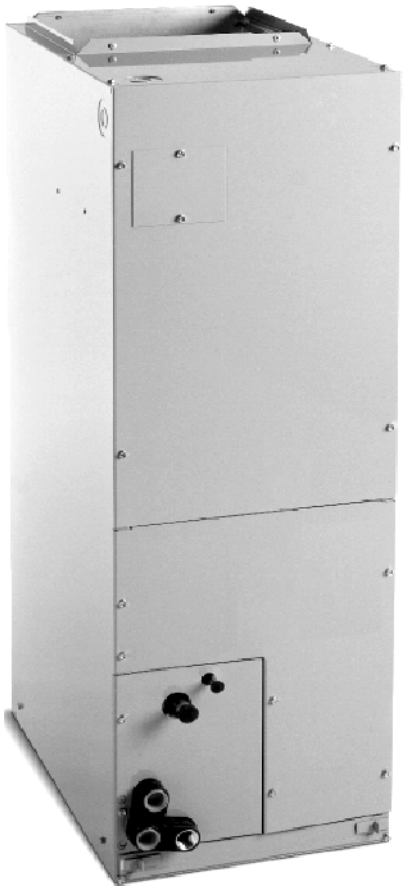
BLOWER COILS

Comfortmaker®
Air Conditioning & Heating



Representative photo only, some models may vary in appearance.

2 THRU 5 TONS SPLIT SYSTEM
EBV Series – Variable Speed

FEATURES

- Variable Speed ECM Blower Motor
- Grooved copper tube
- Lanced sine wave aluminum fin
- Discreet refrigerant circuits
- Prepainted galvanized sheet metal cabinet
- Cooling control in every unit
- Logarithmic spiral blower housings for blower efficiency
- All units multipoise
- 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)
- Extra thick 1–in., R 4.2 high–density insulation
- 2– 5 ton application
- HUD approved for manufactured housing
- Independent fan only selections
- AMP plug connection provided for accessory heater packages
- Connections for humidistat/humidifier
- Connections for humidistat/humidifier
- 40 va, 208/230–v transformer

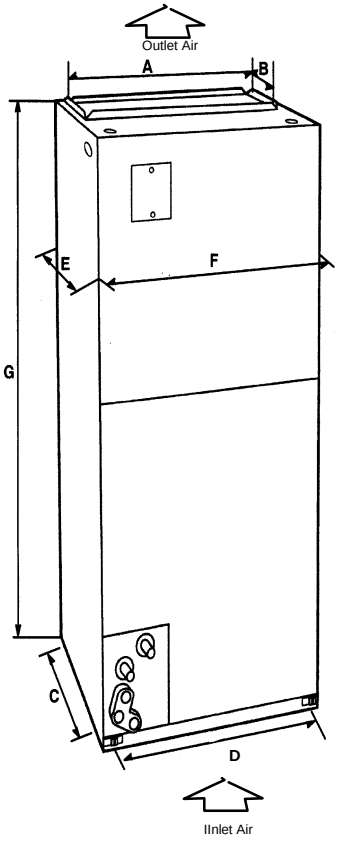
LIMITED PARTS 5 YEAR WARRANTY

c UL® US LISTED

496 41 4114 01

PHYSICAL DATA				
EBV	2400	3600	4800	6000
COIL				
Rows / Fins per inch	3 – 14			
Face Area (Sq. Ft.)	3.46	3.46	5.93	7.42
Configuration	A	Slope	A	A
FAN				
CFM (Nominal)	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 (PSC)	1/2	1/2	1/2	3/4
Filter Size (inches)	21–1/2 x 16– 3/8	21–1/2 x 19– 7/8		21–1/2 x 23– 5/16
WEIGHTS				
Unit Weight (lbs.)	124	142	159	192
Shipping Weight (lbs.)	130	149	167	202

UNIT SIZE	A	B	C	D	E	F	G
2400	15 – 3 / 4”	11”	19 – 3 / 16””	15 – 5 / 8”	22 – 1 / 16”	17 – 5 / 8”	42 – 11 / 16”
3600	19 – 1 / 4”	11”	19 – 3 / 16””	19 – 1 / 8”	22 – 1 / 16”	21 – 1 / 8”	53 – 7 / 16”
4800	19 – 1 / 4”	11”	19 – 3 / 16””	19 – 1 / 8”	22 – 1 / 16”	21 – 1 / 8”	53 – 7 / 16”
6000	22 – 3 / 4”	11”	19 – 3 / 16””	22 – 11 / 16”	22 – 1 / 16”	24 – 11 / 16”	59 – 3 / 16”



WARNING

Fire Hazard

When heaters are installed maintain clearances from combustible materials as specified on unit rating plate. Do not use plastic lined or combustible flexible ducting within 36 inches of the supply end of the air handler.

