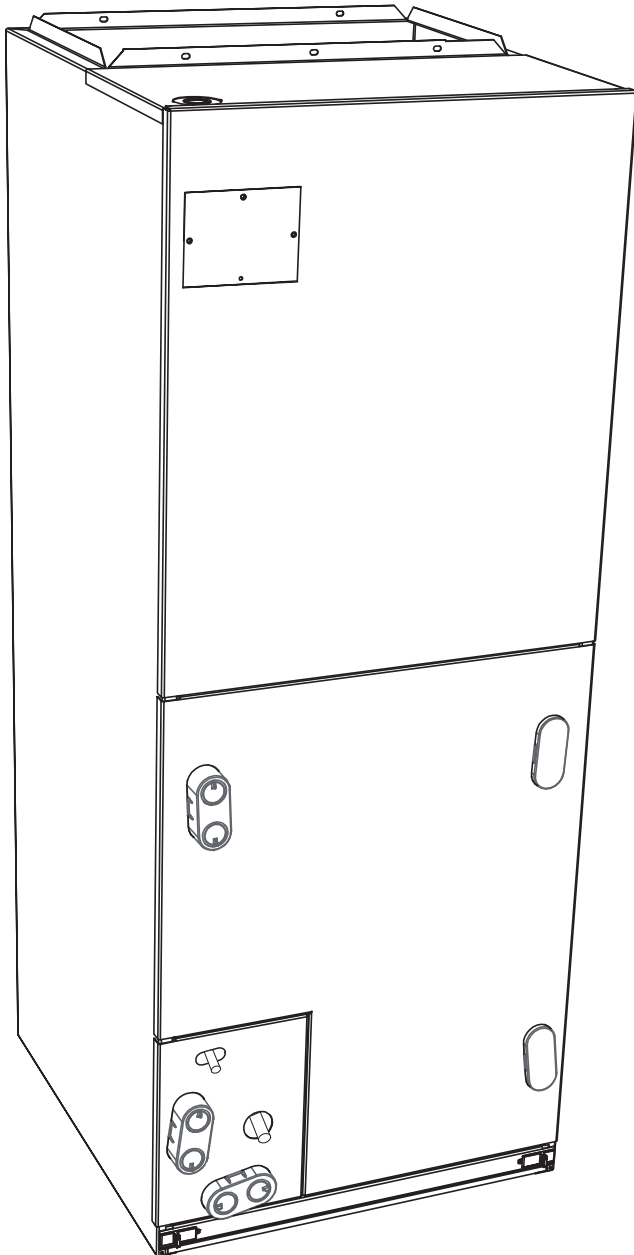


**FB4B (50 Hz)
Direct Expansion Fan Coil
R-22 / R-410A Refrigerant
Sizes 018 thru 070**



Product Data



FB4B FAN COIL AIR HANDLING TECHNOLOGY AT ITS FINEST

The FB4B fan coil is the latest in air handling technology. It's the one to choose for application versatility, ease of installation, and high-tech performance. FB4B fan coils are designed for vertical (upflow or downflow) and horizontal installations. Downflow installations require an accessory adapter package. The 070 size is a modular cabinet to facilitate installation in tight spaces. The FB4B is compact, designed for upflow, downflow, and horizontal installations, and ready to fit right where you need it.

The solid construction of the prepainted metal cabinet ensures years of rugged service, and it's packed with the most advanced components so you know it's going to perform like a deluxe fan coil should.

Inside, you'll find grooved tube/lanced sine wave aluminum fin coil. Solid-state cooling controls are included with every unit.

Efficient and dependable metering of the refrigerant is provided by our AccuRater®, a device which improves overall system reliability and is easily accessible for piston change-out and routine maintenance. Carrier also engineered the FB4B with dedicated refrigerant circuitry, and high-density insulation. For leak-free connections, the FB4B is equipped with sweat connections.

The FB4B offers superior versatility with its 3-speed PSC motor. For field installation, accessory electric heaters are available to allow up to 30 kw of supplemental heat.

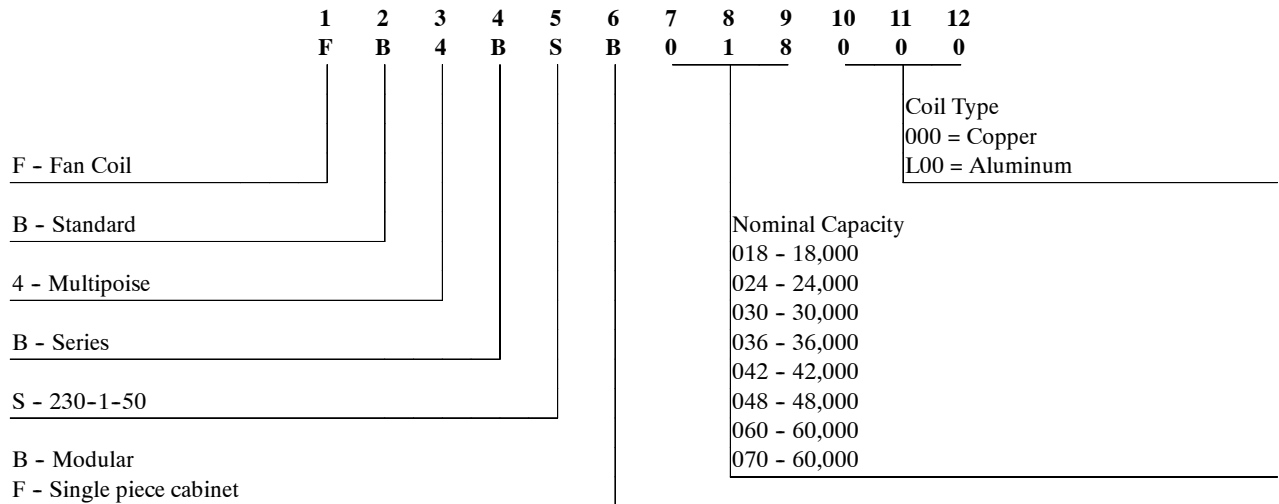
Compact and attractive with a low-maintenance, easy-to-clean, permanent filter, the FB4B is a favorite for contractors and homeowners. Just consider the first-cost affordability and Carrier performance and it's easy to see why it's the fan coil of choice.

FEATURES

- R-22 or R-410A Refrigerant
- 8 models available —
 - 7 sizes in single-piece cabinet, 6–18.0 kW (1.5–5 ton)
 - 1 size in modular version, 14 to 18.0 kW (3.5–5 ton)
- All units multipoise — install upflow, horizontal, or downflow
- 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
- Grooved tubes
- Lanced sine wave aluminum fins
- Fully wettable coil
- Cooling controls on every unit
- 40va control power transformer
- Replaceable 5-amp blade-type automotive fuse protects against transformer secondary short
- Solid-state interlock control board
- 3-speed motor
- Easy access filter for cleaning — no tools required
- Newly improved filter rack area — filter door insulation added for an improved air seal
- Inspection plate for cleaning coil face
- Field-installed heater packages, 3–30 kW
- Prepainted galvanized steel sheetmetal
- High-density insulation
- Sweat connections
- AccuRater piston
- Multiple electric entry
- Reinforced plastic condensate pan with brass drain connection inserts
- Secondary drain connection

FB4B (50 HZ)

MODEL NUMBER NOMENCLATURE



DIMENSIONS

UNIT	SERIES	ELECTRICAL CHARACTERISTICS				A	B	C	D	E	F	G	H	J	COIL CONFIGURATION		SHIPPING WT (LBS) NON-TIN COATED
															SLOPE	"A"	
FB4BSB070	A	X	*		59 3/16"	24 11/16"	22 3/4"	22 11/16"	25 1/4"	32 15/16"	32 5/8"	34 1/16"	-	-	X	196	
FB4BSF018	A	X	O		42 11/16"	14 5/16"	12 7/16"	12 5/16"	10 7/16"	18 1/8"	18 5/8"	-	12"	X	-	89	
FB4BSF024	A	X	O		42 11/16"	14 5/16"	12 7/16"	12 5/16"	10 7/16"	18 1/8"	18 5/8"	-	12"	X	-	93	
FB4BSF030	A	X	O		47 5/8"	17 5/8"	15 3/4"	15 5/8"	15 3/8"	23 1/8"	23 5/8"	-	17"	X	-	112	
FB4BSF036	A	X	*		49 5/8"	17 5/8"	15 3/4"	15 5/8"	15 3/8"	23 1/8"	23 5/8"	-	17"	X	-	115	
FB4BSF042	A	X	*		53 7/16"	21 1/8"	19 1/4"	19 1/8"	19 3/16"	26 15/16"	27 1/2"	-	19"	X	-	135	
FB4BSF048	A	X	*		49 5/8"	21 1/8"	19 1/4"	19 1/8"	15 11/16"	23 7/16"	23 1/8"	-	-	-	X	146	
FB4BSF060	A	X	*		53 7/16"	21 1/8"	19 1/4"	19 1/8"	19 1/2"	27 1/4"	26 15/16"	-	-	-	X	167	

