

## Product Data



### **AIR HANDLER TECHNOLOGY AT ITS FINEST**

The FX4C and FC4D fan coils combine the proven technology of Carrier fan coil units with either Puron®, the environmentally sound refrigerant, or R-22 refrigerant. Both fan coils are loaded with popular features. Factory-installed, refrigerant-specific thermostatic expansion valves (TXV) are standard with these fan coil designs. The designs feature contoured condensate pans with rugged, brass drain connections, ensuring that little water is left in the unit at the end of the cooling duty cycle. The lack of standing condensate and corrosion free pans improves IAQ and product life, features homeowners appreciate.

Standard features for both include grooved copper tubing and louvered aluminum fins. The large face areas of the refrigerant coils provide superior efficiency for high SEER and HSPF performance. Coil circuiting has also been updated to make the most of all Carrier heat pumps and air conditioners. Also units come with solid state fan controls, 1-inch thick insulation with R value of 4.2, super-quiet multi-speed motors, and fully-wettable coils. Units can accommodate factory- and/or field-installed heaters from 3 to 30 kW.

It also should be noted that the unique cabinet design of these fan coils meet new stringent regulations for cabinet air leakage - a requirement of 2% cabinet leakage rate when tested at 1.0 inches of static pressure.

The FX4C fan coil is the Puron® refrigeration design loaded with popular features. It comes in a pre-painted (taupe metallic) galvanized steel casing and is shipped with a cleanable, permanent framed filter, and a factory-supplied power plug. ArmorCoat™ provides a tin plating of the indoor coil's copper hairpins. This creates a barrier between the corrosion-causing elements and the coil. These fan coils utilize the latest in electronic commutation motor (ECM) technology through the use of high efficiency, X13, blower motors.

The FC4D fan coil comes with the same features as the FX4C, but for use with R-22 refrigerant, also available in sizes 018 through 060.

## STANDARD FEATURES

- High efficiency ECM (electronic commutating motor) X13 motors - all sizes
- Simple control board with blower-off delay and internal thermostat wire junction box
- Large, grooved tube, louvered fin coils
- Dedicated refrigerant circuits
- Efficient, quiet, time-tested blower housings and diffusers
- Sturdy, drainable condensate pans
- Cabinet construction features innovations designed to prevent cabinet sweating
- Brass drain connections
- Tested for condensate disposal in much tougher conditions than Air Conditioning and Refrigeration Institute requirements
- Super-thick R-4.2 insulation with vapor barrier
- Pre-painted galvanized steel cabinet (taupe metallic)
- Cabinet design meets stringent regulations for 2% cabinet leakage rate when tested at 1.0 inches static pressure
- Installation-flexible, multipoise units
- Horizontal hanging provisions on cabinet
- No tools required to service filter
- Factory-supplied, cleanable and reusable filter
- Newly improved filter rack area filter door insulation added for improved air seal
- Factory-installed heater packages available (5- through 15-kW)
- 3- through 30-kW accessory heaters - field installed
- Factory-supplied power plug
- Easy plug-in provisions for heater installation
- Entry options for high and low voltage wiring hook-up
- Simple, 5-amp blade fuse (and a spare) to protect 40 VA transformer
- Easy coil inspection (removable, snap-in plug on A-coil models)
- Leak-preventing sweat connections
- Modular cabinets available on 036 through 060 sizes.

## ADDITIONAL FEATURES

### FX4C

- Puron®, environmentally sound refrigerant
- Factory-installed Puron® refrigerant thermostatic expansion valves (TXV)
- Factory-installed heater packages available
- ArmorCoat™ coil protection available

### FC4D

- R-22 refrigerant
- Factory-installed R-22 thermostatic expansion valves (TXV)
- Factory-installed heater packages available

