Comfortmaker®
Air Conditioning & Heating

BHV Series

3 Phase
SPECIFICATIONS
3 to 5 Ton

BELT DRIVE VERTICAL BLOWER COIL UNITS

FEATURES

CONSTRUCTION
- Cabinets are fabricated of heavy gauge galvanealed steel, coated inside and out with beige baked powder enamel coating before assembly.

COILS
- Constructed of copper tube–aluminum fin material. Orifice Pin Refrigerent Metering with optional TXV kits. Suitable for either A/C or Heat Pump applications.

BLOWERS
- Permanently lubricated ball bearing blowers. Blower wheels are belt drive forward curved and factory balanced.

MOTORS
- Standard motors are 208/230/460 volt and have overload protection with adjustable pulleys.

AIR FILTERS
- Two inch throwaway filters are standard.

INSULATION
- Fully insulated with 3/4", 1–1/2 pound dual density insulation.

ACCESSORY ELECTRIC HEAT KITS
- 5 to 20 kw

SERVICE ACCESS
- Large ‘‘easy to remove" access panels on front of each section.

INSTALLATION
- Bottom return or top discharge, or any side return or discharge with return air or discharge grilles, if required, field supplied.

TESTING
- All units are run–tested at the factory prior to shipment. Units are shipped with a holding charge.

477 41 1101 02

International Comfort Products
650 Heil–Quaker Ave.
Lewisburg, Tennessee 37091

5/5/03

SPECIFICATIONS

MODEL		BHV036M3A		BHV036M4A		BHV048M4		BHV048M5		BHV060M5A		BHV060M6A	
Application		Vertical											
Electrical	Voltage	208/230	460	208/230	460	208/230	460	208/230	460	208/230	460	208/230	460
Data	Phase/Hz	3/60											
	Min. Circuit Ampacity	3.0	1.4	4.4	2.0	4.4	2.0	5.8	2.6	5.8	2.6	8.3	3.8
	Max. Fuse	15											
	Contactor	Field Supplied											
Blower	Size	10-6R				12-6R				12-9R			
Data	Horsepower	1/2		3/4		3/4		1		1		1-1/2	
	FLA/RLA	2.2/20.0	1.0/10.0	3.2/25.0	1.6/12.5	3.2/25.0	1.6/12.5	4.2/30.0	2.1/15.0	4.2/30.0	2.1/15.0	6.0/40.0	3.0/20.0
Refrigerant	Liquid (O.D.)	5/16"				3/8"				3/8"			
Connection	Suction (O.D.)	3/4"				7/8"				7/8"			
	Factory Charge	Holding Charge, R-22											
Condensate Drain (O.D.)		7/8"											
Filters		(1 ea.) 2" x 20" x 20"				(1 ea.) 2" x 22-1/2" x 22-1/2"				(2 ea.) 2" x 16" x 25"			
Shipping Weight (lbs.)		170				201				253			

FAN PERFORMANCE

MODEL	INTER SP	CFM	.25" ESP		.50" ESP		.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
BHV036	.29	900	852	.19	1000	.24	1138	.31	1236	.37	1352	.43	1460	.50
	.38	1050	938	.26	1078	.33	1200	.40	1308	.47	1402	.54	1503	.60
	.47	1200	1019	.32	1144	.42	1262	.50	1363	.59	1462	.65	1546	.71
	.58	1350	1111	.44	1217	.53	1333	.64	1433	.73	1513	.81	1603	.89
	.70	1500	1195	.59	1307	.70	1403	.80	1502	.91				
BHV048	.44	1200	788	.29	898	.36	1009	.43	1107	.53	1210	.62	1277	.73
	.57	1400	886	.42	1004	.52	1082	.60	1169	.67	1257	.81	1339	.90
	.71	1600	968	.54	1061	.64	1154	.75	1236	.91	1318	1.00	1391	1.12
	.88	1800	1066	.78	1148	.90	1231	1.02	1303	1.13	1375	1.27	1442	1.37
	1.06	2000	1148	1.00	1221	1.14	1298	1.30	1385	1.43				
BHV060	.41	1500	733	.29	851	.39	949	.46	1046	.58	1140	.69	1229	.82
	.52	1750	806	.43	909	.54	999	.62	1087	.72	1171	.85	1256	1.00
	.65	2000	873	.57	966	.69	1052	.77	1134	.92	1220	1.08	1289	1.21
	.80	2250	947	.76	1036	.89	1117	1.04	1195	1.15	1265	1.33	1340	1.46
	.96	2500	1027	.99	1106	1.15	1185	1.26	1252	1.43				

