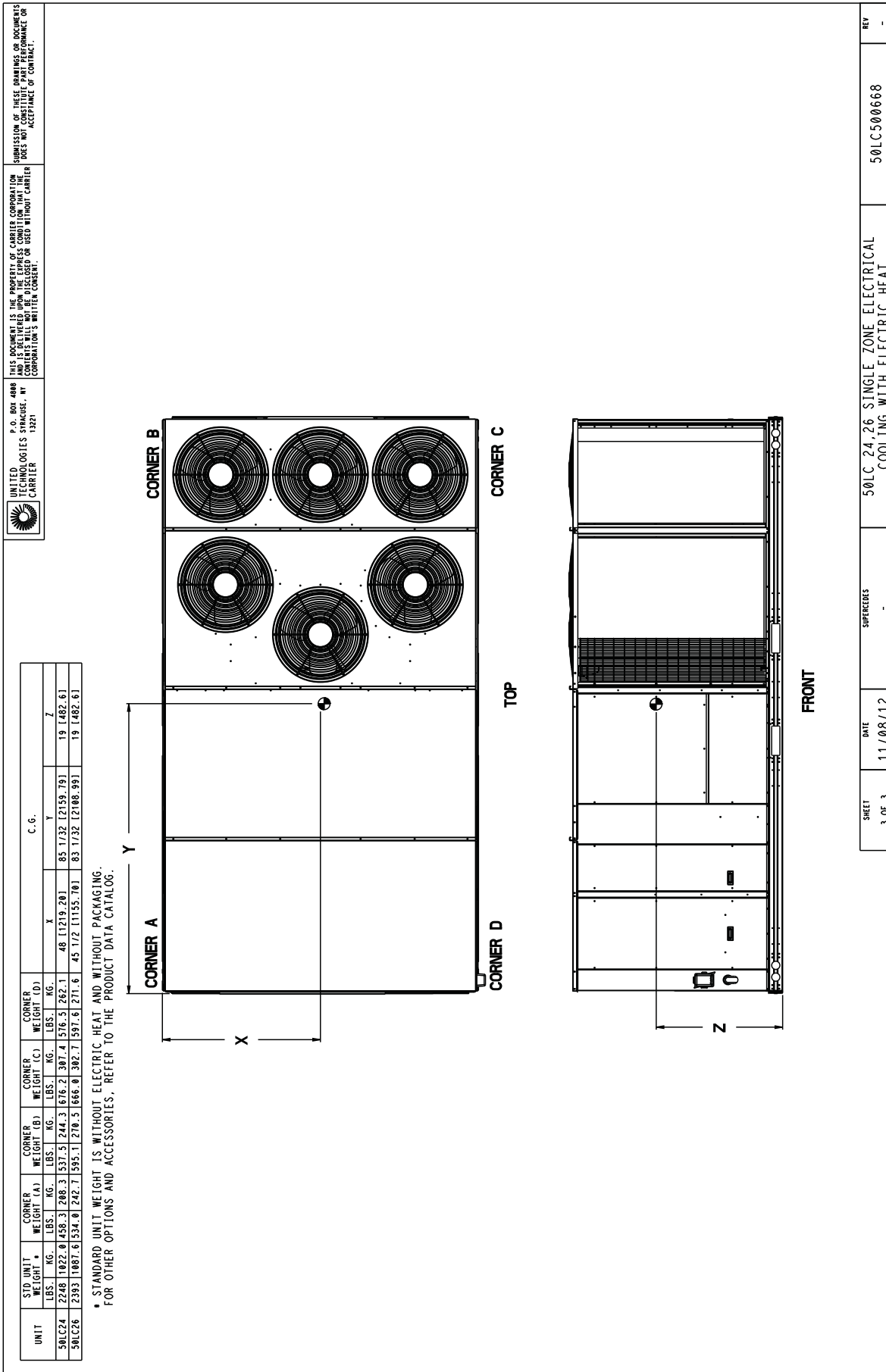
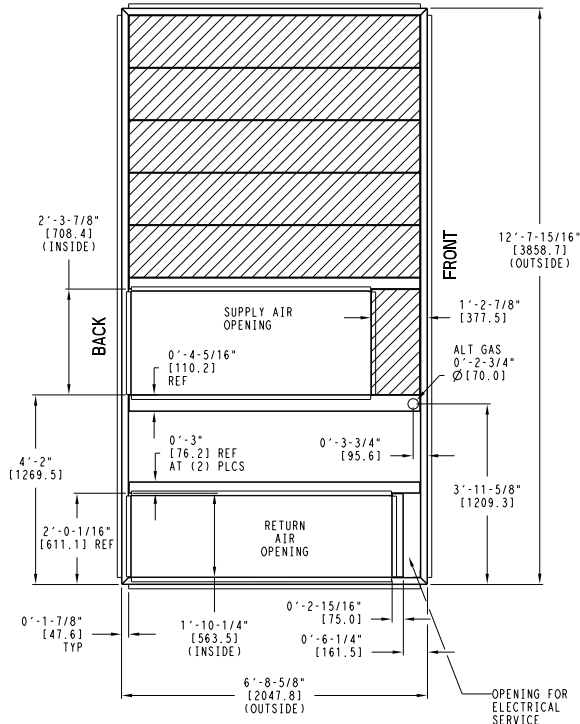


Fig. 11 - Dimensions 50LC\*24, 26

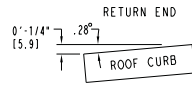
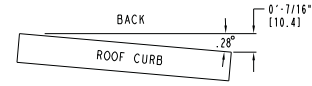
# UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)

UNIT SIZE	"A"	ROOF CURB ACCESSORY
24, 26	1'-2" [356.0] 2'-0" [610.0]	CRRFCURB049A00 CRRFCURB050A00



- NOTES:
- 1 ROOF CURB ACCESSORY IS SHIPPED UNASSEMBLED.
  - 2 BOLT HEADS TO BE ON INSIDE OF FLANGE. CLEARANCE IS (11) 0-0-7/16" TYP ALL CORNERS.
  - 3 DIMENSIONS IN ( ) ARE IN MILLIMETERS.
  - 4 ROOF CURB GALVANIZED STEEL.
  - 5 ATTACH DUCTWORK TO CURB (FLANGES ON DUCT REST ON CURB)
  - 6 SERVICE CLEARANCE 4 FT ON EACH SIDE
  - 7 GAS SERVICE PLATE IS PART OF A SEPERATELY SHIPPED ACCESSORY PACKAGE.
  - 8 GAS SERVICE PLATE CAN BE USED WITH EITHER ACCESSORY ROOFCURB.

➔ DIRECTION OF AIR FLOW



MAX CURB LEVELING TOLERANCES

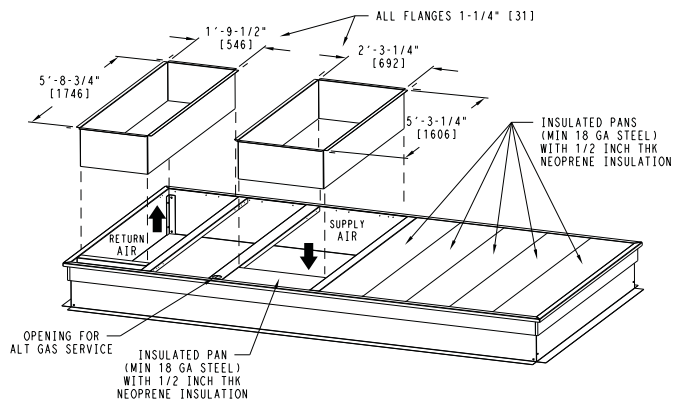
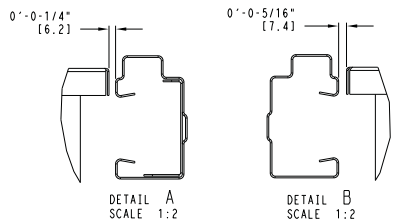
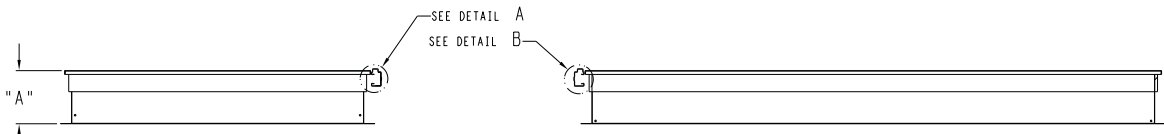
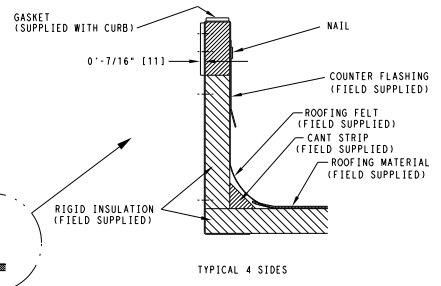
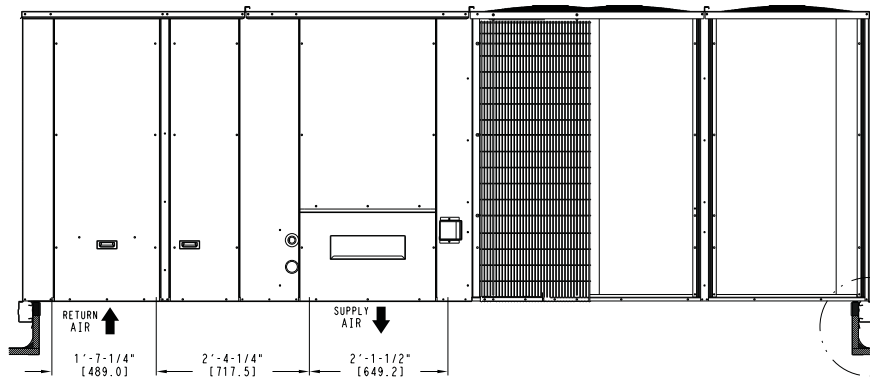
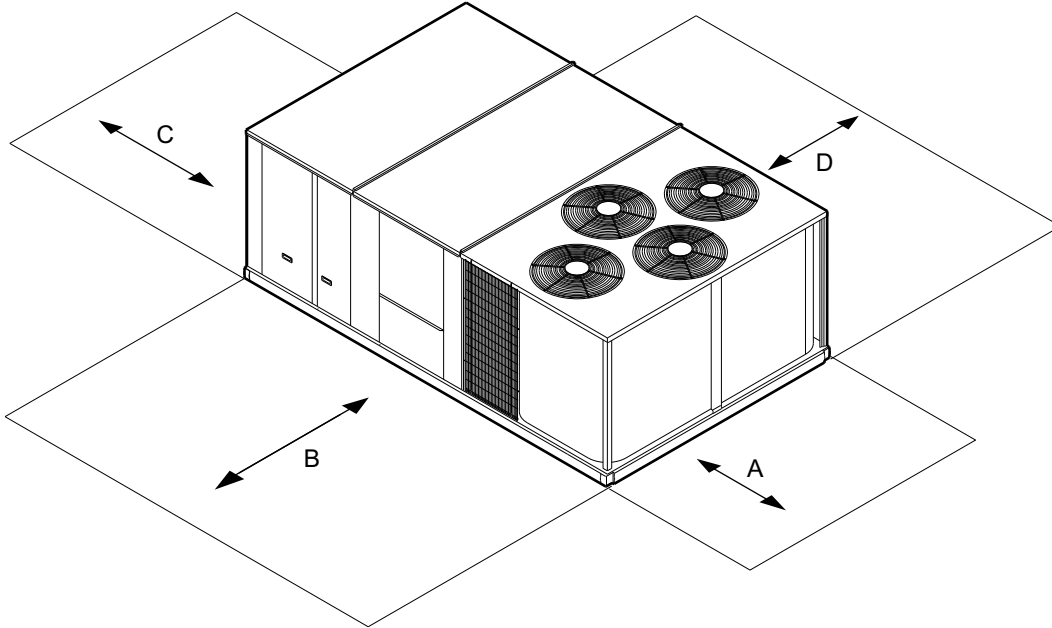


Fig. 12 - Roof Curb Details 50LC\*24, 26

C13056

## UNIT: DIMENSIONS, WEIGHTS & CURBS (cont.)



C13292

LOCATION	DIMENSION	CONDITION
A	36- in (914 mm)	<ul style="list-style-type: none"> <li>• Recommended clearance for air flow and service</li> </ul>
B	42- in (1067 mm)	<ul style="list-style-type: none"> <li>• Recommended clearance for air flow and service</li> </ul>
C	18- in (457 mm)	<ul style="list-style-type: none"> <li>• No Convenience Outlet</li> <li>• No Economizer</li> <li>• No field installed disconnect on economizer hood side (Factory- installed disconnect installed).</li> </ul>
	36- in (914 mm)	<ul style="list-style-type: none"> <li>• Convenience Outlet installed.</li> <li>• Vertical surface behind servicer is electrically non- conductive (e.g.: wood, fiberglass).</li> </ul>
	42- in (1067 mm)	<ul style="list-style-type: none"> <li>• Convenience Outlet installed.</li> <li>• Vertical surface behind servicer is electrically conductive (e.g.: metal, masonry).</li> </ul>
	96- in (2438 mm)	<ul style="list-style-type: none"> <li>• Economizer and/or Power Exhaust installed.</li> <li>• Check for sources of flue products with 10 feet (3 meters) of economizer fresh air intake.</li> </ul>
D	42- in (1067 mm)	<ul style="list-style-type: none"> <li>• Recommended clearance for service.</li> </ul>

**NOTE:** 1. Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

2. The number of fans varies with the unit size. Depending on size unit will have three to six fans.

**Fig. 13 - Service Clearance Dimensional Drawing — Typical All 50LC 14-26 Units**

## OPTIONS & ACCESSORY WEIGHTS

OPTION / ACCESSORY	WEIGHTS in LBS				
	50LC*14	50LC*17	50LC*20	50LC*24	50LC*26
Humidi- MiZer®	120	120	120	120	120
Low Electric Heat	85	85	85	85	85
Medium Electric Heat	100	100	100	100	100
High Electric Heat	100	100	100	100	100
Return Smoke Detector	5	5	5	5	5
Supply Smoke Detector	5	5	5	5	5
RA & SA Smoke Detector	10	10	10	10	10
CO2 sensor	5	5	5	5	5
RA Smoke Detector & CO2	10	10	10	10	10
SA Smoke Detector & CO2	10	10	10	10	10
RA & SA Smoke Detector & CO2	15	15	15	15	15
Medium Static Option	5	6	6	10	10
High Static Option	11	16	16	20	20
Cu/Cu Cond & Al/Cu Evap	28	34	34	34	34
Cu/Cu Cond & Cu/Cu Evap	53	64	64	64	64
Al/Cu Cond & Al/Cu Evap + Hail Guard	60	150	150	150	150
Precoat Al/Cu Cond & Al/Cu Evap + Hail Guard	60	150	150	150	150
Ecoat Al/Cu Cond & Al/Cu Evap + Hail Guard	60	150	150	150	150
Ecoat Al/Cu Cond & Ecoat Al/Cu Evap + Hail Guard	60	150	150	150	150
Cu/Cu Cond & Al/Cu Evap + Hail Guard	88	184	184	184	184
Cu/Cu Cond & Cu/Cu Evap + Hail Guard	113	214	214	214	214
Temp Ultra Low Leak Econo w/Baro Relief	246	246	246	246	246
Temp Ultra Low Leak Econo w/PE (cent) Power Exhaust	371	371	371	371	371
Enthalpy Ultra Low Leak Econo w/Baro Relief	246	246	246	246	246
Enthalpy Ultra Low Leak Econo w/PE (cent) Power Exhaust	371	371	371	371	371
Unpowered Convenience Outlet	5	5	5	5	5
Powered Convenience outlet	35	35	35	35	35
Hinged Panels	5	5	5	5	5
Hinged Panels with Unpowered Convenience Outlet	10	10	10	10	10
Hinged Panels with Powered Convenience Outlet	40	40	40	40	40
HACR Breaker	10	10	10	10	10
Non- Fused Disconnect	15	15	15	15	15

## APPLICATION DATA

### **Min operating ambient temp (cooling):**

In mechanical cooling mode, your Carrier rooftop can safely operate down to an outdoor ambient temperature of 40°F (4°C).

An economizer shall be the source of cooling in low ambient conditions. When the outside air temperature is below 40°F, to improve system reliability, reduce energy usage, and improve system efficiency: mechanical cooling shall not be utilized. Therefore, an economizer shall be used in these conditions to provide efficient low ambient cooling. Using an economizer for low ambient cooling merely requires fan energy to satisfy space requirements. The compressors shall not be required to run which will provide exceptional energy savings due to less power draw, improved system reliability due to fewer compressor run hours, improved reliability through fewer starts/stops, and lower life cycle costs due to reduced compressor maintenance.

### **Max operating ambient temp (cooling):**

The maximum operating ambient temperature for cooling mode is 125°F (52°C). While cooling operation above 125°F (52°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 Carrier representative for assistance.

### **Motor limits, break horsepower (BHP):**

Due to Carrier's internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in Table 7 can be used with the utmost confidence. There is no need for extra safety factors, as Carrier'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.

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.

# COOLING CAPACITIES

**Table 10 – COOLING CAPACITIES - FIRST STAGE, PART LOAD**

**12.5 TONS**

14 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
2000 Cfm	EA (wB)	58	THC	58.0	58.0	66.0	54.1	54.1	61.9	50.2	50.2	57.6	46.0	46.0	53.1	41.7	41.7	48.6	
			SHC	49.9	58.0	66.0	46.3	54.1	61.9	42.7	50.2	57.6	38.9	46.0	53.1	35.0	41.7	48.6	
		62	THC	58.8	58.8	67.6	54.4	54.4	64.4	50.3	50.3	60.3	46.1	46.1	55.7	41.8	41.8	50.9	
			SHC	46.7	57.1	67.6	43.7	54.0	64.4	40.3	50.3	60.3	36.7	46.1	55.7	32.8	41.8	50.9	
		67	THC	65.8	65.8	65.8	60.9	60.9	60.9	56.1	56.1	56.1	50.9	50.9	50.9	45.6	45.6	46.8	
			SHC	37.5	48.1	58.7	34.7	45.2	55.8	31.8	42.3	52.8	28.8	39.3	49.8	25.7	36.3	46.8	
	72	THC	73.9	73.9	73.9	68.8	68.8	68.8	63.6	63.6	63.6	58.1	58.1	58.1	52.5	52.5	52.5		
		SHC	28.1	38.7	49.3	25.2	35.8	46.4	22.3	32.9	43.5	19.3	29.9	40.6	16.4	26.9	37.5		
	76	THC	-	80.9	80.9	-	75.5	75.5	-	69.9	69.9	-	64.2	64.2	-	58.2	58.2		
		SHC	-	31.0	41.7	-	28.1	38.8	-	25.3	35.9	-	22.2	33.0	-	19.3	29.9		
	2350 Cfm	EA (wB)	58	THC	61.8	61.8	70.4	57.8	57.8	66.0	53.6	53.6	61.4	49.2	49.2	56.7	44.7	44.7	51.8
				SHC	53.3	61.8	70.4	49.6	57.8	66.0	45.7	53.6	61.4	41.7	49.2	56.7	37.6	44.7	51.8
62			THC	61.9	61.9	73.3	57.9	57.9	68.8	53.7	53.7	64.2	49.3	49.3	59.3	44.8	44.8	54.2	
			SHC	50.6	61.9	73.3	46.9	57.9	68.8	43.2	53.7	64.2	39.3	49.3	59.3	35.3	44.8	54.2	
67			THC	67.8	67.8	67.8	62.8	62.8	62.8	57.7	57.7	59.4	52.5	52.5	56.4	47.0	47.0	53.1	
			SHC	40.8	53.0	65.3	37.8	50.1	62.4	34.9	47.1	59.4	31.9	44.1	56.4	28.8	41.0	53.1	
72		THC	76.1	76.1	76.1	70.7	70.7	70.7	65.2	65.2	65.2	59.6	59.6	59.6	53.7	53.7	53.7		
		SHC	29.5	41.9	54.3	26.6	39.0	51.4	23.7	36.1	48.4	20.8	33.1	45.4	17.6	30.0	42.3		
76		THC	-	83.1	83.1	-	77.4	77.4	-	71.7	71.7	-	65.7	65.7	-	59.6	59.6		
		SHC	-	32.9	45.3	-	29.9	42.4	-	27.0	39.4	-	24.0	36.4	-	21.0	33.3		
2700 Cfm		EA (wB)	58	THC	65.0	65.0	73.9	60.8	60.8	69.3	56.5	56.5	64.5	51.9	51.9	59.6	47.1	47.1	54.4
				SHC	56.2	65.0	73.9	52.3	60.8	69.3	48.3	56.5	64.5	44.1	51.9	59.6	39.8	47.1	54.4
	62		THC	65.1	65.1	77.0	60.8	60.8	72.2	56.5	56.5	67.4	51.9	51.9	62.3	47.2	47.2	56.9	
			SHC	53.3	65.1	77.0	49.5	60.8	72.2	45.6	56.5	67.4	41.5	51.9	62.3	37.3	47.2	56.9	
	67		THC	69.3	69.3	71.8	64.3	64.3	68.7	59.0	59.0	65.6	53.6	53.6	62.4	48.2	48.2	59.1	
			SHC	43.8	57.8	71.8	40.9	54.8	68.7	37.8	51.7	65.6	34.7	48.6	62.4	31.5	45.2	59.1	
	72	THC	77.6	77.6	77.6	72.1	72.1	72.1	66.5	66.5	66.5	60.7	60.7	60.7	54.7	54.7	54.7		
		SHC	30.9	45.0	59.1	28.0	42.0	56.1	25.0	39.0	53.0	21.9	36.0	50.0	18.9	32.9	46.9		
	76	THC	-	84.6	84.6	-	78.8	78.8	-	72.9	72.9	-	66.9	66.9	-	60.5	60.5		
		SHC	-	34.5	48.7	-	31.6	45.7	-	28.6	42.7	-	25.5	39.7	-	22.4	36.5		
	3050 Cfm	EA (wB)	58	THC	67.8	67.8	76.9	63.3	63.3	72.2	58.8	58.8	67.2	54.0	54.0	62.0	49.0	49.0	56.6
				SHC	58.6	67.8	76.9	54.5	63.3	72.2	50.3	58.8	67.2	46.0	54.0	62.0	41.5	49.0	56.6
62			THC	67.9	67.9	80.0	63.4	63.4	75.2	58.8	58.8	70.1	54.1	54.1	64.7	49.1	49.1	59.3	
			SHC	55.6	67.9	80.0	51.7	63.4	75.2	47.6	58.8	70.1	43.4	54.1	64.7	39.0	49.1	59.3	
67			THC	70.6	70.6	77.8	65.4	65.4	74.7	60.2	60.2	71.4	54.8	54.8	68.0	49.4	49.4	63.7	
			SHC	46.7	62.2	77.8	43.7	59.2	74.7	40.6	56.0	71.4	37.3	52.7	68.0	33.8	48.8	63.7	
72		THC	78.8	78.8	78.8	73.2	73.2	73.2	67.5	67.5	67.5	61.5	61.5	61.5	55.5	55.5	55.5		
		SHC	32.2	47.9	63.7	29.3	44.9	60.6	26.2	41.8	57.5	23.1	38.8	54.5	20.0	35.7	51.3		
76		THC	-	85.9	85.9	-	80.0	80.0	-	73.9	73.9	-	67.7	67.7	-	61.3	61.3		
		SHC	-	36.1	51.9	-	33.2	48.8	-	30.1	45.8	-	27.0	42.7	-	23.9	39.6		
3350 Cfm		EA (wB)	58	THC	69.7	69.7	79.1	65.1	65.1	74.2	60.5	60.5	69.0	55.6	55.6	63.8	50.5	50.5	58.3
				SHC	60.4	69.7	79.1	56.2	65.1	74.2	51.9	60.5	69.0	47.4	55.6	63.8	42.8	50.5	58.3
	62		THC	69.8	69.8	82.4	65.2	65.2	77.3	60.5	60.5	72.1	55.7	55.7	66.6	50.6	50.6	60.9	
			SHC	57.2	69.8	82.4	53.2	65.2	77.3	49.0	60.5	72.1	44.8	55.7	66.6	40.3	50.6	60.9	
	67		THC	71.6	71.6	82.7	66.4	66.4	79.5	61.1	61.1	75.9	55.9	55.9	71.8	50.7	50.7	66.2	
			SHC	48.9	65.8	82.7	45.9	62.7	79.5	42.7	59.3	75.9	39.3	55.6	71.8	35.2	50.7	66.2	
	72	THC	79.6	79.6	79.6	73.9	73.9	73.9	68.2	68.2	68.2	62.1	62.1	62.1	56.0	56.0	56.0		
		SHC	33.2	50.3	67.4	30.2	47.3	64.4	27.1	44.2	61.2	24.1	41.1	58.1	21.0	37.9	54.9		
	76	THC	-	86.8	86.8	-	80.7	80.7	-	74.6	74.6	-	68.3	68.3	-	61.8	61.8		
		SHC	-	37.3	54.5	-	34.3	51.5	-	31.3	48.4	-	28.2	45.2	-	25.1	42.0		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity



**Table 11 – COOLING CAPACITIES - SECOND STAGE, PART LOAD**

**12.5 TONS**

14 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
3000 Cfm	EA (wb)	58	THC	76.5	76.5	88.1	69.1	69.1	80.2	61.5	61.5	72.2	53.7	53.7	63.9	45.6	45.6	55.3	
			SHC	64.9	76.5	88.1	57.9	69.1	80.2	50.8	61.5	72.2	43.5	53.7	63.9	36.0	45.6	55.3	
		62	THC	76.6	76.6	92.1	69.2	69.2	84.1	61.6	61.6	75.9	53.8	53.8	67.5	45.7	45.7	58.7	
			SHC	61.2	76.6	92.1	54.3	69.2	84.1	47.3	61.6	75.9	40.2	53.8	67.5	32.9	45.7	58.7	
		67	THC	86.9	86.9	86.9	78.0	78.0	78.0	68.9	68.9	68.9	59.7	59.7	61.6	50.2	50.2	55.3	
			SHC	48.4	64.3	80.0	42.2	58.1	74.0	36.1	52.0	67.9	29.9	45.7	61.6	23.6	39.5	55.3	
	72	THC	99.1	99.1	99.1	89.8	89.8	89.8	80.2	80.2	80.2	70.5	70.5	70.5	60.5	60.5	60.5		
		SHC	35.0	51.0	67.0	29.0	44.9	60.8	22.8	38.8	54.7	16.7	32.6	48.5	10.4	26.3	42.2		
	76	THC	-	109.5	109.5	-	99.8	99.8	-	90.0	90.0	-	79.8	79.8	-	69.2	69.2		
		SHC	-	40.2	56.3	-	34.1	50.2	-	28.0	44.1	-	21.8	37.8	-	15.5	31.6		
	3500 Cfm	EA (wb)	58	THC	82.1	82.1	94.3	74.3	74.3	86.0	66.3	66.3	77.5	58.1	58.1	68.7	49.7	49.7	59.8
				SHC	69.9	82.1	94.3	62.6	74.3	86.0	55.1	66.3	77.5	47.5	58.1	68.7	39.6	49.7	59.8
62			THC	82.2	82.2	98.5	74.4	74.4	90.0	66.4	66.4	81.3	58.2	58.2	72.4	49.8	49.8	63.3	
			SHC	66.0	82.2	98.5	58.8	74.4	90.0	51.5	66.4	81.3	44.0	58.2	72.4	36.3	49.8	63.3	
67			THC	89.6	89.6	89.8	80.4	80.4	83.6	71.2	71.2	77.3	61.7	61.7	70.9	52.0	52.0	64.4	
			SHC	53.1	71.5	89.8	46.9	65.2	83.6	40.7	59.0	77.3	34.3	52.7	70.9	27.9	46.1	64.4	
72		THC	101.8	101.8	101.8	92.2	92.2	92.2	82.5	82.5	82.5	72.3	72.3	72.3	62.0	62.0	62.0		
		SHC	37.3	55.8	74.2	31.1	49.6	68.1	24.9	43.4	61.8	18.6	37.1	55.5	12.3	30.6	49.0		
76		THC	-	112.4	112.4	-	102.4	102.4	-	92.2	92.2	-	81.7	81.7	-	70.9	70.9		
		SHC	-	43.0	61.6	-	36.8	55.4	-	30.6	49.1	-	24.3	42.8	-	17.9	36.4		
4000 Cfm		EA (wb)	58	THC	86.7	86.7	99.3	78.6	78.6	90.7	70.3	70.3	81.9	61.8	61.8	72.7	53.0	53.0	63.4
				SHC	74.1	86.7	99.3	66.5	78.6	90.7	58.7	70.3	81.9	50.8	61.8	72.7	42.6	53.0	63.4
	62		THC	86.8	86.8	103.6	78.7	78.7	94.9	70.4	70.4	85.9	61.9	61.9	76.6	53.1	53.1	67.0	
			SHC	69.9	86.8	103.6	62.5	78.7	94.9	54.9	70.4	85.9	47.2	61.9	76.6	39.2	53.1	67.0	
	67		THC	91.7	91.7	99.2	82.5	82.5	92.7	73.0	73.0	86.3	63.4	63.4	79.6	53.6	53.6	72.5	
			SHC	57.6	78.4	99.2	51.3	72.1	92.7	44.9	65.6	86.3	38.5	59.0	79.6	31.9	52.2	72.5	
	72	THC	103.9	103.9	103.9	94.1	94.1	94.1	84.1	84.1	84.1	73.8	73.8	73.8	63.3	63.3	63.3		
		SHC	39.4	60.3	81.2	33.2	54.0	75.0	26.8	47.7	68.6	20.5	41.3	62.2	13.9	34.8	55.7		
	76	THC	-	114.6	114.6	-	104.3	104.3	-	93.9	93.9	-	83.2	83.2	-	72.2	72.2		
		SHC	-	45.5	66.6	-	39.3	60.4	-	33.0	53.9	-	26.5	47.5	-	20.1	41.0		
	4500 Cfm	EA (wb)	58	THC	90.6	90.6	103.5	82.2	82.2	94.7	73.6	73.6	85.5	64.8	64.8	76.1	55.8	55.8	66.5
				SHC	77.5	90.6	103.5	69.7	82.2	94.7	61.7	73.6	85.5	53.5	64.8	76.1	45.0	55.8	66.5
62			THC	90.7	90.7	108.0	82.3	82.3	99.0	73.7	73.7	89.6	64.9	64.9	80.0	55.9	55.9	70.1	
			SHC	73.3	90.7	108.0	65.6	82.3	99.0	57.8	73.7	89.6	49.8	64.9	80.0	41.5	55.9	70.1	
67			THC	93.6	93.6	107.9	84.2	84.2	101.3	74.8	74.8	94.5	65.3	65.3	87.0	56.2	56.2	76.8	
			SHC	61.8	84.9	107.9	55.4	78.4	101.3	48.9	71.8	94.5	42.1	64.5	87.0	34.4	55.6	76.8	
72		THC	105.5	105.5	105.5	95.6	95.6	95.6	85.4	85.4	85.4	74.9	74.9	74.9	64.3	64.3	64.3		
		SHC	41.2	64.5	87.9	34.9	58.2	81.5	28.6	51.9	75.2	22.1	45.3	68.6	15.6	38.8	62.0		
76		THC	-	116.2	116.2	-	105.9	105.9	-	95.2	95.2	-	84.2	84.2	-	73.0	73.0		
		SHC	-	47.9	71.3	-	41.5	64.9	-	35.2	58.5	-	28.8	52.0	-	22.1	45.3		
4950 Cfm		EA (wb)	58	THC	93.5	93.5	106.9	84.9	84.9	97.7	76.2	76.2	88.3	67.2	67.2	78.8	57.9	57.9	68.8
				SHC	80.2	93.5	106.9	72.2	84.9	97.7	64.1	76.2	88.3	55.7	67.2	78.8	47.0	57.9	68.8
	62		THC	93.6	93.6	111.4	85.1	85.1	102.1	76.3	76.3	92.5	67.3	67.3	82.7	58.0	58.0	72.5	
			SHC	75.9	93.6	111.4	68.1	85.1	102.1	60.1	76.3	92.5	51.9	67.3	82.7	43.4	58.0	72.5	
	67		THC	95.2	95.2	115.3	85.8	85.8	108.4	76.4	76.4	100.8	67.6	67.6	89.9	58.1	58.1	80.0	
			SHC	65.4	90.4	115.3	58.9	83.7	108.4	52.1	76.4	100.8	44.1	67.0	89.9	36.3	58.1	80.0	
	72	THC	106.7	106.7	106.7	96.6	96.6	96.6	86.3	86.3	86.3	75.8	75.8	75.8	64.9	64.9	67.6		
		SHC	42.9	68.3	93.7	36.5	61.9	87.3	30.1	55.5	80.8	23.6	48.9	74.3	17.1	42.3	67.6		
	76	THC	-	117.4	117.4	-	107.0	107.0	-	96.1	96.1	-	85.1	85.1	-	73.7	73.7		
		SHC	-	49.9	75.4	-	43.5	69.0	-	37.1	62.5	-	30.5	55.9	-	24.0	49.1		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 12 – COOLING CAPACITIES - THIRD STAGE, FULL LOAD**

