

- 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

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.



## **Table of Contents**

- 4 Portfolio
- **5** Features and Benefits
- 6 Unit Model Key
- **7-8** Ratings and Listings
- **9-12** PSC Fan Curves FXC, FVC
- **13-16** PSC Fan Curves FHC
- **17-20** ECM Fan Curves FXC, FVC
- **21-24** ECM Fan Curves FHC
  - 25 Motor Performance Data
  - 26 Sound Power Data
  - 27 Electric Heating
  - **28** Exploded View FHC
- 29-33 Submittal Data FHC
  - **34** Exploded View FXC
- **35-38** Submittal Data FHC
  - **39** Exploded View FVC
- **40-44** Submittal Data FVC
  - **45** Air Flow Arrangements
- **46-57** Standard Features, Options and Accessories



# Portfolio

## Vertical Hideaway (FHC) 200 CFM to 1200 CFM

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



## Vertical Cabinet (FXC) 200 CFM to 1200 CFM

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

## Vertical Sloped Top Cabinet (FVC) 200 CFM to 1200 CFM

The Vertical Sloped Top Cabinet (FVC) 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 FVC cabinet is fabricated of heavy gauge steel. The 25-degree, sloped, top panel provides structural rigidity essential for an exposed unit. FVC units have a removable, one-piece front panel for easy access to all internal components. Standard FVC 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 (FXC) 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 (FVC) 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 (FHC) 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 FVC/ FXC 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.

• Product integrated into IEC's computer rating program for quick performance calculations to aid in unit selection & quoting.

#### **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 & Canada.
- AHRI certified for performance to AHRI 440.
- All hydronic coils are pressure tested to 300 psig.



# **Unit Model Key**



- Phase 1 • 1-Phase

3 • 3-Phase

- C Basic Series, 156, Unit Mounted
- 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

Consult factory for 50 Hz applications.
 Standing in front of the unit, hand is
 determined by looking into the air supplication.

E • 240V

F • 277V

V • 220V (50 Hz)\*

U • 240V (50 Hz)\*

- determined by looking into the air supply and assigning the hand to match the location of the cooling coil connections.
- \*\*\* Note that kWs 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.

Water

Pressure

Drop (ft.

water) 7.2

17.5

15.0

6.0

8.5

15.0

12.9

15.5

6.3

4.1

9.1

5.5

6.0

14.1

11.9

5.0

17.5

13.6

12.5

21.3

18.3

6.8

17.2

18.3



Sensible

Cap.

(Btuh)

3,900

4,700

5,200

4,400

5,900

6,400

7,600

8,800

9,100

9,700

10,500

11,800

10,200

13,400

14,200

10,700

14,400

14,300

18,700

21,100

19,900

20,200

23,900

25,600

Power

Input

(Watts)

65

65

65

80

80

80

150

135

135

225

180

230

200

190

190

200

200

200

290

275

275

360

355

350

Total

Cap.

(Btuh)

5,100

6,900

8,000

5,800

8,100

9,500

9,300

11,600

12,700

11,700

15,400

17,500

13,000

18,700

20,600

14,000

20,800

21,700

25,200

31,700

30,700

25,300

34,100

38,900

#### **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)		Model	Size	Coil Rows	Air Flow Rating (SCFM)
	02	2	200	7.2	5,100	3,900	65			02	2	200
	02	3	200	17.5	6,900	4,700	65			02	3	200
	02	4	200	9.4	7,900	5,200	65			02	4	200
	03	2	300	4.4	5,800	4,400	80			03	2	280
	03	3	300	8.5	8,100	5,900	80			03	3	300
	03	4	250	15.0	9,200	6,500	80			03	4	270
	04	2	400	12.9	9,500	7,600	150			04	2	400
	04	3	400	20.0	11,400	8,400	135			04	3	400
	04	4	400	6.3	12,700	9,100	135			04	4	400
	05	2	500	4.1	11,700	9,700	225		FXC, FVC	05	2	500
	05	3	500	9.1	15,400	10,500	180			05	3	500
FHC	05	4	500	10.0	17,500	11,800	230			05	4	500
	06	2	600	3.5	13,000	10,200	190			06	2	600
	06	3	600	14.1	18,700	13,400	190			06	3	600
	06	4	600	11.9	20,600	14,200	190			06	4	600
	08	2	680	5.0	14,000	10,700	200			08	2	680
	08	3	680	17.5	20,800	14,400	200			08	3	680
	08	4	680	13.6	21,700	14,300	200			08	4	680
	10	2	1,000	12.5	25,200	18,700	290			10	2	1,000
	10	3	1,000	21.3	31,700	21,100	275			10	3	1,000
	10	4	1,000	18.3	30,700	19,900	275			10	4	1,000
	12	2	1,200	6.8	25,300	20,200	360			12	2	1,200
	12	3	1,200	17.2	34,100	23,900	355				12	3
	12	4	1,200	18.3	38,900	25,600	350			12	4	1,200



