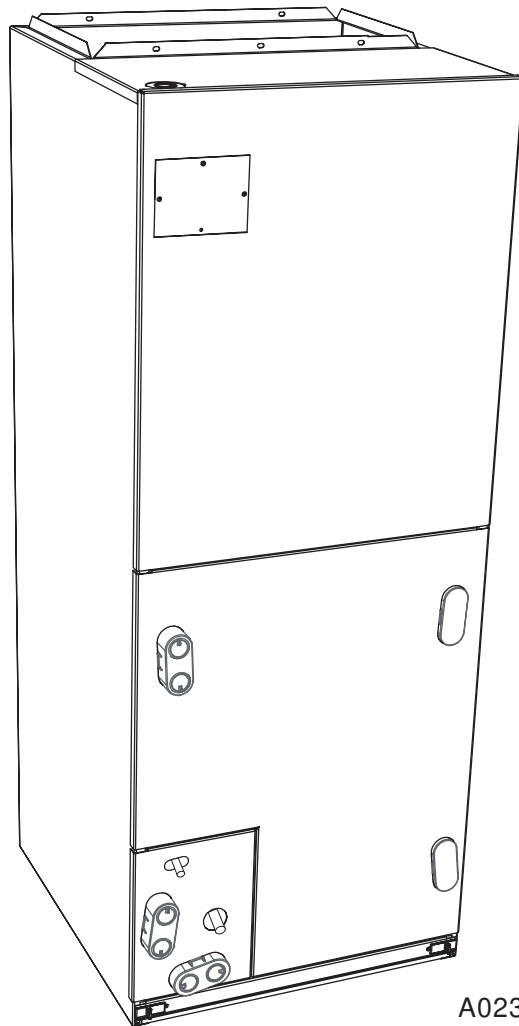




Product Data

FE4A Communicating Variable Speed Fan Coil Puron® Refrigerant

Sizes 002 thru 006



A02332



Premium Environmentally Sound Fan Coil

The latest in technology makes the FE4A the most advanced air handler available. With attention to quiet, efficient, and comfortable operation, Carrier has developed a new benchmark for homeowner comfort and ease of installation.

The FE4A comes with state of the art smart diagnostics capability. This enables faster troubleshooting providing ease of service and repair. The FE4A also provides a 4-wire hook up with matching outdoor unit and the Infinity Control. This makes installation simpler and a lot quicker than with conventional fan coils. The FE4A's advanced technology allows the fan coil to self-configure with a matching outdoor unit and the Infinity Control, cutting down on installation time.

The FE4A features Puron® (R-410A), the chlorine-free refrigerant that is the future for the residential heating and cooling industry. The FE4A using Puron® maximizes performance for environmentally sound systems. In addition to environmental safety, these systems are 30 to 40 percent more efficient than standard heating and cooling systems, thereby combining excellence in efficiency and environmental safety.

The FE4A provides these benefits due to Carrier's command of ECM "Electronically Commutating Motor" technology. These motors are extremely efficient at all speeds, and enable the FE4A to operate at the correct speed to deliver airflow precisely, ensuring proper performance across a wide range of duct static pressures. This adaptive efficiency also makes installation quality easier to achieve for today's demanding homeowner.

Carrier's command of ECM

technology may be most evident in the comfort advantages that ECM can deliver. For true comfort, the homeowner can achieve command of both temperature and humidity in cooling and heating modes.

Another feature which sets the FE4A apart is the factory-installed TXV, which enhances efficiency and provides compressor-protecting operation at all recommended

conditions. Grooved copper tubing, louvered aluminum fins, and the large face areas of the FE4A refrigerant coils also provide superior efficiency, for high SEER and HSPF performance. Carrier leads the way in condensate control, a hallmark of these multipoise fan coils. All of these featured components are protected within a rugged, prepainted metal cabinet lined with super thick, high density

insulation. For neat, high quality installations the unit exterior features sweat refrigerant connections for simple leak free performance, and multiple electrical entry for both high and low voltage service.

For superior technology and unmatched comfort, the environmentally sound and efficient FE4A can't be beat.

Features

Smart Diagnostics

- Self configuring (ease of installation)
- Easier troubleshooting, providing faster service and repair.

Environmentally Sound Refrigerant Technology

- Puron, chlorine-free non-ozone depleting refrigerant
- Thermostatic Expansion Valve (TXV) designed to maximize performance with Puron

Energy Efficient Operation

- Electronically Commutated Motor (ECM) operates efficiently at all speeds
- Maximizes efficiency of heating and cooling systems
- Ultra low power consumption during fan only operation

Indoor Weather Control

- Warm, comfortable heating air temperatures
- Unmatched humidity control

Airflow and Sound Technology

- Logarithmic spiral blower housings for high blower efficiency and quiet operation
- Diffuser air discharge section for high airflow efficiency and quiet, smooth operation
- High duct static capability
- Unique cabinet design that meets new stringent regulations for air leakage. Meets requirements of a 2% cabinet leakage rate when tested at 1.0 inches of static pressure

Condensate Control and Disposal Technology

- Minimal standing water - less microbial growth for improved IAQ and reduced condensate line clogging and related condensate leakage
- Condensate fittings relocated away from turbulent airflow patterns at the blower entrance for improved condensate control performance
- Overflow feature for slope coil units allows condensate to exit the unit without damage to product under clogged primary and secondary line conditions
- Tested for condensate disposal at conditions much more severe than those required by ARI
- Primary and secondary drain connections to comply with HUD
- All pans constructed of an injection molded glass-filled polycarbonate engineering resin material, with brass drain connections.
- High density, super thick cabinetry insulation with vapor barrier
- Pre-painted galvanized sheet metal cabinet

Heat Transfer Technology

- Grooved copper tubing
- Lanced sine wave aluminum fins
- Discreet refined counterflow refrigerant circuitry
- Bi-flow hard shut-off TXV metering device