**12.5 TONS**

14 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
3750 Cfm	EA (wb)	58	THC	127.7	127.7	145.1	120.8	120.8	137.6	113.6	113.6	129.6	106.0	106.0	121.3	98.0	98.0	112.6	
			SHC	110.4	127.7	145.1	104.0	120.8	137.6	97.5	113.6	129.6	90.6	106.0	121.3	83.5	98.0	112.6	
		62	THC	133.7	133.7	138.8	125.3	125.3	133.7	116.6	116.6	128.3	107.6	107.6	122.8	98.9	98.9	116.2	
			SHC	99.6	119.2	138.8	94.6	114.1	133.7	89.3	108.8	128.3	83.9	103.4	122.8	78.1	97.1	116.2	
		67	THC	148.2	148.2	148.2	139.2	139.2	139.2	129.8	129.8	129.8	120.1	120.1	120.1	110.0	110.0	110.0	
			SHC	81.6	101.3	121.0	76.5	96.2	115.9	71.4	91.1	110.8	66.1	85.8	105.4	60.6	80.3	99.9	
	72	THC	164.3	164.3	164.3	154.8	154.8	154.8	144.9	144.9	144.9	134.6	134.6	134.6	123.6	123.6	123.6		
		SHC	63.2	83.0	102.9	58.2	78.0	97.8	53.1	72.9	92.6	47.9	67.7	87.5	42.5	62.3	82.0		
	76	THC	-	177.9	177.9	-	168.0	168.0	-	157.7	157.7	-	146.6	146.6	-	-	-		
		SHC	-	68.0	88.0	-	63.1	83.2	-	58.0	78.1	-	52.8	72.9	-	-	-		
	4400 Cfm	EA (wb)	58	THC	136.2	136.2	154.5	128.8	128.8	146.4	121.1	121.1	138.0	113.0	113.0	129.1	104.5	104.5	119.8
				SHC	117.9	136.2	154.5	111.2	128.8	146.4	104.1	121.1	138.0	96.8	113.0	129.1	89.1	104.5	119.8
62			THC	138.8	138.8	154.1	130.3	130.3	148.6	121.9	121.9	142.2	113.1	113.1	134.7	104.6	104.6	125.2	
			SHC	108.9	131.5	154.1	103.5	126.1	148.6	97.9	120.0	142.2	91.6	113.1	134.7	84.1	104.6	125.2	
67			THC	152.9	152.9	152.9	143.5	143.5	143.5	133.8	133.8	133.8	123.6	123.6	123.6	113.1	113.1	113.1	
			SHC	87.7	110.5	133.4	82.5	105.4	128.2	77.2	100.0	122.9	71.9	94.7	117.5	66.4	89.1	111.9	
72		THC	169.1	169.1	169.1	159.2	159.2	159.2	148.9	148.9	148.9	138.2	138.2	138.2	126.8	126.8	126.8		
		SHC	66.0	89.0	111.9	60.9	83.9	106.9	55.8	78.7	101.7	50.5	73.4	96.3	45.0	68.0	90.9		
76		THC	-	182.8	182.8	-	172.5	172.5	-	161.8	161.8	-	150.5	150.5	-	-	-		
		SHC	-	71.5	94.9	-	66.4	89.8	-	61.3	84.6	-	56.1	79.4	-	-	-		
5000 Cfm		EA (wb)	58	THC	142.6	142.6	161.8	134.8	134.8	153.2	126.8	126.8	144.3	118.3	118.3	135.0	109.4	109.4	125.3
				SHC	123.6	142.6	161.8	116.5	134.8	153.2	109.2	126.8	144.3	101.5	118.3	135.0	93.5	109.4	125.3
	62		THC	143.2	143.2	166.7	135.0	135.0	159.5	126.9	126.9	150.4	118.5	118.5	140.8	109.6	109.6	130.8	
			SHC	116.6	141.7	166.7	110.5	135.0	159.5	103.4	126.9	150.4	96.0	118.5	140.8	88.3	109.6	130.8	
	67		THC	156.1	156.1	156.1	146.5	146.5	146.5	136.5	136.5	136.5	126.3	126.3	128.1	115.4	115.4	122.4	
			SHC	92.8	118.6	144.3	87.7	113.4	139.0	82.3	107.9	133.7	76.8	102.5	128.1	71.3	96.8	122.4	
	72	THC	172.4	172.4	172.4	162.2	162.2	162.2	151.6	151.6	151.6	140.6	140.6	140.6	129.1	129.1	129.1		
		SHC	68.3	94.2	120.0	63.2	89.0	114.9	58.0	83.8	109.6	52.7	78.4	104.1	47.1	72.8	98.6		
	76	THC	-	186.2	186.2	-	175.7	175.7	-	164.7	164.7	-	153.2	153.2	-	-	-		
		SHC	-	74.3	100.5	-	69.3	95.5	-	64.2	90.2	-	58.8	84.9	-	-	-		
	5650 Cfm	EA (wb)	58	THC	148.5	148.5	168.3	140.3	140.3	159.3	131.9	131.9	150.1	123.0	123.0	140.4	113.9	113.9	130.3
				SHC	128.8	148.5	168.3	121.4	140.3	159.3	113.7	131.9	150.1	105.8	123.0	140.4	97.4	113.9	130.3
62			THC	148.7	148.7	175.1	140.5	140.5	165.8	132.0	132.0	156.3	123.2	123.2	146.3	114.0	114.0	135.9	
			SHC	122.3	148.7	175.1	115.1	140.5	165.8	107.7	132.0	156.3	100.0	123.2	146.3	92.0	114.0	135.9	
67			THC	159.0	159.0	159.0	149.3	149.3	150.2	139.0	139.0	144.8	128.5	128.5	139.1	117.6	117.6	133.2	
			SHC	98.2	126.9	155.6	92.9	121.6	150.2	87.6	116.1	144.8	82.0	110.6	139.1	76.3	104.8	133.2	
72		THC	175.2	175.2	175.2	164.8	164.8	164.8	154.1	154.1	154.1	142.7	142.7	142.7	130.9	130.9	130.9		
		SHC	70.6	99.5	128.3	65.5	94.3	123.1	60.3	89.0	117.8	54.8	83.6	112.3	49.2	78.0	106.7		
76		THC	-	189.2	189.2	-	178.3	178.3	-	167.1	167.1	-	155.4	155.4	-	-	-		
		SHC	-	77.2	106.5	-	72.2	101.3	-	67.0	96.0	-	61.6	90.7	-	-	-		
6250 Cfm		EA (wb)	58	THC	153.1	153.1	173.4	144.7	144.7	164.2	135.9	135.9	154.5	126.8	126.8	144.6	117.3	117.3	134.1
				SHC	132.8	153.1	173.4	125.2	144.7	164.2	117.3	135.9	154.5	109.0	126.8	144.6	100.4	117.3	134.1
	62		THC	153.2	153.2	180.3	144.9	144.9	170.9	136.0	136.0	161.0	126.9	126.9	150.6	117.4	117.4	139.8	
			SHC	126.2	153.2	180.3	118.9	144.9	170.9	111.2	136.0	161.0	103.3	126.9	150.6	95.0	117.4	139.8	
	67		THC	161.3	161.3	165.8	151.3	151.3	160.3	141.0	141.0	154.6	130.4	130.4	148.8	119.4	119.4	142.5	
			SHC	103.0	134.4	165.8	97.6	129.0	160.3	92.1	123.4	154.6	86.6	117.7	148.8	80.7	111.6	142.5	
	72	THC	177.4	177.4	177.4	166.8	166.8	166.8	155.8	155.8	155.8	144.3	144.3	144.3	132.3	132.3	132.3		
		SHC	72.6	104.2	135.8	67.5	99.0	130.6	62.2	93.7	125.2	56.7	88.1	119.6	51.1	82.6	114.0		
	76	THC	-	191.4	191.4	-	180.4	180.4	-	169.0	169.0	-	157.1	157.1	-	-	-		
		SHC	-	79.9	111.7	-	74.7	106.6	-	69.4	101.3	-	64.1	95.8	-	-	-		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

50LC\*A14 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-1 (Subcooler Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		3750			5000			6250		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	165	148	135	173	158	146	179	164	153
	SHC	72	90	111	83	109	135	93	125	153
	kW	8.2	7.9	7.7	8.3	8.1	7.9	8.4	8.2	8.0
85	TC	156	142	130	163	149	138	168	155	144
	SHC	64	85	106	73	100	128	83	117	141
	kW	9.1	8.9	8.6	9.2	9.0	8.8	9.3	9.1	8.9
95	TC	147	132	123	154	140	129	158	144	135
	SHC	56	75	100	65	92	120	74	107	135
	kW	10.1	9.8	9.7	10.3	10.0	9.8	10.3	10.1	9.9
105	TC	138	123	114	145	131	121	148	134	126
	SHC	47	67	92	57	84	112	65	98	126
	kW	11.3	11.0	10.8	11.4	11.1	10.9	11.5	11.2	11.0
115	TC	129	116	107	133	122	112	137	125	117
	SHC	39	61	85	46	76	104	55	89	113
	kW	12.6	12.3	12.1	12.6	12.4	12.2	12.7	12.5	12.3
125	TC	119	108	99	124	112	104	127	115	108
	SHC	31	54	78	39	67	97	46	80	108
	kW	14.0	13.7	13.5	14.1	13.8	13.6	14.1	13.8	13.7

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

50LC\*A14 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-2 (Hot Gas Reheat Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		3750			5000			6250		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	52	53	54	54	55	56	55	56	58
	SHC	10	1	-6	20	9	1	31	19	8
	kW	11.2	11.4	11.5	11.3	11.4	11.6	11.3	11.5	11.6
75	TC	54	56	57	57	58	59	58	59	61
	SHC	12	4	-4	22	12	3	33	21	11
	kW	10.7	10.9	11.0	10.8	10.9	11.1	10.8	11.0	11.1
70	TC	57	58	60	59	61	62	61	62	63
	SHC	14	6	-1	25	14	6	36	24	14
	kW	10.2	10.4	10.5	10.3	10.5	10.6	10.4	10.5	10.6
60	TC	62	63	65	64	66	68	66	68	69
	SHC	19	11	4	29	19	11	40	29	19
	kW	9.4	9.5	9.6	9.4	9.6	9.7	9.5	9.6	9.8
50	TC	67	68	70	70	71	73	71	73	75
	SHC	23	15	8	34	24	16	45	34	24
	kW	8.6	8.7	8.8	8.7	8.8	8.9	8.7	8.9	9.0
40	TC	72	74	76	75	77	79	77	79	81
	SHC	28	20	14	39	30	21	51	40	30
	kW	7.9	8.0	8.1	8.0	8.1	8.2	8.1	8.2	8.3

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

**Table 14 – COOLING CAPACITIES - FIRST STAGE, PART LOAD**

**15 TONS**

17 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
2550 Cfm	EA (wb)	58	THC	119.0	119.0	132.0	71.3	71.3	80.9	67.2	67.2	76.3	62.7	62.7	71.5	57.8	57.8	66.1	
			SHC	105.9	119.0	132.0	61.6	71.3	80.9	57.9	67.2	76.3	53.8	62.7	71.5	49.4	57.8	66.1	
		62	THC	75.3	75.3	88.4	71.4	71.4	84.2	67.3	67.3	79.6	62.8	62.8	74.5	57.9	57.9	69.0	
			SHC	61.7	75.1	88.4	58.5	71.4	84.2	54.9	67.3	79.6	51.0	62.8	74.5	46.8	57.9	69.0	
		67	THC	83.4	83.4	83.4	78.5	78.5	78.5	107.8	107.8	119.8	67.7	67.7	68.4	61.5	61.5	65.3	
			SHC	49.5	63.2	76.7	47.0	60.5	74.1	95.8	107.8	119.8	41.3	54.9	68.4	38.2	51.8	65.3	
	72	THC	93.0	93.0	93.0	87.8	87.8	87.8	82.3	82.3	82.3	76.2	76.2	76.2	69.7	69.7	69.7		
		SHC	37.0	50.6	64.3	34.3	48.0	61.7	31.7	45.3	59.0	28.8	42.4	56.1	25.7	39.4	53.0		
	76	THC	-	101.4	101.4	-	96.0	96.0	-	90.2	90.2	-	83.9	83.9	-	76.9	76.9		
		SHC	-	40.3	54.0	-	37.7	51.5	-	35.1	48.8	-	32.3	45.9	-	29.3	42.9		
	2950 Cfm	EA (wb)	58	THC	79.2	79.2	89.7	75.2	75.2	85.3	208.3	208.3	208.3	66.1	66.1	75.3	121.4	121.4	121.4
				SHC	68.7	79.2	89.7	65.0	75.2	85.3	65.0	80.8	96.6	56.8	66.1	75.3	34.7	50.4	66.1
62			THC	79.3	79.3	93.3	75.3	75.3	88.8	70.9	70.9	83.9	66.2	66.2	78.5	61.0	61.0	72.6	
			SHC	65.3	79.3	93.3	61.8	75.3	88.8	58.0	70.9	83.9	53.8	66.2	78.5	49.4	61.0	72.6	
67			THC	85.4	85.4	85.4	80.4	80.4	81.8	75.1	75.1	79.1	69.2	69.2	76.1	63.0	63.0	72.8	
			SHC	53.2	68.9	84.5	50.6	66.2	81.8	47.9	63.5	79.1	44.9	60.5	76.1	41.7	57.3	72.8	
72		THC	95.2	95.2	95.2	89.9	89.9	89.9	84.0	84.0	84.0	77.9	77.9	77.9	71.1	71.1	71.1		
		SHC	38.6	54.3	70.1	36.0	51.7	67.5	33.2	48.9	64.6	30.3	46.0	61.8	27.3	43.0	58.7		
76		THC	-	103.7	103.7	-	98.2	98.2	-	92.0	92.0	-	85.5	85.5	-	78.4	78.4		
		SHC	-	42.4	58.2	-	39.9	55.7	-	37.1	52.9	-	34.3	50.1	-	31.3	47.1		
3400 Cfm		EA (wb)	58	THC	83.1	83.1	94.0	78.9	78.9	89.4	74.3	74.3	84.3	69.3	69.3	78.9	63.9	63.9	72.9
				SHC	72.2	83.1	94.0	68.3	78.9	89.4	64.2	74.3	84.3	59.7	69.3	78.9	54.9	63.9	72.9
	62		THC	83.2	83.2	97.8	79.0	79.0	93.0	74.4	74.4	87.8	69.3	69.3	82.2	64.0	64.0	76.1	
			SHC	68.5	83.2	97.8	64.8	79.0	93.0	60.8	74.4	87.8	56.6	69.3	82.2	51.9	64.0	76.1	
	67		THC	87.3	87.3	92.9	82.2	82.2	90.2	76.7	76.7	87.3	70.8	70.8	84.1	64.5	64.5	80.6	
			SHC	57.2	75.1	92.9	54.5	72.3	90.2	51.7	69.5	87.3	48.7	66.4	84.1	45.4	63.0	80.6	
	72	THC	97.0	97.0	97.0	91.6	91.6	91.6	85.6	85.6	85.6	79.3	79.3	79.3	72.3	72.3	72.3		
		SHC	40.4	58.3	76.3	37.7	55.7	73.7	34.9	52.9	70.9	32.0	50.0	68.0	28.9	46.9	64.8		
	76	THC	-	105.6	105.6	-	99.9	99.9	-	93.7	93.7	-	87.0	87.0	-	79.7	79.7		
		SHC	-	44.7	62.9	-	42.0	60.3	-	39.3	57.4	-	36.4	54.5	-	33.3	51.5		
	3800 Cfm	EA (wb)	58	THC	86.0	86.0	97.2	81.6	81.6	92.4	76.8	76.8	87.3	71.7	71.7	81.5	66.1	66.1	75.4
				SHC	74.7	86.0	97.2	70.7	81.6	92.4	66.4	76.8	87.3	61.8	71.7	81.5	56.7	66.1	75.4
62			THC	86.1	86.1	101.1	81.7	81.7	96.2	76.9	76.9	90.8	71.8	71.8	84.9	66.2	66.2	78.6	
			SHC	71.0	86.1	101.1	67.2	81.7	96.2	63.0	76.9	90.8	58.6	71.8	84.9	53.7	66.2	78.6	
67			THC	88.6	88.6	100.1	83.5	83.5	97.3	78.0	78.0	94.2	72.2	72.2	90.7	66.3	66.3	84.6	
			SHC	60.5	80.3	100.1	57.8	77.6	97.3	54.9	74.6	94.2	51.8	71.2	90.7	47.6	66.1	84.6	
72		THC	98.3	98.3	98.3	92.7	92.7	92.7	86.7	86.7	86.7	80.1	80.1	80.1	73.1	73.1	73.1		
		SHC	41.7	61.8	81.8	39.1	59.1	79.2	36.3	56.4	76.3	33.3	53.3	73.3	30.2	50.2	70.2		
76		THC	-	107.0	107.0	-	101.2	101.2	-	94.9	94.9	-	87.9	87.9	-	80.5	80.5		
		SHC	-	46.5	66.7	-	43.9	64.1	-	41.1	61.3	-	38.2	58.3	-	35.1	55.3		
4250 Cfm		EA (wb)	58	THC	88.7	88.7	100.3	84.2	84.2	95.4	79.3	79.3	90.0	73.9	73.9	84.0	68.2	68.2	77.7
				SHC	77.1	88.7	100.3	73.0	84.2	95.4	68.6	79.3	90.0	63.9	73.9	84.0	58.6	68.2	77.7
	62		THC	88.8	88.8	104.3	84.3	84.3	99.3	79.4	79.4	93.6	74.0	74.0	87.6	68.3	68.3	81.0	
			SHC	73.3	88.8	104.3	69.4	84.3	99.3	65.1	79.4	93.6	60.5	74.0	87.6	55.5	68.3	81.0	
	67		THC	90.1	90.1	107.7	84.9	84.9	104.6	79.6	79.6	100.7	74.1	74.1	94.4	68.3	68.3	87.5	
			SHC	64.2	86.0	107.7	61.3	83.0	104.6	58.1	79.5	100.7	53.8	74.1	94.4	49.2	68.3	87.5	
	72	THC	99.4	99.4	99.4	93.7	93.7	93.7	87.7	87.7	87.7	81.0	81.0	81.0	73.9	73.9	76.1		
		SHC	43.3	65.5	87.8	40.7	62.9	85.1	37.8	60.1	82.3	34.8	57.0	79.3	31.7	53.8	76.1		
	76	THC	-	108.1	108.1	-	102.3	102.3	-	95.8	95.8	-	88.8	88.8	-	81.3	81.3		
		SHC	-	48.6	70.9	-	45.9	68.3	-	43.1	65.5	-	40.2	62.5	-	37.1	59.4		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 15 – COOLING CAPACITIES - SECOND STAGE, PART LOAD**

**15 TONS**

17 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
3700 Cfm	EA (wb)	58	THC	110.2	110.2	124.5	104.9	104.9	118.7	99.6	99.6	112.8	94.2	94.2	106.7	88.3	88.3	100.2	
			SHC	95.8	110.2	124.5	91.2	104.9	118.7	86.5	99.6	112.8	81.6	94.2	106.7	76.4	88.3	100.2	
		62	THC	110.4	110.4	129.5	105.1	105.1	123.4	99.7	99.7	117.4	94.3	94.3	111.1	88.4	88.4	104.3	
			SHC	91.3	110.4	129.5	86.7	105.1	123.4	82.2	99.7	117.4	77.5	94.3	111.1	72.5	88.4	104.3	
		67	THC	120.7	120.7	120.7	113.8	113.8	113.8	107.0	107.0	107.0	100.0	100.0	102.4	92.6	92.6	99.0	
			SHC	73.0	92.6	112.1	69.8	89.3	108.9	66.6	86.2	105.7	63.4	82.9	102.4	60.1	79.6	99.0	
	72	THC	133.5	133.5	133.5	125.9	125.9	125.9	118.5	118.5	118.5	110.9	110.9	110.9	102.9	102.9	102.9		
		SHC	54.2	73.9	93.6	51.0	70.7	90.3	47.8	67.5	87.1	44.7	64.3	83.9	41.3	60.9	80.6		
	76	THC	-	144.5	144.5	-	136.4	136.4	-	128.3	128.3	-	120.2	120.2	-	111.8	111.8		
		SHC	-	58.6	78.5	-	55.4	75.3	-	52.3	72.1	-	49.0	68.8	-	45.8	65.5		
	4300 Cfm	EA (wb)	58	THC	115.8	115.8	130.8	110.2	110.2	124.5	104.4	104.4	118.2	98.6	98.6	111.7	92.4	92.4	104.8
				SHC	100.8	115.8	130.8	95.7	110.2	124.5	90.8	104.4	118.2	85.5	98.6	111.7	80.0	92.4	104.8
62			THC	115.9	115.9	136.0	110.3	110.3	129.5	104.6	104.6	122.9	98.8	98.8	116.2	92.5	92.5	109.1	
			SHC	95.9	115.9	136.0	91.1	110.3	129.5	86.2	104.6	122.9	81.2	98.8	116.2	76.0	92.5	109.1	
67			THC	123.5	123.5	123.5	116.3	116.3	120.0	109.3	109.3	116.7	102.1	102.1	113.3	94.6	94.6	109.7	
			SHC	78.3	100.8	123.3	75.0	97.5	120.0	71.7	94.2	116.7	68.4	90.9	113.3	64.9	87.4	109.7	
72		THC	136.3	136.3	136.3	128.4	128.4	128.4	120.6	120.6	120.6	112.8	112.8	112.8	104.6	104.6	104.6		
		SHC	56.5	79.2	101.9	53.1	75.9	98.5	49.9	72.6	95.3	46.7	69.3	92.0	43.4	66.0	88.6		
76		THC	-	147.4	147.4	-	139.0	139.0	-	130.7	130.7	-	122.4	122.4	-	113.7	113.7		
		SHC	-	61.5	84.4	-	58.2	81.0	-	55.0	77.8	-	51.8	74.6	-	48.5	71.2		
4900 Cfm		EA (wb)	58	THC	120.4	120.4	136.0	114.5	114.5	129.4	108.4	108.4	122.7	102.3	102.3	115.8	95.7	95.7	108.5
				SHC	104.9	120.4	136.0	99.5	114.5	129.4	94.2	108.4	122.7	88.7	102.3	115.8	83.0	95.7	108.5
	62		THC	120.6	120.6	141.4	114.6	114.6	134.5	108.5	108.5	127.5	102.4	102.4	120.5	95.8	95.8	112.9	
			SHC	99.8	120.6	141.4	94.7	114.6	134.5	89.5	108.5	127.5	84.3	102.4	120.5	78.8	95.8	112.9	
	67		THC	125.7	125.7	134.1	118.4	118.4	130.7	111.2	111.2	127.1	103.9	103.9	123.4	96.4	96.4	119.3	
			SHC	83.3	108.7	134.1	79.9	105.2	130.7	76.5	101.8	127.1	73.1	98.3	123.4	69.5	94.5	119.3	
	72	THC	138.5	138.5	138.5	130.3	130.3	130.3	122.3	122.3	122.3	114.3	114.3	114.3	105.9	105.9	105.9		
		SHC	58.5	84.1	109.8	55.2	80.8	106.5	52.0	77.5	103.2	48.7	74.3	99.8	45.3	70.9	96.4		
	76	THC	-	149.7	149.7	-	141.0	141.0	-	132.4	132.4	-	123.8	123.8	-	115.0	115.0		
		SHC	-	64.2	90.0	-	60.8	86.7	-	57.6	83.4	-	54.3	80.0	-	51.0	76.7		
	5550 Cfm	EA (wb)	58	THC	124.7	124.7	140.8	118.4	118.4	133.7	112.0	112.0	126.7	105.6	105.6	119.5	98.8	98.8	111.9
				SHC	108.6	124.7	140.8	103.0	118.4	133.7	97.4	112.0	126.7	91.7	105.6	119.5	85.6	98.8	111.9
62			THC	124.8	124.8	146.3	118.5	118.5	138.9	112.1	112.1	131.7	105.7	105.7	124.3	98.9	98.9	116.4	
			SHC	103.4	124.8	146.3	97.9	118.5	138.9	92.5	112.1	131.7	87.1	105.7	124.3	81.2	98.9	116.4	
67			THC	127.7	127.7	145.2	120.3	120.3	141.4	113.0	113.0	137.5	106.0	106.0	132.8	99.2	99.2	124.5	
			SHC	88.3	116.8	145.2	84.8	113.1	141.4	81.4	109.4	137.5	77.5	105.2	132.8	72.3	98.4	124.5	
72		THC	140.2	140.2	140.2	131.8	131.8	131.8	123.6	123.6	123.6	115.4	115.4	115.4	107.0	107.0	107.0		
		SHC	60.6	89.4	118.2	57.2	86.0	114.8	54.0	82.7	111.3	50.7	79.4	108.0	47.3	76.0	104.6		
76		THC	-	151.5	151.5	-	142.6	142.6	-	133.9	133.9	-	125.1	125.1	-	116.1	116.1		
		SHC	-	67.0	95.8	-	63.6	92.4	-	60.3	89.1	-	56.9	85.8	-	53.6	82.4		
6150 Cfm		EA (wb)	58	THC	128.0	128.0	144.4	121.4	121.4	137.1	114.9	114.9	129.8	108.1	108.1	122.4	101.1	101.1	114.6
				SHC	111.5	128.0	144.4	105.6	121.4	137.1	99.8	114.9	129.8	93.9	108.1	122.4	87.7	101.1	114.6
	62		THC	128.1	128.1	150.1	121.5	121.5	142.4	115.0	115.0	134.9	108.2	108.2	127.2	101.2	101.2	119.1	
			SHC	106.1	128.1	150.1	100.4	121.5	142.4	94.9	115.0	134.9	89.2	108.2	127.2	83.2	101.2	119.1	
	67		THC	129.5	129.5	154.6	122.1	122.1	150.3	115.2	115.2	144.2	108.5	108.5	136.0	101.3	101.3	128.2	
			SHC	92.7	123.7	154.6	89.1	119.7	150.3	84.7	114.5	144.2	79.6	107.7	136.0	74.4	101.3	128.2	
	72	THC	141.5	141.5	141.5	133.0	133.0	133.0	124.7	124.7	124.7	116.4	116.4	116.4	107.7	107.7	111.9		
		SHC	62.5	94.1	125.6	59.1	90.7	122.2	55.8	87.3	118.8	52.5	83.9	115.4	49.1	80.5	111.9		
	76	THC	-	152.9	152.9	-	143.8	143.8	-	134.9	134.9	-	126.1	126.1	-	116.9	116.9		
		SHC	-	69.3	101.1	-	66.0	97.6	-	62.7	94.3	-	59.3	90.9	-	56.0	87.5		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 16 – COOLING CAPACITIES - THIRD STAGE, FULL LOAD**

**15 TONS**

17 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
4500 Cfm	EA (wb)	58	THC	156.8	156.8	177.9	148.6	148.6	169.1	139.9	139.9	159.6	130.7	130.7	149.5	120.9	120.9	138.7	
			SHC	135.6	156.8	177.9	128.1	148.6	169.1	120.3	139.9	159.6	111.9	130.7	149.5	103.1	120.9	138.7	
		62	THC	164.6	164.6	169.4	154.6	154.6	163.2	144.2	144.2	157.0	133.3	133.3	150.3	121.8	121.8	143.0	
			SHC	122.2	145.8	169.4	116.1	139.7	163.2	109.9	133.4	157.0	103.4	126.8	150.3	96.5	119.7	143.0	
		67	THC	182.6	182.6	182.6	171.8	171.8	171.8	160.6	160.6	160.6	148.7	148.7	148.7	136.1	136.1	136.1	
			SHC	100.4	124.1	147.8	94.4	118.1	141.8	88.2	111.9	135.6	81.9	105.5	129.2	75.3	98.9	122.6	
	72	THC	202.4	202.4	202.4	191.0	191.0	191.0	179.0	179.0	179.0	166.4	166.4	166.4	153.0	153.0	153.0		
		SHC	78.1	102.0	125.9	72.2	96.0	119.8	66.1	89.9	113.8	59.9	83.7	107.4	53.3	77.1	100.9		
	76	THC	-	219.3	219.3	-	207.1	207.1	-	194.5	194.5	-	181.2	181.2	-	167.1	167.1		
		SHC	-	83.8	107.9	-	77.9	102.0	-	71.9	96.0	-	65.6	89.8	-	59.3	83.5		
	5250 Cfm	EA (wb)	58	THC	166.9	166.9	189.3	158.1	158.1	179.8	149.0	149.0	169.7	139.2	139.2	159.0	128.8	128.8	147.5
				SHC	144.6	166.9	189.3	136.6	158.1	179.8	128.3	149.0	169.7	119.5	139.2	159.0	110.1	128.8	147.5
62			THC	170.8	170.8	187.4	160.6	160.6	181.0	150.1	150.1	174.1	139.4	139.4	165.8	129.0	129.0	154.0	
			SHC	133.0	160.2	187.4	126.8	153.9	181.0	120.3	147.2	174.1	113.1	139.4	165.8	103.9	129.0	154.0	
67			THC	188.4	188.4	188.4	177.2	177.2	177.2	165.4	165.4	165.4	153.1	153.1	153.1	140.0	140.0	140.0	
			SHC	107.5	134.9	162.3	101.4	128.8	156.2	95.2	122.6	149.9	88.6	116.0	143.4	81.9	109.2	136.6	
72		THC	208.4	208.4	208.4	196.4	196.4	196.4	184.0	184.0	184.0	170.8	170.8	170.8	157.0	157.0	157.0		
		SHC	81.5	109.1	136.6	75.5	103.0	130.6	69.3	96.8	124.3	62.9	90.4	117.9	56.4	83.8	111.2		
76		THC	-	225.1	225.1	-	212.6	212.6	-	199.5	199.5	-	185.5	185.5	-	170.9	170.9		
		SHC	-	87.9	116.1	-	81.9	110.0	-	75.9	103.7	-	69.4	97.3	-	62.9	90.7		
6000 Cfm		EA (wb)	58	THC	175.4	175.4	198.8	166.2	166.2	188.7	156.5	156.5	178.0	146.2	146.2	166.7	135.2	135.2	154.7
				SHC	152.1	175.4	198.8	143.7	166.2	188.7	134.9	156.5	178.0	125.7	146.2	166.7	115.7	135.2	154.7
	62		THC	176.5	176.5	204.0	166.3	166.3	196.4	156.7	156.7	185.4	146.3	146.3	173.8	135.4	135.4	161.4	
			SHC	143.0	173.6	204.0	136.3	166.3	196.4	127.8	156.7	185.4	119.0	146.3	173.8	109.4	135.4	161.4	
	67		THC	192.8	192.8	192.8	181.3	181.3	181.3	169.2	169.2	169.2	156.6	156.6	156.9	143.2	143.2	150.0	
			SHC	114.2	145.2	176.2	108.0	138.9	169.9	101.6	132.6	163.5	95.1	126.0	156.9	88.2	119.1	150.0	
	72	THC	212.8	212.8	212.8	200.5	200.5	200.5	187.7	187.7	187.7	174.2	174.2	174.2	159.9	159.9	159.9		
		SHC	84.5	115.7	146.8	78.4	109.5	140.7	72.2	103.3	134.4	65.7	96.7	127.8	59.1	90.0	121.0		
	76	THC	-	229.7	229.7	-	216.6	216.6	-	203.3	203.3	-	189.2	189.2	-	173.8	173.8		
		SHC	-	91.7	123.3	-	85.6	117.1	-	79.4	110.9	-	72.9	104.3	-	66.2	97.5		
	6750 Cfm	EA (wb)	58	THC	182.5	182.5	206.7	172.8	172.8	196.1	162.6	162.6	185.0	152.0	152.0	173.3	140.6	140.6	160.7
				SHC	158.3	182.5	206.7	149.6	172.8	196.1	140.4	162.6	185.0	130.7	152.0	173.3	120.5	140.6	160.7
62			THC	182.7	182.7	215.1	173.0	173.0	204.1	162.8	162.8	192.7	152.2	152.2	180.5	140.8	140.8	167.6	
			SHC	150.4	182.7	215.1	142.0	173.0	204.1	133.1	162.8	192.7	123.8	152.2	180.5	114.0	140.8	167.6	
67			THC	196.4	196.4	196.4	184.5	184.5	184.5	172.3	172.3	176.7	159.4	159.4	169.8	145.8	145.8	162.7	
			SHC	120.5	155.0	189.5	114.2	148.7	183.1	107.8	142.3	176.7	101.2	135.5	169.8	94.3	128.5	162.7	
72		THC	216.4	216.4	216.4	203.7	203.7	203.7	190.6	190.6	190.6	176.8	176.8	176.8	162.2	162.2	162.2		
		SHC	87.3	122.0	156.6	81.1	115.7	150.3	74.8	109.4	143.9	68.3	102.8	137.3	61.5	96.0	130.5		
76		THC	-	233.3	233.3	-	220.0	220.0	-	206.1	206.1	-	191.7	191.7	-	176.1	176.1		
		SHC	-	95.1	130.3	-	88.9	123.9	-	82.7	117.6	-	76.1	111.0	-	69.3	103.9		
7500 Cfm		EA (wb)	58	THC	188.5	188.5	213.3	178.4	178.4	202.4	167.9	167.9	190.8	156.9	156.9	178.6	145.1	145.1	165.7
				SHC	163.6	188.5	213.3	154.5	178.4	202.4	145.1	167.9	190.8	135.1	156.9	178.6	124.5	145.1	165.7
	62		THC	188.7	188.7	221.9	178.6	178.6	210.6	168.1	168.1	198.7	157.1	157.1	186.1	145.3	145.3	172.8	
			SHC	155.5	188.7	221.9	146.7	178.6	210.6	137.6	168.1	198.7	127.9	157.1	186.1	117.8	145.3	172.8	
	67		THC	199.3	199.3	202.5	187.3	187.3	196.0	174.8	174.8	189.2	161.9	161.9	182.2	148.2	148.2	174.7	
			SHC	126.6	164.5	202.5	120.2	158.1	196.0	113.7	151.5	189.2	107.0	144.6	182.2	99.8	137.3	174.7	
	72	THC	219.2	219.2	219.2	206.3	206.3	206.3	193.0	193.0	193.0	178.9	178.9	178.9	164.1	164.1	164.1		
		SHC	89.9	128.0	166.0	83.7	121.7	159.7	77.3	115.2	153.3	70.8	108.6	146.5	64.0	101.8	139.6		
	76	THC	-	236.1	236.1	-	222.6	222.6	-	208.6	208.6	-	193.8	193.8	-	177.8	177.8		
		SHC	-	98.4	136.9	-	92.1	130.5	-	85.8	124.0	-	79.3	117.3	-	72.3	110.2		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

50LC\*A17 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-1 (Subcooler Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		4500			6000			7500		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	207	187	167	217	198	180	225	205	189
	SHC	95	116	137	107	137	164	120	155	189
	kW	10.1	9.9	9.6	10.1	10.0	9.8	10.2	10.0	9.9
85	TC	190	175	157	206	186	168	212	186	173
	SHC	79	106	128	98	126	154	109	138	173
	kW	11.0	10.9	10.7	11.3	11.0	10.8	11.3	10.9	10.8
95	TC	173	163	146	192	173	157	192	180	165
	SHC	64	95	117	85	114	143	90	132	165
	kW	12.1	12.1	11.9	12.5	12.2	12.0	12.3	12.3	12.1
105	TC	169	151	135	179	160	145	185	166	153
	SHC	61	84	107	73	102	132	84	120	153
	kW	13.7	13.4	13.2	13.8	13.6	13.4	13.9	13.6	13.5
115	TC	156	138	123	165	147	132	170	152	140
	SHC	49	72	96	60	90	120	71	107	140
	kW	15.2	14.9	14.7	15.3	15.1	14.8	15.4	15.1	15.0
125	TC	142	125	110	150	133	118	155	138	126
	SHC	37	60	85	47	78	108	57	94	126
	kW	16.9	16.6	16.3	17.0	16.7	16.5	17.1	16.8	16.6

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

50LC\*A17 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-2 (Hot Gas Reheat Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		4500			6000			7500		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	69	72	74	72	75	77	74	77	79
	SHC	16	8	0	28	17	8	41	28	17
	kW	12.6	12.8	12.9	12.7	12.9	13.0	12.8	12.9	13.0
75	TC	74	77	79	77	80	83	79	82	85
	SHC	21	12	5	33	22	13	46	33	22
	kW	12.1	12.2	12.3	12.2	12.3	12.4	12.3	12.4	12.5
70	TC	79	82	84	82	85	88	85	87	90
	SHC	26	17	10	38	27	18	51	38	27
	kW	11.6	11.7	11.8	11.7	11.8	11.9	11.7	11.9	12.0
60	TC	88	91	94	92	96	98	95	98	101
	SHC	35	27	19	48	37	28	61	48	37
	kW	10.6	10.7	10.9	10.7	10.8	11.0	10.8	10.9	11.0
50	TC	98	102	104	103	106	109	106	109	112
	SHC	45	37	30	58	48	39	71	59	48
	kW	9.8	9.9	10.1	9.9	10.1	10.2	10.0	10.1	10.2
40	TC	108	112	115	113	117	120	116	120	123
	SHC	55	47	41	69	59	50	83	71	60
	kW	9.1	9.3	9.4	9.3	9.4	9.5	9.3	9.5	9.6