FAN PERFORMANCE WITH AHW SERIES HOT WATER COILS

MODEL	INTER SP	CFM	.25" ESP		.50" ESP		.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
BHV036 AHW36VH2A	.41	900	905	.21	1043	.27	1165	.32	1277	.38	1378	.46	1468	.54
	.53	1050	994	.29	1120	.35	1241	.43	1345	.52	1440	.57	1519	.63
	.67	1200	1091	.38	1228	.46	1330	.57	1424	.63	1515	.72	1589	.78
	.83	1350	1200	.54	1319	.63	1413	.72	1507	.81	1576	.88	1659	.95
	1.00	1500	1298	.70	1403	.80	1496	.91	1582	1.00				
BHV048 AHW48VH2A	.57	1200	881	.31	984	.40	1071	.46	1159	.56	1257	.64	1334	.74
	.74	1400	968	.46	1066	.56	1154	.64	1236	.74	1318	.83	1385	.93
	.94	1600	1056	.61	1148	.73	1221	.83	1318	.96	1391	1.08	1457	1.15
	1.15	1800	1159	.87	1236	.96	1324	1.09	1391	1.22	1463	1.35	1530	1.48
	1.37	2000	1267	1.16	1344	1.28	1411	1.41						
BHV060 AHW60VH2A	.53	1500	775	.34	891	.44	983	.53	1082	.64	1171	.74	1257	.90
	.68	1750	851	.48	950	.59	1041	.69	1128	.78	1213	.95	1396	1.09
	.85	2000	930	.66	1019	.76	1107	.92	1188	1.02	1260	1.17	1337	1.32
	1.05	2250	1011	.87	1097	1.03	1173	1.15	1246	1.29	1316	1.42	1387	1.59
	1.25	2500	1091	1.12	1170	1.30	1243	1.46						

NOTICE: When a hot water coil is installed in a BHV unit, a freeze stat must be field installed to prevent the hot water coil from freezing.

DIRECT EXPANSION COOLING CAPACITIES

BHV036

			85°F DB/71°F WB				80°F DB/67°F WB				75°F DB/63°F WB			
SUCT	PD		TTL	SENS	LVG AIR		TTL	SENS	LVG AIR		TTL	SENS	LVG AIR	
TEMP	PSI	CFM	MBH	MBH	DB	WB	MBH	MBH	DB	WB	MBH	MBH	DB	WB
40	9.19	900	51.5	31.0	53.2	53.2	44.0	28.6	50.6	50.6	33.6	24.4	49.9	49.7
		1200	58.0	36.8	56.7	56.3	49.5	33.6	54.1	53.5	41.5	30.6	51.4	50.8
		1500	63.5	41.5	59.4	58.5	54.0	38.0	56.4	55.4	47.0	35.8	53.0	52.1
45	6.46	900	46.0	28.8	55.5	55.5	34.6	24.6	54.8	54.5	25.2	20.6	53.8	53.3
		1200	51.0	33.8	59.0	58.4	42.5	30.8	56.3	55.6	29.4	25.2	55.6	54.6
		1500	55.5	38.5	61.3	60.2	48.5	36.0	57.8	56.8	34.8	30.2	56.4	55.1
50	4.35	900	35.4	24.6	59.7	59.5	25.4	20.6	58.7	58.2	18.5	17.5	57.0	56.1
		1200	43.5	31.0	61.1	60.4	29.6	25.4	60.4	59.4	22.0	21.4	58.5	56.9
		1500	49.5	36.2	62.7	61.5	35.0	30.4	61.3	59.8	24.6	24.2	60.1	57.6

