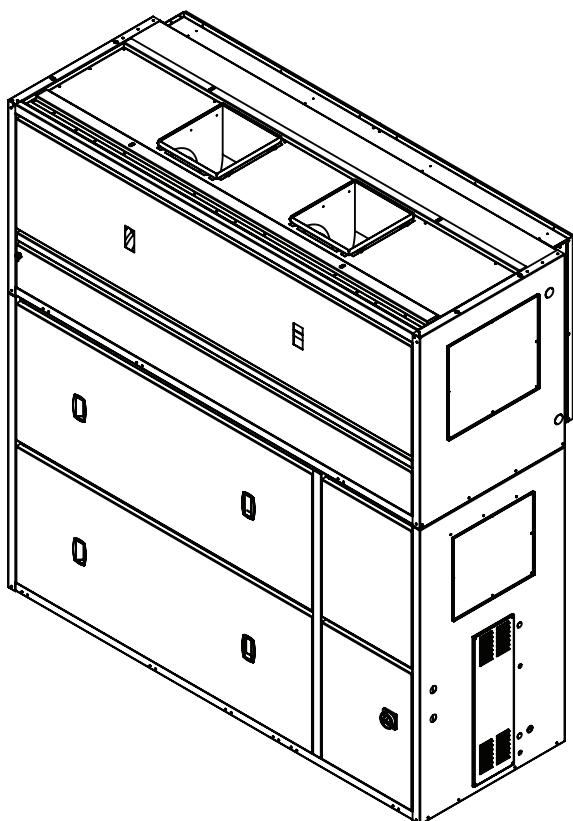




Product Data

**Omnizone™
50XCA06-14
Air-Cooled
Indoor Self-Contained Systems
with Puron® Refrigerant (R-410A)**

5 to 12 Nominal Tons



The 50XCA single-package cooling units with integral air-cooled condensers offer:

- Compact, durable, and attractive cabinet that fits any working environment
- Ducted or free return with rear return connections and vertical or horizontal supply air discharge
- High-efficiency cooling for commercial and industrial projects
- 2-in. and 4-in. filtration options
- Optional coated evaporator coil
- Rear condenser inlet and discharge and belt drive condenser fan permit condenser air connections to be ducted through window or wall louver
- Uses Puron® refrigerant (R-410A)
- Available hot water or steam heat
- Optional airside economizer

Features/Benefits

The Omnizone 50XCA units provide a practical and economical approach to comfort conditioning requirements for offices, factories, and other applications in existing buildings when indoor air-cooled condensers are required.

Design flexibility

The 50XCA indoor packaged units are designed to provide the flexibility required in replacement, renovation, and new construction. Units are available in 4 sizes, from 5 tons to 12 tons, which meet the needs for cooling restaurants, retail stores, warehouses, offices, and building additions.



Features/Benefits (cont)

The compact footprint and ability to service from the front of the units save valuable floor space in equipment rooms. Belt drive condensers provide adequate static to overcome ducting and louver static losses. This allows units to be positioned against an existing window or wall louver, or ducted to the outside, as required. These units can be installed in the equipment room or the conditioned space and used for either ducted or free return applications. Unit supply air discharge is vertical.

Easy installation and maintenance

The units are completely pre-piped and wired at the factory to ensure saving time and money for installation and service. Exterior access panels are easily removed to provide speedy inspection, and service work may be done from the front of the unit. Precision engineered parts translate to a quality built, reliable design that will operate efficiently, minimize service calls, and provide years of reliable operation.

Designed for customer satisfaction

Where space and styling are important considerations, 50XCA units are designed to exceed expectations. The high quality, baked enamel finish will fit any environment attractively. These packaged systems provide the user with economy and product satisfaction in cooling, dehumidification, filtering, and air circulation.

Efficient design to increase savings

In order to provide an energy efficient HVAC solution, all 50XCA units have been designed to exceed the ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 (2010) guidelines.

Special features for outstanding performance

- High-efficiency scroll compressors deliver quiet, reliable cooling capacity. Compressor motor protection is assured by quick-acting, internal sensing elements that prevent trouble before it starts.

- Space-saver slab type evaporator and condenser coils use advanced heat transfer technology and provide peak heat transfer efficiency with large coil face area. Fins are mechanically bonded to nonferrous, seamless tubing for efficient leak-free operation.
- Quiet fan performance moves large volumes of indoor air. Compact housing and specially designed discharge air section provide superior air-handling capacity. Vertical and horizontal supply air discharge is available for both ducted or free blow (louvered) applications.
- Convenient front access electrical control center contains all factory pre-wired control devices.
- A stainless steel, sloped, condensate pan is standard. As a result of this new design, the coil is easily accessed for cleaning.
- The cabinets are constructed of galvanized steel, bonderized, and coated on all external surfaces with a baked enamel finish. The paint finish is nonchalking and is capable of withstanding ASTM (American Society for Testing and Materials) Standard No. B117 500-hour salt spray test.
- Choose from a full line of room-mounted thermostats.
- Compressor head pressure control is available to ensure proper unit operation during low ambient conditions.
- Two-speed fan operation is available for 50XCA12 and larger and offers a larger fan speed that operates at 67% of full speed for first stage cooling operation and 100% of full

speed for second stage cooling operation.

- Full compressor protection is assured by several devices, including current-sensing lockout relay(s), anti-short cycle control, and high and low-pressure stats. These devices lock out the compressor(s) under abnormal operating conditions to prevent compressor damage and ensure long life.
- Easy to understand and operate controls provide a virtually mistake-proof control operation.
- All motors are protected against single-phasing conditions.
- Units are built in an ISO 9001 (International Standards Organization) certified manufacturing facility, and are fully run-tested.

Environmentally balanced

Making an environmentally responsible decision is possible when using Carrier's Puron® refrigerant (R-410A). Puron refrigerant (R-410A) is an HFC refrigerant that does not contain chlorine that is damaging to the stratospheric ozone layer. Puron refrigerant (R-410A) is unaffected by the Montreal Protocol. Puron refrigerant (R-410A) is a safe, non-toxic, efficient and environmentally balanced refrigerant for the future.

Table of contents

	Page
Features/Benefits	1,2
Model Number Nomenclature	3
AHRI Capacity Ratings	3
Physical Data	4
Options and Accessories	5
Dimensions	6-13
Selection Procedure	13
Performance Data	14-26
Electrical Data	27
Typical Wiring Schematics	28-38
Controls	39
Typical Piping and Wiring	40
Application Data	41,42
Guide Specifications	43,44

Model number nomenclature



50XC	A	14	A	A	-	G	5	A	A	G	0	AA	
50XC – OMNIZONE™ Indoor Packaged Unit											Factory-Installed Options Code See codes in unit price pages		
Condenser Option A – Air-Cooled											Design Revision Level 0 – Original Release		
Unit Size – Nominal Tons 06 – 5 14 – 12 08 – 7 1/2 12 – 10											Condenser Motor Hp Options D – 1 Hp Motor E – 1 1/2 Hp Motor F – 2 Hp Motor G – 3 Hp Motor		
Return Air/Discharge Air Options* A – Rear Return, Vertical Discharge, Ducted B – Rear Return, Vertical Discharge, Louvered E – Rear Return, Horizontal Discharge, Ducted F – Rear Return, Horizontal Discharge, Louvered J – Front Return, Vertical Discharge, Ducted K – Front Return, Vertical Discharge, Louvered N – Front Return, Horizontal Discharge, Ducted P – Front Return, Horizontal Discharge, Louvered											Condenser Coil Options A – No Low Ambient Option, Low ESP B – No Low Ambient Option, Medium ESP C – No Low Ambient Option, High ESP D – No Low Ambient Option, Highest ESP F – Low Ambient Option, Low ESP G – Low Ambient Option, Medium ESP H – Low Ambient Option, High ESP J – Low Ambient Option, Highest ESP		
Heating Coil Options A – No Factory-Installed Heating Coil											Control Options A – Standard Controls B – Standard Controls with Disconnect F – Two Speed with Standard Controls G – Two Speed with Standard Controls with Disconnect		
Evaporator Fan Speed Set by selection program											Voltage Options 1 – 575-3-60 5 – 208/230-3-60 6 – 460-3-60		
Evaporator Motor Hp Options B – 1/2 Hp Motor E – 1 1/2 Hp Motor C – 3/4 Hp Motor F – 2 Hp Motor D – 1 Hp Motor G – 3 Hp Motor													

LEGEND

ESP — External Static Pressure

* Horizontal discharge not available on size 06 or 08.

AHRI* capacity ratings

UNIT 50XCA	NOMINAL TONS	EVAPORATOR CFM	CONDENSER CFM	NET COOLING (Btuh)	TOTAL kW	EER	IEER
06	5	1,875	2,800	65,000	5.8	11.2	11.4
08	7 1/2	2,625	3,500	80,000	7.1	11.2	11.4
12	10	3,500	5,500	119,000	10.6	11.2	11.4
14	12	4,200	8,000	140,000	12.7	11.0	11.2

LEGEND

EER — Energy Efficiency Ratio

IEER — Integrated Energy Efficiency Ratio

*AHRI — Air-Conditioning, Heating, and Refrigeration Institute.

NOTE: Unit is tested in accordance with AHRI standard 340/360.



Physical data



UNIT 50XCA	06	08	12	14
NOMINAL CAPACITY (tons)	5	7.5	10	12
UNIT OPERATING WEIGHT (lb)	891	1144	1269	1298
COMPRESSOR	Scroll			
Compressor Model	ZP57	ZP67	ZP51	ZP57
Qty	1	1	2	2
Steps of Control	1	1	2	2
Operating Charge R-410A (lb)	17.4	21.4	15.5 / 14.6	22.1 / 20.8
EVAPORATOR FAN	Adjustable, Belt-Drive, Centrifugal			
Nominal Cfm	1750	2625	3500	4375
Cfm Range	1500 - 2500	2250 - 3750	3000 - 5000	3600 - 6000
Available Static (in. wg)	0 - 1.6	0 - 1.6	0 - 1.6	0 - 1.6
Evaporator Fan Size	110-10R	110-10R	120-9R	120-9R
Number of Evaporator Fans	1	2	2	2
Standard Speed Range (Rpm)	576 - 782	712 - 949	656 - 875	712 - 949
Max. Allowable Rpm	1600	1700	1700	1700
Vertical Belt (Type)	A48	BX41	BX48	BX47
Fan Pulley (Type)	AK89	BK65	BK70	BK65
Motor Pulley (Type)	1VL44	1VP34	1VP34	1VP34
Std Hp	.5	1	1	1.5
Hp Range	.5 - 2	1 - 2	1 - 3	1.5 - 3
Fan Shaft Size (in.)	0.75	1	1	1
Motor Shaft Size (in.)	0.625	0.875	0.875	0.875
Center Distance (in.) - Vertical	15.3	15.3	18.1	18.1
Center Distance (in.) - Horizontal	N/A	N/A	15.5	13.0
EVAPORATOR COIL	3/8-in. OD, Enhanced Copper Tube, Aluminum Fins			
Quantity Rows ... Fin/in.	4...12	4...12	5...12	5...12
Fin Block Size (H x L) (in.)	28 x 34	28 x 46	32 x 60	32 x 60
Face Area (sq ft)	6.6	8.9	13.3	13.3
RETURN AIR FILTERS				
Std 1 in., throwaway	(2) 25 x 25	(2) 25 x 25	(8) 16 x 16	(8) 16 x 16 (2) 16 x 20
CONDENSER FAN	Adjustable, Belt-Drive, Centrifugal			
Nominal Cfm	2800	3500	5500	8000
Cfm Range	2100 - 3500	2625 - 4300	4125 - 6875	6000 - 9500
Available Static	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0
Condenser Fan Size	110-10R	110-10R	150-12R	150-15R
Number of Condenser Fans	2	2	2	2
Standard Speed Range (Rpm)	656 - 875	712 - 949	712 - 949	764 - 1011
Max. Allowable Rpm	1700	1700	1700	1600
Belt (Type)	BX66	BX65	BX75	BX77
Fan Pulley (Type)	BK70	BK65	BK90	BK100
Motor Pulley (Type)	1VP34	1VP34	1VP34	1VP34
Std Hp	1	1.5	2	2
Hp Range	1 - 1.5	1.5 - 2	2 - 3	2 - 3
Fan Shaft Size (in.)	1	1	1	1.1875
Motor Shaft Size (in.)	0.875	0.875	0.875	0.875
Center Distance (in.)	27.1	27.1	29.8	29.8
CONDENSER COIL	3/8-in. OD, Enhanced Copper Tube, Aluminum Fins			
Quantity Rows ... Fin/in.	6...16W	6...16W	6...16W	6...16W
Fin Block Size (H x L) (in.)	30 x 46	30 x 46	34 x 60	34 x 80
Face Area (sq ft)	9.58	9.58	14.17	18.89
HIGH-PRESSURE SWITCH	Opens at 595 ± 10 psig; Closes at 443 ± 15 psig			
LOW-PRESSURE SWITCH	Opens at 53 ± 5 psig; Closes at 80 ± 7 psig			
CONDENSATE DRAIN LINE (in.)	1 at 3/4 MPT (Male Pipe Thread)			

Options and accessories



ITEM	FACTORY-INSTALLED OPTION	FIELD-INSTALLED ACCESSORY
Hot Water Coil		X
Low Ambient Operation	X	
Supply Air Plenum		X
Winter Start Operation	X	
Two-Speed Supply Fan	X	
Evaporator Coil Coating	X	
Non-Fused Disconnect	X	
High-Static Motor Upgrade	X	
4-in. Filter	X	
Airside Economizer		X
Steam Heat		X
Pressure Regulating Valve		X

Factory-installed options

Low ambient option allows a refrigerant pressure controlled VFD (variable frequency drive) to adjust condenser fan speed to control head pressure. This fan speed control permits the unit to operate in cooling, even in winter - when outdoor air temperature is down to 0° F.

Winter start option provides a bypass of low-pressure switch on start-up for initial 90 seconds.

Two-speed supply fan for dual-stage units, sizes 50XCA12 and larger. Fan speed shall operate at 67% of full speed for first stage cooling operation and 100% of full speed for second stage cooling operation.

Evaporator coil coating is continuous and covers the whole fin surface, tubing, manifolds, and feeder lines if applicable. For evaporator coils with thermostatic expansion valve assemblies, valve body, head, and bulb shall be masked. A minimum of 2-in. shall be masked on all coil connection points. Expansion valve inlet piping if less than 6-in. in total length, expansion valve distributor, and external equalizer line are not required to be coated.

4-in. filter supplied with the unit has 4-in. deep pleated, 30% high-efficiency filters. The filters shall have side access capability through an access panel.

Non-fused disconnect is located by the unit control panel to disconnect all unit power. The lockable switch is accessible without opening any control panels.

High-static motor upgrade may be required for higher external static pressure (ESP) needed for factory or field-installed accessories (dampers, heating coils, etc.) to achieve the required performance.

Units are designed with a fixed pulley on the blower and an adjustable sheave on the motor. The sheave turns open or the components themselves may need to be changed to provide the desired performance.

Field-installed accessories

Supply air plenum provides adjustable horizontal and vertical louvers for controlled free blow into conditioned space. The plenum mounts easily on top of base unit and matches unit styling.

Hot water coil provides a 2-row coil, encased in a 5-in. deep metal casing. The hot water coil is field installed in the preheat location, before the evaporator.

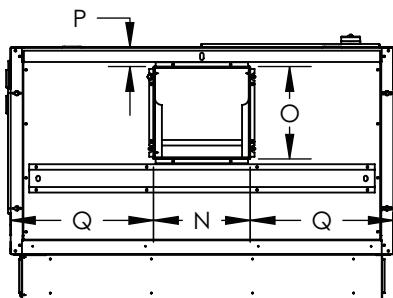
Steam coil provides a 1-row steam distributing type coil. The steam coil is field installed in the preheat position, before the evaporator.

Airside economizer provides a field-installed economizer assembly with integral economizer controller.

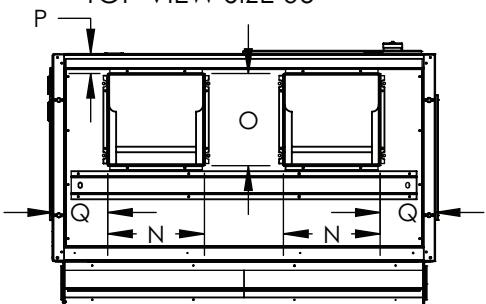
Dimensions — 50XCA06,08



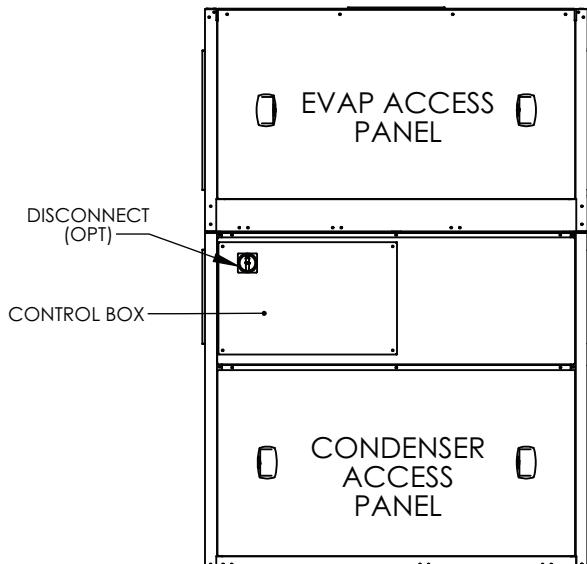
REAR RETURN, VERTICAL DISCHARGE



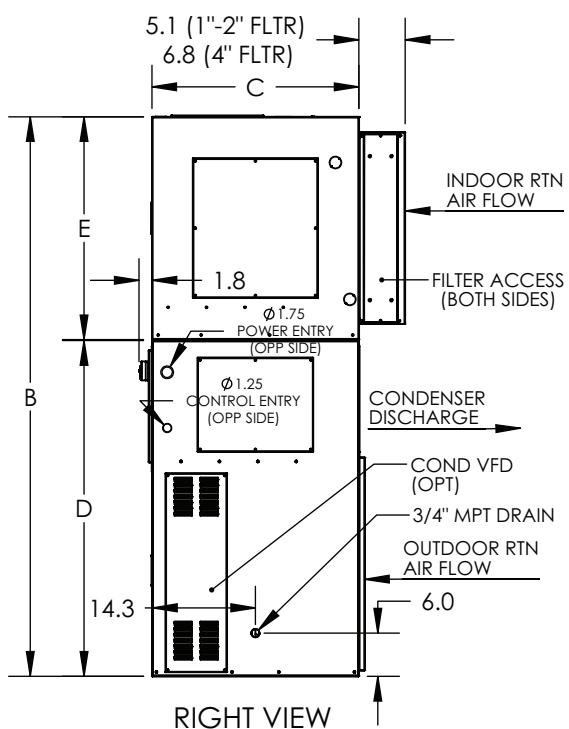
TOP VIEW SIZE 06



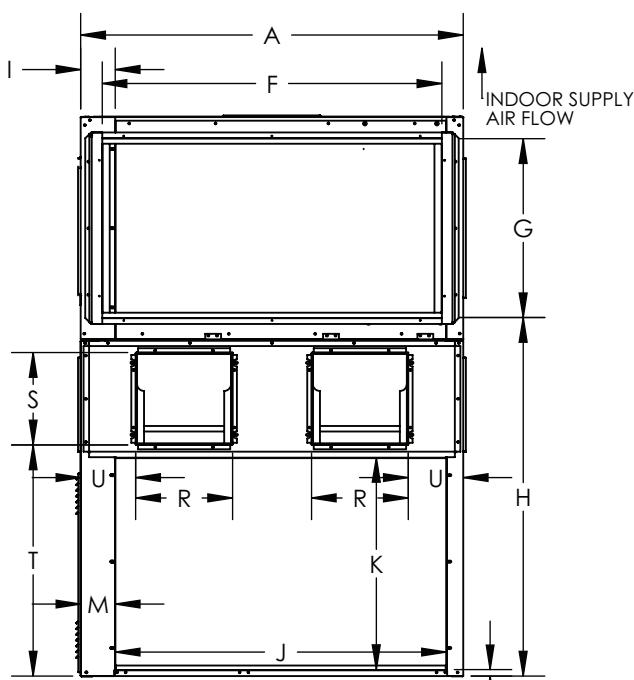
TOP VIEW SIZE 08



FRONT VIEW



RIGHT VIEW



REAR VIEW

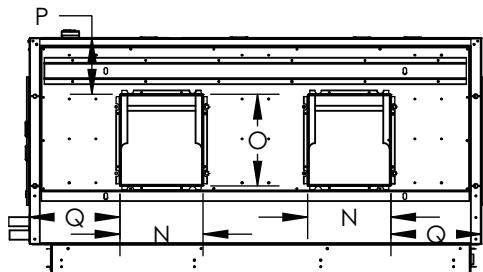
UNIT 50XCA	WIDTH	HEIGHT	DEPTH	COND SECTION	EVAP SECTION	EVAP RETURN DUCT				COND RETURN DUCT				EVAP SUPPLY DUCT (Blower Opening)				COND DISCHARGE DUCT (Blower Opening)			
						F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
06	53.1	77.1	29.0	46.6	31.0	47.2	24.8	49.8	4.8	46	29.4	0.9	4.8	13.4	12.8	2.7	19.8	13.4	12.8	32.1	7.6
08	53.1	77.1	29.0	46.6	31.0	47.2	24.8	49.8	4.8	46	29.4	0.9	4.8	13.4	12.8	2.7	7.6	13.4	12.8	32.1	7.6

NOTE: Dimensions are in inches.

