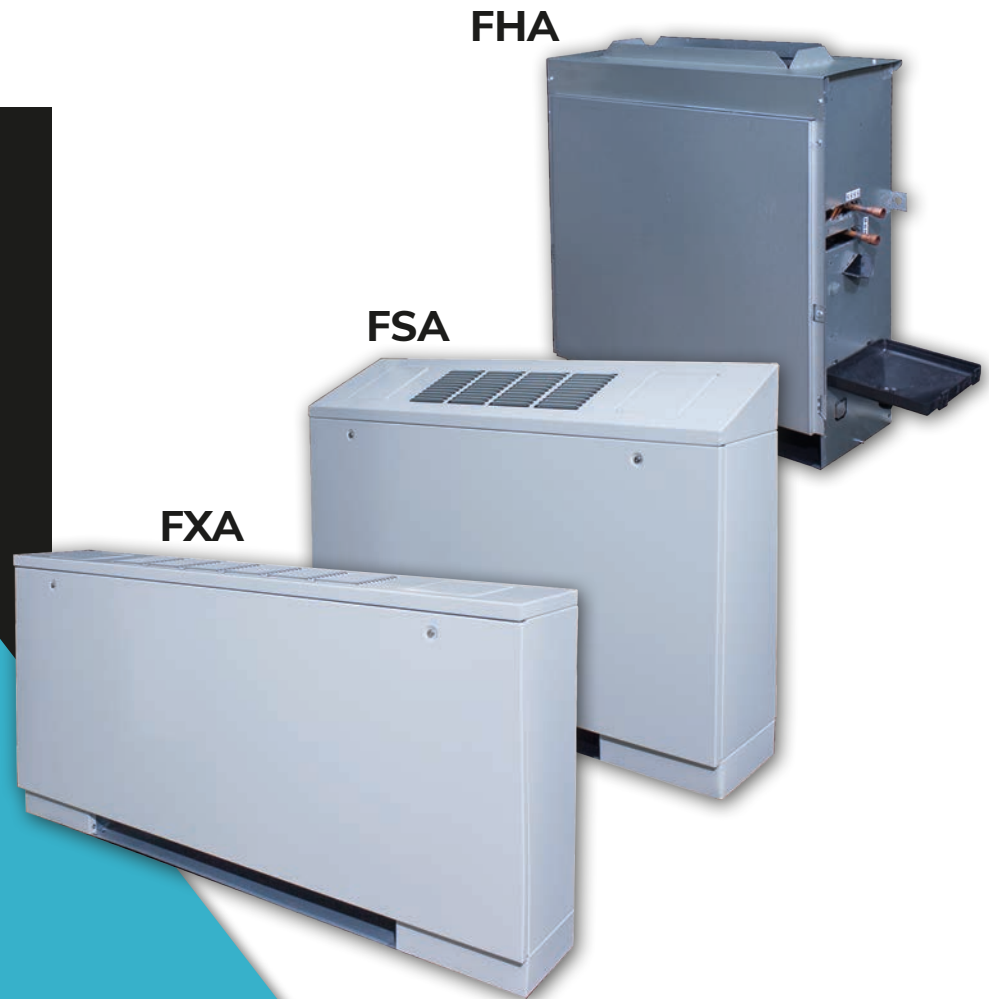




A **NIBE** GROUP MEMBER



- Easy to install
- Easy to Service
- Durable construction
- Design flexibility

- Floor mounted for concealed or exposed applications
- Standard and high capacity coils
- Optional colors, valve packages, controls and unit configurations
- Nominal CFM range of 200 to 1200 CFM

Vertical F*A Series

FAN COIL TECHNICAL CATALOG

International Environmental Corporation (IEC) works continually to improve its products. As a result, the design and specifications of each product may be changed without notice and may not be as described herein. Please contact IEC for information regarding current design and product specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties but are merely IEC's opinion or commendation of its products. Manufacturer's standard limited warranty applies.

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Portfolio

Vertical Hideaway (FHA) 200 CFM to 1200 CFM

The Vertical Hideaway (FHA) fan coil unit is designed for concealed applications. The slender design of the FHA makes this unit ideal for perimeter heating and cooling applications in public buildings, offices, hospitals and hotels. The coil section of the FHA is lined with insulation to provide positive protection against sweating and maximum dampening of air noise. Standard FHA units are constructed with 18-gauge galvanized steel and are provided with a galvanized finish.



Vertical Cabinet (FXA) 200 CFM to 1200 CFM

The slender design of the Vertical Cabinet (FXA) fan coil unit makes this unit ideal for perimeter heating and cooling applications in public buildings, offices, hospitals and hotels. The FXA cabinet is fabricated of heavy gauge steel. The top panel provides structural rigidity essential for an exposed unit. FXA units have a removable, one-piece front panel for easy access to all internal components. Standard FXA units are constructed with 18-gauge galvanized steel and are provided with a durable powder-coated paint finish.



Vertical Sloped Top Cabinet (FSA) 200 CFM to 1200 CFM

The Vertical Sloped Top Cabinet (FSA) fan coil unit is designed for applications in public buildings, offices and hospitals where it is necessary to prevent books and other items from being placed over the discharge grilles on the top panel. The FSA cabinet is fabricated of heavy gauge steel. The 25-degree, sloped, top panel provides structural rigidity essential for an exposed unit. FSA units have a removable, one-piece front panel for easy access to all internal components. Standard FSA units are constructed with 18-gauge galvanized steel and are provided with a durable powder-coated paint finish.



Features and Benefits

Application Fit

- Several cabinet types allow for a multitude of room layouts.
 - The vertical flat top cabinet units (FXA) are ideal for perimeter air conditioning, ideally placed under a window to mitigate the effects of heat losses or gains through the glazing.
 - The vertical sloped top cabinet units (FSA) discourages the placement of objects on the supply grille, blocking airflow, which could potentially result in performance issues.
 - The vertical hideaway version of the above units (FHA) is tailored to recess in a wall or continuous cabinetry to meet architectural needs.

Design Flexibility

- Standard and high capacity hydronic coils are available to match the space heating and cooling loads.
- Optional finishes and colors are available on FSA/FXA models, allowing the unit to blend in with any decor.
- Optional back panel provides an aesthetic cover for units that are visible from the building exterior, which are not completely covered by a wall or other architecture.
- Special cabinetry can be designed for jobs where unique cabinet dimensions are required, most often found on renovation projects.
- Optional airflow configuration (front supply) to enhance performance, given certain design limitations.
- Wide variety of valve package options to meet desired controls specifications; factory preassembled and shipped loose for field installation.
- Variety of insulation materials to address IAQ concerns.
- Optional condensate float switch to meet latest building code requirements.

Ease of Installation

- Preassembled valve packages are available, to reduce field piping performed at the jobsite.
- Optional unit mounted controls, service switches and fusing minimize on-site electrical work.
- Units are tagged at the factory for ease of identification on the jobsite.
- Opposite end coil connections are an optional feature intended to minimize the piping work on renovation jobs.
- Custom cabinetry facilitates installations by:
 - Deeper units allow the piping to run along the wall minimizing piping work and providing an insulated plenum that eliminates outside air transitions on renovation jobs.
 - Wider units allow for same end piping and electrical connections to minimize floor penetrations and eliminate the need for filler cabinetry.

Ease of Service

- All commonly serviced components are accessible by simply removing the front panel.
- Filters can be easily replaced without tools or removing the front panels of exposed units.
- Slide-out blower assembly for maintenance convenience.
- Positively sloped drain pan easily removes condensate, and inhibits the occurrence of standing water.

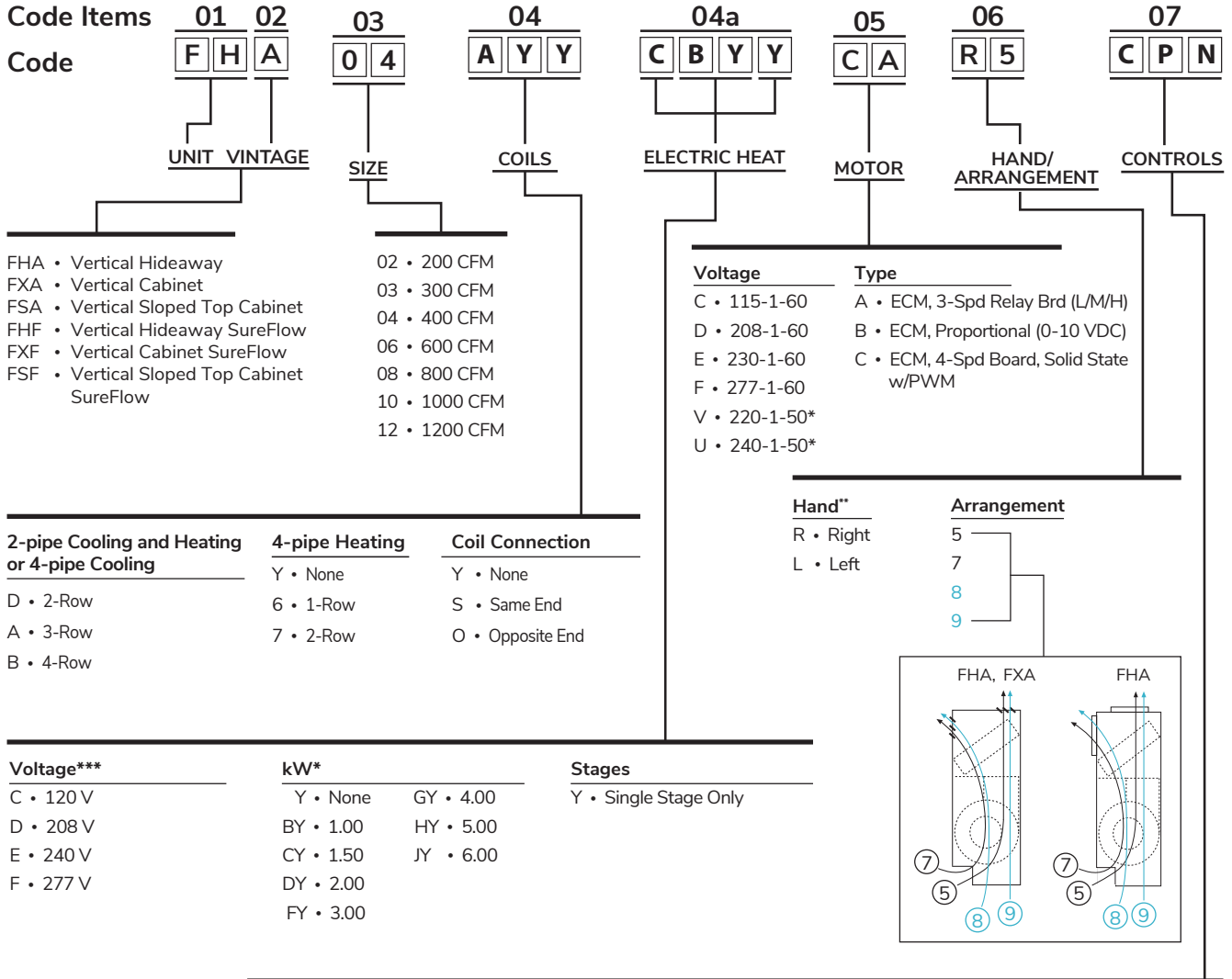
Quality and Safety

- Rigorous multi-point inspection at the factory for trouble-free start-up.
- ETL listed for safety compliance to UL 1995, US and Canada.
- AHRI certified for performance to AHRI 440.
- All hydronic coils are pressure tested to 350 psig.

Vertical F*A Series

FAN COIL TECHNICAL CATALOG

Unit Model Key



Voltage	System	Thermostat
B • 24 V	Manual Fan Operation	Thermostat
C • 120 V	A1 • Standard Unit Mount (Switch Only)	P • Basic 24 V Digital, 7-Day Programmable
D • 208 V	A2 • Standard Wall Mount (Switch Only)	N • Basic 24 V Digital, Non-Programmable
E • 240 V	Function Control	F • Premium 24 V Digital, 7-Day Programmable/ BACnet with Proportional Fan/ Valves Option
F • 277 V	G • 2 Pipe Heat Only	G • Premium 24 V Digital BACnet with Proportional Fan/ Valves Option
V • 220 V (50 Hz)*	H • 2 Pipe Cool Only	W • Venture 24 V Wi-Fi Programmable
U • 240 V (50 Hz)*	K • 2 Pipe Heat and Cool Only	
	M • 2 Pipe Heat and Cool w/Aux. Elec. Heat	
	P • 2 Pipe Cool Only w/Total Elec. Heat	
	R • 4 Pipe Heat and Cool	

* Consult factory for 50 Hz applications.
 ** Standing in front of the unit, hand is determined by looking into the air supply and assigning the hand to match the location of the cooling coil connections.
 *** Note that kW's range from 1.0 to 6.0 depending on voltage and unit size.

Rating and Listings

AHRI Certification

IEC's Vertical F*C Series units are certified in compliance with Air-Conditioning, Heating, and Refrigeration Institute (AHRI) industry standard AHRI-440 for room fan coil units. Approved standard ratings are tabulated below.



C-ETL-US Listing

IEC's Vertical F*C Series units are listed by ETL. The C-ETL-US listing signifies that IEC's fan coil units have been examined by ETL and are in compliance with both the U.S. and Canadian applicable standards.



Intertek
3061627

HEATING AND COOLING EQUIPMENT

PSC Motor Standard Ratings

Model	Size	Coil Rows	Air Flow Rating (SCFM)	Water Pressure Drop (ft. water)	Total Cap. (Btuh)	Sensible Cap. (Btuh)	Power Input (Watts)
FHA	02	3	200	2.5	4,800	3,500	80
	02	4	200	1.4	6,600	4,100	80
	03	3	290	6.0	7,200	5,300	80
	03	4	290	8.6	8,600	5,700	80
	04	3	400	13.1	11,200	7,900	130
	04	4	400	20.0	13,100	8,600	130
	06	3	600	7.0	13,900	10,400	180
	06	4	600	15.0	18,600	13,600	200
	08	3	700	8.4	18,500	13,500	210
	08	4	680	12.0	20,600	14,100	195
	10	3	820	4.2	22,000	16,800	250
	10	4	820	10.0	29,500	19,600	240
	12	3	1,060	6.4	26,300	20,000	370
	12	4	1,060	16.0	35,300	26,300	370
FXA, FSA	02	3	200	5.0	4,800	3,500	80
	02	4	200	1.4	6,600	4,100	80
	03	3	290	3.8	7,200	5,300	80
	03	4	290	8.6	8,600	5,700	80
	04	3	400	13.1	11,200	7,900	130
	04	4	400	20.0	13,100	8,600	130
	06	3	600	3.8	13,900	10,400	180
	06	4	600	8.6	18,600	13,600	170
	08	3	650	10.0	18,500	13,500	210
	08	4	680	12.0	20,600	14,100	195
	10	3	820	4.2	22,000	16,800	250
	10	4	820	10.0	29,500	19,600	240
	12	3	1,060	6.4	26,300	20,000	370
	12	4	1,060	16.0	35,300	26,300	370

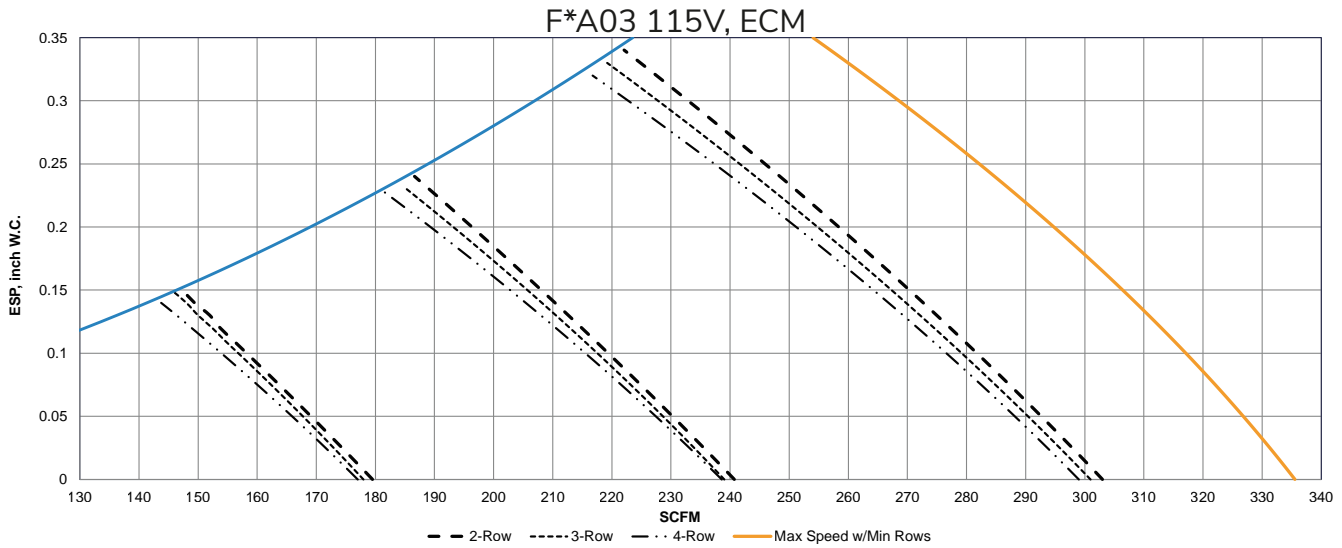
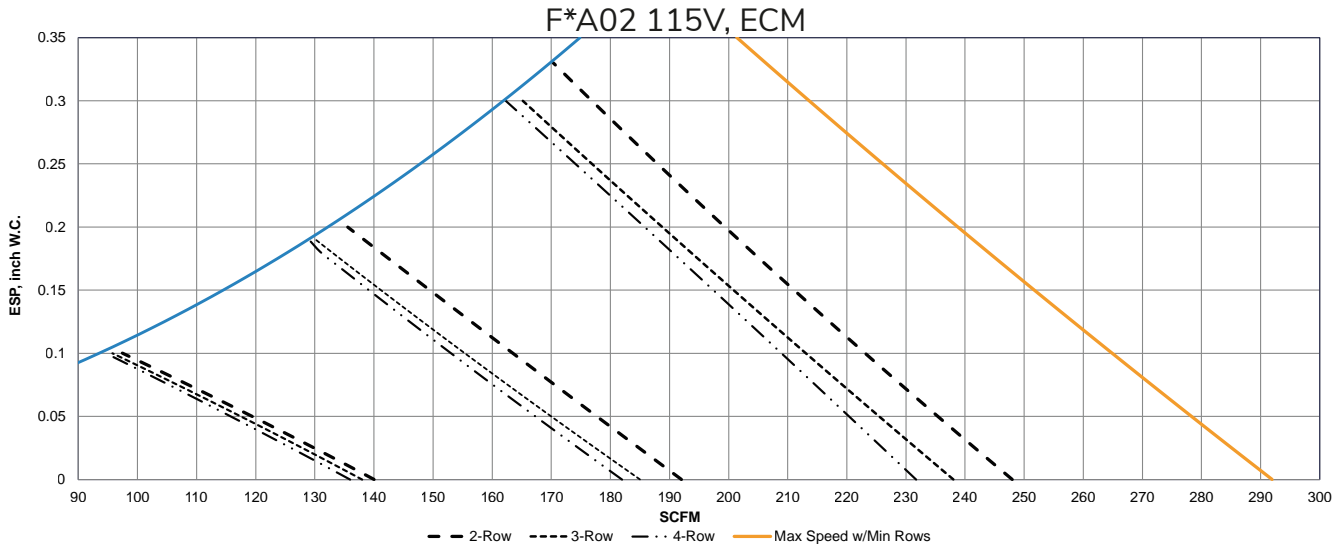
EC Motor Standard Ratings

Model	Size	Coil Rows	Air Flow Rating (SCFM)	Water Pressure Drop (ft. water)	Total Cap. (Btuh)	Sensible Cap. (Btuh)	Power Input (Watts)
FHA	02	3	200	2.5	4,800	3,500	80
	02	4	200	1.4	6,600	4,100	80
	03	3	290	6.0	7,200	5,300	70
	03	4	290	8.6	8,600	5,700	80
	04	3	400	13.1	11,200	7,900	85
	04	4	400	20.0	13,100	8,600	130
	06	3	600	7.0	13,900	10,400	135
	06	4	600	8.6	18,600	13,600	170
	08	3	700	8.4	18,500	13,500	210
	08	4	680	12.0	20,600	14,100	195
	10	3	820	4.2	22,000	16,800	250
	10	4	820	10.0	29,500	19,600	240
	12	3	1,060	6.4	26,300	20,000	370
	12	4	1,060	16.0	35,300	26,300	370
FXA, FSA	02	3	200	5.0	4,800	3,500	55
	02	4	200	1.4	6,600	4,100	80
	03	3	290	3.8	7,200	5,300	80
	03	4	290	8.6	8,600	5,700	80
	04	3	400	13.1	11,200	7,900	130
	04	4	400	20.0	13,100	8,600	130
	06	3	600	3.8	13,900	10,400	180
	06	4	600	8.6	18,600	13,600	170
	08	3	700	10.0	18,500	13,500	175
	08	4	680	12.0	20,600	14,100	195
	10	3	820	4.2	22,000	16,800	250
	10	4	820	10.0	29,500	19,600	240
	12	3	1,060	6.4	26,300	20,000	370
	12	4	1,060	16.0	35,300	26,300	370

