



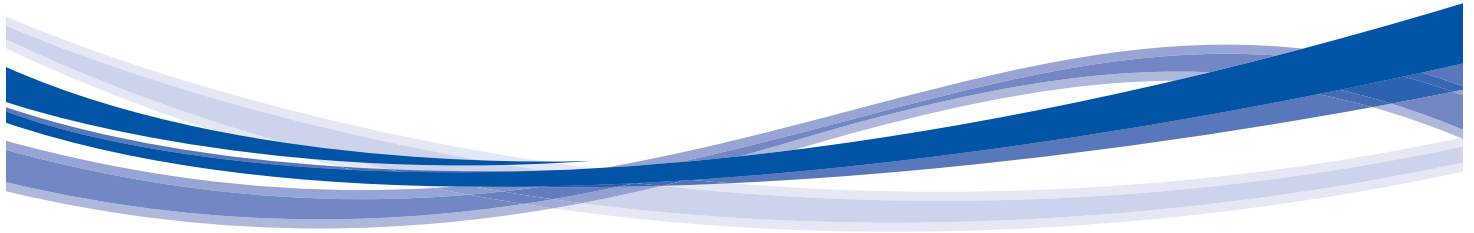
Turn to the experts

Product Data

WeatherExpert®

Single Packaged Rooftop

6 to 10 Nominal Tons



WeatherExpert®



50LC**07, 08, 09, 12
Electric Cooling Rooftop Units with Optional Electric Heat
with Puron® Refrigerant (R-410A)

Carrier’s Electric Heat / Electric Cooling WeatherExpert® 6 to 10 ton Commercial Package Rooftop models are designed to provide total low cost of ownership by providing some of the highest cooling efficiencies in the industry with low installation costs, low maintenance costs, and high reliability.

These models focus on providing high IEERs (Integrated Energy Efficiency Ratios) which are a measurement of cooling part load performance and where actual buildings operate most of the time. These high part load values are achieved by using logic that strategically sequences compressor stages, indoor fan motor and condenser fan motor speeds. These models are in addition to the 3 to 5 ton models with SEERs up to 17.5 and 12.5 to 23 ton models with IEERs up to 19.3 to provide a full range offering.

Ultra high efficiency

With IEERs up to 21.0, these WeatherExpert models help to contribute in LEED credits and help qualify for rebates. The high IEER efficiencies are achieved by utilizing a proven staged compressor design on a single refrigerant circuit that provides 3 stages of cooling capacity control. The indoor fan motors are high efficiency belt drive, controlled by a VFD (Variable Frequency Drive) that matches the cooling capacity stages for optimum comfort and efficient control. Models also have multiple heat capacities for each size.

Easy to install

All WeatherExpert units have full perimeter base rails with built in rigging capability. They 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 job-site complications. Many factory options and field-installed accessories are also available that are pre-engineered and tested.

Easy to maintain

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

Reliable

Carrier conducts rigorous testing to insure your unit will perform as designed. Extensive rain testing is conducted in special designed test areas and under conditions that simulate actual job sites. In addition, units are both shake tested and driven around the country to make sure that both the packaging and 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.

Unit features include:

- Three-stage cooling capacity control with staged scroll compressors design. Each cooling stage is different in capacity output to better match typical building load profiles.
- Single refrigerant circuit design with precision sized TXV refrigerant metering devices to provide optimum operation through the entire operating range.
- Single full faced evaporator coil for full surface utilization, even at part load operation.
- Crankcase heater on each compressor designed to cycle off during the on cycle.
- IEERs up to 21.0 and EERs up to 13.7.
- High efficiency permanently lubricated belt driven evaporator-fan motor with VFD (Variable Frequency Drive) controller.
- Electro-mechanical Integrated Staging Control (ISC) board that provides:
 - Thermostat controls
 - Compressor staging
 - Indoor fan motor staging
 - Field and factory wiring connections
 - Outdoor fan motor staging
 - Crank case heater control
- Sound levels as low as 82 dB.
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or bottom drain.
- Single point electrical connections.

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Features/Benefits (cont)



- 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 40°F (4°C). An economizer shall be the source of cooling in low ambient temperature conditions. When the outside air temperature is below 40°F (4°C), to reduce operating costs, 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.
- High capacity liquid line filter drier.
- Factory-Installed Humidi-MiZer® Adaptive Dehumidification System on all sizes.
- Factory-installed SystemVu™ controller with LCD user display
- Standard Limited Parts Warranty: 5 yr. Electric heaters, 5 yr. compressor, 3 yr. SystemVu controller, 1 yr. parts.

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	D	0	1	2	A	1	A	5	-	0	A	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

Refrig. Systems Options

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

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
J = Condensate Overflow Switch
K = Condensate Overflow Switch and RA Smoke Detector
L = Condensate Overflow Switch and
RA + SA Smoke Detectors

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
4 = Ultra High Static Belt Drive with VFD controller (08, 09 only)

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 Circuit Breaker
C = Non-Fused Disconnect
D = Thru-The-Base Connections
E = HACR Circuit 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

A = None
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

0 = Electro-mechanical Controls
1 = RTU Open Multi-Protocol Controller
4 = SystemVu™ Controller

Design Revision

- = Factory Design Revision

Voltage

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

50LC**07-12 COOLING RATINGS (208v)

50LC UNIT	NOMINAL CAPACITY (TONS)	COOLING STAGES	ELECTRIC HEAT OPTION	MOTOR OPTION	NOM COOLING CAPACITY	TOTAL POWER (kW)	EER	SEER / IEER
07	6.0	3	All	—	70.0	5.3	13.1	20.7
08	7.5	3	All	Standard	89.0	6.8	13.1	19.7
				Medium	89.0	6.9	13.0	19.4
				High	89.0	7.0	12.9	19.3
				Ultra High	89.0	6.9	13.0	19.4
09	8.5	3	All	Standard	102.0	7.6	13.7	21.0
				Medium	102.0	7.6	13.7	21.0
				High	102.0	7.7	13.6	20.8
				Ultra High	102.0	7.7	13.6	20.8
12	10.0	3	All	—	116.0	8.9	13.1	20.8

50LC**07-12 COOLING RATINGS (230v/460v/575v)

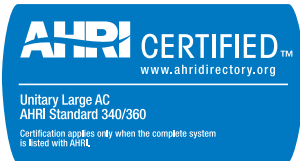
50LC UNIT	NOMINAL CAPACITY (TONS)	COOLING STAGES	ELECTRIC HEAT OPTION	MOTOR OPTION	NOM COOLING CAPACITY	TOTAL POWER (kW)	EER	SEER / IEER
07	6.0	3	All	—	70.0	5.3	13.1	20.5
08	7.5	3	All	Standard	89.0	6.8	13.0	19.5
				Medium	89.0	6.9	12.9	19.2
				High	89.0	7.0	12.8	19.1
				Ultra High	89.0	6.9	12.9	19.2
09	8.5	3	All	Standard	102.0	7.6	13.4	19.9
				Medium	102.0	7.6	13.4	19.9
				High	102.0	7.7	13.3	19.7
				Ultra High	102.0	7.7	13.3	19.7
12	10.0	3	All	—	116.0	8.9	13.1	20.5

LEGEND

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

NOTES:

1. Rated in accordance with AHRI Standards 340/360.
2. Ratings are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F (35°C) db outdoor air temp.
3. 50LC units comply with US Energy Policy Act. To evaluate code compliance requirements, refer to state and local codes.



COOLING MINIMUM - MAXIMUM OPERATION CFM

50LC UNIT	COOLING STAGE	MIN CFM	MAX CFM	MIN OD AMBIENT TEMP (°F)	MAX OD AMBIENT TEMP (°F)
07	Stage-3	1500	3000	40	125
	Stage-2	1000	2000		
	Stage-1	1000	2000		
08	Stage-3	1900	3750	40	125
	Stage-2	1250	2500		
	Stage-1	1250	2500		
09	Stage-3	2150	4250	40	125
	Stage-2	1400	2800		
	Stage-1	1400	2800		
12	Stage-3	2500	5000	40	125
	Stage-2	1500	3000		
	Stage-1	1000	2000		

SOUND PERFORMANCE

50LC UNIT	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz								
		A-WEIGHTED	63	125	250	500	1000	2000	4000	8000
07	3	82.0	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
08	3	83.0	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5
09	3	83.0	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5
12	3	83.0	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5

LEGEND

dB — Decibel

NOTES:

1. Outdoor sound data is measured in accordance with AHRI standard 270.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of the "average" human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI standard 270.

PHYSICAL DATA (COOLING) 6 TO 10 TONS

		50LC**07	50LC**08	50LC**09	50LC**12
REFRIGERATION SYSTEM					
# Circuits / # Comp. / Type		1/2/Scroll	1/2/Scroll	1/2/Scroll	1/2/Scroll
RTPF models R-410A charge A/B (lbs - oz)		15 - 8	22 - 5	25-11	24-15
Alternate (Humidi-MiZer) R-410A charge A/B (lbs - oz)		23-5	27-6	34-0	31-8
oil A/B (oz)		25/42	42/42	42/42	42/42
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
Loss of charge Trip / Reset (psig)		27 / 44	27 / 44	—	—
EVAP. 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		3/4 in.	3/4 in.	3/4 in.	3/4 in.
HUMIDI-MIZER 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.)		38	49.5	49.5	49.5
Coil height (in.)		32	40	40	40
Rows / FPI		2 / 18	1 / 18	1 / 18	1 / 18
Total face area (ft ²)		8.4	13.8	13.8	13.8
EVAP. FAN AND MOTOR					
Standard Static 3 phase	Motor qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.7	1.7	1.7	2.4
	RPM range	356-534	338-507	338-507	375-563
	Motor frame size	56	56	56	56Z
	Fan qty / Type	1 / Centrifugal	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	18.5 X 18
	Motor qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.7	1.7	1.7	2.9
	RPM range	539-809	488-675	488-675	547-757
	Motor frame size	56	56	56	56
High Static 3 phase	Fan qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan diameter (in.)	15.5 x 15	18.5 x 18	18.5 x 18	18.5 X 18
	Motor qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9	2.9	3.7	4.9
	RPM range	799-1054	623-863	675-863	760-960
Ultra High Static 3 phase	Motor frame size	56	56	56HZ	145TZ
	Fan qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan diameter (in.)	15.5 x 15	18.5 x 18	18.5 x 18	18.5 X 18
	Motor qty / Drive type	—	1 / Belt	1 / Belt	—
	Max BHP (208/230/460/575v)	—	3.7	4.9	—
COND. COIL 1	RPM range	—	847-1150	832-1021	—
	Motor frame size	—	56HZ	145TZ	—
	Fan qty / Type	—	1 / Centrifugal	1 / Centrifugal	—
	Fan diameter (in.)	—	18.5 x 18	18.5 x 18	—
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

PHYSICAL DATA (COOLING) 6 TO 10 TONS (cont)

	50LC**07	50LC**08	50LC**09	50LC**12
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 # / 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 # / 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

Economizer

Economizers can reduce operating costs. 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 coupled to CO₂ sensors, economizers can limit the ventilation air to only that amount required.

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

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

CO₂ Sensor

The CO₂ sensor works 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 un-powered)

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

Non-fused Disconnect

This OSHA-compliant, factory-installed safety switch allows a service technician to locally secure power to the rooftop. When selecting a factory-installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate any field items such as power exhaust devices etc.

Power Exhaust

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

Time Guard II Control Circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required if built into thermostat or building management system.

Hinged Access Panels

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

Alternate Motors and Drives

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

Thru-the-Base Connections

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

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 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.

Thermostat

Due to the 3-stage cooling capacity design of these units, a 3-stage cooling thermostat is required for the unit to perform at listed operating efficiencies.

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

This provides:

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

SystemVu™ Controller



- Full range of diagnosis:
 - Read refrigerant pressures without the need of gauges
 - Sensor faults
 - Compressor reverse rotation
 - Economizer diagnostics that meets California Title 24 requirements
- Quick data transfer via USB port:
 - Unit configuration uploading/downloading
 - Data logging
 - Software upgrades
- Built in capability for:
 - i-Vu® open systems
 - BACnet systems
 - CCN systems
- Configuration and alarms point capability
 - Contain over 100 alarm codes
 - Contain over 260 status, troubleshooting, diagnostic and maintenance points
 - Contain over 270 control configuration setpoints

NOTE: SystemVu controller is not available on units equipped with Standard Leak Economizers.

Carrier's new SystemVu unit controller is an optional factory-installed and tested controller designed specifically for use with the WeatherExpert rooftop units.

This new controller takes on a whole new approach to provide an intuitive, intelligent controller that not only monitors and controls the unit, but also provides linkage to multiple building automation systems.

Each SystemVu controller makes it easy to set up, service, troubleshoot, gain historical data, generate reports and provide the comfort for which Carrier is noted.

Some of the key features include:

- Easy to read back lit 4 line text screen for superior visibility.
- Quick operational condition LEDs of: Run, Alert, and Fault.
- Simple navigation with large keypad buttons of: Navigation arrows, Test, Back, Enter and Menu.
- Capable of being controlled with a conventional thermostat, space sensor or building automation systems.
- Service capabilities include:
 - Auto run test
 - Manual run test
 - Component run hours and starts
 - Commissioning reports
 - Data logging

Optional Humidi-MiZer® Adaptive Dehumidification System

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

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

The Humidi-MiZer adaptive dehumidification system has a unique dual operational mode setting. The Humidi-MiZer system provides greater dehumidification of the occupied space by 2 modes of dehumidification operations in addition to its normal design cooling mode.

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

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

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
Humidity Control	Humidi-MiZer® Adaptive Dehumidification System	X	
Controls	Thermostats, temperature sensors, and subbases		X
	Smoke detector (supply and/or return air)	X	
	Horn/Strobe Annunciator ¹		X
	Time Guard II compressor delay control circuit		X
	Phase Monitor		X
	SystemVu™ Controller ²	X	
Economizers and Outdoor Air Dampers	EconoMi\$er X for electromechanical controls, complies with FDD. (Low and Ultra Low Leak air damper models) ⁶	X	X
	EconoMi\$er2 for DDC controls, complies with FDD. (Low and Ultra Low Leak air damper models) ³	X	X
	Barometric relief ⁴	X	X
	Power exhaust		X
Economizer Sensors and IAQ Devices	Single dry bulb temperature sensors ⁵	X	X
	Differential dry bulb temperature sensors ⁵		X
	Single enthalpy sensors ⁵	X	X
	Differential enthalpy sensors ⁵		X
	CO ₂ sensor (wall, duct, or unit mounted) ⁵	X	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		
Power Options	Convenience outlet (powered)	X	
	Convenience outlet (unpowered)	X	
	HACR Circuit Breaker ^{6,7}	X	
	Non-fused disconnect ⁸	X	
Roof Curbs	Roof curb 14 in. (356 mm)		X
	Roof curb 24 in. (610 mm)		X

NOTES:

- Requires a field-supplied 24V transformer for each application. See price pages for details.
- SystemVu controller is not available on units with factory-installed Standard Leak Economizers (field-installed only).
- FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2
- 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-Electrical Data Table for more information.

OPTION AND ACCESSORY WEIGHTS

OPTION / ACCESSORY	WEIGHTS (lbs)			
	50LC**07	50LC**08	50LC**09	50LC**12
Humidi-MiZer System	80	90	90	90
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
CO ₂ Sensor	5	5	5	5
RA Smoke Detector and CO ₂ Sensor	10	10	10	10
SA Smoke Detector and CO ₂ Sensor	10	10	10	10
RA + SA Smoke Detector and CO ₂ Sensor	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
Pre-coat 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 E-coat 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 Economizer with Barometric Relief	74	103	103	103
Enthalpy Ultra Low Leak Economizer with Barometric 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 connections	4	4	4	4
HACR Breaker and thru-the-base connections	14	14	14	14
Non-Fused Disconnect and thru-the-base connections	19	19	19	19

50LC**07 UNIT DIMENSIONS

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

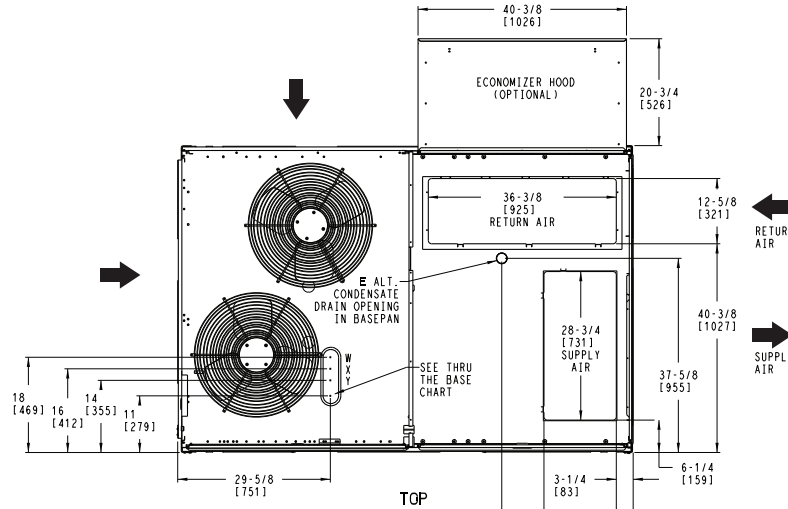
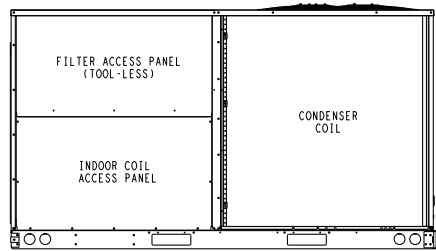
UNIT	OUTDOOR COIL TYPE	J	K	H
50LC 07	RTPF	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]

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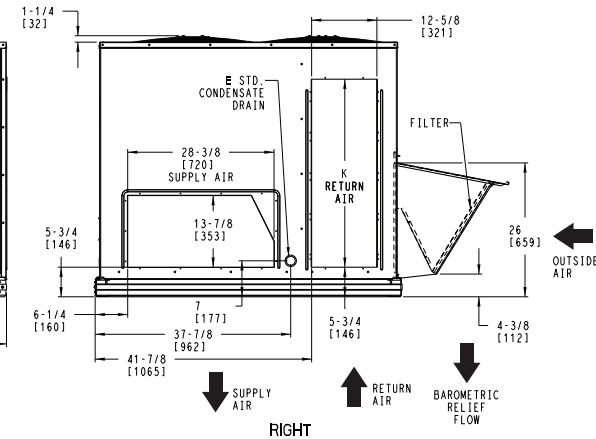
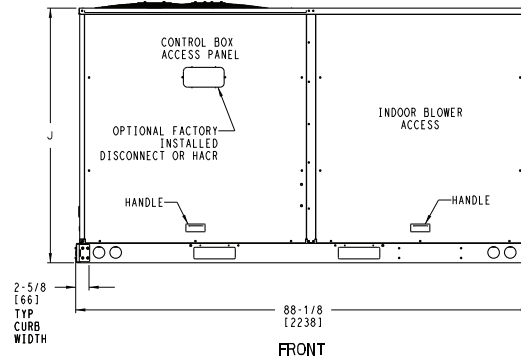
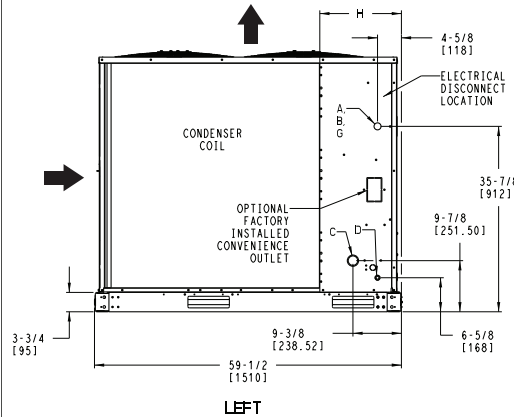


CONNECTION SIZES	
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
G	2" [51] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART (FIELD INST)
THESE HOLES REQUIRED FOR USE WITH ACCY KITS:
CRBTMPWR002A01

	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.



SHEET	DATE	SUPERCEDES	50LC 07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500392	REV
1 OF 2	7/11/14	5/8/13			B

50LC**07 UNIT DIMENSIONS (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	1527

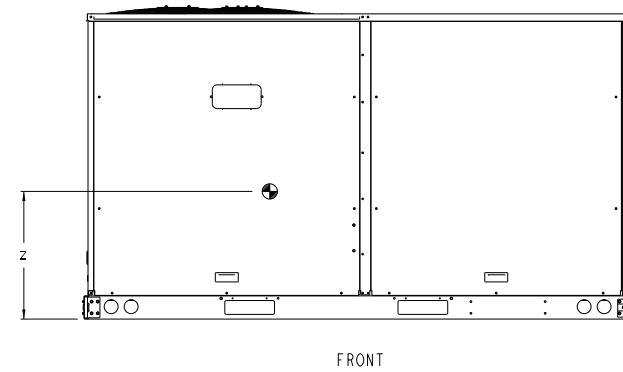
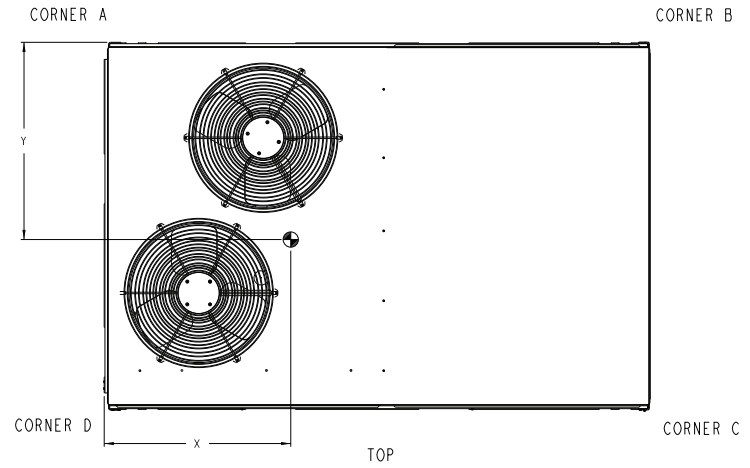


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*** STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING. FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



SHEET 2 OF 2	DATE 7/11/14	SUPERCEDES 5/8/13	50LC 07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500392	REV B
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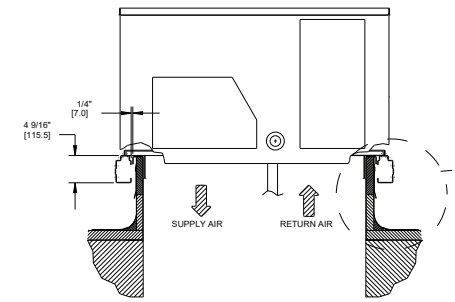
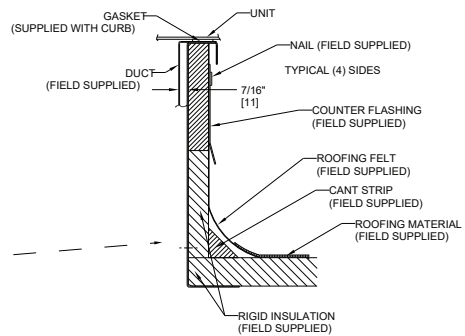
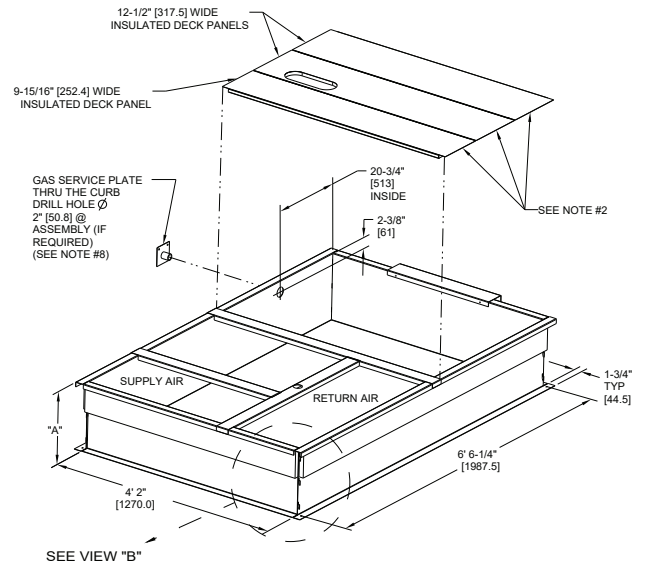
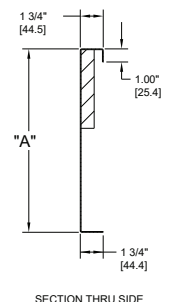
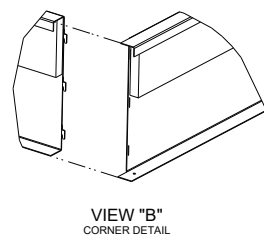
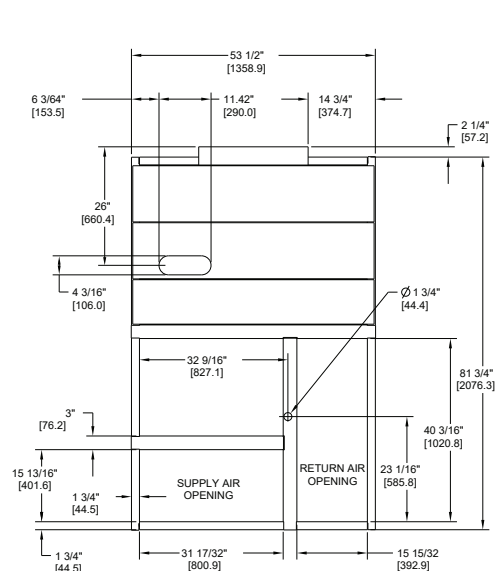


50LC**07 ROOF CURB DETAILS

ROOF CURB ACCESSORY #	A
CRRFCURB003A01	14" [356]
CRRFCURB004A01	24" [610]

- NOTES:
 1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
 2. INSULATED PANELS: 25.4 [1"] THK. POLYURETHANE FOAM, 44.5 [1-3/4] # DENSITY.
 3. DIMENSIONS IN [] ARE IN MILLIMETERS.
 4. ROOFCURB: 18 GAGE STEEL.
 5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
 6. SERVICE CLEARANCE 4 FEET ON EACH SIDE.
 7. DIRECTION OF AIR FLOW.
 8. CONNECTOR PACKAGE CRBTMPWR002A01 IS FOR THRU-THE-CURB GAS TYPE PACKAGE CRBTMPWR004A01 IS FOR THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRBTMPWR002A01	THRU THE CURB	3/4" [19] NPT	1 1/4" [31.7] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR004A01	THRU THE BOTTOM				



CERTIFIED DRAWING

C	6' 6 1/4" WAS 6' 7 1/8"; 4' 2" WAS 4' 2 13/16"; 18 GA WAS 16 GA.; 15 13/16" WAS 15 15/16"; NAIL FIELD SUPPLIED WAS WITH CURB	4/22/13	MMC	-	-	1067898
REV	REVISION RECORD	DATE	BY	CHKD	APPD	ECN NO.