BHV048

			85°F DB/71°F WB				80°F DB/67°F WB				75°F DB/63°F WB			
SUCT	PD		TTL	SENS	LVG AIR		TTL	SENS	LVG AIR		TTL	SENS	LVG AIR	
TEMP	PSI	CFM	MBH	MBH	DB	WB	MBH	MBH	DB	WB	MBH	MBH	DB	WB
40	13.02	1200	67.0	40.5	53.7	53.7	56.5	37.2	51.3	51.3	48.5	34.2	48.6	48.5
		1600	75.0	48.0	57.2	56.8	64.0	44.0	54.4	53.9	53.5	40.0	51.8	51.2
		2000	82.0	54.0	59.9	58.9	70.0	50.5	56.7	55.8	59.0	46.0	53.8	52.8
45	9.39	1200	58.5	37.2	56.3	56.2	47.5	33.4	54.2	54.0	37.4	29.2	52.5	52.2
		1600	66.0	44.5	59.3	58.7	55.0	40.0	56.7	56.0	45.0	36.6	53.9	53.2
		2000	72.0	50.5	61.5	60.5	60.5	46.0	58.6	57.5	50.0	42.5	55.4	54.5
50	6.20	1200	49.0	33.6	59.1	58.9	37.5	29.4	57.4	57.1	25.8	24.2	56.4	55.7
		1600	56.0	40.5	61.5	60.8	46.0	36.8	58.8	58.0	30.8	29.4	58.0	56.6
		2000	61.5	46.5	63.4	62.3	48.5	41.5	60.8	59.5	37.0	35.8	58.5	56.8

BHV060

			85°F DB/71°F WB				80°F DB/67°F WB				75°F DB/63°F WB			
SUCT	PD		TTL	SENS	LVG AIR		TTL	SENS	LVG AIR		TTL	SENS	LVG AIR	
TEMP	PSI	CFM	MBH	MBH	DB	WB	MBH	MBH	DB	WB	MBH	MBH	DB	WB
40	10.41	1500	88.0	52.5	52.6	52.6	74.0	48.0	50.5	50.5	62.5	43.5	48.0	47.9
		2000	100.0	62.5	56.1	55.7	85.0	57.5	53.5	53.0	70.0	51.5	51.1	50.6
		2500	111.0	71.0	58.7	57.9	93.0	65.0	55.8	54.9	77.0	59.0	53.1	52.2
45	7.39	1500	76.0	48.0	55.5	55.5	64.0	43.5	53.0	52.8	47.0	36.6	52.4	52.1
		2000	88.0	57.5	58.4	58.0	72.0	51.5	56.1	55.5	58.5	46.0	53.6	52.9
		2500	96.0	65.0	60.7	59.7	79.0	59.5	58.0	57.0	63.0	52.5	55.5	54.4
50	4.78	1500	63.5	42.5	58.6	58.5	47.5	36.8	57.3	57.0	32.8	30.4	56.3	55.6
		2000	73.0	52.0	61.0	60.4	59.0	46.5	58.5	57.7	39.0	37.2	57.8	56.4
		2500	81.0	59.5	62.9	61.8	63.5	53.0	60.4	59.2	46.5	44.5	58.5	56.8

TXV KITS

MODEL	USED ON
AMF153TKB	3 TON
AMF355TKB	4 & 5 TON

DISCHARGE / RETURN PLENUM *

MODEL	USED ON
ADR36DRPA	3 TON
ADR48DRPA	4 TON
ADR60DRPA	5TON

*Can be used as Discharge or Return plenum, if both are required you must order two.