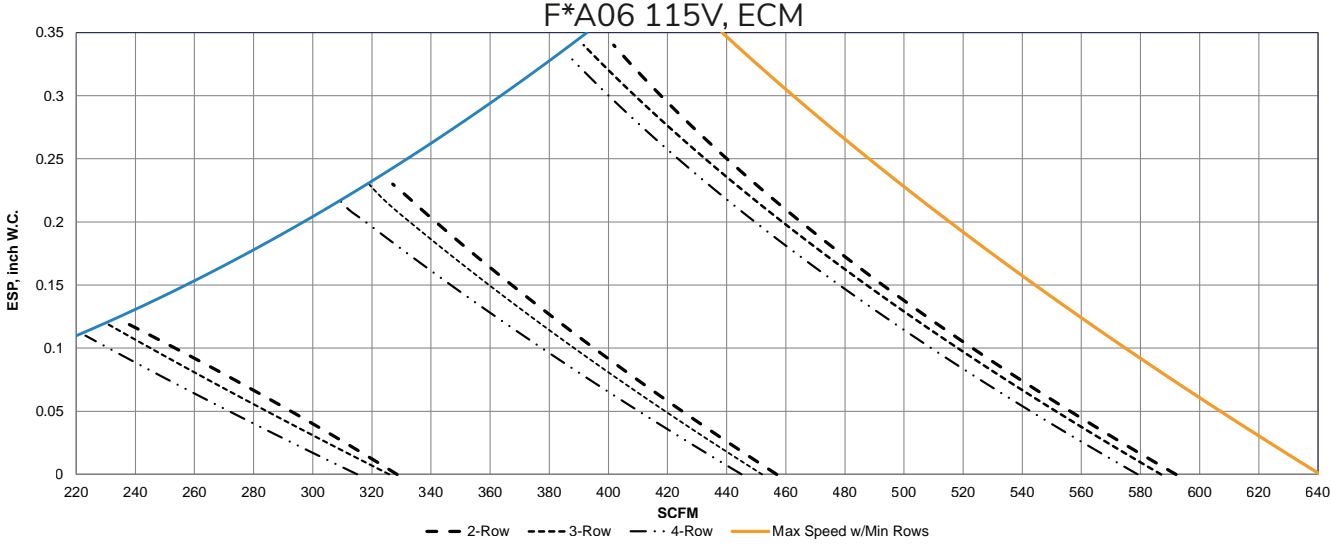
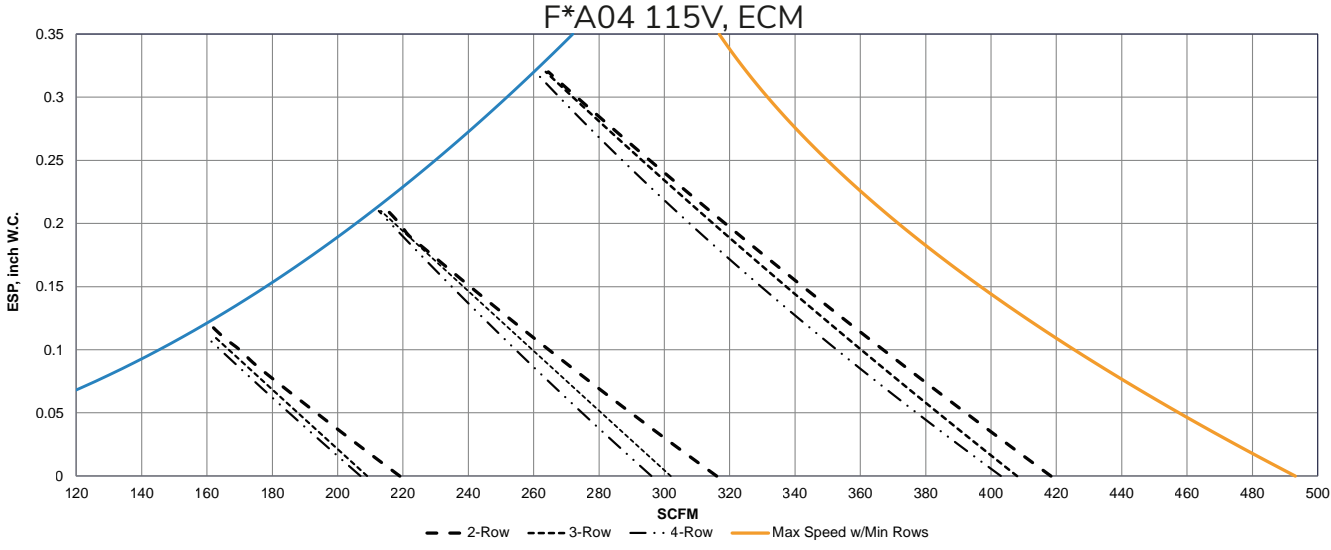
- NOTES: 1. Ratings are based on 80°F DB and 67°F WB EAT, 45°F EWT, 10°F water temperature rise, high fan speed, motor voltage 115/1/60, and airflow under dry coil conditions.
 2. For all application ratings, use IEC's computer selection program, the quick-selection ratings provided in this catalog, or contact your local IEC representative.
 3. For additional information, please consult the Directory of Certified Air-Conditioning, Heating, and Refrigeration Products or AHRI's website at www.ahrinet.org.
 4. Motor standard ratings also applicable to obsolete F*Y floor line.
 5. Ratings are based on the Standard Coil Circuit and FPI option.

Fan Performance Curves – ECM

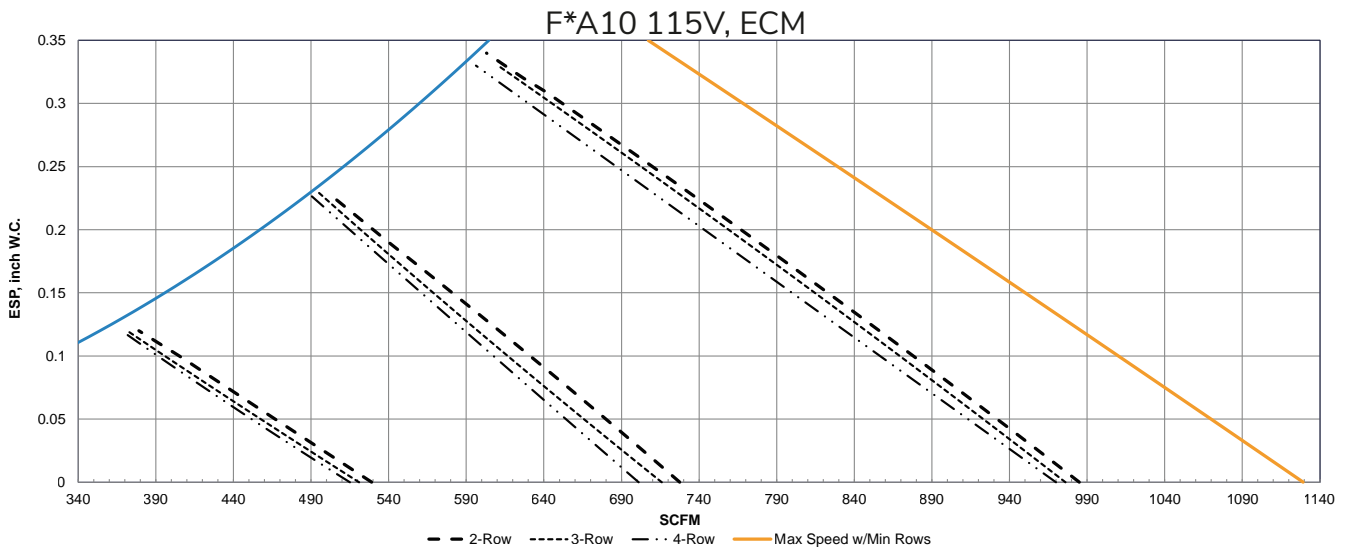
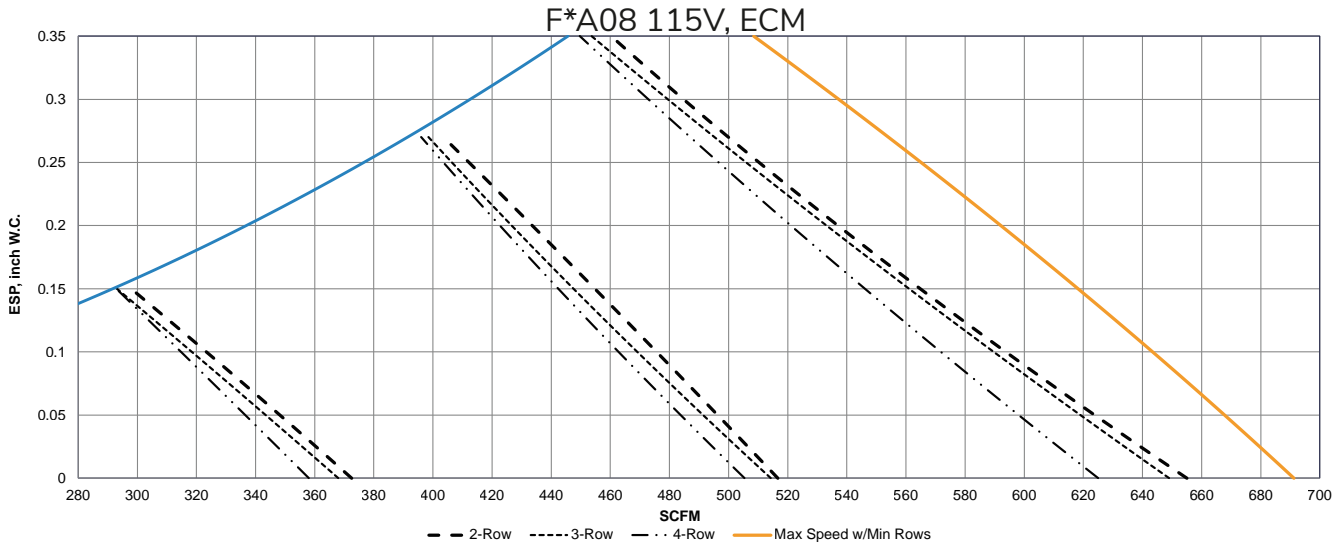
NOTE: Fan Performance Curves also applicable to obsolete F*Y floor line.



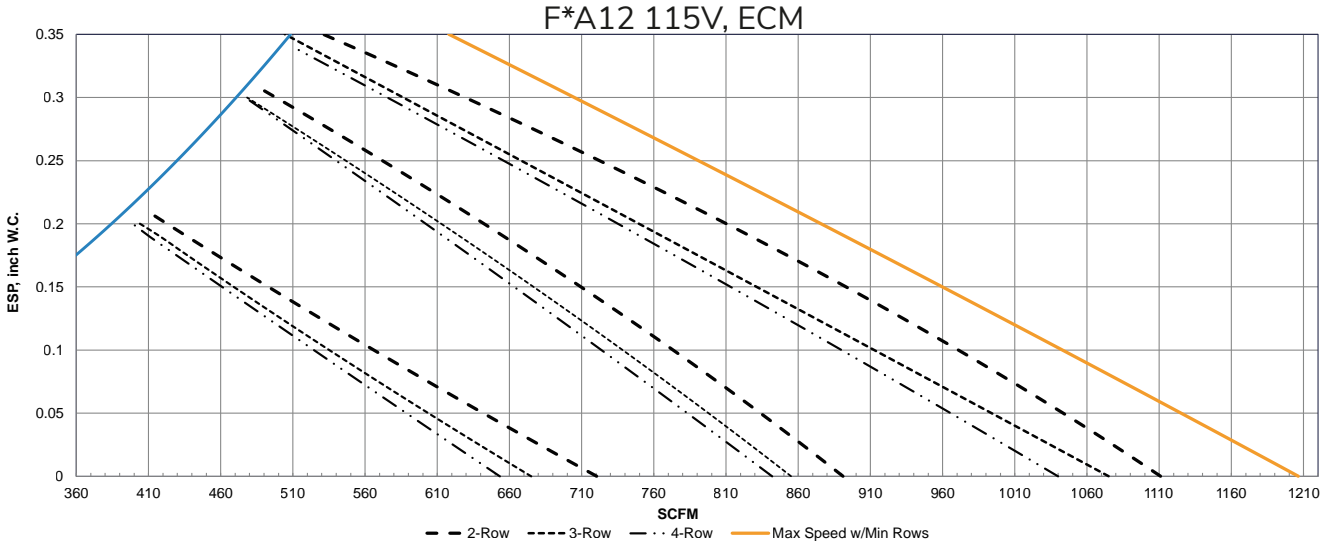
Fan Performance Curves – ECM



Fan Performance Curves – ECM



Fan Performance Curves – ECM



Vertical F*A Series

FAN COIL TECHNICAL CATALOG

Motor Performance Data

Thermal Overload Protection

All split-capacitor motors furnished by IEC contain internal thermal-overload protection. The overload automatically resets when the temperature returns to a safe limit. Electronics Testing Laboratories, Inc. (ETL) approves the motor and thermal overload combination at locked rotor conditions only.

PSC Motor Electrical Data — Vertical F**

Voltage	Fan Speed	Unit Size	02	03	04	06	08	10	12
		Nominal HP	1/30	1/30	1/12	1/6	1/6	(2) 1/12	(2) 1/6
115V 60 Hz 1-Phase	High	Amps	0.53	0.83	1.40	2.50	2.50	2.80	5.00
		Watts	85	81	139	178	183	265	364
	Medium	Amps	0.31	0.48	0.70	1.30	1.30	1.30	2.50
		Watts	59	59	78	134	141	175	282
	Low	Amps	0.27	0.33	0.47	0.57	0.61	0.40	1.25
		Watts	45	46	52	77	72	131	174
208V 60 Hz 1-Phase	High	Amps	0.48	0.48	0.69	1.00	1.30	1.38	2.60
		Watts	89	89	111	141	145	240	287
	Medium	Amps	0.29	0.29	0.40	0.59	0.69	0.80	1.15
		Watts	67	67	83	92	95	182	201
	Low	Amps	0.14	0.14	0.22	0.47	0.47	0.45	0.84
		Watts	43	44	47	52	51	115	127
230V 60 Hz 1-Phase	High	Amps	0.48	0.48	0.69	1.00	1.30	1.38	2.60
		Watts	102	104	127	149	159	269	316
	Medium	Amps	0.31	0.31	0.43	0.71	0.71	0.85	1.40
		Watts	77	78	96	102	108	212	226
	Low	Amps	0.15	0.15	0.24	0.50	0.50	0.50	1.00
		Watts	50	50	56	62	64	137	150
277V 60 Hz 1-Phase	High	Amps	0.35	0.35	0.69	0.91	0.91	1.38	1.82
		Watts	91	90	126	170	176	286	374
	Medium	Amps	0.26	0.26	0.44	0.57	0.58	0.82	1.10
		Watts	71	88	115	121	213	273	374
	Low	Amps	0.16	0.17	0.25	0.34	0.35	0.45	0.65
		Watts	41	42	58	96	100	153	232

NOTES: 1. Total unit motor Amps and Watts are shown.
2. Consult factory for 50Hz applications.

EC Motor Performance Data — Vertical F**, Standard Performance

Voltage	Unit Size	F**02	F**03	F**04	F**06	F**08	F**10	F**12
	Nominal HP	1/7	1/7	1/6	1/6	1/6	(2) 1/6	(2) 1/6
120V	Rated Motor FLA	2.3	2.3	2.4	2.4	2.4	2.4, 2.4	2.4, 2.4
	Max Program Current	1.2	1.4	1.5	2.2	2.4	2.0, 2.0	2.4, 2.4
208-240V	Rated Motor FLA	1.4	1.4	1.6	1.6	1.6	1.6, 1.6	1.6, 1.6
	Max Program Current	0.7	0.9	1.0	1.4	1.6	1.3, 1.3	1.6, 1.6
277V	Rated Motor FLA	1.2	1.2	1.3	1.3	1.3	1.3, 1.3	1.3, 1.3
	Max Program Current	0.6	0.7	0.8	1.2	1.3	1.1, 1.1	1.3, 1.3

NOTE: Motor Performance Data also applicable to obsolete F*Y floor line.

Sound Power Data

FXA, FSA, FHA Sound Power Data

UNIT SIZE	FAN SPEED	SOUND POWER LEVEL							A-wgt (dBA)
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
200	H	43.0	43.1	36.1	31.0	31.9	25.1	29.7	44.7
	M	43.7	36.6	25.4	22.6	27.0	24.5	29.8	40.0
	L	42.7	29.3	22.2	20.8	23.2	24.1	29.9	39.7
300	H	47.4	46.3	42.8	38.0	32.9	27.0	31.8	49.1
	M	40.9	36.9	32.3	25.6	27.0	25.3	31.7	42.2
	L	40.2	30.1	23.9	23	21.3	25.1	31.7	40.3
400	H	48.1	45.3	42.2	37.6	30.4	26.8	31.5	48.4
	M	42.5	38.4	32.4	28.2	23.6	26.6	32.0	42.6
	L	41.1	31.0	21.7	21.3	20.3	26.2	32.1	39.6
600	H	49.8	51.1	48.0	43.3	37.4	30.7	32.7	54.1
	M	43.9	43.6	38.9	34.3	30.3	26.0	32.4	46.9
	L	40.7	34.7	28.3	23.1	24.6	25.9	32.4	41.2
800	H	57.4	57.5	52.6	49.4	42.3	37.0	33.5	59.5
	M	48.0	47.4	46.1	39.2	32.7	27.0	31.9	50.2
	L	43.8	41.4	33.9	29.8	26.7	25.9	31.9	44.2
1000	H	50.4	49.9	48.2	44.9	38.8	34.1	32.4	53.9
	M	44.4	42.2	40.2	35.7	31.1	32.2	32.3	47.1
	L	41.5	35.0	29.5	26.5	24.4	28.0	32.2	41.2
1200	H	58.0	56.9	53.2	51.1	44.3	37.3	33.1	59.9
	M	49.4	49.7	45.9	42.3	37.0	28.4	31.9	52.1
	L	45.7	42.7	37.0	32.1	31.1	26.4	31.7	45.3

- NOTES: 1. Unit Test Configuration: Bottom Return/ Stamped Louver Top Supply, 3 Row ½-inch10 FPI Coil, 120 VAC EC Motor, ½-inch dual density fiberglass insulation.
 2. Casing Radiated Testing per AHRI 350-2015: 4.2.2.3 Casing radiated with free inlet, Sound Rating of Non-Ducted Air Moving and Conditioning Equipment.
 3. Sound power data is expressed in decibels, dB RE: 1 x 10⁻¹² w (picowatts).
 4. Sound Power Data also applicable to obsolete F*Y floor line.

Electric Heating

Electric heaters are available on IEC Vertical Series fan coil units for the following applications.

Total Electric Heat

Total electric heat eliminates the requirement for a boiler. Heating and/or cooling may be available on an individual basis throughout the year. Two-pipe chilled water is used for cooling, and the electric heater is used for heating. Individual room controls can be supplied for either manual or automatic changeover.

Auxiliary Electric Heat

Auxiliary electric heat is ideal for tempering room air between seasons and during the cooling season when chilled water is being circulated. Individual room controls are supplied to provide electric heat only when chilled water is being circulated. During the regular heating season, heating is provided by hot water being circulated in the system.

Construction

The heater coils of high-grade resistance wire are supported by ceramic insulators on plated steel brackets. These heat elements are suspended directly in front of the fan outlet between the blower and the coil. High limit thermal cutouts protect the heater in the event of air failure. There are many special applications and control sequences for electric heat. For special applications, please consult the factory.

Electric Heater Selection

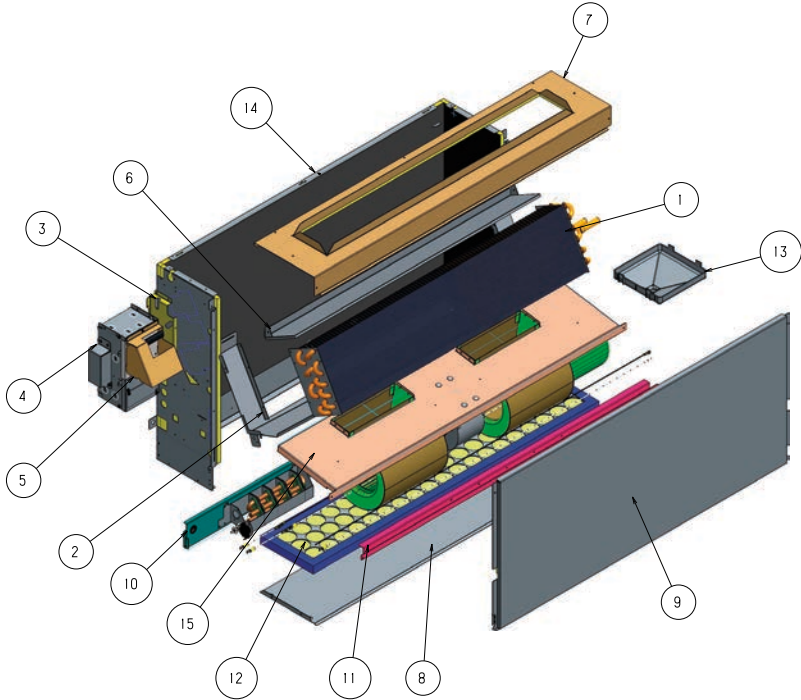
Voltage	kW	Unit Size						
		02	03	04	06	08	10	12
120V	1.0	•	•	•	•	-	-	-
	1.5	-	•	•	•	-	-	-
	2.0	-	-	•	•	•	-	-
	3.0	-	-	-	•	•	•	•
208V 240V 220/240V 50Hz	1.0	•	•	•	•	-	-	-
	1.5	-	•	•	•	-	-	-
	2.0	-	-	•	•	•	-	-
	3.0	-	-	-	•	•	•	•
277V	4.0	-	-	-	-	•	•	•
	1.0	•	•	•	•	-	-	-
	1.5	-	•	•	•	-	-	-
	2.0	-	-	•	•	•	-	-
	3.0	-	-	-	•	•	•	•
	4.0	-	-	-	-	•	•	•
5.0	-	-	-	-	-	•	•	
6.0	-	-	-	-	-	-	•	

- NOTES: 1. All heaters are single stage and single phase.
 2. Electric heater available with top or front discharge.
 3. Electric Heating Capacities (Btuh) = Heater kW x 3413.
 4. Electric Heater Amperage = (Heater kW x 1000)/Applied Voltage.

