TECHNICAL GUIDE

DOWNFLOW/UPFLOW ELECTRIC FURNACE

MODELS: EB SERIES

ISO 9001
Certified Quality
Management System

DESCRIPTION

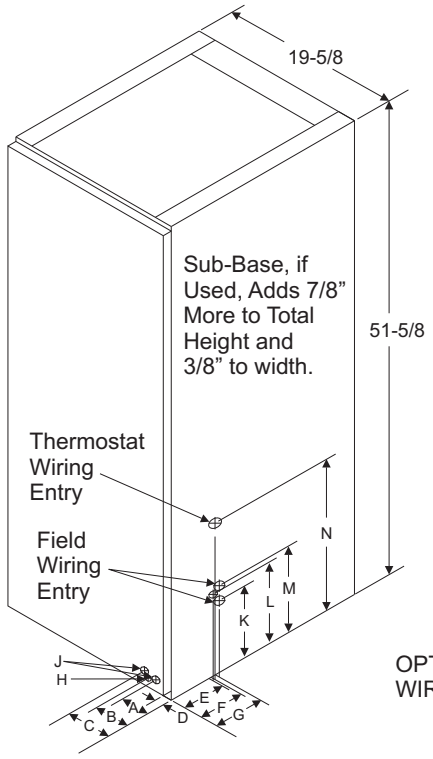
The EB Series Electric Furnace is actually two systems in one. As an air handler, it provides airflow for air conditioning and heat pump cooling requirements. As an electric furnace, its range of heating capacities makes the EB a perfect match for the heating requirements of almost any manufactured home.

WARRANTY

2- year limited parts warranty.

FEATURES

- Zero clearance feature allows the EB to be installed where space is a premium.
- Pre-painted white front panels provide a scratch resistant, attractive, easy to clean appliance finish.
- Built-in coil cabinet is design-matched to work in conjunction with Coleman heat pumps and air conditioners, providing ease of installation and highly efficient operating performance.
- Air Conditioner and Heat Pump operation ready, all models have a multi-speed blower capable of handling cooling and heat pump loads.
- Heating package includes specifically designed, long lasting nickel/chrome heat elements.
- Universal throw-away filter cleans the air, and is easy to replace.
- Accessory blower kit available for larger A/C and HP applications.
- As defined by the U.S. Department of Energy, these furnaces are 100% efficient when used in specified applications.



A	1-7/8
B	2-5/8
C	3-1/2
D	1
E	5-1/16
F	5-1/2
G	5-13/16
H	1
J	1-3/4
K	7-13-16
L	8-5/8
M	9-7/16
N	16-1/2

OPTIONAL BOTTOM FIELD WIRING ENTRY

ELETRICAL DATA

MODEL NUMBER			EB23* [1]	EB20* [1]	EB17* [1]	EB15* [1]	EB12* [2]	EB10* [3]
D.O.E. Output Capacity	24 Vac 60 Hz. 1 Phase	BTU	77,000	67,000	56,000	51,000	39,000	34,000
		KW	22.6	19.6	16.4	15.0	11.4	10.0
Output Capacity	230 Vac 60Hz. 1 Phase	BTU	71,000	61,000	52,000	47,000	36,000	31,000
		KW	20.8	17.9	15.2	13.8	10.6	9.1
	220 Vac 60Hz. 1 Phase	BTU	65,000	57,000	48,000	43,000	33,000	29,000
		KW	19.1	16.7	14.1	12.6	9.7	8.5
Element Capacity @ 240 Vac		KW	21.6	19.2	16.0	14.4	11.2	9.6
		AMPS	90.0	80.0	66.7	60.0	46.7	40.0
Motor Amps @ 240 V			4.0 Maximum					
Circuit Load Amps @ 240 V		CKT 1	47.3	44.0	47.3	44.0	50.7[4]	44.0[4]
		CKT 2	46.7	40.0	23.4	20.0	--	--
Filter Size			16 x 20 x 1					
Shipping Weights			86	84	86	85	84	83

1 Requires Jumper Bars (P/N 3500-378P) - Dual Supply for U.S. Only.
2 Jumper provided for Single Branch Circuit Only.
3 Does Not require a Jumper.
4 Approved for Single Branch Circuit Service Only.
Casing or Cabinet must be permanently grounded in accordance with N.E.C. or other applicable codes.

EB SERIES BLOWER PERFORMANCE

Static Pressure (Inches of WC)		.0	.1	.2	.3	.4	.5	.6	.7	.8
Low Speed Heating Speed Models EB10, 12, 15	CFM (STD. Air)	945	936	936	924	915	889	870	813	705
Medium Speed Heating Speed Models EB17, 20, 23	CFM (STD. Air)	1160	1145	1145	1140	1129	1109	1073	1027	935
Medium High with A-Coil in place	CFM (STD. Air)	1340	1317	1290	1252	1208	1158	1095	1021	876
High with A-Coil in place	CFM (STD. Air)	1573	1534	1490	1435	1369	1309	1237	1135	1019

