Installation, Start-Up and Service Instructions

Part Numbers 50XCA900-800A00 through 50XCA900-805A00,
50XCR900-800A00 through 50XCR900-805A00,
50XCW900-800A00 through 50XCW900-805A00

CONTENTS

SAFETY CONSIDERATIONS

- Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location. Only trained, qualified installers and service mechanics should install, start-up, and service this equipment.
- When working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.
- Follow all safety codes. Wear safety glasses and work gloves. Keep quenching cloth and fire extinguisher nearby when brazing.
- Use care in handling, rigging, and setting bulky equipment.

⚠ WARNING

To avoid the possibility of electrical shock, open and tag all disconnects before installing this equipment.

Wear hard hat and safety shoes when working in an area where there is danger of falling objects. Wear safety glasses to protect your eyes. When welding, brazing or cutting wear gloves and goggles for personal protection. Follow safe rigging practices when handling larger coils. Refer to ANSI (American National Standards Institute) Z49.1 (latest edition) for American Welding Society Standards of safe welding and flame cutting practices.

All field piping must conform to local codes.

INTRODUCTION

The hot water coil accessory provides draw-thru heat sources for Omnizone™ 50XC 5 ton to 20 ton packaged units. The coils are mounted directly in the return air and upstream of the cooling coil external to the unit. This heating coil accessory is not recommended for units with the air economizer or water economizer option, but mount on the inlet side of the cooling coil. They may be used with any discharge arrangement. The 50XC coils mount external to the unit where the filter track is attached on the unit return air connection. See Table 1 for accessory package contents and usage. See Fig. 1 for an illustration of the hot water coil accessory with dimensions and weights.

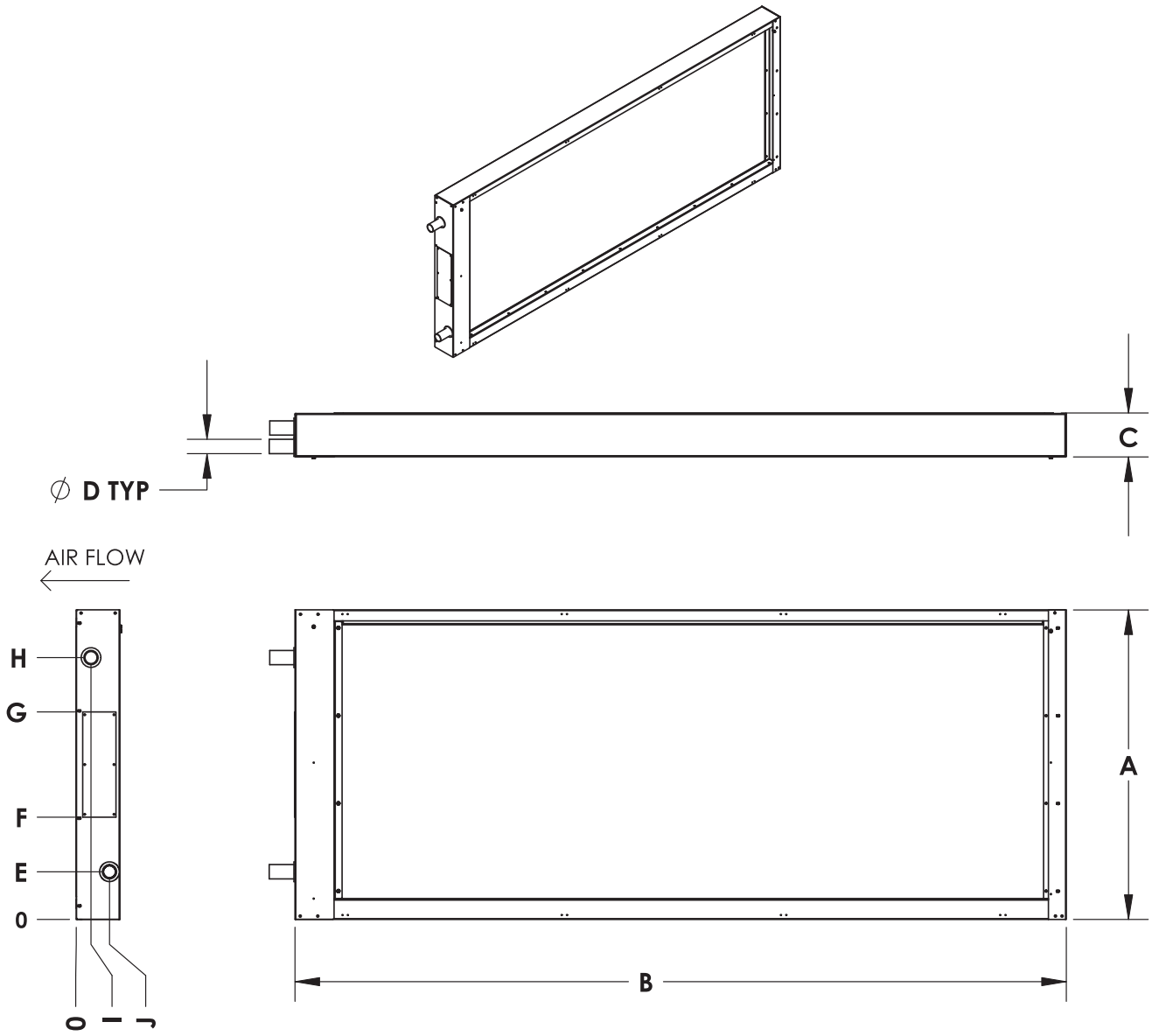
Table 1 — Package Contents and Usage

UNIT	ACCESSORY PART NUMBER	KIT CONTENTS
50XCA06	50XCA900-800A00	Complete Coil Assembly
50XCA08	50XCA900-801A00	
50XCA12	50XCA900-802A00	
50XCA14	50XCA900-803A00	
50XCA16	50XCA900-804A00	
50XCA24	50XCA900-805A00	
50XCR06	50XCR900-800A00	
50XCR08	50XCR900-801A00	
50XCR12	50XCR900-802A00	
50XCR14	50XCR900-803A00	
50XCR16	50XCR900-804A00	
50XCR24	50XCR900-805A00	
50XCW06	50XCW900-800A00	
50XCW08	50XCW900-801A00	
50XCW12	50XCW900-802A00	
50XCW14	50XCW900-803A00	
50XCW16	50XCW900-804A00	
50XCW24	50XCW900-805A00	

PRE-INSTALLATION

Complete Pre-Installation Checks — Remove accessory packaging and inspect shipment for damage. File claim with shipping company if accessory is damaged or incomplete.

Check Unit Clearance — Provide sufficient space for airflow clearance and servicing accessory after it is mounted in unit. The base unit minimum clearances for front, sides and rear of unit also apply to the hot water coils. Coils may need to be installed before the unit is moved into final position. Check job clearances and install coils before final placement if necessary.



PART NUMBER	UNIT SIZE	A	B	C	D (OD)	E	F	G	H	I	J	APRROX WEIGHT (lb)
50XC*900-800A00	06	30.8	53.1	5.0	1.375	6.6	9.4	21.4	25.6	1.7	3.8	70
50XC*900-801A00	08	30.8	53.1	5.0	1.375	6.6	9.4	21.4	25.6	1.7	3.8	70
50XC*900-802A00	12	35.3	68.0	5.0	1.375	5.4	11.6	23.6	29.9	1.7	3.8	90
50XCR900-803A00	14	35.3	68.0	5.0	1.375	5.4	11.6	23.6	29.9	1.7	3.8	90
50XCW900-803A00		35.3	68.0	5.0	1.375	5.4	11.6	23.6	29.9	1.7	3.8	90
50XCA900-803A00		35.5	88.0	5.0	1.625	5.4	11.6	23.6	29.9	1.7	3.8	115
50XC*900-804A00	16	35.5	88.0	5.0	1.625	5.4	11.6	23.6	29.9	1.7	3.8	115
50XC*900-805A00	24	39.3	88.0	5.0	1.625	4.1	13.6	25.6	33.8	1.7	3.8	125

* Applies to 50XCA/50XCR/50XCW models.

NOTE: Dimensions are in inches.

Fig. 1 — 50XC Hot Water Coil Assembly

Tools Needed

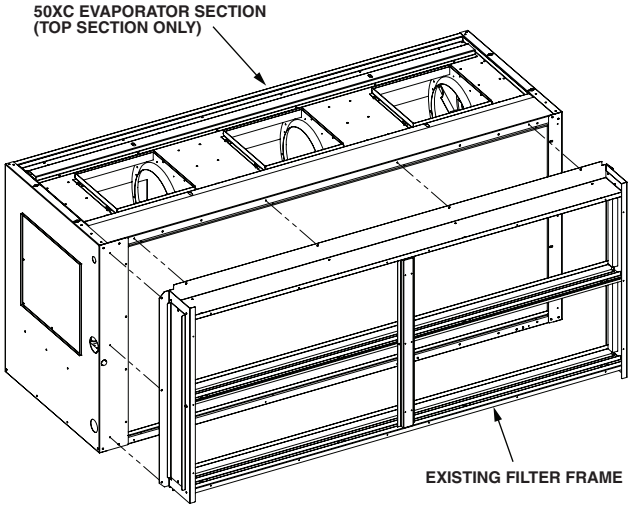
- $^{5}/_{16}$ in. nut driver
- Self-tapping screws (no. 10 x $^{3}/_{4}$ in.)
- Adequate lifting device
- Safety glasses
- Work gloves

INSTALLATION

⚠ WARNING

Lock-out and tag-out all power supplies to equipment and controls prior to servicing unit. Follow all safety codes. Failure to follow these requirements could result in serious personal injury or death.