Quality Assisting, Ease of Installation and Service Features

- Easy 4 wire hook up: convenient and reduces installation time.
- All units multipoise
- Provision made for suspending from roof or ceiling joints
- Modular cabinet on 006 unit
- Sweat connections for leak free service
- Multiple electrical entry for application flexibility (high and low voltage)
- Low voltage terminal strip, to safely hold connections within the cabinet
- Inspection plate on A-coil models for quick coil cleanliness inspection
- Cabinet construction features innovations designed to prevent cabinet sweating

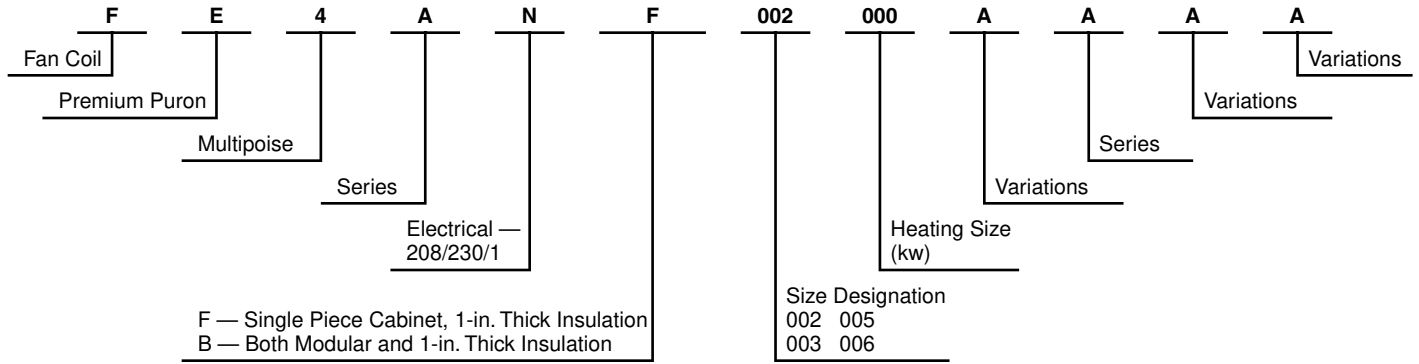
Controls and Electrical Features

- Easy plug connection provided for quick installation of accessory heater packages
- 40VA 208/230v transformer
- Replaceable 5-amp blade-type auto fuse protects against transformer secondary short

Filter Features

- Factory supplied filter
- Cleanable polyester filter media
- Filter "springs" out for easy access - no tools required
- Newly improved filter rack area - filter door insulation added for an improved air seal

Model number nomenclature



Physical data

Model FE4A

UNIT SIZE	002	003	005	006*
SHIPPING WEIGHT (Lb)	135	150	172	207
REFRIGERANT	Puron (R-410A)			
Refr. Metering Device	TXV			
Size	2 Ton	3 Ton	4 Ton	4 Ton
COIL	A			
Type	Slope			
Rows—Fins/In.	3 - 14.5			
Face Area (Sq Ft)	3.46	3.46	5.93	7.42
MATCHES OUTDOOR UNIT SIZES	Nominal Cooling Tons			
Nominal Cooling Tons	1.5, 2, 2.5, 3	2, 2.5, 3, 3.5	2.5, 3, 3.5, 4	3, 3.5, 4, 5
FAN	Upflow, Downflow, Horizontal			
Air Discharge	350+			
CFM/TON (Nominal Cfg/Htg)				
MOTOR HP (ECM)	1/2	1/2	1/2	3/4
FILTER	21-1/2 X 16-3/8	21-1/2 X 18-7/8	21-1/2 X 18-7/8	21-1/2 X 23-5/16

* Modular Unit

+ Nominal airflow = outdoor unit size (tons) x 350 cfm. Airflow may be modified by system operating mode.

