

Producing Quality Heating & Cooling Equipment For Over 50 Years

Magic Aire[®] **F SERIES**



*Floor Exposed
Vertical Fan
Coil Units*

*Nominal Sizes
200 thru 1200 CFM*

MAGIC AIRE F SERIES FAN COILS ARE ETL
LISTED TO U.S. AND CANADIAN SAFETY STANDARDS
AND ARE ASSEMBLED TO ORDER FOR COMPETITIVE DELIVERY.



United Electric Company, L.P.

501 Galveston St. • Wichita Falls, TX 76301 • 940-397-2100 • www.magicaire.com

Magic Aire Fan Coil Unit

HVAC Guide Specifications

Size Range: 200 to 1200 Nominal CFM

Magic Aire Model: FF and FS (F Series)

Part 1 — General

1.01 SYSTEM DESCRIPTION

Vertical, 2-pipe or 4-pipe, room fan coil unit with painted finish cabinet for exposed installation.

1.02 QUALITY ASSURANCE

Unit shall be ETL listed to UL/ANSI Standard 1995. Each coil shall be factory tested for leakage at 500 psig air pressure with coil submerged in water. Insulation and adhesive shall meet NFPA-90A requirements for flame spread and smoke generation. All equipment wiring shall comply with UL/ANSI Standard 1995.

1.03 DELIVERY, STORAGE AND HANDLING

Each unit shall be individually packaged from point of manufacture. Unit shall be handled and stored in accordance with the manufacturer's instructions.

Part 2 — Product

2.01 EQUIPMENT

General:

Factory-assembled, vertical, blow-thru type fan coil for exposed installations. Unit shall be complete with water coil(s), fan(s), motor(s), drain pan, and all required wiring, piping, controls and special features.

A. Base Unit:

1. Units shall be fabricated of galvanized or galvanized steel. Casing to consist of heavy gauge steel insulated with 1/2" closed cell polyolefin insulation low transmittance vapor retarder providing effective acoustical and thermal control. Insulation shall conform to UL 181 for air erosion and with NFPA 90A for ASTM E 84 flame spread (rating of 25 or less) and smoke generation (rating of 50 or less). Units shall pass 500 hour salt spray test as described in ASTM B-117. Cabinet shall include a removable front access panel, removable side panels, filter rack and 1-in. fiberglass throwaway filter. Cabinet exterior has a baked on polyurethane powder-coated finish for corrosion and scratch resistance while providing an enhanced appearance.

2. Unit top shall be provided with stamped discharge louvers for effective air distribution into the space. The sloped top option shall have louvers that direct air up and toward rear of unit for effective air distribution and draft control.

3. The main drain pan shall be constructed of stainless steel extending the entire length of the coil. The factory supplied auxiliary drainpan shall be of polymer construction, field installed in the end compartment, with 1" O.D. stub for hose or PVC pipe connection.

B. Fans:

Direct-driven, double-width fan wheels with forward curved blades shall be statically and dynamically balanced. The housing shall be constructed of heavy gauge galvanized steel with die-formed inlet cones. Fan wheels shall be constructed of galvanized steel.

C. Coils:

1. Standard base unit shall be equipped with a 3 or 4-row CW coil for installation in a 2 or 4-pipe system.

2. Hot water heating coils in a 4-pipe or heating only system shall be 1 or 2-row water coils, factory installed.

3. All coils shall have 1/2-in. o.d. smooth copper tubes and aluminum fins. Coil tubes are expanded for secure mechanical bond to aluminum fins and to extruded steel endplates. The copper tubes comply with ASTM B-75. The fin thickness is 0.0045-in and tube thickness is 0.017-in. All coils are tested with air under water.

4. All coils shall have manual air vent to allow purging of air from coils.

D. Controls and Safeties:

Unit shall be furnished with optional factory installed controls: manual 3-speed, 4-position fan switch; or thermostat-ready with 3-speed, 4-position fan switch; or unit mounted thermostat. The fan motor(s) shall be equipped with integral automatic temperature reset for motor protection.

E. Operating Characteristics:

1. A unit with single hydronic coil installed in a 2-pipe system shall be capable of providing heating or cooling as determined by the operating mode of the central water supply system, and controlled as determined by valve (factory or field-provided and installed) and controls (factory or field-provided and installed).

2. A unit with two hydronic coils installed in a 4-pipe system shall be capable of providing heating and cooling, controlled as determined by valves (factory or field-provided and installed) and controls (factory or field-provided and installed).

F. Electrical Requirements:

The unit power supply shall be single phase, 60 Hz. The standard unit is 120V, but 208/240V and 277V options are available.

G. Motor(s):

Fan motors shall be 3-speed; permanent split capacitor type, with factory-sealed permanently lubricated sleeve or ball type bearings.

H. Outside Air Damper

1. Optional motorized OA damper shall be two-position and include two-position 24V actuator. Damper actuator shall be factory wired to open when fan is energized and to spring return closed when fan is de-energized.

2. Optional manual OA damper shall have factory mounted "locking quadrant" type manual damper operator.

I. Valve Packages

Optional factory provided valve packages shall have configuration as indicated in the nomenclature, complete with all fittings including ball valves, ball valve with memory stop, circuit setter, unions, PT ports, and 2- or 3-way two position control valve, as applicable. Heating coil valve package control valves shall be piped normally open to the coil. Cooling coil valve packages shall have option to be piped normally open or normally closed to the coil. Control valves shall spring return to normal position upon loss of power. Control valves shall have Cv ratings as follows: 2-way, Cv = 3.5; 3-way, Cv = 4.0. Customer is responsible for protecting the unit from freezing conditions.



MODEL NOMENCLATURE

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Example	F	F	C	0	6	B	1	L	A	1	B	C	3	C	2	G	M

Model Series

FFC—Floor Cabinet, Flat Top
FSC—Floor Cabinet, Sloped Top

Unit Size

	CFM	Nominal Tons
02 -	200 CFM	0.5
03 -	300 CFM	0.8
04 -	400 CFM	1.0
06 -	600 CFM	1.5
08 -	800 CFM	2.0
10 -	1000 CFM	2.5
12 -	1200 CFM	3.0

Cooling Coil

Type	Rows
None	N/A
Chilled Water/2-Pipe	3
	4

Heating Coil

Type	Rows
None	N/A
Hot Water	1
	2

Coil Configuration

Heat Position	Connection Hand
Pre-Heat	Right Hand (Cooling & Heating Coil) or N/A Left hand (Cooling & Heating Coil)
Re-Heat	Right Hand (Cooling & Heating Coil) Left hand (Cooling & Heating Coil) Opp Cnx - Right Hand Cooling Opp Cnx - Left Hand Cooling

Use our New Magic 4 Selection

Software for:

- exact unit model selection
- performance data
- submittal information (visit www.magicaire.com)

Color (Textured Powder Coat)

Gray
Polar Ice
Beige

Floor Cover/ Kickplate

Floor Cover and Kickplate
options available

Heating Coil

(See pg 5)

Cooling Coil Valve Package

(See following page)

Controls Options

(See following page)

Motor Voltage

120/1/60

280/240/1/60 (Note 1)

NOTES:

1. Unit is wired for 240V at factory. Field must switch transformer tap (if provided) to 208V for operation with 208V power supply.

Damper

None
Manual Damper
Motorized Damper

NOTES:

1. Motorized damper actuator option is installed on same end as control box.
2. Damper actuator used is 24V, 2-position; opens when fan is running, closes when fan stops.
3. Manual damper option includes factory installed locking quadrant hardware to allow manual damper positioning.



MODEL NOMENCLATURE

F Series Model Number Nomenclature

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Example	F	F	C	0	6	B	1	L	A	1	B	C	3	C	2	G	M

CONTROLS

	2 or 4-pipe	Mode	Changeover
AA	Manual Fan Operation Switch (3-Speed Fan Switch Only)		
AC	24V T-Stat Ready w/3-Speed Fan Switch (see Note 4, 5, 6)		
Unit Mounted Thermostat			
BA	VALVE CYCLE CONTROL - 2 PIPE	HEAT ONLY	NONE
BB		COOL ONLY	NONE
BC		HEAT/COOL	AUTO
BD			MANUAL
BE	VALVE CYCLE CONTROL - 4 PIPE	HEAT/COOL	AUTO
BF			MANUAL

NOTES:

- Valve Cycle control requires selection of control valve (digit #13 and or digit #14).
- Manual Fan Operation option "AA" includes line voltage 3-speed switch.
- Auto Changeover thermostat ("aqua stat"; on option "BC") is factory wired and field mounted to supply water piping to sense temperature and close on temp rise above 85F (opens at 70F). Auto changeover thermostat mounting is for 5/8" O.D. piping.
- Option "AC" includes 3-speed fan switch, 24V/40VA control transformer, fan relay and flying leads for R,C,G (and Y1 and W1 if factory valve option selected) for connection to field supplied and installed thermostat.
- Option "AC" with normally open control valve will include relay(s) to reverse a standard-acting call for heat or cool.
- Option "AC" does not include auto changeover thermostat ("aqua stat") accessory that is purchased separately, field installed and field wired.
- Control box is mounted on the side opposite the cooling coil connections.

COOLING COIL VALVE PACKAGE

A -- None

B --	2 Ball Valves (NO MOTORIZED VALVE)	
C --	1 Ball Valve, 1 Circuit Setter (NO MOTORIZED VALVE)	
1 --	Normally Closed Control Valve	2-Way Motorized Valve - valve only (valve loose)
2 --		3-Way Motorized Valve - valve only (valve loose)
3 --		2 Ball Valves, (1) 2-Way Motorized
4 --		1 Ball Valve, 1 Circuit Setter, (1) 2-Way Motorized
5 --		2 Ball Valves, 1 BV w/MS, (1) 3-Way Motorized
6 --		1 Ball Valve, 1 Circuit Setter, 1 BV w/MS, (1) 3-Way Motorized
D --	Normally Open Control Valve	2-Way Motorized Valve - valve only (valve loose)
E --		3-Way Motorized Valve - valve only (valve loose)
F --		2 Ball Valves, (1) 2-Way Motorized
G --		1 Ball Valve, 1 Circuit Setter, (1) 2-Way Motorized
H --		2 Ball Valves, 1 BV w/MS, (1) 3-Way Motorized
J --		1 Ball Valve, 1 Circuit Setter, 1 BV w/MS, (1) 3-Way Motorized

NOTES:

- Use cooling coil valve package selection for 2-Pipe units.
- Control valve is 2-position, 24VAC.
- Normally closed valve springs closed to coil upon power loss. Field is responsible for protecting the unit from freezing conditions.
- Normally open valve springs open to coil upon power loss. Field is responsible for protecting the unit from freezing conditions.
- Selections 5,6,H and J: "BV w/MS" is ball valve with memory stop feature.
- See Valve Package Availability Matrix for allowable combinations.
- Selections B and C DO NOT include motorized control valve.



MODEL NOMENCLATURE

F Series Model Number Nomenclature

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Example	F	F	C	0	6	B	1	L	A	1	B	C	3	C	2	G	M

Heating Coil Valve Package

None (for 2-Pipe or cooling only)

2 Ball Valves (NO MOTORIZED VALVE)

1 Ball Valve, 1 Circuit Setter
(NO MOTORIZED VALVE)

2-Way Motorized Valve - valve only (valve loose)

3-Way Motorized Valve - valve only (valve loose)

2 Ball Valves, (1) 2-Way Motorized

1 Ball Valve, 1 Circuit Setter, (1) 2-Way Motorized

2 Ball Valves, 1 BV w/MS, (1) 3-Way Motorized

1 Ball Valve, 1 Circuit Setter, 1 BV w/MS, (1) 3-Way Motorized

NOTES:

1. Heating Valve Package available only for reheat (digit 8 selections "R," "S," "T" or "U").
2. Use cooling coil valve package selection for 2-Pipe units.
3. Control valve is 2-position, 24VAC.
4. Normally open valve springs open to coil upon power loss. Field is responsible for protecting the unit from freezing conditions.
5. Selections 5 and 6: "BV w/MS" is ball valve with memory stop feature.
6. See Valve Package Availability Matrix for allowable combinations.
7. Selections B and C DO NOT include motorized control valve.

