Product Data

WeatherMaker®
Single Packaged Rooftop
Cooling Only/Electric Heat

6 to 15 Nominal Tons



50TC 07, 08, 09, 12, 14, 16
with Puron® (R-410A) Refrigerant

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Features/Benefits

Carrier's WeatherMaker® 6 to 15 Ton rooftop unit (RTU) was designed by customers for customers. With "no-strip" screw collars, handled access panels, and more we've made your unit easy to install, easy to maintain, easy to use and reliable.

Easy to install:

All WeatherMaker® units are field-convertible to horizontal air flow which makes it easy to adjust to unexpected job site complications. Lighter units make easy replacement. Most Carrier 50TC rooftops fit on existing Carrier curbs dating back to 1989. Also, our large control box gives you room to work and room to mount Carrier accessory controls.

Easy to maintain:

Easy access handles by Carrier provide quick and easy 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.

Easy to use:

The newly designed, central terminal board by Carrier puts all your connections and troubleshooting points in one convenient place, standard. Most low voltage connections are made to the same board and make it easy to find what you're looking for and easy to access it. Carrier rooftops have high and low pressure switches, a filter drier, and 2-in. (51mm) standard filters.

Key features:

Key features are:

- Single cooling stage capacity control on 07 to 12 models. Two-stage cooling capacity control on 08-16 models.
- EERs up to 11.3
- IEERs up to 12.2 with single speed indoor fan motor, and up to 13.0 with 2-speed/VFD indoor fan motor.
- Utility connections are the same because 6-12.5 ton units fit on existing Carrier rooftop curbs. This saves time and money on replacement jobs.
- Standardized components and layout. Standardized components and controls make service and stocking parts easier.
- Scroll compressors on all units. This makes service, stocking parts, replacement, and troubleshooting easier.
- Field convertible airflow (6-12.5 ton). Being able to convert a unit from vertical airflow to horizontal makes it easy to overcome job site complications. A 15 ton model requires a simple supply duct cover to field convert from factory vertical to horizontal.
- Easy-adjust, belt-drive motor available. There's no need for field-supplied drives or motors.
- Provisions for bottom or side condensate drain.
- Capable of thru-the-base or thru-the-curb gas line routing.
- Single-point electrical connection.
- Sloped, composite drain pan sheds water; and won't rust.
- Standardized controls and control box layout. Standardized components and controls make stocking parts and service easier.
- Clean, large, easy to use control box.
- Color-coded wiring.
- Large, laminated wiring and power wiring drawings which are affixed to unit make troubleshooting easy.
- Single, central terminal board for test and wiring connections.
- Fast-access, handled, panels for easy access to the blower and blower motor, control box, and compressors.
- "No-strip" screw system guides screws into the panel and captures them tightly without stripping the screw, the panel, or the unit.
- Exclusive, newly designed indoor refrigerant header for easier maintenance and replacement.
- Mechanical cooling 115°F to 40°F (46°C to 4°C) standard on all models. Winter Start Kit allows cooling operation down to 25°F (–4°C) and Motormaster to –20°F (–29°C).
- 2-in. (51mm) disposable filters on all units.
- Refrigerant filter-drier on each circuit protected with a high and low pressure switch.
- Factory-installed Humidi-MiZer® adaptive dehumidification system on all sizes with round tube/plate fin (RFPF) condenser coils, includes Motormaster® I controller.
- Many factory-installed options ranging from air management economizers, 2 position dampers, plus convenience outlets, disconnect switches and smoke detectors.
- Standard Warranty (parts only): 5-year compressor, 5-year electric heater (field-installed only), 5-year Ultra Low Leak Economizers, 3-year Novation® condenser coil, 1-year Round Tube/Plate Fin (RTPF) condenser coil parts, and 1-year limited on all parts.
- Staged Air Volume (SAV™) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed between cooling stages. Available on single stage cooling model 07 and 2-stage cooling models 08-16 with electromechanical controls or RTU Open Controller. SAV™ system is required on all units in the United States to meet DOE-2018 (Department of Energy) energy efficiency standards.

Table of contents

	Page
Features/Benefits	2
Model Number Nomenclature	3
Capacity Ratings	4-20
Physical Data	21-24
Options and Accessories	25-28
Dimensions	29-43
Application Data	44-45
Performance Data	46-53
Electrical Data	54-84
Controls	85-87
Guide Specifications	88-97

Model number nomenclature

50TC UNITS MODEL NUMBER NOMENCLATURE (EXAMPLE)

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

Unit Heat Type
50 - Electric Heat Packaged Rooftop

Model Series - WeatherMaker®
TC - Standard Efficiency

Heat Size
- = No heat

Refrig. Systems Options
A = Standard One Stage Cooling Models
B = Standard One Stage Cooling with Humidi-MiZer® System (07 models only)
D = Two Stage Cooling Models 08-16
E = Two Stage Cooling Models 08-16 with Al/Cu condenser Coils and with Humidi-MiZer System

Cooling Tons
07 = 6 tons
08 = 7.5 tons
09 = 8.5 tons
12 = 10 tons
14 = 12.5 tons
16 = 15 tons

Sensor Options
A = None
B = RA Smoke Detector
C = SA Smoke Detector
D = RA + SA Smoke Detector
E = CO_2 Sensor
F = RA Smoke Detector and CO_2 Sensor
G = SA Smoke Detector and CO_2 Sensor
H = RA + SA Smoke Detector and CO_2 Sensor
J = Condensate Overflow Switch
K = Condensate Overflow Switch and RA Smoke Detectors
L = Condensate Overflow Switch and RA and SA Smoke Detectors

Indoor Fan Options
1 = Belt Drive, Standard Static Option
2 = Belt Drive, Medium Static Option
3 = Belt Drive, High Static Option
C = High Static Option with High Efficiency Motor (Size 16 Only)

Coil Options – RTPF (Outdoor - Indoor - 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

Coil Options – Novation (Outdoor - Indoor - Hail Guard)
G = Al/Al - Al/Cu
H = Al/Al - Cu/Cu
J = Al/Al - E-coat Al/Cu
K = E-coat Al/Al - Al/Cu
L = E-coat Al/Al - E-coatAl/Cu
T = Al/Al - Al/Cu — Louvered Hail Guard
U = Al/Al - Cu/Cu — Louvered Hail Guard
V = Al/Al - E-coat Al/Cu — Louvered Hail Guard
W = E-coat Al/Al - Al/Cu — Louvered Hail Guard
X = E-coat Al/Al - E-coat Al/Cu — Louvered Hail Guard

Packaging & Seismic Compliance
0 = Standard
1 = LTL

Electrical Options
A = None
C = Non-Fused Disconnect
D = Thru-The-Base Connections
F = Non-Fused Disconnect and Thru-The-Base Connections
G = 2-Speed Indoor Fan (VFD) Controller
J = 2 Speed Fan Controller (VFD) and Non-Fused Disconnect
K = 2 Speed Fan Controller (VFD) and Thru-The-Base Connections
M = 2 Speed Fan Controller (VFD) with 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 = Temperature Economizer w/ Barometric Relief
F = Enthalpy Economizer w/ Barometric Relief
K = 2-Position Damper
U = Temperature Ultra Low Leak Economizer w/ Barometric Relief
W = Enthalpy Ultra Low Leak Economizer w/ Barometric Relief

Base Unit Controls
0 = Electro-mechanical Controls can be used with W7212 EconoMi$er® IV (Non-Fault Detection and Diagnostic)
1 = PremierLink™ Controller
2 = RTU Open Multi-Protocol Controller
6 = Electro-mechanical w/ 2-Speed Fan and W7220 Economizer Controller Controls. Can be used with W7220 EconoMi$er X (w/ Fault Detection & Diagnostic)

Design Revision
- = Factory Design Revision

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

NOTE: Not all possible options are displayed, see the current 50TC 07-16 Price Pages for more details.

Capacity ratings

AHRI COOLING RATINGS

50TC UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTALPOWER (kW)	EER	IEER WITH SINGLE SPEED INDOOR FAN MOTOR	IEER WITH 2-SPEED INDOOR FAN MOTOR
A07	1	6.0	70.0	6.4	11.2	11.4	12.9
A08	1	7.5	88.0	8.0	11.2	11.4	N/A
D08	2	7.5	83.0	7.4	11.2	11.7	13.0
A09	1	8.5	97.0	8.8	11.2	11.4	N/A
D09	2	8.5	99.0	8.8	11.2	11.7	13.0
A12	1	10.0	117.0	10.6	11.2	11.4	N/A
D12	2	10.0	114.0	10.1	11.3	12.2	13.0
D14	2	12.5	140.0	12.7	11.0	11.2	12.4
D16	2	15.0	174.0	15.8	11.0	11.5	12.6

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
IECC — International Energy Conservation Code
IPLV — Integrated Part Load Value
N/A — Not Applicable

NOTES:
1. Rated and certified under AHRI Standard 210/240 or 340/360, as appropriate.
2. Ratings are based on:
   Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor.
   IEER Standard: A measure that expresses cooling part load EER efficiency for commercial unitary air conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
3. The 50TC units meet the DOE-2018 (Department of Energy), ASHRAE 90.1-2016 and IECC*-2015 minimum efficiency requirements when equipped with the SAV™ (staged air volume) option.
4. 50TC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes or visit the following website: http://bcap-energy.org to determine if compliance with this standard pertains to your state, territory, or municipality.

SOUND RATING PERFORMANCE

50TC UNIT	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz								
		A–Weighted	63	125	250	500	1000	2000	4000	8000
A07	1	78	88.8	81.8	76.9	74.4	73.3	69.8	66.3	62.7
A08	1	82	90.1	82.6	81.0	79.4	77.0	73.0	70.4	66.7
D08	2	82	85.8	84.3	80.5	78.7	76.4	72.7	68.3	65.1
A09	1	83	91.2	86.4	81.9	81.0	78.3	73.9	71.4	67.3
D09	2	82	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
A12	1	82	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
D12	2	82	89.0	83.1	80.5	78.5	75.5	71.6	69.6	69.3
D14	2	87	87.0	85.2	84.6	84.9	82.2	78.4	75.3	72.9
D16	2	87	87.0	85.2	84.6	84.9	82.2	78.4	75.3	72.9

LEGEND:

dB — Decibel

NOTES
1. Outdoor sound data is measure 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 “average” human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI standard 270.

* IECC is a registered trademark of International Code Council, Inc.

MINIMUM - MAXIMUM AIRFLOW RATINGS - COOLING AND ELCTRIC HEAT

UNIT	COOLING			ELECTRIC HEATERS		
	Minimum	Minimum 2-Speed Fan Motor (at High Speed)	Minimum 2-Speed Fan Motor (at Low Speed)	Maximum	Minimum	Maximum
50TC07**	1800	N/A	N/A	3000	1800	3000
50TC08**	2250	2250	1500	3750	2250*	3750
50TC09**	2550	2873	1915	4250	2550*	4250
50TC12**	3000	3380	2253	5000	3000*	5000
50TC14**	3600	4056	2704	6000	3000*	6000
50TC16**	4500	5625	3750	7500	4500	7500

* Minimum electric heat CFM exceptions, see table below.

MINIMUM ELECTRIC HEAT CFM EXCEPTIONS

UNIT	UNIT VOLTAGE	HEATER kW	UNIT CONFIGURATION	REQUIRED MINIMUM CFM
50TC12**	208/230	42.4	Horizontal	3200
50TC14**				
50TC12**	208/230	50.0	Horizontal	3200
50TC14**				
50TC08**	575	17.0	Horizontal or Vertical	2800
50TC09** **50TC**12** **50TC**14**		17.0 34.0		2350

Capacity ratings (cont)

COOLING CAPACITIES — 1-STAGE COOLING, 6 TONS

50TC*A07 (RTPF)				AMBIENT TEMPERATURE (F)												
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1800 Cfm	EAT (wb)	58	TC	64.9	64.9	73.3	62.1	62.1	70.0	58.9	58.9	66.4	55.6	55.6	62.7
			SHC	56.6	64.9	73.3	54.1	62.1	70.0	51.4	58.9	66.4	48.5	55.6	62.7
		62	TC	68.7	68.7	70.3	64.9	64.9	68.5	60.8	60.8	66.4	56.4	56.4	64.0
			SHC	51.7	61.0	70.3	49.9	59.2	68.5	47.9	57.2	66.4	45.7	54.9	64.0
		67	TC	75.6	75.6	75.6	71.7	71.7	71.7	67.4	67.4	67.4	62.5	62.5	62.5
			SHC	42.8	52.2	61.5	41.2	50.5	59.8	39.3	48.6	58.0	37.2	46.5	55.8
		72	TC	82.6	82.6	82.6	78.5	78.5	78.5	73.7	73.7	73.7	67.8	67.8	67.8
			SHC	33.5	42.8	52.2	31.9	41.3	50.6	30.0	39.3	48.6	27.8	36.9	45.9
		76	TC	—	87.5	87.5	—	83.3	83.3	—	77.7	77.7	—	70.9	70.9
			SHC	—	35.0	44.9	—	33.5	43.4	—	31.6	41.5	—	29.3	39.1
2100 Cfm	EAT (wb)	58	TC	68.9	68.9	77.7	65.9	65.9	74.3	62.5	62.5	70.5	58.7	58.7	66.2
			SHC	60.1	68.9	77.7	57.4	65.9	74.3	54.5	62.5	70.5	51.2	58.7	66.2
		62	TC	70.9	70.9	76.9	67.1	67.1	75.0	63.0	63.0	72.5	58.7	58.7	68.7
			SHC	55.6	66.3	76.9	53.8	64.4	75.0	51.6	62.1	72.5	48.7	58.7	68.7
		67	TC	77.8	77.8	77.8	73.7	73.7	73.7	69.2	69.2	69.2	64.0	64.0	64.0
			SHC	45.4	56.1	66.8	43.7	54.4	65.2	41.8	52.5	63.2	39.6	50.2	60.7
		72	TC	84.5	84.5	84.5	80.3	80.3	80.3	75.1	75.1	75.1	68.8	68.8	68.8
			SHC	34.5	45.2	55.9	32.9	43.5	54.2	30.9	41.4	52.0	28.5	38.7	48.9
		76	TC	—	89.2	89.2	—	84.7	84.7	—	78.8	78.8	—	71.6	71.6
			SHC	—	36.3	47.8	—	34.7	46.0	—	32.6	43.7	—	30.1	40.9
2400 Cfm	EAT (wb)	58	TC	72.0	72.0	81.2	68.7	68.7	77.5	65.2	65.2	73.5	61.1	61.1	68.9
			SHC	62.8	72.0	81.2	60.0	68.7	77.5	56.9	65.2	73.5	53.3	61.1	68.9
		62	TC	72.8	72.8	82.8	68.9	68.9	80.7	65.2	65.2	76.4	61.2	61.2	71.6
			SHC	59.1	71.0	82.8	57.2	68.9	80.7	54.1	65.2	76.4	50.7	61.2	71.6
		67	TC	79.4	79.4	79.4	75.2	75.2	75.2	70.5	70.5	70.5	65.1	65.1	65.3
			SHC	47.7	59.8	71.8	46.0	58.1	70.2	44.0	56.0	68.1	41.6	53.5	65.3
		72	TC	86.0	86.0	86.0	81.6	81.6	81.6	76.1	76.1	76.1	69.6	69.6	69.6
			SHC	35.3	47.2	59.2	33.7	45.6	57.5	31.7	43.3	55.0	29.1	40.3	51.4
		76	TC	—	90.3	90.3	—	85.7	85.7	—	79.6	79.6	—	72.1	72.1
			SHC	—	37.3	49.8	—	35.6	48.0	—	33.5	45.6	—	30.8	42.5
2700 Cfm	EAT (wb)	58	TC	60.3	60.3	74.1	71.1	71.1	80.2	67.4	67.4	76.0	63.0	63.0	71.1
			SHC	46.4	60.3	74.1	62.0	71.1	80.2	58.8	67.4	76.0	55.0	63.0	71.1
		62	TC	65.4	65.4	69.3	71.2	71.2	83.3	67.5	67.5	79.0	63.1	63.1	73.8
			SHC	41.0	55.1	69.3	59.0	71.2	83.3	55.9	67.5	79.0	52.3	63.1	73.8
		67	TC	72.7	72.7	72.7	76.3	76.3	76.3	71.5	71.5	72.6	65.8	65.8	69.4
			SHC	33.8	48.0	62.2	48.2	61.6	74.9	46.1	59.3	72.6	43.5	56.5	69.4
		72	TC	79.7	79.7	79.7	82.5	82.5	82.5	76.9	76.9	76.9	70.1	70.1	70.1
			SHC	25.8	40.2	54.6	34.5	47.5	60.5	32.3	45.0	57.7	29.7	41.7	53.8
		76	TC	—	85.1	85.1	—	86.4	86.4	—	80.2	80.2	—	72.5	72.5
			SHC	—	33.5	48.4	—	36.5	49.9	—	34.3	47.3	—	31.5	44.0
3000 Cfm	EAT (wb)	58	TC	64.9	64.9	78.8	73.1	73.1	82.5	69.2	69.2	78.0	64.5	64.5	72.7
			SHC	51.1	64.9	78.8	63.8	73.1	82.5	60.3	69.2	78.0	56.2	64.5	72.7
		62	TC	68.7	68.7	76.5	73.2	73.2	85.7	69.2	69.2	81.0	64.5	64.5	75.5
			SHC	45.5	61.0	76.5	60.7	73.2	85.7	57.4	69.2	81.0	53.5	64.5	75.5
		67	TC	75.6	75.6	75.6	77.2	77.2	79.4	72.2	72.2	76.8	66.3	66.3	73.0
			SHC	36.6	52.2	67.7	50.2	64.8	79.4	48.0	62.4	76.8	45.1	59.1	73.0
		72	TC	82.6	82.6	82.6	83.3	83.3	83.3	77.5	77.5	77.5	70.5	70.5	70.5
			SHC	27.2	42.8	58.5	35.1	49.2	63.3	32.9	46.6	60.3	30.2	43.0	55.9
		76	TC	—	87.5	87.5	—	86.9	86.9	—	80.6	80.6	—	72.8	72.8
			SHC	—	35.0	51.5	—	37.3	51.6	—	35.0	48.9	—	32.1	45.3

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5. Do not operate outside these limits.

COOLING CAPACITIES — 1-STAGE COOLING, 6 TONS (cont)

Temp (F) Air Entering Condenser (Edb)		50TC*B07 (6 TON) - UNIT WITH HUMIDI-MIZER IN SUBCOOLING MODE								
		Air Entering Evaporator - CFM								
		4,500			6,000			7,500		
		Air Entering Evaporator - Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	208.50	190.60	172.60	229.20	208.60	188.10	247.80	224.90	202.00
	SHC	94.00	114.50	135.00	104.50	125.20	145.90	113.00	133.80	154.60
	kW	13.42	13.05	12.70	13.60	13.21	12.80	13.82	13.36	13.15
85	TC	198.30	180.70	163.00	214.90	194.80	174.60	229.80	207.40	185.10
	SHC	74.10	99.60	125.10	85.20	110.90	136.70	94.10	120.00	145.90
	kW	14.79	14.42	14.10	14.97	14.58	14.20	15.19	14.73	14.51
95	TC	188.20	170.80	153.40	200.60	180.90	161.10	211.90	190.00	168.10
	SHC	54.40	84.80	115.30	65.90	96.70	127.50	75.10	106.20	137.20
	kW	16.23	15.86	15.50	16.41	16.02	15.60	16.63	16.17	15.95
105	TC	178.10	160.90	143.80	186.40	167.00	147.70	193.90	172.50	151.20
	SHC	34.60	70.00	105.40	46.50	82.40	118.20	56.10	92.30	128.50
	kW	17.47	17.10	16.80	17.65	17.26	16.90	17.87	17.41	17.25
115	TC	167.90	151.10	134.20	172.10	153.20	134.20	175.90	155.10	134.50
	SHC	14.80	55.20	95.60	27.20	68.10	109.00	37.10	78.50	119.80
	kW	18.87	18.50	18.20	19.05	18.66	18.30	19.27	18.81	18.55

50TC*B07 (6 TONS) – UNIT WITH HUMIDI-MIZER SYSTEM IN HOT GAS REHEAT MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Entering Condenser (Edb)		75 dry bulb			75 dry bulb			75 dry bulb		
		62.5 wet bulb (50% relative)			64 wet bulb (55% relative)			65.3 wet bulb (60% relative)		
		2100	2400	2700	2100	2400	2700	1750	2000	2700
80	TC	16.7	19.8	22.5	18.8	21.9	24.7	16.2	19.4	26.7
	SHC	0.6	0.6	0.6	-0.4	-0.4	-0.4	-1.3	-1.3	-1.3
	kW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75	TC	17.7	20.6	23.1	19.6	22.6	25.3	17.3	20.3	27.1
	SHC	0.6	0.6	0.6	-0.3	-0.3	-0.3	-1.2	-1.2	-1.2
	kW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70	TC	18.6	21.3	23.7	20.5	23.3	25.8	18.3	21.1	27.6
	SHC	0.7	0.7	0.7	-0.2	-0.2	-0.2	-1.0	-1.0	-1.0
	kW	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1
60	TC	20.5	22.9	25.0	22.2	24.7	26.8	20.4	22.8	28.5
	SHC	0.7	0.7	0.7	-0.0	-0.0	-0.0	-0.7	-0.7	-0.7
	kW	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
50	TC	22.4	24.4	26.2	24.0	26.0	27.9	22.4	24.5	29.3
	SHC	0.8	0.8	0.8	0.1	0.1	0.1	-0.4	-0.4	-0.4
	kW	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.2	4.2
40	TC	24.3	25.9	27.4	25.7	27.4	28.9	24.5	26.3	30.2
	SHC	0.8	0.8	0.8	0.3	0.3	0.3	-0.1	-0.1	-0.1
	kW	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2

LEGEND

Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
ldb — Leaving Dry-Bulb
lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:
1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Capacity ratings (cont)

COOLING CAPACITIES — 1-STAGE COOLING, 7.5 TONS

50TC*A08 (RTPF)				AMBIENT TEMPERATURE (F)											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EAT (wb)	58	TC	81.2	81.2	91.8	77.5	77.5	87.7	73.6	73.6	83.3	69.5	69.5	78.7
			SHC	70.5	81.2	91.8	67.3	77.5	87.7	63.9	73.6	83.3	60.4	69.5	78.7
		62	TC	86.9	86.9	86.9	82.3	82.3	84.0	77.2	77.2	81.5	71.9	71.9	78.8
			SHC	63.6	74.9	86.2	61.4	72.7	84.0	58.9	70.2	81.5	56.3	67.6	78.8
		67	TC	95.2	95.2	95.2	90.7	90.7	90.7	85.7	85.7	85.7	79.9	79.9	79.9
			SHC	52.8	64.2	75.6	50.9	62.2	73.6	48.8	60.1	71.5	46.3	57.6	68.9
		72	TC	103.5	103.5	103.5	98.9	98.9	98.9	93.8	93.8	93.8	87.3	87.3	87.3
			SHC	41.5	53.1	64.6	39.7	51.2	62.7	37.7	49.2	60.6	35.3	46.6	57.8
		76	TC	—	109.6	109.6	—	104.8	104.8	—	99.1	99.1	—	91.6	91.6
			SHC	—	43.7	56.0	—	42.0	54.3	—	40.0	52.4	—	37.4	49.8
2625 Cfm	EAT (wb)	58	TC	85.9	85.9	97.2	82.2	82.2	93.1	78.1	78.1	88.4	73.9	73.9	83.6
			SHC	74.6	85.9	97.2	71.4	82.2	93.1	67.9	78.1	88.4	64.1	73.9	83.6
		62	TC	89.6	89.6	94.1	85.1	85.1	91.7	80.1	80.1	89.1	74.6	74.6	86.0
			SHC	68.1	81.1	94.1	65.9	78.8	91.7	63.4	76.3	89.1	60.6	73.3	86.0
		67	TC	97.9	97.9	97.9	93.2	93.2	93.2	88.1	88.1	88.1	82.0	82.0	82.0
			SHC	55.7	68.7	81.7	53.7	66.7	79.8	51.6	64.6	77.6	49.0	62.0	74.9
		72	TC	106.0	106.0	106.0	101.3	101.3	101.3	95.9	95.9	95.9	89.0	89.0	89.0
			SHC	42.7	55.8	68.9	40.9	53.9	67.0	38.8	51.8	64.7	36.2	48.9	61.7
		76	TC	—	111.8	111.8	—	106.9	106.9	—	100.7	100.7	—	92.7	92.7
			SHC	—	45.3	59.8	—	43.6	58.0	—	41.4	55.6	—	38.7	52.6
3000 Cfm	EAT (wb)	58	TC	89.6	89.6	101.4	85.9	85.9	97.2	81.7	81.7	92.5	77.0	77.0	87.1
			SHC	77.9	89.6	101.4	74.6	85.9	97.2	71.0	81.7	92.5	66.9	77.0	87.1
		62	TC	91.8	91.8	101.1	87.2	87.2	98.6	82.3	82.3	95.5	77.1	77.1	90.6
			SHC	72.2	86.7	101.1	69.9	84.3	98.6	67.2	81.3	95.5	63.5	77.1	90.6
		67	TC	99.9	99.9	99.9	95.2	95.2	95.2	89.9	89.9	89.9	83.6	83.6	83.6
			SHC	58.3	72.9	87.5	56.4	71.0	85.5	54.2	68.8	83.4	51.6	66.1	80.5
		72	TC	107.9	107.9	107.9	103.0	103.0	103.0	97.3	97.3	97.3	90.1	90.1	90.1
			SHC	43.7	58.3	72.8	41.9	56.4	70.9	39.7	54.1	68.4	37.0	51.0	65.0
		76	TC	—	113.8	113.8	—	108.4	108.4	—	102.0	102.0	—	93.4	93.4
			SHC	—	46.7	62.5	—	44.8	60.4	—	42.6	57.9	—	39.6	54.7
3375 Cfm	EAT (wb)	58	TC	92.7	92.7	104.9	88.8	88.8	100.5	84.6	84.6	95.7	79.6	79.6	90.0
			SHC	80.5	92.7	104.9	77.1	88.8	100.5	73.4	84.6	95.7	69.1	79.6	90.0
		62	TC	93.7	93.7	107.3	89.1	89.1	104.7	84.6	84.6	99.5	79.6	79.6	93.6
			SHC	75.8	91.6	107.3	73.5	89.1	104.7	69.8	84.6	99.5	65.6	79.6	93.6
		67	TC	101.5	101.5	101.5	96.7	96.7	96.7	91.3	91.3	91.3	84.8	84.8	85.7
			SHC	60.8	76.9	93.0	58.8	74.9	91.0	56.7	72.8	88.9	53.9	69.8	85.7
		72	TC	109.4	109.4	109.4	104.3	104.3	104.3	98.4	98.4	98.4	90.9	90.9	90.9
			SHC	44.6	60.5	76.4	42.8	58.6	74.4	40.5	56.2	71.8	37.7	52.8	68.0
		76	TC	—	115.1	115.1	—	109.5	109.5	—	102.8	102.8	—	94.0	94.0
			SHC	—	47.8	64.9	—	45.9	62.7	—	43.5	60.1	—	40.4	56.5
3750 Cfm	EAT (wb)	58	TC	95.3	95.3	107.8	91.3	91.3	103.3	86.9	86.9	98.3	81.7	81.7	92.4
			SHC	82.7	95.3	107.8	79.3	91.3	103.3	75.5	86.9	98.3	70.9	81.7	92.4
		62	TC	95.5	95.5	112.2	91.3	91.3	107.4	87.0	87.0	102.2	81.7	81.7	96.0
			SHC	78.7	95.5	112.2	75.3	91.3	107.4	71.7	87.0	102.2	67.4	81.7	96.0
		67	TC	102.8	102.8	102.8	97.9	97.9	97.9	92.3	92.3	94.0	85.7	85.7	90.5
			SHC	63.1	80.6	98.2	61.2	78.7	96.3	59.0	76.5	94.0	56.0	73.2	90.5
		72	TC	110.6	110.6	110.6	105.4	105.4	105.4	99.2	99.2	99.2	91.5	91.5	91.5
			SHC	45.5	62.7	79.9	43.5	60.7	77.8	41.3	58.1	75.0	38.3	54.5	70.7
		76	TC	—	116.1	116.1	—	110.3	110.3	—	103.5	103.5	—	94.5	94.5
			SHC	—	48.9	67.0	—	46.8	64.8	—	44.4	62.0	—	41.1	58.1

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5.
Do not operate outside these limits

COOLING CAPACITIES — 2-STAGE COOLING, 7.5 TONS

50TC*D08 (RTPF)				AMBIENT TEMPERATURE (F)											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EAT (wb)	58	TC	77.4	77.4	87.8	73.8	73.8	83.8	70.1	70.1	79.5	66.0	66.0	74.9
			SHC	66.9	77.4	87.8	63.9	73.8	83.8	60.6	70.1	79.5	57.1	66.0	74.9
		62	TC	82.2	82.2	83.9	77.5	77.5	81.7	72.6	72.6	79.2	67.3	67.3	76.4
			SHC	60.8	72.4	83.9	58.6	70.1	81.7	56.3	67.7	79.2	53.6	65.0	76.4
		67	TC	90.1	90.1	90.1	86.0	86.0	86.0	81.4	81.4	81.4	75.9	75.9	75.9
			SHC	50.2	61.8	73.3	48.5	60.1	71.6	46.5	58.1	69.7	44.2	55.8	67.4
		72	TC	98.0	98.0	98.0	94.0	94.0	94.0	89.5	89.5	89.5	84.3	84.3	84.3
			SHC	39.1	50.7	62.4	37.5	49.2	60.9	35.8	47.5	59.2	33.8	45.5	57.2
		76	TC	—	104.3	104.3	—	100.4	100.4	—	95.9	95.9	—	90.7	90.7
			SHC	—	41.7	54.0	—	40.3	52.7	—	38.7	51.0	—	36.8	49.0
2625 Cfm	EAT (wb)	58	TC	82.1	82.1	93.2	78.4	78.4	89.0	74.4	74.4	84.4	70.0	70.0	79.5
			SHC	71.0	82.1	93.2	67.8	78.4	89.0	64.3	74.4	84.4	60.6	70.0	79.5
		62	TC	84.9	84.9	91.8	80.4	80.4	89.5	75.4	75.4	86.7	70.2	70.2	82.9
			SHC	65.4	78.6	91.8	63.2	76.3	89.5	60.6	73.7	86.7	57.6	70.2	82.9
		67	TC	92.5	92.5	92.5	88.3	88.3	88.3	83.6	83.6	83.6	78.3	78.3	78.3
			SHC	53.0	66.3	79.5	51.3	64.6	78.0	49.4	62.8	76.1	47.2	60.6	73.9
		72	TC	100.4	100.4	100.4	96.4	96.4	96.4	91.7	91.7	91.7	86.4	86.4	86.4
			SHC	40.2	53.5	66.7	38.7	52.0	65.3	36.9	50.3	63.7	35.0	48.4	61.8
		76	TC	—	106.5	106.5	—	102.6	102.6	—	98.0	98.0	—	92.7	92.7
			SHC	—	43.3	57.6	—	41.8	55.9	—	40.2	54.1	—	38.4	52.2
3000 Cfm	EAT (wb)	58	TC	85.7	85.7	97.3	82.2	82.2	93.3	78.0	78.0	88.6	73.5	73.5	83.4
			SHC	74.1	85.7	97.3	71.1	82.2	93.3	67.5	78.0	88.6	63.6	73.5	83.4
		62	TC	86.9	86.9	98.7	82.8	82.8	96.4	78.2	78.2	92.3	73.6	73.6	86.9
			SHC	69.3	84.0	98.7	67.2	81.8	96.4	64.1	78.2	92.3	60.3	73.6	86.9
		67	TC	94.3	94.3	94.3	90.1	90.1	90.1	85.2	85.2	85.2	79.8	79.8	80.1
			SHC	55.6	70.5	85.4	54.0	68.9	83.9	52.1	67.1	82.2	49.9	65.0	80.1
		72	TC	102.2	102.2	102.2	98.1	98.1	98.1	93.3	93.3	93.3	87.9	87.9	87.9
			SHC	41.2	56.0	70.7	39.7	54.6	69.5	38.0	53.0	68.0	36.0	51.1	66.2
		76	TC	—	108.1	108.1	—	104.2	104.2	—	99.5	99.5	—	94.2	94.2
			SHC	—	44.5	60.2	—	43.2	58.7	—	41.6	57.0	—	39.8	55.2
3375 Cfm	EAT (wb)	58	TC	88.5	88.5	100.4	85.0	85.0	96.4	81.0	81.0	92.0	76.5	76.5	86.8
			SHC	76.5	88.5	100.4	73.5	85.0	96.4	70.1	81.0	92.0	66.1	76.5	86.8
		62	TC	88.9	88.9	103.9	85.1	85.1	100.4	81.1	81.1	95.7	76.5	76.5	90.3
			SHC	72.3	88.1	103.9	69.7	85.1	100.4	66.5	81.1	95.7	62.7	76.5	90.3
		67	TC	95.8	95.8	95.8	91.5	91.5	91.5	86.6	86.6	87.9	81.1	81.1	85.8
			SHC	58.0	74.4	90.9	56.4	73.0	89.6	54.6	71.3	87.9	52.4	69.1	85.8
		72	TC	103.6	103.6	103.6	99.4	99.4	99.4	94.6	94.6	94.6	89.1	89.1	89.1
			SHC	42.0	58.3	74.5	40.6	57.0	73.4	38.9	55.5	72.0	37.0	53.7	70.3
		76	TC	—	109.2	109.2	—	105.4	105.4	—	100.7	100.7	—	95.3	95.3
			SHC	—	45.6	62.6	—	44.4	61.3	—	42.8	59.7	—	41.0	58.0
3750 Cfm	EAT (wb)	58	TC	90.8	90.8	103.0	87.3	87.3	99.1	83.3	83.3	94.5	78.8	78.8	89.4
			SHC	78.5	90.8	103.0	75.5	87.3	99.1	72.0	83.3	94.5	68.2	78.8	89.4
		62	TC	90.9	90.9	107.2	87.4	87.4	103.1	83.3	83.3	98.4	78.9	78.9	93.1
			SHC	74.5	90.9	107.2	71.6	87.4	103.1	68.3	83.3	98.4	64.7	78.9	93.1
		67	TC	97.0	97.0	97.0	92.6	92.6	95.1	87.6	87.6	93.4	82.1	82.1	91.2
			SHC	60.3	78.2	96.2	58.8	76.9	95.1	56.9	75.2	93.4	54.8	73.0	91.2
		72	TC	104.7	104.7	104.7	100.5	100.5	100.5	95.6	95.6	95.6	90.1	90.1	90.1
			SHC	42.9	60.5	78.1	41.4	59.3	77.1	39.8	57.8	75.9	37.9	56.1	74.3
		76	TC	—	110.2	110.2	—	106.2	106.2	—	101.6	101.6	—	96.1	96.1
			SHC	—	46.7	64.8	—	45.4	63.6	—	44.0	62.3	—	42.2	60.6