HOT WATER COILS

MODEL	USED ON
AHW36VH2A	3 TON
AHW48VH2A	4 TON
AHW60VH2A	5 TON

HOT WATER HEATING CAPACITIES

AHW36						AHW48						AHW60					
GPM	PD FT.	CFM	TTL MBH	LAT F	LWT F	GPM	PD FT.	CFM	TTL MBH	LAT F	LWT F	GPM	PD FT.	CFM	TTL MBH	LAT F	LWT F
		900	46.5	108.0	148.2			1200	57.5	104.4	150.5			1500	73.0	105.3	154.9
3.0	3.40	1200	52.5	100.6	144.1	4.0	1.10	1600	64.0	97.4	146.9	6.0	0.50	2000	82.0	98.2	151.9
		1500	57.5	95.4	140.9			2000	70.0	92.4	144.2			2500	89.0	93.1	149.5
		900	49.0	110.5	154.9			1200	62.0	108.0	158.7			1500	83.0	111.2	165.8
4.0	6.00	1200	56.0	103.1	151.4	6.0	2.50	1600	70.0	100.9	155.9	12.0	2.00	2000	95.0	103.9	163.8
		1500	61.0	97.8	148.6			2000	77.0	95.8	153.6			2500	104.0	98.7	162.1
		900	50.5	112.1	159.2			1200	65.0	110.0	163.4			1500	87.0	113.5	170.1
5.0	9.40	1200	58.0	104.8	156.2	8.0	4.40	1600	74.0	102.9	161.0	18.0	4.50	2000	100.0	106.3	168.6
		1500	64.0	99.5	153.8			2000	81.0	97.8	159.1			2500	111.0	101.1	167.3

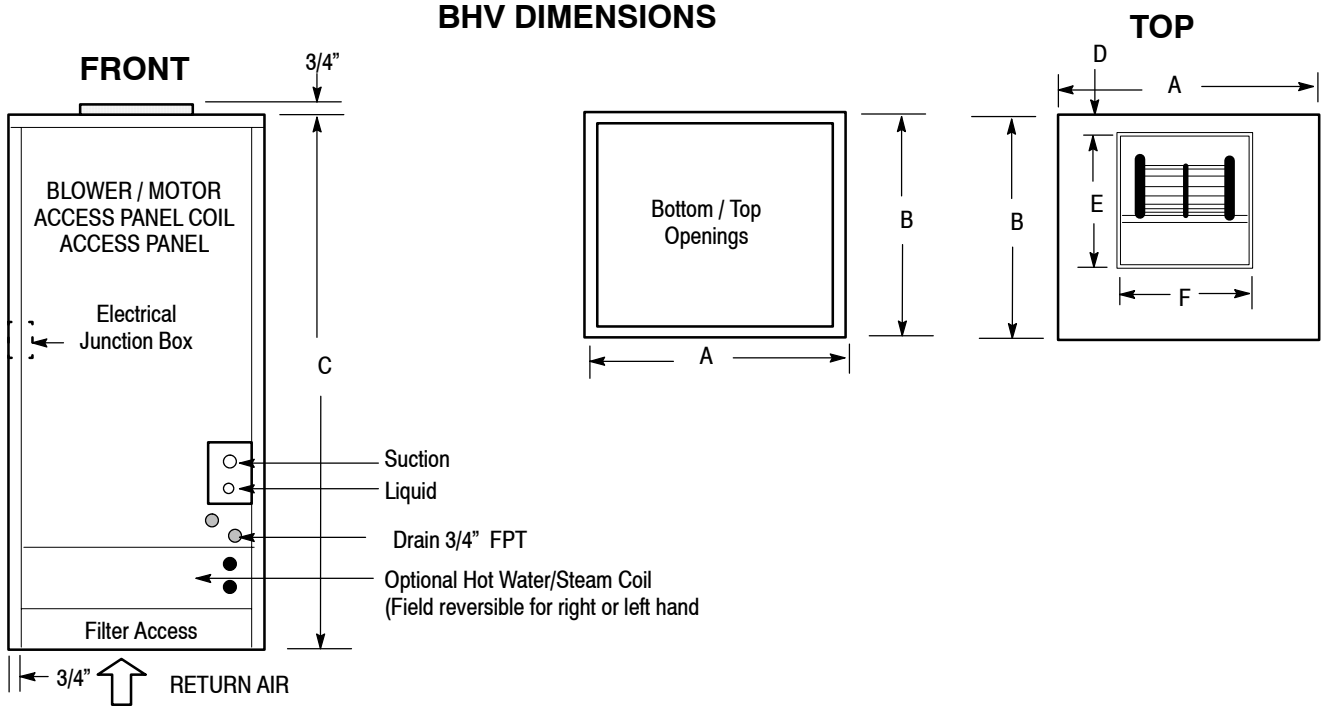
NOTE: Capacities based on 60° EAT and 180° EWT. Units not recommended for heating applications when the leaving air exceeds 130°.