Exploded View – FHA

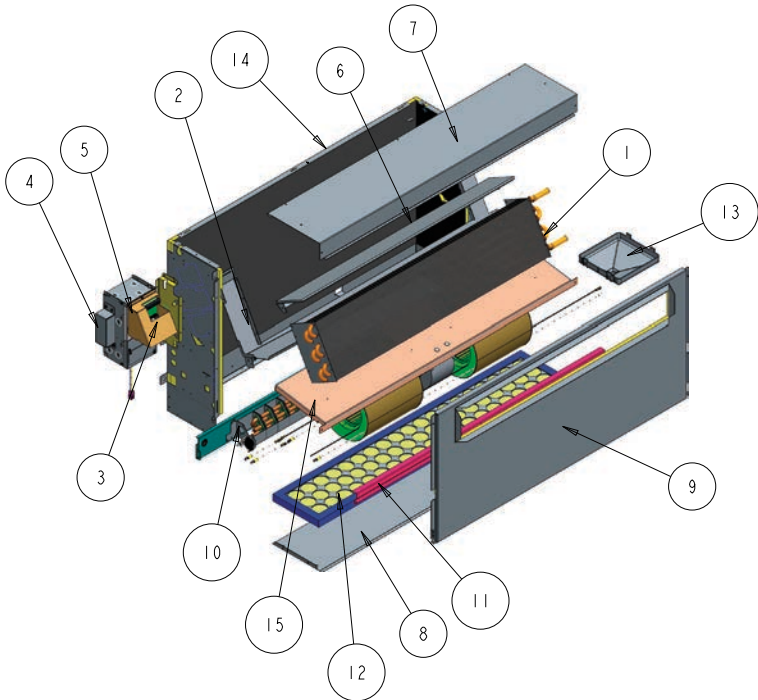
FHA – Vertical Hideaway, with Top Supply and Optional Electric Heat

Item	Description
1	Coil Assembly
2	Drain Trough Assembly
3	Control Box Bracket
4	Guard
5	Control Package
6	Top Coil Baffle Assembly
7	Top Panel Assembly Ducted
8	Base Plate
9	Front Panel Assembly
10	Heater Assembly
11	Filter Channel
12	Filter
13	Auxiliary Drain Pan
14	Chassis Assembly
15	Motor Blower Deck Assembly



FHA – Vertical Hideaway, with Front Supply and Optional Electric Heat

Item	Description
1	Coil Assembly
2	Drain Trough Assembly
3	Control Box Bracket
4	Guard
5	Control Package
6	Top Coil Baffle Assembly
7	Top Panel Assembly
8	Base Plate
9	Front Panel Assembly Ducted
10	Heater Assembly
11	Filter Channel
12	Filter
13	Auxiliary Drain Pan
14	Chassis Assembly
15	Motor Blower Deck Assembly

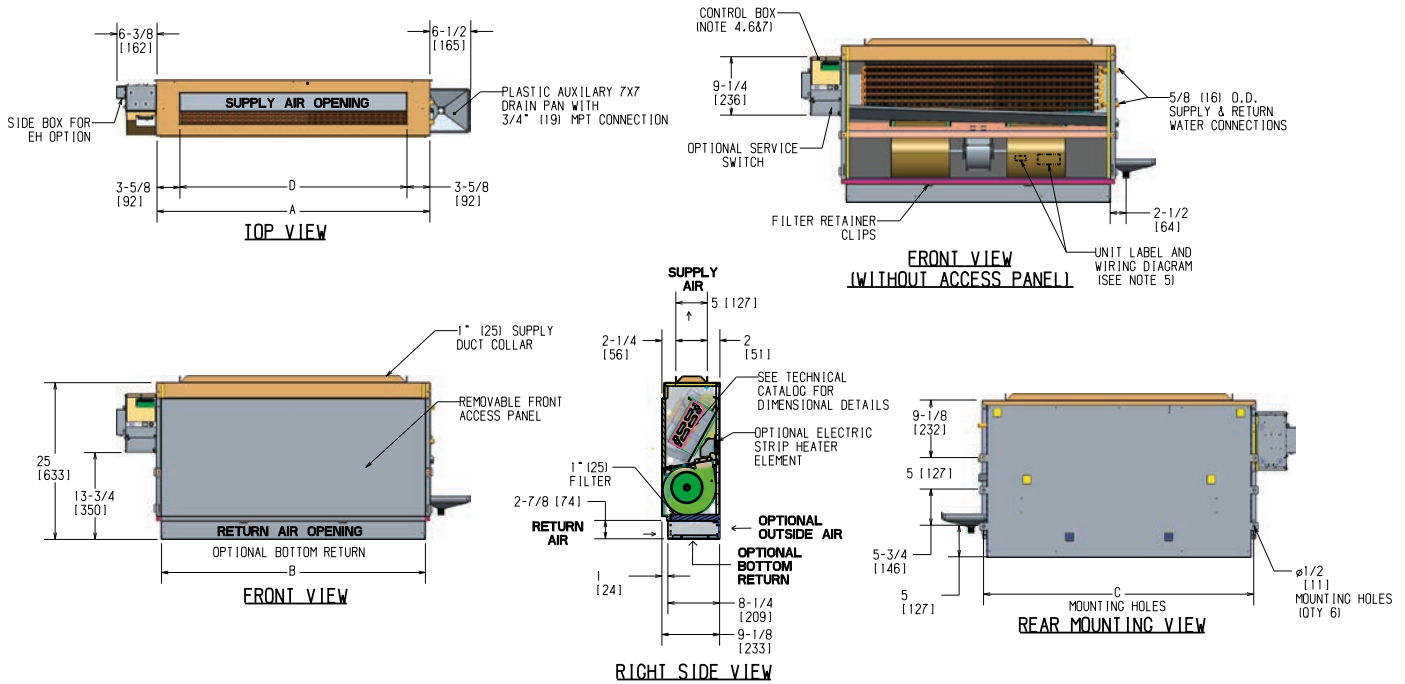


Vertical F*A Series

FAN COIL TECHNICAL CATALOG

Submittal Data – FHA

FHA – Vertical Hideaway Top Supply with Optional Electric Heat



Unit Model	Dimensions – Inches (Millimeters)				Quantity/Unit		Unit Weight*
	A	B	C	D	Blower	Motor	
FHA02	23-1/2 (597)	22 (559)	23 (584)	16 (406)	1	1	42
FHA03	27-1/2 (699)	26 (660)	27 (686)	20 (508)	1	1	47
FHA04	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	57
FHA06	43-1/2 (1105)	42 (1067)	43 (1092)	36 (914)	2	1	77
FHA08	45-1/2 (1156)	44 (1118)	45 (1143)	38 (965)	2	1	79
FHA10	59-1/2 (1511)	58 (1473)	59 (1499)	52 (1321)	4	2	108
FHA12	67-1/2 (1715)	66 (1676)	67 (1702)	60 (1524)	4	2	127

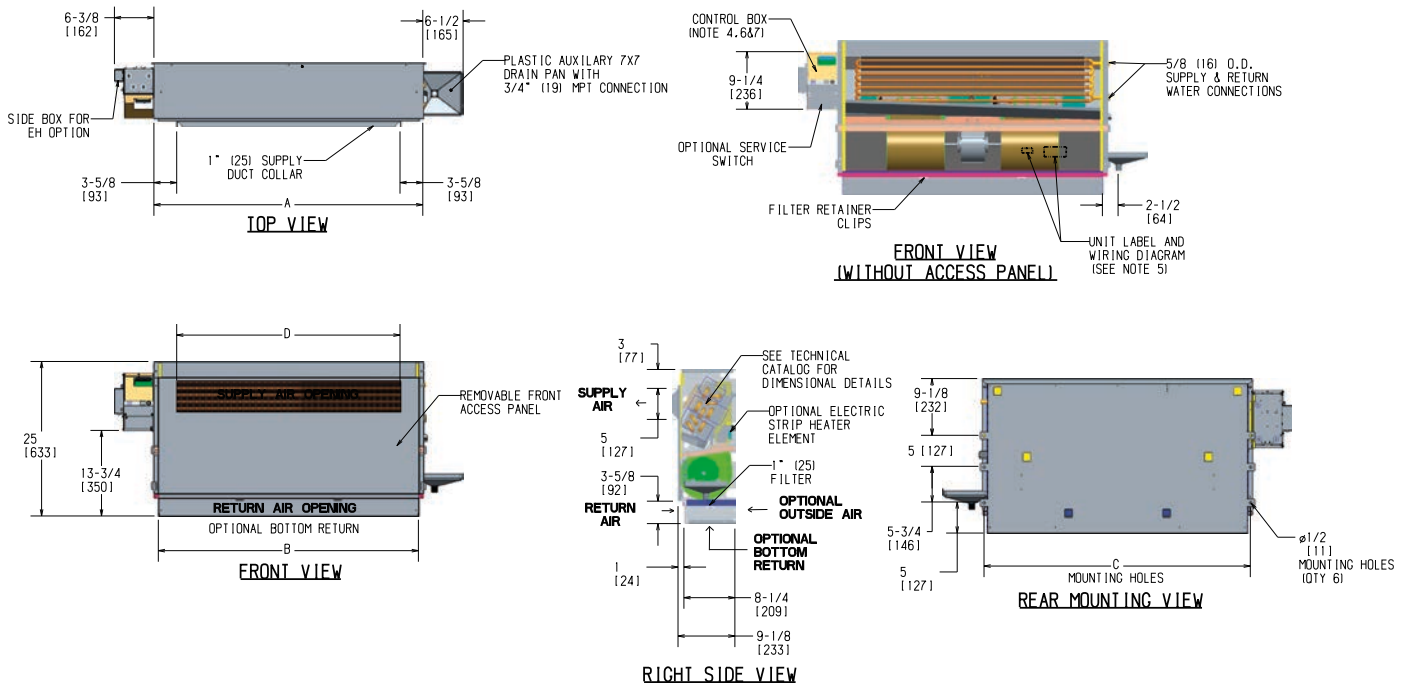
NOTES: * Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components.

1. RH coil shown, LH opposite.
2. All dimensions are $\pm 1/4$ inch (6 mm). Drawing not to scale.
3. Product specifications are subject to change without notice.
4. Control box size and position may vary (consult factory).
5. Position may vary.
6. Service access is located on the front of the control box.
7. Knockouts on the bottom and side of the control box for incoming power connections.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Submittal Data – FHA

FHA – Vertical Hideaway Front Supply with Optional Electric Heat



Unit Model	Dimensions – Inches (Millimeters)				Quantity/Unit		Unit Weight**
	A	B	C	D	Blower	Motor	
FHA02	23-1/2 (597)	22 (559)	23 (584)	16 (406)	1	1	42
FHA03	27-1/2 (699)	26 (660)	27 (686)	20 (508)	1	1	47
FHA04	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	57
FHA06	43-1/2 (1105)	42 (1067)	43 (1092)	36 (914)	2	1	77
FHA08	45-1/2 (1156)	44 (1118)	45 (1143)	38 (965)	2	1	79
FHA10	59-1/2 (1511)	58 (1473)	59 (1499)	52 (1321)	4	2	108
FHA12	67-1/2 (1715)	66 (1676)	67 (1702)	60 (1524)	4	2	127

NOTES: * Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components.

** 3-3/4 inches (95 mm) for all models with the exclusion of the 300 which is 2-3/4 inches (70 mm).

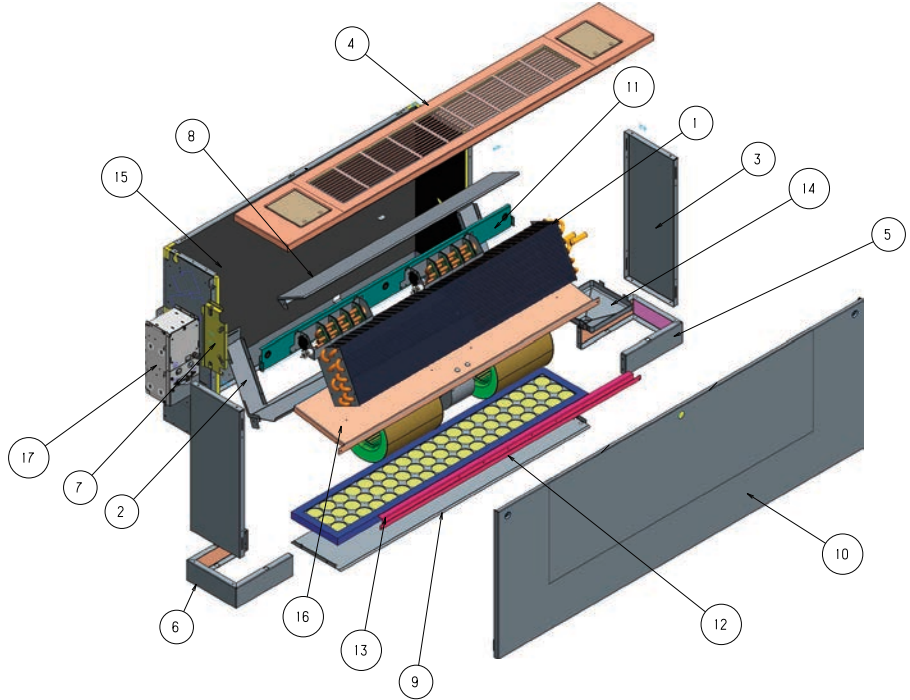
1. RH coil shown, LH opposite.
2. All dimensions are $\pm 1/4$ inch (6 mm). Drawing not to scale.
3. Product specifications are subject to change without notice.
4. Control box size and position may vary (consult factory).
5. Position may vary.
6. Service access is located on the front of the control box.
7. Knockouts on the bottom and side of the control box for incoming power connections.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Exploded View – FXA

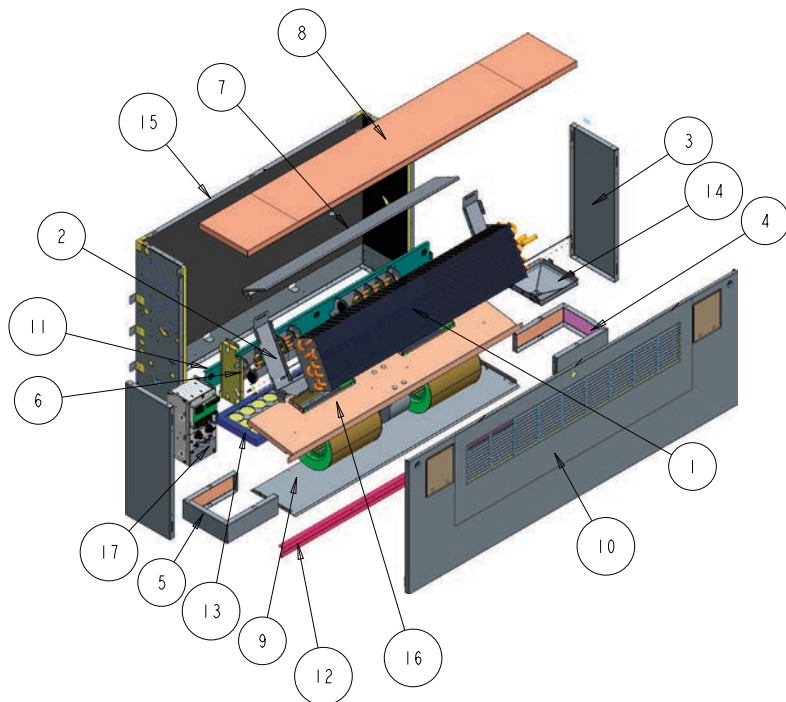
FXA – Vertical Flat Top, with Top Supply and Optional Electric Heat

Item	Description
1	Coil Assembly
2	Drain Trough Assembly
3	Outer Case Leg
4	Top Panel Assembly
5	Subbase Right Hand
6	Subbase Left Hand
7	Control Box Bracket
8	Top Coil Baffle Assembly
9	Base Plate
10	Front Panel Assembly Solid
11	Heater Assembly
12	Filter Channel
13	Filter
14	Auxiliary Drain Pan
15	Chassis Assembly
16	Motor Blower Deck Assembly
17	Control Package



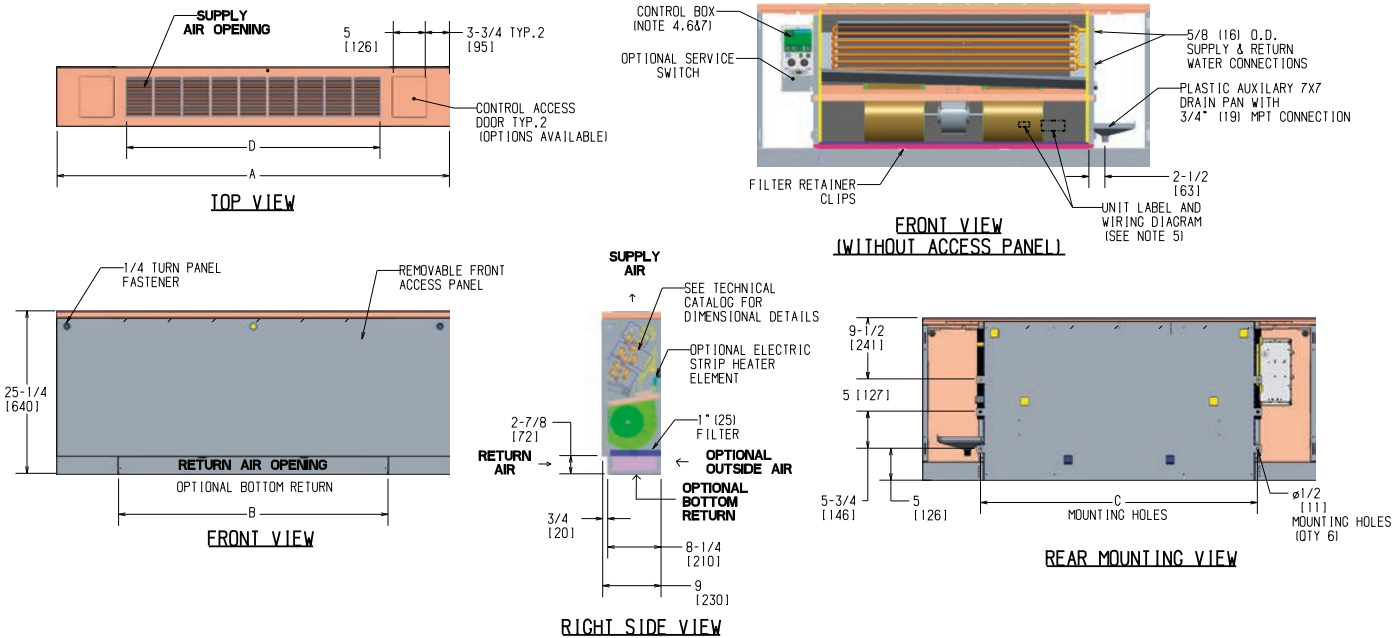
FXA – Vertical Flat Top, with Front Supply and Optional Electric Heat

Item	Description
1	Coil Assembly
2	Drain Trough Assembly
3	Outer Case Leg
4	Subbase Right Hand
5	Subbase Left Hand
6	Control Box Bracket
7	Top Coil Baffle Assembly
8	Top Panel Assembly
9	Base Plate
10	Front Panel Assembly
11	Heater Assembly
12	Filter Channel
13	Filter
14	Auxiliary Drain Pan
15	Chassis Assembly
16	Motor Blower Deck Assembly
17	Control Package



Submittal Data – FXA

FXA – Vertical Cabinet Top Supply with Optional Electric Heat



Unit Model	Dimensions – Inches (Millimeters)				Quantity/Unit		Unit Weight*
	A	B	C	D	Blower	Motor	
FXA02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	63
FXA03	45 (1143)	26 (660)	27 (686)	21-1/2 (546)	1	1	68
FXA04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	82
FXA06	61 (1549)	42 (1067)	43 (1092)	39-1/4 (997)	2	1	99
FXA08	63 (1600)	44 (1118)	45 (1143)	39-1/4 (997)	2	1	101
FXA10	77 (1956)	58 (1473)	59 (1499)	52-1/2 (1334)	4	2	133
FXA12	85 (2159)	66 (1676)	67 (1702)	61-1/4 (1556)	4	2	154

NOTES: * Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components.

1. RH coil shown, LH opposite.
2. All dimensions are ± 1/4 inch (6 mm). Drawing not to scale.
3. Product specifications are subject to change without notice.
4. Control box size and position may vary (consult factory).
5. Position may vary.
6. Service access is located on the front of the control box.
7. Knockouts on the bottom and side of the control box for incoming power connections.