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

**Table 18 – COOLING CAPACITIES - FIRST STAGE, PART LOAD**

**17.5 TONS**

20 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
2750 Cfm	EA (wb)	58	THC	92.1	92.1	104.1	88.5	88.5	100.0	84.6	84.6	95.7	80.4	80.4	91.1	76.0	76.0	86.1	
			SHC	80.1	92.1	104.1	76.9	88.5	100.0	73.5	84.6	95.7	69.8	80.4	91.1	65.8	76.0	86.1	
		62	THC	95.0	95.0	102.0	90.5	90.5	99.5	85.8	85.8	96.9	80.9	80.9	93.9	76.1	76.1	89.6	
			SHC	73.5	87.8	102.0	71.2	85.4	99.5	68.6	82.8	96.9	65.9	80.0	93.9	62.5	76.1	89.6	
		67	THC	104.3	104.3	104.3	99.5	99.5	99.5	94.4	94.4	94.4	88.8	88.8	88.8	83.1	83.1	83.1	
			SHC	59.9	74.2	88.6	57.6	72.0	86.3	55.3	69.6	83.9	52.7	67.1	81.4	50.1	64.4	78.8	
	72	THC	115.1	115.1	115.1	109.9	109.9	109.9	104.4	104.4	104.4	98.5	98.5	98.5	92.2	92.2	92.2		
		SHC	45.9	60.4	74.8	43.7	58.1	72.5	41.3	55.8	70.2	38.9	53.3	67.7	36.4	50.7	65.1		
	76	THC	-	124.1	124.1	-	118.8	118.8	-	112.9	112.9	-	106.7	106.7	-	99.9	99.9		
		SHC	-	49.0	63.8	-	46.8	61.5	-	44.5	59.2	-	42.1	56.6	-	39.5	54.1		
	3250 Cfm	EA (wb)	58	THC	97.5	97.5	110.2	93.7	93.7	105.9	89.5	89.5	101.2	85.0	85.0	96.2	80.2	80.2	90.9
				SHC	84.9	97.5	110.2	81.4	93.7	105.9	77.8	89.5	101.2	73.8	85.0	96.2	69.6	80.2	90.9
62			THC	98.3	98.3	112.6	94.0	94.0	109.6	89.6	89.6	105.2	85.1	85.1	100.0	80.3	80.3	94.6	
			SHC	80.0	96.3	112.6	77.2	93.4	109.6	73.9	89.6	105.2	70.1	85.1	100.0	66.1	80.3	94.6	
67			THC	107.3	107.3	107.3	102.3	102.3	102.3	96.9	96.9	96.9	91.2	91.2	91.2	85.1	85.1	87.6	
			SHC	64.2	80.9	97.7	61.9	78.6	95.4	59.5	76.1	92.9	56.9	73.6	90.3	54.2	70.9	87.6	
72		THC	118.1	118.1	118.1	112.8	112.8	112.8	107.1	107.1	107.1	100.9	100.9	100.9	94.3	94.3	94.3		
		SHC	47.8	64.6	81.4	45.6	62.4	79.2	43.2	60.0	76.7	40.8	57.5	74.2	38.1	54.9	71.6		
76		THC	-	127.3	127.3	-	121.7	121.7	-	115.5	115.5	-	109.1	109.1	-	102.1	102.1		
		SHC	-	51.4	68.4	-	49.1	66.2	-	46.8	63.8	-	44.4	61.2	-	41.7	58.6		
3700 Cfm		EA (wb)	58	THC	101.6	101.6	114.7	97.5	97.5	110.2	93.1	93.1	105.3	88.4	88.4	100.0	83.4	83.4	94.4
				SHC	88.4	101.6	114.7	84.8	97.5	110.2	80.9	93.1	105.3	76.7	88.4	100.0	72.3	83.4	94.4
	62		THC	101.7	101.7	119.1	97.6	97.6	114.5	93.2	93.2	109.5	88.4	88.4	104.0	83.5	83.5	98.2	
			SHC	84.1	101.7	119.1	80.6	97.6	114.5	76.9	93.2	109.5	72.9	88.4	104.0	68.7	83.5	98.2	
	67		THC	109.3	109.3	109.3	104.1	104.1	104.1	98.7	98.7	100.5	92.8	92.8	97.8	86.6	86.6	95.0	
			SHC	67.9	86.7	105.5	65.5	84.3	103.1	63.1	81.8	100.5	60.5	79.1	97.8	57.7	76.3	95.0	
	72	THC	120.2	120.2	120.2	114.7	114.7	114.7	108.8	108.8	108.8	102.5	102.5	102.5	95.7	95.7	95.7		
		SHC	49.3	68.3	87.2	47.1	66.0	84.8	44.8	63.6	82.4	42.2	61.0	79.9	39.6	58.4	77.1		
	76	THC	-	129.5	129.5	-	123.6	123.6	-	117.4	117.4	-	110.7	110.7	-	103.5	103.5		
		SHC	-	53.3	72.4	-	51.1	70.2	-	48.8	67.7	-	46.2	65.1	-	43.6	62.4		
	4150 Cfm	EA (wb)	58	THC	105.0	105.0	118.6	100.7	100.7	113.8	96.1	96.1	108.7	91.3	91.3	103.3	86.0	86.0	97.4
				SHC	91.5	105.0	118.6	87.7	100.7	113.8	83.7	96.1	108.7	79.3	91.3	103.3	74.7	86.0	97.4
62			THC	105.1	105.1	123.1	100.8	100.8	118.3	96.2	96.2	113.0	91.4	91.4	107.3	86.1	86.1	101.3	
			SHC	87.0	105.1	123.1	83.4	100.8	118.3	79.6	96.2	113.0	75.4	91.4	107.3	71.0	86.1	101.3	
67			THC	111.0	111.0	112.9	105.7	105.7	110.5	100.1	100.1	107.8	94.2	94.2	105.0	87.9	87.9	102.0	
			SHC	71.3	92.1	112.9	68.9	89.7	110.5	66.4	87.2	107.8	63.8	84.3	105.0	60.9	81.4	102.0	
72		THC	121.8	121.8	121.8	116.2	116.2	110.2	110.2	110.2	103.7	103.7	103.7	96.8	96.8	96.8			
		SHC	50.8	71.8	92.6	48.6	69.4	90.3	46.1	67.0	87.8	43.6	64.4	85.2	41.0	61.7	82.5		
76		THC	-	131.1	131.1	-	125.2	125.2	-	118.8	118.8	-	111.9	111.9	-	104.6	104.6		
		SHC	-	55.2	76.2	-	52.9	73.9	-	50.5	71.5	-	48.0	68.8	-	45.2	66.1		
4600 Cfm		EA (wb)	58	THC	107.9	107.9	121.9	103.5	103.5	117.0	98.8	98.8	111.6	93.7	93.7	106.0	88.3	88.3	99.9
				SHC	94.0	107.9	121.9	90.2	103.5	117.0	85.9	98.8	111.6	81.4	93.7	106.0	76.6	88.3	99.9
	62		THC	108.0	108.0	126.7	103.6	103.6	121.6	98.9	98.9	116.0	93.8	93.8	110.2	88.3	88.3	103.9	
			SHC	89.5	108.0	126.7	85.7	103.6	121.6	81.7	98.9	116.0	77.4	93.8	110.2	72.8	88.3	103.9	
	67		THC	112.3	112.3	120.0	107.1	107.1	117.5	101.4	101.4	114.7	95.5	95.5	111.7	89.2	89.2	108.2	
			SHC	74.6	97.3	120.0	72.2	94.9	117.5	69.6	92.1	114.7	66.9	89.3	111.7	63.9	86.1	108.2	
	72	THC	123.1	123.1	123.1	117.4	117.4	117.4	111.2	111.2	111.2	104.7	104.7	104.7	97.7	97.7	97.7		
		SHC	52.2	75.1	97.9	49.9	72.7	95.6	47.5	70.2	93.0	44.9	67.7	90.4	42.2	64.9	87.6		
	76	THC	-	132.5	132.5	-	126.5	126.5	-	119.9	119.9	-	112.9	112.9	-	105.5	105.5		
		SHC	-	56.9	80.0	-	54.6	77.5	-	52.2	75.0	-	49.6	72.3	-	46.9	69.5		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity



**Table 19 – COOLING CAPACITIES - SECOND STAGE, PART LOAD**

**17.5 TONS**

20 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
3250 Cfm	EA (wb)	58	THC	101.8	101.8	115.2	96.7	96.7	109.7	91.7	91.7	104.0	86.3	86.3	98.2	80.5	80.5	91.8	
			SHC	88.3	101.8	115.2	83.8	96.7	109.7	79.2	91.7	104.0	74.4	86.3	98.2	69.2	80.5	91.8	
		62	THC	103.9	103.9	115.2	97.9	97.9	111.5	92.0	92.0	107.5	86.4	86.4	102.3	80.6	80.6	95.7	
			SHC	81.9	98.6	115.2	78.4	95.0	111.5	74.7	91.2	107.5	70.5	86.4	102.3	65.5	80.6	95.7	
		67	THC	114.8	114.8	114.8	108.0	108.0	108.0	101.3	101.3	101.3	94.4	94.4	94.4	87.2	87.2	87.2	
			SHC	66.3	83.2	100.0	62.8	79.7	96.6	59.5	76.3	93.2	56.0	72.8	89.7	52.5	69.2	86.1	
	72	THC	127.2	127.2	127.2	119.8	119.8	119.8	112.5	112.5	112.5	105.1	105.1	105.1	97.3	97.3	97.3		
		SHC	50.2	67.2	84.2	46.8	63.8	80.7	43.4	60.4	77.3	40.0	56.9	73.8	36.5	53.3	70.3		
	76	THC	-	137.8	137.8	-	129.8	129.8	-	122.0	122.0	-	114.1	114.1	-	105.7	105.7		
		SHC	-	54.2	71.6	-	50.7	68.0	-	47.3	64.5	-	43.9	61.0	-	40.4	57.4		
	3800 Cfm	EA (wb)	58	THC	107.6	107.6	121.8	102.1	102.1	115.7	96.6	96.6	109.7	91.0	91.0	103.4	84.9	84.9	96.7
				SHC	93.4	107.6	121.8	88.5	102.1	115.7	83.6	96.6	109.7	78.5	91.0	103.4	73.0	84.9	96.7
62			THC	107.9	107.9	126.2	102.3	102.3	120.4	96.7	96.7	114.2	91.1	91.1	107.7	85.0	85.0	100.8	
			SHC	88.5	107.3	126.2	84.0	102.3	120.4	79.3	96.7	114.2	74.4	91.1	107.7	69.2	85.0	100.8	
67			THC	117.8	117.8	117.8	110.8	110.8	110.8	103.7	103.7	103.7	96.6	96.6	99.3	89.2	89.2	95.5	
			SHC	71.0	90.5	109.9	67.5	86.9	106.4	64.0	83.4	102.9	60.5	79.9	99.3	56.8	76.1	95.5	
72		THC	130.5	130.5	130.5	122.7	122.7	122.7	115.1	115.1	115.1	107.3	107.3	107.3	99.3	99.3	99.3		
		SHC	52.4	71.9	91.5	48.8	68.3	87.8	45.3	64.8	84.3	41.9	61.3	80.8	38.3	57.7	77.2		
76		THC	-	141.0	141.0	-	132.7	132.7	-	124.5	124.5	-	116.2	116.2	-	107.6	107.6		
		SHC	-	56.7	76.6	-	53.2	73.0	-	49.7	69.4	-	46.2	65.9	-	42.7	62.2		
4300 Cfm		EA (wb)	58	THC	112.0	112.0	126.7	106.2	106.2	120.3	100.4	100.4	114.0	94.5	94.5	107.3	88.1	88.1	100.3
				SHC	97.3	112.0	126.7	92.1	106.2	120.3	87.0	100.4	114.0	81.6	94.5	107.3	76.0	88.1	100.3
	62		THC	112.1	112.1	131.7	106.3	106.3	125.2	100.5	100.5	118.6	94.6	94.6	111.7	88.2	88.2	104.5	
			SHC	92.4	112.1	131.7	87.5	106.3	125.2	82.5	100.5	118.6	77.3	94.6	111.7	72.0	88.2	104.5	
	67		THC	120.0	120.0	120.0	112.7	112.7	114.8	105.6	105.6	111.2	98.4	98.4	107.4	90.8	90.8	103.5	
			SHC	75.0	96.7	118.5	71.4	93.1	114.8	67.9	89.5	111.2	64.3	85.8	107.4	60.5	82.0	103.5	
	72	THC	132.6	132.6	132.6	124.6	124.6	124.6	116.8	116.8	116.8	108.9	108.9	108.9	100.6	100.6	100.6		
		SHC	54.0	75.9	97.7	50.5	72.2	94.1	47.0	68.7	90.5	43.5	65.2	86.9	39.9	61.5	83.2		
	76	THC	-	143.2	143.2	-	134.6	134.6	-	126.2	126.2	-	117.7	117.7	-	109.0	109.0		
		SHC	-	58.9	81.0	-	55.3	77.3	-	51.8	73.6	-	48.2	70.0	-	44.6	66.2		
	4850 Cfm	EA (wb)	58	THC	116.1	116.1	131.3	110.0	110.0	124.6	103.9	103.9	117.9	97.7	97.7	111.0	91.1	91.1	103.6
				SHC	100.9	116.1	131.3	95.5	110.0	124.6	90.0	103.9	117.9	84.4	97.7	111.0	78.6	91.1	103.6
62			THC	116.2	116.2	136.5	110.1	110.1	129.6	104.0	104.0	122.7	97.8	97.8	115.5	91.2	91.2	107.9	
			SHC	95.9	116.2	136.5	90.7	110.1	129.6	85.4	104.0	122.7	80.0	97.8	115.5	74.4	91.2	107.9	
67			THC	122.0	122.0	127.4	114.6	114.6	123.6	107.3	107.3	119.8	99.9	99.9	115.9	92.3	92.3	111.6	
			SHC	79.1	103.3	127.4	75.5	99.5	123.6	71.9	95.8	119.8	68.2	92.0	115.9	64.4	87.9	111.6	
72		THC	134.6	134.6	134.6	126.4	126.4	126.4	118.3	118.3	118.3	110.3	110.3	110.3	101.8	101.8	101.8		
		SHC	55.8	80.0	104.2	52.2	76.3	100.5	48.7	72.7	96.9	45.0	69.2	93.3	41.4	65.4	89.5		
76		THC	-	145.2	145.2	-	136.3	136.3	-	127.7	127.7	-	119.0	119.0	-	110.1	110.1		
		SHC	-	61.1	85.5	-	57.4	81.7	-	53.8	78.0	-	50.2	74.3	-	46.5	70.4		
5400 Cfm		EA (wb)	58	THC	119.6	119.6	135.2	113.2	113.2	128.2	107.0	107.0	121.2	100.4	100.4	114.1	93.6	93.6	106.5
				SHC	103.9	119.6	135.2	98.3	113.2	128.2	92.6	107.0	121.2	86.9	100.4	114.1	80.7	93.6	106.5
	62		THC	119.7	119.7	140.6	113.3	113.3	133.3	107.1	107.1	126.1	100.5	100.5	118.7	93.7	93.7	110.9	
			SHC	98.9	119.7	140.6	93.4	113.3	133.3	87.9	107.1	126.1	82.4	100.5	118.7	76.5	93.7	110.9	
	67		THC	123.7	123.7	135.8	116.2	116.2	131.8	108.8	108.8	127.9	101.5	101.5	123.5	94.1	94.1	118.1	
			SHC	83.1	109.5	135.8	79.3	105.6	131.8	75.6	101.8	127.9	71.8	97.7	123.5	67.5	92.7	118.1	
	72	THC	136.0	136.0	136.0	127.7	127.7	127.7	119.5	119.5	119.5	111.3	111.3	111.3	102.8	102.8	102.8		
		SHC	57.4	83.9	110.6	53.7	80.2	106.8	50.2	76.6	103.1	46.6	73.0	99.4	42.9	69.2	95.6		
	76	THC	-	146.6	146.6	-	137.7	137.7	-	128.9	128.9	-	120.0	120.0	-	111.0	111.0		
		SHC	-	63.1	89.8	-	59.4	86.0	-	55.8	82.2	-	52.1	78.3	-	48.4	74.4		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 20 – COOLING CAPACITIES - THIRD STAGE, FULL LOAD**

**17.5 TONS**

20 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
5250 Cfm	EA (wb)	58	THC	177.4	177.4	201.2	168.6	168.6	191.6	159.3	159.3	181.4	149.7	149.7	170.8	139.3	139.3	159.4	
			SHC	153.6	177.4	201.2	145.6	168.6	191.6	137.2	159.3	181.4	128.5	149.7	170.8	119.1	139.3	159.4	
		62	THC	184.4	184.4	192.2	173.9	173.9	185.7	163.0	163.0	179.1	151.7	151.7	172.2	140.0	140.0	164.5	
			SHC	138.4	165.3	192.2	132.0	158.9	185.7	125.6	152.4	179.1	118.9	145.5	172.2	111.7	138.1	164.5	
		67	THC	202.7	202.7	202.7	191.4	191.4	191.4	179.6	179.6	179.6	167.2	167.2	167.2	154.2	154.2	154.2	
			SHC	112.7	139.7	166.8	106.5	133.6	160.6	100.2	127.2	154.2	93.6	120.6	147.6	87.0	113.9	140.9	
	72	THC	223.1	223.1	223.1	211.2	211.2	211.2	198.6	198.6	198.6	185.4	185.4	185.4	171.8	171.8	171.8		
		SHC	86.6	113.9	141.1	80.5	107.7	135.0	74.3	101.5	128.7	67.9	95.1	122.2	61.3	88.4	115.5		
	76	THC	-	240.5	240.5	-	228.1	228.1	-	215.0	215.0	-	200.9	200.9	-	186.7	186.7		
		SHC	-	92.8	121.0	-	86.9	115.0	-	80.7	108.7	-	74.3	102.1	-	67.8	95.6		
	6150 Cfm	EA (wb)	58	THC	187.8	187.8	212.8	178.4	178.4	202.6	168.6	168.6	191.8	158.2	158.2	180.5	147.4	147.4	168.5
				SHC	162.7	187.8	212.8	154.2	178.4	202.6	145.4	168.6	191.8	136.1	158.2	180.5	126.4	147.4	168.5
62			THC	190.8	190.8	211.8	180.2	180.2	205.0	169.3	169.3	197.5	158.5	158.5	188.2	147.6	147.6	175.7	
			SHC	150.1	181.0	211.8	143.6	174.3	205.0	136.7	167.1	197.5	128.9	158.5	188.2	119.4	147.6	175.7	
67			THC	208.3	208.3	208.3	196.5	196.5	196.5	184.3	184.3	184.3	171.5	171.5	171.5	158.2	158.2	158.2	
			SHC	120.3	151.5	182.7	114.1	145.3	176.5	107.6	138.8	170.0	101.0	132.1	163.3	94.2	125.3	156.4	
72		THC	228.8	228.8	228.8	216.5	216.5	216.5	203.3	203.3	203.3	189.8	189.8	189.8	175.8	175.8	175.8		
		SHC	90.1	121.5	152.9	83.9	115.2	146.6	77.5	108.8	140.2	71.1	102.4	133.6	64.4	95.6	126.8		
76		THC	-	246.4	246.4	-	233.5	233.5	-	220.0	220.0	-	205.3	205.3	-	190.6	190.6		
		SHC	-	97.1	129.4	-	91.1	123.1	-	84.8	116.8	-	78.3	110.1	-	71.7	103.4		
7000 Cfm		EA (wb)	58	THC	195.8	195.8	221.7	186.0	186.0	211.0	175.7	175.7	199.7	164.9	164.9	187.8	153.6	153.6	175.3
				SHC	169.7	195.8	221.7	161.0	186.0	211.0	151.7	175.7	199.7	142.0	164.9	187.8	131.7	153.6	175.3
	62		THC	196.4	196.4	228.2	186.1	186.1	219.6	175.9	175.9	208.0	165.1	165.1	195.7	153.8	153.8	182.8	
			SHC	160.0	194.1	228.2	152.7	186.1	219.6	143.8	175.9	208.0	134.5	165.1	195.7	124.6	153.8	182.8	
	67		THC	212.4	212.4	212.4	200.4	200.4	200.4	187.9	187.9	187.9	174.8	174.8	177.5	161.2	161.2	170.3	
			SHC	127.1	162.1	197.2	120.8	155.8	190.8	114.3	149.3	184.3	107.5	142.4	177.5	100.7	135.5	170.3	
	72	THC	233.0	233.0	233.0	220.4	220.4	220.4	206.8	206.8	206.8	193.0	193.0	193.0	178.6	178.6	178.6		
		SHC	93.0	128.2	163.4	86.9	122.0	157.1	80.3	115.4	150.5	73.8	108.8	143.8	67.2	102.1	137.1		
	76	THC	-	250.8	250.8	-	237.4	237.4	-	223.2	223.2	-	208.7	208.7	-	193.5	193.5		
		SHC	-	100.8	136.8	-	94.7	130.6	-	88.2	124.0	-	81.8	117.4	-	75.2	110.6		
	7900 Cfm	EA (wb)	58	THC	202.8	202.8	229.6	192.7	192.7	218.4	181.9	181.9	206.7	170.7	170.7	194.3	158.9	158.9	181.4
				SHC	176.0	202.8	229.6	166.8	192.7	218.4	157.2	181.9	206.7	147.1	170.7	194.3	136.5	158.9	181.4
62			THC	203.1	203.1	238.9	192.9	192.9	227.3	182.1	182.1	215.2	170.8	170.8	202.4	159.0	159.0	189.0	
			SHC	167.2	203.1	238.9	158.3	192.9	227.3	149.1	182.1	215.2	139.3	170.8	202.4	129.1	159.0	189.0	
67			THC	215.9	215.9	215.9	203.7	203.7	205.4	190.9	190.9	198.7	177.6	177.6	191.6	163.9	163.9	184.2	
			SHC	134.0	173.0	212.0	127.6	166.5	205.4	121.0	159.8	198.7	114.2	152.9	191.6	107.2	145.7	184.2	
72		THC	236.6	236.6	236.6	223.7	223.7	223.7	209.7	209.7	209.7	195.6	195.6	195.6	181.0	181.0	181.0		
		SHC	95.9	135.0	174.1	89.7	128.7	167.8	83.1	122.1	161.1	76.5	115.4	154.3	69.8	108.6	147.4		
76		THC	-	254.1	254.1	-	240.5	240.5	-	226.3	226.3	-	211.5	211.5	-	196.0	196.0		
		SHC	-	104.4	144.3	-	98.2	138.0	-	91.8	131.4	-	85.3	124.7	-	78.5	117.7		
8750 Cfm		EA (wb)	58	THC	208.5	208.5	236.0	197.9	197.9	224.3	187.0	187.0	212.3	175.3	175.3	199.4	163.2	163.2	186.1
				SHC	181.1	208.5	236.0	171.5	197.9	224.3	161.7	187.0	212.3	151.1	175.3	199.4	140.3	163.2	186.1
	62		THC	208.7	208.7	245.4	198.1	198.1	233.4	187.1	187.1	220.9	175.4	175.4	207.7	163.3	163.3	193.9	
			SHC	172.0	208.7	245.4	162.8	198.1	233.4	153.3	187.1	220.9	143.2	175.4	207.7	132.7	163.3	193.9	
	67		THC	218.7	218.7	225.2	206.3	206.3	218.5	193.4	193.4	211.6	180.0	180.0	204.2	166.1	166.1	196.4	
			SHC	140.1	182.7	225.2	133.7	176.1	218.5	126.9	169.3	211.6	120.0	162.0	204.2	112.8	154.5	196.4	
	72	THC	239.3	239.3	239.3	226.1	226.1	226.1	212.4	212.4	212.4	197.5	197.5	197.5	182.8	182.8	182.8		
		SHC	98.5	141.2	183.9	92.1	134.8	177.5	85.7	128.3	170.8	79.0	121.4	163.9	72.2	114.6	156.9		
	76	THC	-	256.9	256.9	-	243.1	243.1	-	228.5	228.5	-	213.5	213.5	-	197.8	197.8		
		SHC	-	107.7	151.1	-	101.5	144.7	-	95.0	138.1	-	88.3	131.2	-	81.6	124.1		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

50LC\*A20 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-1 (Subcooler Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		5250			7000			8750		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	234	210	189	246	223	202	254	231	215
	SHC	106	131	157	123	157	189	138	180	215
	kW	11.6	11.2	10.9	11.8	11.4	11.1	11.9	11.5	11.3
85	TC	219	196	176	230	208	189	238	215	200
	SHC	93	119	145	109	143	176	123	165	200
	kW	12.7	12.4	12.1	12.9	12.6	12.3	13.0	12.7	12.5
95	TC	204	182	163	214	193	175	221	199	184
	SHC	79	106	132	94	129	163	108	150	184
	kW	14.0	13.7	13.4	14.2	13.9	13.6	14.3	14.0	13.7
105	TC	188	167	149	197	177	160	204	183	170
	SHC	64	91	120	78	114	149	92	135	170
	kW	15.5	15.1	14.8	15.7	15.3	15.0	15.8	15.4	15.2
115	TC	172	152	135	180	161	145	186	166	154
	SHC	50	78	106	62	99	135	75	120	154
	kW	17.2	16.8	16.5	17.3	17.0	16.7	17.4	17.1	16.9
125	TC	155	137	120	163	144	129	168	148	138
	SHC	35	64	93	47	84	120	59	103	138
	kW	19.0	18.6	18.3	19.2	18.8	18.5	19.3	18.9	18.7

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

50LC\*A20 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-2 (Hot Gas Reheat Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		5250			7000			8750		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	77	80	82	80	83	85	81	84	87
	SHC	18	8	-1	33	20	9	49	34	20
	kW	11.8	12.0	12.2	12.0	12.1	12.3	12.1	12.2	12.4
75	TC	82	86	88	86	89	91	88	91	93
	SHC	24	14	5	39	26	15	55	40	26
	kW	11.3	11.5	11.6	11.5	11.6	11.8	11.6	11.7	11.9
70	TC	88	91	94	92	95	98	94	97	100
	SHC	29	19	10	45	32	21	61	46	32
	kW	10.8	11.0	11.1	11.0	11.1	11.3	11.1	11.2	11.4
60	TC	99	103	106	103	107	110	106	109	112
	SHC	40	30	22	56	43	33	72	58	45
	kW	10.0	10.1	10.2	10.1	10.3	10.4	10.2	10.4	10.5
50	TC	111	114	118	115	119	122	118	122	125
	SHC	51	42	33	68	55	45	84	70	57
	kW	9.2	9.3	9.5	9.3	9.5	9.6	9.5	9.6	9.7
40	TC	122	126	129	127	131	134	130	134	137
	SHC	63	53	45	80	68	57	97	83	70
	kW	8.5	8.7	8.8	8.7	8.8	9.0	8.8	9.0	9.1

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

**Table 22 – COOLING CAPACITIES - FIRST STAGE, PART LOAD**

**20 TONS**

24 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
3150 Cfm	EA (wb)	58	THC	87.9	87.9	101.5	79.4	79.4	92.4	70.7	70.7	83.3	61.7	61.7	73.7	52.6	52.6	64.0	
			SHC	74.4	87.9	101.5	66.3	79.4	92.4	58.1	70.7	83.3	49.7	61.7	73.7	41.1	52.6	64.0	
		62	THC	91.3	91.3	101.0	81.4	81.4	93.7	71.6	71.6	86.2	61.9	61.9	77.9	52.7	52.7	67.9	
			SHC	68.1	84.5	101.0	60.8	77.2	93.7	53.5	69.8	86.2	45.8	61.9	77.9	37.4	52.7	67.9	
		67	THC	104.6	104.6	104.6	94.1	94.1	94.1	83.5	83.5	83.5	72.6	72.6	72.6	61.4	61.4	61.4	
			SHC	54.7	71.4	87.9	47.5	64.2	80.7	40.3	56.9	73.5	33.0	49.6	66.2	25.5	42.2	58.8	
	72	THC	119.6	119.6	119.6	108.6	108.6	108.6	97.4	97.4	97.4	86.0	86.0	86.0	74.1	74.1	74.1		
		SHC	41.1	57.8	74.6	33.9	50.6	67.4	26.7	43.4	60.2	19.4	36.2	52.8	12.1	28.8	45.4		
	76	THC	-	132.6	132.6	-	121.1	121.1	-	109.4	109.4	-	97.4	97.4	-	85.0	85.0		
		SHC	-	46.8	63.7	-	39.6	56.6	-	32.4	49.3	-	25.2	42.0	-	17.7	34.6		
	3650 Cfm	EA (wb)	58	THC	94.8	94.8	109.0	85.7	85.7	99.5	76.5	76.5	89.7	67.2	67.2	79.8	57.5	57.5	69.4
				SHC	80.4	94.8	109.0	72.0	85.7	99.5	63.4	76.5	89.7	54.7	67.2	79.8	45.6	57.5	69.4
62			THC	95.6	95.6	112.7	85.9	85.9	104.2	76.7	76.7	94.3	67.4	67.4	84.1	57.6	57.6	73.5	
			SHC	75.4	94.1	112.7	67.6	85.9	104.2	59.2	76.7	94.3	50.6	67.4	84.1	41.7	57.6	73.5	
67			THC	108.2	108.2	108.2	97.4	97.4	97.4	86.5	86.5	86.5	75.3	75.3	75.8	63.8	63.8	68.2	
			SHC	59.8	78.9	98.0	52.5	71.6	90.7	45.0	64.2	83.3	37.6	56.6	75.8	30.0	49.1	68.2	
72		THC	123.4	123.4	123.4	112.0	112.0	112.0	100.5	100.5	100.5	88.6	88.6	88.6	76.4	76.4	76.4		
		SHC	43.7	63.0	82.2	36.4	55.6	74.9	29.1	48.3	67.5	21.5	40.8	60.0	14.0	33.2	52.5		
76		THC	-	136.5	136.5	-	124.7	124.7	-	112.6	112.6	-	100.2	100.2	-	87.5	87.5		
		SHC	-	49.9	69.4	-	42.6	62.1	-	35.3	54.7	-	27.9	47.2	-	20.3	39.7		
4200 Cfm		EA (wb)	58	THC	101.0	101.0	115.9	91.6	91.6	105.9	82.0	82.0	95.7	72.2	72.2	85.3	62.1	62.1	74.5
				SHC	86.1	101.0	115.9	77.2	91.6	105.9	68.3	82.0	95.7	59.2	72.2	85.3	49.7	62.1	74.5
	62		THC	101.2	101.2	121.1	91.7	91.7	110.9	82.2	82.2	100.5	72.3	72.3	89.8	62.2	62.2	78.8	
			SHC	81.2	101.2	121.1	72.5	91.7	110.9	63.9	82.2	100.5	54.9	72.3	89.8	45.6	62.2	78.8	
	67		THC	111.4	111.4	111.4	100.2	100.2	101.0	89.0	89.0	93.4	77.6	77.6	85.8	65.8	65.8	77.9	
			SHC	64.9	86.8	108.5	57.5	79.3	101.0	50.0	71.8	93.4	42.4	64.2	85.8	34.7	56.4	77.9	
	72	THC	126.8	126.8	126.8	115.0	115.0	115.0	103.1	103.1	103.1	90.9	90.9	90.9	78.3	78.3	78.3		
		SHC	46.2	68.2	90.1	38.8	60.7	82.6	31.3	53.2	75.2	23.8	45.6	67.6	16.1	38.0	59.9		
	76	THC	-	139.9	139.9	-	127.7	127.7	-	115.2	115.2	-	102.6	102.6	-	89.4	89.4		
		SHC	-	53.0	75.2	-	45.6	67.8	-	38.1	60.3	-	30.6	52.7	-	22.9	44.9		
	4700 Cfm	EA (wb)	58	THC	105.9	105.9	121.3	96.1	96.1	110.9	86.2	86.2	100.3	76.1	76.1	89.5	65.6	65.6	78.3
				SHC	90.5	105.9	121.3	81.3	96.1	110.9	72.1	86.2	100.3	62.6	76.1	89.5	52.8	65.6	78.3
62			THC	106.0	106.0	126.7	96.2	96.2	116.0	86.4	86.4	105.2	76.1	76.1	94.2	65.7	65.7	82.8	
			SHC	85.4	106.0	126.7	76.4	96.2	116.0	67.5	86.4	105.2	58.2	76.1	94.2	48.7	65.7	82.8	
67			THC	113.8	113.8	117.7	102.5	102.5	110.0	91.1	91.1	102.3	79.4	79.4	94.4	67.5	67.5	86.3	
			SHC	69.4	93.6	117.7	61.8	85.9	110.0	54.2	78.3	102.3	46.5	70.5	94.4	38.7	62.5	86.3	
72		THC	129.0	129.0	129.0	117.0	117.0	117.0	104.9	104.9	104.9	92.4	92.4	92.4	79.7	79.7	79.7		
		SHC	48.4	72.6	97.0	40.9	65.1	89.4	33.2	57.5	81.8	25.6	49.8	74.1	17.8	42.1	66.4		
76		THC	-	142.4	142.4	-	129.9	129.9	-	117.2	117.2	-	104.2	104.2	-	90.9	90.9		
		SHC	-	55.6	80.1	-	48.1	72.6	-	40.6	65.0	-	32.9	57.3	-	25.2	49.5		
5250 Cfm		EA (wb)	58	THC	110.5	110.5	126.3	100.3	100.3	115.5	90.2	90.2	104.7	79.7	79.7	93.5	68.9	68.9	82.0
				SHC	94.6	110.5	126.3	85.1	100.3	115.5	75.7	90.2	104.7	65.9	79.7	93.5	55.9	68.9	82.0
	62		THC	110.6	110.6	131.8	100.5	100.5	120.8	90.3	90.3	109.7	79.9	79.9	98.3	69.0	69.0	86.5	
			SHC	89.4	110.6	131.8	80.1	100.5	120.8	70.9	90.3	109.7	61.3	79.9	98.3	51.6	69.0	86.5	
	67		THC	115.9	115.9	127.3	104.5	104.5	119.4	92.9	92.9	111.4	81.2	81.2	103.2	69.7	69.7	93.6	
			SHC	74.1	100.7	127.3	66.4	92.9	119.4	58.7	85.0	111.4	50.7	76.9	103.2	42.4	68.0	93.6	
	72	THC	131.0	131.0	131.0	118.9	118.9	118.9	106.5	106.5	106.5	93.9	93.9	93.9	80.8	80.8	80.8		
		SHC	50.5	77.3	104.2	42.9	69.7	96.5	35.2	62.1	88.9	27.5	54.3	81.1	19.7	46.5	73.2		
	76	THC	-	144.4	144.4	-	131.7	131.7	-	118.9	118.9	-	105.7	105.7	-	92.1	92.1		
		SHC	-	58.2	85.3	-	50.7	77.7	-	43.0	70.1	-	35.3	62.3	-	27.5	54.5		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 23 – COOLING CAPACITIES - SECOND STAGE, PART LOAD**