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5.
Do not operate outside these limits

Capacity ratings (cont)

COOLING CAPACITIES — 2-STAGE COOLING, 7.5 TONS (cont)

50TC*E08 (7.5 TON) COOLING CAPACITIES, SUBCOOLING MODE

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator - CFM								
		2250			3000			3750		
		Air Entering Evaporator - Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	103.0	93.0	83.6	109.8	99.5	90.1	114.0	103.7	95.2
	SHC	43.7	55.3	67.1	51.0	66.3	81.3	57.5	76.3	92.2
	kW	4.90	4.83	4.77	4.82	4.88	4.96	4.99	4.91	4.85
85	TC	95.4	85.8	76.9	101.6	91.9	82.9	105.5	95.8	87.8
	SHC	36.4	48.5	60.6	43.2	59.0	74.4	49.4	68.7	84.9
	kW	5.49	5.42	5.36	5.40	5.47	5.54	5.58	5.50	5.44
95	TC	87.5	78.4	70.0	93.2	84.0	75.6	96.8	87.6	80.1
	SHC	29.0	41.5	54.0	35.3	51.5	67.3	41.2	60.9	77.4
	kW	6.16	6.09	6.03	6.08	6.14	6.21	6.24	6.17	6.11
105	TC	79.3	70.8	62.8	84.6	76.0	68.0	87.9	79.2	72.3
	SHC	21.3	34.3	47.2	27.2	43.9	60.1	32.7	52.9	69.7
	kW	6.93	6.86	6.81	6.85	6.91	6.97	7.00	6.93	6.88
115	TC	70.9	62.9	55.4	75.6	67.5	60.2	78.6	70.5	64.1
	SHC	13.4	26.8	40.1	18.7	35.9	52.5	23.9	44.7	61.7
	kW	7.79	7.74	7.69	7.73	7.78	7.83	7.86	7.80	7.76
125	TC	62.0	54.6	47.7	66.2	58.8	51.9	68.8	61.4	55.5
	SHC	5.2	19.0	32.8	9.9	27.6	44.7	14.7	36.0	53.3
	kW	8.76	8.72	8.70	8.72	8.75	8.79	8.81	8.77	8.74

50TC*E08 (7.5 TON) COOLING CAPACITIES, HOT GAS REHEAT MODE

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator - Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator - CFM								
		2250	3000	3750	2250	3000	3750	2250	3000	3750
80	TC	27.60	32.75	30.19	40.09	39.43	37.73	45.06	45.25	44.25
	SHC	-3.12	5.20	6.71	3.75	5.24	6.75	3.77	5.26	6.78
	kW	4.56	4.51	4.46	4.63	4.60	4.56	4.70	4.67	4.64
75	TC	35.40	33.78	31.20	41.14	40.51	38.80	46.15	46.37	45.38
	SHC	4.67	6.17	7.69	4.71	6.21	7.73	4.74	6.24	7.76
	kW	4.41	4.36	4.39	4.41	4.36	4.36	4.41	4.39	4.36
70	TC	36.36	34.71	32.18	42.10	41.47	39.77	47.08	47.31	46.32
	SHC	5.63	7.14	8.66	5.67	7.18	8.71	5.70	7.21	8.74
	kW	4.43	4.49	4.41	4.44	4.40	4.39	4.49	4.47	4.44
60	TC	38.25	36.64	34.15	43.97	43.37	41.72	48.98	49.22	48.26
	SHC	7.56	9.09	10.62	7.60	9.13	10.66	7.62	9.15	10.69
	kW	4.56	4.55	4.43	4.57	4.53	4.46	4.56	4.55	4.50
50	TC	40.15	38.60	36.14	45.95	45.37	43.73	50.57	50.97	49.56
	SHC	9.48	11.03	12.58	9.52	11.07	12.62	9.54	11.10	12.64
	kW	4.63	4.52	4.38	4.45	4.41	4.33	5.25	4.91	5.60
40	TC	42.18	40.62	38.11	47.80	47.25	45.43	52.65	52.75	51.83
	SHC	11.41	12.98	14.54	11.45	13.02	14.58	11.47	13.04	14.60
	kW	4.32	4.37	4.37	4.65	4.60	4.89	4.96	5.20	5.12

LEGEND

Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
ldb — Leaving Dry-Bulb
lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:
1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

COOLING CAPACITIES — 1-STAGE COOLING, 8.5 TONS

50TC*A09 (RTPF)				AMBIENT TEMPERATURE (F)											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2550 Cfm	EAT (wb)	58	TC	88.1	88.1	99.9	84.1	84.1	95.3	79.6	79.6	90.3	74.9	74.9	84.9
			SHC	76.4	88.1	99.9	72.8	84.1	95.3	69.0	79.6	90.3	64.9	74.9	84.9
		62	TC	93.9	93.9	95.2	88.6	88.6	92.6	82.8	82.8	89.7	76.6	76.6	86.5
			SHC	69.4	82.3	95.2	66.8	79.7	92.6	64.1	76.9	89.7	61.0	73.8	86.5
		67	TC	103.8	103.8	103.8	98.7	98.7	98.7	93.0	93.0	93.0	86.7	86.7	86.7
			SHC	57.8	70.7	83.6	55.6	68.5	81.4	53.1	66.1	79.0	50.5	63.4	76.4
		72	TC	113.1	113.1	113.1	108.0	108.0	108.0	102.4	102.4	102.4	96.1	96.1	96.1
			SHC	45.2	58.3	71.3	43.2	56.3	69.3	41.1	54.1	67.1	38.7	51.7	64.7
		76	TC	—	119.9	119.9	—	114.7	114.7	—	109.0	109.0	—	102.7	102.7
			SHC	—	47.9	61.9	—	46.0	60.1	—	44.1	58.1	—	41.9	55.8
2975 Cfm	EAT (wb)	58	TC	93.6	93.6	106.1	89.3	89.3	101.2	84.6	84.6	96.0	79.6	79.6	90.3
			SHC	81.1	93.6	106.1	77.4	89.3	101.2	73.3	84.6	96.0	69.0	79.6	90.3
		62	TC	97.5	97.5	104.3	92.0	92.0	101.4	86.1	86.1	98.3	79.8	79.8	94.1
			SHC	74.7	89.5	104.3	72.0	86.7	101.4	69.1	83.7	98.3	65.6	79.8	94.1
		67	TC	106.7	106.7	106.7	101.5	101.5	101.5	95.7	95.7	95.7	89.2	89.2	89.2
			SHC	61.0	75.8	90.6	58.8	73.6	88.5	56.4	71.3	86.1	53.8	68.7	83.6
		72	TC	115.8	115.8	115.8	110.6	110.6	110.6	104.9	104.9	104.9	98.4	98.4	98.4
			SHC	46.5	61.3	76.2	44.5	59.4	74.2	42.3	57.2	72.1	40.0	54.8	69.7
		76	TC	—	122.4	122.4	—	117.0	117.0	—	111.1	111.1	—	104.5	104.5
			SHC	—	49.8	66.1	—	47.8	63.9	—	45.7	61.6	—	43.4	59.0
3400 Cfm	EAT (wb)	58	TC	98.1	98.1	111.3	93.7	93.7	106.2	88.9	88.9	100.8	83.7	83.7	94.9
			SHC	85.0	98.1	111.3	81.2	93.7	106.2	77.0	88.9	100.8	72.5	83.7	94.9
		62	TC	100.0	100.0	112.3	94.9	94.9	108.6	89.1	89.1	104.9	83.8	83.8	98.7
			SHC	79.3	95.8	112.3	76.3	92.5	108.6	73.2	89.1	104.9	68.8	83.8	98.7
		67	TC	109.0	109.0	109.0	103.6	103.6	103.6	97.6	97.6	97.6	91.0	91.0	91.0
			SHC	63.9	80.5	97.2	61.8	78.5	95.2	59.4	76.1	92.9	56.8	73.5	90.3
		72	TC	117.9	117.9	117.9	112.5	112.5	112.5	106.6	106.6	106.6	100.0	100.0	100.0
			SHC	47.6	64.1	80.6	45.6	62.1	78.7	43.4	60.0	76.6	41.1	57.6	74.2
		76	TC	—	124.2	124.2	—	118.6	118.6	—	112.5	112.5	—	105.7	105.7
			SHC	—	51.2	69.0	—	49.2	66.7	—	47.0	64.4	—	44.7	61.9
3825 Cfm	EAT (wb)	58	TC	101.6	101.6	115.1	97.2	97.2	110.1	92.3	92.3	104.6	87.0	87.0	98.6
			SHC	88.0	101.6	115.1	84.2	97.2	110.1	80.0	92.3	104.6	75.4	87.0	98.6
		62	TC	101.9	101.9	120.0	97.3	97.3	114.6	92.4	92.4	108.9	87.1	87.1	102.6
			SHC	83.7	101.8	120.0	79.9	97.3	114.6	75.9	92.4	108.9	71.6	87.1	102.6
		67	TC	110.7	110.7	110.7	105.3	105.3	105.3	99.2	99.2	99.3	92.5	92.5	96.7
			SHC	66.7	85.0	103.4	64.6	83.0	101.5	62.2	80.8	99.3	59.6	78.2	96.7
		72	TC	119.4	119.4	119.4	114.0	114.0	114.0	108.0	108.0	108.0	101.3	101.3	101.3
			SHC	48.5	66.6	84.6	46.6	64.7	82.7	44.4	62.6	80.7	42.1	60.2	78.4
		76	TC	—	125.5	125.5	—	119.8	119.8	—	113.6	113.6	—	106.7	106.7
			SHC	—	52.4	71.5	—	50.4	69.3	—	48.2	67.0	—	45.9	64.4
4250 Cfm	EAT (wb)	58	TC	104.4	104.4	118.3	99.9	99.9	113.2	95.0	95.0	107.6	89.5	89.5	101.5
			SHC	90.4	104.4	118.3	86.6	99.9	113.2	82.3	95.0	107.6	77.6	89.5	101.5
		62	TC	104.4	104.4	123.0	99.9	99.9	117.8	95.0	95.0	112.0	89.6	89.6	105.6
			SHC	85.8	104.4	123.0	82.1	99.9	117.8	78.1	95.0	112.0	73.6	89.6	105.6
		67	TC	112.1	112.1	112.1	106.6	106.6	107.5	100.4	100.4	105.3	93.6	93.6	102.7
			SHC	69.2	89.2	109.2	67.2	87.3	107.5	64.9	85.1	105.3	62.3	82.5	102.7
		72	TC	120.7	120.7	120.7	115.1	115.1	115.1	109.0	109.0	109.0	102.2	102.2	102.2
			SHC	49.4	68.9	88.4	47.4	67.0	86.5	45.3	64.9	84.6	42.9	62.6	82.3
		76	TC	—	126.6	126.6	—	120.8	120.8	—	114.5	114.5	—	107.4	107.4
			SHC	—	53.5	73.9	—	51.5	71.7	—	49.3	69.4	—	46.9	66.8

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5. Do not operate outside these limits.

Capacity ratings (cont)

COOLING CAPACITIES — 2-STAGE COOLING, 8.5 TONS

50TC*D09 (RTPF)				AMBIENT TEMPERATURE (F)											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2550 Cfm	EAT (wb)	58	THC	89.7	89.7	101.6	85.2	85.2	96.5	79.6	79.6	90.1	73.8	73.8	83.6
			SHC	77.8	89.7	101.6	73.9	85.2	96.5	69.0	79.6	90.1	64.0	73.8	83.6
		62	THC	94.3	94.3	97.9	88.7	88.7	95.2	81.3	81.3	91.5	74.3	74.3	86.5
			SHC	71.0	84.4	97.9	68.2	81.7	95.2	64.7	78.1	91.5	60.6	73.6	86.5
		67	THC	105.0	105.0	105.0	99.3	99.3	99.3	92.2	92.2	92.2	84.1	84.1	84.1
			SHC	59.0	72.6	86.1	56.6	70.1	83.7	53.6	67.1	80.7	50.3	63.8	77.3
		72	THC	115.9	115.9	115.9	110.4	110.4	110.4	104.2	104.2	104.2	96.0	96.0	96.0
			SHC	46.4	60.0	73.6	44.3	57.9	71.5	41.9	55.5	69.1	38.8	52.4	65.9
		76	THC	—	123.7	123.7	—	118.3	118.3	—	112.4	112.4	—	105.7	105.7
			SHC	—	49.3	63.3	—	47.3	61.4	—	45.3	59.3	—	42.9	56.7
2975 Cfm	EAT (wb)	58	THC	95.3	95.3	107.9	90.7	90.7	102.7	84.8	84.8	96.1	78.7	78.7	89.1
			SHC	82.6	95.3	107.9	78.6	90.7	102.7	73.5	84.8	96.1	68.2	78.7	89.1
		62	THC	97.9	97.9	107.8	92.1	92.1	104.7	85.4	85.4	99.4	78.8	78.8	92.8
			SHC	76.7	92.2	107.8	73.9	89.3	104.7	69.6	84.5	99.4	64.8	78.8	92.8
		67	THC	108.5	108.5	108.5	102.6	102.6	102.6	95.4	95.4	95.4	86.9	86.9	86.9
			SHC	62.8	78.4	94.1	60.4	76.0	91.7	57.4	73.1	88.8	54.0	69.7	85.3
		72	THC	119.1	119.1	119.1	113.5	113.5	113.5	107.2	107.2	107.2	99.2	99.2	99.2
			SHC	47.9	63.5	79.2	45.8	61.5	77.1	43.5	59.2	74.9	40.6	56.3	72.0
		76	THC	—	126.4	126.4	—	120.8	120.8	—	114.8	114.8	—	108.2	108.2
			SHC	—	51.1	67.4	—	49.2	65.3	—	47.0	63.0	—	44.8	60.7
3400 Cfm	EAT (wb)	58	THC	100.0	100.0	113.3	95.2	95.2	107.9	89.3	89.3	101.1	82.9	82.9	93.9
			SHC	86.7	100.0	113.3	82.6	95.2	107.9	77.4	89.3	101.1	71.8	82.9	93.9
		62	THC	101.1	101.1	115.8	95.7	95.7	111.7	89.4	89.4	105.3	83.0	83.0	97.7
			SHC	81.5	98.7	115.8	78.2	94.9	111.7	73.5	89.4	105.3	68.2	83.0	97.7
		67	THC	111.1	111.1	111.1	105.1	105.1	105.1	97.8	97.8	97.8	89.1	89.1	93.0
			SHC	66.2	83.9	101.6	63.9	81.6	99.3	61.0	78.7	96.5	57.5	75.3	93.0
		72	THC	121.3	121.3	121.3	115.6	115.6	115.6	109.4	109.4	109.4	101.5	101.5	101.5
			SHC	49.2	66.7	84.3	47.1	64.7	82.3	44.9	62.5	80.2	42.1	59.9	77.7
		76	THC	—	128.3	128.3	—	122.6	122.6	—	116.3	116.3	—	109.7	109.7
			SHC	—	52.7	70.7	—	50.7	68.6	—	48.6	66.4	—	46.4	64.2
3825 Cfm	EAT (wb)	58	THC	104.0	104.0	117.8	99.1	99.1	112.3	93.2	93.2	105.5	86.5	86.5	97.9
			SHC	90.2	104.0	117.8	86.0	99.1	112.3	80.8	93.2	105.5	75.0	86.5	97.9
		62	THC	104.2	104.2	122.7	99.3	99.3	116.9	93.3	93.3	109.8	86.6	86.6	101.9
			SHC	85.7	104.2	122.7	81.7	99.3	116.9	76.7	93.3	109.8	71.2	86.6	101.9
		67	THC	113.1	113.1	113.1	107.1	107.1	107.1	99.9	99.9	103.8	91.0	91.0	100.3
			SHC	69.4	89.1	108.8	67.1	86.8	106.5	64.3	84.1	103.8	60.9	80.6	100.3
		72	THC	123.0	123.0	123.0	117.2	117.2	117.2	110.9	110.9	110.9	103.3	103.3	103.3
			SHC	50.3	69.7	89.0	48.3	67.7	87.1	46.1	65.6	85.2	43.5	63.3	83.0
		76	THC	—	129.7	129.7	—	124.0	124.0	—	117.5	117.5	—	110.8	110.8
			SHC	—	54.0	73.7	—	52.1	71.7	—	50.0	69.5	—	47.8	67.4
4250 Cfm	EAT (wb)	58	THC	107.4	107.4	121.7	102.5	102.5	116.1	96.5	96.5	109.3	89.5	89.5	101.4
			SHC	93.1	107.4	121.7	88.9	102.5	116.1	83.7	96.5	109.3	77.6	89.5	101.4
		62	THC	107.5	107.5	126.6	102.6	102.6	120.8	96.6	96.6	113.7	89.6	89.6	105.5
			SHC	88.4	107.5	126.6	84.4	102.6	120.8	79.5	96.6	113.7	73.7	89.6	105.5
		67	THC	114.7	114.7	115.6	108.7	108.7	113.5	101.7	101.7	110.8	92.6	92.6	107.2
			SHC	72.5	94.0	115.6	70.2	91.8	113.5	67.5	89.2	110.8	64.0	85.6	107.2
		72	THC	124.3	124.3	124.3	118.5	118.5	118.5	112.1	112.1	112.1	104.7	104.7	104.7
			SHC	51.3	72.4	93.4	49.3	70.5	91.7	47.2	68.5	89.9	44.7	66.4	88.1
		76	THC	—	130.7	130.7	—	125.0	125.0	—	118.5	118.5	—	111.6	111.6
			SHC	—	55.3	76.5	—	53.5	74.6	—	51.3	72.4	—	49.2	70.3

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5.
Do not operate outside these limits.

COOLING CAPACITIES — 2-STAGE COOLING, 8.5 TONS (cont)

50TC*E09 (8.5 TON) COOLING CAPACITIES, SUBCOOLING MODE

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator - CFM								
		2550			3400			4250		
		Air Entering Evaporator - Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	119.20	107.40	96.40	127.00	115.00	103.90	131.90	119.80	109.50
	SHC	50.60	63.90	77.40	59.20	76.70	94.20	66.80	88.40	108.20
	kW	5.67	5.57	5.47	5.54	5.63	5.74	5.79	5.68	5.59
85	TC	110.40	99.20	88.80	117.60	106.30	95.80	122.20	110.80	101.10
	SHC	42.40	56.20	70.10	50.40	68.50	86.40	57.70	79.90	99.90
	kW	6.33	6.23	6.14	6.20	6.30	6.40	6.45	6.34	6.25
95	TC	101.40	90.80	80.90	108.10	97.30	87.40	112.30	101.50	92.40
	SHC	34.00	48.20	62.60	41.50	60.00	78.40	48.40	71.10	91.50
	kW	7.08	6.99	6.90	6.96	7.05	7.16	7.20	7.09	7.01
105	TC	92.00	82.10	72.70	98.20	88.10	78.70	102.10	91.90	83.40
	SHC	25.30	40.10	54.90	32.20	51.30	70.20	38.80	62.10	82.70
	kW	7.94	7.85	7.77	7.83	7.91	8.01	8.06	7.95	7.87
115	TC	82.40	73.00	64.20	88.00	78.50	69.70	91.50	81.90	74.10
	SHC	16.40	31.60	47.00	22.70	42.40	61.70	28.90	52.70	73.50
	kW	8.92	8.84	8.77	8.82	8.89	8.98	9.02	8.93	8.86
125	TC	72.30	63.50	55.40	77.20	68.40	60.30	80.30	71.50	64.30
	SHC	7.00	22.90	38.70	12.70	33.00	52.80	18.60	43.00	63.90
	kW	10.00	9.94	9.88	9.92	9.98	10.05	10.08	10.01	9.96

50TC*E09 (8.5 TON) COOLING CAPACITIES, HOT GAS REHEAT MODE

Temp (F) Air Entering Condenser (Edb)		AIR ENTERING EVAPORATOR - Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator - Cfm								
		2550	3400	4250	2550	3400	4250	2550	3400	4250
80	TC	37.61	33.13	26.77	44.74	41.60	36.46	50.96	48.99	44.93
	SHC	-0.52	-0.63	-0.73	-0.46	-0.57	-0.67	-0.42	-0.53	-0.62
	kW	5.88	5.68	5.44	6.13	5.97	5.76	6.35	6.24	6.06
75	TC	38.71	34.24	27.86	45.84	42.73	37.59	52.05	50.11	46.06
	SHC	0.45	0.34	0.25	0.50	0.40	0.31	0.54	0.44	0.36
	kW	5.68	5.47	5.22	5.94	5.78	5.56	6.18	6.07	5.88
70	TC	39.70	35.25	28.83	46.80	43.70	38.59	52.97	51.04	47.02
	SHC	1.41	1.32	1.23	1.47	1.37	1.29	1.50	1.41	1.34
	kW	5.65	5.42	5.24	5.97	5.79	5.53	6.26	6.13	5.91
60	TC	41.77	37.33	30.76	48.86	45.80	40.71	55.00	53.10	49.12
	SHC	3.34	3.26	3.18	3.40	3.32	3.25	3.43	3.36	3.29
	kW	5.42	5.15	5.17	5.80	5.59	5.30	6.16	6.01	5.75
50	TC	43.83	39.27	32.61	50.92	47.89	42.70	57.04	55.16	51.22
	SHC	5.27	5.21	5.14	5.32	5.27	5.21	5.36	5.31	5.25
	kW	5.18	5.15	5.17	5.62	5.39	5.05	6.04	5.87	5.59
40	TC	45.75	41.13	34.50	53.08	50.00	44.64	59.24	57.40	53.44
	SHC	7.20	7.15	6.95	7.26	7.21	7.16	7.29	7.25	7.21
	kW	4.79	4.98	4.80	5.25	5.01	5.23	5.68	5.51	5.21

LEGEND

Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
ldb — Leaving Dry-Bulb
lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:
1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Capacity ratings (cont)

COOLING CAPACITIES — 1-STAGE COOLING, 10 TONS

50TC*A12 (RTPF)				AMBIENT TEMPERATURE (F)												
				85			95			105			115			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EAT (wb)	58	TC	106.3	106.3	120.5	101.7	101.7	115.2	96.6	96.6	109.4	91.0	91.0	103.1
			SHC	92.2	106.3	120.5	88.2	101.7	115.2	83.8	96.6	109.4	78.9	91.0	103.1
		62	TC	112.5	112.5	115.2	106.5	106.5	112.3	99.9	99.9	109.0	92.7	92.7	105.2
			SHC	83.8	99.5	115.2	81.0	96.6	112.3	77.8	93.4	109.0	74.2	89.7	105.2
		67	TC	123.5	123.5	123.5	117.8	117.8	117.8	111.3	111.3	111.3	104.0	104.0	104.0
			SHC	69.2	85.0	100.7	66.8	82.5	98.3	64.1	79.8	95.5	61.0	76.8	92.5
		72	TC	134.3	134.3	134.3	128.5	128.5	128.5	122.0	122.0	122.0	114.7	114.7	114.7
			SHC	53.8	69.6	85.5	51.6	67.4	83.2	49.1	64.9	80.7	46.3	62.1	77.9
		76	TC	—	142.4	142.4	—	136.3	136.3	—	129.5	129.5	—	121.8	121.8
			SHC	—	56.8	73.3	—	54.7	71.2	—	52.3	68.8	—	49.7	66.2
3500 Cfm	EAT (wb)	58	TC	112.9	112.9	127.8	108.0	108.0	122.3	102.7	102.7	116.3	96.8	96.8	109.7
			SHC	97.9	112.9	127.8	93.6	108.0	122.3	89.0	102.7	116.3	83.9	96.8	109.7
		62	TC	116.3	116.3	126.2	110.5	110.5	123.3	103.8	103.8	119.5	97.1	97.1	114.3
			SHC	90.2	108.2	126.2	87.4	105.3	123.3	84.0	101.8	119.5	79.8	97.1	114.3
		67	TC	126.9	126.9	126.9	120.9	120.9	120.9	114.3	114.3	114.3	106.8	106.8	106.8
			SHC	73.2	91.3	109.4	70.8	88.9	107.1	68.1	86.2	104.4	65.0	83.2	101.3
		72	TC	137.5	137.5	137.5	131.4	131.4	131.4	124.7	124.7	124.7	117.2	117.2	117.2
			SHC	55.3	73.4	91.5	53.1	71.1	89.2	50.6	68.7	86.7	47.8	65.9	83.9
		76	TC	—	145.1	145.1	—	138.8	138.8	—	131.7	131.7	—	123.6	123.6
			SHC	—	59.0	78.2	—	56.7	75.8	—	54.3	73.1	—	51.5	70.0
4000 Cfm	EAT (wb)	58	TC	117.8	117.8	133.5	113.0	113.0	128.0	107.5	107.5	121.8	101.5	101.5	115.0
			SHC	102.2	117.8	133.5	98.0	113.0	128.0	93.3	107.5	121.8	88.0	101.5	115.0
		62	TC	119.1	119.1	136.0	113.5	113.5	132.5	107.7	107.7	126.7	101.6	101.6	119.6
			SHC	95.8	115.9	136.0	92.8	112.6	132.5	88.6	107.7	126.7	83.6	101.6	119.6
		67	TC	129.4	129.4	129.4	123.3	123.3	123.3	116.5	116.5	116.5	108.9	108.9	109.8
			SHC	76.9	97.3	117.7	74.5	95.0	115.4	71.8	92.3	112.8	68.8	89.3	109.8
		72	TC	139.7	139.7	139.7	133.5	133.5	133.5	126.6	126.6	126.6	118.8	118.8	118.8
			SHC	56.7	76.8	97.0	54.4	74.6	94.7	51.9	72.1	92.3	49.1	69.3	89.5
		76	TC	—	147.0	147.0	—	140.5	140.5	—	133.2	133.2	—	124.9	124.9
			SHC	—	60.6	81.7	—	58.4	79.3	—	55.8	76.5	—	53.0	73.5
4500 Cfm	EAT (wb)	58	TC	121.7	121.7	137.9	116.8	116.8	132.3	111.2	111.2	126.0	105.0	105.0	118.9
			SHC	105.6	121.7	137.9	101.3	116.8	132.3	96.4	111.2	126.0	91.0	105.0	118.9
		62	TC	121.8	121.8	143.4	116.9	116.9	137.6	111.3	111.3	131.0	105.1	105.1	123.7
			SHC	100.2	121.8	143.4	96.1	116.9	137.6	91.6	111.3	131.0	86.5	105.1	123.7
		67	TC	131.3	131.3	131.3	125.1	125.1	125.1	118.2	118.2	120.8	110.5	110.5	117.7
			SHC	80.3	102.9	125.5	78.0	100.7	123.3	75.3	98.0	120.8	72.3	95.0	117.7
		72	TC	141.5	141.5	141.5	135.1	135.1	135.1	128.0	128.0	128.0	120.1	120.1	120.1
			SHC	57.9	80.0	102.1	55.6	77.7	99.9	53.1	75.2	97.4	50.3	72.4	94.6
		76	TC	—	148.3	148.3	—	141.8	141.8	—	134.3	134.3	—	125.8	125.8
			SHC	—	62.1	84.9	—	59.8	82.5	—	57.3	79.7	—	54.4	76.6
5000 Cfm	EAT (wb)	58	TC	125.0	125.0	141.6	120.0	120.0	135.9	114.3	114.3	129.5	107.9	107.9	122.3
			SHC	108.4	125.0	141.6	104.0	120.0	135.9	99.1	114.3	129.5	93.6	107.9	122.3
		62	TC	125.1	125.1	147.2	120.1	120.1	141.4	114.4	114.4	134.7	108.0	108.0	127.2
			SHC	102.9	125.1	147.2	98.8	120.1	141.4	94.1	114.4	134.7	88.9	108.0	127.2
		67	TC	132.8	132.8	133.0	126.5	126.5	130.8	119.6	119.6	128.2	111.8	111.8	125.1
			SHC	83.6	108.3	133.0	81.2	106.0	130.8	78.6	103.4	128.2	75.6	100.3	125.1
		72	TC	142.8	142.8	142.8	136.3	136.3	136.3	129.1	129.1	129.1	121.1	121.1	121.1
			SHC	59.0	82.9	106.9	56.7	80.7	104.7	54.1	78.2	102.2	51.3	75.4	99.4
		76	TC	—	149.4	149.4	—	142.8	142.8	—	135.1	135.1	—	126.5	126.5
			SHC	—	63.4	87.9	—	61.2	85.5	—	58.6	82.7	—	55.6	79.4

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5.
Do not operate outside these limits.

COOLING CAPACITIES, 2-STAGE COOLING, SIZE 12 — 10 TONS

50TC*D12 (10 TON) (RTPF & NOVATION)				AMBIENT TEMPERATURE (F)												
				85			95			105			115				
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75	80	85	75	80	85	75	80	85	75	80	85	
3000 Cfm	EAT (wb)	58	TC	107.6	107.6	121.9	102.5	102.5	116.2	96.8	96.8	109.7	90.5	90.5	102.6	
			SHC	93.2	107.6	121.9	88.8	102.5	116.2	83.9	96.8	109.7	78.4	90.5	102.6	
		62	TC	113.6	113.6	116.5	107.1	107.1	113.4	99.7	99.7	109.8	91.8	91.8	104.9	
			SHC	84.6	100.6	116.5	81.5	97.4	113.4	78.0	93.9	109.8	73.7	89.3	104.9	
		67	TC	124.4	124.4	124.4	118.4	118.4	118.4	111.5	111.5	111.5	103.3	103.3	103.3	
			SHC	69.7	85.7	101.7	67.1	83.2	99.2	64.3	80.3	96.3	60.8	76.8	92.8	
		72	TC	135.8	135.8	135.8	129.7	129.7	129.7	122.8	122.8	122.8	115	115	115	
			SHC	54.3	70.4	86.6	52.0	68.1	84.2	49.3	65.4	81.6	46.4	62.5	78.6	
		76	TC	—	145.3	145.3	—	139	139	—	131.9	131.9	—	124.1	124.1	
			SHC	—	57.8	74.3	—	55.6	72.1	—	53.1	69.6	—	50.4	66.9	
3500 Cfm	EAT (wb)	58	TC	114.2	114.2	129.4	108.9	108.9	123.4	102.9	102.9	116.6	96.3	96.3	109.1	
			SHC	98.9	114.2	129.4	94.3	108.9	123.4	89.1	102.9	116.6	83.4	96.3	109.1	
		62	TC	117.2	117.2	127.9	111.0	111.0	124.7	104.0	104.0	119.5	96.5	96.5	113.7	
			SHC	91.1	109.5	127.9	88.1	106.4	124.7	83.9	101.7	119.5	79.3	96.5	113.7	
		67	TC	127.8	127.8	127.8	121.7	121.7	121.7	114.5	114.5	114.5	106.6	106.6	106.6	
			SHC	73.8	92.3	110.8	71.3	89.8	108.3	68.4	87.0	105.5	65.2	83.8	102.3	
		72	TC	139.4	139.4	139.4	133.0	133.0	133	125.8	125.8	125.8	117.9	117.9	117.9	
			SHC	56.0	74.6	93.1	53.7	72.2	90.8	51.0	69.6	88.2	48.1	66.7	85.4	
		76	TC	—	148.8	148.8	—	142.2	142.2	—	134.9	134.9	—	126.8	126.8	
			SHC	—	60.2	79.5	—	58.0	77.1	—	55.4	74.5	—	52.7	71.6	
4000 Cfm	EAT (wb)	58	TC	119.0	119.0	134.9	114.0	114.0	129.2	108.0	108.0	122.4	101.1	101.1	114.6	
			SHC	103.1	119.0	134.9	98.7	114.0	129.2	93.6	108.0	122.4	87.6	101.1	114.6	
		62	TC	120.3	120.3	137.1	114.7	114.7	132.8	108.2	108.2	127.5	101.3	101.3	119.3	
			SHC	96.5	116.8	137.1	93.0	112.9	132.8	88.9	108.2	127.5	83.2	101.3	119.3	
		67	TC	130.5	130.5	130.5	124.1	124.1	124.1	116.8	116.8	116.8	108.7	108.7	111.1	
			SHC	77.7	98.6	119.5	75.2	96.2	117.2	72.3	93.3	114.4	69.1	90.1	111.1	
		72	TC	142.1	142.1	142.1	135.5	135.5	135.5	128.2	128.2	128.2	120.0	120.0	120.0	
			SHC	57.6	78.4	99.3	55.2	76.1	97.1	52.5	73.6	94.6	49.7	70.7	91.8	
		76	TC	—	151.4	151.4	—	144.7	144.7	—	137.1	137.1	—	—	—	
			SHC	—	62.3	83.8	—	60.0	81.4	—	57.5	78.8	—	—	—	
4500 Cfm	EAT (wb)	58	TC	123.0	123.0	139.5	117.8	117.8	133.6	111.9	111.9	126.9	105.3	105.3	119.3	
			SHC	106.6	123.0	139.5	102.1	117.8	133.6	97.0	111.9	126.9	91.2	105.3	119.3	
		62	TC	123.4	123.4	144.4	117.9	117.9	139.0	112.0	112.0	132.0	105.4	105.4	124.2	
			SHC	100.9	122.7	144.4	96.9	117.9	139.0	92.1	112.0	132.0	86.6	105.4	124.2	
		67	TC	132.6	132.6	132.6	126.0	126.0	126.0	118.7	118.7	122.9	110.4	110.4	119.6	
			SHC	81.4	104.6	127.9	78.9	102.3	125.7	76.1	99.5	122.9	72.9	96.2	119.6	
		72	TC	144.2	144.2	144.2	137.4	137.4	137.4	129.9	129.9	129.9	121.6	121.6	121.6	
			SHC	59.0	82.1	105.2	56.6	79.8	103.1	54.0	77.3	100.7	51.1	74.5	98.0	
		76	TC	—	153.4	153.4	—	146.6	146.6	—	138.9	138.9	—	—	—	
			SHC	—	64.1	87.8	—	61.9	85.6	—	59.4	83.0	—	—	—	
5000 Cfm	EAT (wb)	58	TC	126.5	126.5	143.3	121.2	121.2	137.4	115.1	115.1	130.5	108.4	108.4	122.8	
			SHC	109.6	126.5	143.3	105.0	121.2	137.4	99.8	115.1	130.5	93.9	108.4	122.8	
		62	TC	126.5	126.5	149.1	121.3	121.3	142.9	115.2	115.2	135.8	108.5	108.5	127.8	
			SHC	104.0	126.5	149.1	99.7	121.3	142.9	94.7	115.2	135.8	89.1	108.5	127.8	
		67	TC	134.2	134.2	135.9	127.5	127.5	133.8	120.1	120.1	131.0	111.9	111.9	127.6	
			SHC	84.9	110.4	135.9	82.4	108.1	133.8	79.6	105.3	131.0	76.4	102.0	127.6	
		72	TC	145.8	145.8	145.8	139.0	139.0	139.0	131.3	131.3	131.3	122.9	122.9	122.9	
			SHC	60.3	85.6	110.8	57.9	83.4	108.9	55.3	81.0	106.6	52.5	78.2	104.0	
		76	TC	—	155.1	155.1	—	148.2	148.2	—	—	—	—	—	—	
			SHC	—	65.9	91.5	—	63.7	89.5	—	—	—	—	—	—	

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5. Do not operate outside these limits.