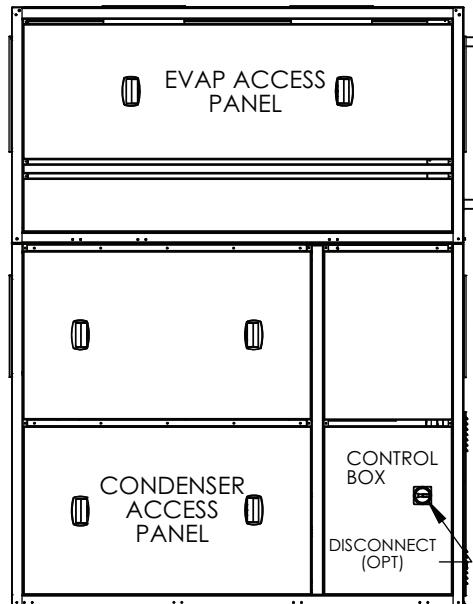
Dimensions — 50XCA12,14



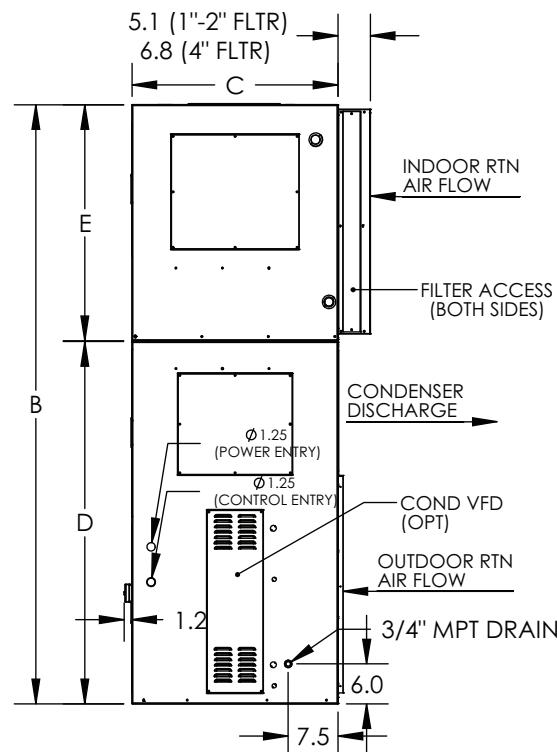
REAR RETURN, VERTICAL DISCHARGE



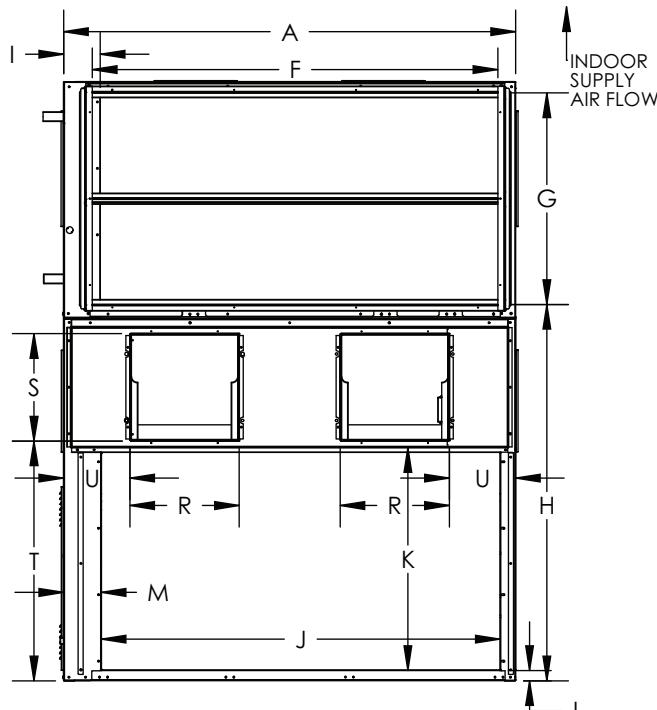
TOP VIEW



FRONT VIEW



RIGHT VIEW



REAR VIEW

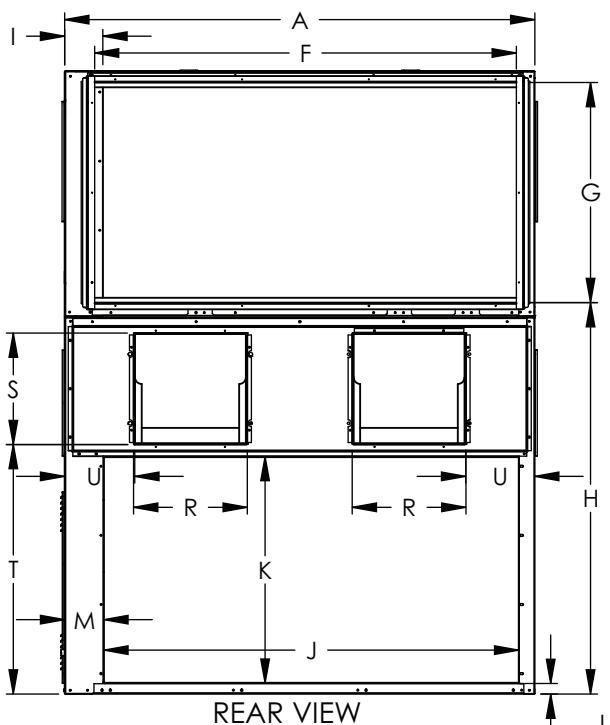
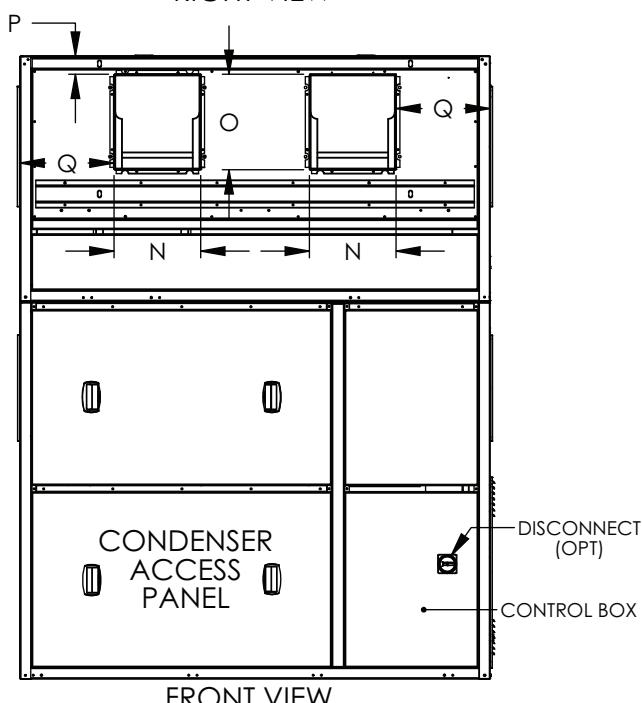
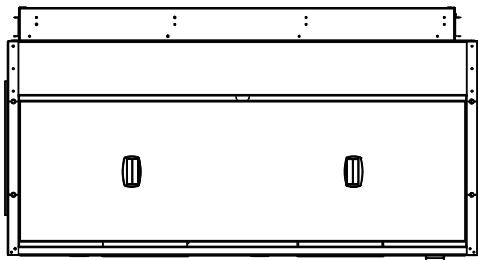
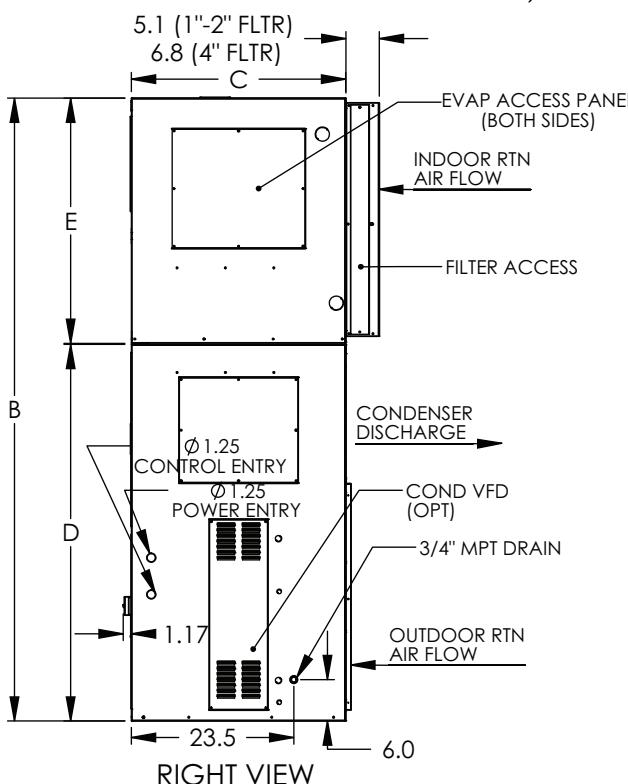
UNIT 50XCA	WIDTH	HEIGHT	DEPTH	COND SECTION	EVAP SECTION	EVAP RETURN DUCT				COND RETURN DUCT				EVAP SUPPLY DUCT (Blower Opening)				COND DISCHARGE DUCT (Blower Opening)			
						F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
12	68.0	90.1	31.2	54.5	35.5	61.1	31.8	56.7	5.5	60	32.8	1.5	5.7	12.5	13.8	8.5	13.6	16.4	16.2	36.5	11.5
14	88.0	90.1	31.2	54.5	35.5	81.0	31.8	56.7	2.5	80	32.8	1.5	5.7	12.5	13.8	8.5	23.6	18.9	16.2	36.6	17.2

NOTE: Dimensions are in inches.

Dimensions — 50XCA12,14 (cont)

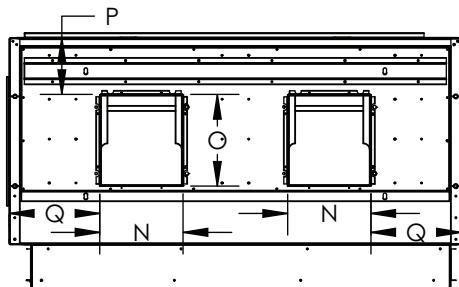
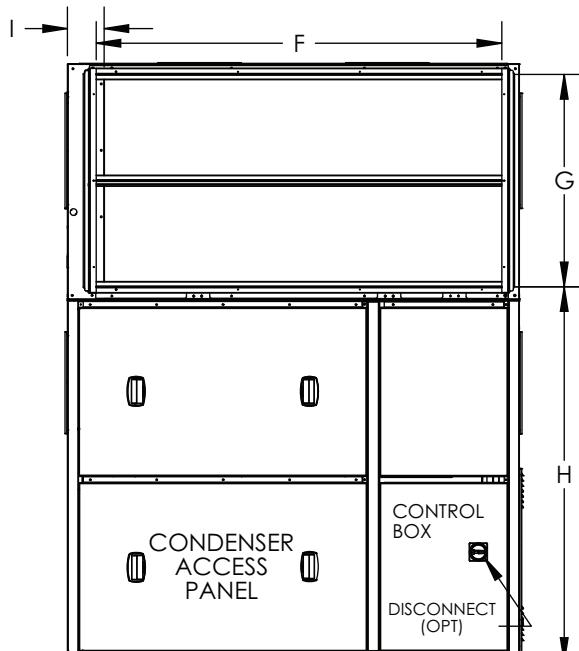
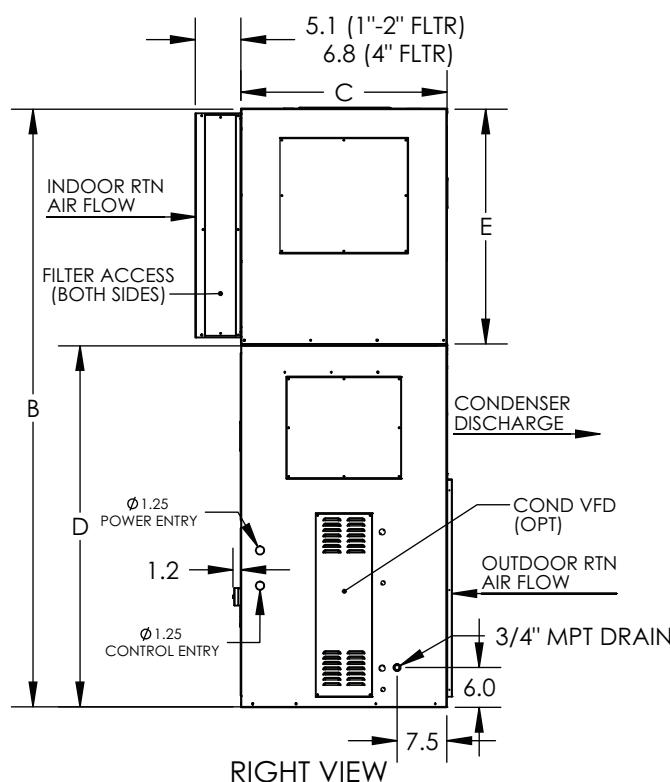
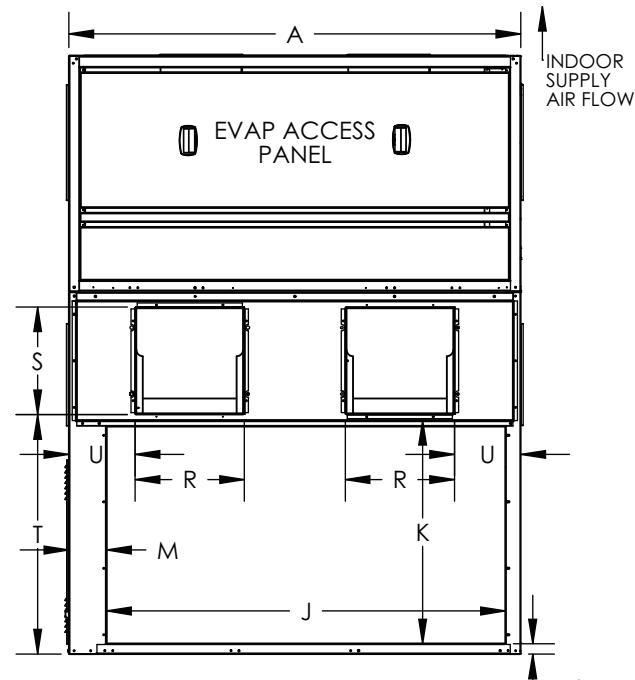


REAR RETURN, HORIZONTAL DISCHARGE



UNIT 50XCA	WIDTH A	HEIGHT B	DEPTH C	COND SECTION D	EVAP SECTION E	EVAP RETURN DUCT				COND RETURN DUCT				EVAP SUPPLY DUCT (Blower Opening)				COND DISCHARGE DUCT (Blower Opening)			
						F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
12	68.0	90.1	31.2	54.5	35.5	61.1	31.8	56.7	5.5	60	32.8	1.5	5.7	12.5	13.8	2.7	13.6	16.4	16.2	36.5	11.5
14	88.0	90.1	31.2	54.5	35.5	81.0	31.8	56.7	2.5	80	32.8	1.5	5.7	12.5	13.8	2.7	23.6	18.9	16.2	36.6	17.2

NOTE: Dimensions are in inches.

FRONT RETURN, VERTICAL DISCHARGE

TOP VIEW

FRONT VIEW

RIGHT VIEW

REAR VIEW

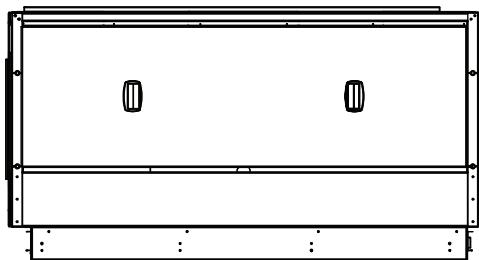
UNIT 50XCA	WIDTH	HEIGHT	DEPTH	COND SECTION	EVAP SECTION	EVAP RETURN DUCT				COND RETURN DUCT				EVAP SUPPLY DUCT (Blower Opening)				COND DISCHARGE DUCT (Blower Opening)			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
12	68.0	90.1	31.2	54.5	35.5	61.1	31.8	56.7	5.5	60	32.8	1.5	5.7	12.5	13.8	8.5	13.6	16.4	16.2	36.5	11.5
14	88.0	90.1	31.2	54.5	35.5	81.0	31.8	56.7	2.5	80	32.8	1.5	5.7	12.5	13.8	8.9	23.6	18.9	16.2	36.6	17.2

NOTE: Dimensions are in inches.

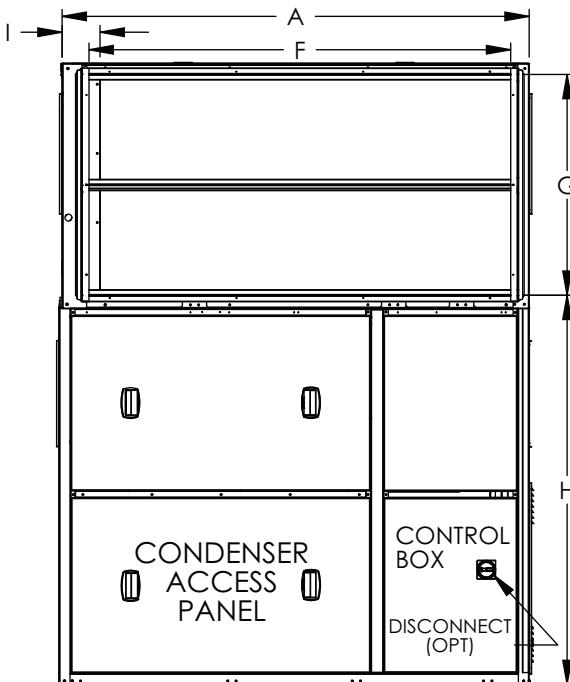
Dimensions — 50XCA12,14 (cont)



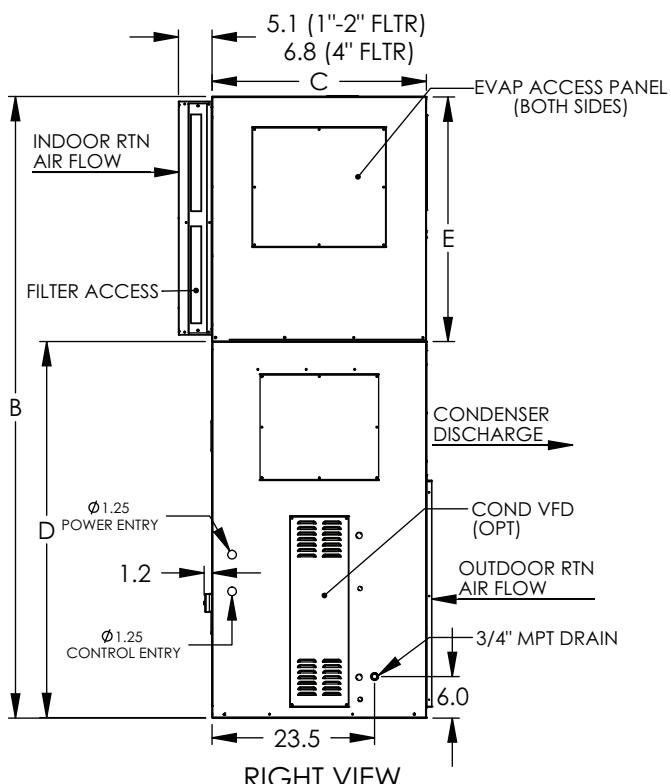
FRONT RETURN, HORIZONTAL DISCHARGE



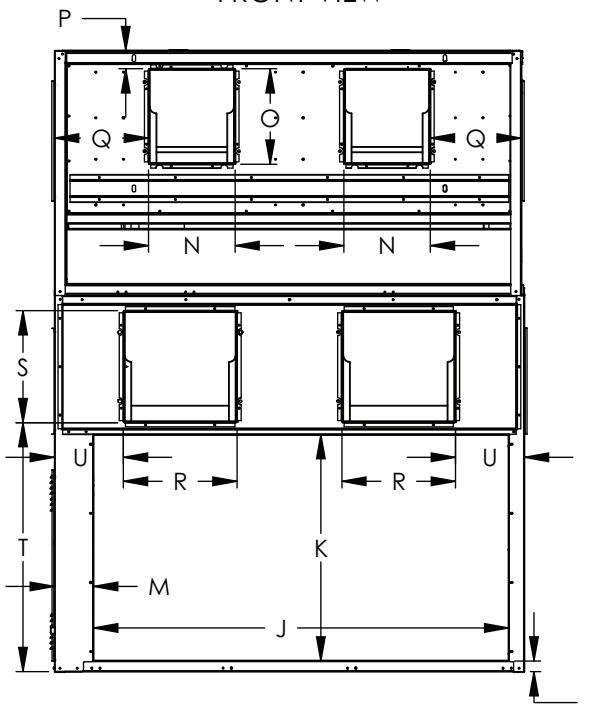
TOP VIEW



FRONT VIEW



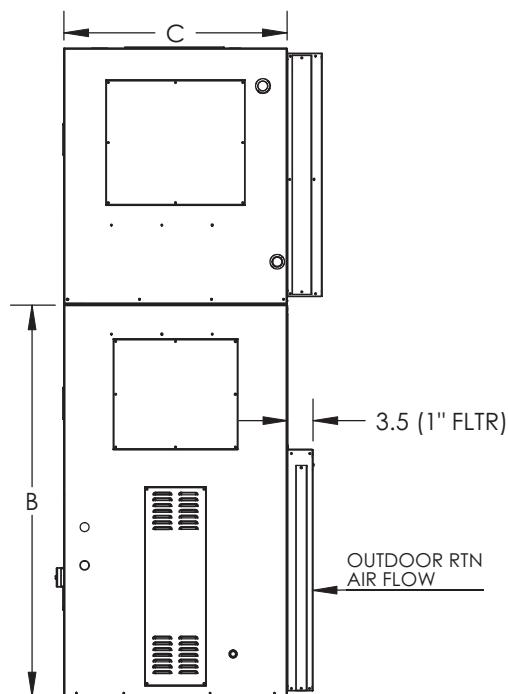
RIGHT VIEW



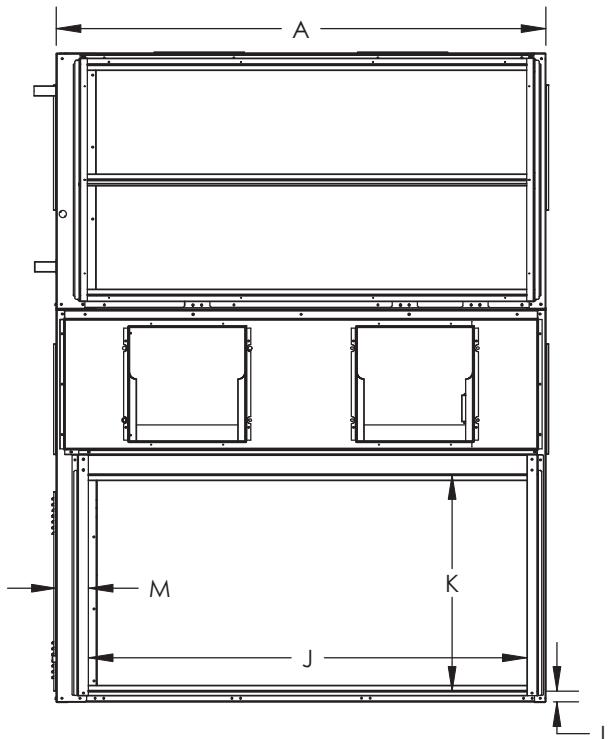
REAR VIEW

UNIT 50XCA	WIDTH	HEIGHT	DEPTH	COND SECTION	EVAP SECTION	EVAP RETURN DUCT				COND RETURN DUCT				EVAP SUPPLY DUCT (Blower Opening)				COND DISCHARGE DUCT (Blower Opening)			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
12	68.0	90.1	31.2	54.5	35.5	61.1	31.8	56.7	5.5	60	32.8	1.5	5.7	12.5	13.8	2.6	13.6	16.4	16.2	36.5	11.5
14	88.0	90.1	31.2	54.5	35.5	81.0	31.8	56.7	2.5	80	32.8	1.5	5.7	12.5	13.8	2.6	23.6	18.9	16.2	36.6	17.2

NOTE: Dimensions are in inches.