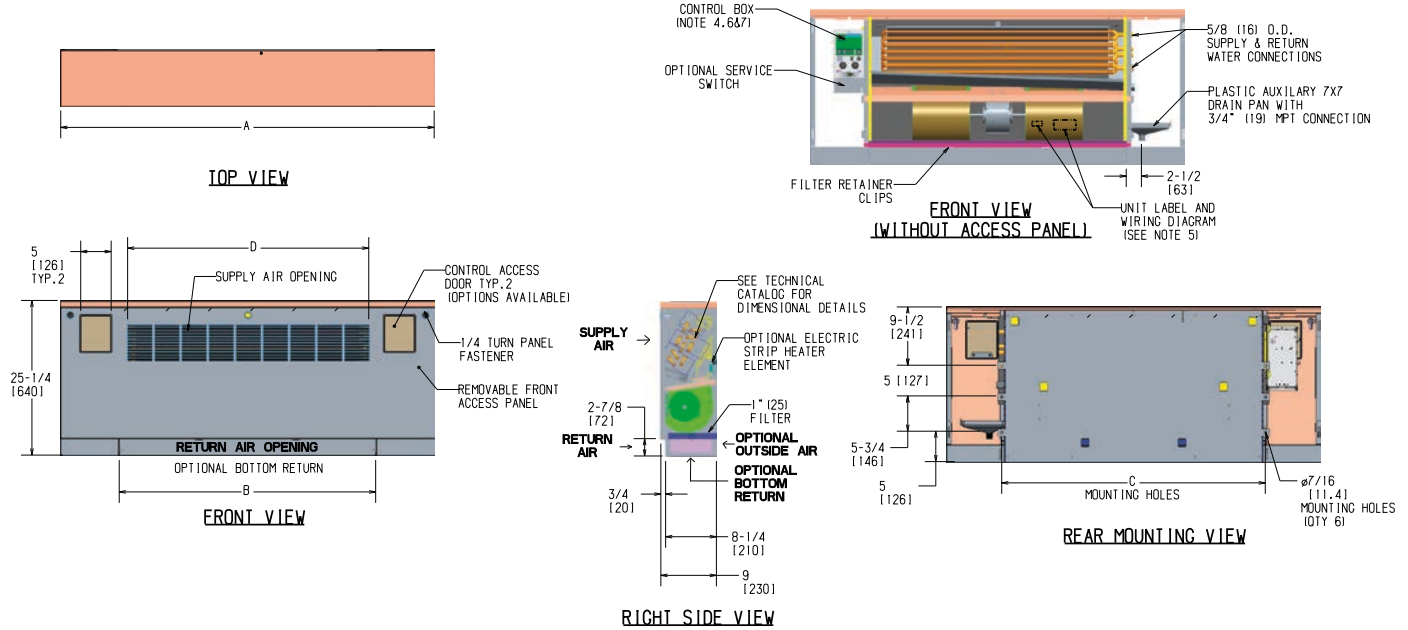
**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Vertical F*A Series

FAN COIL TECHNICAL CATALOG

Submittal Data – FXA

FXA – Vertical Cabinet Front Supply with Optional Electric Heat



Unit Model	Dimensions – Inches (Millimeters)				Quantity/Unit		Unit Weight*
	A	B	C	D	Blower	Motor	
FXA02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	63
FXA03	45 (1143)	26 (660)	27 (686)	21-1/2 (546)	1	1	68
FXA04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	82
FXA06	61 (1549)	42 (1067)	43 (1092)	39-1/4 (997)	2	1	99
FXA08	63 (1600)	44 (1118)	45 (1143)	39-1/4 (997)	2	1	101
FXA10	77 (1956)	58 (1473)	59 (1499)	52-1/2 (1334)	4	2	133
FXA12	85 (2159)	66 (1676)	67 (1702)	61-1/4 (1556)	4	2	154

NOTES: * Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components.

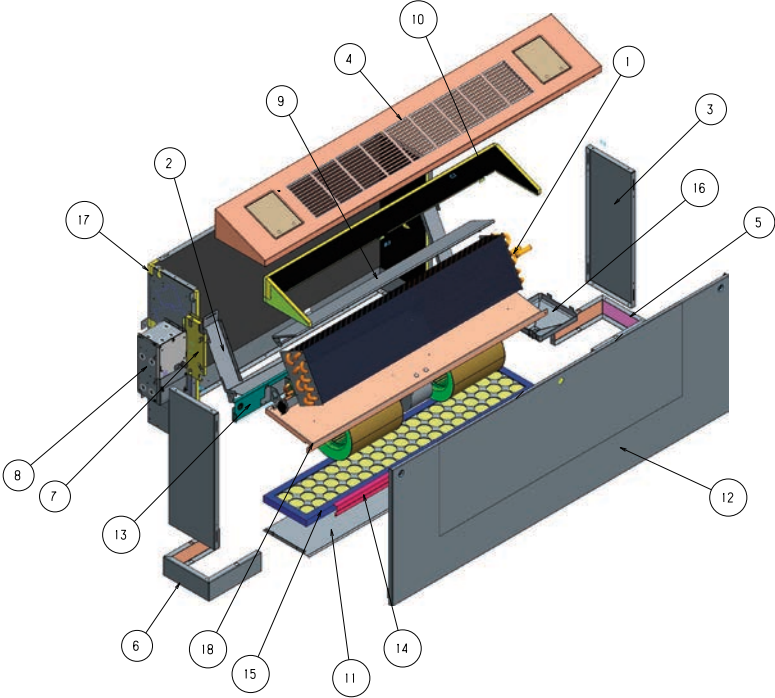
1. RH coil shown, LH opposite.
2. All dimensions are ± 1/4 inch (6 mm). Drawing not to scale.
3. Product specifications are subject to change without notice.
4. Control box size and position may vary (consult factory).
5. Position may vary.
6. Service access is located on the front of the control box.
7. Knockouts on the bottom and side of the control box for incoming power connections.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Exploded View – FSA

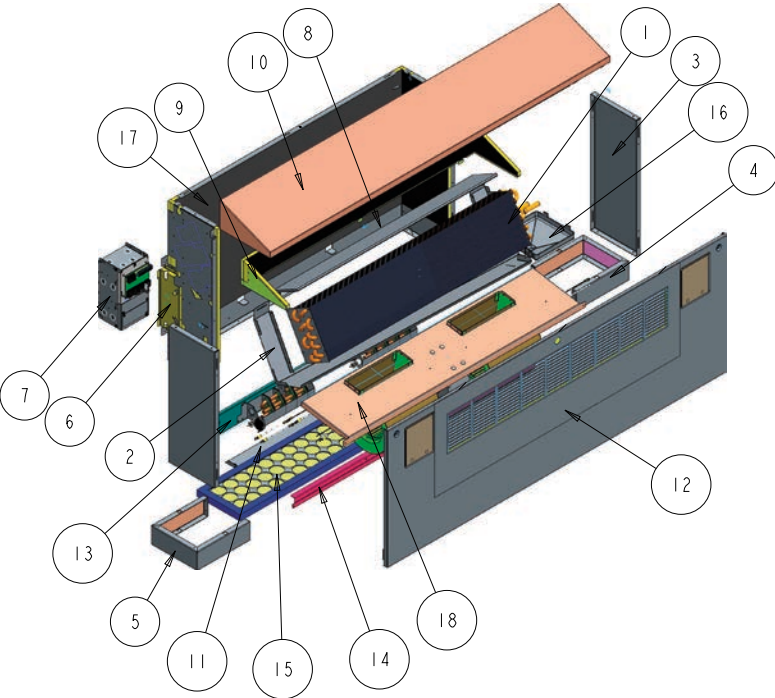
FSA – Vertical Sloped Top, with Top Supply and Optional Electric Heat

Item	Description
1	Coil Assembly
2	Drain Trough Assembly
3	Outer Case Leg
4	Top Panel Assembly
5	Subbase Right Hand
6	Subbase Left Hand
7	Control Package Bracket
8	Control Package
9	Top Coil Baffle Assembly
10	Wrapper Extension Assembly
11	Base Plate
12	Front Panel Assembly
13	Heater Assembly
14	Filter Channel
15	Filter
16	Auxiliary Drain Pan
17	Chassis Assembly
18	Motor Blower Deck Assembly



FSA – Vertical Sloped Top, with Front Supply and Optional Electric Heat

Item	Description
1	Coil Assembly
2	Drain Trough Assembly
3	Outer Case Leg
4	Subbase Right Hand
5	Subbase Left Hand
6	Control Package Bracket
7	Control Package
8	Top Coil Baffle Assembly
9	Wrapper Extension Assembly
10	Top Panel Assembly
11	Base Plate
12	Front Panel Assembly
13	Heater Assembly
14	Filter Channel
15	Filter
16	Auxiliary Drain Pan
17	Chassis Assembly
18	Motor Blower Deck Assembly

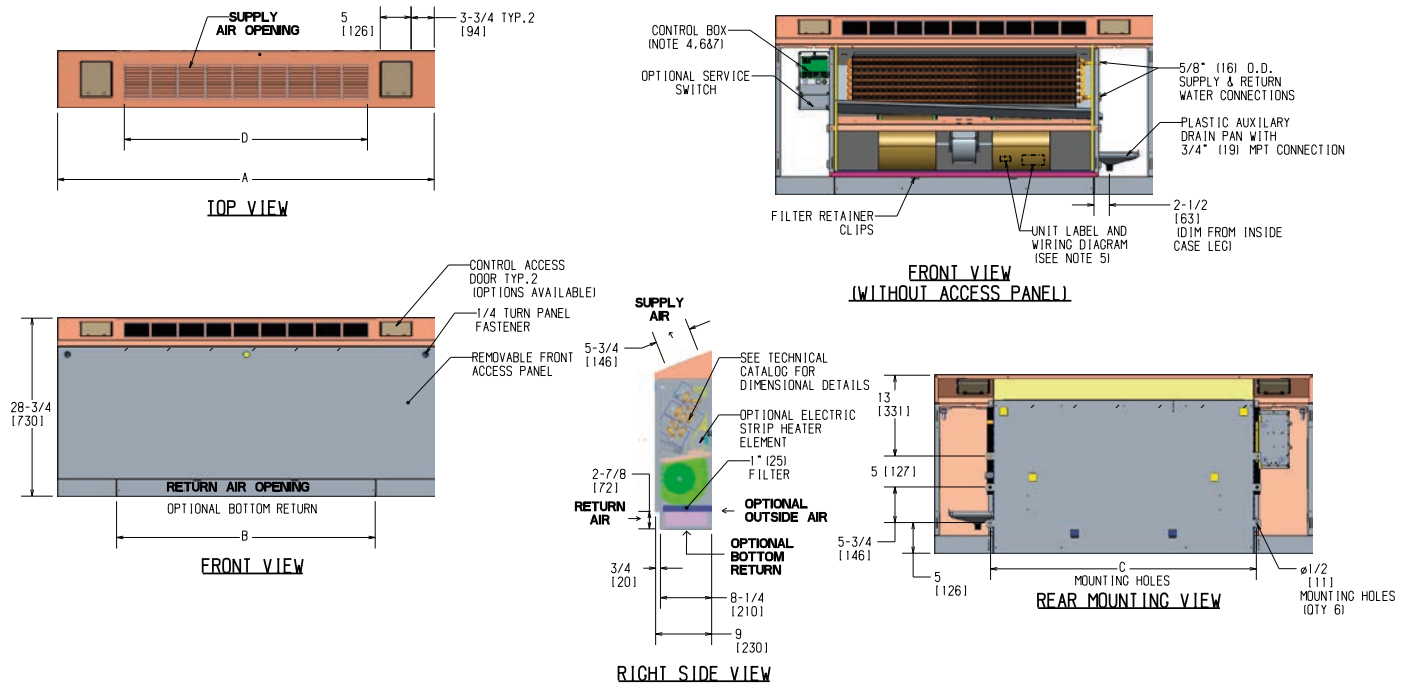


Vertical F*A Series

FAN COIL TECHNICAL CATALOG

Submittal Data – FSA

FSA – Vertical Sloped Cabinet Top Supply and Optional Electric Heat



Unit Model	Dimensions – Inches (Millimeters)				Quantity/Unit		Unit Weight*
	A	B	C	D	Blower	Motor	
FSA02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	64
FSA03	45 (1143)	26 (660)	27 (684)	21-1/2 (698)	1	1	69
FSA04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	83
FSA06	61 (1549)	42 (1067)	43 (1092)	39-1/4 (997)	2	1	100
FSA08	63 (1600)	44 (1118)	45 (1143)	39-1/4 (997)	2	1	102
FSA10	77 (1956)	58 (1473)	59 (1499)	52-1/2 (1334)	4	2	135
FSA12	85 (2159)	66 (1676)	67 (1702)	61-1/4 (1556)	4	2	156

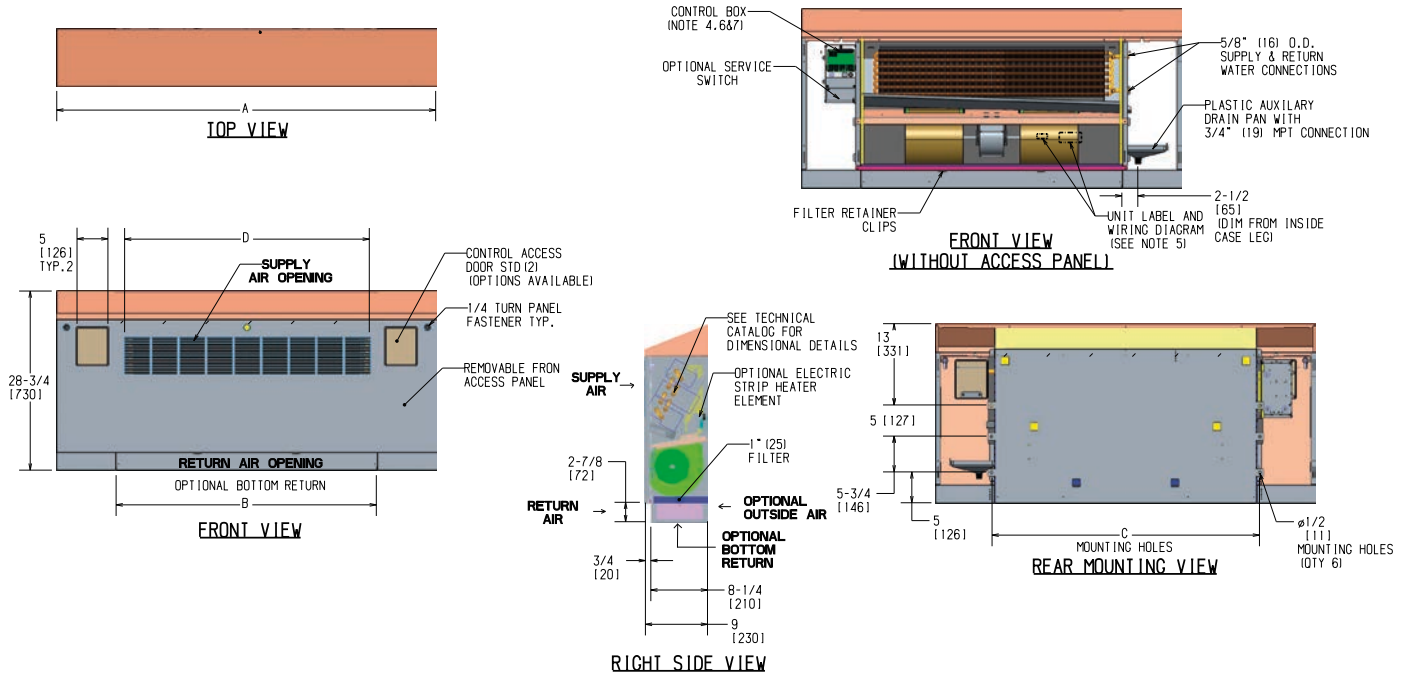
NOTES: * Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components.

1. RH coil shown, LH opposite.
2. All dimensions are ± 1/4 inch (6 mm). Drawing not to scale.
3. Product specifications are subject to change without notice.
4. Control box size and position may vary (consult factory).
5. Position may vary.
6. Service access is located on the front of the control box.
7. Knockouts on the bottom and side of the control box for incoming power connections.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Submittal Data – FSA

FSA – Vertical Sloped Cabinet Front Supply with Optional Electric Heat



Unit Model	Dimensions – Inches (Millimeters)				Quantity/Unit		Unit Weight*
	A	B	C	D	Blower	Motor	
FSA02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	64
FSA03	45 (1143)	26 (660)	27 (686)	21-1/2 (546)	1	1	69
FSA04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	83
FSA06	61 (1549)	42 (1067)	43 (1092)	39-1/4 (997)	2	1	100
FSA08	63 (1600)	44 (1118)	45 (1143)	39-1/4 (997)	2	1	102
FSA10	77 (1956)	58 (1473)	59 (1499)	52-1/2 (1334)	4	2	135
FSA12	85 (2159)	66 (1676)	67 (1702)	61-1/4 (1556)	4	2	156

NOTES: * Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components.

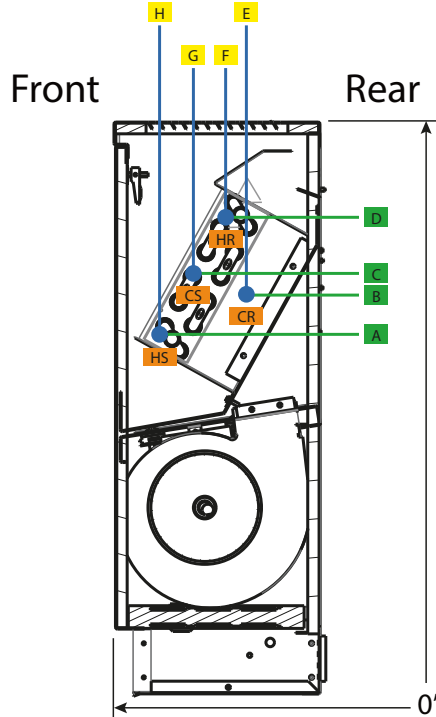
1. RH coil shown, LH opposite.
2. All dimensions are $\pm 1/4$ inch (6 mm). Drawing no to scale.
3. Product specifications are subject to change without notice.
4. Control box size and position may vary (consult factory).
5. Position may vary.
6. Service access is located on the front of the control box.
7. Knockouts on the bottom and side of the control box for incoming power connections.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Piping Connections – F*A

Piping Connection Location – Hydronic Cooling & Heating Coils

Right hand unit with re-heat coil shown.



CR - Cold Water Return
 HR - Hot Water Return
 CS - Cold Water Supply
 HS - Hot Water Supply
 RH - Right Hand
 LH - Left Hand

UNIT SIZE	COIL ROWS		CIRCUITS		A	B	C	D	E	F	G	H	Notes
	COOL	HEAT	COOL	HEAT									
F*A02	2		1			21-6/7	15-1/3		4-1/2		6-7/8		
	3		1			17-1/2	18-4/7		4-3/7		6-1/3		
	3		2			18	19-1/8		4-1/9		6		
	4		1			17-5/9	18-4/7		3-1/6		6-1/3		
	3	1	1	1	16-2/5	17-5/9	18-3/5	21-6/7	3-1/6	4-1/2	5	7-1/2	
	3	1	1	1	12-1/6	17-5/9	18-3/5	12	3-1/6	5	5	7	OE
	3	2	1	1	15-4/7	16-3/4	17-4/5	22-1/8	3	5	4-8/9	7-1/3	
	3	2	1	1	11-1/3	16-3/4	17-4/5	12-1/4	3	5-1/2	4-8/9	7	OE
	4	1	1	1	16-2/3	16-3/4	18-6/7	22-1/8	3	5	5-1/2	8	
F*A03	4	1	1	1	12-3/7	16-3/4	18-6/7	12-1/4	3	5-1/2	5-1/2	7-1/2	OE
	2		1			21-6/7	15-1/3		4-1/2		6-7/8		
	3		1			17-1/2	18-4/7		4-3/7		6-1/3		
	4		1			17-5/9	18-4/7		3-1/6		6-1/3		
	3	1	1	1	16-2/5	17-5/9	18-3/5	21-6/7	3-1/6	4-1/2	5	7-1/2	
	3	1	1	1	12-1/6	17-5/9	18-3/5	12	3-1/6	5	5	7	OE
	3	2	1	1	15	16-7/9	17-5/9	21-5/6	3	5-3/5	5	7	
	3	2	1	1	11	16-7/9	17-5/9	12	3	4-3/4	5	6	OE
	4	1	1	1	16	16-7/9	18-1/2	21-5/6	3	5-3/5	5-5/7	7-6/7	
4	1	1	1	11-7/8	16-7/9	18-1/2	12	3	4-3/4	5-5/7	6-5/6	OE	

- NOTES:
1. OE designates opposite end connection.
 2. Piping connection dimensions are consistent for either right hand or left hand connections.
 3. Horizontal dimensions measured from rear panel. Vertical dimensions measured from bottom panel.
 4. Measurements do not apply to same side piping and controls. Special Feature Requests (SFRs) may change piping stubout locations. Contact Applications.
 5. Sound data also applicable to obsolete F*Y floor line.

Table continued on next page.

Piping Connections – F*A

Piping Connection Location – Hydronic Cooling & Heating Coils

Table continued from previous page.