Capacity ratings (cont)

COOLING CAPACITIES — 2-STAGE COOLING, 10 TONS

50TC*E12 COOLING CAPACITIES, SUBCOOLING MODE

TEMP (F) AIR ENTERING CONDENSER (Edb)		Air Entering Evaporator - CFM								
		3000			4000			5000		
		Air Entering Evaporator - Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	142.90	129.40	116.90	152.10	138.40	125.80	158.00	144.20	132.10
	SHC	58.40	74.90	91.60	68.00	89.50	111.00	76.60	102.90	127.90
	kW	7.19	6.97	6.79	6.92	7.12	7.35	7.45	7.22	7.02
85	TC	132.30	119.70	107.90	140.90	128.00	116.10	146.40	133.40	122.00
	SHC	48.40	65.60	82.80	57.40	79.50	101.70	65.60	92.60	118.10
	kW	7.98	7.77	7.58	7.72	7.92	8.14	8.25	8.01	7.82
95	TC	121.40	109.50	98.40	129.40	117.20	106.00	134.40	122.20	111.50
	SHC	38.20	55.90	73.80	46.50	69.20	92.00	54.30	81.90	108.00
	kW	8.87	8.66	8.48	8.61	8.80	9.03	9.14	8.90	8.71
105	TC	110.00	98.90	88.60	117.30	105.90	95.50	121.90	110.50	100.50
	SHC	27.60	45.90	64.40	35.20	58.60	82.00	42.60	70.80	97.40
	kW	9.86	9.66	9.48	9.61	9.79	10.02	10.12	9.89	9.70
115	TC	98.10	87.70	78.10	104.60	94.10	84.40	108.80	98.10	89.00
	SHC	16.50	35.50	54.50	23.40	47.40	71.50	30.30	59.20	86.30
	kW	10.95	10.76	10.60	10.72	10.89	11.10	11.19	10.98	10.81
125	TC	85.60	76.10	67.20	91.40	81.70	72.80	95.10	85.30	77.00
	SHC	5.00	24.60	44.30	11.10	35.90	60.50	17.60	47.30	74.80
	kW	12.14	11.98	11.84	11.94	12.09	12.27	12.35	12.16	12.02

50TC*E12 COOLING CAPACITIES, HOT GAS REHEAT MODE

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator - Ewb (F)								
		75 Dry Bulb			75 Dry Bulb			75 Dry Bulb		
		62.5 Wet Bulb			64 Wet Bulb			65.3 Wet Bulb		
		(50% Relative)			(56% Relative)			(60% Relative)		
		Air Entering Evaporator - CFM								
		3000	4000	5000	3000	4000	5000	3000	4000	5000
80	TC	44.78	39.41	31.89	53.22	49.44	43.38	60.56	58.12	53.32
	SHC	-0.44	-0.57	-0.69	-0.37	-0.51	-0.61	-0.33	-0.46	-0.56
	kW	6.96	6.77	6.52	7.26	7.13	6.91	7.54	7.45	7.27
75	TC	45.84	40.46	32.86	54.28	50.51	44.45	61.61	59.19	54.40
	SHC	0.53	0.40	0.29	0.60	0.47	0.37	0.64	0.52	0.42
	kW	6.77	6.56	6.29	7.11	6.95	6.72	7.41	7.31	7.12
70	TC	46.91	41.48	33.50	55.36	51.59	45.50	62.69	60.28	55.49
	SHC	1.51	1.38	1.27	1.57	1.45	1.35	1.61	1.50	1.40
	kW	6.54	6.32	6.02	6.90	6.74	6.49	7.23	7.13	6.92
60	TC	48.88	43.42	35.76	57.29	53.56	47.48	64.56	62.16	57.42
	SHC	3.44	3.34	3.24	3.51	3.40	3.31	3.55	3.45	3.37
	kW	6.45	6.16	6.70	6.93	6.72	6.39	7.38	7.24	6.96
50	TC	50.83	45.28	37.67	59.22	55.52	49.43	66.05	64.03	59.34
	SHC	5.38	5.29	5.20	5.45	5.36	5.28	5.48	5.40	5.33
	kW	6.46	6.01	6.34	6.98	6.71	6.29	8.15	7.38	7.02
40	TC	52.82	47.29	39.50	61.14	57.48	51.39	68.23	65.88	61.25
	SHC	7.32	7.24	7.20	7.38	7.31	7.24	7.43	7.36	7.29
	kW	6.29	6.09	6.12	7.05	6.72	6.29	7.78	7.55	7.10

LEGEND

Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
ldb — Leaving Dry-Bulb
lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:
1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

COOLING CAPACITIES, 2-STAGE COOLING, SIZE 14 — 12.5 TONS

50TC*D14 (12.5 TON) (RTPF & NOVATION)				AMBIENT TEMPERATURE (F)												
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
3600 Cfm	EAT (wb)	58	TC	127.6	127.6	142.9	121.7	121.7	137.6	115.0	115.0	130.0	108.3	108.3	122.6
			SHC	110.3	126.6	142.9	105.8	121.7	137.6	99.9	115.0	130.0	94.1	108.3	122.6
		62	TC	136.1	136.1	136.1	131.1	131.1	131.1	123.8	123.8	124.5	114.9	114.9	120.3
			SHC	96.6	112.8	129.0	94.7	111.2	127.7	91.4	108.0	124.5	87.3	103.8	120.3
		67	TC	146.2	146.2	146.2	142.0	142.0	142.0	136.2	136.2	136.2	128.8	128.8	128.8
			SHC	78.5	94.4	110.3	76.9	93.1	109.2	74.7	91.0	107.3	71.7	88.1	104.6
		72	TC	155.9	155.9	155.9	152.4	152.4	152.4	147.2	147.2	147.2	140.1	140.1	140.1
			SHC	60.1	76.6	93.2	58.7	75.2	91.7	56.8	73.3	89.7	54.2	70.6	87.0
		76	TC	—	163.0	163.0	—	160.0	160.0	—	155.1	155.1	—	148.2	148.2
			SHC	—	62.0	81.8	—	61.1	80.9	—	59.5	79.3	—	57.0	76.3
4200 Cfm	EAT (wb)	58	TC	132.2	132.2	149.5	128.2	128.2	144.9	121.9	121.9	137.8	115.0	115.0	130.1
			SHC	115.0	132.2	149.5	111.5	128.2	144.9	106.0	121.9	137.8	99.9	115.0	130.1
		62	TC	139.6	139.6	139.6	134.7	134.7	138.0	128.0	128.0	135.6	119.1	119.1	131.2
			SHC	102.5	120.8	139.0	100.8	119.4	138.0	98.1	116.8	135.6	93.9	112.6	131.2
		67	TC	149.5	149.5	149.5	145.4	145.4	145.4	139.6	139.6	139.6	132.1	132.1	132.1
			SHC	81.8	99.6	117.4	80.6	98.7	116.8	78.5	96.9	115.2	75.7	94.3	112.8
		72	TC	159.0	159.0	159.0	155.5	155.5	155.5	150.3	150.3	150.3	143.1	143.1	143.1
			SHC	61.4	79.6	97.8	60.2	78.5	96.8	58.3	76.7	95.0	55.8	74.2	92.5
		76	TC	—	165.7	165.7	—	162.8	162.8	—	157.8	157.8	—	150.8	150.8
			SHC	—	64.6	87.7	—	63.5	86.3	—	61.5	83.3	—	58.9	79.9
4800 Cfm	EAT (wb)	58	TC	136.7	136.7	154.5	133.0	133.0	150.3	127.7	127.7	144.3	120.6	120.6	136.4
			SHC	118.9	136.7	154.5	115.7	133.0	150.3	111.0	127.7	144.3	104.9	120.6	136.4
		62	TC	142.2	142.2	147.8	137.4	137.4	147.1	131.0	131.0	144.7	122.8	122.8	140.3
			SHC	107.7	127.8	147.8	106.2	126.7	147.1	103.6	124.2	144.7	99.3	119.8	140.3
		67	TC	152.1	152.1	152.1	148.0	148.0	148.0	142.2	142.2	142.2	134.6	134.6	134.6
			SHC	84.8	104.3	123.7	83.8	103.8	123.7	82.0	102.3	122.6	79.4	99.9	120.4
		72	TC	161.3	161.3	161.3	157.8	157.8	157.8	152.5	152.5	152.5	145.4	145.4	145.4
			SHC	62.6	82.2	101.9	61.4	81.4	101.3	59.7	79.7	99.8	57.2	77.3	97.5
		76	TC	—	167.7	167.7	—	164.9	164.9	—	159.9	159.9	—	152.8	152.8
			SHC	—	66.4	91.4	—	65.0	89.2	—	63.1	86.4	—	60.5	83.1
5400 Cfm	EAT (wb)	58	TC	140.5	140.5	158.8	136.9	136.9	154.7	131.8	131.8	149.0	125.2	125.2	141.6
			SHC	122.2	140.5	158.8	119.0	136.9	154.7	114.7	131.8	149.0	108.9	125.2	141.6
		62	TC	144.3	144.3	155.7	139.6	139.6	155.0	133.5	133.5	152.4	125.8	125.8	147.8
			SHC	112.2	133.9	155.7	110.9	132.9	155.0	108.1	130.2	152.4	103.9	125.8	147.8
		67	TC	154.2	154.2	154.2	150.0	150.0	150.0	144.2	144.2	144.2	136.7	136.7	136.7
			SHC	87.6	108.6	129.6	86.8	108.5	130.1	85.2	107.3	129.4	82.8	105.1	127.4
		72	TC	163.1	163.1	163.1	159.7	159.7	159.7	154.3	154.3	154.3	147.1	147.1	147.1
			SHC	63.6	84.6	105.6	62.5	83.9	105.4	60.8	82.5	104.2	58.4	80.2	102.0
		76	TC	—	169.3	169.3	—	166.5	166.5	—	161.5	161.5	—	154.2	154.2
			SHC	—	67.6	93.7	—	66.4	91.7	—	64.5	89.2	—	61.9	86.1
6000 Cfm	EAT (wb)	58	TC	143.6	143.6	162.3	140.1	140.1	158.3	135.1	135.1	152.7	128.7	128.7	145.5
			SHC	124.9	143.6	162.3	121.8	140.1	158.3	117.5	135.1	152.7	111.9	128.7	145.5
		62	TC	146.1	146.1	162.4	141.7	141.7	161.5	135.6	135.6	159.2	128.8	128.8	151.2
			SHC	116.1	139.3	162.4	114.7	138.1	161.5	112.1	135.6	159.2	106.4	128.8	151.2
		67	TC	155.8	155.8	155.8	151.6	151.6	151.6	145.9	145.9	145.9	138.3	138.3	138.3
			SHC	90.1	112.6	135.0	89.6	112.8	136.0	88.3	112.0	135.8	85.9	110.0	134.1
		72	TC	164.5	164.5	164.5	161.2	161.2	161.2	155.8	155.8	155.8	148.5	148.5	148.5
			SHC	64.5	86.7	108.9	63.5	86.3	109.1	61.9	85.1	108.2	59.6	82.9	106.3
		76	TC	—	170.6	170.6	—	167.8	167.8	—	162.8	162.8	—	155.5	155.5
			SHC	—	68.7	95.8	—	67.5	94.1	—	65.7	91.8	—	63.3	88.8

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5. Do not operate outside these limits.

Capacity ratings (cont)

COOLING CAPACITIES, 2-STAGE COOLING, SIZE 14 — 12.5 TONS

50TC*E14 (12.5 TON) COOLING CAPACITIES, SUBCOOLING MODE

TEMP (F) AIR ENTERING CONDENSER (Edb)		Air Entering Evaporator - CFM								
		3750			5000			6250		
		Air Entering Evaporator - Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	183.70	166.90	151.40	194.90	177.80	162.10	202.00	184.80	170.50
	SHC	79.40	100.50	121.90	91.70	119.40	147.10	102.90	137.00	166.70
	kW	9.82	9.63	9.46	9.58	9.76	9.96	10.04	9.84	9.67
85	TC	172.70	156.80	142.10	183.30	167.10	152.20	190.00	173.70	160.30
	SHC	69.00	90.90	113.00	80.70	109.20	137.50	91.50	126.30	156.60
	kW	10.82	10.63	10.45	10.57	10.76	10.96	11.04	10.84	10.67
95	TC	161.40	146.20	132.40	171.4	156.00	141.90	177.60	162.20	149.50
	SHC	58.40	81.00	103.80	69.40	98.70	127.70	79.80	115.40	146.10
	kW	11.92	11.73	11.56	11.68	11.86	12.05	12.14	11.93	11.77
105	TC	149.60	135.30	122.20	158.90	144.40	131.10	164.70	150.30	138.40
	SHC	47.60	70.90	94.30	57.80	87.90	117.60	67.80	104.30	135.30
	kW	13.12	12.94	12.77	12.89	13.06	13.24	13.32	13.13	12.97
115	TC	137.20	123.90	111.60	145.90	132.30	119.80	151.30	137.70	126.70
	SHC	36.30	60.50	84.60	45.90	76.80	107.20	55.30	92.70	124.00
	kW	14.41	14.25	14.10	14.20	14.35	14.53	14.59	14.42	14.28
125	TC	124.20	111.80	100.30	132.20	119.60	108.00	137.10	124.40	114.40
	SHC	24.60	49.60	74.40	33.40	65.20	96.30	42.40	80.50	112.10
	kW	15.80	15.65	15.52	15.61	15.75	15.89	15.95	15.80	15.68

50TC*E14 (12.5 TON) COOLING CAPACITIES, HOT GAS REHEAT MODE

TEMP (F) AIR ENTERING CONDENSER (Edb)		Air Entering Evaporator - Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator - CFM								
		3750	5000	6250	3750	5000	6250	3750	5000	6250
80	TC	52.42	45.88	36.99	62.64	58.07	51.07	71.56	68.64	63.23
	SHC	-0.39	-0.54	-0.67	-0.31	-0.46	-0.58	-0.26	-0.40	-0.52
	kW	9.65	9.39	9.07	9.97	9.77	9.50	10.25	10.11	9.89
75	TC	53.45	46.63	36.10	63.77	59.11	51.87	72.76	69.80	64.31
	SHC	0.59	0.44	0.30	0.67	0.52	0.40	0.72	0.58	0.47
	kW	9.09	8.83	8.49	9.39	9.20	8.94	9.67	9.53	9.32
70	TC	54.33	46.91	37.58	64.77	60.01	52.30	73.80	70.80	65.24
	SHC	1.56	1.41	1.29	1.64	1.50	1.38	1.70	1.56	1.45
	kW	8.81	8.53	8.62	9.15	8.94	8.65	9.46	9.31	9.08
60	TC	55.47	49.48	40.48	66.62	62.07	54.88	75.68	72.76	67.28
	SHC	3.50	3.38	3.27	3.59	3.47	3.36	3.65	3.52	3.42
	kW	8.36	8.84	8.98	9.88	9.56	9.10	9.83	9.64	9.31
50	TC	58.33	51.72	42.81	68.72	63.93	55.84	77.74	74.77	69.24
	SHC	5.47	5.35	5.24	5.54	5.43	5.32	5.60	5.49	5.39
	kW	8.98	9.25	9.43	9.33	8.97	8.73	9.55	9.33	9.70
40	TC	60.33	53.69	46.89	70.67	65.93	49.83	79.46	76.62	71.24
	SHC	7.42	7.31	7.22	7.49	7.39	7.23	7.55	7.45	7.37
	kW	9.16	9.88	9.06	9.50	9.05	9.47	10.31	10.00	9.48

LEGEND

Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
ldb — Leaving Dry-Bulb
lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:
1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

COOLING CAPACITIES — 2-STAGE COOLING, 15 TONS

50TC*D16 (RTPF)				AMBIENT TEMPERATURE (F)													
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
4500 Cfm	EAT (wb)	58	THC	156.6	156.6	175.2	149.4	149.4	169.1	141.6	141.6	160.2	133.3	133.3	150.9
			SHC	134.7	154.9	175.2	129.8	149.4	169.1	123.0	141.6	160.2	115.7	133.3	150.9
		62	THC	166.7	166.7	166.9	158.0	158.0	162.6	147.6	147.6	157.2	136.8	136.8	150.3
			SHC	122.8	144.9	166.9	118.6	140.6	162.6	113.5	135.3	157.2	107.4	128.8	150.3
		67	THC	184.1	184.1	184.1	175.6	175.6	175.6	165.6	165.6	165.6	154.5	154.5	154.5
			SHC	101.6	123.7	145.7	98.1	120.2	142.3	94.0	116.1	138.2	89.4	111.5	133.6
		72	THC	200.3	200.3	200.3	192.0	192.0	192.0	182.9	182.9	182.9	172.2	172.2	172.2
			SHC	78.7	101.1	123.5	75.5	97.9	120.2	72.1	94.4	116.7	68.2	90.5	112.7
		76	THC	—	211.4	211.4	—	203.1	203.1	—	193.8	193.8	—	183.9	183.9
			SHC	—	82.2	107.0	—	79.3	103.8	—	76.0	100.2	—	72.6	96.5
5250 Cfm	EAT (wb)	58	THC	165.2	165.2	186.9	158.2	158.2	179.0	150.0	150.0	169.7	141.3	141.3	160.0
			SHC	143.5	165.2	186.9	137.4	158.2	179.0	130.2	150.0	169.7	122.7	141.3	160.0
		62	THC	172.3	172.3	181.7	163.4	163.4	176.9	153.1	153.1	169.3	143.4	143.4	161.4
			SHC	131.6	156.6	181.7	127.1	152.0	176.9	120.5	144.9	169.3	114.1	137.8	161.4
		67	THC	189.5	189.5	189.5	180.9	180.9	180.9	170.7	170.7	170.7	159.1	159.1	159.1
			SHC	107.2	132.4	157.5	103.8	129.0	154.1	99.9	125.1	150.4	95.3	120.6	145.8
		72	THC	205.0	205.0	205.0	196.5	196.5	196.5	187.1	187.1	187.1	176.4	176.4	176.4
			SHC	80.9	106.1	131.3	77.7	102.9	128.1	74.4	99.5	124.7	70.6	95.8	121.0
		76	THC	—	215.4	215.4	—	206.8	206.8	—	197.1	197.1	—	186.9	186.9
			SHC	—	85.0	113.0	—	82.0	109.8	—	78.8	106.4	—	75.4	102.8
6000 Cfm	EAT (wb)	58	THC	172.7	172.7	195.4	165.5	165.5	187.3	157.1	157.1	177.8	148.1	148.1	167.7
			SHC	150.0	172.7	195.4	143.8	165.5	187.3	136.4	157.1	177.8	128.6	148.1	167.7
		62	THC	176.6	176.6	195.7	168.1	168.1	187.6	158.9	158.9	180.2	148.9	148.9	172.1
			SHC	139.6	167.7	195.7	133.2	160.4	187.6	127.1	153.7	180.2	120.7	146.4	172.1
		67	THC	193.6	193.6	193.6	184.8	184.8	184.8	174.7	174.7	174.7	162.7	162.7	162.7
			SHC	112.3	140.3	168.3	108.9	137.0	165.2	105.2	133.5	161.7	100.7	129.0	157.3
		72	THC	208.4	208.4	208.4	199.6	199.6	199.6	190.2	190.2	190.2	179.5	179.5	179.5
			SHC	82.7	110.5	138.3	79.6	107.3	135.1	76.2	104.0	131.8	72.6	100.6	128.5
		76	THC	—	218.2	218.2	—	209.5	209.5	—	199.5	199.5	—	189.0	189.0
			SHC	—	87.5	118.6	—	84.5	115.2	—	81.1	111.3	—	77.5	107.3
6750 Cfm	EAT (wb)	58	THC	178.8	178.8	202.4	171.6	171.6	194.2	163.1	163.1	184.6	153.8	153.8	174.1
			SHC	155.3	178.8	202.4	149.0	171.6	194.2	141.6	163.1	184.6	133.5	153.8	174.1
		62	THC	181.0	181.0	203.6	173.0	173.0	197.5	163.8	163.8	190.1	153.9	153.9	181.1
			SHC	144.1	173.9	203.6	139.1	168.3	197.5	133.3	161.7	190.1	126.7	153.9	181.1
		67	THC	196.8	196.8	196.8	187.9	187.9	187.9	177.7	177.7	177.7	165.5	165.5	167.9
			SHC	117.0	147.7	178.4	113.7	144.5	175.4	110.1	141.1	172.2	105.6	136.8	167.9
		72	THC	211.0	211.0	211.0	202.2	202.2	202.2	192.5	192.5	192.5	181.8	181.8	181.8
			SHC	84.3	114.5	144.7	81.2	111.5	141.7	77.9	108.1	138.4	74.4	104.9	135.4
		76	THC	—	220.2	220.2	—	211.5	211.5	—	201.3	201.3	—	190.6	190.6
			SHC	—	89.5	122.8	—	86.4	119.4	—	83.0	115.4	—	79.4	111.5
7500 Cfm	EAT (wb)	58	THC	183.9	183.9	208.2	176.6	176.6	199.8	168.2	168.2	190.3	158.6	158.6	179.5
			SHC	159.7	183.9	208.2	153.3	176.6	199.8	146.0	168.2	190.3	137.7	158.6	179.5
		62	THC	185.1	185.1	212.5	177.1	177.1	206.2	168.3	168.3	197.9	158.7	158.7	186.7
			SHC	149.5	181.0	212.5	144.5	175.4	206.2	138.7	168.3	197.9	130.8	158.7	186.7
		67	THC	199.3	199.3	199.3	190.3	190.3	190.3	180.0	180.0	181.7	167.8	167.8	177.8
			SHC	121.3	154.6	187.9	118.1	151.6	185.1	114.4	148.1	181.7	110.1	144.0	177.8
		72	THC	213.0	213.0	213.0	204.1	204.1	204.1	194.2	194.2	194.2	183.5	183.5	183.5
			SHC	85.8	118.2	150.5	82.7	115.2	147.7	79.4	111.9	144.4	76.0	108.8	141.6
		76	THC	—	221.9	221.9	—	213.0	213.0	—	202.7	202.7	—	191.8	191.8
			SHC	—	91.2	126.5	—	88.2	123.1	—	84.7	119.2	—	81.2	115.3

LEGEND

— — Do not operate
Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering Air Temperature (dry bulb)
EAT (wb) — Entering Air Temperature (wet bulb)
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE: See Minimum-Maximum Airflow Ratings on page 5.
Do not operate outside these limits.

Capacity ratings (cont)

COOLING CAPACITIES — 2-STAGE COOLING, 15 TONS

50TC*E16 (15 TON) COOLING CAPACITIES, SUBCOOLING MODE

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator - CFM								
		4500			6000			7500		
		Air Entering Evaporator - Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	204.40	186.30	168.20	218.40	199.60	180.90	229.60	210.40	191.20
	SHC	98.90	118.10	137.20	114.80	133.70	152.60	127.60	146.20	164.90
	kW	11.57	11.22	10.77	11.78	11.45	11.00	12.06	11.64	11.35
85	TC	189.20	171.70	154.10	203.00	184.80	166.70	214.10	195.50	176.90
	SHC	79.50	103.40	127.30	96.50	120.20	144.00	110.20	133.70	157.30
	kW	12.59	12.24	11.81	12.81	12.50	12.03	13.05	12.66	12.47
95	TC	174.00	157.00	140.00	187.60	170.10	152.50	198.60	180.60	162.70
	SHC	60.00	88.70	117.50	78.20	106.80	135.30	92.90	121.30	149.70
	kW	13.68	13.35	12.86	13.91	13.57	13.05	14.15	13.75	13.47
105	TC	158.80	142.30	125.80	172.20	155.30	138.30	183.10	165.70	148.40
	SHC	40.50	74.10	107.70	59.90	93.30	126.70	75.50	108.80	142.00
	kW	14.67	14.41	13.88	14.90	14.55	14.10	15.15	14.73	14.53
115	TC	143.60	127.60	111.70	156.80	140.50	124.10	167.60	150.90	134.20
	SHC	21.00	59.40	97.80	41.60	79.90	118.10	58.10	96.30	134.20
	kW	15.77	15.38	14.88	15.88	15.65	15.10	16.12	15.84	15.54
125	TC	128.40	113.00	97.50	141.50	125.70	109.90	152.00	136.00	119.90
	SHC	1.60	44.80	88.00	23.30	66.40	109.40	40.80	83.80	119.90
	kW	16.69	16.34	15.90	16.92	16.56	16.12	17.16	16.76	16.54

50TC*E16 (15 TON) COOLING CAPACITIES, HOT GAS REHEAT MODE

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator - Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator - CFM								
		4500	6000	7500	4500	6000	7500	4500	6000	7500
80	TC	83.75	84.85	88.95	86.65	91.90	92.90	87.90	91.75	96.30
	SHC	37.50	42.80	55.10	30.90	40.40	44.50	24.80	29.30	34.10
	kW	10.50	11.49	11.60	10.56	10.65	11.70	11.60	11.72	11.77
75	TC	85.00	86.00	90.50	88.05	93.60	94.65	89.20	93.45	97.85
	SHC	40.00	45.00	57.30	33.20	42.30	46.90	26.90	31.50	36.30
	kW	10.16	11.15	11.25	10.21	10.31	11.33	11.26	11.35	11.42
70	TC	86.15	87.35	91.50	89.20	94.30	96.10	90.40	94.10	98.95
	SHC	42.10	47.50	59.80	35.50	45.30	49.50	29.50	33.90	38.70
	kW	9.84	10.83	10.94	10.02	10.13	11.03	10.95	11.05	11.12
60	TC	88.90	90.10	94.25	92.00	97.10	98.20	93.20	96.90	101.75
	SHC	46.80	52.30	64.60	40.20	50.10	54.10	34.10	38.60	43.40
	kW	9.37	10.36	10.44	9.42	9.52	10.55	10.45	10.57	10.64
50	TC	91.70	92.80	97.00	94.80	99.90	101.00	96.10	99.70	104.20
	SHC	51.50	57.10	69.40	44.80	54.80	58.90	38.70	43.20	49.00
	kW	9.12	10.09	10.16	9.17	9.28	10.26	10.17	10.26	10.32
40	TC	94.45	95.60	99.80	97.45	102.55	103.70	98.65	102.35	107.00
	SHC	56.30	61.40	73.70	49.70	59.20	63.30	43.60	48.10	52.90
	kW	9.05	10.02	10.10	9.10	9.21	10.18	10.11	10.20	10.26

LEGEND

Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
ldb — Leaving Dry-Bulb
lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:
1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Physical data

PHYSICAL DATA (COOLING) — 6 TONS

50TC		50TC*A07
REFRIGERATION SYSTEM		
	# Circuits / # Comp. / Type	1 / 1 / Scroll
	Puron® refrig. (R-410A)(lbs-oz)	14 - 2
	Humidi-Mizer® Puron® refrig. charge A/B (lbs-oz)	22 - 5
	Metering device	Acutrol™
	Humidi-Mizer Metering Device	Acutrol™ + TXV
	High-press. Trip / Reset (psig)	630 / 505
	Low-press. Trip / Reset (psig)	54 / 117
	Compressor Capacity Staging (%)	100%
EVAP. COIL		
	Material	Cu / Al
	Coil Type (Tube Dia.)	3/8" RTPF
	Rows / FPI	4 / 15
	Total face area (ft^2)	7.3
	Condensate drain conn. size	3/4"
HUMIDI-MIZER® COIL		
	Material	Cu / Al
	Coil Type (Tube dia.)	3/8" RTPF
	Rows / FPI	2 / 17
	Total face area (ft^2)	5.2
EVAPORATOR FAN AND MOTOR		
Standard Direct Drive	Motor Qty. / Belt Qty. / Driver Type	—
	Max BHP	—
	RPM range	—
	Motor frame size	—
	Fan Qty. / Type	—
	Fan Diameter (in.)	—
Standard Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt
	Max BHP	2.4
	RPM range	1073-1457
	Motor frame size	56
	Fan Qty. / Type	1 / Centrifugal
	Fan Diameter (in.)	10 x 10
Medium Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt
	Max BHP	2.9†
	RPM range	1173-1518
	Motor frame size	56
	Fan Qty. / Type	1 / Centrifugal
	Fan Diameter (in.)	10 x 10
High Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt
	Max BHP	3.7
	RPM range	1474-1788
	Motor frame size	56
	Fan Qty. / Type	1 / Centrifugal
	Fan Diameter (in.)	10 x 10
CONDENSER COIL		
	Material (Tube/Fin)	Cu / Al
	Coil type	3/8" RTPF
	Rows / FPI	2 / 17
	Total Face Area (ft^2)	21.3
COND. FAN / MOTOR		
	Qty / Motor Drive Type	1 / Direct
	Motor HP / RPM	1/4 / 1100
	Fan diameter (in.)	22
FILTERS		
	RA Filter # / Size (in.)	4 / 16 x 16 x 2
	OA inlet screen # / Size (in.)	1 / 20 x 24 x 1

NOTE: Humidi-MiZer® is not available with Novation® condenser coil models, only Round Tube / Plate Fin (RTPF).

— Not applicable
† 575V motor utilizes 3.7 BHP.

Physical data (cont)

PHYSICAL DATA (COOLING) — 7.5-8.5 TONS

50TC		50TC*A08	50TC*D08	50TC*A09	50TC*D09
REFRIGERATION SYSTEM					
# Circuits / # Comp. / Type		1 / 1 / Scroll	2 / 2 / Scroll	1 / 1 / Scroll	2 / 2/ Scroll
RTPF models R-410a charge A/B (lbs-oz)		13-12	8-5 / 8-2	15-4	10-5 / 10-12
Alternate (MCHX) R-410A charge A/B (lbs-oz)		—	4-6 / 4-6	—	—
Alternate (Humidi-MiZer®) R-410A charge A/B (lbs-oz)		—	13-3 / 13-3	—	16-13 / 16-13
Metering device		Acutrol™	Acutrol™	Acutrol™	Acutrol™
Alternate Humidi-Mizer Metering Device		—	Acutrol™ + TXV	—	Acutrol™ + TXV
High-press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505
Low-press. Trip / Reset (psig)		54 / 117	54 / 117	54 / 117	54 / 117
Compressor Capacity Staging (%)		100%	100%	100%	50% / 100%
EVAP. COIL					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil Type (Tube Dia.)		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		3 / 15	3 / 15	3 / 15	3 / 15
Total face area (ft^2)		8.9	8.9	11.1	11.1
Condensate drain conn. size		3/4"	3/4"	3/4"	3/4"
HUMIDI-MIZER® COIL					
Material		—	Cu / Al	—	Cu / Al
Coil Type (Tube dia.)		—	3/8" RTPF	—	3/8" RTPF
Rows / FPI		—	2 / 17	—	2 / 17
Total face area (ft^2)		—	6.3	—	8.4
EVAPORATOR FAN AND MOTOR					
Standard Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.7	1.7	1.7	1.7
	RPM range	489-747	489-747	518-733	518-733
	Motor frame size	56	56	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	15 x 15
Medium Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9†	2.9 †	2.4	2.4
	RPM range	733-949	733-949	690-936	690-936
	Motor frame size	56	56	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	15 x 15
High Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	4.7	4.7	3.7	3.7
	RPM range	909-1102	909-1102	838-1084	838-1084
	Motor frame size	14	14	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	15 x 15
CONDENSER COIL					
Material (Tube/Fin)		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		2 / 17	2 / 17	2 / 17	2 / 17
Total Face Area (ft^2)		20.5	20.5	21.4	25.1
ALTERNATE (MCHX) CONDENSER COIL					
Material (Tube/Fin)		—	Al / Al	—	—
Coil type		—	Novation®	—	—
Rows / FPI		—	1 / 20	—	—
Total Face Area (ft^2)		—	20.5	—	—
COND. FAN / MOTOR					
Qty / Motor Drive Type		2 / Direct	2 / Direct	2 / Direct	2 / Direct
Motor HP / RPM		1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in.)		22	22	22	22
FILTERS					
RA Filter # / Size (in.)		4 / 16 x 20 x 2	4 / 16 x 20 x 2	4 / 20 x 20 x 2	4 / 20 x 20 x 2
OA inlet screen # / Size (in.)		1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE: Humidi-MiZer® is not available with Novation® condenser coil models, only Round Tube / Plate Fin (RTPF).

— Not applicable
† 575V motor utilizes 3.7 BHP.

