



HPFM Series

Three Phase, 10 SEER PACKAGE HEAT PUMP SPECIFICATIONS

3 THRU 5 TON, THREE PHASE

- Efficiency: - **10 SEER.**
- Combination heating and cooling, self-contained for year-round comfort. Systems install on rooftop or at ground level. Units are shipped complete in one carton.

CONSTRUCTION

- Triple-coated steel, consisting of a Polyester top coat, a urethane primer coat preceded by an oxide pretreatment. One piece weather resistant top. Access panels for easy service. Side by side supply and return. Heavy 16 gauge base with rails.
- Coil Guard to protect condenser coil.

ACCESS PANELS

- Located to provide easy serviceability. The electrical controls are behind the same exterior panel.

VERTIBLE DISCHARGE

- Units have side-by-side supply and return air openings for either horizontal or downflow applications. Simply relocate duct cover panels.

COMPRESSOR (Scroll Compressors On All Models)

- The high efficiency compressor has external rubber mounts to help minimize system noise and features an automatic reset current / temperature sensing overload protection system.

COILS

- Both the condenser and evaporator coils have aluminum fins and copper tubes to promote efficient heat transfer.. The refrigerant circuit is sealed, tested, and fully charged at the factory.

EXTERNALLY-MOUNTED GAUGE PORTS

- Provides easier servicing and allows for more accurate reading of operating conditions.

EVAPORATOR BLOWER

- All model sizes are equipped with multiple speed direct drive blower motors to provide proper air flow for both heating and cooling requirements.

AIR FILTERS

- Air filters are supplied with these units.

LOSS OF CHARGE PRESSURE SWITCH

- Low pressure switch on the high side to prevent system damage due to a loss of charge

COIL GUARD

- Standard on all units.

Electric Heat

- 10 to 20 kw

Transformer

- 65VA
- Resettable circuit breaker.

Economizer

- Factory wired to accept economizer.

WARRANTY

- Standard one (1) year limited warranty on parts.
- Five (5) year limited warranty on the compressor.



Rated in accordance with ARI Standard 210.



Listed By Underwriters' Laboratories



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5/16/06

UNIT SPECIFICATIONS

MODEL NUMBER	Electrical Data			Condenser Data								BELS
				Coil			Fan Motor		Fan			
	Voltage Ph. - Hz.	Max. Fuse	Ampacity	Total Face Area (Sq. Ft.)	Fins Per In. / Rows	Tube Dia. (In.)	Horsepower	Full Load Amps	Size Diameter (In.)	No. Blades / Pitch	CFM (Max.)	
HPFM36H000	230-3-60	30 amps.	20.0	11.38	20 / 1	3/8	1/3	1.9	20.3	3/27	2800	7.8
HPFM36L000	460-3-60	15 amps.	10.2	11.38	20 / 1	3/8	1/3	.74	20.3	3/27	2800	7.8
HPFM48H000	230-3-60	40 amps	28.7	14.88	18 / 2	3/8	1/3	1.9	20.3	3/27	3300	7.8
HPFM48L000	460-3-60	20 amps	12.5	14.88	18 / 2	3/8	1/3	.74	20.3	3/27	3300	7.8
HPFM60H000	230-3-60	50 amps	34.2	14.88	18 / 2	3/8	1/3	1.9	20.3	4/25	3300	8.0
HPFM60L000	460-3-60	25 amps	15.4	14.88	18 / 2	3/8	1/3	.74	20.3	4/25	3300	8.0