CONDENSER FILTER


RIGHT VIEW



REAR VIEW

UNIT 50XCA	WIDTH	HEIGHT	DEPTH	COND DUCT DIMENSIONS			
	A	B	C	J	K	L	M
06,08	53.1	46.6	29.0	45.3	29.7	0.7	5.1
12	68.0	54.5	31.2	61.0	30.1	1.5	4.5
14	88.0	54.5	31.2	80.9	30.1	1.5	4.5

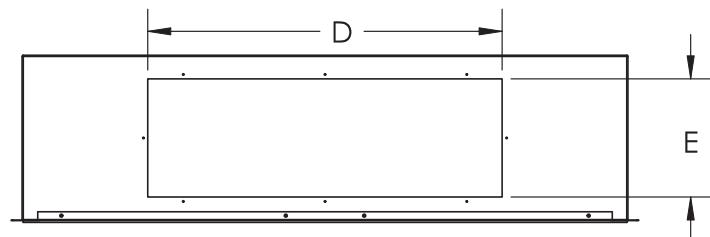
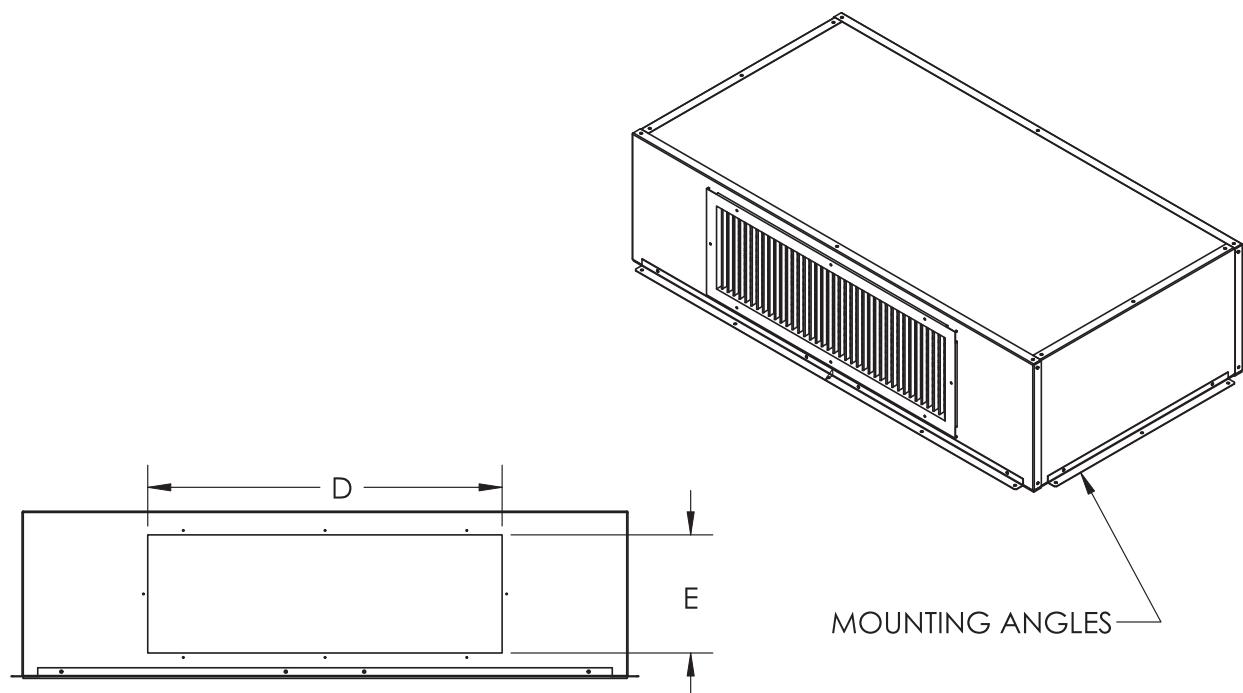
NOTES:

1. Dimensions are in inches.
2. Condenser filters are no longer available as a factory-installed option. If needed, they are to be provided in the field.

Dimensions (cont)

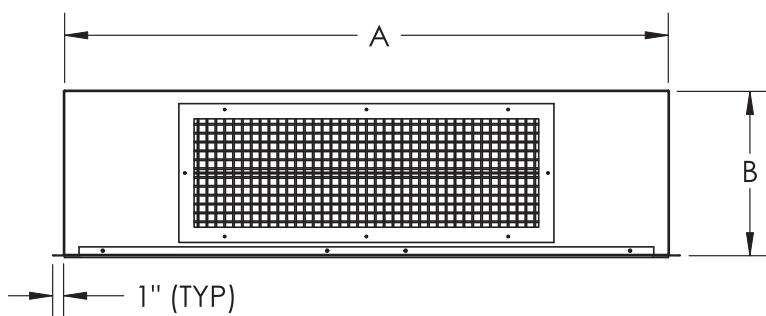


50XC PLENUM UNIT

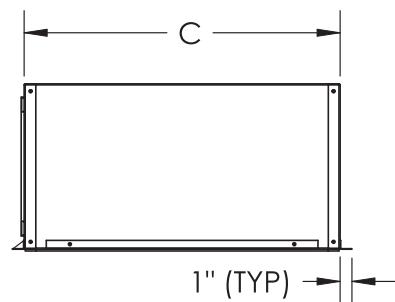


MOUNTING ANGLES

**FRONT VIEW
LESS GRILLE**



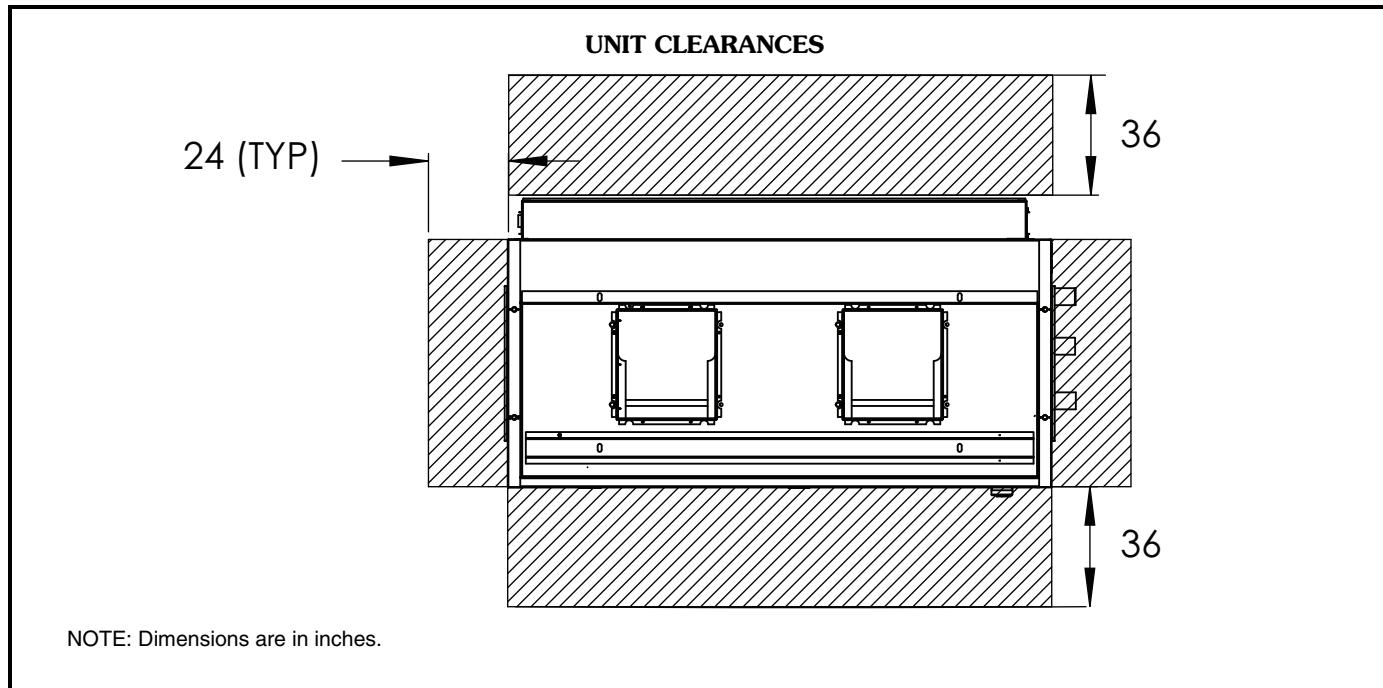
FRONT VIEW



RIGHT VIEW

MODEL	UNIT SIZE	A	B	C	D	E	WGT (lb)
50XCA900-200A00	06	51.3	14.0	26.8	30.0	10.0	65
50XCA900-201A00	08	51.3	14.0	26.8	45.0	10.0	65
50XCA900-202A00	12	66.0	14.0	28.9	60.0	10.0	80
50XCA900-203A00	14	86.0	19.0	28.9	48.0	15.0	115

NOTE: Dimensions are shown in inches.



Selection procedure (50XCA08 unit example)

I Determine design conditions.

Given:

Cooling Requirements

Total Cooling Capacity (TC) 82,000 Btuh
 Sensible Cooling Capacity (SHC) 65,000 Btuh
 Evaporator Air Quantity 3,000 Cfm
 Condenser Air Quantity 3,500 Cfm

Summer Entering-Air Conditions:

Entering dry bulb (edb) 80 F
 Entering wet bulb (ewb) 67 F
 Entering Condenser Air Temp (EAT) 95 F

Unit Voltage 460 V

Fan Requirements

External Static Pressure Required
 ESP (in. wg) 0.75

II Select unit based on cooling requirements.

Enter Gross Cooling Capacities table for 50XCA08 unit at 3000 cfm and required wet bulb of 67 F and read down to the section displaying capacities with 95 F entering-air temperature. The 50XCA08 provides a total capacity closest to design requirements.

For example:

Unit selection — 50XCA08
 Selected at 3000 cfm of 80 F edb, 67 F ewb entering air.

TC = 83,800 Btuh
 SHC = 66,500 Btuh

Compressor — Power Input = 5.85 kW

Leaving Air db
 = 59.9 F

Leaving Air wb at 67 F wb
 = 58.3 F

III Fan requirements.

External static pressure (ESP) required 0.75 in. wg
 Enter Evaporator Fan Performance table for cfm, and static pressure required to obtain the following data:

For 3000 cfm and 0.75 ESP, by interpolation the fan operates at 967 rpm and requires 0.97 brake horsepower.

Since standard motor horsepower is 1.0, it will produce the necessary cfm and ESP for this job.

Performance data



GROSS COOLING CAPACITIES

50XCA06 (5 TONS)

Entering Condenser Air		BF	AIR ENTERING EVAPORATOR — 80 F Edb (F) - CFM											
			2500				2000				1500			
			Air Entering Evaporator — Ewb (F)											
ECT (F)	CFM	BF	57	62	67	75	57	62	67	75	57	62	67	75
		0.20	0.10	0.10	0.03	0.34	0.15	0.14	0.10	0.44	0.22	0.22	0.18	0.15
55	2100	TC	73.4	74.8	80.4	90.4	68.8	71.9	77.8	87.8	62.9	67.9	73.7	83.7
		SHC	73.4	70.2	58.6	38.9	68.8	63.2	53.4	36.9	62.1	55.2	47.5	34.5
		LDB	53.08	54.40	58.75	65.92	48.48	51.18	55.83	63.36	42.07	46.49	51.34	59.30
		LWB	45.41	51.41	56.79	65.43	43.16	48.97	54.36	63.10	39.61	45.04	50.43	59.29
	2800	kW	3.25	3.27	3.34	3.48	3.20	3.23	3.31	3.45	3.13	3.18	3.26	3.39
		TC	74.0	75.7	81.5	92.2	69.3	72.7	78.8	89.4	63.3	68.5	74.5	85.0
		SHC	74.0	70.7	59.0	39.5	69.3	63.6	53.7	37.4	62.4	55.4	47.8	35.0
		LDB	52.85	54.22	58.60	65.71	48.23	51.03	55.66	63.11	41.87	46.35	51.15	59.01
	3500	LWB	45.30	51.28	56.63	65.22	43.03	48.84	54.18	62.86	39.46	44.88	50.23	59.00
		kW	2.85	2.86	2.90	2.98	2.82	2.84	2.86	2.96	2.79	2.82	2.85	2.93
		TC	74.5	76.1	82.2	93.1	69.6	73.0	79.4	90.2	63.5	68.8	75.0	85.6
		SHC	74.5	70.9	59.3	39.9	69.6	63.8	54.0	37.7	62.5	55.6	48.0	35.2
	2100	LDB	52.70	54.13	58.49	65.59	48.09	50.95	55.54	62.97	41.79	46.23	51.01	58.88
		LWB	45.22	51.21	56.54	65.11	42.96	48.76	54.08	62.73	39.39	44.77	50.11	58.87
		kW	2.63	2.63	2.65	2.70	2.61	2.62	2.64	2.69	2.60	2.61	2.63	2.67
		TC	68.7	69.3	74.4	83.5	64.6	66.7	72.1	81.3	59.0	63.2	68.6	77.8
	2800	SHC	68.7	67.3	56.1	36.5	64.6	60.6	50.9	34.5	59.0	52.8	45.1	32.2
		LDB	54.80	55.46	59.67	66.79	50.37	52.37	56.96	64.42	43.96	47.94	52.76	60.63
		LWB	46.22	52.26	57.64	66.23	44.09	50.05	55.40	64.09	40.86	46.40	51.77	60.58
		kW	4.29	4.29	4.37	4.52	4.23	4.26	4.34	4.48	4.15	4.21	4.28	4.43
	3500	TC	69.5	70.3	75.5	85.2	65.2	67.6	73.1	82.8	59.5	63.8	69.5	79.1
		SHC	69.5	67.8	56.5	37.1	65.2	61.1	51.3	35.0	59.5	53.1	45.5	32.7
		LDB	54.52	55.26	59.51	66.59	50.10	52.17	56.76	64.18	43.66	47.76	52.54	60.36
		LWB	46.09	52.11	57.48	66.04	43.96	49.87	55.21	63.86	40.70	46.22	51.55	60.31
		kW	3.83	3.84	3.88	3.96	3.80	3.82	3.86	3.94	3.76	3.79	3.83	3.91
	2100	TC	70.0	70.9	76.3	86.2	65.6	68.0	73.8	83.8	59.7	64.2	70.0	79.8
		SHC	70.0	68.1	56.8	37.5	65.6	61.3	51.6	35.4	59.7	53.3	45.7	33.0
		LDB	54.34	55.15	59.39	66.45	49.93	52.09	56.63	64.03	43.50	47.63	52.39	60.18
		LWB	46.01	52.03	57.37	65.92	43.87	49.79	55.10	63.72	40.62	46.10	51.42	60.14
		kW	3.57	3.58	3.60	3.64	3.56	3.56	3.59	3.63	3.54	3.55	3.57	3.61
	2800	TC	63.4	63.5	67.6	75.8	59.8	60.9	65.7	74.0	54.9	57.8	62.8	71.1
		SHC	63.4	63.5	53.3	33.9	59.8	57.7	48.2	31.9	54.9	50.2	42.5	29.7
		LDB	56.74	56.84	60.66	67.73	52.58	53.68	58.16	65.57	46.46	49.52	54.32	62.13
		LWB	47.14	53.16	58.57	67.11	45.16	51.21	56.55	65.18	42.14	47.93	53.26	62.00
		kW	5.48	5.48	5.55	5.70	5.42	5.43	5.52	5.67	5.28	5.38	5.47	5.62
	3500	TC	64.3	64.5	68.8	77.5	60.5	61.9	66.8	75.5	55.3	58.5	63.7	72.4
		SHC	64.3	64.5	53.7	34.4	60.5	58.1	48.6	32.4	55.3	50.4	42.9	30.2
		LDB	56.44	56.48	60.53	67.54	52.26	53.49	57.99	65.34	46.21	49.36	54.11	61.85
		LWB	46.99	53.01	58.41	66.92	45.01	51.02	56.36	64.96	42.01	47.73	53.03	61.73
		kW	4.99	4.99	5.03	5.11	4.95	4.97	5.01	5.09	4.91	4.94	4.98	5.06
	2100	TC	64.8	65.0	69.6	78.6	61.0	62.4	67.5	76.5	55.7	59.0	64.3	73.3
		SHC	64.8	65.0	54.1	34.8	61.0	58.4	48.9	32.8	55.7	50.7	43.2	30.5
		LDB	56.23	56.29	60.39	67.40	52.05	53.36	57.84	65.18	45.99	49.20	53.93	61.66
		LWB	46.90	52.93	58.30	66.80	44.91	50.91	56.23	64.81	41.90	47.59	52.88	61.55
		kW	4.70	4.71	4.73	4.77	4.69	4.70	4.72	4.76	4.66	4.68	4.70	4.75
	2800	TC	60.4	60.5	63.8	71.6	57.1	57.7	62.2	70.0	52.4	54.8	59.5	67.4
		SHC	60.4	60.5	51.8	32.5	57.1	56.0	46.7	30.5	52.4	48.7	41.1	28.3
		LDB	57.84	57.93	61.22	68.24	53.82	54.46	58.84	66.20	47.96	50.43	55.18	62.95
		LWB	47.64	53.62	59.08	67.59	45.76	51.83	57.17	65.77	42.90	48.76	54.07	62.78
		kW	6.11	6.11	6.17	6.32	6.05	6.14	6.29	6.56	6.01	6.10	6.24	
	3500	TC	61.3	61.4	65.0	73.3	57.8	58.7	63.2	71.5	53.0	55.6	60.4	68.7
		SHC	61.3	61.4	52.1	33.0	57.8	56.5	47.1	31.0	53.0	49.1	41.4	28.8
		LDB	57.52	57.61	61.09	68.06	53.49	54.26	58.67	65.98	47.63	50.19	54.97	62.67
		LWB	47.50	53.48	58.92	67.40	45.61	51.63	56.99	65.55	42.73	48.52	53.85	62.51
		kW	5.62	5.62	5.66	5.75	5.59	5.60	5.73	5.54	5.57	5.62	5.70	
	2100	TC	61.9	62.0	65.9	74.4	58.3	59.3	64.0	72.6	53.4	56.0	61.1	69.6
		SHC	61.9	62.0	52.5	33.4	58.3	56.8	47.4	31.4	53.4	49.3	41.8	29.2
		LDB	57.29	57.39	60.94	67.91	53.26	54.11	58.50	65.80	47.38	50.08	54.78	62.46
		LWB	47.39	53.39	58.80	67.27	45.49	51.53	56.85	65.40	42.61	48.42	53.68	62.32
		kW	5.34	5.34	5.36	5.41	5.32	5.33	5.35	5.40	5.29	5.31	5.33	5.38
	2800	TC	57.3	57.3	59.9	67.3	54.2	54.3	58.4	65.8	49.9	51.5	56.1	63.6
		SHC	57.3	57.3	50.2	31.0	54.2	54.3	45.1	29.1	49.9	47.1	39.6	27.0
		LDB	59.00	59.09	61.79	68.77	55.15	55.22	59.53	66.84	49.53	51.38	56.07	63.77
		LWB	48.18	54.09	59.60	68.07	46.39	52.48	57.82	66.37	43.68	49.64	54.92	63.57
		kW	6.76	6.76	6.81	6.95	6.70	6.78	6.93	6.61	6.64	6.74	6.74	6.88
	3500	TC	58.3	58.3	61.2	68.9	55.1	55.4	59.6	67.4	50.6	52.4	57.1	64.9
		SHC	58.3	58.3	50.7	31.6	55.1	54.5	45.6	29.6	50.6	47.5	40.0	27.4
		LDB	58.63	58.72	61.62	68.58	54.76	55.16	59.33	66.61	49.11	51.15	55.82	63.49
		LWB	48.01	53.94	59.43	67.89	46.21	52.28	57.62	66.15	43.47	49.40	54.67	63.29
		kW	6.28	6.28	6.32	6.40	6.25	6.25	6.30	6.38	6.19	6.22	6.27	6.36
	3500	TC	58.8	58.8	62.0	69.9	55.5	55.9	60.2	68.3	50.9	52.8	57.6	65.7
		SHC	58.8	58.8	51.0	31.9	55.5	54.9	45.9	29.9	50.9	47.7	40.2	27

GROSS COOLING CAPACITIES (cont)
50XCA08 (7½ TONS)

Entering Condenser Air		BF	AIR ENTERING EVAPORATOR — 80 F Edb (F) - CFM											
			3750				3000				2250			
			Air Entering Evaporator — Ewb (F)											
ECT (F)	CFM	BF	57	62	67	75	57	62	67	75	57	62	67	75
		0.30	0.11	0.10	0.06	0.43	0.20	0.13	0.12	0.52	0.31	0.17	0.16	
55	2625	TC	95.1	95.4	100.9	113.5	89.6	91.1	98.1	110.8	82.1	86.4	93.8	106.4
		SHC	95.1	95.3	80.3	50.9	89.6	86.8	72.4	47.9	82.1	75.4	63.8	44.5
		LDB	56.76	56.81	60.59	67.72	52.61	53.61	58.11	65.58	46.56	49.48	54.30	62.17
	3500	LWB	47.15	53.14	58.61	67.13	45.18	51.24	56.60	65.20	42.19	47.98	53.32	62.05
		KW	3.95	3.97	4.07	4.32	3.85	3.88	4.01	4.26	3.71	3.79	3.93	4.18
		TC	96.1	96.2	102.4	115.5	90.4	92.1	99.5	112.7	82.7	87.1	94.9	108.1
75	2625	SHC	96.1	96.2	80.9	51.5	90.4	87.3	73.0	48.5	82.7	75.7	64.3	45.0
		LDB	56.51	56.61	60.44	67.57	52.37	53.47	57.94	65.40	46.31	49.36	54.11	61.94
		LWB	47.03	53.06	58.48	66.98	45.06	51.11	56.44	65.02	42.07	47.85	53.14	61.81
	3500	KW	3.53	3.53	3.61	3.80	3.45	3.47	3.57	3.76	3.35	3.41	3.51	3.70
		TC	96.5	96.7	103.1	116.6	90.8	92.5	100.0	113.6	83.0	87.5	95.3	108.8
		SHC	96.5	96.7	81.2	51.9	90.8	87.6	73.2	48.8	83.0	75.9	64.5	45.3
95	2625	LDB	56.41	56.49	60.37	67.49	52.24	53.39	57.88	65.30	46.19	49.26	54.04	61.83
		LWB	46.98	53.02	58.42	66.90	45.00	51.06	56.38	64.93	42.01	47.77	53.07	61.71
		KW	3.30	3.31	3.37	3.53	3.24	3.26	3.34	3.49	3.16	3.21	3.29	3.44
	3500	TC	88.9	89.0	93.2	105.0	84.0	84.5	90.8	102.6	77.2	80.1	87.0	98.8
		SHC	88.9	89.0	77.1	48.0	84.0	83.2	69.4	45.0	77.2	72.3	60.9	41.7
		LDB	58.27	58.36	61.34	68.43	54.32	54.72	59.01	66.44	48.53	50.72	55.49	63.28
	4300	LWB	47.84	53.79	59.30	67.77	46.00	52.10	57.46	66.00	43.18	49.13	54.44	63.09
		KW	5.06	5.06	5.16	5.44	4.96	4.97	5.11	5.38	4.81	4.87	5.02	5.29
		TC	89.9	89.9	94.7	106.8	84.8	85.5	92.0	104.3	77.8	81.0	88.0	100.3
105	2625	SHC	89.9	89.9	77.8	48.6	84.8	83.7	69.9	45.6	77.8	72.7	61.3	42.2
		LDB	58.04	58.13	61.18	68.29	54.08	54.56	58.89	66.27	48.30	50.54	55.32	63.08
		LWB	47.74	53.70	59.17	67.64	45.88	51.97	57.32	65.84	43.07	48.98	54.28	62.89
	3500	KW	4.58	4.58	4.66	4.85	4.50	4.51	4.61	4.81	4.39	4.44	4.55	4.74
		TC	90.4	90.5	95.4	107.9	85.3	86.0	92.7	105.3	78.1	81.3	88.6	101.1
		SHC	90.4	90.5	78.1	48.9	85.3	84.0	70.2	45.9	78.1	72.9	61.6	42.5
	4300	LDB	57.90	58.00	61.11	68.19	53.94	54.47	58.79	66.17	48.17	50.48	55.21	62.95
		LWB	47.67	53.64	59.11	67.55	45.82	51.90	57.24	65.74	43.00	48.91	54.18	62.78
		KW	4.32	4.32	4.38	4.54	4.26	4.27	4.35	4.51	4.17	4.21	4.30	4.46
115	2625	TC	82.1	82.2	84.7	95.4	77.8	77.9	82.6	93.4	71.8	73.4	79.7	90.3
		SHC	82.1	82.2	73.8	44.8	77.8	77.9	66.2	41.9	71.8	68.9	57.7	38.6
		LDB	59.93	60.01	62.15	69.19	56.21	56.31	60.00	67.37	50.75	52.08	56.74	64.49
	3500	LWB	48.60	54.47	60.06	68.48	46.89	52.94	58.39	66.89	44.28	50.34	55.63	64.25
		KW	6.36	6.37	6.43	6.72	6.25	6.26	6.38	6.67	6.10	6.14	6.30	6.58
		TC	82.9	83.0	86.1	97.1	78.5	78.5	83.8	95.0	72.2	74.1	80.4	91.7
115	3500	SHC	82.9	83.0	74.3	45.4	78.5	78.5	66.5	42.4	72.2	69.3	58.1	39.1
		LDB	59.73	59.82	62.02	69.06	56.03	56.13	59.89	67.21	50.58	51.93	56.61	64.30
		LWB	48.51	54.39	59.93	68.35	46.80	52.86	58.26	66.73	44.19	50.22	55.51	64.06
	4300	KW	5.83	5.83	5.89	6.10	5.75	5.75	5.85	6.06	5.64	5.67	5.79	6.00
		TC	83.5	83.6	86.9	98.2	79.0	79.1	84.5	96.0	72.6	74.5	81.1	92.6
		SHC	83.5	83.6	74.6	45.8	79.0	79.1	66.9	42.8	72.6	69.4	58.3	39.4
105	4300	LDB	59.59	59.67	61.95	68.96	55.87	55.97	59.79	67.11	50.42	51.86	56.49	64.17
		LWB	48.45	54.33	59.87	68.27	46.73	52.80	58.18	66.63	44.12	50.16	55.41	63.94
		KW	5.55	5.55	5.60	5.77	5.48	5.49	5.56	5.73	5.39	5.42	5.52	5.68
	2625	TC	78.3	78.3	80.2	90.2	74.4	74.4	78.2	88.6	68.7	69.5	75.6	85.8
		SHC	78.3	78.3	71.9	43.1	74.4	74.4	64.4	40.3	68.7	67.0	56.1	37.1
		LDB	60.86	60.95	62.61	69.60	57.28	57.38	60.54	67.84	52.00	52.86	57.39	65.10
115	3500	LWB	49.02	54.85	60.46	68.86	47.39	53.39	58.90	67.34	44.89	51.04	56.29	64.84
		KW	7.07	7.08	7.13	7.41	6.97	6.97	7.08	7.37	6.81	6.83	7.00	7.29
		TC	79.1	79.1	81.6	91.9	75.0	75.1	79.5	90.0	69.2	70.4	76.3	87.0
	4300	SHC	79.1	79.1	72.4	43.6	75.0	75.1	64.9	40.7	69.2	67.4	56.3	37.5
		LDB	60.67	60.75	62.49	69.47	57.09	57.18	60.39	67.72	51.82	52.71	57.31	64.95
		LWB	48.94	54.77	60.34	68.74	47.30	53.30	58.75	67.21	44.80	50.88	56.18	64.69
115	2625	KW	6.54	6.54	6.58	6.79	6.45	6.46	6.54	6.76	6.34	6.36	6.48	6.70
		TC	79.7	79.8	82.3	93.0	75.5	75.6	80.0	91.0	69.6	70.8	76.9	87.9
		SHC	79.7	79.8	72.8	44.0	75.5	75.6	65.1	41.1	69.6	67.6	56.6	37.8
	3500	LDB	60.52	60.60	62.41	69.38	56.93	57.02	60.33	67.61	51.66	52.60	57.18	64.82
		LWB	48.87	54.71	60.27	68.66	47.22	53.24	58.69	67.11	44.72	50.80	56.07	64.57
		KW	6.24	6.24	6.28	6.45	6.18	6.18	6.25	6.42	6.09	6.10	6.20	6.37
115	4300	TC	74.1	74.1	75.4	84.8	70.5	70.5	73.6	83.2	65.3	65.6	71.0	80.7
		SHC	74.1	74.1	69.8	41.4	70.5	70.5	62.5	38.5	65.3	64.9	54.2	35.3
		LDB	61.90	61.98	63.11	70.03	58.47	58.56	61.10	68.39	53.40	53.68	58.15	65.81
	2625	LWB	49.49	55.26	60.87	69.25	47.94	53.87	59.41	67.84	45.56	51.71	57.01	65.51
		KW	7.82	7.82	7.86	8.14	7.71	7.71	7.81	8.10	7.56	7.57	7.73	8.02
		TC	75.0	75.1	76.7	86.3	71.2	71.3	74.8	84.7	65.9	66.5	71.9	82.0
115	3500	SHC	75.0	75.1	70.3	41.8	71.2	71.3	63.0	39.0	65.9	65.2	54.5	35.7
		LDB	61.66	61.74	62.99	69.91	58.24	58.33	60.96	68.25	53.17	53.57	58.03	65.64
		LWB	49.38	55.17	60.76	69.14	47.83	53.78	59.28	67.70	45.45	51.55	56.87	65.34
	4300	KW	7.28	7.28	7.32	7.52	7.20	7.20	7.28	7.49	7.09	7.10	7.22	7.43
		TC	75.7	75.7	77.4	87.4	71.8							

