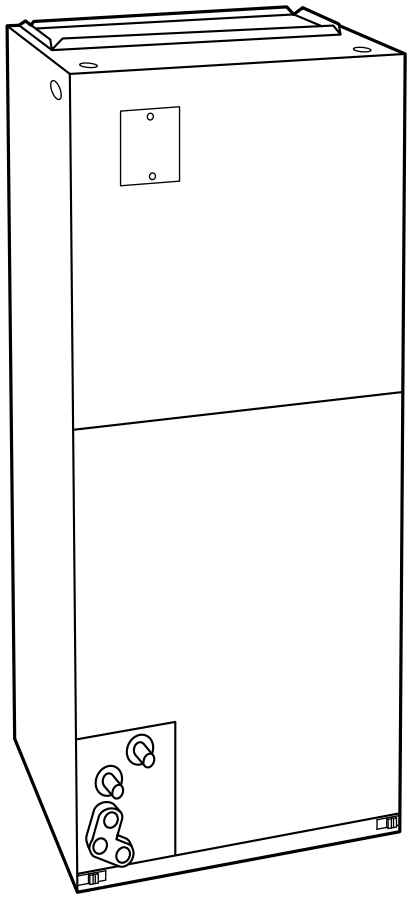
bryant
Heating & Cooling Systems

DIRECT EXPANSION FAN COIL

MODEL FK4C

Sizes 001 thru 006



FK4C
Premium Air Handling Technology

The FK4C is the latest in air handling technology. It is the perfect unit when you need a fan coil that can deliver high-tech performance, application versatility, easy installation, and high efficiency.

The FK4C achieves all this by taking full advantage of its programmable integrated controls and motor (ICM2). This versatile motor is completely static independent, meaning the motor will deliver the selected CFM regardless of the duct system, making it the perfect choice for both high and low static applications. Other features homeowners will appreciate are the FK4C's soft ramp up when the unit is turned on, and its soft ramp down after the thermostat is satisfied. These features increase efficiency and eliminate the annoying sounds associated with sudden changes in airflow. When the ICM2 is used in conjunction with specific indoor controls (such as the Thermidistat™ Control), the HVAC system can operate in comfort control modes like Super Dehumidify. This combination of Bryant products can offer unmatched comfort.

The FK4C also features Bryant's 'Easy Select™ Board.' This board streamlines installation and helps the installer to select the correct airflow. The Easy Select Board combined with the ICM2 truly allows dealers to customize the heating and cooling system to each home.

The FK4C is also loaded with the most advanced components, so you know it will perform like a premium fan coil should. Inside you will find grooved copper tubing and lanced sine wave aluminum fins, which contribute to the FK4C's high SEER and HSPF ratings. Bryant technology also incorporates factory washed coils for superior condensate control, dedicated refrigerant circuitry, and state-of-the-art Thermostatic Expansion Valve (TXV) refrigerant metering. These units are designed with a high-impact Lexan© condensate pan. The primary and secondary drain connections include brass inserts. All of this is packed in a rugged, prepainted metal cabinet that is lined with super-thick, high-density insulation. Obviously a unit built to last!

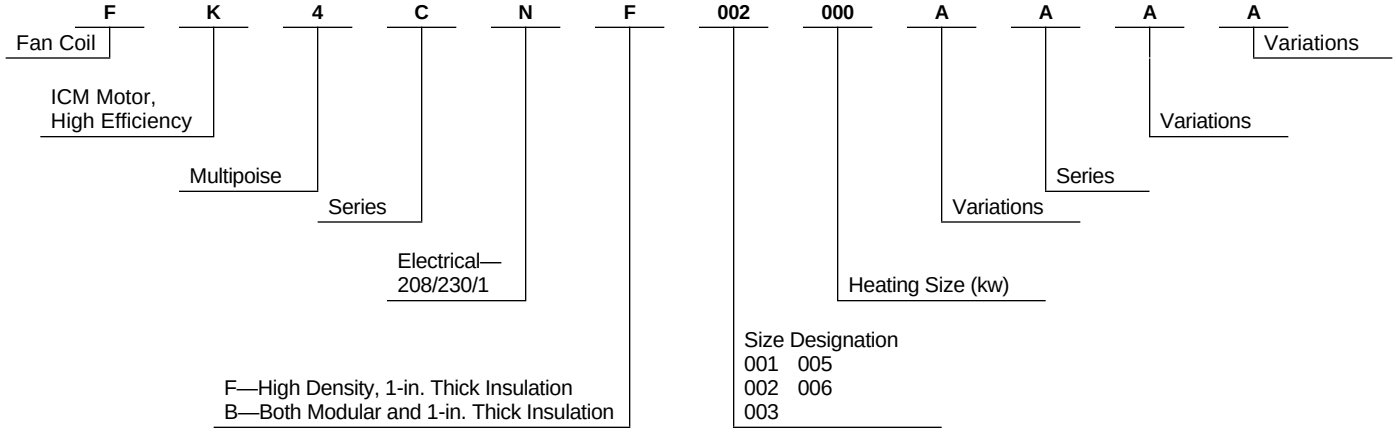
In addition to superior quality, the FK4C also offers the ultimate in versatility. Compact and designed for upflow, downflow, and horizontal applications, the FK4C fits right where it is needed. It is equipped with sweat connections and has multiple electric entries for fast, simple installations. Bryant also offers the FK4C with factory- or field-installed electric resistance heater kits in sizes 5- to 30-kw. When the ultimate in efficiency, flexibility, comfort, and durability is needed, the FK4C is the fan coil to use.

Form No. PDS FK4C.01.3

FEATURES

- Programmable ICM2 blower motor
- Easy Select™ Board
- Grooved copper tube
- Lanced sine wave aluminum fin
- Discreet refrigerant circuits
- Prepainted galvanized sheet metal cabinet
- Cooling control in every unit
- Static independent airflow
- Logarithmic spiral blower housings for blower efficiency
- High impact Lexan© condensate pans
- All units multipoise
- Provision made for suspending from roof or ceiling joists
- Modular cabinet design on 006 size
- Factory-supplied, cleanable, permanent framed filter
- Easy access filter — no tools required
- Field-installed heater packages 5- to 30-kw, fused, circuit breaker, non-fused (10-kw and down)
- Low-voltage terminal block
- AMP plug connection provided for accessory heater packages
- Connections for humidistat/humidifier
- Connections for air cleaner relay
- Blower on/off-delay time selections
- Extra thick 1-in., R 4.2 high-density insulation
- Tested for condensate disposal at conditions much more severe than those required by ARI
- Sweat connections
- Bi-flow hard shut-off TXV
- Multiple electrical entry
- Primary and secondary drain connections with brass inserts
- Inspection plate on A-coil models
- 1-1/2 – 5 ton application
- HUD approved for manufactured housing
- Replaceable 5-amp blade-type auto fuse protects against transformer secondary short
- 40 va, 208/230-v transformer
- All models listed with UL, c-UL, ARI, and RADCO
- Independent fan only selections