Normally Open Control Valve

F Series Model Number Nomenclature

VALVE PACKAGE AVAILABILITY MATRIX

Number of Coil Rows		Configuration (digit 8)	Valve Package Availability		
Position 1	Position 2		Heating Only	Cooling Only	Both Heating and Cooling
1	3	Preheat (A, L)	n	x	n
2	3		n	x	n
1	4		n	x	n
3	1	Reheat, Same Side Cnx (R, S)	x	x	x
3	2		x	x	x
4	1		x	x	x
3	1	Reheat, Opp Side Cnx (T, U)	n	x	n
3	2		n	x	n
4	1		n	x	n
1	none	Preheat (Single Coil - 2-Pipe, Cooling Only or Heating Only) (A, L)	x	n/a	n/a
2	none		x	n/a	n/a
3	none		n/a*	x	n/a
4	none		n/a*	x	n/a

Legend:

x = yes, valve package available
n = no, valve package not available
n/a = not applicable - option does
not apply to coil combination or
configuration.

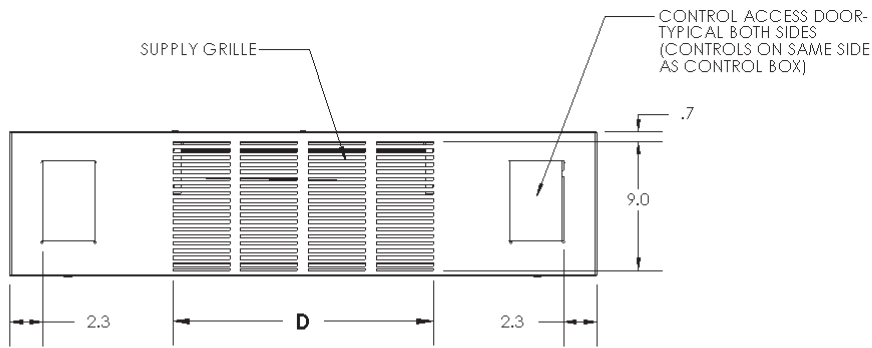
* Select cooling valve package for
2-pipe units.



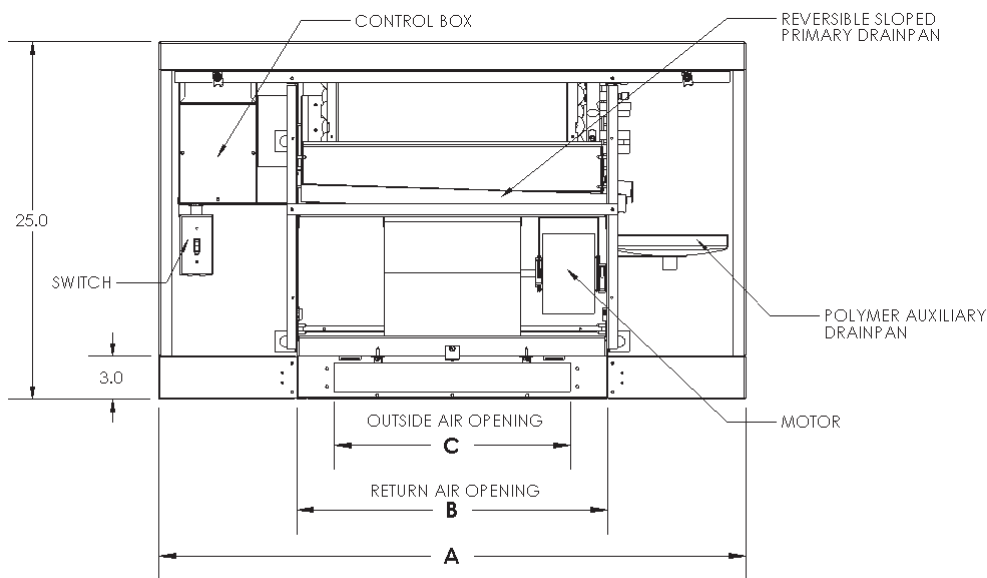
F Series PHYSICAL DATA

Physical Data

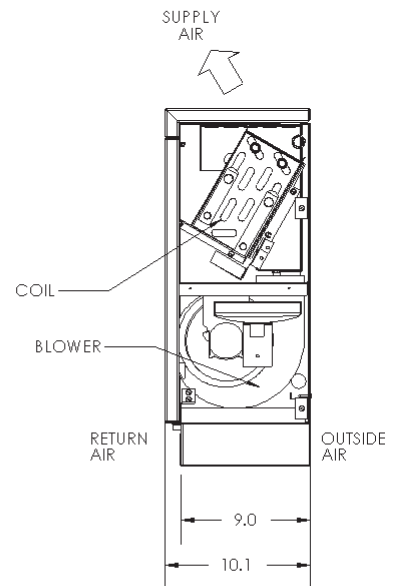
Model FFC/FSC	02	03	04	06	08	10	12
Capacity/CFM							
Nominal Capacity (tons)	0.50	0.75	1.00	1.50	2.00	2.50	3.00
Nominal Capacity (BTU/HR)	6000	9000	12000	18000	24000	30000	36000
Nominal CFM	200	300	400	600	800	1000	1200
Fan							
(Quantity) Diameter x Width (in)	(1) 6.25 x 8.0	(1) 6.25 x 8.0	(2) 6.25 x 7.0	(2) 6.25 x 7.0	(2) 6.25 X 9.5	(4) 6.25 X 9.5	(4) 6.25 X 9.5
Motor							
	See electrical data.						
Filter							
(Quantity) Nominal Size (in)	(1) 8.6 x 21.6	(1) 8.6 x 25.6	(1) 8.6 x 31.6	(1) 8.6 x 41.6	(1) 8.6 x 45.6	(1) 8.6 x 57.6	(1) 8.6 x 65.6
Face Area (sqft)	1.30	1.53	1.89	2.49	2.73	3.45	3.93
Coil Data - Hydronic Coil							
Face Area (sqft)	0.8	1.0	1.4	1.9	2.0	2.7	3.1
Fin Spacing (fins per in)	10	10	10	10	10	10	10
Tube Size (in, OD)	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Tube Material/Fin Material	Cu/Al	Cu/Al	Cu/Al	Cu/Al	Cu/Al	Cu/Al	Cu/Al
Discharge Grille Free Area							
Flat Top (sqft)	0.46	0.57	0.69	0.92	1.03	1.38	1.49
Sloped Top (sqft)	0.49	0.61	0.73	0.97	1.09	1.46	1.58
Coil Connections (in, OD)							
1, 2, 3 and 4-row	0.625	0.625	0.625	0.625	0.625	0.625	0.625
Condensate Drain Connection							
Secondary Drain Pan (in, OD for PVC or hose)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Unit Weight (lbs)							
Flat Top or Sloped Top	55	59	77	87	98	150	164



TOP VIEW



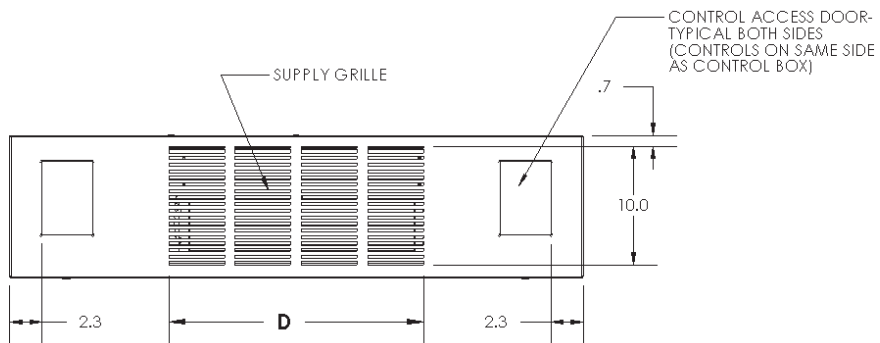
**FRONT VIEW
W/O FRONT PANEL**



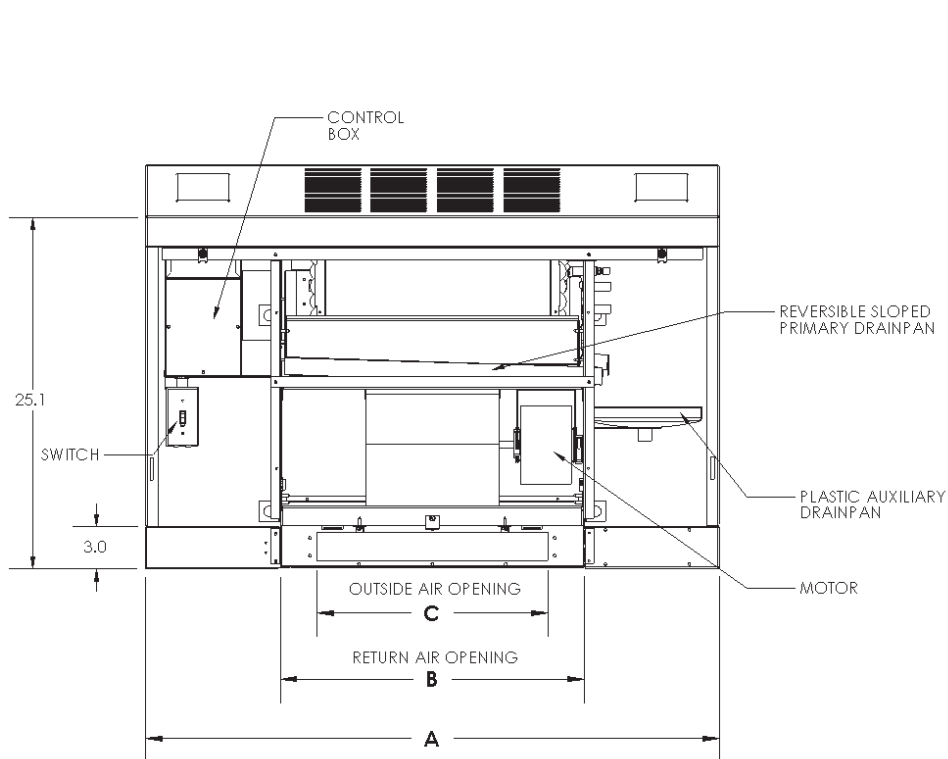
**SIDE VIEW
W/O SIDE PANEL
AND WRAPPER**

MODEL	DIMENSIONS - INCHES				UNIT WEIGHT	QTY. OF FANS/MOTORS
	A	B	C	D		
FFC-02	41.0	21.8	16.5	18.3	55	1/1
FFC-03	45.0	25.8	20.5	23.0	59	1/1
FFC-04	51.0	31.8	26.5	27.8	77	2/1
FFC-06	61.0	41.8	36.5	37.3	87	2/1
FFC-08	63.0	43.8	38.5	42.0	98	2/1
FFC-10	77.0	57.8	52.5	56.3	150	4/2
FFC-12	85.0	65.8	60.5	61.0	164	4/2

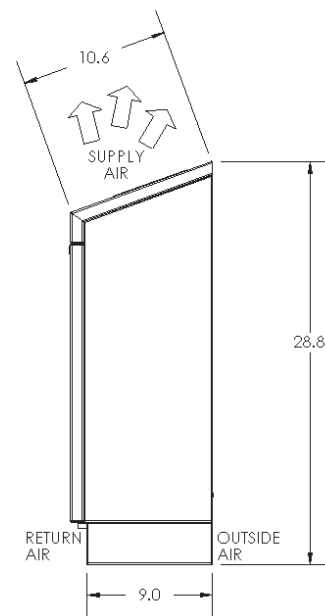
FSC 02-12 FLOOR CABINET (SLOPE TOP)



TOP VIEW



FRONT VIEW
W/O FRONT PANEL



SIDE VIEW

MODEL	DIMENSIONS - INCHES				UNIT WEIGHT	QTY. OF FANS/MOTORS
	A	B	C	D		
FSC-02	41.0	21.8	16.5	18.3	55	1/1
FSC-03	45.0	25.8	20.5	23.0	59	1/1
FSC-04	51.0	31.8	26.5	27.8	77	2/1
FSC-06	61.0	41.8	36.5	37.3	87	2/1
FSC-08	63.0	43.8	38.5	42.0	98	2/1
FSC-10	77.0	57.8	52.5	56.3	150	4/2
FSC-12	85.0	65.8	60.5	61.0	164	4/2