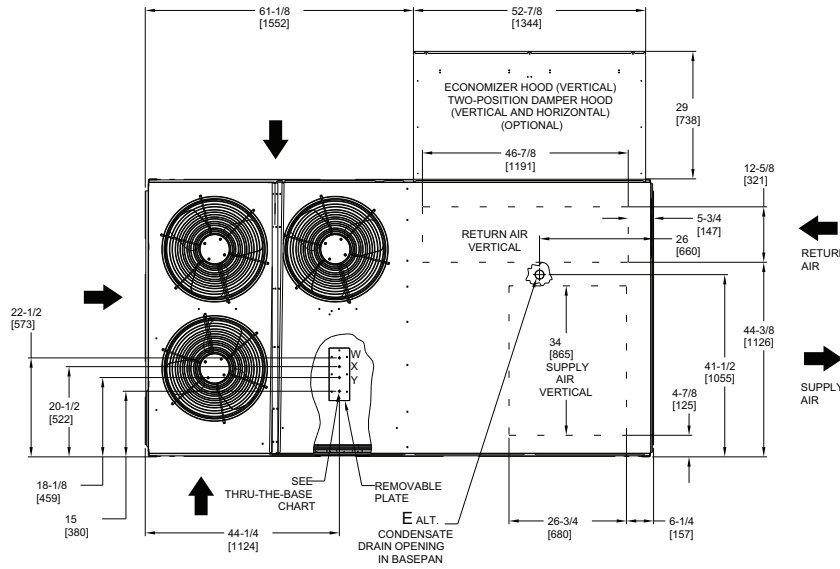
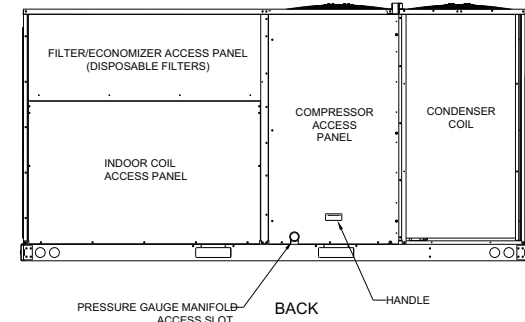
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THIRD ANGLE PROJECTION		1 DEC ±	2 DEC ±	3 DEC ±	ANG ±	TITLE: CURB ASY, ROOF	
MATERIAL	-	AUTHORIZATION NUMBER: 1029120				SIZE: D	DRAWING NUMBER: 50HJ405012
ENGINEERING REQUIREMENTS	T-005, Y-002	ENGINEERING	MANUFACTURING	DRAFTER	CHECKER	REV: C	REV: C
WEIGHT	-	MMC	12/16/09	MODEL	(INTERNAL USE ONLY)	NEXT DRAWING	SCALE: N/A
SURFACE FINISH	-	MFG/PURCH	PURCH			DISTRIBUTION	-



50LC**08 UNIT DIMENSIONS

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

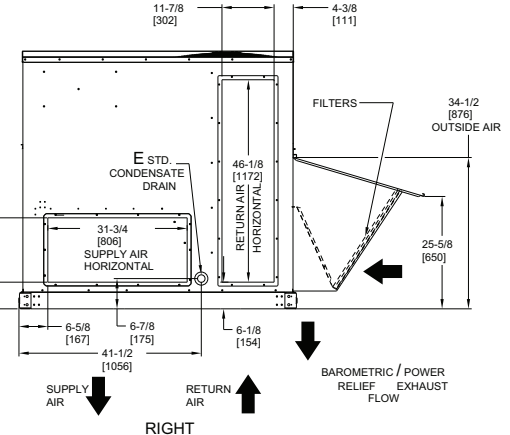
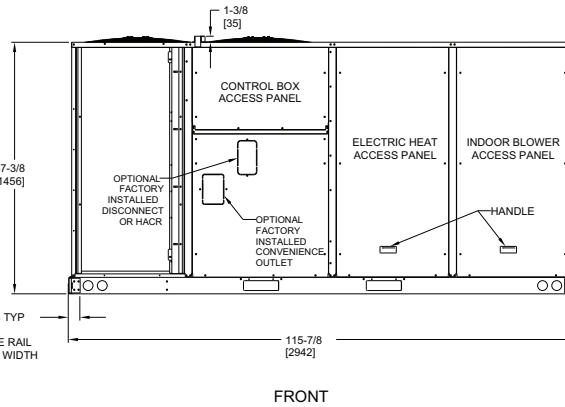
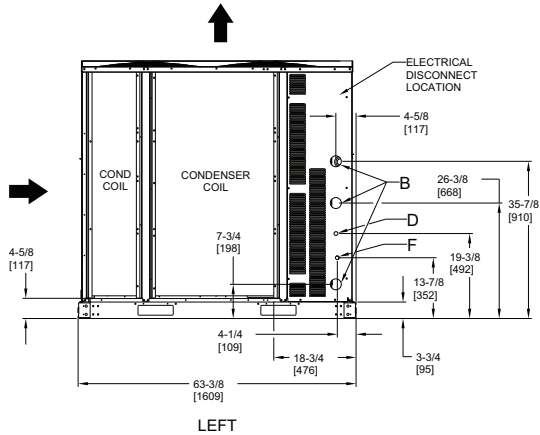
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CONNECTION SIZES	
B	2 1/2" [64] DIA POWER SUPPLY HOLE
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	7/8" [22] DIA FIELD CONVENIENCE OUTLET HOLE

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR005A00,006A00,007A00			
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".




SHEET 1 OF 2	DATE 05/08/13	SUPERCEDES -	50LC 08 SINGLE ZONE ELECTRIC COOLING WITH ELECTRIC HEAT	48LC500407	REV A
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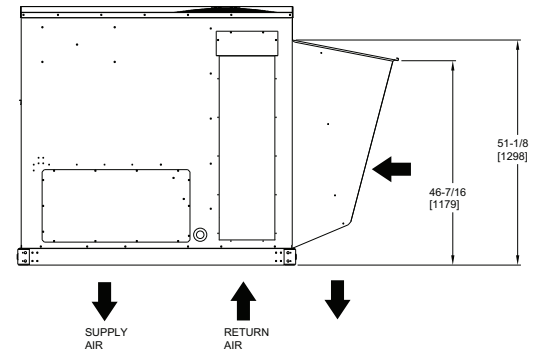
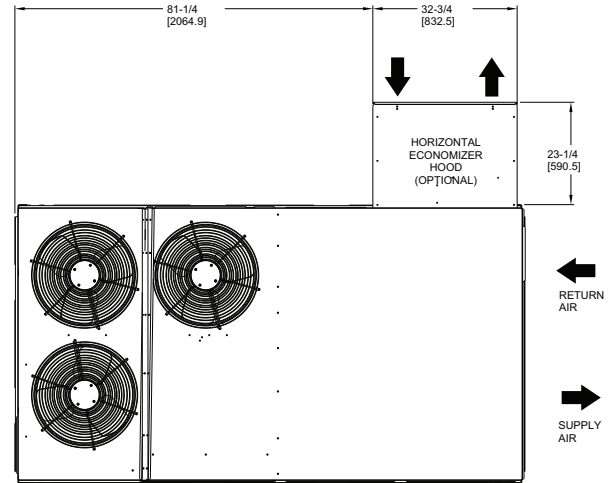
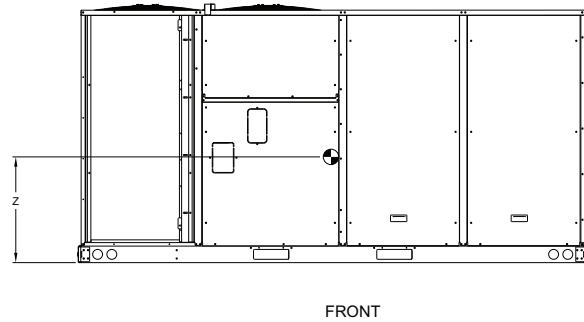
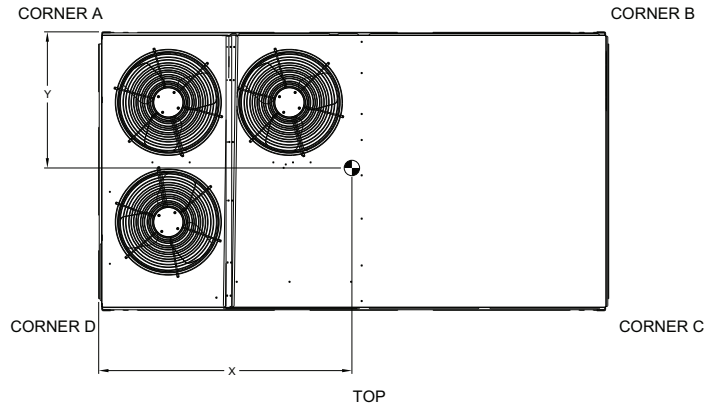


50LC**08 UNIT DIMENSIONS (cont)

UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
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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SHEET 2 OF 2	DATE 05/08/13	SUPERCEDES -	50LC 08 SINGLE ZONE ELECTRIC COOLING WITH ELECTRIC HEAT	48LC500407	REV A
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50LC**09-12 UNIT DIMENSIONS

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



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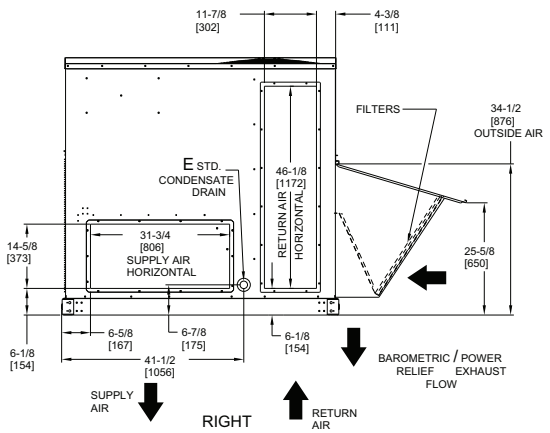
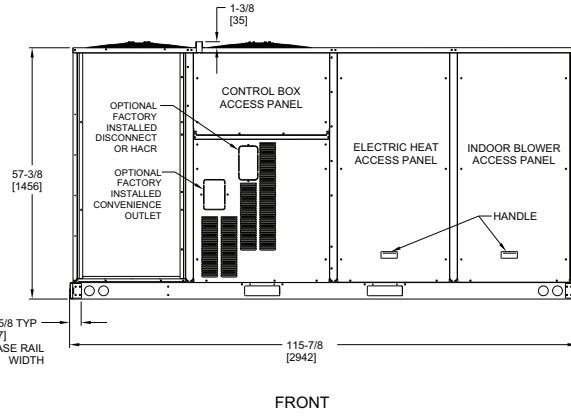
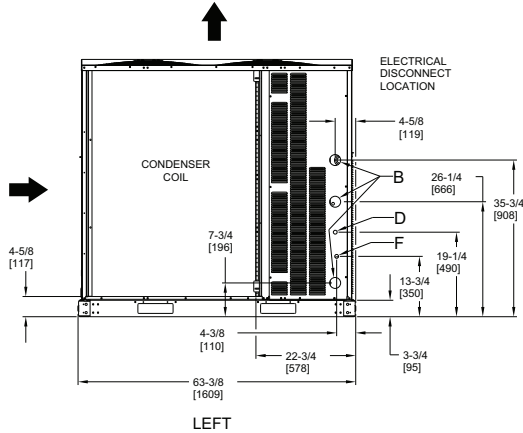
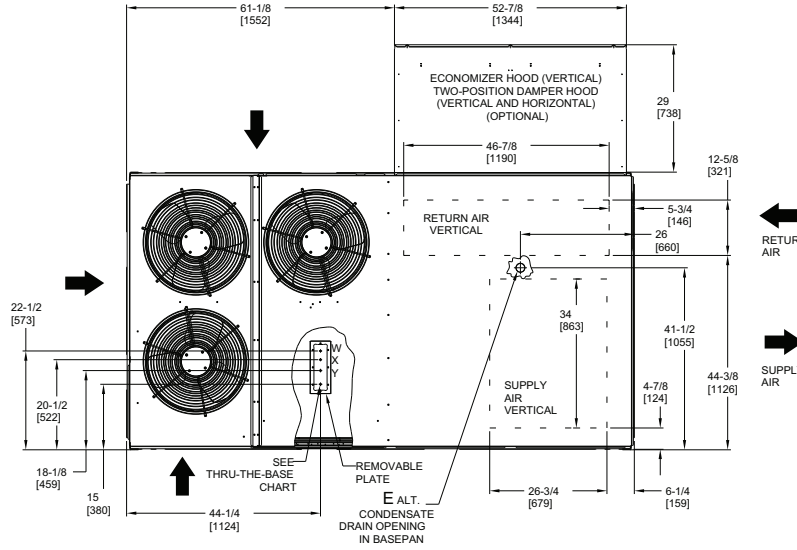
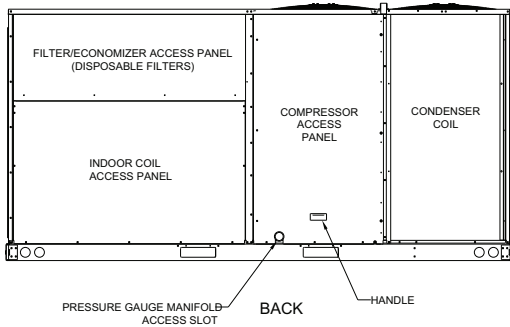
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CONNECTION SIZES	
B	2 1/2" [64] DIA POWER SUPPLY HOLE
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	7/8" [22] DIA FIELD CONVENIENCE OUTLET HOLE

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR005A00,006A00,007A00			
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".




SHEET 1 OF 2	DATE 05/08/13	SUPERCEDES -	50LC 09-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500389	REV A
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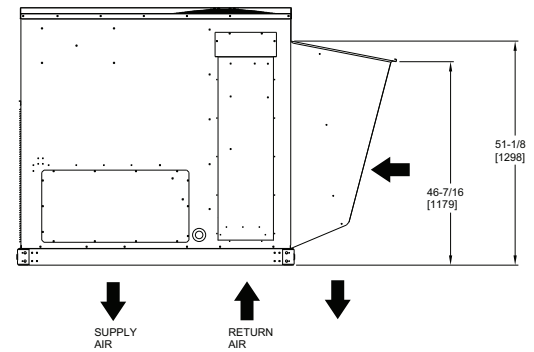
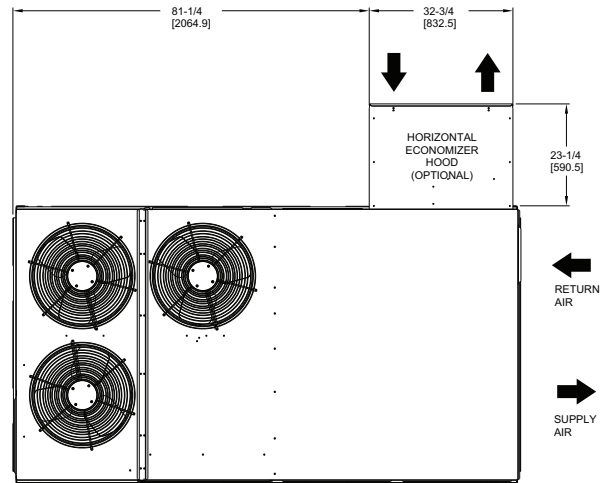
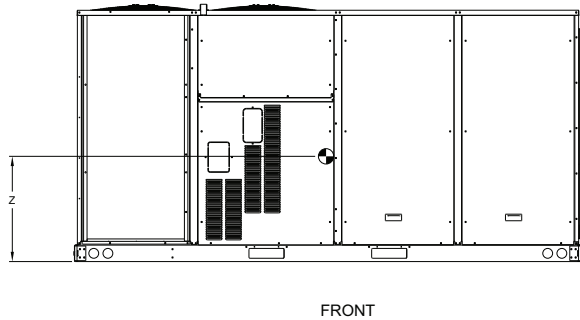
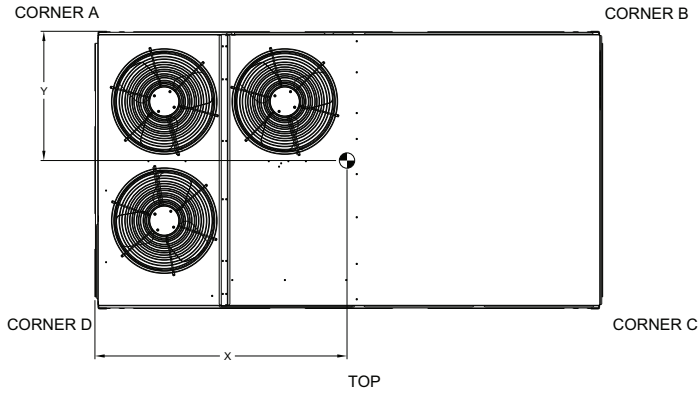


50LC**09-12 UNIT DIMENSIONS (cont)

UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
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]


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



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SHEET 2 OF 2	DATE 05/08/13	SUPERCEDES -	50LC 09-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48LC500389	REV A
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50LC**08-12 ROOF CURB DETAILS

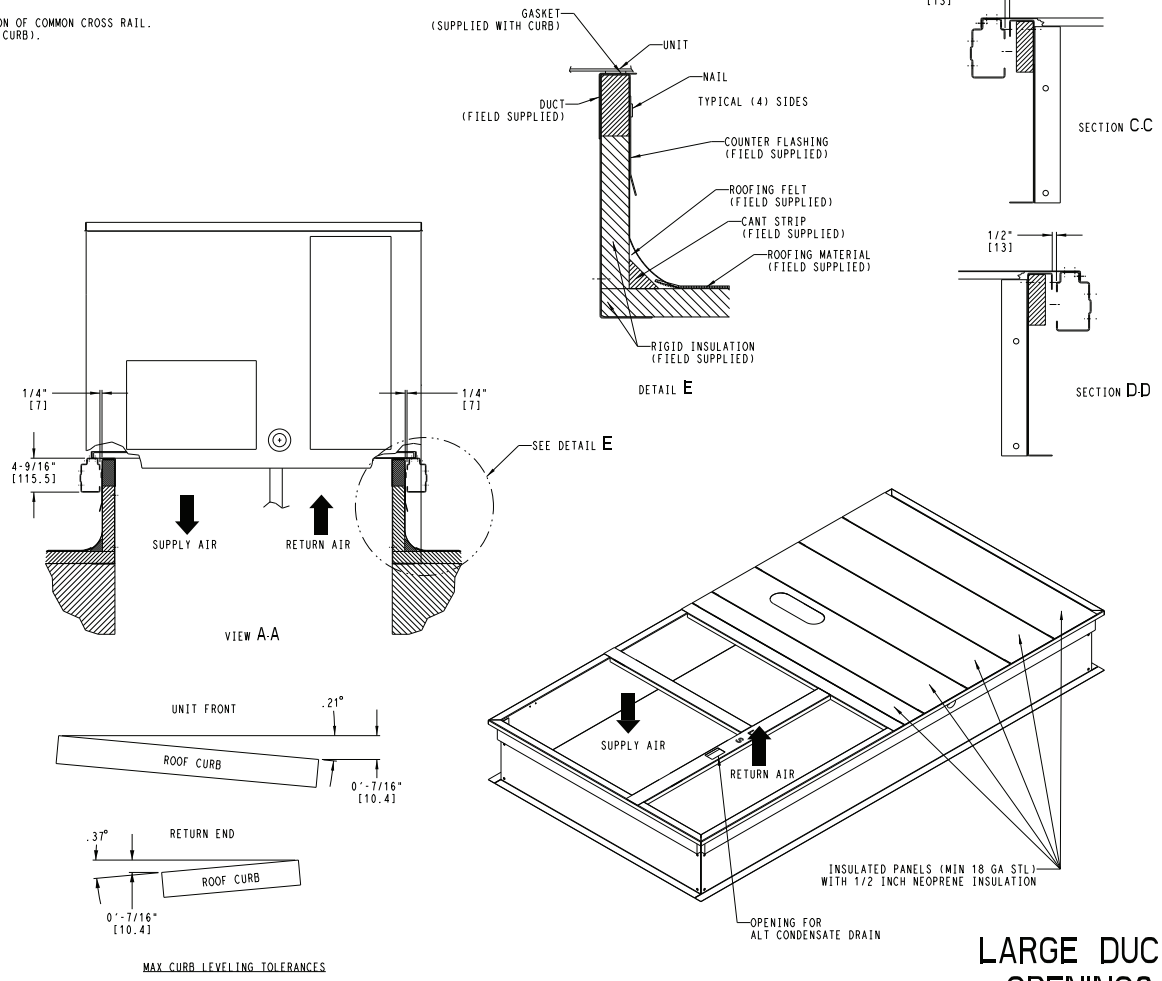
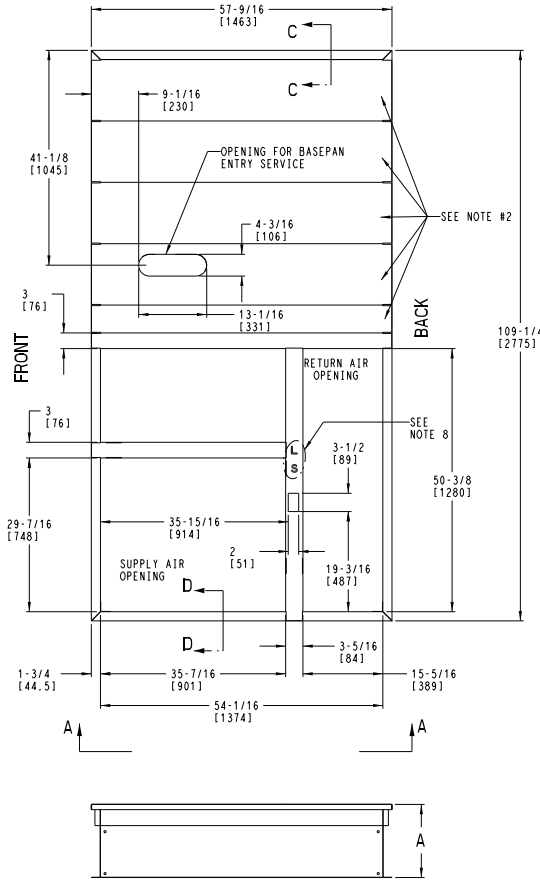
ROOF CURB ACCESSORY #	A
CRRFCURB074A00	14" [356]
CRRFCURB075A00	24" [610]

- 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).

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United Technologies

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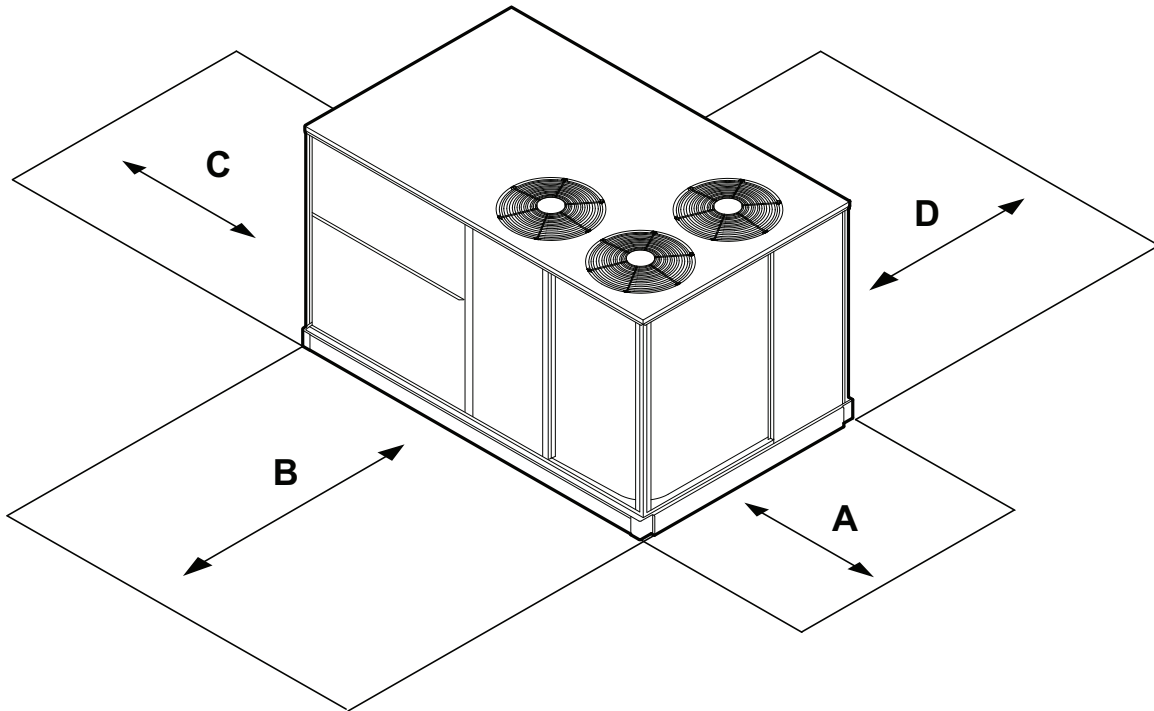
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ITC CLASSIFICATION U.S. ECCN:NSR	SHEET 1 OF 1	DATE 12/19/17	SUPERCEDES 02/15/13	48/50HCD14 / 48/50TCD16 / 48/50LC08,09,12 ROOF CURB	50TMS00780	REV B
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TYPICAL SERVICE CLEARANCES



LOCATION	DIMENSION	CONDITION
A	48 in. (1219 mm)	Unit disconnect is mounted on panel
	18 in. (457 mm)	No disconnect, convenience outlet option
	18 in. (457 mm)	Recommended service clearance
	12 in. (305 mm)	Minimum clearance
B	40 in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36 in. (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	Check sources of flue products within 10 ft (3 m) of unit fresh air intake hood
C	36 in. (914 mm)	Side condensate drain is used
	18 in. (457 mm)	Minimum clearance
D	42 in. (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36 in. (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTES:

- Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.
- The number of fans varies with the unit size. Depending on size, unit will have 2 or 3 fans.