# Rating and Listings, Cont'd.

#### **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)		Model	Size	Coil Rows	Air Flow Rating (SCFM)	Water Pressure Drop (ft. water)	Total Cap. (Btuh)	Sensible Cap. (Btuh)	Power Input (Watts)
	02	2	200	10.0	5,100	3,900	45			02	2	200	7.2	5,100	3,900	65
	02	3	200	17.5	6,900	4,700	65			02	3	200	17.5	6,900	4,700	65
	02	4	200	15.0	8,100	5,200	45			02	4	200	9.4	8,100	5,200	65
	03	2	300	4.4	5,800	4,400	80			03	2	300	6.0	5,800	4,400	80
	03	3	300	8.5	8,100	5,900	80			03	3	300	8.5	8,100	5,900	80
	03	4	300	20.0	9,200	6,500	80			03	4	285	15.0	10,000	6,800	70
	04	2	400	12.9	9,500	7,600	150		04	2	400	12.9	9,500	7,600	150	
	04	3	400	15.5	11,600	8,800	135		04	3	400	15.5	11,600	8,800	135	
	04	4	400	6.3	12,300	8,600	90			04	4	400	6.3	12,700	9,100	135
	05	2	500	4.1	11,700	9,700	225		05	2	500	4.1	11,700	9,700	225	
	05	3	500	9.1	15,400	10,500	180		FXC, FVC	05	3	500	9.1	15,400	10,500	125
	05	4	500	5.5	17,500	11,800	230			05	4	500	5.5	17,500	11,800	230
FHC	06	2	600	3.5	13,000	10,200	190			06	2	600	6.0	13,000	10,200	135
	06	3	600	14.1	18,700	13,400	190			06	3	600	14.1	18,700	13,400	190
	06	4	600	11.9	20,600	14,200	190			06	4	600	11.9	20,600	14,200	190
	08	2	680	5.0	14,000	10,700	200			08	2	680	5.0	14,000	10,700	200
	08	3	680	17.5	20,800	14,400	160			08	3	680	17.5	20,800	14,400	200
	08	4	680	13.6	21,700	14,300	200			08	4	680	13.6	21,700	14,300	200
	10	2	1,000	12.5	25,200	18,700	290			10	2	1,000	17.0	25,200	18,700	265
	10	3	1,000	21.3	31,700	21,100	200			10	3	1,000	21.3	31,700	21,100	275
	10	4	1,000	18.3	30,700	19,900	275			10	4	1,000	18.3	30,700	19,900	275
	12	2	1,200	6.8	25,300	20,200	360			12	2	1,200	6.8	25,300	20,200	360
	12	3	1,200	17.2	34,100	23,900	235			12	3	1,150	17.2	34,100	23,900	355
	12	4	1,200	18.3	38,900	25,600	350			12	4	1,200	18.3	38,900	25,600	350

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.



# PSC Fan Curves – FXC, FVC

**NOTE:** Static pressure losses for factory-installed throwaway air filter and supply/return air grilles (where applicable) are included in all fan performance curves for all sizes.







# PSC Fan Curves – FXC, FVC, Cont'd.







# PSC Fan Curves – FXC, FVC, Cont'd.







# PSC Fan Curves – FXC, FVC, Cont'd.







## **PSC Fan Curves – FHC**







# PSC Fan Curves – FHC, Cont'd.







# PSC Fan Curves – FHC, Cont'd.







# PSC Fan Curves – FHC, Cont'd.







# ECM Fan Curves – FXC, FVC







# ECM Fan Curves - FXC, FVC, Cont'd.







# ECM Fan Curves - FXC, FVC, Cont'd.







# ECM Fan Curves - FXC, FVC, Cont'd.







# **ECM Fan Curves – FHC**







# ECM Fan Curves - FHC, Cont'd.







# ECM Fan Curves - FHC, Cont'd.







# ECM Fan Curves - FHC, Cont'd.







## **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.

		Unit Size	02	03	04	05	06	08	10	12
Voltage	Fan Speed	Nominal HP	1/40	1/30	1/12	1/6	1/6	1/6	(2)-1/12	(2)-1/6
		Amps	0.40	0.80	1.60	2.50	2.50	2.50	3.20	5.00
115V	High		57	77	119	206	185	191	259	336
60 Hz	Medium	Watts	52	65	83	124	146	146	174	254
1-Phase	Low		43	49	62	73	88	80	131	159
208	High		46	87	102	178	148	154	224	269
60 Hz	Medium	1 Watts	39	62	79	84	100	98	173	189
1-Phase	Low		33	30	52	63	60	53	110	117
230V	High		53	104	116	235	161	170	257	293
60 Hz	Medium	Watts	45	73	90	95	113	112	197	211
1-Phase	Low		40	35	60	71	71	64	130	138
277∨	High		50	82	137	96	156	195	272	354
60 Hz	Medium	Watts	41	61	102	69	140	133	215	249
1-Phase	Low		33	47	74	67	115	107	139	212