**20 TONS**

24 SIZE				AMBIENT TEMPERATURE															
				85			95			105			115			125			
				EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
3900 Cfm	EA (wb)	58	THC	128.8	128.8	146.4	121.7	121.7	138.6	114.1	114.1	130.4	105.8	105.8	121.3	96.9	96.9	111.5	
			SHC	111.2	128.8	146.4	104.7	121.7	138.6	97.8	114.1	130.4	90.3	105.8	121.3	82.2	96.9	111.5	
		62	THC	134.0	134.0	141.8	125.6	125.6	136.5	116.5	116.5	130.7	106.8	106.8	124.5	97.0	97.0	116.6	
			SHC	101.1	121.4	141.8	95.8	116.1	136.5	90.3	110.5	130.7	84.3	104.4	124.5	77.4	97.0	116.6	
		67	THC	148.8	148.8	148.8	139.8	139.8	139.8	130.1	130.1	130.1	119.5	119.5	119.5	108.2	108.2	108.2	
			SHC	82.5	103.0	123.4	77.3	97.8	118.3	71.9	92.3	112.8	66.1	86.6	107.1	60.1	80.5	101.0	
	72	THC	165.6	165.6	165.6	156.1	156.1	156.1	145.9	145.9	145.9	134.6	134.6	134.6	122.7	122.7	122.7		
		SHC	63.5	84.1	104.7	58.4	79.0	99.6	53.0	73.6	94.2	47.4	68.0	88.5	41.4	62.0	82.6		
	76	THC	-	179.7	179.7	-	169.8	169.8	-	159.1	159.1	-	147.5	147.5	-	134.8	134.8		
		SHC	-	68.5	89.5	-	63.6	84.4	-	58.3	79.2	-	52.7	73.6	-	46.9	67.7		
	4500 Cfm	EA (wb)	58	THC	136.4	136.4	154.8	129.0	129.0	146.7	120.9	120.9	138.0	112.1	112.1	128.4	102.8	102.8	118.1
				SHC	118.0	136.4	154.8	111.2	129.0	146.7	103.8	120.9	138.0	95.9	112.1	128.4	87.5	102.8	118.1
62			THC	138.6	138.6	155.8	130.2	130.2	150.1	121.0	121.0	143.8	112.3	112.3	134.1	103.0	103.0	123.4	
			SHC	109.5	132.7	155.8	104.0	127.0	150.1	98.2	121.0	143.8	90.7	112.3	134.1	82.5	103.0	123.4	
67			THC	153.0	153.0	153.0	143.7	143.7	143.7	133.7	133.7	133.7	122.9	122.9	122.9	111.2	111.2	112.1	
			SHC	88.0	111.4	134.9	82.8	106.3	129.7	77.3	100.7	124.1	71.5	94.9	118.3	65.4	88.7	112.1	
72		THC	169.9	169.9	169.9	160.2	160.2	160.2	149.5	149.5	149.5	138.0	138.0	138.0	125.5	125.5	125.5		
		SHC	66.1	89.7	113.3	60.9	84.5	108.1	55.5	79.1	102.6	49.8	73.3	96.8	43.8	67.4	90.9		
76		THC	-	184.1	184.1	-	173.9	173.9	-	162.8	162.8	-	150.8	150.8	-	137.9	137.9		
		SHC	-	71.9	95.7	-	66.7	90.6	-	61.3	85.2	-	55.8	79.6	-	49.8	73.6		
5150 Cfm		EA (wb)	58	THC	143.3	143.3	162.5	135.5	135.5	154.1	127.0	127.0	144.8	118.0	118.0	134.8	108.1	108.1	124.0
				SHC	124.0	143.3	162.5	117.0	135.5	154.1	109.3	127.0	144.8	101.0	118.0	134.8	92.1	108.1	124.0
	62		THC	143.4	143.4	169.2	135.7	135.7	160.5	127.2	127.2	151.0	118.1	118.1	140.7	108.2	108.2	129.5	
			SHC	117.7	143.4	169.2	110.9	135.7	160.5	103.4	127.2	151.0	95.6	118.1	140.7	87.0	108.2	129.5	
	67		THC	156.6	156.6	156.6	147.0	147.0	147.0	136.8	136.8	136.8	125.7	125.7	129.9	113.7	113.7	123.5	
			SHC	93.8	120.3	146.8	88.4	115.0	141.5	82.9	109.4	135.9	77.0	103.4	129.9	70.8	97.2	123.5	
	72	THC	173.6	173.6	173.6	163.4	163.4	163.4	152.5	152.5	152.5	140.6	140.6	140.6	127.8	127.8	127.8		
		SHC	68.6	95.4	122.1	63.5	90.1	116.8	58.0	84.6	111.3	52.2	78.8	105.5	46.1	72.7	99.4		
	76	THC	-	187.8	187.8	-	177.3	177.3	-	165.9	165.9	-	153.7	153.7	-	140.3	140.3		
		SHC	-	75.0	102.1	-	69.8	96.8	-	64.4	91.4	-	58.8	85.7	-	52.7	79.7		
	5800 Cfm	EA (wb)	58	THC	149.2	149.2	169.1	141.1	141.1	160.2	132.3	132.3	150.6	122.8	122.8	140.2	112.5	112.5	129.0
				SHC	129.2	149.2	169.1	121.9	141.1	160.2	113.9	132.3	150.6	105.3	122.8	140.2	96.1	112.5	129.0
62			THC	149.3	149.3	175.9	141.2	141.2	166.8	132.4	132.4	157.0	122.9	122.9	146.3	112.7	112.7	134.6	
			SHC	122.7	149.3	175.9	115.5	141.2	166.8	107.9	132.4	157.0	99.6	122.9	146.3	90.7	112.7	134.6	
67			THC	159.4	159.4	159.4	149.8	149.8	152.9	139.2	139.2	147.1	127.9	127.9	141.0	115.8	115.8	134.5	
			SHC	99.2	128.7	158.2	93.8	123.3	152.9	88.1	117.6	147.1	82.2	111.6	141.0	75.9	105.2	134.5	
72		THC	176.3	176.3	176.3	165.9	165.9	165.9	154.8	154.8	154.8	142.7	142.7	142.7	129.8	129.8	129.8		
		SHC	71.0	100.7	130.5	65.7	95.5	125.2	60.3	89.9	119.6	54.4	84.0	113.7	48.3	77.9	107.5		
76		THC	-	190.6	190.6	-	179.9	179.9	-	168.3	168.3	-	155.8	155.8	-	142.3	142.3		
		SHC	-	77.9	108.0	-	72.7	102.8	-	67.3	97.3	-	61.6	91.6	-	55.6	85.4		
6450 Cfm		EA (wb)	58	THC	154.1	154.1	174.6	145.8	145.8	165.6	136.7	136.7	155.6	126.9	126.9	144.9	116.3	116.3	133.2
				SHC	133.7	154.1	174.6	126.1	145.8	165.6	117.9	136.7	155.6	109.0	126.9	144.9	99.5	116.3	133.2
	62		THC	154.3	154.3	181.6	146.0	146.0	172.3	136.9	136.9	162.1	127.0	127.0	151.0	116.5	116.5	139.0	
			SHC	126.9	154.3	181.6	119.5	146.0	172.3	111.6	136.9	162.1	103.2	127.0	151.0	93.9	116.5	139.0	
	67		THC	161.9	161.9	169.3	152.0	152.0	163.7	141.5	141.5	157.9	130.1	130.1	151.4	117.9	117.9	144.4	
			SHC	104.3	136.8	169.3	98.9	131.3	163.7	93.2	125.5	157.9	87.2	119.3	151.4	80.6	112.5	144.4	
	72	THC	178.5	178.5	178.5	168.0	168.0	168.0	156.7	156.7	156.7	144.4	144.4	144.4	131.1	131.1	131.1		
		SHC	73.2	105.9	138.5	67.9	100.5	133.2	62.3	95.0	127.6	56.5	89.1	121.7	50.3	82.9	115.4		
	76	THC	-	192.9	192.9	-	182.0	182.0	-	170.2	170.2	-	157.5	157.5	-	143.8	143.8		
		SHC	-	80.7	113.7	-	75.5	108.5	-	70.0	103.0	-	64.3	97.1	-	58.2	91.1		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 24 – COOLING CAPACITIES - THIRD STAGE, FULL LOAD**

**20 TONS**

24 SIZE			AMBIENT TEMPERATURE																
			85			95			105			115			125				
			EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
6000 Cfm	EA (WB)	58	THC	217.4	217.4	245.6	208.3	208.3	235.6	198.5	198.5	224.7	188.0	188.0	213.0	176.6	176.6	200.3	
			SHC	189.2	217.4	245.6	181.1	208.3	235.6	172.4	198.5	224.7	163.0	188.0	213.0	152.9	176.6	200.3	
		62	THC	227.3	227.3	230.2	216.2	216.2	224.2	204.4	204.4	217.6	191.7	191.7	210.8	178.2	178.2	203.0	
			SHC	169.0	199.6	230.2	162.9	193.5	224.2	156.6	187.1	217.6	149.9	180.4	210.8	142.6	172.9	203.0	
		67	THC	248.8	248.8	248.8	236.8	236.8	236.8	224.1	224.1	224.1	210.2	210.2	210.2	195.4	195.4	195.4	
			SHC	139.0	169.8	200.7	133.2	164.0	194.7	127.0	157.8	188.6	120.5	151.2	182.0	113.7	144.4	175.1	
	72	THC	273.6	273.6	273.6	260.9	260.9	260.9	247.1	247.1	247.1	232.2	232.2	232.2	216.4	216.4	216.4		
		SHC	108.9	140.0	171.0	103.3	134.3	165.3	97.1	128.1	159.1	90.8	121.7	152.7	84.0	115.0	145.9		
	76	THC	-	294.8	294.8	-	281.4	281.4	-	266.8	266.8	-	251.1	251.1	-	234.3	234.3		
		SHC	-	115.5	147.7	-	110.0	142.2	-	103.9	135.9	-	97.7	129.4	-	91.1	122.7		
	7000 Cfm	EA (WB)	58	THC	229.4	229.4	259.1	219.7	219.7	248.3	209.2	209.2	236.7	198.0	198.0	224.2	185.9	185.9	210.7
				SHC	199.7	229.4	259.1	191.1	219.7	248.3	181.7	209.2	236.7	171.8	198.0	224.2	161.1	185.9	210.7
62			THC	234.9	234.9	252.1	223.4	223.4	245.7	211.3	211.3	238.8	199.3	199.3	229.8	186.2	186.2	219.4	
			SHC	182.0	217.1	252.1	175.8	210.8	245.7	169.3	204.0	238.8	161.7	195.7	229.8	153.1	186.2	219.4	
67			THC	256.2	256.2	256.2	243.2	243.2	243.2	229.8	229.8	229.8	215.6	215.6	215.6	200.3	200.3	200.3	
			SHC	147.7	183.1	218.5	141.6	177.0	212.3	135.3	170.6	206.0	128.7	164.1	199.4	121.8	157.1	192.4	
72		THC	281.0	281.0	281.0	267.6	267.6	267.6	253.2	253.2	253.2	237.7	237.7	237.7	221.3	221.3	221.3		
		SHC	112.8	148.5	184.2	107.1	142.6	178.2	100.8	136.4	172.0	94.4	129.9	165.4	87.6	123.0	158.5		
76		THC	-	302.4	302.4	-	288.3	288.3	-	273.1	273.1	-	256.7	256.7	-	239.4	239.4		
		SHC	-	120.4	157.2	-	114.7	151.3	-	108.6	145.1	-	102.2	138.5	-	95.5	131.6		
8000 Cfm		EA (WB)	58	THC	239.2	239.2	270.1	228.9	228.9	258.8	217.9	217.9	246.5	206.2	206.2	233.4	193.5	193.5	219.3
				SHC	208.3	239.2	270.1	199.2	228.9	258.8	189.4	217.9	246.5	179.0	206.2	233.4	167.8	193.5	219.3
	62		THC	241.3	241.3	272.3	229.9	229.9	265.0	218.1	218.1	256.1	206.6	206.6	242.9	193.7	193.7	228.1	
			SHC	194.0	233.1	272.3	187.4	226.2	265.0	180.0	218.1	256.1	170.1	206.5	242.9	159.3	193.7	228.1	
	67		THC	261.6	261.6	261.6	248.2	248.2	248.2	234.5	234.5	234.5	219.8	219.8	219.8	204.0	204.0	208.7	
			SHC	155.7	195.6	235.5	149.5	189.3	229.2	143.1	183.0	222.8	136.5	176.4	216.2	129.4	169.1	208.7	
	72	THC	286.7	286.7	286.7	272.9	272.9	272.9	258.0	258.0	258.0	242.1	242.1	242.1	225.0	225.0	225.0		
		SHC	116.4	156.5	196.7	110.5	150.5	190.7	104.2	144.3	184.4	97.7	137.7	177.6	90.8	130.7	170.6		
	76	THC	-	308.3	308.3	-	293.8	293.8	-	278.1	278.1	-	261.1	261.1	-	243.3	243.3		
		SHC	-	124.9	166.0	-	119.0	160.1	-	112.9	153.8	-	106.4	147.1	-	99.6	140.2		
	9000 Cfm	EA (WB)	58	THC	247.4	247.4	279.2	236.7	236.7	267.4	225.3	225.3	254.8	213.0	213.0	241.1	199.9	199.9	226.4
				SHC	215.4	247.4	279.2	206.0	236.7	267.4	195.9	225.3	254.8	185.1	213.0	241.1	173.4	199.9	226.4
62			THC	247.7	247.7	290.4	236.9	236.9	278.0	225.5	225.5	264.8	213.2	213.2	250.7	200.1	200.1	235.5	
			SHC	205.0	247.7	290.4	195.9	236.9	278.0	186.2	225.5	264.8	175.8	213.2	250.7	164.7	200.1	235.5	
67			THC	266.1	266.1	266.1	252.2	252.2	252.2	238.3	238.3	239.0	223.3	223.3	232.0	207.2	207.2	224.3	
			SHC	163.4	207.6	251.8	157.1	201.2	245.4	150.6	194.8	239.0	143.9	187.9	232.0	136.7	180.5	224.3	
72		THC	291.1	291.1	291.1	277.0	277.0	277.0	261.8	261.8	261.8	245.4	245.4	245.4	228.1	228.1	228.1		
		SHC	119.6	164.1	208.7	113.7	158.1	202.6	107.3	151.8	196.2	100.7	145.1	189.3	93.8	138.1	182.3		
76		THC	-	313.0	313.0	-	298.1	298.1	-	281.9	281.9	-	264.6	264.6	-	246.3	246.3		
		SHC	-	129.0	174.4	-	123.1	168.5	-	116.9	162.1	-	110.4	155.4	-	103.5	148.4		
10000 Cfm		EA (WB)	58	THC	254.8	254.8	287.6	243.4	243.4	275.0	231.6	231.6	261.8	218.8	218.8	247.6	205.1	205.1	232.2
				SHC	222.0	254.8	287.6	211.9	243.4	275.0	201.4	231.6	261.8	190.1	218.8	247.6	177.9	205.1	232.2
	62		THC	255.1	255.1	298.9	243.6	243.6	285.8	231.8	231.8	272.1	219.0	219.0	257.4	205.2	205.2	241.5	
			SHC	211.2	255.1	298.9	201.4	243.6	285.8	191.5	231.8	272.1	180.7	219.0	257.4	169.1	205.2	241.5	
	67		THC	269.3	269.3	269.3	255.9	255.9	261.1	241.5	241.5	254.3	226.2	226.2	247.0	210.1	210.1	239.0	
			SHC	170.4	218.9	267.3	164.3	212.7	261.1	157.8	206.0	254.3	150.8	198.9	247.0	143.4	191.2	239.0	
	72	THC	294.7	294.7	294.7	280.4	280.4	280.4	264.8	264.8	264.8	248.0	248.0	248.0	230.4	230.4	230.4		
		SHC	122.7	171.4	220.2	116.7	165.4	214.0	110.4	158.9	207.6	103.6	152.2	200.8	96.7	145.1	193.5		
	76	THC	-	316.8	316.8	-	301.5	301.5	-	285.1	285.1	-	267.4	267.4	-	248.7	248.7		
		SHC	-	133.0	182.6	-	127.0	176.6	-	120.8	170.1	-	114.2	163.4	-	107.3	156.3		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

50LC\*A24 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-1 (Subcooler Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		6000			8000			10000		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	274	246	221	292	263	238	281	273	250
	SHC	120	148	176	140	176	213	136	202	244
	kW	13.5	13.2	12.9	13.7	13.4	13.1	13.4	13.5	13.3
85	TC	261	233	208	277	249	225	287	258	237
	SHC	107	136	164	126	163	201	142	188	231
	kW	14.9	14.6	14.3	15.1	14.8	14.5	15.3	14.9	14.7
95	TC	245	219	196	261	232	211	270	243	222
	SHC	93	123	153	111	148	188	127	174	217
	kW	16.5	16.2	15.8	16.8	16.3	16.1	16.9	16.5	16.2
105	TC	230	205	182	244	218	196	253	226	209
	SHC	80	110	141	96	135	175	111	159	197
	kW	18.4	18.0	17.7	18.6	18.2	17.9	18.7	18.3	18.1
115	TC	213	189	168	226	201	181	234	209	191
	SHC	65	97	128	80	121	161	95	143	187
	kW	20.4	20.1	19.7	20.6	20.2	19.9	20.8	20.4	20.1
125	TC	196	173	153	207	183	164	214	190	173
	SHC	50	83	115	64	105	146	77	127	173
	kW	22.7	22.4	22.0	22.9	22.5	22.2	23.0	22.6	22.4

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

50LC\*A24 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-2 (Hot Gas Reheat Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		6000			8000			10000		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	89	93	96	92	96	99	94	98	101
	SHC	17	5	-5	32	17	5	48	31	16
	kW	19.6	19.9	20.2	19.9	20.2	20.4	20.0	20.3	20.6
75	TC	96	100	103	100	103	107	102	105	109
	SHC	24	12	2	39	24	12	55	38	23
	kW	18.7	19.0	19.3	19.0	19.3	19.5	19.2	19.5	19.7
70	TC	103	107	110	107	111	114	109	113	116
	SHC	30	18	8	46	31	19	62	45	30
	kW	17.9	18.2	18.4	18.2	18.5	18.7	18.4	18.6	18.9
60	TC	117	121	124	121	125	129	124	128	132
	SHC	43	32	22	59	45	33	76	59	45
	kW	16.4	16.7	16.9	16.7	16.9	17.2	16.9	17.1	17.4
50	TC	131	135	139	136	140	144	139	143	147
	SHC	56	45	35	73	59	47	91	74	59
	kW	15.1	15.3	15.6	15.4	15.6	15.9	15.6	15.8	16.0
40	TC	145	149	153	150	155	159	154	158	162
	SHC	70	59	49	87	74	62	105	89	75
	kW	14.0	14.2	14.4	14.3	14.5	14.7	14.4	14.7	14.9

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

**Table 26 – COOLING CAPACITIES - FIRST STAGE, PART LOAD**

**23 TONS**

26 SIZE			AMBIENT TEMPERATURE																
			85			95			105			115			125				
			EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
4050 Cfm	EA (WB)	58	THC	125.3	125.3	141.0	122.3	122.3	137.4	118.9	118.9	133.4	115.1	115.1	129.0	110.8	110.8	123.9	
			SHC	109.6	125.3	141.0	107.2	122.3	137.4	104.3	118.9	133.4	101.1	115.1	129.0	97.5	110.8	123.9	
		62	THC	126.7	126.7	142.1	122.9	122.9	140.4	119.0	119.0	138.5	115.1	115.1	133.8	110.9	110.9	128.5	
			SHC	102.4	122.3	142.1	101.1	120.7	140.4	99.5	119.0	138.5	96.5	115.1	133.8	93.2	110.9	128.5	
		67	THC	137.1	137.1	137.1	132.6	132.6	132.6	127.7	127.7	127.7	122.4	122.4	122.4	116.5	116.5	117.5	
			SHC	82.5	102.7	122.9	81.4	101.6	121.8	80.1	100.4	120.6	78.8	99.0	119.1	77.2	97.3	117.5	
	72	THC	149.9	149.9	149.9	144.8	144.8	144.8	139.3	139.3	139.3	133.4	133.4	133.4	126.8	126.8	126.8		
		SHC	61.8	82.2	102.5	60.8	81.1	101.4	59.7	80.0	100.2	58.3	78.6	98.8	56.7	77.0	97.2		
	76	THC	-	160.7	160.7	-	155.1	155.1	-	149.2	149.2	-	142.7	142.7	-	135.6	135.6		
		SHC	-	65.5	86.4	-	64.4	85.2	-	63.3	84.0	-	62.0	82.6	-	60.5	81.0		
	4750 Cfm	EA (WB)	58	THC	130.8	130.8	147.2	127.4	127.4	143.2	123.7	123.7	138.9	119.5	119.5	134.1	114.9	114.9	128.6
				SHC	114.4	130.8	147.2	111.5	127.4	143.2	108.5	123.7	138.9	105.0	119.5	134.1	101.0	114.9	128.6
62			THC	130.9	130.9	152.9	127.5	127.5	148.7	123.8	123.8	144.1	119.6	119.6	139.0	114.9	114.9	133.3	
			SHC	108.9	130.9	152.9	106.4	127.5	148.7	103.4	123.8	144.1	100.2	119.6	139.0	96.5	114.9	133.3	
67			THC	139.8	139.8	139.8	135.1	135.1	135.1	130.1	130.1	131.2	124.5	124.5	129.7	118.5	118.5	127.8	
			SHC	87.4	110.6	133.8	86.2	109.4	132.6	84.9	108.1	131.2	83.5	106.6	129.7	81.8	104.8	127.8	
72		THC	152.8	152.8	152.8	147.4	147.4	147.4	141.8	141.8	141.8	135.5	135.5	135.5	128.7	128.7	128.7		
		SHC	63.8	87.1	110.4	62.7	85.9	109.2	61.4	84.7	107.9	60.1	83.3	106.5	58.5	81.6	104.8		
76		THC	-	163.7	163.7	-	158.0	158.0	-	151.7	151.7	-	144.9	144.9	-	137.5	137.5		
		SHC	-	68.1	91.8	-	67.0	90.7	-	65.7	89.4	-	64.4	87.9	-	62.8	86.2		
5400 Cfm		EA (WB)	58	THC	135.0	135.0	152.1	131.4	131.4	147.8	127.4	127.4	143.1	122.9	122.9	138.0	118.0	118.0	132.1
				SHC	118.1	135.0	152.1	115.1	131.4	147.8	111.7	127.4	143.1	107.9	122.9	138.0	103.7	118.0	132.1
	62		THC	135.1	135.1	157.9	131.5	131.5	153.4	127.5	127.5	148.5	123.0	123.0	143.0	118.0	118.0	137.0	
			SHC	112.4	135.1	157.9	109.6	131.5	153.4	106.5	127.5	148.5	103.0	123.0	143.0	99.1	118.0	137.0	
	67		THC	141.9	141.9	143.3	137.0	137.0	142.0	131.8	131.8	140.6	126.2	126.2	138.8	120.0	120.0	136.7	
			SHC	91.7	117.5	143.3	90.4	116.2	142.0	89.1	114.9	140.6	87.7	113.2	138.8	85.8	111.2	136.7	
	72	THC	154.8	154.8	154.8	149.3	149.3	149.3	143.4	143.4	143.4	137.0	137.0	137.0	130.0	130.0	130.0		
		SHC	65.4	91.4	117.3	64.3	90.2	116.0	63.0	88.9	114.8	61.6	87.5	113.2	60.1	85.8	111.5		
	76	THC	-	165.9	165.9	-	159.9	159.9	-	153.4	153.4	-	146.4	146.4	-	138.8	138.8		
		SHC	-	70.2	96.6	-	69.1	95.4	-	67.9	94.1	-	66.4	92.5	-	64.8	90.8		
	6100 Cfm	EA (WB)	58	THC	138.9	138.9	156.5	135.0	135.0	151.9	130.7	130.7	146.9	126.1	126.1	141.5	120.7	120.7	135.3
				SHC	121.4	138.9	156.5	118.2	135.0	151.9	114.6	130.7	146.9	110.7	126.1	141.5	106.2	120.7	135.3
62			THC	139.0	139.0	162.4	135.1	135.1	157.7	130.8	130.8	152.5	126.1	126.1	146.7	120.8	120.8	140.3	
			SHC	115.5	139.0	162.4	112.6	135.1	157.7	109.2	130.8	152.5	105.5	126.1	146.7	101.3	120.8	140.3	
67			THC	143.7	143.7	153.1	138.7	138.7	151.6	133.5	133.5	150.1	127.7	127.7	148.0	121.6	121.6	145.4	
			SHC	95.9	124.5	153.1	94.8	123.2	151.6	93.4	121.7	150.1	91.7	119.8	148.0	89.7	117.6	145.4	
72		THC	156.6	156.6	156.6	150.8	150.8	150.8	144.8	144.8	144.8	138.3	138.3	138.3	131.0	131.0	131.0		
		SHC	67.1	95.6	124.3	65.9	94.5	123.1	64.6	93.2	121.7	63.2	91.7	120.1	61.6	90.0	118.4		
76		THC	-	167.8	167.8	-	161.6	161.6	-	154.9	154.9	-	147.8	147.8	-	139.9	139.9		
		SHC	-	72.4	101.5	-	71.3	100.2	-	70.0	98.9	-	68.5	97.3	-	66.9	95.4		
6750 Cfm		EA (WB)	58	THC	142.0	142.0	159.9	137.9	137.9	155.1	133.4	133.4	150.0	128.4	128.4	144.2	122.9	122.9	137.8
				SHC	124.0	142.0	159.9	120.6	137.9	155.1	116.9	133.4	150.0	112.7	128.4	144.2	108.0	122.9	137.8
	62		THC	142.1	142.1	166.0	138.0	138.0	161.0	133.5	133.5	155.6	128.5	128.5	149.6	122.9	122.9	142.8	
			SHC	118.1	142.1	166.0	114.9	138.0	161.0	111.3	133.5	155.6	107.4	128.5	149.6	103.1	122.9	142.8	
	67		THC	145.2	145.2	161.6	140.2	140.2	160.0	134.8	134.8	158.0	129.2	129.2	155.5	123.1	123.1	151.9	
			SHC	99.8	130.7	161.6	98.5	129.3	160.0	97.0	127.5	158.0	95.2	125.4	155.5	92.7	122.4	151.9	
	72	THC	157.9	157.9	157.9	152.1	152.1	152.1	145.9	145.9	145.9	139.1	139.1	139.1	131.8	131.8	131.8		
		SHC	68.5	99.6	130.7	67.4	98.4	129.4	66.1	97.0	127.9	64.6	95.5	126.4	63.0	93.8	124.5		
	76	THC	-	169.2	169.2	-	162.7	162.7	-	156.0	156.0	-	148.7	148.7	-	140.7	140.7		
		SHC	-	74.4	105.9	-	73.2	104.6	-	71.9	103.2	-	70.4	101.5	-	68.7	99.5		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity



**Table 27 – COOLING CAPACITIES - SECOND STAGE, PART LOAD**

**23 TONS**

26 SIZE			AMBIENT TEMPERATURE																
			85			95			105			115			125				
			EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
4850 Cfm	EA (WB)	58	THC	157.5	157.5	178.5	149.6	149.6	169.9	141.2	141.2	160.8	132.3	132.3	151.0	122.7	122.7	140.4	
			SHC	136.4	157.5	178.5	129.3	149.6	169.9	121.7	141.2	160.8	113.7	132.3	151.0	105.0	122.7	140.4	
		62	THC	164.0	164.0	170.5	154.5	154.5	164.7	144.7	144.7	158.5	134.4	134.4	151.9	123.3	123.3	144.5	
			SHC	123.0	146.7	170.5	117.3	141.0	164.7	111.3	134.9	158.5	105.0	128.4	151.9	98.3	121.4	144.5	
		67	THC	181.1	181.1	181.1	170.7	170.7	170.7	159.8	159.8	159.8	148.2	148.2	148.2	135.8	135.8	135.8	
			SHC	100.8	124.6	148.5	95.1	119.0	142.8	89.2	113.1	136.9	83.1	107.0	130.7	76.7	100.5	124.3	
	72	THC	200.2	200.2	200.2	189.0	189.0	189.0	177.2	177.2	177.2	164.8	164.8	164.8	151.4	151.4	151.4		
		SHC	78.1	102.2	126.3	72.4	96.5	120.5	66.5	90.6	114.7	60.5	84.5	108.5	54.2	78.1	102.1		
	76	THC	-	216.2	216.2	-	204.3	204.3	-	191.9	191.9	-	178.6	178.6	-	164.6	164.6		
		SHC	-	83.8	109.0	-	78.1	103.2	-	72.3	97.2	-	66.2	91.0	-	60.0	84.5		
	5700 Cfm	EA (WB)	58	THC	167.0	167.0	189.2	158.5	158.5	179.9	149.7	149.7	170.1	140.1	140.1	159.6	129.8	129.8	148.3
				SHC	144.8	167.0	189.2	137.2	158.5	179.9	129.1	149.7	170.1	120.5	140.1	159.6	111.2	129.8	148.3
62			THC	170.0	170.0	187.4	160.4	160.4	181.1	150.4	150.4	174.2	140.2	140.2	166.3	130.0	130.0	154.6	
			SHC	133.3	160.3	187.4	127.2	154.1	181.1	121.0	147.6	174.2	114.1	140.2	166.3	105.2	130.0	154.6	
67			THC	186.5	186.5	186.5	175.4	175.4	175.4	164.1	164.1	164.1	152.1	152.1	152.1	139.2	139.2	139.2	
			SHC	107.5	134.9	162.3	101.7	129.0	156.4	95.6	123.0	150.4	89.5	116.8	144.2	83.0	110.3	137.6	
72		THC	205.5	205.5	205.5	193.9	193.9	193.9	181.6	181.6	181.6	168.7	168.7	168.7	154.9	154.9	154.9		
		SHC	81.2	108.8	136.5	75.5	103.1	130.7	69.5	97.0	124.6	63.4	90.9	118.4	56.9	84.4	111.8		
76		THC	-	221.7	221.7	-	209.3	209.3	-	196.5	196.5	-	182.6	182.6	-	168.1	168.1		
		SHC	-	87.7	116.2	-	81.9	110.3	-	76.0	104.2	-	69.8	98.0	-	63.5	91.5		
6500 Cfm		EA (WB)	58	THC	174.4	174.4	197.4	165.5	165.5	187.7	156.0	156.0	177.3	146.0	146.0	166.2	135.1	135.1	154.3
				SHC	151.3	174.4	197.4	143.3	165.5	187.7	134.7	156.0	177.3	125.7	146.0	166.2	116.0	135.1	154.3
	62		THC	175.2	175.2	201.4	165.5	165.5	195.1	156.2	156.2	184.6	146.1	146.1	173.2	135.3	135.3	160.9	
			SHC	142.0	171.7	201.4	135.9	165.5	195.1	127.8	156.2	184.6	119.0	146.1	173.2	109.7	135.3	160.9	
	67		THC	190.1	190.1	190.1	178.8	178.8	178.8	167.2	167.2	167.2	154.9	154.9	156.0	141.9	141.9	149.4	
			SHC	113.3	143.9	174.4	107.3	137.9	168.5	101.3	131.8	162.4	95.1	125.6	156.0	88.5	119.0	149.4	
	72	THC	209.4	209.4	209.4	197.4	197.4	197.4	184.9	184.9	184.9	171.5	171.5	171.5	157.4	157.4	157.4		
		SHC	83.9	114.7	145.4	78.0	108.7	139.4	72.0	102.7	133.4	65.8	96.4	127.0	59.3	89.9	120.4		
	76	THC	-	225.7	225.7	-	213.0	213.0	-	199.8	199.8	-	185.4	185.4	-	170.6	170.6		
		SHC	-	90.9	122.6	-	85.1	116.6	-	79.1	110.6	-	72.8	104.1	-	66.4	97.6		
	7300 Cfm	EA (WB)	58	THC	180.5	180.5	204.3	171.0	171.0	193.8	161.2	161.2	183.0	150.7	150.7	171.6	139.5	139.5	159.2
				SHC	156.8	180.5	204.3	148.2	171.0	193.8	139.3	161.2	183.0	130.0	150.7	171.6	119.9	139.5	159.2
62			THC	180.7	180.7	212.4	171.2	171.2	201.6	161.4	161.4	190.5	150.9	150.9	178.7	139.6	139.6	165.8	
			SHC	148.9	180.7	212.4	140.7	171.2	201.6	132.2	161.4	190.5	123.1	150.9	178.7	113.4	139.6	165.8	
67			THC	193.2	193.2	193.2	181.7	181.7	181.7	170.0	170.0	173.7	157.4	157.4	167.4	144.1	144.1	160.4	
			SHC	119.0	152.6	186.2	112.9	146.5	180.2	106.8	140.2	173.7	100.4	134.0	167.4	93.7	127.0	160.4	
72		THC	212.6	212.6	212.6	200.3	200.3	200.3	187.4	187.4	187.4	173.8	173.8	173.8	159.4	159.4	159.4		
		SHC	86.3	120.2	154.1	80.4	114.3	148.0	74.3	108.1	141.9	68.1	101.8	135.4	61.5	95.2	128.8		
76		THC	-	228.9	228.9	-	216.1	216.1	-	202.5	202.5	-	187.8	187.8	-	172.7	172.7		
		SHC	-	94.0	128.7	-	88.1	122.8	-	82.1	116.6	-	75.8	110.1	-	69.3	103.5		
8100 Cfm		EA (WB)	58	THC	185.6	185.6	209.9	175.8	175.8	199.2	165.7	165.7	188.0	154.8	154.8	176.1	143.2	143.2	163.3
				SHC	161.3	185.6	209.9	152.4	175.8	199.2	143.3	165.7	188.0	133.6	154.8	176.1	123.1	143.2	163.3
	62		THC	185.8	185.8	218.3	176.0	176.0	207.2	165.8	165.8	195.7	154.9	154.9	183.4	143.3	143.3	170.1	
			SHC	153.3	185.8	218.3	144.7	176.0	207.2	135.9	165.8	195.7	126.6	154.9	183.4	116.5	143.3	170.1	
	67		THC	195.9	195.9	197.6	184.3	184.3	191.3	172.2	172.2	185.0	159.5	159.5	178.1	146.2	146.2	170.6	
			SHC	124.2	160.9	197.6	118.1	154.7	191.3	111.9	148.5	185.0	105.4	141.8	178.1	98.6	134.6	170.6	
	72	THC	215.2	215.2	215.2	202.6	202.6	202.6	189.5	189.5	189.5	175.7	175.7	175.7	161.0	161.0	161.0		
		SHC	88.6	125.5	162.3	82.7	119.4	156.2	76.5	113.3	150.1	70.2	106.9	143.5	63.6	100.2	136.8		
	76	THC	-	231.7	231.7	-	218.5	218.5	-	204.7	204.7	-	189.7	189.7	-	174.4	174.4		
		SHC	-	96.9	134.6	-	91.0	128.6	-	84.9	122.4	-	78.5	115.8	-	72.0	109.2		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