50LC**07 COOLING CAPACITIES - FIRST STAGE, PART LOAD

50LC**07				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1200 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	43.2	43.2	—	42.7	42.7	—	42.1	42.1	—	41.3	41.3	—	40.5	40.5		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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	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		THC	—	43.6	43.6	—	43.1	43.1	—	42.4	42.4	—	41.6	41.6	—	40.7	40.7		
		SHC	—	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	THC	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	41.0
				SHC	34.0	38.4	42.8	34.1	38.3	42.5	34.1	38.1	42.1	34.0	37.8	41.6	33.8	37.3	41.0
	62		THC	38.4	38.4	44.3	38.3	38.3	44.0	38.1	38.1	43.5	37.8	37.8	42.9	37.3	37.3	42.1	
			SHC	32.6	38.4	44.3	32.8	38.3	44.0	32.8	38.1	43.5	32.8	37.8	42.9	32.6	37.3	42.1	
	67		THC	38.9	38.9	44.3	38.6	38.6	44.9	38.3	38.3	45.2	37.8	37.8	45.4	37.3	37.3	44.6	
			SHC	28.4	36.3	44.3	29.2	37.0	44.9	29.7	37.5	45.2	30.2	37.8	45.4	30.2	37.3	44.6	
	72	THC	41.4	41.4	41.4	41.0	41.0	41.0	40.5	40.5	40.5	39.7	39.7	39.7	38.8	38.8	38.9		
		SHC	19.9	28.0	36.1	20.7	28.8	36.9	21.5	29.5	37.5	22.2	30.2	38.3	22.8	30.9	38.9		
	76	THC	—	44.0	44.0	—	43.4	43.4	—	42.6	42.6	—	41.8	41.8	—	40.8	40.8		
		SHC	—	21.0	29.2	—	21.8	29.9	—	22.6	30.7	—	23.3	31.4	—	24.0	32.1		
	1800 CFM	EAT (wb)	58	THC	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	34.5	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			THC	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	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			THC	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	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		THC	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	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		THC	—	44.2	44.2	—	43.6	43.6	—	42.8	42.8	—	41.9	41.9	—	40.9	40.9		
		SHC	—	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	THC	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	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		THC	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	33.4	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		THC	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	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	THC	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	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	THC	—	44.5	44.5	—	43.8	43.8	—	43.0	43.0	—	42.0	42.0	—	41.0	41.0		
		SHC	—	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
- THC — Total Capacity (1000 Btuh) Gross

50LC**07 COOLING CAPACITIES - SECOND STAGE, PART LOAD

50LC**07				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1200 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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		
		SHC	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	THC	—	54.6	54.6	—	52.5	52.5	—	50.0	50.0	—	47.5	47.5	—	44.8	44.8		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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	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		THC	—	55.7	55.7	—	53.3	53.3	—	50.9	50.9	—	48.3	48.3	—	45.4	45.4		
		SHC	—	23.2	30.6	—	22.7	30.0	—	22.0	29.3	—	21.5	28.7	—	20.7	28.0		
1600 CFM		EAT (wb)	58	THC	45.8	45.8	51.6	44.4	44.4	49.8	42.7	42.7	47.9	41.0	41.0	45.8	39.0	39.0	43.7
				SHC	40.2	45.8	51.6	38.9	44.4	49.8	37.5	42.7	47.9	36.0	41.0	45.8	34.3	39.0	43.7
	62		THC	45.9	45.9	53.5	44.4	44.4	51.7	42.7	42.7	49.7	41.0	41.0	47.6	39.0	39.0	45.2	
			SHC	38.3	45.9	53.5	37.1	44.4	51.7	35.8	42.7	49.7	34.4	41.0	47.6	32.9	39.0	45.2	
	67		THC	48.8	48.8	48.8	46.7	46.7	46.7	44.7	44.7	45.9	42.3	42.3	45.1	40.0	40.0	44.2	
			SHC	30.9	39.1	47.3	30.3	38.5	46.6	29.7	37.8	45.9	29.0	37.1	45.1	28.2	36.2	44.2	
	72	THC	52.9	52.9	52.9	50.7	50.7	50.7	48.4	48.4	48.4	45.8	45.8	45.8	43.1	43.1	43.1		
		SHC	22.6	30.8	38.9	22.0	30.1	38.3	21.4	29.5	37.6	20.8	28.9	37.0	20.0	28.1	36.2		
	76	THC	—	56.5	56.5	—	54.0	54.0	—	51.5	51.5	—	48.8	48.8	—	45.8	45.8		
		SHC	—	24.0	32.3	—	23.4	31.7	—	22.8	31.0	—	22.1	30.2	—	21.5	29.4		
	1800 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	57.0	57.0	—	54.6	54.6	—	52.0	52.0	—	49.1	49.1	—	46.2	46.2		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	57.5	57.5	—	55.0	55.0	—	52.4	52.4	—	49.5	49.5	—	46.5	46.5		
		SHC	—	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
THC	—Total Capacity (1000 Btuh) Gross

50LC**07 COOLING CAPACITIES - THIRD STAGE, FULL LOAD

50LC**07				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1800 CFM	EAT (wb)	58	THC	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	58.4	
			SHC	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	58.4	
		62	THC	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	60.4	
			SHC	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	60.4	
		67	THC	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	56.4	
			SHC	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	52.3	
	72	THC	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	62.0		
		SHC	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	43.1		
	76	THC	—	85.9	85.9	—	81.5	81.5	—	76.9	76.9	—	72.0	72.0	—	66.8	66.8		
		SHC	—	33.8	43.5	—	32.1	41.7	—	30.2	39.9	—	28.4	37.9	—	26.3	35.8		
	2100 CFM	EAT (wb)	58	THC	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	61.3
				SHC	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	61.3
62			THC	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	63.8	
			SHC	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	63.8	
67			THC	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	57.5	
			SHC	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	57.4	
72		THC	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	63.3		
		SHC	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	46.9		
76		THC	—	87.8	87.8	—	83.3	83.3	—	78.5	78.5	—	73.3	73.3	—	68.0	68.0		
		SHC	—	35.2	46.3	—	33.4	44.5	—	31.6	42.5	—	29.5	40.5	—	27.5	38.4		
2400 CFM		EAT (wb)	58	THC	70.4	70.4	79.5	67.2	67.2	75.9	63.8	63.8	72.1	60.2	60.2	68.1	56.3	56.3	63.7
				SHC	61.3	70.4	79.5	58.5	67.2	75.9	55.5	63.8	72.1	52.3	60.2	68.1	48.8	56.3	63.7
	62		THC	70.7	70.7	81.6	67.3	67.3	78.9	63.9	63.9	75.0	60.2	60.2	70.8	56.3	56.3	66.2	
			SHC	57.8	69.7	81.6	55.6	67.3	78.9	52.7	63.9	75.0	49.6	60.2	70.8	46.3	56.3	66.2	
	67		THC	76.2	76.2	76.2	72.2	72.2	72.2	67.9	67.9	67.9	63.4	63.4	63.4	58.6	58.6	62.3	
			SHC	46.2	58.4	70.6	44.3	56.5	68.6	42.4	54.5	66.7	40.4	52.5	64.5	38.2	50.3	62.3	
	72	THC	83.5	83.5	83.5	79.0	79.0	79.0	74.4	74.4	74.4	69.4	69.4	69.4	64.2	64.2	64.2		
		SHC	34.0	46.3	58.5	32.3	44.5	56.6	30.3	42.5	54.6	28.4	40.5	52.6	26.3	38.3	50.4		
	76	THC	—	89.4	89.4	—	84.6	84.6	—	79.7	79.7	—	74.4	74.4	—	68.8	68.8		
		SHC	—	36.5	48.9	—	34.7	47.0	—	32.8	45.0	—	30.7	42.9	—	28.7	40.8		
	2700 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	90.6	90.6	—	85.7	85.7	—	80.6	80.6	—	75.2	75.2	—	69.4	69.4		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	91.5	91.5	—	86.6	86.6	—	81.3	81.3	—	75.9	75.9	—	70.0	70.0		
		SHC	—	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 Btu/h) Gross
THC	—Total Capacity (1000 Btu/h) Gross

50LC*A07 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-1 (SUBCOOLER MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		1800 / 0.04			2400 / 0.07			3000 / 0.12		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR – Ewb (°F)								
		72	67	62	72	67	62	72	67	62
75	TC	82.0	74.0	64.0	86.0	75.0	71.0	89.0	81.0	72.0
	SHC	37.0	46.0	52.0	43.0	51.0	66.0	48.0	62.0	72.0
	kW	3.5	3.4	3.4	3.5	3.4	3.4	3.5	3.5	3.4
85	TC	77.0	69.0	62.0	81.0	73.0	66.0	84.0	72.0	66.0
	SHC	33.0	42.0	51.0	38.0	49.0	61.0	43.0	53.0	66.0
	kW	3.9	3.9	3.9	4.0	3.9	3.9	4.0	3.9	3.9
95	TC	72.0	64.0	58.0	76.0	68.0	61.0	78.0	70.0	65.0
	SHC	28.0	37.0	47.0	33.0	45.0	57.0	38.0	52.0	65.0
	kW	4.5	4.4	4.4	4.5	4.5	4.4	4.5	4.5	4.4
105	TC	66.0	58.0	53.0	70.0	62.0	56.0	72.0	65.0	60.0
	SHC	23.0	32.0	42.0	28.0	40.0	52.0	33.0	47.0	60.0
	kW	5.1	5.0	5.0	5.1	5.0	5.0	5.1	5.1	5.0
115	TC	60.0	52.0	47.0	64.0	55.0	51.0	66.0	59.0	54.0
	SHC	18.0	27.0	38.0	23.0	34.0	47.0	27.0	42.0	54.0
	kW	5.7	5.7	5.7	5.8	5.7	5.7	5.8	5.7	5.7
125	TC	54.0	48.0	42.0	57.0	51.0	45.0	59.0	52.0	48.0
	SHC	13.0	23.0	33.0	17.0	30.0	42.0	21.0	36.0	48.0
	kW	6.5	6.5	6.4	6.5	6.5	6.4	6.5	6.5	6.4

50LC*A07 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-2 (HOT GAS REHEAT MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		1800 / 0.04			2400 / 0.07			3000 / 0.10		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR – Ewb (°F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	27.0	28.0	29.0	28.0	29.0	30.0	29.0	30.0	31.0
	SHC	5.0	1.0	-2.0	10.0	6.0	2.0	16.0	10.0	6.0
	kW	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.6
75	TC	28.0	29.0	31.0	30.0	31.0	32.0	31.0	32.0	33.0
	SHC	7.0	3.0	0.0	12.0	8.0	4.0	17.0	12.0	8.0
	kW	4.2	4.2	4.3	4.2	4.3	4.3	4.3	4.3	4.3
70	TC	30.0	31.0	32.0	32.0	33.0	34.0	33.0	34.0	35.0
	SHC	8.0	5.0	2.0	14.0	9.0	6.0	19.0	14.0	10.0
	kW	4.0	4.0	4.0	4.0	4.0	4.1	4.0	4.1	4.1
60	TC	34.0	35.0	36.0	36.0	37.0	38.0	37.0	38.0	39.0
	SHC	12.0	9.0	6.0	18.0	13.0	10.0	23.0	18.0	14.0
	kW	3.6	3.6	3.6	3.6	3.6	3.7	3.6	3.7	3.7
50	TC	38.0	39.0	41.0	40.0	41.0	43.0	41.0	42.0	44.0
	SHC	16.0	13.0	10.0	22.0	18.0	14.0	28.0	23.0	19.0
	kW	3.2	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3
40	TC	42.0	44.0	45.0	44.0	46.0	47.0	46.0	47.0	49.0
	SHC	22.0	19.0	17.0	28.0	24.0	21.0	33.0	29.0	25.0
	kW	2.9	3.0	3.0	3.0	3.0	3.1	3.0	3.0	3.1

LEGEND

- kW** —Compressor power input
- SHC** —Sensible capacity (1000 Btuh) Gross
- TC** —Total capacity (1000 Btuh) Gross

50LC**08 COOLING CAPACITIES - FIRST STAGE, PART LOAD

50LC**08				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1500 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	53.9	53.9	—	49.6	49.6	—	45.0	45.0	—	40.4	40.4	—	35.5	35.5		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	50.5	50.5	50.5	46.1	46.1	46.1	41.7	41.7	41.7	37.1	37.1	37.1	32.3	32.3	32.3		
		SHC	19.3	28.6	37.7	16.8	26.0	35.2	14.2	23.4	32.6	11.6	20.8	29.9	8.9	18.0	27.2		
76		THC	—	55.2	55.2	—	50.7	50.7	—	46.0	46.0	—	41.2	41.2	—	36.2	36.2		
		SHC	—	21.8	31.1	—	19.3	28.6	—	16.8	25.9	—	14.1	23.3	—	11.4	20.7		
2000 CFM		EAT (wb)	58	THC	43.9	43.9	50.0	40.3	40.3	46.1	36.5	36.5	42.1	32.7	32.7	37.9	28.6	28.6	33.5
				SHC	37.7	43.9	50.0	34.3	40.3	46.1	30.9	36.5	42.1	27.3	32.7	37.9	23.6	28.6	33.5
	62		THC	43.9	43.9	52.1	40.3	40.3	48.2	36.6	36.6	44.1	32.7	32.7	39.8	28.7	28.7	35.3	
			SHC	35.7	43.9	52.1	32.5	40.3	48.2	29.1	36.6	44.1	25.6	32.7	39.8	22.0	28.7	35.3	
	67		THC	45.9	45.9	50.3	41.8	41.8	47.7	37.5	37.5	44.9	33.2	33.2	41.9	28.8	28.8	38.3	
			SHC	29.7	40.1	50.3	27.1	37.3	47.7	24.5	34.7	44.9	21.6	31.8	41.9	18.6	28.5	38.3	
	72	THC	51.3	51.3	51.3	46.9	46.9	46.9	42.4	42.4	42.4	37.6	37.6	37.6	32.8	32.8	32.8		
		SHC	20.3	30.7	41.1	17.7	28.1	38.5	15.1	25.4	35.9	12.4	22.8	33.2	9.8	20.1	30.5		
	76	THC	—	56.1	56.1	—	51.5	51.5	—	46.7	46.7	—	41.8	41.8	—	36.8	36.8		
		SHC	—	23.0	33.5	—	20.5	30.9	—	17.8	28.3	—	15.2	25.6	—	12.5	22.9		
	2250 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	56.7	56.7	—	52.2	52.2	—	47.3	47.3	—	42.3	42.3	—	37.1	37.1		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	57.3	57.3	—	52.7	52.7	—	47.8	47.8	—	42.7	42.7	—	37.4	37.4		
		SHC	—	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
- THC — Total Capacity (1000 Btuh) Gross

50LC**08 COOLING CAPACITIES - SECOND STAGE, PART LOAD

50LC**08				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1500 CFM	EAT (wb)	58	THC	45.7	45.7	52.3	42.4	42.4	48.7	39.0	39.0	44.9	35.3	35.3	41.0	31.5	31.5	37.0	
			SHC	39.2	45.7	52.3	36.2	42.4	48.7	33.0	39.0	44.9	29.6	35.3	41.0	26.1	31.5	37.0	
		62	THC	47.1	47.1	52.2	43.2	43.2	49.5	39.2	39.2	46.8	35.4	35.4	43.0	31.6	31.6	38.8	
			SHC	36.2	44.2	52.2	33.6	41.5	49.5	30.9	38.8	46.8	27.8	35.4	43.0	24.4	31.6	38.8	
		67	THC	53.1	53.1	53.1	48.8	48.8	48.8	44.5	44.5	44.5	40.0	40.0	40.0	35.2	35.2	35.2	
			SHC	29.3	37.2	45.2	26.6	34.7	42.7	24.0	32.1	40.1	21.4	29.3	37.3	18.6	26.6	34.6	
	72	THC	59.7	59.7	59.7	55.2	55.2	55.2	50.5	50.5	50.5	45.7	45.7	45.7	40.7	40.7	40.7		
		SHC	22.1	30.1	38.2	19.5	27.6	35.6	17.0	25.0	33.1	14.2	22.3	30.3	11.6	19.6	27.7		
	76	THC	—	65.3	65.3	—	60.6	60.6	—	55.8	55.8	—	50.7	50.7	—	45.3	45.3		
		SHC	—	24.4	32.4	—	21.8	29.8	—	19.2	27.3	—	16.6	24.6	—	13.8	21.9		
	1750 CFM	EAT (wb)	58	THC	48.9	48.9	55.9	45.4	45.4	52.1	41.7	41.7	48.1	37.9	37.9	43.9	33.9	33.9	39.5
				SHC	42.1	48.9	55.9	38.8	45.4	52.1	35.5	41.7	48.1	32.0	37.9	43.9	28.3	33.9	39.5
62			THC	49.1	49.1	58.2	45.5	45.5	54.3	41.8	41.8	50.2	38.0	38.0	46.0	33.9	33.9	41.5	
			SHC	39.9	49.0	58.2	36.7	45.5	54.3	33.4	41.8	50.2	30.0	38.0	46.0	26.4	33.9	41.5	
67			THC	54.8	54.8	54.8	50.4	50.4	50.4	45.9	45.9	45.9	41.1	41.1	42.3	36.3	36.3	39.5	
			SHC	31.7	41.0	50.4	29.1	38.4	47.8	26.4	35.8	45.0	23.7	33.1	42.3	20.9	30.2	39.5	
72		THC	61.5	61.5	61.5	56.8	56.8	56.8	52.0	52.0	52.0	47.0	47.0	47.0	41.7	41.7	41.7		
		SHC	23.3	32.7	42.0	20.7	30.0	39.5	18.0	27.4	36.8	15.3	24.7	34.0	12.6	21.9	31.3		
76		THC	—	67.3	67.3	—	62.3	62.3	—	57.2	57.2	—	52.0	52.0	—	46.5	46.5		
		SHC	—	25.8	35.2	—	23.2	32.7	—	20.6	29.9	—	17.9	27.3	—	15.1	24.6		
2000 CFM		EAT (wb)	58	THC	51.7	51.7	58.9	48.0	48.0	54.8	44.1	44.1	50.6	40.1	40.1	46.3	35.9	35.9	41.7
				SHC	44.5	51.7	58.9	41.0	48.0	54.8	37.5	44.1	50.6	33.8	40.1	46.3	30.0	35.9	41.7
	62		THC	51.8	51.8	61.3	48.1	48.1	57.2	44.2	44.2	52.9	40.2	40.2	48.5	35.9	35.9	43.7	
			SHC	42.2	51.8	61.3	38.8	48.1	57.2	35.4	44.2	52.9	31.8	40.2	48.5	28.1	35.9	43.7	
	67		THC	56.2	56.2	56.2	51.6	51.6	52.7	47.0	47.0	49.9	42.1	42.1	47.1	37.1	37.1	44.2	
			SHC	34.1	44.7	55.3	31.4	42.0	52.7	28.7	39.3	49.9	25.9	36.5	47.1	23.1	33.6	44.2	
	72	THC	62.8	62.8	62.8	58.0	58.0	58.0	53.0	53.0	53.0	47.9	47.9	47.9	42.5	42.5	42.5		
		SHC	24.4	35.1	45.7	21.7	32.4	43.1	19.0	29.7	40.4	16.3	27.0	37.6	13.5	24.2	34.8		
	76	THC	—	68.6	68.6	—	63.6	63.6	—	58.4	58.4	—	52.9	52.9	—	47.3	47.3		
		SHC	—	27.2	37.9	—	24.6	35.3	—	21.9	32.7	—	19.2	29.8	—	16.4	27.1		
	2250 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	69.7	69.7	—	64.5	64.5	—	59.2	59.2	—	53.7	53.7	—	48.0	48.0		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	70.6	70.6	—	65.3	65.3	—	60.0	60.0	—	54.3	54.3	—	48.5	48.5		
		SHC	—	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
THC	—Total Capacity (1000 Btuh) Gross

50LC**08 COOLING CAPACITIES - THIRD STAGE, FULL LOAD

50LC**08				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
2250 CFM	EAT (wb)	58	THC	77.4	77.4	88.3	72.3	72.3	82.9	67.0	67.0	77.1	61.4	61.4	71.0	55.6	55.6	64.6	
			SHC	66.5	77.4	88.3	61.8	72.3	82.9	56.9	67.0	77.1	51.9	61.4	71.0	46.5	55.6	64.6	
		62	THC	82.3	82.3	83.8	76.1	76.1	79.8	69.6	69.6	75.7	63.0	63.0	71.5	56.1	56.1	67.1	
			SHC	59.8	71.8	83.8	55.8	67.8	79.8	51.7	63.7	75.7	47.6	59.5	71.5	43.2	55.2	67.1	
		67	THC	92.3	92.3	92.3	85.7	85.7	85.7	78.8	78.8	78.8	71.5	71.5	71.5	64.0	64.0	64.0	
			SHC	49.2	61.2	73.2	45.2	57.2	69.2	41.1	53.1	65.1	37.0	49.0	61.0	32.8	44.8	56.7	
	72	THC	103.3	103.3	103.3	96.1	96.1	96.1	88.7	88.7	88.7	81.0	81.0	81.0	72.9	72.9	72.9		
		SHC	38.4	50.5	62.5	34.4	46.5	58.6	30.4	42.4	54.5	26.2	38.3	50.4	22.0	34.0	46.1		
	76	THC	—	112.4	112.4	—	104.9	104.9	—	97.1	97.1	—	89.0	89.0	—	80.4	80.4		
		SHC	—	41.6	53.6	—	37.6	49.7	—	33.6	45.6	—	29.4	41.5	—	25.3	37.3		
	2650 CFM	EAT (wb)	58	THC	83.5	83.5	95.1	78.0	78.0	89.1	72.2	72.2	83.0	66.3	66.3	76.4	60.1	60.1	69.6
				SHC	71.9	83.5	95.1	66.9	78.0	89.1	61.6	72.2	83.0	56.2	66.3	76.4	50.5	60.1	69.6
62			THC	85.9	85.9	94.1	79.5	79.5	89.9	72.8	72.8	85.6	66.4	66.4	80.0	60.2	60.2	72.9	
			SHC	66.0	80.0	94.1	61.9	76.0	89.9	57.7	71.7	85.6	52.8	66.4	80.0	47.4	60.2	72.9	
67			THC	95.8	95.8	95.8	88.8	88.8	88.8	81.6	81.6	81.6	74.0	74.0	74.0	66.2	66.2	66.2	
			SHC	53.3	67.5	81.6	49.2	63.4	77.5	45.1	59.2	73.3	40.9	55.0	69.0	36.6	50.6	64.6	
72		THC	106.9	106.9	106.9	99.4	99.4	99.4	91.7	91.7	91.7	83.6	83.6	83.6	75.1	75.1	75.1		
		SHC	40.5	54.6	68.8	36.4	50.5	64.7	32.3	46.4	60.5	28.0	42.2	56.4	23.7	37.8	52.0		
76		THC	—	116.1	116.1	—	108.2	108.2	—	100.0	100.0	—	91.6	91.6	—	82.7	82.7		
		SHC	—	44.1	58.2	—	40.0	54.2	—	35.9	50.1	—	31.7	45.9	—	27.4	41.6		
3000 CFM,		EAT (wb)	58	THC	87.9	87.9	100.0	82.1	82.1	93.8	76.1	76.1	87.3	69.8	69.8	80.3	63.3	63.3	73.2
				SHC	75.8	87.9	100.0	70.5	82.1	93.8	65.0	76.1	87.3	59.3	69.8	80.3	53.3	63.3	73.2
	62		THC	88.6	88.6	102.6	82.3	82.3	97.7	76.2	76.2	91.1	70.0	70.0	84.0	63.4	63.4	76.6	
			SHC	71.2	86.9	102.6	66.7	82.2	97.7	61.4	76.2	91.1	55.9	70.0	84.0	50.1	63.4	76.6	
	67		THC	98.2	98.2	98.2	91.0	91.0	91.0	83.5	83.5	83.5	75.8	75.8	75.9	67.7	67.7	71.4	
			SHC	56.7	72.6	88.5	52.7	68.5	84.4	48.4	64.3	80.1	44.1	60.0	75.9	39.7	55.5	71.4	
	72	THC	109.2	109.2	109.2	101.6	101.6	101.6	93.6	93.6	93.6	85.2	85.2	85.2	76.5	76.5	76.5		
		SHC	42.0	58.0	74.0	37.9	53.9	69.8	33.7	49.6	65.6	29.4	45.3	61.3	25.1	41.0	56.9		
	76	THC	—	118.5	118.5	—	110.4	110.4	—	102.0	102.0	—	93.2	93.2	—	84.0	84.0		
		SHC	—	45.9	62.0	—	41.9	58.0	—	37.7	53.7	—	33.4	49.4	—	29.1	45.0		
	3400 CFM	EAT (wb)	58	THC	92.2	92.2	104.8	86.2	86.2	98.2	79.9	79.9	91.4	73.3	73.3	84.1	66.4	66.4	76.6
				SHC	79.7	92.2	104.8	74.1	86.2	98.2	68.3	79.9	91.4	62.4	73.3	84.1	56.1	66.4	76.6
62			THC	92.3	92.3	109.2	86.3	86.3	102.4	80.0	80.0	95.4	73.4	73.4	87.9	66.5	66.5	80.1	
			SHC	75.6	92.3	109.2	70.2	86.3	102.4	64.5	80.0	95.4	58.8	73.4	87.9	52.7	66.5	80.1	
67			THC	100.3	100.3	100.3	92.9	92.9	92.9	85.2	85.2	87.8	77.3	77.3	83.4	69.1	69.1	78.7	
			SHC	60.5	78.4	96.2	56.3	74.2	92.0	52.0	69.8	87.8	47.6	65.4	83.4	43.1	60.9	78.7	
72		THC	111.3	111.3	111.3	103.4	103.4	103.4	95.3	95.3	95.3	86.7	86.7	86.7	77.8	77.8	77.8		
		SHC	43.7	61.6	79.7	39.5	57.5	75.5	35.3	53.2	71.2	30.9	48.8	66.8	26.5	44.5	62.3		
76		THC	—	120.6	120.6	—	112.3	112.3	—	103.6	103.6	—	94.7	94.7	—	85.2	85.2		
		SHC	—	48.0	66.1	—	43.9	61.9	—	39.6	57.6	—	35.3	53.2	—	30.8	48.7		
3750 CFM		EAT (wb)	58	THC	95.5	95.5	108.4	89.2	89.2	101.6	82.7	82.7	94.5	75.9	75.9	87.0	68.6	68.6	79.2
				SHC	82.5	95.5	108.4	76.7	89.2	101.6	70.8	82.7	94.5	64.6	75.9	87.0	58.1	68.6	79.2
	62		THC	95.6	95.6	112.9	89.3	89.3	105.9	82.8	82.8	98.6	76.0	76.0	90.9	68.7	68.7	82.9	
			SHC	78.3	95.6	112.9	72.7	89.3	105.9	67.0	82.8	98.6	60.9	76.0	90.9	54.7	68.7	82.9	
	67		THC	101.9	101.9	102.9	94.4	94.4	98.6	86.6	86.6	94.2	78.5	78.5	89.6	70.2	70.2	84.9	
			SHC	63.5	83.2	102.9	59.3	78.9	98.6	55.0	74.6	94.2	50.5	70.1	89.6	46.0	65.4	84.9	
	72	THC	112.8	112.8	112.8	104.8	104.8	104.8	96.4	96.4	96.4	87.8	87.8	87.8	78.7	78.7	78.7		
		SHC	44.9	64.7	84.4	40.8	60.5	80.2	36.6	56.2	75.9	32.2	51.8	71.5	27.7	47.3	67.0		
	76	THC	—	122.1	122.1	—	113.6	113.6	—	104.7	104.7	—	95.6	95.6	—	86.0	86.0		
		SHC	—	49.6	69.4	—	45.4	65.2	—	41.1	60.8	—	36.8	56.4	—	32.2	51.6		

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
- THC — Total Capacity (1000 Btuh) Gross

50LC*A08 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-1 (SUBCOOLER MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		2250 / 0.01			3000 / 0.02			3750 / 0.05		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR – Ewb (°F)								
		72	67	62	72	67	62	72	67	62
75	TC	109.0	97.0	86.0	113.0	101.0	93.0	116.0	108.0	99.0
	SHC	48.0	58.0	69.0	53.0	68.0	84.0	60.0	81.0	96.0
	kW	4.5	4.5	4.5	5.3	5.1	4.5	5.3	4.6	4.5
85	TC	101.0	89.0	79.0	108.0	95.0	85.0	109.0	100.0	91.0
	SHC	41.0	52.0	62.0	48.0	62.0	77.0	53.0	73.0	88.0
	kW	5.2	5.1	5.1	5.2	5.1	5.1	5.1	5.1	5.1
95	TC	93.0	82.0	72.0	99.0	87.0	77.0	102.0	91.0	82.0
	SHC	34.0	45.0	56.0	41.0	56.0	70.0	47.0	65.0	82.0
	kW	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
105	TC	84.0	74.0	64.0	90.0	79.0	69.0	93.0	82.0	75.0
	SHC	27.0	38.0	49.0	33.0	48.0	63.0	39.0	58.0	72.0
	kW	6.6	6.6	6.5	6.6	6.6	6.5	6.6	6.6	6.5
115	TC	76.0	66.0	56.0	80.0	70.0	61.0	83.0	73.0	66.0
	SHC	19.0	31.0	42.0	25.0	40.0	56.0	31.0	50.0	64.0
	kW	7.5	7.4	7.4	7.5	7.4	7.4	7.5	7.4	7.4
125	TC	67.0	57.0	48.0	71.0	61.0	53.0	73.0	63.0	57.0
	SHC	11.0	23.0	35.0	17.0	32.0	48.0	22.0	41.0	57.0
	kW	8.5	8.5	8.4	8.5	8.5	8.4	8.5	8.5	8.4