Failure to do so can result in fire, property damage, personal injury or death.

CLEARANCES

NO HEATERS
All Sides ..... 0”
From Supply Duct ..... 0”
Recommended Service From Front ..... 20”
(Service for blower, filter if installed)

WITH HEATERS
All Sides ..... 0”
From First Three Feet of Supply Duct to Combustibles ..... 1”
From Duct after Three Feet ..... 0”
Recommended Service From Front ..... 20”

PERFORMANCE DATA

EBV ADVANCED FAN COIL AIRFLOW DELIVERY CHART

UNIT SIZE	OUTDOOR UNIT CAPACITY*	OPERATING MODE—COOLING						FAN ONLY Lo/Med/Hi
		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 Dehumidify	Nominal A/C Cooling	A/C Cooling Dehumidify	
2400	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
3600	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
4800	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
6000	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. Airflow 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.

*Consult ARI ratings before matching outdoor unit with EBV Fan Coil.

EBV ADVANCED FAN COIL AIRFLOW DELIVERY CHART

UNIT SIZE	OUTDOOR UNIT CAPACITY*	OPERATING MODE—HEAT PUMP ONLY HEATING						FAN ONLY Lo/Med/Hi
		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	
2400	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
3600	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
4800	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
6000	036	945	1050	990	1100	670	745	525 / 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. Airflow 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.

*Consult ARI ratings before matching outdoor unit with EBV Fan Coil.

PERFORMANCE DATA CONT.

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
2400	18,000	625	625	625	675	675	675	—	—	—	—	—	—
	24,000	650	725	835	—	725	835	875	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
3600	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
4800	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
6000	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

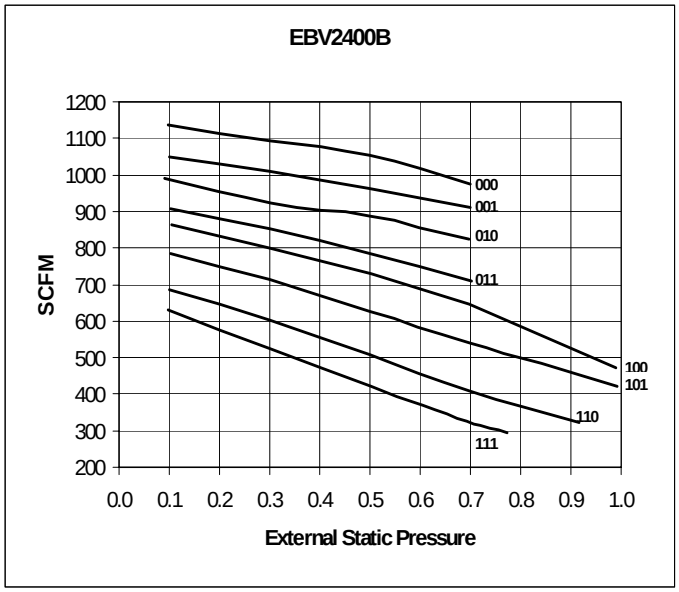
Where dash (—) appears indicates airflow not recommended for heater/system size.
NOTE: LO, NOM and HI refer to the AC/HP CFM ADJUST selection.

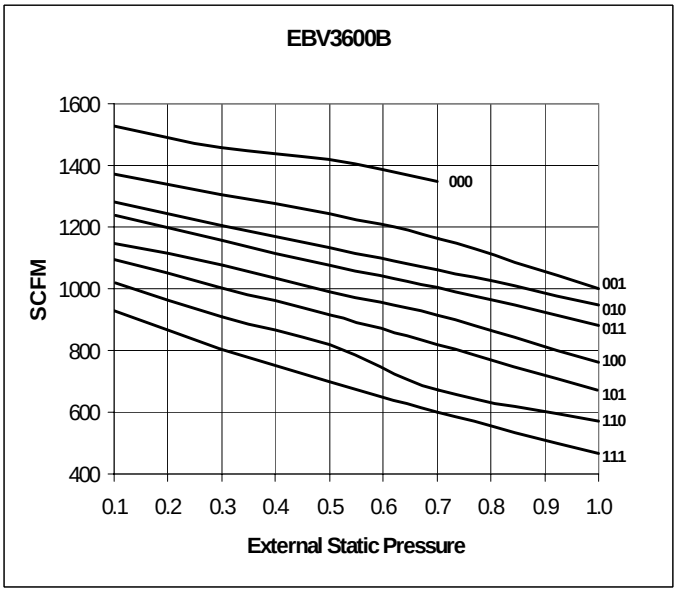
MINIMUM CFM FOR ELECTRIC HEATER APPLICATION