MODEL NUMBER	Evaporator Coil										Factory Refrigerant Charge R-22 Oz.	Shlp Weight (Lbs.)	
	Coil			Blower H.P. / Type / Speeds	Motor		Blower			Compressor			
	Total Face Area (Sq. Ft.)	Fins Per In. / Rows	Tube Diameter (In.)		Full Load Amps	Locked Rotor Amps	Type & Size	RPM (Maximum)	CFM Rated	Rated Load Amps			Locked Rotor Amps
	HPFM36H000	4.0	14 / 3	3/8	1/3 / PSC / 3	3.1	NA	DD10-8A	1100	1250			12.0
HPFM36L000	4.0	14 / 3	3/8	1/2 / PSC / 3	2.0	NA	DD10-8A	1100	1250	6.0	39	95	325
HPFM48H000	5.33	14 / 3	3/8	3/4 / PSC / 3	6.0	NA	DD11-11A	1100	1600	15.4	91	176	390
HPFM48L000	5.33	14 / 3	3/8	1 / PSC / 3	2.1	NA	DD11-11A	1100	1600	7.7	46	176	390
HPFM60H000	5.33	14 / 4	3/8	1 / PSC / 4	6.0	NA	DD11-11A	1100	2000	21.0	128	176	405
HPFM60L000	5.33	14 / 4	3/8	1 / PSC / 3	2.1	NA	DD11-11A	1100	2000	10.0	63	176	405

Air Filters - 3 ton uses 12 x 25 x 1 (2). 4 & 5 ton use 14 x 25 x 1 (2)

PERFORMANCE DATA: COOLING

MODEL NUMBER	Rated Capacity ¹ BTUH Heating	Rated Capacity ² BTUH Cooling	S / T Ratio	HSPF	S.E.E.R.	E.E.R. ⁴	Power Input Watts	Evaporator Rated Airflow (SCFM)	Ext. Static Pressure Drop ³ Wet
HPFM36H000	32,000	34,000	.80	6.8	10.0	8.45	4024	1250	.30
HPFM36L000	32,000	34,000	.80	6.8	10.0	8.45	4024	1250	.30
HPFM48H000	48,000	46,000	.79	6.8	10.0	8.90	5169	1600	.30
HPFM48L000	48,000	46,000	.79	6.8	10.0	8.90	5169	1600	.30
HPFM60H000	60,000	58,000	.77	6.8	10.0	8.70	6552	2000	.30
HPFM60L000	60,000	58,000	.77	6.8	10.0	8.70	6552	2000	.30

¹ Rated Capacity @ 47° F. ² Rated Capacity @ 230 Volts. For applications at 208 volts deduct 1000 BTU. Contact distributor for availability dates.

³ Includes a .08 drop for a filter. ⁴ For reference only.

ELECTRICAL DATA: ELECTRIC HEAT ACCESSORY

HEATER MODEL	Used With	Supply Voltage	Nominal Heating BTUH	Supply Circuit No.	Heater Amps	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device (Amps)
AAH10FBHAA	3 - 5 Ton	208-3-60	24,574	L4-L5-L6	20.0	25.0	30
		240-3-60	32,765	L4-L5-L6	23.1	28.9	30
		480-3-60	32,765	L4-L5-L6	11.5	14.4	15
AAH15FBHAA	3 - 5 Ton	208-3-60	36,860	L4-L5-L6	30.0	37.5	40
		240-3-60	49,147	L4-L5-L6	34.6	43.3	45
		480-3-60	49,147	L4-L5-L6	17.3	21.7	25
AAH20FBHAA	3 - 5 Ton	208-3-60	49,147	L4-L5-L6	40.0	50.0	60
		240-3-60	65,530	L4-L5-L6	46.2	57.8	60
		480-3-60	65,530	L4-L5-L6	23.1	28.9	30

Heater Model	Use With	Supply Voltage	KW Rating	Total Heating BTUH	*Temperature Rise °F @ CFM								
					600	800	1000	1200	1400	1600	1800	2000	2200
AAH10	3 - 5 Ton	240-3-60	9.6	32,765	50.6	37.9	30.3	25.3	21.7	19.0	16.9	15.2	13.8
		208-3-60	7.2	24,574	37.9	28.4	22.8	19.0	16.3	14.2	12.6	11.4	10.3
AAH15	3 - 5 Ton	240-3-60	14.4	49,147	---	56.9	45.5	37.9	32.5	28.4	25.3	22.8	20.7
		208-3-60	10.8	36,860	56.9	42.7	34.1	28.4	24.4	21.3	19.0	17.1	15.5
AAH20	3 - 5 Ton	240-3-60	19.2	65,530	---	---	---	50.6	43.3	37.9	33.7	30.3	27.6
		208-3-60	14.4	49,147	---	56.9	45.5	37.9	32.5	28.4	25.3	22.8	20.7

* Temperature Rise Must Not Exceed 60° F (Electric Heat Only) .