50LC*A08 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-2 (HOT GAS REHEAT MODEL)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		2250 / 0.01			3000 / 0.02			3750 / 0.05		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR – Ewb (°F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	31.0	33.0	35.0	33.0	34.0	36.0	33.0	35.0	36.0
	SHC	3.0	-1.0	-5.0	10.0	4.0	-1.0	16.0	10.0	4.0
	kW	6.8	6.8	6.9	6.8	6.8	6.9	6.8	6.8	6.9
75	TC	35.0	36.0	38.0	36.0	38.0	39.0	37.0	39.0	40.0
	SHC	6.0	2.0	-2.0	13.0	7.0	2.0	20.0	13.0	7.0
	kW	6.4	6.5	6.5	6.4	6.5	6.5	6.5	6.5	6.6
70	TC	38.0	40.0	41.0	40.0	41.0	43.0	40.0	42.0	44.0
	SHC	10.0	5.0	2.0	16.0	11.0	6.0	23.0	16.0	11.0
	kW	6.1	6.1	6.2	6.1	6.2	6.2	6.1	6.2	6.2
60	TC	44.0	46.0	48.0	46.0	48.0	50.0	47.0	49.0	51.0
	SHC	16.0	12.0	8.0	22.0	17.0	12.0	30.0	23.0	18.0
	kW	5.5	5.6	5.6	5.5	5.6	5.6	5.6	5.6	5.7
50	TC	51.0	53.0	54.0	53.0	55.0	57.0	54.0	56.0	58.0
	SHC	22.0	18.0	15.0	29.0	24.0	19.0	37.0	30.0	25.0
	kW	5.0	5.0	5.1	5.0	5.1	5.1	5.1	5.1	5.2
40	TC	57.0	59.0	61.0	60.0	62.0	64.0	61.0	63.0	65.0
	SHC	29.0	25.0	22.0	36.0	31.0	27.0	44.0	38.0	32.0
	kW	4.6	4.6	4.7	4.6	4.7	4.7	4.6	4.7	4.7

LEGEND

- kW** —Compressor power input
- SHC** —Sensible capacity (1000 Btuh) Gross
- TC** —Total capacity (1000 Btuh) Gross



50LC**09 COOLING CAPACITIES - FIRST STAGE, PART LOAD

50LC**09				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1700 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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		
		SHC	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	THC	—	58.1	58.1	—	55.0	55.0	—	51.8	51.8	—	48.3	48.3	—	44.7	44.7		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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		
		SHC	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		THC	—	59.1	59.1	—	56.0	56.0	—	52.6	52.6	—	49.0	49.0	—	45.3	45.3		
		SHC	—	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	THC	49.3	49.3	55.8	47.0	47.0	53.1	44.5	44.5	50.3	41.8	41.8	47.3	39.0	39.0	44.2
				SHC	43.0	49.3	55.8	41.0	47.0	53.1	38.7	44.5	50.3	36.3	41.8	47.3	33.8	39.0	44.2
	62		THC	49.4	49.4	57.9	47.1	47.1	55.2	44.6	44.6	52.3	41.8	41.8	49.1	39.0	39.0	45.9	
			SHC	41.0	49.4	57.9	38.9	47.1	55.2	36.8	44.6	52.3	34.5	41.8	49.1	32.1	39.0	45.9	
	67		THC	50.5	50.5	58.4	47.7	47.7	56.9	44.8	44.8	55.3	41.9	41.9	52.7	39.0	39.0	49.4	
			SHC	35.3	46.9	58.4	34.0	45.4	56.9	32.6	43.9	55.3	30.8	41.8	52.7	28.7	39.0	49.4	
	72	THC	55.4	55.4	55.4	52.3	52.3	52.3	49.0	49.0	49.0	45.6	45.6	45.6	42.1	42.1	42.2		
		SHC	24.1	35.8	47.5	22.9	34.6	46.2	21.6	33.2	44.9	20.3	32.0	43.6	18.9	30.5	42.2		
	76	THC	—	59.8	59.8	—	56.6	56.6	—	53.1	53.1	—	49.4	49.4	—	45.7	45.7		
		SHC	—	26.6	38.4	—	25.4	37.1	—	24.2	35.9	—	22.8	34.5	—	21.5	33.2		
	2550 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	60.4	60.4	—	57.0	57.0	—	53.6	53.6	—	49.9	49.9	—	46.0	46.0		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	60.7	60.7	—	57.4	57.4	—	53.9	53.9	—	50.2	50.2	—	46.3	46.3		
		SHC	—	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
- THC — Total Capacity (1000 Btuh) Gross

50LC**09 COOLING CAPACITIES - SECOND STAGE, PART LOAD

50LC**09				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
1700 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	78.6	78.6	—	74.9	74.9	—	70.8	70.8	—	66.5	66.5	—	61.9	61.9		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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	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		THC	—	80.6	80.6	—	76.7	76.7	—	72.5	72.5	—	68.1	68.1	—	63.2	63.2		
		SHC	—	32.5	43.1	—	30.8	41.4	—	29.1	39.8	—	27.3	37.9	—	25.4	36.1		
2250 CFM		EAT (wb)	58	THC	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
				SHC	55.5	63.7	72.0	52.9	60.8	68.8	50.2	57.9	65.5	47.4	54.7	62.0	44.3	51.2	58.1
	62		THC	63.8	63.8	74.9	60.9	60.9	71.6	58.0	58.0	68.2	54.8	54.8	64.4	51.3	51.3	60.5	
			SHC	52.7	63.8	74.9	50.3	60.9	71.6	47.8	58.0	68.2	45.0	54.8	64.4	42.0	51.3	60.5	
	67		THC	68.9	68.9	68.9	65.3	65.3	65.3	61.6	61.6	62.4	57.6	57.6	60.5	53.3	53.3	58.5	
			SHC	42.4	54.2	65.9	40.8	52.5	64.3	39.0	50.7	62.4	37.1	48.8	60.5	35.2	46.8	58.5	
	72	THC	76.0	76.0	76.0	72.1	72.1	72.1	68.1	68.1	68.1	63.7	63.7	63.7	59.1	59.1	59.1		
		SHC	31.0	42.8	54.7	29.3	41.1	52.9	27.7	39.4	51.2	25.8	37.6	49.3	23.9	35.7	47.4		
	76	THC	—	82.0	82.0	—	77.9	77.9	—	73.6	73.6	—	69.0	69.0	—	64.1	64.1		
		SHC	—	33.6	45.5	—	32.0	43.9	—	30.2	42.1	—	28.4	40.3	—	26.5	38.3		
	2550 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	83.3	83.3	—	79.1	79.1	—	74.6	74.6	—	69.9	69.9	—	64.8	64.8		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	84.0	84.0	—	79.8	79.8	—	75.3	75.3	—	70.5	70.5	—	65.3	65.3		
		SHC	—	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
THC	—Total Capacity (1000 Btuh) Gross

50LC**09 COOLING CAPACITIES - THIRD STAGE, FULL LOAD

50LC**09				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
2250 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	124.0	124.0	—	117.2	117.2	—	110.0	110.0	—	102.3	102.3	—	94.1	94.1		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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	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		THC	—	127.5	127.5	—	120.3	120.3	—	112.8	112.8	—	104.7	104.7	—	96.2	96.2		
		SHC	—	49.7	65.8	—	46.3	62.4	—	42.8	58.8	—	39.1	55.0	—	35.2	51.1		
3400 CFM		EAT (wb)	58	THC	99.5	99.5	112.8	94.3	94.3	107.1	88.7	88.7	100.9	82.8	82.8	94.5	76.5	76.5	87.7
				SHC	86.2	99.5	112.8	81.4	94.3	107.1	76.4	88.7	100.9	71.1	82.8	94.5	65.4	76.5	87.7
	62		THC	99.9	99.9	116.3	94.4	94.4	111.5	88.8	88.8	105.2	82.9	82.9	98.6	76.6	76.6	91.5	
			SHC	81.3	98.9	116.3	77.3	94.4	111.5	72.4	88.8	105.2	67.3	82.9	98.6	61.8	76.6	91.5	
	67		THC	109.1	109.1	109.1	102.6	102.6	102.6	95.7	95.7	95.7	88.4	88.4	89.2	80.8	80.8	85.2	
			SHC	64.7	82.5	100.3	61.2	79.0	96.7	57.5	75.3	93.0	53.8	71.5	89.2	49.9	67.6	85.2	
	72	THC	120.3	120.3	120.3	113.3	113.3	113.3	106.0	106.0	106.0	98.2	98.2	98.2	90.0	90.0	90.0		
		SHC	47.7	65.5	83.4	44.2	62.0	79.8	40.6	58.4	76.1	36.9	54.6	72.3	33.1	50.7	68.4		
	76	THC	—	129.9	129.9	—	122.5	122.5	—	114.7	114.7	—	106.4	106.4	—	97.6	97.6		
		SHC	—	51.7	69.7	—	48.3	66.2	—	44.6	62.5	—	40.9	58.6	—	37.0	54.6		
	3850 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	131.9	131.9	—	124.3	124.3	—	116.2	116.2	—	107.7	107.7	—	98.7	98.7		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	133.4	133.4	—	125.6	125.6	—	117.3	117.3	—	108.6	108.6	—	99.5	99.5		
		SHC	—	55.4	77.3	—	51.8	73.5	—	48.1	69.6	—	44.1	65.5	—	40.0	61.1		

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
- THC — Total Capacity (1000 Btuh) Gross

50LC*A09 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-1 (SUBCOOLER MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		2550 / 0.03			3400 / 0.05			4250 / 0.08		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR – Ewb (°F)								
		72	67	62	72	67	62	72	67	62
75	TC	121.0	108.0	96.0	128.0	115.0	104.0	133.0	120.0	111.0
	SHC	55.0	67.0	78.0	64.0	79.0	95.0	71.0	91.0	107.0
	kW	5.3	5.2	5.1	5.3	5.2	5.2	5.3	5.2	5.2
85	TC	113.0	101.0	90.0	120.0	108.0	97.0	124.0	112.0	103.0
	SHC	48.0	60.0	72.0	56.0	72.0	88.0	64.0	84.0	101.0
	kW	6.0	5.9	5.8	6.0	5.9	5.9	6.0	6.0	5.9
95	TC	105.0	94.0	83.0	112.0	100.0	89.0	115.0	104.0	95.0
	SHC	41.0	54.0	66.0	49.0	65.0	82.0	56.0	76.0	95.0
	kW	6.7	6.7	6.6	6.8	6.7	6.6	6.8	6.7	6.7
105	TC	97.0	86.0	76.0	103.0	92.0	82.0	107.0	95.0	88.0
	SHC	34.0	47.0	60.0	41.0	58.0	75.0	48.0	69.0	85.0
	kW	7.6	7.5	7.5	7.7	7.6	7.5	7.7	7.6	7.6
115	TC	89.0	78.0	69.0	94.0	83.0	74.0	97.0	87.0	81.0
	SHC	27.0	40.0	53.0	34.0	51.0	68.0	40.0	61.0	73.0
	kW	8.7	8.6	8.5	8.7	8.6	8.5	8.7	8.6	8.6
125	TC	80.0	70.0	61.0	85.0	75.0	66.0	88.0	78.0	72.0
	SHC	19.0	33.0	46.0	26.0	43.0	60.0	32.0	53.0	69.0
	kW	9.8	9.7	9.7	9.8	9.8	9.7	9.9	9.8	9.7

50LC*A09 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-2 (HOT GAS REHEAT MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		2550 / 0.03			3400 / 0.05			4250 / 0.08		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR – Ewb (°F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	39.0	41.0	42.0	40.0	42.0	43.0	41.0	43.0	44.0
	SHC	8.0	3.0	-1.0	15.0	9.0	3.0	22.0	15.0	8.0
	kW	7.8	7.8	7.9	7.8	7.8	7.9	7.8	7.8	7.9
75	TC	43.0	44.0	45.0	43.0	45.0	46.0	44.0	46.0	47.0
	SHC	12.0	6.0	2.0	18.0	12.0	6.0	25.0	18.0	11.0
	kW	7.4	7.4	7.5	7.4	7.4	7.5	7.4	7.4	7.5
70	TC	46.0	48.0	48.0	46.0	48.0	50.0	48.0	49.0	51.0
	SHC	15.0	10.0	5.0	21.0	14.0	9.0	29.0	21.0	14.0
	kW	7.0	7.0	7.1	7.0	7.0	7.1	7.0	7.1	7.1
60	TC	51.0	56.0	57.0	56.0	55.0	57.0	55.0	56.0	57.0
	SHC	20.0	18.0	13.0	30.0	21.0	16.0	35.0	27.0	21.0
	kW	6.3	6.4	6.4	6.4	6.4	6.4	6.3	6.4	6.5
50	TC	60.0	61.0	64.0	61.0	64.0	66.0	63.0	65.0	67.0
	SHC	28.0	23.0	20.0	35.0	30.0	25.0	44.0	36.0	30.0
	kW	5.7	5.8	5.8	5.8	5.8	5.9	5.8	5.8	5.9
40	TC	66.0	68.0	69.0	68.0	71.0	71.0	70.0	72.0	72.0
	SHC	34.0	30.0	25.0	42.0	37.0	30.0	50.0	43.0	36.0
	kW	5.2	5.3	5.3	5.3	5.3	5.4	5.3	5.4	5.4

LEGEND

- kW** —Compressor power input
- SHC** —Sensible capacity (1000 Btuh) Gross
- TC** —Total capacity (1000 Btuh) Gross

50LC**12 COOLING CAPACITIES - FIRST STAGE, PART LOAD

50LC**12				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
2000 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	67.3	67.3	—	64.1	64.1	—	60.5	60.5	—	56.7	56.7	—	52.7	52.7		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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	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		THC	—	68.3	68.3	—	64.9	64.9	—	61.3	61.3	—	57.5	57.5	—	53.4	53.4		
		SHC	—	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	THC	57.8	57.8	65.1	55.3	55.3	62.3	52.6	52.6	59.3	49.6	49.6	56.0	46.5	46.5	52.5
				SHC	50.5	57.8	65.1	48.3	55.3	62.3	45.9	52.6	59.3	43.3	49.6	56.0	40.6	46.5	52.5
	62		THC	57.9	57.9	67.7	55.4	55.4	64.7	52.7	52.7	61.5	49.7	49.7	58.1	46.6	46.6	54.5	
			SHC	48.1	57.9	67.7	46.0	55.4	64.7	43.7	52.7	61.5	41.2	49.7	58.1	38.6	46.6	54.5	
	67		THC	58.6	58.6	69.7	55.7	55.7	68.3	52.8	52.8	65.5	49.7	49.7	62.4	46.6	46.6	58.5	
			SHC	42.2	56.0	69.7	41.0	54.6	68.3	39.2	52.4	65.5	37.1	49.7	62.4	34.8	46.6	58.5	
	72	THC	64.1	64.1	64.1	60.8	60.8	60.8	57.3	57.3	57.3	53.6	53.6	53.6	49.7	49.7	51.6		
		SHC	28.8	42.7	56.6	27.6	41.5	55.5	26.3	40.3	54.3	25.1	39.0	52.9	23.7	37.6	51.6		
	76	THC	—	69.1	69.1	—	65.7	65.7	—	62.1	62.1	—	58.2	58.2	—	54.0	54.0		
		SHC	—	31.7	45.7	—	30.6	44.7	—	29.3	43.5	—	28.1	42.1	—	26.8	40.9		
	2950 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	69.7	69.7	—	66.3	66.3	—	62.6	62.6	—	58.6	58.6	—	54.3	54.3		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	70.2	70.2	—	66.8	66.8	—	63.0	63.0	—	59.0	59.0	—	54.7	54.7		
		SHC	—	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
- THC — Total Capacity (1000 Btuh) Gross

50LC**12 COOLING CAPACITIES - SECOND STAGE, PART LOAD

50LC**12				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
2000 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	92.5	92.5	—	87.4	87.4	—	81.7	81.7	—	75.5	75.5	—	68.7	68.7		
		SHC	—	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	THC	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	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			THC	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	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			THC	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	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	
72		THC	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	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		THC	—	95.0	95.0	—	89.6	89.6	—	83.8	83.8	—	77.4	77.4	—	70.4	70.4		
		SHC	—	36.4	48.8	—	33.6	46.0	—	30.8	43.1	—	27.7	40.1	—	24.5	36.9		
2650 CFM		EAT (wb)	58	THC	73.2	73.2	83.3	69.0	69.0	78.7	64.5	64.5	73.8	59.7	59.7	68.4	54.5	54.5	62.7
				SHC	63.3	73.2	83.3	59.5	69.0	78.7	55.4	64.5	73.8	50.9	59.7	68.4	46.2	54.5	62.7
	62		THC	73.3	73.3	86.7	69.2	69.2	82.0	64.6	64.6	77.0	59.8	59.8	71.5	54.5	54.5	65.6	
			SHC	60.1	73.3	86.7	56.4	69.2	82.0	52.4	64.6	77.0	48.1	59.8	71.5	43.5	54.5	65.6	
	67		THC	80.2	80.2	80.2	75.2	75.2	75.2	69.6	69.6	70.1	63.7	63.7	66.9	57.2	57.2	63.6	
			SHC	48.0	62.0	76.1	45.1	59.2	73.2	42.1	56.2	70.1	38.9	52.9	66.9	35.6	49.5	63.6	
	72	THC	89.3	89.3	89.3	84.0	84.0	84.0	78.2	78.2	78.2	71.9	71.9	71.9	65.0	65.0	65.0		
		SHC	34.9	48.9	63.1	32.1	46.1	60.3	29.1	43.2	57.3	25.9	40.1	54.1	22.6	36.8	50.9		
	76	THC	—	97.2	97.2	—	91.7	91.7	—	85.6	85.6	—	79.0	79.0	—	71.9	71.9		
		SHC	—	38.3	52.6	—	35.6	49.7	—	32.7	46.8	—	29.5	43.8	—	26.3	40.5		
	2950 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	98.6	98.6	—	93.0	93.0	—	86.8	86.8	—	80.1	80.1	—	72.8	72.8		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	99.9	99.9	—	94.2	94.2	—	87.9	87.9	—	81.1	81.1	—	73.7	73.7		
		SHC	—	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
- THC — Total Capacity (1000 Btuh) Gross

50LC**12 COOLING CAPACITIES - THIRD STAGE, FULL LOAD

50LC**12				AMBIENT TEMPERATURE (°F)															
				85			95			105			115			125			
				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	
3000 CFM	EAT (wb)	58	THC	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	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	THC	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	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	THC	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	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	
	72	THC	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	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	THC	—	144.6	144.6	—	136.4	136.4	—	127.6	127.6	—	118.0	118.0	—	107.8	107.8		
		SHC	—	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	THC	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	95.2	110.0	124.9	89.4	103.7	118.1	83.4	97.1	110.9	77.0	90.0	103.1	70.1	82.5	94.8
62			THC	112.2	112.2	124.4	105.1	105.1	119.7	97.5	97.5	114.8	90.2	90.2	107.5	82.6	82.6	99.0	
			SHC	87.8	106.1	124.4	83.4	101.6	119.7	78.6	96.6	114.8	72.7	90.2	107.5	66.1	82.6	99.0	
67			THC	123.8	123.8	123.8	116.1	116.1	116.1	107.7	107.7	107.7	98.9	98.9	98.9	89.4	89.4	89.4	
			SHC	70.7	89.1	107.5	66.3	84.7	103.2	61.8	80.2	98.7	57.0	75.5	93.9	52.1	70.5	88.9	
72		THC	137.2	137.2	137.2	129.0	129.0	129.0	120.1	120.1	120.1	110.8	110.8	110.8	100.7	100.7	100.7		
		SHC	53.3	71.9	90.4	49.0	67.6	86.1	44.6	63.1	81.5	39.9	58.4	76.9	35.0	53.5	72.1		
76		THC	—	148.6	148.6	—	140.0	140.0	—	130.8	130.8	—	121.0	121.0	—	110.5	110.5		
		SHC	—	57.8	76.5	—	53.5	72.2	—	49.1	67.9	—	44.6	63.2	—	39.7	58.4		
4000 CFM		EAT (wb)	58	THC	115.6	115.6	131.1	109.1	109.1	124.0	102.1	102.1	116.4	94.7	94.7	108.2	86.7	86.7	99.5
				SHC	100.1	115.6	131.1	94.2	109.1	124.0	87.8	102.1	116.4	81.1	94.7	108.2	73.9	86.7	99.5
	62		THC	116.0	116.0	135.5	109.3	109.3	129.2	102.3	102.3	121.3	94.8	94.8	112.9	86.8	86.8	103.9	
			SHC	94.6	115.1	135.5	89.3	109.3	129.2	83.2	102.3	121.3	76.6	94.8	112.9	69.7	86.8	103.9	
	67		THC	126.8	126.8	126.8	118.8	118.8	118.8	110.3	110.3	110.3	101.1	101.1	103.2	91.5	91.5	98.1	
			SHC	75.3	96.1	117.1	70.9	91.7	112.6	66.2	87.2	108.0	61.4	82.3	103.2	56.5	77.2	98.1	
	72	THC	140.1	140.1	140.1	131.7	131.7	131.7	122.8	122.8	122.8	112.9	112.9	112.9	102.6	102.6	102.6		
		SHC	55.4	76.3	97.4	51.1	72.1	93.0	46.6	67.6	88.5	41.8	62.8	83.8	36.9	57.8	78.8		
	76	THC	—	151.5	151.5	—	142.7	142.7	—	133.4	133.4	—	123.3	123.3	—	112.5	112.5		
		SHC	—	60.4	81.5	—	56.1	77.2	—	51.6	72.7	—	46.9	68.1	—	42.1	63.2		
	4500 CFM	EAT (wb)	58	THC	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	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			THC	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	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			THC	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	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		THC	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	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		THC	—	154.0	154.0	—	145.0	145.0	—	135.4	135.4	—	125.1	125.1	—	114.0	114.0		
		SHC	—	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	THC	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	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		THC	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	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		THC	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	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	THC	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	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	THC	—	155.9	155.9	—	146.8	146.8	—	137.0	137.0	—	126.6	126.6	—	115.3	115.3		
		SHC	—	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
- THC — Total Capacity (1000 Btuh) Gross

50LC*A12 REHEAT MODE #1 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-1 (SUBCOOLER MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		3000 / 0.02			4000 / 0.04			5000 / 0.07		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR– Ewb (°F)								
		72	67	62	72	67	62	72	67	62
75	TC	129.0	119.0	106.0	142.0	127.0	114.0	147.0	132.0	121.0
	SHC	54.0	72.0	85.0	68.0	86.0	104.0	77.0	100.0	121.0
	kW	7.6	7.6	7.6	7.7	7.6	7.6	7.8	7.7	7.6
85	TC	124.0	110.0	97.0	132.0	117.0	105.0	137.0	122.0	113.0
	SHC	50.0	63.0	77.0	59.0	77.0	96.0	68.0	91.0	110.0
	kW	8.4	8.3	8.3	8.4	8.3	8.3	8.5	8.4	8.3
95	TC	114.0	101.0	89.0	122.0	108.0	96.0	126.0	112.0	102.0
	SHC	41.0	55.0	69.0	50.0	69.0	88.0	58.0	82.0	102.0
	kW	9.2	9.1	9.1	9.2	9.2	9.1	9.2	9.2	9.1
105	TC	104.0	91.0	79.0	111.0	98.0	86.0	115.0	102.0	92.0
	SHC	32.0	47.0	61.0	40.0	60.0	79.0	48.0	72.0	92.0
	kW	10.1	10.0	10.0	10.1	10.1	10.0	10.1	10.1	10.0
115	TC	94.0	81.0	70.0	99.0	87.0	76.0	103.0	91.0	82.0
	SHC	23.0	38.0	53.0	30.0	50.0	70.0	37.0	62.0	82.0
	kW	11.2	11.1	11.0	11.2	11.1	11.1	11.2	11.1	11.1
125	TC	83.0	71.0	60.0	88.0	76.0	66.0	91.0	79.0	71.0
	SHC	13.0	29.0	44.0	20.0	41.0	60.0	27.0	52.0	71.0
	kW	12.3	12.3	12.2	12.3	12.3	12.2	12.3	12.3	12.2

50LC*A12 REHEAT MODE #2 CAPACITIES (MBTUH), STANDARD UNITS

REHEAT-2 (HOT GAS REHEAT MODE)		AIR ENTERING EVAPORATOR – SCFM/BF (80°F db)								
		3000 / 0.02			4000 / 0.04			5000 / 0.06		
OUTDOOR AIR TEMP (°F)		AIR ENTERING EVAPORATOR– Ewb (°F)								
		62.5	64	65.3	62.5	64	65.3	62.5	64	65.3
80	TC	43.0	45.0	47.0	44.0	46.0	48.0	45.0	47.0	49.0
	SHC	7.0	1.0	-4.0	15.0	8.0	2.0	24.0	15.0	8.0
	kW	8.6	8.6	8.7	8.6	8.6	8.7	8.6	8.6	8.7
75	TC	46.0	49.0	51.0	48.0	50.0	52.0	49.0	52.0	54.0
	SHC	11.0	5.0	0.0	19.0	12.0	5.0	28.0	19.0	12.0
	kW	8.2	8.2	8.3	8.2	8.2	8.3	8.2	8.2	8.3
70	TC	50.0	52.0	55.0	52.0	54.0	57.0	53.0	56.0	58.0
	SHC	14.0	9.0	4.0	23.0	16.0	9.0	32.0	23.0	16.0
	kW	7.8	7.9	7.9	7.8	7.9	7.9	7.8	7.9	7.9
60	TC	58.0	60.0	62.0	60.0	63.0	65.0	62.0	64.0	66.0
	SHC	22.0	16.0	12.0	30.0	23.0	17.0	40.0	32.0	24.0
	kW	7.1	7.2	7.3	7.1	7.2	7.3	7.2	7.2	7.3
50	TC	67.0	68.0	70.0	69.0	71.0	73.0	70.0	72.0	75.0
	SHC	31.0	24.0	20.0	39.0	32.0	26.0	48.0	40.0	33.0
	kW	6.6	6.6	6.7	6.6	6.7	6.7	6.6	6.7	6.7
40	TC	74.0	76.0	81.0	79.0	81.0	82.0	79.0	81.0	84.0
	SHC	38.0	33.0	31.0	50.0	43.0	37.0	58.0	50.0	44.0
	kW	6.1	6.2	6.2	6.1	6.2	6.3	6.2	6.2	6.3

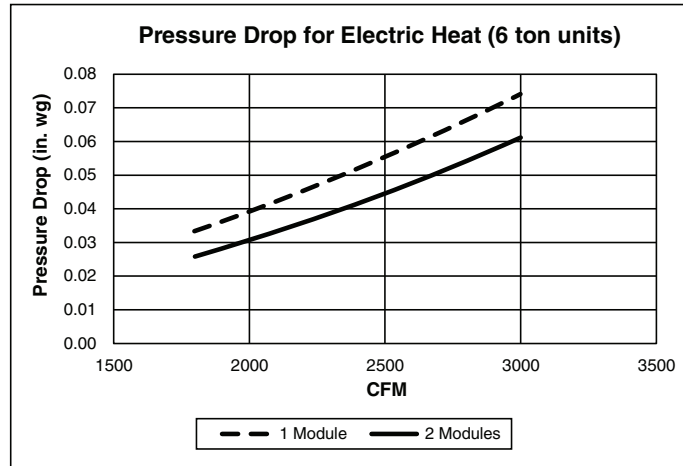
LEGEND

- kW** —Compressor power input
- SHC** —Sensible capacity (1000 Btuh) Gross
- TC** —Total capacity (1000 Btuh) Gross

ELECTRIC HEATERS

PRESSURE DROP FOR ELECTRIC HEAT (6 TON UNITS)

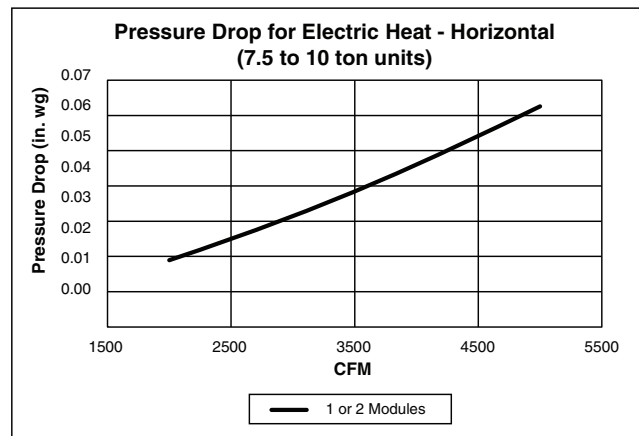
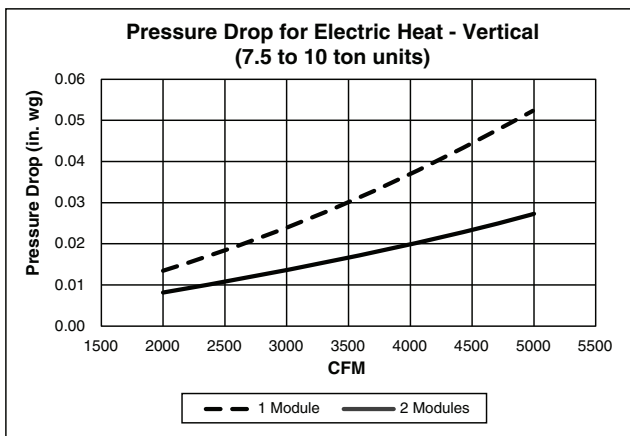
AIR FLOW (CFM)	1800	1950	2100	2250	2400	2550	2700	2850	3000
1 Electric Heater Module	0.026	0.029	0.033	0.037	0.042	0.046	0.051	0.056	0.061
2 Electric Heater Modules	0.033	0.038	0.042	0.047	0.052	0.057	0.063	0.068	0.074



PRESSURE DROP FOR ELECTRIC HEAT (7.5-10 TON UNITS)

AIR FLOW (CFM)	2000	2500	3000	3500	4000	4500	5000
Vertical-1 Elec. Heat Module*	0.008	0.011	0.014	0.017	0.020	0.024	0.027
Vertical-2 Elec. Heat Module*	0.013	0.018	0.024	0.030	0.037	0.044	0.052
Horizontal-1 Elec. Heat Module*	0.019	0.025	0.031	0.038	0.046	0.054	0.063
Horizontal-2 Elec. Heat Module*	0.019	0.025	0.031	0.038	0.046	0.054	0.063

* Use 2 heater module pressure drop for CRHEATER367A00-370A00, 374A00-377A00, 381A00-384A00. Prior to the release of the CRHEATER367A00-370A00, 374A00-377A00, 381A00-384A00, the necessary kW's were achieved with 2 separate heater modules. Now the heat capacity is achieved with a single module.