UNIT SIZE	COIL ROWS		CIRCUITS		A	B	C	D	E	F	G	H	Notes
	COOL	HEAT	COOL	HEAT									
F*A04	2		1			21-6/7	15-1/3		4-1/2		6-7/8		
	3		1			17-1/2	18-4/7		4-3/7		6-1/3		
	4		1			17-5/9	18-4/7		3-1/6		6-1/3		
	3	1	1	1	16-2/5	17-5/9	18-3/5	21-6/7	3-1/6	4-1/2	5	7-1/2	
	3	1	1	1	12-1/6	17-5/9	18-3/5	12	3-1/6	5	5	7	OE
	3	2	1	1	15	16-7/9	17-5/9	21-5/6	3	5-3/5	5	7	
	3	2	1	1	11	16-7/9	17-5/9	12	3	4-3/4	5	6	OE
	4	1	1	1	16	16-7/9	18-1/2	21-5/6	3	5-3/5	5-5/7	7-6/7	
4	1	1	1	11-7/8	16-7/9	18-1/2	12	3	4-3/4	5-5/7	6-5/6	OE	
F*A06	2		2			21-1/3	15-6/7		4-1/6		7-1/5		
	3		2			18	19-1/8		4-1/9		6		
	4		2			17	19-1/8		3-1/2		6		
	3	1	2	1	16-2/5	17	18	21-6/7	3-1/2	4-1/2	5-3/8	7-1/2	
	3	1	2	1	12-1/6	17	18	12	3-1/2	5	5-3/8	7	OE
	3	2	2	2	15-1/2	17-3/8	18-1/7	21-1/3	2-2/3	5-2/9	4-5/7	7-1/2	
	3	2	2	2	11-2/5	17-3/8	18-1/7	11	2-2/3	4-1/3	4-5/7	6-3/7	OE
	4	1	2	1	16	17-3/8	18	21-5/6	2-2/3	5-3/5	6	7-6/7	
4	1	2	1	11-7/8	17-3/8	18	12	2-2/3	4-3/4	6	6-5/6	OE	
F*A08	2		2			22-2/5	15-6/7		4-1/5		7-1/5		
	3		2			19-1/6	19-1/8		3-1/2		6		
	4		2			17	19-1/8		3-1/2		6		
	3	1	2	1	16-2/5	18-1/9	18	21-6/7	2-6/7	4-1/2	5-1/3	7-1/2	
	3	1	2	1	12-1/6	18-1/9	18	12	2-6/7	5	5-1/3	7	OE
	3	2	2	2	15-1/2	18-1/2	18-1/7	22-3/7	2-1/4	5-2/5	4-5/7	7-1/2	
	3	2	2	2	11-2/5	18-1/2	18-1/7	12	2-1/4	4-1/2	4-5/7	6-3/7	OE
	4	1	2	1	16	17-1/3	18	21-5/6	2-2/3	5-3/5	6	7-6/7	
4	1	2	1	11-7/8	17-1/3	18	12	2-2/3	4-3/4	6	6-5/6	OE	
F*A10	2		2			22-2/5	15-6/7		4-1/5		7-1/5		
	3		4			19-1/6	19-1/8		3-1/2		6		
	4		4			18-1/9	19-1/8		2-6/7		6		
	3	1	4	1	16-2/5	18-1/9	18-1/9	21-6/7	2-6/7	4-1/2	5-1/3	7-1/2	
	3	1	4	1	12-1/6	18-1/9	18	12	2-6/7	5	5-1/3	7	OE
	3	2	4	2	15-1/2	18-1/2	18-1/7	22-3/7	2-1/4	5-2/5	4-5/7	7-1/2	
	3	2	4	2	11-2/5	18-1/2	18-1/7	12	2-1/4	4-1/2	4-5/7	6-3/7	OE
	4	1	4	1	16	17-3/8	19-1/9	21-5/6	2-2/3	5-3/5	5-1/2	7-6/7	
4	1	4	1	11-7/8	17-3/8	19-1/9	12	2-2/3	4-3/4	5-1/2	6-5/6	OE	
F*A12	2		2			22-2/5	15-6/7		4-1/5		7-1/5		
	3		4			19-1/6	19-1/8		3-1/2		6		
	4		4			18-1/9	19-1/8		2-6/7		6		
	3	1	4	1	16-2/5	18-1/9	18	21-6/7	2-6/7	4-1/2	5-1/3	7-1/2	
	3	1	4	1	12-1/6	18-1/9	18	12	2-6/7	5	5-1/3	7	OE
	3	2	4	2	15-1/2	18-1/2	18-1/7	22-3/7	2-1/4	5-2/5	4-5/7	7-1/2	
	3	2	4	2	11-2/5	18-1/2	18-1/7	12	2-1/4	4-1/2	4-5/7	6-3/7	OE
	4	1	4	1	16	17-3/8	19-1/9	21-5/6	2-2/3	5-3/5	5-1/2	7-6/7	
4	1	4	1	11-7/8	17-3/8	19-1/9	12	2-2/3	4-3/4	5-1/2	6-5/6	OE	

- NOTES: 1. OE designates opposite end connection.
2. Piping connection dimensions are consistent for either right hand or left hand connections.
3. Horizontal dimensions measured from rear panel. Vertical dimensions measured from bottom panel.
4. Measurements do not apply to same side piping and controls. Special Feature Requests (SFRs) may change piping stubout locations. Contact Applications.
5. Sound data also applicable to obsolete F*Y floor line.

Vertical F*A Series

FAN COIL TECHNICAL CATALOG

Coil Data

NOTE: Coil data also applicable to obsolete F*Y floor line.

Coil Surface Area

Size	Height (in)	Length (in)
02	7.5	16
03	7.5	20
04	7.5	26
06	7.5	36
08	8.75	38
10	8.75	52
12	8.75	60

Coil Weight (lbs) (Aluminum fins)

Size	2-Row	3-Row	4-Row	5-Row
02	4.3	5.9	7.5	9.1
03	5	7	9	10.9
04	6.2	8.7	11.2	13.7
06	8	11.4	14.9	18.3
08	9.8	14	18.2	22.4
10	12.8	18.5	24.2	29.9
12	14.5	21.1	27.7	34.2

NOTES: Weights do not include headers or extras.

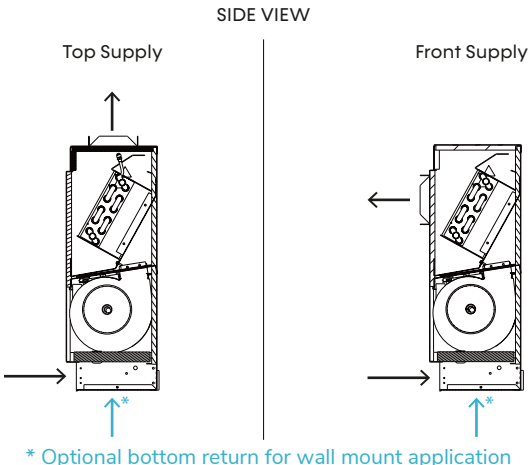
Coil Weight (lbs) (Copper fins)

Size	2-Row	3-Row	4-Row	5-Row
02	7.5	10.7	13.9	17.1
03	9	13	17	20.9
04	11.4	16.5	21.6	26.7
06	15.2	22.2	29.3	36.3
08	18.6	27.3	35.9	44.6
10	24.9	36.7	48.5	60.3
12	28.5	42.1	55.7	69.3

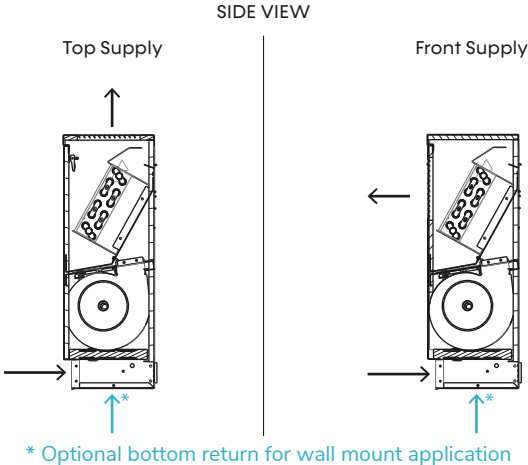
NOTES: Weights do not include headers or extras.

Air Flow Arrangements

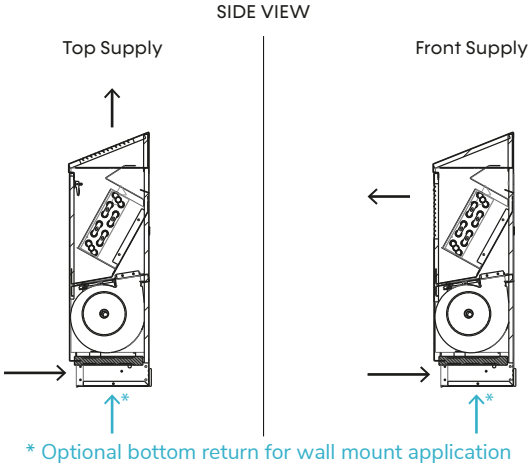
FHA – Vertical Hideaway Cabinet Heater



FXA – Vertical Cabinet Heater



FSA – Vertical Sloped Top Cabinet Heater



Standard Features, Options and Accessories

Vertical Floor cabinets are constructed with 18 gauge galvanized steel unless otherwise specified.

Features and Options	Standard	Factory	Field Installed	Factory Special
Air Flow Arrangements				
Front Return/Top Supply	X			
Front Return/Front Supply		X		
Bottom Return/Top Supply (Wall Mount Only)		X		
Bottom Return/Front Supply (Wall Mount Only)		X		
Floor Mount	X			
Wall Mount		X		
Coil Options				
2, 3, 4 Row, 2-Pipe	X	X		
3/1, 3/2, 4/0, or 4/1-Rows		X		
.016 Coil Tube Thickness	X			
.025 Coil Tube Thickness		X		
Manual Air Vent	X			
Automatic Air Vent		X		
DX Cooling Coils		X		
Coil Test Pressure 350	X			
Coil Test Pressure 400, 450		X		
Epoxy Coating		X		
Direct Expansion (DX) - 2-Pipe Systems Only		X		
Anti-Corrosive Epoxy Coating		X		
Connection				
Right or Left (Same End Standard, Opposite End Optional)	X	X		
Drain Pan				
Stainless Steel Externally Coated	X			
Plastic Auxiliary Drain Pan	X			
Fin Material				
Aluminum w/Galvanized End Sheets	X			
Copper w/Stainless Steel End Sheets & Bottom Coil Baffle		X		
Nichrome Wire Strip Electric Heater (Total and Auxiliary)				
		X		
Indoor Air Quality				
1-inch Throwaway Non-Woven Synthetic	X			
1-inch Permanent		X		
1-inch MERV 8 Pleated		X		
1-inch MERV 13 Pleated				X
2-inch MERV 8 Pleated				X
2-inch MERV 13 Pleated				X
Bipolar Ionizer		X		
Insulation				
½-inch Standard Fiberglass	X			
½-inch Premium IAQ Fiberglass				X
½-inch Foil Face		X		
¼-inch Closed Cell		X		
Motor Type				
Constant Torque ECM Motors		X		
Motor Voltage				
120/1/60 3-Speed	X			
208/230/277/1/60, 220/1/50 3-Speed		X		

Table continued on next page.

Standard Features, Options and Accessories

Table continued from previous page.

Features and Options	Standard	Factory	Field Installed	Factory Special
Supply/Return Air Grilles				
Stamped Supply Grille (FXA, FSA)	X			
Double Deflection Integral Supply Grille, Painted (FXA, FSA)		X		
Double Deflection Aluminum Supply Grille (FXA, FSA)		X		
Stamped Return Grille (FXA, FSA)		X		
Paint Options (FXA, FSA)				
Bright White	X			
Arctic White, Polar White, Flat Black, Ermine Gray, Champagne Beige, Toffee Brown		X		
Special Color				X
Controls				
Service Switch with Lockout Tabs		X		
Single Point Power Connection		X		
Incoming Power Fusing		X		
24V Controls		X		
Three Speed Switch		X		
Condensate Float Switch		X		
Thermostats		X	X	
Outside Air Dampers				
Manually Controlled Damper (FHA, FXA, FSA)		X		
Motorized Controlled Damper (FHA, FXA, FSA)		X		
Outside Air Box (FHA, FXA, FSA)			X	
18ga Decorative Framed Wall Panels (FHA)				
Fully Insulated Front Panel		X		
Front/Wall Panel Tamper Proof Locks		X		
Cabinet Options				
Rear Cabinet Extensions			X	
Left/Right Cabinet Extensions		X		
Height Cabinet Extensions		X		
1-inch, 2.5-inch Leveling Legs		X		
16 ga, 14 ga Cabinet		X		
Finished Back Panel		X		
Camlocks on Access Doors		X		
Camlocks on Front/Wall Panels		X		
Valve Package Options* (* Valve packages are assembled at the factory but field installed.)				
Union Connections at the Coil			X	
24-inch Braided Hoses			X	
Ball Valves			X	
2-Way/3-Way 25 psi Control Valve			X	
2-Way/3-Way 150 psi, Normally Closed, Control Valve			X	
2-Way/3-Way 150 psi, Normally Open, Control Valve			X	
2-Way/3-Way 35 psi Floating Control Valve			X	
2-Way/3-Way 35 psi Proportional Control Valve			X	
Fixed Flow Control 1.0-8.0 GMP			X	
Y-Strainer/Y-Strainer with Blowdown			X	
P-T Ports			X	
Circuit Setter			X	
Balance Valve (Return Line)			X	
Balance Valve (3-Way Bypass)			X	

Standard Features, Options, and Accessories

Filters

All Vertical FHA, FXA, FSA Series units include a non-woven, synthetic throwaway filter, designed to maximize airflow and performance. Permanent (cleanable), MERV 8 filters are also available as factory-installed options.

Unit Size	Nominal One-Inch Filter Size – Inches (Millimeters)
	FHA, FXA, FSA
02	7-3/4" x 21-3/4" (197 x 552)
03	7-3/4" x 25-3/4" (197 x 552)
04	7-3/4" x 31-3/4" (197 x 806)
06	7-3/4" x 41-3/4" (197 x 1060)
08	7-3/4" x 43-3/4" (197 x 1111)
10	7-3/4" x 57-3/4" (197 x 1467)
12	7-3/4" x 65-3/4" (197 x 1670)

NOTES: Sizes shown are nominal ordering sizes.

Filter Static Resistance (in w.c.)

Unit Data			Filter Pressure Drop		
Model	Unit Size	Nominal CFM	1" Throwaway	1" Permanent	1" Merv 8
F*A	02	200	0.041	0.064	0.120
	03	300	0.051	0.090	0.140
	04	400	0.055	0.102	0.148
	06	600	0.061	0.125	0.163
	08	800	0.074	0.184	0.204
	10	1000	0.071	0.168	0.192
	12	1200	0.074	0.183	0.204

Bipolar Ionizer Specifications

SPECIFICATIONS:

- Airflow Capacity: 2,400 CFM
- Pressure Drop: Less than 0.01 In. WG
- Housing Material: ABS
- Weight: 0.2 lbs.
- Maximum Operating Temperature: 200° F (93°C)
- Electrical:
 - Voltage: 24 VAC (602)
 - Power Consumptions: Less than 1 watt
 - Frequency: 50/60 Hz
 - Over Current Protection:.. 500mA Glass Cartridge Fuse
 - Lead Wires 50 inches (L)

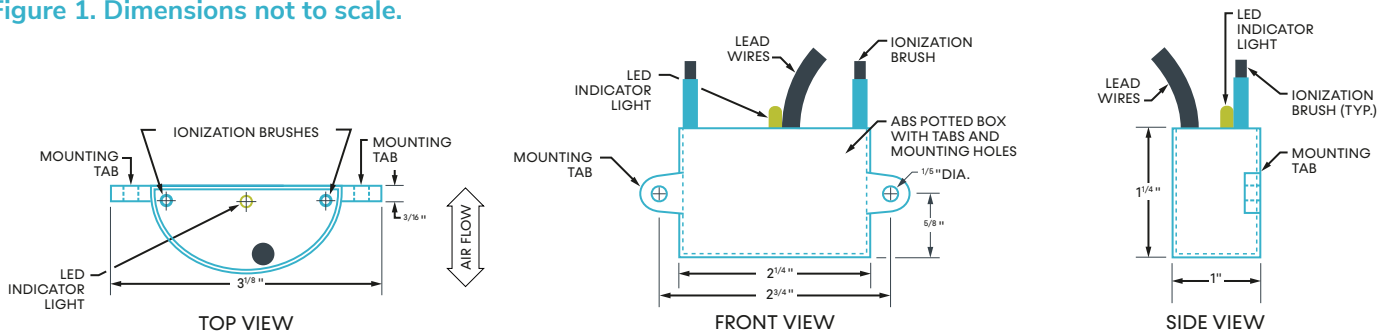
Ionization Output:

- Mode of Operation Needlepoint Type
- Needle Configuration: Brush Type

DIMENSIONS: See Figure 1

APPROVALS: Intertek/ETL Standard UL 867

Figure 1. Dimensions not to scale.



Standard Features, Options and Accessories

Control Packages

Controls

We offer control packages that fit most customer needs. Additional controls and devices are available to meet even the most demanding operating logic.

Low Voltage Control (24V)

The 85 Control Board (see page 41) offers simplified install and service with its plug-in connections and QR code for quick wiring diagram reference. It also offers LED diagnostics and built-in design flexibility for added features such as staged cooling or BAS signal input. The 85 Control board is available with most control schemes.

85 Control Board Standard Features

- Simplified plug connections
- PSC or ECM control
- LED diagnostics (See IOM-100 for detailed LED function and outcome)
- QR code to wire diagram for ease of troubleshooting
- Conduit compatible for remote mounted control boxes
- Compatibility with all actuator types
- Removable thermostat connector

85 Control Board Options

- ECM fan speed adjustment
- Staged Cooling: compatible with IEC Venture Wi-Fi Thermostat (E055 - 1520330)
- BAS signal input to interrupt fan and actuators
- Fusing and service switch with electric heat
- Changeover or aquastat sensor
- Condensate switch LED indication
- Damper control

Condensate Float Switch

This switch shuts down the motor, actuator and electric heat (if applicable) when the water level in the drain pan reaches an unsafe level.

Service Switches

We offer concealed service switches for use by maintenance and service personnel to shut off the power while working on the unit.

Fusing

We offer incoming power fusing for all units as well as blower motor and control sub-fusing (single power source wiring).

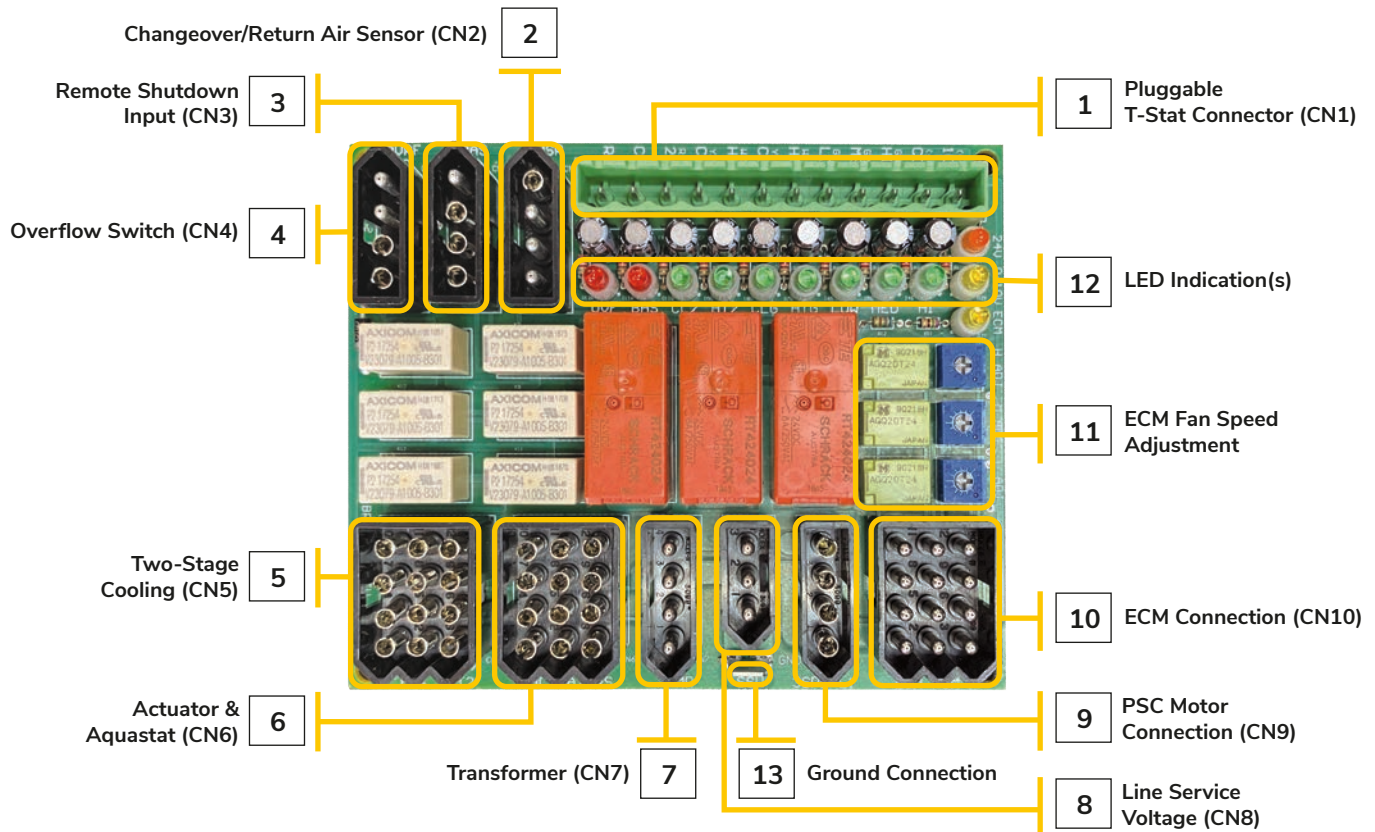
Other Control Options

- Unit mounted 3-speed switch (thermostat by others)
- 4-Speed silent switching board with potentiometers
- Low voltage remote shutdown relays (Special Quote)
- Fan and valve cycle applications (Special Quote)
- Thermostats available with large letter print for handicap applications (Special Quote)

Standard Features, Options and Accessories

Controls Packages

85 Control Board



1	CN1 – 24V Customer Input (Thermostat)
2	CN2 – Changeover/Return Air Sensor
3	CN3 – Remote Shutdown Input
4	CN4 – Condensate Overflow Switch
5	CN5 – Two Stage Cooling
6	CN6 – Actuator & Aquastat
7	CN7 – Transformer
8	CN8 – Line Service Voltage
9	CN9 – PSC Motor Connection
10	CN10 – ECM Connection
11	ECM Fan Speed Adjustment
12	LED Diagnostics
13	Ground Connection

Standard Features, Options and Accessories

Thermostat Control Package Applications

Unit Type	Control Option	System Type	Changeover Type	W	P	N	F	G
-	Manual Fan	Manual ¹	None	-	-	-	-	-
2-Pipe	Valve Cycle*	Heat Only	None	•	•	•	•	•
		Cool Only	None	•	•	•	•	•
		Heat/Cool	Manual	-	-	-	-	-
			Automatic	•	•	•	•	•
		Heat/Cool with Auxiliary Electric Heat	Manual	-	-	-	-	-
			Automatic	•	•	•	•	•
Cool with Total Electric Heat	Manual	-	-	-	-	-		
	Automatic	•	•	•	•	•		
4-Pipe		Heat/Cool	Manual	-	-	-	-	
			Automatic	•	•	•	•	

NOTES: 1. Fan switch only; no thermostat

Thermostat Features

All listed controls include fan switching.	Control Type ¹				
	W	P	N	F	G
24V, 115V, 208V, 240V, 277V	24V only	24V only	24V only	24V only	24V only
Wi-Fi Enabled	•	-	-	-	-
Mobile and Web App for Remote Control	•	-	-	-	-
Staged Cooling	•	-	-	-	-
Programmable	•	•	-	•	-
Remote Wall Mounted	•	•	•	•	•
Manual Fan Switch Operation	•	•	•	•	•
Auto Fan Speed Control	•	•	•	•	•
Continuous 3-Speed Fan	•	•	•	•	•
Cycling Fan	•	•	•	•	•
O.A Damper Signal	•	•	•	•	•
Remote Temperature Sensor	Opt	Opt	Opt	Opt	Opt
Digital Display & Buttons	•	•	•	•	•
Local Temperature Set-Back	•	•	•	•	•
Water Temperature Purge Cycle	•	•	•	•	•
Proportional Control Valves	-	-	-	•	•
Floating Control Valves	-	-	-	•	•
Pipe Sensor	•	•	•	•	•

NOTES: 1. Control packages with valve cycle control are continuous fan operation only.
 2. All wall-mount control packages are shipped loose for field installation. (Boxes, tile rings, plaster rings, etc. are not provided).
 3. Aquastats are included in control packages, as required.