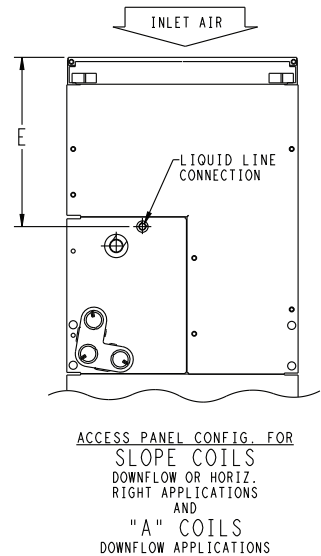
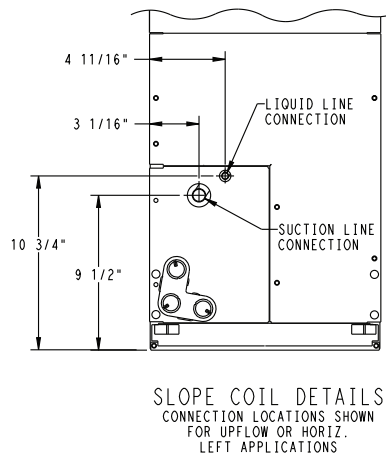
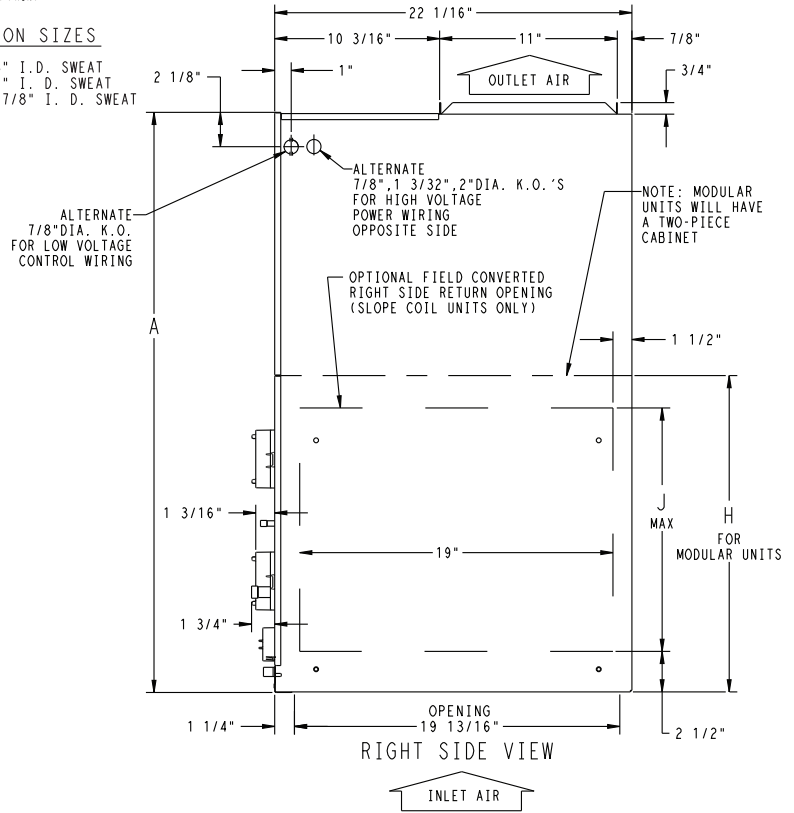
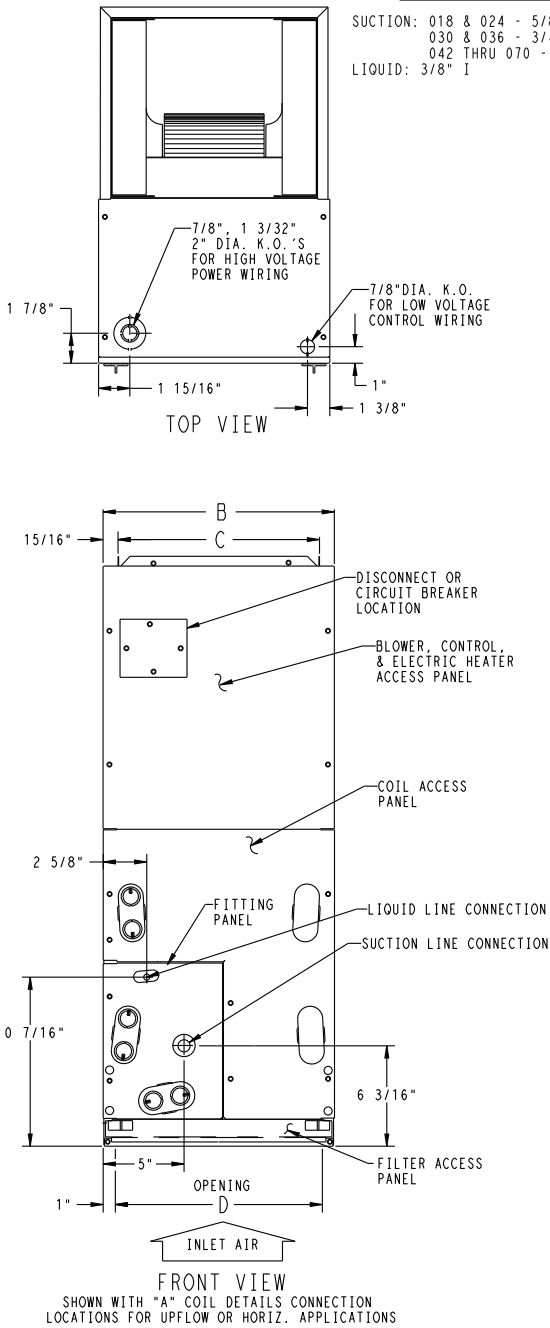
NOTE:

- SERIES DESIGNATION IS THE 14TH POSITION OF UNIT PRODUCT NUMBER
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

NOTE: ALLOW 21" FROM FRONT FOR SERVICE

UNIT CONNECTION SIZES

SUCTION: 018 & 024 - 5/8" I. D. SWEAT
 030 & 036 - 3/4" I. D. SWEAT
 042 THRU 070 - 7/8" I. D. SWEAT
 LIQUID: 3/8" I



FB4B (50 HZ)

Fig. 1 - FB4BS Dimensions - English

A14202

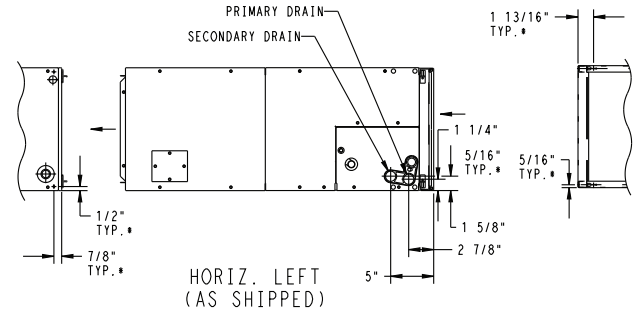
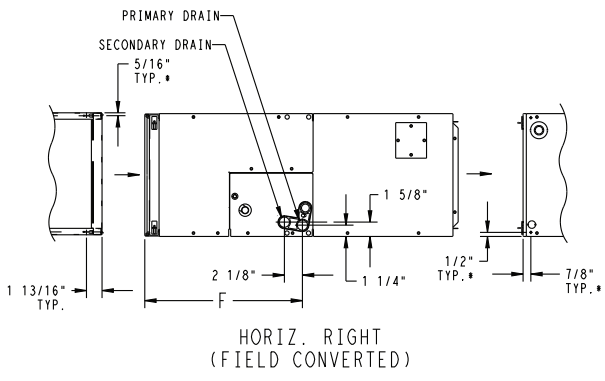
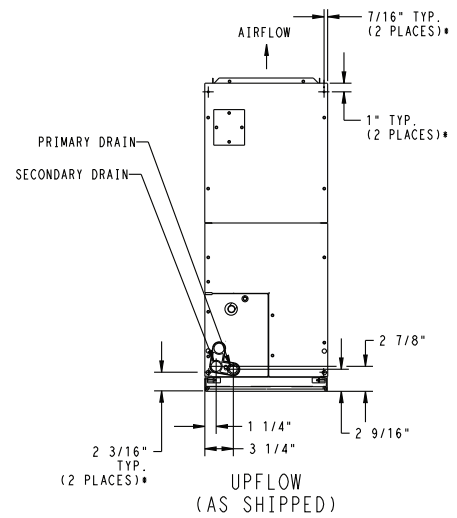
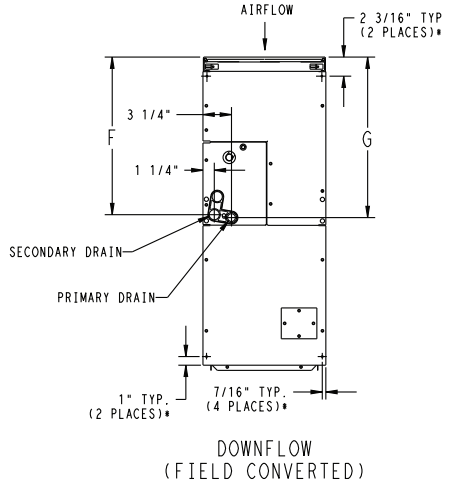
DIMENSIONS (cont.)

SLOPE COIL

NOTES:

- CONDENSATE PAN DRAIN CAPS NOT SHOWN FOR CLARITY.
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

FB4B (50 HZ)



- HORIZONTAL MOUNT LOCATIONS - DIMPLES PROVIDED IN TOP PANEL, AND BACK OF CABINET. IN CABINET BOTTOM, HOLES PROVIDED .136" DIA. HORIZONTAL HANGING HARDWARE TO BE FIELD SUPPLIED.

A-COIL

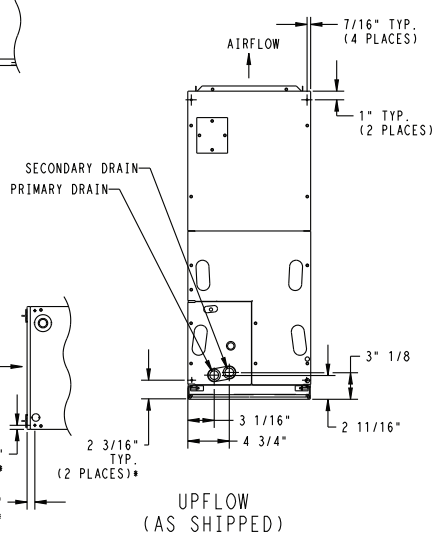
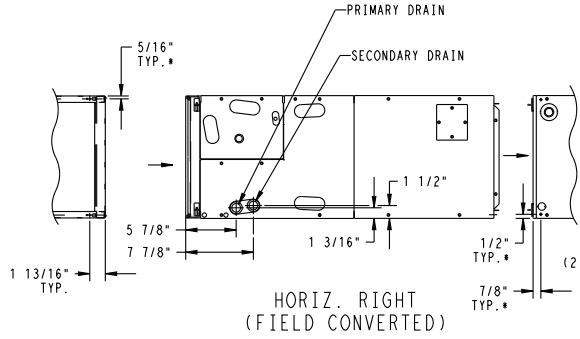
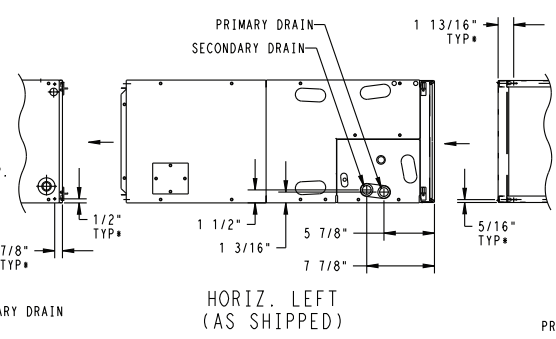
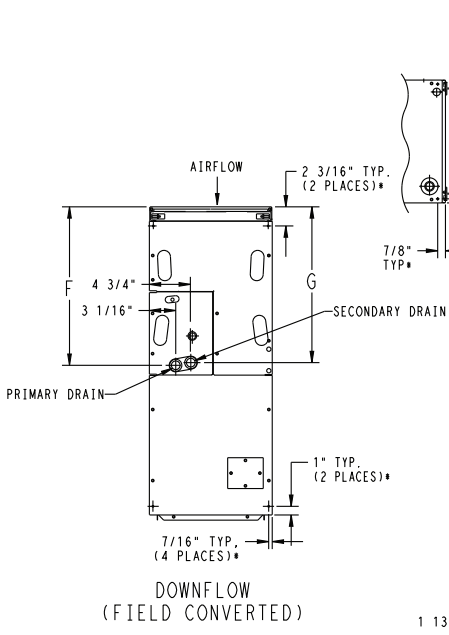


Fig. 2 - FB4BS Dimensions - English

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DIMENSIONS (cont.)

