



Product Data

WeatherExpert®

Electric Cooling Multi Zone
VAV Packaged Rooftop Units

6 to 10 Nominal Tons



Unit shown with Economizer

50LC*B Sizes 07-12
Single Packaged Multi Zone VAV Rooftop Units with Electric
Cooling and Optional Electric Heat

Carrier's new Multi Zone — Variable Air Volume (MZ-VAV) Electric Heat/Electric Cooling WeatherExpert® 50LC*B 6 to 10 ton Package Rooftop models are designed to help provide total low cost of ownership by providing some of the highest cooling efficiencies in the industry with low installation costs, low maintenance costs, and high reliability.

These MZ-VAV models not only provide comfort control to multi-zone applications but also provide high IEERs (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 strategically designed compressor staging, indoor fan motor, and condenser fan motor speed control. These models are in addition to the 12.5 to 23 ton MZ-VAV models with IEERs up to 19.3 to provide a full range offering.

Ultra high efficiency

With IEERs up to 21.0, these new WeatherExpert MZ-VAV models well exceed the latest efficiency standards for ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 and ENERGY STAR¹, and exceed Consortium for Energy Efficiency (CEE) Tier 2 performance criteria. These models help to contribute in LEED (Leadership in Energy and Environmental Design) 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 3 stages of cooling capacity control.

The indoor fan motors are high efficiency belt drive and controlled by a VFD (Variable Frequency Drive) that adjusts speed based on the duct static pressure sensor and also matches cooling capacity stages for optimum comfort and efficient control. Models also have multi heat capacities for each size.

Easy to install

All WeatherExpert units have full perimeter base rails with built-in rigging capability and are fully factory tested, refrigerant-charged, and assembled at the factory for easy installation. Units are easily field convertible to horizontal air flow, which makes it easy to adjust to unexpected jobsite complications. Many pre-engineered and pre-tested factory options and field-installed accessories are also available.

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 in. filters that have a dedicated access door for easy replacement. Optional hinged panels allow easy access with pull tabs and quarter turn latches. Units come with installed supply air temperature sensor, return-air temperature sensor, and duct static pressure sensor located in the control box for remote positioning in the field.

Reliable

Carrier conducts rigorous testing to ensure your unit will perform as designed. Extensive rain testing is conducted in specially designed test areas and under conditions that simulate actual jobsites.

In addition, units are both shake tested and driven around the country to make sure not only the packaging but also the unit components within hold up. Condensate pans are made of non-corrosive composite material, motors are permanently lubricated, and compressors use crankcase heaters, all to further strengthen the unit's reliability.

- Three-stage cooling capacity control with staged scroll compressor design. Each cooling stage differs in capacity output to better match typical building load profiles.
- Single refrigerant circuit design with precision-sized TXV (thermostatic expansion valve) refrigerant metering devices to provide optimum operation through the entire operating range.
- Single fully activated faced evaporator coil for full surface utilization, even at part load operation. This allows for better dehumidification than split face coils and helps eliminate the need for additional dehumidification packages.
- Integrated economizer in either low leak or ultra low leak versions to properly help supplement compressor unloading in all operating conditions
- Crankcase heater on each compressor designed to cycle off during the on cycle.
- IEER up to 21.0 and EERs (Energy Efficiency Ratios) up to 13.7.
- High efficiency, permanently lubricated belt-driven evaporator fan motor with VFD (Variable Frequency Drive) controller.

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1. ENERGY STAR is a registered trademark of U.S. Environmental Protection Agency.

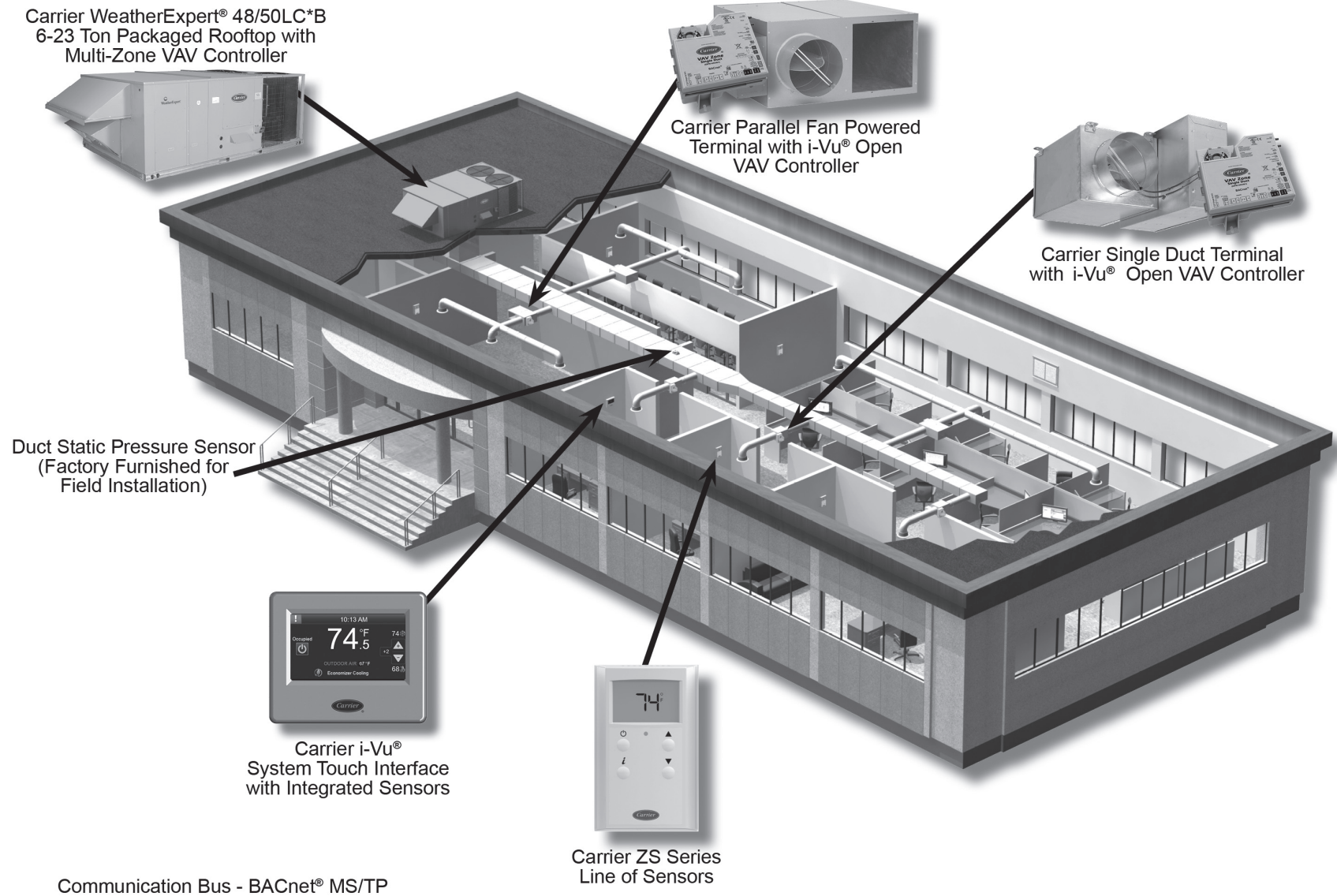
Features/Benefits (cont)



- VAV-RTU Open controller provides:
 - Integrated system control to required Carrier i-Vu® VAV zoning controls for single duct and fan terminals using BACnet MS/TP (Master-Slave/Token Passing) protocol.
 - Unit control of all stages of cooling in order to maintain the desired supply air temperature setting.
 - Supply air temperature control, including reset algorithm, will calculate a proportional reset value between occupied cooling setpoint and 1°F above the occupied heating setpoint. The amount of reset is user configurable.
 - Control for morning warm-up cycle the first time of transition from unoccupied to occupied periods.
 - Linkage from the RTU to the VAV zones in morning warm-up cycle to ensure sufficient airflow while in the heating mode.
 - Optional selected “occupied” heating, which will allow heating whenever required during the occupied period.
 - Configurable setpoint differential between heating and cooling to prevent the unit from prematurely entering the opposite mode.
 - The ability to utilize outdoor air for maintaining the supply air setpoint by using the outdoor air temperature average zone temperature.
 - BACnet¹ test points to activate specific test models that can be used to commission the rooftop and the system. Tests shall include fan test, heat test, cooling test, power exhaust test, and economizer test.
 - Linkage to required Carrier i-Vu VAV zoning controls for single duct and fan terminals using BACnet MS/TP protocol.
 - Standalone BACnet MS/TP or BAS (Building Automation System) network capabilities.
 - Two economizer minimum position settings to accommodate both minimum and maximum air flow settings.
 - Indoor fan motor modulation.
 - Field and factory wiring connections.
 - Outdoor fan motor staging.
 - Crankcase heater control.
 - Sound levels as low as 83 dB.
 - 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 airstream of the cabinet.
 - High ambient cooling operation and ratings up to 125°F (52°C).
 - Low ambient mechanical cooling operation down to 45°F (7°C). An economizer shall be the source of cooling in low ambient conditions. When the outside air temperature is below 45°F (7°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.
 - Field-convertible airflow capability on all models. On 07 size, switch panels within the units. On 08-12 sizes, a simple field-installed supply duct kit is 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 efficiency ECM outdoor fan motor with permanently lubricated bearings.
 - Low pressure switch and high-pressure switch protection.
 - Evaporator coil freeze protection.
 - High capacity liquid line filter drier.
 - Standard Limited Parts Warranty: 5 year electric heaters, 5 year compressor, 1 year parts.
1. BACnet is a trademark of ASHRAE.



TYPICAL VAV RTU-OPEN SYSTEM LAYOUT AND COMPONENTS



MODEL NUMBER NOMENCLATURE

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	5	0	L	C	0	B	1	2	A	1	A	5	-	1	N	0	A	0

Unit Heat Type

50 = Electric Cooling/Heating
Packaged Rooftop

Model Series - WeatherExpert®

LC = Ultra High Efficiency

Heat Options

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

Refrigerant Systems

B = Three stage cooling capacity control
with multi-zone VAV operation

Cooling Tons

07 = 6 ton
08 = 7.5 ton
09 = 8.5 ton
12 = 10 ton

Sensor Options

A = None
B = RA Smoke Detector
C = SA Smoke Detector
D = RA + SA Smoke Detector
E = CO₂
F = RA Smoke Detector and CO₂
G = SA Smoke Detector and CO₂
H = RA + SA Smoke Detector and CO₂

Indoor Fan Options

1 = Standard Static Belt Drive with VFD controller
2 = Medium Static Belt Drive with VFD controller
3 = High Static Belt Drive with VFD controller

Coil Options: Fin/Tube (Condenser — Evaporator — Hail Guard)

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

Packaging

0 = Standard
1 = LTL

Electrical Options

A = None
B = HACR Breaker
C = Non-Fused Disconnect
D = Thru-The-Base Connections
E = HACR Breaker and
Thru-The-Base Connections
F = Non-Fused Disconnect and
Thru-The-Base Connections

Service Options

0 = None
1 = Unpowered Convenience Outlet
2 = Powered Convenience Outlet
3 = Hinged Panels
4 = Hinged Panels and
Unpowered Convenience Outlet
5 = Hinged Panels and
Powered Convenience Outlet

Intake / Exhaust Options (required on each unit)¹

B = Low Leak Temperature Economizer
with Barometric Relief
E = Low Leak Enthalpy Economizer
with Barometric Relief
N = Ultra LOW LEAK Temperature Economizer
with Barometric Relief
R = Ultra LOW LEAK Enthalpy Economizer
with Barometric Relief

Base Unit Controls

1 = VAV-RTU Open Controller
(required on each model)

Design Revision

- = Factory Design Revision

Voltage

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

NOTE: Not all possible options can be displayed above. Refer to other support material or your local Carrier Expert.

¹Vertical air flow economizer factory option, must be field installed for horizontal air flow models.

AHRI COOLING RATINGS — 50LC*B (208v)^{a, b, c, d}

50LC*B UNIT SIZE	COOLING STAGES	HEATING OPTION	MOTOR OPTION	NOMINAL CAPACITY	NOM COOLING CAPACITY	CONFIG	TOTAL POWER (kW)	EER	SEER/IEER	RATED INDOOR AIRFLOW (CFM)
07	3	All	—	6.0	70.0	—	5.3	13.1	20.7	2,250
08	3	All	1	7.5	89.0	—	6.8	13.1	19.7	2,625
		All	2	7.5	89.0	—	6.9	13.0	19.4	2,625
		All	3	7.5	89.0	—	7.0	12.9	19.3	2,625
		All	4	7.5	89.0	—	6.9	13.0	19.4	2,625
09	3	All	1	8.5	102.0	—	7.6	13.7	21.0	2,970
		All	2	8.5	102.0	—	7.6	13.7	21.0	2,970
		All	3	8.5	102.0	—	7.7	13.6	20.8	2,970
		All	4	8.5	102.0	—	7.7	13.6	20.8	2,970
12	3	All	—	10.0	116.0	—	8.9	13.1	20.8	3,500

AHRI COOLING RATINGS — 50LC*B (230v/460v/575v)^{a, b, c, d}

50LC*B UNIT SIZE	COOLING STAGES	HEATING OPTION	MOTOR OPTION	NOMINAL CAPACITY	NOM COOLING CAPACITY	CONFIG	TOTAL POWER (kW)	EER	SEER/IEER	RATED INDOOR AIRFLOW (CFM)
07	3	All	—	6.0	70.0	—	5.3	13.1	20.5	2,250
08	3	All	1	7.5	89.0	—	6.8	13.0	19.5	2,625
		All	2	7.5	89.0	—	6.9	12.9	19.2	2,625
		All	3	7.5	89.0	—	7.0	12.8	19.1	2,625
		All	4	7.5	89.0	—	6.9	12.9	19.2	2,625
09	3	All	1	8.5	102.0	—	7.6	13.4	19.9	2,970
		All	2	8.5	102.0	—	7.6	13.4	19.9	2,970
		All	3	8.5	102.0	—	7.7	13.3	19.7	2,970
		All	4	8.5	102.0	—	7.7	13.3	19.7	2,970
12	3	All	—	10.0	116.0	—	8.9	13.1	20.5	3,500

NOTE(S):

- Rated in accordance with AHRI Standards 340/360.
- 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.
- All 50LC*B units comply with ASHRAE 90.1 Energy Star Standard for minimum IEER and EER requirements.
- 50LC*B units comply with US Energy Policy Act. To evaluate code compliance requirements, refer to state and local codes.

LEGEND

AHRI	— Air-Conditioning, Heating, and Refrigeration Institute
ASHRAE	— American Society of Heating, Refrigerating, and Air-Conditioning Engineers
EER	— Energy Efficiency Ratio
IEER	— Integrated Energy Efficiency



AHRI capacity ratings (cont)



COOLING MINIMUM/MAXIMUM CFM

50LC*B	COOLING STAGE	MAXIMUM CFM	MINIMUM CFM	MAXIMUM OD AMBIENT TEMPERATURE (°F)	MINIMUM OD AMBIENT TEMPERATURE (°F)
07	Stage 3	3000	1200	125	45
	Stage 2	2000	650		
	Stage 1	2000	650		
08	Stage 3	3750	1500	125	45
	Stage 2	2500	750		
	Stage 1	2500	750		
09	Stage 3	4250	1700	125	45
	Stage 2	2800	850		
	Stage 1	2800	850		
12	Stage 3	5000	2000	125	45
	Stage 2	3000	1000		
	Stage 1	2000	1000		

SOUND PERFORMANCE^{a, b, c}

50LC*B	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz								
		A-Weighted	63	125	250	500	1000	2000	4000	8000
07	3	82	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
08	3	83	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5
09	3	83	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5
12	3	83	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5

NOTE(S):

- Outdoor sound data is measure in accordance with AHRI.
- 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 that normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
- A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of the "average" human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

LEGEND

dB — Decibel

PHYSICAL DATA (COOLING) 6-10 TONS

	50LC*07	50LC*08	50LC*09	50LC*12
REFRIGERATION SYSTEM				
No. Circuits/No. Comp./Type/Clg Stages	1/2/Scroll/3	1/2/Scroll/3	1/2/Scroll/3	1/2/Scroll/3
RTPF Models R-410A Charge A/B (lb-oz)	15-8	22-5	25-11	24-15
Metering Device	TXV	TXV	TXV	TXV
High-Press. Trip/Reset (psig)	630/505	630/505	630/505	630/505
Low-Press. Trip/Reset (psig)	54/117	54/117	54/117	54/117
Loss of Charge Trip/Reset (psig)	27/44	27/44	N/A	N/A
EVAPORATOR COIL				
Material	Cu/Al	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Coil Length (in.)	40	52.5	52.5	52.5
Coil Height (in.)	40	48	48	48
Rows/FPI	4/15	4/15	4/15	4/15
Total Face Area (ft ²)	11.1	17.5	17.5	17.5
Condensate Drain Conn. Size (in.)	3/4 in.	3/4 in.	3/4 in.	3/4 in.
EVAPORATOR FAN AND MOTOR				
Standard Static 3 Phase	Motor Qty./Drive Type	1/Belt	1/Belt	1/Belt
	Max bhp	1.7	1.7	2.4
	Rpm Range	356-534	338-507	338-507
	Motor Frame Size	56	56	56Z
	Fan Qty./Type	1/Centrifugal	1/Centrifugal	1/Centrifugal
Medium Static 3 Phase	Fan Diameter (in.)	15.5 x 15	18.5 x 18	18.5 x 18
	Motor Qty./Drive Type	1/Belt	1/Belt	1/Belt
	Max bhp	1.7	1.7	2.9
	Rpm Range	539-809	488-675	488-675
	Motor Frame Size	56	56	56
High Static 3 Phase	Fan Qty./Type	1/Centrifugal	1/Centrifugal	1/Centrifugal
	Fan Diameter (in.)	15.5 x 15	18.5 x 18	18.5 x 18
	Motor Qty./Drive Type	1/Belt	1/Belt	1/Belt
	Max bhp	2.9	2.9	4.9
	Rpm Range	799-1054	623-863	675-863
Super Static 3 Phase	Motor Frame Size	56	56HZ	145TZ
	Fan Qty./Type	1/Centrifugal	1/Centrifugal	1/Centrifugal
	Fan Diameter (in.)	15.5 x 15	18.5 x 18	18.5 x 18
	Motor Qty./Drive Type	N/A	1/Belt	N/A
	Max bhp (208/230/460/575v)	N/A	3.7	4.9
	Rpm Range	N/A	847-1150	832-1021
	Motor Frame Size	N/A	56HZ	145TZ
	Fan Qty./Type	N/A	1/Centrifugal	1/Centrifugal
	Fan Diameter (in.)	N/A	18.5 x 18	18.5 x 18
		N/A	18.5 x 18	N/A
COND. COIL 1				
Material	Cu/Al	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Coil Length (in.)	82	100	64	64
Coil Height (in.)	44	52	52	52
Rows/FPI	2/18	2/18	2/18	2/18
Total Face Area (ft ²)	25.1	36.1	23.1	23.1
COND. COIL 2				
Material	—	—	Cu/Al	Cu/Al
Coil Type	—	—	5/16 in. RTPF	5/16 in. RTPF
Coil Length (in.)	—	—	64	64
Coil Height (in.)	—	—	52	52
Rows/FPI	—	—	2/18	2/18
Total Face Area (ft ²)	—	—	23.1	23.1
COND. FAN/MOTOR				
Qty./Motor Drive Type	2/direct	3/direct	3/direct	3/direct
Motor HP/rpm	1/3/1000	1/3/1000	1/3/1000	1/3/1000
Fan Diameter (in.)	22	22	22	22
FILTERS				
RA Filter No./size (in.)	4/20 x 20 x 2	6/18 x 24 x 2	6/18 x 24 x 2	6/18 x 24 x 2
OA inlet screen No./size (in.)	V 2/24 x 27 x 1 H 1/30 x 39 x1	V 2/24 x 27 x 1 H 1/30 x 39 x1	V 2/24 x 27 x 1 H 1/30 x 39 x2	V 2/24 x 27 x 1 H 1/30 x 39 x2

FACTORY-INSTALLED OPTIONS AND FIELD-INSTALLED ACCESSORIES

CATEGORY	ITEM	FACTORY-INSTALLED OPTION	FIELD-INSTALLED ACCESSORY
Cabinet	Thru-the-base electrical connections	X	X
	Hinged access panels	X	
Coil options	Cu/Cu indoor and/or outdoor coils	X	
	Pre-coated outdoor coils	X	
	Premium, E-coated outdoor coils	X	
Condenser Protection	Condenser coil hail guard (louvered design)	X	X
Controls	VAV-RTU Open	Required	
	Smoke detector (supply and/or return air)	X	
	Phase Monitor		X
	i-Vu® Equipment Touch; Carrier brand 4.3 in. color touch screen zone sensor and local user interface for a single Open (BACnet MS/TP) equipment controller. Includes built-in temperature and humidity sensor.		X
	i-Vu System Touch; Carrier brand 4.3 in. color touch screen user interface connects to a network of up to 60 Open (BACnet MS/TP) equipment controllers. Includes built-in temperature and humidity sensor.		X
Economizers and Outdoor Air Dampers	EconoMi\$er 2 for VAV-RTU Open controls, complies with FDD. (Low Leak and Ultra Low Leak air damper models) ^{a, b}	Required (Vertical air flow)	Required (Horizontal air flow)
	Barometric relief ^c	X	X
	Power exhaust (Prop design)		X
Economizer Sensors and IAQ Devices	Single dry bulb temperature sensors ^d	X	X
	Differential dry bulb temperature sensors ^d		X
	Single enthalpy sensors ^d	X	X
	Differential enthalpy sensors ^d		X
	CO ₂ sensor (wall, duct, or unit mounted) ^d	X	X
Zone Air Terminal Sensors	Full range of Carrier zone air terminal space sensors are available with capabilities of combining: Space temperature, sensors with communication ports, sensors with CO ₂ sensing, sensors with LCD display, sensors with local override and indicating light.		X
VAV Zone Air Terminals	A full range of zone air terminals shall be a i-Vu VAV Zone Single Duct and Fan Terminal type for optimum integrated system solution. This includes: • 35E – Single Duct Air Terminals • 45J – Series Fan Powered Air Terminals • 45K – Quiet Series Fan Powered Air Terminals • 45M – Parallel Fan Powered Air Terminals • 45N – Quiet Parallel Fan Powered Air Terminals • 45Q – Low Profile Series Fan Powered Air Terminals • 45R – Low Profile Parallel Fan Powered Air Terminals • 35J – Single Duct Retrofit Air Terminals		X
Electric Heat	Electric Resistance Heaters	X	X
	Single Point Kit	X	X
Indoor Motor and Drive	Multiple motor and drive packages	X	
Power Options	Convenience outlet (powered)	X	
	Convenience outlet (unpowered)	X	
	HACR Circuit Breaker ^{e, f}	X	
	Non-fused disconnect ^g	X	
Roof Curbs	Roof curb 14 in. (356 mm)		X
	Roof curb 24 in. (610 mm)		X

NOTE(S):

- FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.
- Field-installed economizer required on horizontal air flow models.
- Included with economizer.
- Sensors used to optimize economizer performance.
- On 575V applications, HACR breaker can only be used with WYE power distribution systems. Using on Delta power distribution systems is prohibited.
- 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.
- On 208/230-460 units with FIOP Non-Fused Disconnect, a Single Point Box accessory may be required. Refer to electric heat data table on pages 62-65 for more information.

Factory Options and/or Accessories

Economizer (Required on All Models)

Economizers save energy and 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 CO₂ sensors, economizers can provide even more savings by coupling the ventilation air to only the amount required based on space occupancy.

Economizers are available, installed and tested by the factory, with either enthalpy or temperature dry-bulb inputs. 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 low leak versions.

Ultra Low Leak Economizer

This meets low leak requirements for ASHRAE 90.1 and CA Title 24 standards (4 cfm/ft at 1 in. wg outdoor air, 10 cfm/ft at 1 in. wg return air). This option allows 100% outdoor air supply from 0-100% modulating dampers and is standard with barometric relief. It can be paired with powered exhaust for additional building pressure relief.

Fault Detection and Diagnostics (FDD)

This offering meets the mandatory requirement of CA Title 24 of fully configurable diagnostics allowing fault history and reading fault codes at the unit. This option provides detection of the following faults: air temperature sensor failure/fault and notification of acceptable economizer mode. The FDD system shall be certified by the Energy Commission as meeting the requirements.

CO₂ Sensor

Improves productivity and saves money by working with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO₂ sensor detects their presence through increasing CO₂ levels and opens the economizer appropriately. When the occupants leave, the CO₂ levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called Demand Controlled 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 Unpowered)

Reduce service and/or installation costs by including a convenience outlet in your specification. Carrier will install this

service feature at our factory. It 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 does not accommodate any field items, such as power exhaust devices, etc.

Power Exhaust

Provides superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans coordinating with economizer position and supply fan system airflow.

Hinged Access Panels

This allows access to a 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 main power lines, as well as control power.

Electric Heaters

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

HACR Breaker

These manual reset devices provide overload and short circuit protection for the unit. They are factory wired and mounted with the units, with an access cover to help provide environment protection.

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.

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

Zone Terminal Sensors

A full range of Carrier zone air terminal space sensors are available with capabilities combining:

- Space temperature sensing
- Sensors with communication ports
- Sensors with CO₂ sensing
- Sensors with LCD display
- Sensors with local override and indicating light
- Sensors with humidity sensing

Plus compatibility with:

- i-Vu® Equipment Touch; Carrier brand 4.3 in. color touch screen zone sensor and local user interface, for a single Open (BACnet MS/TP) equipment controller. Includes built-in temperature and humidity sensor.
- i-Vu System Touch; Carrier brand 4.3 in. color touch screen user interface connects to a network of up to 60 Open (BACnet MS/TP) equipment controllers. Includes built-in temperature and humidity sensor.

VAV Zone Air Terminals

A full range of zone air terminals shall be an i-Vu VAV Zone Single Duct and Fan Terminal type for optimum integrated system solution. This includes:

- 35E — Single Duct Air Terminals
- 45J — Series Fan Powered Air Terminals
- 45K — Quiet Series Fan Powered Air Terminals
- 45M — Parallel Fan Powered Air Terminals
- 45N — Quiet Parallel Fan Powered Air Terminals
- 45Q — Low Profile Series Fan Powered Air Terminals
- 45R — Low Profile Parallel Fan Powered Air Terminals
- 35J — Single Duct Retrofit Air Terminals

OPTION/ACCESSORY	WEIGHTS IN LB			
	50LC*B07	50LC*B08	50LC*B09	50LC*B12
Low Electric Heat	57	49	49	49
Medium Electric Heat	69	62	62	62
High Electric Heat	105	65	65	65
Return Smoke Detector	5	5	5	5
Supply Smoke Detector	5	5	5	5
RA and SA Smoke Detector	10	10	10	10
CO2 Sensor	5	5	5	5
RA Smoke Detector and CO2	10	10	10	10
SA Smoke Detector and CO2	10	10	10	10
RA and SA Smoke Detector and CO2	15	15	15	15
Medium Static Option — Belt Drive	15	45	45	45
High Static Option — Belt Drive	15	45	45	45
Cu/Cu Cond and Al/Cu Evap	23	25	25	25
Cu/Cu Cond and Cu/Cu Evap	49	47	47	47
Al/Cu Cond and Al/Cu Evap + Hail Guard	34	45	45	45
Precoat Al/Cu Cond and Al/Cu Evap + Hail Guard	34	45	45	45
E-coat Al/Cu Cond and Al/Cu Evap + Hail Guard	34	45	45	45
E-coat Al/Cu Cond and Ecoat Al/Cu Evap + Hail Guard	34	45	45	45
Cu/Cu Cond and Al/Cu Evap + Hail Guard	57	70	70	70
Cu/Cu Cond and Cu/Cu Evap + Hail Guard	83	92	92	92
Temp Ultra Low Leak Econo with Baro Relief	74	103	103	103
Enthalpy Ultra Low Leak Econo with Baro Relief	74	103	103	103
Unpowered Convenience Outlet	5	5	5	5
Powered Convenience outlet	35	35	35	35
Hinged Panels	5	5	5	5
Hinged Panels with Unpowered Convenience Outlet	10	10	10	10
Hinged Panels with Powered Convenience Outlet	40	40	40	40
HACR Breaker	10	10	10	10
Non-Fused Disconnect	15	15	15	15
Thru-the-Base	4	4	4	4
HACR Breaker with Thru-Base Connections	14	14	14	14
Non-Fused Disconnect + Thru-the-Base	19	19	19	19

UNIT DIMENSIONS 50LC*B07

- NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN () ARE IN MILLIMETERS.
 2.  CENTER OF GRAVITY
 3.  DIRECTION OF AIR FLOW
 4.  ALL VIEW DRAWN USING 3RD ANGLE

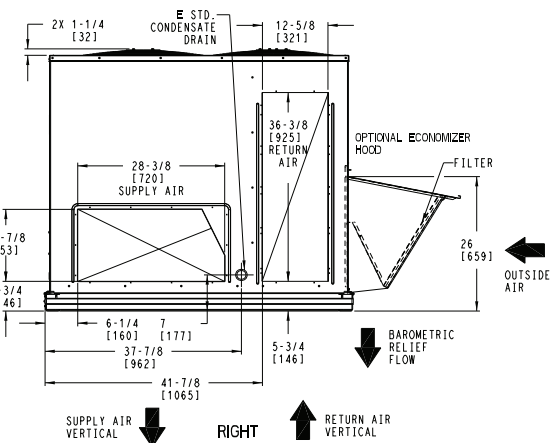
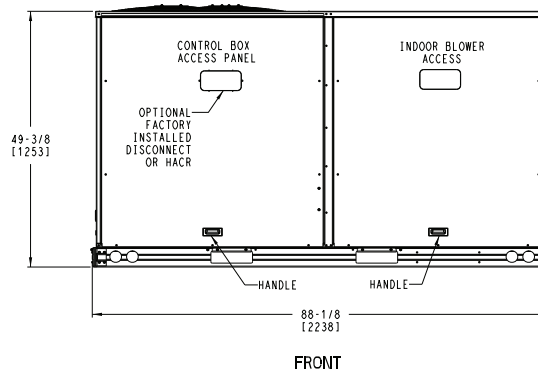
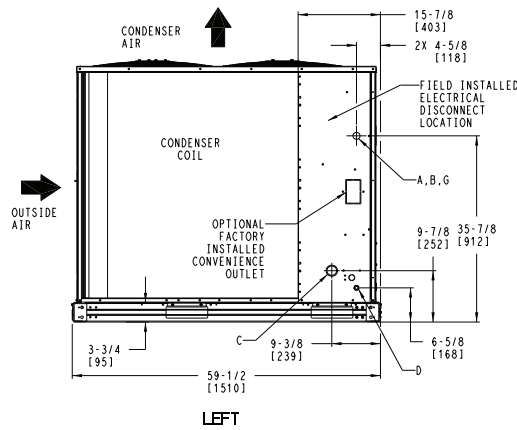
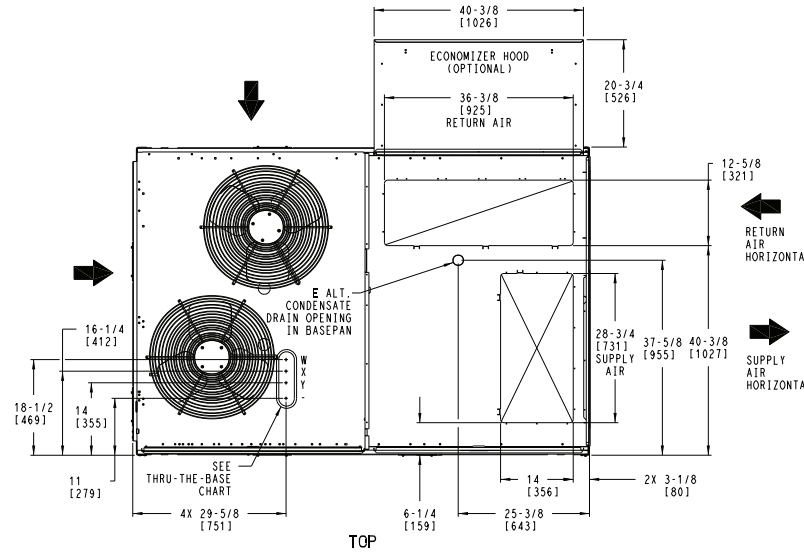
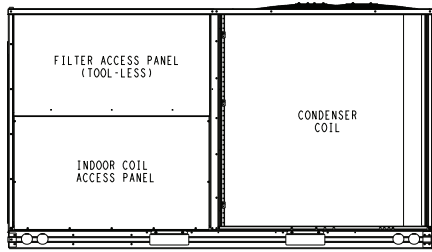
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CONNECTION SIZES		
A	1 3/8" [35] DIA	FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA	POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA	GAUGE ACCESS PLUG
D	7/8" [22] DIA	FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
G	2" [51] DIA	POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART (FIELD INST)
THESE HOLES REQUIRED FOR USE WITH ACCY KITS: CRBTMPW002A01

	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y	1 1/4" [002]	POWER	1 3/4" [44.4]

THRU-THE-BASE CHART (FIOP)
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED:
(1) 1/2" & (1) 1 1/4" ELECTRICAL FITTINGS.

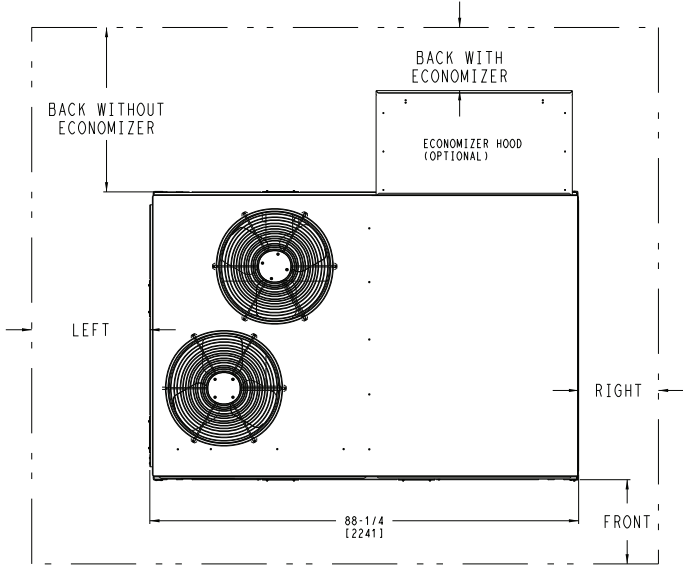
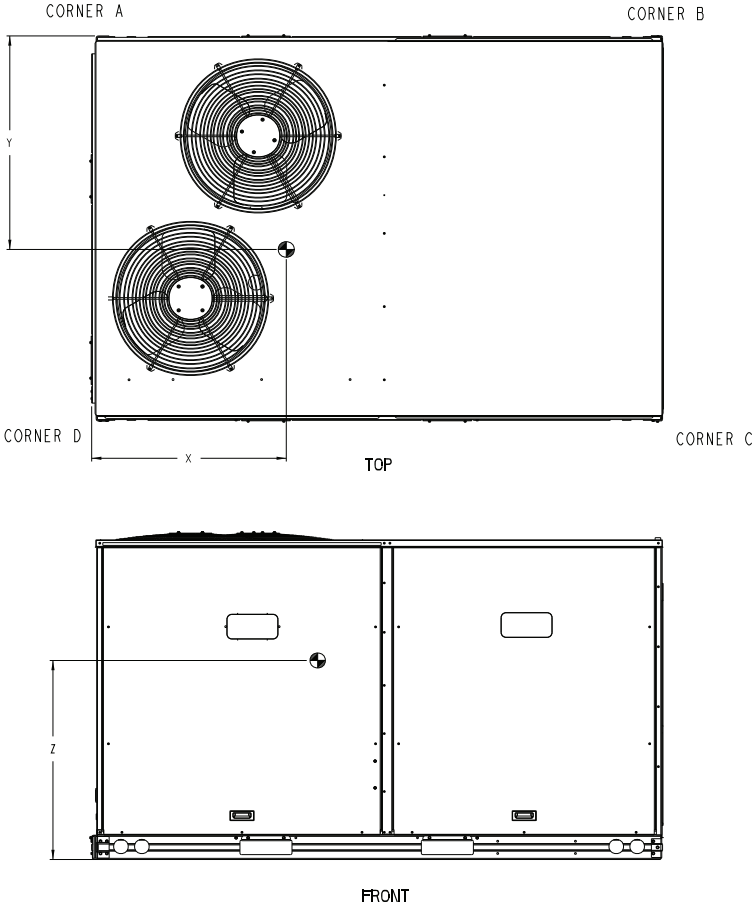


ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50LC 07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500392	REV
U.S. ECCN: NSR	1 OF 3	03/07/22	07/11/14			C

UNIT DIMENSIONS 50LC*B07 (cont)

UNIT	OUTDOOR COIL TYPE	STD. UNIT WEIGHT ***		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50LC 07	RTPF	967	439	211	96	191	87	268	122	297	135	41 3/4 [1060]	24 3/4 [629]	20 3/4 [527]

*** STANDARD UNIT WEIGHT IS WITH NO HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



NOTE:
1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

SURFACE	CLEARANCE		OPERATING CLEARANCE
	SERVICE WITH CONDUCTIVE BARRIER	SERVICE WITH NONCONDUCTIVE BARRIER	
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

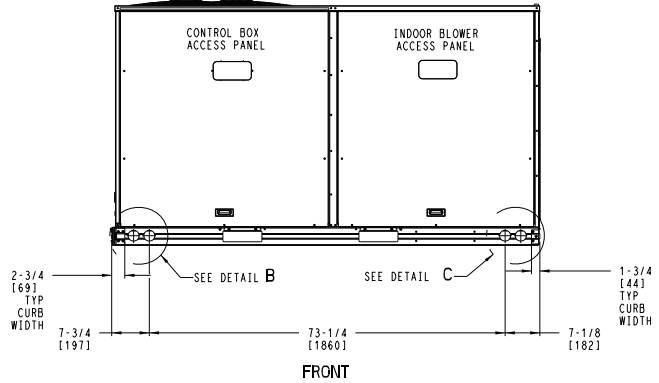
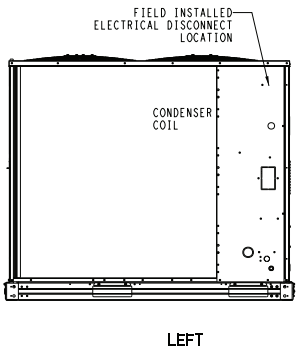
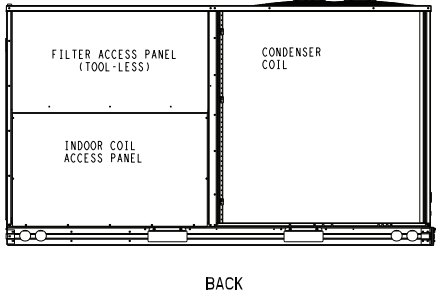
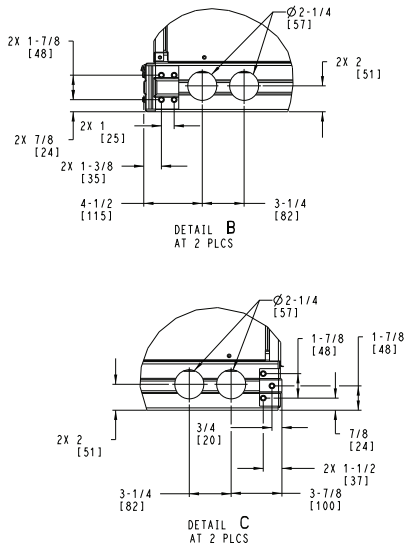
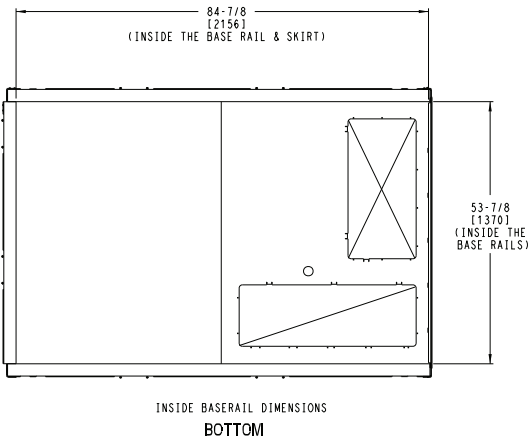
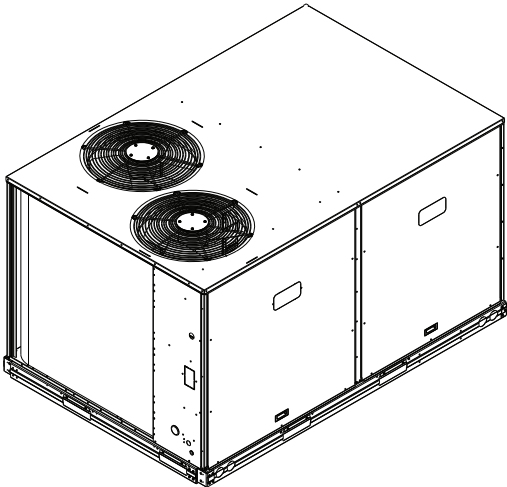
ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50LC 07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500392	REV
U.S. ECCN: NSR	2 OF 3	03/07/22	07/11/14			C

UNIT DIMENSIONS 50LC*B07 (cont)



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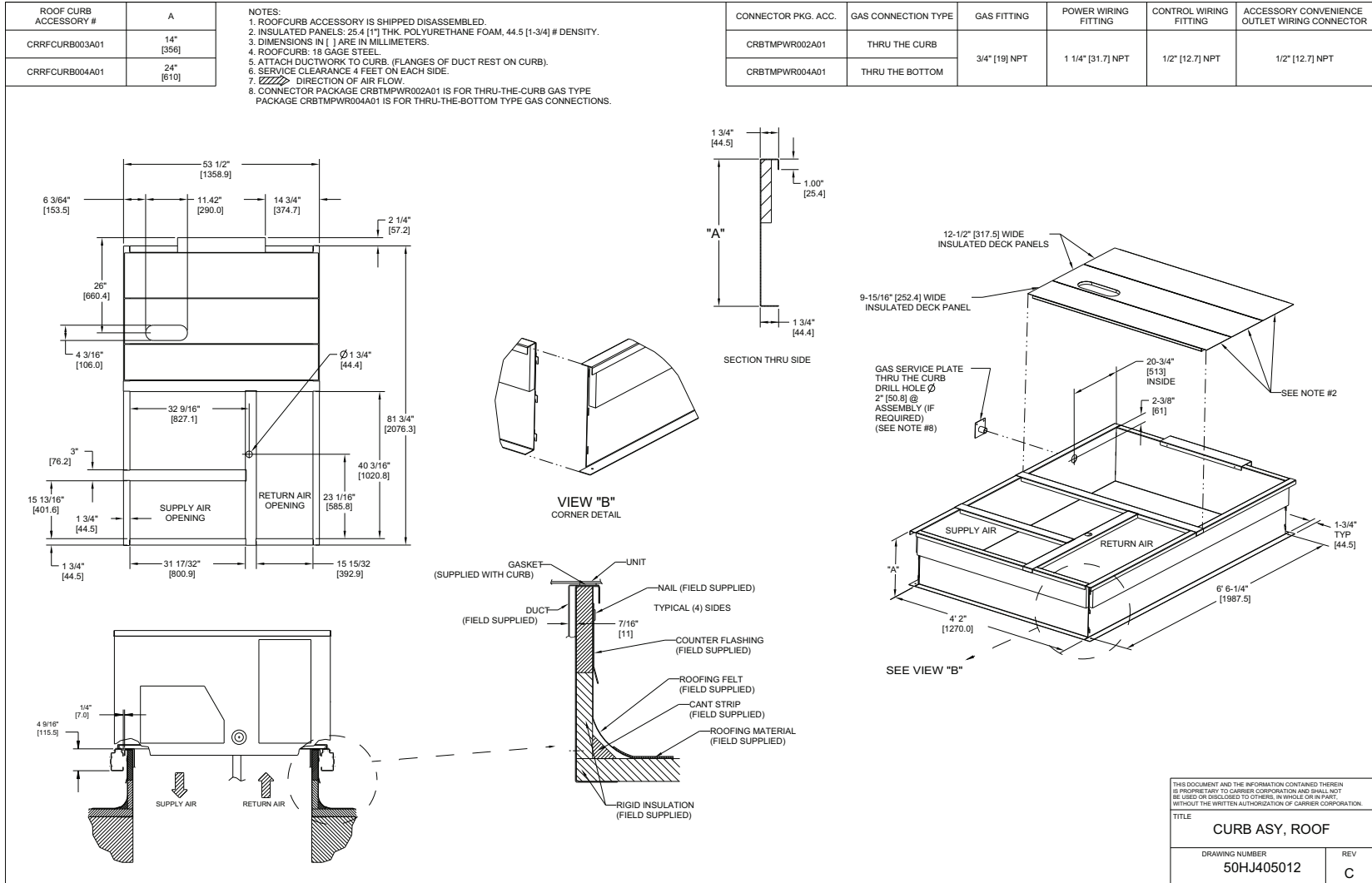
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ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50LC 07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500392	REV C
U.S. ECCN: NSR	3 OF 3	03/07/22	07/11/14			



ROOF CURB DETAILS 50LC*B07



UNIT DIMENSIONS 50LC*B08

- NOTES:
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2.  CENTER OF GRAVITY
 3.  DIRECTION OF AIR FLOW
 4.  ALL VIEW DRAWN USING 3RD ANGLE



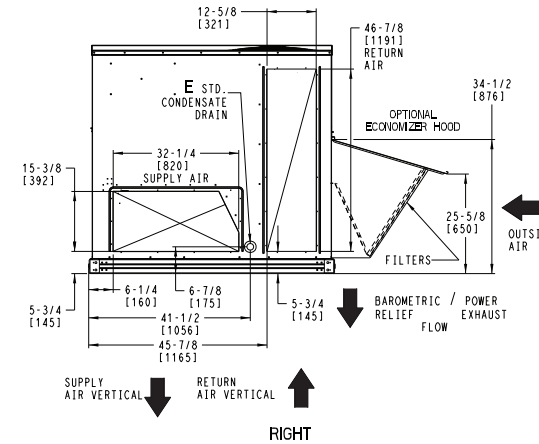
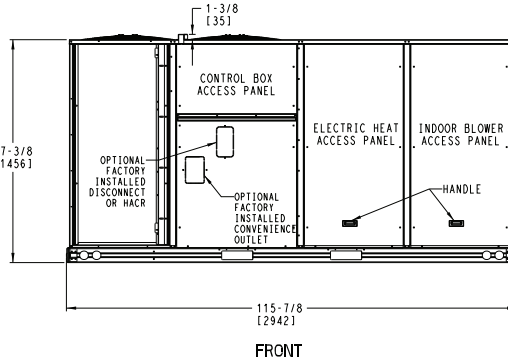
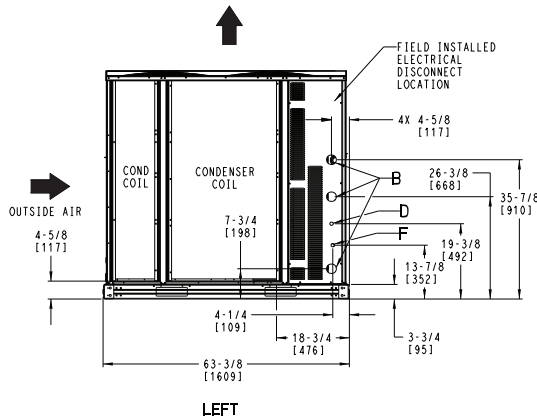
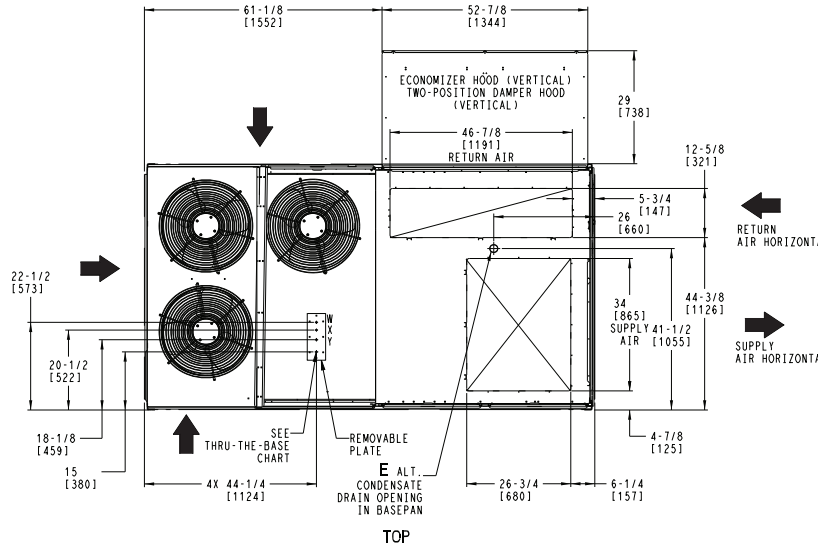
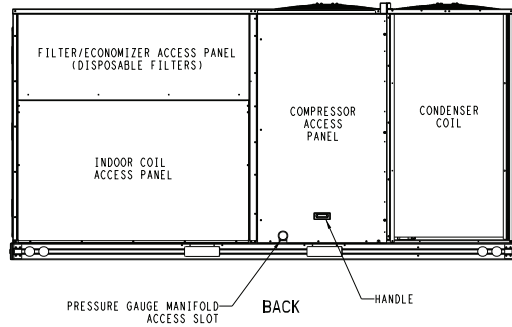
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SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

CONNECTION SIZES			
B	2 1/2" [64]	DIA POWER SUPPLY HOLE	
D	7/8" [22]	DIA FIELD CONTROL WIRING HOLE	
E	3/4"-14 NPT	CONDENSATE DRAIN	
F	7/8" [22]	DIA FIELD CONVENIENCE OUTLET HOLE	

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPNR005A00, 006A00, 007A00				
ACCESSORY NO.	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)	
005	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 1 1/4"	POWER	1 1/2" [38.1]	
006	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 1 1/2"	POWER	2" [50.8]	
007	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 2"	POWER	2 1/2" [63.5]	

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



ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50LC 08 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500407	REV
U.S. ECCN:NSR	1 OF 4	03/07/22	05/08/13			B