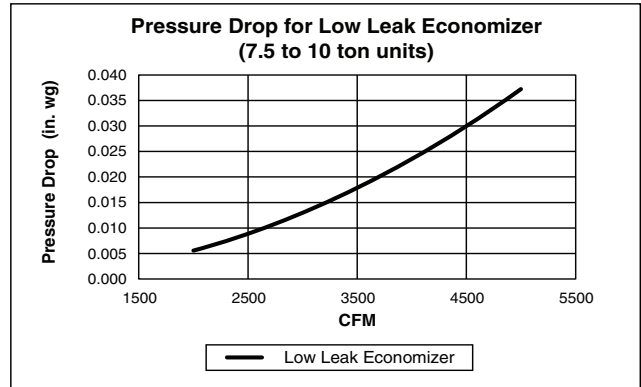
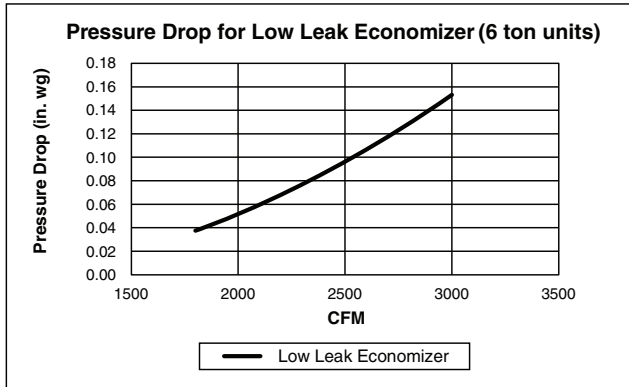
LOW LEAK ECONOMIZER AND HUMIDI-MIZER COIL

PRESSURE DROP FOR LOW LEAK ECONOMIZER (6 TON UNITS)

AIR FLOW (CFM)	1800	1950	2100	2250	2400	2550	2700	2850	3000
Low Leak Economizer	0.038	0.048	0.060	0.072	0.086	0.101	0.117	0.135	0.153

PRESSURE DROP FOR LOW LEAK ECONOMIZER (7.5 to 10 TON UNITS)

Air flow (CFM)	2000	2500	3000	3500	4000	4500	5000
Low Leak Economizer	0.006	0.009	0.013	0.018	0.024	0.030	0.037

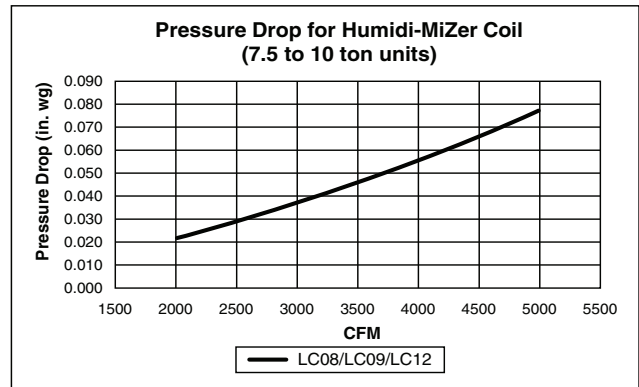
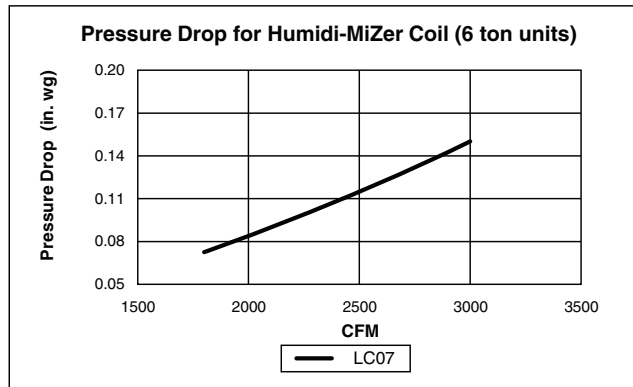


PRESSURE DROP FOR HUMIDI-MIZER (6 TON UNITS)

AIR FLOW (CFM)	1800	1950	2100	2250	2400	2550	2700	2850	3000
Pressure drop (in. wg) Humidifier	0.073	0.081	0.090	0.099	0.108	0.118	0.129	0.139	0.150

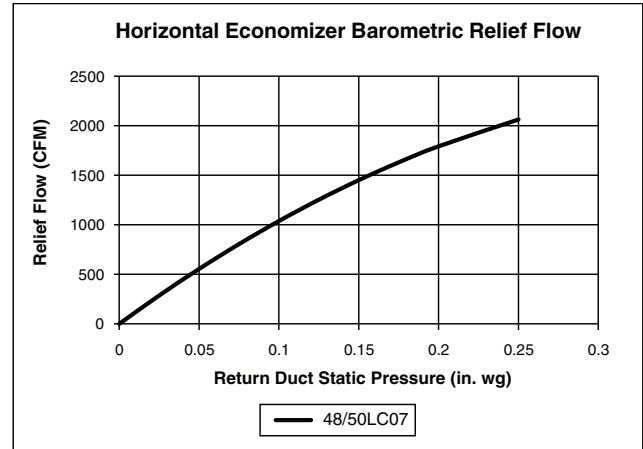
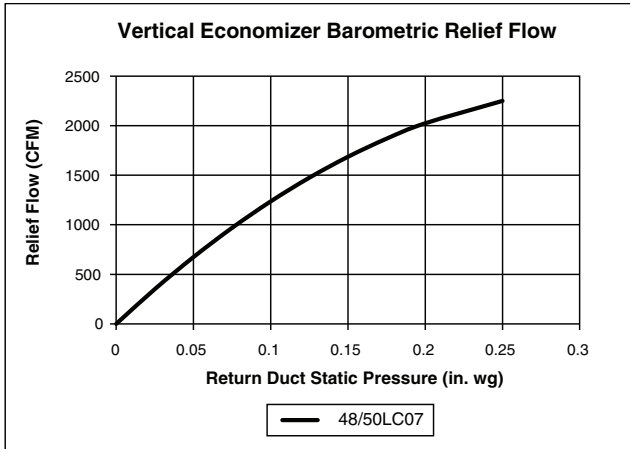
PRESSURE DROP FOR HUMIDI-MIZER (7.5 TO 10 TON UNITS)

AIR FLOW (CFM)	2000	2500	3000	3500	4000	4500	5000
Pressure drop (in. wg) Humidifier	0.022	0.029	0.037	0.046	0.056	0.066	0.077

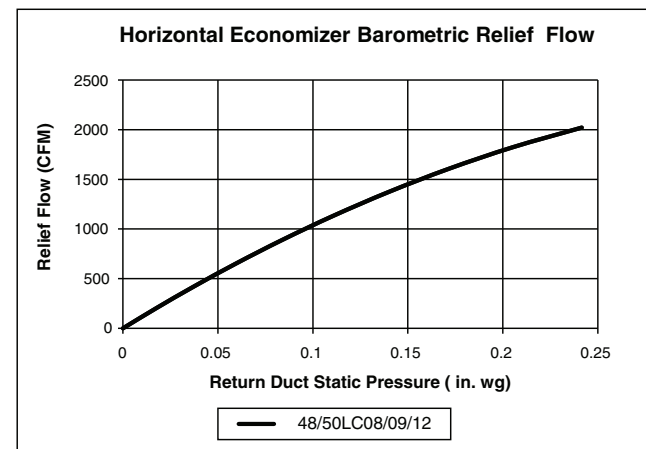
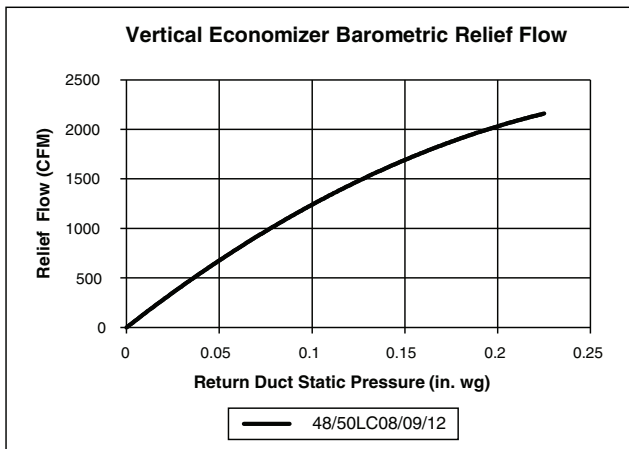


ECONOMIZER BAROMETRIC RELIEF AND STATIC PRESSURE

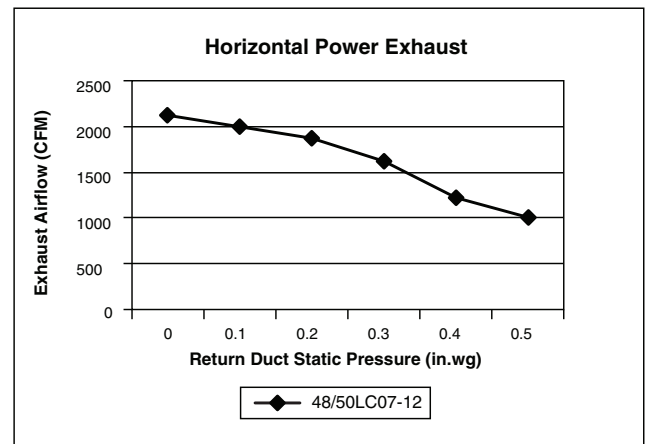
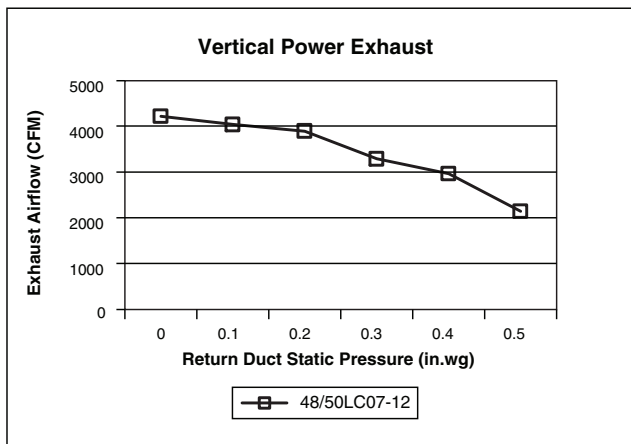
6 TON UNITS



7.5 TO 10 TON UNITS



POWER EXHAUST PERFORMANCE



GENERAL FAN PERFORMANCE NOTES:

1. Interpolation is permissible. Do not extrapolate.
2. External static pressure is the static pressure difference between the return duct and the supply duct plus the static pressure caused by any FIOPs or accessories.
3. Tabular data accounts for pressure loss due to clean filters, unit casing, and wet coils. Factory options and accessories may add static pressure losses. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when 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 information section of this book.
6. For more information on the performance limits of Carrier motors, see the application data section of this book.
7. The EPACT (Energy Policy Act) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (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**07 HORIZONTAL SUPPLY (6 TONS)

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

Standard static: 356-534 rpm, 1.7 max BHP
 Medium static: 539-809 rpm, 1.7 max BHP
 High static: 799-1054 rpm, 2.9 max BHP

50LC**07 VERTICAL SUPPLY (6 TONS)

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

- Standard static: 356-534 rpm, 1.7 max BHP
- Medium static: 539-809 rpm, 1.7 max BHP
- High static: 799-1054 rpm, 2.9 max BHP

50LC**08 HORIZONTAL SUPPLY (7.5 TONS)

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

- Standard static: 338-507 rpm, 1.7 max BHP
- Medium 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 = KR11HY151, blower pulley = AK114 1 3/16, belt = A47) 308-462 rpm.

50LC**08 VERTICAL SUPPLY (7.5 TONS)

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

- Standard static: 338-507 rpm, 1.7 max BHP
- Medium 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 = KR11HY151, blower pulley = AK114 1 3/16, belt = A47) 308-462 rpm.
- Italics* Indicates field-supplied motor and drive are required (motor = HD60FK658, motor pulley = KR11HY213, blower pulley = KR11AK215, belt = KR29AF048) 836-1006 rpm.

50LC**09 HORIZONTAL SUPPLY (8.5 TONS)

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

- Standard static: 338-507 rpm, 1.7 max BHP
- Medium 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 = KR11HY151, blower pulley = AK114 1 3/16, belt = A47) 308-462 rpm.

50LC**09 VERTICAL SUPPLY (8.5 TONS)

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

- Standard static: 338-507 rpm, 1.7 max BHP
- Medium 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**12 HORIZONTAL SUPPLY (10 TONS)

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

Standard static: 375-563 rpm, 2.4 max BHP

Medium static: 547-757 rpm, 2.9 max BHP

High static: 760-960 rpm, 4.9 max BHP

*At 575v, BHP is 4.7

Boldface Indicates field-supplied drive is required (standard motor, motor pulley = KR11HY161, blower pulley = AK134 1 3/16, belt = KR30AE051) 340-470 rpm.

50LC**12 VERTICAL SUPPLY (10 TONS)

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

- Standard static: 375-563 rpm, 2.4 max BHP
- Medium static: 547-757 rpm, 2.9 max BHP
- High static: 760-960 rpm, 4.9 max BHP
*At 575v, BHP is 4.7
- Boldface** indicates field-supplied drive is required (standard motor, motor pulley = KR11HY161, blower pulley = AK134 1 3/16, belt = KR30AE051) 340-470 rpm
- Italics* indicate field-supplied drive and motor are required (high static motor, motor pulley = KR11HY213, blower pulley = KR51BH615, belt = KR29BF047) 880-1080 rpm.

PULLEY ADJUSTMENT

50LC UNIT	MOTOR/DRIVE COMBO	MOTOR PULLEY TURNS OPEN													
		0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
07	3 phase	Standard Static	534	516	498	481	463	445	427	409	392	374	356	—	—
		Medium Static	809	782	755	728	701	674	647	620	593	566	539	—	—
		High Static	—	—	1054	1022	990	958	927	895	863	831	799	—	—
08	3 phase	Standard Static	507	490	473	456	439	423	406	389	372	355	338	—	—
		Medium Static	675	656	638	619	600	582	563	544	525	507	488	—	—
		High Static	863	839	815	791	767	743	719	695	671	647	623	—	—
		Ultra Static	—	—	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	—	—
		Medium Static	675	656	638	619	600	582	563	544	525	507	488	—	—
		High Static	863	844	825	807	788	769	750	731	713	694	675	—	—
		Ultra Static	1021	1002	983	964	945	927	908	889	870	851	832	—	—
12	3 phase	Standard Static	563	544	525	507	488	469	450	431	413	394	375	—	—
		Medium Static	757	736	715	694	673	652	631	610	589	568	547	—	—
		High Static	—	—	960	940	920	900	880	860	840	820	800	780	760

Factory setting

COOLING ELECTRICAL DATA

50LC UNIT	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
		MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF AT FULL FLOOD	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
	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
	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
	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
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
	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
	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
	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
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 69.

50LC**07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.								
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)				
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE		
FLA	LRA	FLA	LRA										
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	
	MED	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	
		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	
	HIGH	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	
		NONE	—	—	37/37	50/45	39/38	203	41/40	50/50	43/42	207	
	460-3-60	STD	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
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	
HIGH		321A	25.5	30.7	42	45	39	87	45	45	41	89	
		NONE	—	—	20	25	21	103	22	25	23	105	
		319A	6.0	7.2	20	25	21	103	22	25	23	105	
575-3-60		STD	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
			NONE	—	—	15	20	16	67	19	20	20	71
	MED	308A	18.0	17.3	26	30	23	67	30	30	27	71	
		299A	28.0	26.9	38	40	34	67	42	45	39	71	
		NONE	—	—	15	20	16	67	19	20	20	71	
	HIGH	308A	18.0	17.3	26	30	23	67	30	30	27	71	
		299A	28.0	26.9	38	40	34	67	42	45	39	71	
		NONE	—	—	17	20	18	80	21	25	22	84	
	HIGH	308A	18.0	17.3	28	30	25	80	32	35	29	84	
		299A	28.0	26.9	40	40	36	80	44	45	40	84	
		NONE	—	—	15	20	16	67	19	20	20	71	

See Legend and Notes on page 69.

50LC**07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
							FLA	LRA			FLA	LRA
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
		299A	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
		299A	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
		299A	28.0	26.9	42	45	38	82	47	50	42	86

See Legend and Notes on page 69.

50LC**08 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
							FLA	LRA			FLA	LRA
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 69.

50LC**08 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
FLA	LRA	FLA	LRA									
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 69.

50LC**09 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
FLA	LRA	FLA	LRA									
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 69.

50LC**09 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
							FLA	LRA			FLA	LRA
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 69.

50LC**12 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
							FLA	LRA			FLA	LRA
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
		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	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
		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	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
		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	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
		375A	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
		375A	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
		375A	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
		382A	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
		382A	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
		382A	50.0	48.1	56	60	62	130	61	70	67	134

See Legend and Notes on page 69.

50LC**12 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	FUSE OR HACR BRKR	DISC. SIZE		MCA	FUSE OR HACR BRKR	DISC. SIZE	
							FLA	LRA			FLA	LRA
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
		368A	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
		368A	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
		368A	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
		375A	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
		375A	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
		375A	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
		382A	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
		382A	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
		382A	50.0	48.1	58	60	64	132	63	70	69	136

See Legend and Notes on page 69.

50LC**07 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
FLA	LRA	FLA	LRA	FLA	LRA							
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
		299A	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
		299A	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
		299A	28.0	26.9	40	40	36	80	44	45	40	84

See Legend and Notes on page 69.

50LC**07 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA	
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
		299A	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
		299A	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
		299A	28.0	26.9	42	45	38	82	47	50	42	86

See Legend and Notes on page 69.

50LC**08 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA	
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 69.

50LC**08 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.								
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)				
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE		
						FLA	LRA			FLA	LRA		
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 69.

50LC**09 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.									
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)					
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE			
							FLA	LRA			FLA	LRA		
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 69.

50LC**09 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
FLA	LRA	FLA	LRA									
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 69.

50LC**12 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			NO C.O. or UNPWR C.O.							
		CRHEATER***A00	NOM (kW)	FLA	NO P.E.				w/ P.E. (PWRD FR/UNIT)			
					MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
FLA	LRA	FLA	LRA									
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
		368A	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
		368A	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
		368A	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
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		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
		375A	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
		375A	50.0	60.2	69	80	77	157	71	80	79	159
575-3-60		STD	NONE	—	—	22	25	23	107	26	30	27
	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
	382A		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
		382A	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
		382A	50.0	48.1	56	60	62	130	61	70	67	134

See Legend and Notes on page 69.

50LC**12 UNIT WIRE SIZING DATA WITH FACTORY-INSTALLED HACR BREAKER (cont)

NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER			w/ PWRD C.O.							
					NO P.E.				w/ P.E. (PWRD FR/UNIT)			
		CRHEATER***A00	NOM (kW)	FLA	MCA	HACR BRKR	DISC. SIZE		MCA	HACR BRKR	DISC. SIZE	
							FLA	LRA			FLA	LRA
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
		368A	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
		368A	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
		368A	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
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
375A			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
		375A	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
		375A	50.0	60.2	71	80	79	159	74	80	81	161
575-3-60		STD	NONE	—	—	24	25	25	109	28	30	29
	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
	382A		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
		382A	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
		382A	50.0	48.1	58	60	64	132	63	70	69	136

See Legend and Notes on page 69.

ELECTRIC HEAT

50LC UNIT	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER*****	NOM. POWER (kW)	APP. POWER (kW)	APP OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER				
							NO C.O. OR UNPOWERED C.O.		w/PWRD C.O.		
							NO P.E.	w/ P.E. (PWRD FR/UNIT)	NO P.E.	w/ P.E. (PWRD FR/UNIT)	
07	208/230-3-60	STD	316A00	6.5	4.9/6.0	16.7/20.4	047	047	047	047	
			317A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049	
			318A00	24.8	18.6/22.8	63.6/77.7	049	049	049	049	
		MED	316A00	6.5	4.9/6.0	16.7/20.4	047	047	047	047	
			317A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049	
			318A00	24.8	18.6/22.8	63.6/77.7	049	049	049	049	
		HIGH	316A00	6.5	4.9/6.0	16.7/20.4	047	047	047	047	
			317A00	16.0	12.0/14.7	41.0/50.1	047	049	049	049	
			318A00	24.8	18.6/22.8	63.6/77.7	049	049	049	049	
	460-3-60	STD	319A00	6.0	5.5	18.8	047	047	047	047	
			320A00	14.0	12.9	43.9	047	047	047	047	
			321A00	25.5	23.4	79.9	047	047	047	047	
		MED	319A00	6.0	5.5	18.8	047	047	047	047	
			320A00	14.0	12.9	43.9	047	047	047	047	
			321A00	25.5	23.4	79.9	047	047	047	047	
		HIGH	319A00	6.0	5.5	18.8	047	047	047	047	
			320A00	14.0	12.9	43.9	047	047	047	047	
			321A00	25.5	23.4	79.9	047	047	047	047	
	575-3-60	STD	308A00	18.0	16.5	56.4	047	047	047	047	
			299A00	28.0	25.7	87.7	047	047	047	047	
		MED	308A00	18.0	16.5	56.4	047	047	047	047	
			299A00	28.0	25.7	87.7	047	047	047	047	
		HIGH	308A00	18.0	16.5	56.4	047	047	047	047	
			299A00	28.0	25.7	87.7	047	047	047	047	
	08	208/230-3-60	STD	288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
				291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
				294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
MED			288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—	
			291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049	
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049	
HIGH			288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—	
			291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049	
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049	
SUPER			288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—	
			291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049	
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049	
460-3-60			STD	289A00	10.0	9.2	31.3	—	-	—	—
				292A00	16.5	15.2	51.7	—	-	—	—
				295A00	33.5	30.8	105.0	047	047	047	047
		MED	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	047	047	047	
		HIGH	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	047	047	050	
		SUPER	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	047	047	050	

ELECTRIC HEAT (cont)

50LC UNIT	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER*****	NOM. POWER (kW)	APP. POWER (kW)	APP OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER				
							NO C.O. OR UNPOWERED C.O.		w/PWRD C.O.		
							NO P.E.	w/ P.E. (PWRD FR/UNIT)	NO P.E.	w/ P.E. (PWRD FR/UNIT)	
08 (cont)	575-3-60	STD	293A00	16.5	15.2	51.7	—	—	—	—	
			296A00	33.5	30.8	105.0	047	047	047	047	
		MED	293A00	16.5	15.2	51.7	—	—	—	—	
			296A00	33.5	30.8	105.0	047	047	047	047	
		HIGH	293A00	16.5	15.2	51.7	—	—	—	—	
			296A00	33.5	30.8	105.0	047	047	047	047	
	SUPER	293A00	16.5	15.2	51.7	—	—	—	—		
		296A00	33.5	30.8	105.0	047	047	047	047		
	09	208/230-3-60	STD	288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
				291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
				294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			MED	288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	—
291A00				16.5	12.4/15.2	42.3/51.7	—	049	049	049	
294A00				33.5	25.2/30.8	85.9/105.0	049	049	049	049	
HIGH			288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	049	
			291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049	
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049	
SUPER			288A00	10.0	7.5/9.2	25.6/31.3	—	—	049	049	
			291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049	
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049	
460-3-60		STD	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	047	047	047	
		MED	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	047	047	047	
		HIGH	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	047	047	050	
		SUPER	289A00	10.0	9.2	31.3	—	—	—	—	
			292A00	16.5	15.2	51.7	—	—	—	—	
			295A00	33.5	30.8	105.0	047	050	050	050	
575-3-60	STD	293A00	16.5	15.2	51.7	—	—	—	—		
		296A00	33.5	30.8	105.0	047	047	047	047		
	MED	293A00	16.5	15.2	51.7	—	—	—	—		
		296A00	33.5	30.8	105.0	047	047	047	047		
	HIGH	293A00	16.5	15.2	51.7	—	—	—	—		
		296A00	33.5	30.8	105.0	047	047	047	047		
SUPER	293A00	16.5	15.2	51.7	—	—	—	—			
	296A00	33.5	30.8	105.0	047	047	047	047			

ELECTRIC HEAT (cont)

50LC UNIT	NOM V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER*****	NOM. POWER (kW)	APP. POWER (kW)	APP OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER			
							NO C.O. OR UNPOWERED C.O.		w/PWRD C.O.	
							NO P.E.	w/ P.E. (PWRD FR/UNIT)	NO P.E.	w/ P.E. (PWRD FR/UNIT)
12	208/230-3-60	STD	288A00	10.0	7.5/9.2	25.6/31.3	—	—	—	049
			291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			368A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		MED	288A00	10.0	7.5/9.2	25.6/31.3	—	049	049	049
			291A00	16.5	12.4/15.2	42.3/51.7	—	049	049	049
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			368A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		HIGH	288A00	10.0	7.5/9.2	25.6/31.3	049	049	049	049
			291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
			294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			368A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
	460-3-60	STD	289A00	10.0	9.2	31.3	—	—	—	—
			292A00	16.5	15.2	51.7	—	—	—	—
			295A00	33.5	30.8	105.0	047	047	047	047
			375A00	50.0	45.9	156.7	050	050	050	050
		MED	289A00	10.0	9.2	31.3	—	—	—	—
			292A00	16.5	15.2	51.7	—	—	—	—
			295A00	33.5	30.8	105.0	047	047	047	050
			375A00	50.0	45.9	156.7	050	050	050	050
		HIGH	289A00	10.0	9.2	31.3	—	—	—	—
			292A00	16.5	15.2	51.7	—	—	—	—
			295A00	33.5	30.8	105.0	047	050	050	050
			375A00	50.0	45.9	156.7	050	050	050	050
	575-3-60	STD	293A00	16.5	15.2	51.7	—	—	—	—
			296A00	33.5	30.8	105.0	047	047	047	047
			382A00	50.0	45.9	156.7	047	047	047	047
		MED	293A00	16.5	15.2	51.7	—	—	—	—
			296A00	33.5	30.8	105.0	047	047	047	047
			382A00	50.0	45.9	156.7	047	047	047	050
		HIGH	293A00	16.5	15.2	51.7	—	—	—	—
			296A00	33.5	30.8	105.0	047	047	047	047
				382A00	50.0	45.9	156.7	047	050	050

See Legend and Notes on page 69.