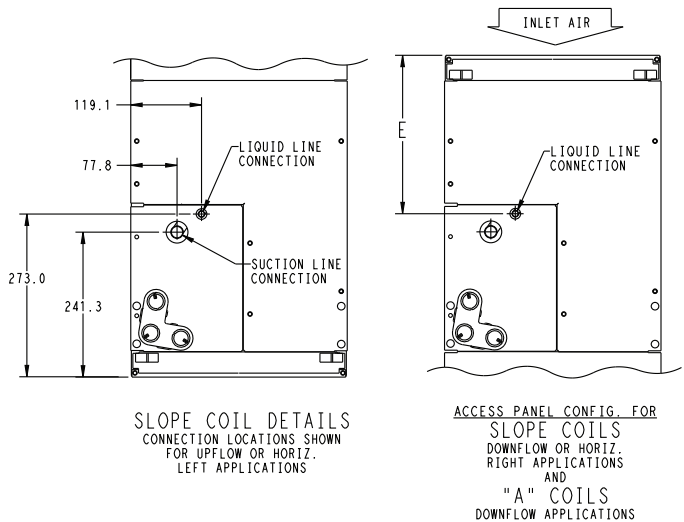
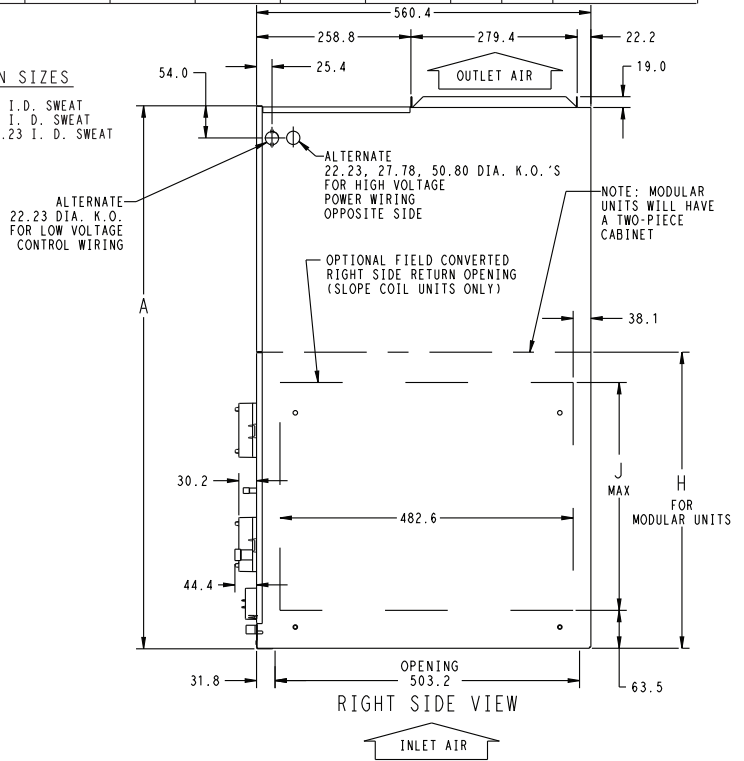
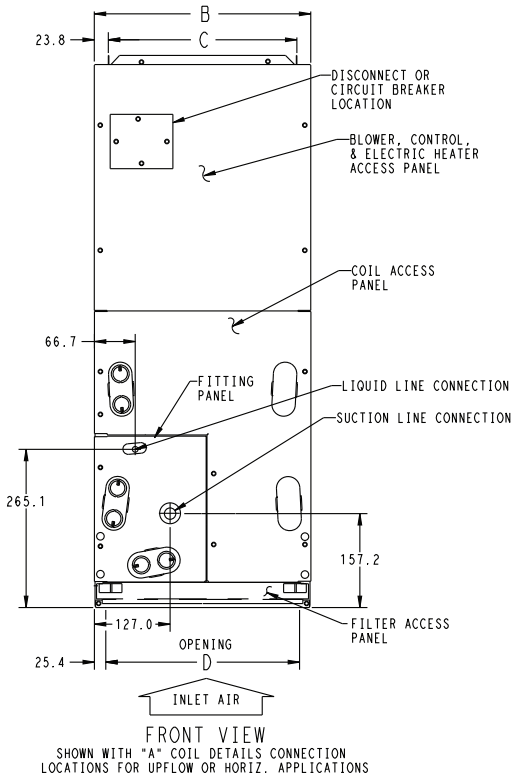
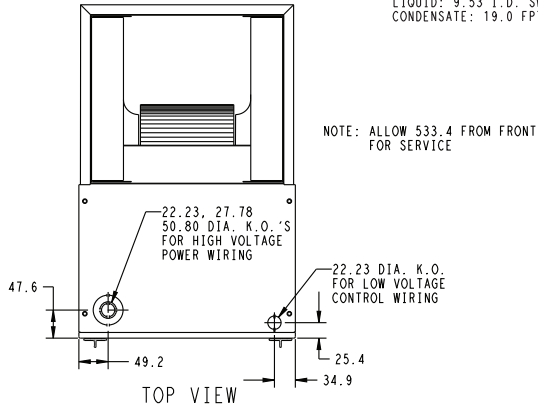
UNIT	SERIES	ELECTRICAL CHARACTERISTICS		A	B	C	D	E	F	G	H	J	COIL CONFIGURATION		SHIPPING WT (Kgs) NON-TIN COATED
													SLOPE	"A"	
FB4BSB070	A	X	*	1503.4	627.1	577.8	576.3	641.4	836.6	828.7	865.2	-	-	X	88.9
FB4BSF018	A	X	O	1084.3	363.6	315.9	312.8	265.1	460.4	473.1	-	304.8	X	-	40.4
FB4BSF024	A	X	O	1084.3	363.6	315.9	312.8	265.1	460.4	473.1	-	304.8	X	-	42.2
FB4BSF030	A	X	O	1209.7	447.7	400.0	396.9	390.5	587.4	600.1	-	431.8	X	-	50.8
FB4BSF036	A	X	*	1260.5	447.7	400.0	396.9	390.5	587.4	600.1	-	431.8	X	-	52.2
FB4BSF042	A	X	*	1357.3	536.6	489.0	485.8	487.4	684.2	684.2	-	482.6	X	-	61.2
FB4BSF048	A	X	*	1260.5	536.6	489.0	485.8	398.5	595.3	587.4	-	-	-	X	66.2
FB4BSF060	A	X	*	1357.3	536.6	489.0	485.8	495.3	692.2	684.2	-	-	-	X	75.8

NOTE:

- SERIES DESIGNATION IS THE 14TH POSITION OF UNIT PRODUCT NUMBER
- ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.

UNIT CONNECTION SIZES

SUCTION: 018 & 024 - 15.88 I. D. SWEAT
 030 & 036 - 19.05 I. D. SWEAT
 042 THRU 070 - 22.23 I. D. SWEAT
 LIQUID: 9.53 I. D. SWEAT
 CONDENSATE: 19.0 FPT



FB4B (50 HZ)

Fig. 3 - FB4BS Dimensions - Metric

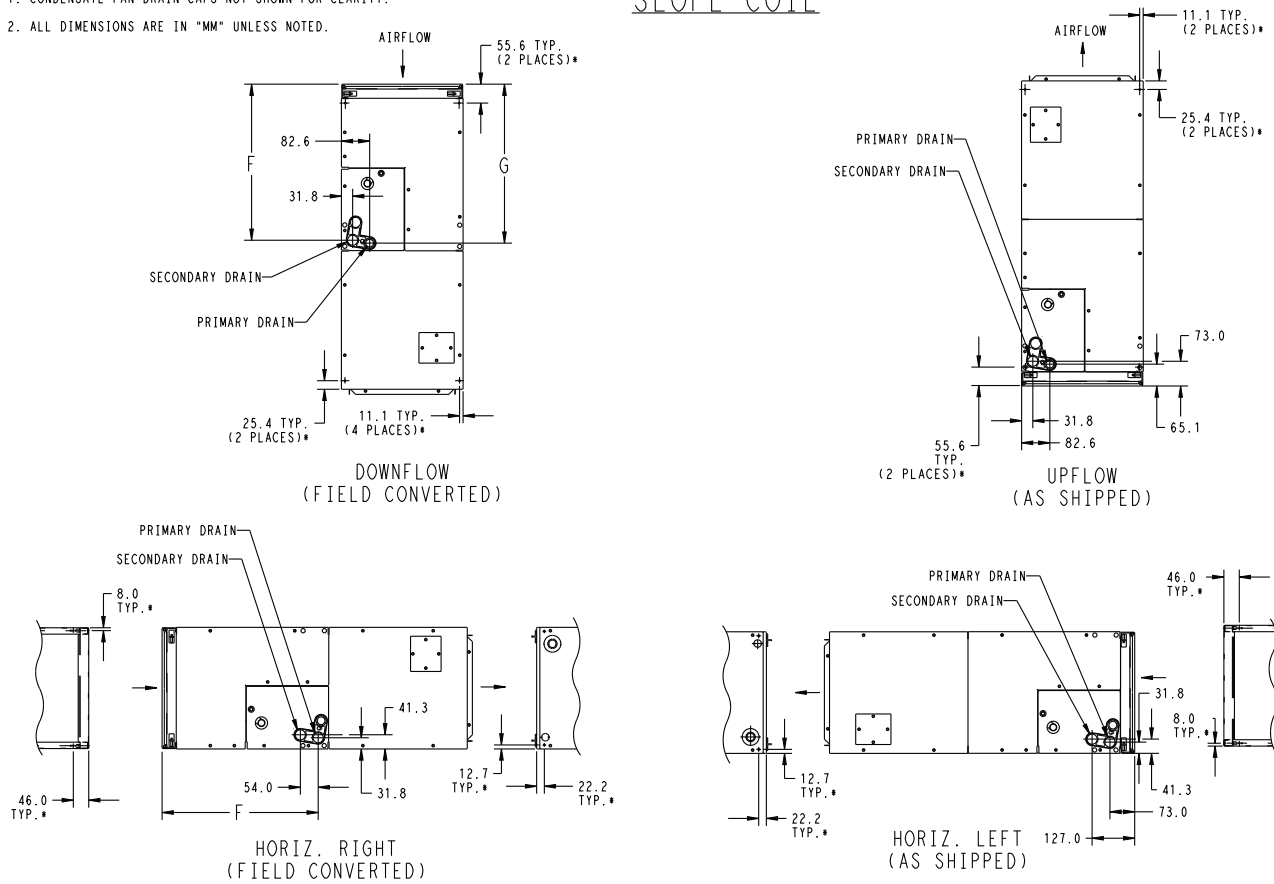
A14203

DIMENSIONS (cont.)