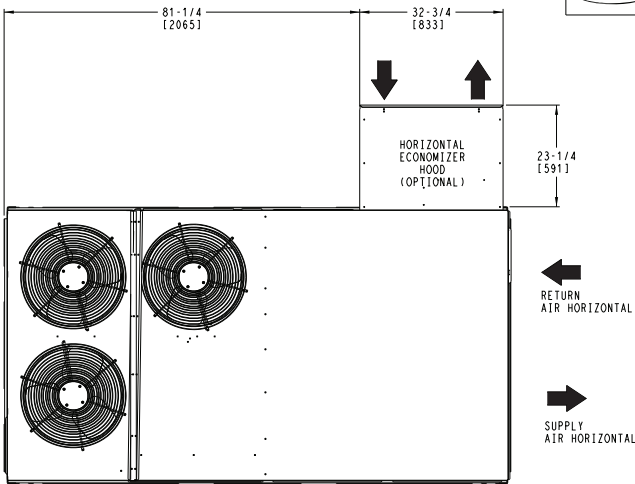




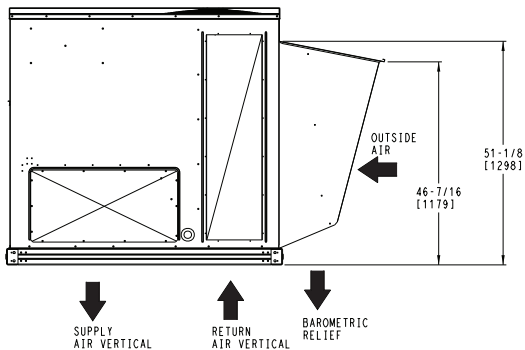
UNIT DIMENSIONS 50LC*B08 (cont)

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TOP



RIGHT

HORIZONTAL ECONOMIZER

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50LC 08 SINGLE ZONE ELECTRICAL	48LC500407	REV
U.S. ECCN:NSR	2 OF 4	03/07/22	05/08/13	COOLING WITH ELECTRIC HEAT		B

UNIT DIMENSIONS 50LC*B08 (cont)

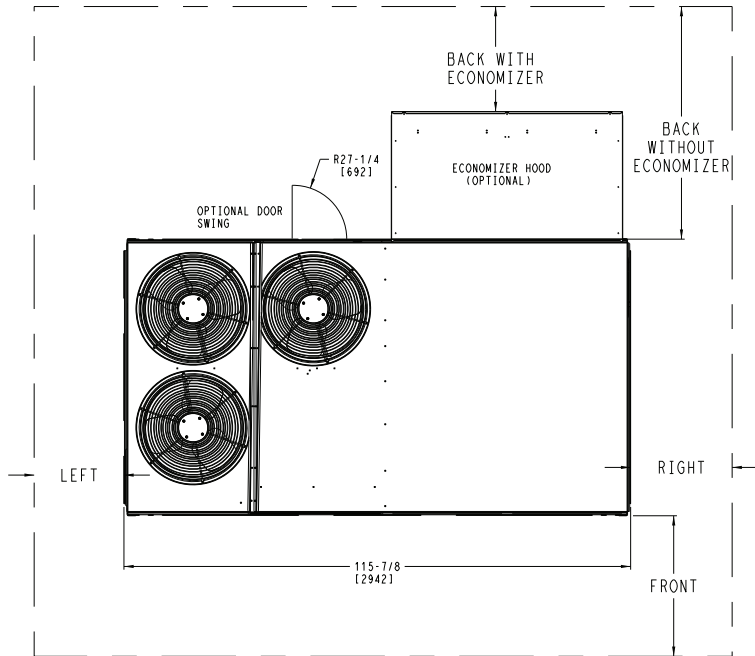
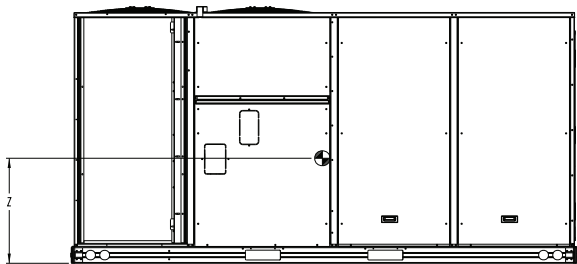
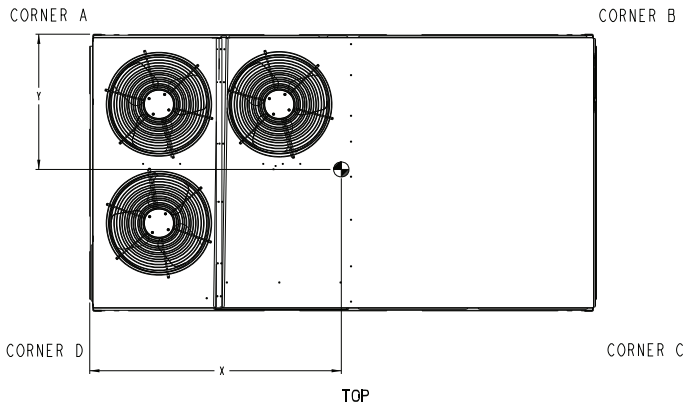
UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50LC 08	1535	696	407	185	397	180	361	164	370	168	57 [1448]	33 [838]	20 5/8 [524]

STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.
FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



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NOTE:
1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

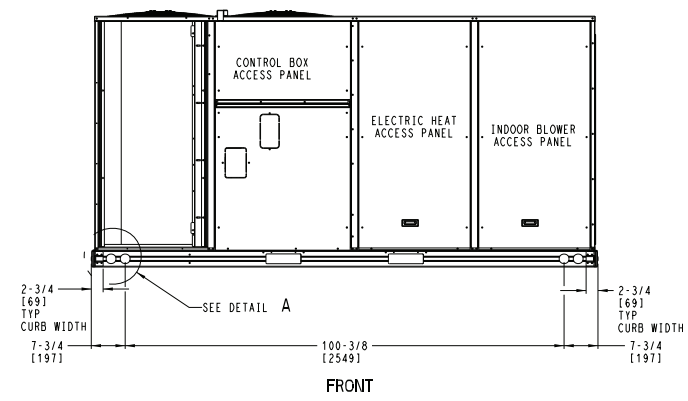
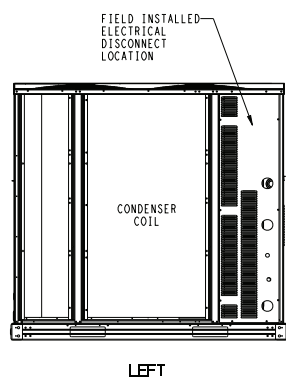
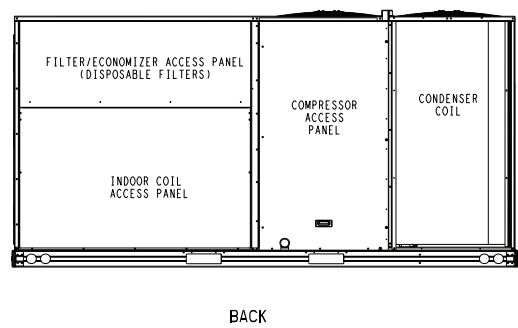
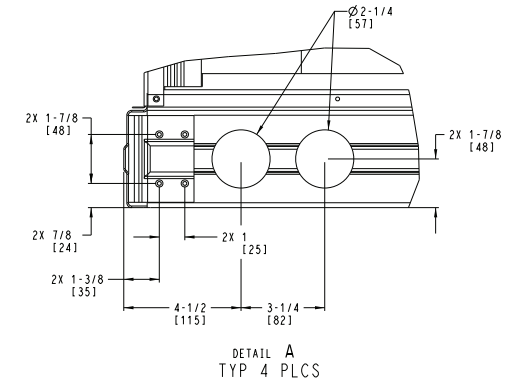
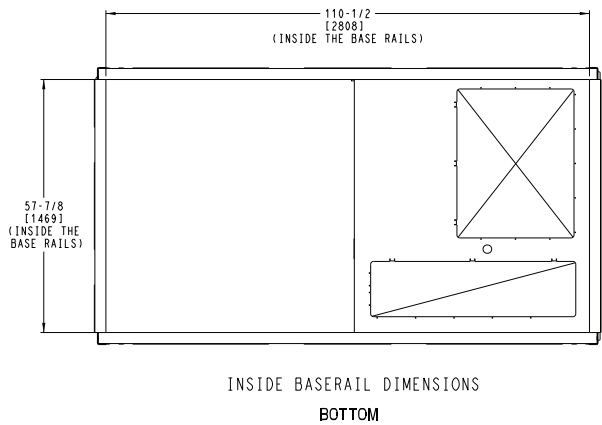
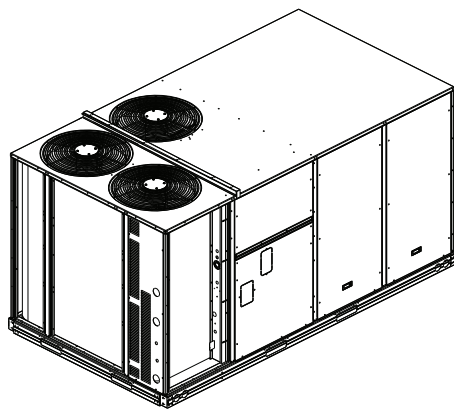
CLEARANCE			
	SERVICE WITH: CONDUCTIVE BARRIER	SERVICE WITH: NONCONDUCTIVE BARRIER	OPERATING CLEARANCE
SURFACE	48 [1219mm]	36 [914mm]	18 [457mm]
FRONT	48 [1219mm]	42 [1067mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 3 OF 4	DATE 03/07/22	SUPERCEDES 05/08/13	50LC 08 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500407	REV B
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UNIT DIMENSIONS 50LC*B08 (cont)

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ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 4 OF 4	DATE 03/07/22	SUPERCEDES 05/08/13	50LC 08 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500407	REV B
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UNIT DIMENSIONS 50LC*B09-12

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW
4.  ALL VIEW DRAWN USING 3RD ANGLE

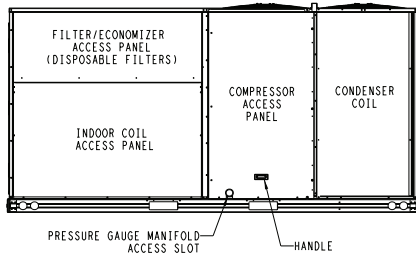


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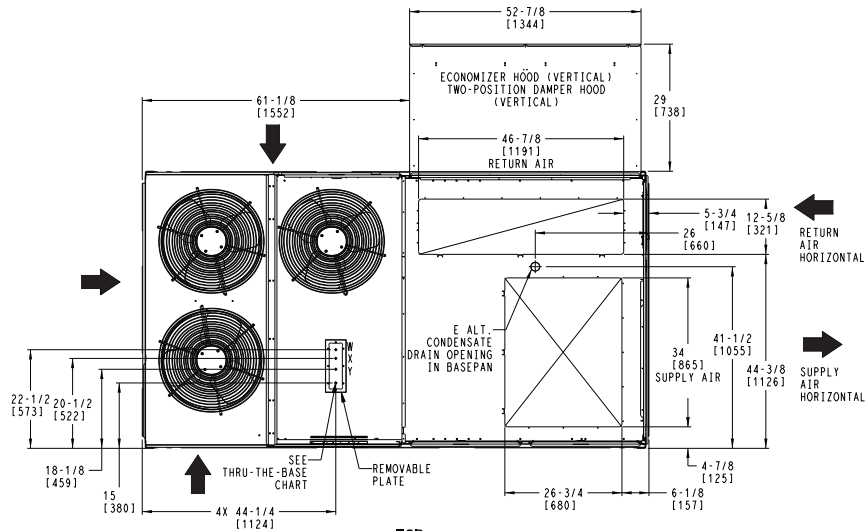
SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

CONNECTION SIZES		
B	2 1/2" [64]	DIA POWER SUPPLY HOLE
D	7/8" [22]	DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
F	7/8" [22]	DIA FIELD CONVENIENCE OUTLET HOLE

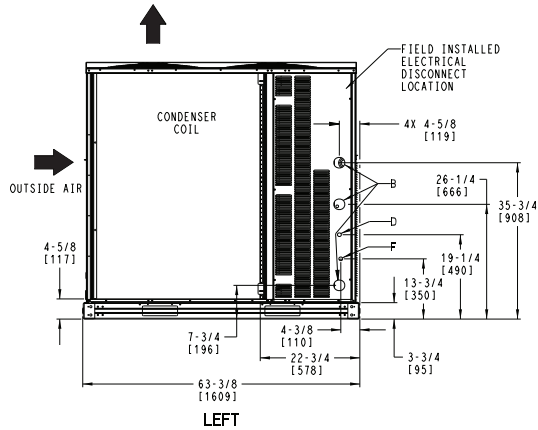
THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMP#R005A00,006A00,007A00				
ACCESSORY NO.	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)	
005	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 1 1/4"	POWER	1 1/2" [38.1]	
006	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 1 1/2"	POWER	2" [50.8]	
007	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 2"	POWER	2 1/2" [63.5]	
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR X & Y ARE PROVIDED AS SPECIFIED ON "006".				



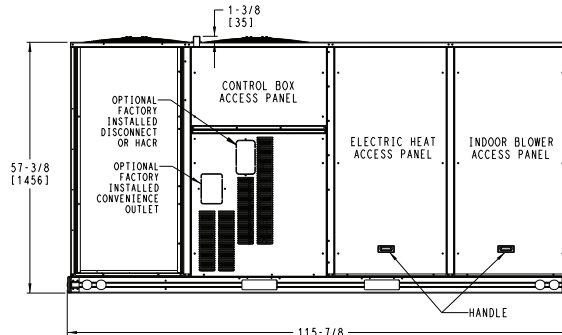
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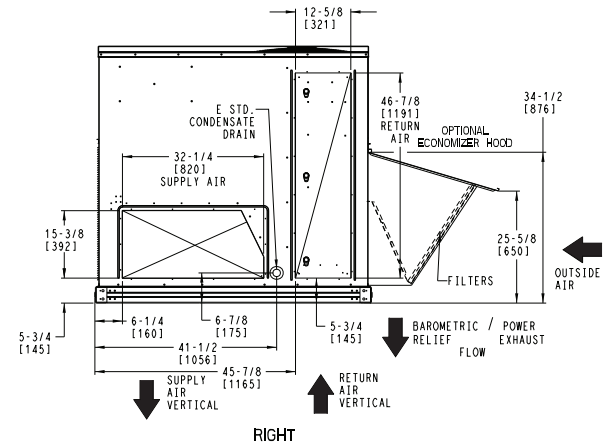
TOP



LEFT



FRONT



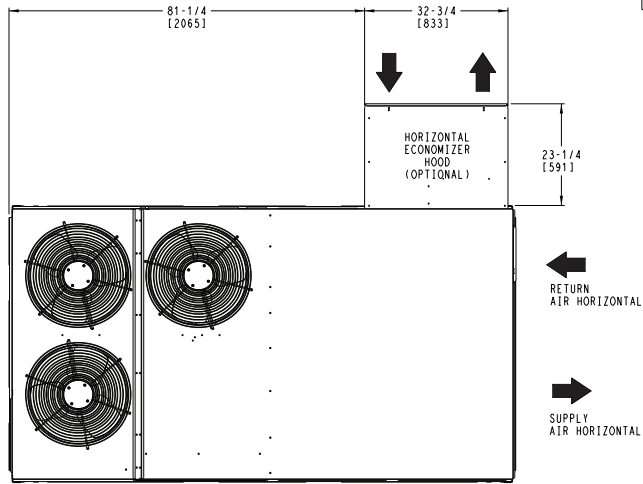
RIGHT

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50LC 09-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500389	REV
U.S. ECCN: NSR	1 OF 4	03/07/22	05/08/13			B

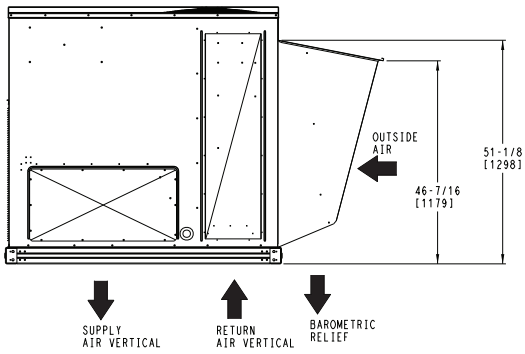


UNIT DIMENSIONS 50LC*B09-12 (cont)

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TOP



RIGHT

HORIZONTAL ECONOMIZER

ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 2 OF 4	DATE 03/07/22	SUPERCEDES 05/08/13	50LC 09-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500389	REV B
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UNIT DIMENSIONS 50LC*B09-12 (cont)

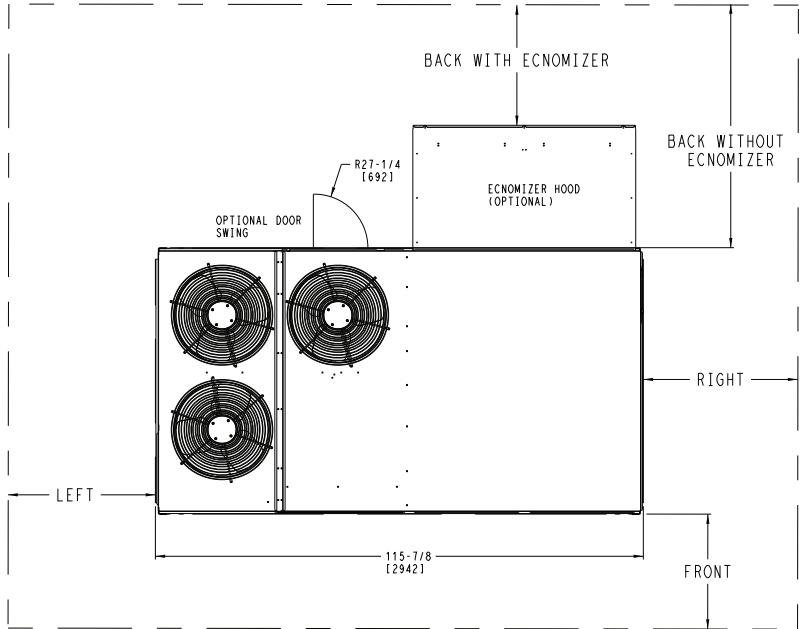
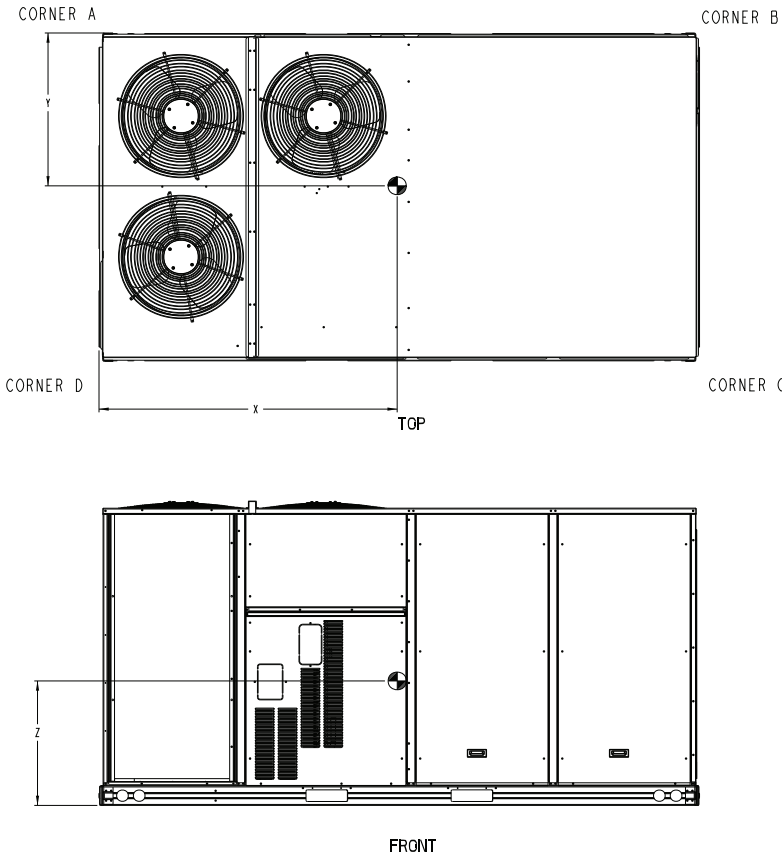
UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50LC 09	1536	697	388	174	392	178	380	172	374	171	58 [1473]	32 [812]	20 5/8 [524]
50LC 12	1536	697	388	174	392	178	380	172	374	171	58 [1473]	32 [812]	20 5/8 [524]

STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.
FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



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SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.



CLEARANCE			
SURFACE	SERVICE WITH: CONDUCTIVE BARRIER	SERVICE WITH: NONCONDUCTIVE BARRIER	OPERATING CLEARANCE
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION U.S. ECCN:NSR	SHEET 3 OF 4	DATE 03/07/22	SUPERCEDES 05/08/13	50LC 09-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500389	REV B
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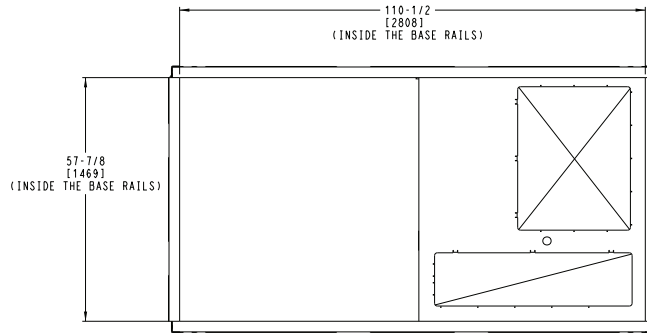
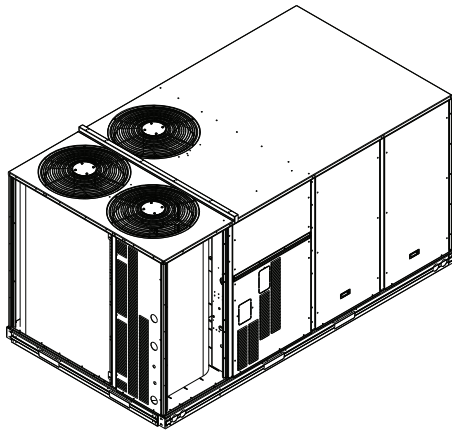


UNIT DIMENSIONS 50LC*B09-12 (cont)

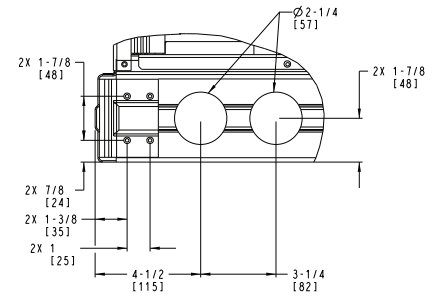


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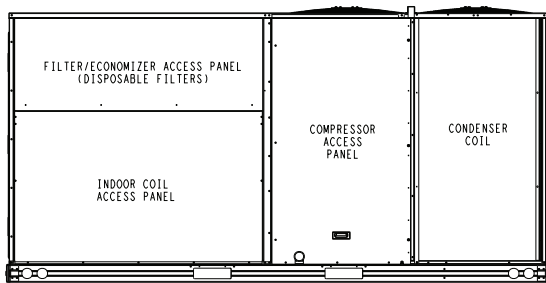
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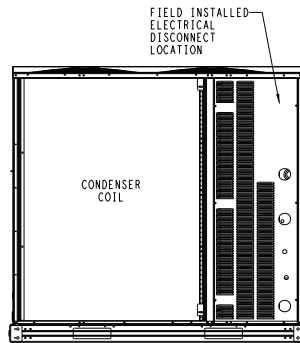
INSIDE BASERAIL DIMENSIONS
BOTTOM



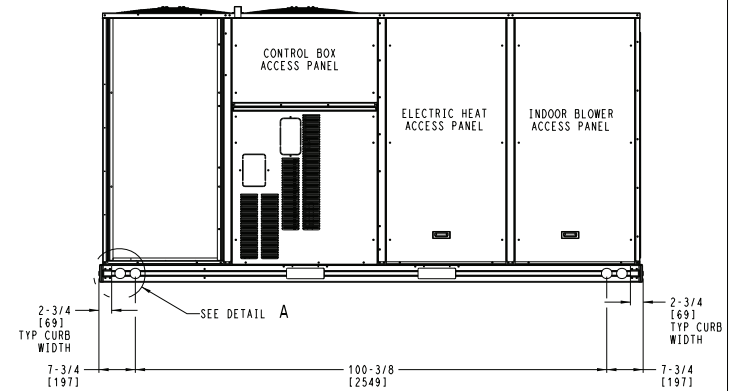
DETAIL A
TYP 4 PLCS



BACK



LEFT



FRONT

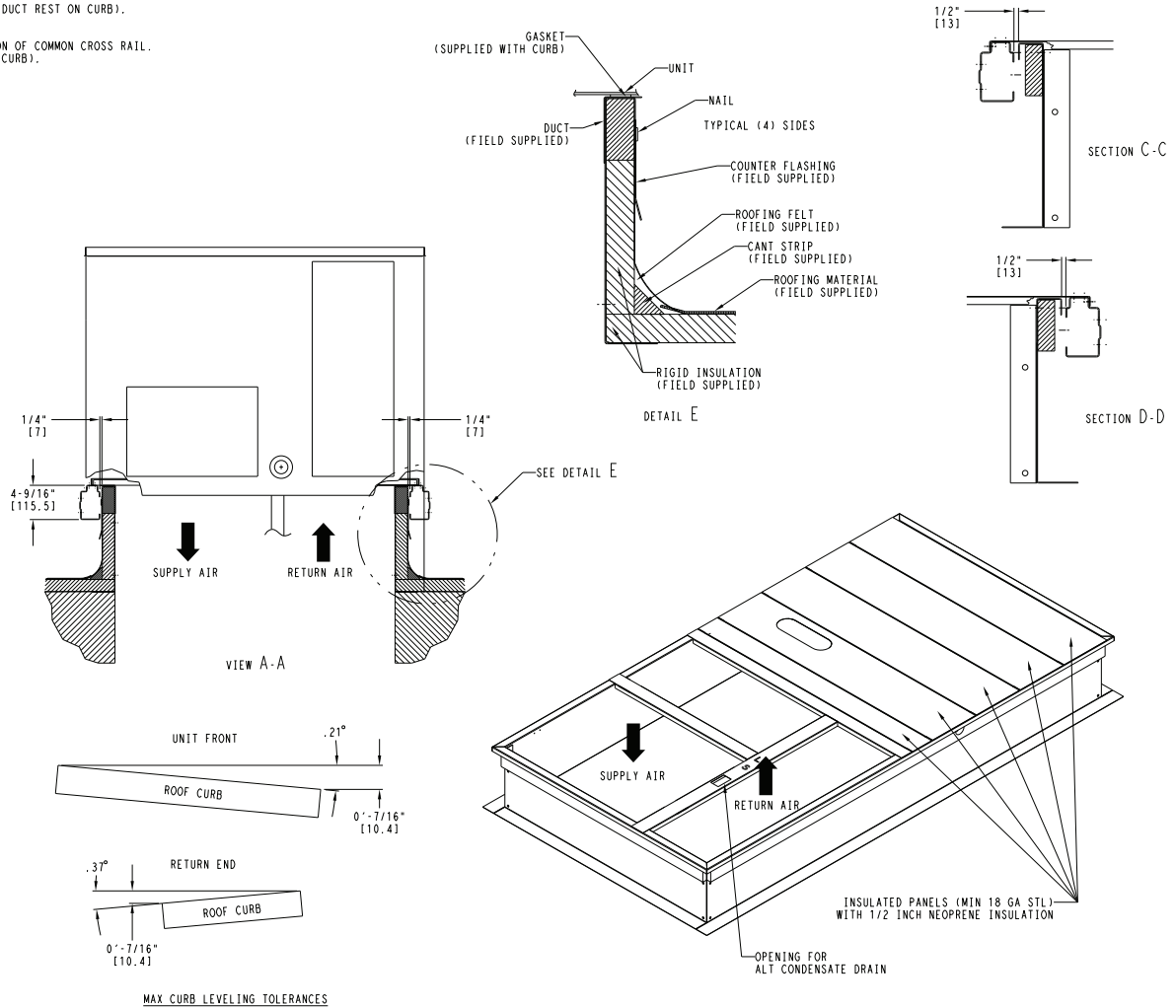
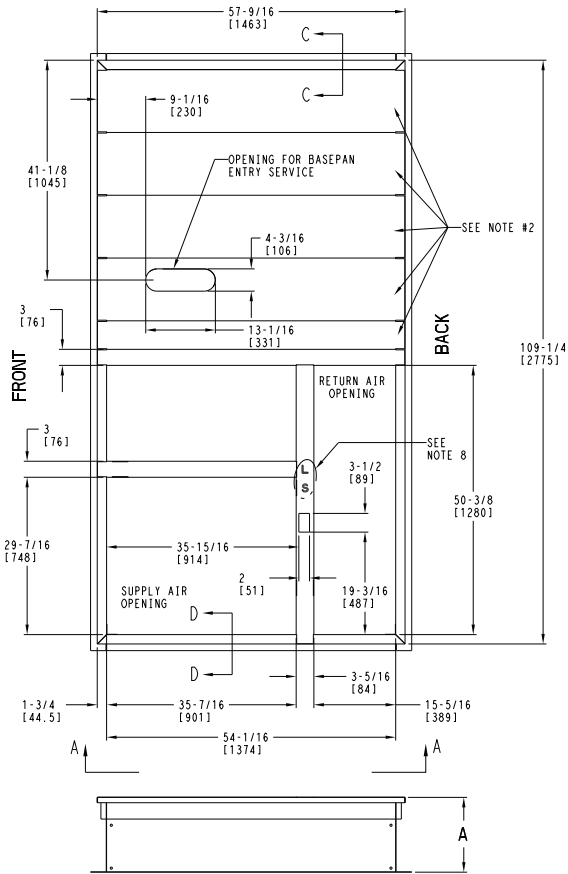
ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 4 OF 4	DATE 03/07/22	SUPERCEDES 05/08/13	50LC 09-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500389	REV B
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ROOF CURB DETAILS 50LC*B08-12

ROOF CURB ACCESSORY #	A
CRRCURB074A00	14" [356]
CRRCURB075A00	24" [610]

- NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
 2. INSULATED PANELS: 1/2" THK. NEOPRENE FOAM, 1.0# DENSITY.
 3. DIMENSIONS IN () ARE IN MILLIMETERS.
 4. ROOFCURB SIDEWALLS: 16 GAGE STEEL.
 5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
 6. SERVICE CLEARANCE 4 FT ON EACH SIDE.
 7. → DIRECTION OF AIR FLOW.
 8. "L" & "S" DESIGNATIONS DENOTE LOCATION OF COMMON CROSS RAIL. (POSITION "L" FOR LARGE DUCT OPENING CURB).



COOLING CAPACITIES — FIRST STAGE, PART LOAD (6 TONS)

50LC*B SIZE 07			AMBIENT TEMPERATURE (°F)																					
			65			75			85			95			105			115			125			
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
650 cfm	EAT (wb)	58	TC	31.6	31.6	34.5	30.6	33.0	29.5	29.5	32.0	28.3	28.3	31.4	27.0	27.0	30.0	25.6	25.6	28.6	24.2	24.2	26.9	
			SHC	27.7	31.1	34.5	26.5	29.7	29.7	33.0	25.6	28.9	32.0	25.1	28.3	31.4	23.9	27.0	30.0	22.7	25.6	28.6	21.4	24.2
		62	TC	33.2	33.2	33.2	31.9	31.9	30.6	30.6	30.6	29.3	29.3	29.3	27.8	27.8	28.6	26.1	26.1	27.7	24.5	24.5	26.7	
			SHC	24.6	28.0	31.5	23.9	27.3	30.8	23.2	26.6	30.0	22.4	25.8	29.3	21.6	25.1	28.6	20.8	24.3	27.7	19.9	23.3	26.7
		67	TC	35.4	35.4	35.4	34.1	34.1	32.7	32.7	32.7	31.2	31.2	31.2	29.5	29.5	29.5	27.9	27.9	27.9	25.9	25.9	25.9	
			SHC	20.5	23.9	27.4	19.8	23.2	26.7	19.1	22.5	26.0	18.3	21.8	25.3	17.6	21.1	24.5	16.8	20.2	23.7	15.9	19.3	22.8
	EAT (wb)	72	TC	38.0	38.0	38.0	36.6	36.6	35.1	35.1	35.1	33.4	33.4	33.4	31.7	31.7	31.7	29.8	29.8	29.8	27.8	27.8	27.8	
			SHC	16.2	19.7	23.2	15.6	19.0	22.5	14.8	18.3	21.8	14.1	17.6	21.2	13.4	16.9	20.4	12.6	16.1	19.5	11.7	15.2	18.6
		76	TC	—	40.4	40.4	—	38.8	38.8	—	37.1	37.1	—	35.5	35.5	—	33.6	33.6	—	31.6	31.6	—	29.4	29.4
			SHC	—	16.3	19.7	—	15.6	19.1	—	14.9	18.4	—	14.2	17.6	—	13.5	17.0	—	12.7	16.1	—	11.8	15.2
850 cfm	EAT (wb)	58	TC	33.4	33.4	37.3	32.3	32.3	36.1	31.1	31.1	34.8	29.8	29.8	33.3	28.5	28.5	31.9	27.0	27.0	30.2	25.4	25.4	28.4
			SHC	29.5	33.4	37.3	28.6	32.3	36.1	27.5	31.1	34.8	26.3	29.8	33.3	25.2	28.5	31.9	23.8	27.0	30.2	22.3	25.4	28.4
		62	TC	34.3	34.3	35.7	33.1	33.1	35.0	31.7	31.7	34.3	30.2	30.2	33.4	28.7	28.7	32.6	27.2	27.2	30.1	25.4	25.4	29.4
			SHC	26.8	31.3	35.7	26.1	30.5	35.0	25.4	29.8	34.3	24.7	29.1	33.4	23.8	28.2	32.6	22.1	26.1	30.1	21.4	25.4	29.4
		67	TC	36.8	36.8	36.8	35.3	35.3	33.7	33.7	33.7	32.2	32.2	32.2	30.4	30.4	30.4	28.6	28.6	28.6	26.6	26.6	26.6	
			SHC	21.7	26.2	30.7	21.1	25.5	30.0	20.4	24.9	29.3	19.6	24.1	28.6	18.8	23.3	27.8	18.0	22.5	27.0	17.2	21.6	26.0
	EAT (wb)	72	TC	39.5	39.5	39.5	37.9	37.9	36.3	36.3	36.3	34.5	34.5	34.5	32.7	32.7	32.7	30.7	30.7	30.7	28.6	28.6	28.6	
			SHC	16.5	21.1	25.5	15.8	20.4	24.9	15.1	19.7	24.2	14.4	18.9	23.5	13.7	18.2	22.7	12.9	17.4	21.8	12.0	16.5	21.1
		76	TC	—	42.0	42.0	—	40.3	40.3	—	38.5	38.5	—	36.7	36.7	—	34.7	34.7	—	32.6	32.6	—	30.2	30.2
			SHC	—	16.8	21.4	—	16.1	20.7	—	15.4	20.0	—	14.7	19.3	—	13.9	18.5	—	13.2	17.7	—	12.4	16.9
1000 cfm	EAT (wb)	58	TC	34.8	34.8	39.0	35.2	35.2	39.2	35.5	35.5	39.4	35.7	35.7	39.4	35.8	35.8	39.4	35.8	35.8	39.2	35.6	35.6	38.8
			SHC	30.7	34.8	39.0	31.2	35.2	39.2	31.7	35.5	39.4	32.0	35.7	39.4	32.3	35.8	39.4	32.4	35.8	39.2	32.5	35.6	38.8
		62	TC	35.3	35.3	38.9	35.5	35.5	39.7	35.6	35.6	40.4	35.7	35.7	40.7	35.8	35.8	40.6	35.8	35.8	40.3	35.6	35.6	39.9
			SHC	28.7	33.7	38.9	29.4	34.6	39.7	30.2	35.3	40.4	30.8	35.7	40.7	31.1	35.8	40.6	31.3	35.8	40.3	31.4	35.6	39.9
		67	TC	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.5	37.5	37.5	37.2	37.2	37.2	37.0	37.0	37.3	36.4	36.4	38.0
			SHC	22.9	28.1	33.3	23.8	29.0	34.2	24.7	29.8	35.1	25.4	30.7	35.9	26.2	31.5	36.7	26.9	32.2	37.3	27.6	32.9	38.0
	EAT (wb)	72	TC	40.5	40.5	40.5	40.4	40.4	40.2	40.2	40.2	40.0	40.0	40.0	39.6	39.6	39.6	39.1	39.1	39.1	38.4	38.4	38.4	
			SHC	17.0	22.2	27.5	17.8	23.1	28.4	18.7	24.0	29.3	19.5	24.8	30.0	20.4	25.6	30.9	21.1	26.3	31.6	21.8	27.0	32.3
		76	TC	—	43.0	43.0	—	42.8	42.8	—	42.5	42.5	—	42.1	42.1	—	41.6	41.6	—	41.0	41.0	—	40.2	40.2
			SHC	—	17.5	22.7	—	18.3	23.6	—	19.2	24.5	—	20.0	25.4	—	20.9	26.1	—	21.5	26.9	—	22.3	27.6
1200 cfm	EAT (wb)	58	TC	36.2	36.2	40.6	36.5	36.5	40.7	36.7	36.7	40.8	36.8	36.8	40.7	36.8	36.8	40.5	36.6	36.6	40.2	36.3	36.3	39.7
			SHC	31.8	36.2	40.6	32.3	36.5	40.7	32.6	36.7	40.8	32.9	36.8	40.7	33.1	36.8	40.5	33.1	36.6	40.2	33.0	36.3	39.7
		62	TC	36.2	36.2	42.0	36.5	36.5	42.1	36.7	36.7	42.1	36.8	36.8	42.0	36.8	36.8	41.7	36.7	36.7	41.3	36.3	36.3	40.8
			SHC	30.4	36.2	42.0	30.8	36.5	42.1	31.2	36.7	42.1	31.6	36.8	42.0	31.8	36.8	41.7	31.9	36.7	41.3	31.9	36.3	40.8
		67	TC	38.3	38.3	38.3	38.2	38.2	38.1	38.1	38.3	37.9	37.9	39.1	37.6	37.6	39.8	37.2	37.2	40.5	36.7	36.7	41.0	
			SHC	24.2	30.4	36.7	25.1	31.3	37.4	25.9	32.1	38.3	26.7	32.9	39.1	27.5	33.6	39.8	28.2	34.3	40.5	28.8	34.9	41.0
	EAT (wb)	72	TC	41.2	41.2	41.2	41.0	41.0	41.0	40.8	40.8	40.8	40.5	40.5	40.5	40.0	40.0	40.0	39.4	39.4	39.4	38.6	38.6	38.6
			SHC	17.4	23.6	29.8	18.2	24.5	30.7	19.1	25.4	31.6	19.9	26.1	32.4	20.7	26.9	33.2	21.5	27.7	33.8	22.1	28.4	34.5
		76	TC	—	43.9	43.9	—	43.5	43.5	—	43.2	43.2	—	42.7	42.7	—	42.1	42.1	—	41.3	41.3	—	40.5	40.5
			SHC	—	18.0	24.3	—	18.9	25.2	—	19.8	26.0	—	20.6	26.9	—	21.4	27.7	—	22.1	28.4	—	22.8	29.1
1400 cfm	EAT (wb)	58	TC	37.3	37.3	41.9	37.5	37.5	41.9	37.6	37.6	41.8	37.6	37.6	41.7	37.5	37.5	41.4	37.2	37.2	41.0	36.9	36.9	40.4
			SHC	32.8	37.3	41.9	33.1	37.5	41.9	33.3	37.6	41.8	33.5	37.6	41.7	33.6	37.5	41.4	33.6	37.2	41.0	33.4	36.9	40.4
		62	TC	37.3	37.3	43.5	37.5	37.5	43.4	37.6	37.6	43.3	37.6	37.6	43.1	37.5	37.5	42.7	37.2	37.2	42.2	36.9	36.9	41.5
			SHC	31.2	37.3	43.5	31.6	37.5	43.4	32.0	37.6	43.3	32.2	37.6	43.1	32.4	37.5	42.7	32.4	37.2	42.2	32.3	36.9	41.5
		67	TC	38.8	38.8	39.8	38.7	38.7	40.6	38.5	38.5	41.3	38.3	38.3	42.1	37.9	37.9	42.7	37.5	37.5	43.2	37.0	37.0	43.5
			SHC	25.5	32.7	39.8	26.4	33.4	40.6	27.2	34.2	41.3	28.0	35.0	42.1	28.7	35.7	42.7	29.3	36.3	43.2	29.8	36.7	43.5
	EAT (wb)	72	TC	41.7	41.7	41.7	41.5	41.5	41.1	41.1	41.1	41.1	40.8	40.8	40.8	40.3	40.3	40.3	39.6	39.6	39.6	38.7	38.7	38.7
			SHC	17.7	25.0	32.2	18.6	25.8	33.0	19.5	26.6	33.8	20.3	27.5	34.6	21.1	28.2	35.4	21.8	29.0	36.1	22.5	29.6	36.8
		76	TC	—	44.5	44.5	—	44.1	44.1	—	43.6	43.6	—	43.1	43.1	—	42.4	42.4	—	41.6	41.6	—	40.7	40.7
			SHC	—	18.6	25.9	—	19.5	26.7	—	20.4	27.6	—	21.2	28.4	—	21.9	29.2	—	22.7	29.9	—	23.4	30.6
1600 cfm	EAT (wb)	58	TC	38.2	38.2	43.0	38.3	38.3	42.9	38.4	38.4	42.8	38.3	38.3	42.5	38.1	38.1	42.1	37.8	37.8	41.6	37.3	37.3	

COOLING CAPACITIES — FIRST STAGE, PART LOAD (6 TONS) (cont)

50LC*B SIZE 07				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1800 cfm	EAT (wb)	58	TC	39.0	39.0	43.9	39.1	39.1	43.8	39.0	39.0	43.6	38.9	38.9	43.2	38.7	38.7	42.8	38.3	38.3	42.2	37.7	37.7	41.4
		SHC	34.2	39.0	43.9	34.4	39.1	43.8	34.5	39.0	43.6	34.6	38.9	43.2	34.6	38.7	42.8	34.4	38.3	42.2	34.1	37.7	41.4	
		62	TC	39.1	39.1	45.5	39.1	39.1	45.3	39.1	39.1	45.0	38.9	38.9	44.8	38.7	38.7	44.2	38.3	38.3	43.5	37.8	37.8	42.7
		SHC	32.6	39.1	45.5	32.9	39.1	45.3	33.1	39.1	45.0	33.2	38.9	44.8	33.2	38.7	44.2	33.2	38.3	43.5	32.9	37.8	42.7	
		67	TC	39.6	39.6	45.5	39.5	39.5	46.2	39.3	39.3	46.8	39.1	39.1	46.2	38.7	38.7	47.0	38.3	38.3	46.1	37.8	37.8	45.1
		SHC	28.0	36.8	45.5	28.8	37.5	46.2	29.4	38.1	46.8	29.7	38.0	46.2	30.5	38.7	47.0	30.5	38.3	46.1	30.5	37.8	45.1	
		72	TC	42.4	42.4	42.4	42.1	42.1	42.1	41.7	41.7	41.7	41.1	41.1	41.1	40.6	40.6	40.6	39.9	39.9	40.5	38.9	38.9	41.0
		SHC	18.6	27.6	36.6	19.5	28.5	37.4	20.3	29.3	38.2	21.1	30.0	39.0	21.8	30.8	39.7	22.6	31.5	40.5	23.2	32.2	41.0	
		76	TC	—	45.2	45.2	—	44.8	44.8	—	44.2	44.2	—	43.6	43.6	—	42.8	42.8	—	41.9	41.9	—	40.9	40.9
		SHC	—	19.9	29.0	—	20.8	29.7	—	21.6	30.6	—	22.4	31.4	—	23.2	32.2	—	23.9	32.9	—	24.6	33.5	
2000 cfm	EAT (wb)	58	TC	39.7	39.7	44.7	39.7	39.7	44.6	39.6	39.6	44.3	39.4	39.4	43.9	39.1	39.1	43.4	38.7	38.7	42.7	38.1	38.1	41.8
		SHC	34.7	39.7	44.7	34.9	39.7	44.6	35.0	39.6	44.3	35.0	39.4	43.9	34.9	39.1	43.4	34.7	38.7	42.7	34.4	38.1	41.8	
		62	TC	39.8	39.8	46.4	39.7	39.7	46.1	39.6	39.6	45.8	39.5	39.5	45.3	39.2	39.2	44.8	38.7	38.7	44.1	38.1	38.1	43.1
		SHC	33.1	39.8	46.4	33.3	39.7	46.1	33.4	39.6	45.8	33.5	39.5	45.3	33.5	39.2	44.8	33.4	38.7	44.1	33.2	38.1	43.1	
		67	TC	40.0	40.0	48.1	39.9	39.9	48.5	39.7	39.7	48.8	39.5	39.5	48.4	39.2	39.2	47.6	38.7	38.7	46.7	38.1	38.1	45.6
		SHC	29.1	38.6	48.1	29.7	39.1	48.5	30.4	39.7	48.8	30.6	39.5	48.4	30.7	39.2	47.6	30.8	38.7	46.7	30.7	38.1	45.6	
		72	TC	42.7	42.7	42.7	42.3	42.3	42.3	41.8	41.8	41.8	41.3	41.3	41.3	40.7	40.7	41.8	40.0	40.0	42.5	39.0	39.0	43.1
		SHC	19.1	28.9	38.7	19.9	29.7	39.5	20.8	30.5	40.4	21.5	31.3	41.0	22.2	32.1	41.8	23.0	32.8	42.5	23.6	33.3	43.1	
		76	TC	—	45.4	45.4	—	44.9	44.9	—	44.5	44.5	—	43.8	43.8	—	43.0	43.0	—	42.0	42.0	—	41.0	41.0
		SHC	—	20.6	30.4	—	21.4	31.2	—	22.2	32.1	—	23.0	32.9	—	23.8	33.5	—	24.5	34.3	—	25.2	34.9	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — SECOND STAGE, PART LOAD (6 TONS)

50LC*B SIZE 07			AMBIENT TEMPERATURE (°F)																					
			65			75			85			95			105			115			125			
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
650 cfm	EAT (wb)	58	TC	35.9	35.9	35.9	34.8	34.8	34.9	33.5	33.5	34.1	32.2	32.2	33.3	30.7	30.7	32.6	29.2	29.2	31.7	27.4	27.4	30.6
			SHC	28.7	32.1	35.6	28.0	31.4	34.9	27.2	30.7	34.1	26.4	29.9	33.3	25.6	29.1	32.6	24.8	28.2	31.7	23.8	27.2	30.6
		62	TC	38.8	38.8	38.8	37.5	37.5	37.5	36.3	36.3	36.3	34.7	34.7	34.7	33.2	33.2	33.2	31.4	31.4	31.4	29.5	29.5	29.5
			SHC	26.1	29.5	33.1	25.4	28.9	32.4	24.7	28.2	31.6	23.9	27.4	30.8	23.0	26.5	30.0	22.1	25.6	29.2	21.3	24.7	28.2
		67	TC	42.7	42.7	42.7	41.4	41.4	41.4	39.9	39.9	39.9	38.3	38.3	38.3	36.5	36.5	36.5	34.6	34.6	34.6	32.6	32.6	32.6
			SHC	22.8	26.3	29.7	22.1	25.6	29.1	21.4	24.9	28.4	20.6	24.1	27.6	19.8	23.2	26.7	18.8	22.3	25.8	17.9	21.5	24.9
	EAT (wb)	72	TC	47.1	47.1	47.1	45.6	45.6	45.6	44.0	44.0	44.0	42.2	42.2	42.2	40.3	40.3	40.3	38.1	38.1	38.1	35.9	35.9	35.9
			SHC	19.4	22.9	26.4	18.7	22.2	25.7	17.9	21.5	25.0	17.2	20.7	24.2	16.4	19.8	23.3	15.5	18.9	22.4	14.5	18.0	21.5
		76	TC	—	50.8	50.8	—	49.2	49.2	—	47.5	47.5	—	45.5	45.5	—	43.4	43.4	—	41.1	41.1	—	38.7	38.7
			SHC	—	20.1	23.6	—	19.4	22.9	—	18.6	22.1	—	17.8	21.4	—	17.1	20.5	—	16.1	19.6	—	15.2	18.7
850 cfm	EAT (wb)	58	TC	39.1	39.1	41.8	37.8	37.8	41.0	36.4	36.4	40.2	35.3	35.3	38.2	33.4	33.4	37.6	31.9	31.9	36.0	30.3	30.3	34.1
			SHC	32.9	37.3	41.8	32.1	36.6	41.0	31.3	35.8	40.2	29.9	34.0	38.2	29.2	33.4	37.6	27.9	31.9	36.0	26.4	30.3	34.1
		62	TC	42.0	42.0	42.0	40.7	40.7	39.0	39.0	39.0	37.3	37.3	37.3	35.5	35.5	35.5	33.5	33.5	33.5	34.2	31.4	31.4	33.2
			SHC	29.4	33.9	38.5	28.8	33.2	37.7	28.0	32.5	37.0	27.1	31.6	36.1	26.1	30.7	35.2	25.3	29.7	34.2	24.2	28.7	33.2
		67	TC	46.2	46.2	46.2	44.7	44.7	44.7	42.9	42.9	42.9	41.0	41.0	41.0	39.0	39.0	39.0	36.8	36.8	36.8	34.4	34.4	34.4
			SHC	25.1	29.6	34.1	24.4	28.9	33.4	23.6	28.1	32.6	22.7	27.2	31.8	21.8	26.3	30.8	20.9	25.4	29.9	19.9	24.4	28.9
	EAT (wb)	72	TC	50.8	50.8	50.8	49.0	49.0	49.0	47.1	47.1	47.1	45.0	45.0	45.0	42.8	42.8	42.8	40.4	40.4	40.4	37.8	37.8	37.8
			SHC	20.6	25.2	29.7	19.9	24.4	29.0	19.1	23.6	28.2	18.2	22.8	27.3	17.4	21.8	26.4	16.4	21.0	25.4	15.4	19.9	24.5
		76	TC	—	54.7	54.7	—	52.7	52.7	—	50.7	50.7	—	48.5	48.5	—	46.0	46.0	—	43.5	43.5	—	40.8	40.8
			SHC	—	21.5	26.0	—	20.7	25.3	—	19.9	24.5	—	19.1	23.6	—	18.1	22.7	—	17.3	21.8	—	16.3	20.9
1000 cfm	EAT (wb)	58	TC	41.8	41.8	46.7	41.0	41.0	45.9	40.0	40.0	44.9	38.8	38.8	43.5	37.6	37.6	42.1	36.3	36.3	40.6	34.8	34.8	38.9
			SHC	36.5	41.6	46.7	35.9	41.0	45.9	35.1	40.0	44.9	34.1	38.8	43.5	33.2	37.6	42.1	32.0	36.3	40.6	30.7	34.8	38.9
		62	TC	44.5	44.5	44.5	43.3	43.3	43.3	41.9	41.9	42.0	40.4	40.4	41.4	38.8	38.8	40.9	37.1	37.1	40.2	35.2	35.2	39.3
			SHC	32.5	37.7	43.0	32.0	37.2	42.5	31.5	36.8	42.0	31.0	36.3	41.4	30.3	35.6	40.9	29.7	34.9	40.2	29.0	34.1	39.3
		67	TC	48.6	48.6	48.6	47.2	47.2	45.6	45.6	45.6	43.9	43.9	43.9	42.0	42.0	42.0	40.1	40.1	40.1	37.9	37.9	37.9	37.9
			SHC	27.1	32.4	37.6	26.7	32.0	37.2	26.2	31.5	36.8	25.6	30.9	36.2	25.1	30.3	35.6	24.4	29.7	35.0	23.7	29.0	34.2
	EAT (wb)	72	TC	52.9	52.9	52.9	51.4	51.4	51.4	49.7	49.7	49.7	47.8	47.8	47.8	45.7	45.7	45.7	43.6	43.6	43.6	41.2	41.2	41.2
			SHC	21.6	26.9	32.3	21.2	26.5	31.9	20.8	26.0	31.4	20.2	25.5	30.8	19.6	25.0	30.2	19.0	24.3	29.5	18.3	23.6	28.9
		76	TC	—	56.7	56.7	—	55.1	55.1	—	53.1	53.1	—	51.1	51.1	—	48.8	48.8	—	46.5	46.5	—	44.0	44.0
			SHC	—	22.4	27.8	—	22.0	27.4	—	21.5	26.9	—	21.1	26.4	—	20.5	25.8	—	19.9	25.3	—	19.2	24.6
1200 cfm	EAT (wb)	58	TC	44.5	44.5	50.0	43.5	43.5	48.8	42.3	42.3	47.6	41.0	41.0	46.1	39.7	39.7	44.5	38.1	38.1	42.7	36.6	36.6	40.9
			SHC	38.9	44.5	50.0	38.0	43.5	48.8	37.1	42.3	47.6	36.1	41.0	46.1	34.9	39.7	44.5	33.6	38.1	42.7	32.2	36.6	40.9
		62	TC	46.1	46.1	47.7	44.9	44.9	47.2	43.4	43.4	46.6	41.7	41.7	45.9	40.1	40.1	45.1	38.3	38.3	44.1	36.6	36.6	42.3
			SHC	35.2	41.4	47.7	34.7	41.0	47.2	34.2	40.4	46.6	33.5	39.8	45.9	32.9	39.0	45.1	32.1	38.1	44.1	30.8	36.6	42.3
		67	TC	50.1	50.1	50.1	48.7	48.7	48.7	47.0	47.0	47.0	45.1	45.1	45.1	43.2	43.2	43.2	41.0	41.0	41.0	38.8	38.8	38.8
			SHC	28.9	35.1	41.3	28.4	34.7	41.0	27.9	34.1	40.5	27.3	33.5	39.9	26.7	33.0	39.2	26.0	32.3	38.5	25.4	31.6	37.8
	EAT (wb)	72	TC	54.7	54.7	54.7	52.9	52.9	51.1	51.1	51.1	49.0	49.0	49.0	46.9	46.9	46.9	44.6	44.6	44.6	42.0	42.0	42.0	42.0
			SHC	22.3	28.7	34.9	21.9	28.2	34.5	21.4	27.7	34.0	20.9	27.1	33.4	20.3	26.5	32.9	19.6	25.8	32.2	18.9	25.2	31.4
		76	TC	—	58.5	58.5	—	56.6	56.6	—	54.6	54.6	—	52.5	52.5	—	50.0	50.0	—	47.5	47.5	—	44.8	44.8
			SHC	—	23.4	29.8	—	22.9	29.3	—	22.4	28.9	—	21.9	28.3	—	21.4	27.7	—	20.7	27.0	—	20.0	26.3
1400 cfm	EAT (wb)	58	TC	46.6	46.6	52.5	45.5	45.5	51.2	44.3	44.3	49.7	42.9	42.9	48.2	41.3	41.3	46.3	39.7	39.7	44.5	37.9	37.9	42.4
			SHC	40.8	46.6	52.5	39.9	45.5	51.2	38.8	44.3	49.7	37.6	42.9	48.2	36.4	41.3	46.3	34.9	39.7	44.5	33.3	37.9	42.4
		62	TC	47.5	47.5	52.0	46.1	46.1	51.4	44.6	44.6	50.7	43.0	43.0	49.7	41.4	41.4	48.1	39.7	39.7	46.1	37.9	37.9	43.9
			SHC	37.7	44.9	52.0	37.1	44.3	51.4	36.6	43.6	50.7	35.8	42.7	49.7	34.7	41.4	48.1	33.3	39.7	46.1	31.9	37.9	43.9
		67	TC	51.4	51.4	51.4	49.7	49.7	49.7	48.0	48.0	48.0	46.0	46.0	46.0	44.0	44.0	44.0	41.7	41.7	41.9	39.4	39.4	41.1
			SHC	30.4	37.6	44.9	29.9	37.2	44.5	29.4	36.7	43.9	28.9	36.1	43.3	28.3	35.4	42.6	27.5	34.7	41.9	26.8	33.9	41.1
	EAT (wb)	72	TC	55.9	55.9	55.9	54.1	54.1	54.1	52.2	52.2	52.2	50.0	50.0	50.0	47.7	47.7	47.7	45.2	45.2	45.2	42.7	42.7	42.7
			SHC	23.0	30.2	37.5	22.5	29.8	37.1	22.0	29.3	36.6	21.5	28.7	36.0	20.9	28.1	35.3	20.2	27.4	34.6	19.5	26.7	33.8
		76	TC	—	59.8	59.8	—	57.8	57.8	—	55.7	55.7	—	53.3	53.3	—	50.9	50.9	—	48.3	48.3	—	45.4	45.4
			SHC	—	24.2	31.6	—	23.8	31.1	—	23.2	30.6	—	22.7	30.0	—	22.0	29.3	—	21.5	28.7	—	20.7	28
1600 cfm	EAT (wb)	58	TC	48.4	48.4	54.5	47.2	47.2	53.1	45.8	45.8	51.6	44.4											