*LEGEND: P • Basic 24V Digital, 7-Day Programmable
 N • Basic 24V Digital, Non-Programmable
 F • Premium 24V Digital, 7-Day Programmable/BACnet with Proportional Fan/Valves Option
 G • Premium 24V Digital BACnet with Proportional Fan/Valves Option
 W • Venture 24V Wi-Fi Programmable

Standard Features, Options, and Accessories



Venture 24V,
Wi-Fi Programmable



Basic 24V Digital
7-Day Programmable and
Non-Programmable Series



Premium 24V Digital
7-Day Programmable/BACnet

Standard Features, Options, and Accessories

Outside Air Dampers

FHA, FXA, and FSA models may be supplied with an outside air inlet connection. When a damper for control of the outside air is provided, two styles of outside air damper control are available.

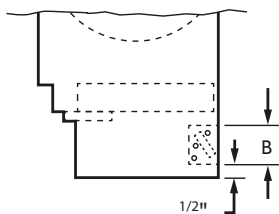
Style 1

Control of the damper is by manual operation of the damper in the unit return air toe space. FHA, FXA, and FSA models are provided with a lever arm on the damper.

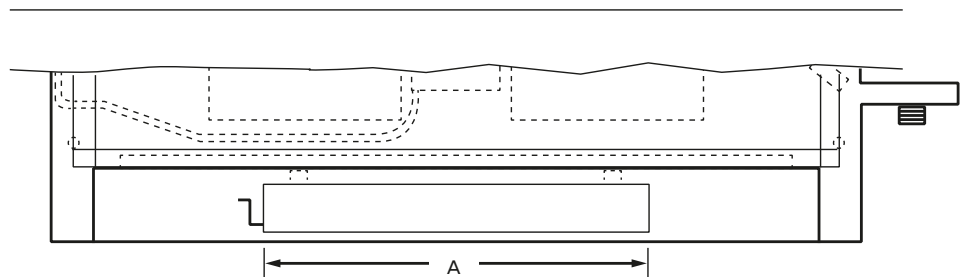
Style 2

For FHA, FXA, and FSA models only, control of the damper is achieved by a motorized operator installed in the left-hand end compartment. Consult the factory for application restrictions.

Unit Size	Nominal CFM	Outside Air Opening Dimensions – Inches (Millimeters)	
		FHA, FXA, FSA	
		Front View (A)	Side View (B)
02	200	8" (203)	2" (51)
03	300	10" (254)	2" (51)
04	400	12" (305)	2" (51)
06	600	14" (356)	2" (51)
08	800	18" (457)	2" (51)
10	1000	27" (686)	2" (51)
12	1200	27" (686)	2" (51)



Side View



Front View

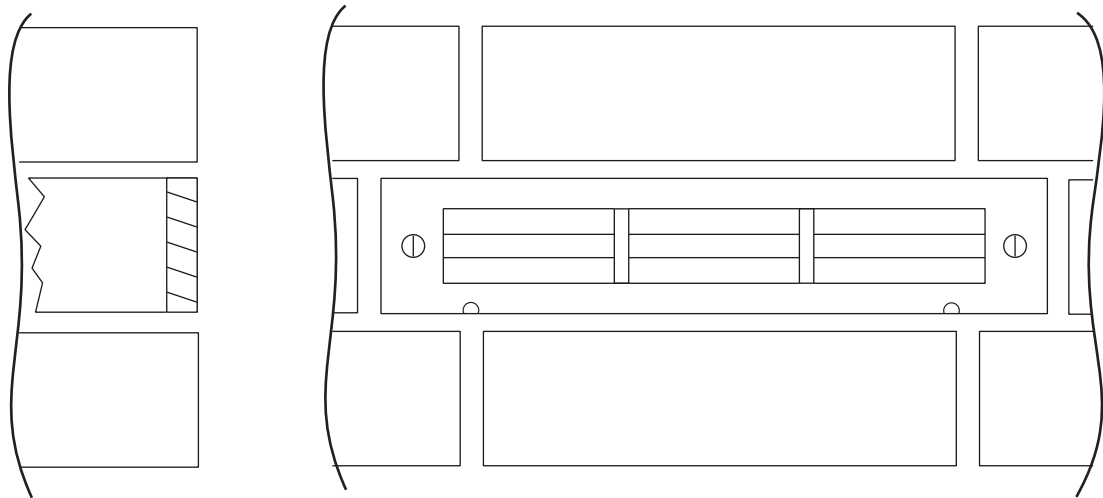
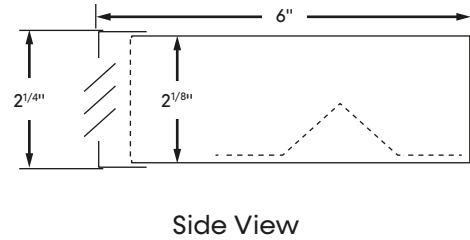
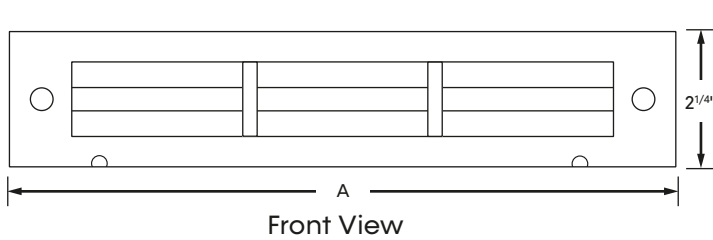
Standard Features, Options, and Accessories

Outside Air Wall Boxes

Optional outside air wall boxes are constructed of aluminum to minimize corrosion. A louvered grille caps the wall box on the exterior side. A fine mesh insect screen is installed behind the louver on the inside of the box.

Standard wall box depth is six inches with the width and length dimensions established to be used with the appropriate outside air openings.

Unit Size	Nominal CFM	Outside Air Opening Dimensions – Inches (Millimeters)	
		FHA, FXA, FSA	
		Front View (A)	Side View (B)
02	200	8-1/4" (203)	2-1/8" (54)
03	300	8-1/4" (203)	2-1/8" (54)
04	400	12-1/4" (311)	2-1/8" (54)
06	600	14-1/4" (362)	2-1/8" (54)
08	800	18-1/4" (464)	2-1/8" (54)
10	1000	27-1/4" (692)	2-1/8" (54)
12	1200	27-1/4" (692)	2-1/8" (54)



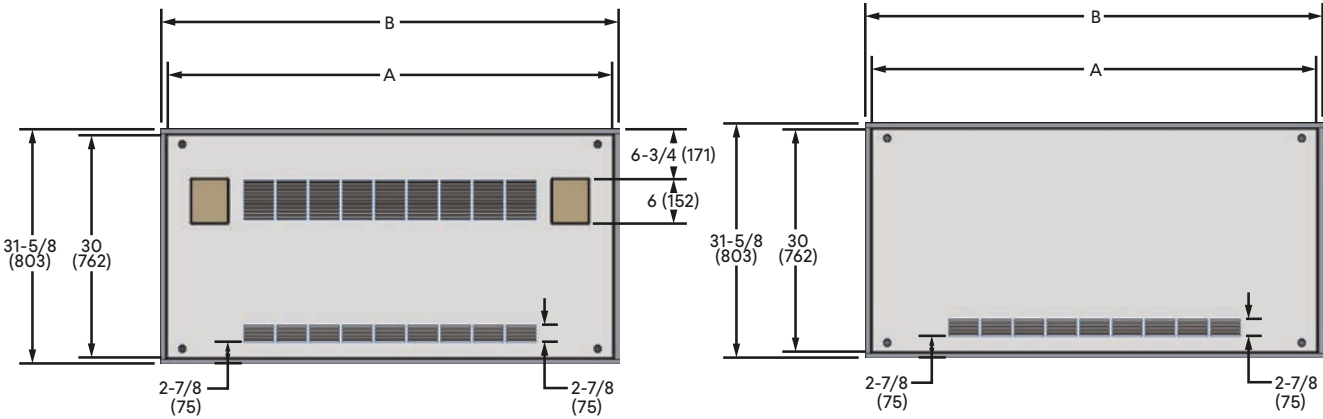
Standard Features, Options, and Accessories

Decorative Wall Panels

Optional decorative wall panels are used with FHA models when fully recessed into the wall of the conditioned space. The wall panels cover the recessed unit on all sides and can be removed for access to the unit for servicing. The wall panel provides the air seal for the front of the unit; therefore, installation alignment is critical. Consult IOM-100 for installation instructions.

Two styles of decorative wall panels are available – Style W, with stamped return and supply louvers and front facing hinged-access doors; and Style Z, with stamped return louvers only.

Nominal CFM	Dimensions – Inches (Millimeters)			
	Panel Width	Frame Width	Wall Opening	
	A	B	Width	Height
02	40 (1016)	41-3/4 (1061)	40-3/8 (1026)	30-1/4 (768)
03	40 (1016)	41-3/4 (1061)	40-3/8 (1026)	30-1/4 (768)
04	50 (1270)	51-3/4 (1315)	50-3/8 (1280)	30-1/4 (768)
06	60 (1524)	61-3/4 (1569)	60-3/8 (1534)	30-1/4 (768)
08	62 (1575)	63-3/4 (1619)	62-3/8 (1585)	30-1/4 (768)
10	76 (1930)	77-3/4 (1975)	76-3/8 (1940)	30-1/4 (768)
12	84 (2134)	85-3/4 (2178)	84-3/8 (2143)	30-1/4 (768)



**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Standard Features, Options, and Accessories

Supply Air Grilles (Optional)

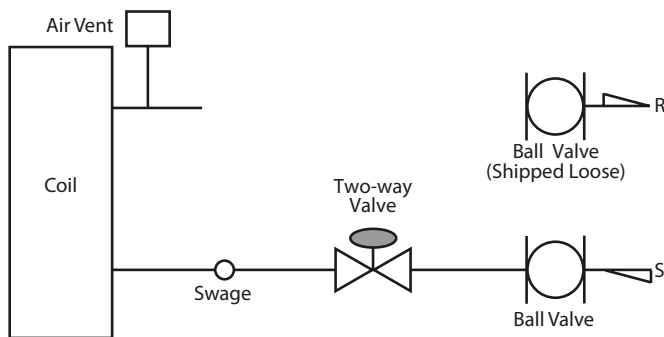
Unit Size	Nominal CFM	Recommended Grille Sizes – Inches (Millimeters)	
		FXA, FSA	FHA
02	200	16" x 6" (406 x 152)	16" x 5" (406 x 127)
03	300	16" x 6" (406 x 152)	18" x 5" (457 x 127)
04	400	26" x 6" (660 x 152)	26" x 5" (660 x 127)
06	600	36" x 6" (914 x 152)	36" x 5" (914 x 127)
08	800	38" x 6" (965 x 152)	38" x 5" (965 x 127)
10	1000	52" x 6" (1321 x 152)	52" x 5" (1321 x 127)
12	1200	60" x 6" (1524 x 152)	60" x 5" (1524 x 127)

- NOTES:**
1. Refer to Submittal Data pages for actual unit supply air opening dimensions.
 2. FXA and FSA models supply air grilles are factory installed.
 3. Consult factory for application restrictions using double-deflection grilles with electric heat and maximum coil rows.
 4. FHA models supply air grilles are shipped loose.

Standard Features, Option, and Accessories

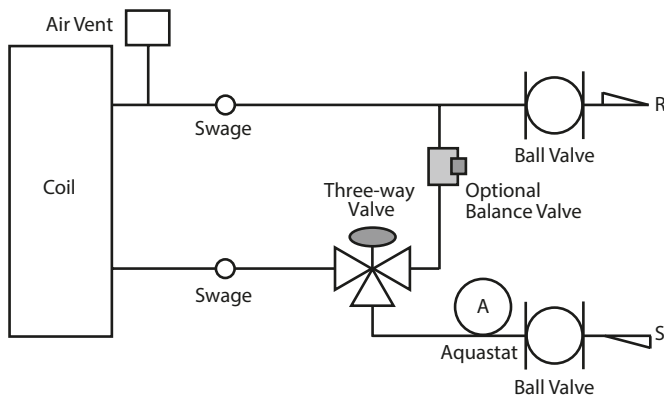
Two-way Motorized Control Valve

In a two-way motorized control valve package, the motor drives the valve open, and a spring returns the valve to a normally closed position. No water flows with the unit off. The standard supply connection from the coil will accept a swaged copper fitting for field soldering. As an option, this connection may be factory furnished with a union. When a swage is necessary, it becomes part of the valve package. The isolation ball valve in the return piping is shipped loose for field installation.



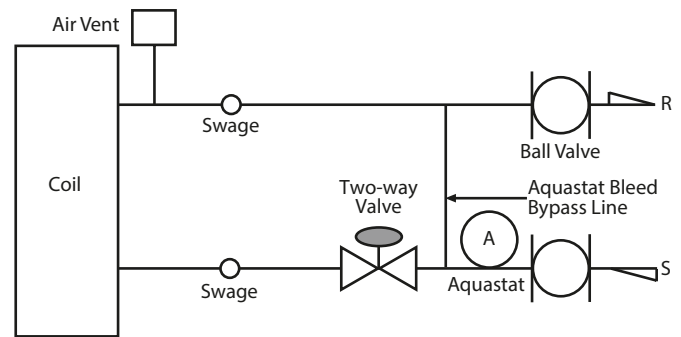
Three-way Motorized Control Valve

In a three-way motorized control valve package, a diverting valve controls water flow to the coil. When the unit is off, water bypasses the coil and flows directly to the system return. A balancing valve may be specified in the bypass line to permit equal flow balancing.



Two-way Motorized Control Valve with Aquastat Bypass Line

In a two-way motorized control valve package, the motor drives the valve open, and a spring returns the valve to a normally closed position. No water flows through the coil with the unit off. The aquastat bypass line allows a small amount of water to flow from the supply to the return piping when the control valve is closed. The strap-on aquastat senses whether the flowing water is being chilled or heated and switches a contact closed to provide automatic summer/winter changeover (ACO) for the system. When a 2-pipe cooling/heating system with optional auxiliary electric heat is desired, additional components are required.



- NOTES:**
1. Please note that project specifications for system pressure, pressure drop limitations and flow rate should be checked prior to selecting specific components or the valve package size.
 2. The supply and return piping connections of the factory-provided valve package are either swaged for field brazing (standard) or union fitted (optional) for field connection to the coil.
 3. Consult IEC's Valve Packages and Piping Components manual or your local representative for detailed piping and valve application information. Factory-provided valve packages are assembled, brazed, wired electrically and dry-fit to the coil connections before shipping. Field brazing to the coil completes the installation. Some applications dictate shipping isolation valves loose.

SureFlow™



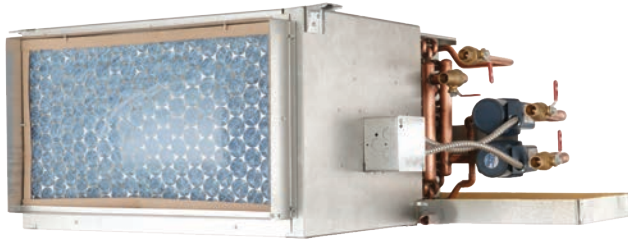
-
- Easy System Design
 - Fewer Moving Parts
 - Saves Money
 - Cost Efficient Operation
 - Plug and Play Simple

The System

What is SureFlow®

SureFlow® is an innovative approach to flexible cooling and heating hydronic system design.

Figure 1.



The key component of a SureFlow system is a custom designed fan coil (see Figure 1) with an integrated low watt circulator. The circulator delivers the design waterflow through the coil and back to a primary loop. This allows the individual fan coils to be hydraulically isolated from one another and be decoupled from the distribution primary loop.

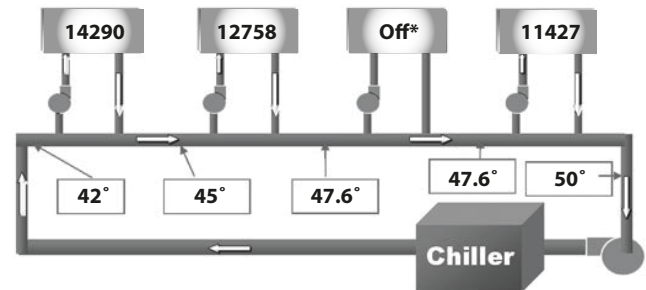
A benefit of this arrangement is the ability to satisfy the comfort requirements of a cooling-only system with one pipe instead of two and for a cooling and heating system with two pipes instead of four.

Since the primary pump is no longer responsible for overcoming the valve and coil losses, and is only responsible for moving the water in the primary loop, the horsepower demand is reduced significantly resulting in energy savings.

How Does SureFlow® Work

Multiple SureFlow® units are placed in series on a primary loop. The primary loop has a constant water flow that is engineered to satisfy the total Btu demands of the loop at peak load conditions.

Figure 2. 48,000 Btu/h; 42°F EWT; 10°F ΔT; 9.6 GPM Primary

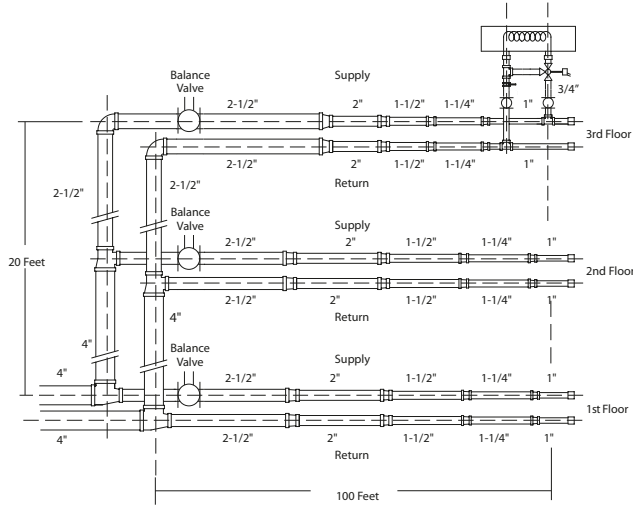


In the example shown in Figure 2, four coils are connected to a loop with a peak load of 48,000 Btu/h. The designer plans for a 10 degree water temperature rise from the loop and configures the primary for 9.6 GPM of water flow with an initial temperature of 42 degrees. The primary loop is set up for constant water flow while the SureFlow units cycle on local thermostat demand. As each unit cycles on, the local circulator “borrows” water for use in the coil and then returns the used water to the loop. The blended water then becomes the inlet water for the next operating unit. Units are selected to operate at the available water temperature.

System Comparison

Parallel Flow vs. SureFlow®

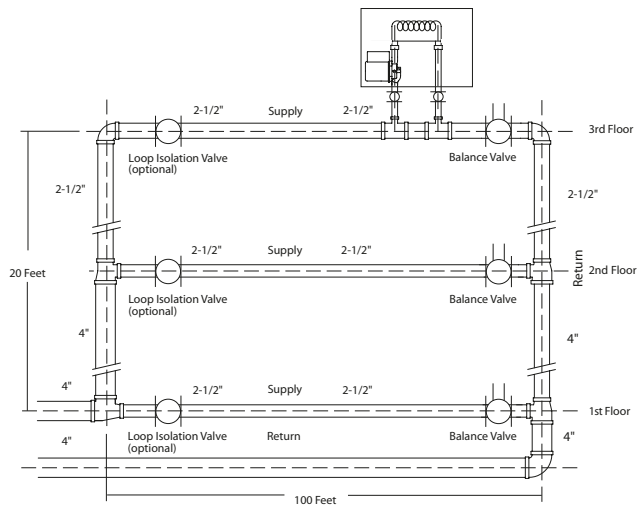
Figure 3. Basic Two-pipe Direct-return Piping Diagram



In parallel flow hydronic systems (see Figure 3), a central pump delivers constant water temperature throughout the building to each fan coil unit. The central pump must overcome system head losses (piping, balancing valves or circuit setters, fittings, accessories, zone control valves) and still produce sufficient pressure to push water through the coil. Unfortunately building diversity causes problems balancing flow at actual operating conditions. Parallel flow systems are “design specific,” making changes in zoning difficult to implement.