## MODEL NUMBER NOMENCLATURE

### CARRIER FAN COILS

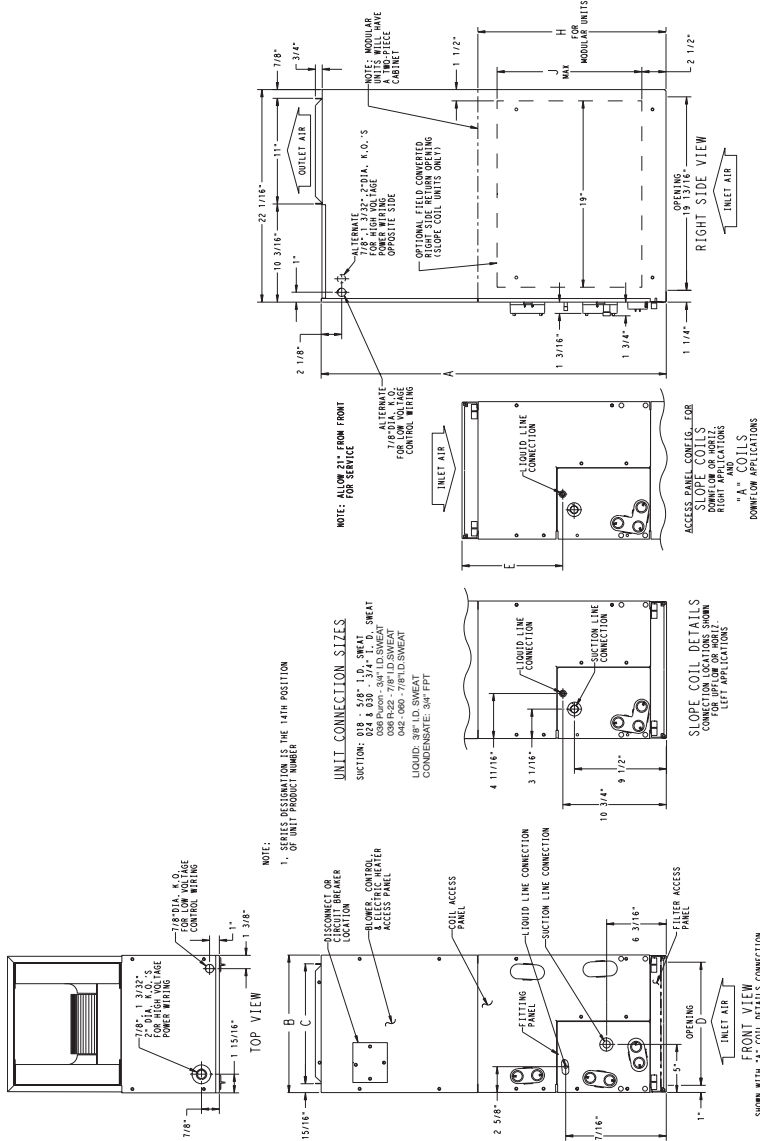
1	2	3	4	5	6	7-9	10-12
<b>F</b>	<b>X</b>	<b>4</b>	<b>C</b>	<b>N</b>	<b>F</b>	<b>018</b>	<b>000</b>
Product	Type	Position	Series	Electrical	Cabinet/ Insulation	Capacity	Heating Size
F = Fan Coil    X = Comfort™, Puron® C = Comfort™, R-22				N = 208/230v,    B = Modular 1ph-60Hz    F = Single piece		018 = 18,000 024 = 24,000 030 = 30,000 036 = 36,000 042 = 42,000 048 = 48,000 060 = 60,000	T00 = ArmorCoat™ 000 = No Heat 005 = 5kW 075 = 7.5kW 008 = 8 kW 010 = 10kW 011 = 11kW 015 = 15kW