Blower Performance Data in Horizontal Configuration						ARI Minimum Static	Actual	ARI Minimum Allowable
UNIT SIZE	Motor Speed	Air Delivery in CFM at ESP (in. W.C.)				Without Filter	Capacity Rating	Airflow - 350 CFM/ton**
		0.20	0.30	0.40	0.50	inches of water	BTU/hr	CFM
3 TON	HI	1606	1534	1459	1382	0.23	34200	998
	MD	1384	1326	1271	1213	0.23	34200	998
	LO	1084	1053	1024	n/a	0.23	34200	998
4 TON	HI	2607	2564	2440	2354	0.28	45600	1330
	MD	1987	1978	1940	1879	0.28	45600	1330
	LO	1594	1596	1580	1556	0.28	45600	1330
5 TON	HI	2441	2362	2240	2169	0.28	58600	1709
	MD HI	2392	2313	2219	2124	0.28	58600	1709
	MD LO	2253	2188	2107	2009	0.28	58600	1709
	LO	2178	2108	2046	1946	0.28	58600	1709

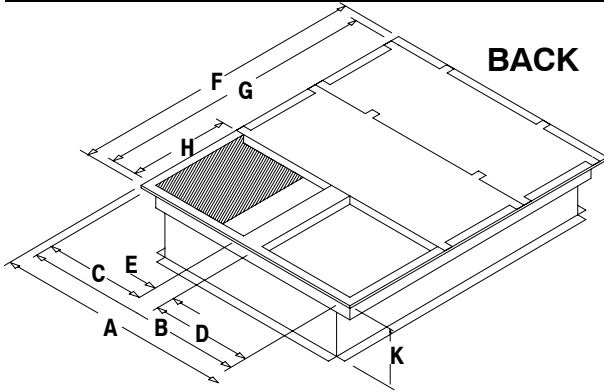
Blower Performance is for Horizontal Configuration without Accessories.

Air delivery against shown external static pressures taken with 230V to unit and dry coil. For wet coil subtract approximately 25 CFM.

Add .08 static for internal filters.

** Applied to the ACTUAL capacity rating

ACCESSORIES



ROOF CURBS

Model Number	Height (K)	Use With
ACL01FB0A	8"	HPFM - all
ACM01FB0A	14"	
ACH01FB0A	24"	

ROOF CURB DIMENSIONS (inches)

Model Number	A	B	C	D	E	F	G	H	K (ACL)	K (ACM)	K (ACH)
AC(L,M,H)01FB0A	42-1/2	39-1/2	16	21-1/2	3-3/4	45-3/4	42-3/4	20	8	14	24
AC(L,M,H)02FB0A	44-3/4	41-3/4	18-7/8	20-7/8	2	45-3/4	42-3/4	22	8	14	24

SQUARE to ROUND TRANSITION

Model Number	Round Size	Use With Roof Curb
ACT01FB0A	16"	ACL01FB0A, ACM01FB0A, ACH01FB0A

CONCENTRIC GRILLE - FLUSH MOUNT

Model Number	Use With Roof Curb
AXB020CFA	ACL01FB0A, ACM01FB0A, ACH01FB0A

CONCENTRIC GRILLE - STEP DOWN

Model Number	Use With Roof Curb
AXB020CSA	ACL01FB0A, ACM01FB0A, ACH01FB0A

ECONOMIZERS *

Model Number	Application	Motion	Control	Use With Model Size
AHE02FB0B	Horizontal	Fully Modulating w/ Return Air Damper w/ Relief Damper	Enthalpy	ALL
AEM03FB0B	Downflow			HPFM36-48
AHP02FB0B	Horizontal	Fully Modulating w/ Return Air Damper w/ Relief Damper	Dry Bulb Only	ALL
AEP03FB0B	Downflow			HPFM36-48
AEP001A	Adapter Harness	N/A	N/A	ALL

* An adapter harness will be required for use with three phase units.