F Series

AIRFLOW & ELECTRICAL DATA

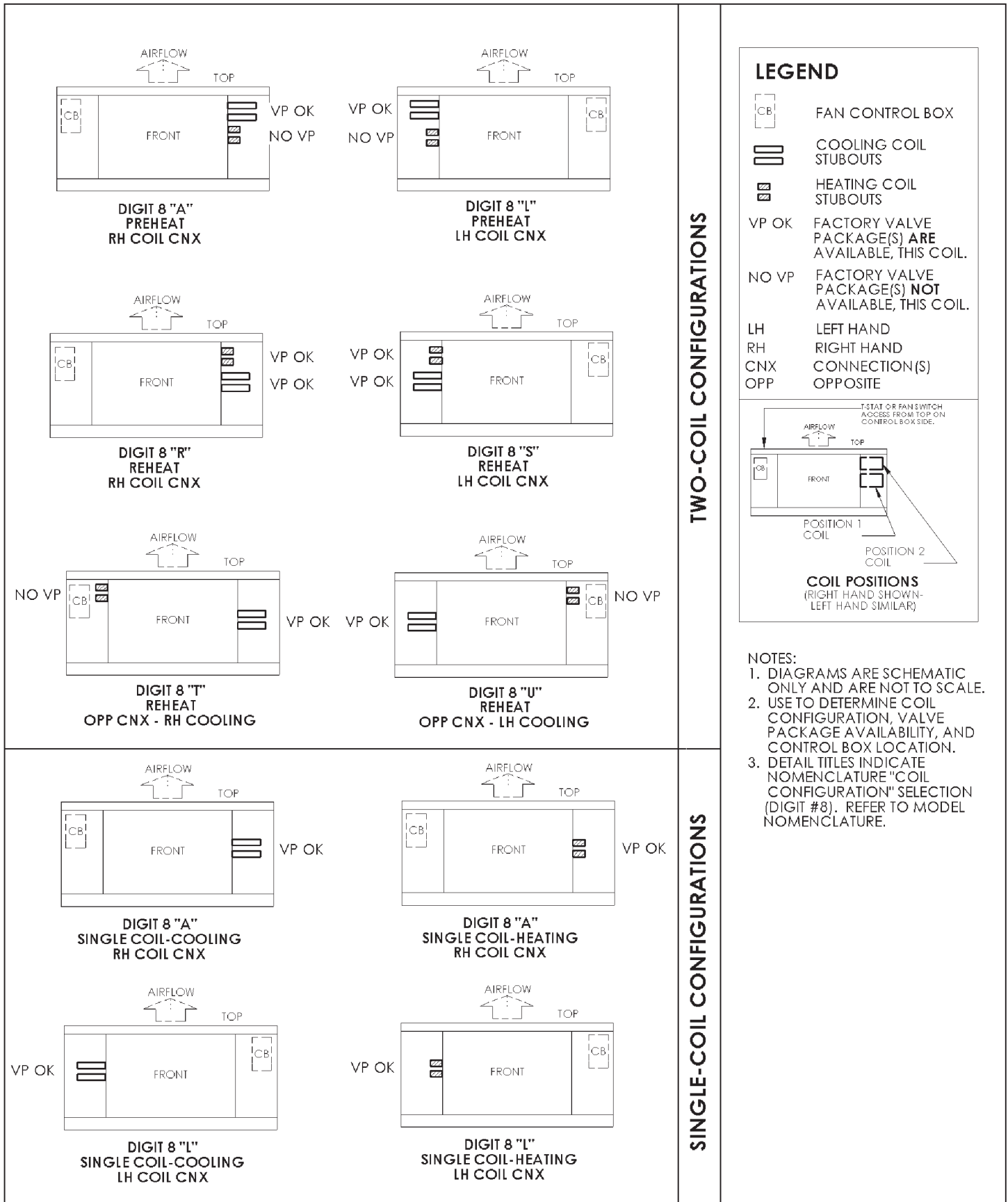
F Series Airflow					
UNIT			CFM @ 0.0 E.S.P FOR FAN SPEED INDICATED		
UNIT	SIZE	COIL	LOW	MEDIUM	HIGH
FFC FSC	02	3 ROW	164	241	339
	03		178	261	373
	04		296	415	555
	06		372	527	785
	08		387	549	817
	10		603	838	1121
	12		672	907	1344
	02	4 ROW	151	222	308
	03		164	226	329
	04		281	391	529
	06		347	487	689
	08		377	529	749
	10		606	802	1052
	12		649	886	1320
	02	5 ROW	145	216	283
	03		157	233	306
	04		233	317	420
	06		330	438	618
	08		344	456	651
	10		515	682	894
	12		492	686	1059

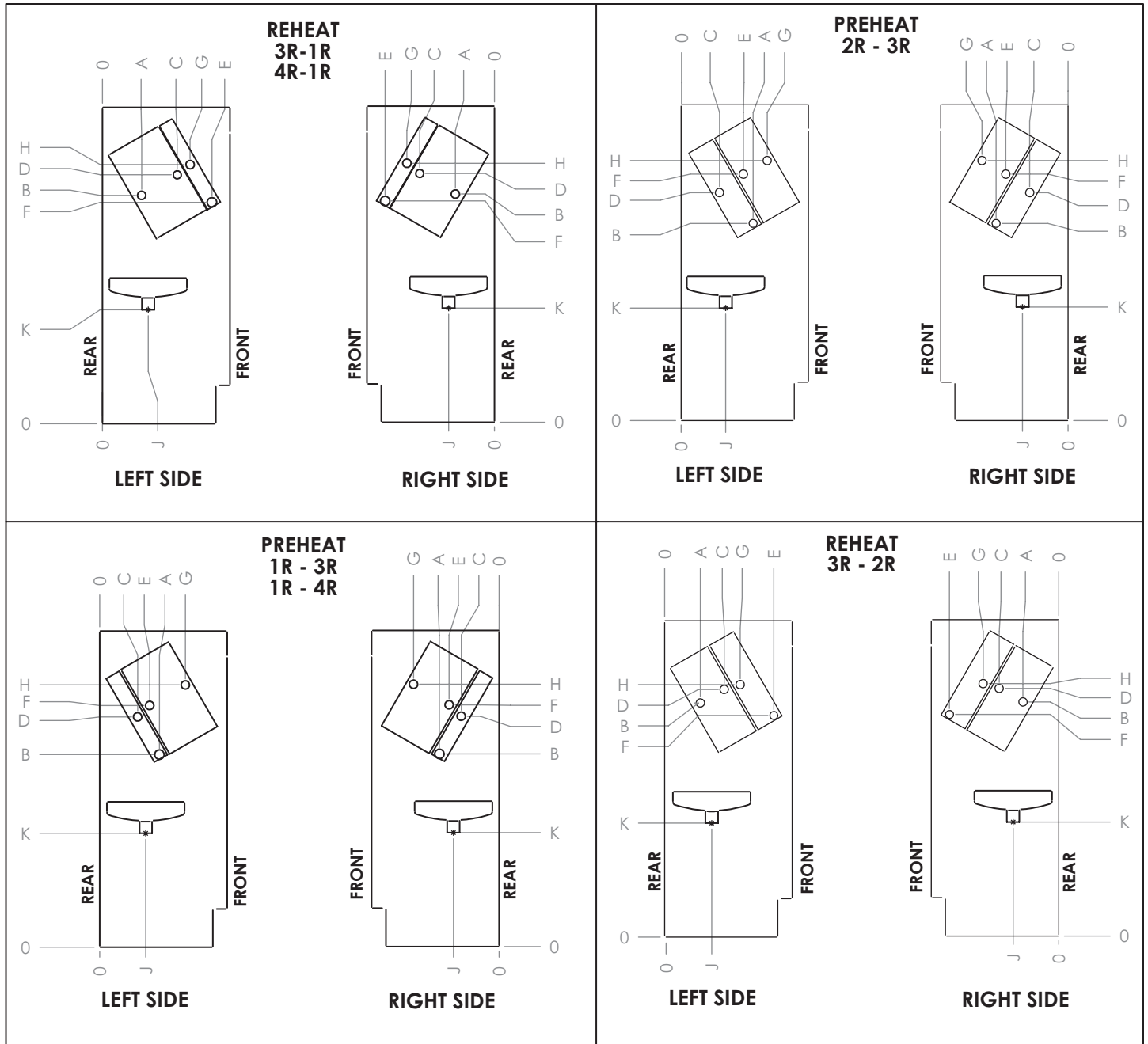
NOTES:

1. Values are at standard CFM at sea level, 70 deg. with dry coil.
2. All airflow ratings include filter and horizontal stamped louver top.
3. Unit for free delivery non-ducted application only.

Unit Electrical Data							
SIZE	HP	120V			240V		
		FLA	MCA	MOPD	FLA	MCA	MOPD
02	1/10	1.67	2.1	15	.7	.88	15
03	1/10	1.67	2.1	15	.7	.88	15
04	1/4	3.2	4.0	15	1.58	2.0	15
06	1/4	3.2	4.0	15	1.58	2.0	15
08	1/4	3.2	4.0	15	1.58	2.0	15
10*	1/4	6.4	7.2	15	3.16	3.6	15
12*	1/4	6.4	7.2	15	3.16	3.6	15

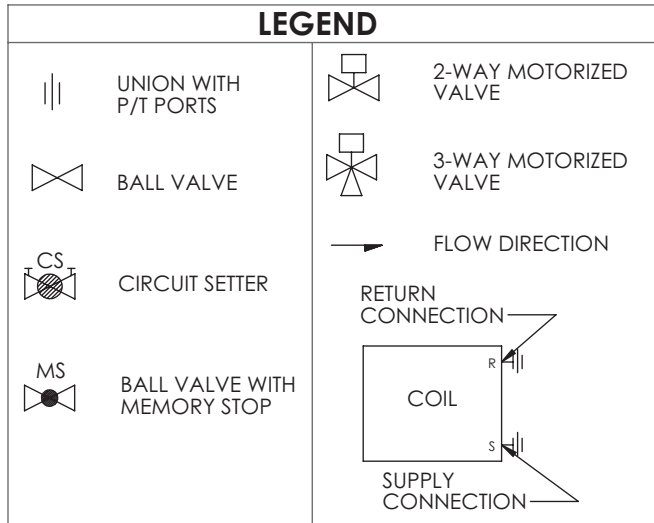
* Data given is for two motors.





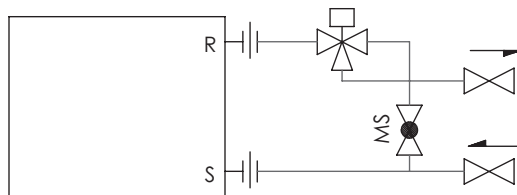
COIL CONNECTION DIMENSIONS (inches)											
COIL CONFIGURATION		1ST POSITION COIL				2ND POSITION COIL				DRAINPAN	
		SUPPLY		RETURN		SUPPLY		RETURN			
		A	B	C	D	E	F	G	H	J	K
REHEAT	4R - 1R	3.1	18.0	5.9	19.7	8.6	17.5	6.9	20.5	3.7	9.0
	3R - 1R	2.9	18.5	4.8	19.6	7.7	17.0	6.0	19.9	3.7	9.0
PREHEAT	2R - 3R	4.6	15.2	2.9	18.2	4.9	19.5	6.8	20.5	3.7	9.0
PREHEAT	1R - 4R	4.7	15.2	3.0	18.2	3.9	19.1	6.8	20.7	3.7	9.0
	1R - 3R	4.7	15.2	3.0	18.2	3.9	19.1	5.8	20.2	3.7	9.0
REHEAT	3R - 2R	2.8	18.4	4.7	19.5	8.6	17.5	6.0	19.9	3.7	9.0
NOTE: ALL COIL STUBOUTS ARE 5/8" O.D. COPPER.											