CERTIFICATION APPLIES ONLY WHEN THE COMPLETE SYSTEM IS LISTED WITH ARI



**FX4C / FC4D**



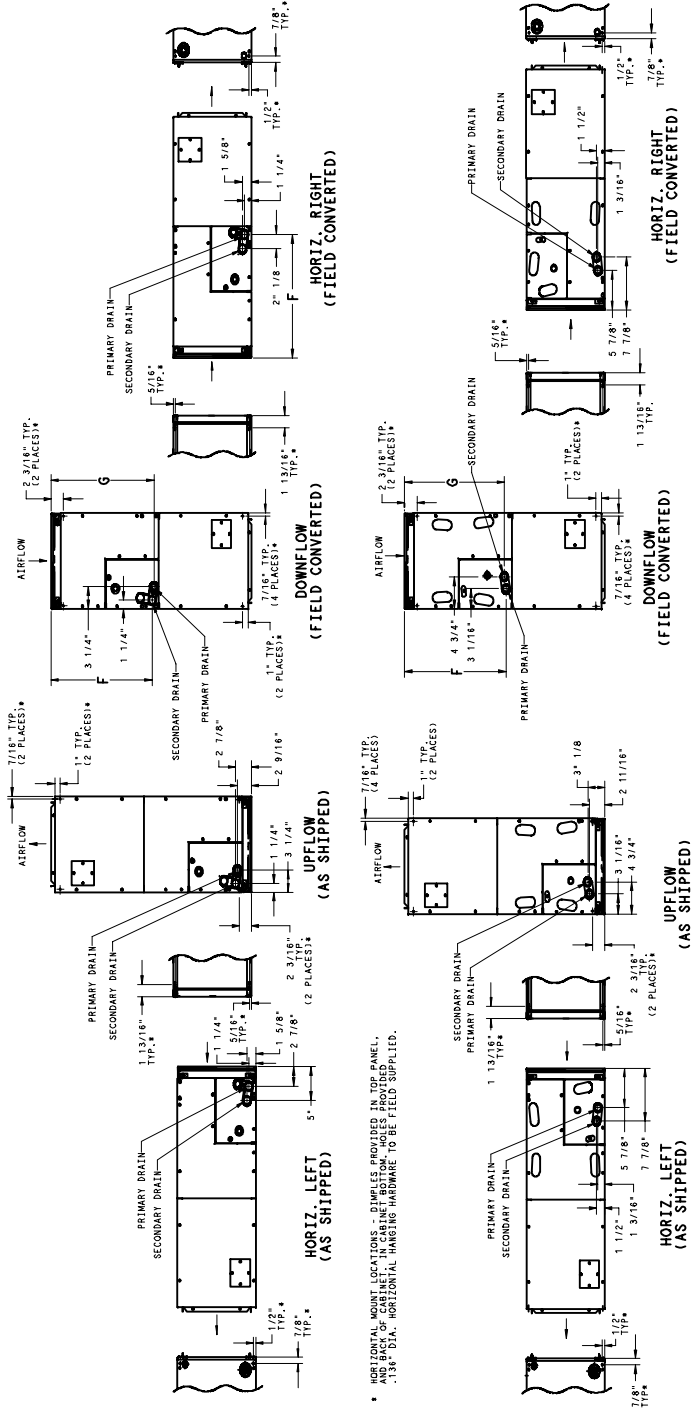
**DIMENSIONS**

UNIT SIZE FX, FC	COIL TYPE	A		B		C		D		E		H†		J	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
018*	Slope	42-11/16	1084	14-5/16	364	12-7/16	316	12-5/16	313	10-7/16	265	-	-	12	305
024*	Slope	47-5/8	1210	17-5/8	448	15-3/4	400	15-5/8	397	15-3/8	391	-	-	17	305
030*	Slope	49-5/8	1261	17-5/8	448	15-3/4	400	15-5/8	397	15-3/8	391	-	-	17	432
036*	Slope	53-7/16	1357	21-1/8	537	19-1/4	489	19-1/8	486	19-3/16	487	-	-	19	483
042*	A	49-5/8	1261	21-1/8	537	19-1/4	489	19-1/8	486	15-11/16	398	-	-	-	-
048*	A	53-7/16	1357	21-1/8	537	19-1/4	489	19-1/8	486	19-1/2	495	-	-	-	-
060*	A	59-3/16	1503	24-11/16	627	22-3/4	578	22-11/16	576	25-1/4	642	-	-	-	-
036†	Slope	53-7/16	1357	21-1/8	537	19-1/4	489	19-1/8	486	19-3/16	487	-	-	-	-
042†	A	53-7/16	1357	21-1/8	537	19-1/4	489	19-1/8	486	19-1/2	495	28-5/16	735	-	-
048†	A	53-7/16	1357	21-1/8	537	19-1/4	489	19-1/8	486	19-1/2	495	28-5/16	735	-	-
060†	A	59-3/16	1503	24-11/16	627	22-3/4	578	22-11/16	576	25-1/4	642	34-1/16	865	-	-

\* Single piece cabinet  
† Modular cabinet  
‡ Applicable to modular units only

### SLOPE COIL

NOTES:  
1. CONDENSATE PAN DRAIN CAPS NOT SHOWN FOR CLARITY.



\* HORIZONTAL MOUNT LOCATIONS - DIMPLES PROVIDED IN TOP PANEL, AND BACK OF CABINET. IN CABINET BOTTOM HOLES PROVIDED. .13" DIA. HORIZONTAL HANGING HARDWARE TO BE FIELD SUPPLIED.

### A-COIL

### DIMENSIONS (cont.)

UNIT SIZE FX, FC	COIL TYPE	F		G	
		in.	mm	in.	mm
018*	Slope	18-1/8	460	18-5/8	473
024*	Slope	23-1/8	587	23-5/8	600
030*	Slope	23-1/8	587	23-5/8	600
036*	Slope	26-15/16	684	27-1/2	699
042*	A	23-7/16	593	23-1/8	587
048*	A	27-1/4	692	26-15/16	684
060*	A	32-15/16	837	32-5/8	829
036†	A	26-15/16	684	27-1/2	699
042†	A	27-1/4	692	26-15/16	684
048†	A	27-1/4	692	26-15/16	684
060†	A	32-15/16	837	32-5/8	829

\* Single piece cabinet

† Modular cabinet

A05356

FX4C / FC4D

## PHYSICAL DATA

ODS CATALOG ORDERING NO.	FACTORY INSTALLED HEAT (kW)	NOMINAL COOLING CAPACITY (Btuh)	DIMENSIONS			SHIPPING WEIGHT
			Height	Width	Depth	
FX4CNF018(0,T)00	–	18,000	42–11/16"	14–5/16"	22–1/16"	100 lb
FX4CNF018005	5		1084mm	363mm	560mm	45 kg
FX4CNF024(0,T)00	–	24,000	47–11/16"	17–5/8"	22–1/16"	117 lb
FX4CNF024005	5		1211mm	447mm	560mm	53 kg
FX4CNF030(0,T)00	–	30,000	49–5/8"	17–5/8"	22–1/16"	122 lb
FX4CNF030008	8		1260mm	447mm	560mm	55 kg
FX4CNF036(0,T)00	–	36,000	53–7/16"	21–1/8"	22–1/16"	144 lb
FX4CNF036010	10		1357mm	536mm	560mm	65 kg
FX4CNF042(0,T)00	–	42,000	49–5/8"	21–1/8"	22–1/16"	150 lb
FX4CNF042010	10		1260mm	536mm	560mm	68 kg
FX4CNF048(0,T)00	–	48,000	53–7/16"	21–1/8"	22–1/16"	170 lb
FX4CNF048010	10		1357mm	536mm	560mm	77 kg
FX4CNF060(0,T)00	–	60,000	59–3/16"	24–11/16"	22–1/16"	198 lb
FX4CNF060010	10		1503mm	627mm	560mm	90 kg
FX4CNF060015	15					
FX4CNB036T00	–	36,000	53–7/16" 1357mm	21–1/8" 536mm	22–1/16" 560mm	144 lb 65kg
FX4CNB042T00	–	42,000	53–7/16" 1357mm	21–1/8" 536mm	22–1/16" 560mm	170 lb 77 kg
FX4CNB048T00	–	48,000	53–7/16" 1357mm	21–1/8" 536mm	22–1/16" 560mm	170 lb 77 kg
FX4CNB060T00	–	60,000	59–3/16" 1503mm	24–11/16" 627mm	22–1/16" 560mm	198 lb 90 kg