#### PSC Motor Performance Data — FXC, FVC - 3 Row Coil

#### PSC Motor Performance Data — FHC - 3 Row Coil

		Unit Size	02	03	04	05	06	08	10	12
Voltage	Fan Speed	Nominal HP	1/40	1/30	1/12	1/6	1/6	1/6	(2)-1/12	(2)-1/6
		Amps	0.40	0.80	1.60	2.50	2.50	2.50	3.20	5.00
115V	High		48	79	145	218	184	185	266	339
60 Hz	Medium	Watts	43	49	87	128	142	142	175	259
1-Phase	Low		35	36	54	73	85	77	134	161
208V	High		67	94	104	173	148	151	216	268
60 Hz	Medium	Watts	61	73	78	86	101	97	169	190
1-Phase	Low		55	50	45	65	59	52	110	117
230V	High		67	94	104	173	148	151	216	268
60 Hz	Medium	Watts	61	73	78	86	101	97	169	190
1-Phase	Low		55	50	45	65	59	52	110	117
277∨	High		50	83	136	96	172	194	274	350
60 Hz	Medium	Watts	41	62	107	72	131	132	219	247
1-Phase	Low		33	48	68	70	110	106	141	212

NOTES: 1. Total unit PSC motor Amps and Watts are shown. (Consult factory for ECM motor amps and watts). 2. Consult factory for 50 Hz applications.

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

	Unit Size	F**02	F**03	F**04	F**05	F**06	F**08	F**10	F**12
Voltage	Nominal HP	1/7	1/7	1/6	1/6	1/6	1/6	(2) 1/6	(2) 1/6
1201/	Rated Motor FLA	2.3	2.3	2.4	2.4	2.4	2.4	2.4, 2.4	2.4, 2.4
1200	Max Program Current	1.2	1.4	1.5	2.3	2.2	2.4	2.0, 2.0	2.4, 2.4
	Rated Motor FLA	1.4	1.4	1.6	1.6	1.6	1.6	1.6, 1.6	1.6, 1.6
208-240V	Max Program Current	0.7	0.9	1.0	1.4	1.4	1.6	1.3, 1.3	1.6, 1.6
2771/	Rated Motor FLA	1.2	1.2	1.3	1.3	1.3	1.3	1.3, 1.3	1.3, 1.3
2770	Max Program Current	0.6	0.7	0.8	1.3	1.2	1.3	1.1, 1.1	1.3, 1.3



## **Sound Power Data**

#### FXC, FVC, FHC Sound Power Data

	DATING	FAN	0514		SOUND P	OWER LEVE	EL, Lw (dB re	eference one	picowatt)		A-wgt
UNIT SIZE	RATING	SPEED	СЕМ	125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz	(dBA)
		н	245	56	60	52	46	42	36	35	54
2	CASING RADIATED	М	210	54	57	48	41	38	31	35	51
	10.000.1120	L	145	48	46	40	33	28	29	34	43
		н	315	59	63	57	55	47	43	38	60
3	CASING	м	260	54	57	54	47	40	35	35	54
		L	225	50	51	49	40	32	30	35	49
		н	485	62	68	60	56	51	46	41	63
4	CASING	М	350	56	63	53	49	43	37	35	56
		L	280	54	52	47	44	35	31	34	49
		н	575	70	68	62	58	52	48	43	64
5	CASING RADIATED	м	530	67	66	60	57	50	46	41	63
		L	385	64	60	54	48	41	36	36	55
		н	630	66	69	62	59	52	48	42	65
6		М	555	65	67	60	56	50	45	39	62
		L	385	59	54	50	44	36	61	35	51
		н	690	66	69	63	60	54	51	46	66
8	CASING	М	605	66	71	61	58	52	48	43	65
		L	375	63	60	54	47	41	34	35	55
		н	970	64	67	64	60	54	49	42	65
10	CASING RADIATED	М	725	58	62	58	52	45	38	35	58
		L	590	54	56	52	45	38	32	34	52
		Н	1165	68	72	66	62	56	52	47	69
12	CASING	М	1030	68	72	64	60	54	49	44	67
	RADIATED	L	735	65	63	56	50	43	37	34	57

NOTES: 1. Casing Radiated Testing per AHRI 350-2008: 4.2.2.3 Casing radiated with free inlet, Sound Rating of Ducted Air Moving and Conditioning Equipment.
 2. Unit Test Configuration: Bottom Return/ Stamped Louver Top Supply, 3 Row 3/8" 12 FPI Coil, 115 VAC PSC Motor, 1/2" dual density figerglass insulation.
 3. Sound power data is expressed in decibels, dB RE: 1 x 10<sup>-12</sup> w (picowatts).





## **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.

#### **Electric Heater Selection**

					Unit	Size			
Voltage	KVV	02	03	04	05	06	08	10	12
	1.0	•	•	•	•	•	-	-	-
40014	1.5	-	•	•	•	•	-	-	-
1200	2.0	-	-	•	•	•	•	-	-
	3.0	-	-	-	•	•	•	•	•
	1.0	•	•	•	•	•	-	-	-
208V	1.5	-	•	•	•	•	-	-	-
240V	2.0	-	-	•	•	•	•	-	-
50Hz	3.0	-	-	-	•	•	•	•	•
	4.0	-	-	-	-	-	•	•	•
	1.0	•	•	•	•	•	-	-	-
	1.5	-	•	•	•	•	-	-	-
	2.0	-	-	•	•	•	•	-	-
277V	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 Amerpage = (Heater kW x 1000)/Applied Voltage.