PHYSICAL DATA (COOLING) — 10-15 TONS

50TC		50TC*A12	50TC*D/E12	50TC*D/E14	50TC*D/E16
REFRIGERATION SYSTEM					
# Circuits / # Comp. / Type		1 / 1 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2/ Scroll
RTPF models R-410a charge A/B (lbs-oz)		20-0	10-5 / 10-3	11-0 / 11-6	15-14 / 16-12
Alternate (MCHX) R-410a charge A/B (lbs-oz)		—	6-0 / 6-0	7-6 / 8-0	—
Alternate (Humidi-MiZer®) R-410a charge A/B (lbs- oz)		—	16-10 / 16-0	17-10 / 18-3	—
Metering device		Acutrol™	Acutrol™	Acutrol™	Acutrol™
Alternate Humidi-Mizer Metering Device		—	Acutrol™ + TXV	Acutrol™ + TXV	—
High-press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505
Low-press. Trip / Reset (psig)		54 / 117	54 / 117	54 / 117	54 / 117
Compressor Capacity Staging (%)		100%	50% / 100%	50% / 100%	50% / 100%
EVAP. COIL					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil Type (Tube Dia.)		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		4 / 15	4 / 15	4 / 15	3 / 15
Total face area (ft²)		11.1	11.1	11.1	17.5
Condensate drain conn. size		3/4"	3/4"	3/4"	3/4"
HUMIDI-MIZER® COIL					
Material		—	Cu / Al	Cu / Al	Cu / Al
Coil Type (Tube dia.)		—	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		—	2 / 17	2 / 17	2 / 17
Total face area (ft²)		—	8.4	8.4	13.8
EVAPORATOR FAN AND MOTOR					
Standard	Motor Qty. / Belt Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.4	2.4	2.9 †	2.9 †
	RPM range	591-838	591-838	652-843	507-676
	Motor frame size	56	56	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	18 x 18
Medium Standard Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	3.7	3.7	3.7	3.7
	RPM range	838-1084	838-1084	838-1084	627-851
	Motor frame size	56	56	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	18 x 18
High Static	Motor Qty. / Belt Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	4.7	4.7	4.7	6.5 / 6.9 / 7.0 / 8.3 ‡
	RPM range	1022	1022-1240	1022-1240	776-955
	Motor frame size	14	14	14	S184T
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	18 x 18

Physical data (cont)

PHYSICAL DATA (COOLING) — 10-15 TONS (cont)

50TC	50TC*A12	50TC*D/E12	50TC*D/E14	50TC*D/E16
CONDENSER COIL				
Material (Tube/Fin)	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type	3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI	2 / 17	2 / 17	3 / 17	2 / 17
Total Face Area (ft^2)	25.1	25.1	25.1	2@23.1
ALTERNATE (MCHX) CONDENSER COIL				
Material (Tube/Fin)	—	Al / Al	Al / Al	—
Coil type	—	Novation®	Novation®	—
Rows / FPI	—	1 / 20	1 / 20	—
Total Face Area (ft^2)	—	25.1	25.1	—
COND. FAN / MOTOR				
Qty / Motor Drive Type	2 / Direct	2 / Direct	1 / Direct	3 / Direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1175	1/4 / 1100
Fan diameter (in.)	22	22	30	22
FILTERS				
RA Filter # / Size (in.)	4 / 20 x 20 x 2	4 / 20 x 20 x 2	4 / 20 x 20 x 2	6 / 18 x 24 x 2 2 / 24 x 27 x 1 (vert.)
OA inlet screen # / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 30 x 39 x 1 (horiz.)

NOTE: Humidi-MiZer® is not available with Novation® condenser coil models, only Round Tube / Plate Fin (RTPF) up to size 16.

— Not applicable

† 575V motor utilizes 3.7 BHP.

‡ On size 16 units, Max BHP for the Hight Static motor varies with the motor's voltage; see the following table:

Voltage	BHP
208	6.5
230	6.9
460	7.0
575	8.3

Options and accessories

FACTORY-INSTALLED AND FIELD-INSTALLED ACCESSORIES

CATEGORY	ITEM	FACTORYINSTALLED OPTION	FIELD INSTALLED ACCESSORY
Cabinet	Thru - the- base electrical or gas-line connections	X	X
	Supply duct cover (16 size only)		X
	Hinged access panels	X	
Coil Options	Cu/Cu indoor and/or outdoor coils [1]	X	
	Pre-coated outdoor coils [1]	X	
	Premium, E-coated outdoor coils [1]	X	
Humidity Control	Humidi- MiZer® adaptive dehumidification system	X	
Condenser Protection	Condenser coil hail guard (louvered design)	X	X
Controls	Thermostats, temperature sensors, and subbases		X
	PremierLink™ DDC communicating controller [9]	X	X
	RTU Open - protocol controller	X	
	Smoke detector (supply and/or return air)	X	
	Horn/strobe annunciator	X	X
	Time Guard II compressor delay control circuit		X
	Phase monitor		X
	Condensate overflow switch		X
Economizers and Outdoor Air Dampers	EconoMi$er IV for electro-mechanical controls — Non FDD (Standard air leak damper models) [6]	X	X
	EconoMi$er2 for DDC controls, complies with FDD (Standard and Ultra Low Leak air damper models) [7]	X	X
	Motorized 2 position outdoor air damper [9]	X	X
	Manual outdoor air damper (25% and 50%) [9]		X
	Barometric relief [2]	X	X
	Power exhaust		X
	EconoMi$er X for electro-mechanical controls, complies with FDD. (Standard and Ultra Low Leak air damper models) [6]	X	X
Economizer Sensors and IAQ Devices	Single dry bulb temperature sensors [3]	X	X
	Differential dry bulb temperature sensors [3]		X
	Single enthalpy sensors [3]	X	X
	Differential enthalpy sensors [3]		X
	Wall or duct mounted CO2 sensor [3]		X
	Unit mounted CO_2 sensor [3]	X	
Indoor Motor and Drive	Multiple motor and drive packages	X	
	Staged Air Vol (SAV) system w/VFD controller (2-stage cool only with electrical mechanical and RTU Open controls; the 6 ton unit has 1-stage cooling.) [8]	X	
	Display Kit for SAV system with VFD		X
Low Ambient Control	Winter start kit [4]		X
	Motormaster® head pressure controller [4]		X
Power Options	Convenience outlet (powered)	X	
	Convenience outlet (un-powered): 15 amp factory-installed, 20 amp field-installed	X	X
	Non-fused disconnect [5]	X	
	Disconnect switch bracket (16 size only)		X
Roof Curbs	Roof curb 14- in. (356 mm)		X
	Roof curb 24- in. (610 mm)		X

NOTES:
1. Novation® coated coils only available with E-coat.
2. Included with economizer.
3. Sensors used to optimize economizer performance.
4. See application data for assistance.
5. Available on units with MOCPs of 80 amps or less.
6. FDD (Fault Detection and Diagnostic) capability per California Title 24 120.2i, ASHRAE 90.1-2016 and IECC-2015 Fault Detection and Diagnostic (FDD) requirements.
7. Models with RTU Open DDC controls comply with California Title 24 120.2i, ASHRAE 90.1-2016 and IECC-2015 Fault Detection and Diagnostic (FDD) requirements. PremierLink is non FDD.
8. SAV is required on all units for installation in the United States as per the Department of Energy (DOE) efficiency standard of 2018.
9. Not available with SAV system.

Options and accessories (cont)

Economizer (dry-bulb or enthalpy)

Economizers save energy, money and improve comfort levels in the conditioned space. They bring in fresh, outside air for ventilation; and provide cool outside air to cool your building. This also is the preferred method of low ambient cooling. When integrated with CO_2 sensors, economizers can provide even more savings by coupling the ventilation air to only that amount required based on space occupancy.

Economizers are available, installed and tested by the factory, with either enthalpy or temperature dry-bulb inputs. There are also models for electromechanical, direct digital controllers and single speed fan or 2-speed indoor fan motors. Additional sensors are available as accessories to optimize the economizer.

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

CO_2 sensor

Improves productivity and saves money by working with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO_2 sensor detects their presence through increasing CO_2 levels, and opens the economizer appropriately.

When the occupants leave, the CO_2 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 side as required by code. The "un-powered" option is to be powered from a separate (non-unit) 115/120v power source. The unpowered convenience outlet is available as a 15 amp factory-installed option or a 20 amp field-installed accessory.

The 20 amp unpowered convenience outlet kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location, if necessary.

Non-fused disconnect

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

Disconnect switch bracket

Provides a pre-engineered and sized mounting bracket for applications requiring a unit mounted fused and non-fused disconnect of greater than 100 amps. Bracket assures that no damage will occur to coils when mounting with screws and other fasteners (16 size only).

Power exhaust with barometric relief

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

PremierLink™ DDC controller

This CCN controller regulates your rooftop's performance to tighter tolerances and expanded limits, as well as facilitates zoning systems and digital accessories. It also unites your Carrier HVAC equipment together on one, coherent CCN network. The PremierLink controller can be factory installed, or easily field installed. Not available on models equipped with Staged Air Volume (SAV) 2-speed fan motor. SAV is required on all USA models.

RTU Open protocol controller

Connect the rooftop to an existing Building Automation System (BAS) without needing complicated translators or adapter modules using the RTU Open controller. This new controller speaks the 4 most common building automation system languages (BACnet*, Modbus†, LonWorks**, and N2). Use this controller when you have an existing BAS.

Time guard II control circuit

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

Filter or fan status switches

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

Motorized two-position damper

The new Carrier two-position, motorized outdoor air damper admits up to 100% outside air. Using reliable, gear-driven technology, the two-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration. Not available on models equipped with Staged Air Volume (SAV) 2-speed fan motor.

Manual OA damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions. Not available on models equipped with Staged Air Volume (SAV) 2-speed fan motor.

* BACnet is a registered trademark of ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).
† Modbus is a registered trademark of Schneider Electric.
** LonWorks is a registered trademark of Echelon Corporation.

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 WeatherMaker® 50TC07-16 rooftop unit equipped with Round Tube-Plate Fin (RTPF) coils.

This system expands the envelope of operation of Carrier's WeatherMaker 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 includes two new modes of operation.

The WeatherMaker® 50TC 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.

Staged air volume (SAV™) indoor fan speed system with a variable frequency drive (VFD)

Carrier's Staged Air Volume (SAV) system saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1-2016, DOE-2018 (Department of Energy), and IECC-2015 standards, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 66% of total cfm.

Compared to single speed indoor fan motor systems, Carrier's SAV system can save substantial energy, 25%+ versus single speed indoor fan motor systems.

IMPORTANT: Data based on .10 ($/kWh) in an office application utilizing Carrier's HAP 4.6 simulation software program.

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

This SAV system is available on models with 2-stage cooling operation with electrical mechanical or RTU Open, Multi Protocol controls. Both space sensor and conventional thermostats controls can be used to provide accurate control in any application.

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

Motormaster® head pressure controller

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

Hinged access panels

Allows access to unit's major components with specifically designed hinged access panels. Panels are: filter, control box, and fan motor.

Winter start kit

The winter start kit by Carrier extends the low ambient limit of your rooftop to 25°F (–4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

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, install, and are all pre-engineered and certified.

Supply duct cover

The supply duct cover is required when field converting the factory standard vertical duct supply to the horizontal duct supply configuration. One required per unit (16 size only).

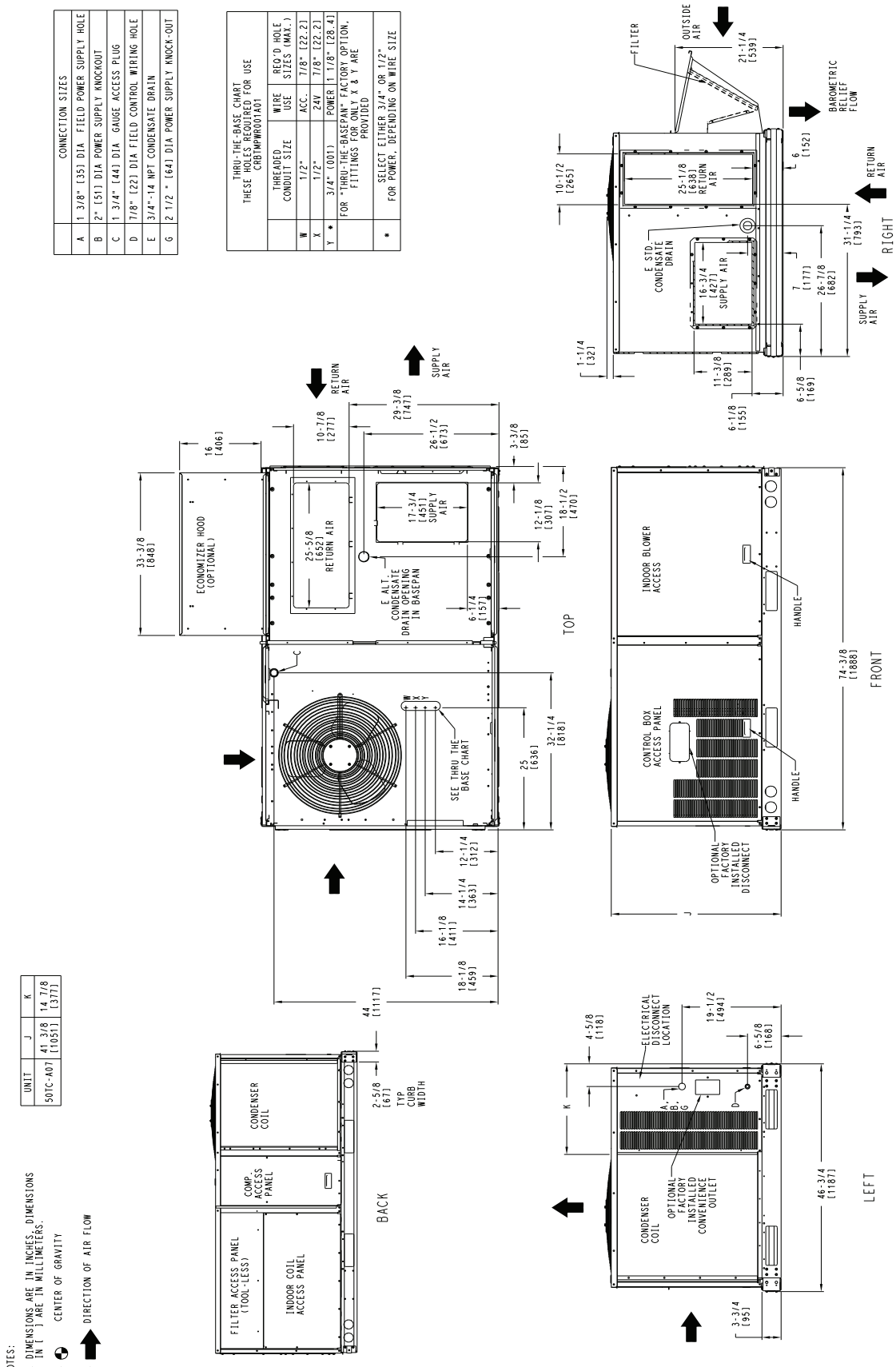
Options and accessories (cont)

OPTIONS AND ACCESSORIES — WEIGHT ADDERS

BASE UNIT WITH OPTIONS AND ACCESSORIES (WEIGHT ADDERS)	MAX WEIGHT ADDER											
	50TC**07		50TC**08		50TC**09		50TC**12		50TC**14		50TC**16	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Humidi-MiZer® System [1]	55	25	80	36	80	36	80	36	85	39	90	41
Power Exhaust, Vertical	50	23	75	34	75	34	75	34	75	34	85	39
Power Exhaust, Horizontal	30	14	30	14	30	14	30	14	30	14	75	34
EconoMi$er® (IV, X, or 2)	246	112	246	112	246	112	246	112	246	112	246	112
Cu/Cu Condenser Coil [2]	28	13	28	13	30	14	34	15	34	15	34	15
Cu/Cu Condenser and Evaporator Coils[2]	53	24	58	26	64	29	64	29	64	29	64	29
Medium Gas Heat	90	41	90	41	90	41	90	41	90	41	90	41
High Gas Heat	113	51	113	51	113	51	113	51	113	51	113	51
Roof Curb 14-in. (356 mm)	240	109	255	116	255	116	255	116	255	116	255	116
Roof Curb 24-in. (610 mm)	340	154	355	161	355	161	355	161	355	161	355	161
Louvered Hail Guard	60	27	60	27	120	54	150	68	150	68	150	68
CO_2 Sensor	5	2	5	2	5	2	5	2	5	2	5	2
Return Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2
Supply Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2
Fan/Filter Status Switch	2	1	2	1	2	1	2	1	2	1	2	1
Non-Fused Disconnect	15	7	15	7	15	7	15	7	15	7	15	7
Powered Convenience Outlet	35	16	35	16	35	16	35	16	35	16	35	16
Non-Powered Convenience Outlet	5	2	5	2	5	2	5	2	5	2	5	2
Enthalpy Sensor	2	1	2	1	2	1	2	1	2	1	2	1
Differential Enthalpy Sensor	3	1	3	1	3	1	3	1	3	1	3	1
Two Position Motorized Damper	50	23	50	23	65	29	65	29	65	29	65	29
Manual Damper	35	16	35	16	35	16	40	18	—	—	—	—
Field Filter Track 4-in (102 mm)	12	5	12	5	12	5	12	5	22	10	22	10
Motormaster® Controller	35	16	35	16	35	16	35	16	35	16	35	16
Medium Static Motor/Drive	5	2	6	3	6	3	6	3	10	5	10	5
High Static Motor/Drive	11	5	12	5	16	7	16	7	20	9	20	9
SAV™ System with VFD	20	9	20	9	20	9	20	9	20	9	20	9

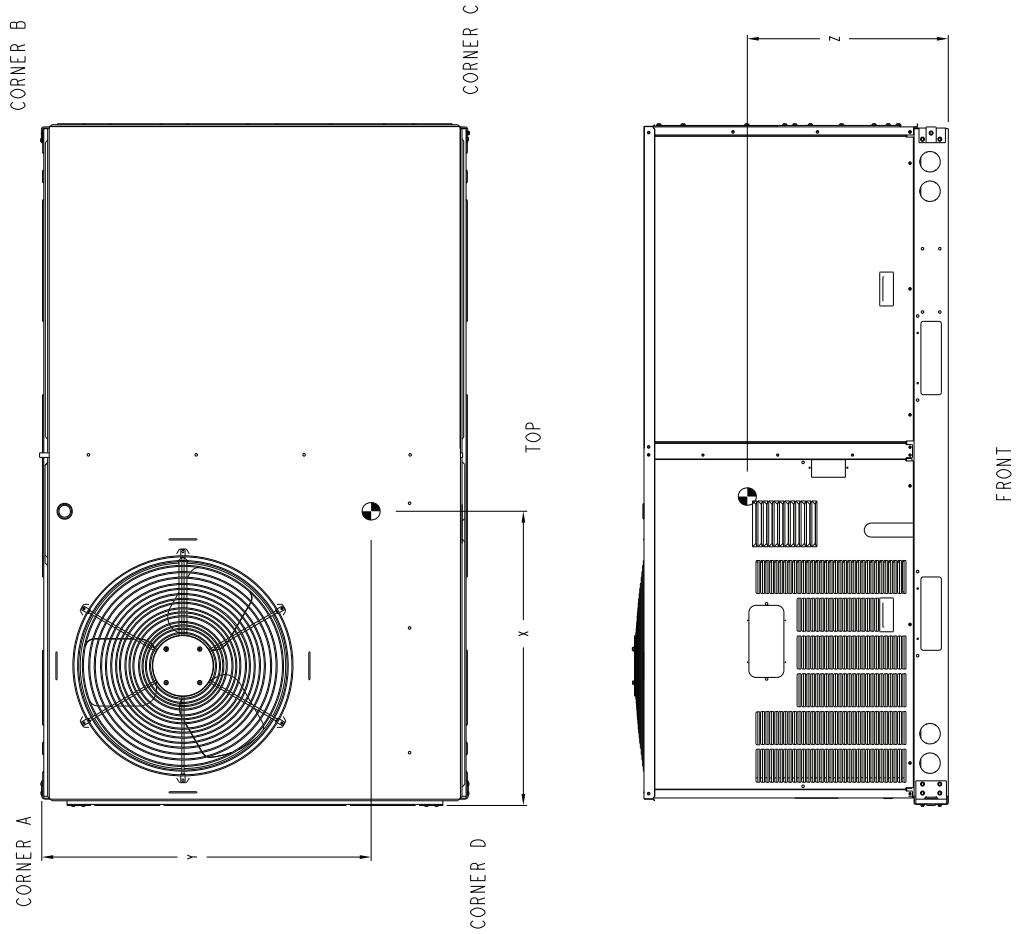
[1] For Humidi-MiZer® System add Motormaster Controller.
[2] Where available
— Not available

UNIT DIMENSIONAL DRAWING - 07 SIZE UNIT



Dimensions (cont)

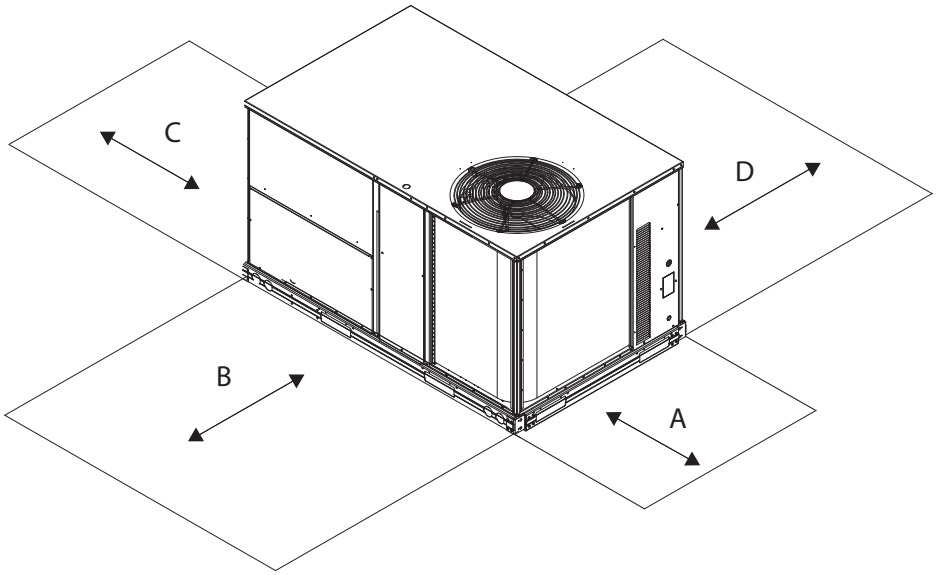
UNIT DIMENSIONAL DRAWING - 07 SIZE UNIT (cont)



UNIT	STD. UNIT WEIGHT*		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50TC-A07	607	275	150	68	160	73	153	69	144	65	38 [965]	22 [559]	20 3/4 [527]

* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.

SERVICE CLEARANCE DIMENSIONAL DRAWING — 07 SIZE UNIT

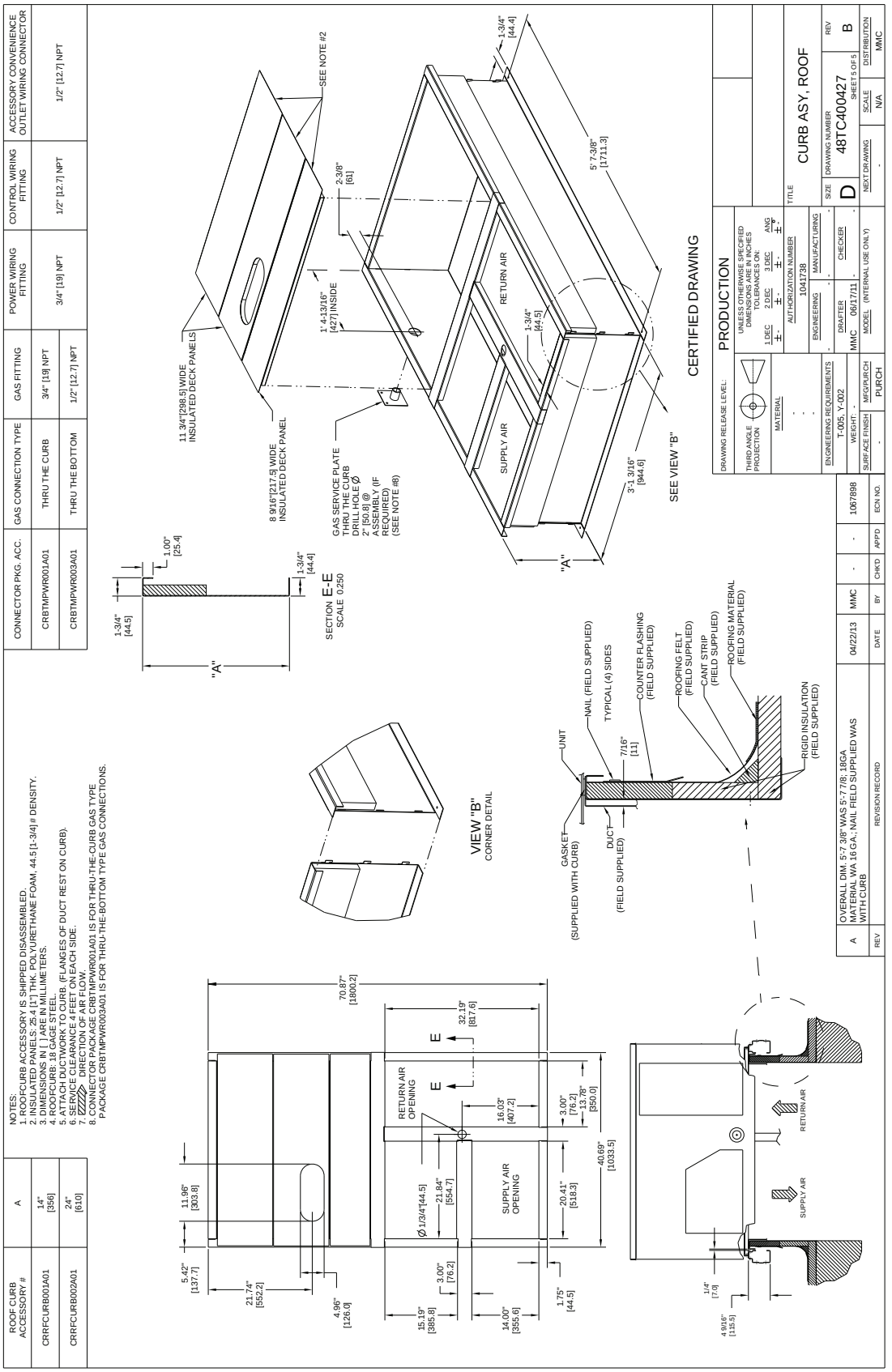


LOC	DIMENSION	CONDITION
A	48-in. (1219 mm) 18-in. (457 mm) 18-in. (457 mm) 12-in. (305 mm)	• Unit disconnect is mounted on panel • No disconnect, convenience outlet option • Recommended service clearance • Minimum clearance
B	42-in. (1067 mm) 36-in. (914 mm) Special	• Surface behind servicer is grounded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

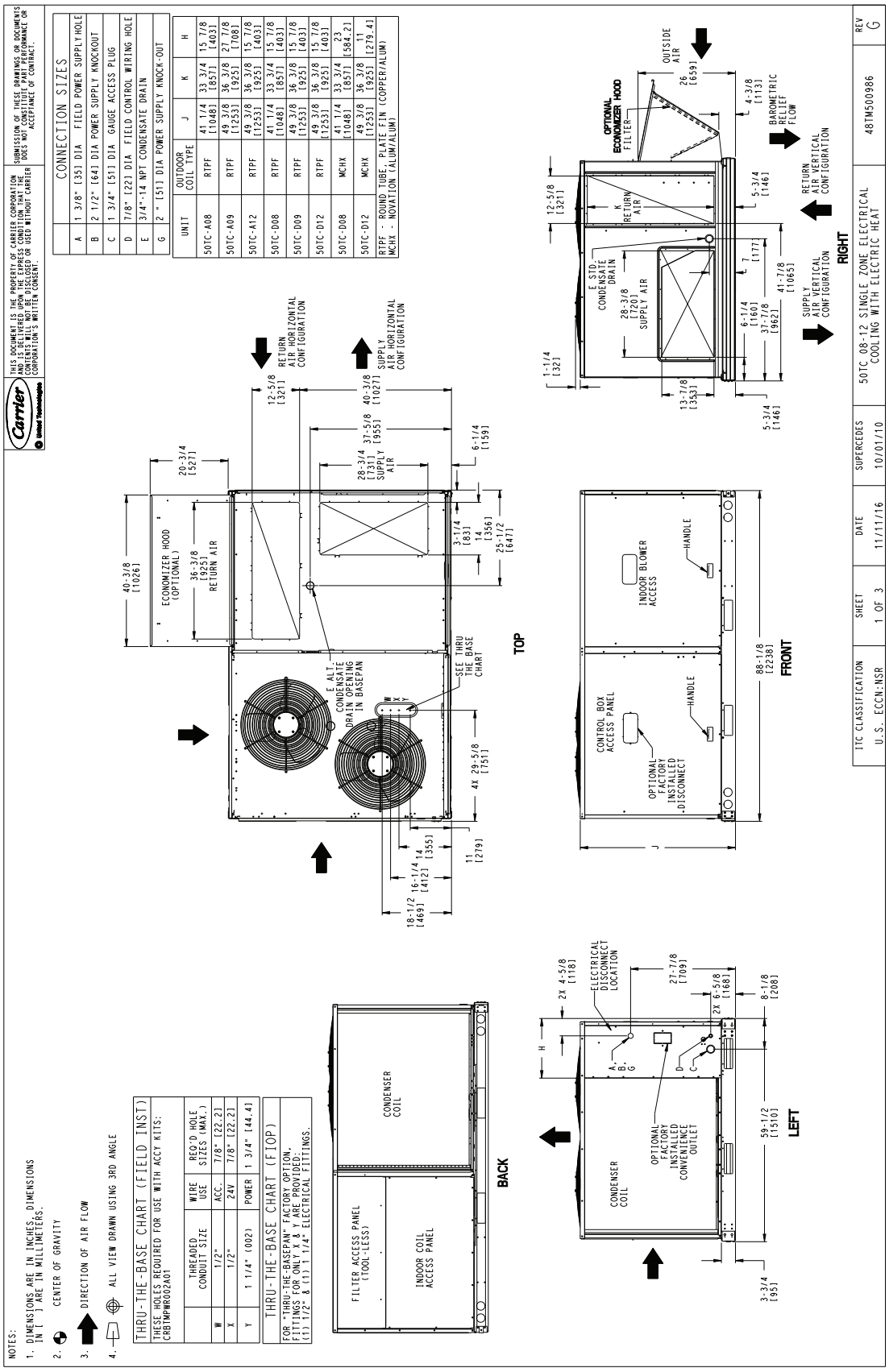
NOTE: Unit not designed to have overhead obstruction.
Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.