**Table 28 – COOLING CAPACITIES - THIRD STAGE, FULL LOAD**

**23 TONS**

26 SIZE			AMBIENT TEMPERATURE																
			85			95			105			115			125				
			EA (dB)			EA (dB)			EA (dB)			EA (dB)			EA (dB)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
6750 Cfm	EA (wB)	58	THC	236.0	236.0	267.5	224.8	224.8	255.5	212.8	212.8	242.3	200.0	200.0	228.2	186.1	186.1	212.9	
			SHC	204.3	236.0	267.5	194.3	224.8	255.5	183.4	212.8	242.3	171.8	200.0	228.2	159.3	186.1	212.9	
		62	THC	249.9	249.9	249.9	236.2	236.2	236.6	222.1	222.1	228.0	206.8	206.8	218.7	190.5	190.5	208.8	
			SHC	180.1	212.6	245.0	171.7	204.2	236.6	163.1	195.6	228.0	154.1	186.4	218.7	144.5	176.7	208.8	
		67	THC	275.4	275.4	275.4	260.8	260.8	260.8	245.4	245.4	245.4	228.7	228.7	228.7	210.9	210.9	210.9	
			SHC	149.4	181.9	214.6	141.1	173.6	206.3	132.5	165.1	197.6	123.5	156.1	188.6	114.1	146.6	179.1	
	72	THC	304.3	304.3	304.3	288.6	288.6	288.6	271.7	271.7	271.7	254.1	254.1	254.1	234.9	234.9	234.9		
		SHC	118.3	151.4	184.6	110.1	143.2	176.3	101.5	134.6	167.6	92.7	125.7	158.5	83.5	116.3	149.2		
	76	THC	-	328.7	328.7	-	312.0	312.0	-	294.3	294.3	-	275.2	275.2	-	255.1	255.1		
		SHC	-	126.5	162.7	-	118.4	154.2	-	109.8	145.3	-	100.9	135.9	-	91.7	126.4		
	7900 Cfm	EA (wB)	58	THC	249.9	249.9	283.1	237.8	237.8	269.9	225.1	225.1	256.0	211.5	211.5	241.0	196.9	196.9	224.9
				SHC	216.6	249.9	283.1	205.7	237.8	269.9	194.3	225.1	256.0	181.9	211.5	241.0	168.8	196.9	224.9
62			THC	258.9	258.9	268.2	244.8	244.8	259.5	230.2	230.2	250.4	214.6	214.6	240.4	198.1	198.1	229.5	
			SHC	194.1	231.2	268.2	185.6	222.6	259.5	176.8	213.5	250.4	167.3	203.9	240.4	157.2	193.3	229.5	
67			THC	284.4	284.4	284.4	269.0	269.0	269.0	252.8	252.8	252.8	235.5	235.5	235.5	216.8	216.8	216.8	
			SHC	158.7	196.1	233.3	150.2	187.5	224.7	141.6	178.7	216.0	132.4	169.6	206.7	122.8	159.9	197.0	
72		THC	313.6	313.6	313.6	297.1	297.1	297.1	279.6	279.6	279.6	261.0	261.0	261.0	241.1	241.1	241.1		
		SHC	122.9	160.8	198.5	114.7	152.3	190.0	105.9	143.5	181.2	96.9	134.5	172.0	87.5	124.9	162.3		
76		THC	-	338.2	338.2	-	320.7	320.7	-	302.2	302.2	-	282.4	282.4	-	261.4	261.4		
		SHC	-	132.1	172.5	-	123.7	163.8	-	115.1	154.8	-	106.0	145.5	-	96.6	135.8		
9000 Cfm		EA (wB)	58	THC	260.7	260.7	295.1	248.1	248.1	281.5	234.9	234.9	266.9	220.4	220.4	251.1	205.1	205.1	234.1
				SHC	226.2	260.7	295.1	214.9	248.1	281.5	202.9	234.9	266.9	189.9	220.4	251.1	176.1	205.1	234.1
	62		THC	266.1	266.1	288.6	251.9	251.9	279.4	237.0	237.0	269.4	221.2	221.2	258.1	205.2	205.2	244.0	
			SHC	206.5	247.6	288.6	197.6	238.6	279.4	188.4	228.8	269.4	178.2	218.1	258.1	166.5	205.2	244.0	
	67		THC	291.0	291.0	291.0	275.2	275.2	275.2	258.3	258.3	258.3	240.4	240.4	240.4	221.2	221.2	221.2	
			SHC	167.0	208.6	250.1	158.4	199.9	241.4	149.5	190.9	232.3	140.2	181.5	223.0	130.5	171.8	213.1	
	72	THC	320.5	320.5	320.5	303.5	303.5	303.5	285.4	285.4	285.4	266.1	266.1	266.1	245.6	245.6	245.6		
		SHC	126.9	169.0	211.0	118.5	160.4	202.3	109.6	151.5	193.3	100.4	142.3	184.0	90.9	132.5	174.1		
	76	THC	-	345.2	345.2	-	327.2	327.2	-	308.0	308.0	-	287.6	287.6	-	266.1	266.1		
		SHC	-	136.9	181.3	-	128.4	172.5	-	119.6	163.4	-	110.5	154.0	-	100.9	144.2		
	10150 Cfm	EA (wB)	58	THC	270.4	270.4	306.0	257.3	257.3	291.6	243.4	243.4	276.4	228.5	228.5	260.0	212.6	212.6	242.4
				SHC	234.8	270.4	306.0	223.0	257.3	291.6	210.4	243.4	276.4	197.0	228.5	260.0	182.6	212.6	242.4
62			THC	272.9	272.9	307.7	258.6	258.6	297.6	243.4	243.4	287.3	228.8	228.8	270.9	212.7	212.7	252.6	
			SHC	218.1	263.0	307.7	208.8	253.2	297.6	199.4	243.4	287.3	186.7	228.8	270.9	172.9	212.7	252.6	
67			THC	296.7	296.7	296.7	280.3	280.3	280.3	263.0	263.0	263.0	244.5	244.5	244.5	225.1	225.1	229.2	
			SHC	175.0	220.8	266.7	166.3	212.1	257.9	157.3	203.0	248.7	147.8	193.5	239.3	138.1	183.6	229.2	
72		THC	326.3	326.3	326.3	308.8	308.8	308.8	290.2	290.2	290.2	270.4	270.4	270.4	249.5	249.5	249.5		
		SHC	130.7	177.0	223.3	122.1	168.3	214.5	113.1	159.2	205.3	103.8	149.9	195.9	94.2	140.1	185.9		
76		THC	-	351.3	351.3	-	332.7	332.7	-	313.0	313.0	-	292.1	292.1	-	270.0	270.0		
		SHC	-	141.5	189.9	-	132.9	181.2	-	123.9	172.0	-	114.8	162.5	-	105.1	152.6		
11250 Cfm		EA (wB)	58	THC	278.5	278.5	314.9	264.8	264.8	300.1	250.5	250.5	284.3	235.1	235.1	267.3	218.6	218.6	249.1
				SHC	241.9	278.5	314.9	229.6	264.8	300.1	216.6	250.5	284.3	202.8	235.1	267.3	188.0	218.6	249.1
	62		THC	278.4	278.4	327.1	264.9	264.9	311.9	250.8	250.8	295.9	235.4	235.4	278.4	218.8	218.8	259.5	
			SHC	229.6	278.4	327.1	217.9	264.9	311.9	205.5	250.8	295.9	192.3	235.4	278.4	177.9	218.8	259.5	
	67		THC	301.0	301.0	301.0	284.3	284.3	284.3	266.6	266.6	266.6	248.0	248.0	254.0	228.2	228.2	243.8	
			SHC	182.2	232.1	281.8	173.5	223.2	272.9	164.3	214.0	263.7	154.8	204.5	254.0	144.9	194.3	243.8	
	72	THC	330.8	330.8	330.8	313.0	313.0	313.0	293.9	293.9	293.9	273.8	273.8	273.8	252.4	252.4	252.4		
		SHC	133.9	184.2	234.4	125.3	175.4	225.5	116.2	166.2	216.3	106.9	156.8	206.7	97.1	146.9	196.7		
	76	THC	-	356.0	356.0	-	337.0	337.0	-	316.8	316.8	-	295.5	295.5	-	273.0	273.0		
		SHC	-	145.6	197.9	-	136.9	189.1	-	127.9	179.8	-	118.6	170.2	-	108.8	160.3		

**LEGEND:**

- Do not operate
- 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
- TC - Total capacity

50LC\*A26 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-1 (Subcooler Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		6750			9000			11250		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	291	288	259	337	303	274	344	310	284
	SHC	116	171	203	157	198	239	170	220	270
	kW	30.0	20.3	19.8	22.7	22.1	21.4	24.7	24.0	23.2
85	TC	301	270	242	316	284	257	323	290	265
	SHC	123	155	187	139	180	223	151	201	252
	kW	22.6	22.0	21.5	24.4	23.8	23.2	26.4	25.8	24.9
95	TC	282	252	225	294	264	238	301	270	246
	SHC	105	138	171	119	162	206	131	183	234
	kW	24.6	24.0	23.4	26.3	25.7	25.1	28.4	27.7	26.8
105	TC	261	233	208	273	244	219	278	248	226
	SHC	86	121	155	100	144	188	110	163	215
	kW	26.8	26.2	25.6	28.6	27.9	27.3	30.6	29.9	29.0
115	TC	240	213	189	250	223	200	254	226	206
	SHC	68	103	138	79	124	170	89	143	196
	kW	29.2	28.6	28.1	31.0	30.4	29.7	33.0	32.3	31.4
125	TC	218	192	170	227	200	179	229	203	184
	SHC	48	84	121	59	105	151	67	122	176
	kW	32.0	31.4	30.8	33.8	33.1	32.4	35.7	35.0	34.1

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

50LC\*A26 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

Reheat-2 (Hot Gas Reheat Mode)		AIR ENTERING EVAPORATOR - SCFM/BF (80db)								
		6750			9000			11250		
Outdoor Air Temp ° F		Air Entering Evaporator -- Ewb (F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	119	124	128	125	130	133	129	133	137
	SHC	31	18	7	49	33	19	67	48	31
	kW	22.3	22.7	23.0	22.8	23.1	23.4	23.0	23.4	23.6
75	TC	127	132	136	133	138	142	137	141	145
	SHC	38	26	15	56	40	26	75	56	39
	kW	21.3	21.7	21.9	21.8	22.1	22.4	22.1	22.3	22.6
70	TC	134	139	143	141	146	150	145	150	154
	SHC	45	33	22	64	48	34	82	63	47
	kW	20.4	20.7	21.0	20.8	21.1	21.4	21.1	21.4	21.7
60	TC	149	154	159	157	162	166	161	166	170
	SHC	60	47	36	78	63	49	98	79	63
	kW	18.6	18.9	19.2	19.1	19.4	19.6	19.4	19.7	19.9
50	TC	164	169	174	172	178	182	177	182	187
	SHC	74	62	51	94	78	65	113	95	79
	kW	17.1	17.4	17.6	17.5	17.8	18.1	17.8	18.1	18.4
40	TC	179	185	190	188	194	199	193	199	204
	SHC	89	77	67	109	94	81	129	111	96
	kW	15.7	16.0	16.3	16.2	16.5	16.7	16.5	16.7	17.0

LEGEND AND NOTES

- kW --- Compressor Power Input
- SHC --- Sensible Capacity (1000 Btuh) Gross
- TC --- Total Capacity(1000 Btuh) Gross

**Table 30 – STATIC PRESSURE ADDERS (IN. WG) (FACTORY OPTIONS AND/OR ACCESSORIES)**

**Humidi-MiZer**

12.5 Tons											
CFM	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000
Humidi- MiZer Coil	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04
CFM	5250	5500	5750	6000	6250						
Humidi- MiZer Coil	0.04	0.04	0.05	0.05	0.05						
15 - 23 Tons											
CFM	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750
Humidi- MiZer Coil	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05
CFM	7000	7250	7500	7750	8000	8250	8500	8750	9000	9250	9500
Humidi- MiZer Coil	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08
CFM	9750	10000	10250	10500	10750	11000	11250	11500			
Humidi- MiZer Coil	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10			

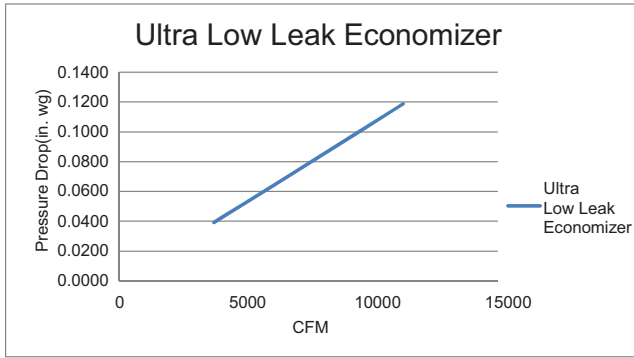
**Ultra Low Leak Economizers**

14 - 26 Tons											
CFM	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250
Ultra Low Leak Economizer	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07
CFM	6500	6750	7000	7250	7500	7750	8000	8250	8500	8750	9000
Ultra Low Leak Economizer	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
CFM	9250	9500	9750	10000	10250	10500	10750	11000	11250		
Ultra Low Leak Economizer	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12		

**Electric Heaters**

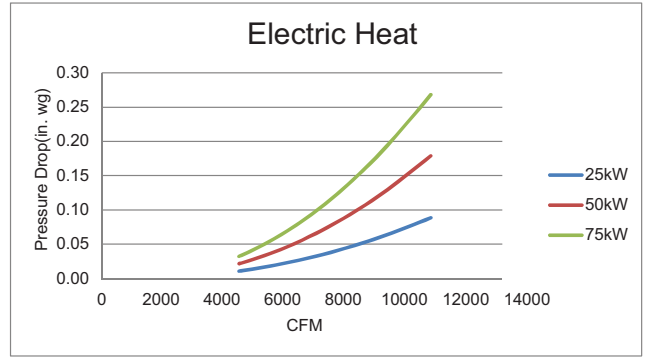
Unit 50LC	ELECTRIC HEATERS							
	Unit Voltages	CFM	NOMINAL HEATER SIZE (kW)	PRESSURE DROP (in wg.)	NOMINAL HEATER SIZE (kW)	PRESSURE DROP (in wg.)	NOMINAL HEATER SIZE (kW)	PRESSURE DROP (in wg.)
014, 017 020, 024, 026	208/240- 3- 60	4800	25	0.01	50	0.02	75	0.03
		5000		0.01		0.02		0.04
		6000		0.02		0.04		0.06
		7000		0.03		0.06		0.08
		8000		0.04		0.08		0.12
		9000		0.05		0.10		0.15
		10000		0.06		0.13		0.20
	11500	0.09		0.18		0.27		
	480- 3- 60	4800		0.01		0.02		0.03
		5000		0.01		0.02		0.04
		6000		0.02		0.04		0.06
		7000		0.03		0.06		0.08
		8000		0.04		0.08		0.12
		9000		0.05		0.10		0.15
		10000		0.06		0.13		0.20
	11500	0.09		0.18		0.27		
	575- 3- 60	4800		0.01		0.02		0.03
		5000		0.01		0.02		0.04
		6000		0.02		0.04		0.06
		7000		0.03		0.06		0.08
		8000		0.04		0.08		0.12
		9000	0.05	0.10	0.15			
		10000	0.06	0.13	0.20			
	11500	0.09	0.18	0.27				

# ECONOMIZER, BAROMETRIC RELIEF and PE PERFORMANCE



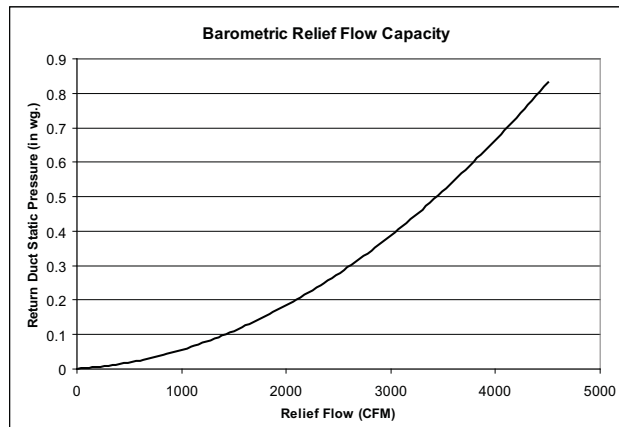
C13090

Fig. 14 - Pressure Drop - Ultra Low Leak Economizer



C13091

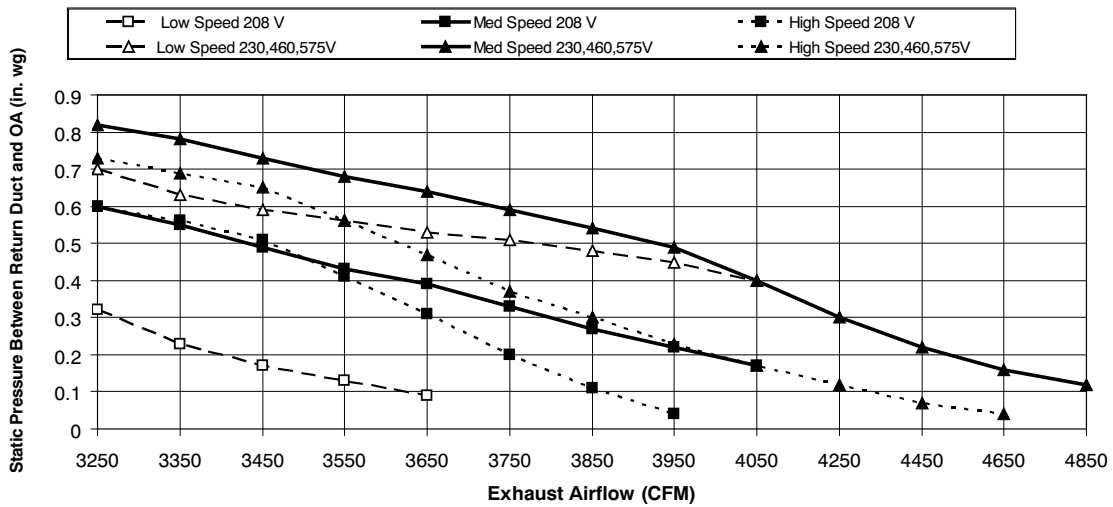
Fig. 15 - Pressure Drop - Electric Heat



C13107

Fig. 16 - Barometric Pressure Drop

## Power Exhaust Fan Performance



C09270A

Fig. 17 - Power Exhaust Fan Performance

## 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. 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, Carrier recommended the lower horsepower option.
5. For information on the electrical properties of Carrier motors, please see the Electrical information section of this book.
6. For more information on the performance limits of Carrier motors, see the application data section of this book.
7. The EPACT (Energy Policy Act) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements.

# FAN PERFORMANCE

## 12.5 TON VERTICAL SUPPLY

**Table 31 – 50LC\*\*14**

CFM	Available External Static Pressure (in. wg)																												
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0										
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP									
3750	<b>413</b>	<b>0.41</b>	514	0.61	600	0.82	673	1.03	738	1.25	797	1.46	851	1.68	901	1.90	948	2.12	992	2.34									
4063	<b>429</b>	<b>0.49</b>	526	0.70	610	0.93	684	1.15	749	1.39	807	1.62	861	1.85	912	2.09	958	2.32	1003	2.56									
4375	<b>447</b>	<b>0.57</b>	539	0.80	621	1.04	694	1.28	759	1.53	818	1.78	872	2.03	922	2.28	969	2.53	1013	2.79									
4688	<b>466</b>	<b>0.67</b>	553	0.91	633	1.16	705	1.42	769	1.69	828	1.95	882	2.22	932	2.49	979	2.76	1024	3.03									
5000	<b>485</b>	<b>0.78</b>	568	1.03	645	1.30	716	1.57	779	1.85	838	2.14	892	2.42	942	2.70	990	2.99	1034	3.28									
5313	505	0.90	584	1.16	659	1.44	727	1.74	790	2.03	848	2.33	902	2.63	952	2.93	1000	3.23	1045	3.54									
5625	525	1.04	600	1.31	672	1.61	739	1.91	801	2.22	859	2.54	912	2.85	963	3.17	1010	3.49	1055	3.81									
5938	546	1.20	618	1.48	687	1.78	752	2.10	813	2.42	870	2.75	923	3.09	973	3.42	1020	3.76	1065	4.10									
6250	568	1.37	636	1.66	702	1.97	765	2.30	825	2.64	881	2.99	934	3.34	983	3.69	1030	4.04	1075	4.39									
STD Static (498 - 676rpm) 2.9 Max BHP										MID Static (682 - 861 rpm) 4.9 Max BHP										HIGH Static (782 - 963 rpm) 7.4 Max BHP									
<b>Ultra High Static (933- 1113 rpm) 9.9 Max BHP</b> <b>ULTRA HIGH Static (933- 1113 rpm) 9.9 Max BHP</b> <b>ULTRA HIGH Static (933- 1113 rpm) 9.9 Max BHP</b>																													

**Table 32 – 50LC\*\*14**

## 12.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																												
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0										
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP									
3750	<b>426</b>	<b>0.62</b>	513	1.01	584	1.43	645	1.88	700	2.36	749	2.85	794	3.36	836	3.88	875	4.42	913	4.98									
4063	<b>445</b>	<b>0.72</b>	530	1.13	600	1.58	661	2.05	715	2.55	764	3.06	809	3.60	851	4.15	891	4.71	928	5.29									
4375	<b>465</b>	<b>0.83</b>	547	1.27	617	1.74	677	2.24	731	2.75	780	3.29	825	3.85	867	4.42	906	5.01	944	5.62									
4688	<b>485</b>	<b>0.95</b>	565	1.41	633	1.91	693	2.43	747	2.97	795	3.54	840	4.12	882	4.71	922	5.33	959	5.95									
5000	506	1.09	584	1.58	650	2.09	709	2.64	762	3.21	811	3.79	856	4.40	898	5.02	937	5.65	974	6.31									
5313	527	1.25	602	1.75	668	2.29	726	2.86	779	3.45	827	4.06	871	4.69	913	5.34	953	6.00	990	6.67									
5625	549	1.42	622	1.95	686	2.51	743	3.10	795	3.72	843	4.35	887	5.00	929	5.67	968	6.36	1005	7.06									
5938	571	1.61	641	2.16	704	2.74	760	3.36	812	4.00	859	4.66	903	5.33	945	6.03	984	6.73	1021	7.46									
6250	593	1.82	661	2.39	722	3.00	778	3.64	829	4.30	876	4.98	919	5.68	961	6.40	1000	7.13	1037	7.87									
STD Static (498 - 676rpm) 2.9 Max BHP										MID Static (682 - 861 rpm) 4.9 Max BHP*										HIGH Static (782 - 963 rpm) 7.4 Max BHP									
<b>Ultra High Static (933- 1113 rpm) 9.9 Max BHP</b> <b>ULTRA HIGH Static (933- 1113 rpm) 9.9 Max BHP</b> <b>ULTRA HIGH Static (933- 1113 rpm) 9.9 Max BHP</b>																													

## FAN PERFORMANCE (cont.)

**15 TON VERTICAL SUPPLY**

**Table 33 – 50LC\*\*17**

CFM	Available External Static Pressure (in. wg)																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
4500	<b>420</b>	<b>0.55</b>	535	0.88	620	1.19	689	1.48	751	1.79	809	2.10	864	2.43	917	2.78	968	3.14	1018	3.53				
4875	<b>439</b>	<b>0.65</b>	547	0.99	634	1.34	703	1.66	764	1.99	821	2.32	874	2.66	925	3.01	975	3.38	1023	3.77				
5250	<b>460</b>	<b>0.77</b>	557	1.11	647	1.50	717	1.86	778	2.20	834	2.55	886	2.91	936	3.28	983	3.66	1030	4.05				
5625	<b>483</b>	<b>0.91</b>	568	1.24	659	1.67	731	2.06	793	2.44	848	2.81	899	3.18	948	3.56	994	3.96	1039	4.36				
6000	508	1.08	580	1.38	670	1.84	745	2.27	807	2.68	862	3.08	913	3.47	961	3.87	1006	4.28	1050	4.70				
6375	534	1.26	595	1.55	681	2.01	757	2.49	821	2.94	877	3.37	927	3.79	975	4.21	1019	4.63	1062	5.07				
6750	560	1.47	613	1.74	691	2.20	769	2.72	834	3.21	891	3.67	942	4.12	989	4.56	1033	5.01	1076	5.46				
7125	587	1.71	633	1.97	702	2.40	779	2.95	847	3.48	904	3.98	956	4.46	1003	4.94	1047	5.41	1090	5.88				
7500	615	1.97	655	2.22	716	2.63	790	3.19	858	3.76	917	4.31	970	4.83	1017	5.33	1062	5.83	1104	6.32				
STD Static (498 - 676 rpm) 2.9 Max BHP			MID Static (651 - 818 rpm) 7.4 Max BHP						HIGH Static (804 - 970rpm)9.9 Max BHP						ULTRA HIGH Static (948 - 1190 rpm) 13.6 Max BHP									
<b>Bold Face = Field Supplied Drive (Standard motor [HD58FE654], motor pulley = KR11HY216, blower pulley = KR51BN615, belt = KR29BF052) 403 - 529rpm</b>																								

**15 TON HORIZONTAL SUPPLY**

**Table 34 – 50LC\*\*17**

CFM	Available External Static Pressure (in. wg)																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
4500	<b>466</b>	<b>1.00</b>	546	1.48	615	2.01	677	2.59	732	3.21	783	3.85	829	4.52	873	5.22	914	5.94	953	6.68				
4875	<b>491</b>	<b>1.19</b>	567	1.69	634	2.25	695	2.86	749	3.50	799	4.17	846	4.87	889	5.59	930	6.34	969	7.11				
5250	517	1.40	589	1.93	654	2.51	713	3.14	767	3.81	817	4.51	863	5.24	906	5.99	947	6.77	986	7.56				
5625	543	1.65	612	2.20	674	2.80	732	3.46	785	4.15	834	4.88	880	5.63	923	6.42	964	7.22	1002	8.05				
6000	570	1.93	635	2.50	696	3.13	752	3.81	804	4.53	852	5.28	897	6.06	940	6.87	980	7.70	1019	8.55				
6375	598	2.24	660	2.83	718	3.49	772	4.19	823	4.93	870	5.71	915	6.52	957	7.35	998	8.21	1036	9.09				
6750	626	2.59	685	3.20	740	3.88	793	4.60	843	5.37	889	6.17	933	7.01	975	7.87	1015	8.75	1053	9.66				
7125	654	2.98	710	3.62	764	4.31	815	5.06	863	5.85	909	6.67	952	7.53	993	8.42	1033	9.33	1070	10.27				
7500	683	3.41	736	4.07	788	4.78	837	5.55	884	6.37	929	7.22	971	8.10	1012	9.01	1051	9.95	1088	10.91				
STD Static (498 - 676 rpm) 2.9 Max BHP			MID Static (651 - 818 rpm) 7.4 Max BHP						HIGH Static (804 - 970 rpm) 9.9 Max BHP						ULTRA HIGH Static(948 - 1190rpm)13.6 Max BHP									
<b>Bold Face = Field Supplied Drive (Standard motor [HD58FE654], motor pulley = KR11HY216, blower pulley = KR51BN615, belt = KR29BF052) 403 - 529 rpm</b>																								



# FAN PERFORMANCE (cont.)

## 17.5 TON VERTICAL SUPPLY

**Table 35 – 50LC\*\*20**

CFM	Available External Static Pressure (in. wg)																						
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0				
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP			
5250	<b>460</b>	<b>0.77</b>	557	1.11	647	1.50	717	1.86	778	2.20	834	2.55	886	2.91	936	3.27	983	3.66	1030	4.05			
5688	<b>487</b>	<b>0.94</b>	569	1.26	661	1.69	734	2.09	795	2.47	850	2.85	901	3.23	950	3.61	996	4.01	1041	4.41			
6125	<b>517</b>	<b>1.14</b>	584	1.43	674	1.89	749	2.34	812	2.76	867	3.17	918	3.58	965	3.98	1011	4.40	1054	4.82			
6563	<b>547</b>	<b>1.37</b>	603	1.64	686	2.11	763	2.60	828	3.07	884	3.52	934	3.95	982	4.38	1026	4.82	1069	5.26			
7000	578	1.63	626	1.89	698	2.33	776	2.87	842	3.39	900	3.88	951	4.35	998	4.81	1043	5.27	1085	5.74			
7438	610	1.93	651	2.18	713	2.59	788	3.15	856	3.72	915	4.25	967	4.76	1015	5.26	1059	5.75	1101	6.25			
7875	642	2.26	678	2.51	731	2.89	800	3.44	869	4.05	929	4.64	983	5.20	1031	5.74	1076	6.26	1118	6.78			
8313	675	2.64	707	2.88	752	3.24	814	3.77	881	4.40	943	5.03	998	5.64	1047	6.23	1092	6.79	1135	7.35			
8750	707	3.06	737	3.30	776	3.64	830	4.13	893	4.77	955	5.44	1011	6.10	1062	6.73	1108	7.34	1151	7.94			
STD Static (555 - 753 rpm) 2.9 Max BHP		MID Static (707 - 888 rpm) 7.4 Max BHP																		HIGH Static (872 - 1053 rpm) 9.9 Max BHP		ULTRA HIGH Static (948 - 1190 rpm) 13.6 Max BHP	
<b>Bold Face = Field Supplied Drive (Standard Motor [HD60FE656], motor pulley = KR11HY216, blower pulley = KR51BM415, belt = KR29BF050) 435- 570rpm</b>																							

## 17.5 TON HORIZONTAL SUPPLY

**Table 36 – 50LC\*\*20**

CFM	Available External Static Pressure (in. wg)																						
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0				
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP			
5250	<b>517</b>	<b>1.40</b>	589	1.93	654	2.51	713	3.14	767	3.81	817	4.51	863	5.24	906	5.99	947	6.77	986	7.56			
5688	<b>548</b>	<b>1.70</b>	615	2.24	678	2.86	735	3.52	788	4.21	837	4.94	883	5.70	926	6.49	966	7.30	1005	8.13			
6125	580	2.03	643	2.61	703	3.24	758	3.93	810	4.66	858	5.42	903	6.21	946	7.02	986	7.87	1024	8.73			
6563	612	2.41	672	3.01	729	3.68	783	4.39	833	5.15	880	5.94	924	6.76	966	7.60	1006	8.48	1044	9.37			
7000	645	2.85	702	3.47	756	4.16	807	4.90	856	5.68	902	6.50	946	7.35	987	8.23	1027	9.14	1064	10.06			
7438	678	3.34	732	3.99	784	4.70	833	5.47	881	6.28	925	7.12	968	8.00	1009	8.91	1048	9.84	1085	10.80			
7875	712	3.88	763	4.56	812	5.30	860	6.09	906	6.93	949	7.80	991	8.71	1031	9.64	1069	10.61	-	-			
8313	746	4.49	794	5.19	841	5.96	887	6.78	931	7.64	974	8.54	1015	9.47	1054	10.44	1092	11.43	-	-			
8750	780	5.16	826	5.89	871	6.68	915	7.53	958	8.41	999	9.34	1039	10.30	1077	11.29	-	-	-	-			
STD Static (555 - 753 rpm) 2.9 Max BHP		MID Static (651 - 818 rpm) 7.4 Max BHP																		HIGH Static (804 - 970 rpm) 9.9 Max BHP		ULTRA HIGH Static (948 - 1190 rpm) 13.6 Max BHP	
<b>Bold Face = Field Supplied Drive (Standard Motor [HD60FE656], motor pulley = KR11HY216, blower pulley = KR51BM415, belt = KR29BF050) 435- 570rpm</b>																							

# FAN PERFORMANCE (cont.)

**Table 37 – 50LC\*\*24**

**20 TON VERTICAL SUPPLY**

CFM	Available External Static Pressure (in. wg)																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
6000	<b>508</b>	<b>1.08</b>	<b>580</b>	<b>1.38</b>	670	1.84	745	2.27	807	2.68	862	3.08	913	3.47	961	3.87	1006	4.28	1050	4.70				
6500	<b>543</b>	<b>1.33</b>	600	1.61	684	2.07	761	2.57	825	3.03	881	3.47	932	3.90	979	4.33	1024	4.76	1067	5.19				
7000	<b>578</b>	<b>1.63</b>	626	1.89	698	2.33	776	2.87	842	3.39	900	3.88	951	4.35	998	4.81	1043	5.27	1085	5.74				
7500	615	1.97	655	2.22	716	2.63	790	3.19	858	3.76	917	4.31	970	4.83	1017	5.33	1062	5.83	1104	6.32				
8000	651	2.37	686	2.61	737	2.99	804	3.53	872	4.15	933	4.75	987	5.32	1036	5.88	1081	6.41	1123	6.94				
8500	689	2.81	720	3.05	762	3.41	820	3.92	886	4.55	948	5.21	1004	5.84	1054	6.44	1099	7.03	1142	7.60				
9000	726	3.32	754	3.56	791	3.89	840	4.37	900	4.99	962	5.68	1019	6.37	1070	7.03	1117	7.67	1160	8.29				
9500	764	3.87	789	4.12	822	4.44	864	4.88	917	5.47	976	6.18	1033	6.91	1086	7.63	1134	8.33	1178	9.00				
10000	802	4.50	825	4.74	854	5.05	891	5.47	937	6.03	991	6.71	1047	7.48	1100	8.25	1149	9.00	1195	9.73				
STD Static (583- 717 rpm) 7.4 Max BHP			MID Static (707 - 888 rpm) 7.4 Max BHP			HIGH Static (872 - 1053 rpm) 9.9 Max BHP			ULTRA HIGH Static (1049 - 1291 rpm) 13.6 Max BHP															
<b>Bold Face = Field Supplied Drive (Standard Motor [HD60FK657], motor pulley = KR11HY229, blower pulley = KR51BQ415, belt = KR29BF056) 493 - 605rpm</b>																								

**Table 38 – 50LC\*\*24**

**20 TON HORIZONTAL SUPPLY**

CFM	Available External Static Pressure (in. wg)																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
6000	<b>570</b>	<b>1.93</b>	635	2.50	696	3.13	752	3.81	804	4.53	852	5.28	897	6.06	940	6.87	980	7.70	1019	8.55				
6500	607	2.36	668	2.95	725	3.61	779	4.32	829	5.07	877	5.86	921	6.68	963	7.52	1003	8.39	1041	9.28				
7000	645	2.85	702	3.47	756	4.16	807	4.90	856	5.68	902	6.50	946	7.35	987	8.23	1027	9.14	1064	10.06				
7500	683	3.41	736	4.07	788	4.78	837	5.55	884	6.37	929	7.22	971	8.10	1012	9.01	1051	9.95	1088	10.91				
8000	721	4.05	772	4.74	821	5.48	868	6.28	913	7.12	956	8.00	998	8.92	1037	9.86	1076	10.84	1112	11.83				
8500	760	4.77	808	5.48	854	6.26	899	7.09	943	7.96	985	8.87	1025	9.82	1064	10.80	1101	11.80	1137	12.83				
9000	799	5.57	844	6.32	889	7.13	932	7.98	974	8.88	1014	9.83	1053	10.80	1091	11.81	1128	12.85	-	-				
9500	839	6.46	882	7.25	924	8.08	965	8.97	1005	9.90	1044	10.87	1082	11.88	1119	12.91	-	-	-	-				
10000	879	7.45	919	8.27	960	9.14	999	10.05	1038	11.01	1075	12.01	1112	13.05	-	-	-	-	-	-				
STD Static (583- 717 rpm) 7.4 Max BHP			MID Static (707 - 888 rpm) 7.4 Max BHP			HIGH Static (872 - 1053 rpm) 9.9 Max BHP			ULTRA HIGH Static (948 - 1190 rpm) 13.6 Max BHP															
<b>Bold Face = Field Supplied Drive (Standard Motor [HD60FK657], motor pulley = KR11HY229, blower pulley = KR51BQ415, belt = KR29BF056) 493 - 605rpm</b>																								