LEGEND

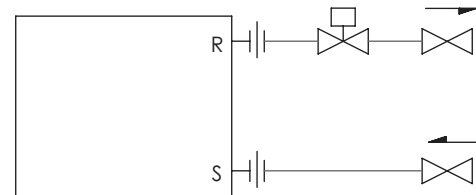


NOTES:

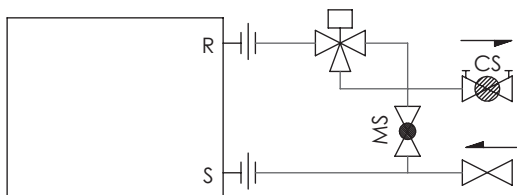
1. SCHEMATICS INDICATE VALVE PACKAGE ARRANGEMENT. NOT TO SCALE.
2. REFER TO NOMENCLATURE FOR AVAILABLE VALVE PACKAGE OPTIONS.
3. REFER TO "COIL AND VALVE PACKAGE CONFIGURATIONS" SHEET FOR ALLOWABLE COIL & VALVE PACKAGE COMBINATIONS.



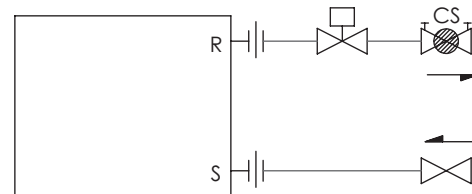
OPTIONS 5,H
2-BALL VALVES, 1-BALL VALVE W/
MEMORY STOP, 1-3-WAY
MOTORIZED VALVE



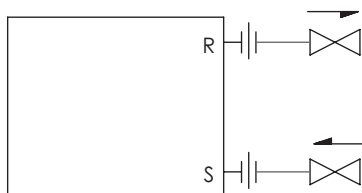
OPTIONS 3,F
2-BALL VALVES, 1-2-WAY
MOTORIZED VALVE



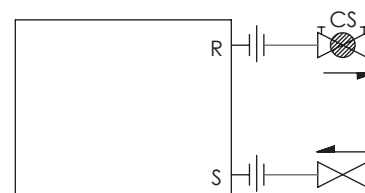
OPTIONS 6,J
1-BALL VALVE, 1-BALL VALVE W/
MEMORY STOP, 1-CIRCUIT SETTER,
1-3-WAY MOTORIZED VALVE



OPTIONS 4,G
1-BALL VALVE, 1-CIRCUIT SETTER,
1-2-WAY MOTORIZED VALVE



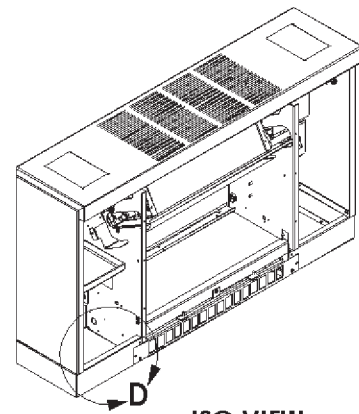
OPTION B
2-BALL VALVES
(NO MOTORIZED VALVE)



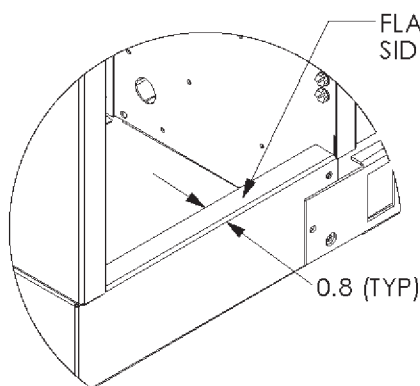
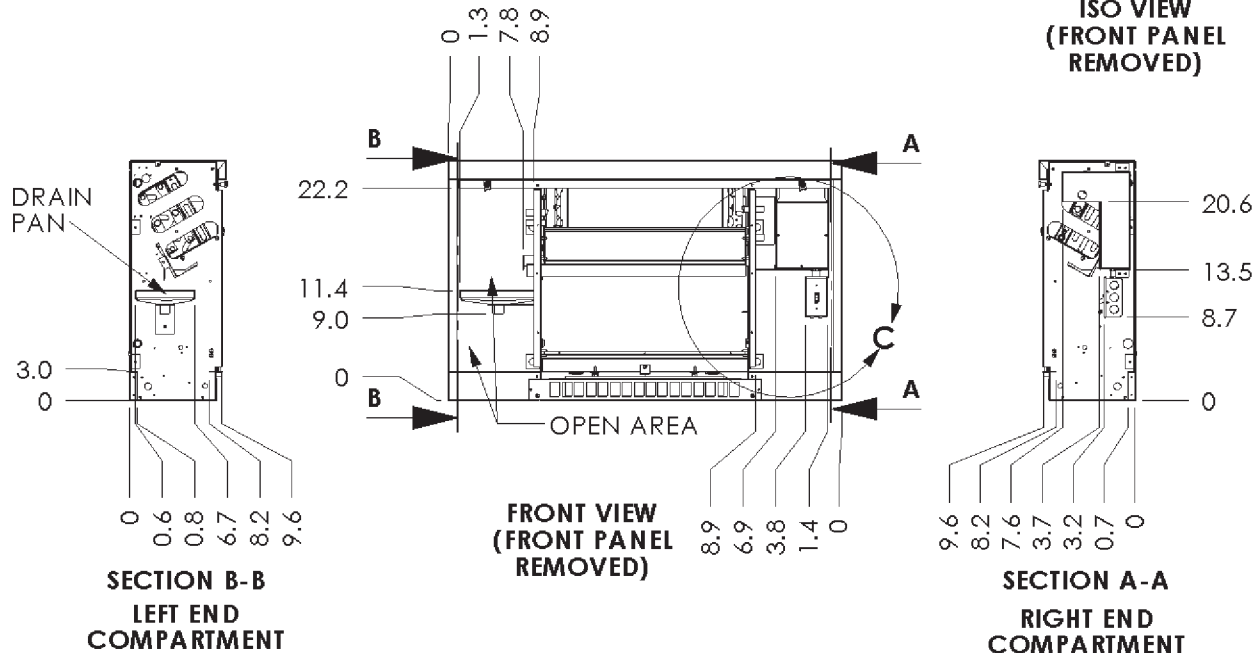
OPTION C
1-BALL VALVE, 1-CIRCUIT SETTER,
(NO MOTORIZED VALVE)

NOTES:

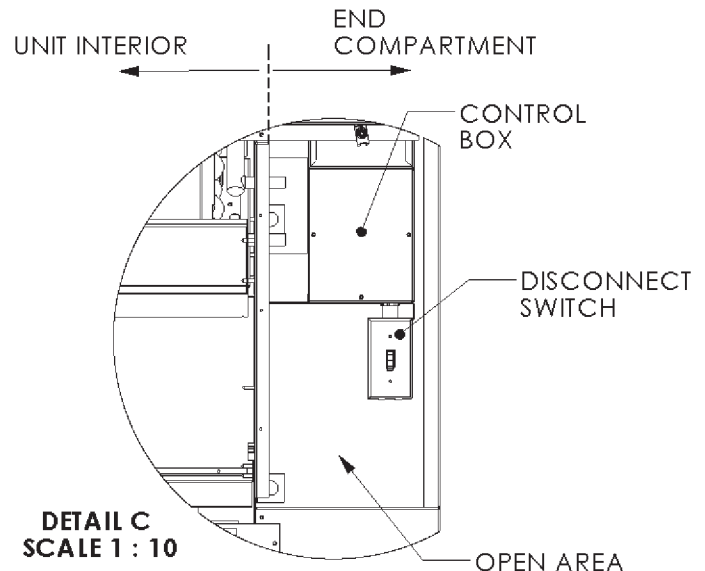
1. DIMENSIONS FOR REFERENCE ONLY. DRAWING IS FOR IDENTIFYING AVAILABLE SPACE FOR VALVE PACKAGE INSTALLATION. CUSTOMER TO FIELD VERIFY FIT OF FIELD SUPPLIED AND FIELD INSTALLED VALVE PACKAGES.
2. REFER TO "COIL AND VALVE PACKAGE UNIT CONFIGURATIONS" SHEET FOR ALLOWABLE COIL COMBINATIONS.
3. MIRROR DIMENSIONS FOR OPPOSITE SIDE DRAIN PAN AND CONTROL BOX.
4. REFER TO "COIL CONNECTIONS" DIMENSION SHEET FOR LOCATIONS OF COIL CONNECTIONS.
5. FACTORY VALVE PACKAGES ARE AVAILABLE. REFER TO NOMENCLATURE AND "FACTORY VALVE PACKAGE SCHEMATICS" SHEET.



ISO VIEW
(FRONT PANEL
REMOVED)