MODEL NUMBER NOMENCLATURE



RADCO • CERTIFICATION • LISTING • TESTING • INSPECTION ®

c UL ® US

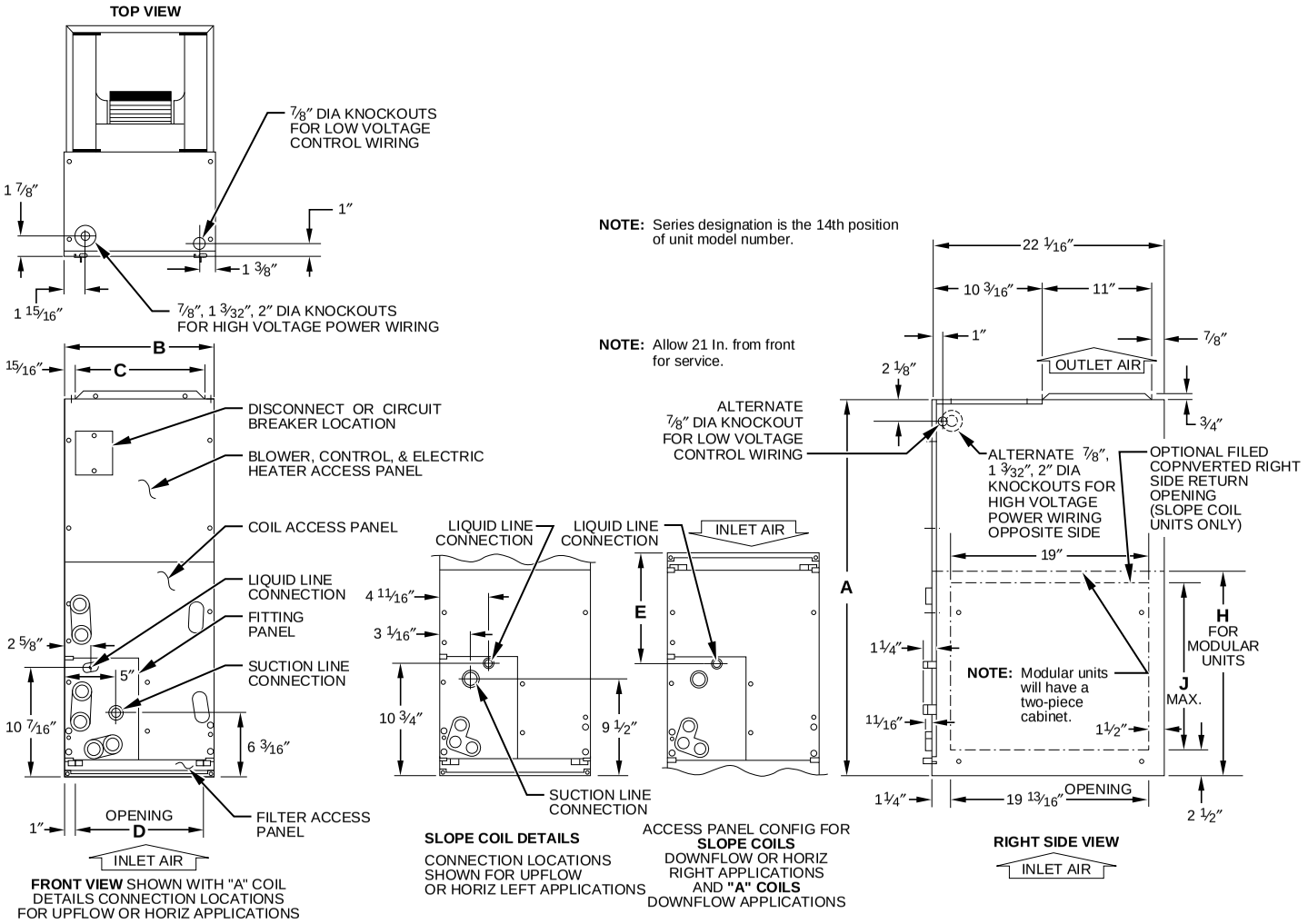
Carrier Corporation UL ® REGISTERED FIRM ISO 9001 #A2883

REGISTRATION QUALITY SYSTEM

MANUFACTURER CERTIFIED TO ARI AS COMPLYING WITH ARI STANDARD 210

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

DIMENSIONS



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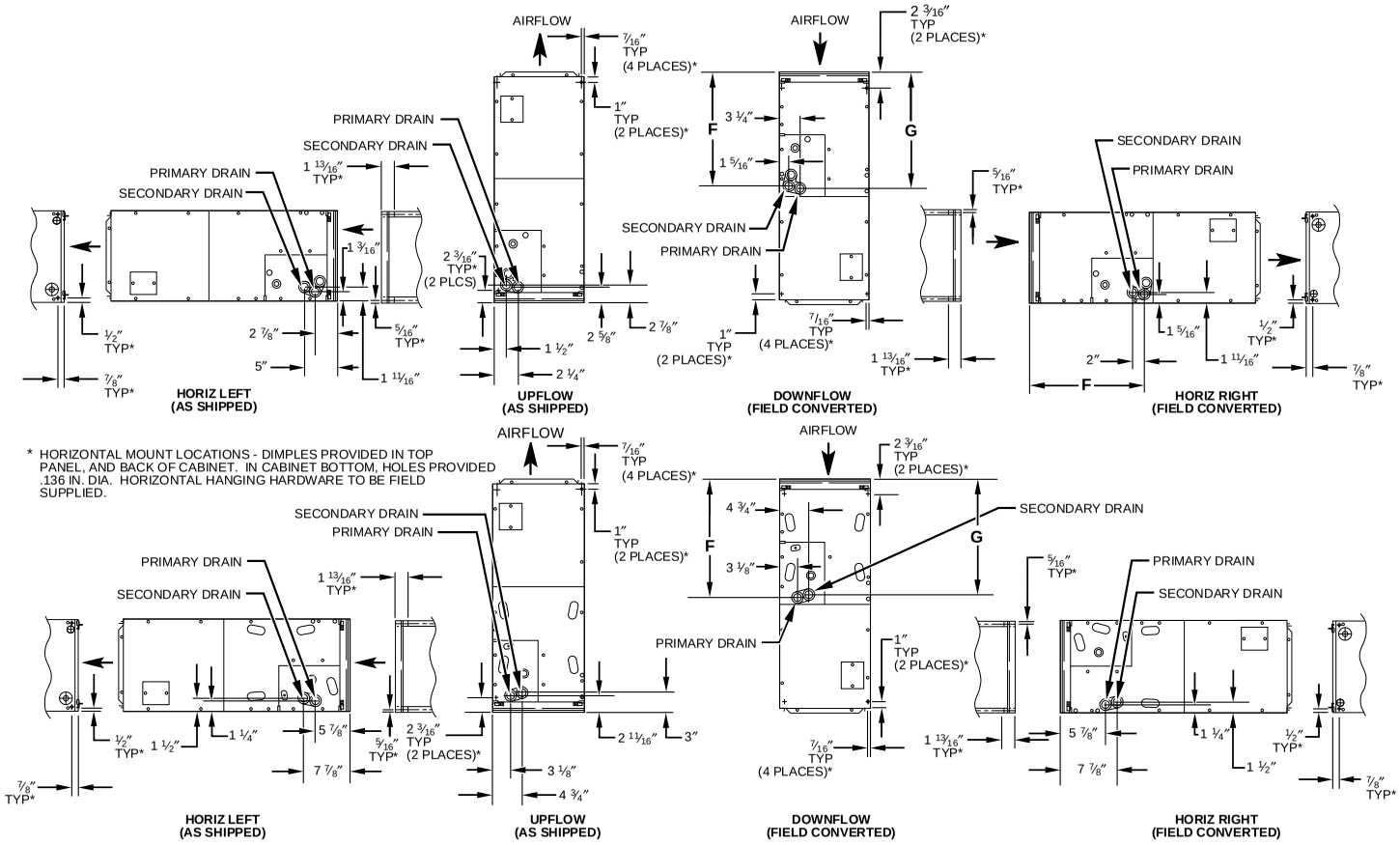
UNIT	SIZE	A In.	B In.	C In.	D In.	E In.
FK4C	001	47-5/8	17-5/8	15-3/4	15-5/8	15-3/8
	002	42-11/16	17-5/8	15-3/4	15-5/8	10-3/4
	003	53-7/16	21-1/8	19-1/4	19-1/8	19-3/16
	005	53-7/16	21-1/8	19-1/4	19-1/8	19-1/2
	006	59-3/16	24-11/16	22-3/4	22-11/16	25-1/4

DIMENSIONS Continued

SLOPE COIL



A–COIL

A95536

UNIT	SIZE	F	G	H	J	COIL CONFIGURATION		SHIPPING WEIGHT
		In.	In.	In.	In.	SLOPE	"A"	Lb
FK4C	001	23-1/8	23-5/8	—	17	Yes	—	115
	002	18-9/16	18-1/4	—	—	—	Yes	130
	003	26-15/16	27-1/2	—	19	Yes	—	149
	005	27-1/4	26-15/16	—	—	—	Yes	167
	006	32-15/16	32-5/8	34-1/16	—	—	Yes	202

SPECIFICATIONS

MODEL FK4C

SIZE	001	002	003	005	006*
SHIPPING WEIGHT (Lb)	117	130	149	167	202
REFRIGERANT			R-22		
Refr. Metering Device			TXV		
Size	3 Ton	3 Ton	5 Ton	5 Ton	5 Ton
COIL					
Type	Slope	A	Slope	A	A
Rows - Fins/In.			3 - 14.5		
Face Area (sq-ft)	2.97	3.46	3.46	5.93	7.42
FAN					
Air Discharge			Upflow, Downflow, Horizontal		
CFM (Nominal Clg/Htg)	525 / 470 700 / 630 875 / 785 1050 / 945	525 / 470 700 / 630 875 / 785 1050 / 945	700 / 630 875 / 785 1050 / 945 1225 / 1100	875 / 785 1050 / 945 1225 / 1100 1400 / 1260	1050 / 945 1225 / 1100 1400 / 1260 1750 / 1575
MOTOR HP (ECM)	1/2	1/2	1/2	1/2	3/4
FILTER	21-1/2 x 16-3/8	21-1/2 x 16-3/8	21-1/2 x 19-7/8	21-1/2 x 19-7/8	21-1/2 x 23-5/16

* Modular Units
† Fan coil units with TXV must have a start capacitor and relay for single-phase outdoor (non-scroll) units.