COOLING CAPACITIES — SECOND STAGE, PART LOAD (6 TONS) (cont)

50LC*B SIZE 07				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1800 cfm	EAT (wb)	58	TC	49.9	49.9	56.3	48.7	48.7	54.7	47.2	47.2	53.0	45.6	45.6	51.2	43.9	43.9	49.2	41.9	41.9	47.0	39.9	39.9	44.7
			SHC	43.7	49.9	56.3	42.5	48.7	54.7	41.3	47.2	53.0	40.0	45.6	51.2	38.5	43.9	49.2	36.9	41.9	47.0	35.1	39.9	44.7
		62	TC	50.0	50.0	58.4	48.7	48.7	56.8	47.2	47.2	55.1	45.6	45.6	53.1	43.9	43.9	51.0	42.0	42.0	48.8	40.0	40.0	46.3
			SHC	41.5	50.0	58.4	40.6	48.7	56.8	39.4	47.2	55.1	38.1	45.6	53.1	36.8	43.9	51.0	35.2	42.0	48.8	33.5	40.0	46.3
		67	TC	52.9	52.9	52.9	51.3	51.3	51.3	49.3	49.3	50.4	47.3	47.3	49.7	45.1	45.1	49.0	42.8	42.8	48.2	40.5	40.5	47.1
			SHC	33.4	42.5	51.6	33.0	42.0	51.0	32.4	41.4	50.4	31.8	40.8	49.7	31.1	40.1	49.0	30.3	39.2	48.2	29.4	38.3	47.1
		72	TC	57.5	57.5	57.5	55.7	55.7	55.7	53.5	53.5	53.5	51.3	51.3	51.3	48.8	48.8	48.8	46.2	46.2	46.2	43.5	43.5	43.5
			SHC	24.1	33.2	42.3	23.7	32.8	41.8	23.1	32.2	41.2	22.5	31.6	40.7	21.9	30.9	40.0	21.3	30.2	39.2	20.5	29.4	38.4
		76	TC	—	61.4	61.4	—	59.4	59.4	—	57.0	57.0	—	54.6	54.6	—	52.0	52.0	—	49.1	49.1	—	46.2	46.2
			SHC	—	25.7	34.9	—	25.3	34.4	—	24.7	33.8	—	24.1	33.2	—	23.5	32.5	—	22.8	31.8	—	22.0	31.0
2000 cfm	EAT (wb)	58	TC	51.2	51.2	57.7	49.8	49.8	56.1	48.4	48.4	54.3	46.6	46.6	52.4	44.9	44.9	50.3	42.8	42.8	48.0	40.7	40.7	45.5
			SHC	44.8	51.2	57.7	43.6	49.8	56.1	42.3	48.4	54.3	40.9	46.6	52.4	39.3	44.9	50.3	37.6	42.8	48.0	35.8	40.7	45.5
		62	TC	51.3	51.3	59.9	49.9	49.9	58.2	48.4	48.4	56.4	46.7	46.7	54.4	44.9	44.9	52.2	42.9	42.9	49.8	40.8	40.8	47.2
			SHC	42.6	51.3	59.9	41.5	49.9	58.2	40.4	48.4	56.4	39.0	46.7	54.4	37.5	44.9	52.2	36.0	42.9	49.8	34.2	40.8	47.2
		67	TC	53.6	53.6	54.7	51.9	51.9	54.0	49.9	49.9	53.5	47.9	47.9	52.7	45.6	45.6	51.9	43.3	43.3	50.9	40.9	40.9	49.5
			SHC	34.8	44.8	54.7	34.3	44.2	54.0	33.7	43.6	53.5	33.1	42.9	52.7	32.4	42.1	51.9	31.6	41.2	50.9	30.6	40.1	49.5
		72	TC	58.1	58.1	58.1	56.2	56.2	56.2	54.0	54.0	54.0	51.7	51.7	51.7	49.1	49.1	49.1	46.5	46.5	46.5	43.7	43.7	43.7
			SHC	24.7	34.6	44.6	24.2	34.1	44.1	23.7	33.5	43.5	23.1	33.0	42.8	22.4	32.3	42.1	21.7	31.6	41.4	21.0	30.8	40.6
		76	TC	—	62.1	62.1	—	60.0	60.0	—	57.5	57.5	—	55.0	55.0	—	52.4	52.4	—	49.5	49.5	—	46.5	46.5
			SHC	—	26.4	36.4	—	25.9	35.9	—	25.4	35.3	—	24.8	34.7	—	24.2	34.0	—	23.4	33.2	—	22.7	32.4

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — THIRD STAGE, FULL LOAD (6 TONS)

50LC*B SIZE 07			AMBIENT TEMPERATURE (°F)																				
			65			75			85			95			105			115			125		
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1200 cfm	EAT (wb)	58	TC	61.5	61.5	62.7	59.6	59.6	61.5	57.3	57.3	60.3	54.9	54.9	52.4	52.4	57.4	50.3	50.3	54.4	47.2	47.2	53.1
			SHC	50.0	56.4	62.7	48.8	55.2	61.5	47.6	53.9	60.3	46.2	52.6	58.9	44.9	51.1	57.4	42.6	48.6	54.4	41.1	47.2
		62	TC	66.2	66.2	66.2	64.1	64.1	64.1	61.6	61.6	61.6	59.0	59.0	59.0	56.2	56.2	53.1	53.1	53.1	49.9	49.9	49.9
			SHC	45.2	51.6	57.9	44.1	50.4	56.7	42.8	49.1	55.5	41.4	47.8	54.1	40.0	46.4	52.7	38.5	44.9	51.2	36.9	43.3
		67	TC	72.8	72.8	72.8	70.4	70.4	70.4	67.8	67.8	67.8	64.9	64.9	64.9	61.8	61.8	61.8	58.5	58.5	58.5	54.9	54.9
			SHC	39.1	45.4	51.9	37.9	44.3	50.7	36.7	43.0	49.4	35.3	41.6	48.1	33.8	40.3	46.6	32.4	38.7	45.1	30.7	37.1
	EAT (db)	72	TC	80.0	80.0	80.0	77.3	77.3	77.3	74.5	74.5	74.5	71.3	71.3	68.0	68.0	68.0	64.3	64.3	64.3	60.4	60.4	60.4
			SHC	32.7	39.1	45.5	31.5	37.9	44.4	30.2	36.7	43.1	29.0	35.4	41.8	27.5	33.9	40.4	26.0	32.5	38.9	24.5	30.8
		76	TC	—	86.2	86.2	—	83.3	83.3	—	80.1	80.1	—	76.7	76.7	—	73.1	73.1	—	69.2	69.2	—	64.9
			SHC	—	33.8	40.3	—	32.7	39.1	—	31.4	37.8	—	30.1	36.6	—	28.7	35.1	—	27.2	33.6	—	25.6
1350 cfm	EAT (wb)	58	TC	63.9	63.9	67.4	61.7	61.7	66.1	59.4	59.4	64.7	57.9	57.9	61.4	55.1	55.1	59.6	52.0	52.0	58.5	49.3	49.3
			SHC	53.1	60.3	67.4	51.9	59.0	66.1	50.6	57.6	64.7	48.4	54.9	61.4	46.6	53.1	59.6	45.3	52.0	58.5	43.0	49.3
		62	TC	68.5	68.5	68.5	66.2	66.2	66.2	63.6	63.6	63.6	60.8	60.8	60.8	57.8	57.8	57.8	54.7	54.7	55.0	51.3	51.3
			SHC	47.7	54.8	61.9	46.4	53.5	60.7	45.1	52.3	59.4	43.8	50.9	58.0	42.3	49.4	56.6	40.8	47.9	55.0	39.1	46.2
		67	TC	75.2	75.2	75.2	72.6	72.6	72.6	69.8	69.8	69.8	66.8	66.8	66.8	63.5	63.5	63.5	60.0	60.0	60.0	56.2	56.2
			SHC	40.8	47.9	55.0	39.5	46.6	53.8	38.2	45.3	52.5	36.8	44.0	51.1	35.3	42.5	49.6	33.8	41.0	48.1	32.2	39.3
	EAT (db)	72	TC	82.6	82.6	82.6	79.7	79.7	79.7	76.6	76.6	76.6	73.2	73.2	73.2	69.7	69.7	69.7	65.8	65.8	65.8	61.7	61.7
			SHC	33.5	40.8	48.0	32.3	39.6	46.8	31.0	38.2	45.4	29.6	36.9	44.1	28.2	35.4	42.6	26.7	33.8	41.0	25.1	32.3
		76	TC	—	88.8	88.8	—	85.7	85.7	—	82.4	82.4	—	78.8	78.8	—	74.9	74.9	—	70.8	70.8	—	66.3
			SHC	—	34.8	42.0	—	33.6	40.9	—	32.4	39.6	—	31.0	38.2	—	29.5	36.8	—	28.0	35.3	—	26.4
1500 cfm	EAT (wb)	58	TC	64.8	64.8	70.8	62.3	62.3	69.0	59.6	59.6	67.3	57.0	57.0	64.4	54.3	54.3	61.5	51.4	51.4	58.3	48.4	48.4
			SHC	55.1	62.9	70.8	53.5	61.2	69.0	51.8	59.6	67.3	49.5	57.0	64.4	47.2	54.3	61.5	44.6	51.4	58.3	41.8	48.4
		62	TC	69.5	69.5	69.5	66.7	66.7	66.7	63.7	63.7	63.7	60.5	60.5	60.5	57.0	57.0	58.1	53.4	53.4	56.2	49.6	49.6
			SHC	49.1	57.0	64.9	47.6	55.5	63.4	45.9	53.8	61.7	44.2	52.1	60.0	42.3	50.2	58.1	40.5	48.3	56.2	38.4	46.2
		67	TC	76.5	76.5	76.5	73.4	73.4	73.4	70.1	70.1	70.1	66.6	66.6	66.6	62.9	62.9	62.9	58.9	58.9	58.9	54.6	54.6
			SHC	41.6	49.5	57.4	40.1	48.0	55.9	38.4	46.3	54.2	36.7	44.6	52.5	34.8	42.7	50.6	33.0	40.9	48.8	30.9	38.8
	EAT (db)	72	TC	84.0	84.0	84.0	80.7	80.7	80.7	77.1	77.1	77.1	73.3	73.3	73.3	69.3	69.3	69.3	64.9	64.9	64.9	60.4	60.4
			SHC	33.8	41.8	49.8	32.3	40.3	48.3	30.6	38.6	46.6	29.0	36.9	44.9	27.1	35.1	43.0	25.3	33.2	41.1	23.3	31.2
		76	TC	—	90.6	90.6	—	87.0	87.0	—	83.2	83.2	—	79.1	79.1	—	74.7	74.7	—	70.0	70.0	—	65.1
			SHC	—	35.4	43.5	—	33.8	41.9	—	32.3	40.3	—	30.5	38.6	—	28.8	36.8	—	26.9	34.9	—	25.0
1800 cfm	EAT (wb)	58	TC	68.9	68.9	77.8	66.5	66.5	75.1	63.9	63.9	72.2	61.1	61.1	69.1	58.1	58.1	65.8	55.0	55.0	62.2	51.6	51.6
			SHC	60.1	68.9	77.8	57.9	66.5	75.1	55.6	63.9	72.2	53.1	61.1	69.1	50.5	58.1	65.8	47.7	55.0	62.2	44.7	51.6
		62	TC	72.6	72.6	72.6	69.6	69.6	70.7	66.4	66.4	68.9	63.0	63.0	67.1	59.5	59.5	65.0	55.7	55.7	63.0	51.8	51.8
			SHC	53.6	63.0	72.3	52.0	61.3	70.7	50.2	59.6	68.9	48.5	57.7	67.1	46.5	55.8	65.0	44.5	53.7	63.0	42.2	51.3
		67	TC	79.7	79.7	79.7	76.3	76.3	76.3	72.8	72.8	72.8	69.0	69.0	69.0	65.0	65.0	65.0	60.7	60.7	60.7	56.4	56.4
			SHC	44.6	53.9	63.4	42.9	52.3	61.7	41.1	50.6	60.0	39.4	48.8	58.1	37.5	46.9	56.3	35.6	44.9	54.3	33.5	42.9
	EAT (db)	72	TC	87.4	87.4	87.4	83.8	83.8	83.8	80.0	80.0	80.0	75.9	75.9	75.9	71.6	71.6	71.6	67.0	67.0	67.0	62.0	62.0
			SHC	35.2	44.8	54.2	33.6	43.1	52.6	31.9	41.3	50.8	30.1	39.6	49.0	28.3	37.7	47.1	26.4	35.8	45.1	24.4	33.7
		76	TC	—	93.9	93.9	—	90.0	90.0	—	85.9	85.9	—	81.5	81.5	—	76.9	76.9	—	72.0	72.0	—	66.8
			SHC	—	37.1	46.8	—	35.5	45.1	—	33.8	43.5	—	32.1	41.7	—	30.2	39.9	—	28.4	37.9	—	26.3
2100 cfm	EAT (wb)	58	TC	72.8	72.8	82.2	70.3	70.3	79.3	67.5	67.5	76.1	64.4	64.4	72.8	61.2	61.2	69.2	57.8	57.8	65.4	54.1	54.1
			SHC	63.6	72.8	82.2	61.2	70.3	79.3	58.7	67.5	76.1	56.1	64.4	72.8	53.2	61.2	69.2	50.2	57.8	65.4	46.9	54.1
		62	TC	75.1	75.1	79.3	72.0	72.0	77.5	68.6	68.6	75.7	65.1	65.1	73.6	61.5	61.5	71.3	57.9	57.9	68.1	54.2	54.2
			SHC	57.7	68.5	79.3	56.1	66.8	77.5	54.2	64.9	75.7	52.4	63.0	73.6	50.2	60.7	71.3	47.7	57.9	68.1	44.6	54.2
		67	TC	81.9	81.9	81.9	78.4	78.4	78.4	74.7	74.7	74.7	70.8	70.8	70.8	66.6	66.6	66.6	62.2	62.2	62.2	57.5	57.5
			SHC	47.2	58.0	68.8	45.5	56.4	67.2	43.8	54.6	65.4	41.9	52.7	63.6	40.0	50.8	61.6	38.0	48.8	59.6	36.0	46.7
	EAT (db)	72	TC	89.7	89.7	89.7	85.9	85.9	85.9	81.9	81.9	81.9	77.6	77.6	77.6	73.1	73.1	73.1	68.3	68.3	68.3	63.3	63.3
			SHC	36.5	47.3	58.2	34.8	45.6	56.6	33.1	43.9	54.8	31.3	42.1	52.9	29.3	40.2	51.0	27.4	38.2	48.9	25.4	36.1
		76	TC	—	96.2	96.2	—	92.2	92.2	—	87.8	87.8	—	83.3</									

COOLING CAPACITIES — THIRD STAGE, FULL LOAD (6 TONS) (cont)

50LC*B SIZE 07				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2700 cfm	EAT (wb)	58	TC	78.9	78.9	89.0	76.0	76.0	85.7	72.8	72.8	82.2	69.5	69.5	78.5	65.9	65.9	74.5	62.1	62.1	70.2	58.0	58.0	65.6
		SHC	68.8	78.9	89.0	66.2	76.0	85.7	63.5	72.8	82.2	60.5	69.5	78.5	57.3	65.9	74.5	53.9	62.1	70.2	50.3	58.0	65.6	
		62	TC	79.2	79.2	91.4	76.1	76.1	89.0	72.9	72.9	85.4	69.5	69.5	81.6	65.9	65.9	77.4	62.1	62.1	73.0	58.0	58.0	68.3
		SHC	65.0	78.2	91.4	63.0	76.1	89.0	60.4	72.9	85.4	57.5	69.5	81.6	54.5	65.9	77.4	51.3	62.1	73.0	47.8	58.0	68.3	
		67	TC	85.1	85.1	85.1	81.3	81.3	81.3	77.4	77.4	77.4	73.3	73.3	73.6	68.9	68.9	71.5	64.3	64.3	69.3	59.5	59.5	67.0
		SHC	52.0	65.5	79.2	50.3	63.9	77.4	48.5	62.0	75.6	46.6	60.1	73.6	44.6	58.0	71.5	42.5	56.0	69.3	40.4	53.6	67.0	
		72	TC	92.9	92.9	92.9	88.9	88.9	88.9	84.6	84.6	84.6	80.0	80.0	80.0	75.3	75.3	75.3	70.3	70.3	70.3	64.9	64.9	64.9
		SHC	38.5	52.1	65.6	36.8	50.3	63.9	35.0	48.6	62.0	33.2	46.6	60.2	31.2	44.7	58.1	29.3	42.6	56.0	27.1	40.5	53.8	
		76	TC	—	99.5	99.5	—	95.2	95.2	—	90.6	90.6	—	85.7	85.7	—	80.6	80.6	—	75.2	75.2	—	69.4	69.4
		SHC	—	41.1	55.0	—	39.5	53.1	—	37.6	51.3	—	35.8	49.4	—	33.8	47.4	—	31.8	45.2	—	29.6	42.9	
3000 cfm	EAT (wb)	58	TC	81.2	81.2	91.6	78.2	78.2	88.1	74.9	74.9	84.5	71.4	71.4	80.6	67.7	67.7	76.4	63.7	63.7	72.1	59.4	59.4	67.3
		SHC	70.9	81.2	91.6	68.2	78.2	88.1	65.2	74.9	84.5	62.1	71.4	80.6	58.9	67.7	76.4	55.4	63.7	72.1	51.6	59.4	67.3	
		62	TC	81.3	81.3	95.2	78.2	78.2	91.7	75.0	75.0	87.8	71.5	71.5	83.8	67.7	67.7	79.5	63.8	63.8	74.9	59.5	59.5	69.9
		SHC	67.5	81.3	95.2	64.8	78.2	91.7	62.1	75.0	87.8	59.1	71.5	83.8	56.0	67.7	79.5	52.6	63.8	74.9	49.0	59.5	69.9	
		67	TC	86.3	86.3	86.3	82.5	82.5	82.5	78.5	78.5	80.2	74.2	74.2	78.3	69.8	69.8	76.1	65.1	65.1	73.8	60.3	60.3	71.3
		SHC	54.2	69.1	84.0	52.5	67.4	82.2	50.7	65.4	80.2	48.8	63.5	78.3	46.7	61.4	76.1	44.6	59.2	73.8	42.3	56.7	71.3	
		72	TC	94.1	94.1	94.1	90.0	90.0	90.0	85.6	85.6	85.6	80.9	80.9	80.9	76.1	76.1	76.1	70.9	70.9	70.9	65.5	65.5	65.5
		SHC	39.4	54.2	69.1	37.7	52.6	67.4	35.9	50.7	65.4	34.0	48.8	63.5	32.1	46.8	61.4	30.0	44.7	59.3	27.9	42.5	57.0	
		76	TC	—	100.6	100.6	—	96.2	96.2	—	91.5	91.5	—	86.6	86.6	—	81.3	81.3	—	75.9	75.9	—	70.0	70.0
		SHC	—	42.3	57.3	—	40.6	55.6	—	38.8	53.6	—	36.9	51.7	—	34.9	49.5	—	32.9	47.4	—	30.6	45.0	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — FIRST STAGE, PART LOAD (7.5 TONS)

50LC*B SIZE 08			AMBIENT TEMPERATURE (°F)																									
			65			75			85			95			105			115			125							
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)							
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85					
750 cfm	EAT (wb)	58	TC	32.6	32.6	33.6	31.5	31.5	33.2	30.2	30.2	32.5	28.9	28.9	31.8	27.4	27.4	31.0	26.0	26.0	29.9	25.7	25.7	29.3				
			SHC	25.6	29.6	33.6	25.1	29.1	33.2	24.5	28.5	32.5	23.8	27.8	31.8	23.1	27.1	31.0	22.1	26.0	29.9	22.2	25.7	29.3				
		62	TC	36.3	36.3	36.3	35.0	35.0	35	33.7	33.7	33.7	32.2	32.2	32.2	30.6	30.6	30.6	28.9	28.9	28.9	27.0	27.0	27.2				
			SHC	23.3	27.3	31.4	22.7	26.8	30.8	22.1	26.1	30.1	21.5	25.4	29.4	20.8	24.8	28.8	20.0	24.0	28.0	19.2	23.2	27.2				
		67	TC	41.2	41.2	41.2	40.0	40.0	40.0	38.4	38.4	38.4	36.8	36.8	36.8	35.0	35.0	35.0	33.1	33.1	33.1	31.0	31.0	31.0				
			SHC	20.4	24.4	28.4	19.8	23.8	27.8	19.1	23.1	27.2	18.4	22.4	26.4	17.7	21.7	25.7	17.0	21.0	25.0	16.1	20.2	24.2				
	EAT (db)	72	TC	46.7	46.7	46.7	45.2	45.2	45.2	43.6	43.6	43.6	41.7	41.7	41.7	39.8	39.8	39.8	37.6	37.6	37.6	35.3	35.3	35.3				
			SHC	17.3	21.3	25.3	16.7	20.7	24.7	16.0	20.0	24.1	15.3	19.3	23.4	14.6	18.6	22.6	13.8	17.8	21.8	13.1	17.1	21.1				
		76	TC	—	51.4	51.4	—	49.7	49.7	—	48.0	48.0	—	45.9	45.9	—	43.8	43.8	—	41.5	41.5	—	39.0	39.0				
			SHC	—	18.7	22.7	—	18.1	22.1	—	17.5	21.5	—	16.8	20.9	—	16.1	20.1	—	15.3	19.3	—	14.5	18.5				
1000 cfm	EAT (wb)	58	TC	37.1	37.1	41.0	35.6	35.6	40.8	34.5	34.5	39.4	33.2	33.2	38.0	32.0	32.0	36.5	30.5	30.5	34.8	29.0	29.0	33.1				
			SHC	31.0	36.0	41.0	30.5	35.6	40.8	29.5	34.5	39.4	28.5	33.2	38.0	27.4	32.0	36.5	26.1	30.5	34.8	24.9	29.0	33.1				
		62	TC	40.4	40.4	40.4	38.9	38.9	38.9	37.2	37.2	37.3	35.5	35.5	36.6	33.5	33.5	35.8	31.6	31.6	34.8	29.4	29.4	33.9				
			SHC	28.1	33.4	38.7	27.4	32.8	38.1	26.7	32.0	37.3	25.9	31.2	36.6	25.1	30.4	35.8	24.3	29.5	34.8	23.3	28.6	33.9				
		67	TC	45.6	45.6	45.6	44.0	44.0	44.0	42.1	42.1	42.1	40.2	40.2	40.2	38.1	38.1	38.1	35.9	35.9	35.9	33.4	33.4	33.4				
			SHC	23.8	29.1	34.4	23.1	28.5	33.8	22.3	27.7	33.1	21.5	26.9	32.3	20.8	26.1	31.5	19.9	25.3	30.6	19.0	24.4	29.7				
	EAT (db)	72	TC	51.3	51.3	51.3	49.4	49.4	49.4	47.5	47.5	47.5	45.3	45.3	45.3	43.0	43.0	43.0	40.6	40.6	40.6	37.9	37.9	37.9				
			SHC	19.3	24.7	30.0	18.6	24.0	29.3	17.9	23.3	28.7	17.2	22.5	27.9	16.4	21.7	27.1	15.5	20.9	26.2	14.6	20.0	25.4				
		76	TC	—	56.1	56.1	—	54.1	54.1	—	52.0	52.0	—	49.6	49.6	—	47.2	47.2	—	44.6	44.6	—	41.6	41.6				
			SHC	—	21.0	26.3	—	20.4	25.7	—	19.6	25.0	—	18.9	24.3	—	18.0	23.4	—	17.3	22.6	—	16.4	21.7				
1250 cfm	EAT (wb)	58	TC	42.0	42.0	47.8	39.2	39.2	44.8	36.3	36.3	41.6	33.2	33.2	38.3	29.9	29.9	34.9	26.6	26.6	31.3	23.2	23.2	27.6				
			SHC	36.4	42.0	47.8	33.6	39.2	44.8	30.9	36.3	41.6	28.0	33.2	38.3	25.1	29.9	34.9	21.9	26.6	31.3	18.8	23.2	27.6				
		62	TC	44.1	44.1	46.5	40.8	40.8	44.1	37.3	37.3	41.6	33.8	33.8	39.1	30.1	30.1	36.4	26.7	26.7	33.0	23.3	23.3	29.2				
			SHC	33.2	39.9	46.5	30.9	37.5	44.1	28.5	35.1	41.6	26.0	32.6	39.1	23.4	29.9	36.4	20.5	26.7	33.0	17.4	23.3	29.2				
		67	TC	49.3	49.3	49.3	45.9	45.9	45.9	42.3	42.3	42.3	38.5	38.5	38.5	34.5	34.5	34.5	30.4	30.4	30.4	26.1	26.1	26.1				
			SHC	27.6	34.3	41.0	25.3	32.0	38.6	22.9	29.5	36.2	20.4	27.1	33.7	17.9	24.6	31.2	15.3	21.9	28.6	12.8	19.4	26.0				
	EAT (db)	72	TC	55.1	55.1	55.1	51.5	51.5	51.5	47.7	47.7	47.7	43.7	43.7	43.7	39.5	39.5	39.5	35.2	35.2	35.2	30.6	30.6	30.6				
			SHC	21.8	28.6	35.2	19.5	26.2	32.9	17.2	23.8	30.5	14.6	21.4	28.0	12.2	18.8	25.5	9.7	16.3	23.0	7.0	13.7	20.4				
		76	TC	—	60.0	60.0	—	56.3	56.3	—	52.3	52.3	—	48.1	48.1	—	43.8	43.8	—	39.2	39.2	—	34.5	34.5				
			SHC	—	23.8	30.5	—	21.5	28.2	—	19.1	25.8	—	16.7	23.4	—	14.1	20.9	—	11.6	18.3	—	9.1	15.8				
1500 cfm	EAT (wb)	58	TC	45.5	45.5	51.6	42.5	42.5	48.4	39.3	39.3	45.0	36.1	36.1	41.5	32.7	32.7	37.8	29.2	29.2	34.0	25.4	25.4	30.0				
			SHC	39.4	45.5	51.6	36.6	42.5	48.4	33.6	39.3	45.0	30.6	36.1	41.5	27.5	32.7	37.8	24.2	29.2	34.0	20.8	25.4	30.0				
		62	TC	46.1	46.1	52.7	42.8	42.8	50.0	39.4	39.4	47.0	36.1	36.1	43.4	32.7	32.7	39.7	29.2	29.2	35.8	25.4	25.4	31.7				
			SHC	37.1	44.9	52.7	34.5	42.3	50.0	31.8	39.4	47.0	28.9	36.1	43.4	25.7	32.7	39.7	22.6	29.2	35.8	19.3	25.4	31.7				
		67	TC	51.3	51.3	51.3	47.7	47.7	47.7	43.9	43.9	43.9	39.9	39.9	39.9	35.8	35.8	36.1	31.5	31.5	33.3	27.1	27.1	30.7				
			SHC	30.2	38.1	46.0	27.8	35.7	43.6	25.4	33.2	41.1	22.8	30.7	38.6	20.2	28.1	36.1	17.6	25.5	33.3	14.9	22.8	30.7				
	EAT (db)	72	TC	57.0	57.0	57.0	53.2	53.2	53.2	49.3	49.3	49.3	45.1	45.1	45.1	40.8	40.8	40.8	36.3	36.3	36.3	31.6	31.6	31.6				
			SHC	23.1	31.1	39.0	20.8	28.7	36.7	18.3	26.2	34.2	15.8	23.8	31.7	13.3	21.2	29.2	10.6	18.6	26.5	8.0	16.0	23.9				
		76	TC	—	61.9	61.9	—	58.1	58.1	—	53.9	53.9	—	49.6	49.6	—	45.0	45.0	—	40.4	40.4	—	35.5	35.5				
			SHC	—	25.4	33.3	—	23.0	31.0	—	20.6	28.6	—	18.0	26.1	—	15.5	23.5	—	13.0	21.0	—	10.3	18.3				
1750 cfm	EAT (wb)	58	TC	48.3	48.3	54.6	45.1	45.1	51.3	41.8	41.8	47.8	38.3	38.3	44.1	34.8	34.8	40.2	31.1	31.1	36.2	27.2	27.2	32.0				
			SHC	41.9	48.3	54.6	39.0	45.1	51.3	35.9	41.8	47.8	32.7	38.3	44.1	29.3	34.8	40.2	25.9	31.1	36.2	22.3	27.2	32.0				
		62	TC	48.4	48.4	56.8	45.1	45.1	53.4	41.8	41.8	49.8	38.4	38.4	46.0	34.8	34.8	42.0	31.1	31.1	37.9	27.2	27.2	33.6				
			SHC	39.8	48.4	56.8	37.0	45.1	53.4	33.9	41.8	49.8	30.8	38.4	46.0	27.6	34.8	42.0	24.3	31.1	37.9	20.8	27.2	33.6				
		67	TC	52.7	52.7	52.7	48.9	48.9	48.9	45.0	45.0	45.9	41.0	41.0	43.3	36.8	36.8	40.7	32.4	32.4	37.8	27.9	27.9	35.0				
			SHC	32.6	41.7	50.9	30.1	39.3	48.4	27.6	36.8	45.9	25.1	34.1	43.3	22.4	31.5	40.7	19.7	28.8	37.8	17.0	26.0	35.0				
	EAT (db)	72	TC	58.4	58.4	58.4	54.6	54.6	54.6	50.5	50.5																	

COOLING CAPACITIES — FIRST STAGE, PART LOAD (7.5 TONS) (cont)

50LC*B SIZE 08				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2250 cfm	EAT (wb)	58	TC	52.5	52.5	59.3	49.0	49.0	55.7	45.5	45.5	51.9	41.8	41.8	47.9	37.9	37.9	43.7	33.9	33.9	39.4	29.7	29.7	34.9
		SHC	45.6	52.5	59.3	42.5	49.0	55.7	39.2	45.5	51.9	35.8	41.8	47.9	32.2	37.9	43.7	28.6	33.9	39.4	24.7	29.7	34.9	
		62	TC	52.5	52.5	61.6	49.1	49.1	57.9	45.5	45.5	54.0	41.8	41.8	49.9	38.0	38.0	45.6	34.0	34.0	41.2	29.8	29.8	36.7
		SHC	43.4	52.5	61.6	40.4	49.1	57.9	37.1	45.5	54.0	33.7	41.8	49.9	30.3	38.0	45.6	26.7	34.0	41.2	23.0	29.8	36.7	
		67	TC	54.5	54.5	59.8	50.7	50.7	57.2	46.7	46.7	54.6	42.6	42.6	51.7	38.3	38.3	48.7	34.1	34.1	44.6	29.8	29.8	40.1
		SHC	36.8	48.3	59.8	34.3	45.7	57.2	31.7	43.1	54.6	29.0	40.4	51.7	26.2	37.4	48.7	23.0	33.8	44.6	19.7	29.8	40.1	
		72	TC	60.3	60.3	60.3	56.3	56.3	56.3	52.0	52.0	52.0	47.6	47.6	47.6	42.9	42.9	42.9	38.1	38.1	38.1	33.2	33.2	33.5
		SHC	26.1	37.7	49.3	23.7	35.3	46.9	21.2	32.8	44.4	18.5	30.1	41.7	15.9	27.5	39.1	13.3	24.8	36.4	10.5	22.0	33.5	
		76	TC	—	65.3	65.3	—	61.2	61.2	—	56.7	56.7	—	52.2	52.2	—	47.3	47.3	—	42.3	42.3	—	37.1	37.1
		SHC	—	29.1	40.8	—	26.7	38.3	—	24.2	35.8	—	21.5	33.2	—	18.9	30.5	—	16.3	27.8	—	13.6	25.1	
2500 cfm	EAT (wb)	58	TC	54.0	54.0	61.0	50.6	50.6	57.3	46.9	46.9	53.4	43.1	43.1	49.3	39.2	39.2	45.0	35.1	35.1	40.6	30.8	30.8	36.0
		SHC	47.1	54.0	61.0	43.9	50.6	57.3	40.5	46.9	53.4	37.0	43.1	49.3	33.2	39.2	45.0	29.5	35.1	40.6	25.5	30.8	36.0	
		62	TC	54.1	54.1	63.4	50.6	50.6	59.7	47.0	47.0	55.7	43.2	43.2	51.4	39.2	39.2	47.1	35.1	35.1	42.5	30.8	30.8	37.7
		SHC	44.8	54.1	63.4	41.6	50.6	59.7	38.3	47.0	55.7	34.9	43.2	51.4	31.4	39.2	47.1	27.7	35.1	42.5	23.9	30.8	37.7	
		67	TC	55.3	55.3	63.9	51.5	51.5	61.2	47.5	47.5	58.3	43.5	43.5	54.6	39.4	39.4	50.7	35.1	35.1	46.2	30.8	30.8	41.2
		SHC	38.7	51.3	63.9	36.2	48.7	61.2	33.5	45.9	58.3	30.5	42.5	54.6	27.4	39.0	50.7	24.1	35.1	46.2	20.5	30.8	41.2	
		72	TC	60.8	60.8	60.8	56.8	56.8	56.8	52.6	52.6	52.6	48.0	48.0	48.0	43.3	43.3	43.3	38.5	38.5	39.4	33.4	33.4	36.6
		SHC	27.0	39.8	52.6	24.5	37.2	50.0	21.9	34.7	47.5	19.4	32.1	44.9	16.7	29.4	42.1	14.0	26.7	39.4	11.2	23.9	36.6	
		76	TC	—	66.0	66.0	—	61.8	61.8	—	57.3	57.3	—	52.7	52.7	—	47.8	47.8	—	42.7	42.7	—	37.4	37.4
		SHC	—	30.2	43.0	—	27.8	40.6	—	25.2	38.0	—	22.6	35.4	—	19.9	32.7	—	17.3	29.9	—	14.4	27.1	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — SECOND STAGE, PART LOAD (7.5 TONS)

50LC*B SIZE 08				AMBIENT TEMPERATURE (°F)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
				65						75						85						95						105						115						125																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
750 cfm	EAT (wb)	58	TC	42.3	42.3	42.3	41.0	41.0	41.0	39.4	39.4	39.7	37.8	37.8	38.7	36.0	36.0	37.7	34.0	34.0	36.7	31.9	31.9	35.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

COOLING CAPACITIES — SECOND STAGE, PART LOAD (7.5 TONS) (cont)

50LC*B SIZE 08				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2250 cfm	EAT (wb)	58	TC	61.3	61.3	69.3	57.7	57.7	65.4	53.9	53.9	61.3	50.1	50.1	57.1	46.0	46.0	52.8	41.8	41.8	48.3	37.4	37.4	43.5
			SHC	53.3	61.3	69.3	49.9	57.7	65.4	46.5	53.9	61.3	43.0	50.1	57.1	39.3	46.0	52.8	35.5	41.8	48.3	31.5	37.4	43.5
		62	TC	61.3	61.3	72.1	57.7	57.7	68.1	54.0	54.0	64.0	50.1	50.1	59.7	46.1	46.1	55.2	41.9	41.9	50.5	37.5	37.5	45.5
			SHC	50.7	61.3	72.1	47.5	57.7	68.1	44.1	54.0	64.0	40.7	50.1	59.7	37.1	46.1	55.2	33.3	41.9	50.5	29.4	37.5	45.5
		67	TC	66.0	66.0	66.0	61.6	61.6	62.8	57.2	57.2	60.1	52.6	52.6	57.3	47.9	47.9	54.6	43.0	43.0	51.7	37.9	37.9	48.6
			SHC	41.6	53.5	65.4	39.0	50.9	62.8	36.4	48.3	60.1	33.6	45.5	57.3	30.9	42.7	54.6	28.1	39.9	51.7	25.2	36.9	48.6
		72	TC	73.2	73.2	73.2	68.6	68.6	68.6	63.9	63.9	63.9	59.0	59.0	59.0	53.9	53.9	53.9	48.7	48.7	48.7	43.1	43.1	43.1
			SHC	30.6	42.6	54.5	28.0	40.0	52.0	25.4	37.3	49.3	22.7	34.6	46.6	20.0	31.9	43.9	17.3	29.2	41.0	14.4	26.3	38.2
		76	TC	—	79.6	79.6	—	74.8	74.8	—	69.7	69.7	—	64.5	64.5	—	59.2	59.2	—	53.7	53.7	—	48.0	48.0
			SHC	—	33.7	45.7	—	31.1	43.2	—	28.5	40.5	—	25.8	37.8	—	23.1	35.1	—	20.4	32.3	—	17.6	29.4
2500 cfm	EAT (wb)	58	TC	63.5	63.5	71.8	59.8	59.8	67.7	55.9	55.9	63.6	51.9	51.9	59.2	47.7	47.7	54.7	43.4	43.4	50.0	38.8	38.8	45.0
			SHC	55.3	63.5	71.8	51.8	59.8	67.7	48.3	55.9	63.6	44.6	51.9	59.2	40.8	47.7	54.7	36.9	43.4	50.0	32.7	38.8	45.0
		62	TC	63.6	63.6	74.6	59.9	59.9	70.5	56.0	56.0	66.2	52.0	52.0	61.7	47.8	47.8	57.0	43.5	43.5	52.3	38.9	38.9	47.2
			SHC	52.6	63.6	74.6	49.2	59.9	70.5	45.7	56.0	66.2	42.2	52.0	61.7	38.5	47.8	57.0	34.7	43.5	52.3	30.6	38.9	47.2
		67	TC	67.1	67.1	70.1	62.6	62.6	67.5	58.1	58.1	64.7	53.4	53.4	61.9	48.7	48.7	58.9	44.0	44.0	55.2	39.1	39.1	50.9
			SHC	43.8	56.9	70.1	41.1	54.3	67.5	38.5	51.6	64.7	35.8	48.8	61.9	33.0	45.9	58.9	29.8	42.5	55.2	26.4	38.7	50.9
		72	TC	74.2	74.2	74.2	69.5	69.5	69.5	64.7	64.7	64.7	59.7	59.7	59.7	54.5	54.5	54.5	49.1	49.1	49.1	43.6	43.6	43.6
			SHC	31.6	44.9	58.0	29.0	42.2	55.4	26.3	39.5	52.7	23.6	36.9	50.0	20.9	34.0	47.3	18.0	31.3	44.5	15.2	28.4	41.5
		76	TC	—	80.6	80.6	—	75.8	75.8	—	70.6	70.6	—	65.3	65.3	—	60.0	60.0	—	54.3	54.3	—	48.5	48.5
			SHC	—	34.9	48.3	—	32.4	45.6	—	29.6	42.9	—	27.0	40.3	—	24.2	37.4	—	21.5	34.6	—	18.6	31.8

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — FIRST STAGE, PART LOAD (8.5 TONS)

50LC*B SIZE 09			AMBIENT TEMPERATURE (°F)																					
			65			75			85			95			105			115			125			
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
850 cfm	EAT (wb)	58	TC	38.9	38.9	42.0	37.6	37.6	41.2	36.2	40.5	34.8	34.8	39.2	33.4	33.4	37.6	32.0	32.0	36.0	30.3	30.3	34.2	
			SHC	33.0	37.4	42.0	32.2	36.8	41.2	31.4	35.9	40.5	30.3	34.8	39.2	29.2	33.4	37.6	27.9	32.0	36.0	26.5	30.3	34.2
		62	TC	42.2	42.2	42.2	40.8	40.8	40.8	39.2	39.2	37.4	37.4	37.4	35.6	35.6	35.6	33.6	33.6	34.5	31.5	31.5	33.4	
			SHC	29.5	34.1	38.7	28.9	33.4	37.9	28.1	32.7	37.1	27.2	31.8	36.4	26.3	30.9	35.4	25.4	29.9	34.5	24.4	29.0	33.4
		67	TC	46.7	46.7	46.7	45.0	45.0	45.0	43.4	43.4	43.4	41.5	41.5	41.5	39.5	39.5	39.5	37.2	37.2	37.2	34.9	34.9	34.9
			SHC	25.4	29.8	34.4	24.7	29.2	33.7	23.8	28.4	33.0	23.0	27.5	32.1	22.0	26.6	31.2	21.2	25.6	30.2	20.1	24.7	29.3
	EAT (wb)	72	TC	51.6	51.6	51.6	49.9	49.9	49.9	48.0	48.0	48.0	45.9	45.9	45.9	43.7	43.7	43.7	41.3	41.3	41.3	38.7	38.7	38.7
			SHC	21.0	25.4	30.0	20.2	24.8	29.3	19.4	24.0	28.6	18.6	23.1	27.7	17.6	22.2	26.8	16.8	21.3	25.8	15.7	20.3	24.9
		76	TC	—	55.8	55.8	—	54.0	54.0	—	52.0	52.0	—	49.7	49.7	—	47.3	47.3	—	44.8	44.8	—	42.0	42.0
			SHC	—	21.8	26.4	—	21.2	25.7	—	20.4	25.0	—	19.5	24.1	—	18.6	23.2	—	17.7	22.2	—	16.8	21.3
1100 cfm	EAT (wb)	58	TC	41.5	41.5	45.1	39.9	39.9	44.9	38.6	38.6	43.5	37.1	37.1	41.9	35.7	35.7	40.2	34.0	34.0	38.4	32.3	32.3	36.4
			SHC	35.3	40.3	45.1	34.8	39.9	44.9	33.7	38.6	43.5	32.5	37.1	41.9	31.1	35.7	40.2	29.7	34.0	38.4	28.2	32.3	36.4
		62	TC	44.1	44.1	44.1	42.5	42.5	42.5	40.9	40.9	41.1	39.0	39.0	40.3	37.0	37.0	39.3	34.9	34.9	38.3	32.7	32.7	37.2
			SHC	32.1	37.3	42.7	31.3	36.7	41.9	30.4	35.8	41.1	29.5	34.9	40.3	28.7	33.9	39.3	27.7	33.0	38.3	26.6	31.9	37.2
		67	TC	48.8	48.8	48.8	47.0	47.0	47.0	45.1	45.1	45.1	43.1	43.1	43.1	41.0	41.0	41.0	38.6	38.6	38.6	36.1	36.1	36.1
			SHC	27.0	32.4	37.6	26.2	31.6	37.0	25.4	30.7	36.1	24.5	29.8	35.2	23.6	29.0	34.3	22.6	28.0	33.2	21.5	26.9	32.3
	EAT (wb)	72	TC	53.7	53.7	53.7	51.9	51.9	51.9	49.8	49.8	49.8	47.6	47.6	47.6	45.2	45.2	45.2	42.7	42.7	42.7	40.0	40.0	40.0
			SHC	21.7	27.1	32.5	21.0	26.3	31.7	20.2	25.5	30.9	19.3	24.7	30.0	18.4	23.8	29.2	17.5	22.8	28.2	16.4	21.7	27.1
		76	TC	—	58.0	58.0	—	56.1	56.1	—	53.9	53.9	—	51.5	51.5	—	48.9	48.9	—	46.2	46.2	—	43.3	43.3
			SHC	—	22.8	28.2	—	22.1	27.5	—	21.3	26.6	—	20.4	25.7	—	19.5	24.9	—	18.5	23.9	—	17.6	22.9
1400 cfm	EAT (wb)	58	TC	46.2	46.2	52.2	44.6	44.6	50.3	42.7	42.7	48.3	40.8	40.8	46.1	38.7	38.7	43.8	36.5	36.5	41.3	34.1	34.1	38.7
			SHC	40.3	46.2	52.2	38.8	44.6	50.3	37.1	42.7	48.3	35.5	40.8	46.1	33.6	38.7	43.8	31.7	36.5	41.3	29.5	34.1	38.7
		62	TC	47.1	47.1	52.3	45.1	45.1	51.1	43.0	43.0	49.8	41.0	41.0	47.8	38.7	38.7	45.5	36.6	36.6	43.0	34.2	34.2	40.3
			SHC	37.5	44.9	52.3	36.5	43.8	51.1	35.2	42.5	49.8	33.6	40.7	47.8	32.0	38.7	45.5	30.0	36.6	43.0	28.1	34.2	40.3
		67	TC	51.9	51.9	51.9	49.7	49.7	49.7	47.3	47.3	47.3	44.8	44.8	44.8	42.0	42.0	42.0	39.1	39.1	39.4	36.1	36.1	38.0
			SHC	30.5	38.0	45.4	29.4	37.0	44.4	28.4	35.8	43.2	27.1	34.6	42.0	25.8	33.3	40.8	24.6	32.0	39.4	23.2	30.6	38.0
	EAT (wb)	72	TC	57.1	57.1	57.1	54.9	54.9	54.9	52.4	52.4	52.4	49.5	49.5	49.5	46.6	46.6	46.6	43.5	43.5	43.5	40.2	40.2	40.2
			SHC	23.3	30.8	38.3	22.3	29.7	37.2	21.2	28.7	36.2	20.0	27.5	34.9	18.7	26.2	33.7	17.5	25.0	32.4	16.2	23.6	31.1
		76	TC	—	61.6	61.6	—	59.3	59.3	—	56.6	56.6	—	53.6	53.6	—	50.5	50.5	—	47.2	47.2	—	43.8	43.8
			SHC	—	24.9	32.4	—	23.9	31.4	—	22.8	30.3	—	21.6	29.2	—	20.5	28.0	—	19.2	26.7	—	17.8	25.4
1700 cfm	EAT (wb)	58	TC	49.3	49.3	55.7	47.6	47.6	53.7	45.6	45.6	51.5	43.5	43.5	49.1	41.2	41.2	46.6	38.8	38.8	43.9	36.3	36.3	41.0
			SHC	43.1	49.3	55.7	41.4	47.6	53.7	39.7	45.6	51.5	37.8	43.5	49.1	35.8	41.2	46.6	33.6	38.8	43.9	31.4	36.3	41.0
		62	TC	49.4	49.4	57.9	47.7	47.7	55.8	45.6	45.6	53.5	43.5	43.5	51.1	41.2	41.2	48.5	38.8	38.8	45.7	36.3	36.3	42.7
			SHC	41.0	49.4	57.9	39.5	47.7	55.8	37.7	45.6	53.5	36.0	43.5	51.1	34.0	41.2	48.5	32.0	38.8	45.7	29.8	36.3	42.7
		67	TC	53.5	53.5	53.5	51.2	51.2	51.2	48.8	48.8	48.8	46.0	46.0	47.6	43.2	43.2	46.3	40.2	40.2	44.9	37.1	37.1	43.4
			SHC	33.2	42.1	51.1	32.1	41.0	50.0	31.0	39.9	48.8	29.7	38.6	47.6	28.5	37.3	46.3	27.1	36.0	44.9	25.7	34.5	43.4
	EAT (wb)	72	TC	58.8	58.8	58.8	56.5	56.5	53.7	53.7	53.7	50.8	50.8	50.8	47.8	47.8	47.8	44.5	44.5	44.5	41.0	41.0	41.0	41.0
			SHC	24.5	33.4	42.5	23.4	32.5	41.4	22.3	31.3	40.3	21.1	30.1	39.1	19.8	28.9	37.8	18.5	27.5	36.5	17.2	26.1	35.1
		76	TC	—	63.3	63.3	—	60.9	60.9	—	58.1	58.1	—	55.0	55.0	—	51.8	51.8	—	48.3	48.3	—	44.7	44.7
			SHC	—	26.3	35.5	—	25.4	34.4	—	24.3	33.3	—	23.1	32.2	—	21.8	30.9	—	20.6	29.5	—	19.2	28.3
2000 cfm	EAT (wb)	58	TC	51.9	51.9	58.5	49.9	49.9	56.4	47.9	47.9	54.0	45.5	45.5	51.5	43.2	43.2	48.8	40.6	40.6	45.9	37.8	37.8	42.9
			SHC	45.2	51.9	58.5	43.6	49.9	56.4	41.6	47.9	54.0	39.7	45.5	51.5	37.5	43.2	48.8	35.2	40.6	45.9	32.9	37.8	42.9
		62	TC	52.0	52.0	60.7	50.0	50.0	58.6	47.9	47.9	56.2	45.6	45.6	53.5	43.2	43.2	50.7	40.7	40.7	47.8	37.9	37.9	44.7
			SHC	43.1	52.0	60.7	41.4	50.0	58.6	39.7	47.9	56.2	37.7	45.6	53.5	35.7	43.2	50.7	33.4	40.7	47.8	31.2	37.9	44.7
		67	TC	54.6	54.6	56.6	52.4	52.4	55.4	49.7	49.7	54.2	47.0	47.0	52.8	44.1	44.1	51.5	41.0	41.0	49.9	38.0	38.0	47.9
			SHC	35.7	46.1	56.6	34.6	45.0	55.4	33.4	43.8	54.2	32.2	42.5	52.8	30.8	41.1	51.5	29.4	39.7	49.9	27.8	37.8	47.9
	EAT (wb)	72	TC	59.9	59.9	59.9	57.5	57.5	54.7	54.7	54.7	51.8	51.8	51.8	48.6	48.6	48.6	45.2	45.2	45.2	41.7	41.7	41.7	41.7
			SHC	25.4	36.0	46.5	24.5	34.9	45.4	23.3	33.8	44.3	22.1	32.6	43.1	20.9	31.3	41.7	19.5	29.9	40.5	18.1	28.6	39.1
		76	TC	—	64.5	64.5	—	62.0	62.0	—	59.1	59.1	—	56.0	56.0	—	52.6	52.6	—	49.0	49.0	—	45.3	45.3
			SHC	—	27.7	38.2	—	26.7	37.2	—	25.5	36.2	—	24.4	34.9	—	23.1	33.6	—	21.8	32.4	—	20.5	30.9
2250 cfm	EAT (wb)	58	TC	53.5	53.5	60.4	51.6	51.6	58.2	49.3	49.3	55.8	47.0	47.0</										