NOTES:

1. CONDENSATE PAN DRAIN CAPS NOT SHOWN FOR CLARITY.
2. ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.

SLOPE COIL



FB4B (50 HZ)

A-COIL

- * HORIZONTAL MOUNT LOCATIONS - DIMPLES PROVIDED IN TOP PANEL, AND BACK OF CABINET. IN CABINET BOTTOM, HOLES PROVIDED 3.45 DIA. HORIZONTAL HANGING HARDWARE TO BE FIELD SUPPLIED.

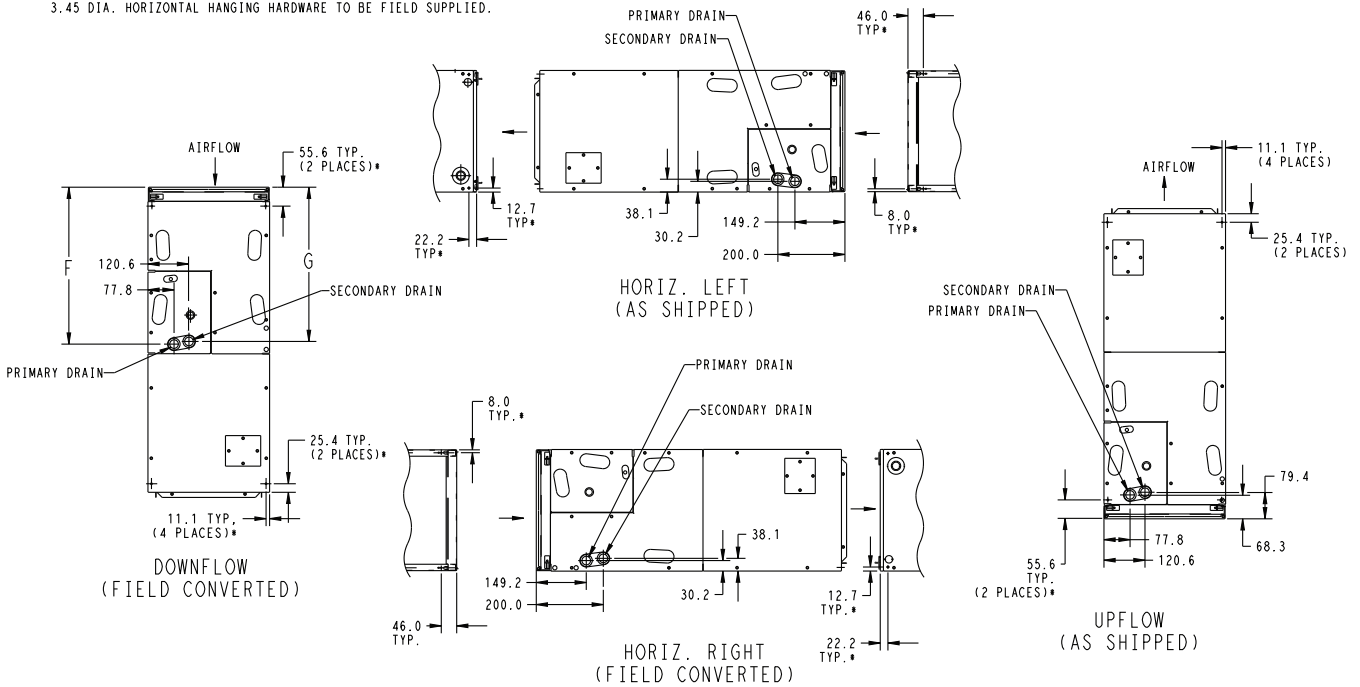


Fig. 4 - FB4BS Dimensions - Metric

A10008

PHYSICAL DATA

Metric

UNIT SIZE		018	024	030	036	042	048	060	070
Nominal Capacity	TR	1.5	2.0	2.5	3.0	3.5	4.0	5.0	5.0
Kilowatts	*	6.4	8.2	10.2	12.3	14.1	17.3	17.6	17.6
Operating Weight	KG	44	51	55	58	67	72	80	92
Dimensions (vert)									
Height	mm	1084	1084	1212	1261	1357	1261	1357	1503
Width	mm	364	364	448	448	536	537	537	627
Depth	mm	560	560	560	560	560	560	560	560
Refrigerant		R-22 / R-410A							
Refrigerant Control **		Bypass AccuRater							
Unit Arrangement		Upflow / Downflow / Horizontal (LH)							
Fan									
Airflow/Nom.	L/s	275	350	475	550	600	750	825	825
Motor Type		PSC							
Nominal	kW	0.15	0.15	0.24	0.24	0.24	0.56	0.56	0.56
Speeds	RPM	1000 / 900 / 800							
Indoor Coil		Copper/Aluminum Tube / Aluminum Fin with Lanced Sine Wave							
Face Area	m ²	0.21	0.21	0.28	0.28	0.32	0.41	0.55	0.69
Arrangement		Slope	Slope	Slope	Slope	Slope	A	A	A
Rows		2	3	3	3	3	3	3	3
Fin Density	/m	551							
Filter		Permanent Type / 25 mm (1 in.) Thick							
Coil Connections		Sweat-Type							
Vapor (OD)	in.	5/8	3/4	3/4	3/4	7/8	7/8	7/8	7/8
Liquid (OD)	in.	3/8							

* Based on nominal airflow rates, 19.4°C entering wet bulb and 7.2°C saturated suction temperature.

** Unit ships from factory with R-22 orifice. Field replacement of orifice required for R-410A application.

FB4B (50 HZ)

English

UNIT SIZE		018	024	030	036	042	048	060	070
Nominal Capacity	TR	1.5	2.0	2.5	3.0	3.5	4.0	5.0	5.0
1000 BTU / HR	*	22	26	35	42	48	59	60	60
Operating Weight	lb	94	98	126	128	147	158	168	199
Dimensions (vert)									
Height		42-11/16	42-11/16	47-11/16	49-5/8	53-7/16	53-7/16	53-7/16	59-3/16
Width	in.	14-5/16	14-5/16	17-5/8	17-5/8	21-1/8	21-1/8	21-1/8	24-11/16
Depth	in.	22-1/16	22-1/16	22-1/16	22-1/16	22-1/16	22-1/16	22-1/16	22-1/16
Refrigerant		R-22 / R-410A							
Refrigerant Control **		Bypass AccuRater							
Unit Arrangement		Upflow / Downflow / Horizontal (LH)							
Fan									
Airflow/Nom.	CFM	600	750	1000	1200	1250	1600	1750	1750
Motor Type		PSC							
Nominal	HP	1/5	1/5	1/3	1/3	1/3	3/4	3/4	3/4
Speeds	RPM	1000 / 900 / 800							
Indoor Coil		Copper/Aluminum Tube / Aluminum Fin with Lanced Sine Wave							
Face Area	ft ²	2.23	2.23	2.97	2.97	3.46	4.45	5.93	7.42
Arrangement		Slope	Slope	Slope	Slope	Slope	A	A	A
Rows		2	3	3	3	3	3	3	3
Fin Density	/in.	14-1/2							
Filter		Permanent Type / 25 mm (1 in.) Thick							
Coil Connections		Sweat-Type							
Vapor (OD)	in.	5/8	3/4	3/4	3/4	7/8	7/8	7/8	7/8
Liquid (OD)	in.	3/8							

* Based on nominal airflow rates, 67°F entering wet bulb and 45°F saturated suction temperature.

** Unit ships from factory with R-22 orifice. Field replacement of orifice required for R-410A application.

PERFORMANCE DATA

Cooling Capacities (kW)

Metric

FB4B (50 HZ)