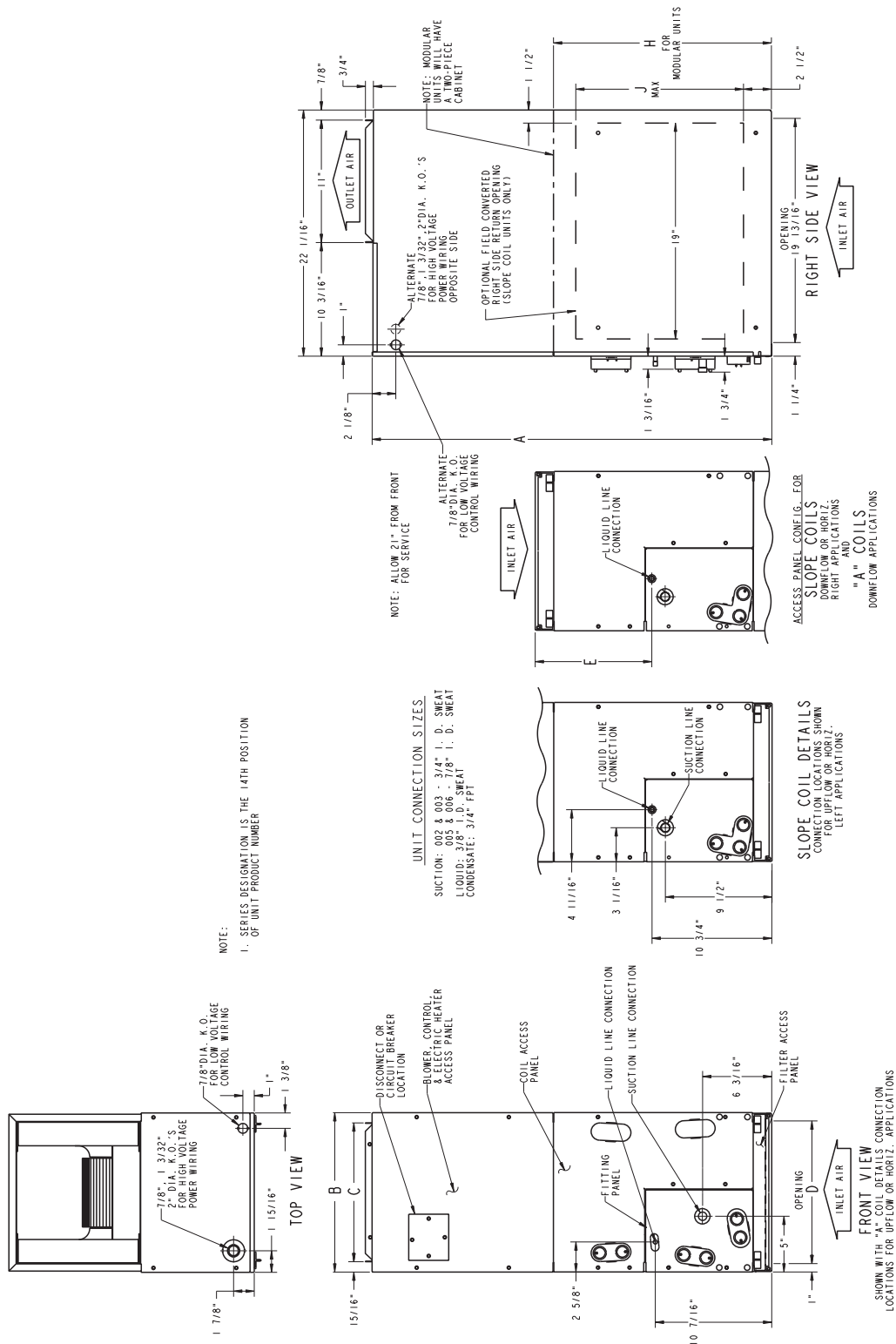


REGISTERED
QUALITY
SYSTEM



CERTIFICATION APPLIES ONLY WHEN THE COMPLETE SYSTEM IS LISTED WITH ARI.

Dimensions



A02321

UNIT	SIZE	A	B	C	D	E	H	J
FE4A	002	In.	In.	In.	In.	In.	In.	In.
	003	42-11/16	17-5/8	15-3/4	15-5/8	10-3/4	—	—
	005	53-7/16	21-1/8	19-1/4	19-1/8	19-3/16	—	19
	006	53-7/16	21-1/8	19-1/4	19-1/8	19-1/2	—	—
		59-3/16	24-11/16	22-3/4	22-11/16	25-1/4	34-1/16	—

Performance data

AIRFLOW DELIVERY — COOLING, HEATING, ELECTRIC HEATING MODES

The FE4 fan coil will provide airflow at a rate that is requested by the Integrated System User Interface during Air conditioning or Heat Pump Heating (without electric heat) modes. The nominal airflow for both heating and cooling modes is 350 cfm/ton nominal size of the outdoor unit

installed. The airflow actually requested by the User Interface is modified by its internal algorithms for zoning, comfort or efficiency concerns. Refer to the documentation for the User Interface for more information on how the User Interface controls the fan coil. Safe operation of electric heaters

requires airflow delivery at or above the minimum CFM for electric heater application listed in the chart below. The fan coil will adjust its airflow delivery to maintain safe airflow as operating mode and staging conditions require.

AIRFLOW PERFORMANCE — AVAILABLE EXTERNAL STATIC PRESSURE MODES

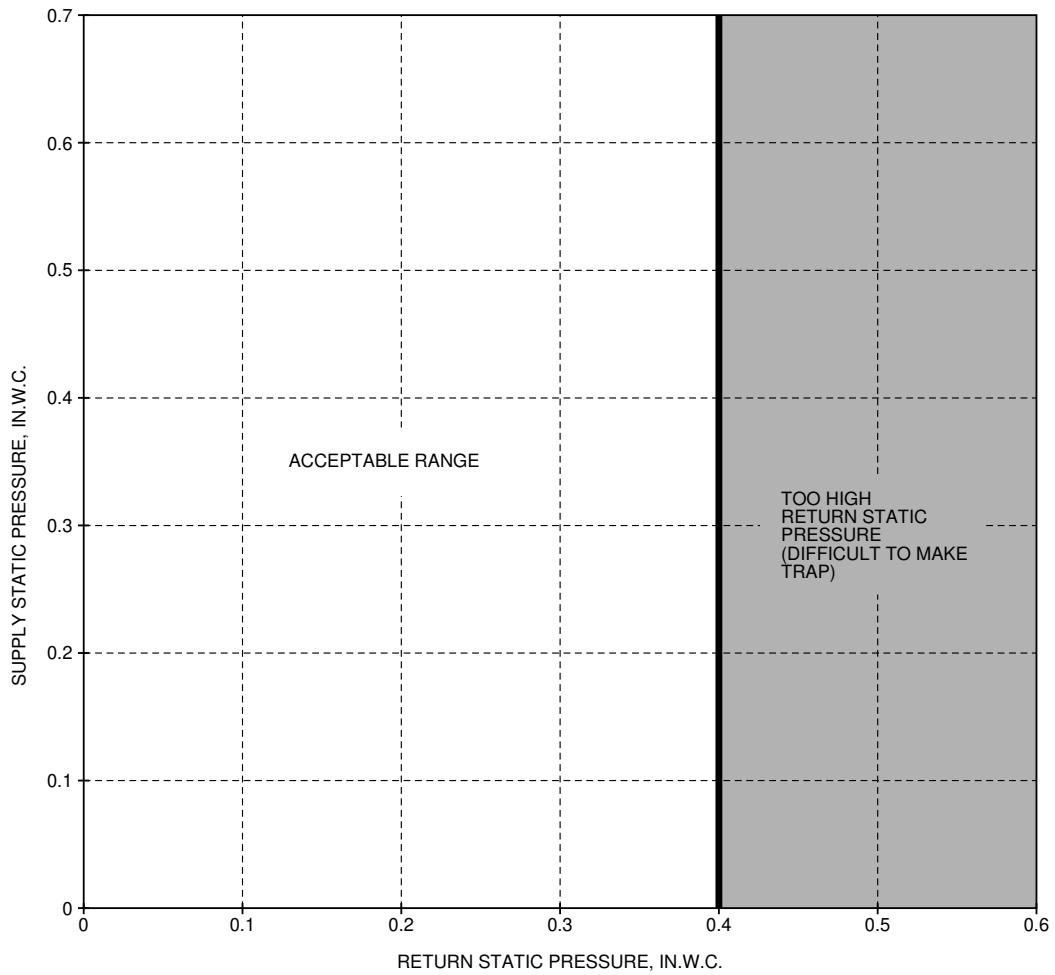
FAN COIL MODEL	AIRFLOW DELIVERY	AVAILABLE STATIC PRESSURE
FE4ANF002	525 CFM	1.00 IN. H2O
	700 CFM	1.00 IN. H2O
	875 CFM	1.00 IN. H2O
	1050 CFM	0.80 IN. H2O
FE4ANF003	700 CFM	1.00 IN. H2O
	875 CFM	1.00 IN. H2O
	1050 CFM	1.00 IN. H2O
	1225 CFM	1.00 IN. H2O
FE4ANF005	875 CFM	1.00 IN. H2O
	1050 CFM	1.00 IN. H2O
	1225 CFM	1.00 IN. H2O
	1400 CFM	1.00 IN. H2O
FE4ANB006	1050 CFM	1.00 IN. H2O
	1225 CFM	1.00 IN. H2O
	1400 CFM	1.00 IN. H2O
	1750 CFM	1.00 IN. H2O