# FAN PERFORMANCE (cont.)

## 23 TON VERTICAL SUPPLY

**Table 39 – 50LC\*\*26**

CFM	Available External Static Pressure (in. wg)																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
6750	<b>560</b>	<b>1.47</b>	<b>613</b>	<b>1.74</b>	691	2.20	769	2.72	834	3.21	891	3.67	942	4.12	989	4.56	1033	5.01	1076	5.46				
7313	<b>601</b>	<b>1.84</b>	<b>644</b>	<b>2.09</b>	709	2.52	785	3.07	852	3.62	911	4.14	963	4.64	1010	5.13	1055	5.61	1097	6.10				
7875	<b>642</b>	<b>2.27</b>	678	2.51	731	2.89	800	3.45	869	4.05	930	4.64	983	5.20	1031	5.74	1076	6.26	1118	6.79				
8438	684	2.76	715	3.00	759	3.35	818	3.87	884	4.50	947	5.15	1002	5.77	1052	6.37	1097	6.95	1140	7.52				
9000	726	3.32	754	3.56	791	3.89	840	4.37	900	4.99	962	5.68	1019	6.37	1070	7.03	1117	7.67	1160	8.29				
9563	769	3.95	794	4.19	826	4.51	867	4.95	919	5.54	978	6.24	1035	6.98	1088	7.71	1136	8.41	1180	9.09				
10125	811	4.66	834	4.91	862	5.22	898	5.63	942	6.18	995	6.86	1050	7.62	1104	8.41	1153	9.18	1199	9.92				
10688	854	5.46	875	5.71	900	6.01	931	6.41	969	6.92	1015	7.56	1067	8.31	1119	9.13	1169	9.96	1216	10.77				
11250	897	6.34	917	6.59	939	6.90	967	7.28	1000	7.76	1039	8.36	1085	9.08	1135	9.90	1185	10.77	1232	11.64				
STD Static (651 - 818 rpm) 7.4 Max BHP		MID Static (804 - 970 rpm) 9.9 Max BHP																						
HIGH Static (948 - 1190 rpm) 13.6 Max BHP																								
<b>Bold Face = Field Supplied Drive (Standard Motor [HD60FK657], motor pulley = KR11HY194, blower pulley = KR51BQ415, belt = KR29BF057) 527 - 661rpm</b>																								
<i>Italics = Field Supplied drive (High Static Motor, motor pulley = KR12HY118, blower pulley = KR52BH615, belts = KR29BF034) 1049 - 1291rpm</i>																								

## 23 TON HORIZONTAL SUPPLY

**Table 40 – 50LC\*\*26**

CFM	Available External Static Pressure (in. wg)																							
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0					
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
6750	<b>626</b>	<b>2.59</b>	<b>685</b>	<b>3.20</b>	740	3.88	793	4.60	843	5.37	889	6.17	933	7.01	975	7.87	1015	8.75	1053	9.66				
7313	<b>668</b>	<b>3.19</b>	723	3.84	776	4.54	826	5.30	873	6.10	919	6.94	962	7.81	1003	8.71	1042	9.64	1079	10.59				
7875	712	3.88	763	4.56	812	5.30	860	6.09	906	6.93	949	7.80	991	8.71	1031	9.64	1069	10.61	1106	11.60				
8438	755	4.67	803	5.39	850	6.16	895	6.98	939	7.85	981	8.76	1021	9.70	1060	10.67	1098	11.68	1134	12.70				
9000	799	5.57	844	6.32	889	7.13	932	7.98	974	8.88	1014	9.83	1053	10.80	1091	11.81	1128	12.85	-	-				
9563	844	6.58	886	7.37	928	8.21	969	9.10	1009	10.03	1048	11.01	1086	12.02	1123	13.06	-	-	-	-				
10125	889	7.72	929	8.54	969	9.42	1008	10.34	1046	11.30	1083	12.31	1120	13.35	-	-	-	-	-	-				
10688	933	8.98	972	9.84	1010	10.75	1047	11.71	1083	12.71	-	-	-	-	-	-	-	-	-	-				
11250	979	10.38	1015	11.28	1051	12.22	1087	13.21	-	-	-	-	-	-	-	-	-	-	-	-				
STD Static (707 - 888 rpm) 7.4 Max BHP		MID Static (859 - 1026 rpm) 9.9 Max BHP																						
HIGH Static (948 - 1190 rpm) 13.6 Max BHP																								
<b>Bold Face = Field Supplied Drive (Standard Motor [HD60FK657], motor pulley = KR11HY232, blower pulley = KR51BQ415, belt = KR29BF059) 583 - 717rpm</b>																								

## FAN PERFORMANCE (cont.)

**Table 41 – PULLEY ADJUSTMENT**

**VERTICAL**

UNIT	MOTOR/ DRIVE COMBO	MOTOR PULLEY TURNS OPEN (RPM)												
		0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
14	Standard Static	N/A	N/A	676	658	640	623	605	587	569	551	534	516	498
	Medium Static	N/A	N/A	861	843	825	807	789	772	754	736	718	700	682
	High Static	963	948	933	918	903	888	873	857	842	827	812	797	782
	Ultra High Static	1113	1098	1083	1068	1053	1038	1023	1008	993	978	963	948	933
17	Standard Static	N/A	N/A	676	658	640	623	605	587	569	551	534	516	498
	Medium Static	818	804	790	776	762	748	735	721	707	693	679	665	651
	High Static	970	956	942	929	915	901	887	873	859	846	832	818	804
	Ultra High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948
20	Standard Static	N/A	N/A	753	733	713	694	674	654	634	614	595	575	555
	Medium Static	888	873	858	843	828	813	798	782	767	752	737	722	707
	High Static	1053	1038	1023	1008	993	978	963	947	932	917	902	887	872
	Ultra High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948
24	Standard Static	717	706	695	684	672	661	650	639	628	617	605	594	583
	Medium Static	888	873	858	843	828	813	798	782	767	752	737	722	707
	High Static	1053	1038	1023	1008	993	978	963	947	932	917	902	887	872
	Ultra High Static	1291	1271	1251	1231	1210	1190	1170	1150	1130	1110	1089	1069	1049
26	Standard Static	818	804	790	776	762	748	735	721	707	693	679	665	651
	Medium Static	970	956	942	929	915	901	887	873	859	846	832	818	804
	High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948

## FAN PERFORMANCE (cont.)

**Table 42 – PULLEY ADJUSTMENT**

**HORIZONTAL**

UNIT	MOTOR/ DRIVE COMBO	MOTOR PULLEY TURNS OPEN (RPM)												
		0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
14	Standard Static	N/A	N/A	676	658	640	623	605	587	569	551	534	516	498
	Medium Static	808	794	781	767	753	740	726	712	699	685	671	658	644
	High Static	888	873	858	843	828	813	798	782	767	752	737	722	707
	Ultra High Static	1053	1038	1023	1008	993	978	963	947	932	917	902	887	872
17	Standard Static	N/A	N/A	676	658	640	623	605	587	569	551	534	516	498
	Medium Static	818	804	790	776	762	748	735	721	707	693	679	665	651
	High Static	970	956	942	929	915	901	887	873	859	846	832	818	804
	Ultra High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948
20	Standard Static	N/A	N/A	753	733	713	694	674	654	634	614	595	575	555
	Medium Static	818	804	790	776	762	748	735	721	707	693	679	665	651
	High Static	970	956	942	929	915	901	887	873	859	846	832	818	804
	Ultra High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948
24	Standard Static	717	706	695	684	672	661	650	639	628	617	605	594	583
	Medium Static	888	873	858	843	828	813	798	782	767	752	737	722	707
	High Static	1053	1038	1023	1008	993	978	963	947	932	917	902	887	872
	Ultra High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948
26	Standard Static	888	873	858	843	828	813	798	782	767	752	737	722	707
	Medium Static	1026	1012	998	984	970	956	943	929	915	901	887	873	859
	High Static	1190	1170	1150	1130	1109	1089	1069	1049	1029	1009	988	968	948

# ELECTRICAL INFORMATION

Table 43 – 50LC\*014 - 026

15 - 23 TONS

50LC UNIT	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
14	208- 3- 60	187	253	17.6	123	23.2	164	185	1.3	STD	85.0%	8.6
										MED	83.6%	13.6
										HIGH	89.5%	21.2
										ULTRA HIGH	91.7%	28.0
	230- 3- 60	187	253	17.6	123	23.2	164	185	1.3	STD	85.0%	7.8
										MED	83.6%	12.7
										HIGH	89.5%	21.2
										ULTRA HIGH	91.7%	28.0
	460- 3- 60	414	506	9.6	62	11.2	75	185	1.3	STD	85.0%	3.8
										MED	83.6%	6.4
										HIGH	89.5%	9.7
										ULTRA HIGH	91.7%	13.7
575- 3- 60	518	633	6.1	40	7.9	54	185	1.3	STD	81.1%	4.5	
									MED	83.6%	6.2	
									HIGH	89.5%	7.2	
									ULTRA HIGH	91.7%	8.9	
17	208- 3- 60	187	253	19.1	123	27.6	191	185	1.3	STD	85.0%	8.6
										MED	89.5%	21.2
										HIGH	91.7%	28.0
										ULTRA HIGH	91.7%	37.3
	230- 3- 60	187	253	19.1	123	27.6	191	185	1.3	STD	85.0%	7.8
										MED	89.5%	21.2
										HIGH	91.7%	28.0
										ULTRA HIGH	91.7%	37.3
	460- 3- 60	414	506	9.8	62	12.8	100	185	1.3	STD	85.0%	3.8
										MED	89.5%	9.7
										HIGH	91.7%	13.7
										ULTRA HIGH	91.7%	16.9
575- 3- 60	518	633	7.5	50	10.2	78	185	1.3	STD	81.1%	4.5	
									MED	89.5%	7.2	
									HIGH	91.7%	8.9	
									ULTRA HIGH	91.7%	12.6	
20	208- 3- 60	187	253	25.0	164	27.6	191	185	1.3	STD	85.0%	8.6
										MED	89.5%	21.2
										HIGH	91.7%	28.0
										ULTRA HIGH	91.7%	37.3
	230- 3- 60	187	253	25.0	164	27.6	191	185	1.3	STD	85.0%	7.8
										MED	89.5%	21.2
										HIGH	91.7%	28.0
										ULTRA HIGH	91.7%	37.3
	460- 3- 60	414	506	12.2	100	12.8	100	185	1.3	STD	85.0%	3.8
										MED	89.5%	9.7
										HIGH	91.7%	13.7
										ULTRA HIGH	91.7%	16.9
575- 3- 60	518	633	9.3	78	10.2	78	185	1.3	STD	81.1%	4.5	
									MED	89.5%	7.2	
									HIGH	91.7%	8.9	
									ULTRA HIGH	91.7%	12.6	

## ELECTRICAL INFORMATION (cont.)

Table 43 (cont.) - 50LC\*014 - 026

15 - 23 TONS

50LC UNIT	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
24	208- 3- 60	187	253	29.5	195	33.3	239	190	1.6	STD	89.5%	21.2
										MED	89.5%	21.2
										HIGH	91.7%	28.0
										ULTRA HIGH	91.7%	37.3
	230- 3- 60	187	253	29.5	195	33.3	239	190	1.6	STD	89.5%	21.2
										MED	89.5%	21.2
										HIGH	91.7%	28.0
										ULTRA HIGH	91.7%	37.3
	460- 3- 60	414	506	14.8	95	18.0	125	190	1.6	STD	89.5%	9.7
										MED	89.5%	9.7
										HIGH	91.7%	13.7
										ULTRA HIGH	91.7%	16.9
575- 3- 60	518	633	12.2	80	12.8	80	190	1.6	STD	89.5%	7.2	
									MED	89.5%	7.2	
									HIGH	91.7%	8.9	
									ULTRA HIGH	91.7%	12.6	
26	208- 3- 60	187	253	30.1	225	51.2	300	190	1.6	STD	89.5%	21.2
										MED	91.7%	28.0
										HIGH	91.7%	37.3
	230- 3- 60	187	253	30.1	225	51.2	300	190	1.6	STD	89.5%	21.2
										MED	91.7%	28.0
										HIGH	91.7%	37.3
	460- 3- 60	414	506	16.7	114	23.1	150	190	1.6	STD	89.5%	9.7
										MED	91.7%	13.7
										HIGH	91.7%	16.9
	575- 3- 60	518	633	12.2	80	19.9	109	190	1.6	STD	89.5%	7.2
										MED	91.7%	8.9
										HIGH	91.7%	12.6

# ELECTRICAL DATA

**Table 44 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA**

UNIT	NO M. V. - Ph. - Hz	ELEC. HTR				NO C.O. or UNPWR C.O.						w/ PWRD C.O.									
		CRHEATER***A00 VERT/HORZ	Nom (kW)	FLA	MCA	NO P.E.			w/ P.E. (pwrd frunt)			NO P.E.			w/ P.E. (pwrd frunt)						
						MAX FUSE of HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE of HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE of HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE of HACR BRKR	FLA	DISC. SIZE	LRA
50LC-014	460-3-60	STD	NONE	-	-	59.1158.3	6160	343	343	70.970.1	9090	75/74	363	63.9/63.1	8080	67/66	348	75.7/74.9	9090	80/79	368
			302/305A00	11.3/15.0	31.3/36.1	59.1158.3	6160	343/343	343/343	70.970.1	9090	75/74	363/363	63.9/63.1	8080	67/66	348/348	75.7/75.6	9090	80/79	368/368
			2792/70A00	18.8/25.0	52.1/60.1	75.984.9	7078	343/343	83/92	90.699.6	100100	83/92	363/363	81.990.9	90100	75/84	348/348	96.6105.6	100110	89/97	368/368
			309/312A00	37.6/50.0	104.2/120.3	141.0130.1	130147	343/343	143/161	155.8144.8	175150	143/161	363/363	147.0136.1	150150	135/153	348/348	161.8150.8	175175	149/166	368/368
			NONE	-	-	64.1163.2	378	378	81/80	75.975.0	9090	81/80	398	68.9/68.0	9090	73/72	383	80.7/79.8	100100	86/85	403
			302/305A00	11.3/15.0	31.3/36.1	64.1163.2	6766	378/378	81/80	75.975.8	9090	81/80	398/398	68.9/68.0	9090	73/72	383/383	80.7/81.8	100100	86/85	403/403
			2792/70A00	18.8/25.0	52.1/60.1	82.1191.0	7684	378/378	89/97	96.9105.8	100110	89/97	398/398	88.1/97.0	90100	81/89	383/383	102.9/111.8	110125	95/103	403/403
			309/312A00	37.6/50.0	104.2/120.3	147.3136.2	150150	378/378	149/167	162.0150.9	175175	149/167	398/398	153.3142.2	175175	141/158	383/383	168.0156.9	200175	155/172	403/403
			NONE	-	-	71.7	382	402	89	83.5	100	89	402	76.5	90	81	387	88.3	100	95	407
			302/305A00	11.3/15.0	31.3/36.1	71.7/71.7	7676	382/382	89/89	83.5/86.4	100100	89/89	402/402	76.5/77.6	9090	81/81	387/387	88.3/92.4	100100	95/95	407/407
50LC-014	460-3-60	ULTRA HIGH	NONE	-	-	79.7	84	456	91.594.9	100100	97	476	84.5	100	89	461	96.3	110	103		
			302/305A00	11.3/15.0	31.3/36.1	79.7/80.1	8484	456/456	91.594.9	100100	97/97	476/476	84.5/86.1	100100	89/89	461/461	96.3/100.9	110110	103/103		
			2792/70A00	18.8/25.0	52.1/60.1	100.1/101.1	92101	456/456	114.9124.9	125125	106/115	476/476	106.1/116.1	110125	98/107	461/461	120.9/130.9	125125	103/113		
			309/312A00	37.6/50.0	104.2/120.3	165.3155.3	152171	456/456	180.0170.1	200175	166/184	476/476	171.3161.3	175175	158/176	461/461	186.0176.1	200200	171/190		
			NONE	-	-	31.3	33	167	37.5	45	45	179	33.5	40	35	169	39.7	50	42	181	
			303/306A00	15.0	18.0	31.3	167	33	33.5	45	45	179	37.5	45	45	169	39.7	50	42	181	
			282/273A00	25.0	30.1	42.4	167	39	50.1	60	60	46	46	45.1	50	42	169	52.9	60	49	181
			310/313A00	50.0	60.1	64.9	167	70	73	72.6	80	81	76	75.4	80	76	179	83	80	83	181
			NONE	-	-	33.9	36	184	40.1	50	43	196	36.1	42.3	45	38	186	42.3	50	45	198
			303/306A00	15.0	18.0	33.9	36	184	40.1	50	43	196	36.1	42.3	45	38	186	42.3	50	45	198
50LC-014	460-3-60	HIGH	NONE	-	-	48.8	46	186	43.4	50	47	198	39.4	50	42	188	45.6	50	49		
			303/306A00	15.0	18.0	48.8	46	186	43.4	50	47	198	39.4	50	42	188	45.6	50	49		
			282/273A00	25.0	30.1	49.8	186	46	53	52.5	60	48	48.4	56.1	50	48	56.1	60	52	198	
			310/313A00	50.0	60.1	68.1	186	76	70.9	75.9	80	84	79	78.6	80	79	186	78.6	80	86	
			NONE	-	-	37.2	40	186	43.4	50	47	198	39.4	50	42	188	45.6	50	49		
			303/306A00	15.0	18.0	37.2	40	186	43.4	50	47	198	39.4	50	42	188	45.6	50	49		
			282/273A00	25.0	30.1	49.8	186	46	53	52.5	60	48	48.4	56.1	50	48	56.1	60	52	198	
			310/313A00	50.0	60.1	72.2	186	80	75.0	80	80	87	198	75.0	80	80	188	82.7	90	90	
			NONE	-	-	41.8	44	223	48.0	60	51	235	44.0	50.2	60	47	225	50.2	60	54	
			303/306A00	15.0	18.0	41.8	44	223	48.0	60	51	235	44.0	50.2	60	47	225	50.2	60	54	
50LC-014	460-3-60	ULTRA HIGH	NONE	-	-	54.8	60	223	62.5	70	58	57.5	60	60	53	65.3	70	60	60		
			282/273A00	25.0	30.1	54.8	60	223	62.5	70	58	57.5	60	60	53	65.3	70	60	60		
			310/313A00	50.0	60.1	77.2	223	85	85.0	80	90	92	80.0	80	90	87	85.3	90	95		
			NONE	-	-	24.4	26	119	29.2	35	31	127	26.1	30.9	30	28	121	30.9	35	33	
			304/307A00	15.0	14.4	24.4	26	119	29.6	35	31	127	26.1	30.9	30	28	121	31.8	35	33	
			285/276A00	24.8	23.9	35.5	119	33	37.6	41.5	45	38	37.6	41.5	45	38	43.6	45	40	129	
			311/314A00	49.6	47.7	65.3	119	60	66	71.3	80	66	61.4	67.4	70	62	121	73.4	80	68	
			NONE	-	-	26.1	28	133	30.9	35	33	141	27.8	32.6	40	30	135	32.6	40	35	
			304/307A00	15.0	14.4	26.1	28	133	30.9	35	33	141	27.8	32.6	40	30	135	32.6	40	35	
			50LC-014	460-3-60	MED	NONE	-	-	37.6	40	186	43.4	50	47	198	39.4	50	42	188	45.6	50
304/307A00	15.0	14.4				37.6	40	186	43.4	50	47	198	39.4	50	42	188	45.6	50	49		
285/276A00	24.8	23.9				37.6	40	186	43.4	50	47	198	39.4	50	42	188	45.6	50	49		
311/314A00	49.6	47.7				67.4	133	68	68	73.4	80	68	69.5	75.5	80	69	143	75.5	80	69	
NONE	-	-				27.1	29	131	31.9	35	34	139	28.8	33.6	40	31	133	33.6	40	36	
304/307A00	15.0	14.4				27.1	29	131	31.9	35	34	139	28.8	33.6	40	31	133	33.6	40	36	
285/276A00	24.8	23.9				38.9	131	41	44.9	41.0	45	38	41.0	45.8	50	40	139	47.0	50	43	
311/314A00	49.6	47.7				68.6	131	63	74.6	70.8	80	65	70.8	76.8	80	65	133	76.8	80	71	
NONE	-	-				29.0	31	158	33.8	40	36	166	30.7	35.5	40	35	160	35.5	40	38	
304/307A00	15.0	14.4				29.1	31	158	33.8	40	36	166	30.7	35.5	40	35	160	35.5	40	38	
50LC-014	460-3-60	ULTRA HIGH	NONE	-	-	41.0	45	188	47.0	50	43	166	43.1	50	40	160	49.1	50	45		
			285/276A00	24.8	23.9	41.0	45	188	47.0	50	43	166	43.1	50	40	160	49.1	50	45		
			311/314A00	49.6	47.7	70.8	188	65	78.8	72.9	80	67	72.9	78.9	80	67	160	78.9	80	73	

See Legend and Notes on page 74



# ELECTRICAL DATA (cont.)

**Table 44 (cont.) - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA**

UNIT	NO M.V.-Ph.-HZ	ELEC. HTR				NO C.O. or UNPWR C.O.				NO P.E.				W/ PWRD C.O.			
		CR-HEATER***A00 VERT/HORZ	Nom (kW)	FLA	IMAX FUSE or HACR BRKR	DISC. SIZE		MCA	IMAX FUSE or HACR BRKR	MCA	DISC. SIZE		MCA	IMAX FUSE or HACR BRKR	FLA	LRA	
						FLA	LRA				FLA	LRA					
STD		NONE	-	-	7069	371	79,278.4	100/100	8382	391	391	72,271.4	90/90	75/74	376	89/88	
		2792/70A00	18.8/25.0	52.1/60.1	7078	371/371	90,699.6	100/100	8392	391/391	391/391	81,990.9	90/100	75/84	376/376	89/97	
		2802/71A00	37.6/50.0	104.2/120.3	130147	371/371	155,814.8	175/150	150/150	143/161	391/391	147,813.6	150/150	135/153	376/376	149/166	
		2812/72A00	56.3/75.0	156.4/180.4	190216	371/371	181,920.9	200/225	200/225	203/230	391/391	173,219.6	200/225	195/222	376/376	209/236	
MED	208/230-3-60	NONE	-	-	84	410	91.8	100	98	430	430	84.8	100	90	415	103	
		2792/70A00	18.8/25.0	52.1/60.1	8493	410/410	106,471.6	110/125	98/107	430/430	430/430	97,6107.6	100/110	90/99	415/415	125/125	
		2802/71A00	37.6/50.0	104.2/120.3	144763	410/410	171,516.1	175/175	158/176	430/430	430/430	162,8152.8	175/175	150/168	415/415	163/182	
		2812/72A00	56.3/75.0	156.4/180.4	204232	410/410	197,722.1	225/250	218/245	430/430	430/430	188,9212.9	200/250	210/237	415/415	223/251	
HIGH		NONE	-	-	92	484	98.7	125	105	504	504	91.7	100	97	489	111	
		2792/70A00	18.8/25.0	52.1/60.1	92101	484/484	114,912.9	125/125	106/115	504/504	504/504	106,11716.1	110/125	98/107	489/489	111/120	
		2802/71A00	37.6/50.0	104.2/120.3	152171	484/484	180,070.1	200/175	179/175	504/504	504/504	171,37161.3	200/200	158/176	489/489	171/190	
		2812/72A00	56.3/75.0	156.4/180.4	212240	484/484	206,223.0	225/250	226/253	504/504	504/504	197,44221.4	225/250	218/245	489/489	231/259	
ULTRA HIGH		NONE	-	-	103	524	110.3	125	116	544	544	103.3	125	108	529	122	
		2792/70A00	18.8/25.0	52.1/60.1	103112	524/524	126,5736.5	150/150	116/126	544/544	544/544	117,8727.8	125/150	108/118	529/529	122/131	
		2802/71A00	37.6/50.0	104.2/120.3	163181	524/524	191,6181.7	200/200	176/195	544/544	544/544	182,9172.9	200/200	168/187	529/529	200/200	
		2812/72A00	56.3/75.0	156.4/180.4	223250	524/524	217,8241.8	250/250	236/264	544/544	544/544	209,0233.0	225/250	228/256	529/529	242/269	
STD	460-3-60	NONE	-	-	36	193	41.0	45	43	205	205	37.0	45	39	195	46	
		282/73A00	25.0	30.1	39	193	42.4	60	46	205	205	45.1	60	42	195	49	
		283/74A00	50.0	60.1	73	193	64.9	80	81	205	205	67.6	80	76	195	83	
		284/75A00	75.0	90.2	108	193	102.7	110	115	205	205	97.7	100	111	195	118	
MED		NONE	-	-	43	212	46.9	60	42	224	224	42.9	60	46	214	53	
		282/73A00	25.0	30.1	46	212	57.5	70	53	224	224	52.5	70	48	214	55	
		283/74A00	50.0	60.1	80	212	80.0	90	87	224	224	75.0	80	83	214	90	
		284/75A00	75.0	90.2	115	212	110.1	125	105	224	224	112.8	125	117	214	125	
HIGH		NONE	-	-	48	249	51.1	60	55	261	261	47.1	60	50	251	57	
		282/73A00	25.0	30.1	54	249	62.5	70	58	261	261	57.5	70	53	251	60	
		283/74A00	50.0	60.1	89	249	85.0	90	86	261	261	87.7	90	87	251	95	
		284/75A00	75.0	90.2	119	249	115.1	125	127	261	261	110.1	125	122	251	129	
ULTRA HIGH		NONE	-	-	51	269	55.1	60	59	281	281	51.1	60	54	271	61	
		282/73A00	25.0	30.1	54	269	66.5	70	61	281	281	61.5	70	57	271	64	
		283/74A00	50.0	60.1	89	269	89.0	90	88	281	281	91.7	100	91	271	98	
		284/75A00	75.0	90.2	123	269	119.1	125	130	281	281	114.1	125	126	271	133	
STD	575-3-60	NONE	-	-	32	154	34.8	40	37	162	162	31.7	40	33	156	39	
		285/76A00	24.8	23.9	33	154	41.5	45	38	162	162	43.6	45	35	156	45	
		286/77A00	49.6	47.7	60	154	71.3	80	66	162	162	73.4	80	62	156	68	
		287/78A00	74.4	71.6	88	154	83.2	90	93	162	162	85.4	90	89	156	95	
MED		NONE	-	-	35	166	37.5	45	40	174	174	34.4	45	37	168	42	
		285/76A00	24.8	23.9	36	166	44.9	45	41	174	174	41.0	45	38	168	43	
		286/77A00	49.6	47.7	63	166	74.6	80	69	174	174	70.8	80	65	168	71	
		287/78A00	74.4	71.6	91	166	86.6	90	96	174	174	88.7	90	93	168	98	
HIGH		NONE	-	-	37	193	39.2	45	42	201	201	36.1	45	39	195	44	
		285/76A00	24.8	23.9	38	193	47.0	50	43	201	201	43.1	45	40	195	44	
		286/77A00	49.6	47.7	65	193	70.8	80	71	201	201	72.9	80	67	195	73	
		287/78A00	74.4	71.6	93	193	88.7	90	98	201	201	84.9	90	95	195	100	
ULTRA HIGH		NONE	-	-	41	204	38.7	50	46	212	212	40.4	50	43	206	48	
		285/76A00	24.8	23.9	42	204	45.6	50	47	212	212	47.8	50	44	206	49	
		286/77A00	49.6	47.7	69	204	81.4	80	75	212	212	77.5	80	71	206	77	
		287/78A00	74.4	71.6	97	204	93.4	100	102	212	212	89.5	100	99	206	104	

See Legend and Notes on page 74

# ELECTRICAL DATA (cont.)

**Table 44 (cont.) - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA**

UNIT	NO M.V.-Ph.-HZ	ELEC. HTR				NO C.O. or UNPWR C.O.				NO P.E.				W/ PWRD C.O.				
		CR-HEATER***A00 VERT/HORZ	Nom (kW)	FLA	MCA	DISC. SIZE		MAX FUSE or HACR BRKR	MCA	DISC. SIZE		MAX FUSE or HACR BRKR	MCA	DISC. SIZE		MAX FUSE or HACR BRKR	FLA	LRA
						FLA	LRA			FLA	LRA			FLA	LRA			
STD	208/230-3-60	NONE	-	-	-	76/75	412	100/100	85.184.3	104/107	90/92	432	78.177.3	100/100	82/81	417	100/100	89.989.1
		2792/70A00	18.8/25.0	52.1/60.1	73.3/72.5	412	100/100	100/100	85.184.3	104/107	90/92	432	78.177.3	100/100	82/81	417	100/100	89.989.1
		2802/71A00	37.6/50.0	104.2/120.3	141.0/130.1	76/78	412/412	100/100	100/100	155.8/144.8	143/161	432/432	147.8/136.1	150/150	135/153	417/417	150/150	161.8/150.8
MED	208/230-3-60	2812/72A00	56.3/75.0	156.4/180.4	167.2/190.2	190/216	412/412	200/200	181.9/204.9	203/230	203/230	432/432	173.2/196.2	200/225	195/222	417/417	200/225	187.9/210.9
		NONE	-	-	85.9	91	451	100	97.7	104	104	471	90.7	100	96	456	125	102.5
		2792/70A00	18.8/25.0	52.1/60.1	91.6/101.6	451/451	100/110	91/93	106.4/116.4	104/107	104/107	471/471	97.6/107.6	100/110	96/99	456/456	125/125	112.4/122.4
HIGH	208/230-3-60	2802/71A00	37.6/50.0	104.2/120.3	156.8/146.8	144/163	451/451	175/175	171.5/161.6	158/176	158/176	471/471	162.8/152.8	175/175	150/168	456/456	200/175	177.5/167.6
		NONE	-	-	92.8	99	525	100	104.6	112	112	545	97.6	125	104	530	125	109.4
		2792/70A00	18.8/25.0	52.1/60.1	100.1/110.1	525/525	110/125	99/101	114.9/124.9	112/115	112/115	545/545	106.1/116.1	125/125	104/107	530/530	125/150	120.9/130.9
ULTRA HIGH	208/230-3-60	2802/71A00	37.6/50.0	104.2/120.3	165.3/155.3	152/171	525/525	175/175	180.0/170.1	166/184	158/176	545/545	171.3/161.3	175/175	158/176	530/530	200/200	186.0/176.1
		2812/72A00	56.3/75.0	156.4/180.4	191.4/215.4	212/240	525/525	200/250	206.2/230.2	226/253	226/253	545/545	197.4/221.4	225/250	218/245	530/530	212.2/236.2	225/250
		NONE	-	-	104.4	109	565	150	116.2	123	123	585	109.2	125	115	570	150	121.0
STD	460-3-60	2792/70A00	18.8/25.0	52.1/60.1	111.8/121.8	109/112	565/565	125/125	126.5/136.5	123/126	123/126	585/585	117.8/127.8	125/150	115/118	570/570	150/150	132.5/142.5
		2802/71A00	37.6/50.0	104.2/120.3	176.9/166.9	163/181	565/565	200/200	191.6/181.7	176/195	168/187	585/585	182.9/172.9	200/200	168/187	570/570	200/200	197.6/187.7
		2812/72A00	56.3/75.0	156.4/180.4	203.0/227.0	223/250	565/565	225/250	217.8/241.8	236/264	236/264	585/585	209.0/233.0	225/250	228/256	570/570	250/300	223.8/247.8
MED	460-3-60	NONE	-	-	37.2	39	231	50	43.4	46	46	243	39.4	50	42	233	50	45.6
		2827/3A00	25.0	30.1	42.4	39	231	50	50.1	46	46	243	45.1	60	42	233	60	52.9
		2832/4A00	50.0	60.1	64.9	73	231	100	72.6	80	81	243	67.6	80	76	233	80	75.4
HIGH	460-3-60	2842/5A00	75.0	90.2	95.0	108	100	102.7	115	115	243	97.7	100	111	233	110	105.5	
		NONE	-	-	43.1	250	46	49.3	53	53	262	45.3	50	48	252	50	51.5	
		2827/3A00	25.0	30.1	49.8	46	250	60	57.5	60	60	262	52.5	60	48	252	60	60.3
ULTRA HIGH	460-3-60	2832/4A00	50.0	60.1	72.2	80	250	80.0	80.0	87	262	75.0	80	83	252	90	82.7	
		2842/5A00	75.0	90.2	102.3	115	250	102.3	110.1	125	122	262	112.8	125	117	262	125	112.8
		NONE	-	-	47.3	287	50	53.5	58	58	299	49.5	60	53	289	60	55.7	
STD	575-3-60	2827/3A00	25.0	30.1	54.8	50	287	62.5	62.5	58	299	57.5	60	53	289	60	60	
		2832/4A00	50.0	60.1	71.2	85	287	85.0	80.0	90	299	80.0	90	87	289	90	87.7	
		2842/5A00	75.0	90.2	107.3	119	287	115.1	115.1	125	127	299	110.1	125	122	289	125	117.8
MED	575-3-60	NONE	-	-	51.3	54	307	57.5	57.5	61	319	53.5	60	57	309	70	59.7	
		2827/3A00	25.0	30.1	58.8	54	307	66.5	66.5	70	319	61.5	60	57	309	70	64	
		2832/4A00	50.0	60.1	81.2	89	307	89.0	89.0	100	319	91.7	100	91	309	100	98	
ULTRA HIGH	575-3-60	2842/5A00	75.0	90.2	111.3	123	307	119.1	119.1	130	319	114.1	125	126	309	125	121.8	
		NONE	-	-	31.8	34	182	36.6	36.6	39	190	33.5	40	36	184	45	38.3	
		2852/6A00	24.8	23.9	47.7	34	182	41.5	41.5	45	190	37.6	40	36	190	45	41	
STD	575-3-60	2862/7A00	49.6	47.7	65.3	60	182	71.3	71.3	66	190	67.4	70	62	184	80	73.4	
		NONE	-	-	77.2	88	182	83.2	83.2	93	190	79.4	90	89	184	90	85.4	
		2872/8A00	74.4	71.6	86.6	37	194	39.3	39.3	45	202	36.2	45	39	196	50	44	
MED	575-3-60	2852/6A00	24.8	23.9	38.9	40	194	44.9	44.9	42	202	41.0	45	39	196	50	44	
		2862/7A00	49.6	47.7	68.6	63	194	74.6	74.6	80	202	70.8	80	65	196	80	76.8	
		2872/8A00	74.4	71.6	80.6	90	194	86.6	86.6	90	202	82.7	90	93	196	90	88.7	
HIGH	575-3-60	NONE	-	-	36.2	39	221	41.0	41.0	44	229	37.9	45	41	223	50	42.7	
		2852/6A00	24.8	23.9	41.0	39	221	47.0	47.0	44	229	43.1	45	41	223	50	46	
		2862/7A00	49.6	47.7	70.8	65	221	76.8	76.8	71	229	72.9	80	67	223	80	73	
ULTRA HIGH	575-3-60	2872/8A00	74.4	71.6	82.7	93	221	88.7	88.7	98	229	84.9	90	95	223	100	90.9	
		NONE	-	-	40.5	43	232	45.3	45.3	48	240	42.2	50	45	234	60	47.0	
		2852/6A00	24.8	23.9	45.6	40	232	51.6	51.6	48	240	47.8	50	44	234	60	50	
STD	575-3-60	2862/7A00	49.6	47.7	75.4	69	232	81.4	81.4	75	240	77.5	80	71	234	90	77	
		NONE	-	-	87.4	97	232	93.4	93.4	102	240	89.5	100	99	234	100	95.5	
		2872/8A00	74.4	71.6	87.4	97	232	93.4	93.4	100	240	89.5	100	99	234	100	95.5	