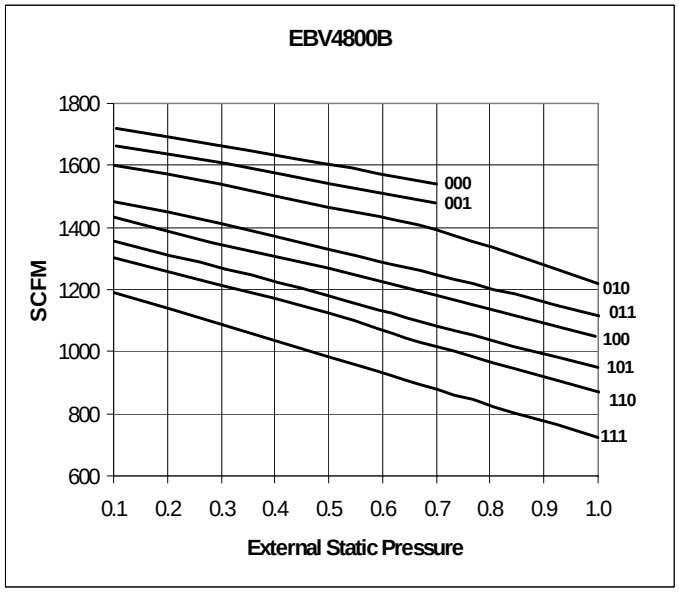
UNIT SIZE	HEAT PUMP UNIT SIZE	CFM				
		Heater Size KW				
		5	8, 9, 10	15	18, 20	24, 30
2400	Heater Only	625	625	725	875	—
	018	625	625	—	—	—
	024	650	725	875	—	—
	030	800	875	875	1040	—
	036	970	970	970	1040	—
3600	Heater Only	675	700	1050	1050	—
	024	675	875	1050	—	—
	030	800	875	1100	—	—
	036	975	975	1100	1225	—
	042	1125	1125	1125	1225	—
4800	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
6000	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

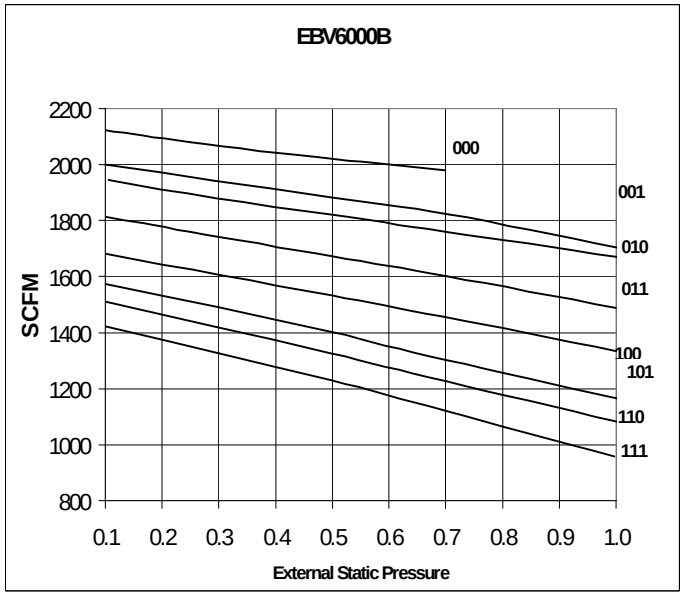
NOTE: 1. Heater Only—Air Conditioner with electric heater application.
2. These airflows are minimum acceptable airflows as UL listed.
3. Actual airflow delivered will be per the airflow delivery chart for Electric Heating Modes.

Airflow Curves









ELECTRIC HEATER STATIC PRESSURE DROP (IN. WC)

HEATER ELEMENTS	KW	EXTERNAL STATIC PRESSURE CORRECTION	
		2 thru 4 Ton	5 Ton
0	0	+.02	+.03
1	5	+.01	+.02
2	8, 10	0	0
3	9, 15	-.02	-.03
4	20	-.04	-.06
6	18, 24, 30	-.06	-.10

FILTER STATIC PRESSURE DROP (IN. WC)

	CFM								
UNIT SIZE	**400**	**600**	**800**	**1000**	**1200**	**1400**	**1600**	**1800**	**2000**
2400	0.020	0.044	0.048	0.072	0.100	-	-	-	-
3600	-	0.020	0.035	0.051	0.070	0.092	-	-	-
4800	-	0.020	0.035	0.051	0.070	0.092	0.120	-	-
6000	-	-	-	-	0.070	0.092	0.120	0.152	0.187

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

	CFM										
UNIT SIZE	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**	**1300**	**1400**	**1500**	**1600**
2400	0.012	0.016	0.022	0.028	0.034	0.040	0.049	-	-	-	-
3600	-	0.026	0.034	0.042	0.052	0.063	0.075	0.083	0.091	0.098	0.110
4800	-	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**
6000	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.