Performance data continued

MINIMUM CFM FOR ELECTRIC HEATER APPLICATION

UNIT SIZE	HEAT PUMP UNIT SIZE	CFM				
		Heater Size KW				
		5	9, 10	15	20	24, 30
002	Heater Only	625	650	825	1025	—
	018	650	650	—	—	—
	024	675	775	900	—	—
	030	850	950	1050	1125	—
	036	1000	1050	1125	1225	—
003	Heater Only	675	725	850	1100	—
	024	675	875	—	—	—
	030	850	950	1100	1150	—
	036	1025	1075	1150	1275	—
	042	1150	1200	1300	1400	—
005	Heater Only	675	725	850	1100	1400
	030	850	950	1100	1150	—
	036	1025	1075	1150	1275	—
	042	1150	1200	1300	1400	—
	048	1325	1325	1400	1500	1600
006	Heater Only	1050	1050	1050	1100	1750
	036	1150	1150	1350	1350	—
	042	1150	1150	1350	1575	—
	048	1325	1325	1400	1600	1750
	060	1650	1650	1650	1750	1750

NOTE: 1. Heater Only—Air Conditioner with electric heater application.
 2. These airflows are minimum acceptable airflows as UL listed.



A96052

Acceptable Duct Conditions

For satisfactory operation (specifically making dry secondary trap), subject fan coils must be installed with duct systems which fall within the "Acceptable Range" illustrated above.

Performance data continued

COOLING CAPACITIES (MBtuh)

UNIT SIZE	EVAPORATOR AIR Cfm BF	COIL REFRIGERANT TEMPERATURE (°F)*														
		35			40			45			50			55		
		Evaporator Air — Entering Wet-Bulb Temperature (°F)														
		72	67	62	72	67	62	72	67	62	72	67	62	72	67	62
002	500	40	32	26	36	28	22	32	24	18	27	19	14	21	13	11
	0.04	18	18	19	16	16	17	14	14	15	12	12	13	10	10	11
	650	50	40	32	45	36	27	39	30	22	33	24	18	26	17	14
	0.07	21	22	23	19	20	21	16	17	18	14	15	16	12	13	14
	875	58	49	38	53	42	32	46	35	27	39	28	22	31	20	18
	0.10	24	26	28	22	24	25	19	21	22	17	19	19	15	16	18
003	1000	62	51	41	56	45	35	50	38	29	42	30	24	33	22	20
	0.11	26	28	31	23	26	28	21	23	25	18	20	21	16	18	20
	1250	67	55	45	61	49	39	54	42	33	46	34	28	37	25	24
	0.13	29	33	36	27	30	33	24	27	30	22	24	26	19	21	24
	800	59	48	38	53	42	32	46	35	24	39	27	20	30	18	16
	0.20	28	29	31	25	27	28	22	23	24	19	20	20	16	16	16
005	1000	68	56	45	61	49	37	54	41	29	45	32	25	35	22	20
	0.22	32	34	37	29	31	33	26	28	28	23	24	25	19	20	20
	1200	75	62	49	68	54	42	60	45	34	50	36	29	40	25	23
	0.25	35	39	42	32	36	38	29	32	33	26	28	29	22	23	23
	1400	80	67	54	73	59	46	64	49	38	54	39	32	43	28	27
	0.27	38	43	47	35	39	43	32	36	37	28	32	32	24	26	27
006	750	61	49	39	55	43	33	48	37	27	41	29	20	33	21	17
	0.04	27	27	28	24	25	25	21	22	22	18	18	18	15	15	15
	950	74	60	48	67	53	40	59	45	33	50	35	25	39	24	21
	0.06	32	34	35	29	30	31	25	26	27	22	23	23	18	18	19
	1150	89	72	57	79	63	48	69	52	38	58	41	31	44	29	25
	0.07	37	39	41	33	35	36	29	31	32	25	26	27	20	22	22
006	1500	103	84	66	92	73	56	81	61	46	67	48	39	52	34	31
	0.10	43	46	49	38	41	44	34	37	39	29	32	33	25	27	27
	1700	110	89	71	99	78	60	86	65	49	72	51	42	56	37	35
	0.11	45	50	53	41	45	48	36	39	42	31	34	36	27	29	30
	1050	77	62	50	69	55	43	61	47	35	52	38	27	41	27	22
	0.01	34	36	37	31	32	33	27	28	29	23	25	24	20	20	20
006	1300	100	82	65	90	71	55	79	60	45	66	47	37	49	32	27
	0.02	42	45	47	37	40	42	33	35	37	29	31	32	23	25	24
	1750	117	96	77	106	84	65	93	71	53	78	56	46	60	40	34
	0.04	48	53	57	44	48	52	39	43	46	34	38	39	29	31	31
	2050	126	103	83	114	91	71	99	76	59	84	60	50	65	44	39
	0.05	52	58	63	48	53	57	43	47	51	37	42	43	33	35	35
006	2300	132	108	87	119	95	75	105	80	63	88	63	54	70	47	42
	0.06	55	62	68	50	57	61	45	51	54	40	45	46	35	39	38