COOLING CAPACITIES — FIRST STAGE, PART LOAD (8.5 TONS) (cont)

50LC*B SIZE 09				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2550 cfm	EAT (wb)	58	TC	55.3	55.3	62.3	53.2	53.2	60.1	50.9	50.9	57.4	48.5	48.5	54.7	45.8	45.8	51.8	43.0	43.0	48.7	40.1	40.1	45.3
		SHC	48.3	55.3	62.3	46.4	53.2	60.1	44.4	50.9	57.4	42.2	48.5	54.7	39.9	45.8	51.8	37.3	43.0	48.7	34.7	40.1	45.3	
		62	TC	55.3	55.3	64.7	53.2	53.2	62.3	51.0	51.0	59.7	48.5	48.5	56.8	45.8	45.8	53.8	43.0	43.0	50.6	40.1	40.1	47.2
		SHC	45.9	55.3	64.7	44.2	53.2	62.3	42.2	51.0	59.7	40.1	48.5	56.8	37.8	45.8	53.8	35.5	43.0	50.6	33.0	40.1	47.2	
		67	TC	56.3	56.3	65.6	53.9	53.9	64.4	51.3	51.3	62.9	48.6	48.6	60.8	45.9	45.9	57.4	43.1	43.1	54.4	40.1	40.1	50.7
		SHC	39.9	52.7	65.6	38.7	51.6	64.4	37.4	50.1	62.9	35.9	48.4	60.8	33.8	45.6	57.4	31.8	43.1	54.4	29.5	40.1	50.7	
		72	TC	61.2	61.2	61.2	58.8	58.8	58.8	55.9	55.9	55.9	52.8	52.8	52.8	49.5	49.5	49.5	46.0	46.0	47.3	42.4	42.4	45.8
		SHC	27.2	40.3	53.4	26.1	39.3	52.4	25.0	38.1	51.2	23.8	36.9	49.9	22.5	35.6	48.7	21.2	34.2	47.3	19.8	32.8	45.8	
		76	TC	—	65.9	65.9	—	63.4	63.4	—	60.4	60.4	—	57.0	57.0	—	53.6	53.6	—	49.9	49.9	—	46.0	46.0
		SHC	—	29.9	43.1	—	29.0	42.1	—	27.8	41.0	—	26.6	39.7	—	25.4	38.4	—	24.0	37.1	—	22.6	35.7	
2800 cfm	EAT (wb)	58	TC	56.5	56.5	63.7	54.4	54.4	61.3	52.0	52.0	58.7	49.4	49.4	55.9	46.7	46.7	52.8	43.9	43.9	49.6	40.9	40.9	46.2
		SHC	49.2	56.5	63.7	47.4	54.4	61.3	45.3	52.0	58.7	43.1	49.4	55.9	40.7	46.7	52.8	38.1	43.9	49.6	35.4	40.9	46.2	
		62	TC	56.5	56.5	66.1	54.4	54.4	63.7	52.1	52.1	60.9	49.5	49.5	58.0	46.8	46.8	54.9	43.9	43.9	51.6	40.9	40.9	48.1
		SHC	46.9	56.5	66.1	45.1	54.4	63.7	43.1	52.1	60.9	41.0	49.5	58.0	38.6	46.8	54.9	36.2	43.9	51.6	33.6	40.9	48.1	
		67	TC	56.8	56.8	69.2	54.8	54.8	66.6	52.2	52.2	65.1	49.6	49.6	61.9	46.8	46.8	59.0	44.0	44.0	55.5	40.9	40.9	51.7
		SHC	41.5	55.4	69.2	39.9	53.2	66.6	38.6	51.9	65.1	36.6	49.2	61.9	34.6	46.8	59.0	32.5	44.0	55.5	30.1	40.9	51.7	
		72	TC	61.7	61.7	61.7	59.2	59.2	59.2	56.3	56.3	56.3	53.1	53.1	53.1	49.8	49.8	51.6	46.3	46.3	50.2	42.7	42.7	48.8
		SHC	27.9	42.2	56.5	26.9	41.1	55.4	25.7	40.0	54.2	24.5	38.7	52.9	23.2	37.4	51.6	21.8	36.1	50.2	20.5	34.6	48.8	
		76	TC	—	66.4	66.4	—	63.8	63.8	—	60.7	60.7	—	57.4	57.4	—	53.9	53.9	—	50.2	50.2	—	46.3	46.3
		SHC	—	30.9	45.2	—	29.9	44.2	—	28.8	43.1	—	27.5	41.8	—	26.2	40.5	—	24.9	39.1	—	23.5	37.7	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — SECOND STAGE, PART LOAD (8.5 TONS)

50LC*B SIZE 09			AMBIENT TEMPERATURE (°F)																					
			65			75			85			95			105			115			125			
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
850 cfm	EAT (wb)	58	TC	50.1	50.1	50.1	48.7	48.7	47.1	47.1	47.1	45.3	45.3	45.6	43.4	43.4	44.6	41.2	41.2	43.3	38.9	38.9	42.0	
			SHC	39.3	43.9	48.4	38.5	43	47.6	37.5	42.1	46.6	36.5	41.0	45.6	35.4	40.0	44.6	34.2	38.8	43.3	33.0	37.4	42.0
		62	TC	54.2	54.2	54.2	52.7	52.7	50.9	50.9	50.9	49.0	49.0	49.0	47.0	47.0	47.0	44.8	44.8	44.8	42.2	42.2	42.2	
			SHC	36.1	40.7	45.2	35.2	39.8	44.3	34.2	38.8	43.3	33.2	37.7	42.3	32.1	36.7	41.2	30.9	35.5	40.0	29.6	34.2	38.7
		67	TC	59.9	59.9	59.9	58.1	58.1	56.2	56.2	56.2	54.1	54.1	54.1	52.0	52.0	52.0	49.5	49.5	49.5	46.8	46.8	46.8	
			SHC	31.9	36.5	41	30.9	35.5	40.1	29.9	34.5	39.1	29.0	33.5	38.0	27.9	32.4	37.0	26.7	31.2	35.8	25.4	29.9	34.5
	EAT (db)	72	TC	66.1	66.1	66.1	64.2	64.2	62.1	62.1	62.1	59.9	59.9	59.9	57.4	57.4	57.4	54.8	54.8	54.8	51.9	51.9	51.9	
			SHC	27.5	32.1	36.7	26.6	31.1	35.7	25.6	30.1	34.7	24.6	29.2	33.7	23.5	28.1	32.6	22.3	26.9	31.5	21.1	25.6	30.1
		76	TC	—	71.6	71.6	—	69.4	69.4	—	67.2	67.2	—	64.8	64.8	—	62.2	62.2	—	59.4	59.4	—	56.3	56.3
			SHC	—	28.5	33.1	—	27.6	32.1	—	26.6	31.1	—	25.5	30.1	—	24.5	29.1	—	23.3	27.9	—	22.0	26.6
1100 cfm	EAT (wb)	58	TC	53.2	53.2	53.5	51.5	51.5	52.6	49.7	49.7	51.6	47.8	47.8	50.5	45.7	45.7	49.3	43.4	43.4	48.1	41.0	41.0	46.3
			SHC	42.9	48.3	53.5	41.9	47.3	52.6	40.9	46.2	51.6	39.8	45.1	50.5	38.6	44.0	49.3	37.4	42.7	48.1	35.9	41.0	46.3
		62	TC	57.4	57.4	57.4	55.7	55.7	53.7	53.7	53.7	51.7	51.7	51.7	49.4	49.4	49.4	46.9	46.9	46.9	44.3	44.3	44.3	
			SHC	38.9	44.3	49.6	37.9	43.3	48.7	37.0	42.3	47.7	35.9	41.2	46.5	34.7	40.1	45.4	33.4	38.8	44.2	32.1	37.4	42.8
		67	TC	63.4	63.4	63.4	61.4	61.4	59.3	59.3	59.3	57.0	57.0	57.0	54.6	54.6	54.6	51.9	51.9	51.9	48.9	48.9	48.9	
			SHC	33.9	39.3	44.6	33.0	38.2	43.6	31.9	37.2	42.6	30.8	36.2	41.5	29.6	35.0	40.4	28.4	33.7	39.1	27.1	32.5	37.8
	EAT (db)	72	TC	69.9	69.9	69.9	67.7	67.7	65.4	65.4	65.4	63.0	63.0	63.0	60.3	60.3	60.3	57.4	57.4	57.4	54.2	54.2	54.2	
			SHC	28.7	34.0	39.4	27.7	33.1	38.4	26.7	32.1	37.4	25.6	31.0	36.4	24.5	29.8	35.2	23.2	28.6	33.9	21.9	27.3	32.7
		76	TC	—	75.5	75.5	—	73.2	73.2	—	70.7	70.7	—	68.1	68.1	—	65.2	65.2	—	62.1	62.1	—	58.7	58.7
			SHC	—	29.7	35.1	—	28.8	34.1	—	27.8	33.2	—	26.7	32.1	—	25.5	30.9	—	24.4	29.7	—	23.1	28.5
1400 cfm	EAT (wb)	58	TC	57.9	57.9	64.7	55.6	55.6	62.8	53.4	53.4	60.5	51.2	51.2	58.0	48.8	48.8	55.3	46.1	46.1	52.5	43.3	43.3	49.2
			SHC	50.0	57.4	64.7	48.4	55.6	62.8	46.4	53.4	60.5	44.4	51.2	58.0	42.2	48.8	55.3	39.9	46.1	52.5	37.3	43.3	49.2
		62	TC	62.4	62.4	62.4	59.8	59.8	59.8	57.0	57.0	54.1	54.1	54.9	51.1	51.1	53.1	47.8	47.8	51.4	44.4	44.4	49.4	
			SHC	44.7	52.1	59.6	43.2	50.6	58.0	41.6	49.0	56.5	40.0	47.4	54.9	38.3	45.7	53.1	36.6	44.0	51.4	34.6	42.0	49.4
		67	TC	68.9	68.9	68.9	66.1	66.1	63.2	63.2	63.2	60.1	60.1	60.1	56.7	56.7	56.7	53.2	53.2	53.2	49.4	49.4	49.4	
			SHC	37.6	45.1	52.7	36.2	43.7	51.1	34.6	42.1	49.5	33.1	40.5	48.0	31.4	38.8	46.3	29.6	37.1	44.6	27.8	35.2	42.7
	EAT (db)	72	TC	76.1	76.1	76.1	73.0	73.0	69.9	69.9	69.9	66.6	66.6	66.6	63.0	63.0	63.0	59.2	59.2	59.2	55.1	55.1	55.1	
			SHC	30.5	38.0	45.5	29.1	36.6	44.1	27.5	35.0	42.5	25.9	33.4	41.0	24.3	31.8	39.3	22.5	30.0	37.5	20.8	28.3	35.7
		76	TC	—	82.2	82.2	—	79.1	79.1	—	75.8	75.8	—	72.2	72.2	—	68.3	68.3	—	64.4	64.4	—	60.0	60.0
			SHC	—	32.2	39.7	—	30.7	38.2	—	29.2	36.7	—	27.6	35.1	—	26.0	33.5	—	24.3	31.8	—	22.5	30.0
1700 cfm	EAT (wb)	58	TC	62.4	62.4	70.4	60.2	60.2	68.0	57.8	57.8	65.3	55.3	55.3	62.6	52.7	52.7	59.7	49.8	49.8	56.5	46.7	46.7	53.0
			SHC	54.3	62.4	70.4	52.4	60.2	68.0	50.2	57.8	65.3	48.0	55.3	62.6	45.6	52.7	59.7	43.1	49.8	56.5	40.4	46.7	53.0
		62	TC	65.3	65.3	67.2	62.6	62.6	65.6	59.7	59.7	64.0	56.6	56.6	62.2	53.4	53.4	60.5	50.0	50.0	58.4	46.8	46.8	55.3
			SHC	49.2	58.2	67.2	47.7	56.6	65.6	46.0	55.0	64.0	44.4	53.3	62.2	42.6	51.5	60.5	40.8	49.5	58.4	38.2	46.8	55.3
		67	TC	72.0	72.0	72.0	68.9	68.9	65.8	65.8	65.8	62.5	62.5	62.5	59.0	59.0	59.0	55.2	55.2	55.2	51.2	51.2	51.2	
			SHC	40.8	49.7	58.7	39.2	48.2	57.2	37.5	46.6	55.6	36.0	44.9	53.9	34.2	43.2	52.3	32.5	41.4	50.4	30.5	39.5	48.6
	EAT (db)	72	TC	79.3	79.3	79.3	76.1	76.1	72.6	72.6	72.6	69.1	69.1	69.1	65.3	65.3	65.3	61.3	61.3	61.3	56.9	56.9	56.9	
			SHC	32.0	41.0	50.1	30.5	39.5	48.6	29.0	37.9	47.0	27.3	36.4	45.4	25.6	34.6	43.7	23.9	32.9	41.9	21.9	31.0	40.1
		76	TC	—	85.5	85.5	—	82.2	82.2	—	78.6	78.6	—	74.9	74.9	—	70.8	70.8	—	66.5	66.5	—	61.9	61.9
			SHC	—	33.9	43.0	—	32.5	41.5	—	30.9	40.0	—	29.3	38.4	—	27.6	36.8	—	25.8	35.0	—	24.1	33.2
2000 cfm	EAT (wb)	58	TC	66.2	66.2	74.8	63.8	63.8	72.1	61.2	61.2	69.2	58.6	58.6	66.3	55.8	55.8	63.1	52.7	52.7	59.8	49.3	49.3	56.1
			SHC	57.7	66.2	74.8	55.6	63.8	72.1	53.3	61.2	69.2	50.9	58.6	66.3	48.4	55.8	63.1	45.6	52.7	59.8	42.7	49.3	56.1
		62	TC	67.7	67.7	74.3	64.7	64.7	72.6	61.8	61.8	70.8	58.8	58.8	68.7	55.8	55.8	65.7	52.7	52.7	62.2	49.4	49.4	58.3
			SHC	53.5	63.9	74.3	51.9	62.3	72.6	50.1	60.5	70.8	48.3	58.5	68.7	45.9	55.8	65.7	43.3	52.7	62.2	40.5	49.4	58.3
		67	TC	74.1	74.1	74.1	71.0	71.0	67.7	67.7	67.7	64.3	64.3	64.3	60.5	60.5	60.5	56.6	56.6	56.6	52.5	52.5	54.0	
			SHC	43.5	54.0	64.5	41.9	52.5	63.0	40.3	50.8	61.3	38.6	49.1	59.7	36.9	47.4	57.9	35.1	45.5	56.1	33.2	43.6	54.0
	EAT (db)	72	TC	81.5	81.5	81.5	78.2	78.2	74.7	74.7	74.7	71.0	71.0	71.0	67.0	67.0	67.0	62.8	62.8	62.8	58.2	58.2	58.2	
			SHC	33.2	43.8	54.4	31.7	42.3	52.8	30.1	40.7	51.3	28.5	39.0	49.6	26.7	37.3	47.9	25.0	35.5	46.0	23.1	33.6	44.2
		76	TC	—	87.9	87.9	—	84.4	84.4	—	80.6	80.6	—	76.7	76.7	—	72.5	72.5	—	68.1	68.1	—	63.2	63.2
			SHC	—	35.5	46.2	—	34.0	44.8	—	32.5	43.1	—	30.8	41.4	—	29.1	39.8	—	27.3	37.9	—	25.4	36.1
22500 cfm	EAT (wb)	58	TC	68.9	68.9	77.7	66.4	66.4	75.0	63.7	63.7	72.0	60.8	60.8	68.8	57.9	57.9	65.5	54.7	54.7	62.0	51.2	51.2	58.1

COOLING CAPACITIES — SECOND STAGE, PART LOAD (8.5 TONS) (cont)

50LC*B SIZE 09				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2550 cfm	EAT (wb)	58	TC	71.7	71.7	80.8	69.0	69.0	77.9	66.2	66.2	74.8	63.2	63.2	71.5	60.1	60.1	68.0	56.7	56.7	64.3	53.0	53.0	60.2
		SHC	62.5	71.7	80.8	60.1	69.0	77.9	57.6	66.2	74.8	55.0	63.2	71.5	52.2	60.1	68.0	49.1	56.7	64.3	45.9	53.0	60.2	
		62	TC	71.8	71.8	83.9	69.0	69.0	80.9	66.3	66.3	77.7	63.3	63.3	74.3	60.2	60.2	70.7	56.7	56.7	66.9	53.1	53.1	62.7
		SHC	59.5	71.8	83.9	57.2	69.0	80.9	54.8	66.3	77.7	52.3	63.3	74.3	49.6	60.2	70.7	46.7	56.7	66.9	43.6	53.1	62.7	
		67	TC	76.8	76.8	76.8	73.6	73.6	73.6	70.1	70.1	71.2	66.5	66.5	69.5	62.6	62.6	67.7	58.6	58.6	65.6	54.2	54.2	63.5
		SHC	48.2	61.3	74.5	46.5	59.8	72.9	44.9	58.0	71.2	43.2	56.4	69.5	41.3	54.5	67.7	39.5	52.6	65.6	37.4	50.5	63.5	
		72	TC	84.3	84.3	84.3	80.8	80.8	80.8	77.1	77.1	77.1	73.1	73.1	73.1	69.0	69.0	69.0	64.5	64.5	64.5	59.9	59.9	59.9
		SHC	35.2	48.5	61.7	33.6	46.9	60.2	32.1	45.3	58.5	30.4	43.6	56.8	28.7	41.8	55.1	26.8	40.0	53.2	24.9	38.0	51.3	
		76	TC	—	90.9	90.9	—	87.2	87.2	—	83.3	83.3	—	79.1	79.1	—	74.6	74.6	—	69.9	69.9	—	64.8	64.8
		SHC	—	38.0	51.4	—	36.6	49.9	—	34.9	48.3	—	33.2	46.5	—	31.5	44.8	—	29.6	42.9	—	27.8	41.0	
2800 cfm	EAT (wb)	58	TC	73.6	73.6	83.0	70.9	70.9	80.0	68.0	68.0	76.7	64.9	64.9	73.3	61.6	61.6	69.7	58.2	58.2	65.9	54.4	54.4	61.7
		SHC	64.3	73.6	83.0	61.7	70.9	80.0	59.2	68.0	76.7	56.5	64.9	73.3	53.5	61.6	69.7	50.5	58.2	65.9	47.1	54.4	61.7	
		62	TC	73.7	73.7	86.3	71.0	71.0	83.1	68.1	68.1	79.8	64.9	64.9	76.2	61.7	61.7	72.5	58.2	58.2	68.5	54.4	54.4	64.2
		SHC	61.1	73.7	86.3	58.8	71.0	83.1	56.3	68.1	79.8	53.6	64.9	76.2	50.9	61.7	72.5	48.0	58.2	68.5	44.8	54.4	64.2	
		67	TC	77.8	77.8	78.9	74.5	74.5	77.2	71.0	71.0	75.5	67.3	67.3	73.7	63.4	63.4	71.8	59.3	59.3	69.7	54.9	54.9	67.3
		SHC	50.1	64.5	78.9	48.6	62.9	77.2	46.9	61.1	75.5	45.1	59.4	73.7	43.3	57.5	71.8	41.3	55.5	69.7	39.2	53.2	67.3	
		72	TC	85.3	85.3	85.3	81.7	81.7	81.7	77.9	77.9	77.9	73.9	73.9	73.9	69.7	69.7	69.7	65.1	65.1	65.1	60.4	60.4	60.4
		SHC	36.1	50.5	64.9	34.5	48.9	63.4	32.9	47.3	61.7	31.2	45.5	60.0	29.4	43.8	58.2	27.6	41.9	56.3	25.6	40.0	54.3	
		76	TC	—	91.8	91.8	—	88.1	88.1	—	84.0	84.0	—	79.8	79.8	—	75.3	75.3	—	70.5	70.5	—	65.3	65.3
		SHC	—	39.1	53.6	—	37.6	52.1	—	36.0	50.4	—	34.2	48.8	—	32.5	46.9	—	30.6	45.0	—	28.7	43.0	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — THIRD STAGE, FULL LOAD (8.5 TONS)

50LC*B SIZE 09			AMBIENT TEMPERATURE (°F)																							
			65			75			85			95			105			115			125					
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)					
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85			
1700 cfm	EAT (wb)	58	TC	89.2	89.2	90.4	86.4	86.4	88.7	83.4	83.4	87.0	80.0	80.0	85.1	76.5	76.5	83.2	72.6	72.6	81.0	69.0	69.0	77.7		
			SHC	72.2	81.2	90.4	70.6	79.7	88.7	68.8	77.9	87.0	67.0	76.1	85.1	65.1	74.1	83.2	62.9	72.0	81.0	60.3	69.0	77.7		
		62	TC	96.1	96.1	96.1	93.1	93.1	89.8	89.8	89.8	86.3	86.3	86.3	82.4	82.4	82.4	78.2	78.2	78.2	73.7	73.7	73.7			
			SHC	65.3	74.4	83.5	63.7	72.8	81.9	62.0	71.1	80.1	60.2	69.2	78.3	58.2	67.3	76.3	56.1	65.1	74.3	53.9	63.0	72.1		
		67	TC	105.6	105.6	105.6	102.3	102.3	98.7	98.7	98.7	94.9	94.9	94.9	90.7	90.7	90.7	86.2	86.2	86.2	81.2	81.2	81.2			
			SHC	56.6	65.6	74.8	54.9	64.1	73.1	53.2	62.3	71.4	51.4	60.5	69.6	49.4	58.5	67.7	47.4	56.5	65.5	45.1	54.2	63.4		
	EAT (db)	72	TC	115.9	115.9	115.9	112.3	112.3	108.5	108.5	108.5	104.3	104.3	104.3	100.3	99.7	99.7	94.8	94.8	94.8	89.4	89.4	89.4			
			SHC	47.5	56.6	65.7	45.8	55.0	64.1	44.2	53.3	62.4	42.3	51.5	60.5	40.5	49.5	58.7	38.4	47.5	56.6	36.2	45.3	54.4		
		76	TC	—	124.9	124.9	—	121.1	121.1	—	116.9	116.9	—	112.4	112.4	—	107.4	107.4	—	102.2	102.2	—	96.4	96.4		
			SHC	—	49.1	58.2	—	47.6	56.6	—	45.8	55.0	—	44.1	53.2	—	42.1	51.3	—	40.2	49.2	—	37.9	47.1		
1900 cfm	EAT (wb)	58	TC	92.4	92.4	96.7	89.4	89.4	95.1	86.2	86.2	93.2	83.9	83.9	89.8	80.0	80.0	87.1	75.8	75.8	85.4	72.2	72.2	81.3		
			SHC	76.4	86.6	96.7	74.8	84.9	95.1	73.0	83.2	93.2	70.5	80.1	89.8	68.2	77.6	87.1	66.1	75.8	85.4	63.0	72.2	81.3		
		62	TC	99.4	99.4	99.4	96.1	96.1	92.6	92.6	88.9	88.9	84.8	84.8	88.9	84.8	84.8	84.8	80.4	80.4	80.4	75.7	75.7	77.2		
			SHC	68.7	78.9	89.0	67.1	77.2	87.4	65.3	75.4	85.5	63.4	73.5	83.7	61.3	71.5	81.6	59.2	69.3	79.5	56.9	67.1	77.2		
		67	TC	109.0	109.0	109.0	105.5	105.5	101.7	101.7	101.7	97.6	97.6	97.6	93.2	93.2	93.2	88.4	88.4	88.4	83.3	83.3	83.3			
			SHC	58.8	69.0	79.2	57.1	67.4	77.5	55.4	65.5	75.8	53.5	63.7	73.8	51.6	61.7	71.9	49.4	59.6	69.7	47.2	57.3	67.5		
	EAT (db)	72	TC	119.5	119.5	119.5	115.7	115.7	111.6	111.6	111.6	107.3	107.3	107.3	102.4	102.4	102.4	97.2	97.2	97.2	91.6	91.6	91.6			
			SHC	48.7	58.8	69.0	47.0	57.2	67.4	45.2	55.5	65.6	43.4	53.6	63.8	41.4	51.6	61.8	39.3	49.5	59.7	37.1	47.3	57.5		
		76	TC	—	128.6	128.6	—	124.6	124.6	—	120.1	120.1	—	115.3	115.3	—	110.2	110.2	—	104.6	104.6	—	98.6	98.6		
			SHC	—	50.5	60.6	—	48.8	59.1	—	47.1	57.3	—	45.3	55.5	—	43.3	53.5	—	41.2	51.5	—	39.1	49.2		
2150 cfm	EAT (wb)	58	TC	91.9	91.9	100.5	87.5	87.5	97.3	82.8	82.8	93.8	78.3	78.3	89.2	73.7	73.7	84.2	68.8	68.8	78.9	63.7	63.7	73.2		
			SHC	77.8	89.1	100.5	74.6	86.0	97.3	71.3	82.6	93.8	67.4	78.3	89.2	63.2	73.7	84.2	58.7	68.8	78.9	54.0	63.7	73.2		
		62	TC	99.5	99.5	99.5	94.7	94.7	89.5	89.5	89.5	84.1	84.1	84.1	78.5	78.5	79.2	72.4	72.4	75.6	66.1	66.1	71.8			
			SHC	69.5	81.0	92.4	66.4	77.8	89.3	63.2	74.6	86.0	59.8	71.3	82.7	56.4	67.8	79.2	52.7	64.2	75.6	48.9	60.4	71.8		
		67	TC	110.1	110.1	110.1	105	105.0	99.5	99.5	99.5	93.8	88.9	93.8	87.7	87.7	87.7	81.3	81.3	81.3	74.4	74.4	74.4			
			SHC	59.1	70.6	82.0	56.0	67.5	78.9	52.7	64.3	75.7	49.4	60.8	72.3	45.9	57.4	68.8	42.4	53.8	65.3	38.6	50.1	61.5		
	EAT (db)	72	TC	121.7	121.7	121.7	116.2	116.2	110.4	110.4	110.4	104.2	104.2	104.2	97.8	97.8	97.8	90.9	90.9	90.9	83.6	83.6	83.6			
			SHC	48.4	59.9	71.5	45.2	56.8	68.3	42.0	53.6	65.1	38.7	50.3	61.8	35.3	46.8	58.3	31.8	43.3	54.8	28.1	39.6	51.1		
		76	TC	—	131.6	131.6	—	125.8	125.8	—	119.7	119.7	—	113.2	113.2	—	106.4	106.4	—	99.1	99.1	—	91.4	91.4		
			SHC	—	51.1	62.6	—	48.0	59.6	—	44.9	56.4	—	41.5	53.0	—	38.1	49.6	—	34.6	46.1	—	31.0	42.5		
2550 cfm	EAT (wb)	58	TC	97.9	97.9	110.7	93.6	93.6	106.1	89.1	89.1	101.2	84.4	84.4	96.1	79.5	79.5	90.7	74.2	74.2	84.9	68.6	68.6	78.9		
			SHC	85.0	97.9	110.7	81.1	93.6	106.1	77.0	89.1	101.2	72.8	84.4	96.1	68.3	79.5	90.7	63.6	74.2	84.9	58.5	68.6	78.9		
		62	TC	104.1	104.1	104.1	99.0	99.0	99.7	93.6	93.6	96.3	87.9	87.9	92.9	81.9	81.9	89.3	75.7	75.7	85.5	69.1	69.1	81.4		
			SHC	76.0	89.5	103.0	72.7	86.3	99.7	69.4	82.9	96.3	66.0	79.5	92.9	62.4	75.9	89.3	58.7	72.1	85.5	54.8	68.1	81.4		
		67	TC	114.8	114.8	114.8	109.3	109.3	109.3	103.5	103.5	103.5	97.5	97.5	97.5	91.1	91.1	91.1	84.3	84.3	84.3	77.1	77.1	77.1		
			SHC	63.4	76.9	90.5	60.2	73.7	87.3	56.8	70.4	83.9	53.4	67.0	80.5	49.9	63.5	76.9	46.3	59.8	73.3	42.5	56.0	69.5		
	EAT (db)	72	TC	126.5	126.5	126.5	120.7	120.7	114.6	114.6	114.6	108.1	108.1	108.1	101.2	101.2	101.2	94.0	94.0	94.0	86.3	86.3	86.3			
			SHC	50.5	64.2	77.8	47.4	61.0	74.6	44.1	57.7	71.3	40.8	54.3	67.9	37.2	50.8	64.4	33.6	47.2	60.7	29.8	43.4	56.9		
		76	TC	—	136.6	136.6	—	130.5	130.5	—	124.0	124.0	—	117.2	117.2	—	110.0	110.0	—	102.3	102.3	—	94.1	94.1		
			SHC	—	53.6	67.4	—	50.5	64.2	—	47.3	60.9	—	43.9	57.6	—	40.5	54.1	—	36.9	50.5	—	33.2	46.8		
3000 cfm	EAT (wb)	58	TC	104.4	104.4	118.0	99.8	99.8	113.1	95.2	95.2	107.9	90.1	90.1	102.4	84.8	84.8	96.6	79.2	79.2	90.5	73.2	73.2	83.9		
			SHC	90.8	104.4	118.0	86.7	99.8	113.1	82.4	95.2	107.9	77.8	90.1	102.4	72.9	84.8	96.6	67.9	79.2	90.5	62.5	73.2	83.9		
		62	TC	108.0	108.0	114.2	102.8	102.8	110.9	97.1	97.1	107.3	91.3	91.3	103.7	85.2	85.2	99.7	79.4	79.4	94.4	73.3	73.3	87.6		
			SHC	82.7	98.5	114.2	79.4	95.2	110.9	76.0	91.7	107.3	72.4	88.0	103.7	68.6	84.1	99.7	64.3	79.3	94.4	59.0	73.3	87.6		
		67	TC	118.7	118.7	118.7	112.9	112.9	112.9	106.9	106.9	106.9	100.5	100.5	100.5	93.8	93.8	93.8	86.8	86.8	86.8	79.4	79.4	79.4		
			SHC	67.8	83.7	99.5	64.5	80.3	96.1	61.1	76.9	92.7	57.7	73.5	89.3	54.1	69.8	85.6	50.3	66.1	81.9	46.5	62.2	78.0		
	EAT (db)	72	TC	130.5	130.5	130.5	124.4	124.4	124.4	118.0	118.0	118.0	111.2	111.2	111.2	104.0	104.0	104.0	96.5	96.5	96.5	88.5	88.5	88.5		
			SHC	52.7	68.5	84.4	49.4	65.3	81.2	46.1	61.9	77.8	42.6	58.5	74.4	39.1	54.9	70.8	35.4	51.2	67.1	31.6	47.4	63.2		
		76	TC	—	140.7	140.7	—	134.4	134.4	—	127.5	127.5	—	120.3	120.3	—	112.									

COOLING CAPACITIES — THIRD STAGE, FULL LOAD (8.5 TONS) (CONT)

50LC*B SIZE 09				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3850 cfm	EAT (wb)	58	TC	113.9	113.9	128.6	108.9	108.9	123.1	103.7	103.7	117.5	98.2	98.2	111.4	92.3	92.3	105.1	86.2	86.2	98.3	79.7	79.7	91.1
		SHC	99.2	113.9	128.6	94.7	108.9	123.1	89.9	103.7	117.5	84.9	98.2	111.4	79.7	92.3	105.1	74.1	86.2	98.3	68.3	79.7	91.1	
		62	TC	114.2	114.2	133.1	109.1	109.1	128.1	103.8	103.8	122.3	98.3	98.3	116.0	92.4	92.4	109.4	86.3	86.3	102.4	79.8	79.8	95.0
		SHC	94.1	113.6	133.1	90.0	109.1	128.1	85.4	103.8	122.3	80.5	98.3	116.0	75.5	92.4	109.4	70.1	86.3	102.4	64.4	79.8	95.0	
		67	TC	123.5	123.5	123.5	117.5	117.5	117.5	111.2	111.2	111.2	104.5	104.5	104.8	97.4	97.4	101.0	90.1	90.1	97.1	82.3	82.3	93.0
		SHC	75.4	95.4	115.3	72.0	91.9	111.9	68.5	88.5	108.4	65.0	84.9	104.8	61.2	81.1	101.0	57.4	77.3	97.1	53.5	73.2	93.0	
		72	TC	135.5	135.5	135.5	129.1	129.1	129.1	122.3	122.3	122.3	115.1	115.1	115.1	107.6	107.6	107.6	99.6	99.6	99.6	91.4	91.4	91.4
		SHC	56.0	76.1	96.0	52.7	72.7	92.7	49.3	69.2	89.2	45.8	65.7	85.7	42.1	62.1	82.0	38.4	58.2	78.1	34.5	54.3	74.1	
		76	TC	—	146.0	146.0	—	139.1	139.1	—	131.9	131.9	—	124.3	124.3	—	116.2	116.2	—	107.7	107.7	—	98.7	98.7
		SHC	—	60.5	80.7	—	57.1	77.3	—	53.7	73.8	—	50.2	70.2	—	46.5	66.4	—	42.6	62.4	—	38.6	58.2	
4250 cfm	EAT (wb)	58	TC	117.4	117.4	132.5	112.3	112.3	126.9	106.9	106.9	121.0	101.1	101.1	114.8	95.1	95.1	108.1	88.7	88.7	101.1	82.0	82.0	93.7
		SHC	102.3	117.4	132.5	97.6	112.3	126.9	92.7	106.9	121.0	87.6	101.1	114.8	82.1	95.1	108.1	76.3	88.7	101.1	70.3	82.0	93.7	
		62	TC	117.6	117.6	137.8	112.4	112.4	132.0	107.0	107.0	125.9	101.2	101.2	119.4	95.2	95.2	112.6	88.8	88.8	105.4	82.1	82.1	97.7
		SHC	97.3	117.6	137.8	92.8	112.4	132.0	88.1	107.0	125.9	83.1	101.2	119.4	77.8	95.2	112.6	72.2	88.8	105.4	66.4	82.1	97.7	
		67	TC	125.2	125.2	125.2	119.0	119.0	119.0	112.6	112.6	115.4	105.9	105.9	111.7	98.7	98.7	107.8	91.3	91.3	103.8	83.5	83.5	99.5
		SHC	78.7	100.5	122.4	75.3	97.1	119.0	71.8	93.6	115.4	68.2	90.0	111.7	64.4	86.1	107.8	60.5	82.2	103.8	56.6	78.0	99.5	
		72	TC	137.2	137.2	137.2	130.7	130.7	130.7	123.7	123.7	123.7	116.5	116.5	116.5	108.8	108.8	108.8	100.7	100.7	100.7	92.2	92.2	92.2
		SHC	57.4	79.3	101.2	54.1	76.0	97.8	50.7	72.4	94.3	47.1	68.9	90.7	43.5	65.2	87.0	39.7	61.3	83.0	35.7	57.3	79.0	
		76	TC	—	147.7	147.7	—	140.8	140.8	—	133.4	133.4	—	125.6	125.6	—	117.3	117.3	—	108.6	108.6	—	99.5	99.5
		SHC	—	62.2	84.2	—	58.9	80.8	—	55.4	77.3	—	51.8	73.5	—	48.1	69.6	—	44.1	65.5	—	40.0	61.1	

LEGEND

I	— 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 (1000 Btuh) Gross
TC	— Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — FIRST STAGE, PART LOAD (10 TONS)

50LC*B SIZE 12			AMBIENT TEMPERATURE (°F)																						
			65			75			85			95			105			115			125				
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1000 cfm	EAT (wb)	58	TC	44.3	44.3	48.7	42.8	42.8	47.9	41.3	41.3	46.6	39.9	39.9	44.9	38.3	38.3	43.2	36.6	36.6	41.2	34.7	34.7	39.1	
			SHC	37.9	43.3	48.7	37.1	42.5	47.9	36.1	41.3	46.6	34.9	39.9	44.9	33.4	38.3	43.2	32.0	36.6	41.2	30.3	34.7	39.1	
		62	TC	48.1	48.1	48.1	46.5	46.5	44.7	44.7	44.7	42.7	42.7	42.7	40.6	40.6	41.1	38.2	38.2	40.0	35.7	35.7	38.8		
			SHC	34.1	39.4	44.8	33.2	38.6	44.0	32.4	37.7	43.1	31.4	36.8	42.1	30.4	35.8	41.1	29.3	34.6	40.0	28.2	33.4	38.8	
		67	TC	53.3	53.3	53.3	51.6	51.6	49.6	49.6	49.6	47.4	47.4	47.4	45.0	45.0	45.0	42.5	42.5	42.5	39.8	39.8	39.8		
			SHC	29.2	34.5	39.9	28.3	33.6	39.0	27.4	32.8	38.1	26.4	31.8	37.1	25.4	30.8	36.2	24.4	29.7	35.1	23.2	28.6	33.9	
	EAT (db)	72	TC	59.1	59.1	59.1	57.1	57.1	55.0	55.0	55.0	52.7	52.7	52.7	50.0	50.0	50.0	47.3	47.3	47.3	44.3	44.3	44.3		
			SHC	24.0	29.3	34.7	23.2	28.6	33.9	22.3	27.7	33.1	21.4	26.7	32.1	20.4	25.7	31.1	19.3	24.7	30.0	18.1	23.5	28.9	
		76	TC	—	64.1	64.1	—	62.0	62.0	—	59.7	59.7	—	57.1	57.1	—	54.4	54.4	—	51.4	51.4	—	48.3	48.3	
			SHC	—	25.2	30.5	—	24.4	29.7	—	23.5	28.9	—	22.6	28.0	—	21.5	26.9	—	20.5	25.8	—	19.3	24.7	
		58	TC	49.8	49.8	56.2	48.5	48.5	54.6	46.8	46.8	52.7	45.0	45.0	50.8	43.2	43.2	48.7	41.1	41.1	46.3	38.9	38.9	43.8	
			SHC	43.6	49.8	56.2	42.3	48.5	54.6	41.0	46.8	52.7	39.4	45.0	50.8	37.7	43.2	48.7	35.9	41.1	46.3	33.9	38.9	43.8	
1500 cfm	EAT (wb)	62	TC	52.1	52.1	54.1	50.2	50.2	53.2	48.1	48.1	52.3	45.8	45.8	51.3	43.5	43.5	50.1	41.1	41.1	48.2	38.9	38.9	45.5	
			SHC	39.8	47.0	54.1	38.9	46.1	53.2	37.9	45.1	52.3	36.9	44.1	51.3	35.8	42.9	50.1	34.2	41.1	48.2	32.4	38.9	45.5	
		67	TC	57.5	57.5	57.5	55.5	55.5	53.1	53.1	53.1	50.7	50.7	50.7	48.0	48.0	48.0	45.1	45.1	45.1	42.1	42.1	42.1		
			SHC	33.0	40.2	47.4	32.1	39.3	46.5	31.1	38.3	45.5	30.0	37.2	44.5	29.0	36.2	43.4	27.8	35.0	42.2	26.6	33.8	41.0	
		72	TC	63.5	63.5	63.5	61.3	61.3	58.8	58.8	58.8	56.2	56.2	56.2	53.2	53.2	53.2	50.1	50.1	50.1	46.8	46.8	46.8		
			SHC	25.8	33.2	40.4	25.1	32.3	39.5	24.1	31.3	38.5	23.1	30.3	37.5	22.0	29.3	36.5	20.9	28.1	35.4	19.7	26.9	34.1	
	EAT (db)	76	TC	—	68.4	68.4	—	66.3	66.3	—	63.7	63.7	—	60.8	60.8	—	57.7	57.7	—	54.4	54.4	—	50.9	50.9	
			SHC	—	27.3	34.6	—	26.5	33.8	—	25.6	32.9	—	24.7	31.9	—	23.6	30.8	—	22.4	29.7	—	21.3	28.6	
1800 cfm	EAT (wb)	58	TC	53.8	53.8	60.6	52.2	52.2	58.7	50.2	50.2	56.6	48.2	48.2	54.3	46.0	46.0	51.9	43.6	43.6	49.1	41.0	41.0	46.3	
			SHC	47.0	53.8	60.6	45.5	52.2	58.7	43.9	50.2	56.6	42.0	48.2	54.3	40.1	46.0	51.9	38.0	43.6	49.1	35.8	41.0	46.3	
		62	TC	54.4	54.4	61.7	52.4	52.4	60.5	50.3	50.3	58.8	48.3	48.3	56.5	46.0	46.0	53.8	43.7	43.7	51.1	41.0	41.0	48.1	
			SHC	44.3	52.9	61.7	43.2	51.9	60.5	41.8	50.3	58.8	40.1	48.3	56.5	38.2	46.0	53.8	36.2	43.7	51.1	34.0	41.0	48.1	
		67	TC	59.8	59.8	59.8	57.5	57.5	55.0	55.0	55.0	52.3	52.3	52.3	49.3	49.3	49.3	46.2	46.2	47.7	42.9	42.9	46.3		
			SHC	35.8	44.7	53.4	34.8	43.7	52.5	33.7	42.6	51.4	32.7	41.4	50.2	31.4	40.2	48.9	30.1	38.9	47.7	28.8	37.5	46.3	
	EAT (db)	72	TC	65.8	65.8	65.8	63.4	63.4	60.7	60.7	60.7	57.7	57.7	57.7	54.6	54.6	54.6	51.2	51.2	51.2	47.6	47.6	47.6		
			SHC	27.2	36.1	44.9	26.2	35.1	44.0	25.3	34.0	42.9	24.1	33.0	41.8	22.9	31.8	40.6	21.6	30.5	39.3	20.3	29.2	38.0	
		76	TC	—	70.8	70.8	—	68.4	68.4	—	65.6	65.6	—	62.5	62.5	—	59.2	59.2	—	55.6	55.6	—	51.7	51.7	
			SHC	—	29.0	37.8	—	28.1	37.0	—	27.1	35.9	—	25.9	34.8	—	24.8	33.6	—	23.6	32.5	—	22.2	31.1	
2000 cfm	EAT (wb)	58	TC	57.4	57.4	64.6	55.6	55.6	62.6	53.4	53.4	60.3	51.2	51.2	57.7	48.8	48.8	55.0	46.2	46.2	52.1	43.4	43.4	48.9	
			SHC	50.1	57.4	64.6	48.6	55.6	62.6	46.7	53.4	60.3	44.8	51.2	57.7	42.6	48.8	55.0	40.3	46.2	52.1	37.8	43.4	48.9	
		62	TC	57.4	57.4	67.2	55.6	55.6	65.0	53.5	53.5	62.6	51.3	51.3	60.0	48.8	48.8	57.1	46.2	46.2	54.1	43.5	43.5	50.8	
			SHC	47.8	57.4	67.2	46.2	55.6	65.0	44.5	53.5	62.6	42.6	51.3	60.0	40.6	48.8	57.1	38.4	46.2	54.1	36.1	43.5	50.8	
		67	TC	61.5	61.5	61.5	59.2	59.2	59.2	56.6	56.6	58.1	53.6	53.6	56.9	50.6	50.6	55.6	47.4	47.4	54.2	44.0	44.0	52.7	
			SHC	39.0	49.6	60.3	38.0	48.6	59.2	36.9	47.5	58.1	35.7	46.3	56.9	34.5	45.0	55.6	33.2	43.7	54.2	31.8	42.2	52.7	
	EAT (db)	72	TC	67.6	67.6	67.6	65.1	65.1	62.3	62.3	62.3	59.2	59.2	59.2	55.9	55.9	55.9	52.4	52.4	52.4	48.6	48.6	48.6		
			SHC	28.6	39.2	49.9	27.6	38.2	48.9	26.5	37.2	47.9	25.4	36.1	46.7	24.2	34.8	45.5	22.9	33.5	44.3	21.5	32.3	42.9	
		76	TC	—	72.6	72.6	—	70.2	70.2	—	67.3	67.3	—	64.1	64.1	—	60.5	60.5	—	56.7	56.7	—	52.7	52.7	
			SHC	—	30.6	41.3	—	29.7	40.5	—	28.8	39.5	—	27.7	38.4	—	26.5	37.2	—	25.3	36.0	—	24.0	34.7	
2300 cfm	EAT (wb)	58	TC	59.9	59.9	67.4	57.9	57.9	65.2	55.7	55.7	62.8	53.3	53.3	60.1	50.7	50.7	57.1	48.0	48.0	54.1	45.0	45.0	50.7	
			SHC	52.3	59.9	67.4	50.6	57.9	65.2	48.7	55.7	62.8	46.5	53.3	60.1	44.3	50.7	57.1	41.8	48.0	54.1	39.3	45.0	50.7	
		62	TC	60.0	60.0	70.0	57.9	57.9	67.8	55.8	55.8	65.1	53.3	53.3	62.4	50.8	50.8	59.4	48.1	48.1	56.2	45.0	45.0	52.7	
			SHC	49.8	60.0	70.0	48.2	57.9	67.8	46.3	55.8	65.1	44.4	53.3	62.4	42.2	50.8	59.4	39.9	48.1	56.2	37.3	45.0	52.7	
		67	TC	62.7	62.7	65.8	60.3	60.3	64.7	57.5	57.5	63.7	54.6	54.6	62.4	51.5	51.5	60.9	48.3	48.3	59.4	45.1	45.1	56.6	
			SHC	41.5	53.7	65.8	40.6	52.7	64.7	39.5	51.6	63.7	38.2	50.3	62.4	37.0	48.9	60.9	35.6	47.5	59.4	33.6	45.0	56.6	
	EAT (db)	72	TC	68.6	68.6	68.6	66.1	66.1	63.3	63.3	63.3	60.1	60.1	60.1	56.6	56.6	56.6	53.0	53.0	53.0	49.1	49.1	49.1		
			SHC	29.5	41.8	54.0	28.7	40.9	53.0	27.6	39.8	52.0	26.4	38.6	50.8	25.3	37.4	49.6	23.9	36.1	48.3	22.6	34.8	46.9	
		76	TC	—	73.8	73.8	—	71.3	71.3	—	68.3	68.3	—	64.9	64.9	—	61.3	61.3	—	57.5	57.5	—	53.4	53.4	
			SHC	—	32.1	44.4	—	31.2	43.5	—	30.1	42.5	—	29.1	41.3	—	27.9	40.2	—	26.6	38.9	—	25.3	37.5	
2650 cfm	EAT (wb)	58	TC	62.2	62.2	70.0	60.2	60.2	67.8	57.8	57.8	65.1	55.3												

COOLING CAPACITIES — FIRST STAGE, PART LOAD (10 TONS) (cont)