Performance data (cont)



GROSS COOLING CAPACITIES (cont)

50XCA12 (10 TONS)

Entering Condenser Air		BF	AIR ENTERING EVAPORATOR — 80 F Edb (F) - CFM											
			5000				4000				3000			
			Air Entering Evaporator — Ewb (F)											
ECT (F)	CFM	BF	57	62	67	75	57	62	67	75	57	62	67	75
		0.23	0.06	0.05	0.03	0.37	0.13	0.08	0.06	0.46	0.23	0.11	0.10	
55	4800	TC	140.7	140.9	151.0	171.6	131.8	135.1	146.3	166.9	119.7	127.4	139.0	159.3
		SHC	140.7	140.9	117.2	75.7	131.8	125.6	105.3	71.0	119.7	108.2	92.4	65.8
		LDB	54.21	54.30	58.75	66.32	49.79	51.37	56.13	63.98	43.44	47.13	52.10	60.24
		LWB	45.94	52.09	57.48	65.97	43.81	49.88	55.21	63.77	40.59	46.26	51.54	60.18
	6000	kW	5.93	5.93	6.09	6.42	5.80	5.85	6.02	6.34	5.62	5.74	5.91	6.22
		TC	141.6	141.8	152.6	173.7	132.5	136.0	147.7	168.7	120.2	128.2	140.0	160.8
		SHC	141.6	141.8	117.9	76.4	132.5	126.1	105.9	71.6	120.2	108.6	92.9	66.4
		LDB	54.03	54.13	58.62	66.19	49.62	51.26	56.00	63.83	43.27	47.01	51.96	60.07
		LWB	45.86	52.02	57.37	65.85	43.72	49.79	55.08	63.63	40.50	46.14	51.41	60.02
	7600	kW	5.31	5.31	5.42	5.64	5.22	5.26	5.37	5.59	5.11	5.18	5.30	5.50
		TC	142.1	142.6	153.3	174.8	132.9	136.5	148.3	169.6	120.5	128.6	140.5	161.5
		SHC	142.1	141.3	118.1	76.7	132.9	126.3	106.2	71.9	120.5	108.8	93.1	66.6
		LDB	53.95	54.23	58.57	66.13	49.54	51.21	55.94	63.76	43.18	46.95	51.89	59.99
		LWB	45.82	51.96	57.32	65.78	43.68	49.74	55.03	63.56	40.46	46.08	51.34	59.94
		kW	4.97	4.96	5.05	5.21	4.90	4.93	5.01	5.17	4.82	4.87	4.96	5.11
75	4800	TC	131.8	132.0	140.0	159.5	123.7	125.4	135.8	155.2	112.6	118.3	129.3	148.5
		SHC	131.8	132.0	112.8	71.6	123.7	120.7	101.0	66.9	112.6	103.8	88.1	61.7
		LDB	55.83	55.93	59.54	67.05	51.65	52.50	57.11	64.88	45.59	48.47	53.38	61.44
		LWB	46.71	52.78	58.24	66.66	44.71	50.85	56.16	64.65	41.70	47.54	52.79	61.35
	6000	kW	7.65	7.65	7.80	8.16	7.51	7.53	7.72	8.08	7.31	7.41	7.60	7.95
		TC	132.7	132.9	141.2	161.3	124.5	126.2	136.9	156.8	113.2	119.1	130.2	149.8
		SHC	132.7	132.9	113.3	72.2	124.5	121.1	101.4	67.5	113.2	104.2	88.5	62.2
		LDB	55.67	55.77	59.44	66.94	51.48	52.39	57.00	64.76	45.41	48.35	53.26	61.29
		LWB	46.63	52.71	58.15	66.56	44.63	50.77	56.06	64.53	41.61	47.43	52.67	61.21
	7600	kW	6.94	6.94	7.03	7.28	6.84	6.86	7.22	7.68	6.72	6.78	6.91	7.14
		TC	133.2	133.3	141.9	162.1	124.9	126.7	137.5	157.6	113.5	119.5	130.7	150.5
		SHC	133.2	133.3	113.6	72.5	124.9	121.4	101.7	67.7	113.5	104.4	88.8	62.5
		LDB	55.58	55.68	59.40	66.89	51.39	52.34	56.95	64.70	45.32	48.29	53.19	61.21
		LWB	46.59	52.68	58.11	66.52	44.59	50.72	56.01	64.47	41.56	47.38	52.61	61.14
		kW	6.53	6.54	6.60	6.78	6.47	6.48	6.57	6.74	6.38	6.43	6.51	6.68
95	4800	TC	121.9	122.0	127.6	145.4	114.7	114.9	123.9	141.9	104.7	108.3	118.3	136.2
		SHC	121.9	122.0	107.9	67.0	114.7	114.9	96.2	62.4	104.7	98.9	83.5	57.3
		LDB	57.65	57.75	60.43	67.88	53.72	53.81	58.19	65.90	48.02	49.95	54.78	62.76
		LWB	47.56	53.54	59.08	67.46	45.71	51.89	57.21	65.63	42.92	48.94	54.16	62.64
	6000	kW	9.68	9.68	9.80	10.18	9.53	9.53	9.72	10.10	9.32	9.39	9.60	9.98
		TC	122.8	122.9	128.7	147.1	115.4	115.6	124.9	143.3	105.3	109.1	119.2	137.4
		SHC	122.8	122.9	108.3	67.5	115.4	115.6	96.6	62.9	105.3	99.3	83.8	57.7
		LDB	57.49	57.59	60.36	67.78	53.55	53.65	58.10	65.79	47.83	49.83	54.67	62.63
		LWB	47.49	53.47	59.01	67.37	45.63	51.81	57.12	65.53	42.83	48.83	54.05	62.51
	7600	kW	8.89	8.90	8.97	9.23	8.80	8.80	8.92	9.18	8.66	8.71	8.85	9.09
		TC	123.2	123.3	129.3	147.9	115.8	116.0	125.5	144.1	105.6	109.4	119.7	138.0
		SHC	123.2	123.3	108.5	67.8	115.8	116.0	96.8	63.1	105.6	99.5	84.0	58.0
		LDB	57.42	57.51	60.31	67.73	53.47	53.56	58.06	65.74	47.74	49.77	54.61	62.56
		LWB	47.45	53.44	58.97	67.33	45.59	51.78	57.07	65.47	42.79	48.78	53.99	62.45
		kW	8.45	8.45	8.51	8.69	8.38	8.38	8.47	8.65	8.29	8.32	8.42	8.59
105	4800	TC	116.5	116.6	120.9	137.9	109.8	109.9	117.5	134.6	100.4	102.9	112.5	129.4
		SHC	116.5	116.6	105.2	64.6	109.8	109.9	93.6	59.9	100.4	96.3	81.0	54.9
		LDB	58.64	58.73	60.93	68.32	54.84	54.94	58.78	66.45	49.32	50.73	55.53	63.47
		LWB	48.01	53.94	59.53	67.89	46.25	52.37	57.76	66.16	43.57	49.66	54.88	63.33
	6000	kW	10.81	10.82	10.91	11.29	10.66	10.66	10.84	11.22	10.45	10.51	10.72	11.10
		TC	117.3	117.4	121.9	139.4	110.5	110.6	118.5	136.0	101.0	103.7	113.3	130.6
		SHC	117.3	117.4	105.6	65.1	110.5	110.6	94.0	60.4	101.0	96.6	81.3	55.3
		LDB	58.49	58.58	60.85	68.23	54.68	54.78	58.69	66.34	49.14	50.63	55.42	63.34
		LWB	47.95	53.88	59.46	67.80	46.17	52.30	57.68	66.06	43.48	49.56	54.78	63.21
	7600	kW	10.00	10.00	10.07	10.33	9.90	9.91	10.02	10.28	9.77	9.81	9.95	10.20
		TC	117.7	117.8	122.5	140.1	110.8	111.0	119.0	136.7	101.3	104.0	113.7	131.2
		SHC	117.7	117.8	105.8	65.3	110.8	111.0	94.2	60.6	101.3	96.8	81.5	55.5
		LDB	58.42	58.51	60.81	68.19	54.60	54.71	58.64	66.29	49.06	50.58	55.37	63.28
		LWB	47.91	53.85	59.42	67.76	46.13	52.26	57.64	66.01	43.44	49.52	54.73	63.15
		kW	9.54	9.54	9.59	9.77	9.47	9.55	9.74	9.73	9.37	9.40	9.50	9.68
115	4800	TC	110.8	110.9	114.0	129.9	104.5	104.7	110.8	127.0	95.9	97.3	106.2	122.3
		SHC	110.8	110.9	102.3	62.0	104.5	104.7	90.9	57.4	95.9	93.5	78.4	52.4
		LDB	59.69	59.78	61.44	68.78	56.04	56.14	59.38	67.02	50.71	51.57	56.30	64.21
		LWB	48.49	54.37	59.99	68.33	46.81	52.87	58.34	66.71	44.26	50.42	55.64	64.05
	6000	kW	12.01	12.01	12.08	12.47	11.86	11.87	12.01	12.40	11.66	11.70	11.90	12.29
		TC	111.6	111.7	114.9	131.3	105.2	105.3	111.7	128.2	96.3	97.9	107.0	123.4
		SHC	111.6	111.7	102.7	62.5	105.2	105.3	91.3	57.8	96.3	93.8	78.7	52.8
		LDB	59.55	59.63	61.38	68.70	55.90	56.00	59.31	66.92	50.58	51.50	56.21	64.10
		LWB	48.43	54.31	59.93	68.25	46.74	52.81	58.26	66.62	44.19	50.34	55.54	63.95
	7600	kW	11.20	11.20	11.25	11.50	11.09</							

GROSS COOLING CAPACITIES (cont)
50XCA14 (12 TONS)

Entering Condenser Air		BF	AIR ENTERING EVAPORATOR — 80 F Edb (F) - CFM											
			6000				4800				3600			
			Air Entering Evaporator — Ewb (F)											
ECT (F)	CFM	BF	57	62	67	75	57	62	67	75	57	62	67	75
55	6000	TC	165.3	166.3	178.4	202.5	155.0	159.4	172.8	196.7	141.0	150.5	164.0	187.6
		SHC	165.3	163.1	136.5	88.8	155.0	146.7	123.2	83.4	141.0	127.1	108.6	77.5
		LDB	54.74	55.21	59.37	66.62	50.40	52.14	56.73	64.30	44.09	47.82	52.68	60.60
	8000	LWB	46.20	52.28	57.65	66.14	44.11	50.11	55.43	64.00	40.93	46.54	51.85	60.51
		KW	6.11	6.13	6.21	6.39	6.05	6.08	6.17	6.34	5.97	6.02	6.11	6.27
		TC	165.8	166.9	179.2	204.0	155.5	159.9	173.5	197.8	141.3	150.8	164.6	188.6
75	6000	SHC	165.8	163.7	136.8	89.3	155.5	147.0	123.5	83.8	141.3	127.2	108.8	77.8
		LDB	54.66	55.13	59.33	66.54	50.31	52.08	56.69	64.23	44.01	47.81	52.63	60.51
		LWB	46.17	52.24	57.60	66.07	44.07	50.07	55.38	63.93	40.89	46.51	51.79	60.42
	8000	KW	5.51	5.51	5.54	5.62	5.48	5.49	5.53	5.60	5.45	5.47	5.50	5.57
		TC	166.2	167.2	179.7	204.6	155.8	160.2	174.0	198.5	141.6	151.2	165.0	189.2
		SHC	166.2	163.8	137.0	89.5	155.8	147.1	123.7	84.1	141.6	127.4	109.0	78.1
95	6000	LDB	54.61	55.10	59.29	66.51	50.25	52.06	56.64	64.18	43.95	47.76	52.58	60.46
		LWB	46.14	52.22	57.57	66.04	44.04	50.05	55.34	63.88	40.86	46.47	51.75	60.37
		KW	5.24	5.24	5.26	5.32	5.23	5.24	5.25	5.30	5.22	5.22	5.24	5.28
	8000	TC	155.1	155.3	165.2	187.7	145.8	148.1	160.3	182.7	133.1	140.1	152.7	174.9
		SHC	155.1	155.3	131.2	83.8	145.8	141.1	118.0	78.5	133.1	122.0	103.6	72.7
		LDB	56.31	56.40	60.17	67.37	52.15	53.20	57.71	65.22	46.11	49.13	53.94	61.79
105	6000	LWB	46.94	52.99	58.41	66.85	44.96	51.05	56.36	64.88	41.97	47.77	53.05	61.65
		KW	8.16	8.16	8.24	8.44	8.09	8.11	8.21	8.39	8.00	8.05	8.14	8.33
		TC	155.7	155.9	166.0	189.0	146.3	148.9	161.0	183.8	133.4	140.6	153.3	175.8
	8000	SHC	155.7	155.9	131.5	84.2	146.3	141.4	118.3	78.9	133.4	122.2	103.8	73.0
		LDB	56.22	56.30	60.13	67.30	52.06	53.15	57.66	65.14	46.02	49.08	53.87	61.70
		LWB	46.90	52.94	58.36	66.79	44.92	50.99	56.31	64.80	41.92	47.71	52.99	61.56
115	6000	KW	7.45	7.46	7.49	7.58	7.43	7.44	7.47	7.56	7.39	7.41	7.45	7.53
		TC	156.1	156.2	166.6	189.8	146.7	149.2	161.6	184.6	133.7	141.0	153.8	176.4
		SHC	156.1	156.2	131.8	84.5	146.7	141.5	118.5	79.2	133.7	122.4	104.0	73.3
	8000	LDB	56.15	56.26	60.09	67.26	51.99	53.12	57.61	65.09	45.95	49.02	53.82	61.64
		LWB	46.87	52.92	58.33	66.75	44.89	50.97	56.27	64.76	41.89	47.67	52.94	61.51
		KW	7.14	7.14	7.15	7.20	7.13	7.15	7.19	7.19	7.12	7.12	7.14	7.17
135	6000	TC	143.5	143.6	150.6	171.0	135.3	135.9	146.4	166.9	124.1	127.8	140.0	160.6
		SHC	143.5	143.6	125.4	78.3	135.3	134.3	112.3	73.1	124.1	115.9	98.1	67.5
		LDB	58.08	58.17	61.05	68.19	54.17	54.48	58.78	66.22	48.39	50.65	55.31	63.08
	8000	LWB	47.76	53.72	59.23	67.63	45.93	52.05	57.38	65.84	43.12	49.19	54.37	62.89
		KW	10.55	10.55	10.61	10.80	10.48	10.48	10.57	10.77	10.39	10.27	10.52	10.71
		TC	144.1	144.3	151.6	172.4	135.8	136.7	147.1	168.1	124.3	129.2	140.6	161.3
155	6000	SHC	144.1	144.3	125.8	78.7	135.8	134.6	112.6	73.5	124.3	116.6	98.3	67.7
		LDB	57.98	58.07	60.98	68.13	54.07	54.44	58.73	66.15	48.35	50.48	55.25	63.01
		LWB	47.71	53.68	59.17	67.57	45.88	51.98	57.33	65.77	43.10	49.02	54.31	62.83
	8000	KW	9.79	9.79	9.82	9.90	9.76	9.77	9.80	9.88	9.73	9.74	9.78	9.85
		TC	144.6	144.8	152.1	173.3	136.2	137.0	147.7	168.9	124.7	129.4	141.2	162.0
		SHC	144.6	144.8	126.0	79.1	136.2	134.8	112.9	73.8	124.7	116.7	98.6	68.0
175	6000	LDB	57.90	58.00	60.96	68.08	53.98	54.40	58.68	66.10	48.26	50.44	55.18	62.95
		LWB	47.68	53.65	59.15	67.53	45.84	51.96	57.28	65.72	43.05	49.00	54.25	62.77
		KW	9.44	9.44	9.45	9.49	9.43	9.43	9.48	9.48	9.43	9.43	9.44	9.47
	8000	TC	137.3	137.4	142.6	162.4	129.7	129.6	138.8	158.6	119.0	122.1	133.3	152.6
		SHC	137.3	137.4	122.2	75.6	129.7	134.3	109.3	70.4	119.0	113.2	95.4	64.7
		LDB	59.03	59.12	61.53	68.60	55.24	55.38	59.36	66.74	49.70	51.34	55.99	63.77
195	6000	LWB	48.20	54.11	59.68	68.04	46.44	52.56	57.93	66.34	43.77	49.83	55.05	63.57
		KW	11.85	11.85	11.90	12.09	11.78	11.78	11.87	12.05	11.68	11.71	11.82	12.00
		TC	137.7	137.8	143.7	163.6	130.0	130.3	139.5	159.4	119.2	122.8	133.6	153.3
	8000	SHC	137.7	137.8	122.6	75.9	130.0	130.3	109.5	70.6	119.2	113.5	95.4	64.9
		LDB	58.96	59.05	61.47	68.56	55.18	55.24	59.31	66.70	49.65	51.27	55.99	63.72
		LWB	48.17	54.08	59.62	67.98	46.41	52.50	57.88	66.29	43.74	49.75	55.02	63.51
215	6000	KW	11.08	11.08	11.11	11.19	11.06	11.06	11.09	11.17	11.02	11.03	11.07	11.15
		TC	138.2	138.4	144.1	164.3	130.5	130.6	140.2	160.2	119.6	123.1	134.2	154.0
		SHC	138.2	138.4	122.8	76.1	130.5	130.6	109.8	70.9	119.6	113.6	95.6	65.1
	8000	LDB	58.88	58.97	61.44	68.52	55.09	55.19	59.25	66.65	49.54	51.23	55.92	63.66
		LWB	48.13	54.05	59.59	67.95	46.37	52.47	57.83	66.25	43.69	49.72	54.96	63.46
		KW	10.73	10.73	10.74	10.77	10.72	10.73	10.76	10.71	10.72	10.72	10.73	10.75
235	6000	TC	130.4	130.5	134.2	152.8	123.4	123.5	130.6	149.5	113.4	115.2	125.4	144.1
		SHC	130.4	130.5	118.8	72.5	123.4	123.5	106.0	67.4	113.4	109.7	92.0	61.7
		LDB	60.08	60.16	62.04	69.07	56.44	56.54	59.97	67.31	51.12	52.21	56.84	64.51
	8000	LWB	48.67	54.53	60.14	68.48	47.00	53.04	58.51	66.89	44.46	50.60	55.85	64.28
		KW	13.18	13.18	13.22	13.39	13.12	13.12	13.18	13.36	13.02	13.04	13.14	13.31
		TC	130.8	130.9	135.3	154.0	123.7	123.8	131.6	150.2	113.6	116.0	126.1	144.8
255	6000	SHC	130.8	130.9	119.2	72.8	123.7	123.8	106.4	67.5	113.6	110.0	92.2	61.9
		LDB	60.02	60.10	61.98	69.03	56.39	56.48	59.89	67.28	51.07	52.13	56.78	64.47
		LWB	48.65	54.51	60.08	68.43	46.98	53.02	58.44	66.85	44.44	50.51	55.78	64.23

Performance data (cont)



