

BELT DRIVE HORIZONTAL DIRECT EXPANSION BLOWER COIL UNITS

FEATURES

CONSTRUCTION

- Cabinets are fabricated with polyurethane based powder coated A60 galvanealed steel.

COILS

- Constructed of copper tube-aluminum fin material.

BLOWERS

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

MOTORS

- Standard ETL Approved motors are 208/230/460 volt and have overload protection. Motor pulleys are variable pitch single groove.

THERMAL EXPANSION VALVES

- All units standard with thermal expansion valve mounted - with side port distributors.

AIR FILTERS

- Two inch throwaway filters are standard, with access from either side.

ACCESSORY ELECTRIC HEAT KITS

- 5 to 20 kW

DRAIN PANS

- Fabricated of heavy guage Type 304 stainless steel.

SERVICE ACCESS

Panel on each side of the unit is easily removed for access to motor, blowers, and sheaves.

INSTALLATION

Units have 3/8" NC thread spotweld nuts in each corner of top panel for easy suspension.

INSULATION

Fully insulated with 1", 1-1/2 pound dual density insulation.

TESTING

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



3 Phase Units

RESIDENTIAL AND COMMERCIAL SYSTEMS • SPLIT SYSTEMS • PACKAGED AIR CONDITIONERS • COMBINATION GAS / ELECTRIC UNITS • HEAT PUMPS • AIR HANDLERS • MANUFACTURED HOME AIR CONDITIONERS • GAS, OIL AND ELECTRIC FURNACES)

International Comfort Products
650 Heil-Quaker Avenue, Lewisburg, TN 37091

477 11 1001 03

2/4/04

SPECIFICATIONS

MODEL		BHH036M3A	BHH036M4A		BHH048M4A		BHH048M5A		BHH060M5A		BHH060M6A		
Application		Horizontal											
Electrical Data	Voltage	208/230	460	208/230	460	208/230	460	208/230	460	208/230	460	208/230	460
	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											
	Contactors	Field Supplied											
Blower Data	Size	9-9R				12-6R				12-9R			
	Horsepower	1/2		3/4		3/4		1		1		1-1/2	
	FLA/LRA	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 Connection	Liquid (O.D.)	3/8"				1/2"				1/2"			
	Suction (O.D.)	3/4"				7/8"				1-1/8"			
	Factory Charge	Holding Charge, R-22											
Condensate Drain		3/4"											
Filters (Qty.)		16" x 32" (1)				16" x 20" (2)				20" x 20" (2)			
Shipping Weight (lbs.)		178				203				246			

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
BHH036	.23	900	829	.18	1011	.24	1205	.38	1388	.46	1514	.58	1632	.67
	.30	1050	896	.23	1059	.30	1220	.40	1442	.58	1563	.67		
	.37	1200	952	.30	1114	.39	1256	.47	1383	.62	1571	.75		
	.44	1350	1024	.37	1159	.46	1293	.56	1418	.68				
	.53	1500	1080	.48	1231	.59	1349	.69						
BHH048	.31	1200	682	.25	797	.34	905	.43	1014	.52	1099	.61	1177	.69
	.40	1400	752	.35	849	.43	946	.53	1048	.67	1129	.75	1213	.84
	.49	1600	808	.46	908	.57	997	.67	1077	.78	1156	.88	1247	.99
	.58	1800	878	.60	968	.71	1051	.83	1125	.93				
	.70	2000	948	.76	1036	.94								
BHH060	.26	1500	677	.29	769	.38	878	.47	982	.58	1075	.70	1199	.88
	.33	1750	703	.37	810	.48	908	.59	1006	.72	1093	.83	1177	.95
	.41	2000	755	.50	850	.61	949	.74	1035	.88	1120	1.00	1202	1.14
	.50	2250	820	.66	908	.78	995	.92	1076	1.06	1157	1.22	1230	1.35
	.60	2500	878	.87	961	.99	1049	1.14	1124	1.30	1196	1.46		

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
BHH036 AHW36HH2A	.29	900	881	.19	1105	.29	1304	.39	1424	.49	1558	.57	1674	.66
	.37	1050	939	.24	1118	.34	1350	.47	1499	.60	1615	.69		
	.47	1200	1014	.32	1173	.41	1308	.49	1516	.67				
	.56	1350	1091	.40	1232	.50	1363	.61	1489	.71				
	.67	1500	1172	.53	1301	.62	1410	.72						
BHH048 AHW48HH2A	.37	1200	709	.26	828	.34	940	.44	1032	.53	1119	.62	1194	.72
	.47	1400	784	.37	888	.46	975	.56	1063	.66	1163	.77	1241	.87
	.59	1600	854	.50	951	.61	1035	.72	1114	.81	1191	.93		
	.71	1800	919	.66	1014	.79	1100	.91	1174					
	.84	2000	1003	.85	1082	.98								
BHH060 AHW60HH2A	.32	1500	677	.30	792	.39	899	.49	996	.62	1093	.73	1193	.88
	.43	1750	737	.41	842	.53	938	.64	1027	.75	1114	.89	1202	1.01
	.52	2000	790	.56	890	.66	979	.79	1064	.92	1144	1.05	1223	1.18
	.63	2250	851	.71	947	.85	1029	.98	1109	1.12	1189	1.29	1256	1.41
	.76	2500	923	.95	1002	1.08	1077	1.23	1155	1.37				