DETAIL D
SCALE 1 : 5



DETAIL C
SCALE 1 : 10



F Series Cooling Capacities

3-ROW CHILLED WATER

FFC/FSC 3-ROW COOLING CAPACITIES

Unit Size	EWT °F	GPM	WPD (ft w.g.)	Airflow CFM	85 °F EDB/71 °F EWB				LWT °F	80 °F EDB/67 °F EWB				LWT °F	75 °F EDB/63 °F EWB				LWT °F
					TTL MBH	SENS MBH	LDB °F	LWB °F		TTL MBH	SENS MBH	LDB °F	LWB °F		TTL MBH	SENS MBH	LDB °F	LWB °F	
02	45	1.0	1.56	150	5.48	3.63	61.90	59.50	55.90	4.50	3.28	58.67	57.00	53.97	3.74	3.02	55.57	54.16	52.46
				200	6.12	4.30	63.86	61.59	57.20	5.22	4.02	60.41	58.42	55.41	4.31	3.64	57.43	55.46	53.60
				250	6.75	4.99	65.38	62.79	58.48	5.79	4.64	61.90	59.47	56.55	4.72	4.15	58.95	56.46	54.42
		1.4	2.77	150	6.08	3.86	59.70	58.07	53.66	4.98	3.47	57.43	55.81	52.09	3.96	3.08	55.15	53.59	50.65
				200	6.91	4.59	62.41	60.21	54.85	5.66	4.15	59.76	57.61	53.07	4.70	3.82	56.53	54.71	51.70
				250	7.53	5.23	64.43	61.74	55.73	6.34	4.85	61.10	58.69	54.03	5.30	4.45	57.78	55.59	52.56
		1.9	4.79	150	6.57	4.05	58.40	56.88	51.89	5.37	3.63	56.35	54.81	50.63	4.25	3.20	54.38	52.84	49.46
				200	7.59	4.85	61.10	59.02	52.96	6.21	4.37	58.66	56.61	50.63	4.92	3.87	56.31	54.31	50.16
				250	8.37	5.55	63.16	60.59	53.79	6.86	5.01	60.44	57.94	52.20	5.51	4.50	57.60	55.28	50.78
03	45	1.4	3.22	250	8.38	5.68	62.72	60.59	56.95	6.94	5.19	59.85	57.83	54.89	5.83	4.79	56.55	54.80	53.31
				300	8.95	6.31	64.38	61.85	57.76	7.65	5.92	60.85	58.64	55.91	6.33	5.36	57.81	55.64	54.02
				350	9.59	7.00	65.42	62.67	58.67	8.27	6.56	61.79	59.32	56.79	6.75	5.87	58.87	56.32	54.62
		1.9	5.57	250	9.25	6.01	61.44	59.37	54.71	7.58	5.42	58.94	56.90	52.95	6.11	4.88	56.22	54.37	51.42
				300	9.99	6.69	63.13	60.67	55.49	8.19	6.06	60.39	58.01	53.60	6.78	5.56	57.16	55.08	52.12
				350	10.59	7.32	64.52	61.71	56.12	8.77	6.69	61.44	58.80	54.21	7.41	6.21	57.93	55.62	52.78
		2.5	9.03	250	9.91	6.26	60.43	58.42	52.91	8.11	5.63	58.10	56.11	51.47	6.42	4.97	55.85	53.90	50.12
				300	10.80	7.00	62.12	59.73	53.62	8.84	6.31	59.56	57.21	52.05	7.00	5.59	57.07	54.79	50.59
				350	11.54	7.67	63.52	60.78	54.21	9.12	7.05	60.01	58.25	53.12	7.55	6.19	57.98	55.46	51.03
04	45	1.9	6.69	200	9.34	5.71	56.60	56.86	54.81	7.61	5.11	54.85	53.89	52.99	6.02	4.50	53.07	52.09	51.32
				300	11.35	7.39	60.55	59.02	56.92	9.25	6.64	58.21	56.65	54.72	7.64	6.07	55.27	53.93	53.02
				400	12.61	8.72	63.37	61.24	58.25	10.77	8.16	59.94	58.09	56.32	8.90	7.39	56.99	55.17	54.34
		2.5	10.89	200	9.84	5.91	55.64	54.75	52.85	8.04	5.29	53.96	53.02	51.42	6.36	4.64	52.36	51.40	50.07
				300	12.22	7.71	59.48	57.96	54.75	10.01	6.94	57.23	55.71	52.98	7.92	6.13	55.07	53.56	51.32
				400	14.31	8.72	62.03	59.99	56.75	11.38	8.30	59.57	57.54	54.08	9.42	7.62	56.43	54.67	52.52
		3.4	18.71	200	10.32	6.10	54.66	53.79	51.05	8.43	5.45	53.16	52.24	49.94	6.67	4.77	51.72	50.77	48.91
				300	13.09	8.04	58.36	56.89	52.68	10.70	7.22	56.30	54.82	51.28	8.47	6.36	54.33	52.85	49.96
				400	15.10	9.64	61.06	59.05	53.86	12.37	8.69	58.62	56.63	52.25	9.79	7.69	56.26	54.32	50.74
06	45	2.6	0.70	400	12.70	8.61	63.65	61.17	54.74	10.41	7.80	60.84	58.43	52.98	9.04	7.46	56.84	55.04	51.94
				500	13.75	9.78	65.61	62.61	55.55	11.79	9.23	61.86	59.30	54.04	9.98	8.53	58.39	56.04	52.65
				600	14.55	10.82	67.11	63.68	56.17	13.13	10.61	62.62	59.90	55.07	10.73	9.47	59.62	56.81	53.23
		3.4	1.14	400	13.95	9.07	62.49	60.07	53.19	11.43	8.19	59.85	57.50	51.70	9.05	7.26	57.31	55.03	50.31
				500	15.28	10.33	64.50	61.57	53.96	12.52	9.36	61.60	58.78	52.35	10.44	8.67	58.11	55.69	51.12
				600	16.32	11.45	66.07	62.70	54.58	13.39	10.40	62.96	59.74	52.86	11.81	10.04	58.70	56.15	51.93
		4.8	2.09	400	15.26	9.57	61.24	58.91	51.34	12.48	8.61	58.83	56.53	50.18	9.87	7.60	56.49	54.24	49.10
				500	16.92	10.94	63.28	60.44	52.03	13.85	9.87	60.58	57.82	50.75	10.97	8.74	57.96	55.30	49.55
				600	18.27	12.16	64.89	61.61	52.59	14.96	11.00	61.97	58.82	51.22	11.86	9.76	59.14	56.11	49.93
08	45	3.7	1.38	600	17.57	12.22	64.74	62.00	55.47	14.42	11.09	61.77	59.13	52.77	12.66	10.64	57.66	55.60	51.82
				700	18.51	13.34	66.05	62.95	54.98	15.92	12.60	62.25	59.58	53.58	13.52	11.66	58.72	56.28	52.28
				800	19.30	14.37	67.13	63.71	55.40	17.42	14.09	62.63	59.93	54.39	14.24	12.58	59.63	56.84	52.67
		4.9	2.26	600	19.25	12.83	63.71	61.04	52.84	15.78	11.61	60.91	58.32	51.42	13.10	10.74	57.50	55.32	50.33
				700	20.43	14.02	65.06	62.03	53.32	16.76	12.72	62.08	59.16	51.82	14.66	12.26	57.88	55.67	50.96
				800	21.43	15.13	66.19	62.83	53.73	17.59	13.74	63.06	59.85	52.16	15.53	13.27	58.79	56.24	51.32
		6.7	3.90	600	20.91	13.45	62.68	60.08	51.22	17.11	12.13	60.05	57.51	50.09	13.55	10.74	57.50	55.04	49.03
				700	22.35	14.73	64.05	61.09	51.65	18.31	13.31	61.24	58.37	50.45	14.50	11.81	58.50	55.75	49.32
				800	23.60	15.91	65.21	61.93	52.02	19.34	14.40	62.24	59.08	50.76	16.10	13.38	58.85	55.97	49.79
10	45	4.0	2.06	600	21.57	14.19	61.48	59.68	55.76	17.67	12.82	58.93	57.16	53.81	13.89	11.27	56.65	54.82	51.93
				800	24.02	16.79	64.13	61.74	56.98	20.28	15.57	60.82	58.66	55.11	16.85	14.17	57.69	55.62	53.40
				1000	26.46	19.45	65.66	62.94	58.20	22.61	18.08	62.18	59.63	56.28	18.46	16.18	59.20	56.59	54.20
		5.9	4.07	600	24.10	15.14	59.89	58.17	53.15	19.72	13.63	57.60	55.89	51.66	15.61	12.03	55.40	53.72	50.27
				800	27.43	18.03	62.58	60.27	54.28	22.48	16.30	59.91	57.66	52.60	18.31	14.79	56.94	54.93	51.19
				1000	29.94	20.53	64.58	61.77	55.13	24.57	18.62	61.65	58.94	53.31	20.77	17.35	58.05	55.73	52.02
		8.0	6.94	600	25.72	15.77	58.84	57.17	51.41	21.02	14.15	56.73	55.06	50.24	16.63	12.46	54.71	53.04	49.14
				800	29.70	18.90	61.51	59.27	52.40	24.31	17.02	59.03	56.82	51.06	19.24	15.04	56.62	54.48	49.79
				1000	32.79	21.58	63.53	60.80	53.17	26.86	19.50	60.78	58.12	51.70	21.28	17.30	58.10	55.54	50.30
12	45	5.5	4.06	800	29.20	19.05	61.36	59.50	55.59	23.92	17.21	58.85	57.01	53.67	19.65	15.69	55.88	54.29	52.12
				1000	31.90	21.73	63.44	61.11	56.57	25.87	19.50	60.83	58.48	54.38	22.52	18.57	56.91	55.07	53.17
				1200	34.00	24.13	65.06	62.32	57.34	29.03	22.58	61.50	59.00	55.53	24.40	20.73	58.17	55.90	53.85
		7.4	6.86	800	31.66	19.99	60.20	58.39	53.53	25.91	17.99	57.87	56.08	51.98	20.51	15.89	55.63	53.87	50.53
				1000	35.03	22.89	62.29	60.02	54.44	28.70	20.67	59.67	57.45	52.73	23.55	18.90	56.58	54.68	51.35
				1200	37.72	24.47	63.94	61.27	55.17	30.93	23.07	61.10	58.51	53.34	26.49	21.87	57.28	55.24	52.14
		9.5	10.61	800	33.42	20.67	59.35	57.59	52.01	27.32	18.56	57.17	55.41	50.73	21.61	16.35	55.07	53.33	49.54
				1000	37.31	23.75	61.42	59.21	52.83	30.54	21.39	58.95	56.77	51.41	24.17	18.91	56.56	54.44	50.07
				1200	40.49	26.49	63.09	60.48	53.50	33.16	23.93	60.39	57.84	51.96	26.28	21.22	57.77	55.31	50.51