See notes on pg. 10.

* Saturated suction leaving evaporator coil.

Sensible Heat Capacity (1000 Btuh)

Gross Cooling Capacity (1000 Btuh)

BF — Bypass Factor

NOTES:

1. Net capacities shown include a deduction for evaporator fan motor heat.
2. Contact manufacturer for cooling capacities at conditions other than shown in table.
3. Formulas:

Leaving db = entering db —

Leaving wb = wb corresponding to enthalpy of air leaving coil (h_{lwb})

$h_{lwb} = h_{ewb}$ —

where h_{ewb} = enthalpy of air entering coil.

4. Direct interpolation is permissible. Do not extrapolate.

5. SHC is based on 80°F db temperature of air entering coil. Below 80°F subtract (corr factor X CFM) from SHC. Above 80°F db, add (corr factor X CFM) to SHC.

SHC Correction Factor

BYPASS FACTOR	ENTERING AIR DRY-BULB TEMPERATURE (°F)					
	79	78	77	76	75	Under 75
	81	82	83	84	85	Over 85
	Correction Factor					
0.10	0.98	1.96	2.94	3.92	4.91	Use formula shown below
0.20	0.87	1.74	2.62	3.49	4.36	
0.30	0.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.

Correction Factor = 1.09 X (1 – BF) X (db – 80)

Performance data continued

ESTIMATED SOUND POWER LEVEL (dBA)*

UNIT SIZE	CONDITIONS		OCTAVE BAND CENTER FREQUENCY						
	CFM	ESP	63	125	250	500	1000	2000	4000
FE4-002	400	0.25	63.0	59.0	55.0	52.0	50.0	48.0	44.0
	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
	1400	0.25	68.4	64.4	60.4	57.4	55.4	53.4	49.4
FE4-003	400	0.25	63.0	59.0	55.0	52.0	50.0	48.0	44.0
	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
	1400	0.25	68.4	64.4	60.4	57.4	55.4	53.4	49.4
	636	0.25	65.0	61.0	57.0	54.0	52.0	50.0	46.0
FE4-005	400	0.25	63.0	59.0	55.0	52.0	50.0	48.0	44.0
	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
	1400	0.25	68.4	64.4	60.4	57.4	55.4	53.4	49.4
	1600	0.25	69.0	65.0	61.0	58.0	56.0	54.0	50.0
FE4-006	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
	1400	0.25	68.4	64.4	60.4	57.4	55.4	53.4	49.4
	1600	0.25	69.0	65.0	61.0	58.0	56.0	54.0	50.0
	1800	0.25	69.5	65.5	61.5	58.5	56.5	54.5	50.5
	2000	0.25	70.0	66.0	62.0	59.0	57.0	55.0	51.0
	2150	0.25	70.3	66.3	62.3	59.3	57.3	55.3	51.3

* Estimated sound power levels have been derived using the method described in the 1987 ASHRAE Systems & Applications Handbook, chapter 52, p. 52.7.

CFM — Cubic Feet Per Minute
 ESP — External Static Pressure
 RPM — Revolutions Per Minute

Performance data continued

AIRFLOW PERFORMANCE CORRECTION FACTORS

The FE4A airflow performance table was developed using fan coils with 10-kw electric heaters (2 elements) in the units. For fan coils with heaters made up of a different number of elements, the external available static at a given CFM from the table may be corrected by adding or subtracting pressure. Use table for this correction.

HEATER KW	ELEMENTS	STATIC PRESSURE CORRECTION (In. wc)	
		Sizes 002–005	Size 006
0	0	+02	+03
5	1	+01	+02
8, 10	2	0	0
9, 15	3	–02	–03
20	4	–04	–06
18, 24, 30	6	–06	–10

FACTORY-INSTALLED FILTER STATIC PRESSURE DROP (In. wc)

MODEL FE4A	CFM								
	400	600	800	1000	1200	1400	1600	1800	2000
002	0.020	0.044	0.048	0.072	0.100	—	—	—	—
003	—	0.020	0.035	0.051	0.070	0.092	—	—	—
005	—	—	0.035	0.051	0.070	0.092	0.120	—	—
006	—	—	—	—	0.070	0.092	0.120	0.152	0.187

AIR DELIVERY PERFORMANCE CORRECTION COMPONENT PRESSURE DROP (IN. WC) AT INDICATED AIRFLOW (DRY TO WET COIL)

MODEL FE4A	CFM										
	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
002	0.012	0.016	0.022	0.028	0.034	0.040	0.049	—	—	—	—
003	—	0.026	0.034	0.042	0.052	0.063	0.075	0.083	0.091	0.098	0.110
005	—	0.006	0.008	0.010	0.012	0.015	0.017	0.020	0.023	0.027	0.030
	CFM										
	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
006	0.013	0.016	0.018	0.020	0.023	0.027	0.030	0.034	0.039	0.044	0.048

NOTE: Subtract the above pressure drop corrections from unit airflow data when that component or condition is used. The remaining external static pressure will be available for the duct system.