ACCESSORIES - (CONT.)

0% - 35% FRESH AIR DAMPERS (use in DOWNFLOW application only) *

Model Number	Control	Use With Model Size
AFA02FB0A	Manual	ALL
AFM02FB0A	Motorized	

* Unit must have internal filters to protect evaporator coil when Fresh Air Damper is installed.
All 3-phase units shipped with internal filters installed.

HAIL GUARD

Model Number	Use With Model Size
AGH02FB0A	ALL

LOW AMBIENT CONTROL

Model Number	FAST Part Number	Use With Model Size
ALA12HP0A	1113884	HPFM - all

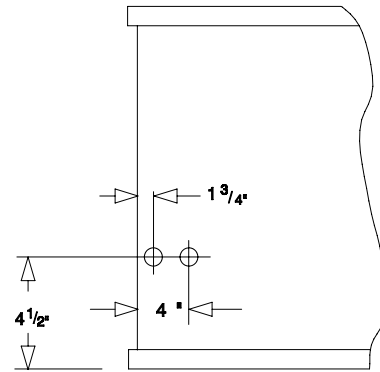
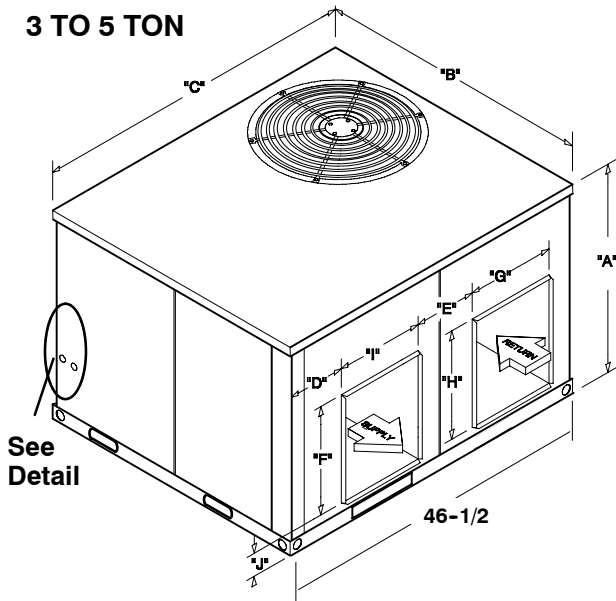
OUTDOOR THERMOSTAT

Model Number	Description	Use With Model Size
AMF002OTA	2 Stage, Electronic	HPFM - all