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

DIRECT EXPANSION COOLING CAPACITIES

BHH036

			85°F DB/71°F WB				80°F DB/67°F WB				75°F DB/63°F WB			
SUCT TEMP	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	8.72	900	51.5	31.0	53.2	53.2	44.0	28.8	50.5	50.5	34.0	24.6	49.8	49.6
		1200	58.5	36.8	56.7	56.3	49.5	33.8	54.0	53.5	41.5	30.8	51.3	50.8
		1500	63.5	41.5	59.3	58.4	54.5	38.5	56.3	55.4	47.0	35.8	52.9	52.0
45	6.14	900	46.0	28.8	55.4	55.4	35.0	24.8	54.6	54.4	25.4	20.6	53.7	53.2
		1200	51.0	33.8	58.9	58.4	43.0	31.0	56.1	55.5	29.8	25.4	55.4	54.5
		1500	56.0	38.5	61.1	60.1	48.5	36.2	57.7	56.7	35.4	30.4	56.2	55.5
50	4.15	900	36.0	24.8	59.5	59.3	25.6	20.8	58.6	58.1	18.7	17.6	56.9	56.0
		1200	44.0	31.2	61.0	60.3	29.8	25.6	60.3	59.3	22.2	21.6	58.4	56.8
		1500	50.0	36.4	62.6	61.5	35.6	30.6	61.1	59.7	24.8	24.4	59.9	57.5

BHH048

			85°F DB/71°F WB				80°F DB/67°F WB				75°F DB/63°F WB			
SUCT TEMP	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	11.51	1200	66.0	40.5	53.8	53.8	56.0	37.2	51.4	51.3	48.0	34.2	48.7	48.5
		1600	75.0	48.0	57.3	56.9	64.0	44.0	54.4	53.9	53.5	40.0	51.8	51.2
		2000	81.0	54.0	59.9	59.0	70.0	50.0	56.8	55.8	58.5	46.0	53.8	52.8
45	8.36	1200	58.5	37.2	56.3	56.3	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	5.53	1200	49.0	33.6	59.1	58.9	37.5	29.4	57.4	57.1	26.0	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	29.2	57.9	56.5
		2000	61.5	46.5	63.4	62.2	48.5	41.5	60.8	59.5	37.2	35.8	58.5	56.8

BHH060

			85°F DB/71°F WB				80°F DB/67°F WB				75°F DB/63°F WB			
SUCT TEMP	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	5.59	1500	90.0	53.5	52.1	52.1	77.0	49.5	49.5	49.5	59.0	42.0	49.1	48.9
		2000	104.0	64.0	55.5	55.1	87.0	58.0	53.1	52.6	73.0	53.0	50.5	49.9
		2500	115.0	72.0	58.1	57.2	97.0	66.0	55.4	54.5	79.0	59.5	52.9	51.9
45	3.82	1500	81.0	49.5	54.4	54.4	60.5	42.0	54.0	53.8	43.0	34.8	53.5	53.1
		2000	89.0	58.0	58.1	57.6	75.0	53.0	55.4	54.8	50.5	42.5	55.3	54.4
		2500	99.0	66.0	60.4	59.4	81.0	60.0	57.8	56.7	62.0	52.0	55.7	54.6
50	2.58	1500	62.0	42.0	59.0	58.8	43.0	34.8	58.5	58.0	31.2	29.4	56.9	56.0
		2000	77.0	53.5	60.3	59.7	50.5	42.5	60.2	59.2	37.2	36.2	58.3	56.8
		2500	82.0	60.0	62.8	61.6	62.0	52.0	60.7	59.4	41.5	40.5	59.9	57.5