F Series Cooling Capacities

4-ROW CHILLED WATER

FFC/FSC 4-ROW COOLING CAPACITIES																			
Unit Size	EWT °F	GPM	WPD (ft w.g.)	Airflow CFM	85 °F EDB/71 °F EWB					80 °F EDB/67 °F EWB					75 °F EDB/63 °F EWB				
					TTL MBH	SENS MBH	LDB °F	LWB °F	LWT °F	TTL MBH	SENS MBH	LDB °F	LWB °F	LWT °F	TTL MBH	SENS MBH	LDB °F	LWB °F	LWT °F
02	45	1.0	2.04	150	6.46	4.15	57.88	57.15	57.90	5.39	3.79	55.45	54.77	55.75	4.41	3.41	53.12	52.44	53.79
				200	7.40	5.02	60.41	59.36	59.77	6.25	4.62	57.55	56.54	57.48	5.06	4.13	55.13	54.04	55.10
				250	8.19	5.81	62.23	60.86	61.24	6.84	5.30	59.41	57.98	58.66	5.69	4.83	56.39	55.02	56.34
		1.4	3.73	150	7.16	4.42	56.08	55.39	55.20	5.87	3.97	54.27	53.53	53.36	4.70	3.53	52.35	51.65	51.69
				200	8.23	5.32	58.94	57.87	56.73	6.79	4.82	56.58	55.53	54.68	5.61	4.38	53.91	52.98	52.99
				250	9.07	6.12	61.01	59.62	57.93	7.68	5.66	58.01	56.75	55.94	6.25	5.07	55.47	54.17	53.90
		1.9	6.42	150	7.66	4.62	54.77	54.10	53.04	6.27	4.14	53.18	52.47	51.57	4.96	3.63	51.68	50.94	50.21
				200	8.97	5.60	57.51	56.49	54.42	7.35	5.04	55.51	54.45	52.72	5.86	4.47	53.49	52.47	51.15
				250	9.98	6.45	59.69	58.31	55.48	8.19	5.82	57.37	55.99	53.59	6.74	5.30	54.59	53.39	52.08
03	45	1.4	4.30	250	9.67	6.34	59.90	58.73	58.78	8.17	5.86	57.02	55.98	55.64	6.67	5.27	54.52	53.47	54.50
				300	10.58	7.18	61.31	59.95	60.08	8.96	6.63	58.32	57.03	57.77	7.25	5.92	55.81	54.45	55.34
				350	11.35	7.95	62.53	60.94	61.18	9.54	7.28	59.60	57.99	58.59	7.83	6.58	56.72	55.14	56.16
		1.9	7.35	250	10.69	6.73	58.35	57.22	56.23	8.75	6.05	56.24	55.09	54.19	7.17	5.49	53.65	52.68	52.52
				300	11.60	7.53	60.16	58.73	57.18	9.57	6.84	57.64	56.26	55.05	7.98	6.27	54.68	53.50	53.38
				350	12.34	8.26	61.66	59.95	57.96	10.51	7.69	58.44	56.97	56.03	8.60	6.93	55.75	54.30	54.02
		2.5	12.08	250	11.50	7.05	57.06	56.00	54.18	9.41	6.33	55.15	54.06	52.51	7.45	5.57	53.34	52.23	50.94
				300	12.62	7.93	58.83	57.48	55.07	10.33	7.14	56.66	55.30	53.24	8.31	6.38	54.34	53.07	51.63
				350	13.65	8.73	60.32	58.70	55.82	11.11	7.87	57.94	56.33	53.87	9.00	7.08	55.33	53.85	52.18
04	45	1.9	1.32	200	10.63	6.38	53.20	53.15	56.16	8.70	5.72	51.75	51.66	54.13	6.88	5.02	50.45	50.31	52.22
				300	12.93	8.34	57.33	57.06	58.58	10.69	7.56	55.15	54.81	56.23	8.60	6.74	53.04	52.65	54.03
				400	14.56	10.01	60.09	59.52	60.29	12.12	9.14	57.46	56.84	57.73	9.80	8.16	55.05	54.30	55.29
		2.5	2.13	200	11.35	6.68	51.72	51.66	54.05	9.29	5.97	50.53	50.44	52.41	7.35	5.23	49.43	49.31	50.86
				300	14.29	8.87	55.55	55.33	56.40	11.69	7.98	53.77	53.50	54.33	9.33	7.05	52.02	51.68	52.44
				400	16.20	10.65	58.50	58.03	57.93	13.42	9.67	56.16	55.62	55.71	10.80	8.63	53.92	53.33	53.61
		3.4	3.67	200	11.96	6.93	50.43	50.37	52.01	9.77	6.18	49.49	49.40	50.73	7.73	5.39	48.61	48.50	49.53
				300	15.50	9.35	53.94	53.73	54.09	12.69	8.39	52.40	52.16	52.44	10.01	7.35	51.03	50.74	50.87
				400	18.03	11.36	56.72	56.32	55.58	14.74	10.22	54.78	54.34	53.65	11.76	9.05	52.89	52.36	51.90
06	45	2.6	2.91	400	16.41	10.58	58.74	57.85	57.60	13.61	9.63	56.32	55.45	55.44	11.15	8.87	53.84	52.99	53.55
				500	18.13	12.22	60.75	59.58	58.91	15.31	11.26	57.85	56.74	55.75	12.38	10.05	55.40	54.21	54.50
				600	19.78	13.83	62.14	60.74	60.19	16.51	12.60	59.35	57.88	57.67	13.50	11.37	56.54	55.08	55.36
		3.4	4.67	400	17.84	11.13	57.38	56.52	55.47	14.60	10.01	55.38	54.49	53.57	11.81	8.97	53.14	52.33	51.92
				500	19.77	12.80	59.58	58.40	56.60	16.37	11.66	57.07	55.94	54.60	13.39	10.52	54.50	53.42	52.85
				600	21.28	14.30	61.35	59.86	57.49	17.91	13.18	58.39	57.03	55.51	14.60	11.85	55.76	54.38	53.57
		4.8	8.59	400	19.33	11.71	55.91	55.09	53.03	15.80	10.50	54.17	53.31	51.57	12.51	9.23	52.51	51.62	50.19
				500	21.77	13.57	58.05	56.92	54.05	17.83	12.21	55.98	54.83	52.41	14.11	10.77	54.00	52.85	50.86
				600	23.75	15.22	59.81	58.38	54.87	19.46	13.73	57.48	56.06	53.09	15.81	12.38	54.89	53.59	51.57
08	45	4.7	8.65	600	23.53	15.04	60.11	58.52	54.99	19.26	13.55	57.78	56.18	53.17	15.83	12.35	54.93	53.58	51.71
				700	25.17	16.52	61.58	59.69	55.69	20.62	14.92	59.03	57.17	53.75	17.38	13.86	55.70	54.19	52.37
				800	26.56	17.88	62.83	60.66	56.28	22.19	16.44	59.79	57.80	54.42	18.50	15.08	56.62	54.84	52.85
		6.1	13.72	600	25.08	15.63	59.13	57.57	53.20	20.50	14.05	56.96	55.40	51.70	16.21	12.39	54.87	53.33	50.30
				700	27.02	17.21	60.59	58.74	53.84	22.10	15.50	58.21	56.38	52.23	17.82	13.93	55.60	53.94	50.83
				800	28.69	18.67	61.84	59.72	54.38	23.49	16.85	59.28	57.21	52.68	19.37	15.43	56.20	54.42	51.33
		8.2	23.22	600	26.53	16.20	58.18	56.67	51.45	21.66	14.52	56.18	54.65	50.27	17.12	12.76	54.25	52.73	49.16
				700	28.79	17.88	59.62	57.82	52.00	23.52	16.07	57.41	55.61	50.72	18.59	14.16	55.28	53.51	49.52
				800	30.76	19.45	60.86	58.80	52.48	25.15	17.50	58.47	56.43	51.12	19.89	15.46	56.17	54.17	49.84
10	45	5.0	4.07	600	29.23	18.00	55.15	54.91	56.67	23.94	16.18	53.41	53.13	54.55	19.29	14.39	51.56	51.25	52.69
				800	33.54	21.76	57.96	57.51	58.39	27.88	19.79	55.62	55.12	56.13	22.47	17.64	53.46	52.89	53.97
				1000	36.99	25.13	60.02	59.31	59.77	30.81	22.90	57.44	56.66	57.30	25.02	20.57	54.91	54.10	54.98
		7.0	7.34	600	31.72	18.98	53.50	53.26	54.04	25.95	17.00	52.05	51.77	52.39	20.54	14.93	50.68	50.38	50.85
				800	37.13	23.12	56.25	55.81	55.58	30.43	20.81	54.35	53.88	53.67	24.48	18.53	52.37	51.89	51.97
				1000	41.21	26.71	58.43	57.77	56.75	34.18	24.32	56.03	55.38	54.74	27.53	21.66	53.85	53.12	52.84
		9.0	11.51	600	33.17	19.58	52.50	52.28	52.35	27.12	17.49	51.24	50.97	51.01	21.45	15.32	50.04	49.74	49.75
				800	39.42	24.02	55.12	54.70	53.74	32.27	21.56	53.42	52.96	52.15	25.65	19.04	51.75	51.28	50.68
				1000	44.29	27.88	57.26	56.62	54.82	36.29	25.13	55.23	54.56	53.04	29.21	22.41	53.11	52.45	51.47
12	45	7.0	8.32	800	36.00	22.23	57.32	56.35	55.26	29.46	19.98	55.35	54.36	53.39	23.21	17.55	53.56	52.52	51.61
				1000	40.06	25.61	59.50	58.20	56.42	32.81	23.10	57.21	55.90	54.35	26.76	20.86	54.61	53.42	52.62
				1200	43.23	28.60	61.28	59.66	57.33	36.02	26.20	58.47	56.95	55.26	29.25	23.49	55.87	54.35	53.33
		8.7	12.19	800	37.60	22.84	56.56	55.59	53.62	30.75	20.48	54.73	53.72	52.05	24.33	18.01	52.98	51.96	50.57
				1000	42.24	26.41	58.70	57.39	54.68	34.58	23.77	56.55	55.23	52.93	27.38	20.98	54.49	53.17	51.27
				1200	45.99	29.59	60.45	58.83	55.55	37.66	26.69	58.06	56.44	53.63	30.86	24.24	55.25	53.83	52.07
		10.0	15.67	800	38.59	23.23	56.06	55.11	52.70	31.55	20.81	54.32	53.32	51.29	24.95	18.28	52.65	51.64	49.97
				1000	41.07	25.02	58.72	57.51	53.34	35.67	24.20	56.11	54.81	52.11	28.23	21.33	54.14	52.84	50.63
				1200	46.12	29.05	60.01	58.51	54.55	39.04	27.24	57.61	56.01	52.79	31.40	24.39	55.13	53.65	51.26



F Series Heating Capacities

I-ROW HOT WATER

FFC/FSC I-ROW HEATING CAPACITIES

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
02	180.0	0.5	0.01	150	6.79	101.26	152.12
				200	7.69	95.07	148.40
				250	8.40	90.64	145.48
		1.0	0.35	150	7.82	107.52	163.96
				200	9.07	101.34	161.39
				250	10.10	96.81	159.28
		1.5	0.73	150	8.25	110.12	168.72
				200	9.66	104.03	166.79
				250	10.84	99.52	165.17
03	180.0	0.5	1.12	250	9.25	93.74	141.99
				300	9.92	90.13	139.26
				350	10.47	87.27	136.97
		1.0	0.41	250	11.10	100.46	157.22
				300	12.09	96.74	155.18
				350	12.95	93.73	153.41
		1.5	0.85	250	11.90	103.38	163.73
				300	13.05	99.67	162.14
				350	14.07	96.66	160.75
04	180.0	0.5	0.15	200	9.32	102.49	141.70
				300	11.03	93.52	134.67
				400	12.22	87.86	129.75
		1.5	1.03	200	11.62	112.97	164.10
				300	14.51	104.11	160.14
				400	16.76	98.21	157.06
		2.5	2.55	200	12.24	115.77	169.96
				300	15.51	107.12	167.80
				400	18.12	101.29	165.13
06	180.0	0.5	0.20	400	13.81	91.47	123.22
				500	14.86	87.09	118.88
				600	15.68	83.83	115.48
		1.5	1.34	400	19.04	103.40	153.94
				500	21.24	98.73	150.92
				600	23.11	95.11	148.36
		2.5	3.30	400	20.58	106.89	163.11
				500	23.19	102.29	160.96
				600	25.46	98.68	159.10

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
08	180.0	1.0	0.69	600	21.14	92.12	136.56
				700	22.44	89.22	133.89
				800	23.55	86.84	131.59
		2.0	2.33	600	25.06	98.07	154.28
				700	26.95	95.10	152.34
				800	28.63	92.62	150.61
		3.0	4.77	600	26.70	100.56	161.74
				700	28.87	97.60	160.25
				800	30.82	95.12	158.92
10	180.0	2.0	3.04	600	28.21	102.87	151.03
				800	32.43	96.95	146.70
				1000	35.03	92.16	141.05
		3.0	6.21	600	30.10	105.73	159.41
				800	34.98	99.86	156.06
				1000	39.01	95.57	153.30
		4.0	10.36	600	31.14	107.31	164.03
				800	36.41	101.49	161.32
				1000	40.82	97.21	159.05
12	180.0	2.5	5.11	800	35.78	100.77	150.61
				1000	39.83	96.31	147.28
				1200	43.25	92.86	144.46
		3.5	13.82	800	37.78	103.06	157.84
				1000	42.36	98.62	155.15
				1200	46.28	95.16	152.85
		4.5	14.49	800	38.99	104.44	162.22
				1000	43.90	100.02	159.98
				1200	48.14	96.57	158.04



F Series Heating Capacities

2-ROW HOT WATER

FFC/FSC 2-ROW HEATING CAPACITIES

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
02	180.0	0.5	0.22	150	10.49	123.71	149.50
				200	12.00	114.65	130.69
				250	13.14	107.89	125.97
		1.0	0.74	150	12.18	133.95	155.00
				200	14.40	125.58	150.43
				250	16.22	119.09	146.70
		1.5	1.51	150	12.83	137.90	162.45
				200	15.39	130.07	158.95
				250	17.52	123.84	156.02
03	180.0	0.5	0.26	250	14.17	111.62	121.75
				300	15.17	106.07	117.61
				350	15.99	101.61	114.25
		1.0	0.86	250	17.47	123.67	144.11
				300	19.19	118.26	140.59
				350	20.65	113.75	137.57
		1.5	1.76	250	18.86	128.71	154.19
				300	20.92	123.52	151.37
				350	22.73	119.16	148.88
04	180.0	0.5	0.31	200	13.90	123.30	122.85
				300	16.45	109.94	112.35
				400	19.20	106.54	108.25
		1.5	2.13	200	17.67	140.46	155.82
				300	22.74	129.04	148.87
				400	26.63	120.64	143.54
		2.5	2.50	200	18.57	144.55	164.76
				300	24.39	134.04	159.98
				400	29.09	126.25	156.11
06	180.0	2.0	2.59	400	32.61	134.18	146.53
				500	37.09	127.52	141.91
				600	40.80	121.89	138.10
		3.0	4.97	400	34.87	139.32	156.15
				500	40.15	133.08	152.53
				600	44.63	127.70	149.46
		4.0	7.81	400	36.04	142.00	161.51
				500	41.77	136.02	158.57
				600	46.70	130.83	156.10

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
08	180.0	3.0	9.80	600	42.56	124.56	150.87
				700	46.37	120.30	148.26
				800	49.78	116.64	145.92
		4.0	16.34	600	44.25	127.12	157.30
				700	48.42	122.96	155.15
				800	52.20	119.40	153.21
		5.0	24.34	600	45.29	128.70	161.41
				700	49.73	124.66	159.59
				800	53.74	121.14	157.94
10	180.0	3.0	12.69	600	46.74	130.89	148.01
				800	55.15	122.73	142.25
				1000	61.84	116.29	137.65
		4.0	21.14	600	48.55	133.63	155.09
				800	57.82	125.77	150.32
				1000	65.46	119.58	146.39
		5.0	31.46	600	49.68	135.34	159.61
				800	59.52	127.71	155.57
				1000	67.77	121.68	152.18
12	180.0	3.0	14.42	800	57.40	125.30	140.70
				1000	64.64	118.83	135.73
				1200	70.69	113.62	131.58
		4.0	23.96	800	60.32	128.62	149.04
				1000	68.48	122.32	144.84
				1200	75.47	117.25	141.24
		5.0	35.63	800	62.10	130.64	154.51
				1000	70.97	124.59	150.86
				1200	78.55	119.58	147.74