Dimensions (cont)

ROOF CURB DETAILS — 07 SIZE UNIT

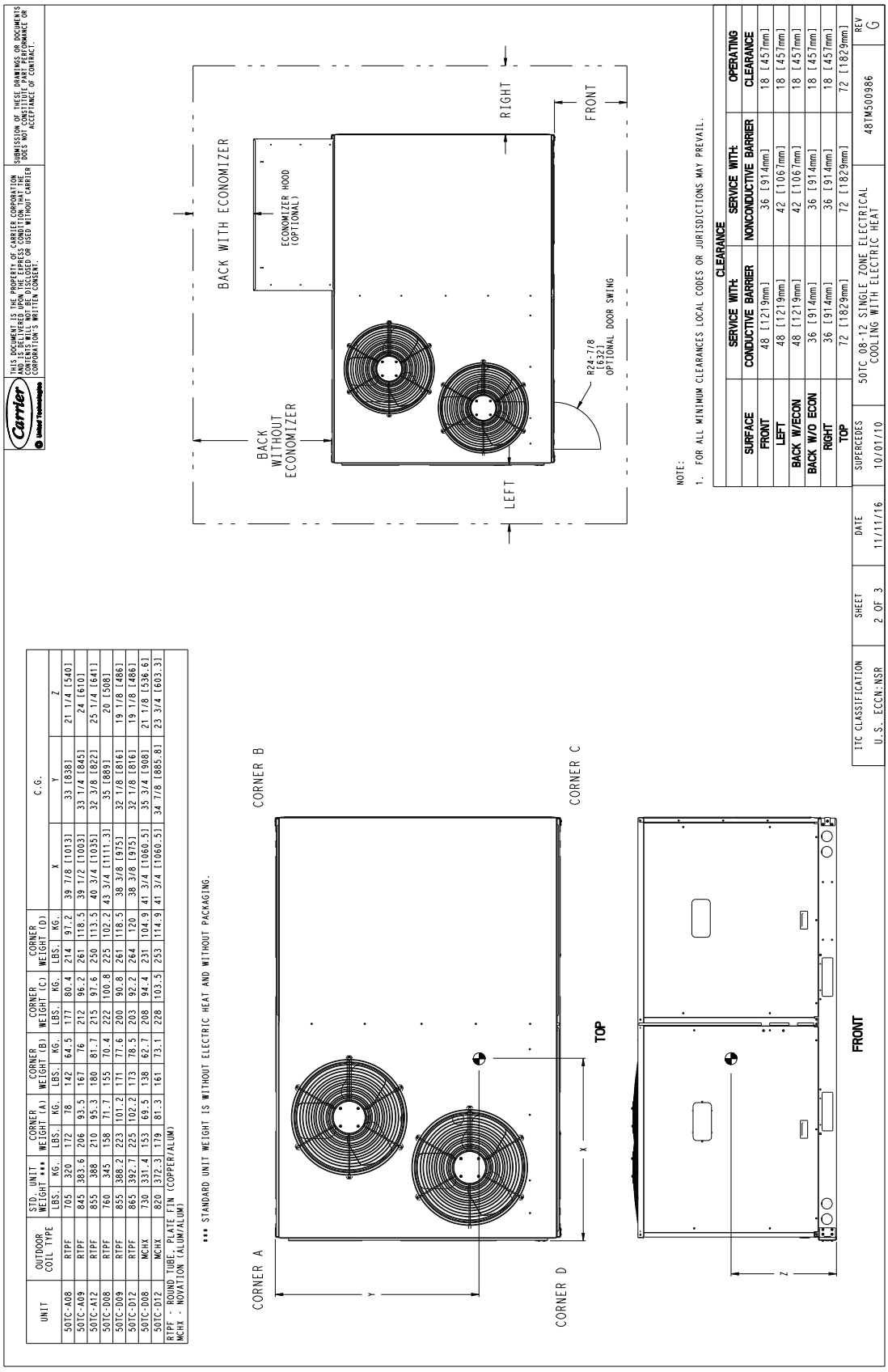


UNIT DIMENSIONAL DRAWING — 08 - 12 SIZE UNIT



Dimensions (cont)

UNIT DIMENSIONAL DRAWING — 08 - 12 SIZE UNIT (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
50TC-A08	RTPF	705	320	172	78	142	64.5	177	80.4	214	97.2	39 7/8 [1013]	33 [838]	21 1/4 [540]
50TC-A09	RTPF	845	383.6	206	93.5	167	76	212	96.2	261	118.5	39 1/2 [1003]	33 1/4 [845]	24 [610]
50TC-A12	RTPF	855	388	210	95.3	180	81.7	215	97.6	250	113.5	40 3/4 [1035]	32 3/8 [822]	25 1/4 [641]
50TC-D08	RTPF	760	345	158	71.7	155	70.4	222	100.8	225	102.2	43 3/4 [1111.3]	35 [889]	20 [508]
50TC-D09	RTPF	855	388.2	223	101.2	171	77.6	200	90.8	261	118.5	38 3/8 [975]	32 1/8 [816]	19 1/8 [486]
50TC-D12	RTPF	865	392.7	225	102.2	173	78.5	203	92.2	264	120	38 3/8 [975]	32 1/8 [816]	19 1/8 [486]
50TC-D08	MCHX	730	331.4	153	69.5	138	62.7	208	94.4	231	104.9	41 3/4 [1060.5]	35 3/4 [908]	21 1/8 [536.6]
50TC-D12	MCHX	820	372.3	179	81.3	161	73.1	228	103.5	253	114.9	41 3/4 [1060.5]	34 7/8 [885.8]	23 3/4 [603.3]

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)
MCHX - NOVATION (ALUM/ALUM)

*** STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.

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

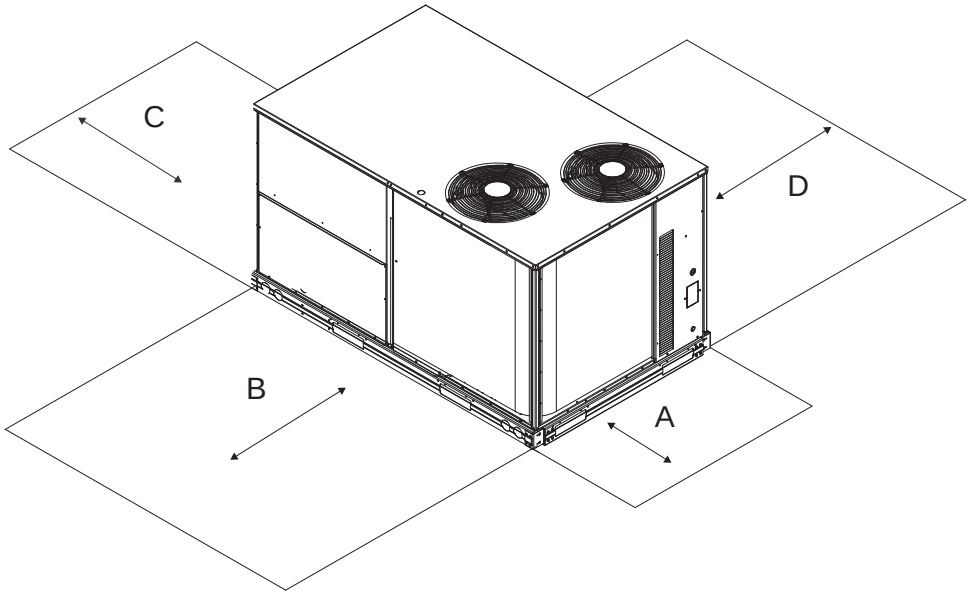
CLEARANCE			
	SERVICE WITH:	SERVICE WITH:	OPERATING
SURFACE	CONDUCTIVE BARRIER	NONCONDUCTIVE BARRIER	CLEARANCE
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]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

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ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM500986	REV
U.S. ECCN:NSR	2 OF 3	11/11/16	10/01/10			G

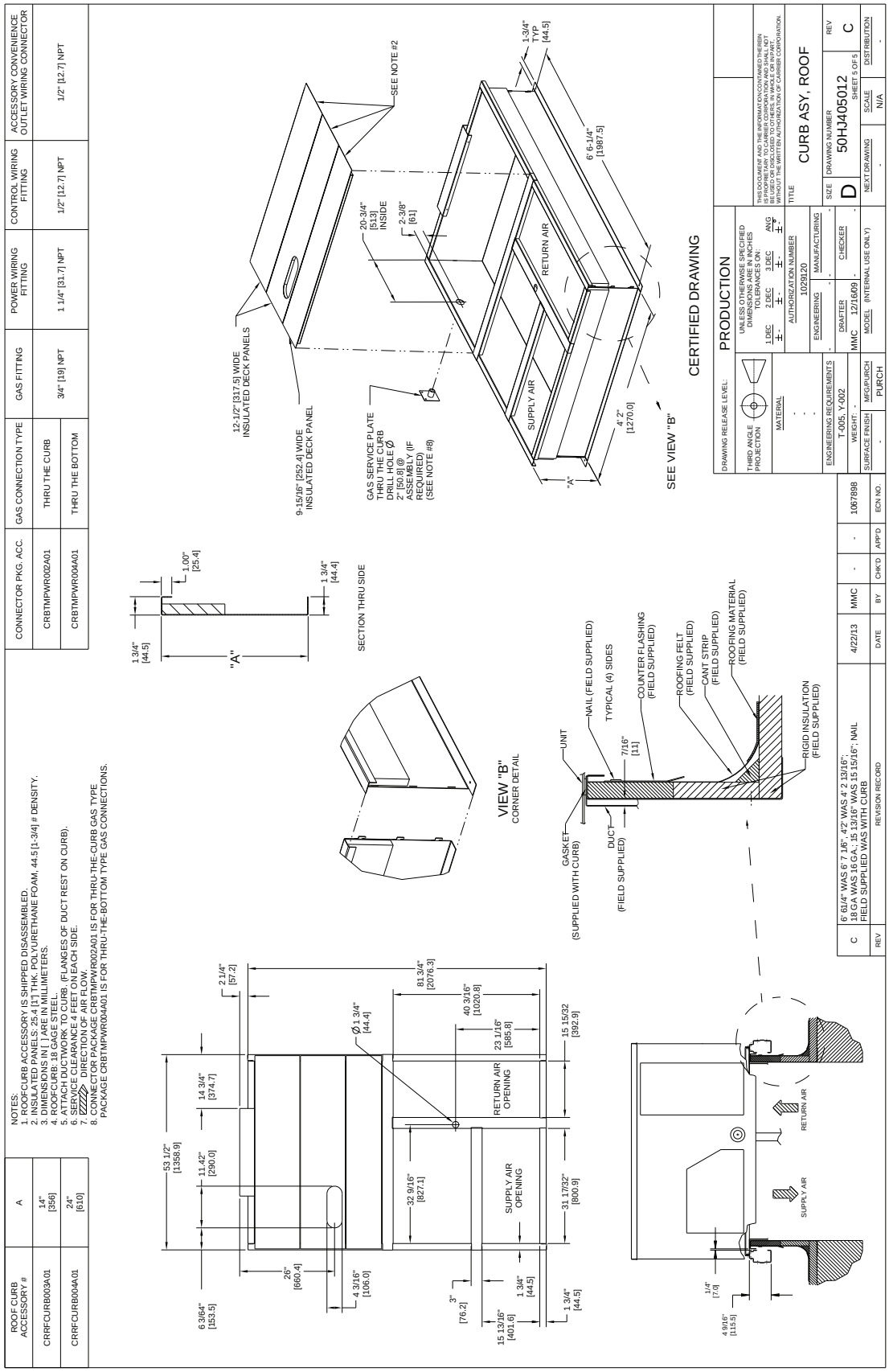
SERVICE CLEARANCE DIMENSIONAL DRAWING — 08-12 SIZE UNITS



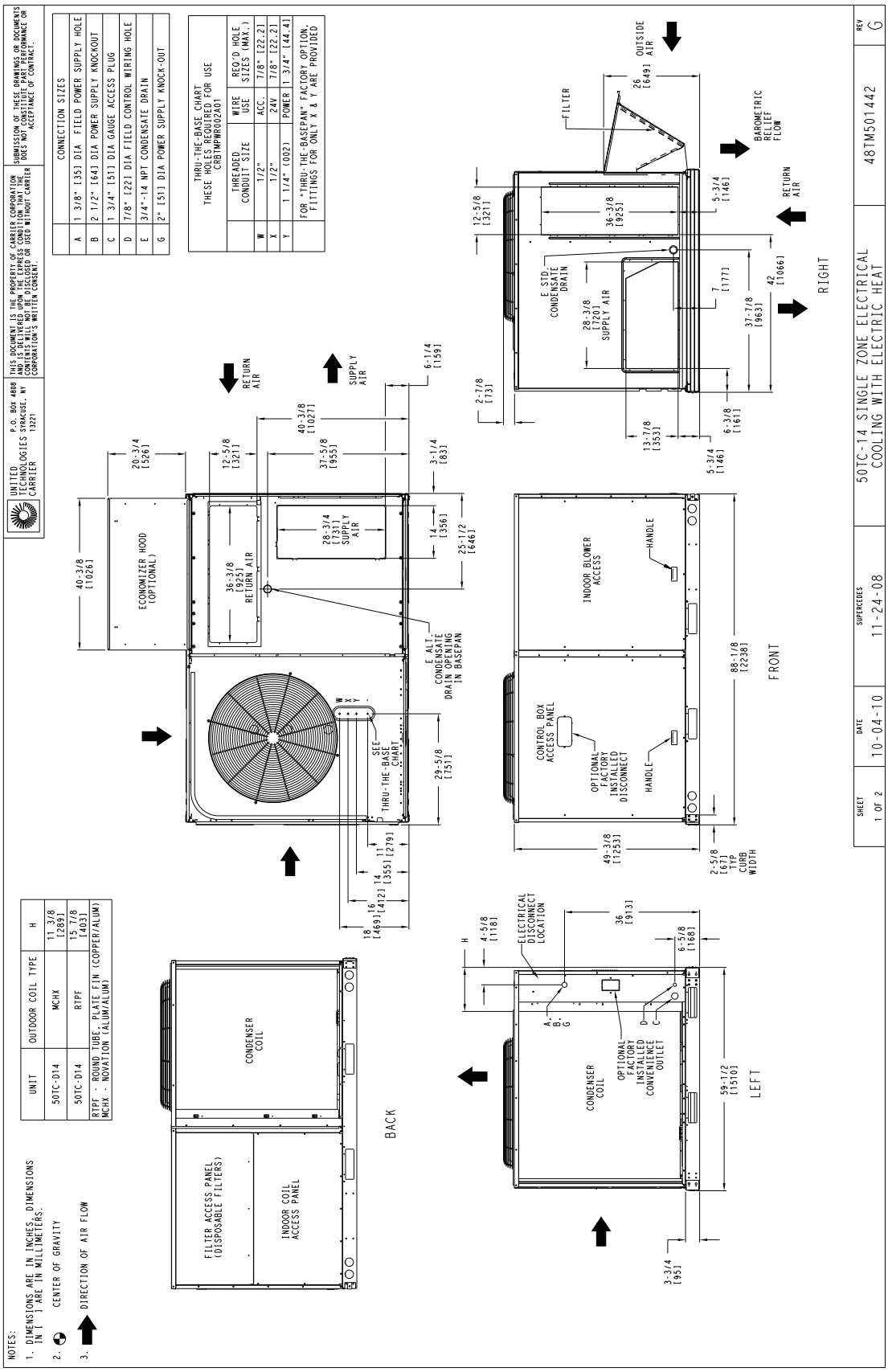
LOC	DIMENSION	CONDITION
A	48-in. (1219 mm) 36-in.(914 mm) 18-in. (457 mm) 18-in. (457 mm) 12-in. (305 mm)	• Unit disconnect is mounted on panel • If dimension B is 12-in. (305 mm) • No disconnect, convenience outlet option • Recommended service clearance (electric screwdriver) • Minimum clearance (use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

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

ROOF CURB DETAILS — 08-12 SIZE UNIT

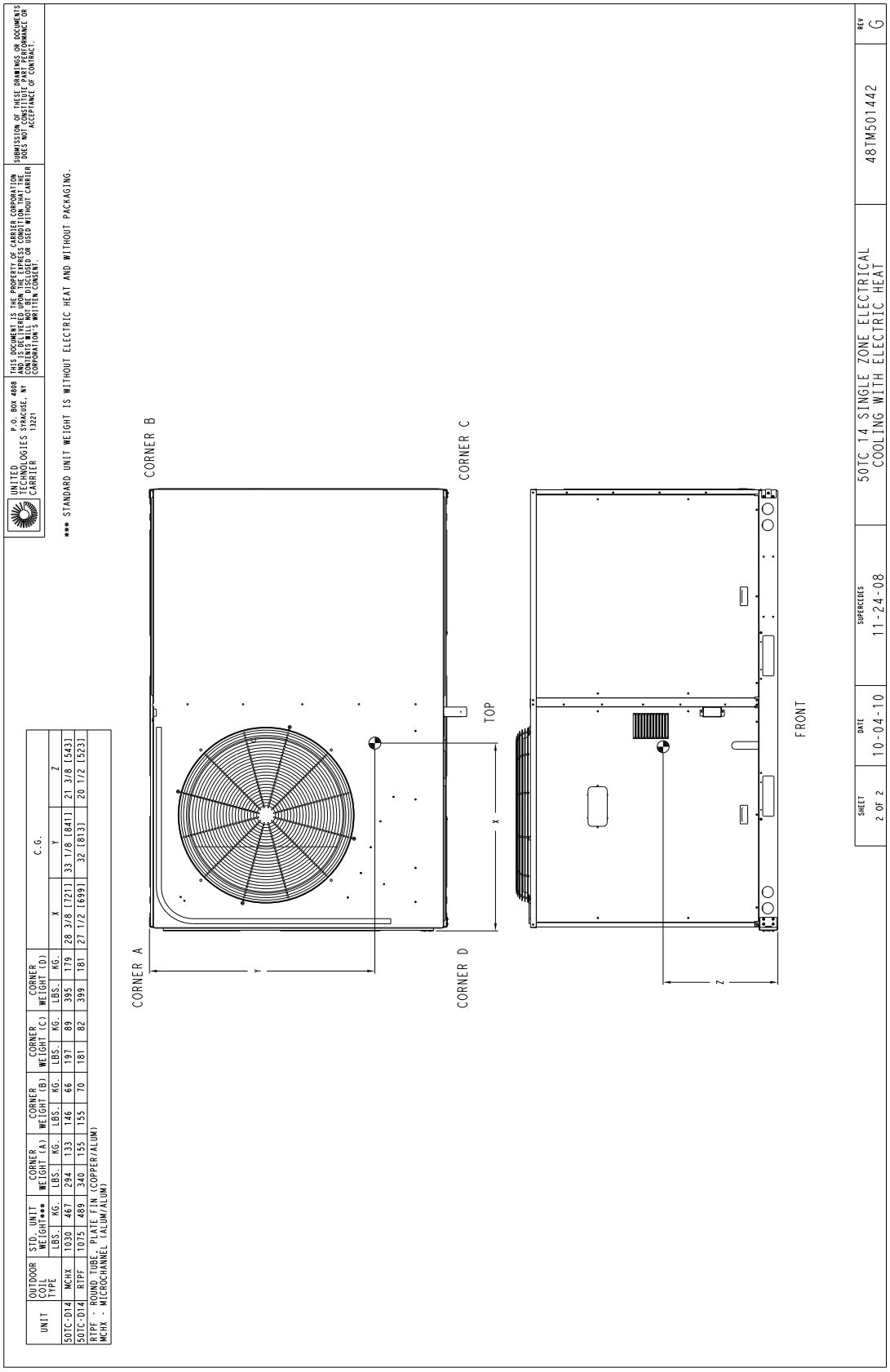


UNIT DIMENSIONAL DRAWING — 14 SIZE UNIT



Dimensions (cont)

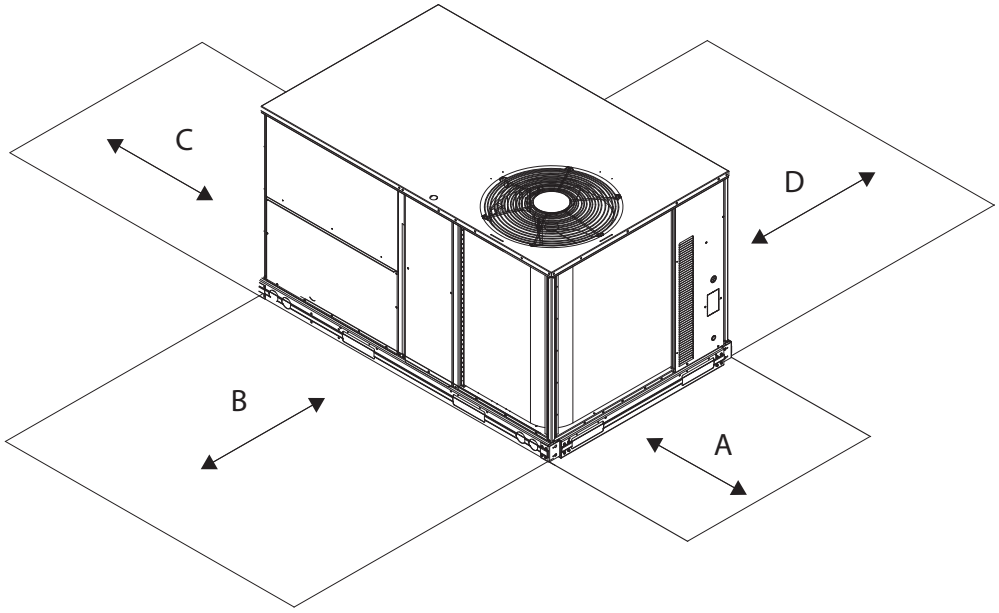
UNIT DIMENSIONAL DRAWING — 14 SIZE UNIT (cont)



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
50TC-D14	MCHX	1030	467	294	133	146	66	197	89	395	179	28 3/8 [721]	33 1/8 [841]	21 3/8 [543]
50TC-D14	RTPF	1075	489	340	155	155	70	181	82	399	181	27 1/2 [699]	32 [813]	20 1/2 [523]

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)
MCHX - MICROCHANNEL (ALUM/ALUM)

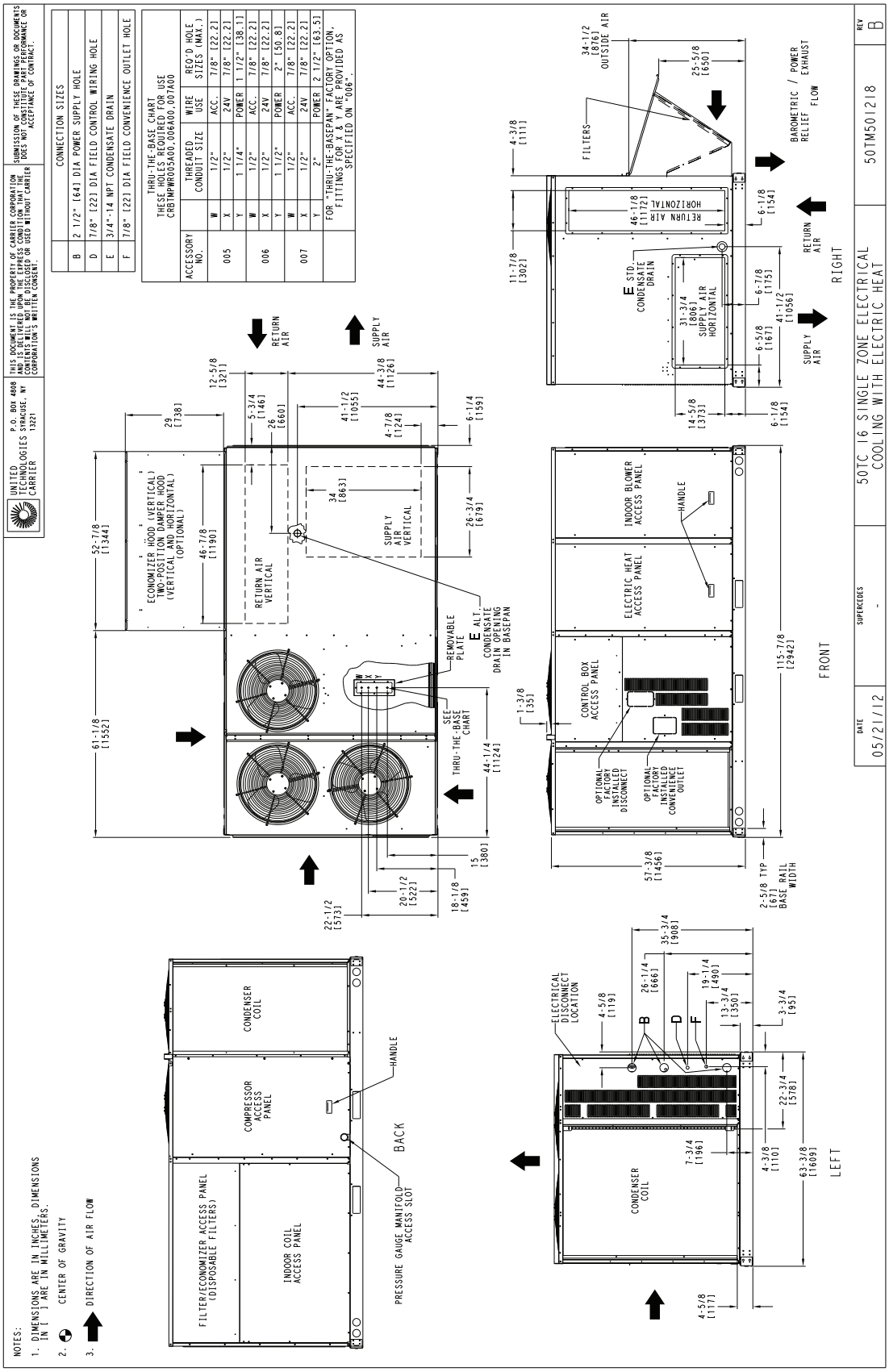
SERVICE CLEARANCE DIMENSIONAL DRAWING — 14 SIZE UNIT



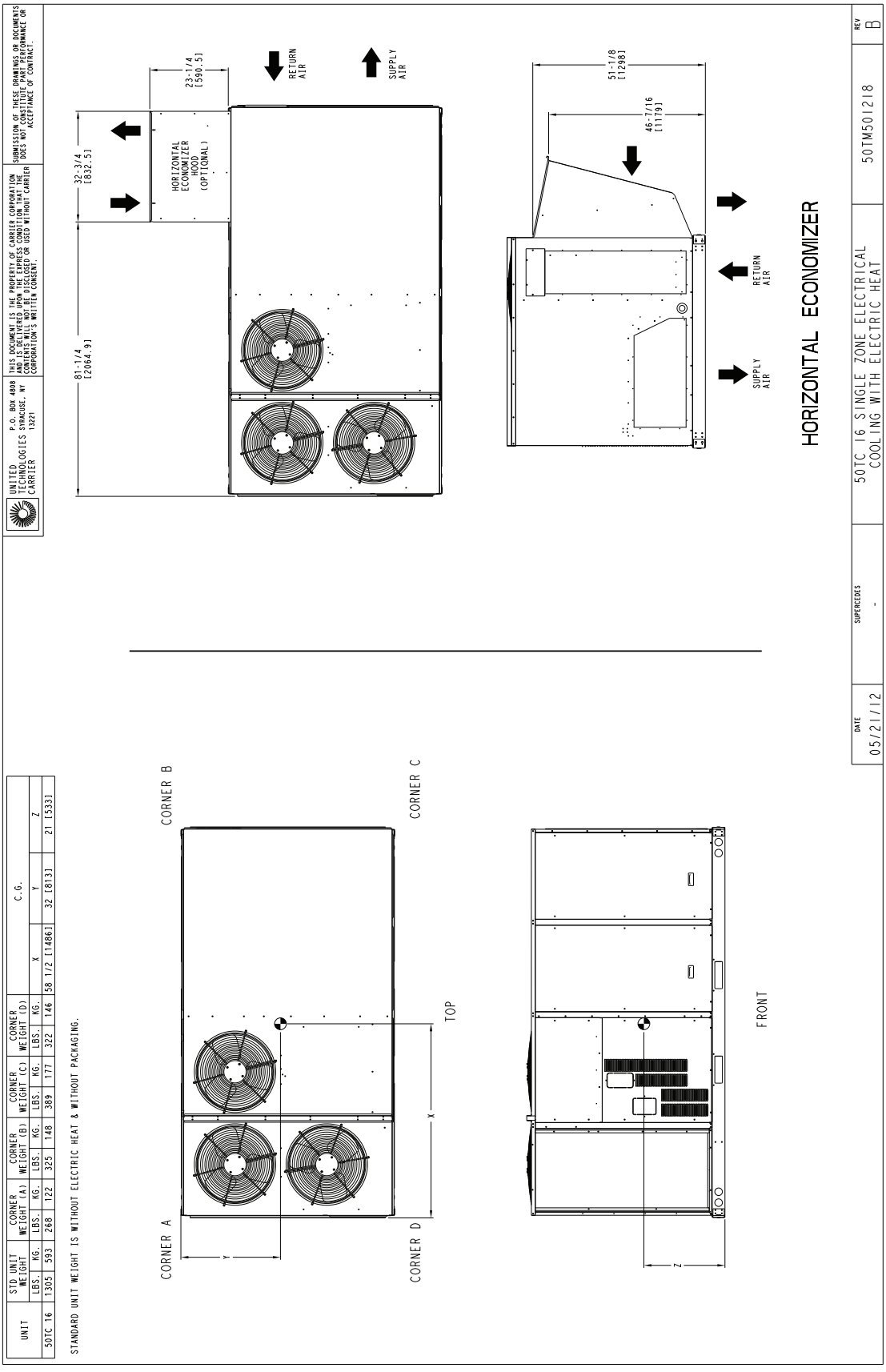
LOC	DIMENSION	CONDITION
A	48-in. (1219 mm) 18-in. (457 mm) 18-in. (457 mm) 12-in. (305 mm)	• Unit disconnect is mounted on panel • No disconnect, convenience outlet option • Recommended service clearance • Minimum clearance
B	42-in. (1067 mm) 36-in. (914 mm) Special	• Surface behind servicer is grounded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

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

UNIT DIMENSIONAL DRAWING — 16 SIZE UNIT



UNIT DIMENSIONAL DRAWING — 16 SIZE UNIT (cont)

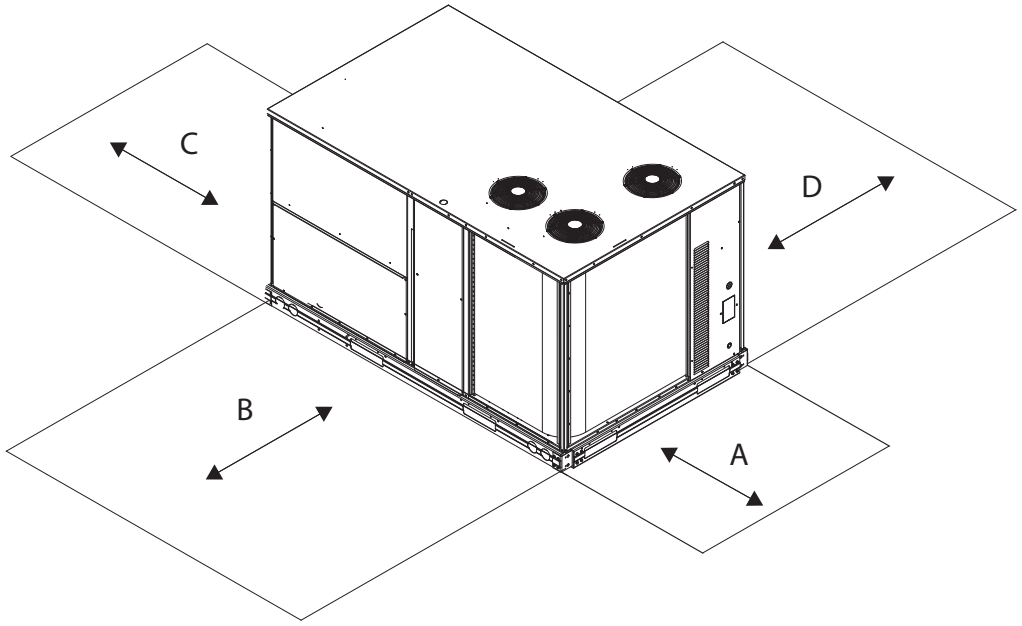


UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50TC 16	1305	593	268	122	325	148	389	177	322	146	58 1/2 [1486]	32 [813]	21 [533]

STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.

Dimensions (cont)

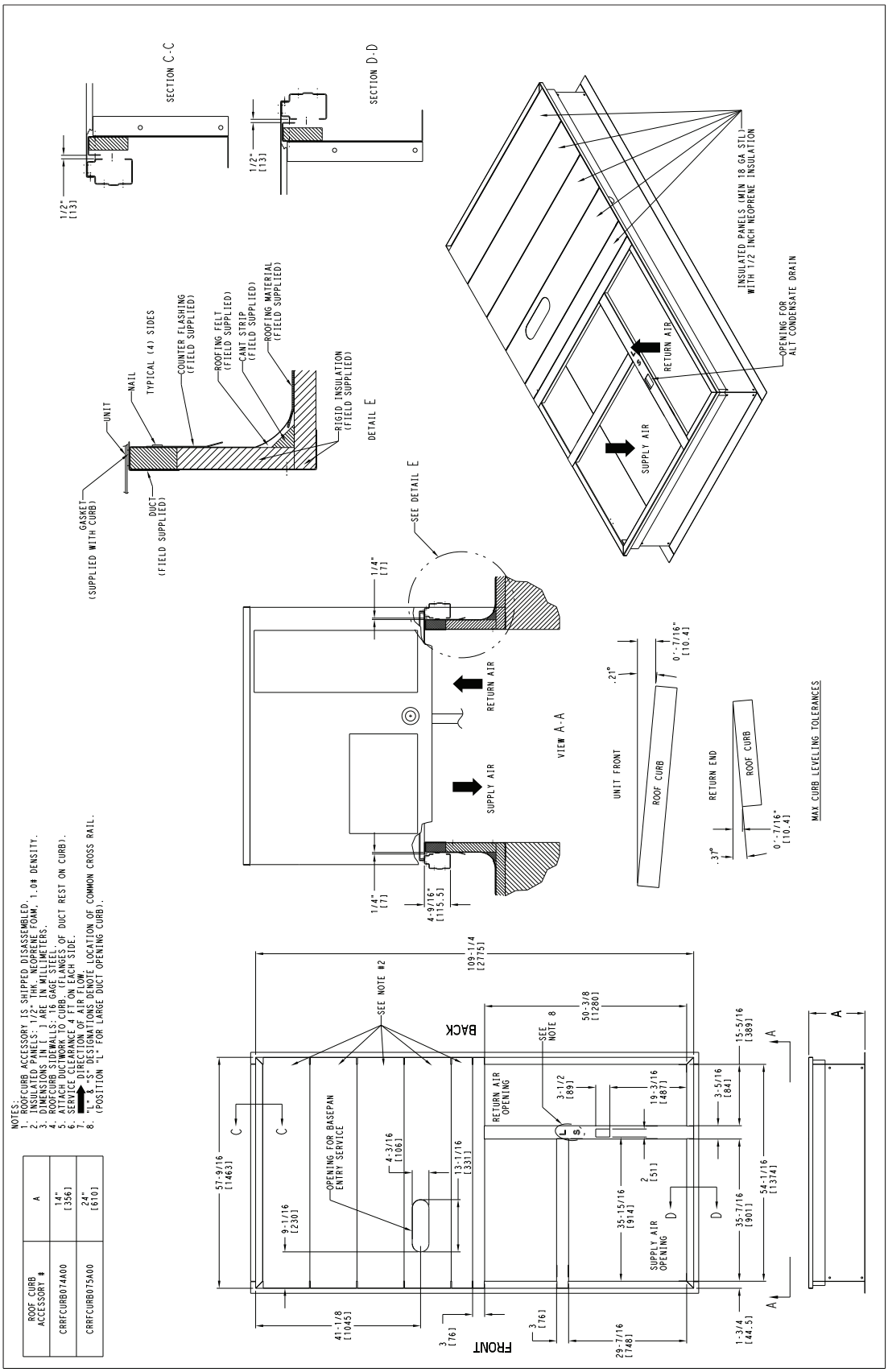
SERVICE CLEARANCE DIMENSIONAL DRAWING — 16 SIZE UNIT



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

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

ROOF CURB DETAILS — 16 SIZE UNIT



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).

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

Application data

Min operating ambient temp (cooling)

In mechanical cooling mode, your Carrier rooftop unit can safely operate down to an outdoor ambient temperature of 40°F (4°C) and 25°F (–4°C), with an accessory winter start kit. It is possible to provide cooling at lower outdoor ambient temperatures by using less outside air, economizers, and/or accessory low ambient kits.

Max operating ambient temp (cooling)

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

Min and max airflow (cooling mode)

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

Heating-to-cooling changeover

Your unit will automatically change from heating to cooling mode when using a thermostat with an auto-change-over feature.

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, brake 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 tables, 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, are all signs of oversizing air conditioners. Oversizing the air conditioner leads to poor humidity control, reduced efficiency, higher utility bills, larger indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, engineers should "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. Please contact your local Carrier representative for assistance.

Low ambient applications

The optional Carrier economizer can adequately cool your space by bringing in fresh, cool outside air. In fact, when so equipped, accessory low-ambient kit may not be necessary. In low ambient conditions, unless the outdoor air is excessively humid or contaminated, economizer-based "free cooling" is the preferred less costly and energy conscious method. In low ambient applications where outside air might not be desired (such as contaminated or excessively humid outdoor environments), your Carrier rooftop can operate to ambient temperatures down to –20°F (–29°C) using the recommended accessory Motormaster® low ambient controller or down to 25°F (–4°C) with the field-installed Winter Start Package.

Winter start

Carrier's winter start kit extends the low ambient limit of your rooftop to 25°F (–4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

Staged air volume (SAV™) with variable frequency drive (VFD)

Carrier's Staged Air Volume (SAV™) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1-2016 section 6.4.3.10.b standard (and IECC-2015 standard), during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode, the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 66% of total cfm.