PERFORMANCE DATA

FK4C ADVANCED FAN COIL AIRFLOW DELIVERY CHART

UNIT SIZE	OUTDOOR UNIT CAPACITY	OPERATING MODE—COOLING						FAN ONLY
		Single-Speed Application		Two-Speed Application				
				High Speed		Low Speed		
		Nominal A/C Cooling	A/C Cooling Dehumidify	Nominal A/C Cooling	A/C Cooling Dehumifidy	Nominal A/C Cooling	A/C Cooling Dehumidify	Lo/Med/Hi
001	018	525	420	—	—	—	—	350 / 350 / 525
	024	700	560	—	—	—	—	350 / 455 / 700
	030	875	700	—	—	—	—	440 / 570 / 875
	036	1050	840	1100	880	680	545	525 / 680 / 1050
002	018	525	420	—	—	—	—	350 / 350 / 525
	024	700	560	—	—	—	—	350 / 455 / 700
	030	875	700	—	—	—	—	440 / 570 / 875
	036	1050	840	1100	880	680	545	525 / 680 / 1050
003	024	700	560	—	—	—	—	415 / 455 / 700
	030	875	700	—	—	—	—	440 / 570 / 875
	036	1050	840	1100	880	680	545	525 / 680 / 1050
	042	1225	980	—	—	—	—	610 / 795 / 1225
005	030	875	700	—	—	—	—	440 / 570 / 875
	036	1050	840	1100	880	680	545	525 / 680 / 1050
	042	1225	980	—	—	—	—	610 / 795 / 1225
	048	1400	1120	1470	1175	910	725	700 / 910 / 1400
006	036	1050	840	1100	880	745	595	525 / 745 / 1050
	042	1225	980	—	—	—	—	610 / 870 / 1225
	048	1400	1120	1470	1175	995	795	700 / 995 / 1400
	060	1750	1400	1835	1470	1240	995	875 / 1240 / 1750

NOTE: 1. The above airflows result with the AC/HP CFM ADJUST select jumper set on NOM.
2. Air flow can be adjusted +15% or –10% by selecting HI or LO respectively for all modes except fan only.
3. Dry coil at 230 volts and with 10-kw heater and filter installed.
4. Airflows shown are at standard air conditions.

FK4C ADVANCED FAN COIL AIRFLOW DELIVERY CHART

UNIT SIZE	OUTDOOR UNIT CAPACITY	OPERATING MODE—HEAT PUMP ONLY HEATING						FAN ONLY
		Single-Speed Application		Two-Speed Application				
				High Speed		Low Speed		
		Heat Pump Comfort	Heat Pump Efficiency	Heat Pump Comfort	Heat Pump Efficiency	Heat Pump Comfort	Heat Pump Efficiency	Lo/Med/Hi
001	018	470	525	—	—	—	—	350 / 350 / 470
	024	630	700	—	—	—	—	350 / 410 / 630
	030	785	875	—	—	—	—	440 / 510 / 785
	036	945	1050	990	1100	615	680	525 / 615 / 945
002	018	470	525	—	—	—	—	350 / 350 / 470
	024	630	700	—	—	—	—	350 / 410 / 630
	030	785	875	—	—	—	—	440 / 510 / 785
	036	945	1050	990	1100	615	680	525 / 615 / 945
003	024	630	700	—	—	—	—	415 / 415 / 630
	030	785	875	—	—	—	—	440 / 510 / 785
	036	945	1050	990	1100	615	680	525 / 615 / 945
	042	1100	1225	—	—	—	—	610 / 715 / 1100
005	030	785	875	—	—	—	—	440 / 510 / 785
	036	945	1050	990	1100	615	680	525 / 615 / 945
	042	1100	1225	—	—	—	—	610 / 715 / 1100
	048	1260	1400	1320	1470	820	910	700 / 820 / 1260
006	036	945	1050	990	1100	670	745	540 / 670 / 945
	042	1100	1225	—	—	—	—	610 / 780 / 1100
	048	1260	1400	1325	1470	895	995	700 / 895 / 1260
	060	1575	1750	1655	1835	1120	1240	875 / 1120 / 1575

NOTE: 1. The above airflows result with the AC/HP CFM ADJUST select jumper set on NOM.
2. Air flow can be adjusted +15% or –10% by selecting HI or LO respectively.
3. Dry coil at 230 volts and with 10-kw heater and filter installed.
4. Airflows shown are at standard air conditions.

PERFORMANCE DATA Continued

AIRFLOW DELIVERY CHART (CFM)—ELECTRIC HEATING MODES

UNIT SIZE	OUTDOOR UNIT CAPACITY BtuH	ELECTRIC HEATER KW RANGE											
		0–5			0–10			0–15			0–20		
		Lo	Nom	Hi	Lo	Nom	Hi	Lo	Nom	Hi	Lo	Nom	Hi
001, 002	18,000	625	625	625	675	675	675	—	—	—	—	—	—
	24,000	650	725	835	—	725	835	875	875	—	—	—	—
	30,000	815	905	1040	—	905	1040	900	900	1040	1100	1100	1100
	36,000	980	1085	1250	980	1085	1250	980	1085	1250	1100	1100	1250
003	24,000	675	725	835	875	875	875	—	—	—	—	—	—
	30,000	815	905	1040	875	905	1040	1100	1100	1100	—	—	—
	36,000	980	1085	1250	980	1085	1250	1100	1100	1250	1225	1225	1250
	42,000	1140	1270	1460	1140	1270	1460	1140	1270	1460	1225	1270	1460