ACCESSORY ELECTRIC HEATER ELECTRICAL DATA

Heater Model	KW		Phase	Internal Circuit Protection	Heater Amps 208 / 230v		
					Single Circuit	Dual Circuit	
	230v	208v				L1,L2	L3,L4
EHK05AKN11	5	3.8	1	None	18.1 / 20.0	–	–
EHK05AKN12	5	3.8	1	None	18.1 / 20.0	–	–
EHK07AKN1	8	6.0	1	None	28.9 / 32.0	–	–
EHK07AKB1	8	6.0	1	Ckt Bkr	28.9 / 32.0	–	–
EHK09AKCN1	9	6.8	1	None	32.8 / 36.0	–	–
EHK09AKCN1[	9	6.8	3	None	18.8 / 20.8	–	–
EHK10AKN1	10	7.5	1	None	36.2 / 40.0	–	–
EHK10AKB1	10	7.5	1	Ckt Bkr	36.2 / 40.0	–	–
EHK15AKF1	15	11.3	1	Fuse	54.2 / 59.9	36.2/40.0	18.1/20.0
EHK15AKB1	15	11.3	1	Ckt Bkr	–	36.2/40.0	18.1/20.0
EHK15AHN1	15	11.3	3	None	31.3 / 34.6	–	–
EHK20AHN1	18	13.5	3	None	37.6 / 41.5	–	–
EHK20AKF1	20	15.0	1	Fuse	72.3 / 79.9	36.2/40.0	36.2/40.0
EHK20AKB1	20	15.0	1	Ckt Bkr	–	36.2/40.0	36.2/40.0
EHK25AHCF1]	24	18.0	3	Fuse	50.1 / 55.4	–	–
	24	18.0	1	Fuse	86.7 / 95.5	–	–
EHK30AHCF1]	30	22.5	3	Fuse	62.6 / 69.2	–	–
	30	22.5	1	Fuse	109 / 120	–	–

ACCESSORY ELECTRIC HEATER ELECTRICAL DATA (CONT.)

Heater Model	Branch Circuit														
	Min. Ampacity 208 / 230v**			Min. Wire Size (AWG) 208 / 230v I I			Min. Gnd. Wire Size 208 / 230v			Max Fuse/Ckt Bkr Amps			Max Wire Length 208 / 230v(ft.) [[		
	Single Cir-cuit	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		L1,L2	L3,L4
EHK05AKN11	26.0 / 28.4	–	–	10 / 10	–	–	10 / 10	–	–	30 / 30	–	–	66 / 66	–	–
EHK05AKN12	31.2 / 33.5	–	–	8 / 8	–	–	10 / 10	–	–	35 / 35	–	–	85 / 88	–	–
EHK05AKB11	26.0 / 28.4	–	–	10 / 10	–	–	10 / 10	–	–	30 / 30	–	–	66 / 66	–	–
EHK05AKB12	31.2 / 33.5	–	–	8 / 8	–	–	10 / 10	–	–	35 / 35	–	–	85 / 88	–	–
EHK07AKN1	44.7 / 48.5	–	–	8 / 8	–	–	10 / 10	–	–	45 / 50	–	–	59 / 60	–	–
EHK07AKB1	44.7 / 48.5	–	–	8 / 8	–	–	10 / 10	–	–	45 / 50	–	–	59 / 60	–	–
EHK09AKCN1	49.5 / 53.5	–	–	8 / 6	–	–	10 / 10	–	–	50 / 60	–	–	54 / 87	–	–
EHK09AKCN1[	32.0 / 34.5	–	–	8 / 8	–	–	10 / 10	–	–	35 / 35	–	–	83 / 85	–	–
EHK10AKN1	53.8 / 58.5	–	–	6 / 6	–	–	10 / 10	–	–	60 / 60	–	–	78 / 80	–	–
EHK10AKB1	53.8 / 58.5	–	–	6 / 6	–	–	10 / 10	–	–	60 / 60	–	–	78 / 80	–	–
EHK15AKF1	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
EHK15AKB1	–	53.8/58.5	22.7/25.0	–	6 / 6	10 / 10	–	10 / 10	10 / 10	–	60 / 60	25 / 25	–	78 / 80	75 / 76
EHK15AHN1	47.7 / 51.8	–	–	8 / 6	–	–	10 / 10	–	–	50 / 60	–	–	56 / 90	–	–
EHK18AHN1	55.5 / 60.4	–	–	6 / 6	–	–	10 / 8	–	–	60 / 70	–	–	76 / 77	–	–
EHK20AKF1	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
EHK20AKB1	–	53.8/58.5	45.3/50.0	–	6 / 6	8 / 8	–	10 / 10	10 / 10	–	60 / 60	50 / 50	–	78 / 80	59 / 59
EHK25AHCF1]	71.2 / 77.8	–	–	4 / 4	–	–	8 / 8	–	–	80 / 80	–	–	94 / 95	–	–
	116.9/127.9	–	–	1 / 1	–	–	6 / 6	–	–	125 / 150	–	–	115 / 116	–	–
EHK30AHCF1]	86.8 / 95.0	–	–	3 / 3	–	–	8 / 8	–	–	90 / 100	–	–	97 / 98	–	–
	144.8/158.5	–	–	0 / 00	–	–	6 / 6	–	–	150 / 175	–	–	117 / 150	–	–