STEAM CAPACITIES

50XCA UNIT SIZE	STEAM PRESSURE (psig)	CFM	EAT (F)	40	50	60	70
06	2	1500	TC LDB	86 92.1	81 99.2	76 106.3	72 113.4
		2000	TC LDB	103 86.7	97 94.1	91 101.5	86 108.9
		2500	TC LDB	118 82.8	111 90.4	104 98.0	98 105.6
	5	1500	TC LDB	90 94.5	85 101.6	80 108.7	76 115.8
		2000	TC LDB	108 88.9	102 96.3	96 103.6	90 111.0
		2500	TC LDB	123 84.7	116 92.3	110 99.9	103 107.5
	10	1500	TC LDB	96 97.9	91 105.0	86 112.1	81 119.2
		2000	TC LDB	114 92.0	109 99.3	103 106.7	97 114.1
		2500	TC LDB	131 87.5	124 95.1	118 102.8	111 110.4
08	2	2250	TC LDB	124 90.1	117 97.3	110 104.5	103 111.7
		3000	TC LDB	148 84.8	140 92.3	132 99.8	123 107.3
		3750	TC LDB	169 80.9	159 88.6	150 96.4	141 104.1
	5	2250	TC LDB	130 92.4	123 99.6	116 106.8	109 114.0
		3000	TC LDB	155 86.9	147 94.4	138 101.9	130 109.4
		3750	TC LDB	177 82.8	167 90.5	158 98.2	148 105.9
	10	2250	TC LDB	138 95.7	131 102.9	124 110.1	117 117.3
		3000	TC LDB	165 89.8	156 97.4	148 104.8	140 112.4
		3750	TC LDB	188 85.5	178 93.2	169 100.9	159 108.7
12	2	3000	TC LDB	174 92.8	164 99.8	155 106.9	145 113.9
		4000	TC LDB	209 87.4	197 94.8	185 102.1	174 109.5
		5000	TC LDB	238 83.4	225 90.9	212 98.5	199 106.1
	5	3000	TC LDB	182 95.2	173 102.3	163 109.3	153 116.4
		4000	TC LDB	218 89.6	207 96.9	195 104.3	183 111.6
		5000	TC LDB	249 85.3	236 92.9	223 100.5	209 108.1
	10	3000	TC LDB	194 98.7	184 105.7	174 112.8	164 119.8
		4000	TC LDB	232 92.7	220 100.0	209 107.4	197 114.8
		5000	TC LDB	265 88.2	252 95.8	239 103.4	225 110.9
14	2	3750	TC LDB	200 88.6	189 95.9	178 103.2	167 110.4
		5000	TC LDB	239 83.4	225 91.0	212 98.5	199 106.1
		6250	TC LDB	272 79.5	257 87.3	241 95.1	226 102.9
	5	3750	TC LDB	210 90.8	198 98.1	187 105.4	176 112.7
		5000	TC LDB	250 85.4	236 92.9	223 100.5	210 108.1
		6250	TC LDB	284 81.4	269 89.1	254 96.9	239 104.7
	10	3750	TC LDB	223 94.0	212 101.3	200 108.6	189 115.9
		5000	TC LDB	265 88.2	252 95.8	239 103.4	225 111.0
		6250	TC LDB	302 84.0	287 91.8	272 99.5	257 107.3

LEGEND

EAT — Entering Air Temperature (F)

LDB — Leaving Dry-Bulb (F)

TC — Total Capacity (1000 Btu/hr)

CONDENSER FAN PERFORMANCE
50XCA06 (5 TONS)

CFM	ESP (in. wg)											
	0.00		0.10		0.20		0.30		0.40		0.50	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	594	0.19	594	0.19	594	0.19	676	0.25	755	0.33	828	0.42
1900	588	0.19	588	0.19	598	0.20	686	0.27	764	0.35	836	0.44
2000	582	0.19	582	0.19	610	0.21	696	0.29	773	0.37	844	0.46
2100	576	0.19	576	0.19	623	0.23	707	0.31	783	0.40	852	0.49
2200	570	0.20	570	0.20	636	0.25	718	0.33	793	0.42	861	0.51
2300	564	0.20	564	0.20	649	0.27	730	0.36	803	0.44	870	0.54
2400	558	0.20	573	0.22	662	0.29	742	0.38	814	0.47	880	0.57
2500	552	0.21	589	0.24	676	0.32	754	0.41	825	0.50	890	0.60
2600	546	0.21	605	0.26	690	0.34	766	0.43	836	0.53	901	0.63
2600	540	0.21	622	0.28	704	0.37	779	0.46	848	0.56	911	0.66
2800	550	0.23	638	0.31	719	0.40	792	0.49	860	0.59	923	0.70
2900	570	0.26	655	0.34	734	0.43	806	0.53	872	0.63	934	0.74
3000	590	0.29	672	0.37	749	0.46	819	0.56	885	0.67	946	0.78

50XCA06 (5 TONS) (cont)

CFM	ESP (in. wg)											
	0.60		0.70		0.80		0.90		1.00		1.10	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	896	0.51	960	0.61	1020	0.72	—	—	—	—	—	—
1900	902	0.54	965	0.64	1025	0.74	1082	0.86	—	—	—	—
2000	909	0.56	971	0.66	1030	0.77	1086	0.88	1140	1.00	—	—
2100	917	0.58	978	0.69	1036	0.80	1091	0.91	1145	1.03	1196	1.16
2200	925	0.61	985	0.72	1042	0.83	1097	0.94	1150	1.06	1201	1.19
2300	933	0.64	993	0.75	1049	0.86	1103	0.98	1155	1.10	1206	1.22
2400	942	0.67	1001	0.78	1057	0.89	1110	1.01	1162	1.13	1211	1.26
2500	951	0.70	1009	0.81	1065	0.93	1117	1.05	1168	1.17	1217	1.30
2600	961	0.74	1018	0.85	1073	0.96	1125	1.09	1175	1.21	1224	1.34
2700	971	0.77	1028	0.89	1081	1.00	1133	1.13	1183	1.25	1231	1.39
2800	982	0.81	1037	0.93	1090	1.05	1141	1.17	1191	1.30	1238	1.43
2900	992	0.85	1047	0.97	1100	1.09	1150	1.21	1199	1.34	1246	1.48
3000	1003	0.89	1058	1.01	1110	1.13	1159	1.26	1207	1.39	—	—

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.
3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on unit casing, and dry DX (direct expansion) coil losses at sea level.

Performance data (cont)



CONDENSER FAN PERFORMANCE (cont)

50XCA08 (7½ TONS)

CFM	ESP (in. wg)															
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2500	594	0.25	594	0.25	662	0.32	738	0.41	807	0.50	872	0.60	932	0.70	988	0.81
2650	588	0.26	600	0.27	682	0.36	757	0.45	824	0.55	887	0.65	946	0.75	1001	0.87
2800	582	0.27	625	0.31	704	0.40	776	0.49	842	0.59	903	0.70	961	0.81	1016	0.93
2950	576	0.28	650	0.35	726	0.45	795	0.54	860	0.65	920	0.76	977	0.87	1030	0.99
3100	597	0.31	675	0.40	748	0.50	816	0.60	879	0.71	938	0.82	993	0.94	1046	1.06
3250	625	0.36	700	0.45	771	0.55	836	0.66	898	0.77	956	0.88	1010	1.00	1062	1.13
3400	654	0.42	726	0.51	794	0.61	858	0.72	918	0.83	974	0.95	1027	1.08	1078	1.21
3550	683	0.47	752	0.57	818	0.68	879	0.79	938	0.91	993	1.03	1045	1.16	1095	1.29
3700	712	0.54	778	0.64	842	0.75	901	0.86	958	0.98	1012	1.11	1064	1.24	1113	1.37
3850	741	0.60	805	0.71	866	0.82	924	0.94	979	1.06	1032	1.19	1083	1.33	1131	1.47
4000	770	0.68	831	0.79	890	0.90	947	1.02	1001	1.15	1053	1.29	1102	1.42	1150	1.56
4150	799	0.75	858	0.87	915	0.99	970	1.11	1023	1.25	1073	1.38	1122	1.52	1168	1.67
4300	828	0.84	885	0.96	940	1.08	994	1.21	1045	1.34	1094	1.49	1142	1.63	1188	1.78
4450	856	0.93	912	1.05	966	1.18	1017	1.31	1068	1.45	1116	1.59	1162	1.74	1207	1.89
4600	885	1.03	939	1.15	991	1.28	1042	1.42	1090	1.56	1138	1.71	1183	1.86	—	—

50XCA08 (7½ TONS) (cont)

CFM	ESP (in. wg)															
	0.80		0.90		1.00		1.10		1.20		1.30		1.40			
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2500	1042	0.93	1094	1.05	1144	1.17	1192	1.30	1238	1.43	1283	1.57	1327	1.72		
2650	1055	0.98	1105	1.11	1154	1.23	1201	1.36	1247	1.50	1291	1.64	1334	1.78		
2800	1068	1.05	1117	1.17	1166	1.30	1212	1.43	1257	1.57	1301	1.71	1343	1.86		
2950	1081	1.11	1131	1.24	1178	1.37	1224	1.50	1268	1.64	1311	1.79	1353	1.94		
3100	1096	1.18	1144	1.31	1191	1.44	1236	1.58	1279	1.72	1322	1.87			—	
3250	1111	1.26	1159	1.39	1205	1.53	1249	1.67	1292	1.81	1334	1.96			—	
3400	1127	1.34	1174	1.47	1219	1.61	1263	1.75	1305	1.90					—	
3550	1143	1.42	1189	1.56	1234	1.70	1277	1.85	1319	2.00					—	
3700	1160	1.51	1206	1.65	1249	1.80	1292	1.95							—	
3850	1178	1.61	1222	1.75	1265	1.90	—	—	—	—	—	—	—	—	—	
4000	1195	1.71	1239	1.86	—	—	—	—	—	—	—	—	—	—	—	
4150	1213	1.82	1257	1.97	—	—	—	—	—	—	—	—	—	—	—	
4300	1232	1.93	—	—	—	—	—	—	—	—	—	—	—	—	—	
4450	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.
3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on unit casing, and dry DX (direct expansion) coil losses at sea level.

CONDENSER FAN PERFORMANCE (cont)
50XCA12 (10 TONS)

CFM	ESP (in. wg)															
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
4100	427	0.58	476	0.70	526	0.83	570	0.96	610	1.09	648	1.23	684	1.36	720	1.51
4300	448	0.67	494	0.79	543	0.93	586	1.07	625	1.21	662	1.34	697	1.49	731	1.63
4500	468	0.76	512	0.89	559	1.04	602	1.18	640	1.33	676	1.47	710	1.62	744	1.77
4700	489	0.87	531	1.00	576	1.15	618	1.31	655	1.46	691	1.61	724	1.76	757	1.91
4900	510	0.98	550	1.12	594	1.28	634	1.44	671	1.60	706	1.75	738	1.91	770	2.07
5100	531	1.11	569	1.25	611	1.41	651	1.58	687	1.75	721	1.91	753	2.07	784	2.24
5300	552	1.25	588	1.39	628	1.56	667	1.74	703	1.91	736	2.08	768	2.24	798	2.41
5500	572	1.39	607	1.54	646	1.71	684	1.90	719	2.08	752	2.25	783	2.43	813	2.60
5700	593	1.55	626	1.70	664	1.88	701	2.07	736	2.26	768	2.44	798	2.62	828	2.80
5900	614	1.72	646	1.87	682	2.06	718	2.25	752	2.45	784	2.64	814	2.83	843	3.01
6100	635	1.90	665	2.06	700	2.25	735	2.45	769	2.65	800	2.85	830	3.04	858	3.24
6300	656	2.09	685	2.25	719	2.45	753	2.66	786	2.87	817	3.07	846	3.27	874	3.47
6500	676	2.30	705	2.46	737	2.66	770	2.88	803	3.09	833	3.30	862	3.51	889	3.72
6700	697	2.52	725	2.69	756	2.89	788	3.11	820	3.33	850	3.55	878	3.77	905	3.98
6900	718	2.75	744	2.92	774	3.13	806	3.35	837	3.58	866	3.81	894	4.03	921	4.26

50XCA12 (10 TONS) (cont)

CFM	ESP (in. wg)											
	0.80		0.90		1.00		1.10		1.20		1.30	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
4100	—	—	—	—	—	—	—	—	—	—	—	—
4300	765	1.79	—	—	—	—	—	—	—	—	—	—
4500	776	1.92	—	—	—	—	—	—	—	—	—	—
4700	788	2.07	819	2.24	—	—	—	—	—	—	—	—
4900	801	2.23	831	2.40	860	2.57	—	—	—	—	—	—
5100	814	2.40	843	2.58	872	2.75	900	2.93	—	—	—	—
5300	827	2.59	856	2.76	884	2.94	912	3.13	939	3.31	—	—
5500	841	2.78	869	2.96	896	3.14	923	3.33	950	3.52	976	3.72
5700	856	2.99	883	3.17	910	3.36	936	3.55	962	3.74	987	3.94
5900	870	3.20	897	3.39	923	3.58	949	3.78	974	3.98	999	4.18
6100	885	3.43	911	3.63	937	3.82	962	4.02	987	4.23	1011	4.43
6300	900	3.67	926	3.87	951	4.08	976	4.28	1000	4.49	1024	4.70
6500	916	3.93	941	4.14	966	4.34	990	4.55	1014	4.76	1037	4.98
6700	931	4.20	956	4.41	981	4.62	1004	4.84	—	—	—	—
6900	947	4.48	972	4.70	996	4.91	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.
3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on unit casing, and dry DX (direct expansion) coil losses at sea level.

Performance data (cont)



CONDENSER FAN PERFORMANCE (cont)

50XCA14 (12 TONS)

CFM	ESP (in. wg)															
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
6000	494	1.50	494	1.50	494	1.50	494	1.50	494	1.50	521	1.68	554	1.93	586	2.18
6250	488	1.52	488	1.52	488	1.52	488	1.52	494	1.56	528	1.80	561	2.05	592	2.30
6500	482	1.53	482	1.53	482	1.53	482	1.53	502	1.67	536	1.92	568	2.17	599	2.44
6750	476	1.55	476	1.55	476	1.55	477	1.56	511	1.79	544	2.05	576	2.31	606	2.58
7000	470	1.56	470	1.56	470	1.56	488	1.68	520	1.93	552	2.18	583	2.45	613	2.73
7250	464	1.58	464	1.58	466	1.59	498	1.82	530	2.07	561	2.33	591	2.60	621	2.88
7500	458	1.59	458	1.59	477	1.73	509	1.96	540	2.21	570	2.48	600	2.76	628	3.04
7750	452	1.61	459	1.66	489	1.88	519	2.12	549	2.37	579	2.64	608	2.92	636	3.22
8000	446	1.62	472	1.81	501	2.04	530	2.28	560	2.54	588	2.81	617	3.10	644	3.40
8250	458	1.77	485	1.97	513	2.20	542	2.45	570	2.71	598	2.99	626	3.28	653	3.59
8500	472	1.93	498	2.14	526	2.38	553	2.63	580	2.90	608	3.18	635	3.48	661	3.79
8750	486	2.11	512	2.33	538	2.56	564	2.82	591	3.09	618	3.38	644	3.68	670	4.00
9000	500	2.29	525	2.52	550	2.76	576	3.02	602	3.30	628	3.59	654	3.90	679	4.22
9250	514	2.49	538	2.72	563	2.97	588	3.23	613	3.52	638	3.81	663	4.13	688	4.45
9500	528	2.70	551	2.93	575	3.19	600	3.46	624	3.74	649	4.05	673	4.36	697	4.69

50XCA14 (12 TONS) (cont)

CFM	ESP (in. wg)															
	0.80		0.90		1.00		1.10		1.20		1.30		1.40			
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
6000	616	2.43	644	2.69	671	2.96	697	3.23	722	3.50	746	3.78	768	4.06		
6250	622	2.57	650	2.84	677	3.11	703	3.39	728	3.67	751	3.95	774	4.24		
6500	628	2.71	656	2.98	683	3.27	709	3.55	734	3.84	757	4.13	780	4.43		
6750	635	2.86	663	3.14	689	3.43	715	3.72	739	4.02	763	4.32	786	4.62		
7000	642	3.01	669	3.30	696	3.60	721	3.90	745	4.20	769	4.51	792	4.82		
7250	649	3.17	676	3.47	702	3.77	727	4.08	752	4.39	775	4.71	—	—		
7500	656	3.34	683	3.65	709	3.96	734	4.27	758	4.59	781	4.91	—	—		
7750	663	3.52	690	3.83	715	4.15	740	4.47	764	4.80	—	—	—	—		
8000	671	3.71	697	4.02	722	4.35	747	4.67	—	—	—	—	—	—		
8250	679	3.90	705	4.22	730	4.55	754	4.89	—	—	—	—	—	—		
8500	687	4.11	712	4.44	737	4.77	—	—	—	—	—	—	—	—		
8750	695	4.32	720	4.66	744	5.00	—	—	—	—	—	—	—	—		
9000	704	455	728	489	—	—	—	—	—	—	—	—	—	—		
9250	712	498	—	—	—	—	—	—	—	—	—	—	—	—		
9500	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.
3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on unit casing, and dry DX (direct expansion) coil losses at sea level.

EVAPORATOR FAN PERFORMANCE
50XCA06 (5 TONS)

CFM	ESP (in. wg)																			
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80		0.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	594	0.23	594	0.23	594	0.23	612	0.24	670	0.29	727	0.34	785	0.40	842	0.46	897	0.53	950	0.60
1600	588	0.24	588	0.24	588	0.24	630	0.28	684	0.32	738	0.37	793	0.43	847	0.49	900	0.56	952	0.64
1700	582	0.26	582	0.26	596	0.27	650	0.31	701	0.36	752	0.41	803	0.47	854	0.53	905	0.60	955	0.67
1800	576	0.28	576	0.28	618	0.31	670	0.36	719	0.40	767	0.45	815	0.51	863	0.57	911	0.64	959	0.71
1900	570	0.29	586	0.31	641	0.35	691	0.40	738	0.45	784	0.50	829	0.56	875	0.62	920	0.69	966	0.76
2000	564	0.31	612	0.35	664	0.40	712	0.45	757	0.50	801	0.56	845	0.61	888	0.67	931	0.74	975	0.81
2100	593	0.36	637	0.40	687	0.46	734	0.51	778	0.56	820	0.61	862	0.67	903	0.73	944	0.80	985	0.87
2200	621	0.42	663	0.46	710	0.51	756	0.57	799	0.62	840	0.68	879	0.74	919	0.80	958	0.86	997	0.93
2300	649	0.48	689	0.52	734	0.58	779	0.63	820	0.69	860	0.75	898	0.81	936	0.87	974	0.93	1011	1.00
2400	677	0.54	715	0.59	759	0.64	801	0.70	842	0.76	880	0.82	918	0.88	954	0.95	990	1.01	1026	1.08
2500	705	0.61	742	0.66	783	0.72	824	0.78	864	0.84	902	0.90	938	0.97	973	1.03	1008	1.10	1043	1.17

50XCA06 (5 TONS) (cont)

CFM	ESP (in. wg)																			
	1.00		1.10		1.20		1.30		1.40		1.50		1.60		1.70		1.80		1.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	1000	0.68	1047	0.76	1092	0.84	1134	0.93	1174	1.01	1213	1.10	1249	1.19	1284	1.28	1318	1.36	1351	1.46
1600	1001	0.71	1049	0.80	1094	0.88	1137	0.97	1178	1.06	1218	1.14	1255	1.24	1291	1.33	1326	1.42	1359	1.52
1700	1004	0.75	1051	0.83	1096	0.92	1139	1.01	1181	1.10	1221	1.19	1259	1.28	1296	1.38	1331	1.48	1365	1.57
1800	1007	0.79	1053	0.87	1098	0.96	1141	1.05	1183	1.14	1224	1.24	1262	1.33	1300	1.43	—	—	—	—
1900	1011	0.83	1056	0.92	1100	1.00	1143	1.09	1185	1.19	1225	1.28	1264	1.38	1302	1.48	—	—	—	—
2000	1018	0.89	1061	0.97	1104	1.05	1146	1.14	1187	1.24	1227	1.33	1266	1.43	—	—	—	—	—	—
2100	1027	0.94	1068	1.02	1109	1.11	1150	1.20	1190	1.29	1230	1.39	1268	1.49	—	—	—	—	—	—
2200	1037	1.01	1076	1.09	1116	1.17	1155	1.26	1194	1.35	1233	1.45	—	—	—	—	—	—	—	—
2300	1049	1.08	1087	1.16	1124	1.24	1162	1.33	1200	1.42	—	—	—	—	—	—	—	—	—	—
2400	1063	1.16	1099	1.23	1135	1.32	1171	1.40	1207	1.49	—	—	—	—	—	—	—	—	—	—
2500	1077	1.24	1112	1.32	1147	1.40	1181	1.48	1216	1.57	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.
3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on 1 in. standard throwaway filter, unit casing, and dry DX (direct expansion) coil losses at sea level.

Performance data (cont)



EVAPORATOR FAN PERFORMANCE (cont)

50XCA08 (7½ TONS)

CFM	ESP (in. wg)																			
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80		0.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	594	0.26	594	0.26	594	0.26	644	0.31	707	0.38	766	0.45	820	0.53	871	0.62	918	0.70	963	0.79
2400	588	0.28	588	0.28	602	0.29	667	0.36	728	0.43	785	0.51	838	0.59	888	0.68	935	0.77	979	0.86
2600	582	0.29	582	0.29	630	0.34	692	0.42	750	0.49	805	0.58	857	0.66	906	0.75	952	0.84	996	0.94
2800	576	0.31	597	0.33	659	0.41	718	0.48	774	0.56	827	0.65	877	0.74	925	0.83	970	0.93	1013	1.03
3000	570	0.33	631	0.40	690	0.48	746	0.55	799	0.64	850	0.73	898	0.82	945	0.92	989	1.02	1032	1.12
3200	606	0.40	665	0.48	721	0.55	774	0.64	825	0.73	874	0.82	921	0.91	966	1.01	1009	1.12	1051	1.22
3400	644	0.48	699	0.56	752	0.64	803	0.73	852	0.82	899	0.92	944	1.02	988	1.12	1030	1.23	1071	1.34
3600	681	0.57	734	0.66	785	0.74	833	0.83	880	0.93	925	1.03	969	1.13	1011	1.24	1052	1.35	1092	1.46
3800	719	0.67	770	0.76	818	0.85	864	0.95	909	1.04	952	1.15	995	1.25	1035	1.36	1075	1.48	1114	1.59

50XCA08 (7½ TONS) (cont)

CFM	ESP (in. wg)																			
	1.00		1.10		1.20		1.30		1.40		1.50		1.60		1.70		1.80		1.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	1006	0.88	1047	0.97	1085	1.07	1122	1.17	1158	1.27	1193	1.37	1226	1.47	1258	1.58	—	—	—	—
2400	1022	0.96	1062	1.05	1101	1.15	1138	1.26	1174	1.36	1209	1.46	1242	1.57	1274	1.68	1306	1.79	1336	1.90
2600	1038	1.04	1078	1.14	1117	1.24	1154	1.35	1190	1.46	1225	1.57	1258	1.68	1290	1.79	1322	1.91	1352	2.03
2800	1055	1.13	1095	1.23	1133	1.34	1170	1.45	1206	1.56	1240	1.68	1274	1.79	1306	1.91	1338	2.03	1368	2.15
3000	1073	1.23	1112	1.34	1150	1.45	1187	1.56	1222	1.68	1256	1.79	1290	1.91	1322	2.04	1353	2.16	1384	2.29
3200	1091	1.33	1130	1.45	1167	1.56	1204	1.68	1239	1.80	1273	1.92	1306	2.04	1338	2.17	1369	2.30	1400	2.43
3400	1110	1.45	1148	1.57	1185	1.68	1221	1.81	1256	1.93	1290	2.05	1322	2.18	1354	2.31	1385	2.44	1416	2.58
3600	1131	1.58	1168	1.69	1204	1.82	1239	1.94	1274	2.07	1307	2.20	1340	2.33	1371	2.46	1402	2.60	1432	2.74
3800	1152	1.71	1188	1.84	1224	1.96	1258	2.09	1292	2.22	1325	2.35	1357	2.49	1389	2.62	1419	2.76	1449	2.90

50XCA08 (7½ TONS) (cont)

CFM	ESP (in. wg)									
	2.00		2.10		2.20		2.30		2.40	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	—	—	—	—	—	—	—	—	—	—
2400	1366	2.02	1395	2.13	—	—	—	—	—	—
2600	1382	2.14	1411	2.26	1439	2.39	1467	2.51	1494	2.63
2800	1398	2.27	1427	2.40	1455	2.52	1483	2.65	1510	2.78
3000	1414	2.41	1443	2.54	1471	2.67	1499	2.80	1526	2.94
3200	1429	2.56	1459	2.69	1487	2.82	1515	2.96	—	—
3400	1445	2.71	1474	2.85	1503	2.99	—	—	—	—
3600	1462	2.87	—	—	—	—	—	—	—	—
3800	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.