6th digit: B – Modular cabinet, F – Single piece cabinet

10th digit: 0 – Standard copper coil, T – ArmorCoat™

ODS CATALOG ORDERING NO.	FACTORY INSTALLED HEAT (kW)	NOMINAL COOLING CAPACITY (Btuh)	DIMENSIONS			SHIPPING WEIGHT
			Height	Width	Depth	
FC4DNF018000	–	18,000	42–11/16"	14–5/16"	22–1/16"	100 lb
FC4DNF018005	5		1084mm	363mm	560mm	45 kg
FC4DNF024000	–	24,000	47–11/16"	17–5/8"	22–1/16"	117 lb
FC4DNF024005	5		1211mm	447mm	560mm	53 kg
FC4DNF030000	–	30,000	49–5/8"	17–5/8"	22–1/16"	122 lb
FC4DNF030008	8		1260mm	447mm	560mm	55 kg
FC4DNF036000	–	36,000	53–7/16"	21–1/8"	22–1/16"	144 lb
FC4DNF036008	8		1357mm	536mm	560mm	65kg
FC4DNF036010	10					
FC4DNF042000	–	42,000	49–5/8"	21–1/8"	22–1/16"	150 lb
FC4DNF042010	10		1260mm	536mm	560mm	68 kg
FC4DNF042015	15					
FC4DNF048000	–	48,000	53–7/16"	21–1/8"	22–1/16"	170 lb
FC4DNF048010	10		1357mm	536mm	560mm	77 kg
FC4DNF048015	15					
FC4DNF060000	–	60,000	59–3/16"	24–11/16"	22–1/16"	198 lb
FC4DNF060010	10		1503mm	627mm	560mm	90 kg
FC4DNF060015	15					
FC4DNB036000	–	36,000	53–7/16" 1357mm	21–1/8" 536mm	22–1/16" 560mm	144 lb 65kg
FC4DNB042000	–	42,000			22–1/16" 560mm	170 lb 77 kg
FC4DNB048000	–	48,000			22–1/16" 560mm	170 lb 77 kg
FC4DNB060000	–	60,000	59–3/16" 1503mm	24–11/16" 627mm	22–1/16" 560mm	198 lb 90 kg

6th digit: B – Modular cabinet, F – Single piece cabinet

FX4C / FC4D

## SPECIFICATIONS

MODEL FX4C	018	024	030	036	042	048	060
<b>COIL</b>							
R-22 Refrigerant Metering Device	TXV – factory installed hard–shutoff, bi–flow type for heat pump application						
TXV	2 ton			3 ton		4 ton	
Rows/Fins Per In.	3 / 14.5						
Face Area (Sq. Ft.)	2.23	2.97	3.46	4.45	5.93	7.42	
Configuration	Slope				A		
<b>FAN</b>							
CFM (Nominal)	600	800	1000	1200	1400	1600	2000
Motor Type (ECM)	X13	X13	X13	X13	X13	X13	X13
Motor Hp	1/3	1/3	1/3	1/2	1/2	3/4	3/4
<b>FILTER</b>							
21–1/2" / 546 mm X	13" / 330 mm	16–3/8" / 417 mm		19–7/8" / 505 mm		23–5/16" / 585 mm	
<b>CABINET CONFIGURATION OPTIONS</b>							
	1–pc	1–pc	1–pc	1–pc / Modular	1–pc / Modular	1–pc / Modular	1–pc / Modular

MODEL FC4D	018	024	030	036	042	048	060
<b>COIL</b>							
R-22 Refrigerant Metering Device	TXV – factory installed hard–shutoff, bi–flow type for heat pump application						
TXV	3 ton			5 ton		6 ton	
Rows/Fins Per In.	3 / 14.5						
Face Area (Sq. Ft.)	2.23	2.97	3.46	4.45	5.93	7.42	
Configuration	Slope				A		
<b>FAN</b>							
CFM (Nominal)	600	800	1000	1200	1400	1600	2000
Motor Type (ECM)	X13	X13	X13	X13	X13	X13	X13
Motor Hp	1/3	1/3	1/3	1/2	1/2	3/4	3/4
<b>FILTER</b>							
21–1/2" / 546 mm X	13" / 330 mm	16–3/8" / 417 mm		19–7/8" / 505 mm		23–5/16" / 585 mm	
<b>CABINET CONFIGURATION OPTIONS</b>							
	1–pc	1–pc	1–pc	1–pc / Modular	1–pc / Modular	1–pc / Modular	1–pc / Modular

**FX4C / FC4D**

## PERFORMANCE DATA

### AIRFLOW PERFORMANCE (CFM)

MODEL & SIZE	BLOWER SPEED	TOTAL EXTERNAL STATIC PRESSURE					
		0.10	0.20	0.30	0.40	0.50	0.60
FX4C, FC4D 018	High	766	739	706	666	619	566
	Medium	701	659	619	578	538	499
	Low	614	572	530	486	441	396
FX4C, FC4D 024	High	941	905	868	830	792	753
	Medium	823	786	747	707	665	622
	Low	633	583	533	482	431	378
FX4C, FC4D 030	High	1130	1097	1063	1028	992	955
	Medium	1033	1000	965	928	888	846
	Low	840	802	760	713	663	609
FX4C, FC4D 036	High	1437	1398	1354	1308	1257	1204
	Medium	1282	1238	1192	1142	1090	1036
	Low	1168	1118	1067	1014	959	903
FX4C, FC4D 042	High	1616	1578	1533	1480	1420	1353
	Medium	1479	1437	1392	1344	1293	1240
	Low	1303	1258	1211	1161	1108	1054
FX4C, FC4D 048	High	1805	1772	1739	1704	1669	1632
	Medium	1652	1617	1581	1543	1504	1463
	Low	1458	1418	1377	1335	1292	1248
FX4C, FC4D 060	High	2057	2024	1989	1954	1916	1878
	Medium	1799	1766	1731	1695	1658	1618
	Low	1667	1633	1596	1558	1517	1475

■ – Airflow outside 450 cfm/ton.