50LC*B SIZE 12				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2950 cfm	EAT (wb)	58	TC	63.9	63.9	72.0	61.7	61.7	69.5	59.4	59.4	66.9	56.7	56.7	63.9	53.9	53.9	60.7	50.9	50.9	57.3	47.7	47.7	53.7
		SHC	55.8	63.9	72.0	53.9	61.7	69.5	51.8	59.4	66.9	49.5	56.7	63.9	47.0	53.9	60.7	44.4	50.9	57.3	41.5	47.7	53.7	
		62	TC	63.9	63.9	74.7	61.8	61.8	72.2	59.4	59.4	69.4	56.7	56.7	66.3	53.9	53.9	63.1	50.9	50.9	59.6	47.7	47.7	55.8
		SHC	53.1	63.9	74.7	51.4	61.8	72.2	49.3	59.4	69.4	47.2	56.7	66.3	44.8	53.9	63.1	42.2	50.9	59.6	39.6	47.7	55.8	
		67	TC	64.5	64.5	77.0	62.2	62.2	75.8	59.6	59.6	73.7	56.9	56.9	70.6	54.0	54.0	67.7	51.0	51.0	63.9	47.7	47.7	59.9
		SHC	46.7	61.9	77.0	45.6	60.7	75.8	44.2	59.0	73.7	42.2	56.5	70.6	40.4	54.0	67.7	38.0	51.0	63.9	35.6	47.7	59.9	
		72	TC	70.2	70.2	70.2	67.6	67.6	67.6	64.6	64.6	64.6	61.3	61.3	61.3	57.8	57.8	58.1	54.0	54.0	56.8	50.1	50.1	55.4
		SHC	31.7	47.2	62.6	30.8	46.2	61.6	29.7	45.1	60.5	28.6	44.0	59.4	27.3	42.7	58.1	26.0	41.4	56.8	24.7	40.0	55.4	
		76	TC	—	75.4	75.4	—	72.7	72.7	—	69.7	69.7	—	66.3	66.3	—	62.6	62.6	—	58.6	58.6	—	54.3	54.3
		SHC	—	34.9	50.4	—	34.0	49.5	—	33.0	48.6	—	31.9	47.4	—	30.6	46.2	—	29.3	44.9	—	28.1	43.5	
3300 cfm	EAT (wb)	58	TC	65.5	65.5	73.7	63.3	63.3	71.3	60.8	60.8	68.5	58.1	58.1	65.4	55.2	55.2	62.2	52.1	52.1	58.7	48.7	48.7	54.9
		SHC	57.2	65.5	73.7	55.3	63.3	71.3	53.1	60.8	68.5	50.7	58.1	65.4	48.2	55.2	62.2	45.4	52.1	58.7	42.5	48.7	54.9	
		62	TC	65.5	65.5	76.5	63.4	63.4	74.0	60.8	60.8	71.2	58.1	58.1	68.0	55.2	55.2	64.5	52.1	52.1	60.9	48.8	48.8	57.0
		SHC	54.5	65.5	76.5	52.7	63.4	74.0	50.6	60.8	71.2	48.4	58.1	68.0	45.8	55.2	64.5	43.3	52.1	60.9	40.5	48.8	57.0	
		67	TC	65.6	65.6	81.9	63.5	63.5	79.4	60.9	60.9	76.2	58.2	58.2	72.9	55.3	55.3	69.2	52.2	52.2	65.3	48.8	48.8	61.1
		SHC	49.0	65.4	81.9	47.5	63.5	79.4	45.5	60.9	76.2	43.5	58.2	72.9	41.2	55.3	69.2	38.9	52.2	65.3	36.4	48.8	61.1	
		72	TC	70.7	70.7	70.7	68.2	68.2	68.2	65.1	65.1	65.1	61.8	61.8	63.9	58.2	58.2	62.6	54.4	54.4	61.1	50.4	50.4	59.7
		SHC	32.8	49.9	67.1	31.9	48.9	66.1	30.8	47.9	65.0	29.6	46.7	63.9	28.4	45.4	62.6	27.1	44.2	61.1	25.7	42.7	59.7	
		76	TC	—	76.0	76.0	—	73.3	73.3	—	70.2	70.2	—	66.8	66.8	—	63.0	63.0	—	59.0	59.0	—	54.7	54.7
		SHC	—	36.3	53.5	—	35.4	52.7	—	34.4	51.7	—	33.3	50.5	—	32.1	49.3	—	30.8	48.0	—	29.4	46.6	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — SECOND STAGE, PART LOAD (10 TONS)

50LC*B SIZE 12			AMBIENT TEMPERATURE (°F)																						
			65			75			85			95			105			115			125				
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1000 cfm	EAT (wb)	58	TC	59.4	59.4	59.4	57.9	57.9	57.9	56.0	56.0	56.0	53.8	53.8	54.1	51.3	51.3	52.7	48.5	48.5	51.1	45.3	45.3	49.3	
			SHC	46.6	52.0	57.3	45.8	51.2	56.6	44.7	50.0	55.4	43.4	48.8	54.1	41.9	47.3	52.7	40.4	45.7	51.1	38.6	44.0	49.3	
		62	TC	64.4	64.4	64.4	62.7	62.7	62.7	60.6	60.6	60.6	58.4	58.4	58.4	55.8	55.8	55.8	52.8	52.8	52.8	49.5	49.5	49.5	
			SHC	42.9	48.3	53.6	41.9	47.3	52.7	40.9	46.2	51.6	39.6	44.9	50.3	38.1	43.5	48.8	36.6	41.9	47.3	34.9	40.3	45.6	
		67	TC	71.2	71.2	71.2	69.3	69.3	69.3	67.2	67.2	67.2	64.7	64.7	64.7	61.9	61.9	61.9	58.8	58.8	58.8	55.3	55.3	55.3	
			SHC	38.0	43.4	48.8	37.1	42.4	47.8	36.0	41.3	46.7	34.7	40.1	45.4	33.2	38.6	44.0	31.8	37.1	42.5	30.1	35.5	40.9	
	EAT (db)	72	TC	78.7	78.7	78.7	76.7	76.7	76.7	74.4	74.4	74.4	71.8	71.8	71.8	68.8	68.8	68.8	65.4	65.4	65.4	61.6	61.6	61.6	
			SHC	33.0	38.3	43.7	32.0	37.3	42.7	30.9	36.3	41.6	29.6	35.0	40.4	28.3	33.6	39.0	26.8	32.2	37.5	25.2	30.5	35.9	
		76	TC	—	85.2	85.2	—	83.2	83.2	—	80.7	80.7	—	77.9	77.9	—	74.8	74.8	—	71.2	71.2	—	67.2	67.2	
			SHC	—	34.1	39.5	—	33.2	38.5	—	32.1	37.4	—	30.9	36.3	—	29.5	34.9	—	28.1	33.4	—	26.4	31.8	
		58	TC	66.3	66.3	69.3	64.4	64.4	68.3	62.1	62.1	67.0	59.5	59.5	65.6	56.9	56.9	63.4	54.1	54.1	61.0	51.3	51.3	57.8	
			SHC	54.9	62.1	69.3	53.8	61.0	68.3	52.6	59.8	67.0	51.2	58.4	65.6	49.3	56.4	63.4	47.3	54.1	61.0	44.9	51.3	57.8	
1500 cfm	EAT (wb)	62	TC	71.6	71.6	71.6	69.5	69.5	69.5	67.2	67.2	67.2	64.4	64.4	64.4	61.3	61.3	61.3	57.9	57.9	57.9	54.1	54.1	55.3	
			SHC	49.5	56.7	64.0	48.5	55.7	62.9	47.3	54.5	61.7	45.8	53.0	60.4	44.4	51.6	58.8	42.6	49.9	57.1	40.9	48.1	55.3	
		67	TC	79.0	79.0	79.0	76.7	76.7	76.7	74.2	74.2	74.2	71.3	71.3	71.3	68.0	68.0	68.0	64.4	64.4	64.4	60.3	60.3	60.3	
			SHC	42.7	49.9	57.1	41.6	48.9	56.2	40.5	47.7	54.9	39.1	46.3	53.5	37.5	44.9	52.1	36.0	43.2	50.4	34.1	41.3	48.7	
		72	TC	87.0	87.0	87.0	84.7	84.7	84.7	82.0	82.0	82.0	78.9	78.9	78.9	75.4	75.4	75.4	71.4	71.4	71.4	67.0	67.0	67.0	
			SHC	35.6	42.8	50.1	34.6	41.8	49.0	33.4	40.7	47.9	32.1	39.4	46.6	30.6	37.9	45.1	29.1	36.3	43.5	27.3	34.5	41.7	
	EAT (db)	76	TC	—	94.0	94.0	—	91.6	91.6	—	88.7	88.7	—	85.4	85.4	—	81.7	81.7	—	77.5	77.5	—	72.8	72.8	
			SHC	—	37.1	44.3	—	36.1	43.3	—	34.9	42.1	—	33.6	40.9	—	32.2	39.5	—	30.6	37.8	—	28.9	36.2	
1800 cfm	EAT (wb)	58	TC	65.9	65.9	74.2	62.7	62.7	71.4	59.4	59.4	67.9	55.9	55.9	64.0	52.1	52.1	59.9	48.1	48.1	55.5	43.7	43.7	50.7	
			SHC	56.6	65.4	74.2	54.0	62.7	71.4	51.0	59.4	67.9	47.8	55.9	64.0	44.3	52.1	59.9	40.6	48.1	55.5	36.7	43.7	50.7	
		62	TC	71.9	71.9	71.9	68.3	68.3	68.3	64.3	64.3	64.3	60.0	60.0	60.4	55.3	55.3	57.4	50.2	50.2	54.4	44.9	44.9	51.2	
			SHC	50.6	59.5	68.3	48.2	56.9	65.8	45.5	54.3	63.2	42.7	51.6	60.4	39.8	48.7	57.4	36.8	45.6	54.4	33.5	42.4	51.2	
		67	TC	80.2	80.2	80.2	76.4	76.4	76.4	72.2	72.2	72.2	67.8	67.8	67.8	62.9	62.9	62.9	57.5	57.5	57.5	51.8	51.8	51.8	
			SHC	42.8	51.7	60.5	40.4	49.2	58.1	37.8	46.6	55.5	35.1	43.9	52.7	32.2	41.0	49.8	29.2	38.0	46.8	26.0	34.8	43.7	
	EAT (db)	72	TC	89.3	89.3	89.3	85.4	85.4	85.4	81.1	81.1	81.1	76.3	76.3	76.3	71.2	71.2	71.2	65.5	65.5	65.5	59.5	59.5	59.5	
			SHC	34.9	43.7	52.6	32.5	41.3	50.2	29.9	38.8	47.6	27.2	36.1	44.9	24.4	33.2	42.1	21.5	30.2	39.1	18.3	27.1	36.0	
		76	TC	—	97.0	97.0	—	93.1	93.1	—	88.6	88.6	—	83.7	83.7	—	78.3	78.3	—	72.4	72.4	—	66.1	66.1	
			SHC	—	37.2	46.0	—	34.8	43.7	—	32.4	41.1	—	29.6	38.5	—	26.8	35.7	—	23.9	32.8	—	20.9	29.6	
2000 cfm	EAT (wb)	58	TC	72.0	72.0	81.5	68.7	68.7	78.0	65.2	65.2	74.2	61.4	61.4	70.1	57.3	57.3	65.7	52.9	52.9	60.9	48.2	48.2	55.8	
			SHC	62.3	72.0	81.5	59.4	68.7	78.0	56.2	65.2	74.2	52.7	61.4	70.1	48.9	57.3	65.7	44.9	52.9	60.9	40.7	48.2	55.8	
		62	TC	75.8	75.8	77.7	72.0	72.0	75.2	67.8	67.8	72.4	63.3	63.3	69.6	58.4	58.4	66.6	53.2	53.2	63.3	48.3	48.3	58.4	
			SHC	56.5	67.1	77.7	53.9	64.5	75.2	51.2	61.8	72.4	48.4	59.0	69.6	45.3	56.0	66.6	42.1	52.7	63.3	38.2	48.3	58.4	
		67	TC	84.2	84.2	84.2	80.2	80.2	80.2	75.9	75.9	75.9	71.1	71.1	71.1	65.9	65.9	65.9	60.3	60.3	60.3	54.2	54.2	54.2	
			SHC	46.8	57.4	68.2	44.3	55.0	65.6	41.6	52.4	63.0	38.8	49.5	60.2	35.9	46.6	57.2	32.8	43.5	54.1	29.5	40.2	50.9	
	EAT (db)	72	TC	93.5	93.5	93.5	89.4	89.4	89.4	84.8	84.8	84.8	79.9	79.9	79.9	74.4	74.4	74.4	68.4	68.4	68.4	62.0	62.0	62.0	
			SHC	37.0	47.7	58.4	34.5	45.2	56.0	31.9	42.6	53.3	29.2	39.9	50.6	26.2	37.0	47.7	23.2	33.9	44.7	20.0	30.7	41.4	
		76	TC	—	101.4	101.4	—	97.2	97.2	—	92.5	92.5	—	87.4	87.4	—	81.7	81.7	—	75.5	75.5	—	68.7	68.7	
			SHC	—	39.6	50.3	—	37.1	47.9	—	34.6	45.3	—	31.9	42.6	—	29.1	39.8	—	26.0	36.8	—	22.9	33.6	
2300 cfm	EAT (wb)	58	TC	76.3	76.3	86.4	72.9	72.9	82.8	69.2	69.2	78.8	65.2	65.2	74.5	60.9	60.9	69.8	56.4	56.4	64.7	51.4	51.4	59.3	
			SHC	66.2	76.3	86.4	63.1	72.9	82.8	59.8	69.2	78.8	56.1	65.2	74.5	52.2	60.9	69.8	48.0	56.4	64.7	43.5	51.4	59.3	
		62	TC	78.4	78.4	85.4	74.5	74.5	82.9	70.2	70.2	80.0	65.6	65.6	77.0	61.1	61.1	72.8	56.5	56.5	67.7	51.5	51.5	62.0	
			SHC	61.0	73.2	85.4	58.5	70.7	82.9	55.8	68.0	80.0	52.8	64.9	77.0	49.3	61.1	72.8	45.2	56.5	67.7	40.9	51.5	62.0	
		67	TC	86.8	86.8	86.8	82.7	82.7	82.7	78.2	78.2	78.2	73.2	73.2	73.2	67.9	67.9	67.9	62.0	62.0	62.0	55.8	55.8	56.8	
			SHC	49.8	62.1	74.4	47.4	59.6	71.9	44.7	56.9	69.1	41.8	54.0	66.3	38.8	51.1	63.3	35.7	47.9	60.2	32.4	44.7	56.8	
	EAT (db)	72	TC	96.1	96.1	96.1	91.9	91.9	91.9	87.3	87.3	87.3	82.1	82.1	82.1	76.4	76.4	76.4	70.3	70.3	70.3	63.7	63.7	63.7	
			SHC	38.4	50.7	63.1	36.0	48.3	60.5	33.3	45.6	57.9	30.5	42.9	55.2	27.6	39.9	52.2	24.5	36.9	49.1	21.3	33.5	45.8	
		76	TC	—	104.1	104.1	—	99.8	99.8	—	95.0	95.0	—	89.6	89.6	—	83.8	83.8	—	77.4	77.4	—	70.4	70.4	
			SHC	—	41.4	53.7	—	39.0	51.3	—															

COOLING CAPACITIES — SECOND STAGE, PART LOAD (10 TONS) (cont)

50LC*B SIZE 12				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2950 cfm	EAT (wb)	58	TC	83.8	83.8	94.7	80.1	80.1	90.8	76.1	76.1	86.5	71.9	71.9	81.8	67.2	67.2	76.7	62.1	62.1	71.2	56.6	56.6	65.2
		SHC	72.8	83.8	94.7	69.5	80.1	90.8	65.8	76.1	86.5	61.9	71.9	81.8	57.6	67.2	76.7	53.0	62.1	71.2	48.2	56.6	65.2	
		62	TC	83.9	83.9	98.5	80.2	80.2	94.5	76.2	76.2	90.1	72.0	72.0	85.2	67.3	67.3	80.0	62.2	62.2	74.3	56.7	56.7	68.2
		SHC	69.2	83.9	98.5	66.0	80.2	94.5	62.5	76.2	90.1	58.7	72.0	85.2	54.6	67.3	80.0	50.1	62.2	74.3	45.4	56.7	68.2	
		67	TC	90.6	90.6	90.6	86.4	86.4	86.4	81.6	81.6	81.8	76.4	76.4	78.9	70.9	70.9	75.9	64.7	64.7	72.5	58.3	58.3	69.0
		SHC	56.0	71.6	87.2	53.4	69.0	84.6	50.7	66.3	81.8	47.9	63.4	78.9	44.8	60.3	75.9	41.5	57.0	72.5	38.1	53.6	69.0	
		72	TC	100.0	100.0	100.0	95.6	95.6	95.6	90.8	90.8	90.8	85.3	85.3	85.3	79.4	79.4	79.4	72.9	72.9	72.9	65.9	65.9	65.9
		SHC	41.2	56.8	72.5	38.7	54.4	70.0	36.1	51.7	67.4	33.2	48.8	64.5	30.2	45.9	61.5	27.1	42.7	58.3	23.8	39.4	55.0	
		76	TC	—	108.2	108.2	—	103.6	103.6	—	98.6	98.6	—	93.0	93.0	—	86.8	86.8	—	80.1	80.1	—	72.8	72.8
		SHC	—	44.9	60.7	—	42.5	58.3	—	39.9	55.7	—	37.1	52.8	—	34.1	49.8	—	31.0	46.8	—	27.7	43.5	
3300 cfm	EAT (wb)	58	TC	86.9	86.9	98.2	83.2	83.2	94.2	79.1	79.1	89.7	74.6	74.6	84.8	69.8	69.8	79.6	64.5	64.5	73.9	58.9	58.9	67.7
		SHC	75.6	86.9	98.2	72.2	83.2	94.2	68.4	79.1	89.7	64.4	74.6	84.8	60.0	69.8	79.6	55.2	64.5	73.9	50.1	58.9	67.7	
		62	TC	87.0	87.0	102.1	83.3	83.3	98.0	79.2	79.2	93.4	74.7	74.7	88.4	69.9	69.9	83.0	64.6	64.6	77.1	59.0	59.0	70.7
		SHC	72.0	87.0	102.1	68.6	83.3	98.0	64.9	79.2	93.4	61.0	74.7	88.4	56.7	69.9	83.0	52.2	64.6	77.1	47.3	59.0	70.7	
		67	TC	92.1	92.1	93.7	87.8	87.8	91.2	83.0	83.0	88.3	77.8	77.8	85.4	72.1	72.1	82.2	65.9	65.9	78.8	59.5	59.5	75.1
		SHC	59.1	76.4	93.7	56.6	73.8	91.2	53.8	71.1	88.3	50.9	68.2	85.4	47.8	65.0	82.2	44.5	61.6	78.8	41.0	58.0	75.1	
		72	TC	101.5	101.5	101.5	97.0	97.0	97.0	92.0	92.0	92.0	86.5	86.5	86.5	80.4	80.4	80.4	73.9	73.9	73.9	66.8	66.8	66.8
		SHC	42.6	60.0	77.4	40.1	57.5	74.9	37.4	54.8	72.2	34.5	52.0	69.3	31.5	48.9	66.3	28.4	45.7	63.1	25.1	42.4	59.8	
		76	TC	—	109.7	109.7	—	105.1	105.1	—	99.9	99.9	—	94.2	94.2	—	87.9	87.9	—	81.1	81.1	—	73.7	73.7
		SHC	—	46.6	64.2	—	44.2	61.7	—	41.5	59.1	—	38.7	56.3	—	35.8	53.2	—	32.7	50.1	—	29.3	46.8	

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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES — THIRD STAGE, FULL LOAD (10 TONS)

50LC*B SIZE 12			AMBIENT TEMPERATURE (°F)																									
			65			75			85			95			105			115			125							
			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)							
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85					
2000 cfm	EAT (wb)	58	TC	89.2	89.2	91.2	86.2	86.2	89.5	82.8	82.8	87.7	78.9	78.9	85.5	74.7	74.7	83.3	71.6	71.6	78.6	66.2	66.2	76.2				
			SHC	69.8	80.4	91.2	68.2	78.8	89.5	66.3	76.9	87.7	64.3	74.9	85.5	62.0	72.6	83.3	58.7	68.6	78.6	56.2	66.2	76.2				
		62	TC	98.2	98.2	98.2	95.0	95.0	95.0	91.3	91.3	91.3	87.2	87.2	87.2	82.6	82.6	82.6	77.5	77.5	77.5	72.0	72.0	72.0				
			SHC	62.6	73.3	83.9	60.9	71.7	82.3	59.1	69.8	80.4	57.1	67.8	78.5	54.9	65.5	76.2	52.5	63.2	73.8	49.9	60.6	71.3				
		67	TC	110.5	110.5	110.5	107.0	107.0	107.0	103.0	103.0	103.0	98.5	98.5	98.5	93.5	93.5	93.5	88.0	88.0	88.0	82.1	82.1	82.1				
			SHC	53.4	64.2	74.8	51.8	62.5	73.2	50.0	60.6	71.4	48.0	58.7	69.3	45.8	56.5	67.2	43.5	54.1	64.8	41.0	51.6	62.3				
	EAT (wb)	72	TC	123.7	123.7	123.7	119.9	119.9	119.9	115.6	115.6	115.6	110.8	110.8	110.8	105.4	105.4	105.4	99.5	99.5	99.5	93.0	93.0	93.0				
			SHC	43.9	54.6	65.3	42.3	53.0	63.8	40.6	51.3	62.0	38.5	49.2	60.0	36.4	47.1	57.8	34.1	44.9	55.6	31.6	42.3	53.0				
		76	TC	—	135.0	135.0	—	131.0	131.0	—	126.5	126.5	—	121.3	121.3	—	115.5	115.5	—	109.3	109.3	—	102.4	102.4				
			SHC	—	46.8	57.5	—	45.2	56.0	—	43.5	54.2	—	41.5	52.3	—	39.4	50.1	—	37.1	47.9	—	34.7	45.4				
		58	TC	93.5	93.5	99.5	90.3	90.3	97.7	86.7	86.7	95.7	82.7	82.7	93.5	78.7	78.7	90.3	74.8	74.8	85.9	70.6	70.6	81.1				
			SHC	75.5	87.5	99.5	73.8	85.7	97.7	71.9	83.8	95.7	69.7	81.6	93.5	67.0	78.7	90.3	63.7	74.8	85.9	60.1	70.6	81.1				
2250 cfm	EAT (wb)	62	TC	102.6	102.6	102.6	99.1	99.1	99.1	95.2	95.2	95.2	90.8	90.8	90.8	85.9	85.9	85.9	80.5	80.5	80.7	74.7	74.7	78.0				
			SHC	67.2	79.2	91.2	65.5	77.5	89.5	63.6	75.6	87.6	61.5	73.5	85.5	59.2	71.2	83.2	56.7	68.7	80.7	54.1	66.0	78.0				
		67	TC	115.1	115.1	115.1	111.3	111.3	111.3	107.0	107.0	107.0	102.2	102.2	102.2	97.0	97.0	97.0	91.2	91.2	91.2	84.8	84.8	84.8				
			SHC	56.6	68.6	80.7	55.0	67.0	79.0	53.0	65.1	77.1	51.0	63.0	75.0	48.8	60.7	72.7	46.3	58.3	70.3	43.7	55.7	67.8				
		72	TC	128.5	128.5	128.5	124.4	124.4	124.4	119.8	119.8	119.8	114.8	114.8	114.8	109.0	109.0	109.0	102.8	102.8	102.8	95.9	95.9	95.9				
			SHC	45.7	57.8	69.8	44.1	56.2	68.3	42.2	54.3	66.4	40.2	52.3	64.4	38.0	50.1	62.1	35.7	47.7	59.8	33.1	45.1	57.2				
	EAT (wb)	76	TC	—	140.0	140.0	—	135.7	135.7	—	130.8	130.8	—	125.4	125.4	—	119.3	119.3	—	112.7	112.7	—	105.4	105.4				
			SHC	—	48.8	60.8	—	47.2	59.3	—	45.4	57.4	—	43.4	55.5	—	41.2	53.3	—	38.9	51.0	—	36.5	48.5				
2500 cfm	EAT (wb)	58	TC	106.1	106.1	116.2	100.6	100.6	112.2	94.9	94.9	108.0	89.4	89.4	102.1	83.7	83.7	95.7	77.4	77.4	89.0	70.9	70.9	81.8				
			SHC	89.7	103.0	116.2	85.9	99.1	112.2	81.7	94.9	108.0	76.7	89.4	102.1	71.5	83.7	95.7	65.8	77.4	89.0	59.9	70.9	81.8				
		62	TC	115.0	115.0	115.0	109.3	109.3	109.3	103.1	103.1	103.1	96.3	96.3	96.3	89.2	89.2	90.4	81.5	81.5	85.7	73.4	73.4	80.9				
			SHC	80.3	93.6	107.0	76.5	89.8	103.2	72.4	85.8	99.1	68.3	81.5	94.8	63.8	77.1	90.4	59.2	72.4	85.7	54.4	67.7	80.9				
		67	TC	127.6	127.6	127.6	121.6	121.6	121.6	115.0	115.0	115.0	107.9	107.9	107.9	100.3	100.3	100.3	92.1	92.1	92.1	83.5	83.5	83.5				
			SHC	68.4	81.7	95.1	64.6	77.9	91.3	60.5	73.9	87.3	56.4	69.7	83.1	52.0	65.3	78.7	47.5	60.7	74.1	42.7	56.0	69.3				
	EAT (wb)	72	TC	141.2	141.2	141.2	134.8	134.8	134.8	127.9	127.9	127.9	120.5	120.5	120.5	112.5	112.5	112.5	103.8	103.8	103.8	94.7	94.7	94.7				
			SHC	56.1	69.5	82.9	52.4	65.7	79.2	48.4	61.8	75.2	44.3	57.6	71.1	40.0	53.3	66.7	35.4	48.8	62.2	30.7	44.2	57.5				
		76	TC	—	152.9	152.9	—	146.3	146.3	—	139.1	139.1	—	131.3	131.3	—	122.9	122.9	—	113.9	113.9	—	104.2	104.2				
			SHC	—	59.4	72.8	—	55.7	69.1	—	51.8	65.2	—	47.7	61.1	—	43.5	56.8	—	39.0	52.4	—	34.3	47.8				
3000 cfm	EAT (wb)	58	TC	113.8	113.8	128.7	108.7	108.7	123.2	103.3	103.3	117.3	97.4	97.4	111.0	91.1	91.1	104.1	84.4	84.4	96.8	77.2	77.2	89.0				
			SHC	98.8	113.8	128.7	94.1	108.7	123.2	89.1	103.3	117.3	83.8	97.4	111.0	78.1	91.1	104.1	72.0	84.4	96.8	65.5	77.2	89.0				
		62	TC	120.8	120.8	120.8	114.9	114.9	116.3	108.2	108.2	112.1	101.2	101.2	107.7	93.6	93.6	103.1	85.7	85.7	98.3	77.5	77.5	92.8				
			SHC	88.5	104.3	120.2	84.5	100.4	116.3	80.4	96.2	112.1	76.1	91.8	107.7	71.5	87.3	103.1	66.8	82.5	98.3	61.6	77.2	92.8				
		67	TC	133.5	133.5	133.5	127.0	127.0	127.0	120.1	120.1	120.1	112.6	112.6	112.6	104.6	104.6	104.6	96.0	96.0	96.0	86.9	86.9	86.9				
			SHC	73.9	89.8	105.7	70.0	85.9	101.8	65.9	81.8	97.7	61.5	77.5	93.4	57.0	72.9	88.8	52.5	68.3	84.2	47.6	63.5	79.4				
	EAT (wb)	72	TC	147.2	147.2	147.2	140.6	140.6	140.6	133.3	133.3	133.3	125.5	125.5	125.5	116.9	116.9	116.9	107.8	107.8	107.8	98.2	98.2	98.2				
			SHC	58.9	74.9	90.9	55.1	71.1	87.1	51.1	67.1	83.1	46.8	62.8	78.8	42.4	58.4	74.4	37.8	53.7	69.7	33.1	48.9	64.9				
		76	TC	—	159.1	159.1	—	152.2	152.2	—	144.6	144.6	—	136.4	136.4	—	127.6	127.6	—	118.0	118.0	—	107.8	107.8				
			SHC	—	62.7	78.8	—	58.9	75.0	—	55.0	71.1	—	50.8	66.9	—	46.5	62.6	—	41.9	58.0	—	37.1	53.2				
3500 cfm	EAT (wb)	58	TC	121.2	121.2	137.0	115.8	115.8	131.2	110.0	110.0	124.9	103.7	103.7	118.1	97.1	97.1	110.9	90.0	90.0	103.1	82.5	82.5	94.8				
			SHC	105.4																								

COOLING CAPACITIES — THIRD STAGE, FULL LOAD (10 TONS) (cont)

50LC*B SIZE 12				AMBIENT TEMPERATURE (°F)																				
				65			75			85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
4500 cfm	EAT (wb)	58	TC	132.5	132.5	149.6	126.7	126.7	143.2	120.3	120.3	136.4	113.6	113.6	129.0	106.3	106.3	121.1	98.6	98.6	112.5	90.3	90.3	103.4
		SHC	115.3	132.5	149.6	110.0	126.7	143.2	104.3	120.3	136.4	98.1	113.6	129.0	91.6	106.3	121.1	84.5	98.6	112.5	77.0	90.3	103.4	
		62	TC	132.7	132.7	154.9	126.8	126.8	149.1	120.5	120.5	142.0	113.7	113.7	134.4	106.5	106.5	126.2	98.7	98.7	117.4	90.4	90.4	108.0
		SHC	109.5	132.2	154.9	104.6	126.8	149.1	99.1	120.5	142.0	93.0	113.7	134.4	86.7	106.5	126.2	80.0	98.7	117.4	72.7	90.4	108.0	
		67	TC	143.6	143.6	143.6	136.6	136.6	136.6	129.1	129.1	129.1	120.9	120.9	121.8	112.2	112.2	117.0	103.0	103.0	112.0	93.1	93.1	106.9
		SHC	87.8	111.2	134.6	83.9	107.2	130.5	79.6	102.9	126.3	75.1	98.5	121.8	70.5	93.8	117.0	65.6	88.8	112.0	60.5	83.7	106.9	
		72	TC	157.6	157.6	157.6	150.3	150.3	150.3	142.4	142.4	142.4	133.9	133.9	133.9	124.6	124.6	124.6	114.6	114.6	114.6	104.0	104.0	104.0
		SHC	65.3	88.8	112.2	61.4	84.8	108.3	57.2	80.7	104.1	52.9	76.3	99.7	48.4	71.8	95.2	43.6	67.0	90.4	38.6	62.0	85.4	
		76	TC	—	169.7	169.7	—	162.1	162.1	—	154.0	154.0	—	145.0	145.0	—	135.4	135.4	—	125.1	125.1	—	114.0	114.0
		SHC	—	70.7	94.4	—	66.8	90.5	—	62.7	86.3	—	58.4	82.0	—	53.9	77.5	—	49.2	72.7	—	44.4	67.9	
5000 cfm	EAT (wb)	58	TC	136.9	136.9	154.4	130.8	130.8	147.9	124.3	124.3	140.9	117.3	117.3	133.2	109.8	109.8	125.0	101.8	101.8	116.2	93.2	93.2	106.8
		SHC	119.2	136.9	154.4	113.8	130.8	147.9	107.8	124.3	140.9	101.5	117.3	133.2	94.7	109.8	125.0	87.5	101.8	116.2	79.8	93.2	106.8	
		62	TC	137.0	137.0	160.5	130.9	130.9	153.9	124.5	124.5	146.5	117.5	117.5	138.6	110.0	110.0	130.2	101.9	101.9	121.1	93.3	93.3	111.4
		SHC	113.5	137.0	160.5	108.1	130.9	153.9	102.4	124.5	146.5	96.2	117.5	138.6	89.7	110.0	130.2	82.7	101.9	121.1	75.3	93.3	111.4	
		67	TC	145.8	145.8	145.8	138.6	138.6	139.4	131.0	131.0	135.1	122.8	122.8	130.6	113.9	113.9	125.7	104.5	104.5	120.6	94.7	94.7	115.0
		SHC	92.0	117.8	143.5	88.0	113.7	139.4	83.8	109.4	135.1	79.3	104.9	130.6	74.5	100.1	125.7	69.6	95.1	120.6	64.4	89.7	115.0	
		72	TC	159.7	159.7	159.7	152.3	152.3	152.3	144.2	144.2	144.2	135.5	135.5	135.5	126.2	126.2	126.2	115.9	115.9	115.9	105.3	105.3	105.3
		SHC	67.2	93.0	118.9	63.2	89.1	115.0	59.1	84.9	110.8	54.7	80.5	106.3	50.1	75.9	101.7	45.2	71.1	96.8	40.3	66.0	91.8	
		76	TC	—	172.0	172.0	—	164.3	164.3	—	155.9	155.9	—	146.8	146.8	—	137.0	137.0	—	126.6	126.6	—	115.3	115.3
		SHC	—	73.0	99.1	—	69.1	95.2	—	64.9	91.0	—	60.6	86.7	—	56.2	82.1	—	51.4	77.3	—	46.5	72.3	

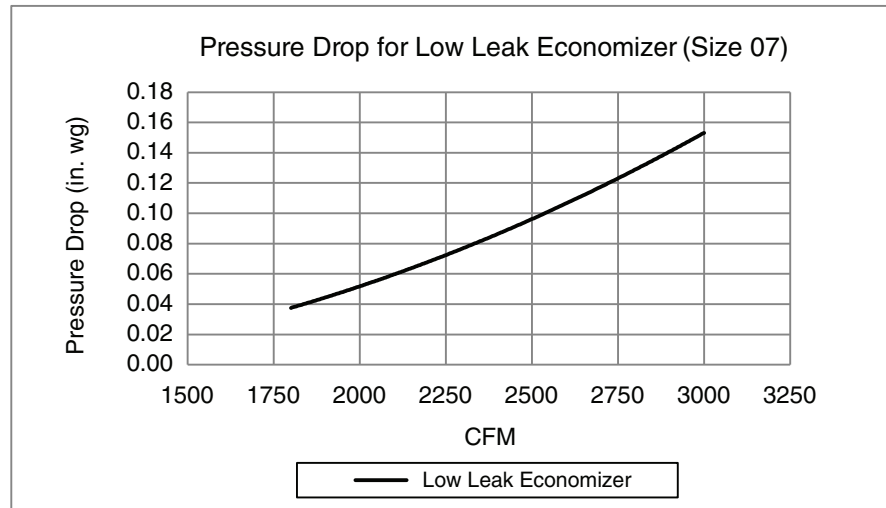
LEGEND

—	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 (1000 Btuh) Gross
TC	Total Capacity (1000 Btuh) Gross

STATIC PRESSURE ADDERS

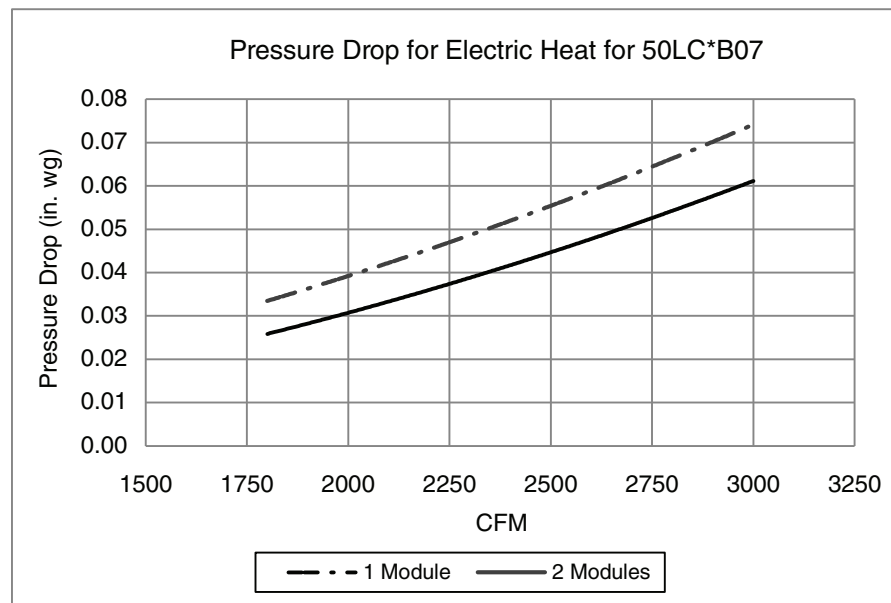
50LC*B07 PRESSURE DROP FOR LOW LEAK ECONOMIZER

AIRFLOW (CFM)	1800	1950	2100	2250	2400	2550	2700	2850	3000
Low Leak Economizer (in. wg)	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15



50LC*B07 PRESSURE DROP FOR ELECTRIC HEAT

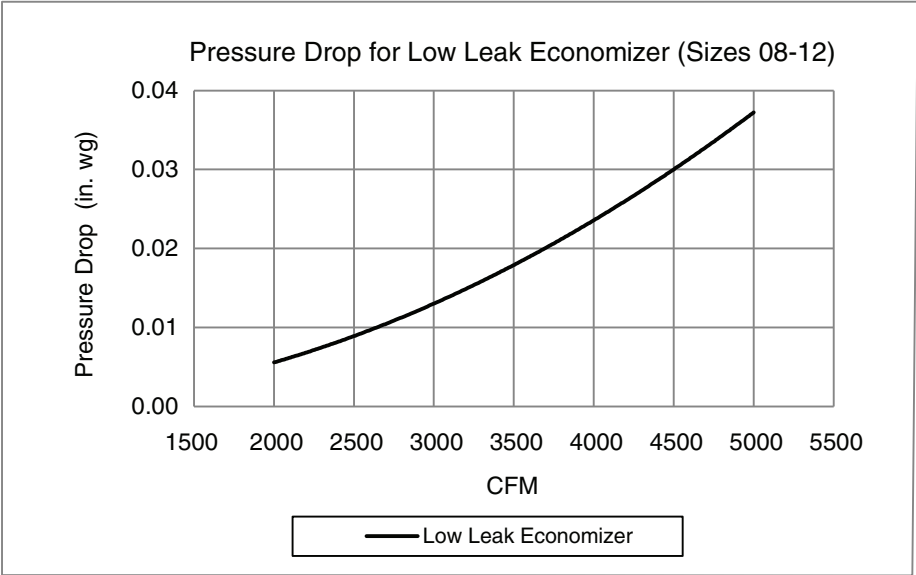
AIRFLOW (CFM)	1800	1950	2100	2250	2400	2550	2700	2850	3000
1 Electric Heater Module (in. wg)	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06
2 Electric Heater Module (in. wg)	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07





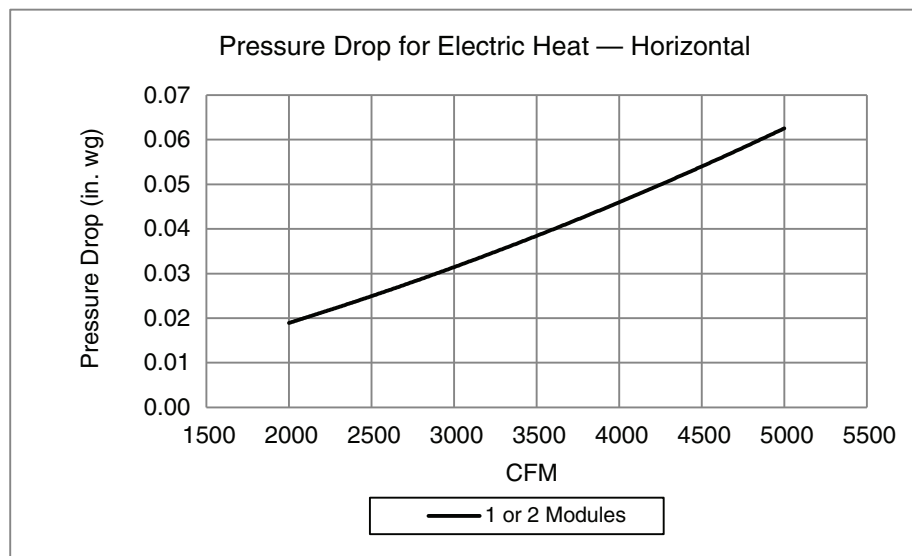
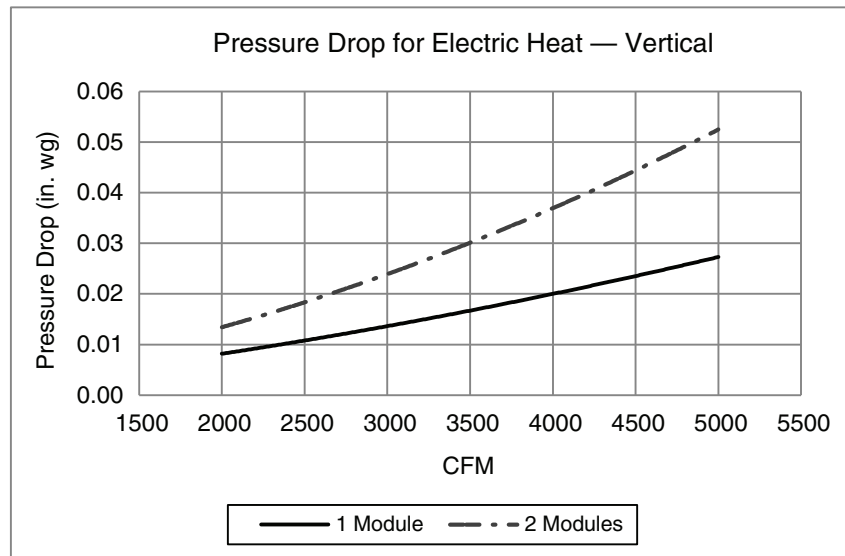
50LC*B08-12 LOW LEAK ECONOMIZER PRESSURE DROP

AIRFLOW (CFM)	2000	2500	3000	3500	4000	4500	5000
Low Leak Economizer (in. wg)	0.01	0.01	0.01	0.02	0.02	0.03	0.04



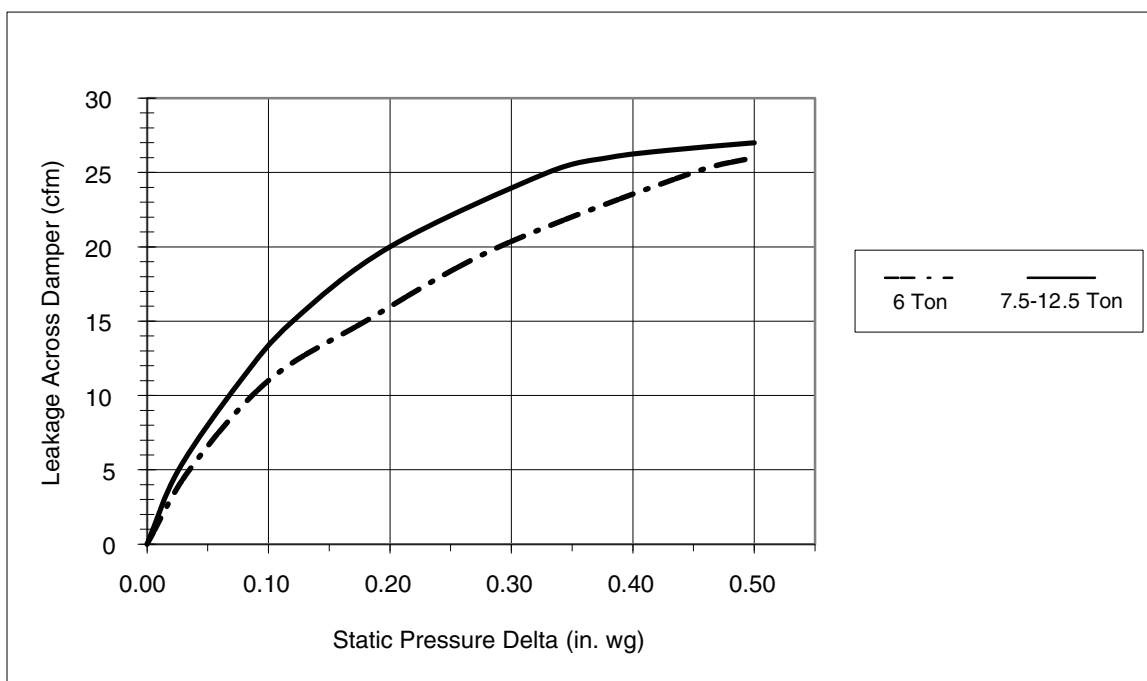
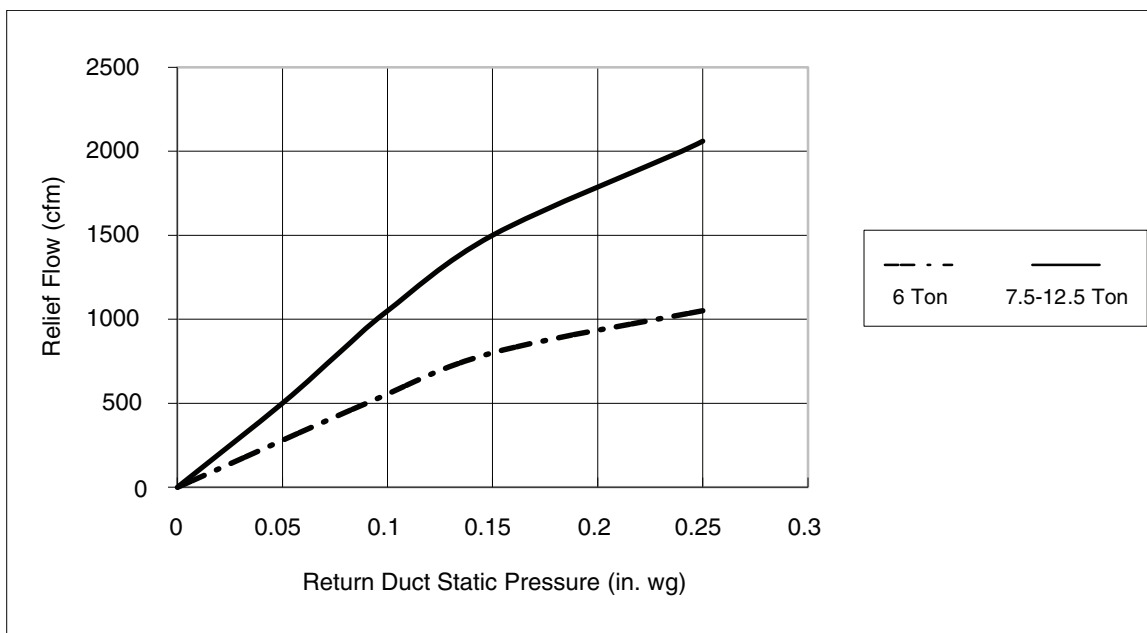
50LC*B08-12 ELECTRIC HEAT PRESSURE DROP

AIRFLOW (CFM)	2000	2500	3000	3500	4000	4500	5000
Vertical, 1 Electric Heat Module (in. wg)	0.01	0.01	0.01	0.02	0.02	0.02	0.03
Vertical, 2 Electric Heat Modules (in. wg)	0.01	0.02	0.02	0.03	0.04	0.04	0.05
Horizontal, 1 Electric Heat Module (in. wg)	0.02	0.02	0.03	0.04	0.05	0.05	0.06
Horizontal, 2 Electrical Heat Modules (in. wg)	0.02	0.02	0.03	0.04	0.05	0.05	0.06

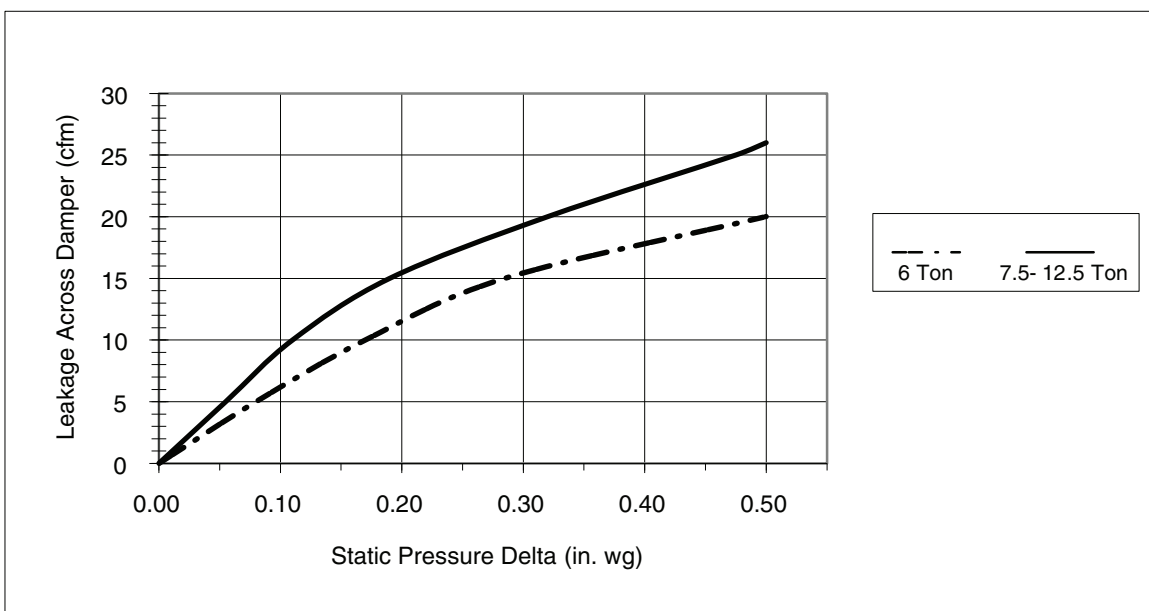
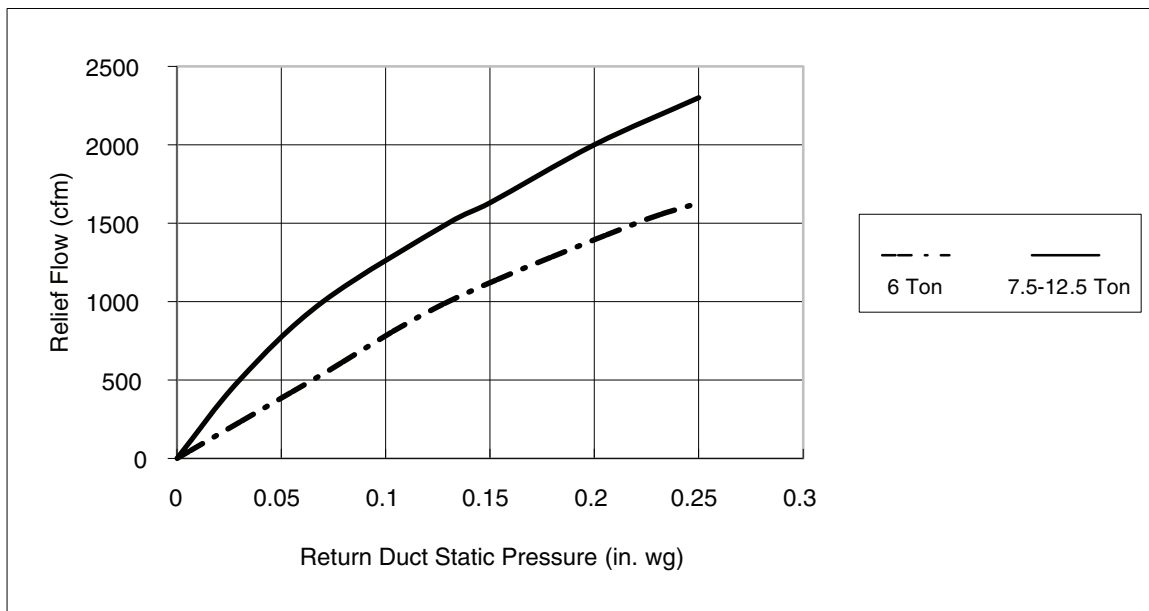


ECONOMIZER, BAROMETRIC, AND POWER EXHAUST PERFORMANCE

HORIZONTAL ECONOMIZERS



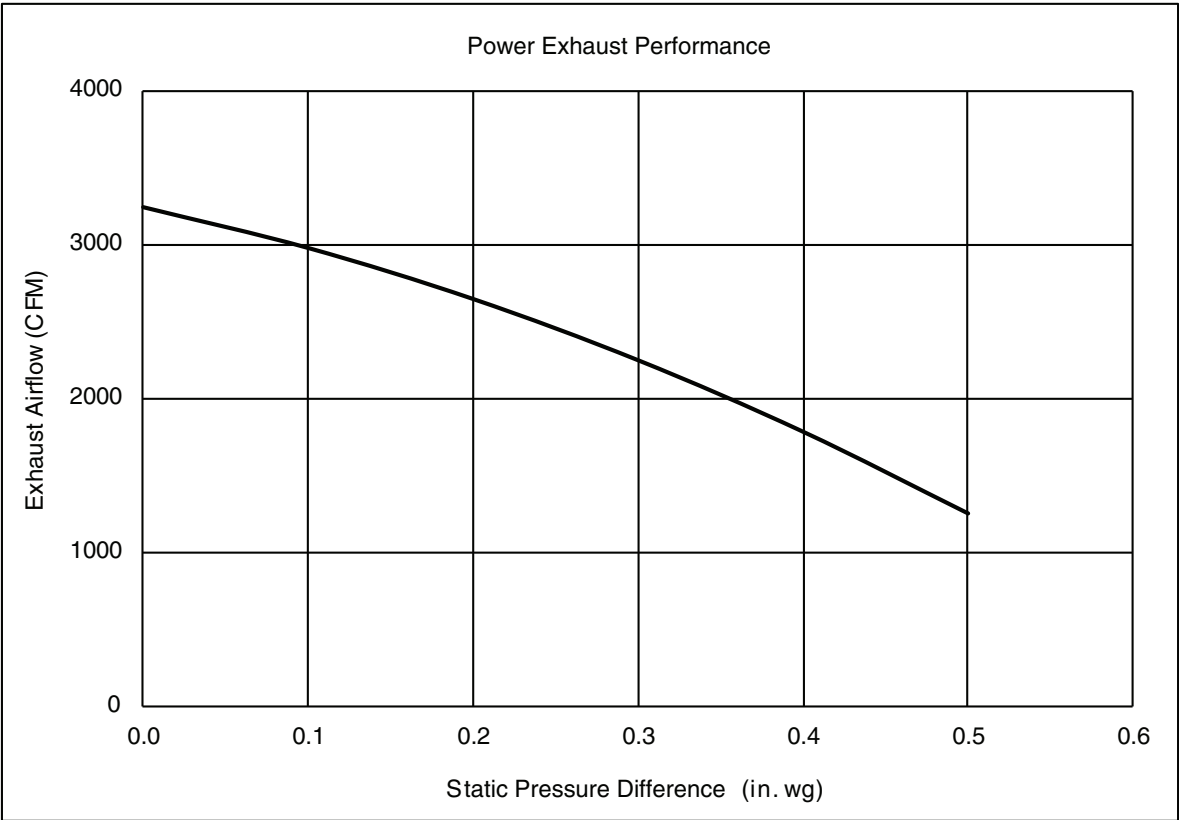
VERTICAL ECONOMIZERS





VERTICAL POWER EXHAUST PERFORMANCE

RETURN DUCT STATIC PRESSURE (in. wg)	0.0	0.1	0.2	0.3	0.4	0.5
Vertical Power Exhaust (cfm)	3239	2974	2642	2244	1780	1249



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 2 motor/drive combinations would work, Carrier recommends the lower horsepower option.
5. For information on the electrical properties of Carrier motors, please see the Electrical Data 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 (3-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.