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

This SAV system is available on models with 2-stage cooling operation with electro-mechanical or RTU Open (multi Protocol) controls, and the 6 ton unit is only 1-stage cooling with VFD. Both space sensor and conventional thermostats controls can be used to provide accurate control in any application.

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

Application/selection option

Selection software by Carrier saves time by performing many of the steps above. Contact your Carrier sales representative for assistance.

50TC STAGED AIR VOLUME (SAV™) - VARIABLE FREQUENCY DRIVE (VFD) HP RATING

SIZE	STATIC OPTION	VOLTAGE	VFD HP
07	STD	208/230	3.0
		460	3.0
		575	3.0
	MED	208/230	3.0
		460	3.0
		575	5.0
	HIGH	208/230	3.0
		460	5.0
		575	5.0
08	STD	208/230	3.0
		460	3.0
		575	3.0
	MED	208/230	3.0
		460	3.0
		575	5.0
	HIGH	208/230	7.5
		460	7.5
		575	7.5
09	STD	208/230	3.0
		460	3.0
		575	3.0
	MED	208/230	3.0
		460	3.0
		575	3.0
	HIGH	208/230	5.0
		460	5.0
		575	5.0
12	STD	208/230	3.0
		460	3.0
		575	3.0
	MED	208/230	5.0
		460	5.0
		575	5.0
	HIGH	208/230	7.5
		460	7.5
		575	7.5
14	STD	208/230	3.0
		460	3.0
		575	5.0
	MED	208/230	5.0
		460	5.0
		575	5.0
	HIGH	208/230	7.5
		460	7.5
		575	7.5
16	STD	208/230	3.0
		460	3.0
		575	5.0
	MED	208/230	5.0
		460	5.0
		575	5.0
	HIGH	208/230	7.5
		460	7.5
		575	7.5

STATIC PRESSURE ADDERS (in. wg) — FACTORY OPTIONS AND/OR ACCESSORIES VERTICAL DUCT CONFIGURATION

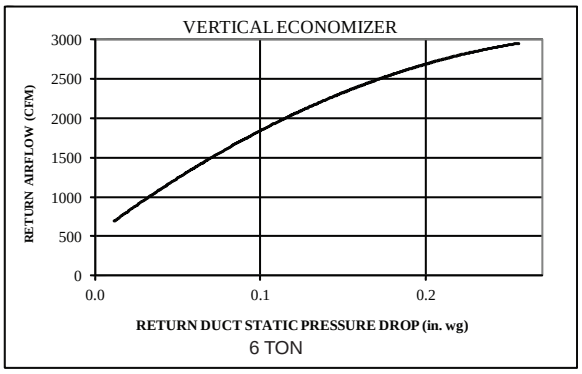
Humidi-MiZer® Coil

6 TONS									
CFM	1000	1250	1500	1750	2000	2250	2500	2750	3000
6 Tons	—	—	—	0.112	0.125	0.161	0.19	0.22	0.25

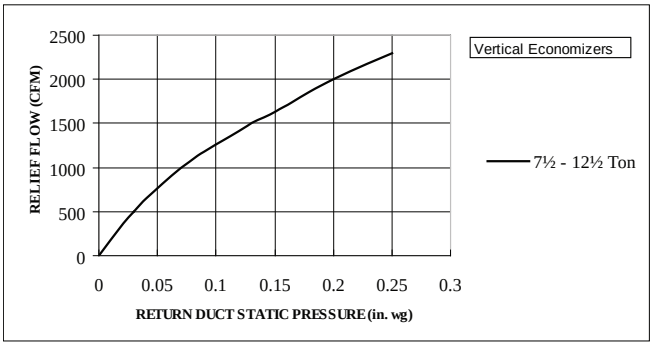
7.5 - 12.5 TONS																
CFM	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
7.5 Tons	0.12	0.14	0.16	0.19	0.21	0.23	0.26	—	—	—	—	—	—	—	—	—
8.5 Tons	—	0.11	0.12	0.13	0.15	0.17	0.18	0.20	0.22	—	—	—	—	—	—	—
10 Tons	—	—	—	0.13	0.15	0.17	0.18	0.20	0.22	0.24	0.26	0.28	—	—	—	—
12.5 Tons	—	—	—	—	—	0.17	0.18	0.20	0.22	0.24	0.26	0.28	0.31	0.33	0.36	0.39

15 TONS														
CFM	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000	7250
15 Tons	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.15

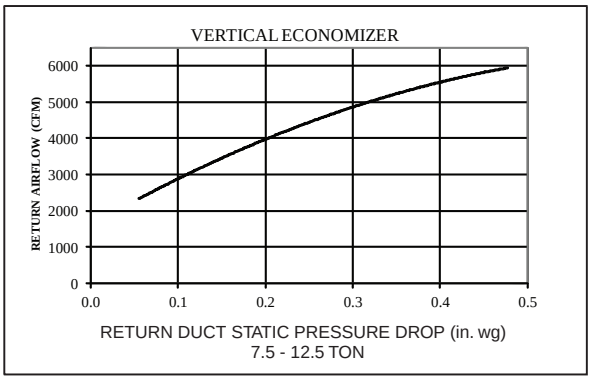
ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE — VERTICAL APPLICATION



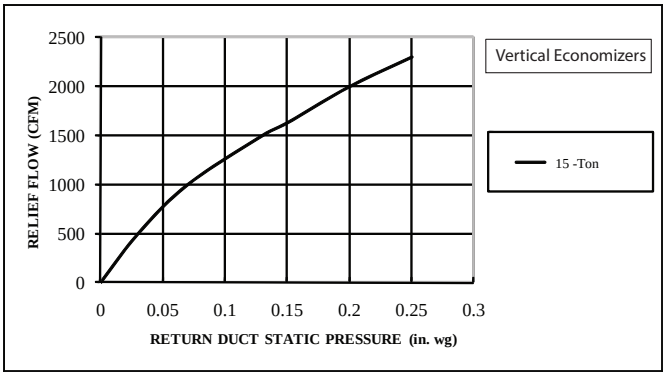
Return air pressure drop — vertical 6 tons



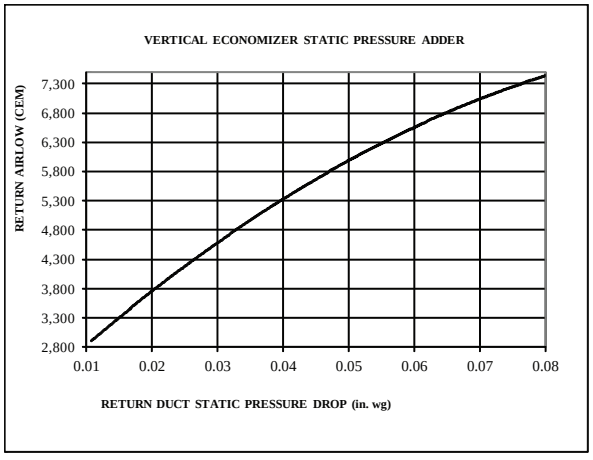
Barometric relief flow capacity — vertical $7^1/_2$ to $12^1/_2$ tons



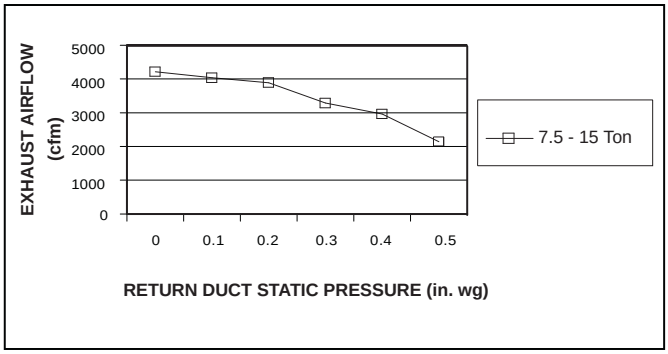
Return air pressure drop — vertical $7^1/_2$ to $12^1/_2$ tons



Barometric relief flow capacity - vertical 15 tons



Return air pressure drop - vertical 15 tons

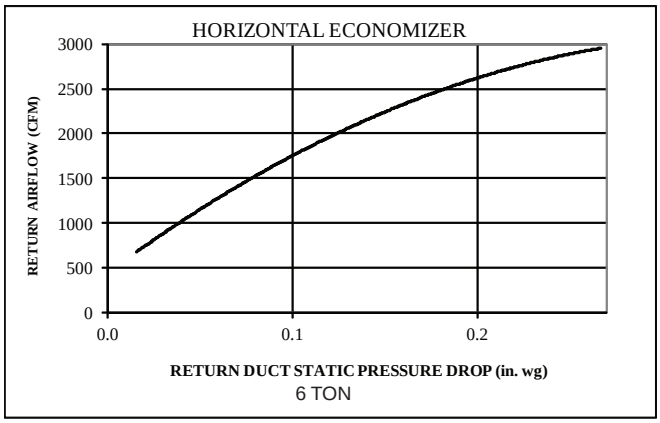


Vertical power exhaust performance

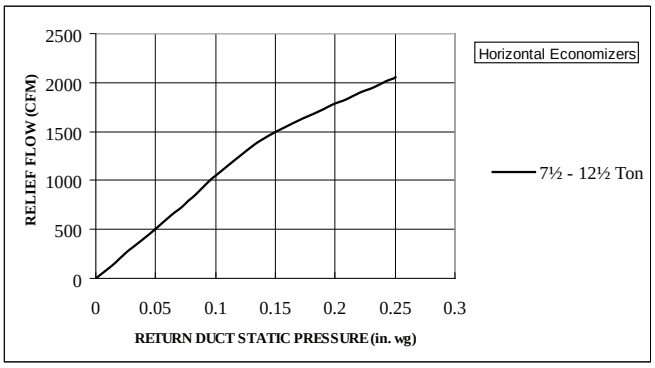
All data for both standard and ultra low leak models, where available.

Performance data (cont)

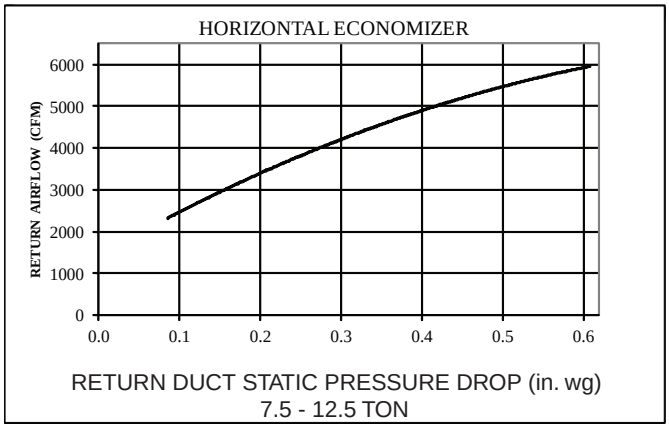
ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE — HORIZONTAL APPLICATION



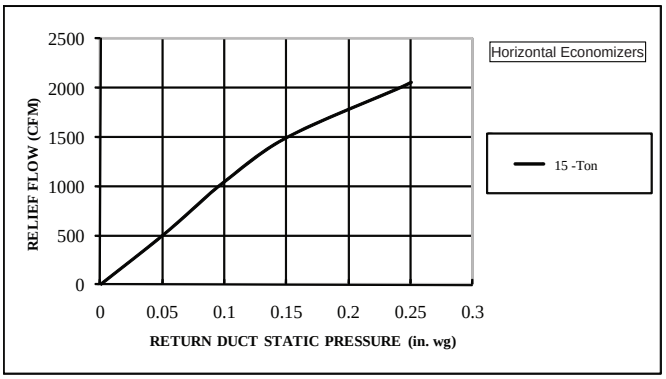
Return air pressure drop — horizontal 6 tons



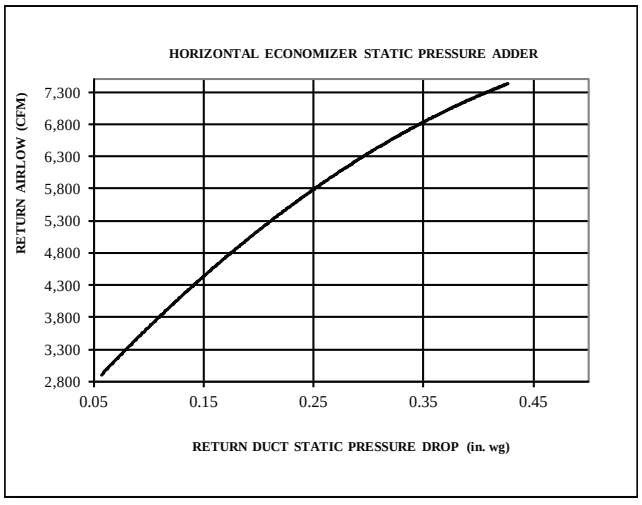
Barometric relief flow capacity — horizontal $7^1/_2$ to $12^1/_2$ tons



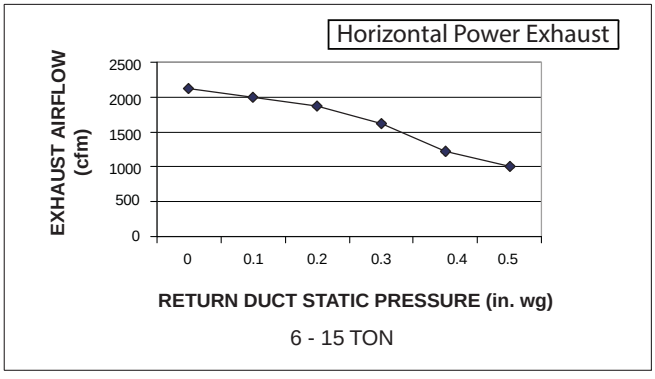
Return air pressure drop — horizontal $7^1/_2$ to $12^1/_2$ tons



Barometric relief flow capacity — horizontal 15 tons



Return air pressure drop - horizontal 15 ton



Horizontal 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 factory-installed options (FIOPs) or accessories.
3. Tabular data accounts for pressure loss due to clean filters, high gas heat, unit casing, and wet coils. Factory options and accessories may add static pressure losses. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, Carrier recommended the lower horsepower option.
5. For information on the electrical properties of Carrier motors, please see the Electrical information section of this book.
6. For more information on the performance limits of Carrier motors, see the application data section of this book.
7. The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT compliant energy efficient motor. Variable speed motors are exempt from EPACT compliance requirements. Therefore, the indoor fan motors for Carrier 50TC**07-16 units are exempt from these requirements.

PULLEY ADJUSTMENT

50TC UNIT	MOTOR/DRIVE COMBO	MOTOR PULLEY TURNS OPEN (RPM)										
		0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
07	Standard Static	1457	1419	1380	1342	1303	1265	1227	1188	1150	1111	1073
	Medium Static	1518	1484	1449	1415	1380	1346	1311	1277	1242	1208	1173
	High Static	1550	1542	1535	1527	1520	1512	1504	1497	1489	1482	1474
08	Standard Static	747	721	695	670	644	618	592	566	541	515	489
	Medium Static	949	927	906	884	863	841	819	798	776	755	733
	High Static	1102	1083	1063	1044	1025	1006	986	967	948	928	909
09	Standard Static	733	712	690	669	647	626	604	583	561	540	518
	Medium Static	936	911	887	862	838	813	788	764	739	715	690
	High Static	1084	1059	1035	1010	986	961	936	912	887	863	838
12	Standard Static	838	813	789	764	739	715	690	665	640	616	591
	Medium Static	1084	1059	1035	1010	986	961	936	912	887	863	838
	High Static	1240	1218	1196	1175	1153	1131	1109	1087	1066	1044	1022
14	Standard Static	843	824	805	786	767	748	728	709	690	671	652
	Medium Static	1084	1059	1035	1010	986	961	936	912	887	863	838
	High Static	1240	1218	1196	1175	1153	1131	1109	1087	1066	1044	1022
16	Standard Static	676	659	642	625	608	592	575	558	541	524	507
	Medium Static	851	829	806	784	761	739	717	694	672	649	627
	High Static	955	937	919	901	883	866	848	830	812	794	776

NOTE

Do not adjust pulley further than 5 turns open.

— Factory settings

Performance data (cont)

50TC**07 HORIZONTAL UNIT — 6 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	822	0.51	927	0.66	1018	0.82	1100	0.98	1174	1.15	1244	1.33	1308	1.51	1369	1.70	1427	1.90	1483	2.10
1950	872	0.62	973	0.79	1061	0.95	1140	1.13	1213	1.31	1281	1.49	1345	1.68	1405	1.88	1462	2.09	1517	2.30
2100	923	0.75	1019	0.92	1104	1.10	1182	1.29	1253	1.48	1320	1.67	1382	1.87	1441	2.08	1498	2.29	—	—
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66	1359	1.87	1420	2.08	1479	2.29	1534	2.51	—	—
2400	1026	1.06	1115	1.26	1195	1.46	1268	1.66	1336	1.87	1400	2.09	1460	2.31	1517	2.53	—	—	—	—
2550	1079	1.25	1164	1.46	1241	1.67	1312	1.88	1379	2.10	1441	2.33	1500	2.55	—	—	—	—	—	—
2700	1132	1.46	1214	1.67	1289	1.90	1358	2.12	1422	2.35	1483	2.59	1541	2.83	—	—	—	—	—	—
2850	1186	1.69	1264	1.92	1336	2.15	1404	2.39	1467	2.63	1527	2.87	—	—	—	—	—	—	—	—
3000	1240	1.94	1315	2.18	1385	2.43	1451	2.68	1512	2.93	—	—	—	—	—	—	—	—	—	—

— Standard static 1073-1457 RPM, 2.4 Max BHP
— Medium static 1173-1518 RPM, 2.9 Max BHP
— High static 1474-1550 RPM, 3.7 Max BHP

50TC**07 VERTICAL UNIT — 6 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	907	0.63	1006	0.80	1092	0.97	1169	1.14	1239	1.32	1304	1.51	1365	1.69	1422	1.88	1477	2.08	1528	2.28
1950	965	0.77	1060	0.95	1143	1.13	1218	1.32	1287	1.51	1350	1.71	1410	1.91	1467	2.11	1520	2.31	—	—
2100	1024	0.93	1115	1.12	1195	1.32	1268	1.52	1335	1.72	1398	1.93	1457	2.14	1512	2.35	—	—	—	—
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96	1446	2.18	1504	2.40	—	—	—	—	—	—
2400	1143	1.32	1227	1.54	1302	1.76	1371	1.99	1435	2.22	1496	2.45	—	—	—	—	—	—	—	—
2550	1203	1.55	1284	1.78	1357	2.02	1424	2.26	1487	2.50	1546	2.75	—	—	—	—	—	—	—	—
2700	1264	1.81	1342	2.06	1412	2.31	1478	2.56	1539	2.82	—	—	—	—	—	—	—	—	—	—
2850	1326	2.09	1400	2.36	1469	2.62	1532	2.89	—	—	—	—	—	—	—	—	—	—	—	—
3000	1387	2.41	1459	2.69	1525	2.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Standard static 1073-1457 RPM, 2.4 Max BHP
— Medium static 1173-1518 RPM, 2.9 Max BHP
— High static 1474-1550 RPM, 3.7 Max BHP

50TC**08 HORIZONTAL UNIT — 7.5 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	465	0.43	555	0.64	629	0.86	694	1.10	753	1.34	806	1.60	856	1.87	903	2.15	947	2.45	988	2.75
2438	488	0.51	575	0.73	648	0.97	712	1.21	769	1.47	822	1.74	872	2.03	918	2.32	961	2.62	1003	2.93
2625	510	0.60	595	0.84	666	1.09	729	1.34	786	1.62	839	1.90	887	2.19	933	2.49	977	2.81	1018	3.13
2813	533	0.70	616	0.95	686	1.22	748	1.49	804	1.77	856	2.06	904	2.37	949	2.68	992	3.01	1033	3.34
3000	557	0.82	637	1.08	705	1.36	766	1.64	822	1.94	873	2.24	921	2.56	966	2.89	1008	3.22	1049	3.56
3188	581	0.94	659	1.23	726	1.51	785	1.81	840	2.12	891	2.44	938	2.77	982	3.10	1025	3.45	1065	3.81
3375	606	1.08	681	1.38	746	1.68	805	2.00	859	2.32	909	2.65	955	2.99	1000	3.34	1041	3.70	1081	4.06
3563	630	1.24	703	1.55	767	1.87	825	2.20	878	2.53	927	2.88	973	3.23	1017	3.59	1059	3.96	1098	4.34
3750	655	1.41	726	1.74	789	2.07	845	2.41	897	2.76	946	3.12	992	3.48	1035	3.86	1076	4.24	**1115**	**4.63**

— Standard static 489-747 RPM, 1.7 Max BHP
— Medium static 733-949 RPM, 2.9 Max BHP
— High static 909-1102 RPM, 4.7 Max BHP
BOLD — Indicated field-supplied drive.

50TC**08 VERTICAL UNIT — 7.5 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	511	0.53	591	0.73	660	0.95	722	1.19	779	1.44	832	1.71	882	1.99	928	2.29	973	2.59	1015	2.92
2438	540	0.64	616	0.85	683	1.08	743	1.33	799	1.59	851	1.87	899	2.16	945	2.46	989	2.78	1031	3.11
2625	569	0.76	642	0.99	706	1.23	765	1.49	819	1.76	870	2.04	918	2.34	963	2.66	1006	2.98	1048	3.32
2813	599	0.90	669	1.14	731	1.39	788	1.66	841	1.94	890	2.24	937	2.55	982	2.87	1024	3.21	1065	3.55
3000	630	1.06	696	1.31	756	1.58	811	1.86	863	2.15	912	2.46	958	2.78	1001	3.11	1043	3.45	1083	3.80
3188	661	1.23	724	1.50	782	1.78	836	2.07	886	2.38	934	2.69	979	3.02	1022	3.36	1063	3.72	1102	4.08
3375	692	1.43	753	1.71	809	2.00	861	2.31	910	2.62	956	2.95	1000	3.29	1042	3.64	1083	4.00	**1122**	**4.38**
3563	723	1.65	782	1.94	836	2.25	887	2.56	934	2.89	980	3.23	1023	3.58	1064	3.94	**1104**	**4.32**	**1142**	**4.70**
3750	755	1.89	811	2.20	864	2.52	913	2.84	959	3.18	1004	3.54	1046	3.90	1086	4.27	**1125**	**4.65**	—	—

— Standard static 489-747 RPM, 1.7 Max BHP
— Medium static 733-949 RPM, 2.9 Max BHP
— High static 909-1102 RPM, 4.7 Max BHP
BOLD — Indicated field-supplied drive.

50TC**09 HORIZONTAL UNIT — 8.5 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	438	0.39	523	0.50	595	0.64	658	0.78	716	0.94	769	1.11	819	1.30	865	1.49	909	1.70	951	1.92
2763	459	0.47	541	0.60	611	0.73	673	0.88	730	1.05	782	1.22	831	1.41	877	1.60	921	1.81	963	2.04
2975	481	0.56	560	0.70	628	0.84	689	1.00	745	1.16	796	1.34	845	1.53	890	1.73	933	1.94	974	2.16
3188	504	0.67	580	0.82	646	0.97	705	1.13	760	1.30	811	1.48	858	1.67	903	1.88	946	2.09	987	2.31
3400	526	0.80	600	0.95	664	1.11	722	1.27	776	1.45	826	1.63	873	1.83	917	2.04	959	2.25	1000	2.48
3613	550	0.94	620	1.10	683	1.26	740	1.43	793	1.62	842	1.81	888	2.01	932	2.22	973	2.44	1013	2.67
3825	573	1.09	641	1.26	702	1.43	758	1.61	810	1.80	858	2.00	903	2.20	946	2.42	988	2.64	1027	2.87
4038	597	1.26	663	1.44	722	1.62	777	1.81	827	2.00	875	2.20	919	2.41	962	2.63	1002	2.86	1041	3.10
4250	621	1.45	685	1.64	743	1.83	796	2.02	845	2.22	892	2.43	936	2.65	978	2.87	1018	3.10	1056	3.34

— Standard static 518-733 RPM, 1.7 Max BHP
— Medium static 690-936 RPM, 2.4 Max BHP
— High static 838-1084 RPM, 3.7 Max BHP

50TC**09 VERTICAL UNIT — 8.5 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	477	0.43	556	0.57	624	0.71	685	0.85	742	0.99	794	1.14	842	1.29	888	1.44	932	1.59	973	1.75
2763	503	0.52	578	0.67	644	0.82	704	0.97	759	1.13	810	1.28	858	1.44	903	1.60	946	1.77	987	1.93
2975	529	0.62	601	0.79	665	0.95	724	1.11	777	1.28	827	1.44	874	1.61	919	1.78	961	1.95	1001	2.13
3188	556	0.74	625	0.92	687	1.09	744	1.26	796	1.44	845	1.62	891	1.79	935	1.98	977	2.16	1017	2.34
3400	583	0.88	650	1.06	710	1.24	765	1.43	816	1.62	864	1.80	909	1.99	952	2.18	993	2.38	1033	2.57
3613	611	1.03	675	1.22	733	1.42	787	1.61	836	1.81	883	2.01	928	2.21	970	2.41	1010	2.61	1049	2.82
3825	639	1.19	701	1.40	757	1.61	809	1.81	857	2.02	903	2.23	947	2.44	988	2.65	1028	2.87	1066	3.08
4038	668	1.38	727	1.60	781	1.81	832	2.03	879	2.25	924	2.47	967	2.70	1008	2.92	1047	3.14	1084	3.37
4250	696	1.58	753	1.81	806	2.04	855	2.27	901	2.50	945	2.73	987	2.97	1027	3.20	1066	3.43	1103	3.67

— Standard static 518-733 RPM, 1.7 Max BHP
— Medium static 690-936 RPM, 2.4 Max BHP
— High static 838-1084 RPM, 3.7 Max BHP

Performance data (cont)

50TC**12 HORIZONTAL UNIT — 10 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	523	0.58	592	0.73	657	0.88	718	1.05	775	1.22	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3250	555	0.71	620	0.87	681	1.04	739	1.21	794	1.39	847	1.57	897	1.76	946	1.96	993	2.16	1039	2.36
3500	588	0.86	649	1.03	707	1.21	762	1.39	815	1.58	865	1.77	914	1.97	961	2.18	1007	2.38	1051	2.60
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86
4000	655	1.23	709	1.42	761	1.61	812	1.82	860	2.03	907	2.24	952	2.46	996	2.68	1038	2.91	1080	3.14
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29	930	2.51	973	2.74	1015	2.97	1057	3.21	1097	3.45
4500	723	1.69	773	1.90	820	2.12	866	2.35	910	2.57	954	2.81	996	3.05	1037	3.29	1076	3.54	1115	3.79
4750	758	1.96	805	2.19	850	2.42	894	2.65	937	2.89	979	3.13	1019	3.38	1059	3.63	1097	3.89	1135	4.15
5000	793	2.26	838	2.50	881	2.74	923	2.98	965	3.23	1005	3.49	1044	3.74	1082	4.01	1119	4.27	1156	4.55

— Standard static 591-838 RPM, 2.4 Max BHP
— Medium static 838-1084 RPM, 3.7 Max BHP
— High static 1022-1240 RPM, 4.7 Max BHP

50TC**12 VERTICAL UNIT — 10 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	556	0.65	623	0.80	684	0.95	738	1.11	789	1.26	836	1.42	881	1.57	923	1.73	963	1.89	1001	2.05
3250	590	0.79	655	0.96	713	1.13	766	1.29	815	1.46	861	1.63	904	1.79	945	1.96	985	2.13	1023	2.30
3500	625	0.96	687	1.14	742	1.32	794	1.50	841	1.68	886	1.86	929	2.04	969	2.22	1008	2.40	1045	2.58
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89
4000	697	1.37	753	1.58	804	1.79	852	1.99	897	2.20	940	2.40	980	2.61	1019	2.81	1056	3.02	1092	3.22
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49	968	2.71	1007	2.93	1045	3.15	1081	3.36	1117	3.58
4500	770	1.89	821	2.13	869	2.36	914	2.59	956	2.82	996	3.05	1035	3.28	1072	3.51	1108	3.74	1142	3.97
4750	807	2.20	856	2.45	902	2.69	945	2.94	986	3.18	1026	3.42	1063	3.66	1100	3.91	1135	4.15	1168	4.39
5000	844	2.54	891	2.80	936	3.06	978	3.31	1018	3.57	1056	3.82	1093	4.08	1128	4.34	1162	4.59	—	—

— Standard static 591-838 RPM, 2.4 Max BHP
— Medium static 838-1084 RPM, 3.7 Max BHP
— High static 1022-1240 RPM, 4.7 Max BHP

50TC**14 HORIZONTAL UNIT — 12.5 TON

(For more information, see General Fan Performance Notes on page 49.)

50TC**14 HORIZONTAL UNIT — 12.5 TON																				
CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	580	0.82	642	0.99	700	1.16	756	1.34	809	1.53	860	1.72	910	1.92	957	2.12	1003	2.32	1048	2.54
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86
4063	663	1.28	717	1.47	769	1.67	818	1.88	866	2.09	912	2.31	957	2.53	1001	2.75	1043	2.98	1084	3.22
4375	706	1.56	757	1.77	805	1.98	852	2.20	897	2.43	941	2.66	984	2.89	1026	3.13	1066	3.37	1106	3.62
4688	749	1.89	797	2.11	843	2.34	887	2.57	930	2.81	972	3.05	1013	3.29	1053	3.54	1092	3.80	1130	4.06
5000	793	2.26	838	2.50	881	2.74	923	2.98	965	3.23	1005	3.49	1044	3.74	1082	4.01	1119	4.27	1156	4.55
5313	837	2.69	880	2.93	921	3.19	961	3.44	1000	3.71	1038	3.97	1076	4.24	1113	4.52	—	—	—	—
5625	882	3.16	922	3.42	961	3.68	**999**	**3.95**	1037	4.23	1073	4.51	—	—	—	—	—	—	—	—
5938	926	3.68	**964**	**3.96**	**1001**	**4.23**	1038	4.52	—	—	—	—	—	—	—	—	—	—	—	—
6250	**971**	**4.26**	**1007**	**4.55**	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Standard static 652-843 RPM, 2.9 Max BHP
— Medium static 838-1084 RPM, 3.7 Max BHP
— High static 1022-1240 RPM, 4.7 Max BHP
BOLD — Indicated field-supplied drive.

50TC**14 VERTICAL UNIT — 12.5 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	616	0.92	679	1.10	735	1.27	786	1.45	835	1.62	880	1.80	922	1.98	963	2.15	1002	2.33	1039	2.51
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89
4063	706	1.43	761	1.64	812	1.85	860	2.06	904	2.27	947	2.48	987	2.68	1025	2.89	1062	3.10	1098	3.31
4375	752	1.75	804	1.98	852	2.20	898	2.43	941	2.65	982	2.88	1021	3.10	1058	3.32	1094	3.55	1129	3.77
4688	798	2.12	847	2.36	894	2.60	937	2.85	979	3.09	1018	3.33	1056	3.57	1093	3.81	1128	4.04	1162	4.29
5000	844	2.54	891	2.80	936	3.06	978	3.31	1018	3.57	1056	3.82	1093	4.08	1128	4.34	1162	4.59	—	—
5313	891	3.01	936	3.28	978	3.56	**1019**	**3.83**	1057	4.11	1094	4.38	1130	4.65	—	—	—	—	—	—
5625	938	3.53	**981**	**3.83**	1022	4.12	1060	4.41	1097	4.70	—	—	—	—	—	—	—	—	—	—
5938	**986**	**4.12**	1026	4.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Standard static 652-843 RPM, 2.9 Max BHP
— Medium static 838-1084 RPM, 3.7 Max BHP
— High static 1022-1240 RPM, 4.7 Max BHP
BOLD — Indicated field-supplied drive.

50TC**16 HORIZONTAL UNIT — 15 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	423	0.77	487	0.99	545	1.22	601	1.47	655	1.73	707	2.02	758	2.33	806	2.66	**853**	**3.01**	**898**	**3.37**
4875	447	0.94	507	1.18	563	1.42	615	1.67	666	1.95	716	2.24	764	2.55	811	2.89	**856**	**3.24**	**900**	**3.61**
5250	471	1.13	528	1.38	581	1.64	631	1.91	679	2.19	726	2.49	772	2.81	817	3.14	**860**	**3.50**	903	3.87
5625	496	1.35	550	1.62	600	1.89	648	2.17	694	2.46	738	2.77	782	3.09	825	3.43	867	3.79	908	4.17
6000	520	1.59	572	1.88	620	2.17	666	2.46	710	2.76	752	3.08	794	3.41	835	3.76	875	4.12	914	4.50
6375	545	1.86	594	2.17	640	2.47	684	2.78	726	3.10	767	3.42	807	3.76	846	4.12	885	4.49	923	4.87
6750	571	2.17	617	2.48	661	2.81	704	3.13	744	3.46	784	3.80	822	4.15	859	4.51	896	4.89	933	5.28
7125	596	2.50	640	2.83	683	3.17	724	3.52	**763**	**3.86**	801	4.22	838	4.58	874	4.95	909	5.33	944	5.73
7500	622	2.87	663	3.22	705	3.58	744	3.93	782	4.30	818	4.66	854	5.04	889	5.42	923	5.81	—	—

— Standard static 507-676 RPM, 2.9 Max BHP
— Medium static 627-851 RPM, 3.7 Max BHP
— High static 776-955 RPM, 6.1 Max BHP
BOLD — Indicated field-supplied drive.

.50TC**16 VERTICAL UNIT — 15 TON

(For more information, see General Fan Performance Notes on page 49.)