#### 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.



# **Exploded View – FHC**

## FHC – Vertical Hideaway, with Top Supply

ITEM	DESCRIPTION
1	COIL 3/8 ASSY
2	DRAIN TROUGH F*C
3	CTRL BOX 85 BRKT F*C
4	CNTL PKG
5	TOP COIL BAF F*C
6	TOP PNL DUCT FHC
7	BASE PL F*C
8	FRNT PNL ASSY FHC
9	FILTER
10	AUX DRAIN PAN F*C
11	CHASSIS F*C ASSY
12	MOT BLO DECK ASSY F*C





## Submittal Data – FHC



FHC – Ver	tical Hidea	way Top	Supply
-----------	-------------	---------	--------

		Dimensions – Inches (Millimeters)							
Unit Model	А	В	С	D	Blower	Motor	Weight*		
FHC02	23-1/2 (597)	22 (559)	23 (584)	16 (406)	1	1	42		
FHC03	23-1/2 (597)	22 (559)	23 (584)	18 (457)	1	1	47		
FHC04	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	57		
FHC05	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	60		
FHC06	43-1/2 (1105)	42 (1067)	43 (1092)	36 (914)	2	1	77		
FHC08	45-1/2 (1156)	44 (1118)	45 (1143)	38 (965)	2	1	79		
FHC10	59-1/2 (1511)	58 (1473)	59 (1499)	52 (1321)	4	2	108		
FHC12	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 (95) for all models with the exclusion of the 300 which is 2-3/4 (70).
1. RH coil shown, LH opposite.

2. All dimensions are +/- .25 (6). Drawing not to scale. 3.

Product specifications are subject to changes without notice. 4. Control box size and positin may vary (consult factory).

5. Position may vary.

Service access is located on the front of the control box.

6. 7. Knockouts on the bottom and side of the control box for incoming power connections.



# Vertical F\*C Series

FAN COIL TECHNICAL CATALOG

# Submittal Data – FHC, Cont'd.

## FHC – Vertical Hideaway Top Supply with Electric Heat



		Dimensions – Inc	hes (Millimeters)		Quanti	ty/Unit	Unit
Unit Model	А	В	С	D	Blower	Motor	Weight*
FHC02	23-1/2 (597)	22 (559)	23 (584)	16 (406)	1	1	44
FHC03	23-1/2 (597)	22 (559)	23 (584)	18 (457)	1	1	49
FHC04	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	59
FHC05	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	62
FHC06	43-1/2 (1105)	42 (1067)	43 (1092)	36 (914)	2	1	80
FHC08	45-1/2 (1156	44 (1118)	45 (1143)	38 (965)	2	1	82
FHC10	59-1/2 (1511)	58 (1473)	59 (1499)	52 (1321)	4	2	111
FHC12	67-1/2 (1715)	66 (1676)	67 (1702)	60 (1524)	4	2	130

NOTES: \* Unit weights (shown in pounds) are based on dry coils, minimum rows and exclude packaging, valves or other components \*\* 3-3/4 (95) for all models with the exclusion of the 300 which is 2-3/4 (70).

1. RH coil shown, LH opposite. 2.

All dimensions are +/- .25 (6). Drawing not to scale. 3. Product specifications are subject to changes without notice.

Control box size and positin may vary (consult factory). 4.

Position may vary. 5

Service access is located on the front of the control box. 6.

7. Knockouts on the bottom and side of the control box for incoming power connections.



# Submittal Data – FHC, Cont'd.

## FHC – Vertical Hideaway Front Supply



		Dimensions – Inc	ches (Millimeters)		Quanti	ty/Unit	Unit
Unit Model	А	В	С	D	Blower	Motor	Weight**
FHC02	23-1/2 (597)	22 (559)	23 (584)	16 (406)	1	1	42
FHC03	23-1/2 (597)	22 (559)	23 (584)	18 (457)	1	1	47
FHC04	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	57
FHC05	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	60
FHC06	43-1/2 (1105)	42 (1067)	43 (1092)	36 (914)	2	1	77
FHC08	45-1/2 (1156)	44 (1118)	45 (1143)	38 (965)	2	1	79
FHC10	59-1/2 (1511)	58 (1473)	59 (1499)	52 (1321)	4	2	108
FHC12	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 (95) for all models with the exclusion of the 300 which is 2-3/4 (70).

1. RH coil shown, LH opposite.

All dimensions are +/- .25 (6). Drawing not to scale.
 Product specifications are subject to changes without notice.

Product specifications are subject to changes without notice.
 Control box size and positin may vary (consult factory).

Control box size al
 Position may vary.