Electrical data (cont)



LEGEND AND NOTES for electrical data tables on pages 49-66

LEGEND

BRKR	—Circuit Breaker
C.O.	—Convenience Outlet
DISC	—Disconnect
FLA	—Full Load Amps
IFM	—Indoor Fan Motor
LRA	—Locked Rotor Amps
MCA	—Minimum Circuit Amps
P.E.	—Power Exhaust
PWRD FR/UNIT	—Powered from Unit
PWRD C.O.	—Powered Convenience Outlet
UNPWR C.O.	—Unpowered Convenience Outlet

NOTES:

1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the over-current protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. For 208/230 v units, where one value is shown it is the same for either 208 or 230 volts.
3. 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.

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

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

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

Maximum deviation is 4 v.

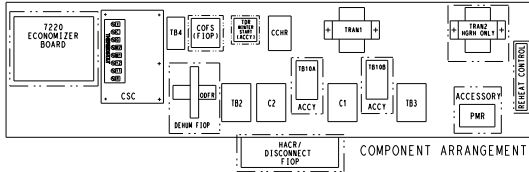
Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{4}{227} = 1.78\%$$

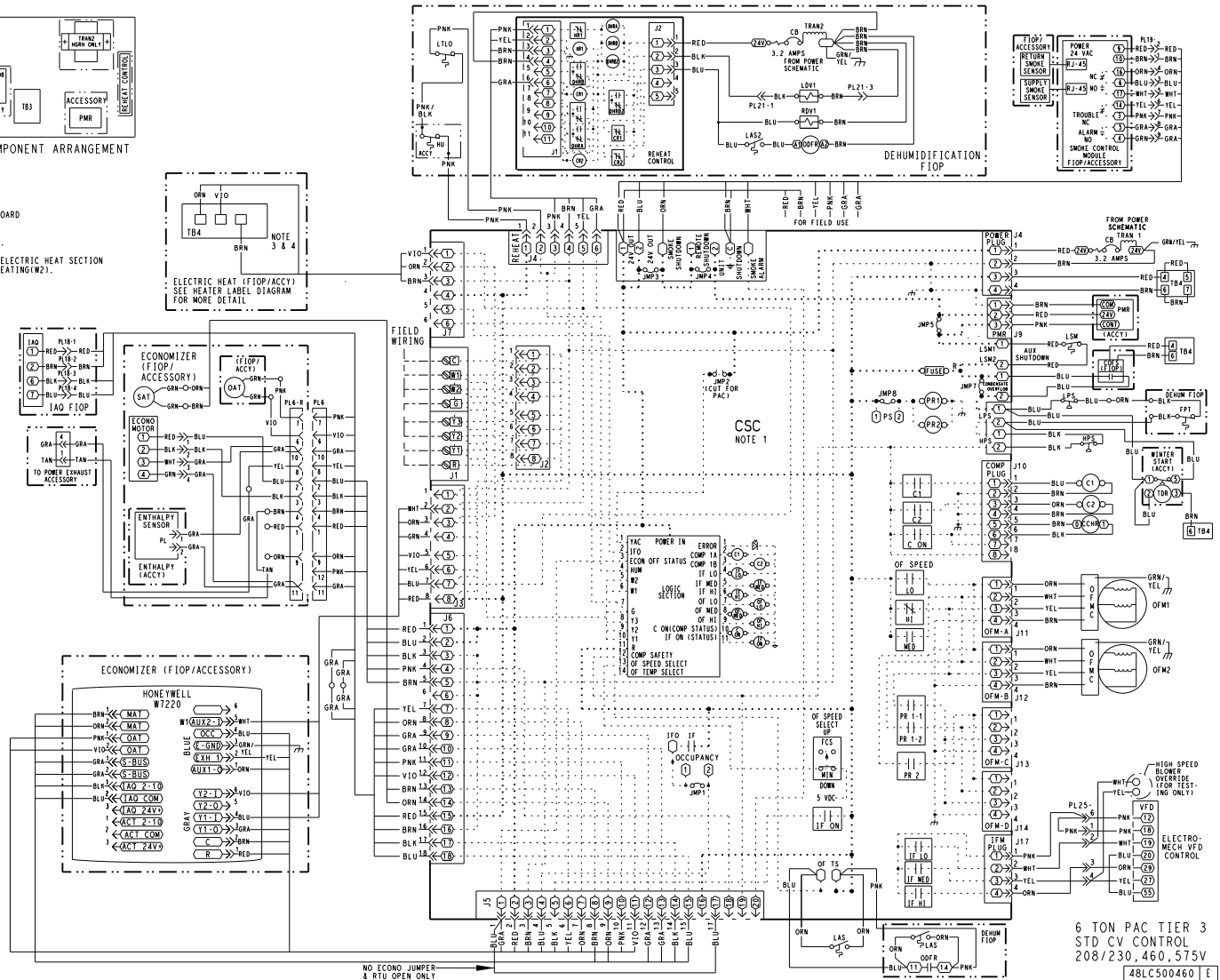
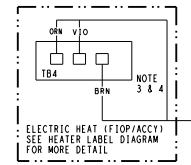
This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

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

TYPICAL 50LC*07 ELECTROMECHANICAL CONTROL WIRING DIAGRAM



- NOTES:**
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD TO SIMPLIFY CIRCUIT TRACES.
 2. ENSURE DESIGNATED JUMPERS ON TERMINAL BOARD ARE CUT WHEN ADDING SMOKE DETECTORS, PHASE 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 V10 ON TB4 FOR SECOND STAGE HEATING(W2). SEE HEATER INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
 5. LOW VOLTAGE CONNECTIONS MUST BE CLASS 2.

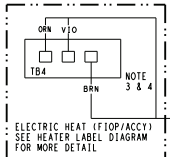
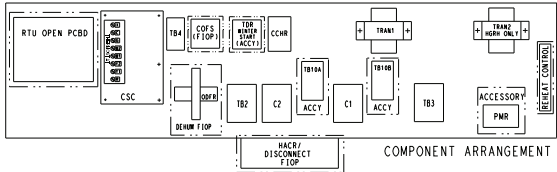


NO ECONO JUMPER & RTU OPEN W/RTU

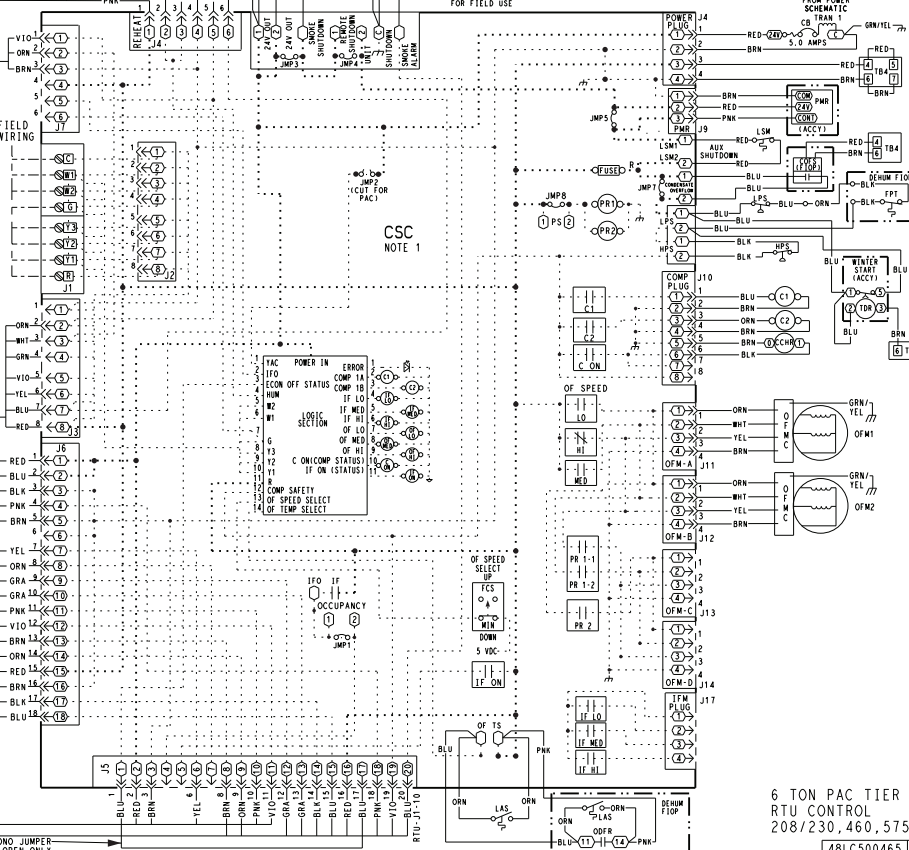
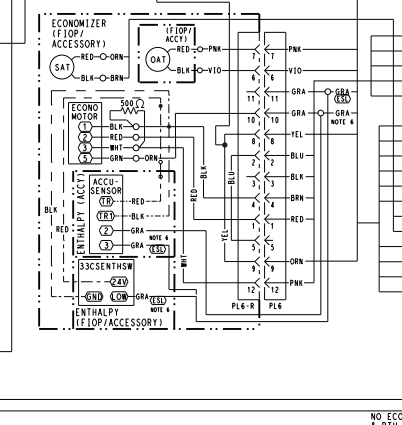
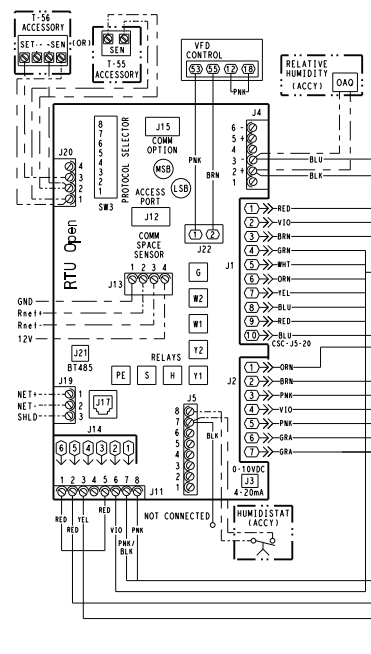
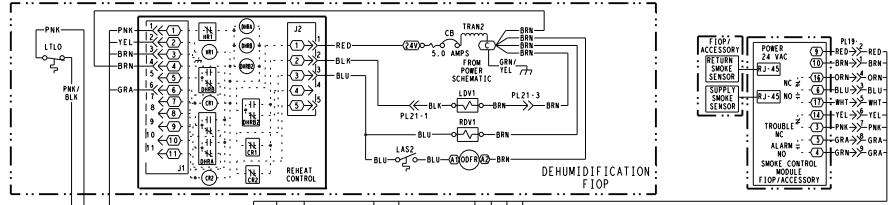
6 TON PAC TIER 3
STD CV CONTROL
208/230, 460, 575V
48LC500460 | E



TYPICAL 50LC**07 RTU OPEN CONTROL WIRING DIAGRAM



- NOTES:
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD TO SIMPLIFY CIRCUIT TRACES.
 2. ENSURE DESIGNATED JUMPERS ON TERMINAL BOARD ARE CUT WHEN ADDING SMOKE DETECTORS, PHASE LOSS RELAY, OCCUPANCY AND REMOTE SHUTDOWN.
 3. TBA IS LOCATED IN HEAT SECTION.
 4. CONNECT ELECTRIC HEATER CONTROL WIRING TO ORN ON TBA LOCATED IN ELECTRIC HEAT SECTION FOR FIRST STAGE HEATING(W1) AND TO VIO ON TBA FOR SECOND STAGE HEATING(W2). SEE HEATER INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
 5. LOW VOLTAGE CONNECTIONS MUST BE CLASS 2.
 6. FOR ENTHALPY SENSOR CONNECTION, DISCONNECT GRAY WIRE(S) FROM PLUG HARNESS AND CONNECT AS SHOWN.



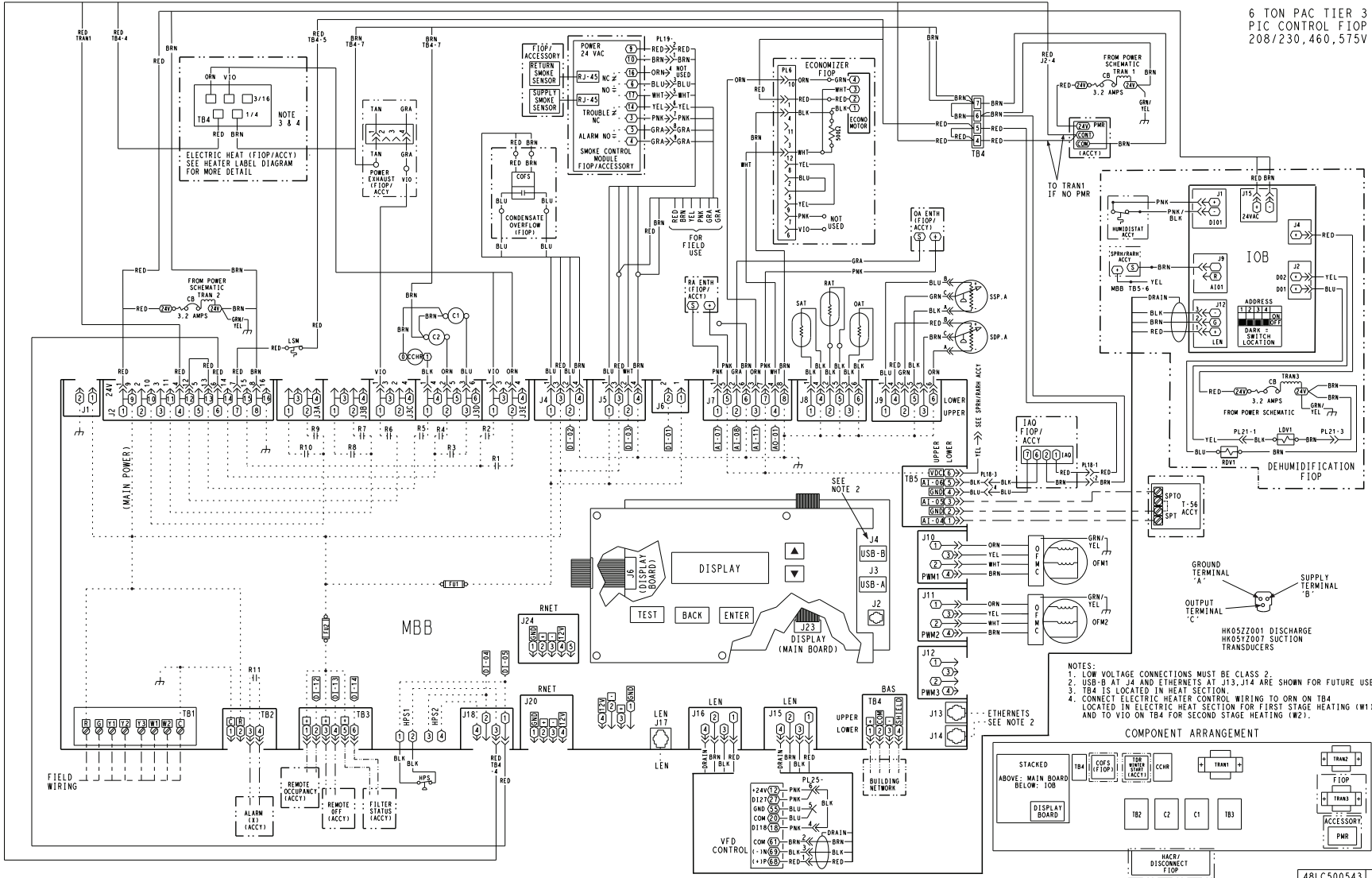
6 TON PAC TIER 3
RTU CONTROL
208/230, 460, 575V
48LC500465 | E

Typical wiring diagrams (cont)

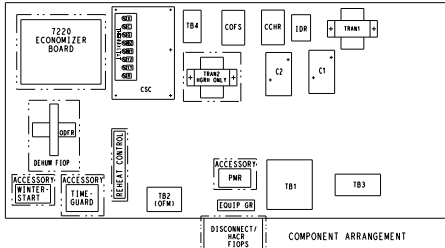


TYPICAL 50LC07 SYSTEMVU CONTROL WIRING DIAGRAM**

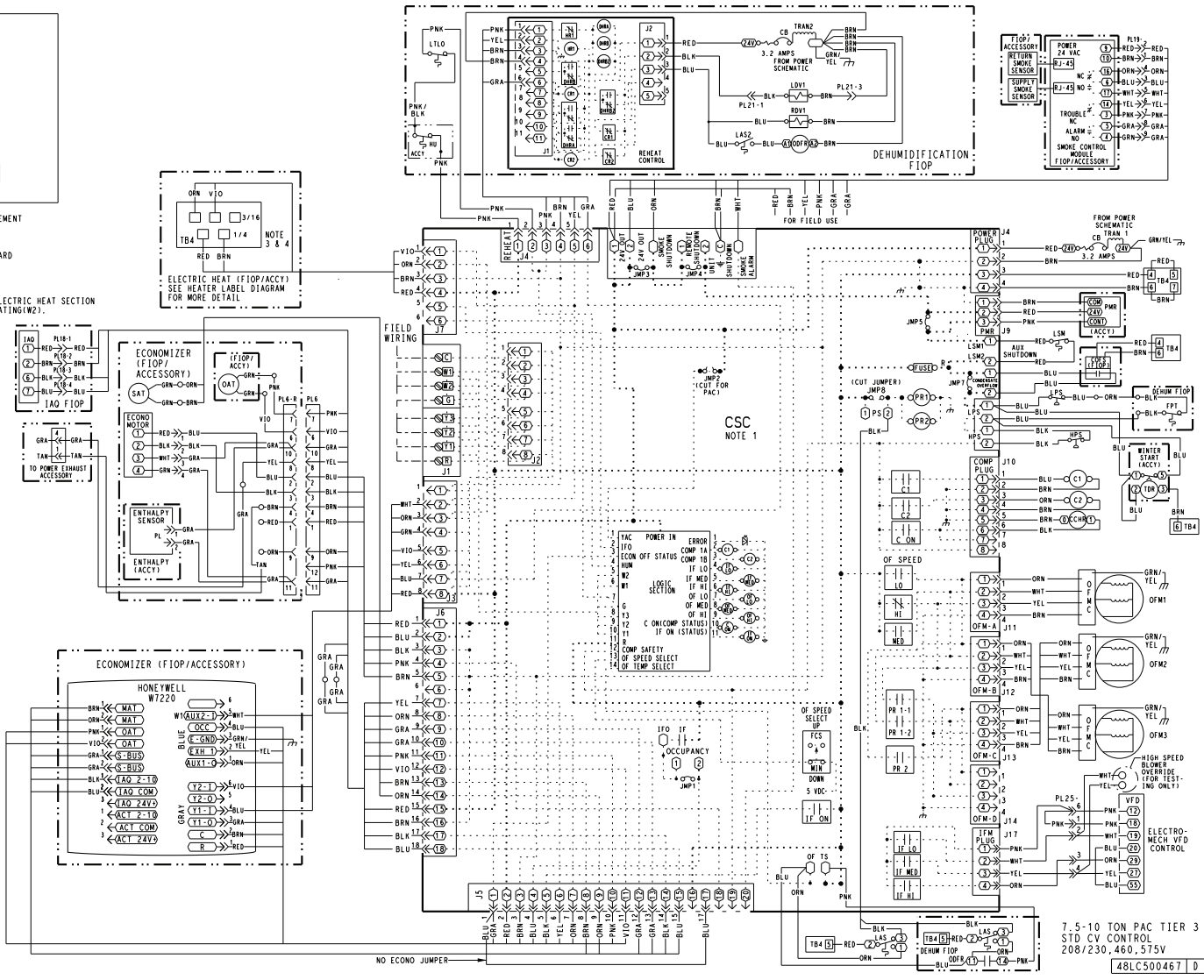
6 TON PAC TIER 3
PIC CONTROL FIOP
208/230, 460, 575V



TYPICAL 50LC**08-12 ELECTROMECHANICAL CONTROL WIRING DIAGRAM



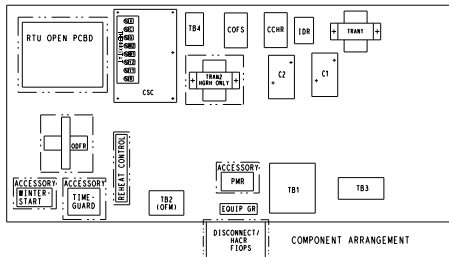
- NOTES:
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD TO SIMPLIFY CIRCUIT TRACES.
 2. ENSURE DESIGNATED JUMPERS ON TERMINAL BOARD ARE CUT WHEN ADDING SMOKE DETECTORS, PHASE LOSS RELAY, OCCUPANCY AND REMOTE SHUTDOWN.
 3. TB4 IS LOCATED IN HEAT SECTION.
 4. CONNECT ELECTRIC HEATER CONTROL WIRING TO ORN ON TB4 LOCATED IN ELECTRIC HEAT SECTION FOR FIRST STAGE HEATING(W1) AND TO VIO ON TB4 FOR SECOND STAGE HEATING(W2). SEE HEATER INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
 5. LOW VOLTAGE CONNECTIONS MUST BE CLASS 2.



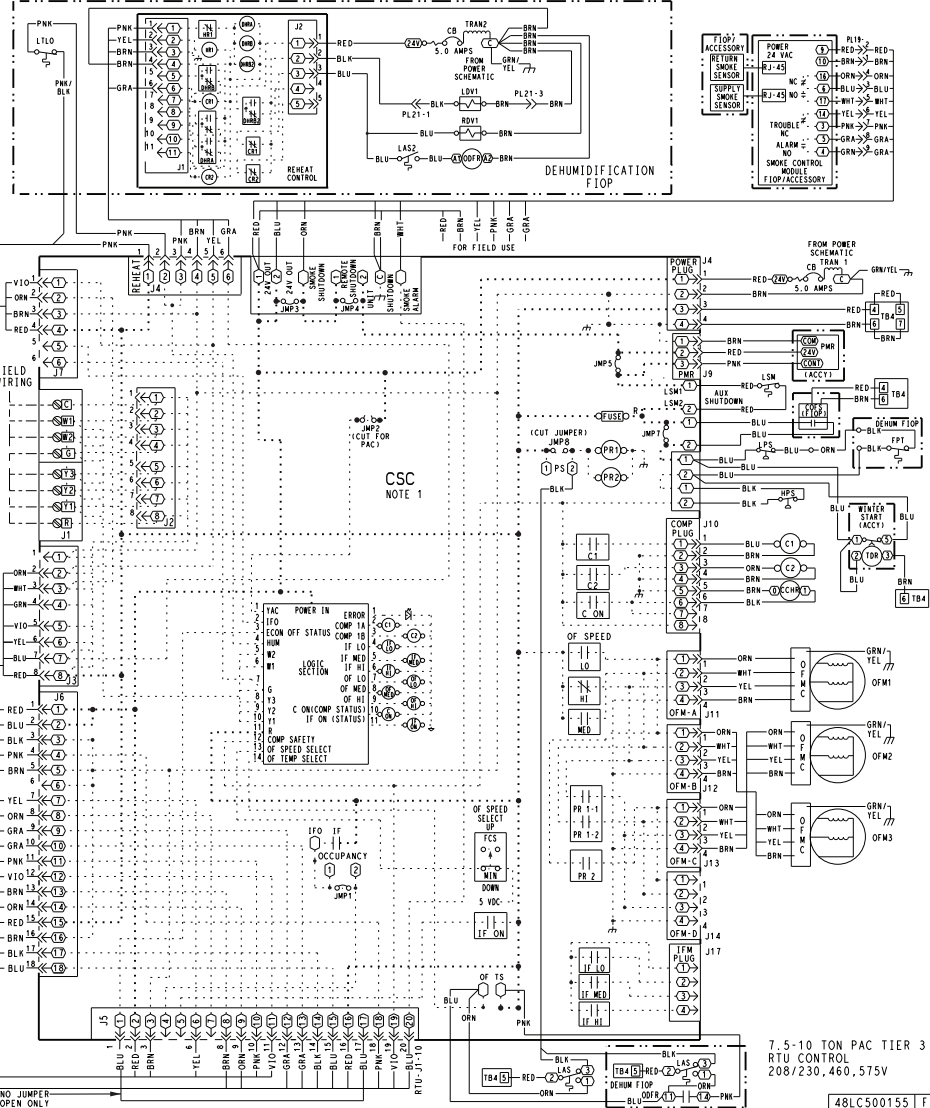
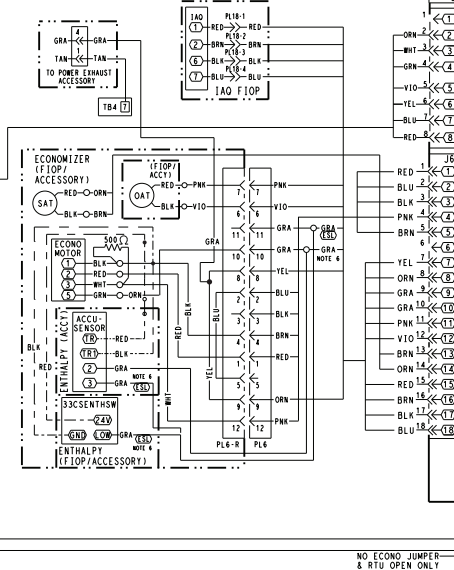
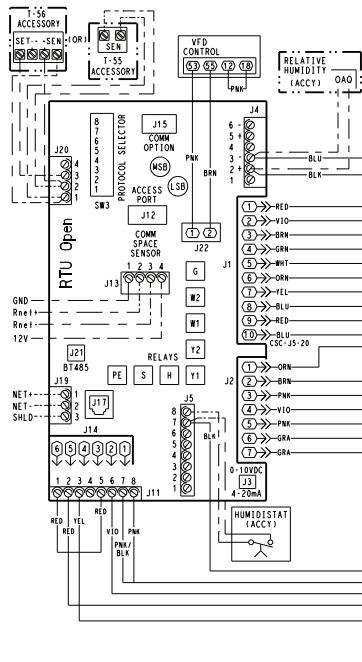
7.5-10 TON PAC TIER 3
 STD CV CONTROL
 208/230, 460, 575V
 48LC500467 | D



TYPICAL 50LC**08-12 RTU OPEN CONTROL WIRING DIAGRAM



- NOTES:
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD TO SIMPLIFY CIRCUIT TRACES.
 2. ENSURE DESIGNATED JUMPERS ON TERMINAL BOARD ARE CUT WHEN ADDING SMOKE DETECTORS, PHASE 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 VIO ON TB4 FOR SECOND STAGE HEATING(W2). SEE HEATER INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
 5. LOW VOLTAGE CONNECTIONS MUST BE CLASS 2.
 6. FOR ENTHALPY SENSOR CONNECTION, DISCONNECT GRAY WIRE(S) FROM PLUG HARNESS AND CONNECT AS SHOWN.