See Legend and Notes on page 74



# ELECTRICAL DATA (cont.)

**Table 44 (cont.) - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA**

UNIT	NO M. V. Ph. Hz	ELEC. HTR				NO C.O. or UNPWR C.O.						w/ PWRD C.O.									
		IFM TYPE	CRHEATER***A00 VERT/HORZ	Nom (kW)	FLA	NO P.E.			w/ P.E. (pwrd ft/unt)			NO P.E.			w/ P.E. (pwrd ft/unt)						
						MAX FUSE or HACR BRKR	FLA	LRA	MCA	MAX FUSE or HACR BRKR	FLA	LRA	MCA	MAX FUSE or HACR BRKR	FLA	LRA	MCA	MAX FUSE or HACR BRKR	FLA	LRA	MCA
208/230-3-60	STD	NONE	-	-	-	129	69	1367	175	142	649	1297	175	134	634	141.5	141.5	175	175	148	654
		279270A00	18.8/25.0	52.1/60.1	129/129	62/96/29	136.7/36.7	175/175	142/142	649/649	1297/1297	175/175	134/134	634/634	141.5/141.5	141.5/141.5	175/175	175/175	148/148	654/654	
		280271A00	37.6/50.0	104.2/120.3	144/163	62/96/29	171.5/161.6	175/175	158/176	649/649	162.8/152.8	175/175	150/168	634/634	171.5/161.6	171.5/161.6	200/175	200/175	163/182	654/654	
208/230-3-60	MED	NONE	-	-	-	204/232	703	1435	175	150	723	188.9/212.9	200/250	210/237	634/634	203.7/227.7	203.7/227.7	225/250	225/250	223/251	654/654
		279270A00	18.8/25.0	52.1/60.1	137/137	703/703	143.5/43.5	175/175	150/150	723/723	136.5/136.5	175/175	142/142	708	148.3	148.3	175	175	156/156	728	
		280271A00	37.6/50.0	104.2/120.3	152/171	703/703	180.0/70.1	175/175	166/184	723/723	171.3/161.3	175/175	158/176	708/708	186.0/176.1	186.0/176.1	200/200	200/200	171/190	728/728	
460-3-60	HIGH	NONE	-	-	-	212/240	703/703	206.2/230.2	200/250	226/253	723/723	197.4/221.4	225/250	218/245	708/708	212.2/236.2	212.2/236.2	252/250	252/250	231/259	728/728
		279270A00	18.8/25.0	52.1/60.1	147/147	743/743	152.8/152.8	200/200	161/161	763/763	145.8/145.8	175/175	153/153	748	157.6	157.6	200	200	167	768	
		280271A00	37.6/50.0	104.2/120.3	163/181	743/743	191.6/181.7	200/200	176/195	763/763	182.9/172.9	200/200	168/187	748/748	197.6/187.7	197.6/187.7	200/200	200/200	182/200	768/768	
460-3-60	STD	NONE	-	-	-	223/250	743/743	217.8/241.8	250/250	236/264	763/763	209.0/233.0	225/250	228/256	748/748	223.8/247.8	223.8/247.8	250/300	250/300	242/259	768/768
		282273A00	25.0	30.1	68	322	71.1	90	75	334	67.1	90	70	324	73.3	73.3	90	90	78	336	
		283274A00	50.0	60.1	80	322	80.0	90	87	334	75.0	90	83	324	82.7	82.7	90	90	90	336	
460-3-60	MED	NONE	-	-	-	115	322	110.1	125	334	371	105.1	125	334	112.8	112.8	125	125	125	336	
		282273A00	25.0	30.1	73	359	75.1	90	80	371	71.1	90	75	361	77.3	77.3	100	100	82	373	
		283274A00	50.0	60.1	85	359	85.0	90	92	371	80.0	90	87	361	87.7	87.7	100	100	95	373	
460-3-60	HIGH	NONE	-	-	-	123	379	119.1	125	391	110.1	125	391	122	117.8	117.8	125	125	129	373	
		282273A00	25.0	30.1	76	379	78.3	100	83	391	74.3	90	79	381	80.5	80.5	100	100	86	393	
		283274A00	50.0	60.1	89	379	89.0	100	96	391	84.0	100	91	381	91.7	91.7	100	100	98	393	
575-3-60	STD	NONE	-	-	-	123	379	119.1	125	391	114.1	125	391	126	121.8	121.8	125	125	133	393	
		285276A00	24.8	23.9	56	235	58.7	70	62	243	55.6	70	58	237	60.4	60.4	80	80	64	245	
		286277A00	49.6	47.7	63	235	74.6	80	69	243	70.8	80	65	237	76.8	76.8	80	80	71	245	
575-3-60	MED	NONE	-	-	-	91	262	88.7	90	98	82.7	90	93	264	88.7	88.7	90	90	98	245	
		285276A00	24.8	23.9	58	262	60.4	70	64	270	57.3	70	60	264	62.1	62.1	80	80	66	272	
		286277A00	49.6	47.7	65	262	76.8	80	71	270	72.9	80	67	264	78.9	78.9	80	80	73	272	
575-3-60	HIGH	NONE	-	-	-	93	262	88.7	90	98	84.9	90	95	264	90.9	90.9	100	100	100	272	
		285276A00	24.8	23.9	62	273	64.1	80	68	281	61.0	80	64	275	65.8	65.8	80	80	70	283	
		286277A00	49.6	47.7	69	273	81.4	80	75	281	77.5	80	71	275	83.5	83.5	90	90	77	283	

See Legend and Notes on page 74

# ELECTRICAL DATA (cont.)

**Table 45 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH HACR**

UNIT	NO M. V. P. H. HZ	ELEC. HTR										NO C.O. or UNPWR C.O.										w/ PWRD C.O.									
		IFM TYPE	CRHEATER***A00 VERT/HORZ	Nom (kW)	FLA	NO P.E.			w/ P.E. (pwrd frunt)			NO P.E.			w/ P.E. (pwrd frunt)			NO P.E.			w/ P.E. (pwrd frunt)										
						MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA											
STD	208/230-3-60	NONE	-	-	-	61/60	343	75/74	363	63.9/63.9	80/80	67/66	348	75.7/75.7	90/90	80/79	368	80/79	368/368	80/79	368	80/79	368/368								
		302/305A00	11.3/15.0	31.3/36.1	59.1/59.1	80/80	61/60	343/343	70.9/70.9	363/363	80/80	67/66	348/348	75.7/75.7	90/90	80/79	368/368	80/79	368/368	80/79	368	80/79	368/368								
		279/270A00	18.8/25.0	52.1/60.1	84.9/84.9	90/90	70/78	343/343	99.6/99.6	363/363	100/100	100/100	75/84	348/348	105.6/105.6	110/110	89/97	368/368	110/110	368/368	89/97	368	89/97	368/368							
MED	208/230-3-60	NONE	-	-	130/147	343/343	155.8/155.8	175/175	363/363	147.0/147.0	150/150	135/153	348/348	161.8/161.8	175/175	149/166	368/368	175/175	368/368	149/166	368	149/166	368/368								
		302/305A00	11.3/15.0	31.3/36.1	64.1/64.1	80/80	67/66	378/378	75.9/75.9	398/398	90/90	81/80	398	88.7/88.7	100/100	86/85	403	90/90	403/403	86/85	403	90/90	403/403								
		279/270A00	18.8/25.0	52.1/60.1	91.0/91.0	100/100	76/84	378/378	105.8/105.8	398/398	100/100	81/80	398/398	111.8/111.8	125/125	95/103	403/403	125/125	403/403	95/103	403	95/103	403/403								
HIGH	208/230-3-60	NONE	-	-	147.3/147.3	378/378	162.0/162.0	175/175	398/398	147.3/147.3	150/150	149/167	398/398	168.0/168.0	200/200	155/172	403/403	200/200	403/403	155/172	403	155/172	403/403								
		302/305A00	11.3/15.0	31.3/36.1	71.7/71.7	90/90	76/76	382/382	83.5	402	100	89	402	76.5	100	95	407	100	407/407	95	407	95	407/407								
		279/270A00	18.8/25.0	52.1/60.1	101.6/101.6	110/110	84/93	382/382	116.4/116.4	402/402	110/110	90/99	402/402	122.4/122.4	125/125	103/113	407/407	125/125	407/407	103/113	407	103/113	407/407								
ULTRA HIGH	208/230-3-60	NONE	-	-	156.8/156.8	456/456	180.0/180.0	200/200	476/476	156.8/156.8	200/200	158/176	476/476	186.0/186.0	200/200	163/182	407/407	200/200	407/407	163/182	407	163/182	407/407								
		302/305A00	11.3/15.0	31.3/36.1	80.1/80.1	100/100	84/84	124.9/124.9	91.5	476	100	97	476	84.5	100	481	103	481/481	103	481	103	481/481									
		279/270A00	18.8/25.0	52.1/60.1	110.1/110.1	125/125	92/101	456/456	124.9/124.9	476/476	125/125	106/115	476/476	116.1/116.1	150/150	111/120	481/481	150/150	481/481	111/120	481	111/120	481/481								
STD	460-3-60	NONE	-	-	33	167	37.5	45	179	33.5	40	35	169	39.7	50	42	181	50	42	181	42	181	42	181							
		303/306A00	15.0	18.0	31.3	40	33	33.5	45	179	37.5	45	179	45.1	60	49	181	60	49	181	49	181	49	181							
		282/273A00	25.0	30.1	42.4	45	39	167	64.9	179	50.1	60	46	179	52.9	80	83	80	83	83	83	83	83	83							
MED	460-3-60	NONE	-	-	36	184	40.1	50	196	36.1	43	38	186	42.3	50	45	198	50	45	198	45	198	45	198							
		303/306A00	15.0	18.0	33.9	45	36	36.1	50	196	40.1	43	38	186	42.3	50	45	198	50	45	198	45	198								
		282/273A00	25.0	30.1	45.6	50	42	184	53.4	196	48.4	60	49	186	56.1	70	73	70	73	73	73	73	73								
HIGH	460-3-60	NONE	-	-	40	186	43.4	50	198	39.4	42	42	188	45.6	50	49	200	50	49	200	49	200	49	200							
		303/306A00	15.0	18.0	37.2	45	40	37.2	50	198	43.4	47	47	188	45.6	50	49	200	50	49	200	49	200								
		282/273A00	25.0	30.1	49.8	50	46	186	57.5	198	52.5	60	53	188	60.3	70	73	70	73	73	73	73									
ULTRA HIGH	460-3-60	NONE	-	-	44	223	48.0	60	235	44.0	51	235	50.2	60	54	237	60	54	237	54	237	54	237								
		303/306A00	15.0	18.0	41.8	50	44	48.0	60	235	48.0	51	235	50.2	60	54	237	60	54	237	54	237									
		282/273A00	25.0	30.1	54.8	60	50	223	62.5	235	62.5	70	58	235	65.3	80	83	80	83	83	83	83									
STD	575-3-60	NONE	-	-	26	119	29.2	35	127	26.1	31	28	121	30.9	35	33	129	35	33	129	33	129	33	129							
		304/307A00	15.0	14.4	24.4	30	26	119	29.6	127	26.1	31	28	121	31.8	35	33	129	35	33	129	33	129								
		285/276A00	24.8	23.9	35.5	40	33	119	41.5	127	37.6	40	35	121	43.6	45	40	129	45	40	129	40	129								
MED	575-3-60	NONE	-	-	60	119	71.3	80	127	61.4	66	66	121	73.4	80	72	129	80	72	129	72	129	72	129							
		304/307A00	15.0	14.4	26.1	30	28	133	30.9	141	27.8	30	30	135	32.6	40	35	143	40	35	143	35	143								
		285/276A00	24.8	23.9	37.6	40	35	133	43.6	141	39.8	40	37	135	45.8	50	42	143	50	42	143	40	143								
HIGH	575-3-60	NONE	-	-	62	133	73.4	80	141	69.5	68	68	141	75.5	80	69	143	80	69	143	69	143	69	143							
		304/307A00	15.0	14.4	27.1	30	29	131	31.9	141	28.8	34	31	133	33.6	40	36	141	40	36	141	36	141								
		285/276A00	24.8	23.9	38.9	40	36	131	44.9	139	41.0	45	38	133	47.0	50	43	141	50	43	141	40	141								
ULTRA HIGH	575-3-60	NONE	-	-	63	131	74.6	80	139	70.8	69	69	133	76.8	80	71	141	80	71	141	71	141	71	141							
		304/307A00	15.0	14.4	29.1	35	31	158	33.8	166	30.7	36	36	166	35.5	40	38	168	40	38	168	38	168								
		285/276A00	24.8	23.9	41.0	45	38	158	47.0	166	43.1	45	40	160	49.1	50	45	168	50	45	168	40	168								

See Legend and Notes on page 74

# ELECTRICAL DATA (cont.)

**Table 45 (cont.) - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH HACR**

UNIT	NO M. V. - Ph. - Hz	ELEC. HTR										NO C.O. or UNPWR C.O.										w/ PWRD C.O.									
		IFM TYPE	CRHEATER***A00 VERT/HORZ	Nom (kW)	FLA	NO P.E.			w/ P.E. (pwrd frunt)			MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE					
						MCA	HACR BRKR	FLA	LRA	MCA	HACR BRKR			FLA	LRA			MCA	HACR BRKR			FLA	LRA			MCA	HACR BRKR	FLA	LRA		
STD	208/230 - 3- 60	NONE	18.8/25.0	52.1/60.1	67.4/67.4	7069	371	83/92	391	79.2/79.2	100/100	83/92	391	72.2/72.2	90/90	75/74	376	84.0/84.0	100/100	89/88	396	89/88	376	84.0/84.0	100/100	89/88	396				
					84.9/84.9	7078	371/371	99.6/99.6	100/100	83/92	391/391	99.6/99.6	100/100	75/84	376/376	105.6/105.6	100/100	75/84	376/376	105.6/105.6	110/110	89/97	396/396	89/97	376/376	105.6/105.6	110/110	89/97	396/396		
					141.0/141.0	1300/17	371/371	155.8/155.8	175/175	143/161	391/391	147.0/147.0	150/150	135/153	376/376	161.8/161.8	150/150	135/153	376/376	161.8/161.8	175/175	149/166	396/396	149/166	376/376	161.8/161.8	175/175	149/166	396/396		
					190.2/190.2	1900/216	371/371	204.9/204.9	225/225	195/222	391/391	196.2/196.2	200/225	195/222	376/376	210.9/210.9	200/225	195/222	376/376	210.9/210.9	225/225	209/236	396/396	209/236	376/376	210.9/210.9	225/225	209/236	396/396		
MED	208/230 - 3- 60	NONE	18.8/25.0	52.1/60.1	80.0	84	98	430	91.8	100	100	98	430	84.8	100	415	96.6	110	103	435	103	415	96.6	110	103	435					
					101.6/101.6	84/93	410/410	116.4/116.4	125/125	98/107	430/430	107.6/107.6	110/110	90/99	415/415	122.4/122.4	110/110	90/99	415/415	122.4/122.4	110/110	103/113	435/435	103/113	415/415	122.4/122.4	110/110	103/113	435/435		
					156.8/156.8	144/163	410/410	171.5/171.5	175/175	158/176	430/430	162.8/162.8	175/175	150/168	415/415	177.5/177.5	200/200	150/168	415/415	177.5/177.5	200/200	163/182	435/435	163/182	415/415	177.5/177.5	200/200	163/182	435/435		
					206.9/206.9	204/232	410/410	221.7/221.7	225/250	218/245	430/430	212.9/212.9	225/250	210/237	415/415	227.7/227.7	250/250	210/237	415/415	227.7/227.7	250/250	223/251	435/435	223/251	415/415	227.7/227.7	250/250	223/251	435/435		
HIGH	208/230 - 3- 60	NONE	18.8/25.0	52.1/60.1	86.9	92	105	504	91.7	125	100	105	504	91.7	100	489	103.5	111	509	111	489	103.5	111	509							
					110.1/110.1	92/101	484/484	124.9/124.9	125/125	106/115	504/504	116.1/116.1	125/125	98/107	489/489	130.9/130.9	125/125	98/107	489/489	130.9/130.9	117/120	509/509	117/120	489/489	130.9/130.9	117/120	509/509				
					165.3/165.3	152/171	484/484	180.0/180.0	200/200	166/184	504/504	171.3/171.3	175/175	158/176	489/489	186.0/186.0	200/200	158/176	489/489	186.0/186.0	200/200	171/190	509/509	171/190	489/489	186.0/186.0	200/200	171/190	509/509		
					215.4/215.4	212/240	484/484	230.2/230.2	250/250	226/253	504/504	221.4/221.4	225/250	218/245	489/489	236.2/236.2	250/250	218/245	489/489	236.2/236.2	250/250	231/259	509/509	231/259	489/489	236.2/236.2	250/250	231/259	509/509		
ULTRA HIGH	460 - 3- 60	NONE	18.8/25.0	52.1/60.1	98.5	103	116	544	110.3	125	100	116	544	103.3	125	108	115.1	150	154	150	108	115.1	150	154							
					121.8/121.8	103/112	524/524	136.5/136.5	150/150	108/118	529/529	142.5/142.5	150/150	108/118	529/529	142.5/142.5	150/150	108/118	529/529	142.5/142.5	122/131	154/154	150	108	115.1	150	154				
					176.9/176.9	163/181	524/524	191.6/191.6	200/200	168/187	544/544	182.9/182.9	200/200	168/187	544/544	182.9/182.9	200/200	168/187	544/544	182.9/182.9	200/200	182/200	154/154	150	108	115.1	150	154			
					227.0/227.0	223/250	524/524	241.8/241.8	250/250	236/264	544/544	233.0/233.0	250/250	228/256	529/529	247.8/247.8	250/250	228/256	529/529	247.8/247.8	250/250	242/269	154/154	150	108	115.1	150	154			
STD	460 - 3- 60	NONE	25.0	30.1	34.8	36	43	205	41.0	45	40	43	205	37.0	45	39	43.2	50	46	207	46	39	43.2	50	46	207					
					42.4	39	193	50.1	60	46	205	45.1	50	42	195	52.9	60	49	50	42	195	52.9	60	49	50	42	195	52.9	60	49	
					64.9	73	193	72.6	80	81	205	67.6	80	76	195	75.4	80	83	207	75.4	80	83	207	75.4	80	83	207				
					95.0	108	193	102.7	110	115	205	97.7	110	111	205	105.5	110	118	207	105.5	110	118	207								
MED	460 - 3- 60	NONE	25.0	30.1	40.7	43	212	224	46.9	60	50	43	224	42.9	60	46	49.1	60	53	226	49.1	60	46	49.1	60	53	226				
					49.8	46	212	57.5	60	53	224	52.5	60	48	214	60.3	70	55	226	60.3	70	55	226								
					72.2	80	224	80.0	80	87	224	75.0	80	82	214	82.7	90	90	214	82.7	90	90	214								
					102.3	115	212	110.1	125	122	224	105.1	125	117	214	112.8	125	125	214	112.8	125	125	214								
HIGH	460 - 3- 60	NONE	25.0	30.1	44.9	48	249	261	51.1	60	50	48	261	47.1	60	50	53.3	60	57	263	53.3	60	50	53.3	60	57	263				
					54.8	50	249	62.5	70	58	249	57.5	70	55	251	65.3	70	60	263	65.3	70	60	263								
					77.2	90	249	85.0	90	92	261	80.0	90	86	251	87.7	90	95	263	87.7	90	95	263								
					107.3	125	249	115.1	125	127	261	110.1	125	122	251	117.8	125	129	263	117.8	125	129	263								
ULTRA HIGH	460 - 3- 60	NONE	25.0	30.1	48.9	51	269	281	55.1	60	50	51	281	51.1	60	54	57.3	70	61	283	57.3	70	61	283							
					58.8	60	269	66.5	70	61	281	61.5	70	57	271	69.3	70	64	283	69.3	70	64	283								
					81.2	80	269	89.0	90	89	281	84.0	90	91	271	91.7	100	98	283	91.7	100	98	283								
					111.3	123	269	119.1	125	130	281	114.1	125	126	271	121.8	125	133	283	121.8	125	133	283								
STD	575 - 3- 60	NONE	24.8	23.9	30.0	32	154	162	34.8	40	30	32	162	31.7	40	33	36.5	45	39	164	36.5	45	39	164							
					35.5	40	154	41.5	45	38	162	37.6	40	35	156	43.6	45	40	164	43.6	45	40	164								
					65.3	70	162	71.3	80	66	162	67.4	80	62	156	73.4	80	68	164	73.4	80	68	164								
					77.2	90	162	83.2	90	93	162	79.4	90	93	162	85.4	90	95	164	85.4	90	95	164								
MED	575 - 3- 60	NONE	24.8	23.9	32.7	35	166	174	37.5	45	30	35	174	34.4	40	37	39.2	45	42	176	39.2	45	42	176							
					38.9	40	166	44.9	45	38	166	41.0	45	38	168	47.0	50	43	176	47.0	50	43	176								
					68.6	70	174	74.6	80	69	174	70.8	80	76	176	76.8	80	77	176	76.8	80	77	176								
					80.6	90	166	86.6	90	96	166	82.7	90	93	168	88.7	90	98	176	88.7	90	98	176								
HIGH	575 - 3- 60	NONE	24.8	23.9	34.4	37	193	201	39.2	45	40	37	201	36.1	45	39	40.9	50	44	203	40.9	50	44	203							
					41.0	45	193	43.1	50	40	193	43.1	50	40	195	45.0	50	45	203	45.0	50	45	203								
					70.8	80	201	72.9	80	71	201	72.9	80	67	195	78.9	80	73	203	78.9	80	73	203								
					82.7	90	193	88.7	90	98	193	84.9	90	95	195	90.9	100	100	203	90.9	100	100	203								
ULTRA HIGH	575 - 3- 60	NONE	24.8	23.9	38.7	41	204	212	43.5	50	40	41	212	40.4	45	43	45.2	50	48	214	45.2	50	48	214							
					45.6	50	204	51.6	60	46	204	47.8	60	44	206	53.8	60	49	214	53.8	60	49	214								
					75.4	80	204	81.4	90	75	212	77.5	90	71	206	83.5	90	77	214	83.5	90	77	214								
					87.4	100	204	93.4	100	102	212	89.5	100	99	206	95.5	100	104	214	95.5	100	104	214								

See Legend and Notes on page 74

# ELECTRICAL DATA (cont.)

**Table 45 (cont.) - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH HACR**

UNIT	NO. M. V. Ph. Hz	ELEC. HTR				NO C.O. or UNPWR C.O.						w/ PWRD C.O.							
		CRHEATER***A00 VERT/HORZ	Nom (kW)	FLA	NO P.E.			w/ P.E. (pwrd ft/unit)			NO P.E.			w/ P.E. (pwrd ft/unit)					
					MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA			
STD	208/230-3-60	NONE	-	-	73.3/73.3	100/100	76/75	412	90/89	432	82/81	100/100	82/81	417	89.9/89.9	100/100	95/95	437	
		279/270A00	18.8/25.0	52.1/60.1	84.9/84.9	412/412	100/100	76/78	412/412	90/92	432/432	82/84	100/100	82/84	417/417	105.6/105.6	100/100	95/97	437/437
		280/271A00	37.6/50.0	104.2/120.3	141.0/141.0	412/412	150/150	130/147	143/161	143/161	432/432	135/153	150/150	135/153	147/147	161.8/161.8	175/175	149/166	437/437
MED	208/230-3-60	NONE	-	-	190.2/190.2	200/200	190/216	412/412	203/230	432/432	195/222	200/225	195/222	417/417	210.9/210.9	252/225	209/236	437/437	
		281/272A00	56.3/75.0	156.4/180.4	206.9/206.9	412/412	200/200	190/216	412/412	203/230	432/432	195/222	200/225	195/222	417/417	210.9/210.9	252/225	209/236	437/437
		281/272A00	56.3/75.0	156.4/180.4	206.9/206.9	412/412	200/200	190/216	412/412	203/230	432/432	195/222	200/225	195/222	417/417	210.9/210.9	252/225	209/236	437/437
HIGH	208/230-3-60	NONE	-	-	85.9	100	91	451	104	471	96	100	96	456	102.5	125	110	476	
		279/270A00	18.8/25.0	52.1/60.1	101.6/101.6	451/451	110/110	91/91	451/451	104/107	471/471	96/99	110/110	96/99	456/456	122.4/122.4	125/125	110/113	476/476
		280/271A00	37.6/50.0	104.2/120.3	156.8/156.8	451/451	110/110	91/91	451/451	104/107	471/471	96/99	110/110	96/99	456/456	122.4/122.4	125/125	110/113	476/476
ULTRA HIGH	208/230-3-60	NONE	-	-	206.9/206.9	225/250	204/232	451/451	218/245	471/471	210/237	225/250	210/237	456/456	221.7/221.7	250/250	223/251	476/476	
		281/272A00	56.3/75.0	156.4/180.4	206.9/206.9	451/451	225/250	204/232	451/451	218/245	471/471	210/237	225/250	210/237	456/456	221.7/221.7	250/250	223/251	476/476
		281/272A00	56.3/75.0	156.4/180.4	206.9/206.9	451/451	225/250	204/232	451/451	218/245	471/471	210/237	225/250	210/237	456/456	221.7/221.7	250/250	223/251	476/476
ULTRA HIGH	208/230-3-60	NONE	-	-	110.1/110.1	125/125	99/101	525/525	124.9/124.9	545/545	115/115	125/125	115/115	530/530	130.9/130.9	150/150	118/120	550	
		279/270A00	18.8/25.0	52.1/60.1	121.8/121.8	525/525	125/125	99/101	525/525	124.9/124.9	545/545	115/115	125/125	115/115	530/530	130.9/130.9	150/150	550/550	
		280/271A00	37.6/50.0	104.2/120.3	176.9/176.9	525/525	125/125	99/101	525/525	124.9/124.9	545/545	115/115	125/125	115/115	530/530	130.9/130.9	150/150	550/550	
STD	460-3-60	NONE	-	-	104.4	125	109	565	116.2	585	115	125	115	570	121.0	150	128	590	
		279/270A00	18.8/25.0	52.1/60.1	121.8/121.8	565/565	125/125	109/112	565/565	136.9/136.5	585/585	123/126	150/150	115/118	142.5/142.5	150/150	128/131	590/590	
		280/271A00	37.6/50.0	104.2/120.3	176.9/176.9	565/565	125/125	109/112	565/565	136.9/136.5	585/585	123/126	150/150	115/118	142.5/142.5	150/150	128/131	590/590	
MED	460-3-60	NONE	-	-	37.2	50	39	231	43.4	243	46	50	46	233	45.6	50	49	245	
		282/273A00	25.0	30.1	42.4	231	50	39	231	43.4	243	46	50	46	233	45.6	50	49	245
		283/274A00	50.0	60.1	64.9	231	73	63	231	72.6	243	81	76	243	67.6	80	83	245	
HIGH	460-3-60	NONE	-	-	95.0	100	108	231	102.7	243	110	110	115	233	105.5	110	118	245	
		284/275A00	75.0	90.2	95.0	231	108	108	231	102.7	243	110	110	115	233	105.5	110	118	245
		284/275A00	75.0	90.2	95.0	231	108	108	231	102.7	243	110	110	115	233	105.5	110	118	245
ULTRA HIGH	460-3-60	NONE	-	-	43.1	50	46	250	49.3	262	53	60	53	252	51.5	60	56	264	
		282/273A00	25.0	30.1	49.8	250	46	46	250	49.8	262	53	60	53	252	51.5	60	56	264
		283/274A00	50.0	60.1	72.2	250	80	80	250	80.0	262	83	80	83	252	82.7	90	90	264
STD	575-3-60	NONE	-	-	102.3	125	115	250	110.1	262	122	125	117	252	112.8	125	125	264	
		284/275A00	75.0	90.2	102.3	250	115	115	250	110.1	262	122	125	117	252	112.8	125	264	
		284/275A00	75.0	90.2	102.3	250	115	115	250	110.1	262	122	125	117	252	112.8	125	264	
MED	575-3-60	NONE	-	-	47.3	60	50	287	53.5	299	58	60	53	289	55.7	60	60	301	
		282/273A00	25.0	30.1	54.8	287	50	50	287	53.5	299	58	60	53	289	55.7	60	60	301
		283/274A00	50.0	60.1	77.2	287	80	80	287	85.0	299	92	90	87	289	87.7	90	90	301
ULTRA HIGH	575-3-60	NONE	-	-	111.3	125	119	299	115.1	319	122	125	126	309	117.8	125	129	301	
		284/275A00	75.0	90.2	111.3	299	119	119	299	115.1	319	122	125	126	309	117.8	125	129	301
		284/275A00	75.0	90.2	111.3	299	119	119	299	115.1	319	122	125	126	309	117.8	125	129	301
STD	575-3-60	NONE	-	-	31.8	40	34	182	36.6	190	39	40	36	184	38.3	45	41	192	
		285/276A00	24.8	23.9	35.5	182	40	34	182	36.6	190	39	40	36	184	38.3	45	41	192
		286/277A00	49.6	47.7	65.3	182	70	60	182	71.3	190	66	70	66	184	73.4	80	68	192
MED	575-3-60	NONE	-	-	71.2	90	88	182	83.2	190	93	90	89	184	85.4	90	95	192	
		285/276A00	24.8	23.9	38.9	182	40	34	182	36.6	190	39	40	36	184	38.3	45	41	192
		286/277A00	49.6	47.7	68.6	182	70	63	182	71.3	190	66	70	66	184	73.4	80	68	192
HIGH	575-3-60	NONE	-	-	80.6	90	91	194	86.6	202	96	90	93	196	88.7	90	98	204	
		287/278A00	74.4	71.6	80.6	194	90	91	194	86.6	202	96	90	93	196	88.7	90	98	204
		287/278A00	74.4	71.6	80.6	194	90	91	194	86.6	202	96	90	93	196	88.7	90	98	204
ULTRA HIGH	575-3-60	NONE	-	-	36.2	45	39	221	41.0	229	44	45	41	223	42.7	50	46	231	
		285/276A00	24.8	23.9	41.0	221	45	39	221	41.0	229	44	45	41	223	42.7	50	46	231
		286/277A00	49.6	47.7	70.8	221	80	65	221	76.8	229	71	80	65	223	78.9	80	73	231
STD	575-3-60	NONE	-	-	82.7	100	93	229	88.7	231	98	90	95	223	84.9	100	100	231	
		287/278A00	74.4	71.6	82.7	229	98	93	229	88.7	231	98	90	95	223	84.9	100	100	231
		287/278A00	74.4	71.6	82.7	229	98	93	229	88.7	231	98	90	95	223	84.9	100	100	231
ULTRA HIGH	575-3-60	NONE	-	-	40.5	50	43	232	45.3	240	48	50	45	234	47.0	60	50	242	
		285/276A00	24.8	23.9	45.6	232	50	43	232	45.3	240	48	50	45	234	47.0	60	50	242
		286/277A00	49.6	47.7	75.4	232	80	69	232	75.4	240	75	80	69	234	77.5	90	77	242

See Legend and Notes on page 74





# ELECTRICAL DATA (cont.)

**Table 45 (cont.) - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH HACR**

UNIT	NO M. V. Ph. Hz	ELEC. HTR				NO C.O. or UNPWR C.O.						w/ PWRD C.O.							
		IFM TYPE	CRHEATER***A00 VERT/HORZ	Nom (kW)	FLA	NO P.E.			w/ P.E. (pwrd frunit)			NO P.E.			w/ P.E. (pwrd frunit)				
						MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA	MCA	HACR BRKR	DISC. SIZE FLA LRA		
50LC-026	208/230-3-60	STD	NONE	-	-	129	69	136.7	175	142	649	129.7	175	134	634	141.5	175	148	654
			2792/70A00	18.8/25.0	52.1/60.1	129/129	62/96/29	136.7/36.7	175/175	142/142	649/649	129.7/129.7	175/175	134/134	634/634	141.5/141.5	175/175	148/148	654/654
			2802/71A00	37.6/50.0	104.2/120.3	144/163	62/96/29	171.5/71.5	175/175	158/176	649/649	162.8/162.8	175/175	150/168	634/634	177.5/171.5	200/200	163/182	654/654
			2812/72A00	56.3/75.0	156.4/180.4	204/232	62/96/29	221.7/21.7	225/250	218/245	649/649	212.9/212.9	225/250	210/237	634/634	227.7/212.7	250/250	223/251	654/654
			NONE	-	-	137	703	143.5	175	150	723	136.5	175	142	708	148.3	175	156	728
			2792/70A00	18.8/25.0	52.1/60.1	137/137	703/703	143.5/43.5	175/175	150/150	723/723	136.5/136.5	175/175	142/142	708/708	148.3/148.3	175/175	156/156	728/728
	460-3-60	MED	2802/71A00	37.6/50.0	104.2/120.3	152/171	703/703	180.0/180.0	200/200	166/184	723/723	171.3/171.3	175/175	158/176	708/708	186.0/186.0	200/200	171/190	728/728
			2812/72A00	56.3/75.0	156.4/180.4	212/240	703/703	230.2/230.2	250/250	226/253	723/723	221.4/221.4	225/250	218/245	708/708	236.2/236.2	250/250	231/259	728/728
			NONE	-	-	147	743	152.8	200	161	763	145.8	175	153	748	157.6	200	167	768
			2792/70A00	18.8/25.0	52.1/60.1	147/147	743/743	152.8/52.8	200/200	161/161	763/763	145.8/145.8	175/175	153/153	748/748	157.6/157.6	200/200	167/167	768/768
			2802/71A00	37.6/50.0	104.2/120.3	163/181	743/743	191.6/191.6	200/200	176/195	763/763	182.9/182.9	200/200	168/187	748/748	197.6/197.6	200/200	182/200	768/768
			2812/72A00	56.3/75.0	156.4/180.4	223/250	743/743	241.8/241.8	250/250	236/264	763/763	233.0/233.0	250/250	228/256	748/748	241.8/241.8	250/300	242/269	768/768
575-3-60	460-3-60	STD	NONE	-	-	68	322	71.1	90	75	334	67.1	90	70	324	73.3	90	78	336
			282/73A00	25.0	30.1	68	322	71.1	90	75	334	67.1	90	70	324	73.3	90	78	336
			283/74A00	50.0	60.1	80	322	80.0	90	87	334	75.0	90	83	324	82.7	90	90	336
			284/75A00	75.0	90.2	115	322	110.1	125	122	334	105.1	125	117	324	112.8	125	125	336
			NONE	-	-	73	359	75.1	90	80	371	71.1	90	75	361	77.3	100	82	373
			282/73A00	25.0	30.1	73	359	75.1	90	80	371	71.1	90	75	361	77.3	100	82	373
	575-3-60	MED	283/74A00	50.0	60.1	85	379	85.0	90	92	371	80.0	90	87	361	87.7	100	95	373
			284/75A00	75.0	90.2	119	359	115.1	125	127	371	110.1	125	122	361	117.8	125	129	373
			NONE	-	-	76	379	78.3	100	83	391	74.3	90	79	381	80.5	100	86	393
			282/73A00	25.0	30.1	76	379	78.3	100	83	391	74.3	90	79	381	80.5	100	86	393
			283/74A00	50.0	60.1	89	379	89.0	100	96	391	84.0	100	91	381	91.7	100	98	393
			284/75A00	75.0	90.2	123	379	119.1	125	130	391	114.1	125	126	381	121.8	125	133	393
575-3-60	HIGH	285/76A00	24.8	23.9	56	235	58.7	70	62	243	55.6	70	58	237	60.4	80	64	245	
		286/77A00	49.6	47.7	63	235	74.6	80	69	243	70.8	80	65	237	76.8	80	71	245	
		281/78A00	74.4	71.6	91	235	86.6	90	96	243	82.7	90	93	237	88.7	90	98	245	
		NONE	-	-	58	262	60.4	70	64	270	57.3	70	60	264	62.1	80	66	272	
		285/76A00	24.8	23.9	58	262	60.4	70	64	270	57.3	70	60	264	62.1	80	66	272	
		286/77A00	49.6	47.7	65	262	76.8	80	71	270	72.9	80	67	264	78.9	80	73	272	
575-3-60	HIGH	281/78A00	74.4	71.6	93	262	88.7	90	98	270	84.9	90	95	264	90.9	100	100	272	
		NONE	-	-	62	273	64.1	70	68	281	61.0	80	64	275	65.8	80	70	283	
		285/76A00	24.8	23.9	62	273	64.1	70	68	281	61.0	80	64	275	65.8	80	70	283	
		286/77A00	49.6	47.7	69	273	81.4	90	75	281	77.5	80	71	275	83.5	90	77	283	
		281/78A00	74.4	71.6	97	273	93.4	100	102	281	89.5	100	99	275	95.5	100	104	283	
		NONE	-	-	97	273	87.4	100	97	273	87.4	100	97	273	87.4	100	97	273	

See Legend and Notes on page 74

# ELECTRICAL DATA (cont.)

## LEGEND & NOTES

- LEGEND:**
- BRKR Circuit breaker
  - CO Convenience outlet
  - DISC Disconnect
  - FLA Full load amps
  - IFM Indoor Fan Motor
  - LRA Locked rotor amps
  - MCA Minimum circuit amps
  - MOCF MAX FUSE or HACR Breaker
  - PE Power exhaust
  - PWRD CO Powered convenient outlet
  - UNPWR CO Unpowered convenient 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.