**NOTES:**

- Airflow based upon dry coil at 230v with factory–approved filter and electric heater (2 element heater sizes 018 through 036, 3 element heater sizes 042 through 060). Airflow at 208 volts is approximately the same as 230 volts because the X13 motor is a constant torque motor. The torque doesn't drop off at the speeds the motor operates.
- To avoid potential for condensate blowing out of drain pan prior to making drain trap:  
Return static pressure must be less than 0.40 in. wc.  
Horizontal applications of 042 – 060 sizes must have supply static greater than 0.20 in. wc.
- Airflow above 400 cfm/ton on 048–060 size could result in condensate blowing off coil or splashing out of drain pan.







## PERFORMANCE DATA (cont)

**CFM** – Cubic Ft. per Minute

**EWB** – Entering Wet Bulb (°F)

**LWB** – Leaving Wet Bulb (°F)

**TC** – Gross Cooling Capacity 1000 Btuh

**SHC** – Gross Sensible Capacity 1000 Btuh

**BF** – Bypass Factor

**MBH** – 1000 Btuh

**NOTES:**

1. Contact manufacturer for cooling capacities at conditions other than shown in table.
2. Formulas:  
 Leaving db = entering db –  $\frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$   
 Leaving wb = wb corresponding to enthalpy of air leaving coil ( $h_{lwb}$ )  
 $h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{CFM}}$   
 where  $h_{ewb}$  = enthalpy of air entering coil. Direct interpolation is permissible. Do not extrapolate.
3. SHC is based on 80°F db temperature of air entering coil. Below 80°F db, subtract (Correction Factor x CFM) from SHC. Above 80°F db, add (Correction Factor x CFM) to SHC.
4. Bypass Factor = 0 indicates no psychometric solution. Use bypass factor of next lower EWB for approximation.

Interpolation is permissible.

Correction Factor =  $1.09 \times (1 - \text{BF}) \times (\text{db} - 80)$

### 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	.098	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	

**FX4C / FC4D**

### MINIMUM CFM AND MOTOR SPEED SELECTION

FAN COIL SIZES FX, FC	HEATER kW									
	3	5	8	9	10	15	18	20	24	30
018	525	525	525	—	600*	—	—	—	—	—
024	700	700	700	—	700	775*	—	—	—	—
030	—	875	875	—	875	875	—	1060*	—	—
036	—	1050	970	970	970	920	—	1040	—	—
042	—	—	1225	1225	1225	1225	1225	1225	—	—
048	—	—	1400	1400	1400	1400	1400	1400	1400	1400
060	—	—	1750	1750	1750	1750	1750	1750	1750	1750

\* Indicates medium speed (blue). All other motor speeds at low tap.

### AIR DELIVERY PERFORMANCE CORRECTION COMPONENT PRESSURE DROP (in. wc) AT INDICATED AIRFLOW (DRY-TO-WET COIL)

FX, FC SIZE	CFM															
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
018	0.034	0.049	0.063	—	—	—	—	—	—	—	—	—	—	—	—	—
024	0.016	0.027	0.038	0.049	0.059	—	—	—	—	—	—	—	—	—	—	—
030	—	—	—	0.049	0.059	0.070	0.080	—	—	—	—	—	—	—	—	—
036	—	—	—	—	—	0.055	0.064	0.073	0.081	—	—	—	—	—	—	—
042	—	—	—	—	—	—	—	0.049	0.056	0.063	0.070	—	—	—	—	—
048	—	—	—	—	—	—	—	—	—	0.038	0.043	0.049	0.054	0.059	—	—
060	—	—	—	—	—	—	—	—	—	—	—	0.027	0.031	0.035	0.039	0.043

## PERFORMANCE DATA (cont)

### FACTORY-INSTALLED FILTER STATIC PRESSURE DROP (in. wc)

UNIT SIZE FX, FC	CFM								
	400	600	800	1000	1200	1400	1600	1800	2000
018	0.02	0.044	0.075	—	—	—	—	—	—
024, 030	—	0.022	0.048	0.072	0.100	—	—	—	—
036, 042, 048	—	—	—	0.051	0.070	0.092	0.120	0.152	—
060	—	—	—	—	—	—	0.086	0.105	0.130

### ELECTRIC HEATER STATIC PRESSURE DROP (in. wc)

018 – 036			042 – 060		
HEATER ELEMENTS	kW	EXTERNAL STATIC PRESSURE CORRECTION	HEATER ELEMENTS	KW	EXTERNAL STATIC PRESSURE CORRECTION
0	0	+ .02	0	0	+ .04
1	3, 5	+ .01	2	8, 10	+ .02
2	8, 10	0	3	9, 15	0
3	9, 15	– .02	4	20	– .02
4	20	– .04	6	18, 24, 30	– .10

The airflow performance data was developed using fan coils with 10–kW electric heaters (2 elements) in the 018 through 036 size units and 15–kW heaters (3 elements) in the 042 through 060 size units. For fan coils with heaters of a different number of elements, the external available static at a given CFM from the curve may be corrected by adding or subtracting available external static pressure as indicated above.

**FX4C / FC4D**

### ACCESSORY ELECTRIC HEATERS

HEATER PART NO.	kW @ 240V	VOLTS/ PH	STAGES (kW OPERATING)	INTERNAL CIRCUIT PROTECTION	FAN COIL SIZE USED WITH	HEATING CAP** @ 230V
KFCEH0401N03	3	230/1	3	None	018–024	9,400
KFCEH0501N05	5	230/1	5	None	018–060	15,700
KFCEH0801N08	8	230/1	8	None	018–060	25,100
KFCEH0901N10	10	230/1	10	None	018–060	31,400
KFCEH3201F20	20	230/1	5, 20	Fuse‡	030–060	62,800
KFCEH1601315	15	230/3	5, 15	None	036–060	47,100
KFCEH2001318	18	230/3	6, 12, 18	None	042–060	56,500
KFCEH3401F24	24	230/3*	8, 16, 24	Fuse	048, 060	78,300
KFCEH3501F30	30	230/3*	10, 20, 30	Fuse	048, 060	94,100
KFCEH2401C05	5	230/1	5	Circuit Breaker	018–060	15,700
KFCEH2501C08	8	230/1	8	Circuit Breaker	018–060	25,100
KFCEH2601C10	10	230/1	10	Circuit Breaker	018–060	31,400
KFCEH3301C20	20	230/1	5, 20	Circuit Breaker	030–060	62,800
KFCEH2901N09	9	230/1†	3, 9	None	036–060	28,200
KFCEH3001F15	15	230/1	5, 15	Fuse‡	024–060	47,100
KFCEH3101C15	15	230/1	5, 15	Circuit Breaker	024–060	47,100