1. Using a $^{5}/_{16}$ in. nut driver, remove and retian screws from filter frame and detach filter frame from evaporator cabinet of 50XC unit. Place filter frame in a safe location. See Fig. 2.



NOTES:
1. 50XC condenser section not shown for clarity.
2. Evaporator fan position shown in vertical orientation for reference only.

Fig. 2 — Remove Existing Filter Frame from 50XC Unit

2. Using $^{5}/_{16}$ in. nut driver, remove top, left, and right panels from external heating cabinet. See Fig. 3.

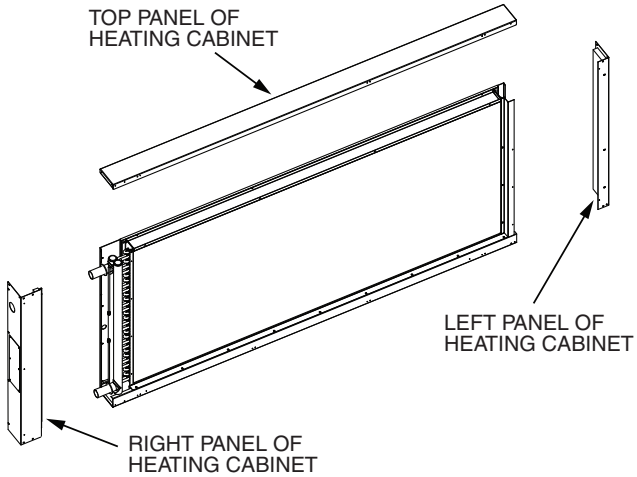


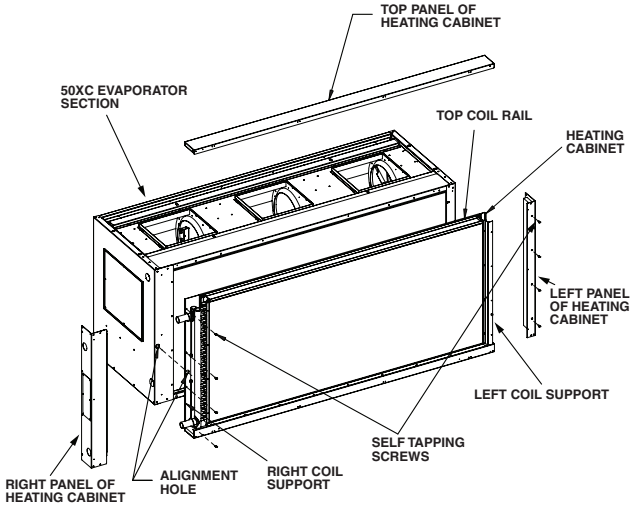
Fig. 3 — Remove Heating Cabinet Panels

3. Align heating accessory cabinet with evaporator cabinet by using the alignment holes shown in Fig. 4. Ensure heating cabinet is parallel with top of 50XC unit.

⚠ CAUTION

Ensure holes align correctly to prevent damaging evaporator coil. Use maximum of $^{3}/_{4}$ in. long screws.

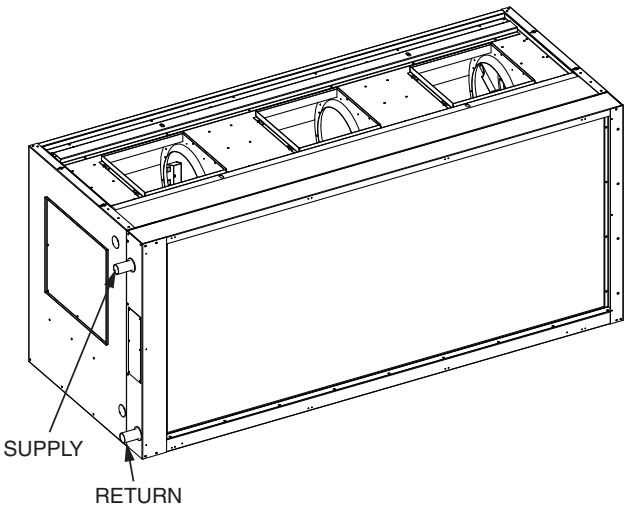
4. Screw top coil rail, left and right coil supports to 50XC unit using self-tapping screws in all provided screw holes as shown in Fig. 4.



NOTES:
1. 50XC condenser section not shown for clarity.
2. Evaporator fan position shown in vertical orientation for reference only.

Fig. 4 — Align and Attach Heating Cabinet to Evaporator

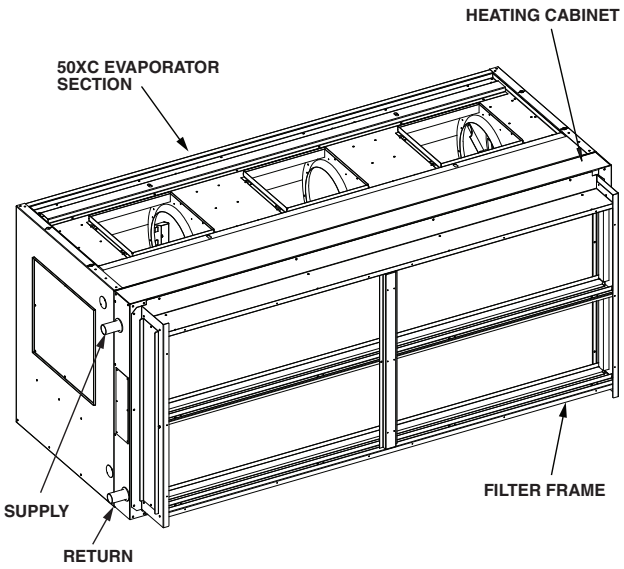
5. Replace top, left, and right panels onto heating cabinet. See Fig. 5.



NOTES:
1. 50XC condenser section not shown for clarity.
2. Evaporator fan position shown in vertical orientation for reference only.

Fig. 5 — Replace Heating Cabinet Panels

6. Attach existing filter frame to heating cabinet as shown in Fig. 6. Fasten with no. 10 screws in all provided screw holes using screws removed in Step 1.



NOTES:
1. 50XC condenser section not shown for clarity.
2. Evaporator fan position shown in vertical orientation for reference only.

Fig. 6 — Attach Filter Frame to 50XC Unit

PIPING

Recommendations for Water Coils — See Fig. 7.

1. Piping should be in accordance with accepted industry standards and all components rated for the system pressure expected. The 50XC coils are rated for maximum of 400 psig DWP (Design Working Pressure).
2. Coils should be piped such that they will drain and a drain and vent provided.
3. Water coils should not be subjected to entering air temperatures below 38 F to prevent coil freeze up. If temperatures over the coil are below this, glycol or brine solution should be used. Use a solution with the lowest concentration, which meet the coldest air expected. Excess concentration will greatly reduce coil capacity.
4. Whenever a hot water coil is subjected to freezing temperatures, some means of adequate freeze protection is required. A heating coil can be subjected to freezing temperatures by outside air during the winter. Use of a freeze protection thermostat is recommended.
5. During winter operation, either the outside-air supply must be closed off or a minimum water flow must be maintained if freezing outdoor air is admitted. For summer operation, it is recommended that if possible that the hot water coil be closed off, drained, and residual water be blown out. If the residual water can not be blown out, an inhibited glycol antifreeze should be added to the coil.
6. The return air duct system should be carefully designed to get adequate mixing of the return air and outdoor air streams to prevent cold spots on the coil that could freeze.
7. Two-position control valves, modulating control valves or three-way control valves may be used to control water flow. Select the valve based on the control valve manufacturer's recommendations for size and temperature rating. Select the control valve based on pressure drop equal to the coil.
8. Pipe sizes should be selected on the head pressure available from the pump. It is recommended that the velocity not exceed 8 ft per second and that the piping system be designed for approximately a 3-ft of loss per 100 equivalent ft of pipe.
9. Design the piping system to allow for expansion and to minimize vibration between the unit and piping system.

CONTROLS

Several methods of control are possible depending on the heating medium to be used, location and type of thermostatic control and whether or not modulating or ON-OFF type control is used. Figure 8 shows a typical control scheme for ON/OFF hot water heating coil in a 50XC Series unit.

Install heating thermostat or connect to the heating side of an available heating/cooling thermostat so that the unit operates the fan in the desired operation, either continuous or cycling with the heating coil. The thermostat should provide the required connection to activate the fan and the cooling and heating should not be able to be activated simultaneously.

Figure 8 shows typical wiring. The freeze stat (LLT) and the heating relay (HR1) are field-supplied and installed. Refer to the product data for typical thermostat wiring.