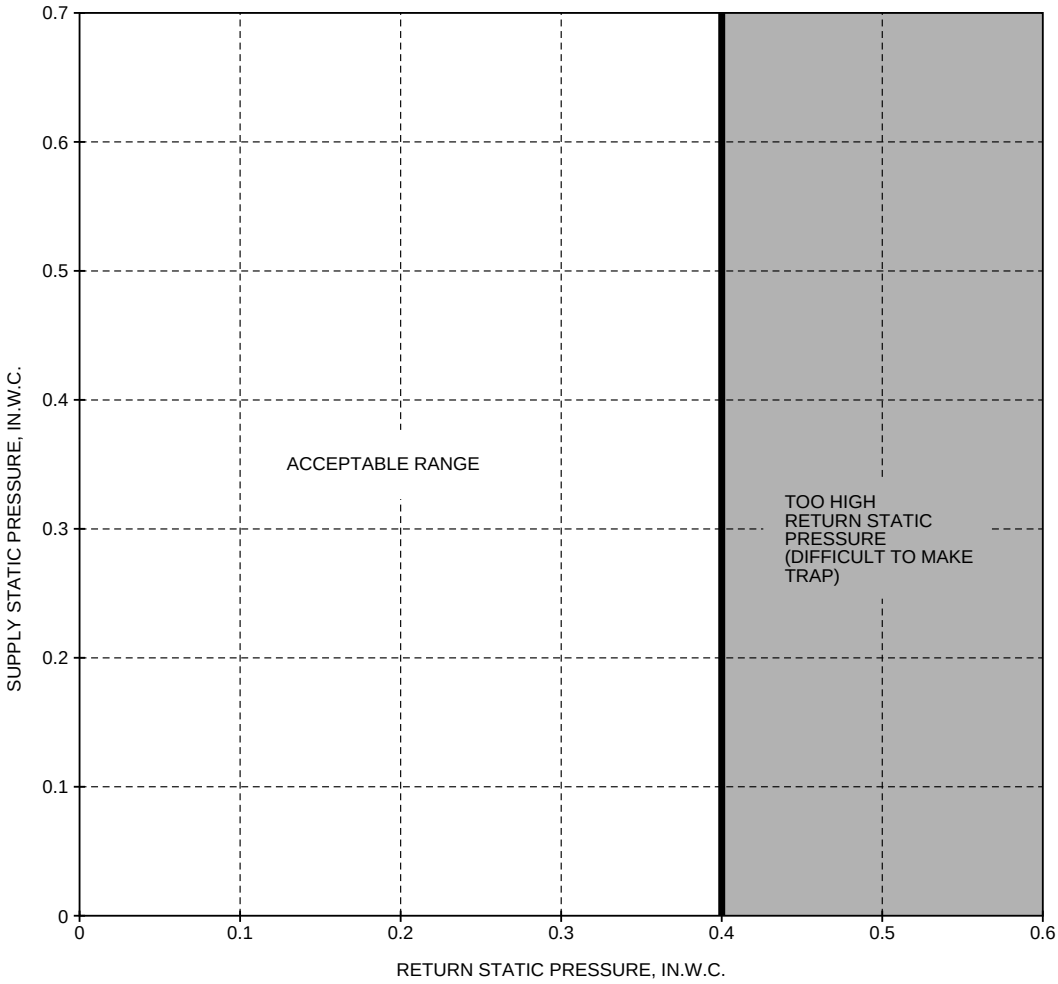
UNIT SIZE	OUTDOOR UNIT CAPACITY BtuH	ELECTRIC HEATER KW RANGE											
		0–10			0–15			0–20			0–30		
		Lo	Nom	Hi	Lo	Nom	Hi	Lo	Nom	Hi	Lo	Nom	Hi
005	30,000	975	975	1040	1100	1100	1100	—	—	—	—	—	—
	36,000	980	1085	1250	1100	1100	1250	1250	1250	1250	—	—	—
	42,000	1140	1270	1460	1140	1270	1460	1250	1270	1460	1500	1500	1500
	48,000	1305	1450	1665	1305	1450	1665	1305	1450	1665	1500	1500	1665
006	36,000	1100	1100	1250	1350	1350	1350	—	—	—	—	—	—
	42,000	1140	1270	1460	1350	1350	1460	1525	1525	1525	—	—	—
	48,000	1305	1450	1665	1350	1450	1665	1525	1525	1665	1750	1750	1750
	60,000	1630	1810	2085	1630	1810	2085	1630	1810	2085	1750	1810	2085

Where dash (—) appears indicates airflow not recommended for heater/system size.
NOTE: LO, NOM and HI refer to the AC/HP CFM ADJUST selection.

MINIMUM CFM FOR ELECTRIC HEATER APPLICATION

UNIT SIZE	HEAT PUMP UNIT SIZE	CFM				
		Heater Size KW				
		5	8, 9, 10	15	18, 20	24, 30
001, 002	Heater Only	625	625	725	875	—
	018	625	625	—	—	—
	024	650	725	875	—	—
	030	800	875	875	1040	—
	036	970	970	970	1040	—
003	Heater Only	675	700	1050	1050	—
	024	675	875	1050	—	—
	030	800	875	1100	—	—
	036	975	975	1100	1225	—
	042	1125	1125	1125	1225	—
005	Heater Only	675	700	1050	1050	1400
	030	800	875	1100	—	—
	036	975	975	1100	1225	—
	042	1125	1125	1125	1225	—
	048	1305	1305	1305	1305	1400
006	Heater Only	1050	1050	1050	1050	1750
	036	1100	1100	1350	1350	—
	042	1125	1125	1350	1350	—
	048	1300	1300	1350	1465	1750
	060	1625	1625	1625	1750	1750

NOTE: Heater Only—Air conditioner with electric heater application.
These airflows are the minimum acceptable air flows as U.L. listed.
Actual airflow delivered will be per the airflow delivery chart for Electric Heating Modes.



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Acceptable Duct Conditions

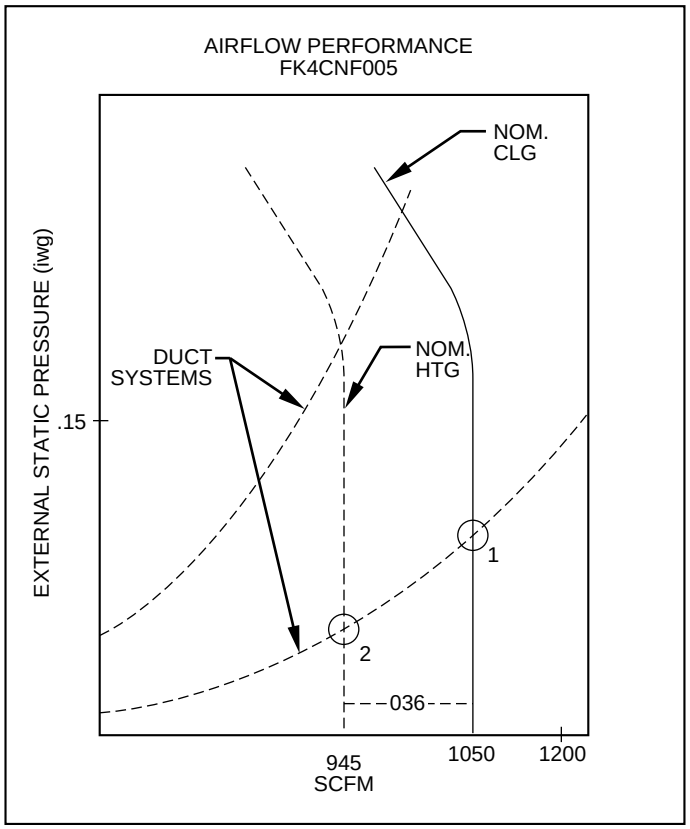
For satisfactory operation (specifically making dry secondary trap), subject fan coils must be installed with duct systems which fall within the “Acceptable Range” illustrated above.

The airflow performance charts for the FK4C fan coil depict nominal airflow delivery for heating and cooling mode operation versus duct system static pressure drop. Cooling mode operation is shown as solid vertical lines for all 4 system size selections. Heating mode operation for the 4 system size selections are shown as dashed vertical lines.

The dotted curved lines are static pressure drop characteristics for several fixed-duct systems. These lines can be used to predict the system static pressure drop at any airflow given the actual drop at 1 known point.

For example, a duct system is designed for 0.15 inches water gage (iwg) drop at 1200 CFM. The FK4CNF005 operating at nominal cooling airflow would deliver 1050 CFM with a duct system drop of 0.11 iwg. (See point 1.) The FK4CNF005 operating at nominal heating airflow would deliver 945 CFM with a duct system drop of 0.09 iwg. (See point 2.)

This example is but one of many possible duct system designs. The FK4CNF005 will deliver the above airflows against much higher static pressures.