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



## Submittal Data - FHC, Cont'd.

## FHC – Vertical Hideaway Front Supply with Electric Heat



Unit Model		Dimensions – Inc	hes (Millimeters)		Quanti	ty/Unit	Unit
	А	В	С	D	Blower	Motor	Weight*
FHC02	23-1/2 (597)	22 (559)	23 (584)	16 (406)	1	1	44
FHC03	23-1/2 (597)	22 (559)	23 (584)	18 (457)	1	1	49
FHC04	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	59
FHC05	33-1/2 (851)	32 (813)	33 (838)	26 (660)	2	1	62
FHC06	43-1/2 (1105)	42 (1067)	43 (1092)	36 (914)	2	1	80
FHC08	45-1/2 (1156	44 (1118)	45 (1143)	38 (965)	2	1	82
FHC10	59-1/2 (1511)	58 (1473)	59 (1499)	52 (1321)	4	2	111
FHC12	67-1/2 (1715)	66 (1676)	67 (1702)	60 (1524)	4	2	130

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

\*\* 3-3/4 (95) for all models with the exclusion of the 300 which is 2-3/4 (70). RH coil shown, LH opposite.

1.

2. All dimensions are +/- .25 (6). Drawing not to scale. 3

Product specifications are subject to changes without notice. 4. Control box size and positin 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.



# Submittal Data – FHC, Cont'd.

#### FHC – Decorative Wall Panel



	Dimensions – Inches (Millimeters)						
Nominal CFM	Panel Width	Frame Width	pening				
	А	В	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)			



# **Exploded View – FXC**

## FXC – Vertical Flat Top, with Top Supply

ITEM	DESCRIPTION
1	COIL 3/8 ASSY 3/0 F*CO6 LH
2	DRAIN TROUGH F*C 06 LH
3	OTR CASE LEG FXC/FVC PTD
4	TOP PNL ASSY LVR FXCO6
5	FRNT PNL ASSY SOL FX:FV06
6	SUBBS F*C RH PTD
7	CTRL BOX 85 BRKT F*C
8	CNTL PKG
9	TOP COIL BAF F*CO6
10	BASE PL F*C 06
11	FILTER
12	AUX DRAIN PAN F*CO2-12
13	CHASSIS F*C ASSY 06
14	MOT BLO DECK ASSY F*CO6





## Submittal Data – FXC



### **FXC – Vertical Cabinet Top Supply**

		Dimensions – Inc	hes (Millimeters)		Quanti	ty/Unit	nit Unit	
Unit Model	А	В	С	D	Blower	Motor	Weight*	
FXC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	63	
FXC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	68	
FXC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	82	
FXC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	85	
FXC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	99	
FXC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	101	
FXC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	133	
FXC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	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 +/- .25 (6). Drawing no to scale.

Product specifications are subject to changes without notice.
 Control box size and position may vary (consult factory).

Control box size al
 Position may vary.

Service access is located on the front of the control box.

Knockouts on the bottom and side of the control box for incoming power connections

7. Riberouts of the bottom and side



## Submittal Data – FXC, Cont'd.

## FXC – Vertical Cabinet Top Supply with Electric Heat



		Dimensions – Inc	hes (Millimeters)		Quanti	ty/Unit	Unit
Unit Model	А	В	с	D	Blower	Motor	Weight*
FXC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	65
FXC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	70
FXC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	84
FXC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	87
FXC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	102
FXC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	104
FXC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	136
FXC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2	157

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

1.

2.

All dimensions are +/- .25 (6). Drawing no to scale. Product specifications are subject to changes without notice. 3.

4. Control box size and position may vary (consult factory).

5.

Position may vary. Service access is located on the front of the control box. 6.

Knockouts on the bottom and side of the control box for incoming power connections.



## Submittal Data – FXC, Cont'd.

## **FXC – Vertical Cabinet Front Supply**



Unit Model		Dimensions – Inc	hes (Millimeters)		Quanti	Unit	
	А	В	с	D	Blower	Motor	Weight*
FXC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	63
FXC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	68
FXC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	82
FXC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	85
FXC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	99
FXC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	101
FXC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	133
FXC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2	154

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

1. 2.

RH coil shown, LH opposite. All dimensions are +/- .25 (6). Drawing no to scale. Product specifications are subject to changes without notice.

3. 4. Control box size and position may vary (consult factory).

5. Position may vary.

Service access is located on the front of the control box. 6. 7.

Knockouts on the bottom and side of the control box for incoming power connections.



# **Vertical F\*C Series**

FAN COIL TECHNICAL CATALOG

# Submittal Data – FXC, Cont'd.

## FXC – Vertical Cabinet Front Supply with Electric Heat



		Dimensions – Inc	ches (Millimeters)		Quanti	Unit	
Unit Model	Α	В	С	D	Blower	Motor	Weight*
FXC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	63
FXC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	68
FXC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	82
FXC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	85
FXC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	99
FXC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	101
FXC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	133
FXC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2	154

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

RH coil shown, LH opposite. All dimensions are +/- .25 (6). Drawing no to scale. 1.

2. Product specifications are subject to changes without notice. 3.

4. Control box size and position may vary (consult factory).

5

Position may vary. Service access is located on the front of the control box. 6. 7.

Knockouts on the bottom and side of the control box for incoming power connections.