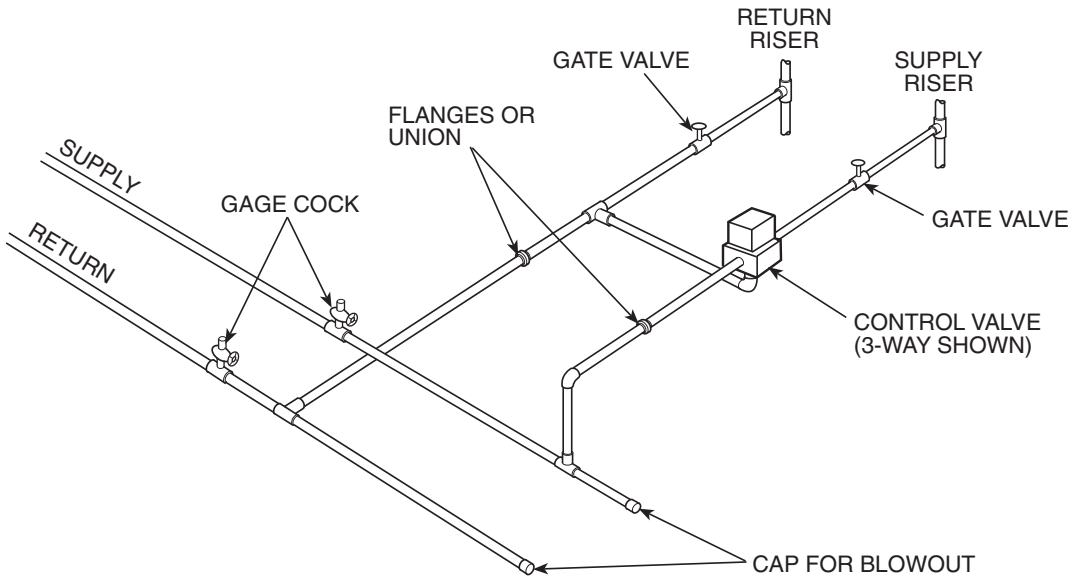


Fig. 7 — Typical Hot Water Coil Piping

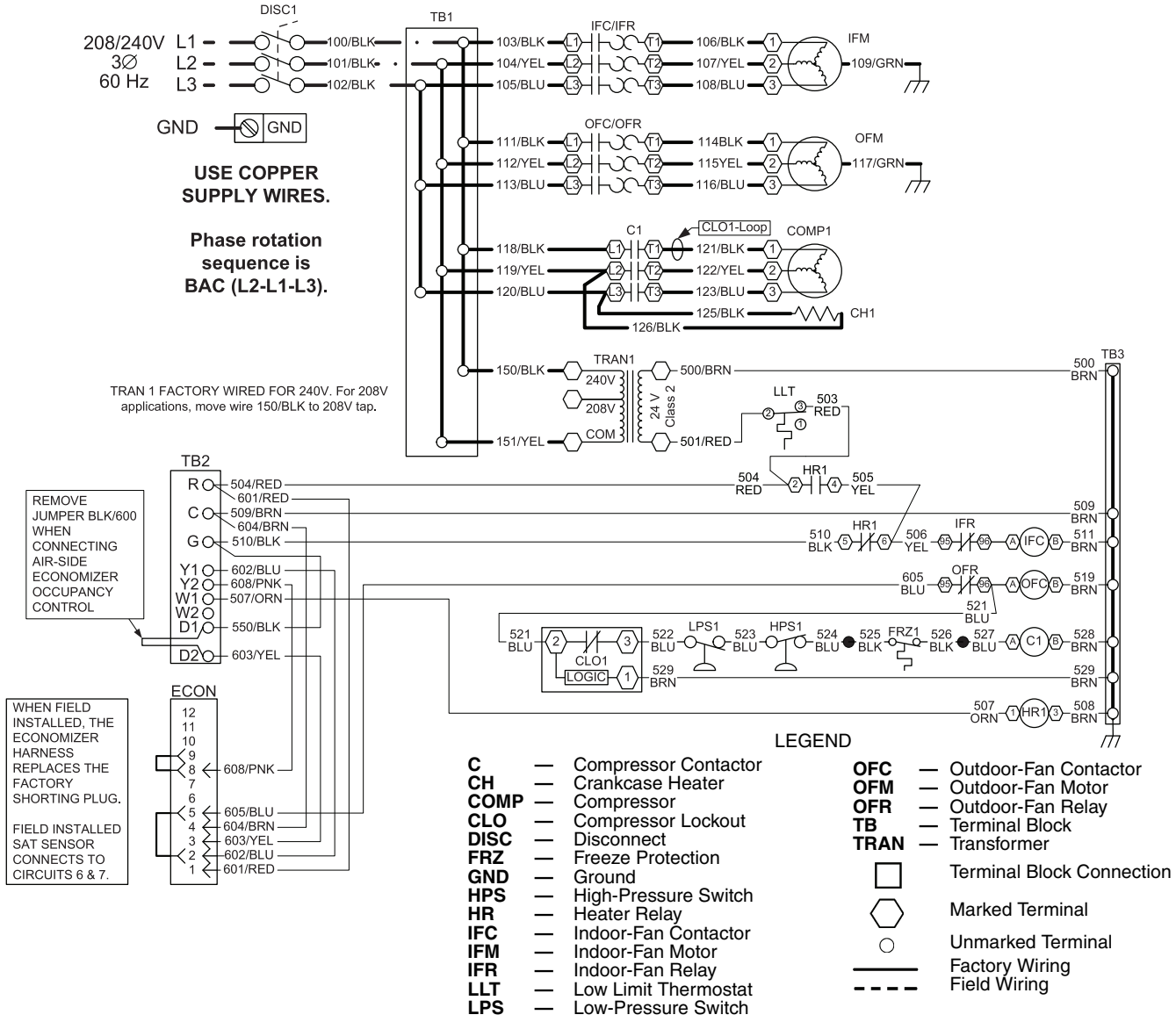


Fig. 8 — Typical Heating Coil Control Wiring

START-UP

1. Leak check coil assembly after piping connections are brazed.
2. Turn on power to the unit.
3. Set thermostat to ON position to energize evaporator fan.
4. Turn on water supply to the unit.
5. Set the thermostat to call for heating.
6. Remove middle access panel located on the right panel of the heating cabinet. Remove the cover. Purge any air in the coil with factory provided shrader fittings.
7. Check for heating effect at the air outlet.
8. Place thermostat in desired control setting.

SERVICE

NOTE: Do not use high-pressure water or air, damage to fins may result.

Cleaning Heating Coils — If proper filtration is maintained in the unit it should not be necessary to clean heating coils. However if the coils become dirty or greasy film forms on the fins. Proper cleaning can restore the coil heating performance.

For best results wash coils from discharge side and wash back toward the fan or unit return filters. Clean coils with a vacuum cleaner, fresh water, compressed air, or a bristle brush (not wire). Backflush coil to remove debris. Commercial coil cleaners may also be used to help remove grease and dirt. Steam cleaning is NOT recommended. Units installed in corrosive environments should be cleaned as part of a planned maintenance schedule. In this type of application, all accumulations of dirt should be cleaned off the coil.

Use a fin comb with teeth of the correct fin spacing when straightening bent or mashed fins.

Heating Capacity Tables — Heating capacity tables for hot water coils are provided for reference in Tables 2-6.