SureFlow® System

Figure 4. Single-pipe, Primary/Secondary SureFlow System



In SureFlow® systems, flow controls and zone control valves are removed from the fan coil unit. The central pump moves water past the fan coil units in a primary circuit called a “SureFlow Loop.” The integral circulator delivers the rated flow to each unit and cycles on demand of the local thermostat.

INTERNATIONAL ENVIRONMENTAL
Flexible solutions for indoor environments

File Unit Reports Schedule Inputs System Help

Unit Performance | Schedule | Project Information | Loop Information

Loop 1

L1C

Chiller LWT (°F) 45.0 Peak Load Total BTUH 102000 Peak Water Flow - GPM 25.0
 Peak Temp Change (°F) 8.2 Sensible BTUH 81600 Pipe Size (inches) 1.50 Nominal OD, Type M Copper
 Target SHR % 80 Actual Total BTUH 100849 Velocity - f/s 4.4 Fluid Water
 Actual LWT (°F) 53.1 Actual Capacity Sensible BTUH 82825

L1 - 2-Pipe, Cooling Only

System ID	L1-SFU1	L1-SFU2	L1-SFU3	L1-SFU4	L1-SFU5	L1-SFU6	L1-SFU7	L1-SFU8
User ID								
Total	12000	12000	24000	6000	12000	12000	12000	12000
Sensible	9600	9600	19200	4800	9600	9600	9600	9600
Latent	2400	2400	4800	1200	2400	2400	2400	2400
Model & Size	CPF04	CPF04	CPF10	CPF02	CPF04	CPF04	CPF04	CPF04
Coil Rows	3	3	3	4	4	4	4	4
Speed	High	High	High	High	High	High	High	High
ESP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Actual ACFM	470	470	1045	185	460	460	460	460
Cooling Entering Air DB /WB	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
Cooling Entering Water °F	45	46	47	48.9	49.4	50.4	51.3	52.2
Total	12878	12364	23111	6512	12294	11730	11229	10731
Sensible	9831	9632	19830	4654	10018	9806	9619	9435
Latent	3047	2732	3281	1858	2276	1924	1610	1296
Sensible to Target %	102.4%	100.3%	103.3%	97.0%	104.4%	102.1%	100.2%	98.3%

Cooling Unit / Loop Simulation

Legend:
 - Target - Total (diamond)
 - Target - Sensible (triangle)
 - Target - Latent (square)
 - Actual - Total (diamond)
 - Actual - Sensible (triangle)
 - Actual - Latent (square)

Current Project: App_Guide.dat
Version 5.6.4
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Design Tools

A SureFlow® Rating Program and Loop Simulator are available for use by the design engineer.

SureFlow® Rating Program

- Individual selection at specific criteria
- Intelligent format allows standard models and coils to be selected. Consult factory for special applications.
- Provides performance rating data
- Includes schedule builder
- Provides submittal drawings
- Provides sample specifications

SureFlow® Loop Simulator

- Models individual unit performance at selected design conditions
- Allows units to be modeled at multiple fan speeds or cycled off
- "AUTO SELECT" function automatically selects unit sizes and coil rows
- Displays total capacity, sensible capacity, and latent capacity for each unit
- Charts entering, leaving, and mixed water temperatures
- Loop performance is displayed graphically
- Allows fast, interactive system design

Applications

Applications

SureFlow® systems can be used in either renovation or new construction projects

- Transporting Btus in pipe is easier to conceal, less costly and more efficient than by air duct.
- Superior comfort of a 4-pipe system is achieved by using a 2-pipe distribution system.
- Minimize or eliminate core drilling.
- Zones are easy to change.
- Configuration is dictated by design. (In many cases, SureFlow® reduces the piping and installation costs significantly compared to the conventional parallel piping system.)
- Floors may have varying layouts.

Primary/Secondary Piping System Considerations

When designing SureFlow® piping systems, several things need to be considered:

- A. Location of Equipment Room. Strategically locating the equipment room may result in pipe size reductions and savings.

- B. Design Requirements. Requirements for auxiliary and common space equipment such as make-up air units should be considered. In those situations it might be advisable to connect such equipment through a conventional two-pipe distribution system following industry accepted design practice (see Figure 6).

Figure 6. SureFlow® System with Decoupled Common Areas

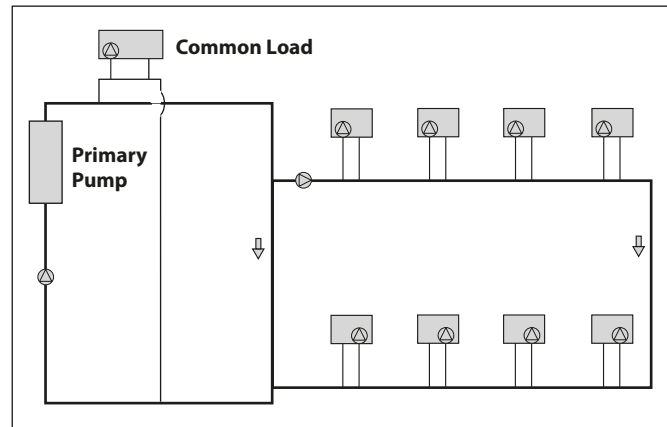
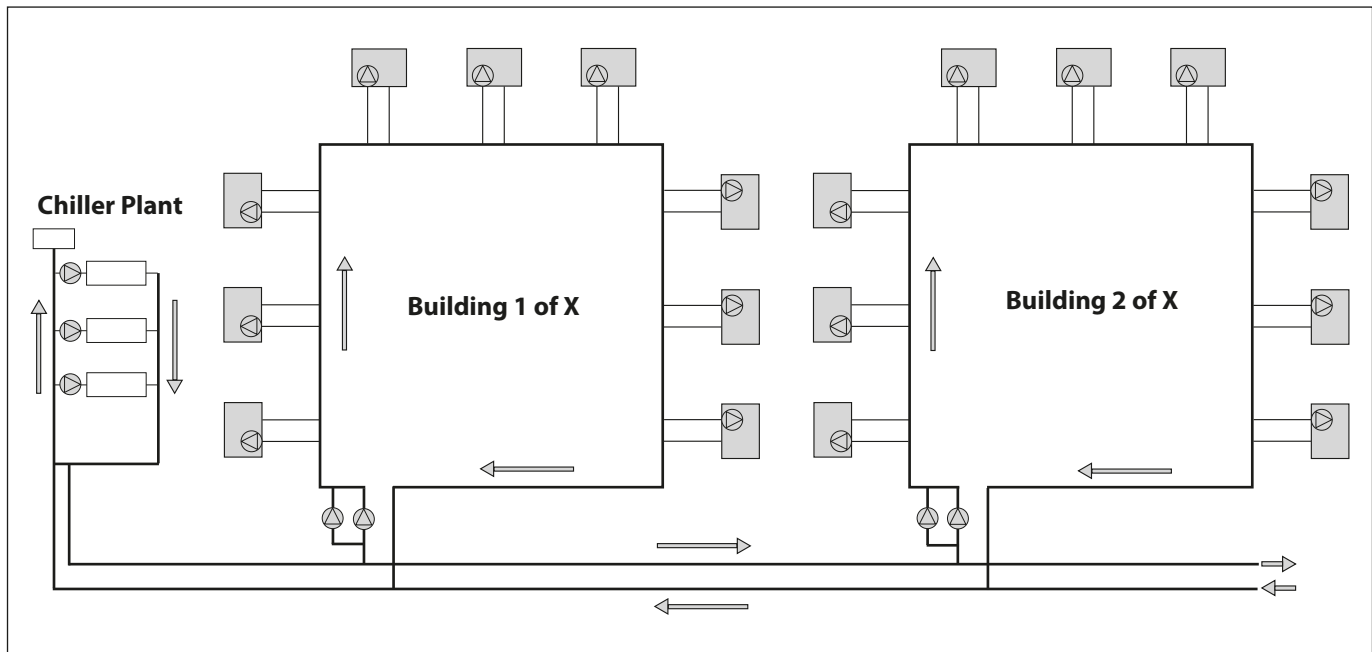


Figure 5. SureFlow® System in Multiple-building Applications



Applications

C. Piping Loops. Piping loops may be run vertically or horizontally through a building, limited only by practical considerations. Hybrid combinations often present opportunities to achieve the best system design (see Figure 7).

Symmetrical piping layouts achieve the most natural flow balance while optimizing the effect of natural diversity on the loads (see Figure 8).

Try to loop piping around at least two sides of the building to take advantage of solar load variation. An alternate method is to run a supply loop down a hallway with take-off piping feeding room fan coils on both the left and right sides of the hallway. For maximum diversity potential, the supply and return mains may be separated by top and bottom floors to create mini-loops (see Figure 9).

Figure 7. Alternate-distribution and Loop-piping Layouts

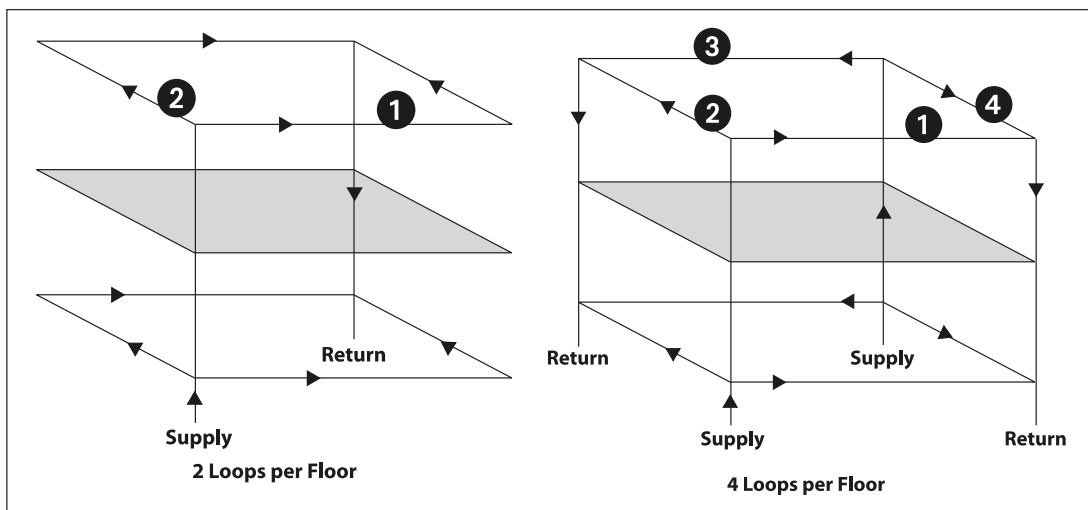
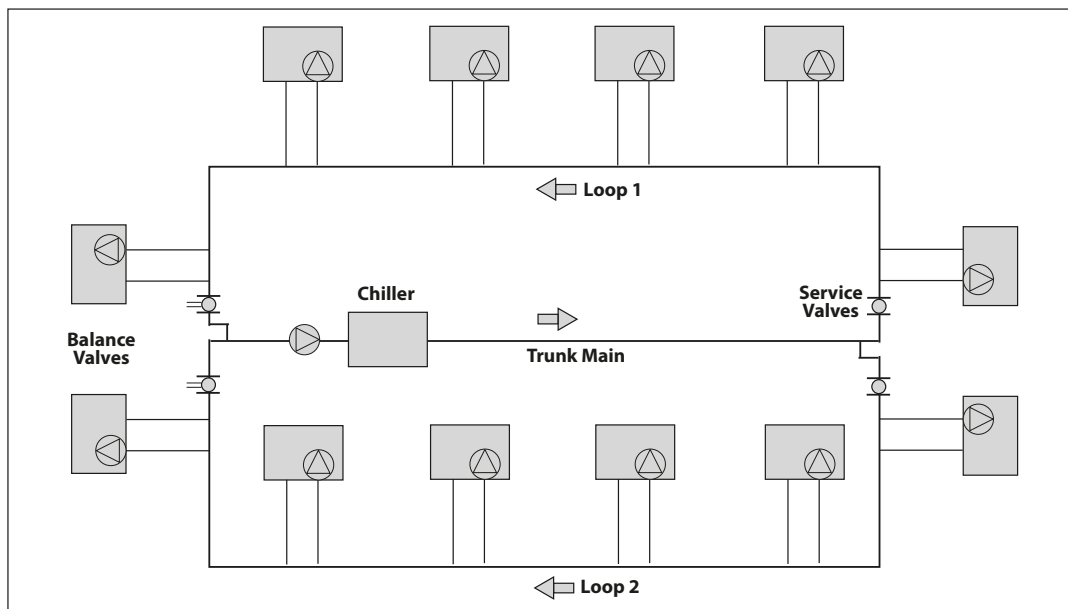
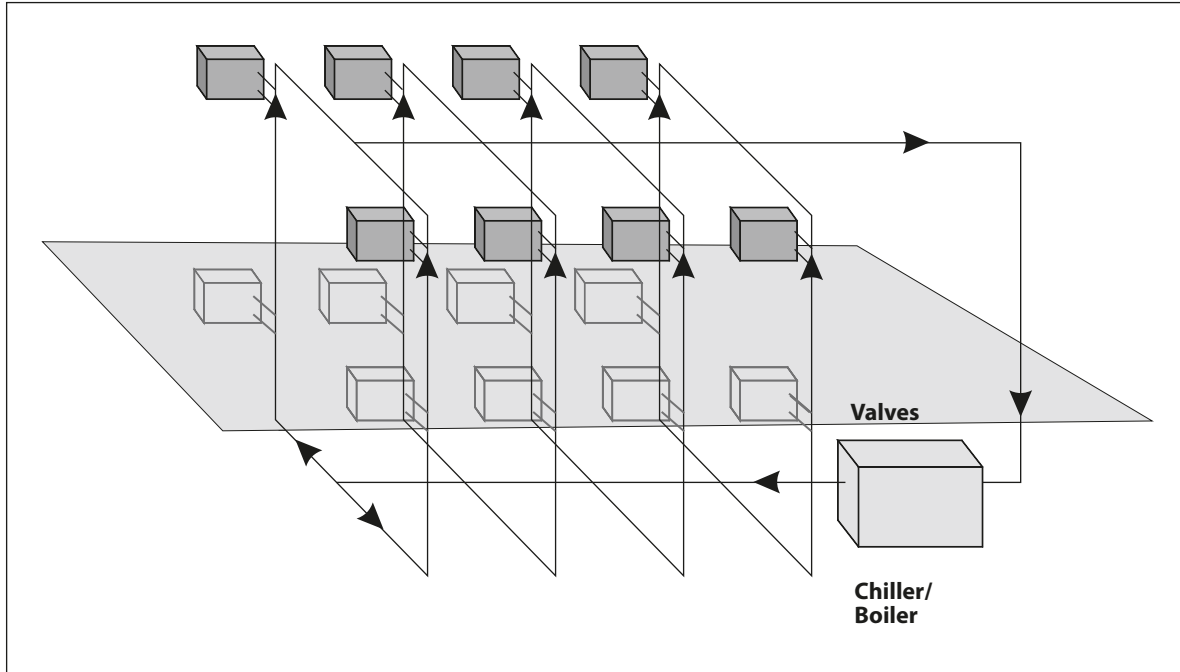


Figure 8. Symmetrical and Diversity-sensitive SureFlow® Installation



Applications

Figure 9. Hybrid Loop Design



It is often desirable to divide a heavily-loaded loop into two or more loops with smaller pipe sizes. Depending on building layout, it may be practical to use one loop per floor and exposure. With other designs, it may be better to split loops and use a common riser to distribute the load.

Distribution risers can supply the parallel loops by direct- or reverse-return arrangements (see Figures 8 and 10). Standard balancing valves, service isolation valves and air vents should be installed as necessary for service and to balance flow to each loop.

Figure 10. Vertical Risers with Horizontal Distribution

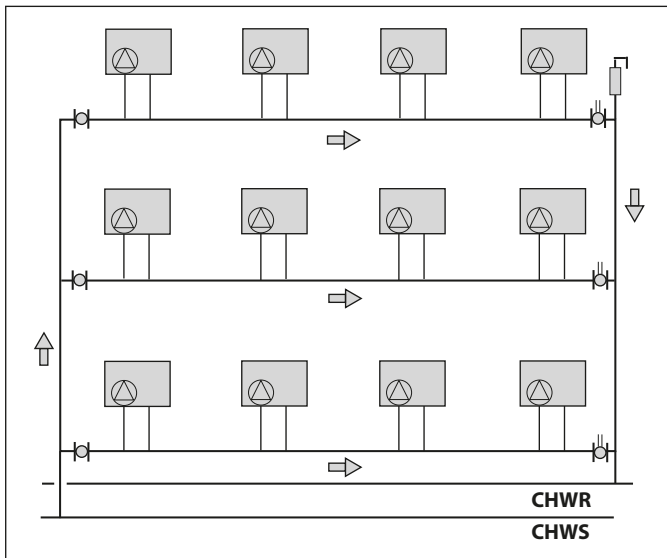
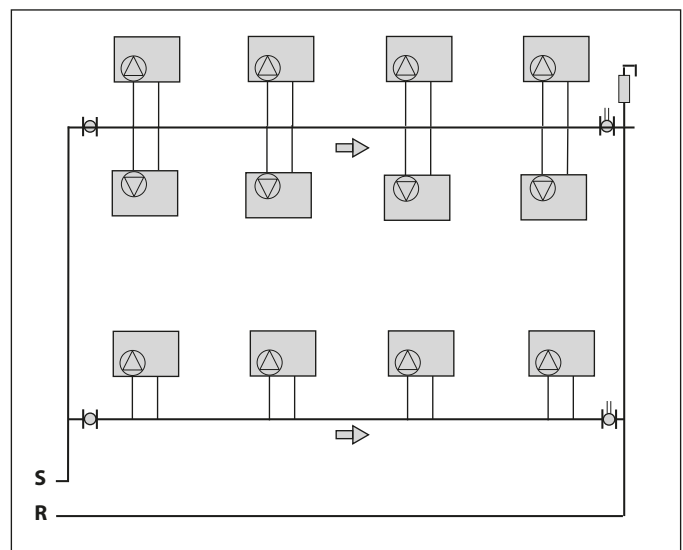
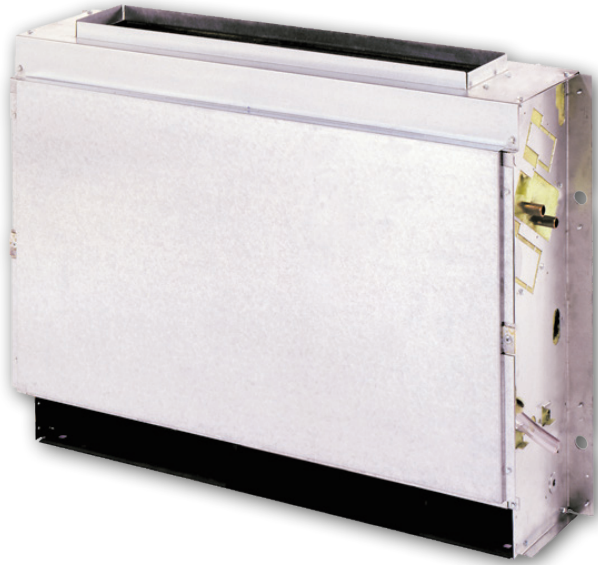


Figure 11. Alternate Layout



Vertical Series Portfolio

**FHF – SureFlow® Vertical Hideaway,
200 CFM to 1200 CFM**



**FSF – SureFlow® Vertical Slope-Top
Cabinet, 200 CFM to 1200 CFM**



**FXF – SureFlow® Vertical Cabinet,
200 CFM to 1200 CFM**



Features and Benefits

Application Fit

- SureFlow® units are offered in many configurations making them adaptable to any space requirements.
- Because of the simplified design, SureFlow® makes it possible to apply hydronic systems in applications where a conventional scheme is too costly, or where a hydronic solution has not been applied in the past.
- The Btu flow design allows the loop to be sized for a capacity range. The result is a SureFlow® Loop rated at a total capacity and a constant pipe size, that is adaptable to future requirements.
- Decoupling the fan coil from the system permanently reduces central pump horsepower.

Design Flexibility

- The IEC Rating Program and SureFlow® Loop Simulator are available to assist the designer.
- SureFlow® designs can be combined with parallel systems where the advantages of each approach can be utilized.
- Simplified pipe designs save time and money by eliminating terminal unit balancing, reducing fittings, transitions, and accessories, reducing design time, reducing errors, and make the design easier to communicate.

Ease of Installation

- Self-balancing design eliminates the need to balance the fan coils on startup, reducing installation time and costs.
- Heating and cooling loops of a constant pipe size reduce field coordination compared to a stepped parallel system.

Reducing the number of pipes (2-to-1 and 4-to-2):

- Speeds the installation of the system and reduces the installed costs.
- Reduces core drilling on renovation projects.
- “As built” drawings and shop-to-field drawings are easier to create, monitor and record.
- Simplified takeoff saves time and improves accuracy,
- Reduction of purchasing and bill of material management, saving overhead costs, and SureFlow® is a system that can be installed as designed.

Reliability

- The circulator delivers the correct water flow to the SureFlow® fan coil ensuring performance and comfort are maintained.
- The self-balancing design results in more predictable operation.
- Standard SureFlow® units are UL and MEA listed.

Efficiency

- Eliminating balancing devices and associated specialties and their added pressure drop reduces the required pump horsepower and results in a more efficient and lower cost system.

Ratings and Listings



Intertek
3061627

HEATING AND COOLING EQUIPMENT

C-UL US Listing

IEC's SureFlow® Series units are listed by Underwriters' Laboratories. The C-UL US listing signifies that IEC's fan coil units have been examined by UL and are in compliance with both the U.S. and Canadian organizations' applicable standards.

Vertical Series SureFlow Standard Ratings

IEC's Vertical Series coils are tested in accordance with ARI 410.