3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on 1 in. standard throwaway filter, unit casing, and dry DX (direct expansion) coil losses at sea level.

EVAPORATOR FAN PERFORMANCE (cont)
50XCA12 (10 TONS)

CFM	ESP (in. wg)																			
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80		0.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3000	410	0.32	475	0.41	536	0.51	592	0.62	645	0.74	696	0.86	743	0.99	789	1.12	832	1.26	874	1.40
3200	437	0.38	498	0.48	556	0.59	610	0.70	661	0.83	710	0.95	756	1.08	800	1.22	843	1.36	884	1.51
3400	464	0.46	522	0.57	577	0.68	629	0.80	678	0.92	725	1.05	770	1.19	813	1.33	854	1.48	894	1.63
3600	492	0.55	547	0.66	599	0.77	649	0.90	696	1.03	741	1.17	785	1.31	827	1.45	867	1.60	906	1.76
3800	519	0.64	571	0.76	621	0.88	669	1.01	714	1.15	758	1.29	800	1.43	841	1.59	880	1.74	918	1.90
4000	546	0.75	596	0.87	644	1.00	689	1.14	733	1.28	776	1.42	817	1.57	856	1.73	894	1.89	932	2.05
4200	574	0.87	621	0.99	667	1.13	711	1.27	753	1.42	794	1.57	834	1.72	872	1.88	909	2.05	946	2.22
4400	601	1.00	646	1.13	690	1.27	732	1.42	773	1.57	813	1.72	852	1.88	889	2.05	925	2.22	960	2.39
4600	628	1.14	672	1.28	714	1.42	755	1.58	794	1.73	833	1.89	870	2.06	906	2.23	942	2.40	976	2.58
4800	655	1.29	697	1.44	738	1.59	777	1.75	815	1.91	853	2.08	889	2.25	924	2.42	958	2.60	992	2.78
5000	683	1.46	723	1.61	762	1.77	800	1.93	837	2.10	873	2.27	908	2.45	943	2.63	976	2.81	1009	3.00

50XCA12 (10 TONS) (cont)

CFM	ESP (in. wg)																			
	1.00		1.10		1.20		1.30		1.40		1.50		1.60		1.70		1.80		1.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3000	914	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3200	923	1.66	961	1.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400	933	1.79	970	1.95	1006	2.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600	943	1.92	980	2.09	1015	2.25	1050	2.43	1084	2.61	—	—	—	—	—	—	—	—	—	—
3800	955	2.07	991	2.24	1026	2.41	1060	2.59	1093	2.77	1125	2.95	1156	3.14	—	—	—	—	—	—
4000	968	2.22	1003	2.40	1037	2.57	1070	2.75	1102	2.94	1134	3.13	1165	3.32	1195	3.52	—	—	—	—
4200	981	2.39	1015	2.57	1049	2.75	1081	2.94	1113	3.12	1144	3.32	1175	3.51	1205	3.71	1234	3.92	1263	4.13
4400	995	2.57	1028	2.75	1061	2.94	1093	3.13	1124	3.32	1155	3.52	1185	3.72	1214	3.92	1243	4.13	1272	4.34
4600	1010	2.76	1042	2.95	1074	3.14	1106	3.34	1136	3.53	1166	3.74	1196	3.94	1225	4.15	1253	4.36	1281	4.58
4800	1025	2.97	1057	3.16	1088	3.36	1119	3.56	1149	3.76	1179	3.96	1208	4.17	1236	4.39	1264	4.60	1292	4.82
5000	1041	3.19	1072	3.39	1103	3.59	1133	3.79	1163	4.00	1192	4.21	1220	4.42	1248	4.64	1276	4.86	1303	5.08

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.
3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on 1 in. standard throwaway filter, unit casing, and dry DX (direct expansion) coil losses at sea level.

Performance data (cont)



EVAPORATOR FAN PERFORMANCE (cont)

50XCA14 (12 TONS)

CFM	ESP (in. wg)																			
	0.00		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80		0.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3500	594	0.62	594	0.62	645	0.71	694	0.80	739	0.88	782	0.97	823	1.06	862	1.15	900	1.23	936	1.32
3700	588	0.66	622	0.72	671	0.82	718	0.91	761	1.00	803	1.09	843	1.18	881	1.28	918	1.37	953	1.46
3900	600	0.74	650	0.84	697	0.93	742	1.03	784	1.13	825	1.22	863	1.32	901	1.42	937	1.52	971	1.61
4100	630	0.86	678	0.96	724	1.06	767	1.16	808	1.27	847	1.37	885	1.47	921	1.57	956	1.68	990	1.78
4300	661	0.99	707	1.10	751	1.20	792	1.31	832	1.42	870	1.53	907	1.63	942	1.74	976	1.85	1009	1.95
4500	692	1.14	736	1.25	778	1.36	818	1.47	856	1.58	893	1.69	929	1.81	963	1.92	997	2.03	1029	2.14
4700	723	1.29	765	1.41	805	1.53	844	1.64	881	1.76	917	1.88	952	1.99	985	2.11	1018	2.23	1050	2.35
4900	753	1.47	794	1.59	833	1.71	870	1.83	906	1.95	941	2.08	975	2.20	1008	2.32	1040	2.44	1071	2.56
5100	784	1.65	823	1.78	861	1.91	897	2.03	932	2.16	966	2.29	999	2.41	1031	2.54	1062	2.67	1092	2.79
5300	815	1.86	853	1.99	889	2.12	924	2.25	958	2.38	991	2.51	1023	2.65	1054	2.78	1084	2.91	1114	3.04
5500	846	2.07	882	2.21	917	2.35	951	2.48	984	2.62	1016	2.76	1047	2.89	1078	3.03	1107	3.17	1136	3.30
5700	876	2.31	911	2.45	945	2.59	978	2.73	1011	2.88	1042	3.02	1072	3.16	1102	3.30	1131	3.44	1159	3.58
5900	907	2.56	941	2.71	974	2.85	1006	3.00	1037	3.15	1068	3.29	1097	3.44	1126	3.59	1155	3.73	1182	3.88
6100	938	2.83	971	2.98	1003	3.13	1034	3.28	1064	3.44	1094	3.59	1123	3.74	1151	3.89	1179	4.04	1206	4.19

50XCA14 (12 TONS) (cont)

CFM	ESP (in. wg)																			
	1.00		1.10		1.20		1.30		1.40		1.50		1.60		1.70		1.80		1.90	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3500	971	1.41	1005	1.50	1038	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700	987	1.56	1021	1.65	1053	1.75	1084	1.84	1115	1.94	—	—	—	—	—	—	—	—	—	—
3900	1005	1.71	1037	1.81	1069	1.91	1100	2.01	1130	2.11	1159	2.21	1187	2.31	—	—	—	—	—	—
4100	1023	1.88	1055	1.98	1086	2.09	1116	2.19	1145	2.30	1174	2.40	1202	2.51	1230	2.62	—	—	—	—
4300	1041	2.06	1073	2.17	1103	2.28	1133	2.39	1162	2.50	1190	2.61	1218	2.72	1245	2.83	1272	2.94	1298	3.05
4500	1061	2.26	1091	2.37	1121	2.48	1150	2.60	1179	2.71	1207	2.82	1234	2.94	1261	3.05	1287	3.17	1313	3.29
4700	1080	2.46	1110	2.58	1140	2.70	1168	2.82	1196	2.94	1224	3.06	1251	3.17	1277	3.29	1303	3.41	1328	3.53
4900	1101	2.68	1130	2.81	1159	2.93	1187	3.05	1215	3.18	1242	3.30	1268	3.42	1294	3.55	1319	3.67	1344	3.80
5100	1122	2.92	1150	3.05	1179	3.18	1206	3.30	1233	3.43	1260	3.56	1286	3.69	1311	3.82	1336	3.95	1361	4.08
5300	1143	3.17	1171	3.30	1199	3.44	1226	3.57	1253	3.70	1279	3.84	1304	3.97	1329	4.10	1354	4.24	1378	4.37
5500	1165	3.44	1192	3.58	1220	3.71	1246	3.85	1272	3.99	1298	4.13	1323	4.26	1348	4.40	1372	4.54	1396	4.68
5700	1187	3.72	1214	3.87	1241	4.01	1267	4.15	1292	4.29	1318	4.44	1342	4.58	1367	4.72	1391	4.86	—	—
5900	1209	4.03	1236	4.17	1262	4.32	1288	4.47	1313	4.61	1338	4.76	1362	4.91	—	—	—	—	—	—
6100	1232	4.34	1258	4.50	1284	4.65	1309	4.80	1334	4.95	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower
ESP — External Static Pressure

NOTES:

1. Units are available with several motor hp options. Refer to Physical Data table.
2. Static pressure losses for any options or accessories must be applied to external static pressure before entering the fan performance table.

3. Interpolation is permitted; extrapolation is not.
4. Fan performance is based on 1 in. standard throwaway filter, unit casing, and dry DX (direct expansion) coil losses at sea level.

Electrical data



UNIT ELECTRICAL DATA

UNIT 50XCA	V-PH-Hz	VOLTAGE RANGE		COMPRESSOR NO. 1		COMPRESSOR NO. 2	
		Min	Max	RLA	LRA	RLA	LRA
06	208/230-3-60	187	253	20.5	155	—	—
	460-3-60	414	506	9.6	75	—	—
	575-3-60	518	632	7.6	54	—	—
08	208/230-3-60	187	253	22.4	149	—	—
	460-3-60	414	506	10.6	75	—	—
	575-3-60	518	632	7.7	54	—	—
12	208/230-3-60	187	253	16.0	110	16.0	110
	460-3-60	414	506	7.8	52	7.8	52
	575-3-60	518	632	5.7	39	5.7	39
14	208/230-3-60	187	253	20.5	155	20.5	155
	460-3-60	414	506	9.6	75	9.6	75
	575-3-60	518	632	7.6	54	7.6	54

LEGEND

FLA — Full Load Amps
LRA — Locked Rotor Amps
NEC — National Electrical Code
RLA — Rated Load Amps

NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR circuit breaker. Canadian units may be fuse or circuit breaker.

- Wire sizing amps are a sum of 125% of the compressor RLA plus 100% of indoor fan motor FLA.
- Motors are protected against primary single phasing condition.
- Indoor-fan motors are 3-phase motors of same voltage as unit.



FAN ELECTRICAL DATA

MOTOR CODE	HP	V-PH-Hz	VOLTAGE RANGE		FLA
			Min	Max	
B	0.50	208/230-3-60	187	253	1.8/2.2
		460-3-60	414	506	1.1
		575-3-60	518	632	0.9
C	0.75	208/230-3-60	187	253	2.5/2.6
		460-3-60	414	506	1.3
		575-3-60	518	632	1.0
D	1.00	208/230-3-60	187	253	3.2/3.2
		460-3-60	414	506	1.6
		575-3-60	518	632	1.1
E	1.50	208/230-3-60	187	253	4.6/4.8
		460-3-60	414	506	2.4
		575-3-60	518	632	1.6
F	2.00	208/230-3-60	187	253	6.0/5.8
		460-3-60	414	506	2.9
		575-3-60	518	632	2.1
G	3.00	208/230-3-60	187	253	9.2/8.6
		460-3-60	414	506	4.3
		575-3-60	518	632	3.4

LEGEND

FLA — Full Load Amps

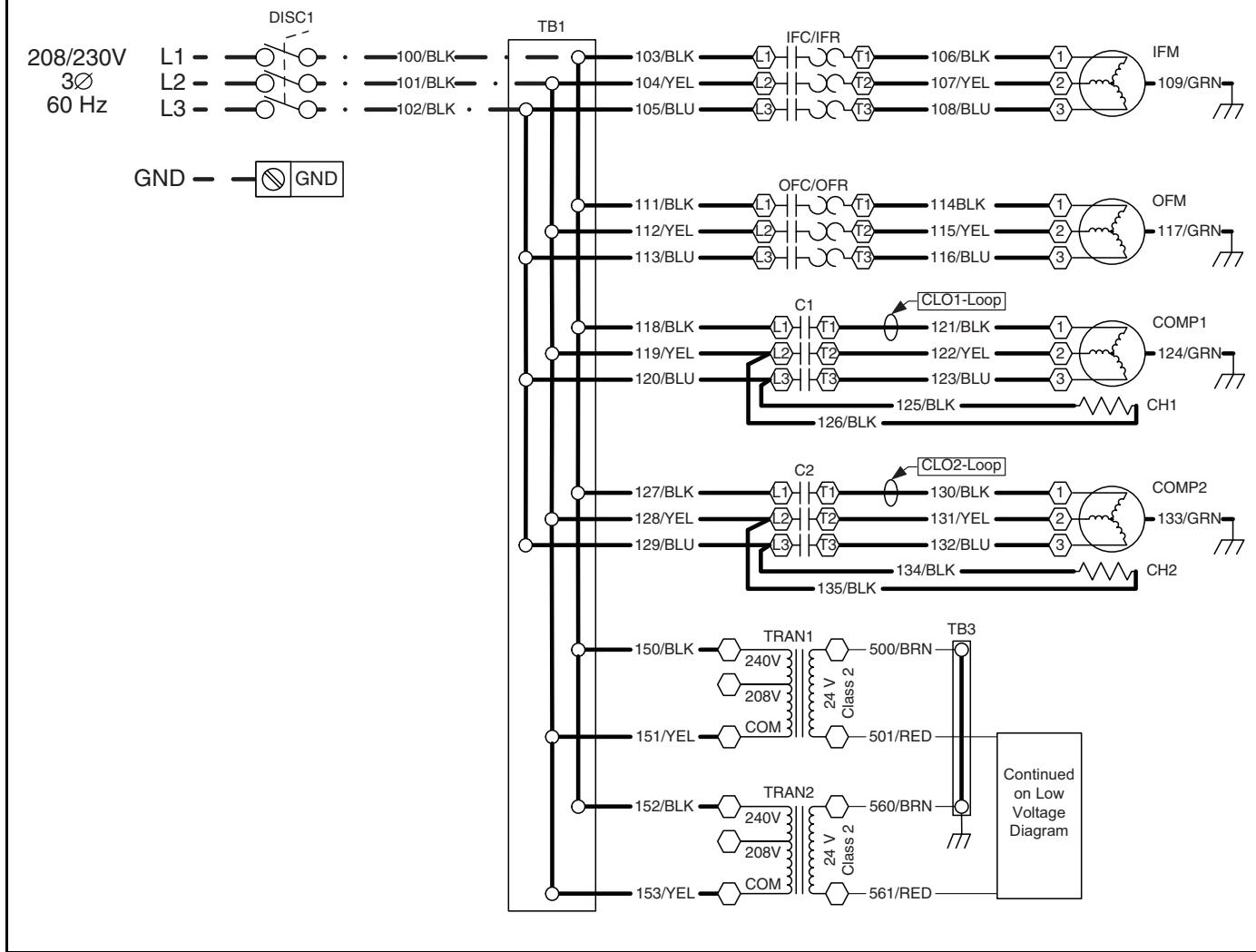
NOTE: The FLA data listed in this table is for one fan only. When calculating system FLA, evaporator fan and condenser fan must be included.



Typical wiring schematics



LINE VOLTAGE DIAGRAM — 50XCA012,014, 208/230-3-60 UNITS SHOWN



LEGEND AND NOTES FOR WIRING SCHEMATICS

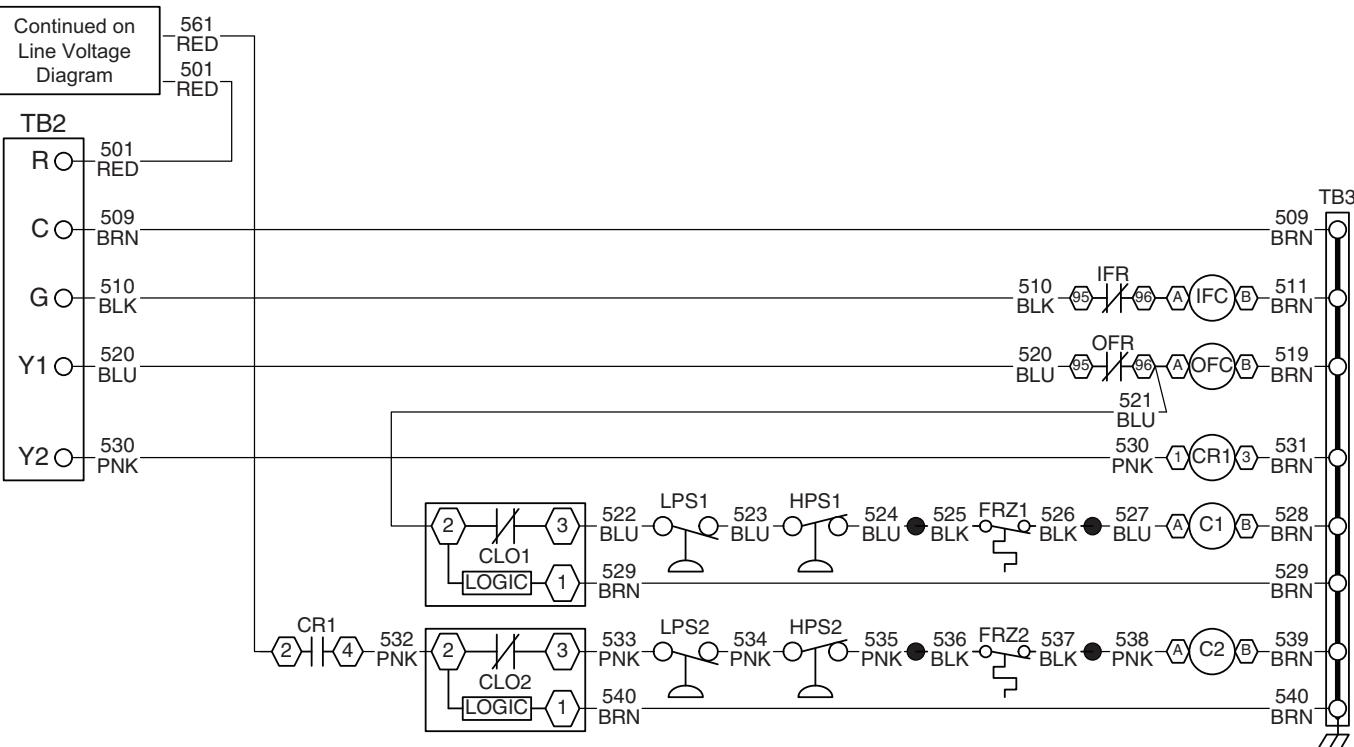
LEGEND

C	— Compressor Contactor	OFR	— Outdoor-Fan Relay
CH	— Crankcase Heater	PRES	— Pressure Transducer
CLO	— Compressor Lockout	SAT	— Supply Air Thermistor
COMP	— Compressor	TB	— Terminal Block
CR	— Control Relay	TRAN	— Transformer
DISC	— Disconnect	VFD	— Variable Frequency Drive
FRZ	— Freeze Protection		Terminal Block Connection
GND	— Ground		Marked Terminal
HPS	— High Pressure Switch		Unmarked Terminal
HR	— Heat Relay	●	Splice
IFC	— Indoor-Fan Contactor	—	Factory Wiring
IFM	— Indoor-Fan Motor	---	Field Power Wiring
IFR	— Indoor-Fan Relay		
LPS	— Low Pressure Switch		
LLT	— Liquid Line Temperature		
OFC	— Outdoor-Fan Contactor		
OFM	— Outdoor-Fan Motor		

* Disconnect can either be field or factory installed.

NOTES:

1. Fan motors are inherently thermally protected.
2. Three-phase motors are protected under primary single phase conditions.
3. Use conductors suitable for at least 194 F (90 C) when replacing factory wiring.
4. Use copper conductors only.
5. Wiring for field power supply must be rated at 165 F (75 C) minimum.

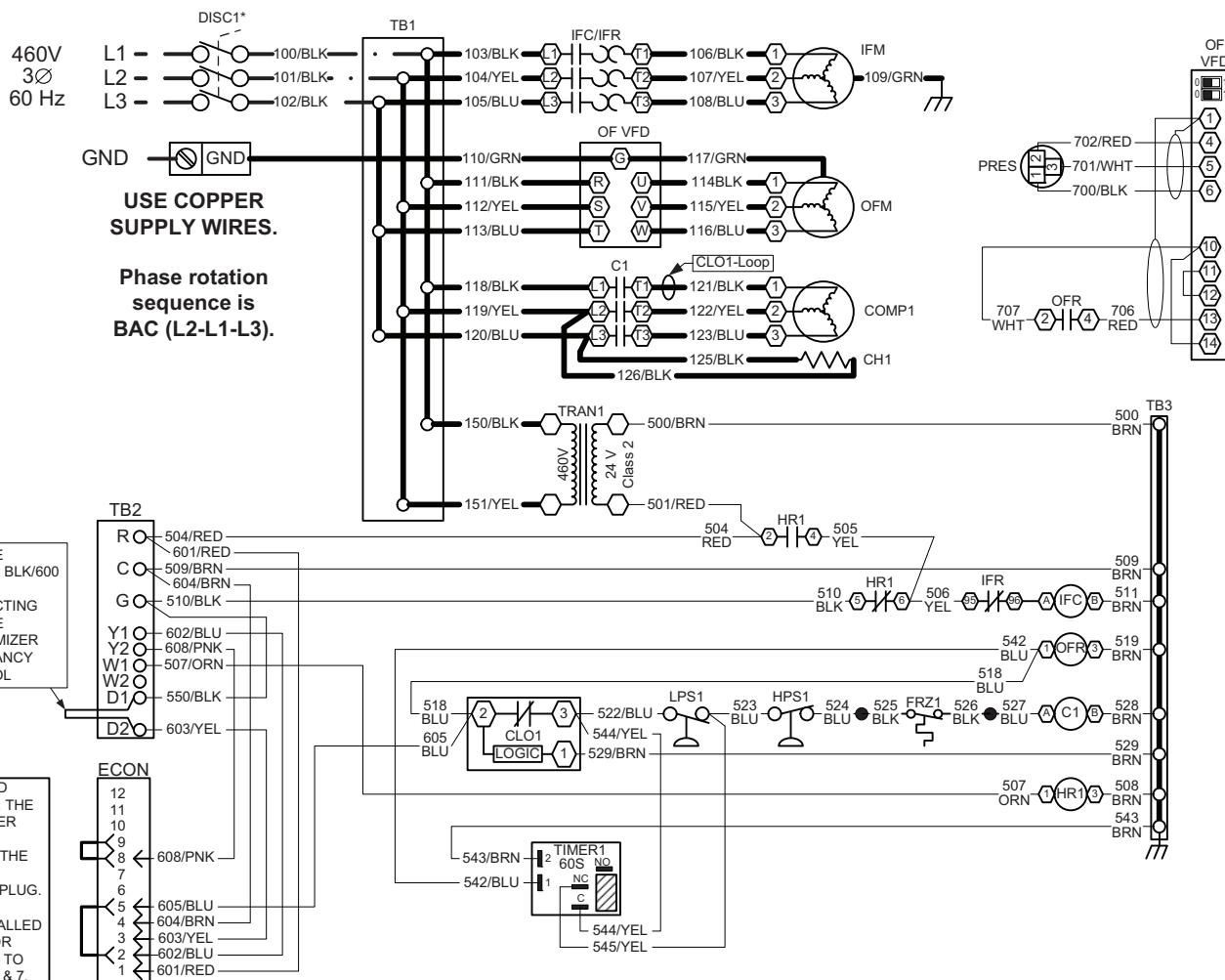
LOW VOLTAGE DIAGRAM — 50XCA012,014, 208/230-3-60 UNITS SHOWN


NOTE: Refer to legend and notes on page 28.