Accessories

ITEM	ACCESSORY PART NO.	FAN COIL SIZE USED WITH FE4A
Disconnect Kit	KFADK0201DSC	Cooling controls and heaters through 10-kW
Downflow Conversion Kit (Slope)	KFADC0201SLP	003
Downflow Conversion Kit (A-coil)	KFADC0401ACL	002, 005, 006
Downflow Base Kit	KFACB0201CFB	002
	KFACB0301CFB	003, 005
	KFACB0401CFB	006
Filter Kit (12 Pack)	KFAFK0212MED	002
	KFAFK0312LRG	003, 005
	KFAFK0412XXL	006
Single-Point Wiring Kit	KFASP0101SPK	Only with 15- and 20-kW fused heaters
Airflow Sensor Kit (Air Cleaner)	KEAAC0101AAA	All
Air Cleaner 240-Volt Conversion Kit	KEAV0201240	All
PVC Condensate Drain Trap Kit (50 Pack)	KFAET0150ETK	All
Downflow/Horizontal Conversion Gasket Kit	KFAHD0101SLP	All

Accessory Description and Usage

1. Disconnect Kit

The kit is used to disconnect electrical power to the fan coil so service or maintenance may be performed safely.

SUGGESTED USE: FE4 units with 3- through 10-kW electric resistance heaters and cooling controls.

2. Downflow Conversion Kit

Fan coils are shipped from the factory for upflow or horizontal-left applications. Downflow conversion kits provide proper condensate water drainage and support for the coil when used in downflow applications. Separate kits are available for slope coils and A-coils.

REQUIRED USE: This kit must be used whenever FE4 fan coils are used in downflow applications.

3. Downflow Base Kit

This kit is designed to provide a 1-in. minimum clearance between unit discharge plenum, ductwork, and combustible materials. It also provides a gap free seal with the floor.

REQUIRED USE: This kit must be used whenever FE4 fan coils are used in downflow applications.

4. Single-Point Wiring Kit

The single-point wiring kit acts as a jumper between L1 and L3 lugs, and between L2 and L4 lugs. This allows the installer to run 2 heavy-gage, high-voltage wires into the fan coil rather than 4 light-gage, high-voltage wires.

SUGGESTED USE: FE4 fan coils only with 15- and 20-kW fused heaters.

5. Air Cleaner 240-Volt Conversion Kit

The AIRA electronic air cleaner comes ready for 115-v operation.

REQUIRED USE: This kit is required when running 240-volt circuit to air cleaner.

6. Airflow Sensor Kit (Air Cleaner)

The airflow sensor kit ensures the FE4 fan coil and electronic air cleaner work as a system.

REQUIRED USE: This kit is required whenever an electronic air cleaner is used with an FE4 fan coil.

7. Fan Coil Filter

Kit shipped from factory with 12 fan coil framed filters. These filters collect large dust particles from the return air entering the fan coil and prevents them from collecting on the coil. This process helps to keep the coil clean, which increases heat transfer and in turn the efficiency of the system.

SUGGESTED USE: To replace factory-supplied filters (same filter).

8. Condensate Drain Trap Kit

This kit consists of 50 PVC condensate traps. Each trap is pre-formed and ready for field installation. This deep trap helps the system make and hold proper condensate flow even during blower initiation.

SUGGESTED USE: FE4 Fan coils.

9. Downflow/Horizontal Conversion Gasket Kit

This kit provides the proper gasketing of units when applied in either a Downflow or Horizontal application.

REQUIRED USE: FE4 Fan coils.

Electrical data

UNITS WITHOUT ELECTRIC HEAT

UNIT SIZE	VOLTS-PHASE	FLA	MIN CKT AMPS	BRANCH CIRCUIT	
				Min Wire Size Awg*	Fuse/Ckt Bkr Amps
002	208/230-1	4.3	5.4	14	15
003	208/230-1	4.3	5.4	14	15
005	208/230-1	4.3	5.4	14	15
006	208/230-1	6.8	8.5	14	15

* Use copper wire only to connect unit. If other than uncoated (nonplated) 75°F ambient, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used consult applicable tables of the National Electric Code (ANSI/NFPA 70).

NOTE: If branch circuit wire length exceeds 100 ft, consult NEC 210-19a to determine maximum wire length. Use 2% voltage drop.
FLA — Full Load Amps

Accessory electric heaters

ELECTRIC HEATERS

HEATER PART NO.	KW @ 240V	VOLTS/PHASE	STAGES (KW OPERATING)	INTERNAL CIRCUIT PROTECTION	FAN COIL SIZE USED WITH	HEATING CAP. @ 230V‡	INTELLIGENT HEAT CAPABLE (KW OPERATING)
KFCEH0501N05	5	230/1	5	None	All	15,700	—
KFCEH0901N10	10	230/1	10	None	All	31,400	—
KFCEH3001F15	15	230/1	5, 15	Fuses**	All	47,100	5, 10, 15
KFCEH3201F20	20	230/1	5, 20	Fuses**	All	62,800	5, 10, 15, 20
KFCEH2901N09	9	230/1*	3, 9	None	All	28,300	3, 6, 9
KFCEH1601315	15	230/3	5, 15	None	All	47,100	—
KFCEH3401F24	24	230/3†	8, 16, 24	Fuses	005, 006	78,500	8, 16, 24
KFCEH3501F30	30	230/3†	10, 20, 30	Fuses	005, 006	94,200	10, 20, 30
KFCEH2401C05	5	230/1	5	Ckt Bkr	All	15,700	—
KFCEH2601C10	10	230/1	10	Ckt Bkr	All	31,400	—
KFCEH3101C15	15	230/1	5, 15	Ckt Bkr	All	47,100	5, 10, 15
KFCEH3301C20	20	230/1	5, 20	Ckt Bkr	All	62,800	5, 10, 15, 20

* Field convertible to 3 phase.