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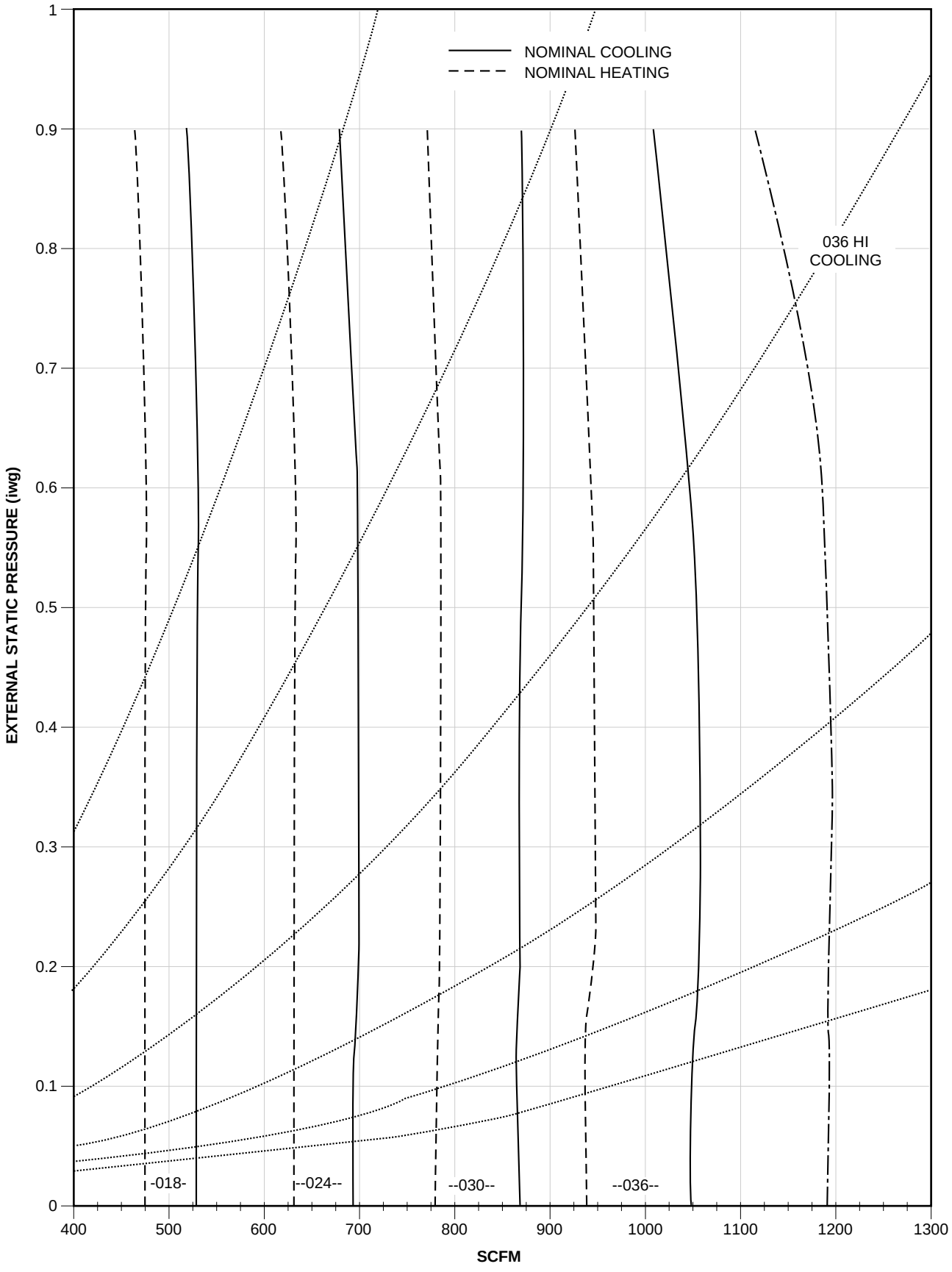
AIRFLOW PERFORMANCE
FK4CNF001



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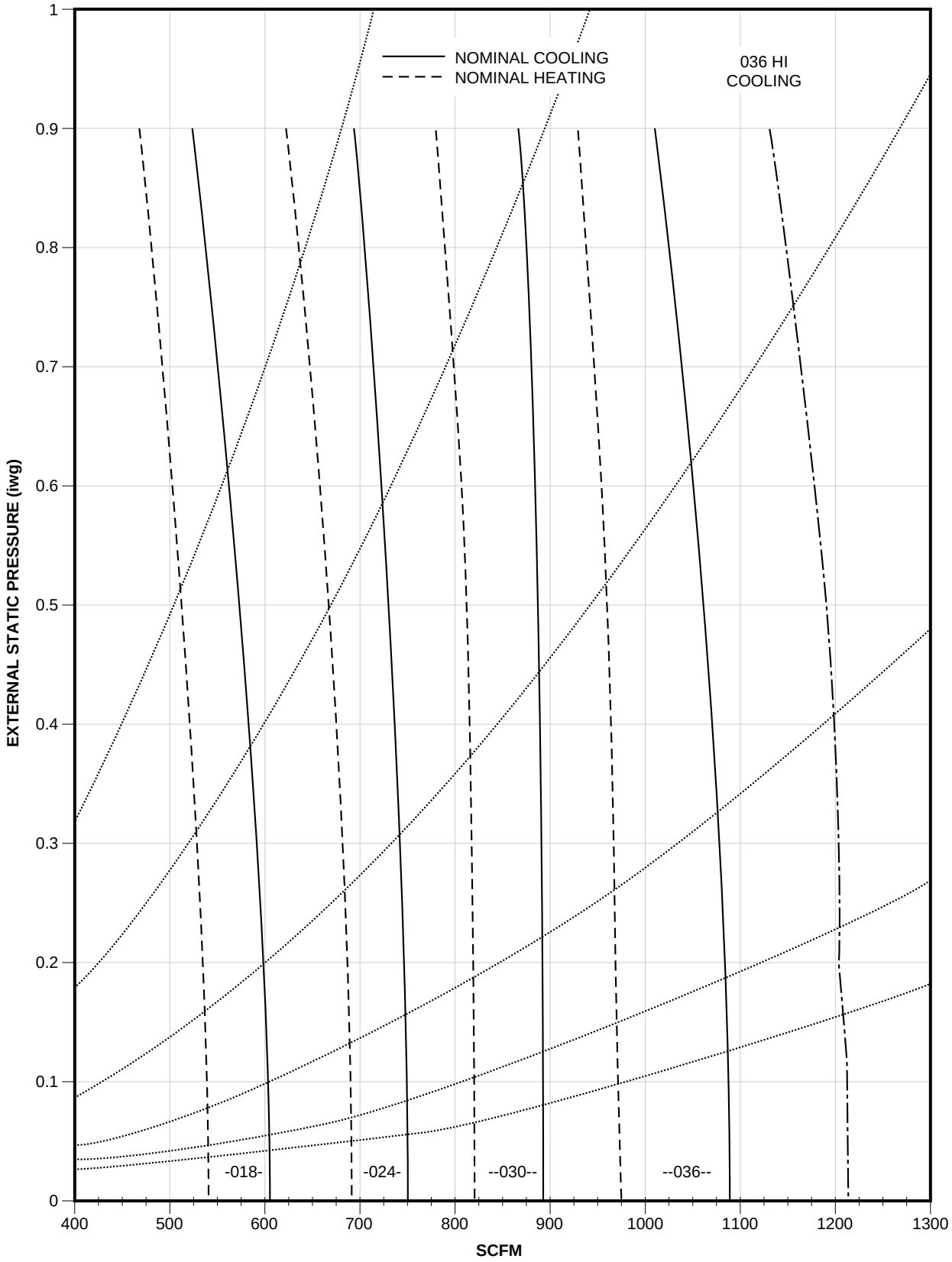
AIRFLOW PERFORMANCE
FK4CNF002