F Series Heating Capacities

3-ROW HOT WATER

FFC/FSC 3-ROW HEATING CAPACITIES

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
02	180.0	1.0	1.12	150	15.21	155.28	148.77
				200	18.40	146.43	142.22
				250	20.98	138.96	136.90
		1.4	5.53	150	15.81	159.03	156.82
				200	19.41	151.20	151.53
				250	22.44	144.34	147.09
		1.9	7.52	150	16.20	161.49	162.50
				200	20.10	154.42	158.29
				250	23.45	148.14	154.67
03	180.0	1.4	2.39	250	24.02	149.88	144.78
				300	26.94	144.03	140.48
				350	29.47	138.91	136.75
		1.9	1.76	250	25.03	153.67	138.50
				300	28.33	148.36	149.39
				350	31.25	143.56	146.22
		2.5	6.63	250	25.72	156.24	137.88
				300	29.29	151.35	155.96
				350	32.50	146.89	153.32
04	180.0	1.4	4.88	200	22.51	166.69	155.69
				300	30.66	156.88	146.87
				400	37.16	148.08	139.83
		1.9	7.95	200	22.89	168.49	161.22
				300	31.59	159.82	154.04
				400	38.77	151.89	148.16
		2.5	13.76	200	23.19	169.94	166.01
				300	32.36	162.25	160.47
				400	40.13	155.12	155.78
06	180.0	2.6	0.51	400	39.52	153.59	148.80
				500	45.61	146.43	143.98
				600	50.72	140.10	139.93
		3.4	0.81	400	40.98	157.05	155.26
				500	47.79	150.55	151.15
				600	53.64	144.71	147.61
		4.8	1.49	400	42.38	160.37	161.88
				500	49.92	154.59	158.66
				600	56.57	149.32	155.81

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
08	180.0	3.7	0.99	600	56.45	149.41	148.68
				700	62.06	144.27	145.56
				800	67.00	139.61	142.81
		4.9	1.62	600	58.80	153.14	155.37
				700	65.12	148.41	152.72
				800	70.76	144.07	150.35
		6.7	2.81	600	60.81	156.31	161.38
				700	67.75	151.99	159.25
				800	74.06	147.98	157.32
10	180.0	4.0	1.47	600	59.01	153.40	149.72
				800	65.42	148.77	146.42
				1000	71.18	144.51	143.46
		5.9	2.92	600	61.56	157.43	158.59
				800	75.45	149.57	153.75
				1000	87.16	142.79	149.67
		8.0	5.01	600	62.97	159.67	163.85
				800	77.88	152.46	160.02
				1000	90.72	146.17	156.73
12	180.0	5.5	2.95	800	81.40	156.39	149.62
				1000	94.66	149.68	144.66
				1200	105.98	143.68	140.42
		7.4	4.95	800	83.96	159.43	156.72
				1000	98.58	153.39	152.66
				1200	111.36	147.92	149.11
		9.5	7.83	800	85.60	161.36	161.51
				1000	101.12	155.79	158.16
				1200	114.88	150.70	155.18



F Series Heating Capacities

4-ROW HOT WATER

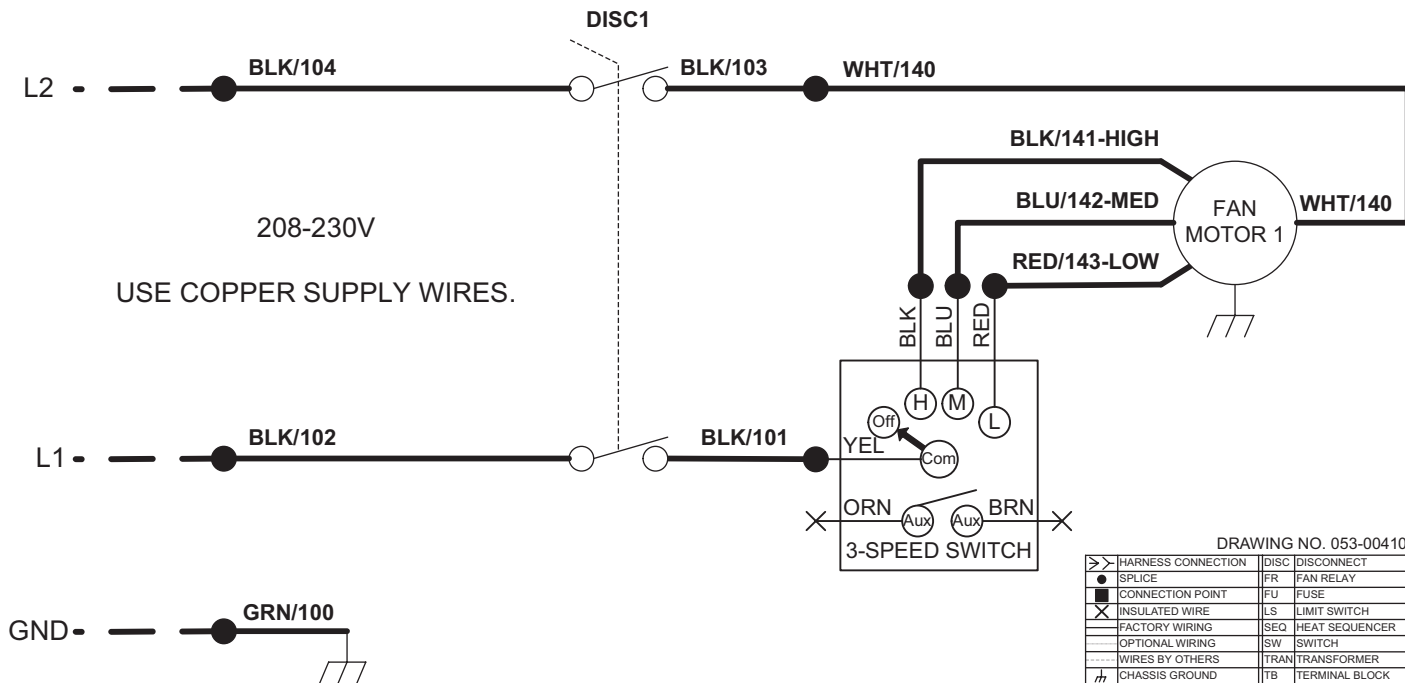
FFC/FSC 4-ROW HEATING CAPACITIES

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
02	180.0	1.3	2.39	150	17.26	167.63	152.75
				200	21.56	160.84	145.95
				250	25.21	154.32	140.18
		1.7	3.86	150	17.57	169.73	158.79
				200	22.18	163.73	153.22
				250	26.20	158.01	148.37
		2.3	6.61	150	17.82	171.13	164.10
				200	22.69	166.09	159.76
				250	27.02	161.08	155.89
03	180.0	1.7	4.48	250	27.11	162.40	147.27
				300	30.95	157.42	148.62
				350	34.35	152.70	138.50
		2.3	7.66	250	27.85	165.21	155.15
				300	32.06	160.94	151.39
				350	35.87	156.80	147.98
		3.0	12.31	250	28.33	167.00	160.63
				300	32.78	163.19	157.58
				350	36.87	159.48	154.78
04	180.0	2.3	1.33	200	23.16	170.00	159.34
				300	32.12	161.71	151.34
				400	39.51	153.84	144.73
		3.0	2.11	200	23.44	171.35	163.97
				300	32.87	164.10	157.52
				400	40.89	157.11	152.03
		4.1	3.67	200	23.68	172.49	168.15
				300	33.52	166.14	163.23
				400	42.09	159.97	158.94
06	180.0	3.0	2.58	400	43.43	162.84	150.28
				500	51.15	156.89	144.99
				600	57.84	151.31	140.41
		4.3	5.14	400	44.72	165.87	158.66
				500	53.23	160.83	154.59
				600	60.83	156.03	150.96
		6.0	9.30	400	45.52	167.77	164.44
				500	54.57	163.35	161.34
				600	62.78	159.10	158.53

Unit Size	EWT °F	GPM	WPD (ft. w.g.)	Airflow CFM	60°F EDB		
					TTL MBH	LDB °F	LWT °F
08	180.0	4.7	2.73	600	63.95	160.95	152.07
				700	71.51	156.75	148.77
				800	78.35	152.76	145.77
		6.1	10.03	600	65.38	163.19	158.01
				700	73.48	159.41	155.28
				800	80.91	155.79	152.77
		8.2	16.99	600	66.57	165.07	163.35
				700	75.15	161.67	161.20
				800	83.11	158.39	159.20
10	180.0	5.0	2.93	600	67.60	166.92	152.55
				800	84.25	159.95	145.40
				1000	98.31	153.31	139.62
		7.0	5.31	600	69.10	169.29	159.75
				800	87.19	163.43	154.44
				1000	102.98	157.74	149.80
		9.0	8.30	600	69.89	170.54	164.07
				800	88.76	165.30	159.76
				1000	105.54	160.16	155.94
12	180.0	7.0	6.06	800	86.34	162.49	154.69
				1000	101.98	156.86	150.09
				1200	115.76	151.63	146.05
		8.7	7.82	800	87.68	164.08	159.32
				1000	104.15	158.91	155.43
				1200	118.84	154.06	151.96
		10.0	11.34	800	88.39	164.92	161.87
				1000	105.29	160.00	158.39
				1200	120.50	155.37	155.27