Typical wiring schematics (cont)

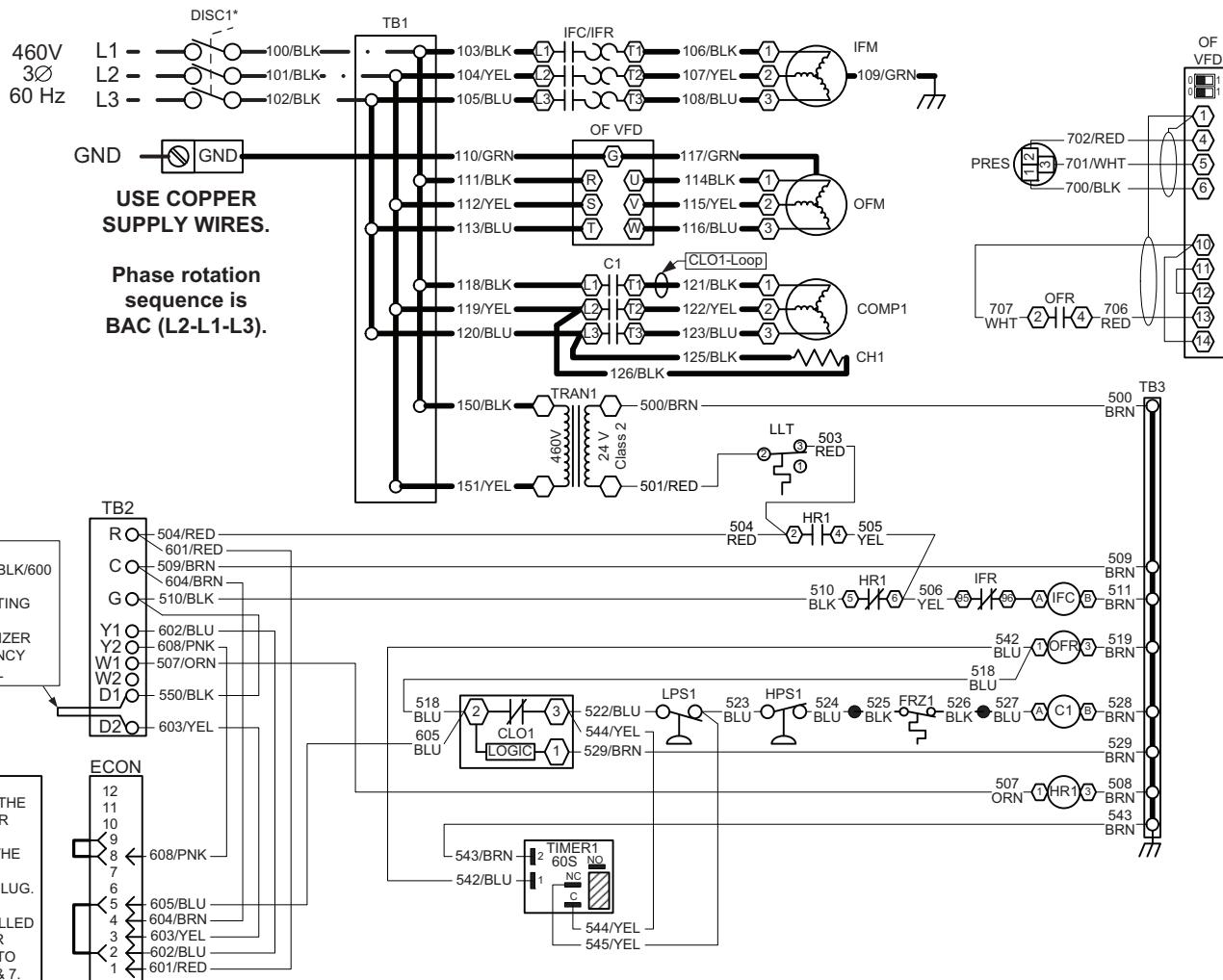


LINE VOLTAGE DIAGRAM — 460V UNITS (50XCA06,08 UNITS)



NOTE: Refer to legend and notes on page 28.

LINE VOLTAGE DIAGRAM — 460V UNITS WITH HEATING (50XCA06,08 UNITS)

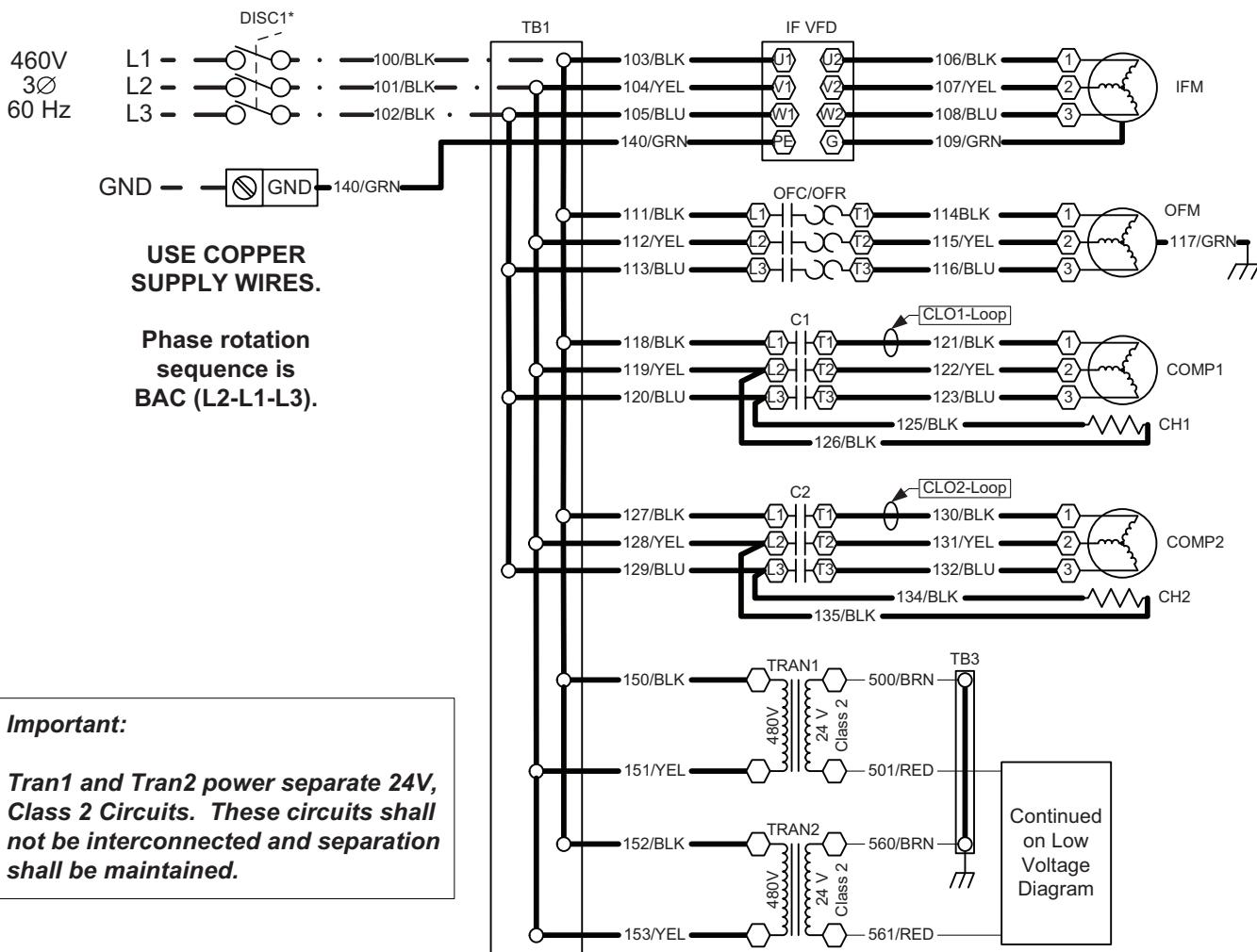


NOTE: Refer to legend and notes on page 28.

Typical wiring schematics (cont)

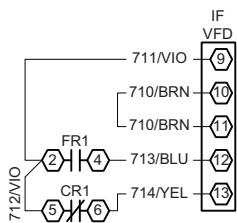


LINE VOLTAGE DIAGRAM — 460V UNITS (50XCA12,14 UNITS)

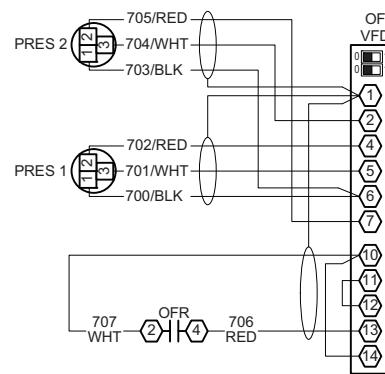


NOTE: Refer to legend and notes on page 28.

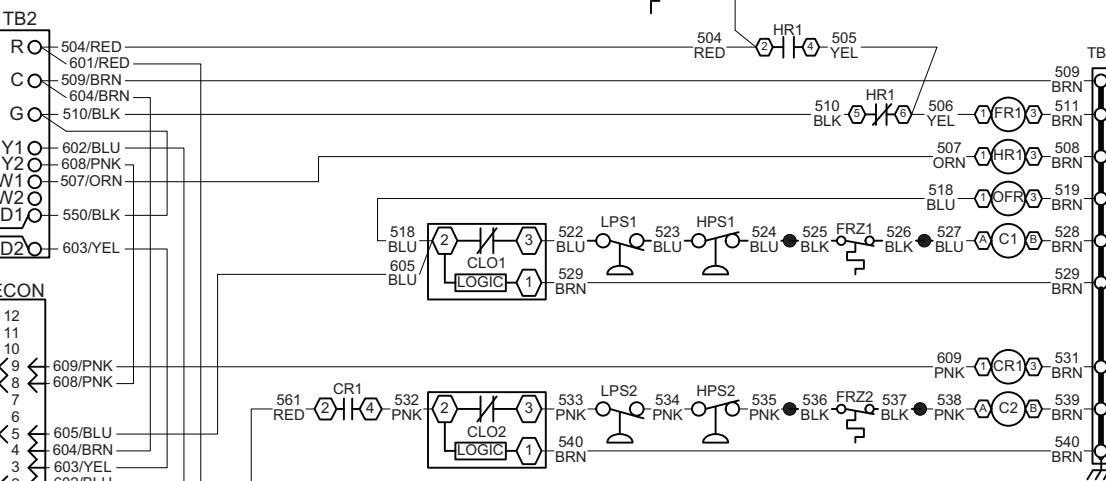
TYPICAL WIRING SCHEMATIC FOR AIRSIDE ECONOMIZER (50XCA12,14)



Note: *PRES1, PRES2, and OFR are connected with shielded wire. The drain wire is connected to OF VFD terminal 1. The remote end of the drain wire shall be insulated.*



Continued on Line
Voltage Diagram



WHEN FIELD
INSTALLED, THE
ECONOMIZER
HARNESS
REPLACES THE
FACTORY
SHORTING PLUG.

FIELD INSTALLED
SAT SENSOR
CONNECTS TO
CIRCUITS 6 & 7.

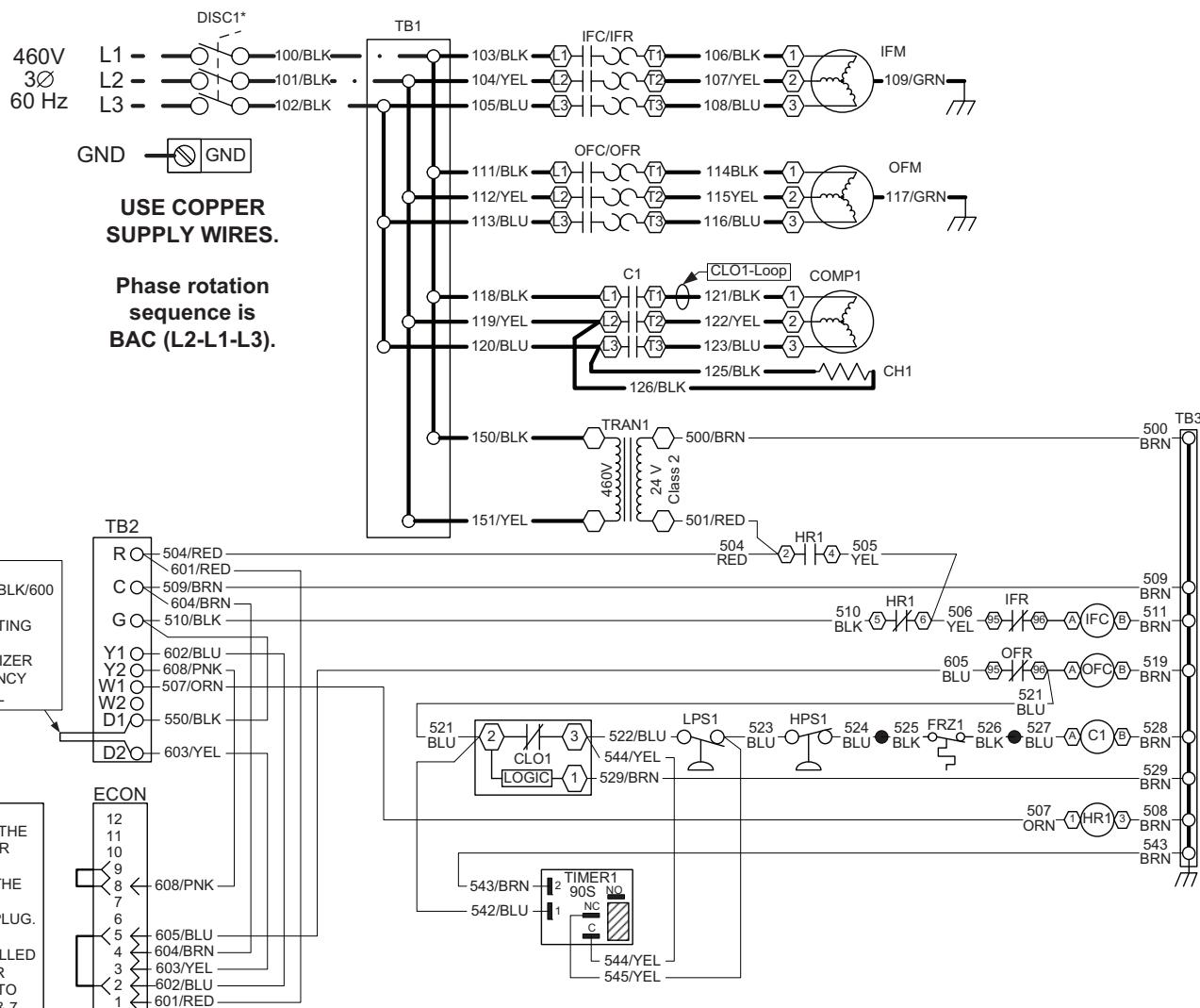
Continued on Line
Voltage Diagram

NOTE: Refer to legend and notes on page 28.

Typical wiring schematics (cont)

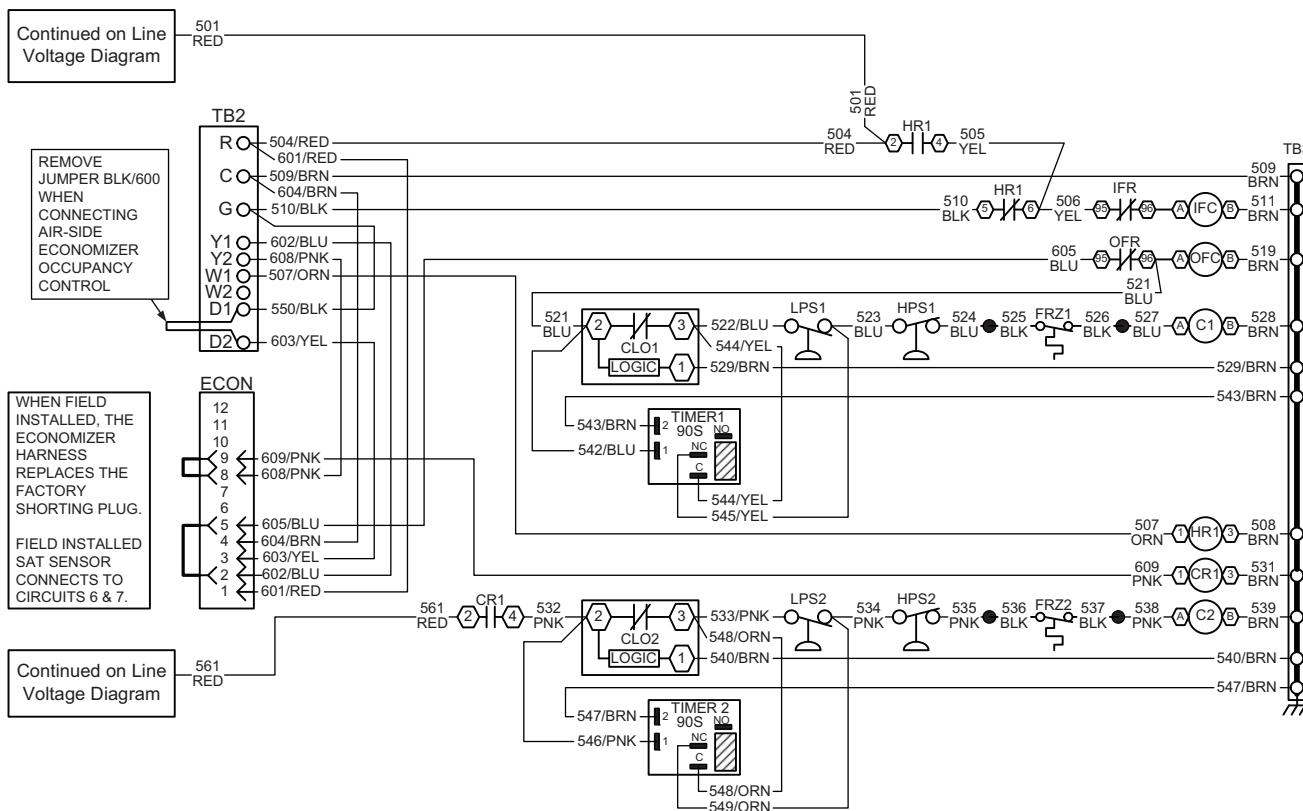


TYPICAL WIRING SCHEMATIC FOR WINTER START KIT (50XCA06,08 UNITS)



NOTE: Refer to legend and notes on page 28.

TYPICAL WIRING SCHEMATIC FOR WINTER START KIT (50XCA12,14 UNITS)

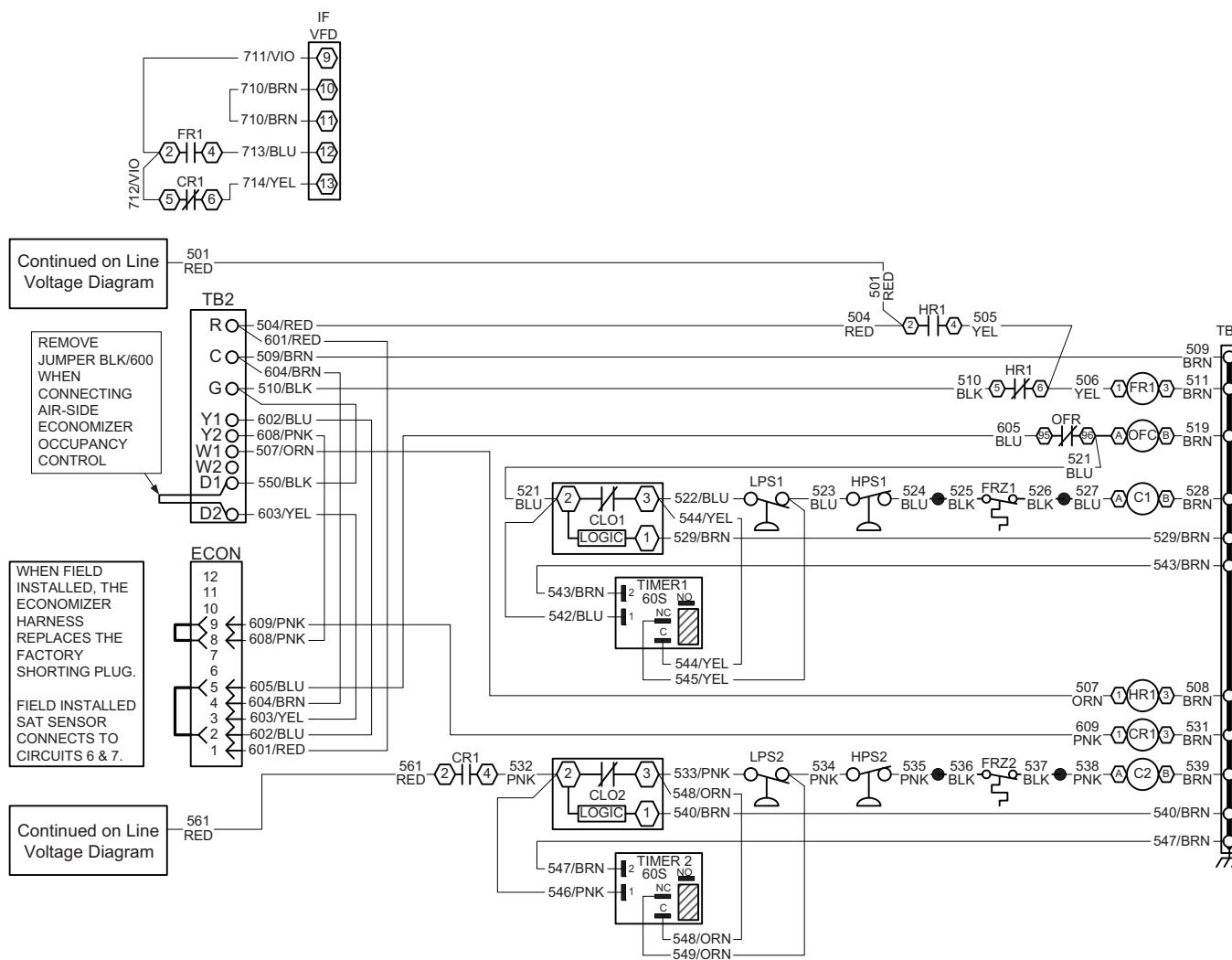


NOTE: Refer to legend and notes on page 28.