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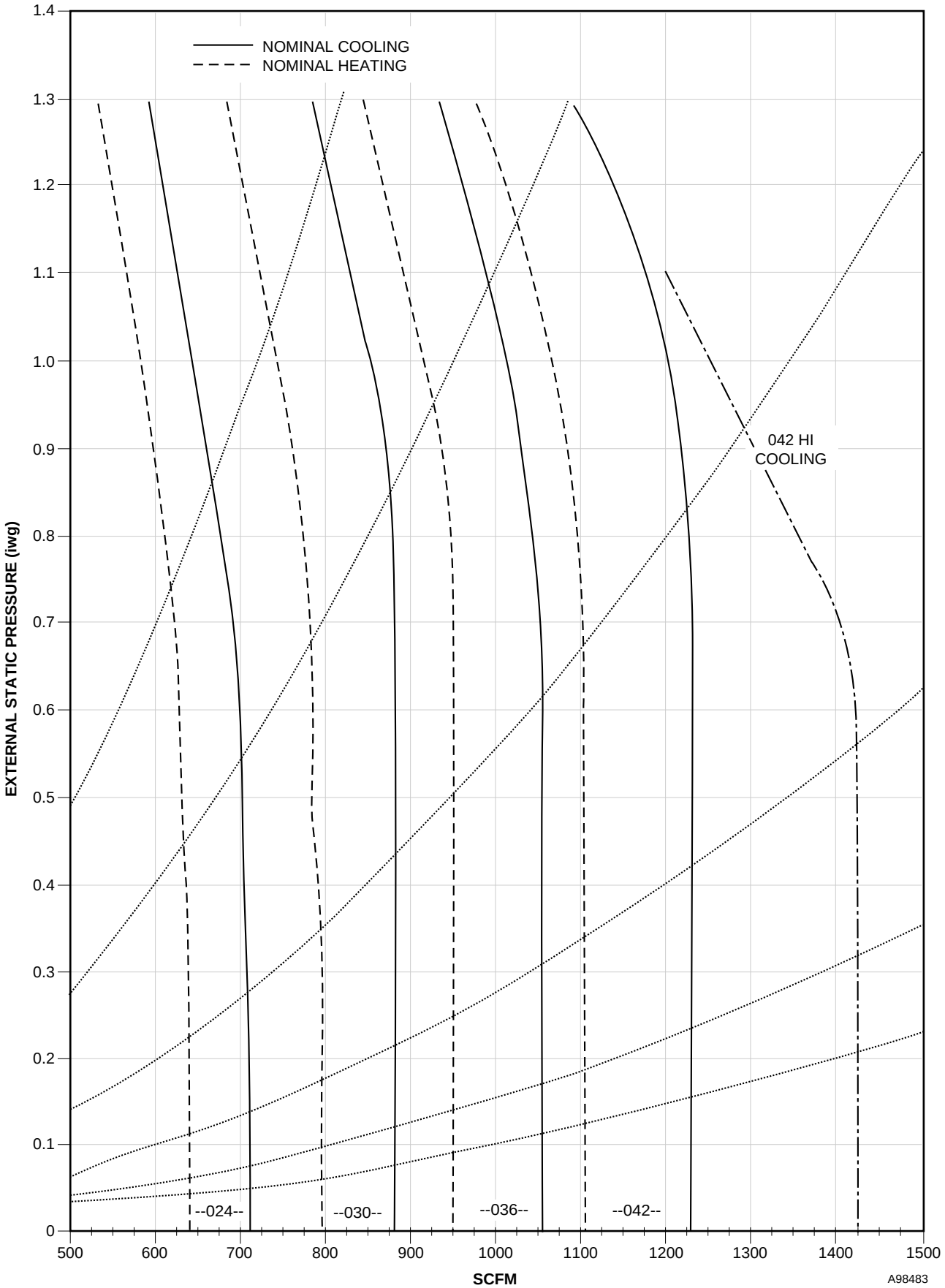
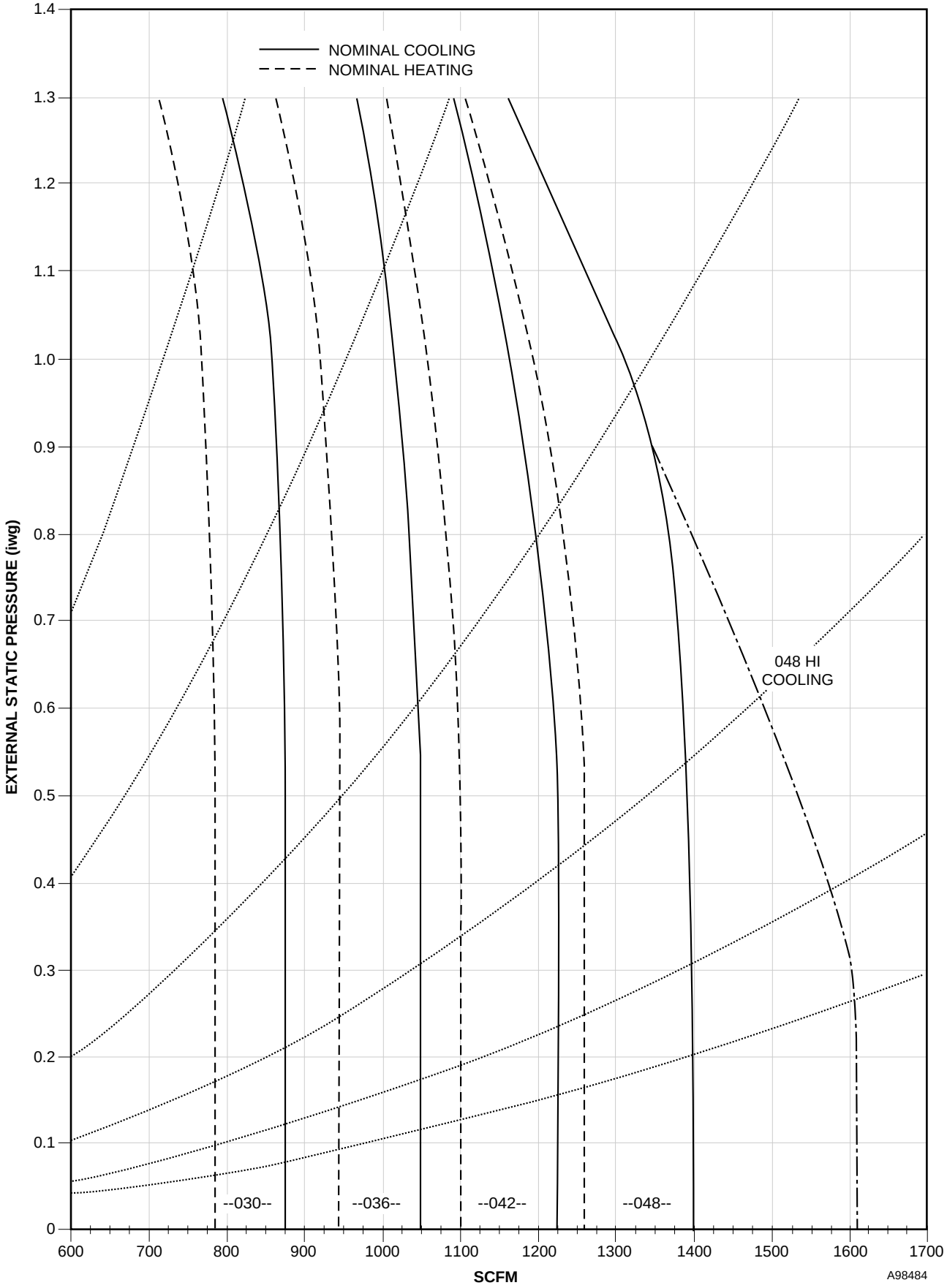
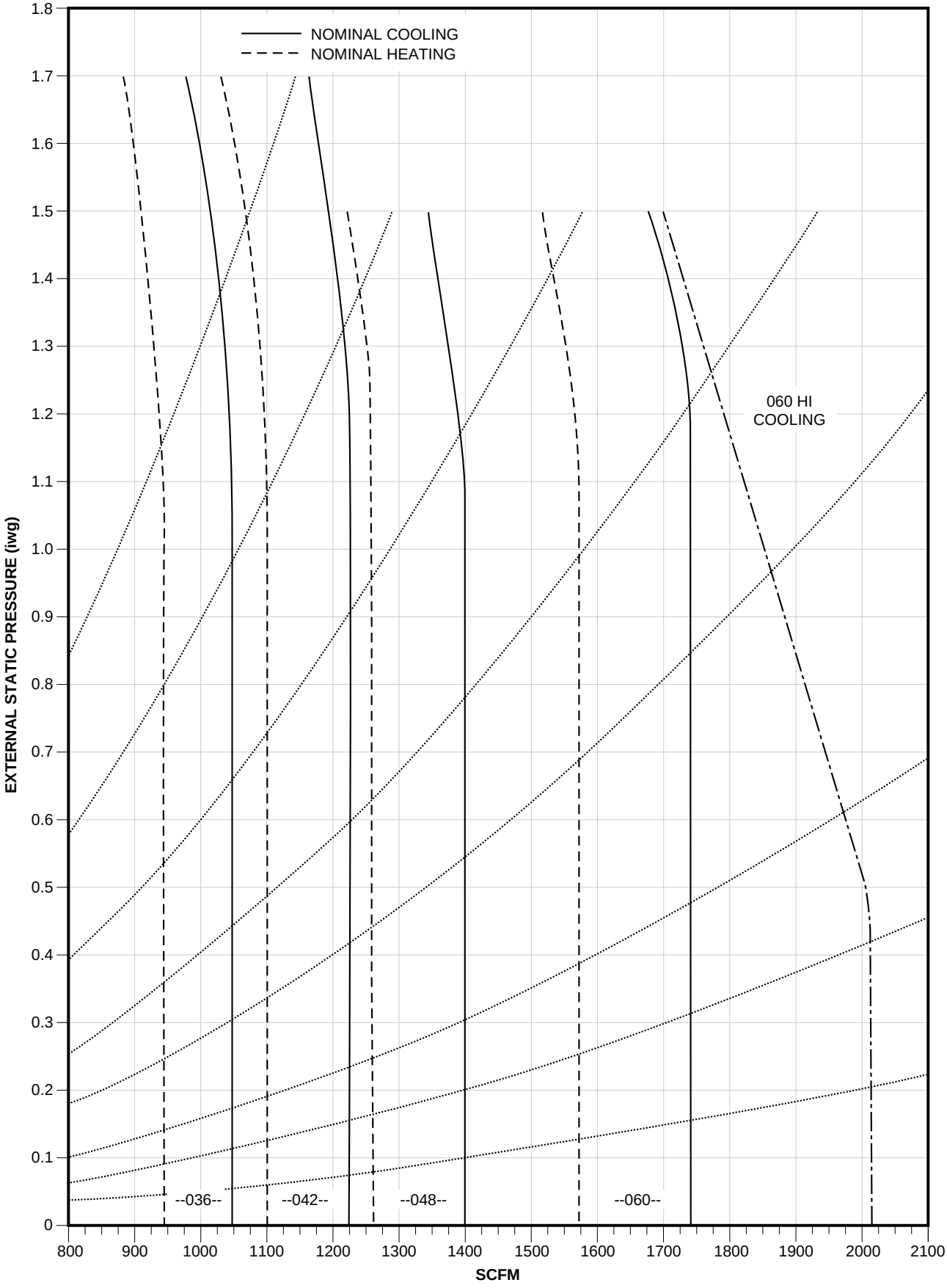
AIRFLOW PERFORMANCE
FK4CNF003