UNIT SIZE	L/S	BF	COIL REFRIGERANT TEMPERATURE* (°C)																											
			2				4				6				8				10				12							
			Evaporator Air — Entering Wet-Bulb Temp (°C)																											
			22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
018	225	TC	8.6	7.6	6.7	5.8	8.1	7.0	6.0	5.2	7.4	6.3	5.4	4.5	6.7	5.6	4.7	3.9	6.1	4.8	4.0	3.3	5.1	4.0	3.4	3.0				
	0.10	SC	4.2	4.6	4.8	5.1	4.0	4.2	4.5	4.8	3.7	4.0	4.2	4.5	3.4	3.6	3.9	3.9	3.1	3.3	3.5	3.3	2.9	3.0	3.1	3.0				
	275	TC	9.5	8.2	7.2	6.2	8.9	7.6	6.5	5.5	8.1	7.0	5.9	4.9	7.3	6.2	5.2	4.3	6.7	5.4	4.5	3.7	5.6	4.4	3.8	3.4				
	0.12	SC	4.6	5.0	5.4	5.8	4.3	4.7	5.1	5.5	4.1	4.4	4.8	4.9	3.8	4.1	4.4	4.3	3.4	3.8	3.9	3.7	3.2	3.5	3.5	3.4				
024	325	TC	10.2	8.9	7.8	6.7	9.6	8.3	7.1	6.1	8.7	7.4	6.4	5.5	7.8	6.5	5.6	4.9	6.9	5.6	4.9	4.3	5.9	4.8	4.3	4.0				
	0.14	SC	5.1	5.5	5.9	6.3	4.6	5.3	5.6	5.7	4.3	4.9	5.2	5.3	4.1	4.5	4.7	4.9	3.9	4.0	4.3	4.3	3.4	3.6	3.9	4.0				
	300	TC	11.4	10.1	8.8	7.5	10.8	9.4	8.0	6.6	9.9	8.5	7.1	5.8	9.0	7.5	6.2	5.0	7.9	6.4	5.2	4.2	6.8	5.2	4.4	3.9				
	0.05	SC	5.6	6.0	6.4	6.6	5.3	5.6	5.9	6.2	5.0	5.3	5.5	5.8	4.6	4.9	5.1	5.0	4.2	4.4	4.5	4.2	3.8	3.9	4.0	3.9				
030	350	TC	12.3	10.8	9.4	8.1	11.6	10.0	8.6	7.3	10.7	9.1	7.7	6.4	9.6	8.0	6.8	5.6	8.5	6.8	5.7	4.9	7.3	5.7	4.9	4.4				
	0.06	SC	6.0	6.4	6.9	7.4	5.8	6.1	6.5	6.9	5.4	5.8	6.1	6.4	5.0	5.4	5.6	5.6	4.5	4.8	5.0	4.9	4.1	4.3	4.5	4.4				
	375	TC	12.8	11.3	9.8	8.4	12.0	10.4	9.0	7.6	11.1	9.5	8.0	6.7	10.0	8.4	7.1	5.8	8.9	7.2	6.1	5.2	7.6	6.0	5.2	4.7				
	0.07	SC	6.3	6.8	7.3	7.8	6.0	6.4	6.8	7.3	5.7	6.0	6.4	6.7	5.2	5.6	6.0	5.8	4.8	5.1	5.4	5.2	4.4	4.6	4.8	4.7				
036	350	TC	13.8	12.1	10.6	9.1	12.9	11.1	9.5	8.0	11.9	10.0	8.4	7.0	10.8	8.9	7.4	5.9	9.5	7.6	6.2	4.9	8.1	6.3	5.3	4.4				
	0.04	SC	6.8	7.2	7.5	7.7	6.4	6.8	7.1	7.3	5.9	6.2	6.5	6.7	5.4	5.7	5.9	5.9	4.8	5.2	5.4	4.9	4.4	4.6	4.7	4.4				
	475	TC	15.9	14.0	12.1	10.3	14.8	12.8	11.0	9.3	13.6	11.6	9.8	8.1	12.3	10.3	8.6	7.0	10.9	8.9	7.4	6.1	9.2	7.2	6.1	5.5				
	0.07	SC	7.7	8.3	8.9	9.4	7.3	7.8	8.3	8.8	6.9	7.3	7.7	8.1	6.4	6.8	7.1	7.0	5.7	6.1	6.4	6.1	5.2	5.5	5.7	5.5				
042	525	TC	16.7	14.6	12.7	10.8	15.6	13.4	11.5	9.8	14.4	12.1	10.3	8.6	13.0	10.7	9.0	7.4	11.5	9.3	7.7	6.5	9.8	7.6	6.5	5.8				
	0.08	SC	8.3	8.8	9.3	9.9	7.9	8.3	8.8	9.2	7.4	7.8	8.2	8.6	6.9	7.2	7.5	7.4	6.3	6.5	6.8	6.5	5.6	5.9	6.0	5.8				
	375	TC	15.1	13.0	11.2	9.5	13.9	11.9	10.1	8.2	12.6	10.6	8.7	7.0	11.3	9.2	7.5	5.8	9.8	7.9	6.3	4.8	8.3	6.4	5.3	4.4				
	0.05	SC	7.3	7.7	8.0	8.2	6.9	7.1	7.4	7.6	6.3	6.5	6.7	6.9	5.7	5.9	6.1	5.8	5.0	5.3	5.3	4.8	4.6	4.8	4.8	4.4				
048	550	TC	19.3	16.7	14.4	12.2	17.7	15.2	12.9	10.7	16.1	13.6	11.4	9.2	14.4	11.9	9.8	7.8	12.6	10.1	8.3	6.7	10.7	8.2	6.9	6.0				
	0.08	SC	9.4	10.1	10.7	11.2	8.8	9.4	9.9	10.3	8.2	8.7	9.1	9.2	7.5	8.0	8.3	7.8	6.9	7.4	7.4	7.2	6.0	6.5	6.5	6.0				
	600	TC	20.2	17.5	15.1	12.8	18.6	16.0	13.6	11.4	16.9	14.4	12.0	9.7	15.1	12.6	10.4	8.3	13.3	10.7	8.8	7.2	11.2	8.7	7.3	6.4				
	0.09	SC	9.8	10.6	11.3	11.8	9.2	10.0	10.5	11.0	8.5	9.2	9.7	9.7	7.9	8.5	8.8	8.3	7.3	7.9	7.9	7.7	6.4	6.9	6.8	6.4				
060	475	TC	19.8	17.2	14.7	12.2	18.3	15.6	13.1	10.8	16.6	13.9	11.5	9.3	14.9	12.1	9.9	7.9	13.0	10.2	8.2	6.6	10.9	8.3	6.9	6.0				
	0.05	SC	9.4	10.0	10.5	10.9	8.8	9.2	9.7	10.1	8.1	8.6	8.9	9.2	7.4	7.8	8.1	7.9	6.6	7.0	7.1	7.1	5.9	6.2	6.3	6.0				
	600	TC	22.6	19.7	17.0	14.4	21.0	18.0	15.3	12.7	19.1	16.1	13.5	11.0	17.2	14.1	11.7	9.4	15.1	12.0	9.9	8.2	12.6	9.7	8.3	7.3				
	0.07	SC	11.0	11.7	12.3	13.0	10.3	10.9	11.5	12.1	9.5	10.1	10.6	11.0	8.7	9.3	9.7	9.4	7.8	8.4	8.7	8.2	7.0	7.4	7.6	7.3				
070	700	TC	24.5	21.4	18.6	15.8	22.8	19.7	16.8	13.9	21.0	17.6	14.8	12.1	18.9	15.4	12.8	10.5	16.6	13.2	11.0	9.3	14.0	10.8	9.2	8.3				
	0.09	SC	11.9	12.9	13.7	14.5	11.3	12.1	12.8	13.4	10.4	11.2	11.8	12.1	9.6	10.3	10.8	10.5	8.7	9.4	9.7	9.3	7.9	8.4	8.5	8.3				
	575	TC	23.5	20.5	17.8	15.2	21.8	18.8	16.0	13.3	19.9	16.9	14.2	11.6	18.0	15.0	12.4	10.0	16.1	12.9	10.6	8.7	13.5	10.5	8.8	7.7				
	0.05	SC	11.3	12.0	12.7	13.3	10.5	11.3	11.9	12.4	9.8	10.5	11.1	11.5	9.1	9.7	10.1	10.0	8.2	8.7	9.1	8.7	7.4	7.8	8.0	7.7				
080	750	TC	26.7	23.3	20.3	17.6	25.0	21.6	18.5	15.6	22.9	19.6	16.6	13.8	20.7	17.3	14.6	12.1	18.4	14.8	12.6	10.9	15.7	12.2	10.6	9.7				
	0.07	SC	13.0	14.0	15.0	16.0	12.3	13.4	14.2	14.9	11.5	12.5	13.3	13.8	10.7	11.5	12.3	12.1	9.8	10.7	11.2	10.9	8.7	9.4	9.8	9.7				
	825	TC	27.6	24.4	21.2	18.1	25.9	22.5	19.5	16.5	23.8	20.4	17.3	14.5	21.6	18.0	15.2	12.8	19.3	15.5	13.2	11.5	16.4	12.7	11.1	10.4				
	0.08	SC	13.6	14.8	16.0	17.0	12.7	14.0	15.1	16.2	12.0	13.2	14.1	14.5	11.3	12.3	13.0	12.8	10.4	11.3	11.8	11.5	9.4	10.1	10.5	10.4				
090	600	TC	25.7	22.1	19.0	16.1	23.6	20.2	17.2	14.2	21.6	18.2	15.1	12.2	19.5	16.0	13.0	10.1	17.0	13.7	10.8	8.1	14.3	11.0	9.0	7.5				
	0.03	SC	12.4	13.0	13.4	13.8	11.5	12.0	12.4	12.8	10.7	11.1	11.4	11.7	9.8	10.2	10.4	10.1	8.7	9.1	9.1	8.1	7.7	8.1	8.1	7.5				
	750	TC	29.6	25.8	22.3	18.9	27.5	23.7	20.2	16.8	25.2	21.3	17.7	14.2	22.8	18.8	15.2	11.8	20.2	16.2	13.0	10.0	17.1	13.1	10.8	9.2				
	0.05	SC	14.4	15.3	16.0	16.6	13.4	14.2	14.9	15.6	12.5	13.2	13.7	14.1	11.6	12.2	12.4	11.8	10.5	11.1	11.2	10.0	9.2	9.9	9.9	9.2				
096	900	TC	32.6	28.5	24.7	21.0	30.3	26.2	22.3	18.6	27.8	23.7	19.8	16.0	25.2	21.0	17.2	13.7	22.4	18.0	14.6	11.8	19.0	14.7	12.3	10.7				
	0.06	SC	15.9	17.1	18.1	19.1	14.9	16.1	16.9	17.7	13.9	14.9	15.7	16.0	12.8	13.7	14.3	13.7	11.8	12.5	12.6	11.8	10.5	11.3	11.3	10.7				
	600	TC	26.8	23.5	20.2	16.9	24.5	21.3	18.2	15.1	22.2	19.2	16.2	13.3	19.9	17.1	14.3	11.5	17.6	15.0	12.3	9.69	15.4	12.9	10.4	7.89				
	0.04	SC	13.4	14.0	14.5	15.1	12.4	12.9	13.4	13.8	11.5	11.9	12.2	12.6	10.5	10.8	11.1	11.4	9.56	9.77	9.97	9.69	8.60	8.72	8.84	7.89				
100	750	TC	30.5	26.9	23.2	19.6	28.0	24.5	21.1	17.6	25.5	22.2	18.9	15.6	23.0	19.9	16.7	13.6	20.4	17.5	14.6	11.7	17.9	15.2	12.4	9.69				
	0.05	SC	15.4	16.2	17.1	18.0	14.3	15.1	15.8	16.6	13.3	13.9	14.6	15.2	12.3	12.8	13.3	13.6	11.3	11.6	12.0	11.7	10.2	10.5	10.7	9.69				
	950	TC	34.2	30.3	26.4	22.4	31.5	27.8	24.1	20.3	28.8	25.3	21.8	18.2	26.1	22.8	19.4	16.1	23.4	20.3	17.1	14.0	20.7	17.8	14.8	11.9				
	0.06	SC	17.5	18.8	20.1	21.4	16.4	17.6	18.7	19.8	15.4	16.3	17.3	18.2	14.3	15.1	15.9	16.1	13.2	13.8	14.5	14.0	12.2	12.6	13.1	11.9				

LEGEND

L/s — Liters per second

BF — Bypass factor

SC — Sensible Capacity

TC — Gross Cooling Capacity 1000 Btuh

1. Gross capacities shown do not include a deduction for evaporator fan motor heat.
2. Contact Carrier for cooling capacities at conditions other than shown in table.
3. Direct interpolation is permissible. Do not extrapolate.
4. SHC is based on 26.7° C temperature of air entering the indoor unit. At any other temperature, correct the SHC read from the table of cooling capacities as follows:
 Corrected SHC_{kW} = SHC + [1.23 x 10⁻³ x (1 - BF) x (Cdb - 26.7) x L/s]
 Observe the rule of signs. Above 26.7° C, SHC correction will be positive; add it to SHC. Below 26.7° C, SHC correction will be negative; subtract it from SHC.