HOT WATER HEATING CAPACITIES

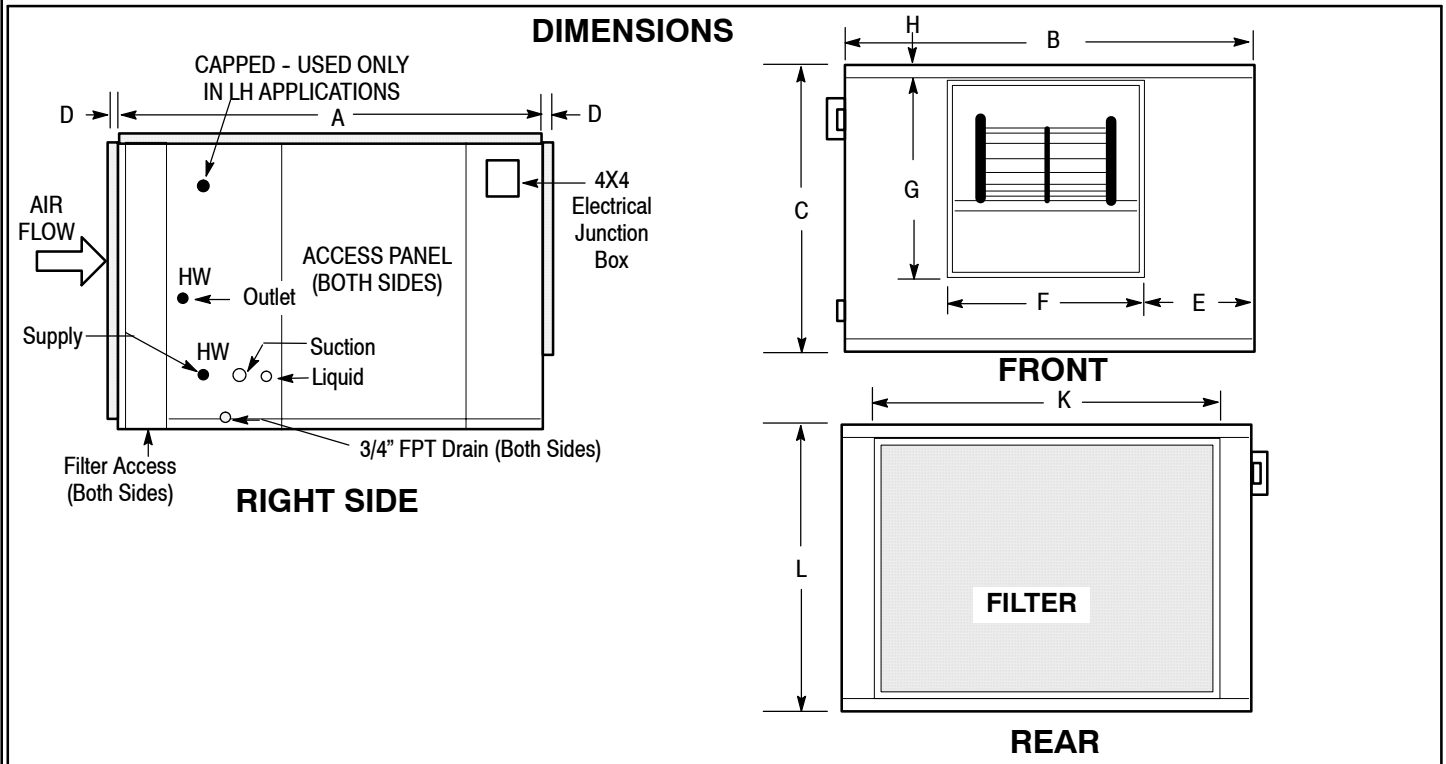
AHW36						AHW48						AHW60					
GPM	PD FT.	CFM	TTL MBH	LAT F	LWT F	GPM	PD FT.	CFM	TTL MBH	LAT F	LWT F	GPM	PD FT.	CFM	TTL MBH	LAT F	LWT F
3.0	1.10	900	49.0	110.3	146.6	4.0	.080	1200	66.0	111.4	145.9	6.0	0.70	1500	86.0	112.9	150.7
		1200	55.0	102.6	142.4			1600	75.0	103.5	141.6			2000	97.0	105.0	146.8
		1500	60.0	97.1	139.0			2000	82.0	97.9	138.2			2500	106.0	99.4	143.7
6.0	4.10	900	55.0	116.8	161.1	8.0	3.00	1200	75.0	118.4	160.6	12.0	2.70	1500	96.0	119.4	163.5
		1200	63.5	109.1	158.3			1600	87.0	110.6	157.6			2000	111.0	111.6	160.9
		1500	70.0	103.5	155.9			2000	97.0	104.9	155.2			2500	124.0	105.9	158.8
9.0	9.00	900	57.5	119.3	166.9	12.0	6.70	1200	79.0	121.2	166.4	18.0	6.00	1500	100.0	121.9	168.6
		1200	67.0	111.7	164.7			1600	92.0	113.5	164.2			2000	117.0	114.2	166.6
		1500	75.0	106.2	162.9			2000	103.0	107.8	162.3			2500	131.0	108.6	165.1

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.