# **Exploded View – FVC**

## FVC – Vertical Sloped Top, with Top Supply

ITEM	DESCRIPTION
1	COIL 3/8 ASSY
2	DRAIN TROUGH F*C
3	OTR CASE LEG FXC/FVC
4	TOP PNL LVR FVC
5	FRNT PNL ASSY SOL FX:FV
6	SUBBS PNTD F*C RH
7	SUBBS PNTD F*C LH
8	CTRL BOX 85 BRKT F*C
9	CNTL PKG
10	TOP COIL BAF INS F*C
11	WRPR EXT ASSY FVC
12	BASE PL F*C
13	FILTER
14	AUX DRAIN PAN F*C
15	CHASSIS F*C ASSY
16	MOT BLO DECK ASSY F*C





# **Vertical F\*C Series**

FAN COIL TECHNICAL CATALOG

# Submittal Data – FVC, Cont'd.

## **FVC – Vertical Sloped Cabinet Top Supply**



		Dimensions – Inc	hes (Millimeters)		Quanti	ty/Unit	y/Unit Unit	
Unit Model	А	В	С	D	Blower	Motor	Weight*	
FVC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	64	
FVC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	69	
FVC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	83	
FVC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	86	
FVC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	100	
FVC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	102	
FVC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	135	
FVC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	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. All dimensions are +/- .25 (6). Drawing no to scale. 2.

Product specifications are subject to changes without notice. 3. 4. Control box size and position may vary (consult factory).

5.

Position may vary. Service access is located on the front of the control box.

6. 7. Knockouts on the bottom and side of the control box for incoming power connections.



# Submittal Data – FVC, Cont'd.

#### FVC – Vertical Sloped Cabinet Top Supply with Electric Heat



		Dimensions – Inc	hes (Millimeters)		Quanti	Unit	
Unit Model	А	В	с	D	Blower	Motor	Weight*
FVC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	66
FVC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	71
FVC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	85
FVC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	88
FVC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	103
FVC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	105
FVC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	138
FVC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2	159

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

RH coil shown, LH opposite. All dimensions are +/- .25 (6). Drawing no to scale. 1.

2. Product specifications are subject to changes without notice. 3.

4. Control box size and position may vary (consult factory).

5. Position may vary.

Service access is located on the front of the control box.

6. 7. Knockouts on the bottom and side of the control box for incoming power connections.



# **Vertical F\*C Series**

FAN COIL TECHNICAL CATALOG

## Submittal Data – FVC, Cont'd.

**FVC – Vertical Sloped Cabinet Front Supply** 



Unit Madal		Dimensions – Inc	hes (Millimeters)		Quanti	ty/Unit	it Unit	
Unit Model	А	В	С	D	Blower	Motor	Weight*	
FVC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	64	
FVC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	69	
FVC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	83	
FVC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	86	
FVC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	100	
FVC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	102	
FVC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	135	
FVC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2	156	

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

1.

All dimensions are +/- .25 (6). Drawing no to scale. Product specifications are subject to changes without notice. 2.

3.

4. Control box size and position may vary (consult factory).

5.

Position may vary. Service access is located on the front of the control box. 6. 7.

Knockouts on the bottom and side of the control box for incoming power connections.



# Submittal Data – FVC, Cont'd.

#### FVC – Vertical Sloped Cabinet Front Supply with Electric Heat



Linit Medel		Dimensions – Inc	hes (Millimeters)		Quanti	Unit	
Unit Model	А	В	с	D	Blower	Motor	Weight*
FVC02	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	66
FVC03	41 (1041)	22 (559)	23 (584)	17-1/4 (438)	1	1	71
FVC04	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	85
FVC05	51 (1295)	32 (813)	33 (838)	26 (660)	2	1	88
FVC06	61 (1549)	42 (1067)	43 (1092)	39 (991)	2	1	103
FVC08	63 (1600)	44 (1118)	45 (1143)	39 (991)	2	1	105
FVC10	77 (1956)	58 (1473)	59 (1499)	52-1/8 (1324)	4	2	138
FVC12	85 (2159)	66 (1676)	67 (1702)	61 (1549)	4	2	159

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

RH coil shown, LH opposite. All dimensions are +/- .25 (6). Drawing no to scale. 1.

2. Product specifications are subject to changes without notice.

3. 4. Control box size and position may vary (consult factory).

5. Position may vary.

Service access is located on the front of the control box. 6.

7. Knockouts on the bottom and side of the control box for incoming power connections.



# Submittal Data, Cont'd.



# - 7-3/8 (187) -- 4-1/4 (108)-AIR VENT CS HR CR HS 16-1/8 (410) 14-1/2 (368)

#### LEFT-HAND CONNECTIONS VIEW

Lingt Mandal	Quantity/Unit				
Unit Model	Blower	Motor			
02	1	1			
03	1	1			
04	2	1			
05	2	1			
06	2	1			
08	2	1			
10	4	2			
12	4	2			

NOTES: 1. All dimensions are +/- 1/4" (6).

Product specifications are subject to change without notice.
 Same side coil connections shown. Consult factory for opposite end applications.