5. Formula:

$$Cldb = Cedb - \frac{SHC_{kW}}{1.23 \times 10^{-3} \times (L/s)}$$

Leaving wet bulb = wet bulb temperature corresponding to enthalpy of air leaving coil (hlwb).

$$hlwb = hewb - \frac{TC_{kW}}{1.20 \times 10^{-3} \times (L/s)}$$

Where hewb is enthalpy of air entering evaporator coil (kJ/kg).

PERFORMANCE DATA (cont.)

Airflow Performance, Airflow Rate - L/s

Metric

UNIT SIZE	BLOWER MOTOR SPEED	EXTERNAL STATIC PRESSURE (PA)				
		25	50	75	100	125
018	HIGH	389	363	317	265	—
	MED	347	320	270	—	—
	LOW	298	273	—	—	—
024	HIGH	373	345	303	238	—
	MED	340	319	269	—	—
	LOW	266	247	—	—	—
030	HIGH	519	482	431	369	299
	MED	462	429	385	321	—
	LOW	415	386	340	—	—
036	HIGH	609	571	531	486	438
	MED	529	499	468	432	394
	LOW	458	437	414	381	—
042	HIGH	692	658	619	571	478
	MED	612	581	544	496	—
	LOW	511	494	472	439	—
048	HIGH	812	765	716	661	595
	MED	770	724	678	628	—
	LOW	713	671	630	579	—
060	HIGH	885	844	800	755	706
	MED	803	767	731	690	—
	LOW	671	647	624	—	—
070	HIGH	1038	996	953	906	852
	MED	937	908	875	838	793
	LOW	781	767	748	724	—

FB4B (50 HZ)

NOTES:

Fan performance based on wet coil with factory-supplied filter; no internal heaters.
 Not recommended for use above 150 Pa external static pressure.

Air Delivery Performance Correction Component Pressure Drop at Indicated Airflow (Electric Heaters)

NOTE: Subtract the component pressure drop corrections from the unit airflow data when accessory electric heaters are installed. The remaining external static pressure will be available for the duct system.

Units: Pa

Metric

HTR QTY	AIRFLOW (L/s)									
	225	250	275	300	325	350	375	400	425	450
1	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.3	1.4	1.6
2	0.8	1.0	1.2	1.4	1.7	2.0	2.2	2.6	2.8	3.2
3	1.2	1.5	1.8	2.1	2.5	3.0	3.4	3.8	4.3	4.8
4	1.7	2.0	2.4	2.9	3.4	3.9	4.5	5.1	5.7	6.4
6	2.5	3.0	3.6	4.3	5.1	5.9	6.7	7.7	8.5	9.6

HTR QTY	AIRFLOW (L/s)									
	475	500	550	600	650	700	750	800	850	900
1	1.8	2.0	2.4	2.8	3.3	3.8	4.4	5.0	5.6	6.2
2	3.5	3.9	4.7	5.6	6.6	7.6	8.7	10.0	11.2	12.5
3	5.3	5.9	7.1	8.4	9.9	11.5	13.1	14.9	16.8	18.7
4	7.1	7.9	9.4	11.2	13.3	15.3	17.5	19.9	22.4	24.9
6	10.6	11.8	14.2	16.9	19.9	22.9	26.2	29.9	33.6	37.4

PERFORMANCE DATA

Cooling Capacities (MBtuh)

English

FB4B (50 HZ)

UNIT SIZE	CFM BF		COIL REFRIGERANT TEMPERATURE* (°F)														
			35			40			45			50			55		
			Evaporator Air — Entering Wet-Bulb Temp (°F)														
			72	67	62	72	67	62	72	67	62	72	67	62	72	67	62
018	450	TC	29	25	21	27	22	18	24	19	15	21	15	12	16	11	9.5
	0.09	SC	14	16	17	13	14	15	12	13	14	10	11	12	9	9.5	9.5
	600	TC	34	28	23	31	25	20	27	22	17	24	18	14	19	13	12
	0.13	SC	16	18	20	15	17	19	14	15	17	12	14	14	11	12	12
024	675	TC	35	29	24	32	26	21	28	22	18	24	18	15	19	14	13
	0.14	SC	17	19	21	15	18	19	14	16	17	13	14	15	11	12	13
	800	TC	39	33	27	36	30	23	32	25	19	27	20	15	22	14	13
	0.05	SC	19	21	22	17	19	20	16	17	18	14	15	15	12	12	13
030	750	TC	43	36	30	40	32	26	35	28	21	30	22	18	24	16	15
	0.07	SC	20	23	25	19	21	23	17	19	21	15	17	18	13	14	15
	800	TC	45	37	31	41	33	27	36	29	22	31	23	19	25	17	16
	0.07	SC	21	24	26	20	22	24	18	20	22	16	18	19	14	15	16
036	750	TC	48	40	33	44	35	28	39	30	23	33	24	18	26	18	15
	0.04	SC	23	25	26	21	23	24	19	20	21	16	18	18	14	15	15
	1000	TC	55	46	38	50	41	33	44	35	27	38	28	22	30	20	18
	0.07	SC	26	29	32	24	27	29	22	24	26	19	21	22	17	18	18
042	1125	TC	58	48	39	53	42	34	47	36	28	40	29	23	32	21	19
	0.09	SC	29	30	33	27	28	30	24	25	27	21	22	23	18	19	19
	800	TC	53	43	35	47	38	29	41	31	23	34	25	18	27	18	15
	0.05	SC	25	27	28	23	24	25	20	21	22	17	18	18	15	16	15
048	1200	TC	69	56	46	61	49	39	53	42	31	45	33	25	35	24	21
	0.08	SC	33	36	39	30	33	35	27	29	31	24	26	25	20	22	21
	1300	TC	72	59	48	64	52	41	56	44	33	47	35	27	37	25	22
	0.09	SC	34	38	41	31	35	37	28	31	33	25	28	27	21	23	22
060	1000	TC	69	57	45	62	49	38	54	41	31	45	32	24	35	23	20
	0.05	SC	32	35	37	29	31	33	26	28	29	22	24	24	19	20	20
	1250	TC	78	65	53	71	57	45	62	48	36	52	38	30	41	27	24
	0.07	SC	37	41	44	34	37	40	30	33	35	26	29	30	22	24	24
070	1500	TC	86	71	58	78	63	50	69	53	41	58	42	34	46	31	28
	0.09	SC	41	46	49	38	42	45	34	38	40	30	33	34	26	28	28
	1200	TC	82	68	56	74	60	47	65	51	39	56	41	32	44	30	26
	0.05	SC	39	42	45	35	39	41	32	35	37	28	30	32	24	26	26
080	1600	TC	93	77	64	85	69	55	75	59	46	64	47	39	51	35	32
	0.07	SC	44	49	54	41	46	49	37	41	45	33	37	39	28	31	32
	1750	TC	96	81	66	88	72	58	78	61	48	67	49	41	53	36	34
	0.08	SC	46	52	57	42	48	53	39	44	47	35	39	41	30	33	34
090	1300	TC	91	74	60	81	65	51	72	55	41	60	44	31	47	31	26
	0.03	SC	43	46	48	39	41	43	35	37	38	30	32	31	25	27	26
	1600	TC	104	86	70	94	76	60	83	64	47	71	52	38	56	37	32
	0.05	SC	50	54	57	45	49	52	41	44	45	36	39	38	30	33	32
100	1900	TC	114	95	77	103	84	66	91	72	53	78	57	43	62	42	36
	0.06	SC	54	60	65	50	55	59	45	49	52	40	43	43	34	37	36
	1300	TC	91	75	61	83	67	51	73	57	41	62	44	32	48	31	26
	0.02	SC	42	45	48	39	41	43	34	37	38	30	31	31	25	25	26
110	1600	TC	102	85	70	93	76	59	83	65	48	71	51	38	56	36	31
	0.03	SC	47	52	56	43	48	51	39	43	45	34	37	38	29	31	31
	2000	TC	113	95	78	104	85	68	93	73	55	80	58	46	64	42	38
	0.05	SC	53	59	65	49	55	60	44	50	53	39	44	46	34	37	38

LEGEND

BF — Bypass factor

cfm — Cubic Feet per Minute

SC — Sensible Capacity

TC — Gross Cooling Capacity 1000 Btuh

1. Gross capacities shown do not include a deduction for evaporator fan motor heat.
2. Contact Carrier for cooling capacities at conditions other than shown in table.
3. Direct interpolation is permissible. Do not extrapolate.
4. SHC is based on 80° F temperature of air entering the indoor unit. At any other temperature, correct the SHC read from the table of cooling capacities as follows:
 $Corrected\ SHC_{Btu/h} = SHC + [1.10 \times (1 - BF) \times (Fdb - 80) \times cfm]$
 Observe the rule of signs. Above 80° F, SHC correction will be positive; add it to SHC. Below 80° F, SHC correction will be negative; subtract it from SHC.

5. Formula:

$$Fdb = C_{edb} - \frac{SHC_{Btu/h}}{1.10 \times (cfm)}$$

Leaving wet bulb = wet bulb temperature corresponding to enthalpy of air leaving coil (hlwb).

$$hlwb = h_{ewb} - \frac{TC_{Btu/h}}{4.50 \times (cfm)}$$

Where hewb is enthalpy of air entering evaporator coil (Btu/lb).

PERFORMANCE DATA (cont.)