Unit Type	Rows	Unit Size	CFM	Cooling Capacity	
				Total MBH	Sensible MBH
FHF FXF FSF	3-Rows	02	240	7.8	5.5
		03	295	9.4	6.7
		04	410	12.1	9.0
		06	620	16.3	12.7
		08	700	18.5	14.5
		10	915	23.5	18.7
	4-Rows	12	1100	26.7	21.9
		02	215	8.5	5.8
		03	285	10.7	7.5
		04	395	13.7	9.9
		06	605	19.1	14.3
		08	690	21.8	16.4
		10	885	27.0	20.7
		12	1070	30.6	24.2

- NOTES: 1. Ratings are based on 80°F DB and 67°F WB EAT, 45°F EWT, high fan speed, motor voltage 115/1/60, and airflow under dry coil conditions.
2. For all application ratings, use IEC's Rating Program or contact your local IEC representative.

Hydronic Heating Capacity

Vertical Series Heating

Unit Type	Rows	Unit Size	CFM	GPM	Capacity MBH
FHF FXF FSF	1-Row	02	215	3.2	9.1
		03	285	3.1	11.8
		04	395	2.9	15.9
		06	605	2.6	22.9
		08	690	2.6	26.2
		10	885	2.3	32.7
	2-Row	02	190	4.5	13.2
		03	260	4.4	17.8
		04	380	4.2	25.3
		06	590	4.0	37.1
		08	680	3.8	42.8
		10	860	3.6	53.1
	3-Row	02	240	3.9	16.5
		03	295	3.8	20.1
		04	410	3.6	27.0
		06	620	5.0	39.2
		08	700	4.9	44.6
		10	915	4.8	57.2
	4-Row	02	215	3.6	13.1
		03	285	3.5	17.1
		04	395	3.3	23.0
		06	605	4.8	34.1
		08	590	4.7	39.0
		10	885	4.5	49.1
		12	1070	4.5	57.4

- NOTES: 1. All base hot water capacities are given in thousands of Btuh (MBH).
 2. Ratings are based on 70°F EAT and 180°F EWT for 1 and 2 row coils, 160°F EWT for 3 row coils and 140°F EWT for 4 row coils.
 3. Data is taken from the IEC's Rating Program.

Air Performance

Air Performance (60 Hz) for Vertical Series

Model	Coil	Unit Size	CFM @ 0.0 ESP for Fan Speed			High Speed CFM @ ESP Indicated			
			Low	Med	High	0.05	0.10	0.15	0.20
FHF FXF FSF	3-Row	02	185	210	240	195	150	105	–
		03	205	250	295	260	220	185	155
		04	225	295	410	370	335	310	290
		06	310	460	620	565	515	475	440
		08	360	575	700	640	600	545	500
		10	490	675	915	850	780	725	655
		12	580	935	1100	1025	970	920	865
	4-Row	02	165	190	215	170	135	95	–
		03	200	240	285	245	205	170	140
		04	220	280	395	355	325	300	260
		06	305	450	605	550	505	465	430
		08	350	570	690	630	590	540	490
		10	475	650	885	820	755	700	635
		12	565	910	1070	995	945	895	840

- NOTES:**
1. Tabled values are standard CFM at sea level, 70°F with dry coil.
 2. Ratings include factory installed filter and/or grille, where applicable.
 3. Consult factory for 50 Hz applications.

Motor Data for Vertical Series

Thermal Overload Protection and UL Listing

All permanently lubricated split-capacitor motors furnished by IEC contain internal thermal-overload protection. The overload automatically resets when the temperature returns to a safe limit.

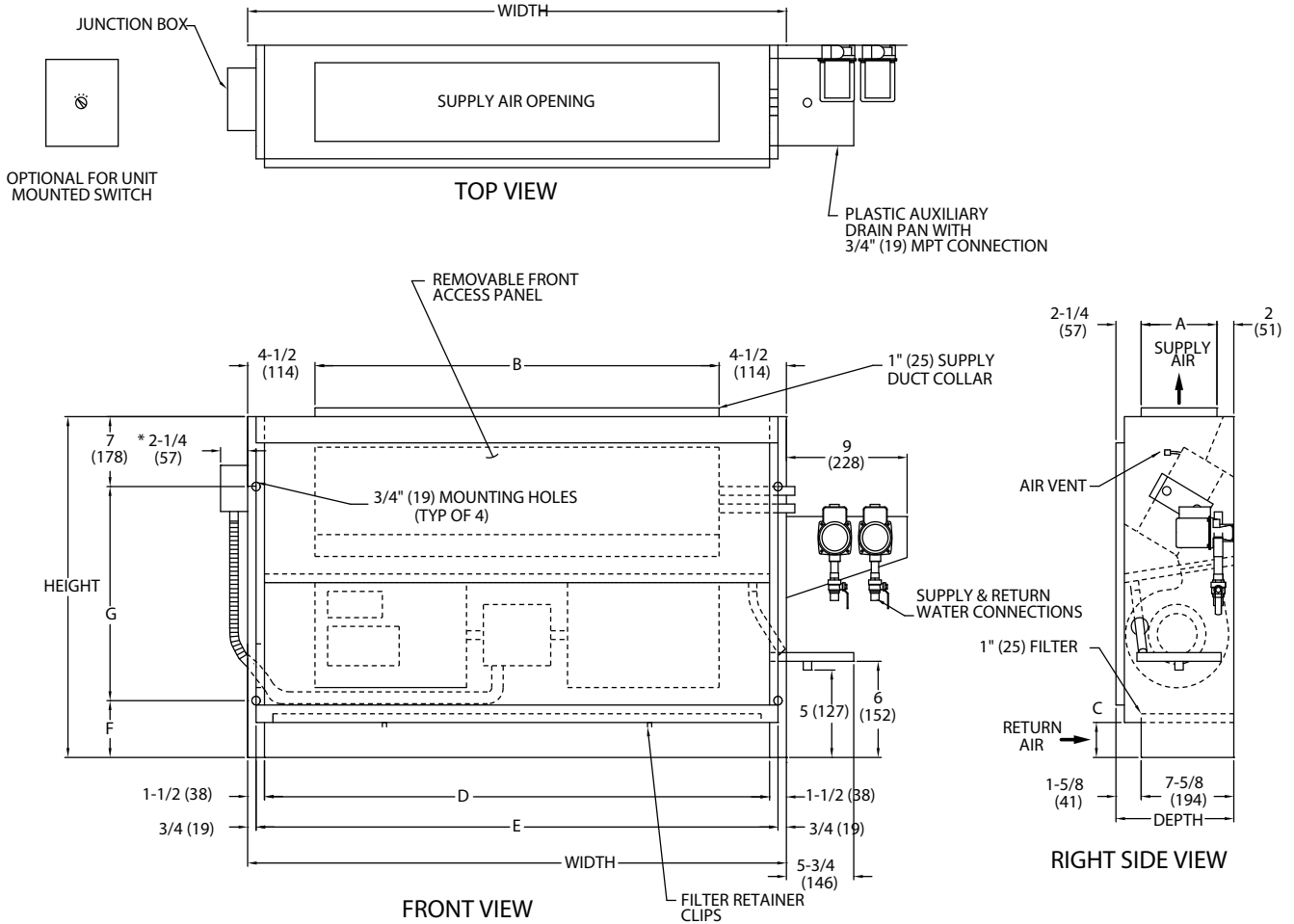
Motor Performance Data – FHF, FXF, FSF

Voltage	Fan Speed	Unit Size	02	03	04	06	08	10	12
		Nominal HP	1/30	1/30	1/12	1/6	1/6	(2) 1/12	(2) 1/6
115V 60 Hz 1-Phase	High	Amps	0.53	0.83	1.25	2.00	2.10	2.20	4.00
		Watts	80	80	130	200	210	250	370
	Medium	Amps	0.31	0.48	0.70	1.30	1.30	1.30	2.50
		Watts	50	50	75	140	140	145	265
	Low	Amps	0.27	0.33	0.47	0.57	0.61	0.40	1.25
		Watts	35	35	50	60	65	100	125
208V 60 Hz 1-Phase	High	Amps	0.45	0.46	0.64	1.00	1.00	1.20	2.00
		Watts	85	85	110	190	195	210	340
	Medium	Amps	0.29	0.29	0.40	0.59	0.69	0.80	1.15
		Watts	60	60	85	130	135	160	220
	Low	Amps	0.14	0.14	0.22	0.47	0.47	0.45	0.84
		Watts	28	28	45	90	90	90	170
230V 60 Hz 1-Phase	High	Amps	0.45	0.46	0.64	1.00	1.00	1.20	2.00
		Watts	100	102	120	205	215	235	370
	Medium	Amps	0.31	0.31	0.43	0.71	0.71	0.85	1.40
		Watts	70	70	100	150	155	190	285
	Low	Amps	0.15	0.15	0.24	0.50	0.50	0.50	1.00
		Watts	33	33	55	105	110	115	200
277V 60 Hz 1-Phase	High	Amps	0.33	0.34	0.63	0.92	0.92	1.26	1.84
		Watts	80	82	140	205	210	270	370
	Medium	Amps	0.26	0.26	0.44	0.57	0.58	0.82	1.10
		Watts	65	67	110	140	140	200	255
	Low	Amps	0.16	0.17	0.25	0.34	0.35	0.45	0.65
		Watts	40	43	65	80	85	125	145

NOTES: 1. Fan motor amps and watts only. Add circulator power for total rating.
2. Consult factory for 50 Hz applications.

Submittal Data

FHF – SureFlow® Vertical Hideaway



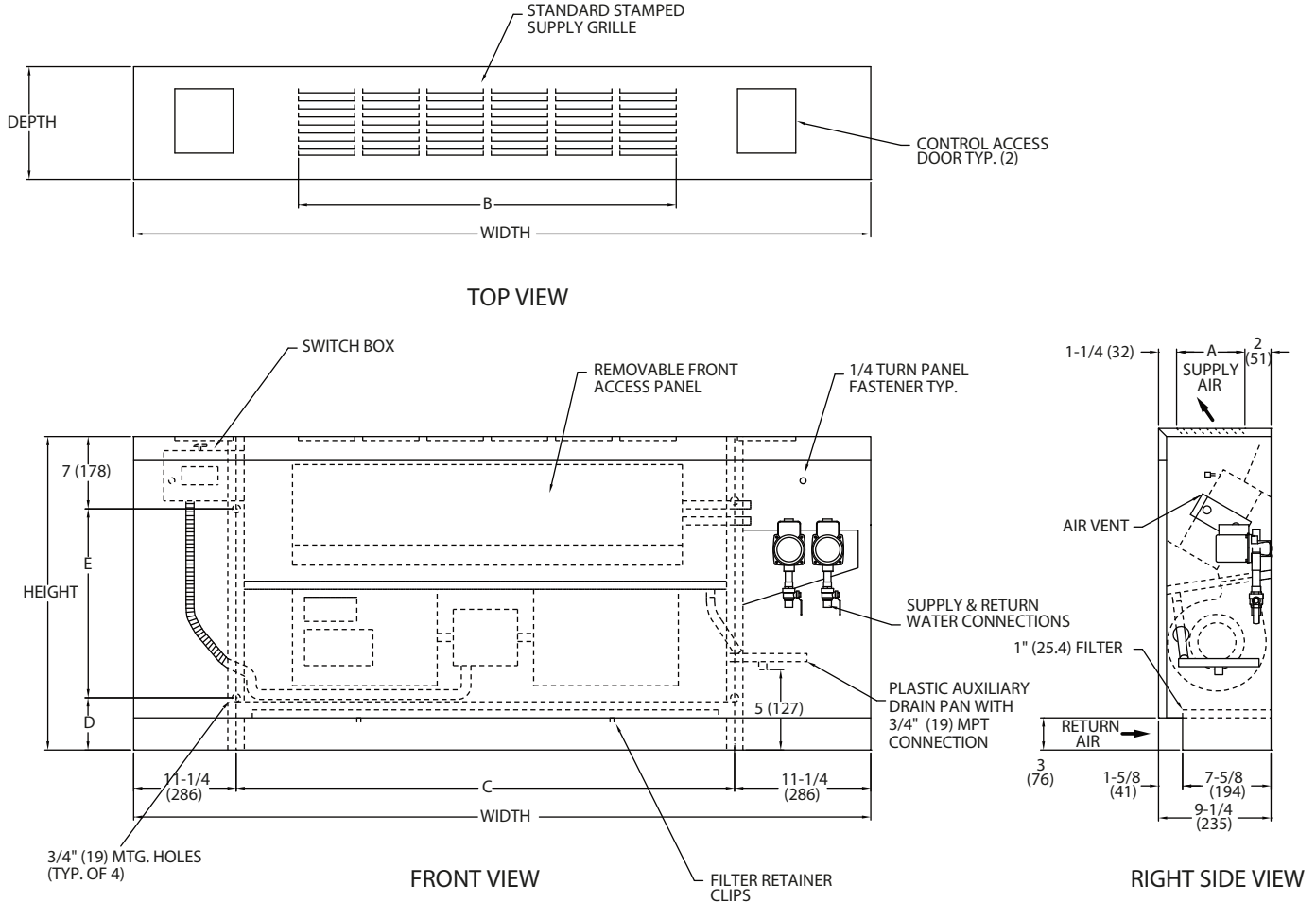
Size	Depth	Width	Height	Supply Air		Return Opening		Mounting Holes		
				A	B	C	D	E	F	G
02	9-1/4 (235)	25 (635)	25 (635)	5 (127)	16 (406)	3 (76)	22 (559)	23-1/2 (597)	4 (102)	14 (356)
03	9-1/4 (235)	29 (737)	25 (635)	5 (127)	20 (508)	3 (76)	26 (660)	27-1/2 (699)	4 (102)	14 (356)
04	9-1/4 (235)	35 (889)	25 (635)	5 (127)	26 (660)	3 (76)	32 (813)	33-1/2 (851)	4 (102)	14 (356)
06	9-1/4 (235)	45 (1143)	25 (635)	5 (127)	36 (914)	3 (76)	42 (1067)	43-1/2 (1105)	4 (102)	14 (356)
08	9-1/4 (235)	47 (1194)	25 (635)	5 (127)	38 (965)	3 (76)	45 (1143)	45-1/2 (1156)	4 (102)	14 (356)
10	9-1/4 (235)	61 (1549)	25 (635)	5 (127)	52 (1321)	3 (76)	58 (1473)	59-1/2 (1511)	4 (102)	14 (356)
12	9-1/4 (235)	69 (1753)	25 (635)	5 (127)	60 (1524)	3 (76)	66 (1676)	67-1/2 (1715)	4 (102)	14 (356)

- NOTES:**
- Any modifications to product specifications by any person are subject to acceptance of the IEC Home Office. Product specifications are subject to change without notice.
 - All dimension are $\pm 1/4$ -inch (6).
 - Dimensions in () are millimeters.
 - RH shown, LH opposite.
 - Addition of electric heat does not alter cabinet dimensions.
 - All unit supply/return water connections are $3/4$ -inch (19) nominal $\{7/8$ -inch (22) O.D. See page 65.
 - * $5 3/4$ (147) for optional unit mounted switch box.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

Submittal Data

FSF – SureFlow® Vertical Cabinet

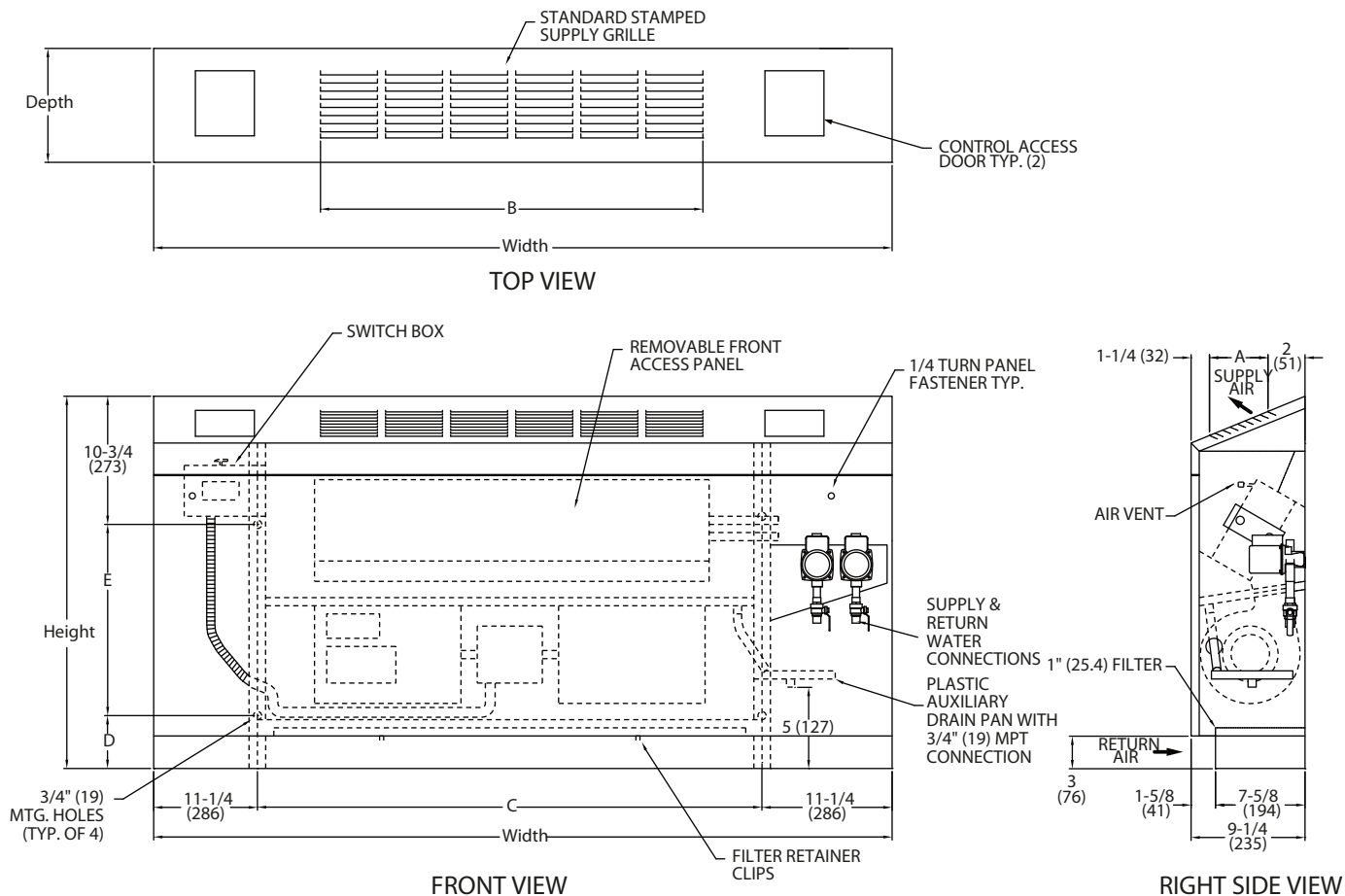


Size	Depth	Width	Height	Supply Air		Mounting Holes		
				A	B	C	D	E
02	9-1/4 (235)	46 (1168)	25 (635)	6 (152)	17-1/8 (435)	23-1/2 (597)	4 (102)	14 (356)
03	9-1/4 (235)	50 (1270)	25 (635)	6 (152)	21-1/2 (546)	27-1/2 (699)	4 (102)	14 (356)
04	9-1/4 (235)	56 (1422)	25 (635)	6 (152)	25-7/8 (657)	33-1/2 (851)	4 (102)	14 (356)
06	9-1/4 (235)	66 (1676)	25 (635)	6 (152)	39 (991)	43-1/2 (1105)	4 (102)	14 (356)
08	9-1/4 (235)	68 (1676)	25 (635)	6 (152)	39 (991)	45-1/2 (1156)	4 (102)	14 (356)
10	9-1/4 (235)	82 (2083)	25 (635)	6 (152)	52-1/8 (1324)	59-1/2 (1511)	4 (102)	14 (356)
12	9-1/4 (235)	90 (2286)	25 (635)	6 (152)	60-1/8 (1527)	67-1/2 (1715)	4 (102)	14 (356)

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 - Dimensions in () are millimeters.
 - RH shown, LH opposite.
 - Addition of electric heat does not alter cabinet dimensions.
 - All unit supply/return water connections are $3/4$ -inch (19) nominal { $7/8$ -inch (22) O.D.} See page 65.

**Drawing is provided for reference only.
Dimensions may vary with options ordered.
Consult IEC website for submittal drawings.**

FSF – SureFlow® Vertical Cabinet with Slope-Top



Size	Depth	Width	Height	Supply Air		Mounting Holes		
				A	B	C	D	E
02	9-1/4 (235)	46 (1168)	28-3/4 (730)	6 (152)	17-1/8 (435)	23-1/2 (597)	4 (102)	14 (356)
03	9-1/4 (235)	50 (1270)	28-3/4 (730)	6 (152)	21-1/2 (546)	27-1/2 (699)	4 (102)	14 (356)
04	9-1/4 (235)	56 (1422)	28-3/4 (730)	6 (152)	25-7/8 (657)	33-1/2 (851)	4 (102)	14 (356)
06	9-1/4 (235)	66 (1676)	28-3/4 (730)	6 (152)	39 (991)	43-1/2 (1105)	4 (102)	14 (356)
08	9-1/4 (235)	68 (1676)	28-3/4 (730)	6 (152)	39 (991)	45-1/2 (1156)	4 (102)	14 (356)
10	9-1/4 (235)	82 (2083)	28-3/4 (730)	6 (152)	52-1/8 (1324)	59-1/2 (1511)	4 (102)	14 (356)
12	9-1/4 (235)	90 (2286)	28-3/4 (730)	6 (152)	60-1/8 (1527)	67-1/2 (1715)	4 (102)	14 (356)

- NOTES:**
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Vertical F*A Series

FAN COIL TECHNICAL CATALOG



Contact your local IEC Sales Representative for further details and pricing applicable to this product. Visit our website (www.iec-okc.com) to find your local IEC Sales Rep.

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