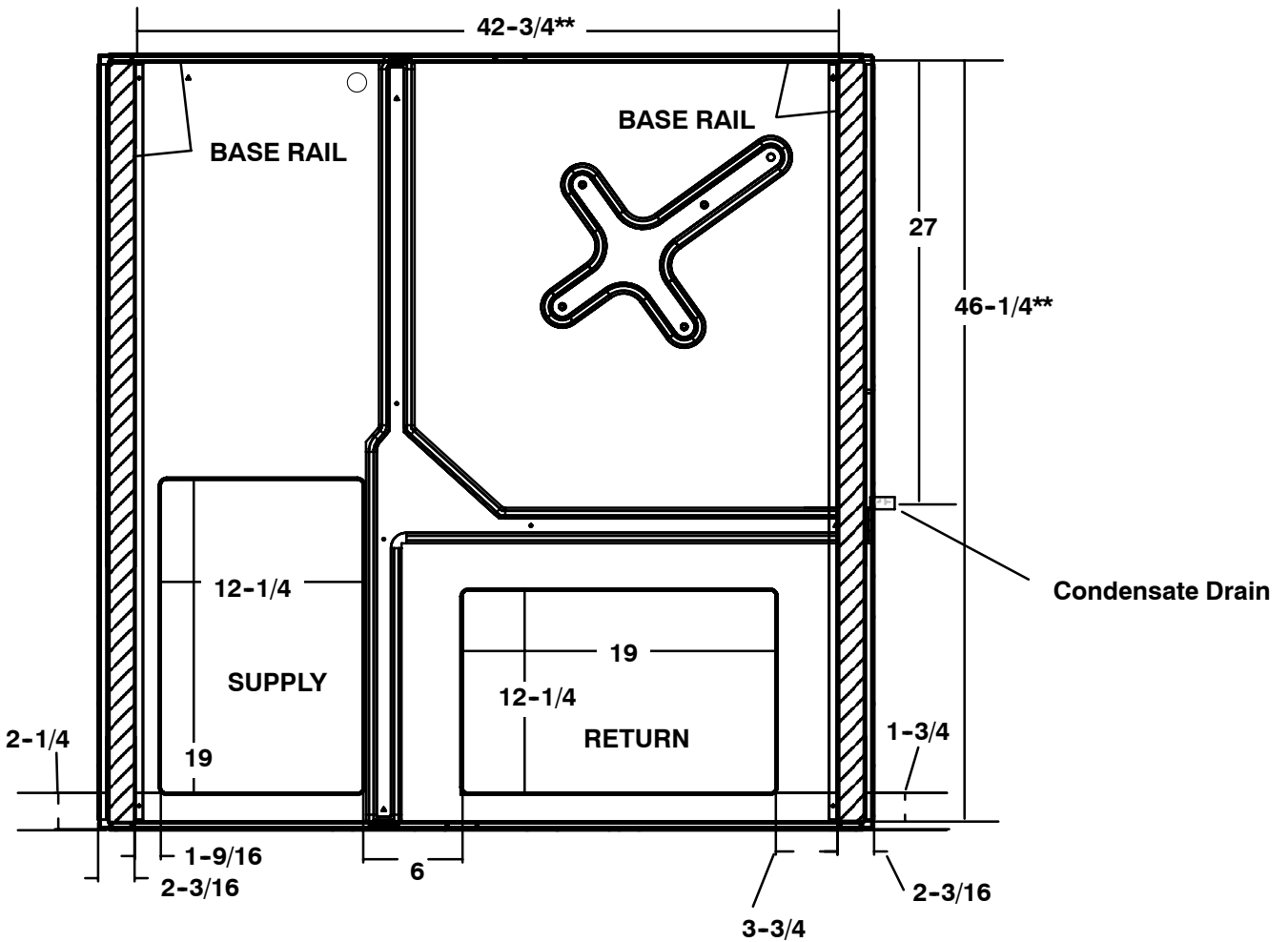
UNIT DIMENSIONS

3 TO 5 TON

All Dimensions In Inches



BASE PAN - CHASSIS



UNIT SIZE	A	B	C	D	E	F	G	H	I	J
3 Ton	29-1/2	47-1/2	47-1/2	3	9-1/2	12	14	12	14	4-1/2
4 TO 5 Ton	37-1/2	47-1/2	47-1/2	4	6-1/2	19	19	12	12	4-1/2

**** Measured from inside to inside on base rails.**

MODEL NUMBER IDENTIFICATION GUIDE

MODEL NUMBER	H	P	F	M24	H	000
HEAT PUMP						
P = Single Package						
F = STANDARD SERIES						ELECTRICAL CHARACTERISTICS H = 208 / 230-3-60, L = 460-3-60
						COOLING CAPACITY (NOMINAL BTUH) M used on 5 ton and below. 36 = 3 ton 48 = 4 Ton 60 = 5 Ton

GUIDE SPECIFICATION

CABINET

The cabinet is made of triple-coated steel, consisting of a Polyester top coat, a urethane primer coat preceded by an oxide pretreatment. One piece weather resistant top. The base rails are 16 gauge steel with fork lift slots and holes provided for lifting shackles. The unit is designed with convertible airflow for either horizontal or downflow applications with conversion accomplished by re-locating two panels. Indoor blower compartment interior cabinet surfaces are insulated with a minimum 1/2" thick, flexible glass insulation, coated on the air side. Aluminum foil faced glass fiber insulation is used in the furnace compartment.