Table 2 — 50XCA,XCR,XCW06 Heating Capacity — Hot Water Coils

EWT (F)	GPM	PD (FT)	CFM	50 F EDB			55 F EDB			60 F EDB			65 F EDB			70 F EDB		
				TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT
120	5.2	0.7	1500	54.7	83.38	98.7	50.8	86.09	100.2	47.0	88.79	101.7	43.1	91.47	103.2	39.2	94.13	104.7
			2000	62.4	78.53	95.7	58.0	81.59	97.4	53.6	84.62	99.1	49.2	87.65	100.9	44.8	90.66	102.6
			2500	68.2	75.02	93.5	63.5	78.31	95.3	58.7	81.60	97.2	53.9	84.87	99.0	49.1	88.13	100.9
	12.5	3.1	1500	64.6	89.47	109.5	60.0	91.74	110.3	55.5	93.99	111.0	50.9	96.23	111.8	46.3	98.46	112.5
			2000	76.4	84.93	107.6	70.9	87.52	108.5	65.5	90.10	109.4	60.1	92.66	110.3	54.7	95.21	111.2
			2500	85.9	81.50	106.1	79.8	84.33	107.1	73.8	87.15	108.1	67.7	89.96	109.0	61.6	92.75	110.0
	19.7	7.2	1500	67.8	91.42	113.0	63.0	93.55	113.5	58.2	95.66	114.0	53.3	97.76	114.5	48.5	99.85	115.0
			2000	81.0	87.08	111.7	75.3	89.51	112.3	69.5	91.94	112.9	63.8	94.35	113.5	58.0	96.74	114.0
			2500	92.1	83.75	110.5	85.5	86.43	111.2	79.0	89.08	111.9	72.5	91.73	112.6	65.9	94.36	113.2
	27.0	12.9	1500	69.5	92.42	114.8	64.5	94.47	115.2	59.6	96.52	115.5	54.6	98.54	115.9	49.7	100.56	116.3
			2000	83.5	88.19	113.7	77.5	90.55	114.2	71.6	92.89	114.6	65.7	95.22	115.1	59.7	97.54	115.5
			2500	95.3	84.94	112.9	88.5	87.53	113.4	81.8	90.10	113.9	75.0	92.66	114.4	68.2	95.21	114.9
140	5.2	0.7	1500	71.1	93.42	112.2	67.2	96.12	113.7	63.3	98.82	115.3	59.4	101.49	116.8	55.5	104.16	118.3
			2000	81.2	87.15	108.3	76.8	90.20	110.0	72.4	93.24	111.7	67.9	96.26	113.5	63.5	99.27	115.2
			2500	88.9	82.59	105.3	84.1	85.89	107.1	79.3	89.18	109.0	74.4	92.45	110.9	69.6	95.71	112.8
	12.5	3.1	1500	83.8	101.15	126.4	79.1	103.42	127.1	74.5	105.68	127.9	69.9	107.92	128.6	65.3	110.15	129.4
			2000	99.0	95.31	123.9	93.6	97.90	124.8	88.2	100.48	125.7	82.7	103.05	126.6	77.2	105.60	127.5
			2500	111.5	90.89	121.9	105.4	93.73	122.9	99.3	96.55	123.9	93.2	99.36	124.9	87.0	102.15	125.9
	19.7	7.2	1500	87.8	103.60	131.0	82.9	105.73	131.5	78.1	107.85	132.0	73.2	109.96	132.5	68.3	112.05	133.0
			2000	104.9	98.01	129.2	99.2	100.45	129.8	93.4	102.88	130.4	87.6	105.30	131.0	81.8	107.70	131.6
			2500	119.3	93.74	127.7	112.7	96.41	128.4	106.2	99.08	129.1	99.6	101.73	129.7	93.0	104.37	130.4
	27.0	12.9	1500	89.8	104.84	133.2	84.8	106.90	133.6	79.9	108.95	134.0	74.9	110.99	134.4	69.9	113.02	134.7
			2000	108.0	99.40	131.9	102.0	101.77	132.3	96.1	104.12	132.8	90.1	106.46	133.2	84.1	108.79	133.7
			2500	123.3	95.22	130.7	116.5	97.82	131.2	109.8	100.40	131.7	103.0	102.97	132.3	96.1	105.53	132.8
160	5.2	0.7	1500	87.7	103.57	125.5	83.8	106.28	127.1	79.9	108.97	128.6	76.0	111.65	130.2	72.0	114.32	131.7
			2000	100.3	95.88	120.6	95.8	98.93	122.3	91.4	101.97	124.1	86.9	104.99	125.9	82.4	108.01	127.6
			2500	109.8	90.27	116.8	105.0	93.57	118.7	100.1	96.86	120.7	95.3	100.14	122.6	90.4	103.40	124.5
	12.5	3.1	1500	103.1	112.93	143.2	98.4	115.21	143.9	93.8	117.47	144.7	89.1	119.72	145.4	84.4	121.96	146.2
			2000	122.0	105.79	140.1	116.5	108.39	141.0	111.0	110.98	141.9	105.5	113.55	142.8	100.0	116.11	143.7
			2500	137.4	100.38	137.6	131.3	103.22	138.6	125.1	106.05	139.6	118.9	108.86	140.6	112.8	111.67	141.6
	19.7	7.2	1500	107.9	115.86	148.8	103.0	118.01	149.3	98.1	120.14	149.8	93.2	122.25	150.3	88.3	124.36	150.8
			2000	129.0	109.04	146.6	123.2	111.49	147.2	117.4	113.93	147.8	111.6	116.35	148.4	105.8	118.76	149.0
			2500	146.7	103.81	144.8	140.2	106.49	145.5	133.6	109.17	146.2	127.0	111.83	146.8	120.4	114.47	147.5
	27.0	12.9	1500	110.3	117.35	151.7	105.3	119.42	152.0	100.3	121.48	152.4	95.3	123.53	152.8	90.3	125.57	153.2
			2000	132.7	110.70	150.0	126.7	113.08	150.4	120.7	115.44	150.9	114.7	117.79	151.3	108.7	120.13	151.8
			2500	151.6	105.59	148.5	144.8	108.19	149.1	138.0	110.78	149.6	131.1	113.36	150.1	124.3	115.93	150.6
180	5.2	0.7	1500	104.5	113.82	138.7	100.6	116.53	140.3	96.6	119.23	141.8	92.7	121.92	143.4	88.7	124.59	145.0
			2000	119.5	104.69	132.8	115.1	107.75	134.5	110.6	110.79	136.3	106.1	113.82	138.1	101.6	116.84	139.9
			2500	131.0	98.03	128.2	126.1	101.34	130.2	121.2	104.63	132.1	116.3	107.91	134.0	111.4	111.18	136.0
	12.5	3.1	1500	122.5	124.80	159.9	117.8	127.08	160.7	113.1	129.36	161.4	108.5	131.61	162.2	103.8	133.86	163.0
			2000	145.0	116.35	156.2	139.5	118.96	157.1	134.0	121.56	158.0	128.5	124.14	158.9	123.0	126.71	159.8
			2500	163.5	109.95	153.2	157.3	112.79	154.2	151.1	115.63	155.2	144.9	118.45	156.2	138.7	121.26	157.2
	19.7	7.2	1500	128.1	128.21	166.7	123.2	130.36	167.2	118.3	132.50	167.7	113.4	134.63	168.2	108.5	136.75	168.7
			2000	153.3	120.14	164.0	147.5	122.60	164.6	141.6	125.05	165.2	135.8	127.49	165.9	130.0	129.91	166.5
			2500	174.4	113.95	161.8	167.8	116.64	162.5	161.2	119.33	163.2	154.6	122.00	163.9	147.9	124.66	164.6
	27.0	12.9	1500	130.9	129.93	170.1	125.9	132.02	170.4	120.9	134.09	170.8	115.9	136.15	171.2	110.8	138.20	171.6
			2000	157.5	122.07	168.0	151.5	124.46	168.5	145.5	126.83	168.9	139.5	129.20	169.4	133.5	131.55	169.9
			2500	180.0	116.02	166.3	173.2	118.63	166.8	166.4	121.24	167.4	159.5	123.83	167.9	152.7	126.41	168.4

LEGEND

EDB — Entering Dry-Bulb Air Temperature
EWT — Entering Water Temperature (F)
LDB — Leaving Dry-Bulb (F)
LWT — Leaving Water Temperature (F)
PD — Water Pressure Drop (ft)
TC — Total Capacity (MBH)

NOTES:
1. Performance data is with 100% fresh water.
2. Elevation is sea level.

Table 3 — 50XCA,XCR,XCW08 Heating Capacity — Hot Water Coils

EWT (F)	GPM	PD (FT)	CFM	50 F EDB			55 F EDB			60 F EDB			65 F EDB			70 F EDB		
				TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT
120	7.9	1.7	2250	82.6	83.66	98.8	76.8	86.35	100.3	70.9	89.02	101.8	65.1	91.68	103.3	59.2	94.32	104.8
			3000	94.7	78.89	95.7	88.1	81.92	97.4	81.4	84.93	99.2	74.7	87.92	100.9	68.0	90.90	102.6
			3750	104.0	75.42	93.4	96.7	78.68	95.2	89.4	81.94	97.1	82.1	85.18	99.0	74.8	88.41	100.9
	18.7	7.6	2250	95.8	89.02	109.6	89.0	91.32	110.4	82.1	93.61	111.1	75.3	95.88	111.9	68.5	98.14	112.6
			3000	113.3	84.57	107.7	105.3	87.18	108.6	97.3	89.78	109.5	89.2	92.37	110.4	81.2	94.95	111.2
			3750	127.7	81.20	106.2	118.7	84.05	107.2	109.6	86.89	108.1	100.6	89.72	109.1	91.5	92.53	110.1
	29.4	17.6	2250	99.9	90.73	113.1	92.8	92.90	113.6	85.7	95.07	114.1	78.6	97.22	114.6	71.5	99.35	115.1
			3000	119.5	86.44	111.8	111.0	88.92	112.4	102.5	91.39	113.0	94.0	93.85	113.5	85.5	96.29	114.1
			3750	135.8	83.18	110.7	126.2	85.89	111.3	116.5	88.59	112.0	106.9	91.27	112.6	97.3	93.95	113.3
	40.2	31.6	2250	102.0	91.59	114.9	94.8	93.70	115.2	87.5	95.80	115.6	80.2	97.89	116.0	73.0	99.97	116.3
			3000	122.6	87.40	113.8	113.9	89.82	114.3	105.2	92.21	114.7	96.5	94.60	115.1	87.7	96.97	115.6
			3750	140.0	84.20	113.0	130.1	86.84	113.5	120.1	89.46	114.0	110.2	92.08	114.5	100.2	94.68	115.0
140	7.9	1.7	2250	107.2	93.69	112.4	101.3	96.38	113.9	95.5	99.05	115.5	89.6	101.71	117.0	83.7	104.36	118.5
			3000	123.0	87.53	108.4	116.3	90.56	110.1	109.6	93.57	111.8	102.9	96.57	113.5	96.1	99.55	115.3
			3750	135.2	83.03	105.2	127.9	86.30	107.1	120.5	89.56	109.0	113.1	92.80	110.9	105.7	96.03	112.8
	18.7	7.6	2250	123.9	100.50	126.5	117.1	102.81	127.3	110.2	105.10	128.0	103.4	107.38	128.8	96.5	109.65	129.5
			3000	146.7	94.77	124.1	138.7	97.39	124.9	130.6	100.00	125.8	122.5	102.60	126.7	114.4	105.18	127.6
			3750	165.5	90.44	122.0	156.4	93.29	123.0	147.3	96.14	124.0	138.2	98.97	125.0	129.1	101.79	126.0
	29.4	17.6	2250	129.2	102.65	131.1	122.0	104.83	131.6	114.9	107.01	132.1	107.7	109.17	132.6	100.6	111.31	133.1
			3000	154.5	97.14	129.3	146.0	99.63	129.9	137.5	102.10	130.5	129.0	104.57	131.1	120.4	107.02	131.7
			3750	175.7	92.93	127.9	166.1	95.65	128.5	156.4	98.36	129.2	146.7	101.05	129.9	137.0	103.74	130.5
	40.2	31.6	2250	131.8	103.72	133.3	124.5	105.85	133.7	117.2	107.96	134.1	109.9	110.06	134.4	102.6	112.15	134.8
			3000	158.4	98.34	132.0	149.7	100.76	132.4	141.0	103.17	132.9	132.2	105.57	133.3	123.5	107.96	133.8
			3750	181.0	94.22	130.9	171.0	96.87	131.4	161.1	99.50	131.9	151.1	102.13	132.4	141.1	104.74	132.9
160	7.9	1.7	2250	132.0	103.81	125.9	126.1	106.50	127.4	120.2	109.18	128.9	114.3	111.85	130.5	108.4	114.50	132.0
			3000	151.6	96.26	120.8	144.9	99.29	122.5	138.1	102.30	124.3	131.4	105.31	126.0	124.6	108.30	127.8
			3750	166.7	90.73	116.9	159.3	94.01	118.8	151.9	97.27	120.7	144.5	100.52	122.6	137.1	103.76	124.5
	18.7	7.6	2250	152.3	112.07	143.4	145.4	114.39	144.1	138.6	116.69	144.9	131.7	118.98	145.6	124.8	121.25	146.4
			3000	180.5	105.06	140.3	172.4	107.69	141.2	164.3	110.30	142.1	156.1	112.91	143.0	148.0	115.50	143.8
			3750	203.6	99.75	137.8	194.5	102.61	138.8	185.4	105.47	139.8	176.2	108.31	140.8	167.1	111.14	141.8
	29.4	17.6	2250	158.6	114.65	149.0	151.5	116.84	149.5	144.3	119.03	150.0	137.1	121.20	150.5	129.9	123.36	151.0
			3000	189.8	107.90	146.8	181.3	110.41	147.4	172.7	112.90	148.0	164.2	115.37	148.6	155.6	117.83	149.2
			3750	215.9	102.76	145.0	206.2	105.49	145.7	196.5	108.21	146.4	186.8	110.92	147.0	177.1	113.61	147.7
	40.2	31.6	2250	161.8	115.94	151.8	154.5	118.08	152.2	147.2	120.20	152.5	139.8	122.32	152.9	132.5	124.41	153.3
			3000	194.5	109.35	150.1	185.8	111.79	150.6	177.0	114.21	151.0	168.2	116.62	151.5	159.4	119.02	151.9
			3750	222.2	104.30	148.7	212.3	106.96	149.2	202.3	109.61	149.7	192.3	112.25	150.2	182.3	114.88	150.7
180	7.9	1.7	2250	157.1	114.01	139.2	151.1	116.71	140.7	145.2	119.40	142.3	139.2	122.07	143.8	133.3	124.73	145.4
			3000	180.4	105.05	133.1	173.7	108.09	134.8	166.9	111.11	136.6	160.1	114.13	138.4	153.3	117.13	140.1
			3750	198.4	98.49	128.4	191.0	101.77	130.3	183.6	105.04	132.2	176.2	108.30	134.2	168.7	111.54	136.1
	18.7	7.6	2250	180.9	123.71	160.2	174.0	126.04	160.9	167.1	128.35	161.7	160.2	130.65	162.4	153.3	132.94	163.2
			3000	214.4	115.41	156.5	206.3	118.05	157.4	198.1	120.68	158.3	190.0	123.30	159.1	181.8	125.90	160.0
			3750	242.0	109.12	153.4	232.8	112.00	154.4	223.7	114.86	155.4	214.5	117.72	156.5	205.3	120.56	157.5
	29.4	17.6	2250	188.2	126.71	166.9	181.0	128.93	167.4	173.9	131.13	167.9	166.7	133.31	168.4	159.5	135.48	168.9
			3000	225.3	118.74	164.3	216.7	121.25	164.9	208.2	123.75	165.5	199.6	126.24	166.1	191.0	128.72	166.7
			3750	256.4	112.64	162.1	246.7	115.39	162.8	237.0	118.12	163.5	227.2	120.84	164.1	217.5	123.55	164.8
	40.2	31.6	2250	191.9	128.21	170.2	184.6	130.37	170.6	177.2	132.51	171.0	169.9	134.64	171.3	162.5	136.75	171.7
			3000	230.8	120.42	168.2	222.0	122.87	168.7	213.2	125.31	169.1	204.4	127.73	169.6	195.6	130.15	170.0
			3750	263.7	114.44	166.5	253.7	117.12	167.1	243.7	119.78	167.6	233.7	122.43	168.1	223.7	125.07	168.6