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

Example: Supply voltage is 230-3-60



AB = 224 V  
BC = 231 V  
AC = 226 V

$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3}$$

Determine maximum deviation from average voltage.

$$(AB) 227 - 224 = 3 \text{ V}$$

$$(BC) 231 - 227 = 4 \text{ V}$$

$$(AC) 227 - 226 = 1 \text{ V}$$

Maximum deviation is 4 V.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{4}{227} = 1.76\%$$

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.

# TYPICAL WIRING DIAGRAMS

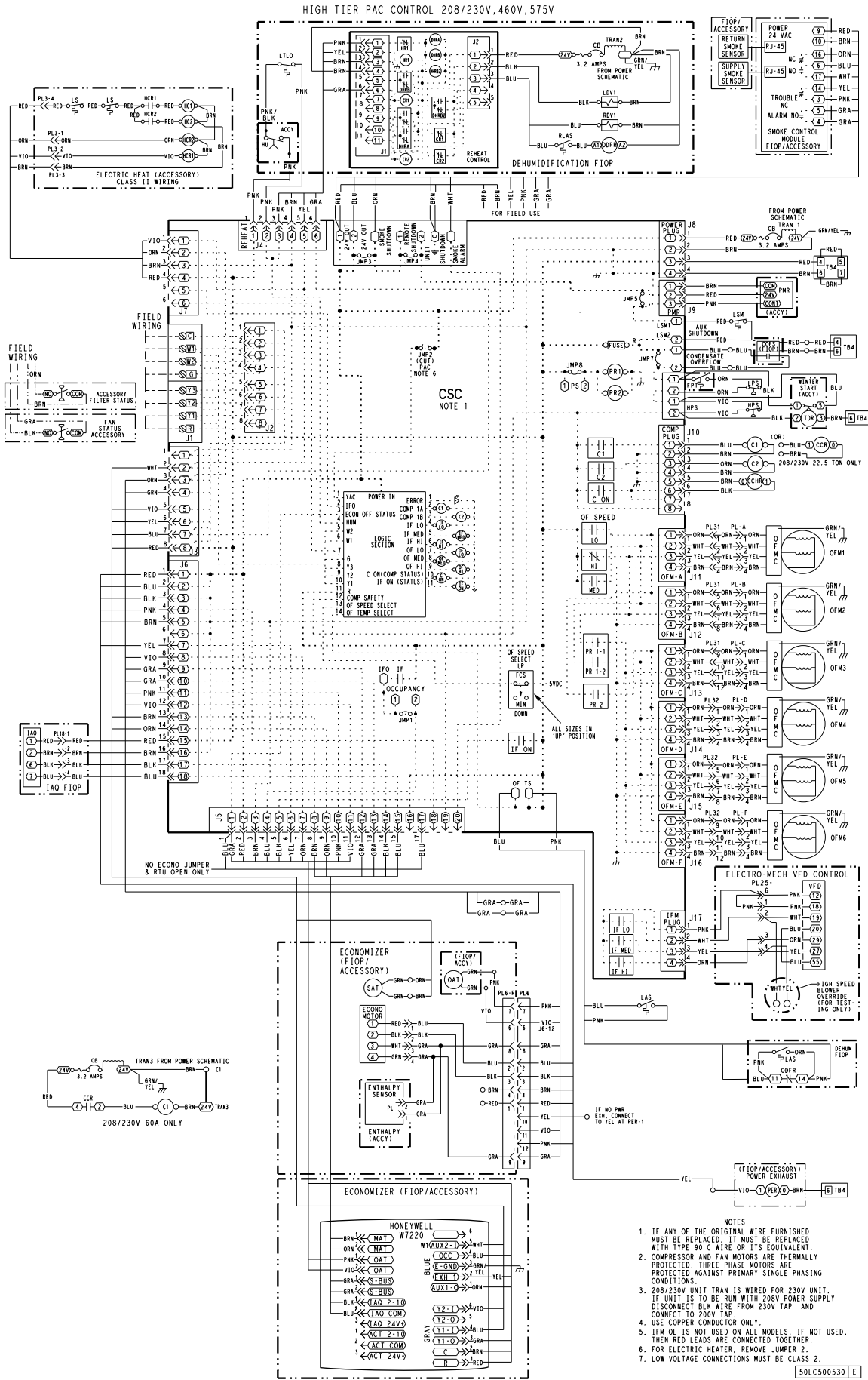


Fig. 18 - 50LC 14-26 Electromechanical Control Wiring Diagram

# TYPICAL WIRING DIAGRAMS (cont.)

12.5 - 20 TON YAC, PAC POWER 208/230V 3 PH WITH/WITHOUT HOT GAS REHEAT FIOP

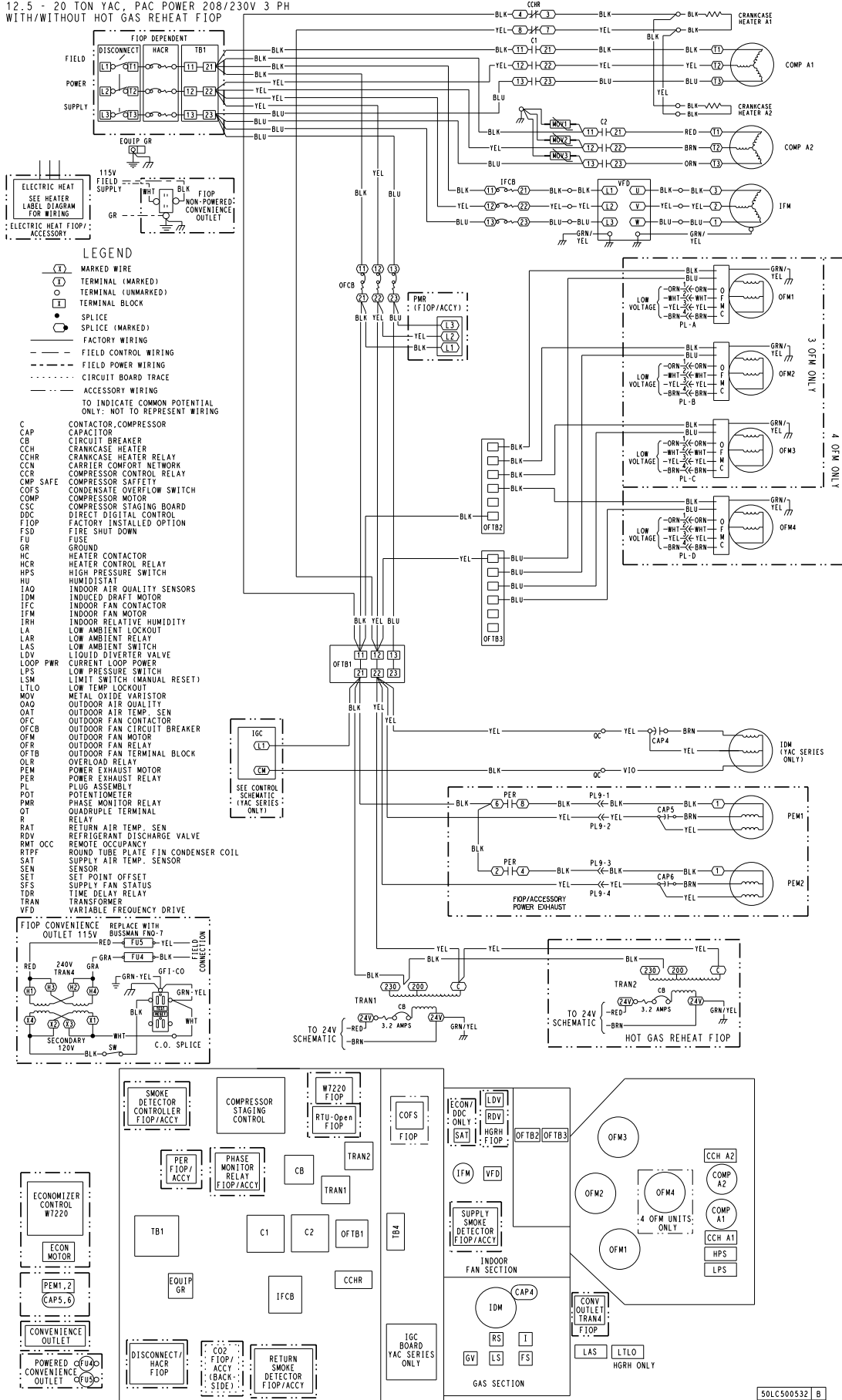


Fig. 19 - Typical Power Wiring Diagram, 50LC 14-20 208/230V Shown

# SEQUENCE OF OPERATION

## General

The Carrier Integrated Staging Control Board (ISC) is intended for use with a standard thermostat capable of three cooling stages. After initial power to the board, a Green LED will blink with a 1 second duty cycle indicating the unit is running properly. When the unit is not running properly, the Green LED will blink along with Red LED lights. The Red LED light configuration will indicate the type of error the board has identified.

The ISC board can be remotely shutdown by removing Jumper 4 and wiring to the Remote Shutdown terminal. The Smoke Control Module can shut down the unit by removing Jumper 3 and wiring to the Smoke Shutdown terminal. A smoke alarm can be obtained by wiring to the Smoke Alarm terminal.

The crankcase heater will run at all times except when the compressors are running. An auxiliary power supply (24Vac) available at TB-4 Terminal is provided to power auxiliary equipment. An optional Phase Monitor Relay can be wired to the PMR terminal by removing Jumper 5.

## Ventilation

In the Ventilation/Fan Mode (G on the thermostat), the indoor fan will run at low speed and the damper will operate at minimum position.

## Cooling

In the Cooling Mode, the small and large compressors will be sequenced to maintain the thermostat/DDC temperature setpoint. The chart below shows the cooling operation based on the following conditions.

INPUT	OUTPUT			
Thermostat	Compressor C1	Compressor C2	Indoor Fan Speed	Outdoor Fan Speed
First Stage Cooling (Y1)	On	Off	Low	Low (700 rpm)
Second Stage Cooling (Y2)	Off	On	Medium	Medium (800 rpm)
Third Stage Cooling (Y3)	On	On	High	High (1,000 rpm)

The outdoor fan and VFD controlled indoor-fan will operate at low, medium and high speed. The indoor-fan speed (rpm) is factory set by the CFM and static pressure requirements for the unit installed.

## Humidi-MiZer<sup>®</sup> (Optional)

In the Dehumidification Mode, both compressors will run and Indoor airflow will rise to High Speed.

In subcooling mode (reheat-1), during part load conditions when the room temperature and humidity are above the set point, the unit initiates the sub-cooling mode of operation; a call for cooling and dehumidification. RDV (Reheat Discharge Valve) and TWV (Three Way Valve) close; Indoor and Outdoor airflow will rise until reaching 100% of Speed.

In hot gas reheat mode (reheat-2), when there is a call for dehumidification without a call for cooling, a portion of the hot gas from the compressor bypasses the condenser coil when RDV opens and hot gas is fed into the liquid line, TWV closes in this mode and the system provides mainly latent cooling. Indoor airflow will rise until reaching 100% of Speed, Outdoor airflow will run at High speed as long as outdoor temperature is above 80°F (26.7°C); when operating in this mode below 80°F (26.7°C) OAT, the system outdoor fan will operate as shown in the table below based on Size:

LC Size	RPM	Number of Fan On	Number of Fan Off
14	250	3	0
17	250	4	0
20	160	4	0
24	250	6	0
26	250	6	0

## Economizer (Optional)

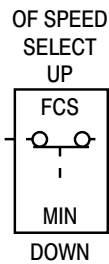
When the Economizer is in Free Cooling Mode and a demand for cooling exists (Y1 on the thermostat), the Economizer will modulate the outdoor-air damper to provide a 50°F (10°C) to 55°F (13°C) mixed-air temperature into the zone and run the indoor-fan at high speed. As mixed-air temperature fluctuates above 55°F (13°C) or below 50°F (10°C) dampers will be modulated (open or close) to bring the mixed-air temperature back within control. Upon more call for cooling (Y2 on the thermostat), the outdoor-air damper will maintain its current position, compressor C1 will run and the outdoor-fan will run at low speed. If there is further demand for cooling, the outdoor-air damper will maintain its current position, only compressor C2 will run and the outdoor fan will run at medium speed. The VFD controlled indoor fan will operate at high speed regardless of the cooling demand.

If the increase in cooling capacity causes the mixed-air temperature to drop below 45°F, the outdoor-air damper will return to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Once the mixed air temperature rises above 48°F (9°C), the control returns to normal. The power exhaust fans will be energized and de-energized, if installed, as the outdoor-air damper opens and closes.

In field-installed accessory CO2 sensors are connected to the Economizer, 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 of fresh air, the outdoor-air damper will be proportionally closed. For economizer 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.

### Low Ambient Cooling Operation down to 40°F (4°C)

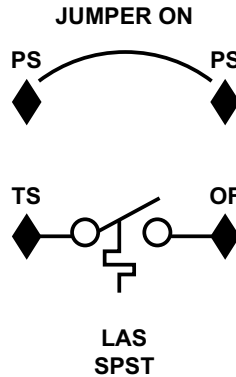
In Low Ambient RTU conditions when the temperature is between 55°F (13°C) and 40°F (4°C), the Low Ambient Switch (LAS) will be active and the outdoor-fans will run to the pre-set factory outdoor-fan speed. When the temperature is greater than 65°F (18°C), the Low Ambient Switch will deactivate and the outdoor-fans will run in the standard cooling mode. If the Outdoor Fan Select Switch (see Fig. 20) is in the up position, the outdoor fans will run in the Fan Cycle Speed Mode (FCS) set to 250 rpm. If the Outdoor Fan Select Switch is in the down position, the outdoor fans will run in the Minimum Fan Speed Mode (MIN) set to 160 rpm regardless of the cooling demand.



C13327

Fig. 20 - Outdoor Fan Speed Select Switch

LC size 014 through 026 units have a SPST normally open Low Ambient Switch wired across the TS and OF terminal and a jumper placed across the PS terminal (See Fig. 21). When the LAS is active, the switch will close making contact to the OF terminal. This is done for units that require all outdoor fans to run at the same pre-set factory Low Ambient Speed.



C13328

Fig. 21 - Schematic of SPST Low Ambient Switch

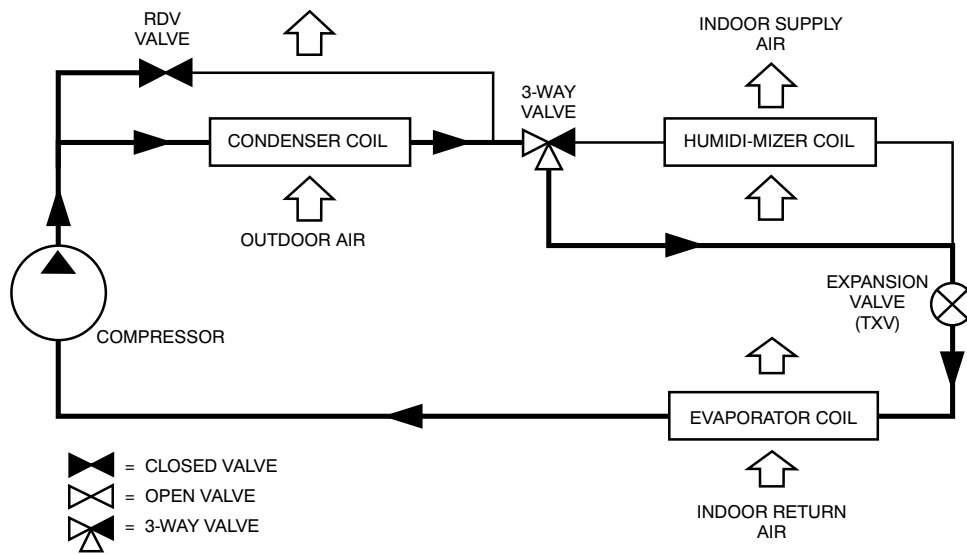
The Low Ambient Outdoor Fan Control chart (listed below) shows the operation of the outdoor fans for each unit

#### Low Ambient Temperature Outdoor Fan Control

LC Size	No. of Fans On	No. of Fans Off	Switch	LAS FIG. No.	OF Select Switch	RPM
014	3	0	(1) SPST	21	Up	250
017	4	0	(1) SPST	21	Up	250
020	4	0	(1) SPST	21	Up	250
024	6	0	(1) SPST	21	Up	250
026	6	0	(1) SPST	21	Up	250

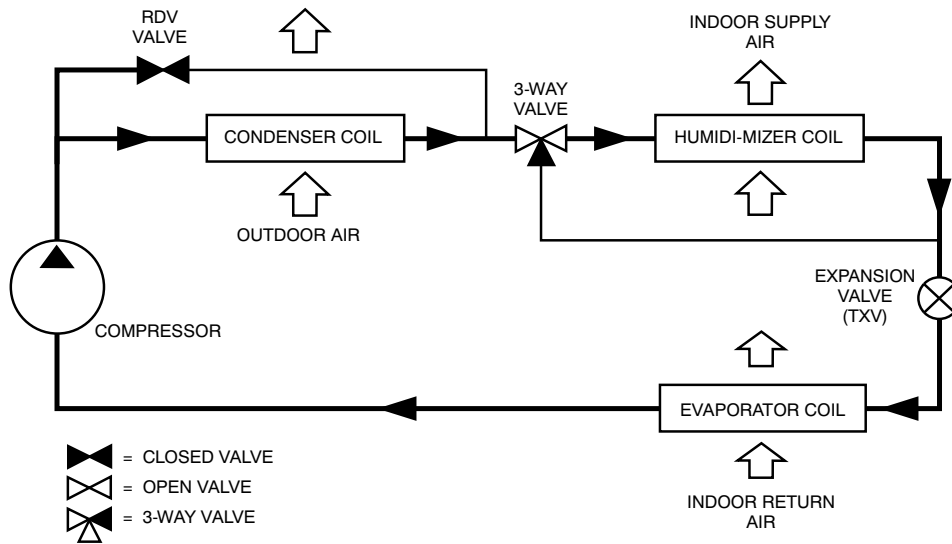
### Heating

In the Heating Mode (W1 on the thermostat), power is applied to the G and W1 terminal at the ISC board and energizes the first state of electric heat. Upon more call for heat (W2 at the thermostat), power is applied to the G and W2 terminal at the ISC board and energizes the second state of electric heat. The VFD controlled indoor fan will operate at high speed regardless of the heating demand.



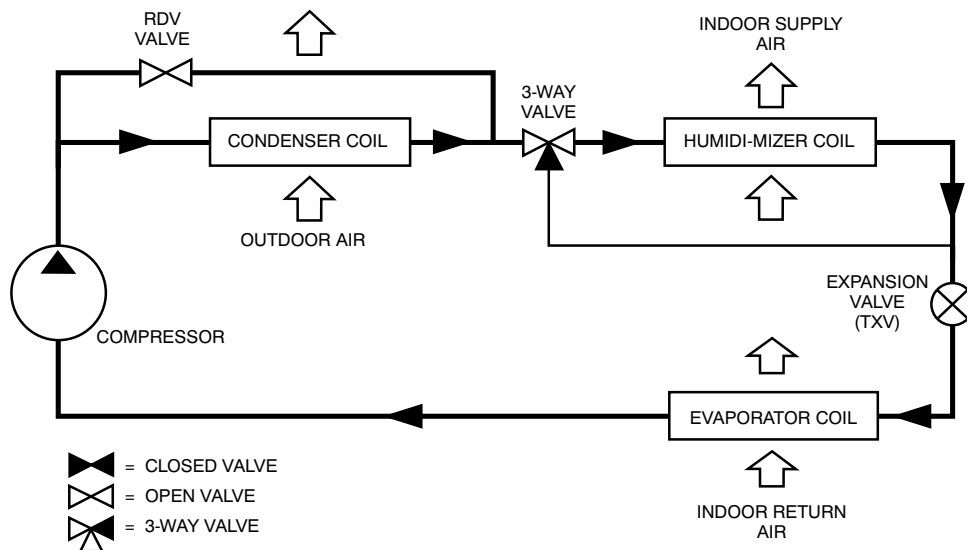
**Fig. 22 - Humidi- MiZer Piping Schematic Normal Cooling**

C14114



**Fig. 23 - Humidi- MiZer Piping Schematic Subcooling Mode (Reheat1)**

C14115



**Fig. 24 - Humidi- MiZer Piping Schematic Hot Gas Reheat Mode (Reheat 2)**

C14116

# GUIDE SPECIFICATIONS – 50LC\*\*14-26

Note about this specification:

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

## WeatherExpert™ Ultra High Efficient Cooling Only/Electric Heat Packaged Rooftop HVAC Guide Specifications



**Size Range:** 12.5 to 23 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 aluminum foil-faced insulation 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. energize both “W” and “G” when calling for heat.
      - b. have capability to energize 3 different stages of cooling, and 2 different stages of heating.
      - c. include capability for occupancy scheduling.

#### **23 09 33      Integrated Staging Control (ISC) 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 an ISC electro-mechanical control board, to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, gas controller, economizer, thermostat, and safety switches. Shall control all three stages of compressor logic, two or three stages of the indoor fan motor logic as well as staging of the outdoor fan motor. Shall also have a green LED indicator to indicate GO operation as well as a fault LED indicator for thermostat mis-wiring, no fan operation and safety switches
    - 4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.
  - 23 09 33.23.B.    Safeties:
    - 1. Compressor over-temperature, over current.
    - 2. Low-pressure switch.
      - a. Low pressure 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. 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. 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 a dedicated, weather tight panel.
4. 4- in filter capabilities shall be capable with pre-engineered and approved Carrier filter track field installed accessory. This kit requires field furnished filters.

**23 81 19 Self-Contained Air Conditioners**

23 81 19.13 Medium-Capacity Self-Contained Air Conditioners (50LC\*D14- 26)

23 81 19.13.A. General

1. Outdoor, rooftop mounted, DDC electrically controlled, heating and cooling unit utilizing hermetic scroll compressors for cooling duty and gas combustion 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 start-up.
3. Unit shall use environmentally safe, Puron 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 and exceeds ASHRAE 90.1 minimum efficiency requirements.
2. Unit meets and exceeds Energy Star and Consortium for Energy Efficiency (CEE) requirements.
3. Unit shall be rated in accordance with AHRI Standard 340/360.
4. Unit shall be designed to conform to ASHRAE 15.
5. Unit shall be ETL- tested and certified in accordance with ANSI Z21.47 Standards and ETL- listed and certified under Canadian standards as a total package for safety requirements.
6. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
7. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
8. Unit shall be designed and manufactured in accordance with ISO 9001.
9. Roof curb shall be designed to conform to NRCA Standards.
10. 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.
11. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
12. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
13. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
14. 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. Project Conditions

1. As specified in the contract.

23 81 19.13.F. Operating Characteristics

1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 340/360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation from 40°F (4°C), ambient outdoor temperatures. For lower operation an integrated economizer shall be utilized to allow lower temperatures and accommodate indoor air quality initiatives
3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
4. Unit shall be factory configured and ordered for vertical supply & return configurations.
5. Unit shall be factory furnished for either vertical or horizontal configuration without the use of special conversion kits. No field kits conversion is possible.
6. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

23 81 19.13.G. Electrical Requirements

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

23 81 19.13.H. Unit Cabinet

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre-painted 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 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 1/2-in. thick, 1 lb density aluminum foil faced fiberglass insulation. Aluminum foil- faced fiberglass insulation shall also be used in the heat compartment.
4. Base of unit shall have a minimum of four locations for factory thru-the-base electrical connections. Connections shall be internal to the cabinet to protect from environmental issues.
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 at the end of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Top panel:
  - a. Shall be a multi-piece top panel linked with water tight flanges and interlocking systems.
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.)Thru-the-base provisions/connections are available as standard with every unit. When bottom connections are required, field furnished couplings are required.
    - (2.)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 and filters shall have molded composite handles while the blower access door shall have an integrated flange for easy removal.
  - 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.I. Coils

### 1. Standard Aluminum Fin/Copper Tube Coils:

- a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved 5/16" diameter 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:

- 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.
- d. Corrosion durability of fin stock shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.
- e. Corrosion durability of fin stock shall be confirmed through testing to have no visible corrosion after 48 hour immersion in a room temperature solution of 5% salt, 1% acetic acid.
- f. Fin stock coating shall pass 2000 hours of the following: one week exposure in the prohesion chamber followed by one week in a QUV. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).

### 3. Optional Copper-fin evaporator and condenser coils:

- 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.
- d. Corrosion durability of fin stock shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.
- e. Corrosion durability of fin stock shall be confirmed through testing to have no visible corrosion after 48 hour immersion in a room temperature solution of 5% salt, 1% acetic acid.
- f. Fin stock coating shall pass 2000 hours of the following: one week exposure in the prohesion chamber followed by one week in a QUV. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).

### 4. Optional E-coated aluminum-fin evaporator and condenser coils:

- 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.J. Refrigerant Components

### 1. Refrigerant circuit shall include the following control, safety, and maintenance features:

- a. Thermostatic Expansion Valve (TXV) shall help provide optimum performance across the entire operating range. Shall contain removable power element to allow change out of power element and bulb without removing the valve body.
- b. Refrigerant filter drier.
- c. Service gauge connections on suction and discharge lines.
- d. Pressure gauge access through a specially designed screen on the side of the unit.

- e. Single circuit design with tandem compressor and fully activated evaporator coil

## 2. Compressors

- a. Models shall use one fully hermetic tandem scroll compressors optimized for comfort staging and IEER energy savings.
- b. Models shall be available with a single refrigerant circuit and three stage cooling operation on all models.
- 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 over-temperature and over-amperage 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 standard on each compressor and deactivated whenever a compressor is in operation.

## 23 81 19.13.K. Filter Section

- 1. Filters access is specified in the unit cabinet section of this specification.
- 2. Filters shall be held in place by a preformed slide out 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.
- 6. 4-in filter capability is possible with a field installed pre-engineered slide out filter track accessory. 4-in filters are field furnished.

## 23 81 19.13.L. 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.
  - d. Shall be Variable Frequency duty to match the three stage compression logic.
  - e. 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). For indoor fan motor Staged Air Volume (SAV) operation:
  - 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.
  - i. Shall not contain visual display to adjust internal setting. Only available as field installed kit.
- 2. Belt-driven Evaporator Fan:
  - a. Belt drive shall include an adjustable-pitch motor pulley and belt break protection system..
  - b. Shall use rigid pillow block bearing system with lubricate fittings at are accessible or lubrication line.
  - 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.

## 23 81 19.13.M. Condenser Fans and Motors

- 1. Condenser fan motors:
  - a. Shall be a totally enclosed – multi-speed ECM 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.

2. Condenser Fans:

a. Shall be a direct-driven propeller type fan.

b. Shall have galvanized aluminum (galvalum) blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

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

1. Integrated EconoMi\$er2 and EconoMi\$er X standard leak rate 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 models shall be equipped with leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.

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. Economizer controller on EconoMi\$er2 models with RTU Open models shall be a 4-20mA design controlled directly by the RTU Open controller. RTU Open meets California Title 24 Fault Detection & Diagnostic (FDD) requirements.

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 100°F / 4 to 38°C. 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 to 80F, set at a factory default of 32°F. Others shall open at 35°F (2C) 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

2. Integrated EconoMi\$er2 and EconoMi\$er X Ultra Low Leak rate 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 ASHRAE 90.1 requirements of 4cfm per sq. ft. on the outside dampers and 10cfm per sq. ft. on the return dampers.
  - g. Economizer controller on EconoMiSer 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. Economizer controller on EconoMiSer2 models with RTU Open models shall be a 4-20mA design controlled directly by the RTU Open controller. RTU Open meets California Title 24 Fault Detection & Diagnostic (FDD) requirements.
  - 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 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.
  - 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 (2C) 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.
3. Condenser Coil Hail Guard Assembly
- a. Shall protect against damage from hail.
  - b. Shall be louvered style design.
4. Unit-Mounted, Non-Fused Disconnect Switch:
- a. Switch shall be factory-installed, internally mounted.
  - b. National Electric Code (NEC) and ETL 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
  - e. Sized only for the unit as ordered from the factory. Does not accommodate field installed devices
5. HACR Breaker
- a. These manual reset devices provide overload and short circuit protection for the unit. Factory wired and mounted with the units, with access cover to help provide environmental protection. On 575V applications, HACR breaker can only be used with WYE power distribution systems. Use on Delta power distribution systems is prohibited.
  - b. Sized only for the unit as ordered from the factory. Does not accommodate field installed devices
6. Convenience Outlet:
- a. Powered convenience outlet.
    - (1.) Outlet shall be powered from main line power to the rooftop unit.

- (2.) Outlet shall be powered from line side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be ETL certified and rated for additional outlet amperage.
  - (3.) Outlet shall be factory- installed and internally mounted with easily accessible 115- v female receptacle.
  - (4.) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
  - (5.) Voltage required to operate convenience outlet shall be provided by a factory- installed step- down transformer.
  - (6.) Outlet shall be accessible from outside the unit.
  - (7.) Outlet shall include a field- installed “Wet in Use” cover.
- b. 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 with independent fuse protection.
  - (5.) Outlet shall be accessible from outside the unit.
  - (6.) Outlet shall include a field- installed “Wet in Use” cover.
7. Fan/Filter Status Switch:
- a. Switch shall provide status of indoor evaporator fan (ON/OFF) or filter (CLEAN/DIRTY).
  - b. Status shall be displayed either over communication bus (when used with direct digital controls) or with an indicator light at the thermostat.
8. Centrifugal 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 is 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.
9. 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.
10. High- Static Indoor Fan Motor(s) and Drive(s):
- a. High- static motor(s) and drive(s) shall be factory- installed to provide additional performance range.
11. 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.
12. 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.
13. Indoor Air Quality (CO<sub>2</sub>) 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.
14. Smoke detectors:
- 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.
15. Time Guard
- a. Shall prevent compressor short cycling by providing a 5-minute delay ( $\pm 2$  minutes) before restarting a compressor after shutdown for any reason.
  - b. One device shall be required per compressor.
16. 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 (24 v coil) and terminal block all mounted in electric heater control box (minimum 18 ga galvanized steel) attached to end of heater assembly.
17. Barometric Hood (Horizontal Economizer Applications)
- a. Shall be required when a horizontal economizer and barometric relief are required. Barometric relief damper must be installed in the return air (horizontal) duct work. This hood provides weather protection.
18. Hinged Access Panels
- a. Shall provide easy access through integrated quarter turn latches.
  - b. Shall be on major panels of – filter, control box, fan motor and compressor
19. 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, mounting bracket and communication cable.
  - c. Display Kit can be permanently installed in the unit or used on any SAV system VFD controller as needed.
20. Thermostat:
- a. Due to the three stage cooling capacity design of these units, a three stage cooling thermostat is required for the unit to perform at listed operating efficiencies.
  - b. Carrier offers a Honeywell branded T7350D (3 Cool/3 Heat) Commercial Programmable Thermostat. This provides:
    - 7-day programmable 365-day clock with holiday programming
    - Automatic Daylight Saving Time adjustment
    - Backlit display
    - Changeover selections: automatic or manual
    - Fan configurable: continuous or intermittent during occupied
21. Humidi-MiZer Adaptive Dehumidification System:
- a. The Humidi-MiZer Adaptive Dehumidification System shall be factory installed, certified and tested to provide greater dehumidification of the occupied space by providing two distinct modes of dehumidification operation in addition to its normal design cooling mode:
    - (1.) Subcooling mode further subcools the hot liquid refrigerant leaving the condenser coil as well as reheat leaving air stream. It can provide both better cooling capacity as well as dehumidification process when both temperature and humidity in the space are not satisfied.
    - (2.) Hot gas reheat mode shall mix a portion of hot gas from the discharge of compressor with the hot liquid refrigerant leaving the condenser coil to create a two-phase warm refrigerant in the reheat coil which results in a neutral leaving air temperature when only humidity in the space is not satisfied.