\* Field convertible to 1 phase.

† Field convertible to 3 phase.

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

\*\* Blower Motor heat not included.

### ESTIMATED SOUND POWER LEVEL (dBA)

UNIT SIZE FX, FC	CONDITIONS		OCTAVE BAND CENTER FREQUENCY*						
	CFM	Ext Static Pressure	63	125	250	500	1000	2000	4000
018	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
024	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
030	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
036	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
042	1400	0.25	68.4	64.4	60.4	57.4	55.4	53.4	49.4
048	1600	0.25	69.0	65.0	61.0	58.0	56.0	54.0	50.0
060	2000	0.25	70.0	66.0	62.0	59.0	57.0	55.0	51.0

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

**ELECTRICAL DATA FOR UNITS WITH FACTORY-INSTALLED HEAT**

MODEL NO.	MTR HP	MTR FLA	VOLTS/PH/HZ	HEAT PACK INSTALLED	SINGLE CIRCUIT			DUAL CIRCUIT						
					Heater Amps	MCA	Max. Overcur. Protect.	Htr. Amps	MCA	Max. Overcur. Protect.	Htr. Amps	MCA	Max. Overcur. Protect.	
								L1/L2	L1/L2	L1/L2	L3/L4	L3/L4	L3/L4	
FX4CNF018005	1/3	2.8	208/230/1/60	MKFCEH0501N05	18.1/20.0	26.1/28.5	30/30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF024005	1/3	2.8	208/230/1/60	MKFCEH0501N05	18.1/20.0	26.1/28.5	30/30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF030008	1/3	2.8	208/230/1/60	MKFCEH0801N08	28.9/32.0	39.6/43.5	40/45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF036010	1/2	4.1	208/230/1/60	MKFCEH0901N10	36.2/40.0	50.4/55.1	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF042010	1/2	4.1	208/230/1/60	MKFCEH0901N10	36.2/40.0	50.4/55.1	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF048010	3/4	6.0	208/230/1/60	MKFCEH0901N10	36.2/40.0	52.8/57.5	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF060010	3/4	6.0	208/230/1/60	MKFCEH0901N10	36.2/40.0	52.8/57.5	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FX4CNF060015	3/4	6.0	208/230/1/60	MKFCEH1501F15	54.2/59.9	75.3/82.4	80/90	36.2/40.0	52.8/57.5	60/60	18.1/20.0	22.6/25.0	25/25	25/25

**FX4C / FC4D**

MODEL NO.	MTR HP	MTR FLA	VOLTS/PH/HZ	HEAT PACK INSTALLED	SINGLE CIRCUIT			DUAL CIRCUIT						
					Heater Amps	MCA	Max. Overcur. Protect.	Htr. Amps	MCA	Max. Overcur. Protect.	Htr. Amps	MCA	Max. Overcur. Protect.	
								L1/L2	L1/L2	L1/L2	L3/L4	L3/L4	L3/L4	
FC4DNF018005	1/3	2.8	208/230/1/60	MKFCEH0501N05	18.1/20.0	26.1/28.5	30/30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF024005	1/3	2.8	208/230/1/60	MKFCEH0501N05	18.1/20.0	26.1/28.5	30/30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF030008	1/3	2.8	208/230/1/60	MKFCEH0801N08	28.9/32.0	39.6/43.5	40/45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF036008	1/2	4.1	208/230/1/60	MKFCEH0801N08	28.9/32.0	41.3/45.1	45/45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF036010	1/2	4.1	208/230/1/60	MKFCEH0901N10	36.2/40.0	50.4/55.1	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF042010	1/2	4.1	208/230/1/60	MKFCEH0901N10	36.2/40.0	50.4/55.1	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF042015	1/2	4.1	208/230/1/60	MKFCEH1501F15	54.2/59.9	72.9/80.0	80/90	36.2/40.0	50.4/55.1	60/60	18.1/20.0	22.6/25.0	25/25	25/25
FC4DNF048010	3/4	6.0	208/230/1/60	MKFCEH0901N10	36.2/40.0	52.8/57.5	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF048015	3/4	6.0	208/230/1/60	MKFCEH1501F15	54.2/59.9	75.3/82.4	80/90	36.2/40.0	52.8/57.5	60/60	18.1/20.0	22.6/25.0	25/25	25/25
FC4DNF060010	3/4	6.0	208/230/1/60	MKFCEH0901N10	36.2/40.0	52.8/57.5	60/60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FC4DNF060015	3/4	6.0	208/230/1/60	MKFCEH1501F15	54.2/59.9	75.3/82.4	80/90	36.2/40.0	52.8/57.5	60/60	18.1/20.0	22.6/25.0	25/25	25/25