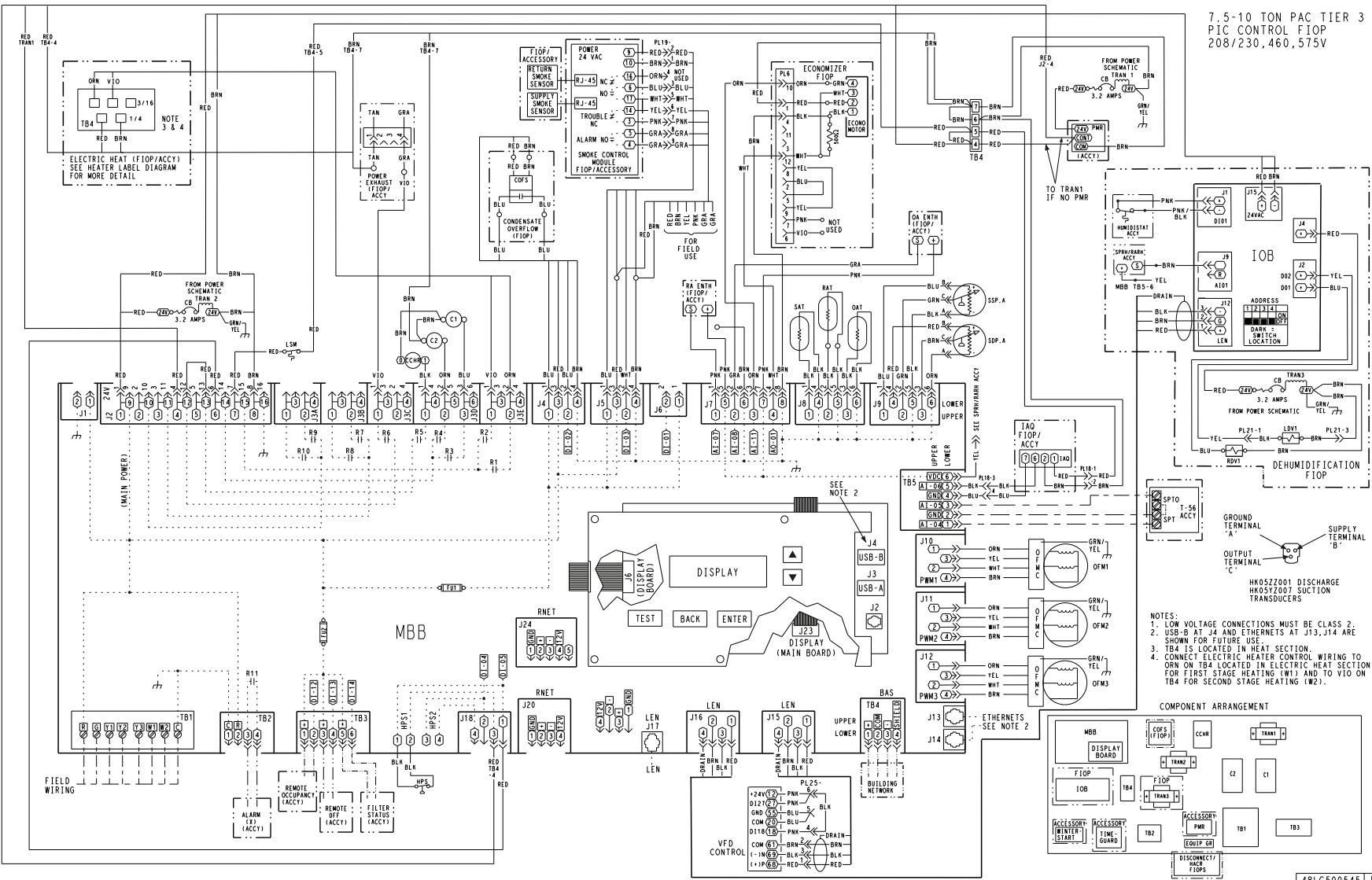
7.5-10 TON PAC TIER 3
RTU CONTROL
208/230, 460, 575V

48LC500155 F

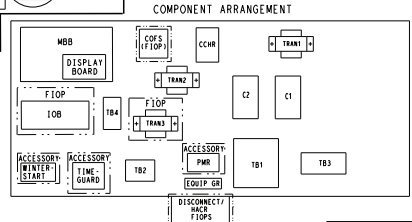


TYPICAL 50LC**08-12 SYSTEMVU CONTROL WIRING DIAGRAM

7.5-10 TON PAC TIER 3
PIC CONTROL FIOP
208/230, 460, 575V



- NOTES:
1. LOW VOLTAGE CONNECTIONS MUST BE CLASS 2.
 2. USB-B AT J4 AND ETHERNETS AT J13, J14 ARE SHOWN FOR FUTURE USE.
 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 VIO ON TB4 FOR SECOND STAGE HEATING (W2).

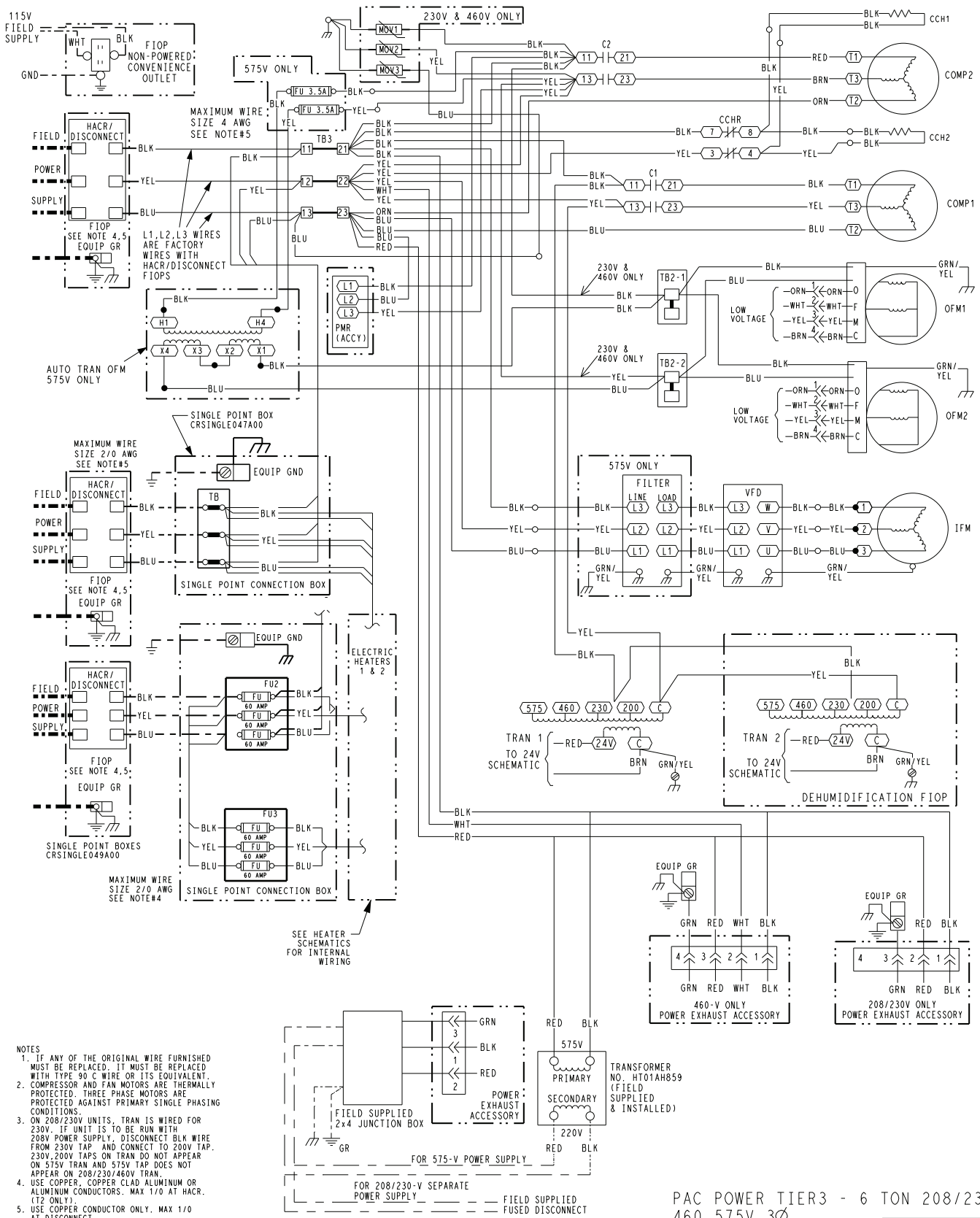


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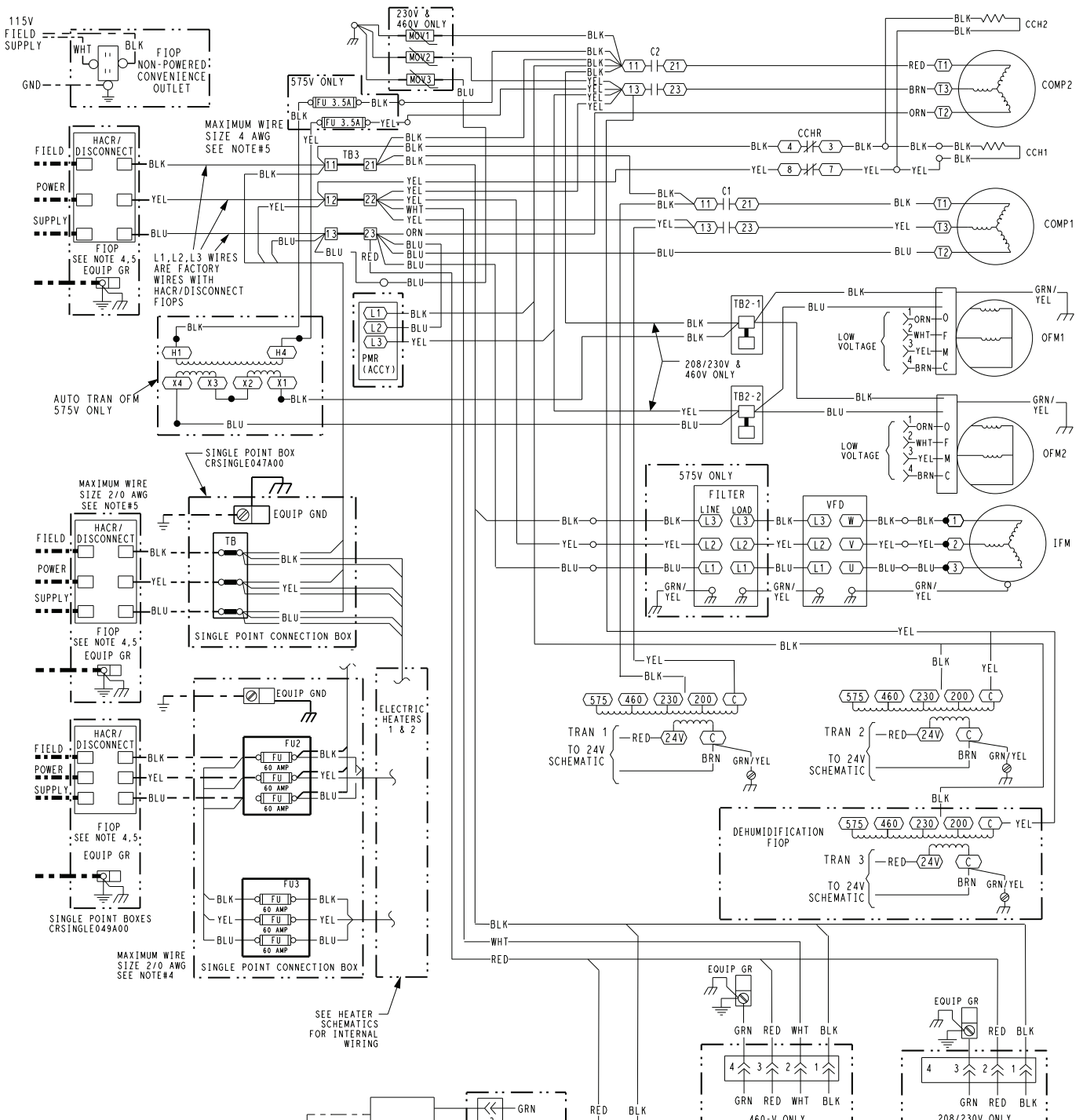
Typical wiring diagrams (cont)



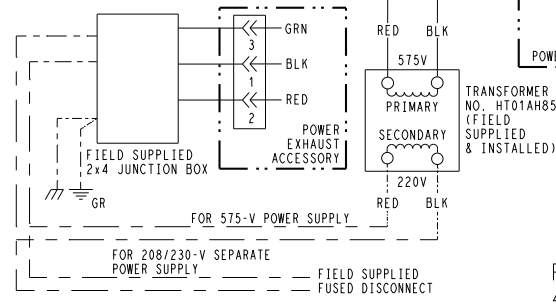
TYPICAL 50LC**07 ELECTROMECHANICAL AND RTU OPEN POWER WIRING DIAGRAM



TYPICAL 50LC**07 SYSTEMVU POWER WIRING DIAGRAM

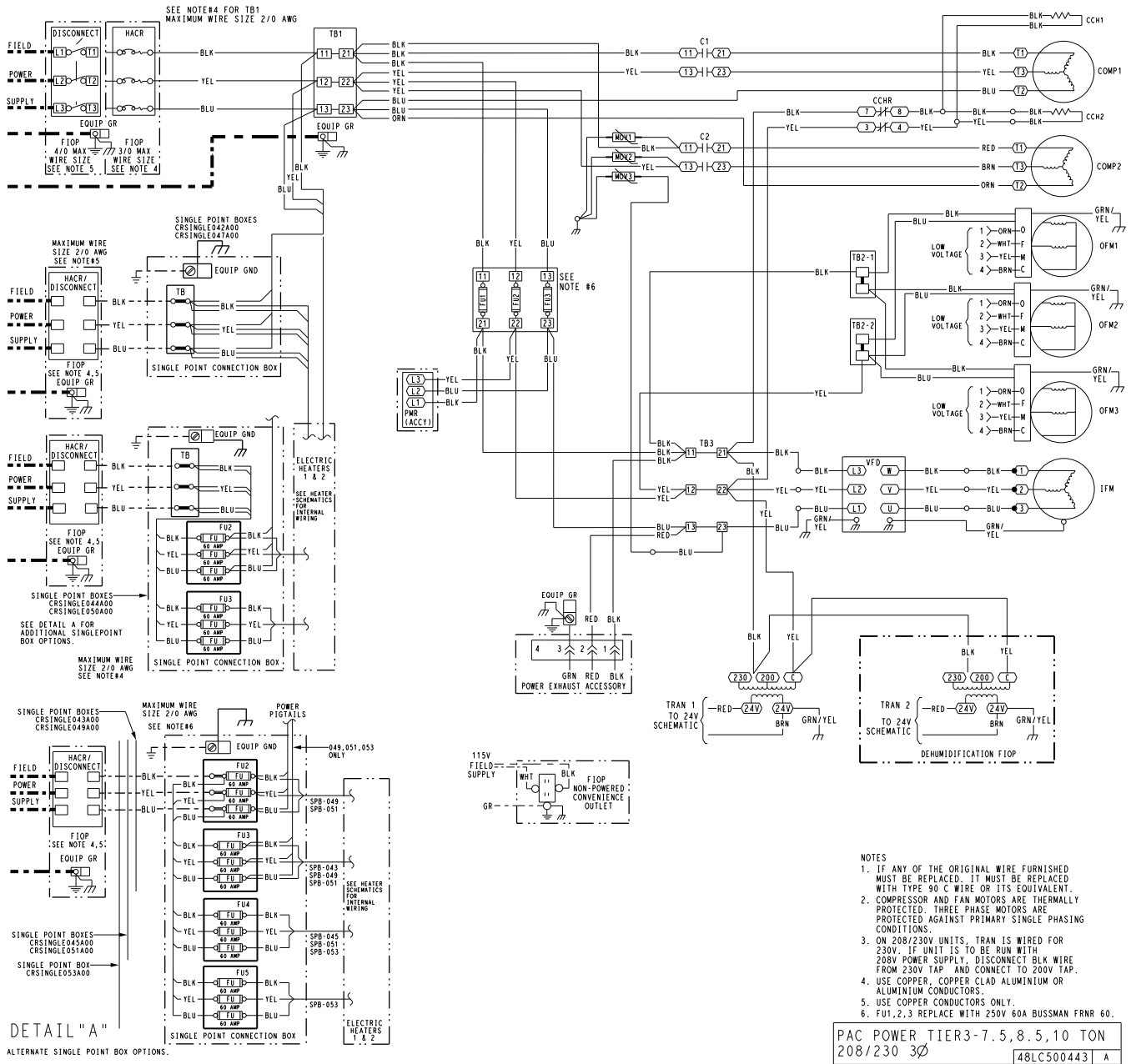


- NOTES**
1. IF ANY OF THE ORIGINAL WIRE FURNISHED MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE 90 C WIRE OR ITS EQUIVALENT.
 2. COMPRESSOR AND FAN MOTORS ARE THERMALLY PROTECTED. THREE PHASE MOTORS ARE PROTECTED AGAINST PRIMARY SINGLE PHASING CONDITIONS.
 3. ON 208/230V UNITS, TRAN IS WIRED FOR 230V. IF UNIT IS TO BE RUN WITH 208V POWER SUPPLY, DISCONNECT BLK WIRE FROM 230V TAP AND CONNECT TO 200V TAP. 230V, 200V TAPS ON TRAN DO NOT APPEAR ON 575V TRAN AND 575V TAP DOES NOT APPEAR ON 208/230/460V TRAN.
 4. USE COPPER, COPPER CLAD ALUMINUM OR ALUMINUM CONDUCTORS. MAX 1/0 AT HACR. (T2 ONLY).
 5. USE COPPER CONDUCTOR ONLY. MAX 1/0 AT DISCONNECT.

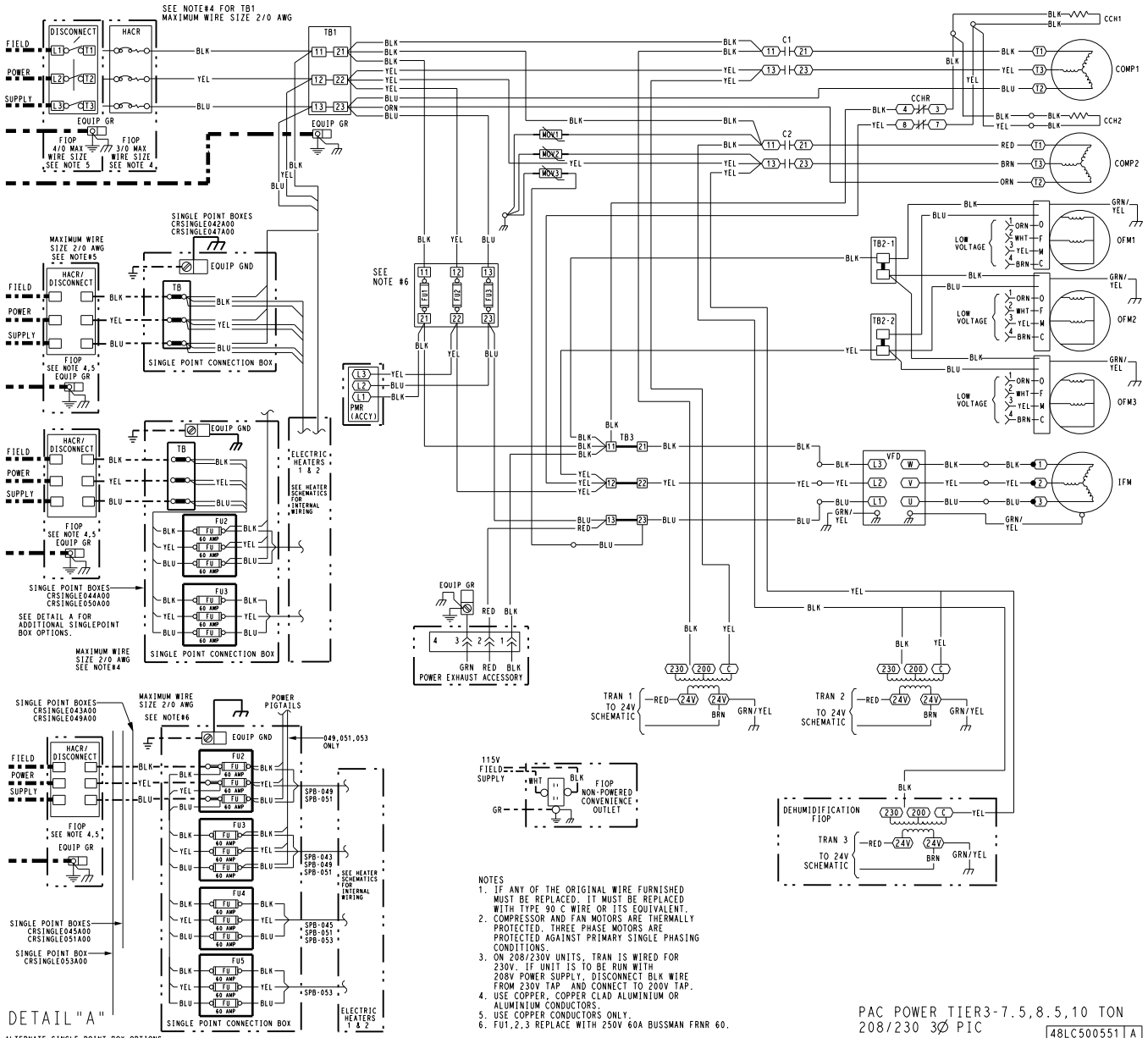


PAC POWER TIER3 - 6 TON 208/230, 460, 575V 3Ø PIC
 48LC500547 E

TYPICAL 50LC**08-12 ELECTROMECHANICAL AND RTU OPEN POWER WIRING DIAGRAM (208/230-3-60 UNIT SHOWN)



TYPICAL 50LC**08-12 SYSTEMVU POWER WIRING DIAGRAM (208/230-3-60 UNIT SHOWN)



General

The Integrated Staging Controller (ISC) is intended for use with a standard thermostat capable of 3 cooling stages. After initial power to the board, a Green LED will blink with a 1 second duty cycle indicating the unit is running properly. When the unit is not running properly, the Green LED will blink along with Red LED lights. The Red LED light configuration will indicate the type of error the board has identified.