50LC*B 07 — 6 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
1800	366	0.19	466	0.30	555	0.42	635	0.55	707	0.69
1950	379	0.22	474	0.33	560	0.46	638	0.60	709	0.75
2100	394	0.26	483	0.38	566	0.51	642	0.65	711	0.80
2250	409	0.31	493	0.43	573	0.56	647	0.71	715	0.87
2400	426	0.36	505	0.48	581	0.62	652	0.77	719	0.94
2550	443	0.41	517	0.54	590	0.68	659	0.84	724	1.01
2700	460	0.48	531	0.61	600	0.75	667	0.92	730	1.09
2850	478	0.55	545	0.68	611	0.83	675	1.00	737	1.17
3000	497	0.62	560	0.76	623	0.92	685	1.09	744	1.27

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
1800	772	0.84	833	1.00	890	1.16	943	1.33	994	1.50
1950	774	0.90	834	1.06	891	1.23	944	1.40	995	1.58
2100	776	0.96	836	1.13	892	1.31	945	1.49	995	1.67
2250	778	1.03	838	1.21	894	1.39	946	1.57	996	1.76
2400	782	1.11	840	1.29	895	1.47	948	1.66	998	1.86
2550	785	1.19	843	1.37	898	1.56	950	1.76	999	1.96
2700	790	1.27	847	1.46	901	1.66	952	1.86	1001	2.07
2850	795	1.36	851	1.56	904	1.76	955	1.97	1004	2.18
3000	802	1.46	856	1.66	909	1.87	959	2.08	1007	2.30

STD Static (356-534 rpm) 1.7 Max bhp

MID Static (539-809 rpm) 1.7 Max bhp

HIGH Static (799-1054 rpm) 2.9 Max bhp

50LC*B 07 — 6 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
1800	392	0.22	492	0.33	580	0.46	658	0.59	729	0.74
1950	408	0.25	502	0.37	587	0.51	664	0.65	733	0.80
2100	425	0.30	514	0.42	596	0.56	670	0.71	739	0.87
2250	442	0.35	526	0.48	605	0.62	678	0.78	745	0.94
2400	460	0.41	540	0.54	616	0.69	686	0.85	752	1.02
2550	479	0.47	555	0.61	627	0.77	696	0.93	760	1.11
2700	499	0.55	570	0.69	640	0.85	706	1.02	768	1.20
2850	519	0.63	587	0.77	653	0.94	717	1.12	778	1.30
3000	539	0.71	604	0.87	667	1.04	729	1.22	788	1.41

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
1800	793	0.89	854	1.05	910	1.22	963	1.39	1013	1.57
1950	798	0.96	857	1.13	913	1.30	966	1.48	1016	1.66
2100	802	1.04	861	1.21	917	1.39	969	1.57	1019	1.76
2250	807	1.12	866	1.30	921	1.48	973	1.67	1022	1.87
2400	813	1.20	871	1.39	926	1.58	977	1.78	1026	1.98
2550	820	1.29	877	1.49	931	1.68	982	1.89	1031	2.10
2700	827	1.39	883	1.59	936	1.79	987	2.00	1035	2.22
2850	835	1.50	890	1.70	943	1.91	993	2.13	1040	2.35
3000	844	1.61	898	1.82	949	2.04	999	2.26	1046	2.49

 STD Static (356-534 rpm) 1.7 Max bhp
 MID Static (539-809 rpm) 1.7 Max bhp
 HIGH Static (799-1054 rpm) 2.9 Max bhp

50LC*B 08 — 7.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2250	317	0.21	426	0.41	511	0.65	583	0.91	644	1.18
2438	323	0.24	429	0.44	515	0.69	587	0.95	649	1.24
2625	331	0.27	433	0.48	519	0.73	591	1.00	654	1.30
2813	339	0.30	438	0.51	522	0.77	595	1.05	658	1.36
3000	348	0.34	443	0.55	526	0.82	598	1.11	662	1.42
3188	358	0.38	448	0.60	530	0.87	602	1.17	666	1.49
3375	369	0.43	455	0.65	534	0.92	606	1.23	669	1.56
3563	380	0.48	462	0.71	539	0.98	610	1.29	673	1.63
3750	392	0.54	469	0.77	544	1.04	614	1.36	677	1.70

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2250	700	1.48	750	1.78	797	2.11	840	2.44	881	2.79
2438	705	1.54	756	1.86	803	2.19	847	2.54	888	2.90
2625	710	1.61	762	1.94	809	2.28	853	2.64	895	3.01
2813	715	1.68	767	2.02	814	2.38	859	2.74	901	3.12
3000	719	1.76	771	2.11	819	2.47	864	2.84	906	3.23
3188	723	1.83	776	2.19	824	2.56	869	2.95	912	3.35
3375	727	1.91	780	2.28	828	2.66	874	3.05	916	3.46
3563	731	1.99	783	2.36	832	2.76	878	3.16	921	3.58
3750	734	2.07	787	2.46	836	2.86	882	3.27	926	3.70

	STD Static (338-507 rpm) 1.7 Max bhp
	MID Static (488-675 rpm) 1.7 Max bhp
	HIGH Static (623-863 rpm) 2.9 Max bhp
	ULTRA HIGH Static (847-1150 rpm) 3.7 Max bhp
Boldface	Indicates field-supplied drive is required (Standard motor, motor pulley P/N KR11HY151, blower pulley P/N AK114 1 3/16, belt P/N A47) for the 308-462 rpm range.

50LC*B 08 — 7.5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2250	328	0.23	438	0.44	521	0.68	588	0.93	647	1.19
2438	335	0.25	443	0.48	527	0.73	596	0.99	655	1.27
2625	342	0.28	448	0.51	533	0.77	602	1.05	662	1.34
2813	349	0.32	454	0.56	538	0.83	608	1.12	669	1.42
3000	358	0.36	459	0.60	543	0.88	614	1.18	675	1.50
3188	367	0.40	465	0.65	548	0.94	620	1.25	681	1.58
3375	378	0.45	471	0.70	554	1.00	625	1.32	687	1.66
3563	388	0.50	477	0.75	559	1.06	630	1.39	693	1.75
3750	400	0.56	484	0.82	564	1.13	635	1.47	698	1.83

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2250	699	1.47	746	1.76	790	2.06	830	2.36	869	2.68
2438	707	1.56	755	1.86	799	2.17	840	2.49	879	2.81
2625	715	1.64	764	1.96	808	2.28	850	2.61	889	2.95
2813	723	1.73	772	2.06	817	2.40	859	2.74	898	3.09
3000	730	1.83	779	2.16	825	2.51	867	2.87	907	3.24
3188	737	1.92	786	2.27	832	2.63	875	3.00	915	3.38
3375	743	2.01	793	2.38	840	2.75	883	3.14	923	3.53
3563	749	2.11	800	2.49	846	2.88	890	3.27	931	3.68
3750	754	2.21	806	2.60	853	3.00	897	3.41	938	3.83

	STD Static (338-507 rpm) 1.7 Max bhp
	MID Static (488-675 rpm) 1.7 Max bhp
	HIGH Static (623-863 rpm) 2.9 Max bhp
	ULTRA HIGH Static (847-1150 rpm) 3.7 Max bhp

Boldface Indicates field-supplied drive is required (Standard motor, motor pulley P/N KR11HY151, blower pulley P/N AK114 1 3/16, belt P/N A47) for the 308-462 rpm range.

50LC*B 09 — 8.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2550	328	0.25	432	0.46	517	0.71	589	0.98	652	1.28
2763	337	0.29	437	0.50	521	0.76	594	1.04	657	1.34
2975	347	0.33	442	0.55	526	0.81	598	1.10	661	1.42
3188	358	0.38	448	0.60	530	0.87	602	1.17	666	1.49
3400	371	0.44	456	0.66	535	0.93	606	1.24	670	1.57
3613	384	0.50	464	0.72	541	1.00	611	1.31	674	1.65
3825	397	0.57	473	0.79	547	1.07	615	1.39	678	1.74
4038	411	0.64	483	0.87	554	1.15	621	1.48	683	1.83
4250	426	0.73	493	0.96	561	1.24	626	1.57	687	1.93

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2550	708	1.59	759	1.91	807	2.25	851	2.60	892	2.96
2763	714	1.67	765	2.00	813	2.35	857	2.71	899	3.09
2975	719	1.75	771	2.09	819	2.46	863	2.83	906	3.22
3188	723	1.83	776	2.19	824	2.56	869	2.95	912	3.35
3400	727	1.92	780	2.29	829	2.67	874	3.07	917	3.48
3613	732	2.01	785	2.39	834	2.78	879	3.19	922	3.61
3825	736	2.11	789	2.49	838	2.90	884	3.32	927	3.75
4038	740	2.21	793	2.60	842	3.02	888	3.45	932	3.89
4250	744	2.31	797	2.72	846	3.14	893	3.58	936	4.03

- STD Static (338-507 rpm) 1.7 Max bhp
 - MID Static (488-675 rpm) 1.7 Max bhp
 - HIGH Static (675-863 rpm) 3.7 Max bhp
 - ULTRA HIGH Static (832-1021 rpm) 4.9 Max bhp
- Boldface** Indicates field-supplied drive is required (Standard motor, motor pulley P/N KR11HY151, blower pulley P/N AK114 1 3/16, belt P/N A47) for the 308-462 rpm range.

50LC*B 09 — 8.5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2550	339	0.27	446	0.50	530	0.76	600	1.03	659	1.31
2763	347	0.31	452	0.54	537	0.81	607	1.10	667	1.40
2975	357	0.35	458	0.59	543	0.87	613	1.17	675	1.49
3188	367	0.40	465	0.65	548	0.94	620	1.25	681	1.58
3400	379	0.46	471	0.71	554	1.01	626	1.33	688	1.67
3613	391	0.52	479	0.77	560	1.08	631	1.41	694	1.77
3825	405	0.59	488	0.84	566	1.16	637	1.50	700	1.87
4038	418	0.66	497	0.92	573	1.24	643	1.60	706	1.98
4250	432	0.75	507	1.01	580	1.33	649	1.70	712	2.09

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
2550	712	1.61	760	1.92	805	2.23	846	2.56	885	2.90
2763	721	1.71	770	2.03	815	2.36	856	2.71	895	3.06
2975	729	1.81	778	2.15	824	2.50	866	2.85	906	3.22
3188	737	1.92	786	2.27	832	2.63	875	3.00	915	3.38
3400	744	2.03	794	2.39	841	2.77	884	3.15	924	3.55
3613	750	2.14	801	2.52	848	2.91	892	3.31	933	3.72
3825	757	2.25	808	2.65	855	3.05	899	3.47	941	3.89
4038	763	2.37	814	2.78	862	3.20	907	3.63	948	4.06
4250	769	2.49	821	2.92	869	3.35	913	3.79	955	4.24

STD Static (338-507 rpm) 1.7 Max bhp
MID Static (488-675 rpm) 1.7 Max bhp
HIGH Static (675-863 rpm) 3.7 Max bhp
ULTRA HIGH Static (832-1021 rpm) 4.9 Max bhp

50LC*B 12 — 10 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3000	348	0.34	443	0.55	526	0.82	598	1.11	662	1.42
3250	362	0.40	450	0.62	532	0.88	603	1.19	667	1.51
3500	377	0.46	459	0.69	538	0.96	608	1.27	672	1.61
3750	392	0.54	469	0.77	544	1.04	614	1.36	677	1.70
4000	409	0.63	481	0.86	552	1.14	620	1.46	682	1.81
4250	426	0.73	493	0.96	561	1.24	626	1.57	687	1.93
4500	443	0.84	506	1.07	571	1.36	634	1.69	693	2.05
4750	461	0.96	521	1.20	582	1.49	642	1.82	700	2.19
5000	480	1.10	536	1.34	594	1.64	651	1.97	708	2.34

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3000	719	1.76	771	2.11	819	2.47	864	2.84	906	3.23
3250	724	1.86	777	2.22	825	2.59	871	2.98	913	3.39
3500	729	1.96	782	2.34	831	2.72	877	3.13	920	3.54
3750	734	2.07	787	2.46	836	2.86	882	3.27	926	3.70
4000	739	2.19	792	2.58	841	3.00	888	3.42	931	3.86
4250	744	2.31	797	2.72	846	3.14	893	3.58	936	4.03
4500	749	2.45	802	2.86	851	3.29	897	3.74	941	4.21
4750	755	2.59	807	3.01	856	3.45	902	3.91	946	4.39
5000	761	2.75	813	3.18	861	3.63	907	4.09	951	4.58

STD Static (375-563 rpm) 2.4 Max bhp
MID Static (547-757 rpm) 2.9 Max bhp
HIGH Static (760-960 rpm) 4.9 Max bhp
*At 575v, HP is 4.7

Boldface Indicates field-supplied drive is required (Standard motor, motor pulley P/N KR11HY161, blower pulley P/N AK134 1 3/16, belt P/N KR30AE051) for the 340-470 rpm range.

50LC*B 12 — 10 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3000	358	0.36	459	0.60	543	0.88	614	1.18	675	1.50
3250	371	0.42	467	0.66	550	0.96	621	1.27	683	1.61
3500	385	0.48	475	0.74	557	1.04	628	1.37	691	1.72
3750	400	0.56	484	0.82	564	1.13	635	1.47	698	1.83
4000	416	0.65	495	0.91	572	1.23	642	1.58	705	1.96
4250	432	0.75	507	1.01	580	1.33	649	1.70	712	2.09
4500	450	0.86	519	1.13	590	1.45	657	1.82	719	2.22
4750	468	0.99	533	1.26	600	1.58	665	1.96	726	2.37
5000	486	1.13	547	1.40	611	1.73	674	2.11	733	2.53

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3000	730	1.83	779	2.16	825	2.51	867	2.87	907	3.24
3250	739	1.95	789	2.31	835	2.67	878	3.05	918	3.43
3500	747	2.08	798	2.45	844	2.83	887	3.23	928	3.63
3750	754	2.21	806	2.60	853	3.00	897	3.41	938	3.83
4000	762	2.35	813	2.76	861	3.17	905	3.60	947	4.03
4250	769	2.49	821	2.92	869	3.35	913	3.79	955	4.24
4500	775	2.65	828	3.08	876	3.53	921	3.99	963	4.46
4750	782	2.80	834	3.25	883	3.72	928	4.19	971	4.68
5000	789	2.97	841	3.44	890	3.91	936	4.40	978	4.90

STD Static (375-563 rpm) 2.4 Max bhp
MID Static (547-757 rpm) 2.9 Max bhp
HIGH Static (760-960 rpm) 4.9 Max bhp

Boldface Indicates field-supplied drive is required (Standard motor, motor pulley P/N KR11HY161, blower pulley P/N AK134 1 3/16, belt P/N KR30AE051) for the 340-470 rpm range.

Italics Indicate field-supplied drive is required (High Static motor, motor pulley P/N KR11HY213, blower pulley P/N KR51BH615, belt P/N KR29BF047) in the 880-1080 rpm range.

PULLEY ADJUSTMENT — FAN RPM AT MOTOR PULLEY SETTINGS

50LC*B 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
07	3 phase	Standard Static	534	516	498	481	463	445	427	409	392	374	356	N/A	N/A
		Medium Static	809	782	755	728	701	674	647	620	593	566	539	N/A	N/A
		High Static	N/A	N/A	1054	1022	990	958	927	895	863	831	799	N/A	N/A
08	3 phase	Standard Static	507	490	473	456	439	423	406	389	372	355	338	N/A	N/A
		Medium Static	675	656	638	619	600	582	563	544	525	507	488	N/A	N/A
		High Static	863	839	815	791	767	743	719	695	671	647	623	N/A	N/A
		Super Static	N/A	N/A	1150	1120	1089	1059	1029	999	968	938	908	877	847
09	3 phase	Standard Static	507	490	473	456	439	423	406	389	372	355	338	N/A	N/A
		Medium Static	675	656	638	619	600	582	563	544	525	507	488	N/A	N/A
		High Static	863	844	825	807	788	769	750	731	713	694	675	N/A	N/A
		Super Static	1021	1002	983	964	945	927	908	889	870	851	832	N/A	N/A
12	3 phase	Standard Static	563	544	525	507	488	469	450	431	413	394	375	N/A	N/A
		Medium Static	757	736	715	694	673	652	631	610	589	568	547	N/A	N/A
		High Static	N/A	N/A	960	940	920	900	880	860	840	820	800	780	760

Factory setting

50LC*B07-12 ELECTRICAL DATA

UNIT	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		CFM (ea)		IFM		
		Min	Max	RLA	LRA	RLA	LRA	Watts	FLA	Type	Eff at Full Load	FLA
07	208-3-60	187	253	8.3	58	13.2	88	195	1.8	STD	81.5%	5.8
								195	1.8	MED	81.5%	5.8
								195	1.8	HIGH	84.5%	8.6
	230-3-60	187	253	8.3	58	13.2	88	195	1.8	STD	81.5%	5.6
								195	1.8	MED	81.5%	5.6
								195	1.8	HIGH	84.5%	7.8
	460-3-60	414	506	5.1	28	6.0	44	195	1.8	STD	81.5%	2.9
								195	1.8	MED	81.5%	2.9
								195	1.8	HIGH	84.5%	3.8
	575-3-60	518	633	3.3	24	4.2	30	195	1.8	STD	81.5%	2.8
								195	1.8	MED	81.5%	2.8
								195	1.8	HIGH	84.5%	4.5
08	208-3-60	187	253	13.2	88	13.7	83	195	1.8	STD	81.5%	5.8
								195	1.8	MED	81.5%	5.8
								195	1.8	HIGH	84.5%	8.6
								195	1.8	SUPER	84.5%	10.8
	230-3-60	187	253	13.2	88	13.7	83	195	1.8	STD	81.5%	5.6
								195	1.8	MED	81.5%	5.6
								195	1.8	HIGH	84.5%	7.8
								195	1.8	SUPER	84.5%	9.8
	460-3-60	414	506	6.0	44	6.2	41	195	1.8	STD	81.5%	2.9
								195	1.8	MED	81.5%	2.9
								195	1.8	HIGH	84.5%	3.8
								195	1.8	SUPER	84.5%	4.9
	575-3-60	518	633	4.2	30	4.8	33	195	1.8	STD	81.5%	2.8
								195	1.8	MED	81.5%	2.8
								195	1.8	HIGH	84.5%	4.5
								195	1.8	SUPER	84.5%	4.5
09	208-3-60	187	253	13.2	88	15.9	110	195	1.8	STD	81.5%	5.8
								195	1.8	MED	81.5%	5.8
								195	1.8	HIGH	84.5%	10.8
								195	1.8	SUPER	82.0%	13.6
	230-3-60	187	253	13.2	88	15.9	110	195	1.8	STD	81.5%	5.6
								195	1.8	MED	81.5%	5.6
								195	1.8	HIGH	84.5%	9.8
								195	1.8	SUPER	82.0%	12.7
	460-3-60	414	506	6.0	44	7.7	52	195	1.8	STD	81.5%	2.9
								195	1.8	MED	81.5%	2.9
								195	1.8	HIGH	84.5%	4.9
								195	1.8	SUPER	82.0%	6.4
	575-3-60	518	633	4.2	30	5.7	39	195	1.8	STD	81.5%	2.8
								195	1.8	MED	81.5%	2.8
								195	1.8	HIGH	84.5%	4.5
								195	1.8	SUPER	82.0%	6.2
12	208-3-60	187	253	13.1	83	19.6	136	195	1.8	STD	80.0%	7.1
								195	1.8	MED	84.5%	8.6
								195	1.8	HIGH	82.0%	13.6
	230-3-60	187	253	13.1	83	19.6	136	195	1.8	STD	80.0%	6.8
								195	1.8	MED	84.5%	7.8
								195	1.8	HIGH	82.0%	12.7
	460-3-60	414	506	6.1	41	8.2	66	195	1.8	STD	80.0%	3.4
								195	1.8	MED	84.5%	3.8
								195	1.8	HIGH	82.0%	6.4
	575-3-60	518	633	4.4	33	6.6	55	195	1.8	STD	80.0%	3.5
								195	1.8	MED	84.5%	4.5
								195	1.8	HIGH	82.0%	6.2

See Legend and Notes on page 86.

ELECTRIC HEAT — 50LC*B07

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER P/N	NOMINAL POWER (kW) ^a	APPLICATION POWER (kW) ^b	APPLICATION OUTPUT (mbh)	SINGLE POINT OR JUNCTION KIT NUMBER			
						NO CO or UNPWRD CO		With PWRD CO	
						NO PE	With PE (PWRD FR/UNIT)	NO PE	With PE (PWRD FR/UNIT)
208/230-3-60	STD	CRHEATER316A00	6.5	4.9/6.0	16.7/20.4	047	047	047	047
		CRHEATER317A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049
		CRHEATER318A00	24.8	18.6/22.8	63.6/77.7	049	049	049	049
	MED	CRHEATER316A00	6.5	4.9/6.0	16.7/20.4	047	047	047	047
		CRHEATER317A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049
		CRHEATER318A00	24.8	18.6/22.8	63.6/77.7	049	049	049	049
	HIGH	CRHEATER316A00	6.5	4.9/6.0	16.7/20.4	047	047	047	047
		CRHEATER317A00	16.0	12.0/14.7	41.0/50.1	047	049	049	049
		CRHEATER318A00	24.8	18.6/22.8	63.6/77.7	049	049	049	049
460-3-60	STD	CRHEATER319A00	6.0	5.5	18.8	047	047	047	047
		CRHEATER320A00	14.0	12.9	43.9	047	047	047	047
		CRHEATER321A00	25.5	23.4	79.9	047	047	047	047
	MED	CRHEATER319A00	6.0	5.5	18.8	047	047	047	047
		CRHEATER320A00	14.0	12.9	43.9	047	047	047	047
		CRHEATER321A00	25.5	23.4	79.9	047	047	047	047
	HIGH	CRHEATER319A00	6.0	5.5	18.8	047	047	047	047
		CRHEATER320A00	14.0	12.9	43.9	047	047	047	047
		CRHEATER321A00	25.5	23.4	79.9	047	047	047	047
575-3-60	STD	CRHEATER308A00	18.0	16.5	56.4	047	047	047	047
		CRHEATER322A00	28.0	25.7	87.7	047	047	047	047
	MED	CRHEATER308A00	18.0	16.5	56.4	047	047	047	047
		CRHEATER322A00	28.0	25.7	87.7	047	047	047	047
	HIGH	CRHEATER308A00	18.0	16.5	56.4	047	047	047	047

NOTE(S):

a. 240v/480v/600v

b. 208/230v/460v/575v

See Legend and Notes on page 86.

ELECTRIC HEAT — 50LC*B08

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER P/N	NOMINAL POWER (kW) ^a	APPLICATION POWER (kW) ^b	APPLICATION OUTPUT (mbh)	SINGLE POINT OR JUNCTION KIT NUMBER			
						NO CO or UNPWRD CO		With PWRD CO	
						NO PE	With PE (PWRD FR/UNIT)	NO PE	With PE (PWRD FR/UNIT)
208/230-3-60	STD	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
	MED	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
	HIGH	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
	SUPER	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
460-3-60	STD	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	047
	MED	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	047
	HIGH	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	050
	SUPER	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	050
575-3-60	STD	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
	MED	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
	HIGH	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
	SUPER	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047

NOTE(S):

a. 240v/480v/600v

b. 208/230v/460v/575v

See Legend and Notes on page 86.

ELECTRIC HEAT — 50LC*B09

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER P/N	NOMINAL POWER (kW) ^a	APPLICATION POWER (kW) ^b	APPLICATION OUTPUT (mbh)	SINGLE POINT OR JUNCTION KIT NUMBER			
						NO CO or UNPWRD CO		With PWRD CO	
						NO PE	With PE (PWRD FR/UNIT)	NO PE	With PE (PWRD FR/UNIT)
208/230-3-60	STD	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
	MED	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
	HIGH	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	049
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
	SUPER	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	049	049
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
460-3-60	STD	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	047
	MED	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	047
	HIGH	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	050
	SUPER	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	050	050	050
575-3-60	STD	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
	MED	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
	HIGH	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
	SUPER	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047

NOTE(S):

a. 240v/480v/600v

b. 208/230v/460v/575v

See Legend and Notes on page 86.

ELECTRIC HEAT — 50LC*B12

NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER P/N	NOMINAL POWER (kW) ^a	APPLICATION POWER (kW) ^b	APPLICATION OUTPUT (mbh)	SINGLE POINT OR JUNCTION KIT NUMBER			
						NO CO or UNPWRD CO		With PWRD CO	
						NO PE	With PE (PWRD FR/UNIT)	NO PE	With PE (PWRD FR/UNIT)
208/230-3-60	STD	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	049
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
		CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
	MED	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	—	049	049	049
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
		CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
	HIGH	CRHEATER288A00	10.0	7.5/9.2	25.6/31.3	049	049	049	049
		CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
		CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
		CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
460-3-60	STD	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	047
		CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
	MED	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	047	047	050
		CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
	HIGH	CRHEATER289A00	10.0	9.2	31.3	—	—	—	—
		CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER295A00	33.5	30.8	105.0	047	050	050	050
		CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
575-3-60	STD	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
		CRHEATER293A00,296A00	50.0	45.9	156.7	047	047	047	047
	MED	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
		CRHEATER293A00,296A00	50.0	45.9	156.7	047	047	047	050
	HIGH	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
		CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
		CRHEATER293A00,296A00	50.0	45.9	156.7	047	050	047	050

NOTE(S):

a. 240v/480v/600v

b. 208/230v/460v/575v

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (6 TONS, NO CO)

50LC* B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR UNPWR CO							
			CRHEATER***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
07	208/230-3-60	STD	NONE	—	—	35/34	45/45	36/35	173	38/38	50/50	40/40	177
			316A	4.9/6.5	13.6/15.6	35/34	45/45	36/35	173/173	38/38	50/50	40/40	177/177
			317A	12.0/16.0	33.4/38.5	49/56	50/60	45/51	173/173	54/60	60/60	49/55	177/177
			318A	18.6/24.8	51.7/59.7	72/82	80/90	66/75	173/173	77/87	80/90	70/79	177/177
		MED	NONE	—	—	35/34	45/45	36/35	173	38/38	50/50	40/40	177
			316A	4.9/6.5	13.6/15.6	35/34	45/45	36/35	173/173	38/38	50/50	40/40	177/177
			317A	12.0/16.0	33.4/38.5	49/56	50/60	45/51	173/173	54/60	60/60	49/55	177/177
			318A	18.6/24.8	51.7/59.7	72/82	80/90	66/75	173/173	77/87	80/90	70/79	177/177
		HIGH	NONE	—	—	37/37	50/45	39/38	203	41/40	50/50	43/42	207
			316A	4.9/6.5	13.6/15.6	37/37	50/45	39/38	203/203	41/40	50/50	43/42	207/207
			317A	12.0/16.0	33.4/38.5	53/58	60/60	48/53	203/203	58/63	60/70	53/58	207/207
			318A	18.6/24.8	51.7/59.7	76/85	80/90	69/78	203/203	81/90	90/90	74/82	207/207
	460-3-60	STD	NONE	—	—	20	25	20	87	21	25	22	89
			319A	6.0	7.2	20	25	20	87	21	25	22	89
			320A	14.0	16.8	25	25	23	87	27	30	25	89
			321A	25.5	30.7	42	45	39	87	45	45	41	89
		MED	NONE	—	—	20	25	20	87	21	25	22	89
			319A	6.0	7.2	20	25	20	87	21	25	22	89
			320A	14.0	16.8	25	25	23	87	27	30	25	89
			321A	25.5	30.7	42	45	39	87	45	45	41	89
		HIGH	NONE	—	—	20	25	21	103	22	25	23	105
			319A	6.0	7.2	20	25	21	103	22	25	23	105
			320A	14.0	16.8	26	30	24	103	28	30	26	105
			321A	25.5	30.7	44	45	40	103	46	50	42	105
	575-3-60	STD	NONE	—	—	15	20	16	67	19	20	20	71
			308A	18.0	17.3	26	30	23	67	30	30	27	71
			322A	28.0	26.9	38	40	34	67	42	45	39	71
		MED	NONE	—	—	15	20	16	67	19	20	20	71
			308A	18.0	17.3	26	30	23	67	30	30	27	71
			322A	28.0	26.9	38	40	34	67	42	45	39	71
		HIGH	NONE	—	—	17	20	18	80	21	25	22	84
			308A	18.0	17.3	28	30	25	80	32	35	29	84
			322A	28.0	26.9	40	40	36	80	44	45	40	84

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (6 TONS, WITH POWERED CO)

50LC* B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
07	208/230-3-60	STD	NONE	—	—	39/39	50/50	41/41	178	43/43	50/50	45/45	182
			316A	4.9/6.5	13.6/15.6	39/39	50/50	41/41	178/178	43/43	50/50	45/45	182/182
			317A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	178/178	60/66	60/70	55/61	182/182
			318A	18.6/24.8	51.7/59.7	78/88	80/90	72/81	178/178	83/93	90/100	76/85	182/182
		MED	NONE	—	—	39/39	50/50	41/41	178	43/43	50/50	45/45	182
			316A	4.9/6.5	13.6/15.6	39/39	50/50	41/41	178/178	43/43	50/50	45/45	182/182
			317A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	178/178	60/66	60/70	55/61	182/182
			318A	18.6/24.8	51.7/59.7	78/88	80/90	72/81	178/178	83/93	90/100	76/85	182/182
		HIGH	NONE	—	—	42/41	50/50	44/43	208	46/45	50/50	49/48	212
			316A	4.9/6.5	13.6/15.6	42/41	50/50	44/43	208/208	46/45	50/50	49/48	212/212
			317A	12.0/16.0	33.4/38.5	59/64	60/70	54/59	208/208	64/69	70/70	58/63	212/212
			318A	18.6/24.8	51.7/59.7	82/91	90/100	75/83	208/208	87/96	90/100	79/88	212/212
	460-3-60	STD	NONE	—	—	22	25	23	89	24	25	25	91
			319A	6.0	7.2	22	25	23	89	24	25	25	91
			320A	14.0	16.8	28	30	25	89	30	30	27	91
			321A	25.5	30.7	45	45	41	89	47	50	43	91
		MED	NONE	—	—	22	25	23	89	24	25	25	91
			319A	6.0	7.2	22	25	23	89	24	25	25	91
			320A	14.0	16.8	28	30	25	89	30	30	27	91
			321A	25.5	30.7	45	45	41	89	47	50	43	91
		HIGH	NONE	—	—	23	25	24	105	24	30	26	107
			319A	6.0	7.2	23	25	24	105	24	30	26	107
			320A	14.0	16.8	29	30	26	105	31	35	28	107
			321A	25.5	30.7	46	50	42	105	49	50	44	107
	575-3-60	STD	NONE	—	—	17	20	18	69	21	25	22	73
			308A	18.0	17.3	28	30	25	69	32	35	29	73
			322A	28.0	26.9	40	40	36	69	44	45	40	73
		MED	NONE	—	—	17	20	18	69	21	25	22	73
			308A	18.0	17.3	28	30	25	69	32	35	29	73
			322A	28.0	26.9	40	40	36	69	44	45	40	73
		HIGH	NONE	—	—	19	20	20	82	23	25	24	86
			308A	18.0	17.3	30	30	27	82	35	35	31	86
			322A	28.0	26.9	42	45	38	82	47	50	42	86

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (7.5 TONS, NO CO)

50LC* ^B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR UNPWR CO							
			CRHEATER***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
08	208/230-3-60	STD	NONE	—	—	42/42	50/50	44/44	200	46/46	50/50	48/48	204
			288A	7.5/10.0	20.9/24.1	42/42	50/50	44/44	200/200	46/46	50/50	48/48	204/204
			291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	200/200	55/62	60/70	51/56	204/204
			294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	200/200	100/113	100/125	91/104	204/204
		MED	NONE	—	—	42/42	50/50	44/44	200	46/46	50/50	48/48	204
			288A	7.5/10.0	20.9/24.1	42/42	50/50	44/44	200/200	46/46	50/50	48/48	204/204
			291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	200/200	55/62	60/70	51/56	204/204
			294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	200/200	100/113	100/125	91/104	204/204
		HIGH	NONE	—	—	45/44	50/50	47/46	230	49/48	60/60	51/50	234
			288A	7.5/10.0	20.9/24.1	45/44	50/50	47/46	230/230	49/48	60/60	51/50	234/234
			291A	12.4/16.5	34.4/39.7	54/60	60/60	49/55	230/230	59/65	60/70	54/59	234/234
			294A	25.2/33.5	69.9/80.6	99/111	100/125	90/102	230/230	103/116	110/125	95/106	234/234
		SUPER	NONE	—	—	47/46	60/50	50/48	254	51/50	60/60	54/53	258
			288A	7.5/10.0	20.9/24.1	47/46	60/50	50/48	254/254	51/50	60/60	54/53	258/258
			291A	12.4/16.5	34.4/39.7	57/62	60/70	52/57	254/254	62/67	70/70	56/61	258/258
			294A	25.2/33.5	69.9/80.6	101/113	110/125	93/104	254/254	106/118	110/125	97/108	258/258
	460-3-60	STD	NONE	—	—	23	25	24	102	24	30	26	104
			289A	10.0	12.0	23	25	24	102	24	30	26	104
			292A	16.5	19.9	29	30	26	102	31	35	28	104
			295A	33.5	40.3	54	60	50	102	57	60	52	104
		MED	NONE	—	—	23	25	24	102	24	30	26	104
			289A	10.0	12.0	23	25	24	102	24	30	26	104
			292A	16.5	19.9	29	30	26	102	31	35	28	104
			295A	33.5	40.3	54	60	50	102	57	60	52	104
		HIGH	NONE	—	—	23	25	25	118	25	30	27	120
			289A	10.0	12.0	23	25	25	118	25	30	27	120
			292A	16.5	19.9	30	30	27	118	32	35	29	120
			295A	33.5	40.3	56	60	51	118	58	60	53	120
		SUPER	NONE	—	—	25	30	26	130	26	30	28	132
			289A	10.0	12.0	25	30	26	130	26	30	28	132
			292A	16.5	19.9	31	35	29	130	34	35	31	132
			295A	33.5	40.3	57	60	52	130	59	60	54	132
	575-3-60	STD	NONE	—	—	19	20	20	78	23	25	24	82
			293A	16.5	15.9	24	25	22	78	29	30	26	82
			296A	33.5	32.2	44	45	40	78	49	50	45	82
		MED	NONE	—	—	19	20	20	78	23	25	24	82
			293A	16.5	15.9	24	25	22	78	29	30	26	82
			296A	33.5	32.2	44	45	40	78	49	50	45	82
		HIGH	NONE	—	—	21	25	22	91	24	30	26	95
			293A	16.5	15.9	26	30	23	91	31	35	28	95
			296A	33.5	32.2	46	50	42	91	51	60	47	95
		SUPER	NONE	—	—	21	25	22	91	24	30	26	95
			293A	16.5	15.9	26	30	23	91	31	35	28	95
			296A	33.5	32.2	46	50	42	91	51	60	47	95

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (7.5 TONS, WITH POWERED CO)

50LC* ^B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
08	208/230-3-60	STD	NONE	—	—	47/47	60/50	49/49	205	51/50	60/60	54/53	209
			288A	7.5/10.0	20.9/24.1	47/47	60/50	49/49	205/205	51/50	60/60	54/53	209/209
			291A	12.4/16.5	34.4/39.7	57/63	60/70	52/58	205/205	61/68	70/70	56/62	209/209
			294A	25.2/33.5	69.9/80.6	101/114	110/125	93/105	205/205	106/119	110/125	97/109	209/209
		MED	NONE	—	—	47/47	60/50	49/49	205	51/50	60/60	54/53	209
			288A	7.5/10.0	20.9/24.1	47/47	60/50	49/49	205/205	51/50	60/60	54/53	209/209
			291A	12.4/16.5	34.4/39.7	57/63	60/70	52/58	205/205	61/68	70/70	56/62	209/209
			294A	25.2/33.5	69.9/80.6	101/114	110/125	93/105	205/205	106/119	110/125	97/109	209/209
		HIGH	NONE	—	—	50/49	60/60	53/52	235	53/53	60/60	57/56	239
			288A	7.5/10.0	20.9/24.1	50/49	60/60	53/52	235/235	53/53	60/60	57/56	239/239
			291A	12.4/16.5	34.4/39.7	60/66	60/70	55/60	235/235	65/71	70/80	59/65	239/239
			294A	25.2/33.5	69.9/80.6	105/117	110/125	96/107	235/235	109/122	110/125	100/112	239/239
		SUPER	NONE	—	—	52/51	60/60	55/54	259	56/55	60/60	59/58	263
			288A	7.5/10.0	20.9/24.1	52/51	60/60	55/54	259/259	56/55	60/60	59/58	263/263
			291A	12.4/16.5	34.4/39.7	63/68	70/70	58/62	259/259	68/73	70/80	62/67	263/263
			294A	25.2/33.5	69.9/80.6	107/119	110/125	98/109	259/259	112/124	125/125	103/114	263/263
	460-3-60	STD	NONE	—	—	25	30	26	104	27	30	28	106
			289A	10.0	12.0	25	30	26	104	27	30	28	106
			292A	16.5	19.9	32	35	29	104	34	35	31	106
			295A	33.5	40.3	57	60	52	104	59	60	54	106
		MED	NONE	—	—	25	30	26	104	27	30	28	106
			289A	10.0	12.0	25	30	26	104	27	30	28	106
			292A	16.5	19.9	32	35	29	104	34	35	31	106
			295A	33.5	40.3	57	60	52	104	59	60	54	106
		HIGH	NONE	—	—	26	30	27	120	27	30	29	122
			289A	10.0	12.0	26	30	27	120	27	30	29	122
			292A	16.5	19.9	33	35	30	120	35	35	32	122
			295A	33.5	40.3	58	60	53	120	61	70	55	122
		SUPER	NONE	—	—	27	30	28	132	29	30	30	134
			289A	10.0	12.0	27	30	28	132	29	30	30	134
			292A	16.5	19.9	34	35	31	132	36	40	33	134
			295A	33.5	40.3	60	60	55	132	62	70	57	134
	575-3-60	STD	NONE	—	—	21	25	22	80	24	30	26	84
			293A	16.5	15.9	26	30	23	80	31	35	28	84
			296A	33.5	32.2	46	50	42	80	51	60	47	84
		MED	NONE	—	—	21	25	22	80	24	30	26	84
			293A	16.5	15.9	26	30	23	80	31	35	28	84
			296A	33.5	32.2	46	50	42	80	51	60	47	84
		HIGH	NONE	—	—	22	25	24	93	26	30	28	97
			293A	16.5	15.9	28	30	25	93	33	35	30	97
			296A	33.5	32.2	48	50	44	93	53	60	49	97
		SUPER	NONE	—	—	22	25	24	93	26	30	28	97
			293A	16.5	15.9	28	30	25	93	33	35	30	97
			296A	33.5	32.2	48	50	44	93	53	60	49	97

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (8.5 TONS, NO CO)

50LC* ^B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR UNPWR CO							
			CRHEATER***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
09	208/230-3-60	STD	NONE	—	—	45/45	60/50	46/46	227	49/48	60/60	51/50	231
			288A	7.5/10.0	20.9/24.1	45/45	60/50	46/46	227/227	49/48	60/60	51/50	231/231
			291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	227/227	55/62	60/70	51/56	231/231
			294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	227/227	100/113	100/125	91/104	231/231
		MED	NONE	—	—	45/45	60/50	46/46	227	49/48	60/60	51/50	231
			288A	7.5/10.0	20.9/24.1	45/45	60/50	46/46	227/227	49/48	60/60	51/50	231/231
			291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	227/227	55/62	60/70	51/56	231/231
			294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	227/227	100/113	100/125	91/104	231/231
		HIGH	NONE	—	—	50/49	60/60	52/51	281	54/53	60/60	56/55	285
			288A	7.5/10.0	20.9/24.1	50/49	60/60	52/51	281/281	54/53	60/60	56/55	285/285
			291A	12.4/16.5	34.4/39.7	57/62	60/70	52/57	281/281	62/67	70/70	56/61	285/285
			294A	25.2/33.5	69.9/80.6	101/113	110/125	93/104	281/281	106/118	110/125	97/108	285/285
		SUPER	NONE	—	—	53/52	60/60	55/54	292	56/55	60/60	60/59	296
			288A	7.5/10.0	20.9/24.1	53/52	60/60	55/54	292/292	56/55	60/60	60/59	296/296
			291A	12.4/16.5	34.4/39.7	60/66	60/70	55/60	292/292	65/71	70/80	60/65	296/296
			294A	25.2/33.5	69.9/80.6	105/117	110/125	96/107	292/292	110/122	110/125	100/112	296/296
	460-3-60	STD	NONE	—	—	24	30	25	113	26	30	27	115
			289A	10.0	12.0	24	30	25	113	26	30	27	115
			292A	16.5	19.9	29	30	26	113	31	35	28	115
			295A	33.5	40.3	54	60	50	113	57	60	52	115
		MED	NONE	—	—	24	30	25	113	26	30	27	115
			289A	10.0	12.0	24	30	25	113	26	30	27	115
			292A	16.5	19.9	29	30	26	113	31	35	28	115
			295A	33.5	40.3	54	60	50	113	57	60	52	115
		HIGH	NONE	—	—	26	30	28	141	28	30	30	143
			289A	10.0	12.0	26	30	28	141	28	30	30	143
			292A	16.5	19.9	31	35	29	141	34	35	31	143
			295A	33.5	40.3	57	60	52	141	59	60	54	143
		SUPER	NONE	—	—	28	30	29	146	30	35	31	148
			289A	10.0	12.0	28	30	29	146	30	35	31	148
			292A	16.5	19.9	33	35	30	146	36	40	32	148
			295A	33.5	40.3	59	60	54	146	61	70	56	148
	575-3-60	STD	NONE	—	—	20	25	21	84	24	25	25	88
			293A	16.5	15.9	24	25	22	84	29	30	26	88
			296A	33.5	32.2	44	45	40	84	49	50	45	88
		MED	NONE	—	—	20	25	21	84	24	25	25	88
			293A	16.5	15.9	24	25	22	84	29	30	26	88
			296A	33.5	32.2	44	45	40	84	49	50	45	88
		HIGH	NONE	—	—	22	25	23	97	25	30	27	101
			293A	16.5	15.9	26	30	23	97	31	35	28	101
			296A	33.5	32.2	46	50	42	97	51	60	47	101
		SUPER	NONE	—	—	24	25	25	111	27	30	29	115
			293A	16.5	15.9	28	30	25	111	33	35	30	115
			296A	33.5	32.2	48	50	44	111	53	60	49	115

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (8.5 TONS, WITH POWERED CO)

50LC* ^B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
09	208/230-3-60	STD	NONE	—	—	50/49	60/60	52/52	232	53/53	60/60	56/56	236
			288A	7.5/10.0	20.9/24.1	50/49	60/60	52/52	232/232	53/53	60/60	56/56	236/236
			291A	12.4/16.5	34.4/39.7	57/63	60/70	52/58	232/232	61/68	70/70	56/62	236/236
			294A	25.2/33.5	69.9/80.6	101/114	110/125	93/105	232/232	106/119	110/125	97/109	236/236
		MED	NONE	—	—	50/49	60/60	52/52	232	53/53	60/60	56/56	236
			288A	7.5/10.0	20.9/24.1	50/49	60/60	52/52	232/232	53/53	60/60	56/56	236/236
			291A	12.4/16.5	34.4/39.7	57/63	60/70	52/58	232/232	61/68	70/70	56/62	236/236
			294A	25.2/33.5	69.9/80.6	101/114	110/125	93/105	232/232	106/119	110/125	97/109	236/236
		HIGH	NONE	—	—	55/54	60/60	58/56	286	58/57	70/70	62/61	290
			288A	7.5/10.0	20.9/24.1	55/54	60/60	58/56	286/286	58/57	70/70	62/61	290/290
			291A	12.4/16.5	34.4/39.7	63/68	70/70	58/62	286/286	68/73	70/80	62/67	290/290
			294A	25.2/33.5	69.9/80.6	107/119	110/125	98/109	286/286	112/124	125/125	103/114	290/290
		SUPER	NONE	—	—	57/56	70/60	61/60	297	61/60	70/70	65/64	301
			288A	7.5/10.0	20.9/24.1	57/56	70/60	61/60	297/297	61/60	70/70	65/64	301/301
			291A	12.4/16.5	34.4/39.7	66/72	70/80	61/66	297/297	71/77	80/80	65/70	301/301
			294A	25.2/33.5	69.9/80.6	111/123	125/125	102/113	297/297	116/128	125/150	106/117	301/301
	460-3-60	STD	NONE	—	—	27	30	28	115	28	30	30	117
			289A	10.0	12.0	27	30	28	115	28	30	30	117
			292A	16.5	19.9	32	35	29	115	34	35	31	117
			295A	33.5	40.3	57	60	52	115	59	60	54	117
		MED	NONE	—	—	27	30	28	115	28	30	30	117
			289A	10.0	12.0	27	30	28	115	28	30	30	117
			292A	16.5	19.9	32	35	29	115	34	35	31	117
			295A	33.5	40.3	57	60	52	115	59	60	54	117
		HIGH	NONE	—	—	29	35	30	143	30	35	32	145
			289A	10.0	12.0	29	35	30	143	30	35	32	145
			292A	16.5	19.9	34	35	31	143	36	40	33	145
			295A	33.5	40.3	60	60	55	143	62	70	57	145
		SUPER	NONE	—	—	30	35	32	148	32	35	34	150
			289A	10.0	12.0	30	35	32	148	32	35	34	150
			292A	16.5	19.9	36	40	33	148	38	40	35	150
			295A	33.5	40.3	62	70	56	148	64	70	58	150
	575-3-60	STD	NONE	—	—	22	25	23	86	25	30	27	90
			293A	16.5	15.9	26	30	23	86	31	35	28	90
			296A	33.5	32.2	46	50	42	86	51	60	47	90
		MED	NONE	—	—	22	25	23	86	25	30	27	90
			293A	16.5	15.9	26	30	23	86	31	35	28	90
			296A	33.5	32.2	46	50	42	86	51	60	47	90
		HIGH	NONE	—	—	23	25	25	99	27	30	29	103
			293A	16.5	15.9	28	30	25	99	33	35	30	103
			296A	33.5	32.2	48	50	44	99	53	60	49	103
		SUPER	NONE	—	—	25	30	27	113	29	35	31	117
			293A	16.5	15.9	30	30	27	113	35	35	32	117
			296A	33.5	32.2	51	60	46	113	55	60	50	117

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (10 TONS, NO CO)