MCA – Minimum Circuit Amps

**ELECTRICAL DATA FOR UNITS WITHOUT ELECTRICAL HEAT**

MODEL NO.	MTR HP	MTR FLA	VOLTS/PH/HZ	SINGLE CIRCUIT		BRANCH CIRCUIT MIN WIRE SIZE* AWG
				MCA	MAXIMUM OVERCURRENT PROTECTION	
FX4CNF018(0,T)00	1/3	2.8	208/230/1/60	3.5	15	14
FX4CNF024(0,T)00	1/3	2.8	208/230/1/60	3.5	15	14
FX4CNF030(0,T)00	1/3	2.8	208/230/1/60	3.5	15	14
FX4CNF036(0,T)00	1/2	4.1	208/230/1/60	5.1	15	14
FX4CNF042(0,T)00	1/2	4.1	208/230/1/60	5.1	15	14
FX4CNF048(0,T)00	3/4	6.0	208/230/1/60	7.5	15	14
FX4CNF060(0,T)00	3/4	6.0	208/230/1/60	7.5	15	14
FX4CNB036T00	1/2	4.1	208/230/1/60	5.1	15	14
FX4CNB042T00	1/2	4.1	208/230/1/60	5.1	15	14
FX4CNB048T00	3/4	6.0	208/230/1/60	7.5	15	14
FX4CNB060T00	3/4	6.0	208/230/1/60	7.5	15	14

MODEL NO.	MTR HP	MTR FLA	VOLTS/PH/HZ	SINGLE CIRCUIT		BRANCH CIRCUIT MIN WIRE SIZE* AWG
				MCA	MAXIMUM OVERCURRENT PROTECTION	
FC4DNF018000	1/3	2.8	208/230/1/60	3.5	15	14
FC4DNF024000	1/3	2.8	208/230/1/60	3.5	15	14
FC4DNF030000	1/3	2.8	208/230/1/60	3.5	15	14
FC4DNF036000	1/2	4.1	208/230/1/60	5.1	15	14
FC4DNF042000	1/2	4.1	208/230/1/60	5.1	15	14
FC4DNF060000	3/4	6.0	208/230/1/60	7.5	15	14
FC4DNB036000	1/2	4.1	208/230/1/60	5.1	15	14
FC4DNB042000	1/2	4.1	208/230/1/60	5.1	15	14
FC4DNB048000	3/4	6.0	208/230/1/60	7.5	15	14
FC4DNB060000	3/4	6.0	208/230/1/60	7.5	15	14

\* Use copper wire only. Use 75°C only in this application. When using non-metallic (NM) sheathed cable, wire size required should be based on that of 60°C conductors, instead of wire sizes shown in table above per NEC Article 336-26.

NOTE: If branch circuit wire length exceeds 100 ft (30 m), consult NEC 215-2 to determine maximum wire length. Use 2% voltage drop.

FLA – Full Load Amps

## ACCESSORY ELECTRIC HEATER ELECTRICAL DATA

HEATER PART NO.	kW		INTERNAL CIRCUIT PROTECTION	HEATER AMPS 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 (F)‡	
	240v	208v		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit
					L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		
KFCEH401N03	3	2.3	1	None	10.9/12.0	—	—	12/12	—	—	20/20	—	—	67/68	—	—	
KFCEH0501N051	5	3.8	1	None	18.1/20.0	—	—	10/10	—	—	30/30	—	—	66/66	—	—	
KFCEH0501N052	5	3.8	1	None	16.1/20.0	—	—	8/6	—	—	35/35	—	—	65/66	—	—	
KFCEH2401C051	5	3.8	1	CH Bkr	18.1/20.0	—	—	10/10	—	—	30/30	—	—	66/66	—	—	
KFCEH2401C052	5	3.8	1	CH Bkr	18.1/20.0	—	—	8/6	—	—	35/35	—	—	65/66	—	—	
KFCEH0801N08	8	6.0	1	None	28.9/32.0	—	—	8/6	—	—	45/50	—	—	58/60	—	—	
KFCEH2501C08	8	6.0	1	CH Bkr	28.9/32.0	—	—	8/8	—	—	45/50	—	—	58/60	—	—	
KFCEH2901N09	9	6.8	1	None	32.8/36.0	—	—	8/6	—	—	50/60	—	—	54/57	—	—	
KFCEH2901N09**	9	6.8	3	None	18.8/20.8	—	—	8/6	—	—	35/35	—	—	63/65	—	—	
KFCEH0901N10	10	7.5	1	None	36.2/40.0	—	—	6/6	—	—	60/60	—	—	78/80	—	—	
KFCEH2601C10	10	7.5	1	CH Bkr	36.2/40.0	—	—	6/6	—	—	60/60	—	—	78/80	—	—	
KFCEH3001F15	15	11.3	1	Fuse	54.2/59.9	36.2/40.0	18.1/20.0	4/4	6/6	10/10	80/80	60/80	25/25	88/89	78/80	75/76	
KFCEH3101C15	15	11.3	1	CH Bkr	—	36.2/40.0	18.1/20.0	—	6/6	10/10	—	60/80	25/25	—	78/80	75/76	
KFCEH1601315	15	11.3	3	None	31.3/34.6	—	—	8/6	—	—	50/60	—	—	58/60	—	—	
KFCEH2001318	18	13.5	3	None	37.6/41.5	—	—	6/6	—	—	60/70	—	—	76/77	—	—	
KFCEH2001F20	20	15.0	1	Fuse	72.3/79.9	36.2/40.0	36.2/40.0	3/2	6/6	8/8	100/110	60/80	50/50	85/109	78/80	59/59	
KFCEH3301C20	20	15.0	1	CH Bkr	—	36.2/40.0	36.2/40.0	—	6/6	8/8	10/10	10/10	10/10	—	78/80	59/59	
KFCEH3401F24†	24	18.0	3	Fuse	50.1/55.4	—	—	4/4	—	—	80/80	—	—	94/95	—	—	
KFCEH3501F30††	30	22.5	3	Fuse	86.7/95.5	—	—	1/1	—	—	125/150	—	—	115/116	—	—	
KFCEH3501F30††	30	22.5	1	Fuse	82.6/89.2	—	—	3/3	—	—	80/100	—	—	97/98	—	—	
KFCEH3501F30††	30	22.5	1	Fuse	109.0/120.0	—	—	0/00	—	—	150/175	—	—	117/150	—	—	