SUPPLY CIRCUIT WIRE SIZES - 240 VOLT, 60 CYCLE, SINGLE PHASE - FROM N.E.C. TABLE 310-16

MODELS	EB23* [1]		EB20*[1]		EB20* [1]		EB15* [1]		EB12* [2]	EB10* [3]
Single Branch Circuit Service	2 Leads + 1 Ground CKT #1		2 Leads + 1 Ground CKT #1		2 Leads + 1 Ground CKT #1		2 Leads + 1 Ground CKT #1		2 Leads + 1 Ground CKT #1	2 Leads + 1 Ground CKT #1
Nominal Circuit Load - AMPS	94.0		84.0		70.7		64.1		50.7	44.0
Minimum Wire Size (90ºC)	#2		#3		#4		#4		#6	#8
Minimum Wire Size (75ºC)	#1		#2		#3		#4		#6	#6
Minimum Wire Size (60ºC)	#0		#1		#2		#3		#4	#6
Ground Wire Size	#6		#6		#8		#8		#8	#10
Max. Fuse (or C.B.) - AMPS	125		110		90		90		70	60
Dual Branch Circuit Service	4 Leads + 2 Ground		4 Leads + 2 Ground		4 Leads + 2 Ground		4 Leads + 2 Ground		NOT APPROVED	
	CKT #1	CKT #2	CKT #1	CKT #2	CKT #1	CKT #2	CKT #1	CKT #2		
Branch Circuit Load - AMPS	47.3	46.7	44.0	40.0	47.3	23.4	44.0	20.1		
Branch Circuit Min. Ampacity	59.2	58.4	55.0	50.0	59.2	29.3	55.0	25.2		
Minimum Wire Size (90ºC)	#6	#6	#8	#8	#6	#10	#8	#10		
Minimum Wire Size (75ºC)	#6	#6	#6	#8	#6	#10	#6	#10		
Minimum Wire Size (60ºC)	#4	#4	#6	#6	#4	#10	#6	#10		
Ground Wire Size [4]	#10	#10	#10	#10	#10	#10	#10	#10		
Max. Fuse (or C.B.) - AMPS	60	60	60	50	60	30	60	30		

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2 Jumper provided for Single Branch Circuit Only.
3 Does Not require a Jumper.
4 Refer to National Electrical Code. Table 250-122 for Non-Sheathed Conductor Ground Wire.

LOCATION

Access for servicing is an important factor in the location of any furnace. A minimum of 24 inches should be provided in front of the furnace for access to the heating elements and controls. This access may be provided by a closet door or by locating the furnace 24 inches from a facing wall or partition.

FURNACE CLEARANCE

Electric furnace is approved for zero (0) in. clearance to combustible material on all or any part of the furnace exterior and the inlet or outlet duct work. For furnaces installed in upflow application, there must be 1” clearance from the outlet duct work for a distance of 3 feet from the supply air opening. Clearances must be provided above the furnace for a minimum of 200 sq. inches free opening for return air. For clearances other than shown above see paragraph on Return Air.

RETURN AIR

In order for the furnace to work properly, a closet or alcove must have a certain total free area opening for return air.

FOR HEATING ONLY FURNACE

Minimum 200 in^2 free area opening.
Use Return Grille 7900-287P/B,

Or any Return Grille with minimum 200 in^2 free area opening.

FOR A/C AND HP APPLICATIONS (Standard Blower):

Minimum 250 in^2 free area opening.
Use Return Grille 7900-287P/B, 1FG0620BK (hinged),
Or Louvered Door 3500-1581, 3500-5851 (bulk pack),

Or any Return Grille with minimum 250 in^2 free area opening.

FOR A/C AND HP APPLICATIONS (Accessory Blower)

Minimum 330 in^2 free area opening.
Use Return Grille 1RF1025BK, 1FG0125 (hinged),
Or Louvered Door 3500-1591, 3500-5861 (bulk pack),

Or any Return Grille with minimum 330 in^2 free area opening.

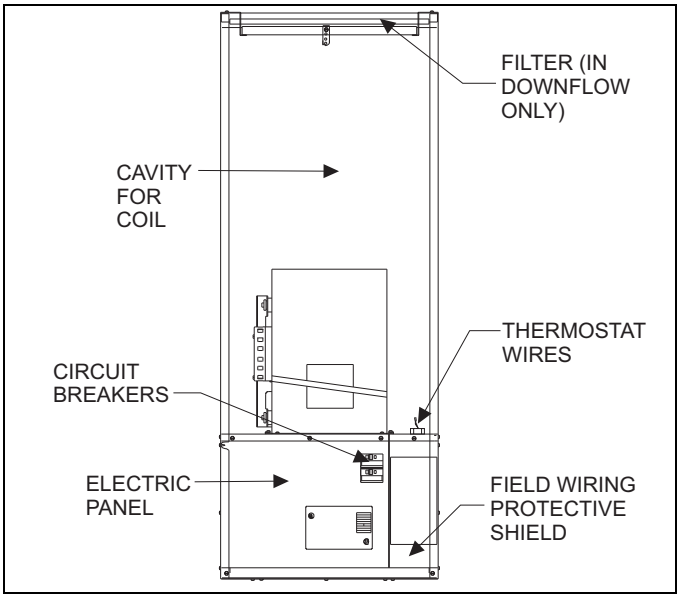
The return air opening can be located in a closet front door or a sidewall above the furnace casing, or in a louvered door on the furnace. If opening for the return air is located in the floor, side walls or closet door anywhere below furnace casing height, 6 inches minimum clearance must be provided on the furnace side where return is located to provide for proper air flow.

For Upflow installations, a closet that is 32 inches wide by 30 inches deep with a 30-inch wide door is necessary.

AIR FILTER

The filter supplied with the furnace is of the throw-away type. Filters need to be cleaned frequently. Shake out all loose dirt, and use vacuum cleaner to clean additionally. This method of cleaning will prolong life of filters. DO change filters often since clean filters not only provide added comfort, better and cleaner environment, but increase the efficiency of the furnace as well.

FILTER LOCATION: The furnace's front panel must be removed to gain access to the filter of the downflow furnace. (See Figure 2.) However, the filter for the upflow furnace* is located behind the return air grill, adjacent to the furnace closet or any other location in the return air.



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Supersedes: 294135-BTG-B-1207

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