LEGEND

EDB — Entering Dry-Bulb Air Temperature
EWT — Entering Water Temperature (F)
LDB — Leaving Dry-Bulb (F)
LWT — Leaving Water Temperature (F)
PD — Water Pressure Drop (ft)
TC — Total Capacity (MBH)

NOTES:
1. Performance data is with 100% fresh water.
2. Elevation is sea level.

Table 4 — 50XCA,XCR,XCW12 Heating Capacity — Hot Water Coils

EWT (F)	GPM	PD (FT)	CFM	50 F EDB			55 F EDB			60 F EDB			65 F EDB			70 F EDB		
				TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT
120	10.0	2.1	3000	105.8	82.22	98.6	98.3	85.00	100.1	90.8	87.76	101.6	83.3	90.51	103.2	75.7	93.25	104.7
			4000	121.5	77.73	95.4	113.0	80.82	97.1	104.4	83.90	98.9	95.8	86.97	100.6	87.1	90.03	102.4
			5000	133.9	74.42	92.9	124.5	77.75	94.8	115.0	81.06	96.7	105.6	84.37	98.6	96.1	87.66	100.6
	21.7	8.8	3000	126.0	88.38	108.3	117.0	90.71	109.1	108.1	93.04	109.9	99.1	95.35	110.8	90.1	97.65	111.6
			4000	149.0	83.99	106.1	138.4	86.64	107.1	127.8	89.27	108.1	117.2	91.90	109.1	106.6	94.51	110.1
			5000	168.0	80.64	104.3	156.1	83.53	105.4	144.2	86.40	106.6	132.2	89.26	107.7	120.3	92.11	108.8
	33.3	19.5	3000	133.6	90.70	111.9	124.1	92.87	112.5	114.6	95.03	113.0	105.1	97.18	113.6	95.5	99.31	114.2
			4000	159.7	86.44	110.3	148.4	88.91	111.0	137.0	91.38	111.7	125.6	93.83	112.4	114.2	96.27	113.1
			5000	181.7	83.15	109.0	168.8	85.86	109.7	155.9	88.56	110.5	143.0	91.24	111.3	130.1	93.91	112.1
	45.0	34.5	3000	137.7	91.95	113.8	127.9	94.03	114.3	118.1	96.10	114.7	108.3	98.16	115.1	98.4	100.21	115.6
			4000	165.6	87.77	112.6	153.8	90.16	113.1	142.0	92.53	113.6	130.2	94.88	114.1	118.4	97.23	114.7
			5000	189.3	84.54	111.5	175.9	87.15	112.1	162.4	89.75	112.7	149.0	92.33	113.3	135.5	94.91	113.9
140	10.0	2.1	3000	136.9	91.69	112.2	129.3	94.47	113.7	121.8	97.24	115.3	114.2	100.00	116.8	106.7	102.74	118.3
			4000	157.3	85.90	108.0	148.7	89.00	109.8	140.1	92.09	111.5	131.4	95.16	113.3	122.8	98.23	115.1
			5000	173.4	81.63	104.7	164.0	84.97	106.7	154.5	88.29	108.6	145.0	91.60	110.5	135.4	94.90	112.5
	21.7	8.8	3000	162.9	99.61	124.8	153.9	101.95	125.6	144.8	104.28	126.4	135.8	106.60	127.3	126.8	108.91	128.1
			4000	192.7	93.96	122.0	182.0	96.62	123.0	171.4	99.26	124.0	160.8	101.90	124.9	150.1	104.52	125.9
			5000	217.4	89.65	119.6	205.4	92.55	120.8	193.5	95.43	121.9	181.5	98.30	123.0	169.5	101.16	124.1
	33.3	19.5	3000	172.6	102.58	129.5	163.1	104.76	130.1	153.5	106.93	130.6	143.9	109.09	131.2	134.3	111.23	131.8
			4000	206.4	97.10	127.4	195.0	99.58	128.1	183.6	102.06	128.8	172.2	104.52	129.5	160.8	106.96	130.2
			5000	235.0	92.87	125.7	222.1	95.58	126.5	209.1	98.29	127.2	196.1	100.98	128.0	183.1	103.67	128.8
	45.0	34.5	3000	177.8	104.17	132.0	168.0	106.26	132.4	158.1	108.34	132.9	148.3	110.41	133.3	138.4	112.47	133.8
			4000	213.9	98.80	130.3	202.1	101.19	130.9	190.2	103.57	131.4	178.4	105.94	131.9	166.6	108.29	132.5
			5000	244.7	94.63	129.0	231.2	97.25	129.6	217.7	99.86	130.2	204.2	102.46	130.8	190.7	105.05	131.4
160	10.0	2.1	3000	168.2	101.21	125.6	160.6	104.00	127.2	153.0	106.78	128.7	145.4	109.54	130.3	137.8	112.29	131.8
			4000	193.4	94.12	120.5	184.7	97.23	122.3	176.0	100.32	124.0	167.4	103.41	125.8	158.7	106.48	127.6
			5000	213.2	88.89	116.4	203.7	92.23	118.4	194.2	95.56	120.3	184.6	98.87	122.3	175.1	102.18	124.2
	21.7	8.8	3000	200.0	110.90	141.2	190.9	113.26	142.0	181.9	115.60	142.9	172.8	117.93	143.7	163.7	120.25	144.6
			4000	236.7	104.00	137.7	226.0	106.66	138.7	215.3	109.32	139.7	204.6	111.96	140.7	193.9	114.59	141.8
			5000	267.1	98.72	134.9	255.1	101.63	136.0	243.1	104.52	137.1	231.1	107.40	138.3	219.0	110.26	139.4
	33.3	19.5	3000	211.9	114.52	147.0	202.2	116.72	147.6	192.6	118.90	148.2	183.0	121.06	148.8	173.4	123.22	149.4
			4000	253.4	107.82	144.5	242.0	110.32	145.2	230.5	112.80	145.9	219.1	115.27	146.6	207.6	117.73	147.3
			5000	288.6	102.64	142.3	275.6	105.37	143.1	262.6	108.09	143.9	249.6	110.79	144.7	236.6	113.49	145.5
	45.0	34.5	3000	218.2	116.45	150.1	208.3	118.56	150.6	198.4	120.65	151.0	188.5	122.74	151.5	178.6	124.81	151.9
			4000	262.5	109.89	148.1	250.6	112.29	148.6	238.7	114.68	149.2	226.9	117.06	149.7	215.0	119.43	150.2
			5000	300.3	104.79	146.4	286.8	107.42	147.0	273.3	110.04	147.6	259.7	112.65	148.2	246.2	115.25	148.8
180	10.0	2.1	3000	199.5	110.77	139.0	191.9	113.57	140.5	184.3	116.35	142.1	176.7	119.13	143.7	169.1	121.89	145.3
			4000	229.5	102.37	132.8	220.8	105.49	134.6	212.1	108.59	136.4	203.4	111.69	138.2	194.7	114.77	140.0
			5000	253.1	96.17	127.9	243.6	99.52	129.9	234.0	102.86	131.9	224.5	106.18	133.8	214.9	109.50	135.8
	21.7	8.8	3000	237.2	122.25	157.6	228.2	124.62	158.4	219.1	126.97	159.3	210.0	129.32	160.1	200.9	131.65	161.0
			4000	280.9	114.08	153.4	270.2	116.76	154.4	259.4	119.43	155.4	248.7	122.08	156.5	238.0	124.72	157.5
			5000	317.1	107.84	150.0	305.0	110.75	151.1	293.0	113.65	152.3	280.9	116.54	153.4	268.9	119.42	154.6
	33.3	19.5	3000	251.3	126.52	164.5	241.6	128.73	165.1	232.0	130.92	165.7	222.3	133.11	166.3	212.7	135.27	166.9
			4000	300.6	118.59	161.5	289.1	121.10	162.2	277.7	123.60	162.9	266.2	126.09	163.6	254.7	128.56	164.3
			5000	342.4	112.47	158.9	329.4	115.21	159.7	316.4	117.94	160.5	303.3	120.65	161.3	290.3	123.36	162.1
	45.0	34.5	3000	258.7	128.80	168.2	248.8	130.92	168.7	238.9	133.03	169.1	228.9	135.12	169.6	219.0	137.21	170.0
			4000	311.3	121.03	165.8	299.4	123.45	166.3	287.5	125.85	166.9	275.6	128.25	167.4	263.7	130.63	168.0
			5000	356.3	114.99	163.7	342.7	117.64	164.4	329.2	120.28	165.0	315.6	122.90	165.6	302.0	125.51	166.2