Airflow Performance, Airflow Rate - CFM

English

UNIT SIZE	BLOWER MOTOR SPEED	EXTERNAL STATIC PRESSURE—In. wc				
		0.10	0.20	0.30	0.40	0.50
018	HIGH	825	770	672	562	—
	MED	736	678	573	—	—
	LOW	631	579	—	—	—
024	HIGH	791	731	643	504	—
	MED	720	677	570	—	—
	LOW	564	523	—	—	—
030	HIGH	1100	1022	914	782	634
	MED	980	910	815	680	—
	LOW	880	818	720	—	—
036	HIGH	1290	1210	1125	1030	928
	MED	1122	1058	992	916	835
	LOW	970	925	878	808	—
042	HIGH	1466	1394	1312	1210	1012
	MED	1296	1232	1152	1050	—
	LOW	1082	1046	1000	930	—
048	HIGH	1720	1622	1518	1400	1260
	MED	1632	1535	1436	1330	1212
	LOW	1510	1422	1334	1226	—
060	HIGH	1876	1788	1696	1600	1496
	MED	1702	1625	1548	1462	—
	LOW	1422	1372	1322	—	—
070	HIGH	2200	2110	2020	1920	1805
	MED	1985	1925	1855	1775	1680
	LOW	1655	1625	1585	1535	—

FB4B (50 HZ)

NOTES:

Fan performance based on wet coil with factory-supplied filter; no internal heaters.
 Not recommended for use above 0.60-in. wc external static pressure.

Air Delivery Performance Correction Component Pressure Drop at Indicated Airflow (Electric Heaters)

NOTE: Subtract the component pressure drop corrections from the unit airflow data when accessory electric heaters are installed. The remaining external static pressure will be available for the duct system.

Units: In wc

English

HTR QTY	AIRFLOW (CFM)										
	450	500	550	600	650	700	750	800	860	900	950
1	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.005	0.005	0.006	0.006
2	0.003	0.004	0.004	0.005	0.006	0.007	0.008	0.009	0.010	0.011	0.013
3	0.005	0.005	0.006	0.008	0.009	0.011	0.012	0.014	0.015	0.017	0.019
4	0.006	0.007	0.009	0.010	0.012	0.014	0.016	0.018	0.021	0.023	0.026
6	0.009	0.011	0.013	0.015	0.018	0.021	0.024	0.027	0.031	0.034	0.039

HTR QTY	AIRFLOW (CFM)										
	1000	1050	1100	1200	1300	1400	1500	1600	1700	1800	1900
1	0.007	0.008	0.009	0.010	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2	0.014	0.016	0.017	0.020	0.024	0.028	0.031	0.036	0.040	0.045	0.050
3	0.021	0.023	0.026	0.030	0.035	0.041	0.047	0.053	0.060	0.068	0.075
4	0.028	0.031	0.034	0.040	0.047	0.055	0.063	0.071	0.080	0.090	0.100
6	0.042	0.047	0.051	0.060	0.071	0.083	0.094	0.107	0.120	0.135	0.150

NOTE: Subtract the component pressure drop corrections from the unit airflow data when accessory electric heaters are installed. The remaining external static pressure will be available for the duct system.

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	024
		KFACB0201CFB	036
		KFACB0301CFB	048, 060
3.	Downflow Conversion Kit	KFADC0201SLP	Slope Coil Units — 024, 036
		KFADC0401ACL	A–Coil Units — 048, 060
4.	Single–Point Wiring Kit	KFASP0101SPK	Only with 15– and 20–kW Fused Heaters
5.	Filter Kit (12 Pack)	KFAFK0212SML	024
		KFAFK0312MED	036
		KFAFK0412LRG	048, 060
6.	PVC Condensate Trap Kit (50 pack)	KFAET0150ETK	All
7.	Air Cleaner 240–volt Conversion Kit	KEAVC0201240	All
8.	Downflow/Horizontal Conversion Gasket Kit	KFAHD0101SLP	All
9.	Horizontal Water Management Kit (25 pack)	KFAHC0125AAA	All
10.	Standard Filter Rack Kit	KFAFR0101FRM	018, 024
		KFAFR0201FRM	030, 036
		KFAFR0301FRM	042, 048, 060
		KFAFR0401FRM	070

* Factory authorized and listed, field–installed.

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: 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. 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. Standard Filter Rack Kit

This kit mounts in fan coil filter rack area and modifies the existing filter rack to support standard 1–in. filter sizes.
SUGGESTED USE: Fan coils using standard filter sizes.

ACCESSORY ELECTRIC HEATERS

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	018-070	25,100
KFCEH0901N10	10	230/1	10	None	018-070	31,400
KFCEH1601315	15	230/3	5, 15	None	036-070	47,100
KFCEH2001318	18	230/3	6, 12, 18	None	042-070	56,500
KFCEH2401C05	5	230/1	5	Circuit Breaker	018-060	15,700
KFCEH2501C08	8	230/1	8	Circuit Breaker	018-070	25,100
KFCEH2601C10	10	230/1	10	Circuit Breaker	018-070	31,400
KFCEH2901N09	9	230/1†	3, 9	None	036-070	28,200
KFCEH3001F15	15	230/1	5, 15	Fuse‡	024-070	47,100
KFCEH3101C15	15	230/1	5, 15	Circuit Breaker	024-070	47,100
KFCEH3201F20	20	230/1	5, 20	Fuse‡	030-070	62,800
KFCEH3301C20	20	230/1	5, 20	Circuit Breaker	030-070	62,800
KFCEH3401F24	24	230/3*	8, 16, 24	Fuse	048, 060, 070	78,300
KFCEH3501F30	30	230/3*	10, 20, 30	Fuse	048, 060, 070	94,100

* 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.

Fan Coil Electrical Data (Units without Electrical Heat)

UNIT SIZE	VOLTS (1-PHASE)	FLA	MCA	BRANCH CIRCUIT			
				Min Wire Size* AWG	Max Wire Length (Ft/M)†		Fuse Amps
					208V	230V	
018	230	1.3	1.7	14	325/99	350/107	15
024	230	0.8	1.0	14	250/76	275/84	15
030	230	1.5	1.9	14	210/64	225/69	15
036	230	1.9	2.4	14	150/46	175/53	15
042	230	1.8	2.3	14	125/38	150/46	15
048	230	2.7	3.4	14	90/27	100/30	15
060	230	3.6	4.5	14	90/27	100/30	15
070	230	3.6	4.5	14	90/27	100/30	15

LEGEND:

FLA — Full Load Amps; Rated in accordance with UL/U.S.A. Standard 465.

MCA — Minimum Circuit Amps; Calculated in accordance with NEC/U.S.A. Article 430.

* Use copper wire only to connect unit. If other than uncoated (nonplated), 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, U.S.A.).

† Length shown is as measured 1 way along wire path between unit and service panel for a maximum 2% voltage drop.

Electric Heater (kW) / Elements

PHASE	kW	ELEMENT QTY.
1	3	1
1	5	1
1	8	2
1	10	2
1	15	3
1	20	4
3	9	3
3	15	3
3	18	6
3	24	6
3	30	6

FB4B (50 HZ)

ACCESSORY ELECTRIC HEATER ELECTRICAL DATA

HEATER PART NO.	KW		P H A S E	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	Dual Circuit		Single Circuit	L1,L2	L3,L4	Single Circuit	L1,L2	L3,L4	L3,L4	L3,L4	Single Circuit	L1,L2	L3,L4	Single Circuit	L1,L2	L3,L4	Single Circuit	L1,L2	L3,L4
						L1,L2	L3,L4																	
KFCEH0401N03	3	2.3	1	None	10.9/12.0	—	—	—	15.9/17.3	—	—	—	12/12	—	—	20/20	—	—	67/68	—	—	—		
KFCEH0501N051	5	3.8	1	None	18.1/20.0	—	—	—	26.0/28.4	—	—	—	10/10	—	—	30/30	—	—	66/66	—	—	—		
KFCEH0501N062	5	3.8	1	None	18.1/20.0	—	—	—	31.2/33.5	—	—	—	10/10	—	—	35/35	—	—	85/86	—	—	—		
KFCEH2401C061	5	3.8	1	Ckt Bkr	18.1/20.0	—	—	—	26.0/28.4	—	—	—	10/10	—	—	30/30	—	—	66/66	—	—	—		
KFCEH2401C062	5	3.8	1	Ckt Bkr	18.1/20.0	—	—	—	31.2/33.5	—	—	—	10/10	—	—	35/35	—	—	85/86	—	—	—		
KFCEH0801N08	8	6.0	1	None	28.9/32.0	—	—	—	44.7/48.5	—	—	—	8/8	—	—	45/50	—	—	59/60	—	—	—		
KFCEH2501C08	8	6.0	1	Ckt Bkr	28.9/32.0	—	—	—	44.7/48.5	—	—	—	8/8	—	—	45/50	—	—	59/60	—	—	—		
KFCEH2901N09*	9	6.8	1	None	32.8/36.0	—	—	—	48.5/53.5	—	—	—	8/6	—	—	50/60	—	—	54/67	—	—	—		
KFCEH2901N09*	9	6.8	3	None	18.8/20.8	—	—	—	32.0/34.5	—	—	—	10/10	—	—	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	Ckt 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	60/60	25/25	88/89	78/80	75/76	—			
KFCEH3101C15*	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	60/60	25/25	88/89	78/80	75/76	—			
KFCEH1601315	15	11.3	3	None	31.3/34.6	—	—	—	47.7/51.8	—	—	—	8/6	—	—	50/60	—	—	56/60	—	—	—		
KFCEH2001318	18	13.5	3	None	37.6/41.5	—	—	—	55.5/60.4	—	—	—	6/6	—	—	60/70	—	—	76/77	—	—	—		
KFCEH3201F20*	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	85/109	78/80	59/59	—			
KFCEH3301C20*	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	60/60	50/50	85/109	78/80	59/59	—			
KFCEH3401F241*	24	18.0	3	Fuse	50.1/55.4	—	—	—	71.2/77.8	—	—	4/4	—	—	—	80/80	—	—	94/95	—	—	—		
KFCEH3401F241*	24	18.0	1	Fuse	66.7/66.5	—	—	—	116.9/127.9	—	—	1/1	—	—	—	125/150	—	—	115/116	—	—	—		
KFCEH3501F301*	30	22.5	3	Fuse	62.6/69.2	—	—	—	86.8/95.0	—	—	3/3	—	—	—	90/100	—	—	97/98	—	—	—		
KFCEH3501F301*	30	22.5	1	Fuse	109.0/120.0	—	—	—	144.8/156.5	—	—	0/00	—	—	—	150/175	—	—	117/150	—	—	—		

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

HEATER PART NO.	KW		PHASE	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 (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
KFCEH3401F241**	24	18.0	1	28.9/32.0	28.9/32.0	28.9/32.0	8/8	8/8	8/8	8/8	10/10	45/50	40/40	40/40	59/60	73/73	73/73	
KFCEH3501F301**	30	22.5	1	36.2/40.0	36.2/40.0	36.2/40.0	6/6	6/6	6/6	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%.