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

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

Ventilation

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

Cooling

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

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

Humidi-MiZer (Optional)

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

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

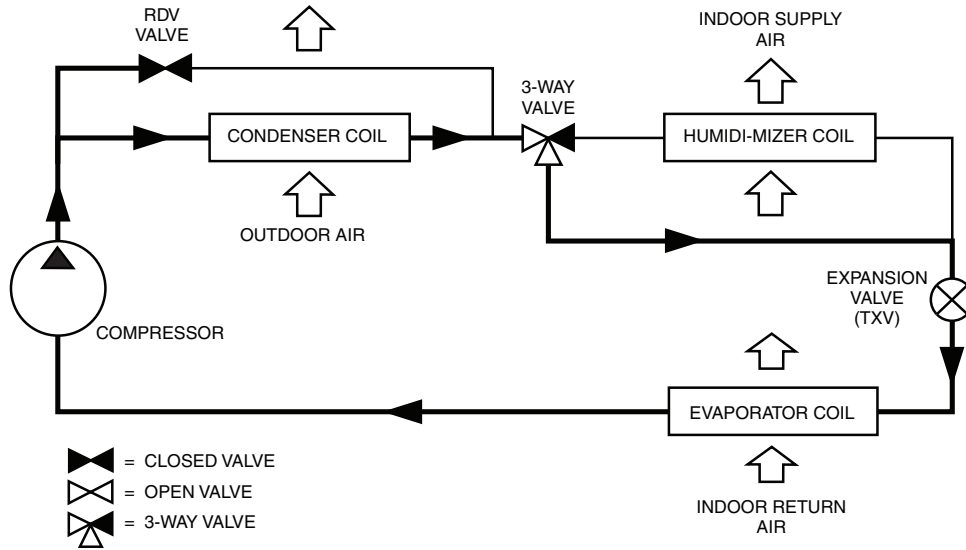
In hot gas reheat mode (reheat-2), when there is a call for dehumidification without a call for cooling, a portion of the hot gas from the compressor bypasses the condenser coil when RDV opens and hot gas is fed into the liquid line, TWV closes in this mode and the system provides mainly latent cooling.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

50LC UNIT	RPM	NUMBER OF FANS ON	NUMBER OF FANS OFF
07	250	2	0
08	160	2	1
09	160	2	1
12	160	2	1

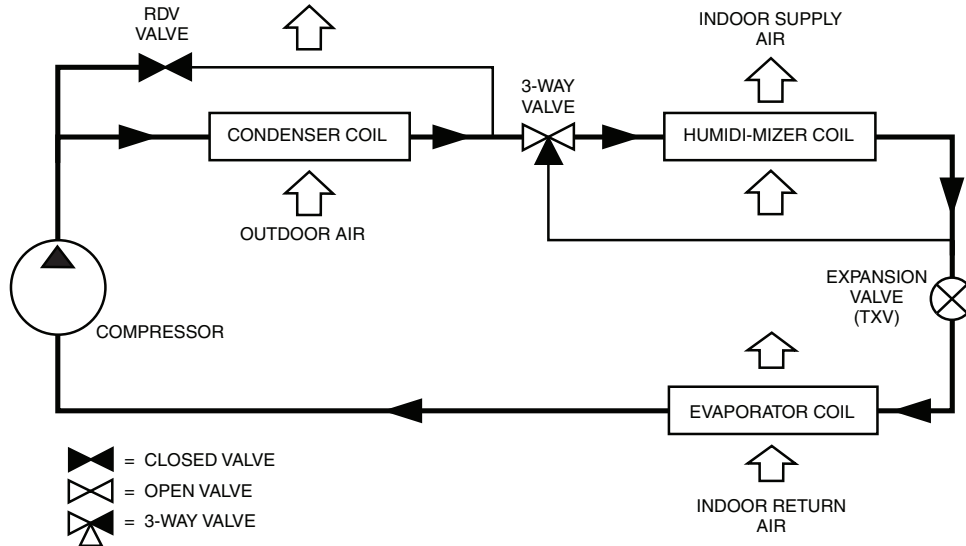
COOLING OPERATION

INPUT	OUTPUT			
	COMPRESSOR C1	COMPRESSOR C2	INDOOR FAN SPEED	OUTDOOR FAN SPEED
First Stage Cooling (Y1)	On	Off	Low	Low (700 rpm)
Second Stage Cooling (Y2)	Off	On	Low	Medium (800 rpm)
Third Stage Cooling (Y3)	On	On	High	High (1,000 rpm)

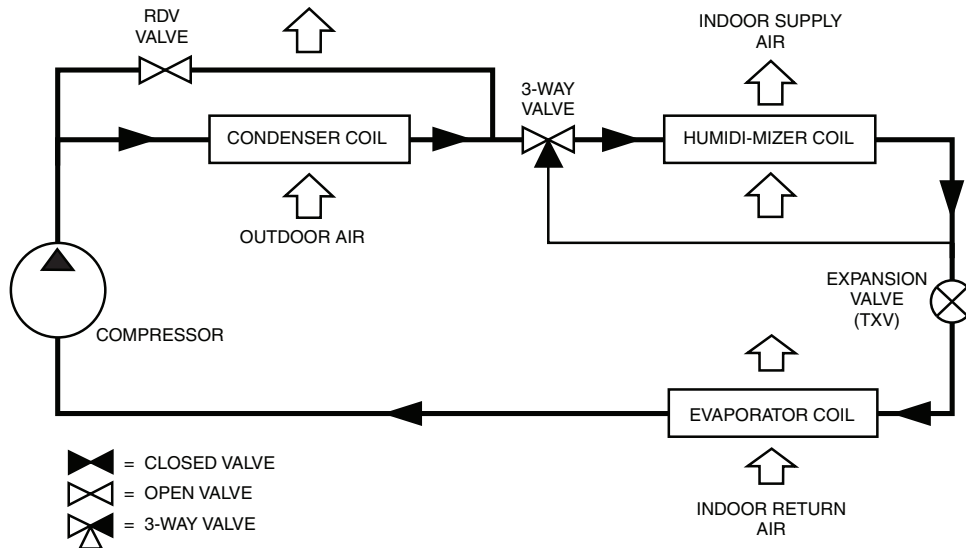
HUMIDI-MIZER PIPING SCHEMATIC (NORMAL COOLING)



HUMIDI-MIZER PIPING SCHEMATIC SUBCOOLING MODE (REHEAT1)



HUMIDI-MIZER PIPING SCHEMATIC HOT GAS REHEAT MODE (REHEAT 2)



Economizer (Optional)

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

If the increase in cooling capacity causes the mixed-air temperature to drop below 45°F (7°C), the outdoor-air damper will return to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Once the mixed air temperature rises above 48°F (9°C), the control returns to normal. The power exhaust fans will be energized and de-energized, if installed, as the outdoor-air damper opens and closes.

If field-installed accessory CO₂ sensors are connected to the economizer, a demand controlled ventilation strategy will begin to operate. As the CO₂ level in the zone increases above the CO₂ setpoint, the minimum position of the damper will be increased proportionally. As the CO₂ level decreases because of the increase of fresh air, the outdoor-air damper will be proportionally closed. For economizer operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

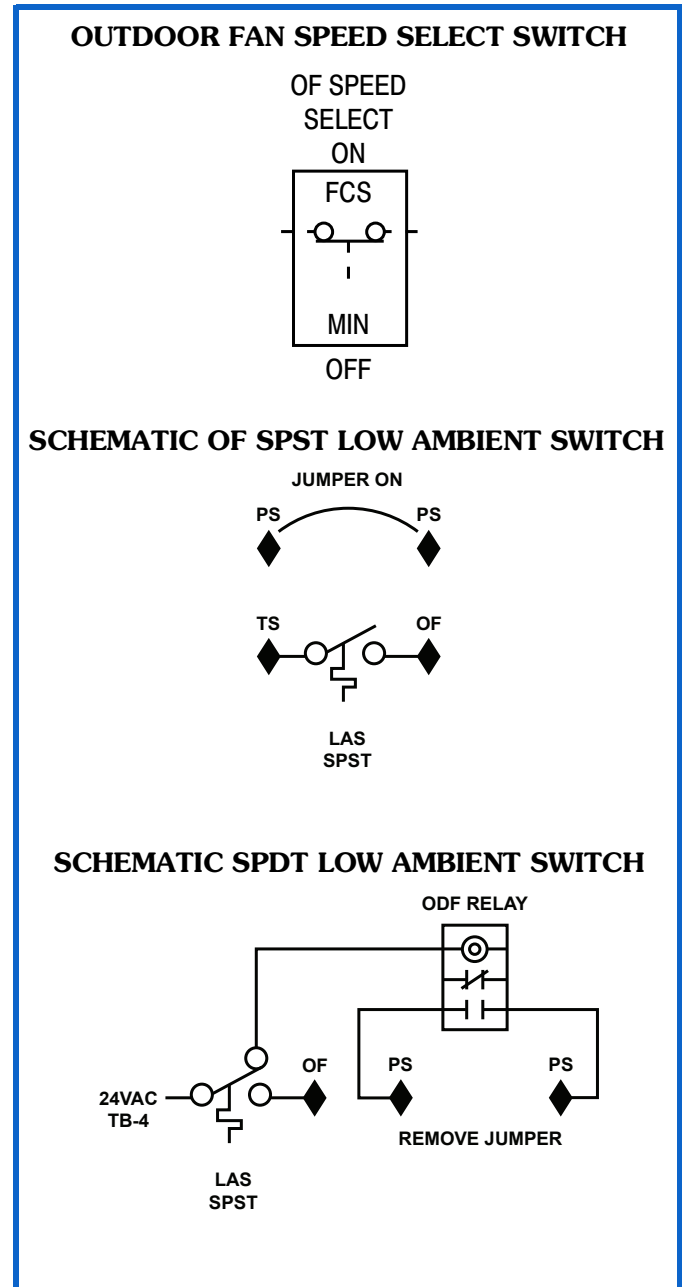
Low Ambient

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

50LC 07 units have a SPST normally open Low Ambient Switch wired across the TS and OF terminal and a jumper placed across the PS terminal (see the art on the right). When the LAS is active, the switch will close making contact to the OF terminal. This is done for units that require all outdoor fans to run at the same pre-set factory Low Ambient Speed.

50LC 08-12 units have a SPDT Low Ambient Switch wired to the OF terminal and the Outdoor Fan Relay (see the art on the right). The jumper across the PS terminal will be removed. When the LAS is active, the switch will close making contact to the OF terminal and will drop connection to the ODF Relay. When electrical connection is removed from the ODF Relay, the PS connection will be opened. This will place the third outdoor-fan electrically isolated from receiving any speed command, which will

then turn the motor off. This is done for units that only require 2 outdoor fans to run at the same pre-set factory Low Ambient Speed.



The table below shows the operation of the outdoor fans for each unit.

LOW AMBIENT TEMPERATURE OUTDOOR FAN CONTROL

50LC UNIT	NO. OF FANS ON	NO. OF FANS OFF	SWITCH	OUTDOOR FAN SELECT SWITCH	RPM
07	2	0	(1) SPST	Up	250
08	2	1	(1) SPDT	Down	160
09	2	1	(1) SPDT	Down	160
12	2	1	(1) SPDT	Down	160

Sequence of operation (cont)



Heating

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

SystemVu Control (Factory Option)

For details on operating 50LC units equipped with the factory-installed SystemVu controls option, refer to *48/50LC*

07-26 Single Package Rooftop Units with SystemVu Controls Version 1.X and Puron (R-410A) Refrigerant Controls, Start-Up, Operation and Troubleshooting.

RTU Open (Factory Option)

For details on operating 50LC units equipped with the factory-installed RTU Open option refer to *48/50LC-07-26 Factory Installed Option RTU Open Multi-Protocol Controller Controls, Start-Up, Operation and Troubleshooting.*

Minimum operating ambient temp (cooling):

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

An economizer shall be the source of cooling in low ambient conditions. When the outside air temperature is below 40°F (4°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 temp (cooling):

The maximum operating ambient temperature for cooling mode is 125°F (52°C). While cooling operation above 125°F (52°C) may be possible, it could cause either a reduction in performance, reliability, or a protective action by the unit's internal safety devices.

Min and max airflow (cooling mode):

To maintain safe and reliable operation of your rooftop, operate within the cooling airflow limits. Operating above the max may cause blow-off, undesired airflow noise, or airflow related problems with the rooftop unit. Operating below the min may cause problems with coil freeze-up. For proper minimum and maximum CFM values, see page 6.

Airflow:

All units are draw-through in cooling mode and blow-through 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 application changing needs. In fact, they should be considered for most applications. Also, consider the various economizer control methods and their benefits, as well as sensors required to accomplish your application goals. Please contact your local Carrier representative for assistance.

Motor limits, break horsepower (BHP):

Due to Carrier's internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in the physical data table on pages 7 to 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 design loads, it doesn't need excess capacity. In fact, 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.

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 Rooftop

HVAC Guide Specifications:

Size Range: 6 to 10 Nominal Tons

Part 1 — 23 06 80 Schedules for Decentralized HVAC Equipment

1.01 23 06 80.13 Decentralized Unitary HVAC Equipment Schedule

A. 23 06 80.13.A. Rooftop unit schedule:

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.
3. Unit internal insulation linings shall be resistant to mold growth in accordance with “mold growth and humidity” test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the “Erosion Test” in UL 181, as part of ASTM C1071.

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 Transmitters

A. 23 09 13.23.A. Thermostats:

1. Thermostat must:
 - a. energize both “W” and “G” when calling for heat.
 - b. have capability to energize 3 different stages of cooling, and 1 and 2 different stages of heating.
 - c. include capability for occupancy scheduling.

Part 4 — 23 09 23 Direct Digital Control (DDC) System for HVAC

4.01 23 09 23.13 Decentralized, Rooftop Units:

A. 23 09 23.13.A. SystemVu™ intelligent integrated Direct Digital Control (DDC) shall provide:

1. Integrated unit operation for comfort cooling, heating ventilation as well as all monitoring,

recording and reporting capabilities. Controller shall also provide diagnostics and alarms of abnormal unit operation through the controller. Controller shall have an intuitive user display and be able to be used in a standalone operation or via building automation system (BAS).

2. Quick Unit Status LEDs of: Run – meaning all systems are go, ALERT - that indicates there is currently a non-critical issue with the unit, like filters need to be replaced and FAULT – that indicates the unit has a critical issue and will possibly shut down.
3. Six large navigation keys for easy access. Navigation keys shall consist of: TEST, BACK, ENTER, and MENU along with UP and DOWN arrows.
4. Full back lit user display with 4 line by 30 character text capabilities. Display menu shall be designed to provide guided major menus and sub menus main menus provided below:
 - a. Shutdown Unit
 - b. Run Status
 - c. Settings
 - d. Alerts/Faults
 - e. Service
 - f. Inputs
 - g. Outputs
 - h. USB
5. The capability for standalone operation with conventional thermostat/sensor or use with building automation systems (BAS) of Carrier i-Vu®, BACnet¹ and Carrier Comfort Network® (CCN) systems. No special modules or boards are required for these capabilities.
6. The ability to read refrigerant pressures at display or via BAS network of Discharge Pressure and Suction Pressure. The need for traditional refrigerant gauges is not required.
7. USB Data Port for flash drive interaction. This will allow the transfer of data for uploads, downloads, perform software upgrades, back-up and restore data and file transfer data such as component number of starts and run hours.
8. Reverse Rotation Protection of compressors if field 3 phase wiring is misapplied.
9. Provide Service Capabilities of:
 - a. Auto run test
 - b. Manual run test
 - c. Component run hours and starts
 - d. Commissioning reports
 - e. Data logging
 - f. Alarm history

1. BACnet is a trademark of ASHRAE.

10. Economizer control and diagnostics. Set up economizer operation, receive feedback from actuator. Also meets the most recent California Title 24 Fault Detection and Diagnostic (FDD) requirements.
 11. Unit cooling operation down to 0°F (-18°C).
 12. Controller shall have easy access connections around the controller perimeter area and consist of Mate-N-Lok¹, terminal block and RJ style modular jack connections.
 13. 365 day real time clock, 20 holiday schedules along with occupied and unoccupied scheduling.
 14. Auto-Recognition for easy installation and commissioning of devices like economizers, space sensors etc.
 15. A 5°F temperature difference between cooling and heating setpoints to meet the latest ASHRAE 90.1-2013 Energy Standard.
 16. Contain return air sensor, supply air sensor and outdoor air sensor to help monitor and provide data for the unit comfort operation, diagnostic and alarms.
 17. Use of Carrier's field accessory hand-held Navigator™ display.
 18. Control of the operation of unit VFD (Variable Frequency Drive) to work in conjunction with the cooling, heating and ventilation modes.
 19. 3-year limited part warranty
- B. 23 09 23.13.B. RTU Open - multi-protocol, direct digital controller:
1. Shall be ASHRAE 62 compliant.
 2. Shall accept 18-30VAC, 50-60Hz, and consume 15VA or less power.
 3. Shall have an operating temperature range from -40°F (-40°C) to 130°F (54°C), 10%-90% RH (non-condensing).
 4. Shall include built-in protocol for BACnet (MS/TP and PTP modes), Modbus² (RTU and ASCII), Johnson N2 and LonWorks. LonWorks³ Echelon processor required for all Lon applications shall be contained in separate communication board.
 5. Shall allow access of up to 62 network variables (SNVT). Shall be compatible with all open controllers.
 6. Baud rate controller shall be selectable using a dipswitch.
 7. Shall have an LED display independently showing the status of serial communication, running, errors, power, all digital outputs, and all analog inputs.
8. 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.
 9. Shall provide the following outputs: economizer, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, heat stage 3/exhaust/reversing valve.
 10. 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.
 11. Shall have a battery back-up capable of a minimum of 10,000 hours of data and time clock retention during power outages.
 12. Shall have built-in support for Carrier technician tool.
 13. Shall include an RS-485 protocol communication port, 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, and a port to connect an optional LonWorks communications card.
 14. Software upgrades will be accomplished by either local or remote download. No software upgrades through chip replacements are allowed.

Part 5 — 23 09 33 Integrated Staging Control (ISC) Board System for HVAC (Electro-Mechanical units)

5.01 23 09 33.13 Decentralized, 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. Shall include an ISC electro-mechanical control board, to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, gas controller, economizer, thermostat, and safety switches. Shall control all 3 stages of compressor logic, 2 or 3 stages of the indoor fan motor logic as well as staging of the outdoor fan motor. Shall also have a green LED indicator to indicate GO operation as well as a fault LED indicator for thermostat mis-wiring, no fan operation and safety switches.
NOTE: Does not apply to units equipped with SystemVu controls.
4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.

1. Mate-N-Lok is a registered trademark of The Whitaker Corporation.

2. Modbus is a registered trademark of Schneider Electric.

3. LonWorks is a registered trademark of Echelon Corporation.

B. 23 09 33.13.B. Safeties:

1. Compressor over-temperature, over current.
2. Low-pressure protection:
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 trouble-shoot the rooftop unit.
NOTE: Does not apply to units equipped with SystemVu controls.
3. High-pressure protection:
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 trouble-shoot the rooftop unit.
4. Automatic reset, motor thermal overload protector.

Part 6 — 23 09 93 Sequence of Operations for HVAC Controls

6.01 23 09 93.13 Decentralized, Rooftop Units:

- A. 23 09 93.13.A. INSERT SEQUENCE OF OPERATION

Part 7 — 23 40 13 Panel Air Filters

7.01 23 40 13.13 Decentralized, 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 8 — 23 81 19 Self-Contained Air Conditioners

8.01 23 81 19.13 Small-Capacity Self-Contained Air Conditioners (50LC**07-12)

- A. 23 81 19.13.A. General
 1. Outdoor, rooftop mounted, ISC electrically controlled, heating and cooling unit utilizing hermetic scroll compressors for cooling duty and optional electric heat for heating duty.
 2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
 3. Unit shall use Puron® (R-410A) refrigerant.
 4. Unit shall be installed in accordance with the manufacturer’s instructions.
 5. Unit must be selected and installed in compliance with local, state, and federal codes.

B. 23 81 19.13.B. Quality Assurance:

1. Unit meets and exceeds ASHRAE 90.1-2013 minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 340/360.
3. Unit shall be designed to conform to ASHRAE 15, 2001.
4. 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.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
6. Unit internal insulation linings shall be resistant to mold growth in accordance with “mold growth and humidity” test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the “Erosion Test” in UL 181, as part of ASTM C1071.
7. Unit casing shall be capable of withstanding 500 hour salt spray exposure per ASTM B117 (scribed specimen).
8. Roof curb shall be designed to conform to NRCA Standards.
9. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
10. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
11. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
12. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
13. High-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:
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 ± 10% voltage.

2. Compressor with standard controls shall be capable of operation down to 40°F (4°C) ambient outdoor temperatures. For lower operation an integrated economizer shall be utilized to allow lower temperatures and accommodate indoor air quality initiatives.
 3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
 4. Unit shall be factory configured 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 size models 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:
- 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 inches minimum, gloss (per ASTM D523, 60°F / 16°C): 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. Unit internal insulation linings shall be resistant to mold growth in accordance with “mold growth and humidity” test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the “Erosion Test” in UL 181, as part of ASTM C1071.
 5. Base of unit shall have a minimum of 4 locations for thru-the-base gas and electrical connections (factory-installed or field-installed), standard.
 6. 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.
7. 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.
 - 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.
8. Top panel:
Shall be a single piece top panel on 07 sizes, 2 piece on 08-12 sizes.
9. 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.
10. Component access panels (standard):
- a. Cabinet panels shall be easily removable for servicing.
 - b. Unit shall have one factory-installed, tool-less, removable, filter access panel.
 - c. Panels covering control box, indoor fan, indoor fan motor, gas components (where applicable), and compressors shall have molded composite handles.
 - d. Handles shall be UV modified, composite, permanently attached, and recessed into the panel.
 - e. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
 - f. Collars shall be removable and easily replaceable using manufacturer recommended parts.
- 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.
 - 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 of accelerated ultraviolet light testing. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).
- 3. Optional Copper-fin evaporator and condenser coils:
 - a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - b. Galvanized steel tube sheets shall not be acceptable.
 - c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.
- 4. Optional E-coated aluminum-fin evaporator and condenser coils:
 - a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
 - b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
 - c. Color shall be high gloss black with gloss per ASTM D523-89.
 - d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
 - e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
 - f. Impact resistance shall be up to 160 in. lb (ASTM D2794-93).
 - g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
 - h. Corrosion durability shall be confirmed through testing to be no less than 6000 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. Thermostatic Expansion Valve (TXV) shall help provide optimum performance across the entire operating range. Shall contain removable power element to allow change out of power element and bulb without removing the valve body.
 - b. Refrigerant filter drier.
 - c. Service gauge connections on suction and discharge lines.
 - d. Single circuit design with tandem compressor and fully activated evaporator coil
 - 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-ampereage conditions by an internal, motor overload device.
 - f. Compressor shall be factory mounted on rubber grommets.
 - g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
 - h. Crankcase 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 Staged Air Volume (SAV™) operation:
 - a. Shall be installed inside the unit cabinet, mounted, wired and tested.
 - b. Shall contain Electromagnetic Interference (EMI) frequency protection.
 - c. Insulated Gate Bi-Polar Transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
 - d. Self diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
 - e. RS485 capability standard.
 - f. Electronic thermal overload protection.
 - g. 5% swinging chokes for harmonic reduction and improved power factor.
 - h. All printed circuit boards shall be conformal coated.
 - i. Shall not contain visual display to adjust internal setting. Only available as field-installed kit.
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 (galvalum) blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

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

1. Low Leak Economizers:

- a. Available as factory-installed option (vertical only) or field-installed accessory (vertical or horizontal) on all electro-mechanical and RTU Open models. SystemVu field-installed accessory (vertical or horizontal) also available.
- b. Low leak economizers are available with EconoMi\$er X controls for electro-mechanical units, or EconoMi\$er2 controls for RTU Open or SystemVu units.
- c. Integrated, gear driven opposed blade design type capable of simultaneous economizer and compressor operation.
- d. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
- e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
- f. Standard leak rate models shall be equipped with leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
- g. Shall be capable of introducing up to 100% outdoor air.
- h. Economizer's barometric relief dampers shall be sized to allow up to 100% relief (actual results will be based on specific job conditions).

2. Ultra-Low Leak Economizers:

- a. Available as a factory-installed option (vertical only) or field-installed accessory (vertical or horizontal) on all models including: electro-mechanical, RTU Open, and SystemVu.
- b. Ultra-Low Leak economizer dampers meet California's Title 24 section 140.4 prescriptive requirements for leakage, reliability testing, etc., and ASHRAE 90.1 requirements for damper leakage.
- c. Economizers are available with EconoMi\$er X controls for electro-mechanical units, or EconoMi\$er2 controls for RTU Open or SystemVu units.
- d. Integrated, gear driven opposed blade design type capable of simultaneous economizer and compressor operation.

- e. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
 - f. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - g. Shall be capable of introducing up to 100% outdoor air.
 - h. Economizer's barometric relief dampers shall be sized to allow up to 100% relief (actual results will be based on specific job conditions).
3. EconoMi\$er X Economizer Controls:
- a. For units with factory-installed (vertical only) or field-installed accessory (vertical or horizontal) on electro-mechanical units with low leak or ultra-low leak economizers.
 - b. Meets California's Title 24 section 120.2 mandatory requirements for economizer Fault Detection and Diagnosis (FDD).
 - c. Economizer controller shall be Honeywell W7220 JADE that provides:
 - 1) 2-line LCD interface screen for setup, configuration and troubleshooting.
 - 2) On-board FDD detects and alerts when economizer is not operating properly.
 - 3) Sensor failure loss of communication identification.
 - 4) Automatic sensor detection.
 - 5) Capabilities for use with multi-speed indoor fan units.
 - d. Compressor lockout temperature on W7220 is adjustable from -45°F to 80°F, set at a factory default of 32°F.
 - e. Shall be designed to spring return close outside air damper during loss of power.
 - f. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - g. Utilizes digital dry bulb or enthalpy outside air sensors. Factory-installed economizers available with dry bulb or enthalpy. Dry bulb sensors installed on all field-installed economizer accessories.
4. EconoMi\$er2 Economizer Controls:
- a. For use with factory-installed (vertical only) or field-installed accessory (vertical or horizontal) on RTU Open or SystemVu units with low leak or ultra-low leak economizers.
NOTE: Factory-installed EconoMi\$er2 is available on SystemVu units with ultra-low leak economizers only.
 - b. EconoMi\$er2 economizers are controlled by RTU Open or SystemVu unit controllers, which shall be 4-20mA design.
 - c. RTU Open and SystemVu controls meet California's Title 24 section 120.2 mandatory requirements for economizer Fault Detection and Diagnosis.
- d. Available on factory-installed (vertical only) economizers with dry bulb or enthalpy outside air sensors. Field-installed accessories (vertical or horizontal) are available with dry bulb outside air sensors only.
 - e. 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.
 - f. Shall be designed to spring return close outside air damper during loss of power.
 - g. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - h. 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%.
 - i. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
 - j. Controller shall drive outside air dampers completely closed when the unit is in the unoccupied mode.
 - k. Economizer controller shall accept a 4 to 20mA 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.
 - l. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
5. Condenser Coil Hail Guard Assembly (Factory or field-installed):
- a. Shall protect against damage from hail.
 - b. Shall be louvered design.
6. 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 shutdown.
 - 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.
7. 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.
8. 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.
9. Thru-the-Base Connectors (07 models only):
- a. Kit shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan. Kit include fittings for thru-the-curb gas connection which is not used on 50LC units.
 - b. Maximum of 3 connection locations per unit.
10. 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 0-100% adjustable setpoint on the economizer control.
11. 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.
12. High-Static Indoor Fan Motor(s) and Drive(s):
- High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
13. Thru-the-Bottom Utility Connectors:
- Kit shall provide connectors to permit electrical connections to be brought to the unit through the basepan.
14. Outdoor Air Enthalpy Sensor:
- 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.
15. Return Air Enthalpy Sensor:
- The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
16. 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.
17. Smoke detectors (factory-installed only):
- a. Shall be a 45-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.
- 18. Horn/Strobe Annunciator:
 - a. Provides an audible/visual signaling device for use with factory-installed option or field-installed accessory smoke detectors:
 - 1) Requires installation of a field-supplied 24 v transformer suitable for 4.2 VA (AC) or 3.0 VA (DC) per horn/strobe accessory.
 - 2) Requires field-supplied electrical box, North American 1-gang box, 2 in. (51 mm) x 4 in. (102 mm).
 - 3) Shall have a clear colored lens.
- 19. Time Guard:
 - a. Shall prevent compressor short cycling by providing a 5 minute delay (± 2 minutes) before restarting a compressor after shutdown for any reason.
 - b. One device shall be required per compressor.
- 20. Electric Heat:
 - a. Heating Section:
 - 1) Heater element open coil resistance wire, nickel-chrome alloy, 0.29 inches inside diameter, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
 - 2) Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermo limit controls, magnetic heater contactors (24 v coil) and terminal block all mounted in electric heater control box (minimum 18 ga galvanized steel) attached to end of heater assembly.
- 21. 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.
- 22. Display Kit for Variable Frequency Drive:
 - a. Kit allows the ability to access the VFD controller programs to provide special setup capabilities and diagnostics.
 - b. Kit contains display module and communication cable.
 - c. Display Kit can be permanently installed in the unit or used on any SAV system VFD controller as needed.
- 23. Supply Duct Kit:
 - 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.
- 24. Thermostat:
 - a. Due to the 3-stage cooling capacity design of these units, a 3-stage cooling thermostat is required for the unit to perform at listed operating efficiencies.
 - b. Carrier offers a Honeywell branded T7350D (3 Cool/3 Heat) Commercial Programmable Thermostat. This provides:
 - 1) 7-day programmable 365-day clock with holiday programming
 - 2) Automatic Daylight Saving Time adjustment
 - 3) Backlit display
 - 4) Changeover selections: automatic or manual
 - 5) Fan configurable: continuous or intermittent during occupied
- 25. Humidi-MiZer Adaptive Dehumidification System:
 - a. The Humidi-MiZer Adaptive Dehumidification System shall be factory-installed, certified and tested to provide greater dehumidification of the occupied space by providing 2 distinct modes of dehumidification operation in addition to its normal design cooling mode:
 - 1) Subcooling mode further sub cools the hot liquid refrigerant leaving the condenser coil as well as reheat leaving air stream. It can provide both better cooling capacity as well as dehumidification process when both temperature and humidity in the space are not satisfied.
 - 2) Hot gas reheat mode shall mix a portion of the hot gas from the discharge of compressor with the hot liquid refrigerant leaving the condenser coil to create a 2-phase warm refrigerant in the reheat coil which results in a neutral leaving air temperature when only humidity in the space is not satisfied.