LEGEND

EDB — Entering Dry-Bulb Air Temperature
EWT — Entering Water Temperature (F)
LDB — Leaving Dry-Bulb (F)
LWT — Leaving Water Temperature (F)
PD — Water Pressure Drop (ft)
TC — Total Capacity (MBH)

NOTES:
1. Performance data is with 100% fresh water.
2. Elevation is sea level.

Table 5 — 50XCA,XCR,XCW14 Heating Capacity — Hot Water Coils

EWT (F)	GPM	PD (FT)	CFM	50 F EDB			55 F EDB			60 F EDB			65 F EDB			70 F EDB		
				TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT
120	11.7	2.9	3750	124.0	80.16	98.6	115.2	83.08	100.1	106.4	85.99	101.6	97.6	88.89	103.1	88.8	91.77	104.6
			5000	141.7	75.84	95.5	131.7	79.07	97.2	121.7	82.28	99.0	111.7	85.48	100.7	101.6	88.68	102.4
			6250	155.5	72.69	93.1	144.6	76.14	95.0	133.6	79.57	96.9	122.6	83.00	98.8	111.6	86.42	100.7
	23.4	10.1	3750	145.7	85.43	107.4	135.3	87.98	108.3	125.0	90.51	109.2	114.6	93.04	110.1	104.2	95.55	111.0
			5000	170.7	81.13	105.2	158.6	83.98	106.3	146.5	86.82	107.3	134.4	89.65	108.4	122.2	92.47	109.4
			6250	191.2	77.90	103.5	177.7	80.98	104.6	164.1	84.05	105.8	150.6	87.10	107.0	137.0	90.15	108.2
	35.0	21.5	3750	154.7	87.62	111.1	143.7	90.01	111.7	132.7	92.39	112.3	121.7	94.76	113.0	110.6	97.11	113.6
			5000	183.1	83.40	109.4	170.1	86.09	110.2	157.1	88.77	110.9	144.1	91.44	111.7	131.1	94.09	112.4
			6250	206.9	80.19	108.0	192.3	83.11	108.9	177.6	86.02	109.7	162.9	88.91	110.6	148.2	91.79	111.4
	46.7	37.1	3750	159.7	88.84	113.1	148.3	91.15	113.6	137.0	93.44	114.1	125.6	95.72	114.6	114.2	97.99	115.1
			5000	190.2	84.69	111.8	176.7	87.29	112.3	163.2	89.88	112.9	149.6	92.45	113.5	136.1	95.02	114.1
			6250	215.9	81.51	110.6	200.6	84.33	111.3	185.3	87.15	112.0	170.0	89.95	112.6	154.6	92.74	113.3
140	11.7	2.9	3750	160.5	89.04	112.1	151.7	91.97	113.7	142.9	94.88	115.2	134.0	97.78	116.7	125.2	100.68	118.3
			5000	183.5	83.47	108.1	173.4	86.70	109.9	163.4	89.92	111.6	153.3	93.13	113.4	143.2	96.33	115.1
			6250	201.5	79.40	105.0	190.5	82.85	106.9	179.5	86.30	108.8	168.5	89.73	110.7	157.4	93.15	112.7
	23.4	10.1	3750	188.4	95.82	123.6	178.0	98.37	124.5	167.6	100.92	125.5	157.2	103.45	126.4	146.7	105.96	127.3
			5000	220.8	90.28	120.8	208.7	93.14	121.9	196.5	95.99	122.9	184.4	98.82	124.0	172.2	101.65	125.1
			6250	247.5	86.12	118.5	233.9	89.20	119.7	220.3	92.28	120.9	206.7	95.34	122.1	193.1	98.39	123.2
	35.0	21.5	3750	199.9	98.62	128.4	188.8	101.02	129.0	177.8	103.41	129.7	166.7	105.78	130.3	155.6	108.15	131.0
			5000	236.7	93.19	126.3	223.7	95.89	127.0	210.6	98.57	127.8	197.6	101.25	128.5	184.5	103.91	129.3
			6250	267.6	89.06	124.5	252.9	91.98	125.3	238.2	94.89	126.2	223.5	97.80	127.0	208.7	100.69	127.9
	46.7	37.1	3750	206.3	100.17	131.0	194.9	102.49	131.5	183.5	104.79	132.0	172.0	107.09	132.5	160.6	109.36	133.0
			5000	245.7	94.83	129.3	232.2	97.44	129.9	218.6	100.04	130.5	205.1	102.62	131.1	191.5	105.20	131.7
			6250	279.1	90.73	127.9	263.8	93.57	128.5	248.4	96.39	129.2	233.0	99.20	129.9	217.6	102.00	130.5
160	11.7	2.9	3750	197.2	97.97	125.6	188.4	100.91	127.1	179.5	103.83	128.7	170.6	106.74	130.2	161.7	109.64	131.8
			5000	225.6	91.15	120.6	215.5	94.38	122.4	205.4	97.61	124.1	195.3	100.83	125.9	185.2	104.03	127.7
			6250	247.8	86.16	116.7	236.7	89.62	118.6	225.7	93.06	120.6	214.6	96.50	122.5	203.5	99.93	124.5
	23.4	10.1	3750	231.3	106.27	139.8	220.9	108.83	140.7	210.5	111.39	141.6	200.0	113.93	142.5	189.5	116.45	143.5
			5000	271.3	99.49	136.3	259.1	102.36	137.4	246.9	105.22	138.4	234.7	108.06	139.5	222.5	110.90	140.6
			6250	304.2	94.39	133.4	290.6	97.49	134.6	276.9	100.57	135.8	263.3	103.64	137.0	249.6	106.70	138.2
	35.0	21.5	3750	245.3	109.67	145.7	234.3	112.09	146.3	223.2	114.49	147.0	212.1	116.88	147.6	201.0	119.25	148.3
			5000	290.7	103.03	143.0	277.6	105.74	143.8	264.5	108.44	144.6	251.4	111.13	145.3	238.3	113.80	146.1
			6250	328.7	97.97	140.8	314.0	100.91	141.7	299.2	103.83	142.5	284.4	106.75	143.4	269.6	109.65	144.3
	46.7	37.1	3750	253.1	111.56	148.9	241.7	113.89	149.4	230.2	116.21	149.9	218.8	118.52	150.4	207.3	120.81	150.9
			5000	301.6	105.02	146.8	288.0	107.65	147.4	274.4	110.26	148.0	260.8	112.86	148.6	247.2	115.44	149.2
			6250	342.7	100.01	145.0	327.3	102.86	145.7	311.9	105.69	146.4	296.5	108.52	147.0	281.0	111.33	147.7
180	11.7	2.9	3750	234.1	106.94	138.9	225.2	109.89	140.4	216.3	112.82	142.0	207.4	115.74	143.6	198.5	118.65	145.1
			5000	267.8	98.86	132.9	257.7	102.10	134.7	247.6	105.34	136.5	237.5	108.57	138.3	227.3	111.78	140.1
			6250	294.2	92.94	128.3	283.2	96.41	130.2	272.1	99.87	132.2	261.0	103.31	134.1	249.9	106.75	136.1
	23.4	10.1	3750	274.5	116.77	155.9	264.0	119.35	156.8	253.6	121.91	157.8	243.1	124.46	158.7	232.6	127.00	159.6
			5000	322.1	108.75	151.7	309.8	111.63	152.8	297.6	114.50	153.9	285.3	117.35	155.0	273.1	120.20	156.0
			6250	361.2	102.71	148.3	347.5	105.81	149.5	333.8	108.91	150.7	320.1	111.99	151.9	306.4	115.06	153.1
	35.0	21.5	3750	291.0	120.79	162.9	279.9	123.21	163.6	268.8	125.63	164.2	257.7	128.03	164.9	246.5	130.42	165.5
			5000	344.9	112.92	159.8	331.8	115.65	160.5	318.7	118.36	161.3	305.6	121.06	162.1	292.4	123.75	162.9
			6250	390.1	106.94	157.1	375.4	109.88	158.0	360.6	112.82	158.8	345.7	115.75	159.7	330.9	118.66	160.6
	46.7	37.1	3750	300.2	123.01	166.8	288.7	125.36	167.3	277.2	127.69	167.8	265.7	130.01	168.3	254.2	132.31	168.8
			5000	357.8	115.27	164.3	344.2	117.91	164.9	330.6	120.53	165.5	316.9	123.14	166.1	303.3	125.75	166.7
			6250	406.6	109.34	162.1	391.2	112.20	162.8	375.8	115.05	163.5	360.3	117.88	164.2	344.8	120.71	164.8