COOLING SECTION

The unit is factory charged and operationally ready upon delivery. The unit refrigerant circuit has a high efficiency scroll compressor with internal overload protection, and copper tube / aluminum fin evaporator and condenser coils. The unit is designed for cooling operation to 40° F and will be capable of being wired for field installed economizer type accessories.

COILS

The evaporator and condenser coils are fabricated with aluminum fins mechanically bonded to copper tubing. Both coils are pressure tested prior to assembly into the unit and electronically leak tested after assembly into the unit.

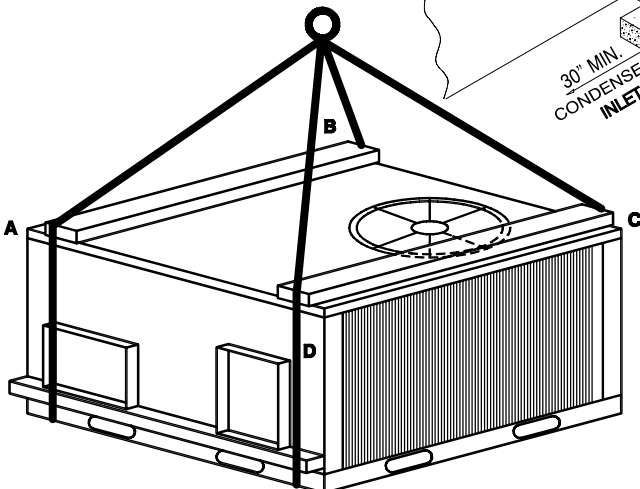
CONDENSER FAN

The unit has a single direct-drive propeller-fan / motor assembly. The assembly is mounted directly to a vertical-discharge grille that is easily removed for service. Motors are 1100 RPM with sleeve or ball bearings and internal overload protection.

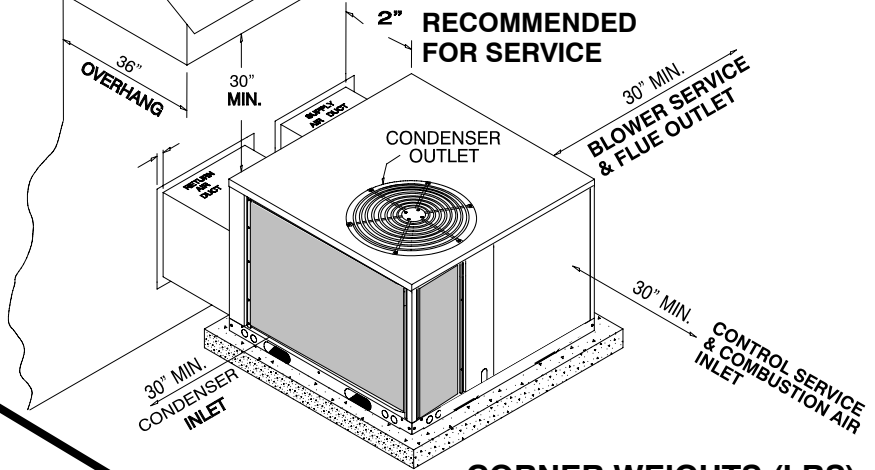
EVAPORATOR BLOWER

All units have a direct-drive evaporator blower motor as a standard. The direct-drive evaporator blower motor has sleeve bearings and internal overload protection.

RIGGING DETAILS



INSTALLATION CLEARANCES



CORNER WEIGHTS (LBS)

UNIT SIZE	A	B	C	D	OPERATING WEIGHT TOTAL
3 TON	72	90	126	72	360
4 TON	98	123	171	98	490
5 TON	100	125	175	100	500