ACCESSORIES		
Model	**Description**	**Use With**
EHK05AKN1	5 Kw Single Phase	All
EHK07AKN1	8 Kw Single Phase	All
EHKO7AKB1	8 Kw Single Phase	All
EHK09AKCN1	9 Kw / Single Phase (Field convertible to 3 phase)	All
EHK10AKN1	10 Kw Single Phase	All
EHK10AKB1	10 Kw Single Phase	All
EHK15AKF1	15 Kw Single Phase	2–5 Ton
EHK15AKB1	15 Kw Single Phase	2–5 Ton
EHK15AHN1	15 Kw 3 Phase	2–5 Ton
EHK18AHN1	18 Kw 3 Phase	3 1/2 – 5 Ton
EHK20AKF1	20 Kw Single Phase	2 1/2 – 5 Ton
EHK20AKB1	20 Kw Single Phase	2 1/2 – 5 Ton
EHK25AHCF1	24 Kw / 3 Phase (Field convertible to single phase)	4 – 5 Ton
EHK30AHCF1	30 Kw / 3 Phase (Field convertible to single phase)	4 – 5 Ton
All AKB Models are Circuit Breaker Models		

ACCESSORIES		
Disconnect Kit	EBAC01DSC	All Heaters 3 thru10 KW
Downflow Base Kit	EBAC02NCB	2400
	EBAC03NCB	3600, 4200, 4800
	EBAC04NCB	60000
Downflow Conversion Kit	EBAC01DFS	Slope Coil 18, 24, 30, 36, 42
	EBAC02DFA	A–Coil 48, 60
Single Point Wiring Kit	EBAC01SPK	Only with 15 & 20 KW fused heaters
Permanent Filter Kit (Box of 12)	EBAC01FKM	2400
	EBAC01FKL	3600, 4200, 4800
	EBAC01FKX	60000
No Heat Kit (Box of 6)	EBAC01PLG	24 thru 60
PVC Condensate Kit (50 pcs.)	EBAC01CTK	All Sizes
Horizontal / Downflow Gasket Kit	EBAC01GSK	All Sizes

MODEL NUMBER IDENTIFICATION GUIDE

EB	V	2400	B	1 = ENGINEERING CODE
				MARKETING CODE

MODEL NUMBER

EB = Evaporator Blower

METERING DEVICE
P = Orifice Piston
X = Expansion Valve
V = Variable Speed

CAPACITY MBTUH
24 = 24,000
36 = 36,000
48 = 48,000
60 = 60,000

ACCESSORIES NUMBER IDENTIFICATION GUIDE

EB	AC	01	NCB	A	
					SALES CODE
					PRODUCT IDENTIFIER
					PRODUCT IDENTIFIER NUMBER

MODEL NUMBER
EB = Evaporator Blower

AC = Accessory

ACCESSORY PRODUCT IDENTIFIER ASSIGNMENT

NCB – Non Combustable Base	SPK – Single Point Wiring Kit	FKM – Filter Kit Medium
DFK – Down Flow Kit	FKS – Filter Kit Small	FKL – Filter Kit Large
PLG – Power Plug	CTK – PVC Condensate Trap Kit	FKX – Filter Kit X–Large