AIRFLOW PERFORMANCE
FK4CNF005



AIRFLOW PERFORMANCE
FK4CNB006



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PERFORMANCE DATA Continued

COOLING CAPACITIES (MBH)

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
001	600	43	34	27	38	30	23	33	25	19	28	20	14	22	14	12
	0.03	19	20	21	17	18	19	15	16	16	13	14	13	11	11	12
	800	52	42	34	46	37	28	40	30	22	33	24	17	26	17	14
	0.05	24	26	27	22	23	24	19	20	21	16	17	17	14	15	14
	900	56	46	37	50	40	31	44	33	24	36	26	19	28	18	15
	0.06	26	28	30	24	25	27	21	22	23	18	19	19	15	16	15
	1100	64	52	42	57	45	35	49	38	28	41	29	22	32	21	18
	0.07	30	33	35	27	29	31	24	26	27	21	23	22	17	19	18
	1300	70	57	46	62	50	39	54	42	31	45	33	25	35	23	20
	0.09	32	36	39	29	33	35	26	29	31	23	26	25	19	21	20
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
	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
003	800	56	46	36	50	40	31	44	34	25	37	27	19	29	19	16
	0.04	27	29	30	24	26	27	21	22	23	18	19	19	15	16	16
	1000	68	56	44	61	48	37	53	40	30	44	31	23	34	22	19
	0.05	31	34	36	28	30	32	25	27	28	21	23	23	18	19	19
	1200	75	62	50	68	54	42	59	45	34	49	35	27	38	25	22
	0.07	35	38	41	32	34	37	28	31	32	24	26	27	20	22	22
	1350	80	66	53	72	58	45	63	48	36	53	38	30	41	27	24
	0.08	37	41	44	34	37	40	30	33	35	26	29	30	22	24	24
	1530	85	70	57	77	62	48	68	51	39	57	40	32	44	29	26
	0.09	39	44	48	36	40	43	32	36	38	28	31	32	24	26	26
005	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
	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
006	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
	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
	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 page 16.

* 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:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$$

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.

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 TEMP (°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	RPM	63	125	250	500	1000	2000	4000
001	400	0.25	680	61	57	53	52	48	46	42
	600	0.25	750	63	59	55	54	50	48	44
	800	0.25	845	64	60	56	55	51	49	45
	1000	0.25	955	65	61	57	56	52	50	46
	1200	0.25	1080	66	62	58	55	55	51	47
	1400	0.25	1210	66	62	58	55	55	51	47
002	400	0.25	680	61	57	53	52	48	46	42
	600	0.25	750	63	59	55	54	50	48	44
	800	0.25	845	64	60	56	55	51	49	45
	1000	0.25	955	65	61	57	56	52	50	46
	1200	0.25	1080	66	62	58	55	55	51	47
	1400	0.25	1210	66	62	58	55	55	51	47
003	400	0.25	555	61	57	53	52	48	46	42
	600	0.25	600	63	59	55	54	50	48	44
	800	0.25	660	64	60	56	55	51	49	45
	1000	0.25	725	65	61	57	56	52	50	46
	1200	0.25	800	66	62	58	57	53	51	47
	1400	0.25	885	66	62	58	57	53	51	47
	1600	0.25	975	67	63	59	56	56	52	48
005	400	0.25	555	61	57	53	52	48	46	42
	600	0.25	600	63	59	55	54	50	48	44
	800	0.25	660	64	60	56	55	51	49	45
	1000	0.25	725	65	61	57	56	52	50	46
	1200	0.25	800	66	62	58	57	53	51	47
	1400	0.25	885	66	62	58	57	53	51	47
	1600	0.25	975	67	63	59	56	56	52	48
006	600	0.25	575	63	59	55	54	50	48	44
	800	0.25	610	64	60	56	55	51	49	45
	1000	0.25	655	65	61	57	56	52	50	46
	1200	0.25	720	66	62	58	57	53	51	47
	1400	0.25	785	66	62	58	57	53	51	47
	1600	0.25	860	67	63	59	58	54	52	48
	1800	0.25	935	68	64	60	57	57	53	49
	2000	0.25	1020	68	64	60	57	57	53	49
	2150	0.25	1090	68	64	60	57	57	53	49

* 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 Ft per Minute
ESP — External Static Pressure
RPM — Revolutions per Minute

PERFORMANCE DATA Continued

AIRFLOW PERFORMANCE CORRECTION FACTORS

The FK4C 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 correction.

HEATER KW	ELEMENTS	STATIC PRESSURE CORRECTION (in. wc)	
		Sizes 001–005	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

FILTER STATIC PRESSURE DROP (In. wc)

MODEL FK4C	CFM								
	400	600	800	1000	1200	1400	1600	1800	2000
001	0.020	0.044	0.048	0.072	0.100	—	—	—	—
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 FK4C	CFM										
	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
001	0.031	0.040	0.051	0.063	0.073	0.081	0.092	—	—	—	—
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.

ELECTRICAL DATA

UNITS WITHOUT ELECTRIC HEATER

UNIT SIZE	VOLTS-PHASE	FLA	MIN CKT AMPS	BRANCH CIRCUIT	
				Min Wire Size Awg*	Fuse Amps
001	208/230-1	4.3	5.4	14	15
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	KW/ STAGE	INTERNAL CIRCUIT PROTECTION	FAN COIL SIZE USED WITH	HEATING CAP. @ 230V‡	INTELLIGENT HEAT CAPABLE††
KFAEH0201N05	KFCEH0501N05	5	230/1	5	None	All	15,700	No
KFAEH0301N08	KFCEH0801N08	8	230/1	8	None	All	25,100	No
KFAEH2501N09	KFCEH1401N09	9	230/1*	3, 6	None	All	28,300	Yes
KFAEH0401N10	KFCEH0901N10	10	230/1	10	None	All	31,400	No
KFAEH2601F15	KFCEH1501F15	15	230/1	5, 10	Fuses**	All	47,100	Yes
KFAEH0601F20	KFCEH1801F20	20	230/1	10, 10	Fuses**	All	62,800	Yes (KFCEH)
KFAEH0801315	KFCEH1601315	15	230/3	5, 10	None	All	47,100	No
KFAEH0901318	KFCEH2001318	18	230/3	6, 6, 6	None	003, 005, 006	56,500	No
KFAEH1001F24	KFCEH2101F24	24	230/3†	8, 8, 8	Fuses	005, 006	78,500	Yes
KFAEH1101F30	KFCEH2201F30	30	230/3†	10, 10, 10	Fuses	005, 006	94,200	Yes
KFAEH1301C05	KFCEH0601C05	5	230/1	5	Ckt Bkr	All	15,700	No
KFAEH1401C08	KFCEH1001C08	8	230/1	8	Ckt Bkr	All	25,100	No
KFAEH1501C10	KFCEH1101C10	10	230/1	10	Ckt Bkr	All	31,400	No
KFAEH2801C15	KFCEH1701C15	15	230/1	5, 10	Ckt Bkr	All	47,100	Yes
KFAEH1701C20	KFCEH1901C20	20	230/1	10, 10	Ckt Bkr	All	62,800	Yes (KFCEH)

* KFAEH2501N09 is field convertable to 3 phase.