50LC* ^B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR UNPWR CO							
			CRHEATER***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
12	208/230-3-60	STD	NONE	—	—	51/50	60/60	52/52	252	54/54	60/60	56/56	256
			288A	7.5/10.0	20.9/24.1	51/50	60/60	52/52	252/252	54/54	60/60	56/56	256/256
			291A	12.4/16.5	34.4/39.7	52/59	60/60	52/53	252/252	57/63	60/70	56/58	256/256
			294A	25.2/33.5	69.9/80.6	97/110	100/110	89/101	252/252	101/114	110/125	93/105	256/256
			291A+294A	37.6/50.0	104.3/120.3	140/129	150/150	128/146	252/252	144/134	150/150	132/151	256/256
		MED	NONE	—	—	52/51	60/60	54/53	278	56/55	70/60	58/57	282
			288A	7.5/10.0	20.9/24.1	52/51	60/60	54/53	278/278	56/55	70/60	58/57	282/282
			291A	12.4/16.5	34.4/39.7	54/60	60/60	54/55	278/278	59/65	70/70	58/59	282/282
			294A	25.2/33.5	69.9/80.6	99/111	100/125	90/102	278/278	103/116	110/125	95/106	282/282
			291A+294A	37.6/50.0	104.3/120.3	142/131	150/150	130/147	278/278	146/135	150/150	134/152	282/282
		HIGH	NONE	—	—	57/56	70/70	59/58	313	61/60	80/70	64/63	317
			288A	7.5/10.0	20.9/24.1	57/56	70/70	59/58	313/313	61/60	80/70	64/63	317/317
			291A	12.4/16.5	34.4/39.7	60/66	70/70	59/60	313/313	65/71	80/80	64/65	317/317
			294A	25.2/33.5	69.9/80.6	105/117	110/125	96/107	313/313	110/122	110/125	100/112	317/317
			291A+294A	37.6/50.0	104.3/120.3	148/137	150/150	136/153	313/313	153/141	175/175	140/157	317/317
	460-3-60	STD	NONE	—	—	26	30	27	126	27	30	29	128
			289A	10.0	12.0	26	30	27	126	27	30	29	128
			292A	16.5	19.9	30	30	27	126	32	35	29	128
			295A	33.5	40.3	55	60	50	126	57	60	52	128
			292A+295A	50.0	60.2	65	70	73	126	67	70	75	128
		MED	NONE	—	—	26	30	27	140	28	30	29	142
			289A	10.0	12.0	26	30	27	140	28	30	29	142
			292A	16.5	19.9	30	30	27	140	32	35	29	142
			295A	33.5	40.3	56	60	51	140	58	60	53	142
			292A+295A	50.0	60.2	65	70	74	140	68	80	76	142
		HIGH	NONE	—	—	29	35	30	157	30	35	32	159
			289A	10.0	12.0	29	35	30	157	30	35	32	159
			292A	16.5	19.9	33	35	30	157	36	40	32	159
			295A	33.5	40.3	59	60	54	157	61	70	56	159
			292A+295A	50.0	60.2	69	80	77	157	71	80	79	159
	575-3-60	STD	NONE	—	—	22	25	23	107	26	30	27	111
			293A	16.5	15.9	25	25	23	107	29	30	27	111
			296A	33.5	32.2	45	45	41	107	50	50	45	111
			293A+296A	50.0	48.1	53	60	59	107	58	60	64	111
			NONE	—	—	23	25	24	116	27	30	28	120
		MED	293A	16.5	15.9	26	30	24	116	31	35	28	120
			296A	33.5	32.2	46	50	42	116	51	60	47	120
			293A+296A	50.0	48.1	54	60	60	116	59	60	65	120
			NONE	—	—	25	30	26	130	29	30	30	134
			293A	16.5	15.9	28	30	26	130	33	35	30	134
			296A	33.5	32.2	48	50	44	130	53	60	49	134
			293A+296A	50.0	48.1	56	60	62	130	61	70	67	134

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (10 TONS, WITH POWERED CO)

50LC*B UNIT SIZE	NOM v-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
12	208/230-3-60	STD	NONE	—	—	55/55	60/60	58/57	257	59/59	70/70	62/62	261
			288A	7.5/10.0	20.9/24.1	55/55	60/60	58/57	257/257	59/59	70/70	62/62	261/261
			291A	12.4/16.5	34.4/39.7	58/65	60/70	58/59	257/257	63/69	70/70	62/63	261/261
			294A	25.2/33.5	69.9/80.6	103/116	110/125	94/106	257/257	107/120	110/125	98/110	261/261
			291A+294A	37.6/50.0	104.3/120.3	146/135	150/150	134/152	257/257	150/140	175/150	138/156	261/261
		MED	NONE	—	—	57/56	70/70	59/58	283	61/60	70/70	64/63	287
			288A	7.5/10.0	20.9/24.1	57/56	70/70	59/58	283/283	61/60	70/70	64/63	287/287
			291A	12.4/16.5	34.4/39.7	60/66	70/70	59/60	283/283	65/71	70/80	64/65	287/287
			294A	25.2/33.5	69.9/80.6	105/117	110/125	96/107	283/283	109/122	110/125	100/112	287/287
			291A+294A	37.6/50.0	104.3/120.3	148/137	150/150	135/153	283/283	152/141	175/150	140/157	287/287
		HIGH	NONE	—	—	62/61	80/80	65/64	318	66/65	80/80	69/68	322
			288A	7.5/10.0	20.9/24.1	62/61	80/80	65/64	318/318	66/65	80/80	69/68	322/322
			291A	12.4/16.5	34.4/39.7	66/72	80/80	65/66	318/318	71/77	80/80	69/70	322/322
			294A	25.2/33.5	69.9/80.6	111/123	125/125	102/113	318/318	116/128	125/150	106/117	322/322
			291A+294A	37.6/50.0	104.3/120.3	154/143	175/175	141/158	318/318	159/147	175/175	145/163	322/322
	460-3-60	STD	NONE	—	—	28	30	29	128	30	35	31	130
			289A	10.0	12.0	28	30	29	128	30	35	31	130
			292A	16.5	19.9	32	35	29	128	35	35	31	130
			295A	33.5	40.3	58	60	53	128	60	60	55	130
			292A+295A	50.0	60.2	68	80	76	128	70	80	78	130
		MED	NONE	—	—	28	30	30	142	30	35	32	144
			289A	10.0	12.0	28	30	30	142	30	35	32	144
			292A	16.5	19.9	33	35	30	142	35	35	32	144
			295A	33.5	40.3	58	60	53	142	61	70	55	144
			292A+295A	50.0	60.2	68	80	76	142	70	80	78	144
		HIGH	NONE	—	—	31	35	33	159	33	40	35	161
			289A	10.0	12.0	31	35	33	159	33	40	35	161
			292A	16.5	19.9	36	40	33	159	38	40	35	161
			295A	33.5	40.3	62	70	56	159	64	70	58	161
			292A+295A	50.0	60.2	71	80	79	159	74	80	81	161
	575-3-60	STD	NONE	—	—	24	25	25	109	28	30	29	113
			293A	16.5	15.9	27	30	25	109	32	35	29	113
			296A	33.5	32.2	47	50	43	109	52	60	47	113
			293A+296A	50.0	48.1	55	60	61	109	60	60	66	113
		MED	NONE	—	—	25	30	26	118	29	30	30	122
			293A	16.5	15.9	28	30	26	118	33	35	30	122
			296A	33.5	32.2	48	50	44	118	53	60	49	122
			293A+296A	50.0	48.1	56	60	62	118	61	70	67	122
		HIGH	NONE	—	—	26	30	28	132	30	35	32	136
			293A	16.5	15.9	30	30	28	132	35	35	32	136
			296A	33.5	32.2	51	60	46	132	55	60	50	136
			293A+296A	50.0	48.1	58	60	64	132	63	70	69	136

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (6 TONS, NO CO)

50LC* B UNIT SIZE	NOM V-PH-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
07	208/230-3-60	STD	NONE	—	—	35/35	45/45	36/35	173	38/38	50/50	40/40	177
			316A	4.9/6.5	13.6/15.6	35/35	45/45	36/35	173/173	38/38	50/50	40/40	177/177
			317A	12.0/16.0	33.4/38.5	56/56	60/60	45/51	173/173	60/60	60/60	49/55	177/177
			318A	18.6/24.8	51.7/59.7	82/82	90/90	66/75	173/173	87/87	90/90	70/79	177/177
		MED	NONE	—	—	35/35	45/45	36/35	173	38/38	50/50	40/40	177
			316A	4.9/6.5	13.6/15.6	35/35	45/45	36/35	173/173	38/38	50/50	40/40	177/177
			317A	12.0/16.0	33.4/38.5	56/56	60/60	45/51	173/173	60/60	60/60	49/55	177/177
			318A	18.6/24.8	51.7/59.7	82/82	90/90	66/75	173/173	87/87	90/90	70/79	177/177
		HIGH	NONE	—	—	37/37	50/50	39/38	203	41/41	50/50	43/42	207
			316A	4.9/6.5	13.6/15.6	37/37	50/50	39/38	203/203	41/41	50/50	43/42	207/207
			317A	12.0/16.0	33.4/38.5	58/58	60/60	48/53	203/203	63/63	70/70	53/58	207/207
			318A	18.6/24.8	51.7/59.7	85/85	90/90	69/78	203/203	90/90	90/90	74/82	207/207
	460-3-60	STD	NONE	—	—	20	25	20	87	21	25	22	89
			319A	6.0	7.2	20	25	20	87	21	25	22	89
			320A	14.0	16.8	25	25	23	87	27	30	25	89
			321A	25.5	30.7	42	45	39	87	45	45	41	89
		MED	NONE	—	—	20	25	20	87	21	25	22	89
			319A	6.0	7.2	20	25	20	87	21	25	22	89
			320A	14.0	16.8	25	25	23	87	27	30	25	89
			321A	25.5	30.7	42	45	39	87	45	45	41	89
		HIGH	NONE	—	—	20	25	21	103	22	25	23	105
			319A	6.0	7.2	20	25	21	103	22	25	23	105
			320A	14.0	16.8	26	30	24	103	28	30	26	105
			321A	25.5	30.7	44	45	40	103	46	50	42	105
	575-3-60	STD	NONE	—	—	15	20	16	67	19	20	20	71
			308A	18.0	17.3	26	30	23	67	30	30	27	71
			322A	28.0	26.9	38	40	34	67	42	45	39	71
		MED	NONE	—	—	15	20	16	67	19	20	20	71
			308A	18.0	17.3	26	30	23	67	30	30	27	71
			322A	28.0	26.9	38	40	34	67	42	45	39	71
		HIGH	NONE	—	—	17	20	18	80	21	25	22	84
			308A	18.0	17.3	28	30	25	80	32	35	29	84
			322A	28.0	26.9	40	40	36	80	44	45	40	84

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (6 TONS, WITH POWERED CO)

50LC* B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
07	208/230-3-60	STD	NONE	—	—	39/39	50/50	41/41	178	43/43	50/50	45/45	182
			316A	4.9/6.5	13.6/15.6	39/39	50/50	41/41	178/178	43/43	50/50	45/45	182/182
			317A	12.0/16.0	33.4/38.5	62/62	70/70	51/56	178/178	66/66	70/70	55/61	182/182
			318A	18.6/24.8	51.7/59.7	88/88	90/90	72/81	178/178	93/93	100/100	76/85	182/182
		MED	NONE	—	—	39/39	50/50	41/41	178	43/43	50/50	45/45	182
			316A	4.9/6.5	13.6/15.6	39/39	50/50	41/41	178/178	43/43	50/50	45/45	182/182
			317A	12.0/16.0	33.4/38.5	62/62	70/70	51/56	178/178	66/66	70/70	55/61	182/182
			318A	18.6/24.8	51.7/59.7	88/88	90/90	72/81	178/178	93/93	100/100	76/85	182/182
		HIGH	NONE	—	—	42/42	50/50	44/43	208	46/46	50/50	49/48	212
			316A	4.9/6.5	13.6/15.6	42/42	50/50	44/43	208/208	46/46	50/50	49/48	212/212
			317A	12.0/16.0	33.4/38.5	64/64	70/70	54/59	208/208	69/69	70/70	58/63	212/212
			318A	18.6/24.8	51.7/59.7	91/91	100/100	75/83	208/208	96/96	100/100	79/88	212/212
	460-3-60	STD	NONE	—	—	22	25	23	89	24	25	25	91
			319A	6.0	7.2	22	25	23	89	24	25	25	91
			320A	14.0	16.8	28	30	25	89	30	30	27	91
			321A	25.5	30.7	45	45	41	89	47	50	43	91
		MED	NONE	—	—	22	25	23	89	24	25	25	91
			319A	6.0	7.2	22	25	23	89	24	25	25	91
			320A	14.0	16.8	28	30	25	89	30	30	27	91
			321A	25.5	30.7	45	45	41	89	47	50	43	91
		HIGH	NONE	—	—	23	25	24	105	24	30	26	107
			319A	6.0	7.2	23	25	24	105	24	30	26	107
			320A	14.0	16.8	29	30	26	105	31	35	28	107
			321A	25.5	30.7	46	50	42	105	49	50	44	107
	575-3-60	STD	NONE	—	—	17	20	18	69	21	25	22	73
			308A	18.0	17.3	28	30	25	69	32	35	29	73
			322A	28.0	26.9	40	40	36	69	44	45	40	73
		MED	NONE	—	—	17	20	18	69	21	25	22	73
			308A	18.0	17.3	28	30	25	69	32	35	29	73
			322A	28.0	26.9	40	40	36	69	44	45	40	73
		HIGH	NONE	—	—	19	20	20	82	23	25	24	86
			308A	18.0	17.3	30	30	27	82	35	35	31	86
			322A	28.0	26.9	42	45	38	82	47	50	42	86

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (7.5 TONS, NO CO)

50LC* ^B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
08	208/230-3-60	STD	NONE	—	—	42/42	50/50	44/44	200	46/46	50/50	48/48	204
			288A	7.5/10.0	20.9/24.1	42/42	50/50	44/44	200/200	46/46	50/50	48/48	204/204
			291A	12.4/16.5	34.4/39.7	57/57	60/60	46/52	200/200	62/62	70/70	51/56	204/204
			294A	25.2/33.5	69.9/80.6	108/108	110/110	87/99	200/200	113/113	125/125	91/104	204/204
		MED	NONE	—	—	42/42	50/50	44/44	200	46/46	50/50	48/48	204
			288A	7.5/10.0	20.9/24.1	42/42	50/50	44/44	200/200	46/46	50/50	48/48	204/204
			291A	12.4/16.5	34.4/39.7	57/57	60/60	46/52	200/200	62/62	70/70	51/56	204/204
			294A	25.2/33.5	69.9/80.6	108/108	110/110	87/99	200/200	113/113	125/125	91/104	204/204
		HIGH	NONE	—	—	45/45	50/50	47/46	230	49/49	60/60	51/50	234
			288A	7.5/10.0	20.9/24.1	45/45	50/50	47/46	230/230	49/49	60/60	51/50	234/234
			291A	12.4/16.5	34.4/39.7	60/60	60/60	49/55	230/230	65/65	70/70	54/59	234/234
			294A	25.2/33.5	69.9/80.6	111/111	125/125	90/102	230/230	116/116	125/125	95/106	234/234
		SUPER	NONE	—	—	47/47	60/60	50/48	254	51/51	60/60	54/53	258
			288A	7.5/10.0	20.9/24.1	47/47	60/60	50/48	254/254	51/51	60/60	54/53	258/258
			291A	12.4/16.5	34.4/39.7	62/62	70/70	52/57	254/254	67/67	70/70	56/61	258/258
			294A	25.2/33.5	69.9/80.6	113/113	125/125	93/104	254/254	118/118	125/125	97/108	258/258
	460-3-60	STD	NONE	—	—	23	25	24	102	24	30	26	104
			289A	10.0	12.0	23	25	24	102	24	30	26	104
			292A	16.5	19.9	29	30	26	102	31	35	28	104
			295A	33.5	40.3	54	60	50	102	57	60	52	104
		MED	NONE	—	—	23	25	24	102	24	30	26	104
			289A	10.0	12.0	23	25	24	102	24	30	26	104
			292A	16.5	19.9	29	30	26	102	31	35	28	104
			295A	33.5	40.3	54	60	50	102	57	60	52	104
		HIGH	NONE	—	—	23	25	25	118	25	30	27	120
			289A	10.0	12.0	23	25	25	118	25	30	27	120
			292A	16.5	19.9	30	30	27	118	32	35	29	120
			295A	33.5	40.3	56	60	51	118	58	60	53	120
		SUPER	NONE	—	—	25	30	26	130	26	30	28	132
			289A	10.0	12.0	25	30	26	130	26	30	28	132
			292A	16.5	19.9	31	35	29	130	34	35	31	132
			295A	33.5	40.3	57	60	52	130	59	60	54	132
	575-3-60	STD	NONE	—	—	19	20	20	78	23	25	24	82
			293A	16.5	15.9	24	25	22	78	29	30	26	82
			296A	33.5	32.2	44	45	40	78	49	50	45	82
		MED	NONE	—	—	19	20	20	78	23	25	24	82
			293A	16.5	15.9	24	25	22	78	29	30	26	82
			296A	33.5	32.2	44	45	40	78	49	50	45	82
		HIGH	NONE	—	—	21	25	22	91	24	30	26	95
			293A	16.5	15.9	26	30	23	91	31	35	28	95
			296A	33.5	32.2	46	50	42	91	51	60	47	95
		SUPER	NONE	—	—	21	25	22	91	24	30	26	95
			293A	16.5	15.9	26	30	23	91	31	35	28	95
			296A	33.5	32.2	46	50	42	91	51	60	47	95

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (7.5 TONS, WITH POWERED CO)

50LC*B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
08	208/230-3-60	STD	NONE	—	—	47/47	60/60	49/49	205	51/51	60/60	54/53	209
			288A	7.5/10.0	20.9/24.1	47/47	60/60	49/49	205/205	51/51	60/60	54/53	209/209
			291A	12.4/16.5	34.4/39.7	63/63	70/70	52/58	205/205	68/68	70/70	56/62	209/209
			294A	25.2/33.5	69.9/80.6	114/114	125/125	93/105	205/205	119/119	125/125	97/109	209/209
		MED	NONE	—	—	47/47	60/60	49/49	205	51/51	60/60	54/53	209
			288A	7.5/10.0	20.9/24.1	47/47	60/60	49/49	205/205	51/51	60/60	54/53	209/209
			291A	12.4/16.5	34.4/39.7	63/63	70/70	52/58	205/205	68/68	70/70	56/62	209/209
			294A	25.2/33.5	69.9/80.6	114/114	125/125	93/105	205/205	119/119	125/125	97/109	209/209
		HIGH	NONE	—	—	50/50	60/60	53/52	235	53/53	60/60	57/56	239
			288A	7.5/10.0	20.9/24.1	50/50	60/60	53/52	235/235	53/53	60/60	57/56	239/239
			291A	12.4/16.5	34.4/39.7	66/66	70/70	55/60	235/235	71/71	80/80	59/65	239/239
			294A	25.2/33.5	69.9/80.6	117/117	125/125	96/107	235/235	122/122	125/125	100/112	239/239
		SUPER	NONE	—	—	52/52	60/60	55/54	259	56/56	60/60	59/58	263
			288A	7.5/10.0	20.9/24.1	52/52	60/60	55/54	259/259	56/56	60/60	59/58	263/263
			291A	12.4/16.5	34.4/39.7	68/68	70/70	58/62	259/259	73/73	80/80	62/67	263/263
			294A	25.2/33.5	69.9/80.6	119/119	125/125	98/109	259/259	124/124	125/125	103/114	263/263
	460-3-60	STD	NONE	—	—	25	30	26	104	27	30	28	106
			289A	10.0	12.0	25	30	26	104	27	30	28	106
			292A	16.5	19.9	32	35	29	104	34	35	31	106
			295A	33.5	40.3	57	60	52	104	59	60	54	106
		MED	NONE	—	—	25	30	26	104	27	30	28	106
			289A	10.0	12.0	25	30	26	104	27	30	28	106
			292A	16.5	19.9	32	35	29	104	34	35	31	106
			295A	33.5	40.3	57	60	52	104	59	60	54	106
		HIGH	NONE	—	—	26	30	27	120	27	30	29	122
			289A	10.0	12.0	26	30	27	120	27	30	29	122
			292A	16.5	19.9	33	35	30	120	35	35	32	122
			295A	33.5	40.3	58	60	53	120	61	70	55	122
		SUPER	NONE	—	—	27	30	28	132	29	30	30	134
			289A	10.0	12.0	27	30	28	132	29	30	30	134
			292A	16.5	19.9	34	35	31	132	36	40	33	134
			295A	33.5	40.3	60	60	55	132	62	70	57	134
	575-3-60	STD	NONE	—	—	21	25	22	80	24	30	26	84
			293A	16.5	15.9	26	30	23	80	31	35	28	84
			296A	33.5	32.2	46	50	42	80	51	60	47	84
		MED	NONE	—	—	21	25	22	80	24	30	26	84
			293A	16.5	15.9	26	30	23	80	31	35	28	84
			296A	33.5	32.2	46	50	42	80	51	60	47	84
		HIGH	NONE	—	—	22	25	24	93	26	30	28	97
			293A	16.5	15.9	28	30	25	93	33	35	30	97
			296A	33.5	32.2	48	50	44	93	53	60	49	97
		SUPER	NONE	—	—	22	25	24	93	26	30	28	97
			293A	16.5	15.9	28	30	25	93	33	35	30	97
			296A	33.5	32.2	48	50	44	93	53	60	49	97

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (8.5 TONS, NO CO)

50LC* ^B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
09	208/230-3-60	STD	NONE	—	—	45/45	60/60	46/46	227	49/49	60/60	51/50	231
			288A	7.5/10.0	20.9/24.1	45/45	60/60	46/46	227/227	49/49	60/60	51/50	231/231
			291A	12.4/16.5	34.4/39.7	57/57	60/60	46/52	227/227	62/62	70/70	51/56	231/231
			294A	25.2/33.5	69.9/80.6	108/108	110/110	87/99	227/227	113/113	125/125	91/104	231/231
		MED	NONE	—	—	45/45	60/60	46/46	227	49/49	60/60	51/50	231
			288A	7.5/10.0	20.9/24.1	45/45	60/60	46/46	227/227	49/49	60/60	51/50	231/231
			291A	12.4/16.5	34.4/39.7	57/57	60/60	46/52	227/227	62/62	70/70	51/56	231/231
			294A	25.2/33.5	69.9/80.6	108/108	110/110	87/99	227/227	113/113	125/125	91/104	231/231
		HIGH	NONE	—	—	50/50	60/60	52/51	281	54/54	60/60	56/55	285
			288A	7.5/10.0	20.9/24.1	50/50	60/60	52/51	281/281	54/54	60/60	56/55	285/285
			291A	12.4/16.5	34.4/39.7	62/62	70/70	52/57	281/281	67/67	70/70	56/61	285/285
			294A	25.2/33.5	69.9/80.6	113/113	125/125	93/104	281/281	118/118	125/125	97/108	285/285
		SUPER	NONE	—	—	53/53	60/60	55/54	292	56/56	60/60	60/59	296
			288A	7.5/10.0	20.9/24.1	53/53	60/60	55/54	292/292	56/56	60/60	60/59	296/296
			291A	12.4/16.5	34.4/39.7	66/66	70/70	55/60	292/292	71/71	80/80	60/65	296/296
			294A	25.2/33.5	69.9/80.6	117/117	125/125	96/107	292/292	122/122	125/125	100/112	296/296
	460-3-60	STD	NONE	—	—	24	30	25	113	26	30	27	115
			289A	10.0	12.0	24	30	25	113	26	30	27	115
			292A	16.5	19.9	29	30	26	113	31	35	28	115
			295A	33.5	40.3	54	60	50	113	57	60	52	115
		MED	NONE	—	—	24	30	25	113	26	30	27	115
			289A	10.0	12.0	24	30	25	113	26	30	27	115
			292A	16.5	19.9	29	30	26	113	31	35	28	115
			295A	33.5	40.3	54	60	50	113	57	60	52	115
		HIGH	NONE	—	—	26	30	28	141	28	30	30	143
			289A	10.0	12.0	26	30	28	141	28	30	30	143
			292A	16.5	19.9	31	35	29	141	34	35	31	143
			295A	33.5	40.3	57	60	52	141	59	60	54	143
		SUPER	NONE	—	—	28	30	29	146	30	35	31	148
			289A	10.0	12.0	28	30	29	146	30	35	31	148
			292A	16.5	19.9	33	35	30	146	36	40	32	148
			295A	33.5	40.3	59	60	54	146	61	70	56	148
	575-3-60	STD	NONE	—	—	20	25	21	84	24	25	25	88
			293A	16.5	15.9	24	25	22	84	29	30	26	88
			296A	33.5	32.2	44	45	40	84	49	50	45	88
		MED	NONE	—	—	20	25	21	84	24	25	25	88
			293A	16.5	15.9	24	25	22	84	29	30	26	88
			296A	33.5	32.2	44	45	40	84	49	50	45	88
		HIGH	NONE	—	—	22	25	23	97	25	30	27	101
			293A	16.5	15.9	26	30	23	97	31	35	28	101
			296A	33.5	32.2	46	50	42	97	51	60	47	101
		SUPER	NONE	—	—	24	25	25	111	27	30	29	115
			293A	16.5	15.9	28	30	25	111	33	35	30	115
			296A	33.5	32.2	48	50	44	111	53	60	49	115

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (8.5 TONS, WITH POWERED CO)

50LC*B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
09	208/230-3-60	STD	NONE	—	—	50/50	60/60	52/52	232	53/53	60/60	56/56	236
			288A	7.5/10.0	20.9/24.1	50/50	60/60	52/52	232/232	53/53	60/60	56/56	236/236
			291A	12.4/16.5	34.4/39.7	63/63	70/70	52/58	232/232	68/68	70/70	56/62	236/236
			294A	25.2/33.5	69.9/80.6	114/114	125/125	93/105	232/232	119/119	125/125	97/109	236/236
		MED	NONE	—	—	50/50	60/60	52/52	232	53/53	60/60	56/56	236
			288A	7.5/10.0	20.9/24.1	50/50	60/60	52/52	232/232	53/53	60/60	56/56	236/236
			291A	12.4/16.5	34.4/39.7	63/63	70/70	52/58	232/232	68/68	70/70	56/62	236/236
			294A	25.2/33.5	69.9/80.6	114/114	125/125	93/105	232/232	119/119	125/125	97/109	236/236
		HIGH	NONE	—	—	55/55	60/60	58/56	286	58/58	70/70	62/61	290
			288A	7.5/10.0	20.9/24.1	55/55	60/60	58/56	286/286	58/58	70/70	62/61	290/290
			291A	12.4/16.5	34.4/39.7	68/68	70/70	58/62	286/286	73/73	80/80	62/67	290/290
			294A	25.2/33.5	69.9/80.6	119/119	125/125	98/109	286/286	124/124	125/125	103/114	290/290
		SUPER	NONE	—	—	57/57	70/70	61/60	297	61/61	70/70	65/64	301
			288A	7.5/10.0	20.9/24.1	57/57	70/70	61/60	297/297	61/61	70/70	65/64	301/301
			291A	12.4/16.5	34.4/39.7	72/72	80/80	61/66	297/297	77/77	80/80	65/70	301/301
			294A	25.2/33.5	69.9/80.6	123/123	125/125	102/113	297/297	128/128	150/150	106/117	301/301
	460-3-60	STD	NONE	—	—	27	30	28	115	28	30	30	117
			289A	10.0	12.0	27	30	28	115	28	30	30	117
			292A	16.5	19.9	32	35	29	115	34	35	31	117
			295A	33.5	40.3	57	60	52	115	59	60	54	117
		MED	NONE	—	—	27	30	28	115	28	30	30	117
			289A	10.0	12.0	27	30	28	115	28	30	30	117
			292A	16.5	19.9	32	35	29	115	34	35	31	117
			295A	33.5	40.3	57	60	52	115	59	60	54	117
		HIGH	NONE	—	—	29	35	30	143	30	35	32	145
			289A	10.0	12.0	29	35	30	143	30	35	32	145
			292A	16.5	19.9	34	35	31	143	36	40	33	145
			295A	33.5	40.3	60	60	55	143	62	70	57	145
		SUPER	NONE	—	—	30	35	32	148	32	35	34	150
			289A	10.0	12.0	30	35	32	148	32	35	34	150
			292A	16.5	19.9	36	40	33	148	38	40	35	150
			295A	33.5	40.3	62	70	56	148	64	70	58	150
	575-3-60	STD	NONE	—	—	22	25	23	86	25	30	27	90
			293A	16.5	15.9	26	30	23	86	31	35	28	90
			296A	33.5	32.2	46	50	42	86	51	60	47	90
		MED	NONE	—	—	22	25	23	86	25	30	27	90
			293A	16.5	15.9	26	30	23	86	31	35	28	90
			296A	33.5	32.2	46	50	42	86	51	60	47	90
		HIGH	NONE	—	—	23	25	25	99	27	30	29	103
			293A	16.5	15.9	28	30	25	99	33	35	30	103
			296A	33.5	32.2	48	50	44	99	53	60	49	103
		SUPER	NONE	—	—	25	30	27	113	29	35	31	117
			293A	16.5	15.9	30	30	27	113	35	35	32	117
			296A	33.5	32.2	51	60	46	113	55	60	50	117

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (10 TONS, NO CO)

50LC* B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO CO OR PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
12	208/230-3-60	STD	NONE	—	—	51/51	60/60	52/52	252	54/54	60/60	56/56	256
			288A	7.5/10.0	20.9/24.1	51/51	60/60	52/52	252/252	54/54	60/60	56/56	256/256
			291A	12.4/16.5	34.4/39.7	59/59	60/60	52/53	252/252	63/63	70/70	56/58	256/256
			294A	25.2/33.5	69.9/80.6	110/110	110/110	89/101	252/252	114/114	125/125	93/105	256/256
			291A+294A	37.6/50.0	104.3/120.3	140/140	150/150	128/146	252/252	144/144	150/150	132/151	256/256
		MED	NONE	—	—	52/52	60/60	54/53	278	56/56	70/70	58/57	282
			288A	7.5/10.0	20.9/24.1	52/52	60/60	54/53	278/278	56/56	70/70	58/57	282/282
			291A	12.4/16.5	34.4/39.7	60/60	60/60	54/55	278/278	65/65	70/70	58/59	282/282
			294A	25.2/33.5	69.9/80.6	111/111	125/125	90/102	278/278	116/116	125/125	95/106	282/282
			291A+294A	37.6/50.0	104.3/120.3	142/142	150/150	130/147	278/278	146/146	150/150	134/152	282/282
		HIGH	NONE	—	—	57/57	70/70	59/58	313	61/61	80/80	64/63	317
			288A	7.5/10.0	20.9/24.1	57/57	70/70	59/58	313/313	61/61	80/80	64/63	317/317
			291A	12.4/16.5	34.4/39.7	66/66	70/70	59/60	313/313	71/71	80/80	64/65	317/317
			294A	25.2/33.5	69.9/80.6	117/117	125/125	96/107	313/313	122/122	125/125	100/112	317/317
			291A+294A	37.6/50.0	104.3/120.3	148/148	150/150	136/153	313/313	153/153	175/175	140/157	317/317
	460-3-60	STD	NONE	—	—	26	30	27	126	27	30	29	128
			289A	10.0	12.0	26	30	27	126	27	30	29	128
			292A	16.5	19.9	30	30	27	126	32	35	29	128
			295A	33.5	40.3	55	60	50	126	57	60	52	128
			292A+295A	50.0	60.2	65	70	73	126	67	70	75	128
		MED	NONE	—	—	26	30	27	140	28	30	29	142
			289A	10.0	12.0	26	30	27	140	28	30	29	142
			292A	16.5	19.9	30	30	27	140	32	35	29	142
			295A	33.5	40.3	56	60	51	140	58	60	53	142
			292A+295A	50.0	60.2	65	70	74	140	68	80	76	142
		HIGH	NONE	—	—	29	35	30	157	30	35	32	159
			289A	10.0	12.0	29	35	30	157	30	35	32	159
			292A	16.5	19.9	33	35	30	157	36	40	32	159
			295A	33.5	40.3	59	60	54	157	61	70	56	159
			292A+295A	50.0	60.2	69	80	77	157	71	80	79	159
	575-3-60	STD	NONE	—	—	22	25	23	107	26	30	27	111
			293A	16.5	15.9	25	25	23	107	29	30	27	111
			296A	33.5	32.2	45	45	41	107	50	50	45	111
			293A+296A	50.0	48.1	53	60	59	107	58	60	64	111
		MED	NONE	—	—	23	25	24	116	27	30	28	120
			293A	16.5	15.9	26	30	24	116	31	35	28	120
			296A	33.5	32.2	46	50	42	116	51	60	47	120
			293A+296A	50.0	48.1	54	60	60	116	59	60	65	120
		HIGH	NONE	—	—	25	30	26	130	29	30	30	134
			293A	16.5	15.9	28	30	26	130	33	35	30	134
			296A	33.5	32.2	48	50	44	130	53	60	49	134
			293A+296A	50.0	48.1	56	60	62	130	61	70	67	134

See Legend and Notes on page 86.

UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (10 TONS, WITH POWERED CO)

50LC*B UNIT SIZE	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			W/PWRD CO							
			CRHEATER***A00	Nom (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
						MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
12	208/230-3-60	STD	NONE	—	—	55/55	60/60	58/57	257	59/59	70/70	62/62	261
			288A	7.5/10.0	20.9/24.1	55/55	60/60	58/57	257/257	59/59	70/70	62/62	261/261
			291A	12.4/16.5	34.4/39.7	65/65	70/70	58/59	257/257	69/69	70/70	62/63	261/261
			294A	25.2/33.5	69.9/80.6	116/116	125/125	94/106	257/257	120/120	125/125	98/110	261/261
			291A+294A	37.6/50.0	104.3/120.3	146/146	150/150	134/152	257/257	150/150	175/175	138/156	261/261
		MED	NONE	—	—	57/57	70/70	59/58	283	61/61	70/70	64/63	287
			288A	7.5/10.0	20.9/24.1	57/57	70/70	59/58	283/283	61/61	70/70	64/63	287/287
			291A	12.4/16.5	34.4/39.7	66/66	70/70	59/60	283/283	71/71	80/80	64/65	287/287
			294A	25.2/33.5	69.9/80.6	117/117	125/125	96/107	283/283	122/122	125/125	100/112	287/287
			291A+294A	37.6/50.0	104.3/120.3	148/148	150/150	135/153	283/283	152/152	175/175	140/157	287/287
		HIGH	NONE	—	—	62/62	80/80	65/64	318	66/66	80/80	69/68	322
			288A	7.5/10.0	20.9/24.1	62/62	80/80	65/64	318/318	66/66	80/80	69/68	322/322
			291A	12.4/16.5	34.4/39.7	72/72	80/80	65/66	318/318	77/77	80/80	69/70	322/322
			294A	25.2/33.5	69.9/80.6	123/123	125/125	102/113	318/318	128/128	150/150	106/117	322/322
			291A+294A	37.6/50.0	104.3/120.3	154/154	175/175	141/158	318/318	159/159	175/175	145/163	322/322
	460-3-60	STD	NONE	—	—	28	30	29	128	30	35	31	130
			289A	10.0	12.0	28	30	29	128	30	35	31	130
			292A	16.5	19.9	32	35	29	128	35	35	31	130
			295A	33.5	40.3	58	60	53	128	60	60	55	130
			292A+295A	50.0	60.2	68	80	76	128	70	80	78	130
		MED	NONE	—	—	28	30	30	142	30	35	32	144
			289A	10.0	12.0	28	30	30	142	30	35	32	144
			292A	16.5	19.9	33	35	30	142	35	35	32	144
			295A	33.5	40.3	58	60	53	142	61	70	55	144
			292A+295A	50.0	60.2	68	80	76	142	70	80	78	144
		HIGH	NONE	—	—	31	35	33	159	33	40	35	161
			289A	10.0	12.0	31	35	33	159	33	40	35	161
			292A	16.5	19.9	36	40	33	159	38	40	35	161
			295A	33.5	40.3	62	70	56	159	64	70	58	161
			292A+295A	50.0	60.2	71	80	79	159	74	80	81	161
	575-3-60	STD	NONE	—	—	24	25	25	109	28	30	29	113
			293A	16.5	15.9	27	30	25	109	32	35	29	113
			296A	33.5	32.2	47	50	43	109	52	60	47	113
			293A+296A	50.0	48.1	55	60	61	109	60	60	66	113
		MED	NONE	—	—	25	30	26	118	29	30	30	122
			293A	16.5	15.9	28	30	26	118	33	35	30	122
			296A	33.5	32.2	48	50	44	118	53	60	49	122
			293A+296A	50.0	48.1	56	60	62	118	61	70	67	122
		HIGH	NONE	—	—	26	30	28	132	30	35	32	136
			293A	16.5	15.9	30	30	28	132	35	35	32	136
			296A	33.5	32.2	51	60	46	132	55	60	50	136
			293A+296A	50.0	48.1	58	60	64	132	63	70	69	136

See Legend and Notes on page 86.

3-STAGE COOLING WITH 3-SPEED INDOOR FAN MOTOR, SIZES 07-12 — HIGH SCCR

50LC*B UNIT SIZE	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		HIGH SCCR kA	IFM		
		MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA		TYPE ^a	EFF at Full Load	FLA
07	208-3-60	187	253	8.3	58	13.2	88	195	1.8	10	STD	0.815	5.8
								195	1.8	10	MED	0.815	5.8
								195	1.8	10	HIGH	0.845	8.6
								195	1.8	10	STD	0.815	5.6
								195	1.8	10	MED	0.815	5.6
								195	1.8	10	HIGH	0.845	7.8
	460-3-60	414	506	5.1	28	6.0	44	195	1.8	10	STD	0.815	2.9
								195	1.8	10	MED	0.815	2.9
								195	1.8	10	HIGH	0.845	3.8
08	208-3-60	187	253	13.2	88	13.7	83	195	1.8	10	STD	0.815	5.8
								195	1.8	10	MED	0.815	5.8
								195	1.8	10	HIGH	0.845	8.6
								195	1.8	10	SUPER	0.845	10.8
								195	1.8	10	STD	0.815	5.6
								195	1.8	10	MED	0.815	5.6
								195	1.8	10	HIGH	0.845	7.8
								195	1.8	10	SUPER	0.845	9.8
	460-3-60	414	506	6.0	44	6.2	41	195	1.8	10	STD	0.815	2.9
								195	1.8	10	MED	0.815	2.9
								195	1.8	10	HIGH	0.845	3.8
								195	1.8	10	SUPER	0.845	4.9
								195	1.8	10	SUPER	0.845	4.9
09	208-3-60	187	253	13.2	88	15.9	110	195	1.8	10	STD	0.815	5.8
								195	1.8	10	MED	0.815	5.8
								195	1.8	10	HIGH	0.845	10.8
								195	1.8	10	SUPER	0.82	13.6
								195	1.8	10	STD	0.815	5.6
								195	1.8	10	MED	0.815	5.6
								195	1.8	10	HIGH	0.845	9.8
								195	1.8	10	SUPER	0.82	12.7
	460-3-60	414	506	6.0	44	7.7	52	195	1.8	10	STD	0.815	2.9
								195	1.8	10	MED	0.815	2.9
								195	1.8	10	HIGH	0.845	4.9
								195	1.8	10	SUPER	0.82	6.4
								195	1.8	10	SUPER	0.82	6.4
12	208-3-60	187	253	13.1	83	19.6	136	195	1.8	10	STD	0.8	7.1
								195	1.8	10	MED	0.845	8.6
								195	1.8	10	HIGH	0.82	13.6
								195	1.8	10	STD	0.8	6.8
								195	1.8	10	MED	0.845	7.8
								195	1.8	10	HIGH	0.82	12.7
	460-3-60	414	506	6.1	41	8.2	66	195	1.8	10	STD	0.8	3.4
								195	1.8	10	MED	0.845	3.8
								195	1.8	10	HIGH	0.82	6.4
								195	1.8	10	HIGH	0.82	6.4

NOTE(S):

a. High SCCR is not available for units with 575v.

See Legend and Notes on page 86.

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA, 3-SPEED INDOOR FAN MOTOR, SIZES 07-12 — HIGH SCCR

50LC*B UNIT SIZE	NOM. V-Ph-Hz ^a	IFM TYPE	HIGH SCCR kA	ELEC. HTR			NO CO OR UNPWR CO							
				CRHEATER ***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
							MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
									FLA	LRA			FLA	LRA
07	208/230-3-60	STD	10	—	—	—	35/34	45/45	36/35	173	38/38	50/50	40/40	177
				316A	4.9/6.5	13.6/15.6	35/34	45/45	36/35	173/173	38/38	50/50	40/40	177/177
				317A	12.0/16.0	33.4/38.5	49/56	50/60	45/51	173/173	54/60	60/60	49/55	177/177
				318A	18.6/24.8	51.7/59.7	72/82	80/90	66/75	173/173	77/87	80/90	70/79	177/177
		MED	10	—	—	—	35/34	45/45	36/35	173	38/38	50/50	40/40	177
				316A	4.9/6.5	13.6/15.6	35/34	45/45	36/35	173/173	38/38	50/50	40/40	177/177
				317A	12.0/16.0	33.4/38.5	49/56	50/60	45/51	173/173	54/60	60/60	49/55	177/177
				318A	18.6/24.8	51.7/59.7	72/82	80/90	66/75	173/173	77/87	80/90	70/79	177/177
		HIGH	10	—	—	—	37/37	50/45	39/38	203	41/40	50/50	43/42	207
				316A	4.9/6.5	13.6/15.6	37/37	50/45	39/38	203/203	41/40	50/50	43/42	207/207
				317A	12.0/16.0	33.4/38.5	53/58	60/60	48/53	203/203	58/63	60/70	53/58	207/207
				318A	18.6/24.8	51.7/59.7	76/85	80/90	69/78	203/203	81/90	90/90	74/82	207/207
	460-3-60	STD	10	—	—	—	20	25	20	87	21	25	22	89
				319A	6.0	7.2	20	25	20	87	21	25	22	89
				320A	14.0	16.8	25	25	23	87	27	30	25	89
				321A	25.5	30.7	42	45	39	87	45	45	41	89
		MED	10	—	—	—	20	25	20	87	21	25	22	89
				319A	6.0	7.2	20	25	20	87	21	25	22	89
				320A	14.0	16.8	25	25	23	87	27	30	25	89
				321A	25.5	30.7	42	45	39	87	45	45	41	89
		HIGH	10	—	—	—	20	25	21	103	22	25	23	105
				319A	6.0	7.2	20	25	21	103	22	25	23	105
				320A	14.0	16.8	26	30	24	103	28	30	26	105
				321A	25.5	30.7	44	45	40	103	46	50	42	105
08	208/230-3-60	STD	10	—	—	—	42/42	50/50	44/44	200	46/46	50/50	48/48	204
				288A	7.5/10.0	20.9/24.1	42/42	50/50	44/44	200/200	46/46	50/50	48/48	204/204
				291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	200/200	55/62	60/70	51/56	204/204
				294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	200/200	100/113	100/125	91/104	204/204
		MED	10	—	—	—	42/42	50/50	44/44	200	46/46	50/50	48/48	204
				288A	7.5/10.0	20.9/24.1	42/42	50/50	44/44	200/200	46/46	50/50	48/48	204/204
				291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	200/200	55/62	60/70	51/56	204/204
				294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	200/200	100/113	100/125	91/104	204/204
		HIGH	10	—	—	—	45/44	50/50	47/46	230	49/48	60/60	51/50	234
				288A	7.5/10.0	20.9/24.1	45/44	50/50	47/46	230/230	49/48	60/60	51/50	234/234
				291A	12.4/16.5	34.4/39.7	54/60	60/60	49/55	230/230	59/65	60/70	54/59	234/234
				294A	25.2/33.5	69.9/80.6	99/111	100/125	90/102	230/230	103/116	110/125	95/106	234/234
		SUPER	10	—	—	—	47/46	60/50	50/48	254	51/50	60/60	54/53	258
				288A	7.5/10.0	20.9/24.1	47/46	60/50	50/48	254/254	51/50	60/60	54/53	258/258
				291A	12.4/16.5	34.4/39.7	57/62	60/70	52/57	254/254	62/67	70/70	56/61	258/258
				294A	25.2/33.5	69.9/80.6	101/113	110/125	93/104	254/254	106/118	110/125	97/108	258/258
	460-3-60	STD	10	—	—	—	23	25	24	102	24	30	26	104
				289A	10.0	12.0	23	25	24	102	24	30	26	104
				292A	16.5	19.9	29	30	26	102	31	35	28	104
				295A	33.5	40.3	54	60	50	102	57	60	52	104
		MED	10	—	—	—	23	25	24	102	24	30	26	104
				289A	10.0	12.0	23	25	24	102	24	30	26	104
				292A	16.5	19.9	29	30	26	102	31	35	28	104
				295A	33.5	40.3	54	60	50	102	57	60	52	104
		HIGH	10	—	—	—	23	25	25	118	25	30	27	120
				289A	10.0	12.0	23	25	25	118	25	30	27	120
				292A	16.5	19.9	30	30	27	118	32	35	29	120
				295A	33.5	40.3	56	60	51	118	58	60	53	120
		SUPER	10	—	—	—	25	30	26	130	26	30	28	132
				289A	10.0	12.0	25	30	26	130	26	30	28	132
				292A	16.5	19.9	31	35	29	130	34	35	31	132
				295A	33.5	40.3	57	60	52	130	59	60	54	132

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA, 3-SPEED INDOOR FAN MOTOR, SIZES 07-12 — HIGH SCCR (cont)

50LC*B UNIT SIZE	NOM. V-Ph-Hz ^a	IFM TYPE	HIGH SCCR KA	ELEC. HTR			NO CO OR UNPWR CO							
				CRHEATER ***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
							MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
									FLA	LRA			FLA	LRA
09	208/230-3-60	STD	10	—	—	—	45/45	60/50	46/46	227	49/48	60/60	51/50	231
				288A	7.5/10.0	20.9/24.1	45/45	60/50	46/46	227/227	49/48	60/60	51/50	231/231
				291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	227/227	55/62	60/70	51/56	231/231
				294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	227/227	100/113	100/125	91/104	231/231
		MED	10	—	—	—	45/45	60/50	46/46	227	49/48	60/60	51/50	231
				288A	7.5/10.0	20.9/24.1	45/45	60/50	46/46	227/227	49/48	60/60	51/50	231/231
				291A	12.4/16.5	34.4/39.7	51/57	60/60	46/52	227/227	55/62	60/70	51/56	231/231
				294A	25.2/33.5	69.9/80.6	95/108	100/110	87/99	227/227	100/113	100/125	91/104	231/231
		HIGH	10	—	—	—	50/49	60/60	52/51	281	54/53	60/60	56/55	285
				288A	7.5/10.0	20.9/24.1	50/49	60/60	52/51	281/281	54/53	60/60	56/55	285/285
				291A	12.4/16.5	34.4/39.7	57/62	60/70	52/57	281/281	62/67	70/70	56/61	285/285
				294A	25.2/33.5	69.9/80.6	101/113	110/125	93/104	281/281	106/118	110/125	97/108	285/285
		SUPER	10	—	—	—	53/52	60/60	55/54	292	56/55	60/60	60/59	296
				288A	7.5/10.0	20.9/24.1	53/52	60/60	55/54	292/292	56/55	60/60	60/59	296/296
				291A	12.4/16.5	34.4/39.7	60/66	60/70	55/60	292/292	65/71	70/80	60/65	296/296
				294A	25.2/33.5	69.9/80.6	105/117	110/125	96/107	292/292	110/122	110/125	100/112	296/296
	460-3-60	STD	10	—	—	—	24	30	25	113	26	30	27	115
				289A	10.0	12.0	24	30	25	113	26	30	27	115
				292A	16.5	19.9	29	30	26	113	31	35	28	115
				295A	33.5	40.3	54	60	50	113	57	60	52	115
		MED	10	—	—	—	24	30	25	113	26	30	27	115
				289A	10.0	12.0	24	30	25	113	26	30	27	115
				292A	16.5	19.9	29	30	26	113	31	35	28	115
				295A	33.5	40.3	54	60	50	113	57	60	52	115
		HIGH	10	—	—	—	26	30	28	141	28	30	30	143
				289A	10.0	12.0	26	30	28	141	28	30	30	143
				292A	16.5	19.9	31	35	29	141	34	35	31	143
				295A	33.5	40.3	57	60	52	141	59	60	54	143
		SUPER	10	—	—	—	28	30	29	146	30	35	31	148
				289A	10.0	12.0	28	30	29	146	30	35	31	148
				292A	16.5	19.9	33	35	30	146	36	40	32	148
				295A	33.5	40.3	59	60	54	146	61	70	56	148

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA, 3-SPEED INDOOR FAN MOTOR, SIZES 07-12 — HIGH SCCR (cont)

50LC*B UNIT SIZE	NOM. V-Ph-Hz ^a	IFM TYPE	HIGH SCCR KA	ELEC. HTR			NO CO OR UNPWR CO							
				CRHEATER ***A00	NOM (kW)	FLA	NO PE				WITH PE (PWRD FR/UNIT)			
							MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
									FLA	LRA			FLA	LRA
12	208/230-3-60	STD	10	—	—	—	51/50	60/60	52/52	252	54/54	60/60	56/56	256
				288A	7.5/10.0	20.9/24.1	51/50	60/60	52/52	252/252	54/54	60/60	56/56	256/256
				291A	12.4/16.5	34.4/39.7	52/59	60/60	52/53	252/252	57/63	60/70	56/58	256/256
				294A	25.2/33.5	69.9/80.6	97/110	100/110	89/101	252/252	101/114	110/125	93/105	256/256
				368A	37.6/50.0	104.3/120.3	140/129	150/150	128/146	252/252	144/134	150/150	132/151	256/256
		MED	10	—	—	—	52/51	60/60	54/53	278	56/55	70/60	58/57	282
				288A	7.5/10.0	20.9/24.1	52/51	60/60	54/53	278/278	56/55	70/60	58/57	282/282
				291A	12.4/16.5	34.4/39.7	54/60	60/60	54/55	278/278	59/65	70/70	58/59	282/282
				294A	25.2/33.5	69.9/80.6	99/111	100/125	90/102	278/278	103/116	110/125	95/106	282/282
				368A	37.6/50.0	104.3/120.3	142/131	150/150	130/147	278/278	146/135	150/150	134/152	282/282
		HIGH	10	—	—	—	57/56	70/70	59/58	313	61/60	80/70	64/63	317
				288A	7.5/10.0	20.9/24.1	57/56	70/70	59/58	313/313	61/60	80/70	64/63	317/317
				291A	12.4/16.5	34.4/39.7	60/66	70/70	59/60	313/313	65/71	80/80	64/65	317/317
				294A	25.2/33.5	69.9/80.6	105/117	110/125	96/107	313/313	110/122	110/125	100/112	317/317
				368A	37.6/50.0	104.3/120.3	148/137	150/150	136/153	313/313	153/141	175/175	140/157	317/317
	460-3-60	STD	10	—	—	—	26	30	27	126	27	30	29	128
				289A	10.0	12.0	26	30	27	126	27	30	29	128
				292A	16.5	19.9	30	30	27	126	32	35	29	128
				295A	33.5	40.3	55	60	50	126	57	60	52	128
				375A	50.0	60.2	65	70	73	126	67	70	75	128
		MED	10	—	—	—	26	30	27	140	28	30	29	142
				289A	10.0	12.0	26	30	27	140	28	30	29	142
				292A	16.5	19.9	30	30	27	140	32	35	29	142
				295A	33.5	40.3	56	60	51	140	58	60	53	142
				375A	50.0	60.2	65	70	74	140	68	80	76	142
		HIGH	10	—	—	—	29	35	30	157	30	35	32	159
				289A	10.0	12.0	29	35	30	157	30	35	32	159
				292A	16.5	19.9	33	35	30	157	36	40	32	159
				295A	33.5	40.3	59	60	54	157	61	70	56	159
				375A	50.0	60.2	69	80	77	157	71	80	79	159

NOTE(S):

a. High SCCR is not available for units with 575v.

See Legend and Notes on page 86.

Legend and Notes for Electrical Data Tables, pages 61-85.