## FIELD MULTIPOINT WIRING OF 24- AND 30-KW SINGLE PHASE

HEATER PART NO.	kW		P H A S E	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	L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6
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	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	6/6	8/8	8/8	10/10	60/60	50/50	50/50	78/80	59/59	59/59		

\* 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%.

\*\* Field convertible to 3 phase.

†† Field convertible to 1 phase, single or multiple supply circuit.

**NOTES:**

1. For fan coil sizes 018–036.
2. For fan coil sizes 042–060.
3. Single circuit application of F15 and F20 heaters requires single-point wiring kit accessory.



## HEATER ELECTRICAL DATA

### FACTORY-INSTALLED HEATER OPTIONS\*

MODEL	018	024	030	036	042	048	060
FC4DNF	5	5	8	8, 10	10, 15	10, 15	10, 15
FX4CNF	5	5	8	10	10	10	10, 15

\* For field-installed heater/fan coil combinations, see Accessory Electric Heaters on page 11.

### ELECTRIC HEATER INTERNAL PROTECTION

HEATER kW	PHASE	FUSE 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	1/3	6/60	—
30	1/3	6/60	—

\* All circuit breakers are 2 pole.

When using units with 20-, 24-, and 30-kW electric heaters, maintain a 1-in. clearance from combustible materials to discharge plenum and ductwork and maintain a distance of 36 in. from the unit. Use an accessory downflow base to maintain proper clearance on downflow installations. Use flexible connectors between ductwork and unit to prevent transmission of vibration. When electric heater is installed, use heat resistant material for flexible connector between ductwork and unit at discharge connection. Ductwork passing through unconditioned space must be insulated and covered with vapor barrier

FX4C / FC4D

## ACCESSORIES

ITEM	ACCESSORY PART NO.*	FAN COIL SIZE USED WITH
1. Disconnect Kit	KFADK0201DSC	Cooling controls and heaters 3– through 10–kW
2. Downflow Base Kit	KFACB0101CFB	018
	KFACB0201CFB	024, 030
	KFACB0301CFB	036, 042, 048
	KFACB0401CFB	060
3. Downflow Conversion Kit †	KFADC0201SLP	Slope Coil Units—018, 024, 030, 036
	KFADC0401ACL	A–Coil Units—042, 048, 060
4. Downflow/Horizontal Conversion Gasket Kit	KFAHD0101SLP	All
5. Horizontal Water Management Kit (25 pack) ‡	KFAHC0125AAA	All
6. Single–Point Wiring Kit	KFASP0101SPK	Only with 15– and 20–kW Fused Heaters
7. Filter Kit (12 Pack)	KFAFK0112SML	018
	KFAFK0212MED	024, 030
	KFAFK0312LRG	036, 042, 048
	KFAFK0412XXL	060
8. Fan Coil Filter Cabinet (Fan Coil Filter Media)	FNCCABCC0014 (FILCCFNC0014)	018
	FNCCABCC0017 (FILCCFNC0017)	024, 030
	FNCCABCC0021 (FILCCFNC0021)	036, 042, 048
	FNCCABCC0024 (FILCCFNC0024)	060
9. PVC Condensate Trap Kit (50 pack)	KFAET0150ETK	All
10. Air Cleaner 240–volt Conversion Kit	KEAVC0201240	All

\* Factory authorized and listed, field–installed.

† KFAHD0101SLP must also be purchased for downflow applications.

‡ KFAHD0101SLP must also be purchased for downflow or horizontal applications.

### Accessory Kits Description Suggested and Required Use

#### 1. Disconnect Kit

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

SUGGESTED USE: Units for 3– through 10–kW electric resistance heaters and cooling controls.

#### 2. 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 fan coils are used in downflow applications.

#### 3. 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 fan coils are used in downflow applications.

#### 4. Downflow/Horizontal Conversion Gasket Kit

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

REQUIRED USE: Fan coils in either downflow or horizontal applications.

#### 5. Horizontal Applications - Water Management Kit

This kit provides proper installation of fan coils under conditions of high static pressure and high relative humidity.

SUGGESTED USE: All fan coils.

#### 6. Single Point Wiring Kit

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

SUGGESTED USE: Fan coils with 15– and 20–kW fused heaters only.

#### 7. Filter Kit (12 pack)

The kit consists of 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 filters in fan coils.

REQUIRED USE: All units unless a filter grille is used.

#### 8. Fan Coil Filter Cabinet

This cabinet is mounted to the fan coil on the return air end and designed to slip over the outer fan coil casing. The cabinets are insulated using the same insulation as production fan coils. They are designed for the removal of particulates from indoor air using FILCCFNC00(14, 17, 21, 24) media filter cartridges. These fan coil media filter cartridge kits are designed for the removal of particles from indoor air. The cartridge is installed in the return air duct next to the air handler or further upstream.

SUGGESTED USE: All fan coils.

FX4C / FC4D

**9. 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: All fan coils.

**10. 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.