† These heaters field convertable to single phase.

‡ Blower motor heat not included.

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

†† Heaters designated with yes are Intelligent Heat capable when used with corporate 2-speed programmable thermostat (TSTATCCP2S01-A), or Thermidistat™ Control (TSTATCCPRH01-B).

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	—

* KFCEH1401N09 is single phase only.

** All circuit breakers are 2 pole.

ELECTRIC HEATER ELECTRICAL DATA

HEATER PART NO.		KW		PHASE	INTERNAL CIRCUIT PROTECTION	HEATER AMPS 208/230V			BRANCH CIRCUIT													
									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)‡‡		
						Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit	
		240v	208v				L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4
KFAEH0101N03	KFCEH0401N03	3	2.3	1	None	10.9/12.0	—	—	15.9/17.3	—	—	12/12	—	—	12/12	—	—	20/20	—	—	67/68	—	—
KFAEH0201N051	KFCEH0501N051	5	3.8	1	None	18.1/20.0	—	—	26.0/28.4	—	—	10/10	—	—	10/10	—	—	30/30	—	—	66/66	—	—
KFAEH0201N052	KFCEH0501N052	5	3.8	1	None	18.1/20.0	—	—	31.2/33.5	—	—	8/8	—	—	10/10	—	—	35/35	—	—	85/88	—	—
KFAEH1301C051	KFCEH0601C051	5	3.8	1	Ckt Bkr	18.1/20.0	—	—	26.0/28.4	—	—	10/10	—	—	10/10	—	—	30/30	—	—	66/66	—	—
KFAEH1301C052	KFCEH0601C052	5	3.8	1	Ckt Bkr	18.1/20.0	—	—	31.2/33.5	—	—	8/8	—	—	10/10	—	—	35/35	—	—	85/88	—	—
KFAEH0301N08	KFCEH0801N08	8	6.0	1	None	28.9/32.0	—	—	44.7/48.5	—	—	8/8	—	—	10/10	—	—	45/50	—	—	59/60	—	—
KFAEH1401C08	KFCEH1001C08	8	6.0	1	Ckt Bkr	28.9/32.0	—	—	44.7/48.5	—	—	8/8	—	—	10/10	—	—	45/50	—	—	59/60	—	—
KFAEH2501N09‡***	KFCEH1401N09***	9	6.8	1	None	32.8/36.0	—	—	49.5/53.5	—	—	8/6	—	—	10/10	—	—	50/60	—	—	54/87	—	—
	—	9	6.8	3	None	18.8/20.8	—	—	32.0/34.5	—	—	8/8	—	—	10/10	—	—	35/35	—	—	83/85	—	—
KFAEH0401N10	KFCEH0901N10	10	7.5	1	None	36.2/40.0	—	—	53.8/58.5	—	—	6/6	—	—	10/10	—	—	60/60	—	—	78/80	—	—
KFAEH1501C10	KFCEH1101C10	10	7.5	1	Ckt Bkr	36.2/40.0	—	—	53.8/58.5	—	—	6/6	—	—	10/10	—	—	60/60	—	—	78/80	—	—
KFAEH2601F15***	KFCEH1501F15***	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	8/8	10/10	10/10	80/90	60/60	25/25	88/89	78/80	75/76
KFAEH2801C15***	KFCEH1701C15***	15	11.3	1	Ckt Bkr	—	36.2/40.0	18.1/20.0	—	53.8/58.5	22.7/25.0	—	6/6	10/10	—	10/10	10/10	—	60/60	25/25	—	78/80	75/76
KFAEH0801315	KFCEH1601315	15	11.3	3	None	31.3/34.6	—	—	47.7/51.8	—	—	8/6	—	—	10/10	—	—	50/60	—	—	56/90	—	—
KFAEH0901318	KFCEH2001318	18	13.5	3	None	37.6/41.5	—	—	55.5/60.4	—	—	6/6	—	—	10/8	—	—	60/70	—	—	76/77	—	—
KFAEH0601F20	KFCEH1801F20***	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	8/6	10/10	10/10	100/110	60/60	50/50	85/109	78/80	59/59
KFAEH1701C20	KFCEH1901C20***	20	15.0	1	Ckt Bkr	—	36.2/40.0	36.2/40.0	—	53.8/58.5	45.3/50.0	—	6/6	8/8	—	10/10	10/10	—	60/60	50/50	—	78/80	59/59
KFAEH1001F24†***	KFCEH2101F24†***	24	18.0	3	Fuse	50.1/55.4	—	—	71.2/77.8	—	—	4/4	—	—	8/8	—	—	80/80	—	—	94/95	—	—
		24	18.0	1	Fuse	86.7/95.5	—	—	116.9/127.9	—	—	1/1	—	—	6/6	—	—	125/150	—	—	115/116	—	—
KFAEH1101F30†***	KFCEH2201F30†***	30	22.5	3	Fuse	62.6/69.2	—	—	86.8/95.0	—	—	3/3	—	—	8/8	—	—	90/100	—	—	97/98	—	—
		30	22.5	1	Fuse	109.0/120.0	—	—	144.8/158.5	—	—	0/00	—	—	6/6	—	—	150/175	—	—	117/150	—	—

FIELD MULTIPOINT 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	L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6		L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6
KFAEH1001F24†	KFCEH2101F24†	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
KFAEH1101F30†	KFCEH2201F30†	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

† 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 when used with the FK, FV fan coils and corporate 2-speed programmable thermostat (TSTATXXP2S01-A), or Thermidistat™ Control (TSTATXXPRH01-B).

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NOTES: 1. For fan coil sizes 018-036.
2. For fan coil sizes 042-060 and all FK4C, FV4A sizes.
3. Single circuit application of F15 and F20 heaters requires single-point wiring kit accessory.

ACCESSORY LIST

ITEM	ACCESSORY PART NO.	FAN COIL SIZE USED WITH FK4C
Disconnect Kit	KFADK0101DSC	Cooling controls and heaters through 10-kw
Downflow Conversion Kit (Slope)	KFADC0201SLP	001, 003
Downflow Conversion Kit (A-coil)	KFADC0401ACL	002, 005, 006
Downflow Base Kit	KFACB0201CFB	001, 002
Downflow Base Kit	KFACB0301CFB	003, 005
Downflow Base Kit	KFACB0401CFB	006
Filter Kit (12 Pack)	KFAFK0212MED	001, 002
Filter Kit (12 Pack)	KFAFK0312LRG	003, 005
Filter Kit (12 Pack)	KFAFK0412XXL	006
Single-Point Wiring Kit	KFASP0101SPK	Only with 15- and 20-kw fused heaters
Airflow Sensor Kit (Air Cleaner)	KEAAC0101AAA	All
Air Cleaner Relay Kit	KFAIR0201ACR	All

ACCESSORY KITS DESCRIPTION SUGGESTED AND REQUIRED USE

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: FK4 units for 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 FK4 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 FK4 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: FK4 fan coils with 15- and 20-kw fused heaters only.

5. **Air Cleaner Relay**
   The electronic air cleaner relay ensures the FK4 fan coil and electronic air cleaner work as a system.

REQUIRED USE: This relay is required whenever an electronic air cleaner is used with an FK4 fan coil.

6. **Airflow Sensor Kit (Air Cleaner)**
   The airflow sensor kit ensures the FK4C 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 FK4C fan coil.

7. **Fan Coil Filter**
   These filters collect large dust particles from the return air entering the fan coil and prevent 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 the filters in FK4 fan coils.

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE
WITH INSTALLATION INSTRUCTIONS

Cancels: PDS FK4C.01.3

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