LEGEND

EDB — Entering Dry-Bulb Air Temperature
EWT — Entering Water Temperature (F)
LDB — Leaving Dry-Bulb (F)
LWT — Leaving Water Temperature (F)
PD — Water Pressure Drop (ft)
TC — Total Capacity (MBH)

NOTES:
1. Performance data is with 100% fresh water.
2. Elevation is sea level.

Table 6 — 50XCA,XCR,XCW16 Heating Capacity — Hot Water Coils

EWT (F)	GPM	PD (FT)	CFM	50 F EDB			55 F EDB			60 F EDB			65 F EDB			70 F EDB		
				TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT
120	18.0	3.2	4500	164.2	83.42	101.5	152.6	86.11	102.9	140.9	88.79	104.2	129.2	91.45	105.5	117.5	94.11	106.8
			6000	190.3	79.05	98.6	176.8	82.05	100.1	163.4	85.03	101.6	149.9	88.01	103.2	136.4	90.98	104.7
			7500	211.2	75.79	96.3	196.3	79.02	97.9	181.4	82.24	99.6	166.5	85.44	101.3	151.5	88.64	103.0
	34.7	10.4	4500	186.7	88.00	109.1	173.4	90.36	109.9	160.1	92.72	110.7	146.8	95.06	111.4	133.5	97.39	112.2
			6000	221.2	83.77	107.1	205.5	86.43	108.0	189.8	89.09	108.9	174.1	91.73	109.9	158.4	94.36	110.8
			7500	250.1	80.54	105.4	232.4	83.43	106.5	214.6	86.31	107.5	196.9	89.18	108.5	179.1	92.04	109.6
	51.3	21.6	4500	196.2	89.92	112.3	182.2	92.15	112.8	168.2	94.37	113.4	154.2	96.57	113.9	140.3	98.76	114.5
			6000	234.6	85.81	110.8	217.9	88.33	111.4	201.3	90.84	112.1	184.6	93.34	112.7	167.9	95.82	113.4
			7500	267.3	82.64	109.5	248.3	85.38	110.2	229.4	88.12	111.0	210.4	90.84	111.7	191.4	93.55	112.5
	68.0	36.8	4500	201.5	91.00	114.0	187.1	93.16	114.4	172.8	95.30	114.9	158.4	97.42	115.3	144.0	99.54	115.7
			6000	242.2	86.97	112.8	225.0	89.41	113.3	207.8	91.84	113.8	190.5	94.25	114.3	173.3	96.65	114.8
			7500	277.1	83.85	111.8	257.5	86.51	112.3	237.8	89.15	112.9	218.1	91.79	113.5	198.4	94.42	114.1
140	14.8	3.2	4500	212.6	93.26	116.0	200.9	95.96	117.3	189.1	98.64	118.7	177.4	101.31	120.0	165.6	103.97	121.3
			6000	246.5	87.63	112.2	233.0	90.63	113.7	219.5	93.63	115.2	205.9	96.61	116.8	192.3	99.58	118.3
			7500	273.8	83.43	109.1	258.8	86.66	110.8	243.8	89.89	112.5	228.8	93.10	114.2	213.7	96.30	115.9
	32.5	10.4	4500	241.4	99.14	125.9	228.1	101.51	126.6	214.7	103.87	127.4	201.4	106.22	128.2	188.0	108.55	129.0
			6000	286.2	93.69	123.2	270.5	96.37	124.2	254.7	99.03	125.1	238.9	101.68	126.0	223.1	104.31	126.9
			7500	323.7	89.53	121.0	306.0	92.43	122.1	288.2	95.32	123.1	270.3	98.20	124.2	252.5	101.07	125.2
	50.3	21.6	4500	253.5	101.59	130.0	239.4	103.83	130.5	225.4	106.05	131.1	211.4	108.27	131.6	197.3	110.47	132.2
			6000	303.3	96.30	128.0	286.6	98.83	128.7	269.8	101.35	129.3	253.1	103.85	130.0	236.3	106.35	130.6
			7500	345.7	92.22	126.3	326.7	94.97	127.1	307.7	97.72	127.8	288.6	100.45	128.6	269.5	103.16	129.3
	68.0	36.8	4500	260.2	102.96	132.2	245.8	105.12	132.7	231.4	107.27	133.1	217.0	109.41	133.5	202.5	111.54	134.0
			6000	312.9	97.77	130.7	295.7	100.22	131.2	278.4	102.66	131.7	261.1	105.09	132.2	243.8	107.50	132.7
			7500	358.3	93.75	129.3	338.6	96.42	129.9	318.8	99.08	130.5	299.1	101.73	131.1	279.3	104.36	131.7
160	14.8	3.2	4500	261.3	103.17	130.4	249.5	105.88	131.7	237.7	108.57	133.0	225.9	111.25	134.4	214.1	113.91	135.7
			6000	303.2	96.28	125.6	289.6	99.29	127.1	276.0	102.29	128.7	262.4	105.28	130.2	248.7	108.25	131.8
			7500	336.8	91.13	121.8	321.8	94.37	123.5	306.7	97.60	125.2	291.6	100.82	126.9	276.5	104.03	128.6
	32.5	10.4	4500	296.5	110.34	142.6	283.1	112.73	143.3	269.7	115.10	144.1	256.3	117.45	144.9	242.8	119.80	145.7
			6000	351.7	103.69	139.3	335.9	106.37	140.2	320.0	109.04	141.2	304.2	111.70	142.1	288.3	114.34	143.0
			7500	397.9	98.60	136.6	380.1	101.51	137.6	362.2	104.40	138.7	344.3	107.29	139.7	326.4	110.16	140.8
	50.3	21.6	4500	311.1	113.32	147.6	297.1	115.58	148.2	283.0	117.81	148.7	268.9	120.04	149.3	254.8	122.25	149.9
			6000	372.4	106.85	145.2	355.7	109.40	145.8	338.9	111.93	146.5	322.1	114.44	147.2	305.2	116.95	147.9
			7500	424.7	101.86	143.1	405.6	104.63	143.9	386.5	107.38	144.6	367.4	110.12	145.4	348.2	112.85	146.1
	68.0	36.8	4500	319.3	114.98	150.4	304.8	117.16	150.9	290.4	119.33	151.3	275.9	121.48	151.7	261.4	123.62	152.2
			6000	384.1	108.64	148.5	366.8	111.10	149.0	349.5	113.55	149.5	332.1	115.99	150.0	314.8	118.42	150.6
			7500	439.9	103.72	146.8	420.1	106.41	147.4	400.3	109.08	148.0	380.5	111.74	148.6	360.7	114.38	149.2
180	14.8	3.2	4500	310.2	113.13	144.6	298.4	115.85	145.9	286.6	118.55	147.3	274.7	121.23	148.7	262.9	123.91	150.0
			6000	360.1	104.97	138.9	346.5	107.99	140.4	332.8	111.00	142.0	319.1	114.00	143.6	305.4	116.98	145.1
			7500	400.2	98.87	134.3	385.1	102.12	136.0	370.0	105.36	137.8	354.9	108.58	139.5	339.7	111.80	141.2
	32.5	10.4	4500	351.8	121.61	159.2	338.4	124.00	160.0	324.9	126.39	160.8	311.5	128.76	161.6	298.0	131.11	162.4
			6000	417.5	113.73	155.3	401.6	116.43	156.2	385.8	119.11	157.2	369.8	121.78	158.1	353.9	124.44	159.1
			7500	472.6	107.71	152.0	454.7	110.63	153.1	436.7	113.54	154.2	418.8	116.43	155.2	400.8	119.32	156.3
	50.3	21.6	4500	369.1	125.12	165.2	355.0	127.39	165.8	340.8	129.64	166.4	326.7	131.87	166.9	312.6	134.10	167.5
			6000	442.0	117.46	162.3	425.1	120.02	163.0	408.3	122.56	163.7	391.4	125.09	164.3	374.6	127.61	165.0
			7500	504.1	111.56	159.8	485.0	114.34	160.6	465.8	117.10	161.4	446.6	119.86	162.1	427.4	122.60	162.9
	68.0	36.8	4500	378.7	127.07	168.6	364.2	129.26	169.0	349.7	131.44	169.5	335.2	133.61	169.9	320.6	135.76	170.3
			6000	455.7	119.56	166.2	438.3	122.04	166.8	421.0	124.51	167.3	403.6	126.96	167.8	386.2	129.40	168.3
			7500	522.0	113.74	164.2	502.2	116.44	164.8	482.3	119.13	165.4	462.5	121.80	166.0	442.6	124.46	166.6

LEGEND

EDB — Entering Dry-Bulb Air Temperature
EWT — Entering Water Temperature (F)
LDB — Leaving Dry-Bulb (F)
LWT — Leaving Water Temperature (F)
PD — Water Pressure Drop (ft)
TC — Total Capacity (MBH)

NOTES:
1. Performance data is with 100% fresh water.
2. Elevation is sea level.