NOTES:

1. For fan coil sizes 018–036.
2. For fan coil sizes 042–070.
3. Single circuit application of F15 and F20 heaters requires single-point wiring kit accessory.



Estimated Sound Power Level for FB4B Fan Coils*

UNIT SIZE	Lw (dB)										
	English		SI		Octave Band Center Frequency (HZ)						
	CFM	ESP	L/S	ESP	63	125	250	500	1000	2000	4000
FB4-018 50 Hz	600	0.29	283	72	66.0	62.0	58.0	55.0	53.0	51.0	47.0
FB4-024 50 Hz	750	0.17	354	42	62.4	58.4	54.4	51.4	49.4	47.4	43.4
FB4-030 50 Hz	1000	0.23	472	57	66.2	62.2	58.2	55.2	53.2	51.2	47.2
FB4-036 50 Hz	1200	0.44	566	110	72.7	68.7	64.7	61.7	59.7	57.7	53.7
FB4-042 50 Hz	1250	0.37	590	92	71.3	67.3	63.3	60.3	58.3	56.3	52.3
FB4-048 50 Hz	1600	0.22	755	55	67.9	63.9	59.9	56.9	54.9	52.9	48.9
FB4-060 50 Hz	1800	0.36	755	90	72.7	68.7	64.7	61.7	59.7	57.7	53.7
FB4-070 50 Hz	2000	0.37	944	92	73.4	69.4	65.4	62.4	60.4	58.4	54.4

METHOD: Estimated Fan Sound Power (in decibels 10E-12 watts) is calculated in accordance with procedure described in ASHRAE 1987 HVAC “Systems and Applications Handbook,” Chapter 52, “Sound and Vibration Control,” using the “Specific Sound Power Level” approach.

ACCURACY: This is a prediction method, based on an accepted method which has demonstrated satisfactory results in field applications. However, field test results may generate sound pressure values which differ from these predicted values, as the current state of the art in determining sound power varies in accuracy from 0.2 db in mid-range (250 to 4000 Hz bands) to 3 to 4 db in 125 and 8000 Hz bands and up to 6 to 8 db in 63 Hz band.

MINOR CHANGES: Use for estimating sound power at other conditions of airflow and external static pressure.

CONVERSION FACTORS

METRIC TECH	X =	ENGLISH UNIT	X =	SI UNIT
Area				
cm			100	mm
cm	0.1550	in.	645.2	mm
m			1.0	m
m	10.76	ft	0.09290	m
Length				
µm			1.0	µm
µm	39.37	micro-in.	0.0254	µm
mm			1.0	mm
mm	0.03937	in.	25.4	mm
mm	0.003281	ft	304.8	mm
m			1.0	m
m	3.281	ft	0.3048	m
m	1.094	yd	0.9144	m
Mass				
g			1.0	g
g	0.03527	oz	28.35	g
kg			1.0	kg
kg	2.205	lb	0.4536	kg
tonne. Mg			1.0	tonne. Mg
tonne. Mg	1.102	U.S. ton (2000 lb)	0.9072	tonne. Mg
Power				
kcal/h			1.163	W
kcal/h	3.968	Btu/h	0.2931	W
HP metric			0.7355	kW
HP metric	0.9863	HP (550 $\frac{ft \cdot lb}{s}$)	0.7457	kW
Mcal/h			1.163	kW
Mcal/h	0.3307	Ton ref.	3.517	kW
Pressure				
mm w.g 4°C			9.806	Pa
mm w.g 4°C	0.03937	in H ₂ O 39.2°F	249.1	Pa
mm Hg 0°C			0.1333	kPa
mm Hg 0°C	0.03937	in Hg 32°F	3.386	kPa
kg/cm ²			98.07	kPa
kg/cm ²	14.22	psi	6.895	kPa
mH ₂ O	3.281	ft H ₂ O	2.989	kPa

METRIC TECH	X =	ENGLISH UNIT	X =	SI UNIT
Temperature				
Interval °C			1.0	k
°C	1.8	°F	0.5556	°C
Velocity				
m/s			1.0	m/s
m/s	3.281	ft/s	0.3048	m/s
m/s	196.9	ft/min	0.00508	m/s
Volume				
mm			1.0 x 10 ⁻⁶	L
mm	6.102x10 ³	in.	0.01639	L
L			1.0	L
L	0.03531	ft	28.32	L
m			1.0	m
m	1.308	yd	0.7646	m
L	0.2642	U.S. gal	3.785	L
L	2.113	U.S. pint	0.4732	L
mL . cm			1.0	mL
mL . cm	0.03381	U.S. oz	29.57	mL
Volume/Time				
m ³ /h			0.2778	L/s
m ³ /h	0.5886	ft ³ /min	0.4719	L/s
m ³ /h	4.403	U.S. gal/min	0.06309	L/s
L/h			2.778x10 ⁻⁴	L/s
L/h	4.303x10 ³	U.S. gal/min	0.06309	L/s
(m ³ /h)/ (1000 kcal/h)	1.780	cfm/ton	0.1342	L/s • kW
METRIC TECH	CONVERSION FACTOR	ENGLISH UNIT	CONVERSION FACTOR	SI UNIT
Temperature °C			°C + 273.15 K	
°C	(°C x 1.8) + 32	°F	(°F - 32) ÷ 1.8°C	

A10175

APPLICATIONS

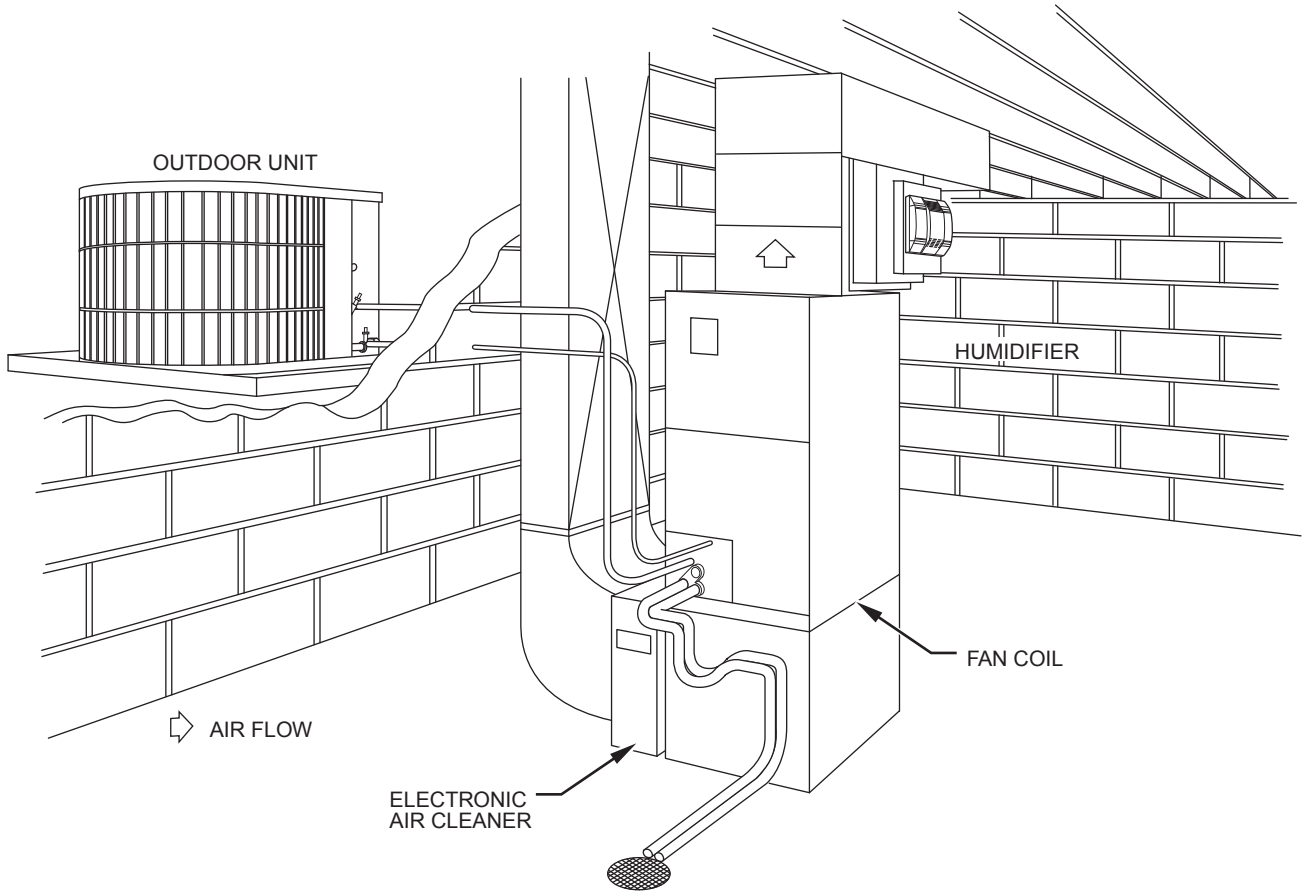
All FB4B units with electric heaters are suitable for installation with 25-mm (1-in.) clearance from unit casing, discharge plenum and ductwork to combustible materials. On these systems, maintain 25-mm (1-in.) minimum clearance between unit discharge air duct and combustible materials for a distance of 914 mm (36 in.) from unit. Refer to electrical data table in this booklet for minimum fan speed required for safe electric heater operation.

Install these units in the conditioned space or in an unconditioned space. They are tested and approved for installation in unconditioned space per ARI Standards (27°C; 80°F db, 24°C; 75°F wb indoor temperature; 27°C; 80°F db outdoor temperature).

Insulate supply and return air ductwork in unconditioned space. It is recommended that insulation with vapor barrier be used. Sound—For acoustical treatment of ductwork, see FB4B Installation, Start-Up, and Service Instructions.

MATCHED SYSTEM

FB4B (50 HZ)



A02306