Typical wiring schematics (cont)

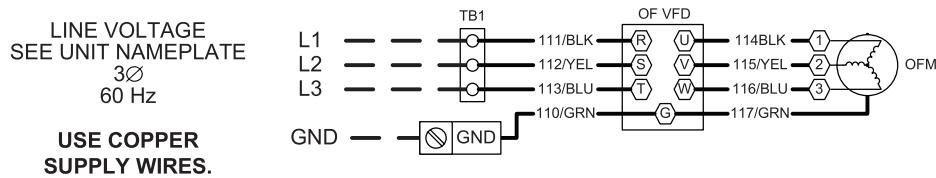


TYPICAL WIRING SCHEMATIC FOR WINTER START KIT FOR 24V (50XCA12,14 UNITS)

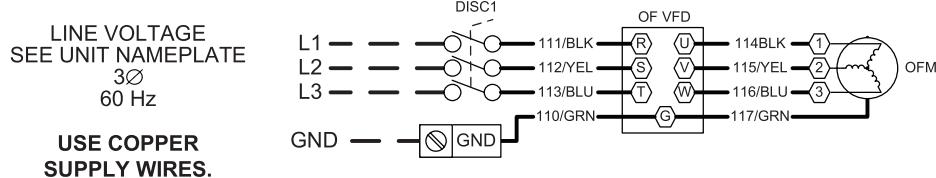


NOTE: Refer to legend and notes on page 28.

TYPICAL WIRING SCHEMATIC FOR LOW AMBIENT OPTION (50XCA06,08 UNITS)



WITHOUT FACTORY INSTALLED DISCONNECT SWITCH



FACTORY INSTALLED DISCONNECT SWITCH OPTION



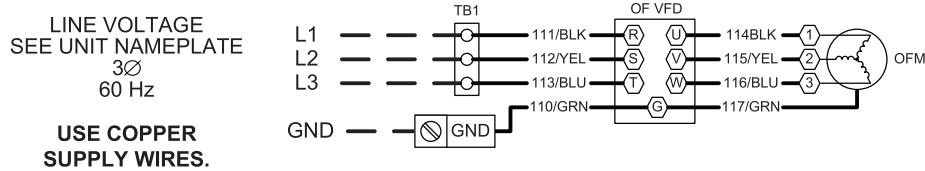
LOW VOLTAGE CONTROLS

NOTE: Refer to legend and notes on page 28.

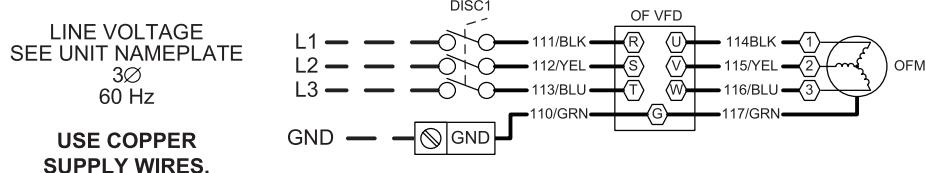
Typical wiring schematics (cont)



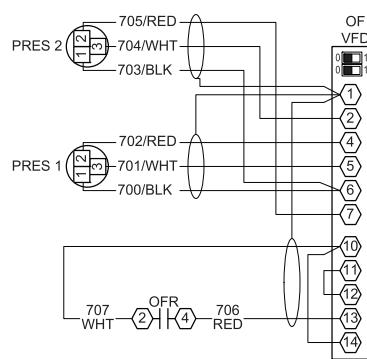
TYPICAL WIRING SCHEMATIC FOR LOW AMBIENT OPTION (50XCA12,14 UNITS)



WITHOUT FACTORY INSTALLED DISCONNECT SWITCH



FACTORY INSTALLED DISCONNECT SWITCH OPTION



LOW VOLTAGE CONTROLS

NOTE: Refer to legend and notes on page 28.

Controls

Operating sequence

All units require the addition of a thermostat accessory package to complete the control circuit. The sequence of operation may vary depending on which package is selected.

Room-mounted thermostat — The unit uses an electronic thermostat mounted in the conditioned space.

Fan circulation — When the thermostat selector switch is set to the FAN position, the evaporator-fan motor will operate to provide air circulation.

Cooling — The evaporator will operate continuously or when the compressor runs, depending on the setting of the thermostat fan selector switch. When the thermostat closes (on a call for cooling), the control relay condenser-fan contactor and compressor contactor(s) close. The control relay will start the indoor fan if it is not already running. The condenser-fan contactor will start the condenser-fan and the compressor contactor(s) will immediately start the compressor(s).

A second stage on 50XCA12, 14 units will close if additional cooling demand is required, and will start the second-stage compressor. When the thermostat is satisfied, the

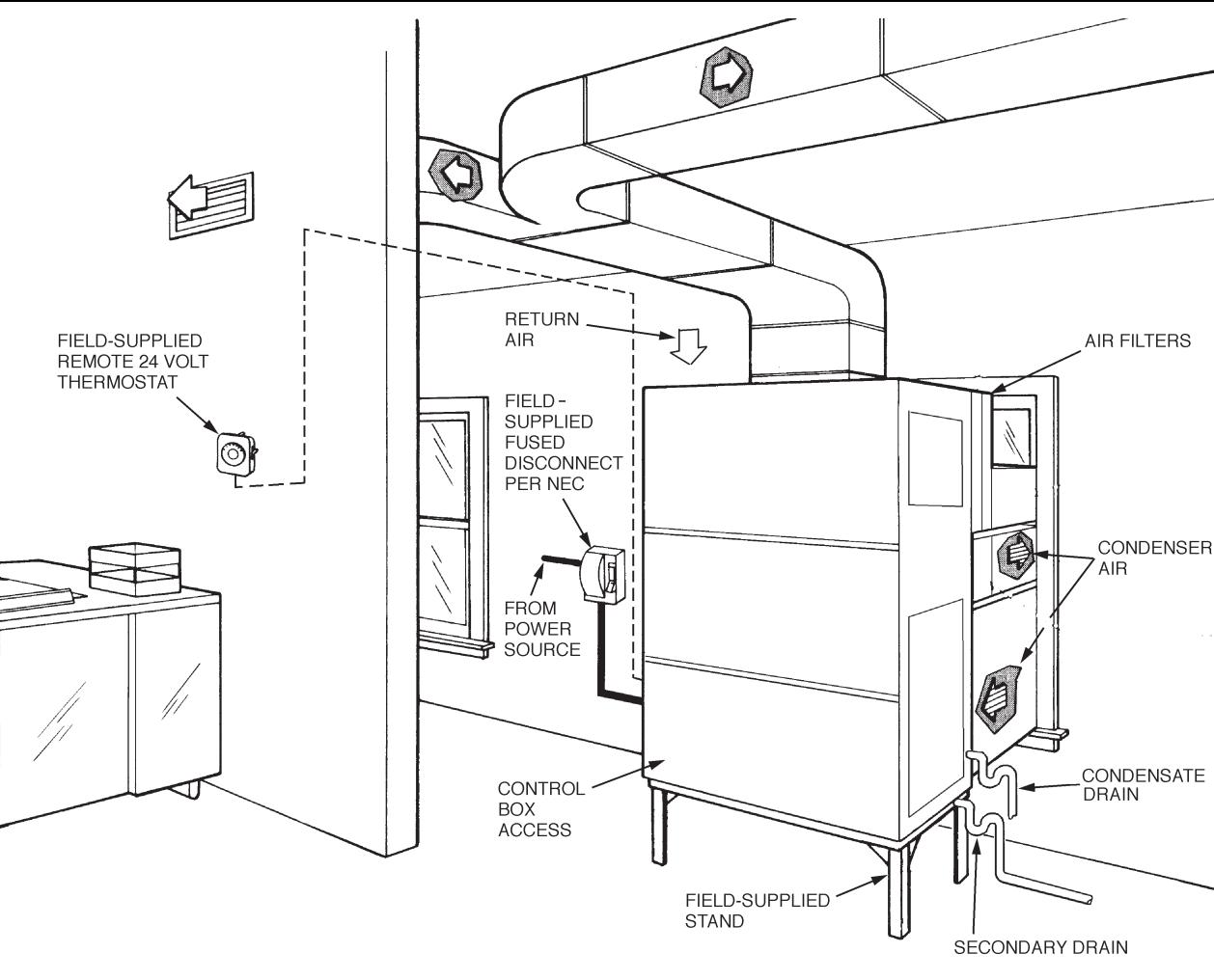
second-stage compressor will stop first, and then the first-stage compressor will stop when cooling demand is satisfied. The condenser will also stop as soon as both cooling stages are satisfied.

A 5-minute timer, TDR (time-delay relay), will prevent the compressor(s) from restarting for 5 minutes after any compressor has stopped.

2-speed fan operation — For dual-stage units, sizes 50XCA12 and larger, fan speed shall operate at 67% of full speed for first-stage cooling operation and 100% of full speed for second-stage cooling operation.

All units — The control circuit incorporates a current sensing lockout relay (Cycle-LOC™ device) that locks off the compressor(s) when any safety device is activated (low or high-pressure switches, or compressor internal overload). If any compressor safety device opens, the compressor will stop. High and low-pressure switches and compressor motor overload protectors will reset automatically when the condition which caused the device to trip has dropped below the reset condition. To reset the Cycle-LOC control device, manually turn the control power OFF, then back ON.

Typical piping and wiring



LEGEND

NEC	— National Electrical Code
➡	Condenser Airflow
➡	Evaporator Airflow
---	Control Wiring
—	Power Wiring

NOTES:

1. Wiring and piping shown are general points of connection guides only and are not intended for or to include all details for a specific installation.
2. All wiring must comply with applicable local and national codes.
3. All piping must follow standard piping techniques. Refer to Carrier System Design Manual Part 3 for details.
4. Connect both drains to building waste system and provide a trap of sufficient depth for unit static.

Application data



Location

For best results, unit must be properly located and installed. Selected location should not be adjacent to an acoustically sensitive space; for example, a conference room or executive office. The best location is in mechanical rooms near areas like elevators, restrooms, stairways, or similar spaces. The mechanical room should use construction methods which will help isolate the transmission of acoustical energy.

Since these units typically use large quantities of ducted condenser air, select a location with the best access to an outside window or wall to accommodate condenser air louver. Locate the unit as close to the wall opening as possible, but allow space for return air inlet and access to the evaporator and condenser coil for cleaning. Units on the same floor should have a minimum of 6 ft between units to prevent recirculation of condenser air. Units floor-to-floor should have a minimum of 10 ft between units to prevent recirculation. Units should not be located with several units pulling condenser air from a small space between buildings, where air may be recirculated. Recirculation of condenser air will result in increased head pressure which may cause units to trip on high pressure.

There are several methods for applying 50XCA units in different space applications. See page 42 for recommended equipment room applications and locations of key components.

Moving units into existing buildings

The 50XCA06-14 units are designed to pass through most 36-in. door openings. The filter rack may also be removed.

Unit isolation

Unit compressors are internally isolated and the compressor compartment is lined with acoustical insulation. If additional vibration isolation is desired, rubber in-shear pads are recommended under the four corners of the unit. Spring isolation is not recommended. All duct connections to the unit should be made with flexible connections to prevent any transmission of vibration to the ductwork.

Evaporator ductwork

Supply duct should be properly supported and the aspect ratio as close to square as possible. Duct should be sized for a maximum of 2000 fpm velocity in areas outside the equipment room. The duct should be lined with acoustical insulation for a minimum of 10 ft beyond the equipment room. A flexible duct connection should be used on the connection to the unit to prevent transmission of any unit vibrations into the duct.

Return duct may be attached to the unit, but is not necessary. The return to the unit should prevent line of sight visibility to the space. Insulated return duct is also recommended for acoustically sensitive spaces. Maximum velocity should not exceed 1000 fpm over occupied spaces. Adequate return area is essential for proper operation.

Condenser ductwork

Condenser supply and discharge air ducts should be as short and straight as possible. Cross-sectional area of the inlet and discharge should never be less than the face area

of the unit openings. When bends must be made, they should be as gradual as space limitations will allow. If the unit will be operated in cold outdoor weather, or if dampers are not provided at the louver, then the condenser ducts should be insulated to prevent condensation.

Design of the louver used for the inlet and discharge of the condenser airflow is critical to preventing recirculation of air and high pressure tips. The louver blades must be heavy enough to prevent unit airflow from drawing them together. Louver blades should be a minimum of 18 gage, and widths over 30 in. should have stiffeners. The inlet louver should not have a flange and the discharge louver should have a flange which directs the air away from the inlet. The use of a deflector, in conjunction with the condenser air discharge, is also recommended.

Piping traps

All 50XCA units have a drain for the condensate from the evaporator coil. The condensate trap should have a depth adequate to allow 2 in. of water in the trap with the unit running. Provide a clean-out on the trap and vent and pitch the trap for proper drainage.

Controls

All units require a room-mounted 24-v thermostat to complete the control system. Carrier has several versions of thermostats to meet a wide range of job conditions, including fully programmable and light-activated versions.

Operational limits

Airflow — 300 to 500 cfm per ton

Air temperature to evaporator:

Cooling

Maximum 90 F

Minimum 67 F

Condenser

Nominal airflow 350 cfm per ton,
Range: 300 to 500 cfm per ton

Condenser air temperature

Maximum 115 F

Minimum without low ambient 55 F

Minimum with low ambient 0° F

Sound considerations

All units are acoustically insulated. When installed in or near areas requiring additional sound attenuation:

- Locate unit in equipment room or closet
- Use acoustic lining in ductwork
- Provide square duct elbows with acoustic lining and turning vanes
- Locate the first supply outlet no less than 10 ft from a lined elbow
- If unit is located in the conditioned space, return air opening from the space should be a lined elbow or equivalent
- For critical applications, use packaged sound attenuators or duct silencers. Sound attenuation may be used on both evaporator air and condenser air.

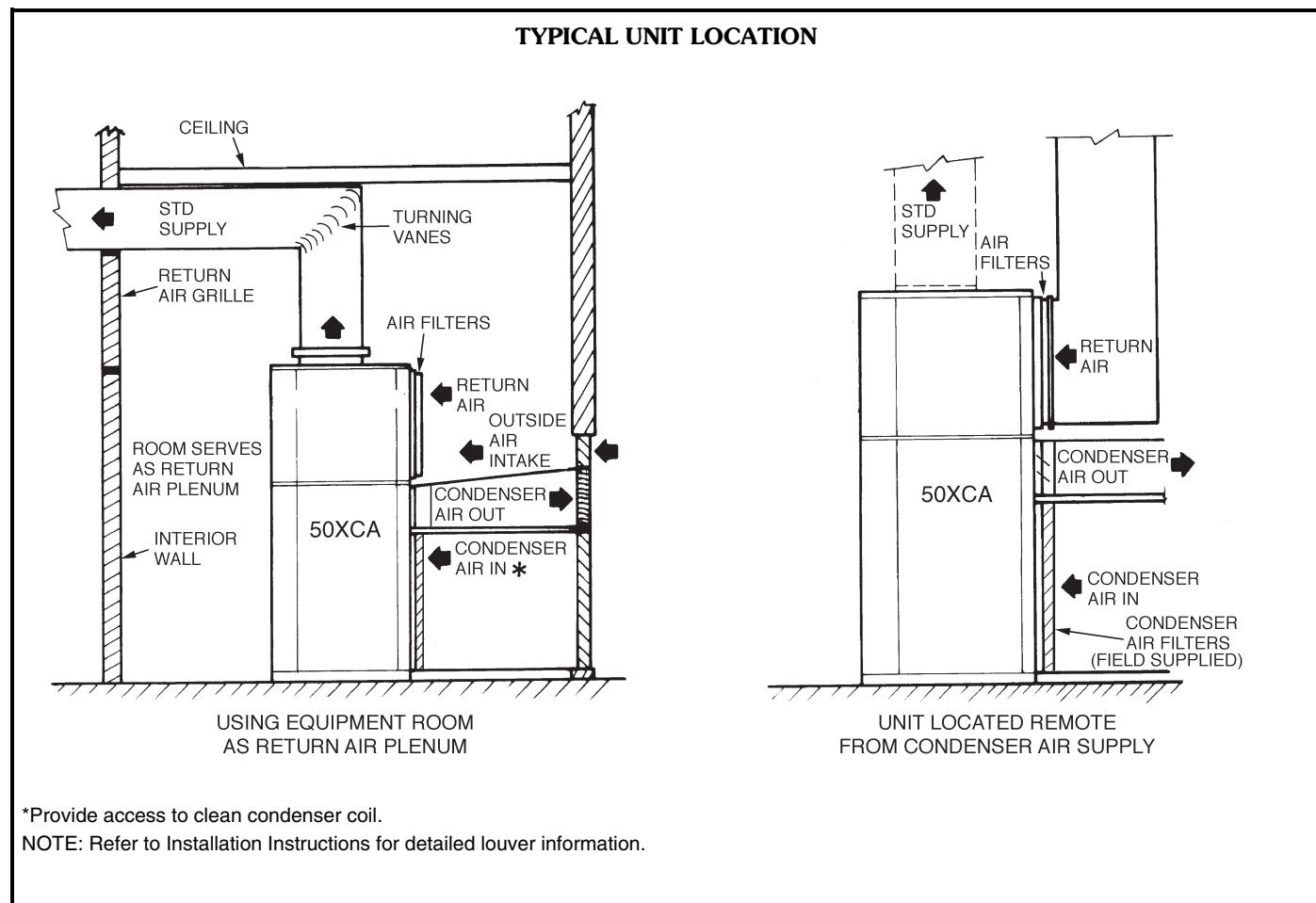
Application data (cont)



Setting condenser fan speed

The 50XCA condenser has a centrifugal blower and a variable pitch drive which allow adjusting the condenser airflow to match the static from the louvers, ductwork,

filters, and sound traps (if used). It is best to adjust the fan to the nominal airflow and the rpm which will achieve this performance. Excess airflow and rpm will make units noisier.



Guide specifications



Indoor Self-Contained Air-Cooled Unit Constant Volume Application

HVAC Guide Specifications

Size Range: **5 to 12 Tons**

Carrier Model Number: **50XCA**

Part 1 — General

1.01 SYSTEM DESCRIPTION

Indoor packaged vertical air-cooled cooling unit using hermetic scroll compressors and built-in condenser fan for cooling duty. Unit shall discharge supply air vertically or horizontally and condenser air horizontally as shown on contract drawings.

1.02 QUALITY ASSURANCE

- A. Units shall be rated in accordance with AHRI (Air-Conditioning, Heating, and Refrigeration Unit) Standard 340/360, latest edition, as appropriate.
- B. Unit shall be designed to conform to ANSI/ASHRAE (American National Standards Institute/American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 15, latest revision safety code, and UL (Underwriters Laboratories) Standard 1995, and shall be UL listed under both American and Canadian Standards.
- C. Unit shall be built in an ISO (International Organization for Standardization) 9001 certified manufacturing facility and shall be fully run-tested.
- D. Insulation, adhesive, and liner system shall meet NFPA (National Fire Protection Association) 90A requirements for flame spread and smoke generation.

1.03 DELIVERY, STORAGE, AND HANDLING

Units shall be stored and handled according to manufacturer's recommendations.

Part 2 — Products

2.01 EQUIPMENT

A. General:

Factory-assembled, single-piece, air-cooled cooling unit. Unit shall consist of scroll refrigerant compressor(s), indoor fan section with belt drive centrifugal fans and motor, evaporator coil section with direct expansion coil and drain pan, air-cooled condenser fan section with belt drive centrifugal fans and motor, factory wiring, piping and controls, and a system charge of refrigerant (R-410A). Unit may be used with or without return ductwork.

B. Unit Cabinet:

1. Cabinet shall be constructed of minimum 18 gage zinc surface alloyed steel with a baked enamel finish. Unit shall be capable of withstanding ASTM (American Society for Testing and Materials) B117 500-hour salt spray test.
2. Cabinet shall be fully insulated.
3. Configurations include vertical or horizontal discharge with a ducted or louvered return.

4. Unit drain pan shall have positive double slope to the drain to prevent standing water in pan.
5. Panels for servicing shall be easily removable.

C. Evaporator Fan Section:

1. Fans shall be double inlet, centrifugal wheel with forward curved blades designed for continuous operation. Fan wheel and scroll shall be constructed of steel with corrosion resistant finish, and statically and dynamically balanced.
2. Motor shall be 3-phase high-efficiency NEMA (National Electrical Manufacturers Association) frame TEFC (totally enclosed fan cooled) of the same voltage as the compressor(s). Motor shall have permanently lubricated ball bearings.

D. Compressor:

Hermetic scroll compressors shall be internally protected with high pressure relief. Compressors shall be factory rubber shock mounted with internal spring vibration isolators.

E. Coils:

1. Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed. Tube sheet openings shall be swaged to prevent tube wear. Coils shall be face split design.
2. Direct expansion coil shall be designed and tested in accordance with ANSI/ASHRAE 15, latest revision safety code.
3. Coil and drain pan shall be accessible through service access panels for cleaning.

F. Filter:

Filter frame shall be installed upstream of the cooling coil, designed to take a 1-in. or 2-in. thick cleanable or disposable type commercially available filter. Filters shall be accessible from either side of the unit and filter rack shall be usable with ducted or free return. Disposable filters will be supplied with the unit. Four-in. filter racks are available.

G. Condenser:

1. Fans shall be double inlet, centrifugal wheel with forward curved blades designed for continuous operation. Fan wheel and scroll shall be constructed of steel with corrosion resistant finish, and statically and dynamically balanced.
2. Fan shall be belt drive with an adjustable pitch motor pulley and fixed pitch fan pulley, with permanently lubricated, ball-bearing type bearings.
3. Motor shall be 3-phase high-efficiency NEMA frame TEFC (totally enclosed fan cooled) of the same voltage as the compressor(s). Motor shall have permanently lubricated ball bearings.

H. Operating Characteristics:

1. Unit shall be capable of providing a constant volume of conditioned air at a specified static pressure within the unit's normal operating range. Unit shall have dual-stage cooling

Guide specifications (cont)



- capacity control on all units sizes 12 to 14. Each compressor shall be on an independent refrigerant circuit. Unit shall be capable of starting and operating at up to 115 F outdoor ambient.
2. Units shall be able to operate down to 0° F when equipped with low ambient option.

I. Controls and Safeties:

1. Units shall be furnished with a control terminal block for connection of low voltage controls and thermostats.
2. Unit shall require a room-mounted thermostat mounted in the conditioned space. Thermostat shall be digital type. Thermostat shall control fan operation and be capable of turning unit on and off.
3. Units shall have the following factory-installed safeties:
 - a. High and low-pressure switches.
 - b. Motor and compressor overtemperature.
 - c. Current lockout.
 - d. Inherent automatic fan motor overload.

J. Electrical Requirements:

All electrical power wiring shall enter the unit cabinet at a single location. Control circuit is 24-v, suitable for a field-supplied 24-v thermostat.

K. Refrigerant Components:

Refrigerant circuit components include thermal expansion valves, distributor with nozzle, filter driers, and charging service valves on each circuit. Suction line shall have a refrigerant loop to prevent refrigerant drain back to the compressor. Suction piping shall be insulated with closed cell piping insulation.

L. Special Features:

1. Supply Air Plenum:

Plenum shall be provided to permit flee-blow horizontal air distribution with movable vanes to adjust airflow in horizontal and vertical direction. Plenum is field installed and shall be fully insulated.

2. Heating Coil:

Field-installed hot water coil shall be two rows with copper tube aluminum fins and a powder coated steel casing. Fins shall be bonded to tubes by mechanical expansion. Coil to be leak tested at 400 psig air pressure submerged in water and charged with dry air.

3. Steam coil:

Field-installed steam heating coil shall be of a steam distributing tube type, aluminum fin coil to be mounted external to the unit.

4. Evaporator Coil Coating:

The coating shall be continuous and cover the whole fin surface, tubing, manifolds, and feeder lines if applicable. For evaporator coils with thermostatic expansion valve assemblies, valve body, head, and bulb shall be masked. A minimum of 2-in. shall be masked on all coil connection points. Expansion valve inlet piping less than 6-inches in total length, expansion valve distributor, and external equalizer line are not required to be coated.

5. Airside Economizer:

A field-installed airside economizer shall be available with integral controller.