† These heaters field convertible to single phase.

‡ Blower motor heat not included.

** Single point wiring kit required for these heaters in Canada.

ELECTRIC HEATER INTERNAL PROTECTION

HEATER KW	PHASE	FUSES QTY/SIZE	CKT BKR QTY/SIZE*
5	1	—	1/60
8	1	—	1/60
9	1/3	—	—
10	1	—	1/60
15	1	2/30, 2/60	2/60
15	3	—	—
18	3	—	—
20	1	4/60	2/60
24	3/1	6/60	—
30	3/1	6/60	—

* All circuit breakers are 2 pole.

Electric heater electrical data

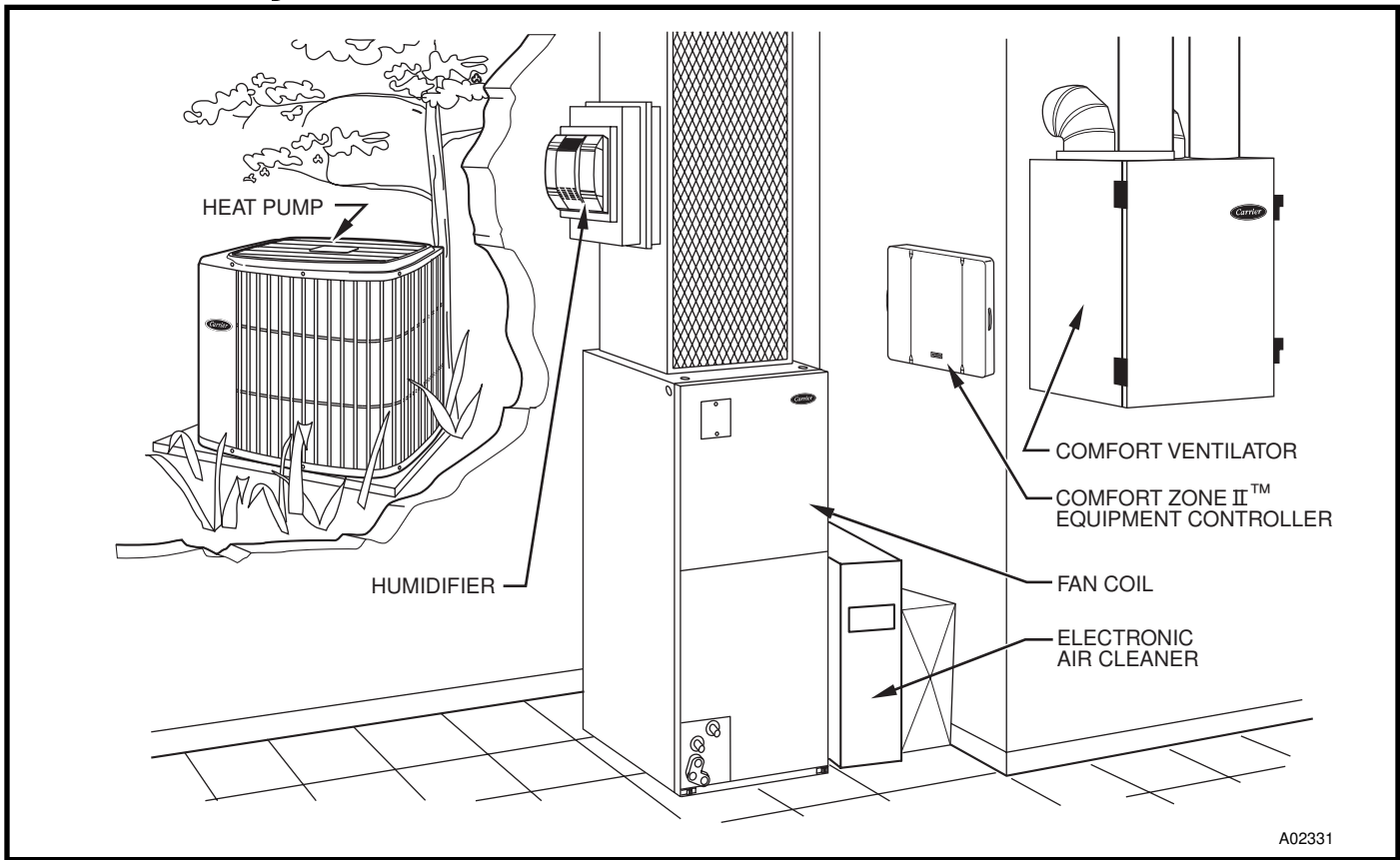
HEATER PART NO.	KW		PHASE	INTERNAL CIRCUIT PROTECTION	HEATER AMPS 208/230V			MIN AMPACITY 208/230V**			MIN WIRE SIZE (AWG) 208/230V††			MIN GND WIRE SIZE 208/230V			MAX FUSE/CKT BKR AMPS 208/230V			MAX WIRE LENGTH 208/230V (FT)‡			
	240V	208V			Single Circuit	L1,L2	L3,L4	Dual Circuit	Single Circuit	L1,L2	L3,L4	Dual Circuit	Single Circuit	L1,L2	L3,L4	Dual Circuit	Single Circuit	L1,L2	L3,L4	Dual Circuit	Single Circuit	L1,L2	L3,L4
KFCEH0401N03	3	2.3	1	None	10.9/12.0	—	—	15.9/17.3	—	—	12/12	—	—	20/20	—	—	—	67/68	—	—	—	—	
KFCEH0501N05 [†]	5	3.8	1	None	18.1/20.0	—	—	26.0/28.4	—	—	10/10	—	—	30/30	—	—	—	66/66	—	—	—	—	
KFCEH0501N05 [‡]	5	3.8	1	None	18.1/20.0	—	—	31.2/33.5	—	—	8/8	—	—	35/35	—	—	—	85/88	—	—	—	—	
KFCEH2401C05 [†]	5	3.8	1	CKI Bkr	18.1/20.0	—	—	26.0/28.4	—	—	10/10	—	—	30/30	—	—	—	66/66	—	—	—	—	
KFCEH2401C05 [‡]	5	3.8	1	CKI Bkr	18.1/20.0	—	—	31.2/33.5	—	—	8/8	—	—	35/35	—	—	—	85/88	—	—	—	—	
KFCEH2901N09***	9	6.8	1	None	32.8/36.0	—	—	49.5/53.5	—	—	8/8	—	—	50/60	—	—	—	54/87	—	—	—	—	
KFCEH2901N09***†	9	6.8	3	None	18.8/20.8	—	—	32.0/34.5	—	—	8/8	—	—	35/35	—	—	—	83/85	—	—	—	—	
KFCEH0901N10	10	7.5	1	None	36.2/40.0	—	—	53.8/58.5	—	—	6/6	—	—	60/60	—	—	—	78/80	—	—	—	—	
KFCEH2601C10	10	7.5	1	CKI Bkr	36.2/40.0	—	—	53.8/58.5	—	—	6/6	—	—	60/60	—	—	—	78/80	—	—	—	—	
KFCEH3001F15***	15	11.3	1	Fuse	54.2/59.9	36.2/40.0	18.1/20.0	76.3/83.4	53.8/58.5	22.7/25.0	4/4	6/6	10/10	10/10	80/90	60/60	25/25	88/89	78/80	75/76	—	—	
KFCEH2701C15***3	15	11.3	1	CKI Bkr	—	36.2/40.0	18.1/20.0	—	53.8/58.5	22.7/25.0	—	6/6	10/10	10/10	—	60/60	25/25	—	78/80	75/76	—	—	
KFCEH3101C15***3	15	11.3	1	CKI Bkr	—	36.2/40.0	18.1/20.0	—	53.8/58.5	22.7/25.0	—	6/6	10/10	10/10	—	60/60	25/25	—	78/80	75/76	—	—	
KFCEH1601315	15	11.3	3	None	31.3/34.6	—	—	47.7/51.8	—	—	8/6	—	—	50/60	—	—	—	56/90	—	—	—	—	
KFCEH3201F20***3	20	15.0	1	Fuse	72.3/79.9	36.2/40.0	36.2/40.0	98.9/108.4	53.8/58.5	45.3/50.0	3/2	6/6	8/8	10/10	100/110	60/60	50/50	85/109	78/80	59/59	—	—	
KFCEH2801C20***	20	15.0	1	CKI Bkr	—	36.2/40.0	36.2/40.0	—	53.8/58.5	45.3/50.0	—	6/6	8/8	10/10	—	60/60	50/50	—	78/80	59/59	—	—	
KFCEH3301C20***	20	15.0	1	CKI Bkr	—	36.2/40.0	36.2/40.0	—	53.8/58.5	45.3/50.0	—	6/6	8/8	10/10	—	60/60	50/50	—	78/80	59/59	—	—	
KFCEH401F24***	24	18.0	3	Fuse	50.1/55.4	—	—	71.2/77.8	—	—	4/4	—	—	80/80	—	—	—	94/95	—	—	—	—	
—	24	18.0	1	Fuse	86.7/95.5	—	—	116.9/127.9	—	—	1/1	—	—	125/150	—	—	—	115/116	—	—	—	—	
—	30	22.5	3	Fuse	62.6/69.2	—	—	86.8/95.0	—	—	3/3	—	—	90/100	—	—	—	97/98	—	—	—	—	
KFCEH3501F30***	30	22.5	1	Fuse	109.0/120.0	—	—	144.8/158.5	—	—	0/00	—	—	150/175	—	—	—	117/150	—	—	—	—	