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	425	0.76	490	1.02	550	1.30	607	1.61	664	1.96	719	2.34	772	2.76	823	3.20	**872**	**3.67**	918	4.16
4875	448	0.92	510	1.20	566	1.49	621	1.81	674	2.15	725	2.54	776	2.95	825	3.40	873	3.87	919	4.37
5250	472	1.10	531	1.40	584	1.70	636	2.03	686	2.38	734	2.76	783	3.18	830	3.63	876	4.10	920	4.60
5625	496	1.30	552	1.62	603	1.94	652	2.28	699	2.64	746	3.03	791	3.44	836	3.89	880	4.36	923	4.86
6000	520	1.52	574	1.86	623	2.20	670	2.55	715	2.92	759	3.32	802	3.74	845	4.18	887	4.66	928	5.16
6375	544	1.77	596	2.13	644	2.49	688	2.86	731	3.24	773	3.64	814	4.07	855	4.52	895	4.99	935	5.49
6750	568	2.05	618	2.43	664	2.81	707	3.19	749	3.59	789	4.00	828	4.43	867	4.89	905	5.36	943	5.87
7125	593	2.35	641	2.75	685	3.16	727	3.56	**767**	**3.97**	806	4.39	844	4.84	881	5.29	917	5.78	—	—
7500	617	2.69	664	3.11	707	3.53	**747**	**3.95**	786	4.38	823	4.82	860	5.27	895	5.74	—	—	—	—

— Standard static 507-676 RPM, 2.9 Max BHP
— Medium static 627-851 RPM, 3.7 Max BHP
— High static 776-955 RPM, 6.1 Max BHP
BOLD — Indicated field-supplied drive.

Electrical data

LEGEND AND NOTES

Applicable for Electrical Data Tables on pages 55-84

LEGEND

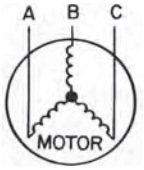
BRKR	— Circuit breaker
C.O.	— Convenience outlet
DISC	— Disconnect
EFF	— Efficiency
FLA	— Full load amps
LRA	— Locked rotor amps
MCA	— Minimum circuit amps
MOCP	— MAX FUSE or HACR Breaker
P.E.	— Power exhaust
Pwrd fr/unit	— Powered from unit
PWRD C.O.	— Powered convenience outlet
RLA	— Rated load amps
UNPWR C.O.	— Unpowered convenience outlet

NOTES

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

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

Example: Supply voltage is 230-3-60



AB = 224 v

BC = 231 v

AC = 226 v

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

$$= 227$$

Determine maximum deviation from average voltage.
(AB) 227 – 224 = 3 v
(BC) 231 – 227 = 4 v
(AC) 227 – 226 = 1 v
Maximum deviation is 4 v.
Determine percent of voltage imbalance.

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

= 1.76%

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

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

SINGLE SPEED INDOOR FAN MOTOR, 6-15 TONS

UNIT SIZE	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
		Min	Max	RLA	LRA	RLA	LRA	Watts	FLA	TYPE	EFF At Full Load	FLA
50TC**07 (1-Stage Cooling)	208-3-60	187	253	19.6	136	—	—	325	1.5	STD	69%	5.2
								325	1.5	MED	89%	8.4
								325	1.5	HIGH	87%	10.6
	230-3-60	187	253	19.6	136	—	—	325	1.5	STD	69%	5.2
								325	1.5	MED	89%	8.3
								325	1.5	HIGH	87%	10.6
	460-3-60	414	506	8.2	66	—	—	325	0.8	STD	69%	2.6
								325	0.8	MED	89%	4.2
								325	0.8	HIGH	87%	5.3
	575-3-60	518	633	6.6	55	—	—	325	0.6	STD	78%	2.0
								325	0.6	MED	77%	2.8
								325	0.6	HIGH	77%	2.8
50TC**08 (1-Stage Cooling)	208-3-60	187	253	25.0	164	—	—	325	1.5	STD	75%	5.2
								325	1.5	MED	89%	8.4
								325	1.5	HIGH	83%	13.6
	230-3-60	187	253	25.0	164	—	—	325	1.5	STD	75%	5.2
								325	1.5	MED	89%	8.3
								325	1.5	HIGH	83%	12.7
	460-3-60	414	506	12.2	100	—	—	325	0.8	STD	75%	2.6
								325	0.8	MED	89%	4.2
								325	0.8	HIGH	83%	6.4
	575-3-60	518	633	9.0	78	—	—	325	0.6	STD	72%	1.6
								325	0.6	MED	77%	2.8
								325	0.6	HIGH	81%	5.6
50TC**08 (2-Stage Cooling)	208-3-60	187	253	13.6	83	13.6	83	325	1.5	STD	75%	5.2
								325	1.5	MED	89%	8.4
								325	1.5	HIGH	83%	13.6
	230-3-60	187	253	13.6	83	13.6	83	325	1.5	STD	75%	5.2
								325	1.5	MED	89%	8.3
								325	1.5	HIGH	83%	12.7
	460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD	75%	2.6
								325	0.8	MED	89%	4.2
								325	0.8	HIGH	83%	6.4
	575-3-60	518	633	4.2	33	4.2	33	325	0.6	STD	72%	1.6
								325	0.6	MED	77%	2.8
								325	0.6	HIGH	81%	5.6
50TC**09 (1-Stage Cooling)	208-3-60	187	253	29.5	195	—	—	325	1.5	STD	75%	5.2
								325	1.5	MED	87%	6.9
								325	1.5	HIGH	87%	10.6
	230-3-60	187	253	29.5	195	—	—	325	1.5	STD	75%	5.2
								325	1.5	MED	87%	6.7
								325	1.5	HIGH	87%	10.6
	460-3-60	414	506	14.7	95	—	—	325	0.8	STD	75%	2.6
								325	0.8	MED	87%	3.4
								325	0.8	HIGH	87%	5.3
	575-3-60	518	633	12.2	80	—	—	325	0.6	STD	72%	1.6
								325	0.6	MED	78%	2.0
								325	0.6	HIGH	77%	2.8
50TC**09 (2-Stage Cooling)	208-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	75%	5.2
								325	1.5	MED	87%	6.9
								325	1.5	HIGH	87%	10.6
	230-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	75%	5.2
								325	1.5	MED	87%	6.7
								325	1.5	HIGH	87%	10.6
	460-3-60	414	506	6.3	55	6.2	41	325	0.8	STD	75%	2.6
								325	0.8	MED	87%	3.4
								325	0.8	HIGH	87%	5.3
	575-3-60	518	633	6.0	41	4.8	33	325	0.6	STD	72%	1.6
								325	0.6	MED	78%	2.0
								325	0.6	HIGH	77%	2.8

See: Legend and Notes on page 54.

Electrical data (cont)

SINGLE SPEED INDOOR FAN MOTOR, 6-15 TONS (cont)

UNIT SIZE	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
		Min	Max	RLA	LRA	RLA	LRA	Watts	FLA	TYPE	EFF At Full Load	FLA
50TC**12 (1-Stage Cooling)	**208-3-60**	187	253	28.2	239	—	—	325	1.5	STD	69%	5.2
								325	1.5	MED	87%	10.6
								325	1.5	HIGH	83%	13.6
	230-3-60	187	253	28.2	239	—	—	325	1.5	STD	69%	5.2
								325	1.5	MED	87%	10.6
								325	1.5	HIGH	83%	12.7
	460-3-60	414	506	14.7	130	—	—	325	0.8	STD	69%	2.6
								325	0.8	MED	87%	5.3
								325	0.8	HIGH	83%	6.4
	575-3-60	518	633	11.3	94	—	—	325	0.6	STD	78%	2.0
								325	0.6	MED	77%	2.8
								325	0.6	HIGH	81%	5.6
50TC**12 (2-Stage Cooling)	**208-3-60**	187	253	15.6	110	15.9	110	325	1.5	STD	69%	5.2
								325	1.5	MED	87%	10.6
								325	1.5	HIGH	83%	13.6
	230-3-60	187	253	15.6	110	15.9	110	325	1.5	STD	69%	5.2
								325	1.5	MED	87%	10.6
								325	1.5	HIGH	83%	12.7
	460-3-60	414	506	7.7	52	7.7	52	325	0.8	STD	69%	2.6
								325	0.8	MED	87%	5.3
								325	0.8	HIGH	83%	6.4
	575-3-60	518	633	5.8	39	5.7	39	325	0.6	STD	78%	2.0
								325	0.6	MED	77%	2.8
								325	0.6	HIGH	81%	5.6
50TC**14 (1-Stage Cooling)	**208-3-60**	187	253	19.6	136	22.4	149	1070	6.2	STD	89%	8.4
								1070	6.2	MED	87%	10.6
								1070	6.2	HIGH	83%	13.6
	230-3-60	187	253	19.6	136	22.4	149	1070	6.2	STD	89%	8.3
								1070	6.2	MED	87%	10.6
								1070	6.2	HIGH	83%	12.7
	460-3-60	414	506	8.2	66	10.6	75	1070	3.1	STD	89%	4.2
								1070	3.1	MED	87%	5.3
								1070	3.1	HIGH	83%	6.4
	575-3-60	518	633	6.6	55	7.7	54	1070	2.5	STD	77%	2.8
								1070	2.5	MED	77%	2.8
								1070	2.5	HIGH	81%	5.6
50TC**16 (1-Stage Cooling)	**208-3-60**	187	253	25.0	164	25.0	164	280	1.5	STD	89%	8.4
								280	1.5	MED	87%	10.6
								280	1.5	HIGH	87%	17.0
								280	1.5	HIGH EFF	90%	20.4
	230-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	89%	8.3
								280	1.5	MED	87%	10.6
								280	1.5	HIGH	87%	15.0
								280	1.5	HIGH EFF	90%	20.4
	460-3-60	414	506	12.2	100	12.8	100	280	0.8	STD	89%	4.2
								280	0.8	MED	87%	5.3
								280	0.8	HIGH	87%	7.6
								280	0.8	HIGH EFF	90%	10.2
	575-3-60	518	633	9.8	78	9.6	78	280	0.6	STD	77%	2.8
								280	0.6	MED	77%	2.8
								280	0.6	HIGH	90%	6.1
								280	0.6	HIGH EFF	94%	9.0

See Legend and Notes on page 54.

2-STAGE COOLING WITH TWO-SPEED INDOOR FAN MOTOR, 6-15 TONS

UNIT SIZE	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
		Min	Max	RLA	LRA	RLA	LRA	Watts	FLA	TYPE	EFF at Full Load	FLA
50TC**07	208-3-60	187	253	19.6	136	—	—	325	1.5	STD	0.77	7.1
								325	1.5	MED	0.85	8.6
								325	1.5	HIGH	0.82	10.8
	230-3-60	187	253	19.6	136	—	—	325	1.5	STD	0.77	6.8
								325	1.5	MED	0.85	7.8
								325	1.5	HIGH	0.82	9.8
	460-3-60	414	506	8.2	66	—	—	325	0.8	STD	0.77	3.4
								325	0.8	MED	0.85	3.8
								325	0.8	HIGH	0.82	4.9
	575-3-60	518	633	6.6	55	—	—	325	0.6	STD	0.80	3.5
								325	0.6	MED	0.84	4.5
								325	0.6	HIGH	0.84	4.5
50TC**08	208-3-60	187	253	13.6	83	13.6	83	325	1.5	STD	0.84	5.8
								325	1.5	MED	0.85	8.6
								325	1.5	HIGH	0.84	13.6
	230-3-60	187	253	13.6	83	13.6	83	325	1.5	STD	0.84	5.6
								325	1.5	MED	0.85	7.8
								325	1.5	HIGH	0.84	12.7
	460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD	0.79	2.9
								325	0.8	MED	0.85	3.8
								325	0.8	HIGH	0.84	6.4
	575-3-60	518	633	4.2	33	4.2	33	325	0.6	STD	0.81	2.8
								325	0.6	MED	0.84	4.5
								325	0.6	HIGH	0.83	6.2
50TC**09	208-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	0.84	5.8
								325	1.5	MED	0.77	7.1
								325	1.5	HIGH	0.82	10.8
	230-3-60	187	253	14.5	98	13.7	83	325	1.5	STD	0.84	5.6
								325	1.5	MED	0.77	6.8
								325	1.5	HIGH	0.82	9.8
	460-3-60	414	506	6.3	55	6.2	41	325	0.8	STD	0.79	2.9
								325	0.8	MED	0.77	3.4
								325	0.8	HIGH	0.82	4.9
	575-3-60	518	633	6.0	41	4.8	33	325	0.6	STD	0.81	2.8
								325	0.6	MED	0.80	3.5
								325	0.6	HIGH	0.84	4.5
50TC**12	208-3-60	187	253	15.6	110	15.9	110	325	1.5	STD	0.77	7.1
								325	1.5	MED	0.82	10.8
								325	1.5	HIGH	0.84	13.6
	230-3-60	187	253	15.6	110	15.9	110	325	1.5	STD	0.77	6.8
								325	1.5	MED	0.82	9.8
								325	1.5	HIGH	0.84	12.7
	460-3-60	414	506	7.7	52	7.7	52	325	0.8	STD	0.77	3.4
								325	0.8	MED	0.82	4.9
								325	0.8	HIGH	0.84	6.4
	575-3-60	518	633	5.8	39	5.7	39	325	0.6	STD	0.80	3.5
								325	0.6	MED	0.84	4.5
								325	0.6	HIGH	0.83	6.2

See Legend and Notes on page 54.

Electrical data (cont)

2-STAGE COOLING WITH TWO-SPEED INDOOR FAN MOTOR, 6-15 TONS (cont)

UNIT SIZE	V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
		Min	Max	RLA	LRA	RLA	LRA	Watts	FLA	TYPE	EFF at Full Load	FLA
50TC**14	208-3-60	187	253	19.6	136	22.4	149	1070	6.2	STD	0.85	8.6
								1070	6.2	MED	0.82	10.8
								1070	6.2	HIGH	0.84	13.6
	230-3-60	187	253	19.6	136	22.4	149	1070	6.2	STD	0.85	7.8
								1070	6.2	MED	0.82	9.8
								1070	6.2	HIGH	0.84	12.7
	460-3-60	414	506	8.2	66	10.6	75	1070	3.1	STD	0.85	3.8
								1070	3.1	MED	0.82	4.9
								1070	3.1	HIGH	0.84	6.4
	575-3-60	518	633	6.6	55	7.7	54	1070	2.5	STD	0.84	4.5
								1070	2.5	MED	0.84	4.5
								1070	2.5	HIGH	0.83	6.2
50TC**16	208-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	0.85	8.6
								280	1.5	MED	0.82	10.8
								280	1.5	HIGH	0.90	20.4
	230-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	0.85	7.8
								280	1.5	MED	0.82	9.8
								280	1.5	HIGH	0.90	20.4
	460-3-60	414	506	12.2	100	12.8	100	280	0.8	STD	0.85	3.8
								280	0.8	MED	0.82	4.9
								280	0.8	HIGH	0.90	10.2
	575-3-60	518	633	9.8	78	9.6	78	280	0.6	STD	0.84	4.5
								280	0.6	MED	0.84	4.5
								280	0.6	HIGH	0.94	9

See Legend and Notes on page 54.

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*07	208/230-3-60	STD	102A00	6.5	4.9/6.0	—	—	—	—
			104B00	10.5	7.9/9.6	—	—	—	—
			105A00	16.0	12.0/14.7	037	037	038	038
			104B00,104B00	21.0	15.8/19.3	038	038	038	038
			104B00,105A00	26.5	19.9/24.3	038	038	038	038
		MED	102A00	6.5	4.9/6.0	—	—	—	—
			104B00	10.5	7.9/9.6	—	—	—	—
			105A00	16.0	12.0/14.7	037	038	038	038
			104B00,104B00	21.0	15.8/19.3	038	038	038	038
			104B00,105A00	26.5	19.9/24.3	038	038	038	038
		HIGH	102A00	6.5	4.9/6.0	—	—	—	—
			104B00	10.5	7.9/9.6	—	—	—	037
			105A00	16.0	12.0/14.7	038	038	038	038
			104B00,104B00	21.0	15.8/19.3	038	038	038	038
			104B00,105A00	26.5	19.9/24.3	038	038	038	038
	460-3-60	STD	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037	037	037	037
			108A00,109A00	25.5	23.4	037	037	037	037
		MED	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037	037	037	037
			108A00,109A00	25.5	23.4	037	037	037	037
		HIGH	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037	037	037	037
			108A00,109A00	25.5	23.4	037	037	037	037

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-A07	208/230-3-60	STD	102A00	6.5	4.9/6.0	037	037	037	037
			104B00	10.5	7.9/9.6	037	037	037	037
			105A00	16.0	12.0/14.7	037	037	038	038
			104B00,104B00	21.0	15.8/19.3	038	038	038	038
			104B00,105A00	26.5	19.9/24.3	038	038	038	038
		MED	102A00	6.5	4.9/6.0	037	037	037	037
			104B00	10.5	7.9/9.6	037	037	037	037
			105A00	16.0	12.0/14.7	037	038	038	038
			104B00,104B00	21.0	15.8/19.3	038	038	038	038
			104B00,105A00	26.5	19.9/24.3	038	038	038	038
		HIGH	102A00	6.5	4.9/6.0	037	037	037	037
			104B00	10.5	7.9/9.6	037	037	037	037
			105A00	16.0	12.0/14.7	038	038	038	038
			104B00,104B00	21.0	15.8/19.3	038	038	038	038
			104B00,105A00	26.5	19.9/24.3	038	038	038	038
	460-3-60	STD	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037	037	037	037
			108A00,109A00	25.5	23.4	037	037	037	037
		MED	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037	037	037	037
			108A00,109A00	25.5	23.4	037	037	037	037
		HIGH	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037	037	037	037
			108A00,109A00	25.5	23.4	037	037	037	037

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*08	208/230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	042	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		MED	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		HIGH	117A00	10.4	7.8/9.6	042	042	042	043
			110A00	16.0	12.0/14.7	043	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
	460-3-60	STD	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		MED	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		HIGH	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	044	044
			128B00	41.7	38.3	044	044	044	044
	575-3-60	STD	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		MED	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		HIGH	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*08	208/230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	042	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		MED	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		HIGH	117A00	10.4	7.8/9.6	042	042	042	043
			110A00	16.0	12.0/14.7	043	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
	460-3-60	STD	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		MED	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		HIGH	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	044	044
			128B00	41.7	38.3	044	044	044	044
	575-3-60	STD	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		MED	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		HIGH	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*08	208/230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	042	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		MED	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		HIGH	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	043	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
	460-3-60	STD	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		MED	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		HIGH	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	044	044
			128B00	41.7	38.3	044	044	044	044
	575-3-60	STD	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		MED	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		HIGH	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*08	208/230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	042	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		MED	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		HIGH	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	043	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
	460-3-60	STD	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		MED	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		HIGH	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	044	044
			128B00	41.7	38.3	044	044	044	044
	575-3-60	STD	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		MED	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		HIGH	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR— 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*08	208/230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	042	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		MED	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	042	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
		HIGH	117A00	10.4	7.8/9.6	042	042	042	042
			110A00	16.0	12.0/14.7	043	043	043	043
			111A00	24.8	18.6/22.8	043	043	043	043
			112A00	32.0	24.0/29.4	043	043	043	043
			112A00,117A00	42.4	31.8/38.9	045	045	045	045
	460-3-60	STD	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		MED	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	042	042
			128B00	41.7	38.3	044	044	044	044
		HIGH	116B00	13.9	12.8	042	042	042	042
			113B00	16.5	15.2	042	042	042	042
			114B00	27.8	25.5	042	042	042	042
			115B00	33.0	30.3	042	042	044	044
			128B00	41.7	38.3	044	044	044	044
	575-3-60	STD	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		MED	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042
		HIGH	118A00	18.0	16.5	042	042	042	042
			119A00	36.0	33.1	042	042	042	042

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*09	208/203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	047	047	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	047	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*09	208/203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	047	047	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	047	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*09	208/203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	049	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*09	208/203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	049	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*09	208/203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	049	049	049	049
			111A00	24.8	18.6/22.8	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			114B00	27.8	25.5	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*12	208/230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	047	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

1-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*12	208/230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	047	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*12	208/230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	047	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	047	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*12	208/230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	047	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	047	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	047	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*12	208/230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
			110A00	16.0	12.0/14.7	047	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	047	047	047	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	047	047	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	050	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*14	208/230-3-60	STD	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*14	208/230-3-60	STD	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	047	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*14	208/230-3-60	STD	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		MED	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
		HIGH	117A00	10.4	7.8/9.6	049	049	049	049
			110A00	16.0	12.0/14.7	049	049	049	049
			112A00	32.0	24.0/29.4	049	049	049	049
			112A00,117A00	42.4	31.8/38.9	051	051	051	051
			112A00,110A00	50.0	37.6/45.9	051	051	051	051
	460-3-60	STD	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	047
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		MED	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	047	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
		HIGH	116B00	13.9	12.8	047	047	047	047
			113B00	16.5	15.2	047	047	047	047
			115B00	33.0	30.3	047	047	050	050
			128B00	41.7	38.3	050	050	050	050
			129B00	50.0	45.9	050	050	050	050
	575-3-60	STD	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	050	050
		MED	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	047	050	050	050
		HIGH	118A00	18.0	16.5	047	047	047	047
			119A00	36.0	33.1	047	047	047	047
			118A00,119A00	54.0	49.6	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*16	208/230-3-60	STD	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
		MED	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
		HIGH	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
	460-3-60	STD	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	047	047	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
		MED	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	047	047	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
		HIGH	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	050	050	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
	575-3-60	STD	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	047	050
			293A00,296A00	50.0	45.9	047	047	047	047
			296A00,296A00	67.0	61.5	050	050	050	050
		MED	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	047	050
			293A00,296A00	50.0	45.9	047	047	047	047
			296A00,296A00	67.0	61.5	050	050	050	050
		HIGH	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	050	050
			293A00,296A00	50.0	45.9	047	050	047	050
			296A00,296A00	67.0	61.5	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*16	208/230-3-60	STD	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
		MED	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
		HIGH	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
	460-3-60	STD	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	047	047	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
		MED	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	047	047	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
		HIGH	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	050	050	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
	575-3-60	STD	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	047	050
			293A00,296A00	50.0	45.9	047	047	047	047
			296A00,296A00	67.0	61.5	050	050	050	050
		MED	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	047	050
			293A00,296A00	50.0	45.9	047	047	047	047
			296A00,296A00	67.0	61.5	050	050	050	050
		HIGH	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	050	050
			293A00,296A00	50.0	45.9	047	050	047	050
			296A00,296A00	67.0	61.5	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

UNIT SIZE	NOM. V-PH-HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX			
						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)
50TC-*16	208/230-3-60	STD	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
		MED	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
		HIGH	291A00	16.5	12.4/15.2	049	049	049	049
			294A00	33.5	25.2/30.8	049	049	049	049
			288A00,294A00	43.5	32.7/40.0	051	051	051	051
			291A00,294A00	50.0	37.6/45.9	051	051	051	051
			294A00,294A00	67.0	50.3/61.5	053	053	053	053
	460-3-60	STD	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	047	047	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
		MED	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	047	047	047	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
		HIGH	292A00	16.5	15.2	-	-	-	-
			295A00	33.5	30.8	050	050	050	050
			289A00,295A00	43.5	40.0	050	050	050	050
			292A00,295A00	50.0	45.9	050	050	050	050
			295A00,295A00	67.0	61.5	050	050	050	050
	575-3-60	STD	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	050	050
			293A00,296A00	50.0	45.9	047	047	047	050
			296A00,296A00	67.0	61.5	050	050	050	050
		MED	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	047	050	050	050
			293A00,296A00	50.0	45.9	047	047	047	050
			296A00,296A00	67.0	61.5	050	050	050	050
		HIGH	293A00	16.5	15.2	-	-	-	-
			296A00	33.5	30.8	047	047	047	047
			290A00,296A00	43.5	40.0	050	050	050	050
			293A00,296A00	50.0	45.9	050	050	050	050
			296A00,296A00	67.0	61.5	050	050	050	050

LEGEND

APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience outlet
FLA — Full load amps
IFM — Indoor fan motor
NOM PWR — 240V / 480V / 600V
P.E. — Power exhaust
PWRD — Powered convenience outlet
UNPWRD — Unpowered convenience outlet

Electrical data (cont)

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA - 1-SPEED INDOOR FAN MOTOR 6-15 TONS

SIZE / STAGE	NOM. V-Ph-Hz	IFM TYPE	NO CONVENIENCE OUTLET (C.O). or UNPWR C.O.								w/ PWRD C.O.							
			NO Power Exhaust (P.E.)				w/ P.E. (pwrd fr/ unit)				NO P.E.				w/ P.E. (pwrd fr/ unit)			
			MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA
50TC*A07 (1-stage cool)	208/230-3-60	STD	32	50	30	170	34	50	32	172	36	50	36	175	38	50	38	177
		MED	35/35	50/50	34/34	212	37/37	50/50	36/36	214	40/40	50/50	39/39	217	42/41	60/60	42/42	219
		HIGH	37	50	36	226	39	50	39	228	42	60	42	231	44	60	44	233
	460-3-60	STD	14	20	13	83	15	20	14	84	16	20	16	85	17	25	17	86
		MED	16	20	15	104	17	20	16	105	18	25	18	106	19	25	19	107
		HIGH	17	20	16	111	18	25	18	112	19	25	19	113	20	25	20	114
	575-3-60	STD	11	15	11	68	13	15	13	70	13	15	13	70	15	20	15	72
		MED	12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	83
		HIGH	12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	83
50TC*A08 (1-stage cool)	208/230-3-60	STD	40	60	38	191	44	60	43	195	45	60	44	196	49	60	48	200
		MED	43/43	60/60	42/42	244	47/47	60/60	46/46	248	48/48	60/60	47/47	249	52/52	60/60	52/52	253
		HIGH	48/47	60/60	48/47	260	52/51	60/60	52/51	264	53/52	60/60	53/52	265	57/56	80/80	58/57	269
	460-3-60	STD	20	30	19	113	22	30	21	115	22	30	21	115	24	30	23	117
		MED	22	30	21	140	23	30	23	142	24	30	23	142	26	30	25	144
		HIGH	24	30	23	148	26	30	25	150	26	30	26	150	28	35	28	152
	575-3-60	STD	15	20	14	89	18	25	18	93	16	20	16	91	20	25	20	95
		MED	16	20	15	104	20	25	19	108	17	25	17	106	21	25	21	110
		HIGH	19	25	18	118	22	30	23	122	20	25	20	120	24	30	24	124
50TC*D08 (2-stage cool)	208/230-3-60	STD	39	50	41	193	43	50	45	197	44	50	46	198	48	60	51	202
		MED	42/42	50/50	44/44	246	46/46	50/50	49/49	250	47/47	60/60	50/50	251	51/51	60/60	54/54	255
		HIGH	48/47	60/50	50/49	262	51/51	60/60	55/54	266	52/52	60/60	56/55	267	56/55	60/60	60/59	271
	460-3-60	STD	18	20	19	95	20	25	21	97	21	25	21	97	22	25	23	99
		MED	20	25	21	122	22	25	23	124	22	25	23	124	24	30	25	126
		HIGH	22	25	23	130	24	30	25	132	24	30	26	132	26	30	28	134
	575-3-60	STD	13	15	13	77	17	20	17	81	14	15	15	79	18	20	19	83
		MED	14	15	14	92	18	20	19	96	16	20	16	94	19	25	21	98
		HIGH	17	20	17	106	21	25	22	110	19	20	19	108	23	25	24	112
50TC*A09 (1-stage cool)	208/230-3-60	STD	46	60	43	222	49	60	48	226	50	60	49	227	54	80	53	231
		MED	47/47	60/60	45/45	260	51/51	60/60	50/49	264	52/52	60/60	51/51	265	56/56	80/80	55/55	269
		HIGH	51	60	50	289	55	80	54	293	56	80	55	294	60	80	59	298
	460-3-60	STD	23	30	22	108	25	30	24	110	25	30	24	110	27	40	26	112
		MED	24	30	23	127	26	30	25	129	26	30	25	129	28	40	27	131
		HIGH	26	30	25	142	28	40	27	144	28	40	27	144	30	40	29	146
	575-3-60	STD	19	30	17	91	22	30	22	95	20	30	19	93	24	30	24	97
		MED	19	30	18	95	23	30	22	99	21	30	20	97	24	30	24	101
		HIGH	20	30	19	106	24	30	23	110	21	30	21	108	25	30	25	112
50TC*D09 (2-stage cool)	208/230-3-60	STD	40	50	42	208	44	50	46	212	45	50	47	213	49	60	52	217
		MED	42/42	50/50	44/44	246	46/46	60/50	48/48	250	47/47	60/60	49/49	251	51/51	60/60	54/53	255
		HIGH	46	50	48	275	50	60	52	279	51	60	54	280	54	60	58	284
	460-3-60	STD	19	20	19	109	21	25	21	111	21	25	22	111	23	25	24	113
		MED	20	25	20	128	21	25	22	130	22	25	23	130	24	25	25	132
		HIGH	21	25	22	143	23	25	24	145	24	25	25	145	25	30	27	147
	575-3-60	STD	16	20	16	85	19	25	20	89	17	20	18	87	21	25	22	91
		MED	16	20	16	89	20	25	20	93	18	20	18	91	21	25	22	95
		HIGH	17	20	17	100	21	25	21	104	18	20	19	102	22	25	23	106
50TC*A12 (1-stage cool)	208/230-3-60	STD	44	60	42	277	48	60	46	281	49	60	47	282	53	60	52	286
		MED	49	60	48	333	53	60	52	337	54	80	54	338	58	80	58	342
		HIGH	52/51	60/60	52/50	335	56/55	80/80	56/55	339	57/56	80/80	57/56	340	61/60	80/80	61/60	344
	460-3-60	STD	23	30	22	149	25	30	24	151	25	30	24	151	27	40	26	153
		MED	26	30	25	177	28	40	27	179	28	40	27	179	30	40	29	181
		HIGH	27	40	26	178	29	40	28	180	29	40	29	180	31	45	31	182
	575-3-60	STD	18	25	17	109	22	30	21	113	19	30	19	111	23	30	23	115
		MED	19	25	18	120	22	30	22	124	20	30	20	122	24	30	24	126
		HIGH	21	30	21	134	25	30	25	138	23	30	23	136	27	30	27	140

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA - 1-SPEED INDOOR FAN MOTOR, 6-15 TONS (cont)

SIZE / STAGE	NOM. V-Ph-Hz	IFM TYPE	NO CONVENIENCE OUTLET (C.O). or UNPWR C.O.								w/ PWRD C.O.							
			NO Power Exhaust (P.E.)				w/ P.E. (pwrd fr/ unit)				NO P.E.				w/ P.E. (pwrd fr/ unit)			
			MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA
50TC*D12 (2-stage cool)	208/230-3-60	STD	44	50	46	258	48	60	50	262	49	60	51	263	53	60	56	267
		MED	50	60	52	314	53	60	56	318	54	60	57	319	58	70	62	323
		HIGH	53/52	60/60	55/54	316	56/55	60/60	60/59	320	57/56	70/60	61/60	321	61/60	70/70	65/64	325
	460-3-60	STD	22	25	23	123	24	30	25	125	24	30	25	125	26	30	27	127
		MED	25	30	26	151	26	30	28	153	27	30	28	153	29	35	30	155
		HIGH	26	30	27	152	28	30	29	154	28	30	29	154	30	35	32	156
	575-3-60	STD	17	20	17	93	20	25	21	97	18	20	19	95	22	25	23	99
		MED	17	20	18	104	21	25	22	108	19	25	20	106	23	25	24	110
		HIGH	20	25	21	118	24	30	25	122	22	25	23	120	26	30	27	124
50TC*D14 (2-stage cool)	208/230-3-60	STD	63/63	80/80	65/65	389	66/66	80/80	69/69	393	67/67	80/80	71/70	394	71/71	80/80	75/75	398
		MED	65	80	68	403	69	80	72	407	70	80	73	408	73	80	78	412
		HIGH	68/67	80/80	71/70	405	72/71	80/80	75/74	409	73/72	80/80	77/76	410	76/76	90/90	81/80	414
	460-3-60	STD	29	35	30	193	31	40	32	195	31	40	33	195	33	40	35	197
		MED	30	40	31	200	32	40	33	202	33	40	34	202	34	40	36	204
		HIGH	31	40	33	201	33	40	35	203	34	40	35	203	35	45	37	205
	575-3-60	STD	22	25	23	147	26	30	27	151	24	30	24	149	27	30	29	153
		MED	22	25	23	147	26	30	27	151	24	30	24	149	27	30	29	153
		HIGH	25	30	26	161	29	35	30	165	26	30	28	163	30	35	32	167
50TC*D16 (2-stage cool)	208/230-3-60	STD	70/70	80/80	72/72	412	73/73	80/80	77/77	416	74/74	90/90	78/78	417	78/78	100/100	82/82	421
		MED	72	80	75	426	76	100	79	430	77	100	80	431	80	100	85	435
		HIGH	78/76	100/100	82/80	424	82/80	100/100	87/84	428	83/81	100/100	88/85	429	87/85	100/100	92/90	433
		HIGH-High Effi-ciency	82	100	86	432	85	100	91	436	86	100	92	437	90	100	96	441
	460-3-60	STD	35	45	36	242	37	45	38	244	37	45	39	244	39	50	41	246
		MED	36	45	38	249	38	50	40	251	39	50	40	251	40	50	42	253
		HIGH	39	50	40	248	40	50	42	250	41	50	43	250	43	50	45	252
		HIGH-High Effi-ciency	41	50	43	252	43	50	45	254	43	50	46	254	45	50	48	256
	575-3-60	STD	27	30	28	184	31	40	32	188	29	35	30	186	32	40	34	190
		MED	27	30	28	184	31	40	32	188	29	35	30	186	32	40	34	190
		HIGH	30	35	31	187	34	40	36	191	32	40	33	189	36	45	38	193
		HIGH-High Effi-ciency	33	40	35	196	37	45	39	200	35	40	37	198	39	45	41	202

Electrical data (cont)

UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA - 2-SPEED BLOWER INDOOR FAN MOTOR, 6-15 TONS