LEGEND

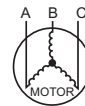
BRKR	— Circuit Breaker
CO	— Convenience Outlet
DISC	— Disconnect
FLA	— Full Load Amps
HACR	— Heating, Air Conditioning, and Refrigeration
IFM	— Indoor Fan Motor
LRA	— Locked Rotor Amps
MCA	— Minimum Circuit Amps
PE	— Power Exhaust
PWRD FR/UNIT	— Powered from Unit
PWRD CO	— Powered Convenience Outlet
SCCR	— Short Circuit Current Rating
UNPWR CO	— Unpowered Convenience Outlet

NOTES:

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

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

Example: Supply voltage is 230-3-60



AB = 224-v

BC = 231-v

AC = 226-v

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

Determine maximum deviation from average voltage.

(AB) 227-224 = 3-v

(BC) 231-227 = 4-v

(AC) 227-226 = 1-v

Maximum deviation is 4-v.

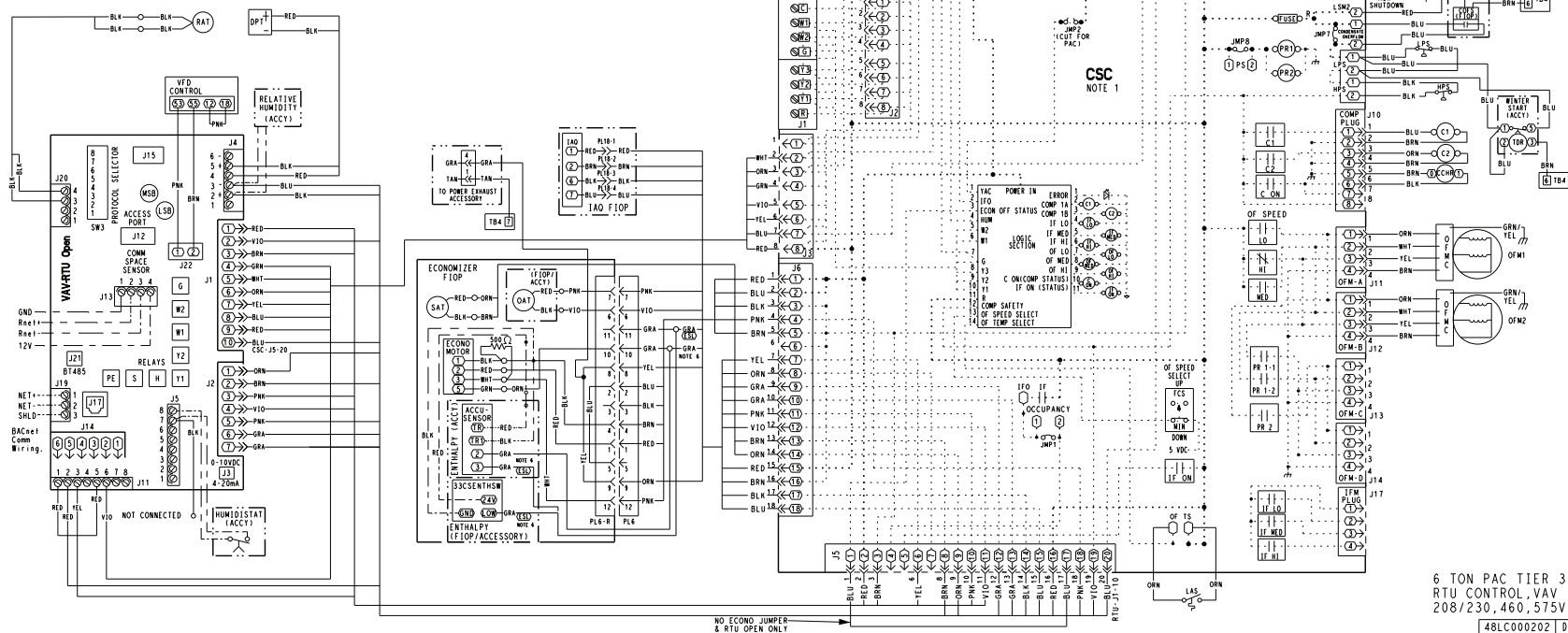
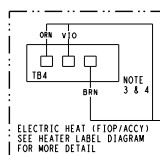
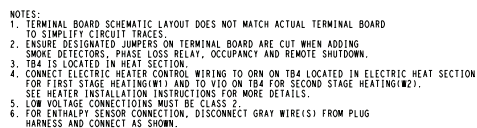
Determine percent of voltage imbalance.

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

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

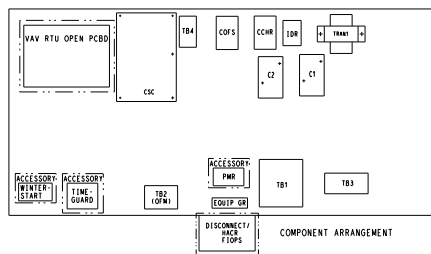
IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

Typical wiring diagrams

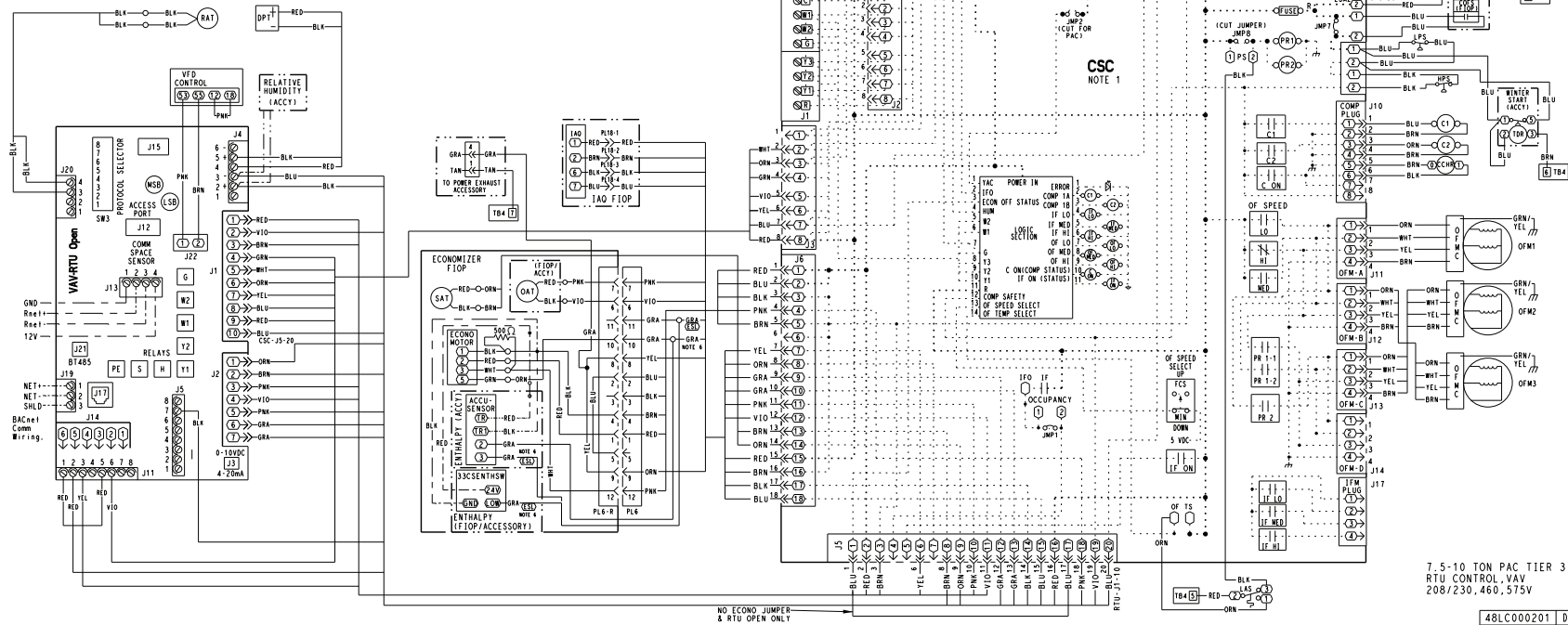


6 TON PAC TIER 3
RTU CONTROL, VAV
208/230, 460, 575V
48LC000202 0

50LC*B08-12 VAV-RTU OPEN CONTROL WIRING DIAGRAM



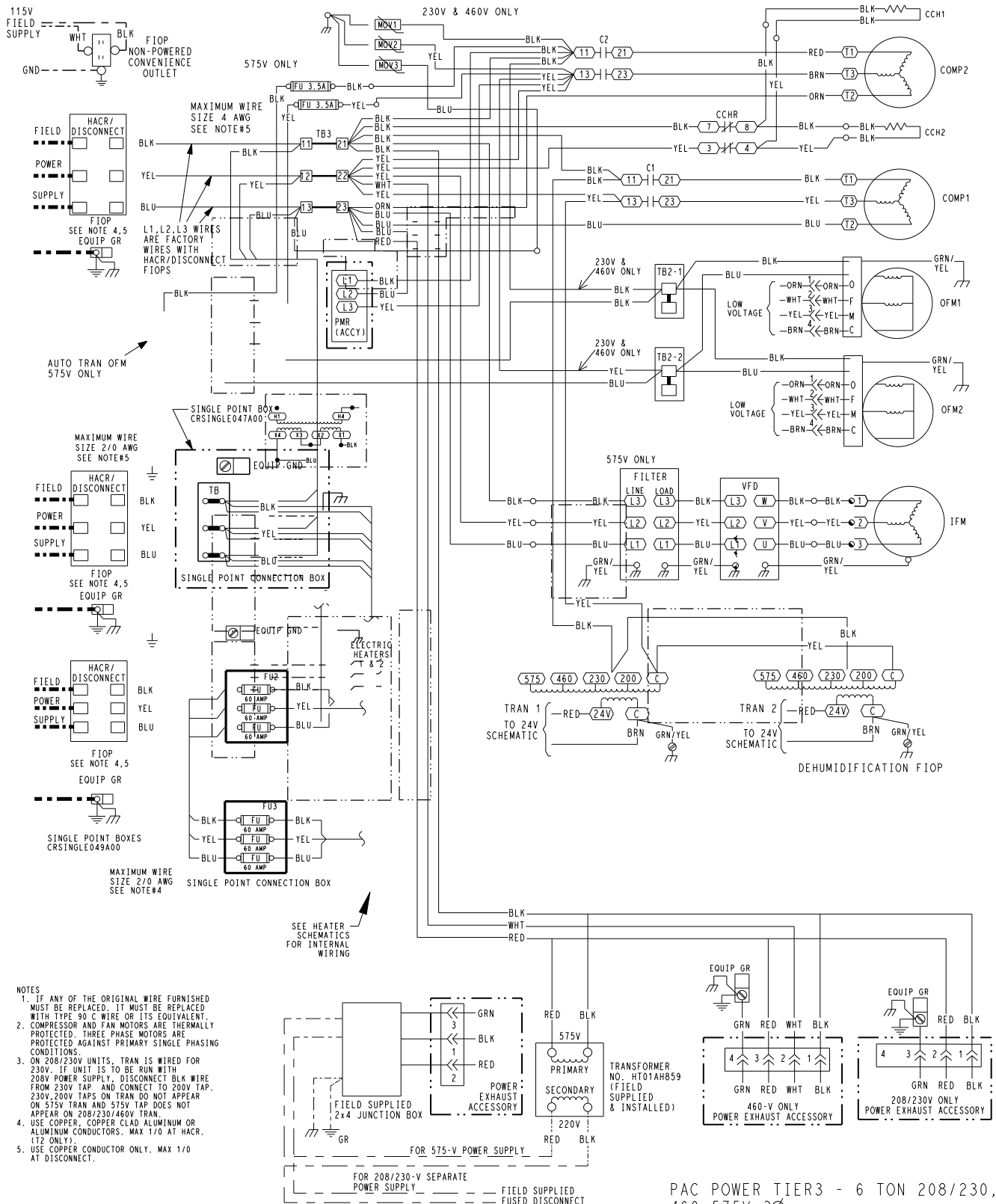
- NOTES:
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD
NO SIMPLIFY CIRCUIT TRACES.
 2. ENSURE DESIGNATED JUMPS ON TERMINAL BOARD ARE CUT WHEN ADDING
SMOKE DETECTORS, FIRE LOSS RELAY, OCCUPANCY AND REMOTE SHUTDOWN.
 3. TB4 IS LOCATED IN HEAT SECTION
 4. CONNECT ELECTRIC HEATER CONTROL WIRING TO ORN ON TB4 LOCATED IN ELECTRIC HEAT SECTION
FOR FIRST STAGE HEATING(W1) AND TO W10 ON TB4 FOR SECOND STAGE HEATING(W2).
 5. SEE HEAT INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
 6. LOW VOLTAGE CONNECTIONS MUST BE CLASS 2.
 7. FOR ENTHALPY SENSOR CONNECTION, DISCONNECT GRAY WIRE(S) FROM PLUG
HEATERS AS SHOWN



7.5-10 TON PAC TIER 3
RTU CONTROL,VAV
208/230,460,575V

48LC000201	D
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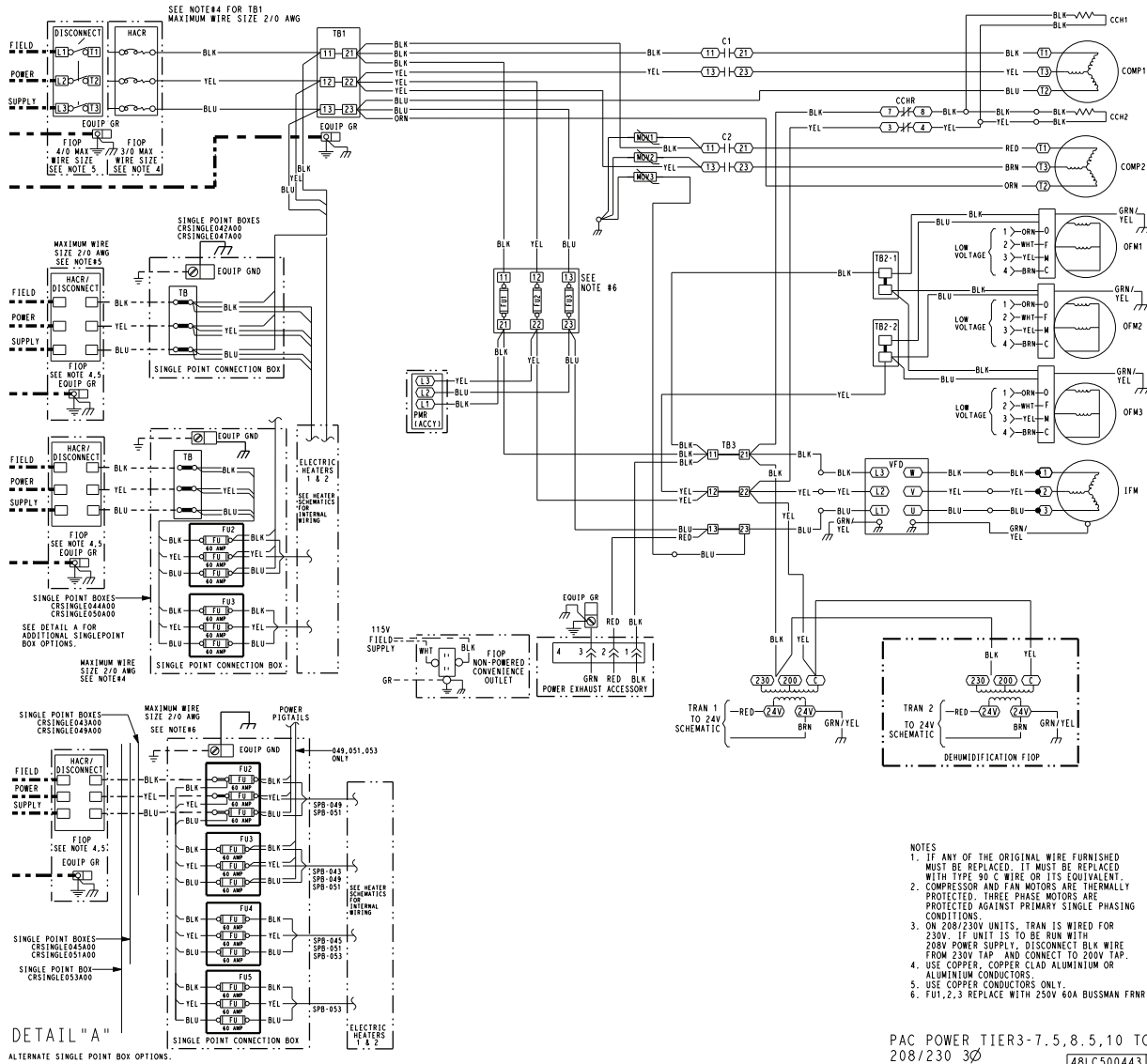
50LC*B07 TYPICAL POWER WIRING DIAGRAM



PAC POWER TIER3 - 6 TON 208/230, 460, 575V 3Ø

48LC500462 G

50LC*B08-12 TYPICAL POWER WIRING DIAGRAM



VAV-RTU Open

The VAV-RTU Open control is designed to provide VAV system operation when using a 50LC*B chassis small packaged rooftop and Carrier i-Vu® Open VAV terminal controls. Functionality includes:

- Duct Static Pressure Control (with optional Reset function)
- Supply Air Temperature Control (with optional Reset function)
- Morning Warm-Up Cycle
- Occupied Heating (available)
- Heating and Cooling Setpoint Separation
- Economizer Cooling Cycle
- Mechanical Cooling Cycle
- Integrated Cooling Cycle
- Minimum Ventilation
- Unoccupied Free Cooling
- Demand Controlled Ventilation (DCV)
- Supply Air Tempering
- Open Airside Linkage
- Field Test/Commissioning

Duct Static Pressure Control (With Optional Reset Function)

The supply fan/motor VFD is controlled by a VFD using a PID (proportional integral derivative loop) and an analog input from a duct static pressure transducer. The supply fan will modulate its speed to maintain the desired duct static pressure setpoint.

Supply Air Temperature Control (With Optional Reset Function)

The control will maintain the desired supply air temperature setpoint whenever cooling is required. A user-configurable setpoint will be provided (default 53°F). The control will use the appropriate method (economizer cooling, mechanical cooling, or a combination of both) to achieve this setpoint whenever the zone temperature is greater than the current cooling setpoint (occupied or unoccupied). If Supply Air Reset is enabled, the reset algorithm will calculate a proportional reset value between the Occupied Cooling setpoint and 1°F above the Occupied Heating setpoint. The amount of reset (reset ratio and maximum reset limit value) is user configurable.

Morning Warm-Up

The control will provide a Morning Warm-Up cycle the first time if transitioning from unoccupied to occupied and if the heating is required and the unit goes into heating immediately. Whenever the unit enters the heating mode, before any heat stage is enabled, the control will provide a Linkage mode to the system that will cause the terminals to maintain sufficient airflow. The Linkage mode of Warm-Up (2) will be sent to the terminal system to ensure sufficient airflow while in the heating mode and also provide a controlled warm-up cycle to prevent overheating of some zones. As a safety measure, should the heating cycle continue and the SAT (supply air temperature) approach the "Maximum Heating SAT" limit, the Linkage mode sent will change to Pressurization (6) to ensure all terminals open to their maximum airflow. The Linkage mode will remain Pressurization until that heating cycle ends. Once

the heating demand is met and the heat cycle is completed, or if cooling is required, heating will be locked out until the beginning of the next occupied period.

Occupied Heating

Optionally, the user may enable occupied heating, which will allow heating whenever heating is needed during the occupied period. The cycle will operate exactly the same as Morning Warm-Up (above), except that it will not be limited by the transition into an occupied period.

Heating and Cooling Setpoint Separation

By default, the control will maintain a 5°F (configurable) separation between the heating and cooling setpoints. This will prevent the unit from prematurely entering the opposite mode.

Economizer Cooling Cycle

The VAV-RTU Open provides variable supply airflow to the VAV system and maintains constant minimum ventilation. As the supply airflow changes, the economizer minimum position is adjusted to provide a constant amount of outdoor air. The control will provide the ability to utilize outdoor air for maintaining the supply air setpoint should the outdoor air be suitable. The economizer control will utilize an OAT (outside air temperature) check, a RAT (return air temperature) check if RAT is available or a SPT (space temperature) check comparison and, optionally, an OA enthalpy check to determine if OA conditions are suitable for economizing. Economizer operation, if available, will begin whenever cooling is required. The economizer will modulate the position of the OA damper to maintain the desired calculated economizer setpoint. The economizer will be controlled to meet CEC (California Energy Commission) Title 24 requirements so that it will remain open 100% during integrated cooling and only partially close if required. The VAV-RTU Open also provides FDD (Fault Detection and Diagnostics) for economizer operation. The FDD logic will detect an economizer that fails to close, fails to open, is stuck fully open, or fails to fully open. Each condition will cause an Economizer Operation alarm to occur and the specific fault condition will be displayed.

Mechanical Cooling Cycle

The control will operate 3 stages of mechanical cooling in order to maintain the desired supply air temperature whenever economizer cooling operation is unavailable but cooling is required. This condition will be determined if the OA has high enthalpy or at a temperature above the Economizer Lockout temperature. The 2 compressors will be staged in a binary fashion so that 3 stages of cooling are provided. Mechanical cooling stages will be added as required to meet the desired SA setpoint. The number of stages will depend on the return air conditions and the system load (airflow through the coil). Stages will be added or dropped as required to maintain the setpoint while also maintaining the minimum on time and minimum off time for compressor operation. Anytime the SA falls below the desired SA setpoint, stages will be dropped until only stage 1 is operating. At that point, should the SA fall below 45°F (7°C), the economizer will modulate to increase the amount of outdoor air in order to maintain this minimum SA temperature. Should the economizer reach the maximum OA position, and if the SA is still below the minimum SA temperature, the first cooling stage will be disabled and the economizer will return to the minimum position.

Integrated Cooling Cycle

If economizer cooling operation is insufficient to maintain the desired SA setpoint, mechanical cooling will be activated to supplement the free economizer cooling. This condition will be determined if the OA has low enthalpy but is at a temperature at least 5°F above the desired SA setpoint and below the Economizer Lockout temperature. Mechanical cooling stages will be added as required to meet the desired SA setpoint. The number of stages will depend on the return air conditions and the system load (airflow through the coil). Stages will be added or dropped as required to maintain the setpoint while also maintaining the minimum on time and minimum off time for compressor operation. Anytime the SA falls below the desired SA setpoint, stages will be dropped until only stage 1 is operating. At that point, should the SA fall below the minimum SA temperature, the economizer will modulate to increase the amount of return air in order to maintain this minimum SA temperature. Should the economizer reach the minimum OA position, and if the SA is still below the minimum SA temperature, the first cooling stage will be disabled.

Minimum Ventilation

The economizer minimum position will be adjusted as required based on the supply fan speed. Two user-configurable minimum economizer positions will be provided. The economizer will be positioned at “Low Fan Econ Min Pos” when the fan is operating at its slowest speed. When the fan is operating at its maximum speed, the economizer will be positioned at “Vent Dmpr Pos/DCV Min Pos.” For any supply fan speed between these 2 points, the economizer minimum position will be calculated proportionally.

Unoccupied Free Cooling

Unoccupied free cooling allows a rooftop unit with an economizer damper to use outdoor air for free cooling during unoccupied periods.

When the VAV-RTU Open is unoccupied and the space temperature rises at least 2°F above the occupied cooling setpoint, the supply fan starts. The economizer damper opens as necessary to maintain the supply air setpoint and cool the space. The VAV-RTU Open continues to operate in this mode until the space temperature drops to 1°F below the occupied cooling setpoint or the outside air conditions are no longer suitable for free cooling.

Demand Controlled Ventilation (DCV)

Whenever the unit is in an occupied mode and “DCV Control” is set to enable, a unique economizer minimum position will be calculated based on the output of the DCV algorithm. The algorithm monitors the CO₂ sensor value and compares that value to the user-defined setpoint. A control algorithm calculates the minimum economizer position required to satisfy the ventilation requirements of the space. A user-adjustable DCV Max Vent Damper Position is provided to limit the maximum amount of outdoor air that can be brought into the unit due to the DCV algorithm. Demand Controlled Ventilation can be used in either a differential mode, where both the indoor air and outdoor air CO₂ levels are provided to the control, or a single indoor air mode, with only the indoor air CO₂ level. In the latter case, the outdoor air CO₂ level is assumed at 400 ppm.

Supply Air Tempering

The VAV-RTU Open provides the capability to operate the optional electric heat, if equipped, to maintain a minimum supply air temperature during conditions where very cold outdoor air causes the supply air temperature to fall below the configured Supply Air (SA) Tempering Setpoint. This occurs during periods where DCV is active and increasing the amount of outdoor air or in cases where the system is operating at very low airflow and the calculated economizer position has increased to maintain a constant ventilation rate.

Heat operation is subject to anti-recycle timers to protect the equipment from short-cycling. There are fixed application specific minimum on and off times for each heating output (15 seconds on and 10 seconds off).

Open Airside Linkage

The control will support Airside Linkage to accommodate system operation using Carrier VAV terminal controls. The VAV-RTU Open will receive zone information (occupancy status, occupied and unoccupied zone temperatures, occupied and unoccupied heating and cooling setpoints, zone CO₂ level for DCV, and zone RH level). The VAV-RTU Open will operate in the mode required to satisfy the zones. Airside Linkage will provide operating mode information to the zones so that the system operation is fully coordinated between the rooftop and the terminal zones. The VAV air terminals offer a minimum airflow setting in AHU heating mode. This shall be configured to maintain the required airflow (cfm) whenever the VAV-RTU is in a heating mode per the unit's specification. The VAV terminals will recognize the Heating or Warm-Up modes as a heat mode and utilize the higher airflow minimum setpoint as configured. For heating cycles, initially utilize the Linkage Morning Warm-Up mode to open dampers on all zones below the midpoint of the occupied heating and cooling setpoints. This provides a controlled heat cycle and prevents the overheating of random zones where heating may not be required. Any zone below this middle setpoint will have its airflow at the maximum value. Further monitor the SAT of the VAV-RTU to determine if the SAT is approaching the configured maximum limit. As the limit is approached, the Linkage mode is changed to Linkage Pressurization to ensure all terminals open to their maximum airflow.

Field Test/Commissioning

The control will provide BACnet test points to activate specific test modes that can be used to commission the rooftop and the system. Test modes will be available in the Service Test screen on the Property pages and shall also be available on the local Equipment Touch device for stand-alone commissioning. Tests include: fan test, low heat test, high heat test, cooling test, power exhaust test, and an economizer test. When any test is active, the appropriate Linkage mode will be sent to the system's terminals. This will ensure appropriate system operation and airflow during any test mode.

Minimum Operating Ambient Temperature (Cooling)

In mechanical cooling mode, your Carrier rooftop can safely operate down to an outdoor ambient temperature of 45°F (7°C).

An economizer shall be the source of cooling in low ambient conditions. When the outside air temperature is below 45°F (7°C), 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.

Maximum Operating Ambient Temperature (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 or reliability or a protective action by the unit's internal safety devices.

Minimum and Maximum Airflow (Heating and Cooling)

To maintain safe and reliable operation of your rooftop, operate within the heating airflow limits during heating mode and cooling airflow limits during cooling mode. Operating above the maximum may cause blow-off, undesired airflow noise, or airflow related problems with the rooftop unit. Operating below the minimum may cause problems with coil freeze-up and unsafe heating operation. For proper minimum and maximum cfm values, see the tables on page 7.

Airflow

All units are draw-thru in cooling mode and blow-thru in heating 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 an application's changing needs. 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 the Physical Data table on page 8 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.

SYSTEM OVERVIEW

	STANDALONE NO BAS	CARRIER I-VU® BAS	THIRD PARTY BAS
VAV-RTU Open Controller Accessible Points	X	X	Limited, see Controls, Start-up, Operation, and Troubleshooting manual
Average Space Temperature	X	X	X
Supply Air Temperature	X	X	X
Return Air Temperature	Monitor only	Monitor only	Monitor only
Duct Static Pressure	X	X	X
Zone Setpoints	X	X	—
i-Vu VAV Zone space/CO2/RH	X	X	—
System Touch	X	X	—
Equipment Touch	X	X	—

Note about this specification:

This specification is in the "Masterformat" as published by the Construction Specification Institute. Please feel free to copy this specification directly into your building spec.

Weather Expert® Ultra High Efficiency Cooling Only/Electric Heat Packaged Variable Air Volume (VAV) Rooftop

HVAC Guide Specifications:

Size Range: **6 to 10 Nominal Tons**

Carrier Model Number: **50LC*B07-12**

Part 1 — 23 06 80 Schedules for Packaged VAV HVAC Equipment

1.01 23 06 80.13 Unitary Packaged VAV HVAC Equipment Schedule

A. 23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

Part 2 — 23 07 16 HVAC Equipment Insulation

2.01 23 07 16.13 Decentralized, Rooftop Units:

A. 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.

B. 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.

Part 3 — 23 09 13 Instrumentation and Control Devices for HVAC

3.01 23 09 13.23 Sensors and Zone Air Terminals

A. 23 09 13.23.A. Space terminal sensors

1. Carrier zone air terminal space sensors shall be available with capabilities of combining:
 - a. Space temperature sensing
 - b. Sensors with communication port
 - c. Sensors with CO₂ sensing
 - d. Sensors with LCD display
 - e. Sensors with RH sensing
 - f. Sensors with local override and indicating light
2. i-Vu Equipment Touch; Carrier brand 4.3 in. color touch screen zone sensor and local user interface for a single Open (BACnet MS/TP) equipment controller. Includes built-in temperature sensor.
3. i-Vu System Touch; Carrier brand 4.3 in. color touch screen user interface connects to a network

of up to 60 Open (BACnet MS/TP) equipment controllers. Includes built-in temperature sensor.

B. 23 09 13.23.B. Zone terminals

1. Zone air terminals shall be a i-Vu VAV Zone Single Duct and Fan Terminal type for optimum integrated system solution. This includes:
 - a. 35E – Single Duct Air Terminals
 - b. 45J – Series Fan Powered Air Terminals
 - c. 45K – Quiet Series Fan Powered Air Terminals
 - d. 45M – Parallel Fan Powered Air Terminals
 - e. 45N – Quiet Parallel Fan Powered Air Terminals
 - f. 45Q – Low Profile Series Fan Powered Air Terminals
 - g. 45R – Low Profile Parallel Fan Powered Air Terminals
 - h. 35J – Single Duct Retrofit Air Terminals

Part 4 — 23 09 33 Integrated Staging Control (ISC) Board System for HVAC

4.01 23 09 33.13 Packaged VAV, Rooftop Units:

A. 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. RTU Open board shall control all 3 stages of compressor logic, fully variable indoor fan motor logic, and staging the outdoor fan motor. Shall also have a green LED (light-emitting diode) indicator to indicate GO operation as well as a fault LED indicator for sensor 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.

B. 23 09 33.23.B. Safeties:

1. Compressor over-temperature, over current.
2. Low-pressure protection 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 protection 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.

Part 5 — 23 09 93 Sequence of Operations for HVAC Controls

5.01 23 09 93.13 Packaged VAV, Rooftop Units:

- A. 23 09 93.13 A. Duct Static Pressure Control (with optional reset function) — The supply fan VFD will be controlled using a PID and an analog input from a duct static pressure transducer. The supply fan will modulate its speed to maintain the desired duct static pressure setpoint.
- B. 23 09 93.13 B. Supply Air Temperature Control (with optional reset function) — The control will maintain the desired supply air temperature setpoint whenever cooling is required. A user-configurable setpoint will be provided (default 53°F). The control will use the appropriate method (economizer cooling, mechanical cooling, or a combination of both) to achieve this setpoint whenever the zone temperature is greater than the current cooling setpoint (occupied or unoccupied). If Supply Air Reset is enabled, the reset algorithm will calculate a proportional reset value between the Occupied Cooling setpoint and 1°F above the Occupied Heating setpoint. The amount of reset (reset ratio and maximum reset limit value) is user configurable.
- C. 23 09 93.13 C. Morning Warm-Up — The control will provide a Morning Warm-Up cycle the first time if transition from unoccupied to occupied and if the heating is required and the unit goes into heating immediately. Whenever the unit enters the heating mode, before any heat stage is enabled, the control will provide a Linkage mode to the system that will cause the terminals to maintain sufficient airflow. The Linkage mode of Warm-Up (2) will be sent to the terminal system to ensure sufficient airflow while in the heating mode but also providing a controlled warm-up cycle to prevent overheating of some zones. As a safety measure, should the heating cycle continue and the SAT approach the “Maximum Heating SAT” limit, the Linkage mode sent will change to Pressurization (6) to ensure all terminals open to their maximum airflow. The Linkage mode will remain Pressurization until that heating cycle ends. Once the heating demand is met and the heat cycle is completed or if cooling is required, heating will be locked out until the beginning of the next occupied period.
- D. 23 09 93.13 D. Occupied Heating — Optionally, the user may enable occupied heating which will allow heating whenever heating is needed during the occupied period. The cycle will operate exactly the same as Morning Warm-Up above, except it will not be limited by the transition into an occupied period.
- E. 23 09 93.13 E. Heating and Cooling Setpoint Separation — By default, the control will maintain a 5°F (configurable) separation between the heating and cooling setpoints. This will prevent the unit from prematurely entering the opposite mode.
- F. 23 09 93.13 F. Economizer Cooling Cycle — The VAV-RTU Open provides variable supply airflow to the VAV system and maintains constant minimum ventilation. As the supply airflow changes, the economizer minimum position is adjusted to provide a constant amount of outdoor air. The control will provide the ability to utilize outdoor air for maintaining the supply air setpoint, should the outdoor air be suitable. The economizer control will utilize an OAT check, a RAT check if RAT is available, or a SPT check comparison, and optionally, an OA enthalpy check to determine if OA conditions are suitable for economizing. Economizer operation, if available, will begin whenever cooling is required. The economizer will modulate the position of the OA damper to maintain the desired calculated economizer setpoint. The economizer will be controlled to meet CEC Title 24 requirements so that it will remain open 100% during integrated cooling and only partially close if required. The VAV-RTU Open also provides FDD (Fault Detection and Diagnostics) for economizer operation. The FDD logic will detect an economizer that fails to close, fails to open, is stuck fully open, and/or fails to fully open. Each condition will cause an Economizer Operation alarm to occur and the specific fault condition will be displayed.
- G. 23 09 93.13 G. Mechanical Cooling Cycle — The control will operate 3 stages of mechanical cooling in order to maintain the desired supply air temperature whenever economizer cooling operation is unavailable but cooling is required. This condition will be determined if the OA has high enthalpy or at a temperature above the Economizer Lockout temperature. The 2 compressors will be staged in a binary fashion so that 3 stages of cooling are provided. Mechanical cooling stages will be added as required to meet the desired SA setpoint. The number of stages will depend on the return air conditions and the system load (airflow through the coil). Stages will be added or dropped as required to maintain the setpoint while also maintaining the minimum on time and minimum off time for compressor operation. Anytime the SA falls below the desired SA setpoint, stages will be dropped until only stage 1 is operating. At that point, should the SA fall below 45°F (7°C), the economizer will modulate to increase the amount of outdoor air in order to maintain this minimum SA temperature. Should the economizer reach the maximum OA position and if the SA is still below the minimum SA temperature, the first cooling stage will be disabled and the economizer will return to the minimum position.
- H. 23 09 93.13 H. Integrated Cooling Cycle — If economizer cooling operation is insufficient to maintain the desired SA setpoint, mechanical cooling will be activated to supplement the free economizer cooling. This condition will be determined if the OA has low enthalpy but is at a temperature at least 5°F above the desired SA setpoint and below the Economizer Lockout temperature. Mechanical cooling stages will be added as required to meet the desired SA setpoint. The number of stages will depend on the return air conditions and the system load (airflow through the coil). Stages will be added or dropped as required to maintain the setpoint while also maintaining the minimum on time and minimum off time for compressor operation. Anytime the SA falls below the desired SA setpoint, stages will be dropped until only stage 1 is

operating. At that point, should the SA fall below the minimum SA temperature, the economizer will modulate to increase the amount of return air in order to maintain this minimum SA temperature. Should the economizer reach the minimum OA position and if the SA is still below the minimum SA temperature, the first cooling stage will be disabled.

- I. 23 09 93.13 I. Minimum Ventilation — The economizer minimum position will be adjusted as required based on the supply fan speed. Two user-configurable minimum economizer positions will be provided. The economizer will be positioned at the “Low Fan Econ Min Pos” when the fan is operating at its slowest speed. When the fan is operating at its maximum speed, the economizer will be positioned at the “Vent Dmpr Pos/DCV Min Pos”. For any supply fan speed between these 2 points, the economizer minimum position will be calculated proportionally.
- J. 23 09 93.13 J. Unoccupied Free Cooling — Unoccupied Free Cooling allows the rooftop unit with an economizer damper to use outdoor air for free cooling during unoccupied periods. When the VAV-RTU Open is unoccupied and the space temperature rises at least 2°F above the Occupied Cooling Setpoint, the supply fan starts. The economizer damper opens as necessary to maintain the Supply Air Setpoint and cool the space. The VAV-RTU Open continues to operate in this mode until the space temperature drops to 1°F below the Occupied Cooling Setpoint or the outside air conditions are no longer suitable for free cooling.
- K. 23 09 93.13 K. Demand Controlled Ventilation (DCV) — Whenever the unit is in an occupied mode and “DCV Control” is set to enable, a unique economizer minimum position will be calculated based on the output of the DCV algorithm. The algorithm monitors the CO₂ sensor value and compares that value to the user defined setpoint. A control algorithm calculates the required minimum economizer position required to satisfy the ventilation requirements of the space. A user-adjustable DCV Max Vent Damper Position is provided to limit the maximum amount of outdoor air that can be brought into the unit due to the DCV algorithm. Demand Controlled Ventilation can be used in either a differential mode where both the indoor air and outdoor air CO₂ levels are provided to the control or it may be used in a single indoor air mode with only the indoor air CO₂ level. In the latter case, the outdoor air CO₂ level is assumed at 400 ppm.
- L. 23 09 93.13 L. Supply Air Tempering — The VAV-RTU Open provides the capability to operate the optional electric heat, if equipped, to maintain a minimum supply air temperature during conditions where very cold outdoor air causes the supply air temperature to fall below the configured Supply Air (SA) Tempering Setpoint. This occurs during periods where DCV is active and increasing the amount of outdoor air or in cases where the system is operating at very low airflow and the calculated economizer position has increased to maintain a constant ventilation rate. Heat operation is subject to anti-recycle timers to protect the

equipment from short-cycling. There are fixed application specific minimum on and off times for each heating output (15 seconds on and 10 seconds off).

- M. 23 09 93.13 M. Open Airside Linkage — The control will support Airside Linkage to accommodate system operation using Carrier VAV terminal controls. The VAV-RTU Open will receive zone information (occupancy status, occupied and unoccupied zone temperatures, occupied and unoccupied heating and cooling setpoints, zone CO₂ level for DCV, and zone RH level). The VAV-RTU Open will operate in the mode required to satisfy the zones. Airside Linkage will provide operating mode information to the zones so that the system operation is fully coordinated between the rooftop and the terminal zones. The VAV air terminals offer a minimum airflow setting in AHU heating mode. This shall be configured to maintain the required airflow (cfm) whenever the VAV RTU is in a heating mode per the unit’s specification. The VAV terminals will recognize the Heating or Warm-Up modes as a heat mode and utilize the higher airflow minimum setpoint as configured. For heating cycles, initially utilize the Linkage Morning Warm-Up mode to open dampers on all zones below the midpoint of the occupied heating and cooling setpoints. This provides a controlled heat cycle and prevents the overheating of random zones where heating may not be required. Any zone below this middle setpoint will have its airflow at the maximum value. Further monitor the SAT of the VAV RTU to determine if the SAT is approaching the configured maximum limit. As the limit is approached, the Linkage mode is changed to Linkage Pressurization to ensure all terminals open to their maximum airflow.
- N. 23 09 93.13 N. Field Test/Commissioning — The control will provide BACnet test points to activate specific test modes that can be used to commission the rooftop and the system. Test modes will be available in the Service Test screen on the Property pages and shall also be available on the local Equipment Touch device for standalone commissioning. Tests include: fan test, low heat test, high heat test, cooling test, power exhaust test, and an economizer test. When any test is active, the appropriate Linkage mode will be sent to the system’s terminals. This will ensure appropriate system operation and airflow during any test mode.

Part 6 — 23 40 13 Panel Air Filters

6.01 23 40 13.13 Packaged VAV, Rooftop Units:

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

Part 7 — 23 81 19 Self-Contained Air Conditioners

7.01 23 81 19.13 Small-Capacity Self-Contained Air Conditioners (50LC*B07-12)

A. 23 81 19.13.A. General

1. Outdoor, rooftop mounted, DDC electrically controlled, heating and cooling VAV unit utilizing fully hermetic scroll compressors for cooling duty and electrical elements for heating duty. VAV-RTU Open-BACnet, direct digital controller:
 - a. Shall be ASHRAE 62-2001 compliant.
 - b. Shall accept 18 to 30VAC, 50 to 60Hz, and consume 15VA or less power.
 - c. Shall have an operating temperature range from -40°F (-40°C) to 130°F (54°C), 10% to 90% RH (non-condensing).
 - d. Shall include built-in protocol for BACnet MS/TP.
 - e. Shall allow access of up to 62 network variables (SNVT). Shall be compatible with all open controllers.
 - f. Baud rate Controller shall be selectable using a dipswitch.
 - g. Shall have an LED display independently showing the status of serial communication, running, errors, power, all digital outputs, and all analog inputs.
 - h. Shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air quality, compressor lock-out, fire shutdown, enthalpy switch, and fan status/filter status/humidity/remote occupancy.
 - i. Shall provide the following outputs: Economizer, Fan Speed, Fan Start/Stop, Cooling Stage 1, Cooling Stage 2, Cooling Stage 3, Heating Stage 1, Heating Stage 2, Power Exhaust.
 - j. Shall have built-in surge protection circuitry through solid state polyswitches. Polyswitches shall be used on incoming power and network connections. Polyswitches will return to normal when the "trip" condition clears.
 - k. Shall have a battery back-up capable of a minimum of 10,000 hours of data and time clock retention during power outages.
 - l. Shall have built-in support for Carrier technician tool.
 - m. Shall include an EIA-485 protocol communication port (BACnet MS/TP only), an access port for connection of either a computer or a Carrier technician tool, an EIA-485 port for network communication to intelligent space sensors and displays.
 - n. Software upgrades will be accomplished by either local or remote download. No software upgrades through chip replacements are allowed.
2. Factory assembled, single-piece heating and VAV cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
 - a. Return air temperature sensor to control multi stage of cooling capacity
 - b. Supply air temperature sensor to control multi stage of cooling capacity
 - c. Duct static pressure transducer, located in control box for remote field mounting
 - d. Evaporator coil freeze protection
3. Unit shall use Puron® (R-401A) 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.
6. To properly control to the desired supply air temperature comfort setting, an integrated EconoMi\$er2 is provided standard. Two versions shall be available: low air leak and ultra low leak versions. For horizontal air flow applications, economizer must be field installed.
 - a. Integrated Low Leak:
 - 1) Integrated, gear-driven opposing modulating blade design type, capable of simultaneous economizer and compressor operation.
 - 2) Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory-installed option. Field installed for horizontal air flow models.
 - 3) Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
 - 4) Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - 5) Shall be equipped with gear-driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - 6) Low leak rate models shall be equipped with leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
 - 7) Economizer controller shall be a 4 to 20mA design controlled directly by the VAV-RTU Open controller. VAV-RTU Open meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.
 - 8) Shall be capable of introducing up to 100% outdoor air.

- 9) 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.
 - 10) Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
 - 11) Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available as factory installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40°F to 100°F (4°C to 38°C). Additional sensor options shall be available as accessories.
 - 12) VAV-RTU Open controller shall also provide control of an accessory power exhaust unit function.
 - 13) The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
 - 14) Dampers shall be completely closed when the unit is in the unoccupied mode.
 - 15) Economizer controller shall accept a 2 to 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.
 - 16) Compressor lockout temperature is adjustable from 45°F to 80°F (7°C to 27°C), set at a factory default of 45°F (7°C). Others shall open at 35°F (2°C) and closes at 50°F (10°C).
 - 17) Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - 18) Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
- b. Integrated Ultra Low Leak Models
- 1) Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
 - 2) Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory installed option. Field installed for horizontal air flow models.
 - 3) Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
 - 4) Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - 5) Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - 6) Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1 requirements of 4 cfm per sq ft on the outside dampers and 10 cfm per sq ft on the return dampers.
 - 7) Economizer controller shall be a 4 to 20mA design controlled directly by the VAV-RTU Open controller. VAV-RTU Open meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.
 - 8) Shall be capable of introducing up to 100% outdoor air.
 - 9) 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.
 - 10) Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
 - 11) 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°F to 100°F (4°C to 38°C). Additional sensor options shall be available as accessories.
 - 12) 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%.
 - 13) The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate over the entire system airflow range.
 - 14) Dampers shall be completely closed when the unit is in the unoccupied mode.
 - 15) Economizer controller shall accept a 2 to 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.
 - 16) Compressor lockout temperature is adjustable from 45°F to 80°F (7°C to 27°C), set at a factory default of 45°F (7°C).
 - 17) Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - 18) Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

B. 23 81 19.13.B. Quality Assurance

1. Unit meets and exceeds ASHRAE 90.1 minimum efficiency requirements.
2. Unit meets and exceeds ENERGY STAR¹ and Consortium for Energy Efficiency (CEE) performance criteria.
3. Unit shall be rated in accordance with AHRI Standards 340/360.
4. Unit shall be designed to conform to ASHRAE 15, 2001.
5. Unit shall be ETL/UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-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 in accordance with ISO 9001, and shall be manufactured in a facility registered by 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 testing 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 Efficiency Motors listed shall meet section 313 of the Energy Independence and Security Act of 2007 (EISA 2007).

C. 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.

D. 23 81 19.13.D. Project Conditions

1. As specified in the contract.

E. 23 81 19.13.E. 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 $\pm 10\%$ voltage.

2. Compressor with standard controls shall be capable of operation down to 45°F (7°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 for vertical supply and return configurations.
5. Unit shall be field convertible from vertical to horizontal airflow on all models. No special kit required on 07 models. Field installed supply duct kit required for 08-12 model only.
6. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

F. 23 81 19.13.F. Electrical Requirements

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

G. 23 81 19.13.G. 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 in. 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 4 locations for thru-the-base gas and electrical connections (factory installed or field installed), standard.
5. Base Rail:
 - a. Unit shall have base rails on a minimum of 4 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 an internally sloped condensate drain pan made of a non-corrosive material.
 - b. Shall comply with ASHRAE Standard 62.

1. ENERGY STAR is a registered trademark of U.S. Environmental Protection Agency.

- c. Shall use a 3/4 in. 14 NPT drain connection, possible either through the bottom or end of the drain pan. Connection shall be made per manufacturer's recommendations.
- 7. Top Panel:
 - a. Shall be a single piece top panel on 07 sizes, 2 piece on 08-12 sizes.
- 8. Electrical Connections:
 - a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
 - b. Thru-the-Base Capability:
 - 1) Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
 - 2) Optional, factory-approved, water-tight connection method must be used for thru-the-base electrical connections.
 - 3) No basepan penetration, other than those authorized by the manufacturer, is permitted.
- 9. Component Access Panels (standard):
 - a. Cabinet panels shall be easily removable for servicing.
 - b. Unit shall have one factory installed, tool-less, removable, filter access panel.
 - c. Panels covering control box, indoor fan, indoor fan motor and compressors shall have molded composite handles.
 - d. Handles shall be UV modified, composite, permanently attached, and recessed into the panel.
 - e. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
 - f. Collars shall be removable and easily replaceable using manufacturer recommended parts.
- H. 23 81 19.13.H. 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 in. 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.
 - 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.
 - 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).
- 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).
- g. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

- h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

I. 23 81 19.13.I. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Multi Thermostatic Expansion Valve (TXV) system 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. Single circuit design with tandem compressor and fully activated evaporator coil.
 - e. Shall be capable of providing cooling capacity turndown to 25% of rated full capacity without the need of hot gas bypass devices.
2. Compressors:
 - a. Models shall use fully hermetic tandem scroll compressors optimized for comfort staging and IEER energy savings.
 - b. Models shall be available with a single refrigerant circuit and 3 stages of 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 heater shall be standard on each compressor and deactivated whenever a compressor is in operation.

J. 23 81 19.13.J. Filter Section

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

K. 23 81 19.13.K. Evaporator Fan and Motor

1. Evaporator Fan Motor:
 - a. Shall have permanently lubricated bearings.
 - b. Shall have inherent automatic-reset thermal overload protection or circuit breaker.
 - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
 - d. Shall be Variable Frequency duty to match the 3 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 controlled by duct static pressure transducer:
 - 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.
3. Belt-driven Evaporator Fan:
 - a. Belt drive shall include an adjustable-pitch motor pulley.
 - b. Shall use sealed, permanently lubricated ball-bearing type.
 - c. Blower fan shall be double-inlet type with forward-curved blades.
 - d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

L. 23 81 19.13.L. 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 on 07 models and shaft-up on 08-12 models with rain shield.
- 2. Condenser Fans:
 - a. Shall be a direct-driven propeller type fan.
 - b. Shall have galvanized aluminum (galvalume) blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.
- M. 23 81 19.13.M. Special Features, Options and Accessories
 - 1. Condenser Coil Hail Guard Assembly (Factory or field installed):
 - a. Shall protect against damage from hail.
 - b. Shall be louvered design.
 - 2. Unit-Mounted, Non-Fused Disconnect Switch:
 - a. Switch shall be factory-installed, internally mounted.
 - b. National Electric Code (NEC) and ETL/UL approved non-fused switch shall provide unit power shutoff.
 - c. Shall be accessible from outside the unit
 - d. Shall provide local shutdown and lockout capability
 - e. Sized only for the unit as ordered from the factory. Does not accommodate field installed devices.
 - 3. 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.
 - 4. 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 or load 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/UL 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.
- 5. Thru-the-Base Connectors:
 - a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
 - b. Minimum of 4 connection locations per unit.
- 6. Propeller Power Exhaust:
 - a. Power exhaust shall be used in conjunction with an integrated economizer.
 - b. Independent modules for vertical or horizontal return configurations shall be available.
 - c. Horizontal power exhaust 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 to 100% adjustable setpoint on the economizer control.
- 7. 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.
- 8. 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.

9. Thru-the-Bottom Utility Connectors:
 - a. Kit shall provide connectors to permit electrical connections to be brought to the unit through the basepan.
10. 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.
11. 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.
12. Indoor Air Quality (CO₂) Sensor:
 - a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
 - b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
13. Smoke Detectors (factory-installed only):
 - a. Shall be a 4-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 2 individual detector modules.
 - 5) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
14. Electric Heat:
 - a. Heating Section
 - 1) Heater element open coil resistance wire, nickel-chrome alloy, 0.29 in. 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.
15. 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.
16. 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 VFD controller as needed.
17. Supply Duct Kit:
 - a. On 08-12 models, a supply air duct cover kit is required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One required per unit.
18. High Short Circuit Current Rating (SCCR):
 - a. An optional SCCR of 10 kA shall be provided for 208/230v and 460v units.