FIELD MULTIPPOINT WIRING OF 24-AND 30-KW SINGLE PHASE

HEATER PART NO.	KW		PHASE	HEATER AMPS 208/230V			MIN AMPACITY 208/230V**			MIN WIRE SIZE (AWG) 208/230V††			MIN GND WIRE SIZE 208/230V			MAX FUSE/CKT BKR AMPS 208/230V			MAX WIRE LENGTH 208/230V (FT)‡			
	240V	208V		L1,L2	L3,L4	L5,L6	Dual Circuit	Single Circuit	L1,L2	L3,L4	L5,L6	Dual Circuit	Single Circuit	L1,L2	L3,L4	L5,L6	Dual Circuit	Single Circuit	L1,L2	L3,L4	L5,L6	
																						240V
KFCEH3401F24***	24	18.0	1	28.9/32.0	28.9/32.0	28.9/32.0	44.7/48.5	36.2/40.0	36.2/40.0	36.2/40.0	8/8	8/8	8/8	10/10	45/50	40/40	40/40	59/60	73/73	73/73	—	—
KFCEH3501F30***	30	22.5	1	36.2/40.0	36.2/40.0	36.2/40.0	53.8/58.5	45.3/50.0	45.3/50.0	45.3/50.0	6/6	8/8	8/8	10/10	60/60	50/50	50/50	78/80	59/59	59/59	—	—

† Field convertible to 1 phase, single or multiple supply circuit.
 ‡ Field convertible to 3 phase.
 ** Includes blower motor amps of largest fan coil used with heater.
 †† Copper wire must be used. If other than uncoated (non-plated), 75°C ambient, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the National Electric Code (ANSI/NFPA 70).
 ‡ Length shown is as measured 1 way along wire path between unit and service panel for a voltage drop not to exceed 2%.
 *** Heaters are Intelligent Heat capable.ermostat
 NOTES: 1. For fan coil sizes 018-036.
 2. For fan coil sizes 042-060 and all FE4A sizes.
 3. Single circuit application of F15 and F20 heaters requires single-point wiring kit accessory

Matched system



A02331