SIZE / STAGE	NOM. V-Ph-Hz	IFM TYPE	NO CONVENIENCE OUTLET (C.O). or UNPWR C.O.								w/ PWRD C.O.							
			NO Power Exhaust (P.E.)				w/ P.E. (pwrd fr/ unit)				NO P.E.				w/ P.E. (pwrd fr/ unit)			
			MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA	MCA	Fuse or Hacr Brkr	DISC. SIZE FLA	DISC. SIZE LRA
50TC*A07 (1-stage cool)	208/230-3-60	STD	34/33	50/50	32/32	167	35/35	50/50	35/34	169	38/38	50/50	38/38	172	40/40	50/50	40/40	174
		MED	35/34	50/50	34/33	193	37/36	50/50	36/35	195	40/39	50/50	40/39	198	42/41	60/60	42/41	200
		HIGH	37/36	50/50	37/36	217	39/38	50/50	39/38	219	42/41	60/60	42/41	222	44/43	60/60	44/43	224
	460-3-60	STD	15	20	14	82	16	20	15	83	17	20	17	84	18	25	18	85
		MED	15	20	15	95	16	20	16	96	18	25	17	97	19	25	18	98
		HIGH	16	20	16	107	17	25	17	108	19	25	19	109	20	25	20	110
	575-3-60	STD	13	15	12	70	15	20	14	72	15	20	14	72	16	20	16	74
		MED	14	15	13	79	16	20	16	81	16	20	15	81	17	20	18	83
		HIGH	14	15	13	79	16	20	16	81	16	20	15	81	17	20	18	83
50TC*D08 (2-stage cool)	208/230-3-60	STD	40/40	50/50	41/41	197	44/43	50/50	46/46	201	45/44	50/50	47/47	202	48/48	60/60	51/51	206
		MED	43/42	50/50	45/44	227	46/46	50/50	49/48	231	47/47	60/50	50/49	232	51/50	60/60	55/54	236
		HIGH	48/47	60/50	50/49	262	51/51	60/60	55/54	266	52/52	60/60	56/55	267	56/55	60/60	60/59	271
	460-3-60	STD	19	20	19	97	20	25	21	99	21	25	22	99	23	25	24	101
		MED	20	25	20	113	21	25	22	115	22	25	23	115	24	25	25	117
		HIGH	22	25	23	130	24	30	25	132	24	30	26	132	26	30	28	134
	575-3-60	STD	14	15	14	79	18	20	19	83	16	20	16	81	19	25	21	85
		MED	16	20	16	92	19	25	21	96	17	20	18	94	21	25	23	98
		HIGH	18	20	18	106	22	25	23	110	20	25	20	108	23	25	24	112
50TC*D09 (2-stage cool)	208/230-3-60	STD	41/41	50/50	43/42	212	45/45	50/50	47/47	216	46/46	50/50	48/48	217	50/49	60/60	52/52	221
		MED	42/42	50/50	44/44	216	46/46	60/50	48/48	220	47/47	60/60	50/49	221	51/51	60/60	54/54	225
		HIGH	46/45	60/50	48/47	266	50/49	60/60	53/52	270	51/50	60/60	54/53	271	55/54	60/60	58/57	275
	460-3-60	STD	19	25	20	111	21	25	22	113	21	25	22	113	23	25	24	115
		MED	20	25	20	114	21	25	22	116	22	25	23	116	24	25	25	118
		HIGH	21	25	22	139	23	25	24	141	23	25	24	141	25	30	26	143
	575-3-60	STD	17	20	17	87	21	25	21	91	18	20	19	89	22	25	23	93
		MED	17	20	18	91	21	25	22	95	19	25	20	93	23	25	24	97
		HIGH	18	20	19	100	22	25	23	104	20	25	21	102	24	30	25	106
50TC*D12 (2-stage cool)	208/230-3-60	STD	46/46	60/60	48/47	255	50/50	60/60	52/52	259	51/51	60/60	53/53	260	55/54	60/60	58/57	264
		MED	50/49	60/60	52/51	305	54/53	60/60	56/55	309	55/54	60/60	58/56	310	58/57	70/70	62/61	314
		HIGH	53/52	60/60	55/54	316	56/55	60/60	60/59	320	57/56	70/60	61/60	321	61/60	70/70	65/64	325
	460-3-60	STD	23	30	23	122	25	30	26	124	25	30	26	124	27	30	28	126
		MED	24	30	25	147	26	30	27	149	26	30	28	149	28	30	30	151
		HIGH	26	30	27	152	28	30	29	154	28	30	29	154	30	35	32	156
	575-3-60	STD	18	20	19	95	22	25	23	99	20	25	21	97	24	25	25	101
		MED	19	25	20	104	23	25	24	108	21	25	22	106	25	30	26	110
		HIGH	21	25	22	118	25	30	26	122	23	25	24	120	26	30	28	124
50TC*D14 (2-stage cool)	208/230-3-60	STD	63/62	80/80	65/64	370	67/66	80/80	70/69	374	68/67	80/80	71/70	375	71/71	80/80	75/74	379
		MED	65/64	80/80	68/67	394	69/68	80/80	72/71	398	70/69	80/80	73/72	399	74/73	80/80	78/77	403
		HIGH	68/67	80/80	71/70	405	72/71	80/80	75/74	409	73/72	80/80	77/76	410	76/76	90/90	81/80	414
	460-3-60	STD	29	35	30	184	31	40	32	186	31	40	32	186	33	40	34	188
		MED	30	40	31	196	32	40	33	198	32	40	33	198	34	40	35	200
		HIGH	31	40	33	201	33	40	35	203	34	40	35	203	35	45	37	205
	575-3-60	STD	24	30	24	147	27	30	29	151	25	30	26	149	29	35	31	153
		MED	24	30	24	147	27	30	29	151	25	30	26	149	29	35	31	153
		HIGH	25	30	26	161	29	35	31	165	27	30	28	163	31	35	33	167
50TC*D16 (2-stage cool)	208/230-3-60	STD	70/69	80/80	73/72	393	74/73	80/80	77/76	397	75/74	90/80	78/77	398	78/78	100/100	82/82	402
		MED	72/71	80/80	75/74	417	76/75	100/90	79/78	421	77/76	100/100	81/79	422	81/80	100/100	85/84	426
		HIGH	82	100	86	432	85	100	91	436	86	100	92	437	90	100	96	441
	460-3-60	STD	35	45	36	233	37	45	38	235	37	45	38	235	39	50	40	237
		MED	36	45	37	245	38	50	39	247	38	50	40	247	40	50	42	249
		HIGH	41	50	43	252	43	50	45	254	43	50	46	254	45	50	48	256
	575-3-60	STD	29	35	30	184	32	40	34	188	30	35	32	186	34	40	36	190
		MED	29	35	30	184	32	40	34	188	30	35	32	186	34	40	36	190
		HIGH	33	40	35	196	37	45	39	200	35	40	37	198	39	45	41	202

General

The sequence below describes the sequence of operation for an electro-mechanical unit with and without a factory-installed EconoMi$er® IV and X (called "economizer" in this sequence). For information regarding a direct digital controller, see the start-up, operations, and troubleshooting manual for the applicable controller.

Electro-mechanical units with no economizer

Cooling (Single speed indoor fan motor) — When the thermostat calls for cooling, terminals G and Y1 are energized. As a result, the indoor fan contactor (IFC) and the compressor contactor (C1) are energized, causing the indoor fan motor (IFM), compressor #1, and outdoor fan to start. If the unit has 2 stages of cooling, the thermostat will additionally energize Y2. The Y2 signal will energize compressor contactor #2 (C2), causing compressor #2 to start. Regardless of the number of stages, the outdoor fan motor runs continuously while unit is cooling. When SAV system is utilized, indoor fan motor runs at design CFM (full speed) during the heating operation.

Cooling (2-speed indoor fan motor) — Per ASHRAE 90.1-2016 and IECC-2015 standards, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). This is standard on all models for installation in the United States to meet U.S. Department of Energy - 2018 IEER efficiency rating.

Heating (Single or 2-speed indoor fan motor)

NOTE: WeatherMaker (50TC) units are sold as cooling only. If electric heaters are required; use only factory-approved electric heaters. They will operated as described below.

Units have either 1 or 2 stages of electric heat. When the thermostat calls for heating, power is applied to the W1 terminal at the unit. The unit control will energize the indoor fan contactor and the first stage of electric heat. On units with 2-stage heating, when additional heating is required, the second stage of electric heat (if equipped) will be energized when power is applied at the W2 terminal on the unit.

Electro-mechanical units with an economizer - cooling — When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the EconoMi$er IV and X control to provide a 50°F (10°C) to 55°F (13°C) mixed-air temperature into the zone. As the 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. If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45°F (7°C), then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48°F (9°C). The power exhaust fans will be energized and de-energized, if installed, as the outdoor-air damper opens and closes.

If field-installed accessory CO_2 sensors are connected to the EconoMi$er IV and X control, a demand controlled ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 setpoint, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed. For EconoMi$er IV and X operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

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

On the initial power to the EconoMi$er IV and X control, it will take the damper up to 2 $^1/_2$ minutes before it begins to position itself. After the initial power-up, further changes in damper position can take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1 $^1/_2$ and 2 $^1/_2$ minutes. If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed air temperature setpoint at 50°F (10°C) to 55°F (13°C). If there is a further demand for cooling (cooling second stage - Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed air temperature setpoint. The EconoMi$er IV and X damper will be open at maximum position.

2-Speed NOTE: When operating in ventilation mode only, the indoor fan motor will automatically adjust to 66% of the total cfm established.

Heating — The sequence of operation for the heating is the same as an electro-mechanical unit with no economizer. The only difference is how the economizer acts. The economizer will stay at the Economizer Minimum Position while the evaporator fan is operating. The outdoor-air damper is closed when the indoor fan is not operating. Refer to Service and Maintenance Manual for further details.

Controls (cont)

Optional Humidi-MiZer® dehumidification system

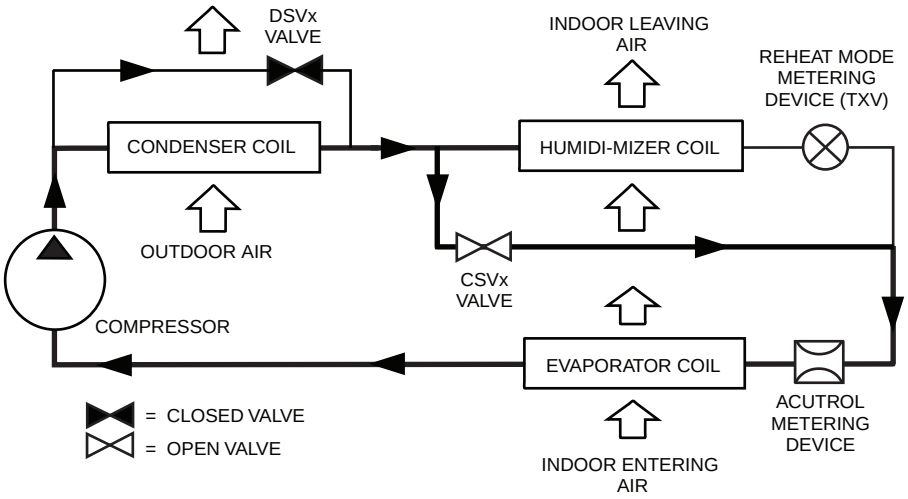
Units with the factory equipped Humidi-MiZer® option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle. The Humidi-MiZer option includes additional valves in the liquid line and discharge line of each refrigerant circuit, a small reheat condenser coil downstream of the evaporator, and Motormaster® variable-speed control of some or all outdoor fans. Operation of the revised refrigerant circuit for each mode is described below.

The Humidi-MiZer system provides three sub-modes of operation: Cool, Reheat1, and Reheat2.

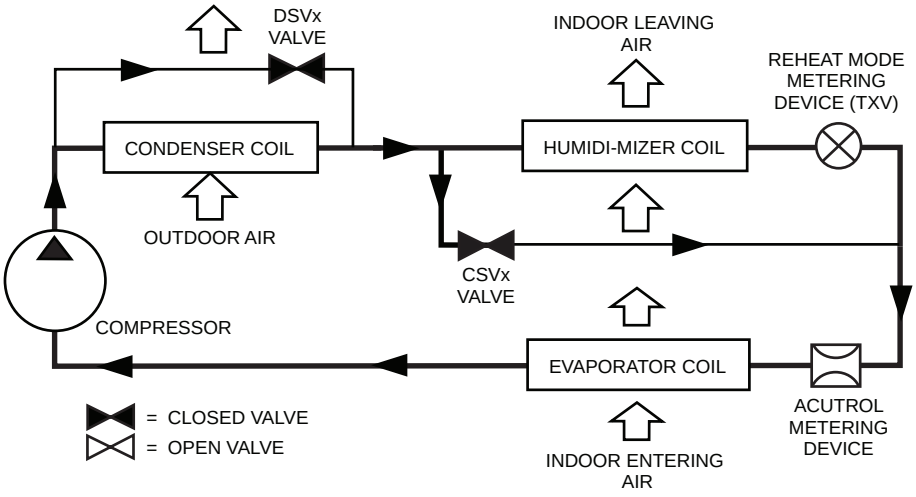
- Cool mode - provides a normal ratio of Sensible and Latent Cooling effect from the evaporator coil.
- Reheat1 - provides increased Latent Cooling while slightly reducing the Sensible Cooling effect.
- Reheat2 - provides normal Latent Cooling but with null or minimum Sensible Cooling effect delivered to the space.

The Reheat1 and Reheat2 modes are a variable when the unit is not in a Heating mode and when the Low Ambient Lockout switch is closed. The following diagrams depict piping for Single Stage cooling units.

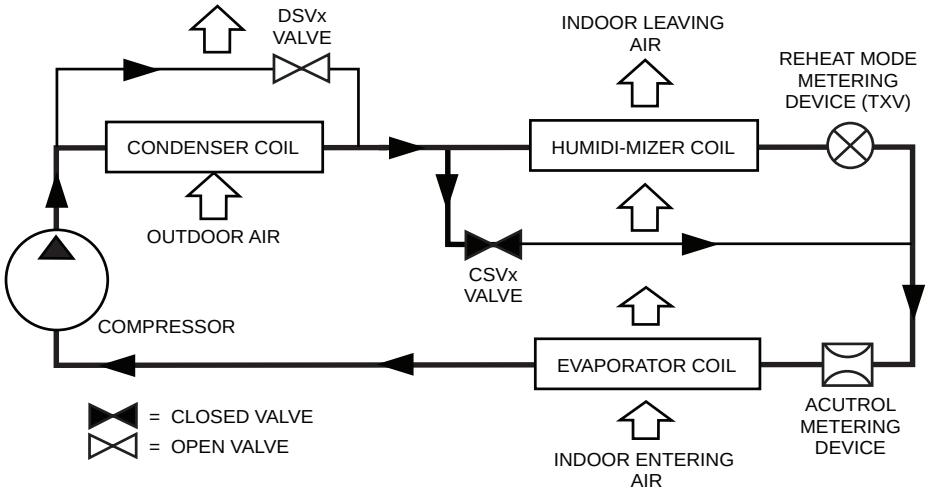
NORMAL COOLING MODE — HUMIDI-MIZER® SYSTEM



SUBCOOLING MODE (REHEAT 1) — HUMIDI-MIZER® SYSTEM



SUBCOOLING MODE (REHEAT 2) — HUMIDI-MIZER® SYSTEM



Guide specifications — 50TC-07-16 units

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

WeatherMaker®
Cooling only/electric heat packaged rooftop
HVAC guide specifications

Size range: **6 to 15 Nominal Tons**

Carrier Model Number: **50TC-07-16**

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 (RTU) schedule

1. Schedule is per the project specification requirements.

Part 2 — (23 07 16) HVAC equipment installation

A. (23 07 16.13) Decentralized rooftop units:

1. (23 07 16.13.A.) Evaporator fan compartment:

a. Interior cabinet surfaces shall be insulated with a minimum $^1/_2$-in. thick, minimum 1 $^1/_2$-lb density, flexible fiberglass insulation bonded with a phenolic binder, neoprene coated on the air side.

b. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

B. (23 06 80.13.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 07 13) Instrumentation and control devices for HVAC

3.01 (23 07 13.23) Sensors and transmitters

A. (23 07 13.23.A.) Thermostats

1. Thermostats must:

a. Energize both "W" and "G" when calling for heat.

b. Have capability to energize 2 different stages of cooling, and 2 different stages of heating.

c. Include capability for occupancy scheduling.

Part 4 — (23 09 23) Direct-digital control system for HVAC

4.01 (23 09 23.13) Decentralized, Rooftop Units:

A. (23 09 23.13.A.) PremierLink™ controller

1. Shall be ASHRAE 62 compliant.
2. Shall accept 18-32 VAC input power.
3. Shall have an operating temperature range from –40°F (–40°C) to 158°F (70°C), 10% to 95% RH (non-condensing).
4. Shall include an integrated economizer controller to support an economizer with 4 to 20 mA actuator input and no microprocessor controller.
5. Controller shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air quality, indoor relative humidity, compressor lock-out, fire shutdown, enthalpy, fan status, remote time clock/door switch.
6. Shall accept a CO_2 sensor in the conditioned space, and be Demand Controlled Ventilation (DCV) ready.
7. 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/dehumidify/occupied.
8. Unit shall provide surge protection for the controller through a circuit breaker.
9. Shall be Internet capable, and communicate at a Baud rate of 38.4K or faster.
10. Shall have an LED display independently showing the status of activity on the communication bus, and processor operation.
11. Shall include an RS-485 protocol communication port, an access port for connection of either a computer or a Carrier technician tool, an RS-485 port for network communication to intelligent space sensors and displays, and a port to connect an optional LonWorks* plug-in communications card.
12. Shall have built-in Carrier Comfort Network® (CCN) protocol, and be compatible with other CCN devices, including *Comfort*Link and ComfortVIEW™ controllers.
13. Shall have built-in support for Carrier technician tool.
14. Software upgrades will be accomplished by local download. Software upgrades through chip replacements are not allowed.
15. Shall be shock resistant in all planes to 5G peak, 11ms during operation, and 100G peak, 11ms during storage.
16. Shall be vibration resistant in all planes to 1.5G at 20-300 Hz.
17. Shall support a bus length of 4000 ft (1219 m) max, 60 devices per 1000 ft (305 m) section, and 1 RS-485 repeater per 1000 ft (305 m) sections.

* LonWorks is a registered trademark of Echelon Corporation.

B. (23 09 23.13.B.) RTU Open 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% to 90% RH (non-condensing).
4. Shall include built-in protocol for BACnet† (MS/TP and PTP modes), Modbus** (RTU and ASCII), Johnson N2 and LonWorks. LonWorks 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 dip switch.
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, variable frequency drive, 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 backup 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 RS-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) Electric and electronic control system for HVAC

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 a central control terminal board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, and low and high pressure switches.
4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.

B. (23 09 33.13.B.) Safeties:

1. Compressor over-temperature, over-current. High internal pressure differential.
2. Low-pressure switch.
   a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 low and high pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
   b. Low-pressure switch shall use different color wire than the high-pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
3. High-pressure switch.
   a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 low and high-pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
   b. High-pressure switch shall use different color wire than the low-pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
4. 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

* LonWorks is a registered trademark of the Echelon Corporation.
† BACnet is a registered trademark of ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).
** Modbus is a registered trademark of Schneider Electric.

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, disposable 2-in. thick fiberglass filters of commercially available sizes.
2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filters shall be accessible through a dedicated, weather tight access panel with 'no-tool' removal as described in the unit cabinet section of this specification.

Part 8 — (23 81 19) Self-contained air conditioners

8.01 (23 81 19.13) Small-Capacity Self-Contained Air Conditioners (50TC**07-16)

A. (23 81 19.13.A.) General

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a fully hermetic scroll compressor(s) for cooling and 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® 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 ASHRAE 90.1-2016 and IECC*-2015 standards.
2. Unit shall be rated in accordance with AHRI Standards 210/240 and 340/360.
3. Unit shall be designed to conform to ASHRAE 15.
4. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
6. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
7. Roof curb shall be designed to conform to NRCA Standards.
8. 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.
9. Unit shall be designed in accordance with UL Standard 1995, ETL listed including tested to withstand rain.
10. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
11. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
12. High Efficiency Motors listed shall meet section 313 of the Energy Independence and Security Act of 2007 (EISA 2007).

C. (23 81 19.13.C.) Delivery, storage, and handling

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

D. (23 81 19.13.D.) Project conditions:

1. As specified in the contract.

E. (23 81 19.13.E.) Operating characteristics

1. Unit shall be capable of starting and running at 115°F (46°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 210/240 or 340/360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation down to 40°F (4°C), ambient outdoor temperatures. Accessory winter start kit is necessary if mechanically cooling at ambient temperatures below 25°F (–4°C).
3. Unit shall discharge supply air horizontally as shown on contract drawings.
4. Unit shall be factory configured and ordered for horizontal supply and return configurations.
5. Unit shall be field convertible from vertical to horizontal airflow on all models. No special kit required on 07-14 models. Supply duct kit required for 16 size model only.
6. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

F. (23 81 19.13.F.) Electrical Requirements

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

G. (23 81 19.13.G.) Unit cabinet

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre-painted baked enamel finish on all externally exposed surfaces.
2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F/16°C): 60, Hardness: H to 2H Pencil hardness.

* IECC is a registered trademark of International Code Council, Inc.

3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 or 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum $^1/_2$-in. thick, 1-lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the heat compartment.
4. Base of unit shall have a minimum of four locations for thru-the-base electrical connections standard.
5. Base rail:
   a. Unit shall have base rails on a minimum of 2 sides.
   b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
   c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
   d. Base rail shall be a minimum of 16-gauge thickness.
6. Condensate pan and connections:
   a. Shall be a sloped condensate drain pan made of a non-corrosive material.
   b. Shall comply with ASHRAE Standard 62.
   c. Shall use a $^3/_4$-in. to 14 NPT drain connection, through the side of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Top panel:
   a. Shall be a single piece top panel on 07 thru 12 sizes, two piece on 14 and 16 sizes.
8. Electrical connections:
   a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
   b. Thru-the-base capability.
      1) Standard unit shall have Thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
      2) Optional, factory approved, water-tight connection method must be used for thru-the- base electrical connections.
      3) No basepan penetration, other than those authorized by the manufacturer, is permitted.
9. Component access panels (standard):
   a. Cabinet panels shall be easily removable for servicing.
   b. Unit shall have one factory-installed, removable, filter access panel.
   c. Panels covering control box and filter shall have molded composite handles.
   d. Handles shall be UV modified, composite. They shall be 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 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.
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 harness 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 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.

5. Standard ALL Aluminum Novation® Coils:

a. Standard condenser coils shall have all aluminum Novation® Heat Exchanger Technology design consisting of aluminum multi-port flat tube design and aluminum fin. Coils shall be a furnace brazed design and contain epoxy lined shrink wrap on all aluminum to copper connections.

b. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

6. Optional E-coated aluminum-fin, aluminum tube condenser coils:

a. Shall have a flexible epoxy polymer coating uniformly applied to all coil external surface areas without material bridging between fins.

b. Coating process shall ensure complete coil encapsulation, including all exposed fin edges.

c. E-coat thickness of 0.8 to 1.2-mil with top coat having a uniform dry film thickness from 1.0 to 2.0 mil on all external coil surface areas, including fin edges, shall be provided.

d. Shall have superior hardness characteristics of 2H per ASTM D3363-00 and crosshatch adhesion of 4B-5B per ASTM D3359-02.

e. Shall have superior impact resistance with no cracking, chipping or peeling per NSF/ANSI 51-2002 Method 10.2.

I. (23 81 19.13.I.) Refrigerant components

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

a. Fixed orifice metering system shall prevent mal-distribution of two-phase refrigerant by including multiple fixed orifice devices in each refrigeration circuit. Each orifice is to be optimized to the coil circuit it serves.

b. Refrigerant filter drier - Solid core design.

c. Service gauge connections on suction and discharge lines.

2. Pressure gauge access through a specially designed access port in the top panel of the unit.

3. There shall be gauge line access port in the skin of the rooftop, covered by a black, removable plug.

a. The plug shall be easy to remove and replace.

b. When the plug is removed, the gauge access port shall enable maintenance personnel to route their pressure gauge lines.

c. This gauge access port shall facilitate correct and accurate condenser pressure readings by enabling the reading with the compressor access panel on.

d. The plug shall be made of a leak proof, UV-resistant, composite material.

4. Compressors:

a. Unit shall use fully hermetic, scroll compressor for each independent refrigeration circuit.

b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.

c. Compressors shall be internally protected from high discharge temperature conditions.

d. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.

e. Compressor shall be factory-mounted on rubber grommets.

f. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.

g. Crankcase heaters shall not be required for normal operating range, unless required by the manufacturer due to refrigerant charge limits.

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 preformed, slide-out filter tray, facilitating easy removal and installation.

3. Shall consist of factory-installed, low velocity, throw-away 2-in. thick fiberglass filters.

4. Filters shall be standard, commercially available sizes.

5. Only one size filter per unit is allowed.

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.

2. Electric Drive (Direct Drive) X13 – 5-Speed/Torque Evaporator Fan:

a. Multi- speed motor with easy quick adjustment settings.

b. Blower fan shall be double- inlet type with forward-curved blades.

c. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

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 finish that aids with corrosion resistance and that is dynamically balanced.

L. (23 81 19.13.L.) Condenser and fan motors
   1. Condenser fan motors:
      a. Shall be a totally enclosed motor.
      b. Shall use permanently lubricated bearings.
      c. Shall have inherent thermal overload protection with an automatic reset feature.
      d. Shall use a shaft-down design on 07 to 12 and 16 models and shaft-up on 14 size with rain shield.
   2. Condenser fans:
      a. Shall be a direct-driven propeller type fan.
      b. Shall have galvalum blades riveted to steel spiders that have corrosion-resistant properties and shall be dynamically balanced.

M. (23 81 19.13.M.) Special features options and accessories
   1. Staged Air Volume System (SAV™) for 2-stage cooling and 6 ton single-stage cooling models with VFD:
      a. Evaporator fan motor:
         1) Shall have permanently lubricated bearings.
         2) Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating.
         3) Shall be Variable Frequency duty and 2-speed control.
         4) Shall contain motor shaft grounding ring to prevent electrical bearing fluting damage by safely diverting harmful shaft voltages and bearing currents to ground.
   2. Variable frequency drive (VFD). Only available on 2-speed indoor fan motor option (SAV):
      a. Factory-supplied VFDs qualify, through ABB, for a 12-month warranty from date of commissioning or 18 months from date of sale, whichever occurs first.
      b. Shall be installed inside the unit cabinet, mounted, wired and tested.
      c. Shall contain Electromagnetic Interference (EMI) frequency protection.
      d. Insulated gate bi-polar transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
      e. Self-diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
      f. RS485 capability standard.
      g. Electronic thermal overload protection.
      h. 5% swinging chokes for harmonic reduction and improved power factor.
      i. All printed circuit boards shall be conformal coated.
   3. Integrated EconoMi$er® IV, EconoMi$er 2, and EconoMi$er X standard leak rate models. (Factory installed on 3-phase models only. Field installed on all 3-phase models):
      a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
      b. Independent modules for horizontal return configuration shall be available. Vertical return modules shall be available as a factory installed option.
      c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
      d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
      e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
      f. Standard leak rate models shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
      g. Economizer controller on EconoMi$er IV models shall be Honeywell W7212 that provides:
         1) Combined minimum and DCV maximum damper position potentiometers with compressor staging relay.
         2) Functions with solid state analog enthalpy or dry bulb changeover control sensing.
         3) Contain LED indicates for: when free cooling is available, when module is in DCV mode, when exhaust fan contact is closed.
      h. Economizer controller on EconoMi$er X models shall be the Honeywell W7220 that provides:
         1) 2-line LCD interface screen for setup, configuration and troubleshooting.

2) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
3) Sensor failure loss of communication identification.
4) Automatic sensor detection.
5) Capabilities for use with multiple-speed indoor fan systems.

i. Economizer controller on EconoMi$er 2 models with PremierLink™ controller shall be 4-20mA design and controlled by the PremierLink controller. PremierLink does not comply with California Title 24 Fault Detection and Diagnostic (FDD) requirements.

j. Economizer controller on EconoMi$er 2 models with RTU Open models shall be 4-20mA design controlled directly by the RTU Open controller. RTU Open meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.

k. Shall be capable of introducing up to 100% outdoor air.

l. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1-2016 and IECC-2015 requirements.

m. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.

n. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available for factory-installed economizers only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100°F (4 to 38°C.) Additional sensor options shall be available as accessories.

o. 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%.

p. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.

q. Dampers shall be completely closed when the unit is in the unoccupied mode.

r. Economizer controller shall accept a 2-10 Vdc CO_2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.

s. Compressor lockout temperature on W7220 is adjustable from –45°F to 80°F, set at a factory default of 32°F. Others shall open at 35°F (2°C) and closes at 50°F (10°C).

t. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.

u. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

4. Integrated EconoMi$er® 2, and EconoMi$er X Ultra Low Leak rate models, factory or field-installed.

a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.

b. Independent modules for horizontal return configuration shall be available. Vertical return modules shall be available as a factory-installed option.

c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.

d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.

e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.

f. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1-2016 and IECC-2015 requirements of 4 cfm per sq ft on the outside air dampers and 10 cfm per sq ft on the return dampers.

g. Economizer controller on EconoMi$er X models shall be the Honeywell W7220 that provides:
1) 2-line LCD interface screen for setup, configuration and troubleshooting.
2) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
3) Sensor failure loss of communication identification.
4) Automatic sensor detection.
5) Capabilities for use with multiple-speed indoor fan systems.
6) Utilize digital sensors: Dry bulb and Enthalpy.

h. Economizer controller on EconoMi$er 2 models with RTU Open models shall be 4-20mA design controlled directly by the RTU Open controller. RTU Open meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.

i. Shall be capable of introducing up to 100% outdoor air.

j. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1-2016 and IECC-2015 standards.

k. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.

l. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available for factory-installed economizers only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100°F (4 to 38°C). Additional sensor options shall be available as accessories.

m. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.

n. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.

o. Dampers shall be completely closed when the unit is in the unoccupied mode.

p. Economizer controller shall accept a 2-10 Vdc CO_2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.

q. Compressor lockout temperature on W7220 is adjustable from –45°F to 80°F (–43°C to 27°C), set at a factory default of 32°F (0°C). Others shall open at 35°F (2°C) and closes at 50°F (10°C).

r. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.

s. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

5. Two-Position Motorized Damper (factory-installed):

a. Damper shall be a 2-position damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.

b. Damper shall include adjustable damper travel from 25% to 100% (full open).

c. Damper shall include single or dual blade, gear driven dampers and actuator motor.

d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.

e. Damper will admit up to 100% outdoor air for applicable rooftop units.

f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.

g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.

h. Outside air hood shall include aluminum water entrainment filter.

i. Not available on Staged Air Volume (SAV™) models.

6. Manual damper:

a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 25% or 50% outdoor air for year round ventilation.

b. Not available on Staged Air Volume (SAV) models.

7. Humidi-MiZer® adaptive dehumidification system:

a. The Humidi-MiZer Adaptive Dehumidification System shall be factory-installed in 50TC 07 with Humidi-MiZer and 2-stage 50TC 08-16 models with RTPF (round tube plate fin) condenser coils, and shall provide greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode:

1) Subcooling mode further sub cools the hot liquid refrigerant leaving the condenser coil 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 the compressor with the hot liquid refrigerant leaving the condenser coil to create a two-phase heat transfer in the system, resulting in a neutral leaving air temperature when only humidity in the space is not satisfied.

3) Includes head pressure controller.

8. Head pressure control package (Motormaster®):

a. Controller shall control coil head pressure by condenser-fan speed modulation or condenser-fan cycling and wind baffles.

b. Shall consist of solid-state control and condenser-coil temperature sensor to maintain condensing temperature between 90°F (32°C) and 110°F (43°C) at outdoor ambient temperatures down to –20°F (–29°C).

9. Condenser coil hail guard assembly (factory or field-installed):

a. Shall protect against damage from hail.

b. Shall be louvered style design.

10. Unit-mounted, non-fused disconnect switch (available on units with MOCPs of 80 amps or less):
    a. Switch shall be factory-installed, internally mounted.
    b. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
    c. Shall be accessible from outside the unit.
    d. Shall provide local shutdown and lockout capability.
    e. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.
11. Convenience outlet:
    a. Powered convenience outlet:
        1) Outlet shall be powered from main line power to the rooftop unit.
        2) Outlet shall be powered from line side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be ETL certified and rated for additional outlet amperage.
        3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
        4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
        5) Voltage required to operate convenience outlet shall be provided by a factory-installed step-down transformer.
        6) Outlet shall be accessible from outside the unit.
        7) Outlet shall include a field-installed "Wet in Use" cover.
    b. Factory-installed 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.
    c. Field-Installed 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 20 amp GFI receptacles. This kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location.
        5) Outlet shall be accessible from outside the unit.
        6) Outlet shall include a field-installed "Wet in Use" cover.
12. Thru- the-base connectors:
    a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
    b. Minimum of four connection locations per unit.
13. Supply duct cover: (16 size only.)
    a. Required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One required per unit.
14. Propeller power exhaust:
    a. Power exhaust shall be used in conjunction with an integrated economizer.
    b. Independent modules for horizontal return configurations shall be available.
    c. Horizontal power exhaust shall be mounted in return ductwork.
    d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0-100% adjustable setpoint on the economizer control.
15. 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.
16. Outdoor air enthalpy sensor:
    a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
17. Return air enthalpy sensor:
    a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy

sensor to provide differential enthalpy control.

18. Indoor air quality (CO_2) 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.
19. Smoke detectors (factory-installed only):
    a. Shall be a four-wire controller and detector.
    b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
    c. Shall use magnet-activated test/reset sensor switches.
    d. Shall have tool-less connection terminal access.
    e. Shall have a recessed momentary switch for testing and resetting the detector.
    f. Controller shall include:
        1) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
        2) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
        3) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
        4) Capable of direct connection to two individual detector modules.
        5) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
20. Winter start kit:
    a. Shall contain a bypass device around the low pressure switch.
    b. Shall be required when mechanical cooling is required down to 25°F (–4°C).
    c. Shall not be required to operate on an economizer when below an outdoor ambient of 40°F (4°C).
21. 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.
22. Electric heat:
    a. 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.
23. Disconnect switch bracket (16 size only):
    a. Provides a pre- engineered and sized mounting bracket for applications requiring a unit mounted fused and non-fused disconnect of greater than 100 amps. Bracket assures that no damage will occur to coils when mounting with screws and other fasteners.
24. Hinged access panels:
    a. Shall provide easy access through integrated quarter-turn latches.
    b. Shall be on major panels of: filters, control box, fan motor and compressor.
25. 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.
26. Condensate overflow switch (for units with electro-mechanical controls or RTU Open controller only):
    a. This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:
        1) Indicator light — solid red (more than 10 seconds on water contact - compressors disabled), blinking red (sensor disconnected).
        2) 10 second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping).
        3) Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for Economizer.
27. 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.

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