**RIGHT-HAND CONNECTIONS VIEW** 

HR - Hot Water Return HS - Hot Water Supply CR - Cold Water Return CS - Cold Water Supply

# **Air Flow Arrangements**

Front Return, Front Supply

SIDE VIEW

## FHC – Vertical Hideaway Cabinet Heater



## FXC – Vertical Cabinet Heater





Front Return, Top Supply





**FVC – Vertical Sloped Top Cabinet Heater** 







Front Return, Front Supply





# **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 (FHC, FXC, FVC)	X			
Front Return/Front Supply (FHC, FXC, FVC)		Х		
Coils				
2, 3, 4 Row, 2-Pipe (FHC, FXC, FVC)	Х	Х		
3/1, 3/2, 4/0, or 4/1-Rows (FHC, FXC, FVC)		Х		
Manual Air Vent	Х			
Automatic Air Vent		Х		
Coil Test Pressure 350	Х			
Coil Test Pressure 400, 450		Х		
Connection				
Right or Left (Same End Standard, Opposite End Optional)	Х	Х		
Drain Pan				
Painted, Galvanized Externally Coated with a 2-part Closed Cell Foam	Х			
Stainless Steel Externally Coated		Х		
Plastic Auxiliary Drain Pan	х			
Fin Material				
Aluminum w/Galvanized End Sheets	X			
Copper w/Stainless End Sheets & Bottom Coil Baffle				Х
Nichrome Wire Strip Electric Heater (Total and Auxiliary)		Х		
Indoor Air Quality				
1" Throwaway Non-Woven Synthetic	Х			
1" Permanent		Х		
1" MERV 8 Pleated		Х		
1" MERV 13 Pleated				Х
2" MERV 8 Pleated				Х
2" MERV 13 Pleated				Х
Bipolar Ionizer		Х		
Insulation				
1/2" Standard Fiberglass	Х			
1/2" Premium IAQ Fiberglass		Х		
1/2" Foil Face		Х		
1/4" Closed Cell		Х		
Motor Type				
PSC Motors w/Quick Connect Plug	Х			
Constant Torque ECM Motors		Х		
Motor Voltage				
120/1/60 3-Speed	Х			
208/230/277/1/60, 220/1/50 3-Speed		X		
Supply/Return Air Grilles				
Stamped Supply Grille (FXC, FVC)	Х			
Double Deflection Integral Supply Grille, Painted (FXC, FVC)		Х		
Double Deflection Aluminum Supply Grille (FXC, FVC)		X		
Stamped Return Grille (FXC, FVC)		X		

table continued on next page



Features and Options	Standar	d Factory	Field Installed	Factory Spec
Paint Options (FXC, FVC)				
Arctic White	Х			
Polar White, Flat Black, Ermine Gray, Champagne Beige, Toffee Brown		Х		
Special Color				Х
Controls		L1		
Service Switch with Lockout Tabs		Х		
Single Point Power Connection		Х		
ncoming Power Fusing		Х		
24V Controls		Х		
Three Speed Switch		Х		
Condensate Float Switch		Х		
Thermostats		Х	Х	
Outside Air Dampers				
Manually Controlled Damper (FHC, FXC, FVC)		Х		
Motorized Controlled Damper (FHC, FXC, FVC)		Х		
Dutside Air Box (FHC, FXC, FVC)			Х	
L8ga Decorative Framed Wall Panels (FHC)			Х	
Cabinet Options				
Rear Cabinet Extensions		Х		
eft/Right Cabinet Extensions		Х		
Height Cabinet Extensions		Х		
1", 2.5" Leveling Legs		Х		
16ga, 14ga Cabinet		Х		
- Finished Back Panel		Х		
Camlocks on Access Doors		Х		
Camlocks on Front/Wall Panels		Х		
/alve Package Options* (* Valve packages are assembled at the factory but	field installed.)			
Jnion Connections at the Coil			Х	
24" Braided Hoses			Х	
Ball Valves			Х	
2-Way/3-Way 25 psi Control Valve			Х	
2-Way/3-Way 150 psi, Normally Closed, Control Valve			Х	
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	
/-Strainer/Y-Strainer with Blowdown			Х	
			Х	
			X	
			X	
Balance Valve (3-Way Bypass)			Х	



#### **Filters**

All Vertical FHC, FXC, FVC 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.

	Nominal One-Inch Filter Size – Inches (Millimeters)
Unit Size	FHC, FXC, FVC
02	7-3/4" x 21-3/4" (197 x 552)
03	7-3/4" x 21-3/4" (197 x 552)
04	7-3/4" x 31-3/4" (197 x 806)
05	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)

#### Filter Static Resistance (in w.c.)

Unit Data			Filter Pressure Drop			
Model	Unit Size	Nominal CFM	1" Throwaway	1" Permanent	1" Merv 8	
	02	200	0.041	0.064	0.120	
F*C	03	300	0.051	0.090	0.140	
	04	400	0.055	0.102	0.148	
	05	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	

NOTES: Sizes shown are nominal ordering sizes

#### **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:
Power Consumptions: Less than 1 watt
Frequency:50/60 hertz
Over Current Protection:. 500mA Glass Cartridge Fuse
Lead Wires50"(L)