Table 7 — 50XCA,XCR,XCW24 Heating Capacity — Hot Water Coils

EWT (F)	GPM	PD (FT)	CFM	50 F EDB			55 F EDB			60 F EDB			65 F EDB			70 F EDB		
				TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT	TC	LDB	LWT
120	20.7	3.5	6000	216.7	83.13	98.8	201.4	85.86	100.3	186.1	88.56	101.8	170.7	91.26	103.3	155.3	93.94	104.8
			8000	248.9	78.53	95.7	231.4	81.57	97.4	213.9	84.61	99.1	196.3	87.63	100.8	178.7	90.64	102.5
			10000	274.2	75.13	93.2	255.0	78.41	95.1	235.7	81.68	97.0	216.4	84.95	98.8	197.0	88.19	100.7
	40.5	11.7	6000	244.5	87.40	107.8	227.2	89.81	108.7	209.8	92.21	109.5	192.5	94.60	110.4	175.1	96.98	111.3
			8000	288.2	83.03	105.6	267.8	85.75	106.6	247.4	88.47	107.6	227.0	91.16	108.7	206.5	93.85	109.7
			10000	324.3	79.72	103.8	301.4	82.68	104.9	278.5	85.62	106.1	255.5	88.55	107.2	232.5	91.47	108.4
	60.2	24.7	6000	255.6	89.09	111.4	237.4	91.38	112.0	219.3	93.66	112.6	201.1	95.93	113.2	182.9	98.18	113.9
			8000	304.3	84.88	109.8	282.8	87.47	110.5	261.2	90.05	111.2	239.6	92.62	112.0	218.0	95.17	112.7
			10000	345.5	81.66	108.4	321.0	84.48	109.2	296.6	87.28	110.0	272.1	90.08	110.9	247.5	92.86	111.7
	80.0	42.3	6000	261.6	90.01	113.4	243.0	92.24	113.9	224.4	94.45	114.3	205.8	96.66	114.8	187.2	98.84	115.3
			8000	313.3	85.90	112.1	291.1	88.42	112.6	268.8	90.93	113.2	246.6	93.42	113.8	224.3	95.90	114.3
			10000	357.3	82.74	111.0	332.0	85.48	111.6	306.7	88.21	112.2	281.3	90.93	112.9	255.9	93.63	113.5
140	20.7	3.5	6000	281.0	92.98	112.4	265.7	95.71	113.9	250.3	98.42	115.4	234.8	101.12	117.0	219.4	103.80	118.5
			8000	323.1	87.03	108.3	305.5	90.08	110.0	287.9	93.12	111.7	270.2	96.15	113.5	252.5	99.16	115.2
			10000	356.1	82.64	105.0	336.8	85.93	106.9	317.4	89.20	108.8	298.0	92.47	110.7	278.5	95.72	112.7
	40.5	11.7	6000	316.5	98.41	124.1	299.1	100.83	125.0	281.7	103.24	125.9	264.2	105.64	126.7	246.7	108.02	127.6
			8000	373.4	92.79	121.3	352.9	95.52	122.3	332.4	98.24	123.3	311.9	100.95	124.4	291.3	103.64	125.4
			10000	420.4	88.52	118.9	397.4	91.48	120.1	374.3	94.43	121.2	351.2	97.37	122.4	328.1	100.30	123.5
	60.2	24.7	6000	330.5	100.55	128.8	312.3	102.85	129.5	294.0	105.14	130.1	275.8	107.42	130.7	257.5	109.68	131.3
			8000	393.8	95.13	126.7	372.2	97.73	127.4	350.5	100.32	128.2	328.8	102.90	128.9	307.1	105.46	129.6
			10000	447.2	90.98	124.9	422.7	93.81	125.7	398.1	96.62	126.6	373.5	99.42	127.4	348.9	102.21	128.2
	80.0	42.3	6000	338.1	101.71	131.4	319.4	103.95	131.9	300.8	106.17	132.4	282.1	108.39	132.8	263.4	110.59	133.3
			8000	405.0	96.42	129.7	382.8	98.95	130.3	360.5	101.47	130.8	338.1	103.97	131.4	315.8	106.47	132.0
			10000	462.2	92.35	128.3	436.8	95.10	128.9	411.4	97.84	129.6	385.9	100.57	130.2	360.4	103.28	130.8
160	20.7	3.5	6000	346.0	102.92	125.9	330.6	105.65	127.4	315.1	108.37	128.9	299.6	111.08	130.4	284.0	113.77	132.0
			8000	398.1	95.62	120.7	380.4	98.68	122.5	362.7	101.72	124.2	344.9	104.76	126.0	327.1	107.78	127.7
			10000	438.9	90.22	116.7	419.5	93.52	118.6	400.0	96.80	120.5	380.5	100.07	122.4	360.9	103.33	124.4
	40.5	11.7	6000	389.1	109.51	140.4	371.6	111.94	141.3	354.1	114.36	142.2	336.6	116.77	143.0	319.0	119.16	143.9
			8000	459.2	102.63	136.8	438.7	105.37	137.9	418.1	108.10	138.9	397.5	110.81	140.0	376.8	113.52	141.0
			10000	517.2	97.40	133.9	494.1	100.37	135.1	471.0	103.33	136.3	447.8	106.28	137.4	424.6	109.21	138.6
	60.2	24.7	6000	406.0	112.08	146.2	387.7	114.40	146.9	369.4	116.70	147.5	351.0	118.99	148.1	332.7	121.27	148.7
			8000	483.9	105.46	143.6	462.2	108.07	144.3	440.5	110.67	145.1	418.7	113.26	145.8	396.9	115.84	146.5
			10000	549.7	100.38	141.4	525.1	103.21	142.2	500.5	106.04	143.0	475.8	108.85	143.9	451.1	111.65	144.7
	80.0	42.3	6000	415.1	113.48	149.4	396.4	115.73	149.9	377.6	117.97	150.4	358.9	120.20	150.8	340.1	122.41	151.3
			8000	497.4	107.01	147.3	475.1	109.55	147.9	452.7	112.09	148.4	430.4	114.60	149.0	407.9	117.11	149.6
			10000	567.7	102.03	145.5	542.3	104.79	146.2	516.8	107.54	146.8	491.3	110.28	147.5	465.7	113.01	148.1
180	20.7	3.5	6000	411.5	112.92	139.2	395.9	115.67	140.7	380.4	118.40	142.3	364.8	121.11	143.8	349.2	123.82	145.4
			8000	473.6	104.27	133.0	455.8	107.34	134.8	438.0	110.39	136.5	420.2	113.44	138.3	402.4	116.47	140.1
			10000	522.3	97.86	128.1	502.8	101.17	130.1	483.3	104.46	132.0	463.7	107.74	134.0	444.1	111.00	135.9
	40.5	11.7	6000	462.2	120.68	156.6	444.6	123.12	157.5	427.0	125.55	158.4	409.4	127.97	159.3	391.8	130.38	160.1
			8000	545.7	112.54	152.3	525.0	115.29	153.4	504.4	118.03	154.4	483.7	120.75	155.5	463.0	123.47	156.5
			10000	614.7	106.34	148.8	591.6	109.32	150.0	568.4	112.29	151.2	545.2	115.24	152.4	521.9	118.19	153.5
	60.2	24.7	6000	481.9	123.69	163.6	463.5	126.02	164.2	445.2	128.34	164.8	426.8	130.64	165.5	408.4	132.93	166.1
			8000	574.6	115.85	160.4	552.8	118.48	161.2	531.0	121.09	161.9	509.2	123.69	162.6	487.4	126.28	163.4
			10000	652.8	109.83	157.7	628.2	112.68	158.6	603.5	115.51	159.4	578.7	118.34	160.3	554.0	121.15	161.1
	80.0	42.3	6000	492.5	125.32	167.4	473.7	127.59	167.9	454.9	129.84	168.3	436.1	132.08	168.8	417.3	134.31	169.3
			8000	590.4	117.66	164.9	568.0	120.22	165.4	545.6	122.77	166.0	523.1	125.30	166.6	500.7	127.82	167.2
			10000	673.9	111.76	162.7	648.4	114.53	163.4	622.9	117.30	164.0	597.3	120.05	164.7	571.7	122.79	165.3

LEGEND

EDB — Entering Dry-Bulb Air Temperature
EWT — Entering Water Temperature (F)
LDB — Leaving Dry-Bulb (F)
LWT — Leaving Water Temperature (F)
PD — Water Pressure Drop (ft)
TC — Total Capacity (MBH)

NOTES:
1. Performance data is with 100% fresh water.
2. Elevation is sea level.