HOT WATER HEATING CORRECTION FACTORS

ENTERING AIR TEMP (F)	ENTERING WATER TEMP (F)								
	100°	110°	120°	130°	140°	150°	160°	170°	180°
50°	.419	.500	.579	.665	.742	.838	.917	1.000	1.090
55°	.376	.460	.544	.629	.708	.791	.873	.963	1.048
60°	.335	.419	.500	.579	.665	.742	.838	.917	1.000
65°	.290	.376	.460	.544	.629	.708	.791	.873	.963
70°	.251	.335	.419	.500	.579	.665	.742	.838	.917
75°	.205	.290	.376	.460	.544	.629	.708	.791	.873
80°	.167	.251	.335	.419	.500	.579	.665	.742	.838

NOTE: When correction factors are used for various entering air and entering water temperatures, multiply the correction factor times the above listed capacity. The correction factors may be used with all published 180° EWT heating capacities.

BHV DIMENSIONS



BHV DIMENSIONS

MODEL	A	B	C	D	E	F
BHV036	22	23-1/2	50	3	12	8-3/4
BHV048	25	23-1/2	56-1/2	1-1/2	14	9-1/2
BHV060	29-1/4	25-1/2	59-5/8	1	14	13

ELECTRIC HEAT ACCESSORY

Heater Model # - C-36BV-(Kw)-(Phase)-(Voltage)			
Voltage / Phase	**Kw Range**	**Stages ****	**Used On**
208 / 3	2.1 - 9.0	1	BHV036M*A
208 / 3	9.1 - 10.0	2	
208 / 3	10.1 - 12.0	2	
240 / 3	2.1 - 10.0	1	
240 / 3	10.1 - 12.0	2	
480 / 3	2.1 - 10.0	1	
480 / 3	10.1 - 12.0	1	

Heater Model # - C-48BV-(Kw)-(Phase)-(Voltage)			
Voltage / Phase	**Kw Range**	**Stages ****	**Used On**
208 / 3	2.1 - 9.0	1	BHV048M*A
208 / 3	9.1 - 15.0	2	
208 / 3	15.1 - 17.0	2	
240 / 3	2.1 - 10.0	2	
240 / 3	10.5 - 15.0	2	
240 / 3	15.1 - 17.0	2	
480 / 3	2.1 - 17.0	1	

Heater Model # - C-60BV-(Kw)-(Phase)-(Voltage)			
Voltage / Phase	**Kw Range**	**Stages ****	**Used On**
208 / 3	2.1 - 9.0	1	BHV060M*A
208 / 3	9.1 - 15.0	2	
208 / 3	15.1 - 17.2	2	
208 / 3	17.3 - 19.6	2	
240 / 3	2.1 - 10.0	1	
240 / 3	10.1 - 15.0	2	
240 / 3	15.1 - 17.0	2	
240 / 3	17.1 - 19.6	2	
480 / 3	2.1 - 19.6	1	

Electric Heaters are non-stock items and may be purchased directly from the O.E.M. supplier. For pricing information or ordering contact:

BEL THERMAL UNITS (BTU)
3640 N.E. 4th Ave.
Ft. Lauderdale, Fl. 33334

Tel: (954) 566-0043
Fax: (800) 956-0002
www.BELTHERMAL.com

When ordering, complete the heater model number with the desired Kw, Phase, & voltage. Example: The model number for a 10.5kw, 3 Phase, 240 volt heater to go on a BHV048M*A would be **C-48BV-10.5-3-240**. (kW is available in increments of 0.10kW.)

AVAILABLE OPTIONS:

1. CLASS 2 CONTROL TRANSFORMER, 24V.
   A. One and two stage heaters
   B. Three and four stage heaters

2. SINGLE POINT LINE CONNECTION
   A. Heater and motor voltage must be the same
   B. Fan relay, motor circuit fusing and control transformer. (See item 3 for recommended disconnect switch.

3. DOOR INTERLOCKING DISCONNECT SWITCH
   A. 40 AMP Unit
   B. 80 AMP Unit
   C. 100 AMP Unit

4. TWO, THREE, and FOUR STAGE PROGRAMMABLE THERMOSTAT. (Wall or Duct Sensor-Specify)

Other options are available.

** Standard staging, consult factory for optional staging.