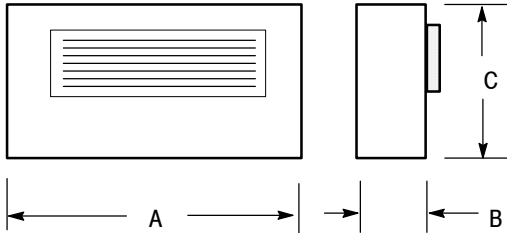


BHH DIMENSIONS

MODEL	A	B	C	D	E	H	F	G	K	L
BHH036	37.0	36.5	18.0	1	12.1	1	12.3	10.9	27.5	16.0
BHH048	42.0	38.0	22.0	1	14.3	1	9.5	14.0	29.0	20.0
BHH060	42.0	45.0	22.0	1	16.0	1	13.0	14.0	36.0	20.0

RETURN AIR GRILLE

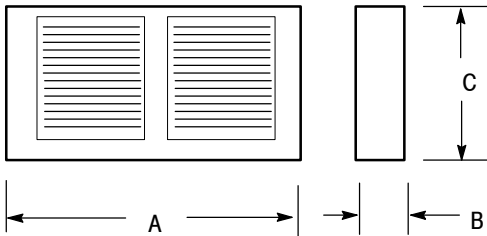
DISCHARGE GRILLE PLENUM



DISCHARGE GRILLE PLENUM

MODEL	A	B	C	WT
AGD36BHGPA	36.5	6.0	18.0	20
AGD48BHGPA	38.0	6.0	22.0	25
AGD60BHGPA	45.0	6.0	22.0	27

RETURN AIR GRILLE



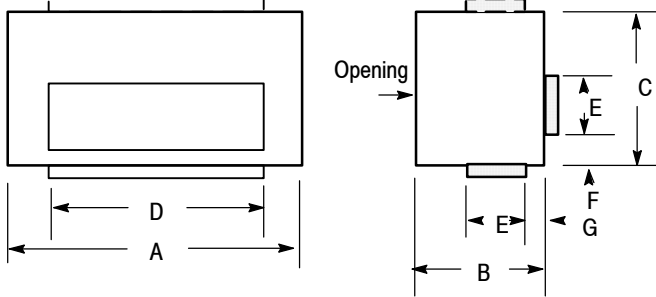
RETURN AIR GRILLE

MODEL	A	B	C	WT
AGR36BHRGA	27.5	2.0	16.0	7
AGR48BHRGA	29.0	2.0	20.0	8
AGR60BHRGA	36.0	2.0	20.0	9

HOT WATER COILS

MODEL	USED ON
AHW36HH2A	3 TON
AHW48HH2A	4 TON
AHW60HH2A	5 TON

MIXING BOX WITH LOW LEAK DAMPERS



MIXING BOX WITH LOW LEAK DAMPERS

MODEL	A	B	C	D	E	F	G	WT
AMB36MBA	27.5	16.0	16.0	25.5	8.0	6.0	3.5	60
AMB48MBA	29.0	16.0	20.0	27.0	8.0	8.0	3.5	65
AMB60MBA	36.0	16.0	20.0	34.0	8.0	8.0	3.5	75

NOTE: May be attached to air unit for top/rear or bottom/rear duct connection. (Barometric relief not included in mixing box, field installed if required.)

HEAT PUMP BY PASS KIT (FIELD INSTALLED)

MODEL	USED ON
AHB01A	3 TON
AHB02A	4 & 5 TON

MIXING BOX CONTROL PACKAGES

MODEL	USED FOR *
AEK3PMA	3 Position Economizer
AEKFMMA	Fully Modulating Economizer

* Used with mixing boxes to create 3 position or fully modulating economizer.

ELECTRIC HEAT ACCESSORY

Heater Model # - C-36BH-(Kw)-(Phase)-(Voltage)

Voltage / Phase	Kw Range	Stages **	Used On
208 / 3	2.1 - 9.0	1	BHH036M*A
208 / 3	9.1 - 10.0	2	
208 / 3	10.1 - 12.0	2	
240 / 3	2.1 - 10.0	2	
240 / 3	10.1 - 12.0	2	
480 / 3	2.1 - 10.0	1	
480 / 3	10.1 - 12.0	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 BHH048M*A would be **C-48BH-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.

NOTE: If an electric heater is not installed with air handler, a field supplied transformer and contactor will be required for operation.

Heater Model # - C-48BH-(Kw)-(Phase)-(Voltage)

Voltage / Phase	Kw Range	Stages **	Used On
208 / 3	2.1 - 9.0	1	BHH048M*A
208 / 3	9.1 - 15.0	2	
208 / 3	15.1 - 17.0	2	
240 / 3	2.1 - 10.0	1	
240 / 3	10.5 - 15.0	2	
240 / 3	15.1 - 17.0	2	
480 / 3	2.1 - 17.0	1	

Heater Model # - C-60BH-(Kw)-(Phase)-(Voltage)

Voltage / Phase	Kw Range	Stages **	Used On
208 / 3	2.1 - 9.0	1	BHH060M*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	