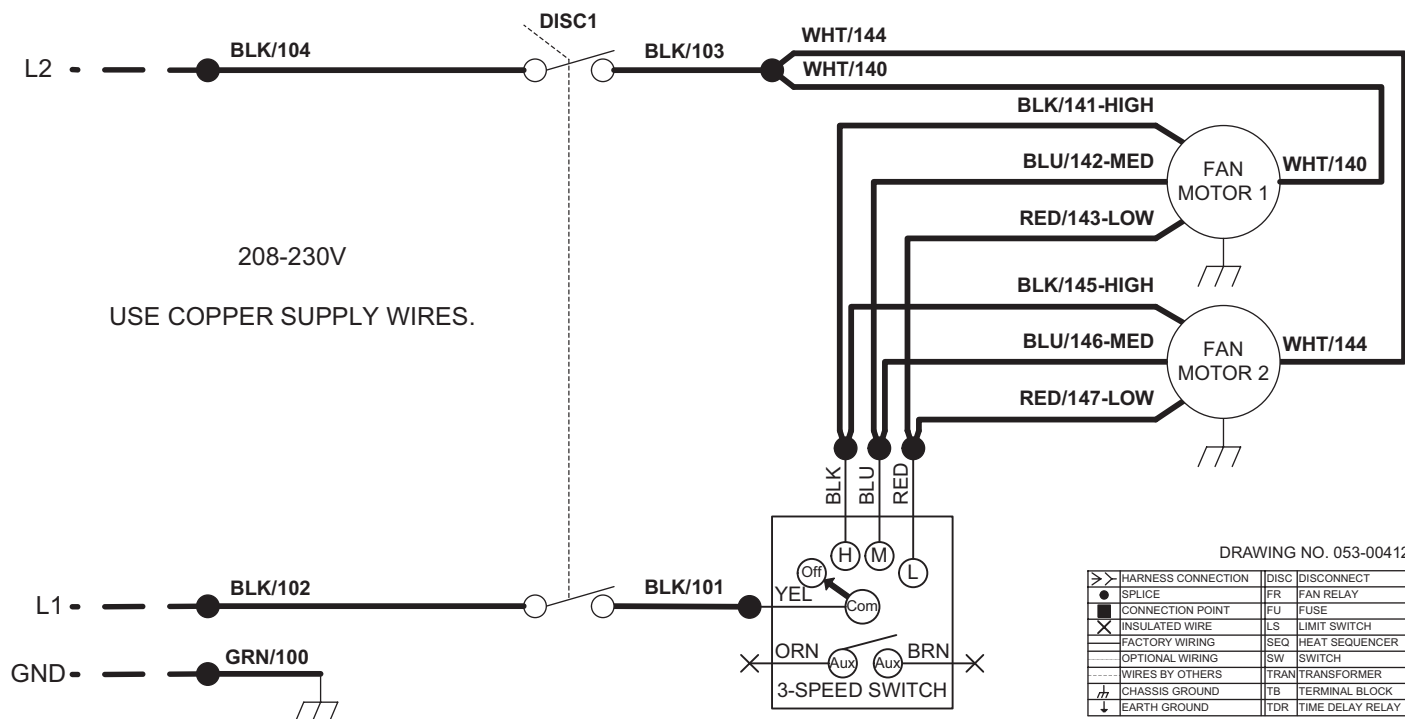
208/240V FAN COIL

SINGLE MOTOR, 3-SPEED FAN SWITCH, DISCONNECT SWITCH



208/240V FAN COIL

TWO MOTORS, 3-SPEED FAN SWITCH, DISCONNECT SWITCH



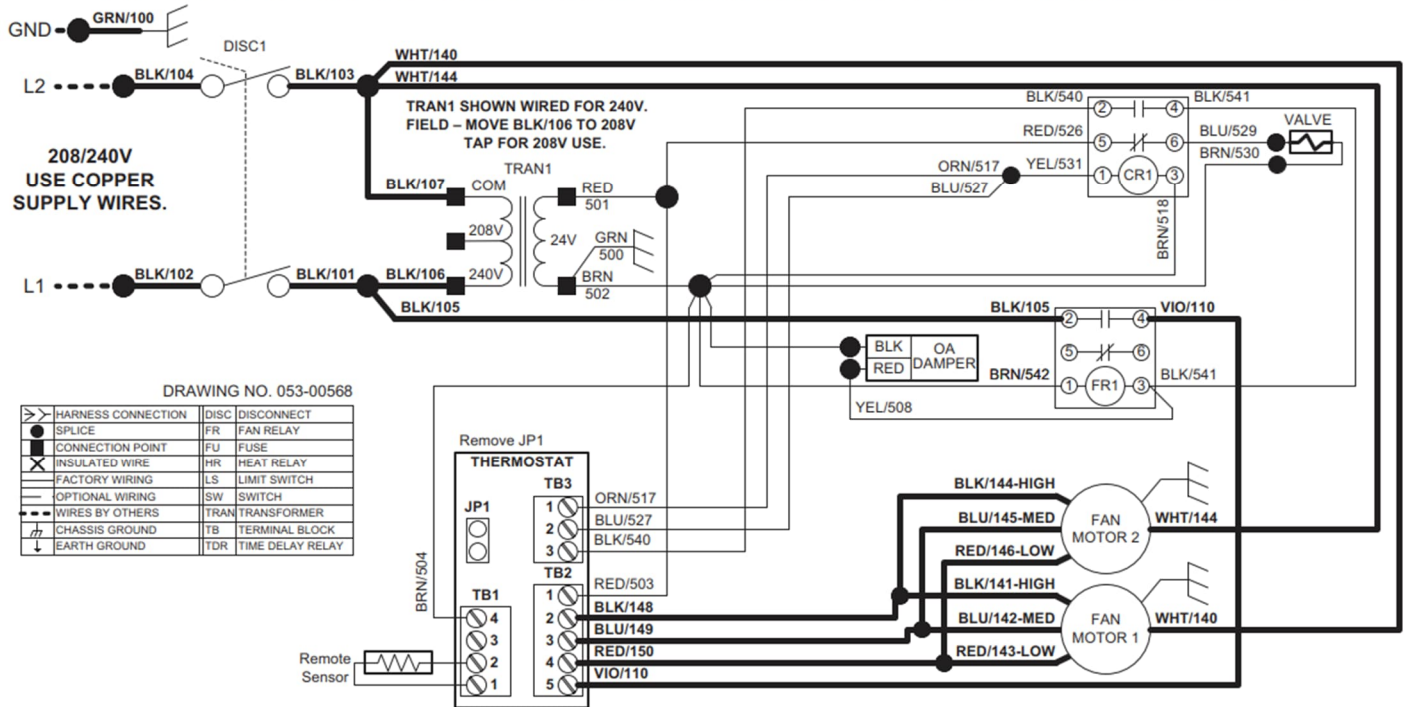
Notes:

1. Wiring diagrams are typical and are for reference only. Actual production wiring diagram may differ from these due to unit size, voltage, damper, control valve or controls options.

F Series 1.3

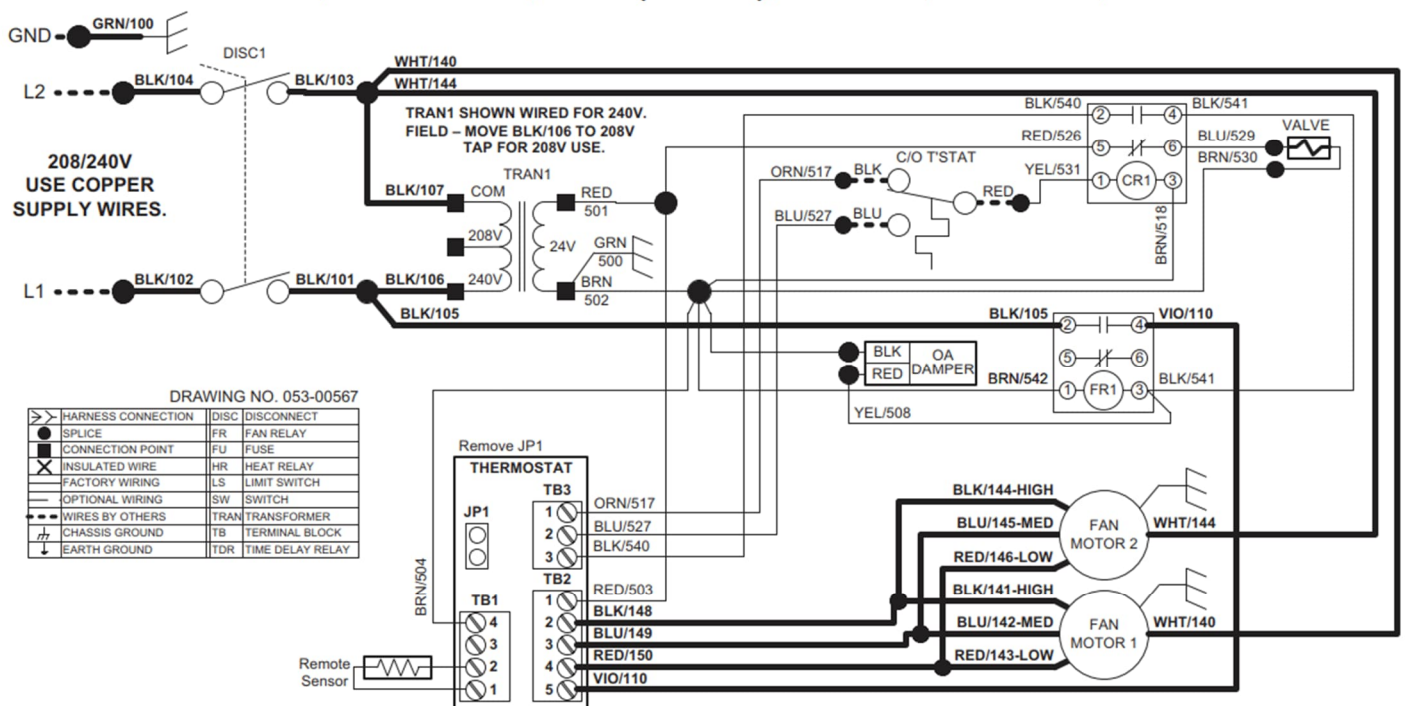
208/240V FAN COIL

TWO MOTORS, THERMOSTAT, 2-PIPE (CW/HW), MANUAL C/O, N.O. VALVE, OA DAMPER



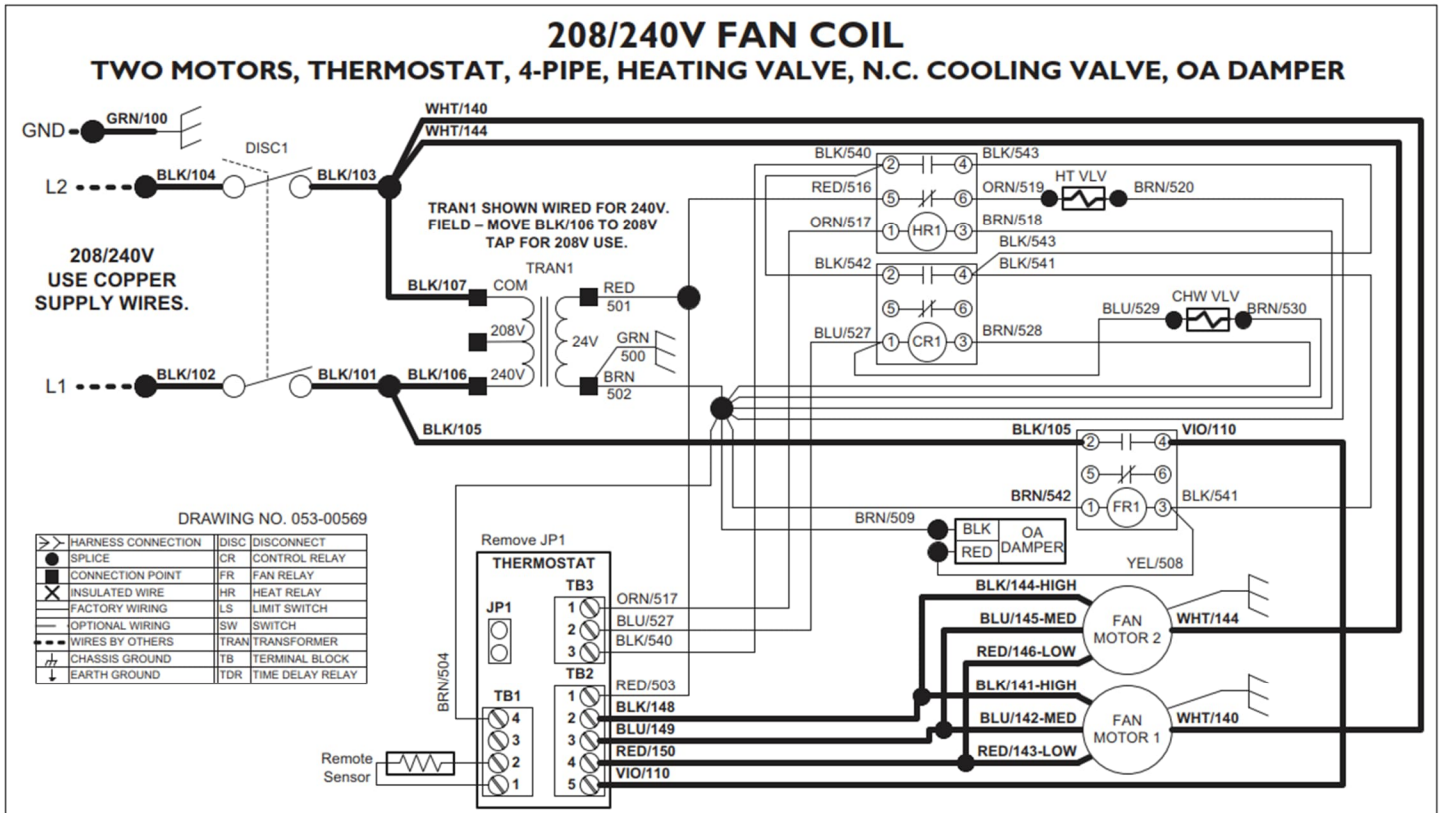
208/240V FAN COIL

TWO MOTORS, THERMOSTAT, 2-PIPE (CW/HW), AUTO C/O, N.O. VALVE, OA DAMPER



Notes:

1. Wiring diagrams are typical and are for reference only. Actual production wiring diagram may differ from these due to unit size, voltage, damper, control valve or controls options.



Notes:

1. Wiring diagrams are typical and are for reference only. Actual production wiring diagram may differ from these due to unit size, voltage, damper, control valve or controls options.



Producing Quality Heating & Cooling Equipment For Over 50 Years

MAGIC AIRE F SERIES FAN COILS ARE ETL
LISTED TO U.S. AND CANADIAN SAFETY STANDARDS c
AND ARE ASSEMBLED TO ORDER FOR COMPETITIVE DELIVERY.



United Electric Company, L.P.

501 Galveston St. • Wichita Falls, TX 76301 • 940-397-2100 • www.magicaire.com