#### Ionization Output:

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

**DIMENSIONS:** See Figure 1

APPROVALS: Intertek/ETL Standard UL 867





### **Control Packages**

#### Controls

As detailed in the table below and on page 38, 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-031 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)
- DX coil applications



# Standard Features, Options and Accessories, Cont'd.

## Controls Packages, Cont'd.

#### **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



## **Thermostat Control Package Applications**

Unit Type	Control Option	System Type	Changeover Type	W	Р	N	F	G	А	В	С
-	Manual Fan	Manual <sup>1</sup>	None	-	-	-	-	-	-	-	-
2-Pipe Valve Cycle*	Heat Only	None	•	•	•	•	•	•	•	•	
		Cool Only	None	•	•	•	•	•	•	•	•
			Manual	-	-	-	-	-	•	•	•
		Heat/Cool	Automatic	•	•	•	•	•	•	•	•
		Heat/Cool with Auxiliary Electric Heat	Manual	-	-	-	-	-	•	•	•
	Valve Cycle*		Automatic	•	•	•	•	•	•	•	•
	Cool with Total Electric Heat	Manual	-	-	-	-	-	•	•	•	
		Automatic	•	•	•	•	•	•	•	•	
			Manual	-	-	-	-	-	•	•	•
4-Pipe		Heat/Cool	Automatic	•	•	•	•	•	•	•	•

NOTES: 1. Fan switch only; no thermostat

#### **Thermostat Features**

All lists described in shade for south bins	Control Type <sup>1</sup>							
All listed controls include fan switching.	W	Р	N	F	G	А	В	с
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: A • Basic Electronic Wall Series, 155, Vertical

B • Basic Electronic Wall Series, 155, Horizontal

C • Basic Electronic Wall Series, 156, Vertical

P • Basic 24 V Digital, 7-Day Programmable
 N • Basic 24 V Digital, Non-Programmable

F • Premium 24 V Digital, 7-Day Programmable/BACnet with Proportional Fan/Valves Option

6 • Premium 24 V Digital BACnet with Proportional Fan/Valves Option W• Venture 24 V Wi-Fi Programmable





Venture 24V, Wi-Fi Programmable



Premium 24V Digital 7-Day Programmable/BACnet



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



Basic Electronic Wall Series 155, Vertical and Horizontal



### **Outside Air Dampers**

FHC, FXC, and FVC 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. FHC, FXC, and FVC models are provided with a lever arm on the damper.

#### Style 2

For FHC, FXC, and FVC 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.

		Outside Air Opening Dimensions – Inches (Millimeters)					
Unit Size	Nominal CFM	FHC, FXC, FVC					
		Front View (A)	Side View (B)				
02	200	8" (203)	2" (51)				
03	300	10" (254)	2" (51)				
04	400	12" (305)	2" (51)				
05	500	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** 



## **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.

		Outside Air Opening Dimensions – Inches (Millin			
Unit Size	Nominal CFM	FHC, FXC, FVC			
		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)		
05	500	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)		





**Side View** 



**Typical Wall Installation** 



#### **Decorative Wall Panels**

Optional decorative wall panels are used with FHC 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	Panel Width (A)	Frame Width (B)	Wall O Inches	pening (mm)
CFM	Inches (mm)	Inches (mm)	Width	Height
200	40" (1016)	41-3/4" (1061)	40-3/8" (1026)	30-1/4" (768)
300	40" (1016)	41-3/4" (1061)	40-3/8" (1026)	30-1/4" (768)
400	50" (1270)	51-3/4" (1315)	50-3/8" (1280)	30-1/4" (768)
500	50" (1270)	51-3/4" (1315)	50-3/8" (1280)	30-1/4" (768)
600	60" (1524)	61-3/4" (1569)	60-3/8" (1534)	30-1/4" (768)
800	62" (1575)	63-3/4" (1619)	62-3/8" (1585)	30-1/4" (768)
1000	76" (1930)	77-3/4" (1975)	76-3/8" (1940)	30-1/4" (768)
1200	84" (2134)	85-3/4" (2178)	84-3/8" (2143)	30-1/4" (768)



Style Z



#### Supply Air Grilles (Optional)

Unit Size	Nominal CFM	Recommended Grille Sizes – Inches (Millimeters)	
		FXC, FVC	FHC
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)
05	500	26" × 6" (660 × 152)	26" x 5" (660 x 127)
06	600	36" × 6" (914 × 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. FXC and FVC models supply air grilles are factory installed.

Consult factory for application restrictions using double-deflection grilles with electric heat and maximum coil rows.
 FHC models supply air grilles are shipped loose.



#### **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
  - 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. Factoryprovided 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.



This page intentionally left blank.



This page intentionally left blank.





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

IEC Part Number: I100-9003983 CA-060 Revision 12.2 (12/2021) ©2000-2021 International Environmental Corporation (IEC)



5000 W. I-40 Service Rd. Oklahoma City, OK 73128 P: 405.605.5000 F: 405.605.5001 www.iec-okc.com