



# SPECIFICATION DATA SHEET

FLORIDA HEAT PUMP HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# HE121

HIGH EFFICIENCY

Dual circuits feature 2-stage operation. Complete package includes 2 each compressors, reversing valves, capillary tube metering devices and water-to-refrigerant condensers. Contains safety controls: overload motor protection, high and low refrigerant pressure switches and a lock-out impedance relay. Beige.

## MECHANICAL SPECIFICATIONS

STANDARD RATED PERFORMANCE					CFM	EVAPORATOR				BLOWER EACH	WEIGHT	
COOLING	EER	HEATING	COP	GPM		FACE AREA	ROWS DEEP	TUBE SIZE	FINS PER IN.		NET	SHIP
121,000	10.5	165,000	4.0	32.1	4,500	9.03	3	%	14	12 x 9	577	601

## ELECTRICAL SPECIFICATIONS

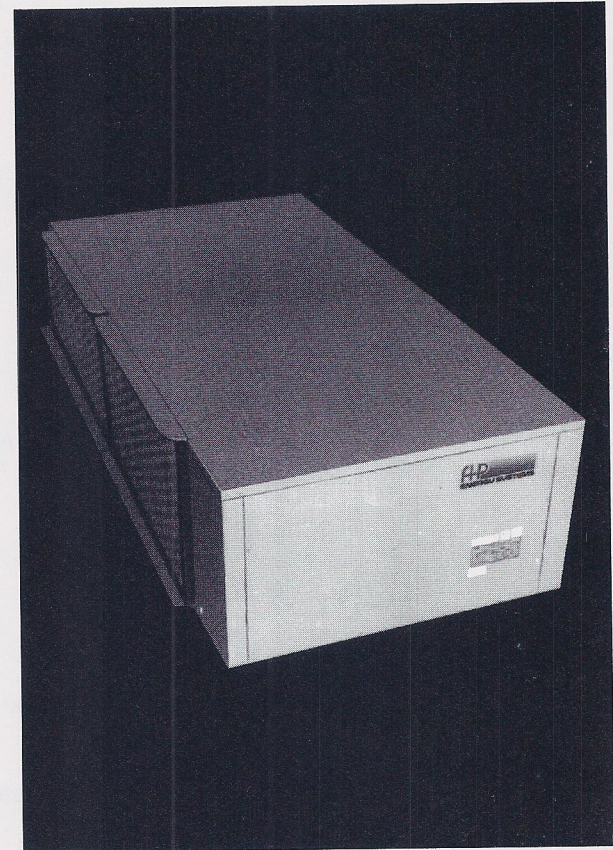
ELECTRICAL CHARACTERISTICS	ELECTR. SYM.	COMPRESSOR EACH		BLOWER		MIN. CIRCUIT AMPACITY	FUSE (T/D) HACR CIRCUIT BREAKER
		RLA	LRA	NPA	H.P.		
208/230-3-60	-3	18.0	110.0	9.2	3.0	47.9	60
460-3-60	-4	8.2	55.0	4.6	3.0	24.0	30
575-3-60	-5	6.1	30.0	3.7	3.0	17.2	20
-	-	-	-	-	-	-	-

## CAPACITY DATA

ARI Standard 320: 4500 SCFM, 32.5GPM/12.0' P.D.

### COOLING (All BTUH in thousands)

Entering Water Temp.	Ent. Air Wet Bulb Temp.	Total Capacity BTUH	Watts Input	Heat Rejection BTUH	Sensible Capacity BTUH Ent. Air Dry Bulb °F			EER
					75°	80°	85°	
55°	61°	121.1	8915	151.6	101.0	121.1	-	13.6
	64°	126.8	8971	157.5	90.1	114.4	126.8	14.1
	67°	132.7	9034	163.5	79.3	103.5	129.8	14.7
	70°	139.1	9089	170.1	63.1	87.3	113.6	15.3
	73°	145.4	9152	176.7	-	71.3	97.6	15.9
65°	61°	118.5	9736	151.7	98.8	118.5	-	12.2
	64°	124.1	9795	157.5	88.2	111.9	124.1	12.7
	67°	129.8	9864	163.5	77.5	101.2	126.9	13.2
	70°	136.0	9923	169.9	61.7	85.4	111.1	13.7
	73°	142.2	9992	176.4	-	69.7	95.4	14.2
75°	61°	115.7	10555	151.8	96.5	115.7	-	11.0
	64°	121.2	10619	157.4	86.1	109.2	121.2	11.4
	67°	126.8	10694	163.3	75.7	98.9	124.0	11.9
	70°	132.8	10758	169.6	60.3	83.4	108.6	12.4
	73°	138.9	10833	175.9	-	68.1	93.2	12.8
85°	61°	110.4	11374	149.2	92.1	110.4	-	9.7
	64°	115.6	11443	154.7	82.2	104.2	115.6	10.1
	<b>67°</b>	<b>121.0</b>	<b>11524</b>	<b>160.3</b>	72.2	<b>94.3</b>	118.3	<b>10.5</b>
	70°	126.8	11593	166.3	57.5	79.6	103.6	10.9
	73°	132.6	11673	172.4	-	65.0	89.0	11.4
95°	61°	100.7	12181	142.3	84.0	100.7	-	8.3
	64°	105.4	12255	147.3	74.9	95.1	105.4	8.6
	67°	110.3	12342	152.4	65.9	86.0	107.9	8.9
	70°	115.6	12416	155.4	52.5	72.6	94.5	9.3
	73°	120.9	12502	163.6	-	59.3	81.1	9.7



## HEATING

Entering Water Temp.	Entering Air Temp.	Heating Capacity BTUH	Heat Of Absorption BTUH	Power Input Watts	COP
55°	60°	143.4	107.3	10568	4.0
	70°	135.3	98.4	10784	3.7
	80°	127.1	89.6	10999	3.4
70°	60°	174.9	134.4	11848	4.3
	<b>70°</b>	<b>165.0</b>	<b>123.7</b>	<b>12090</b>	<b>4.0</b>
	80°	155.1	113.0	12331	3.7
80°	60°	185.3	143.4	12298	4.4
	70°	174.9	132.0	12549	4.1
	80°	164.4	120.7	12800	3.8

## CONDENSER WATER FLOW

Cooling Cycle Design ΔT	GPM	P.D. (Ft. of Hd.)
8°	40.3	18.0
<b>10°</b>	<b>32.5</b>	<b>12.0</b>
12°	26.0	9.1
14°	21.8	7.0
16°	18.6	5.5



BOLD DATA ARE AT ARI STANDARD 320 RATING CONDITIONS.

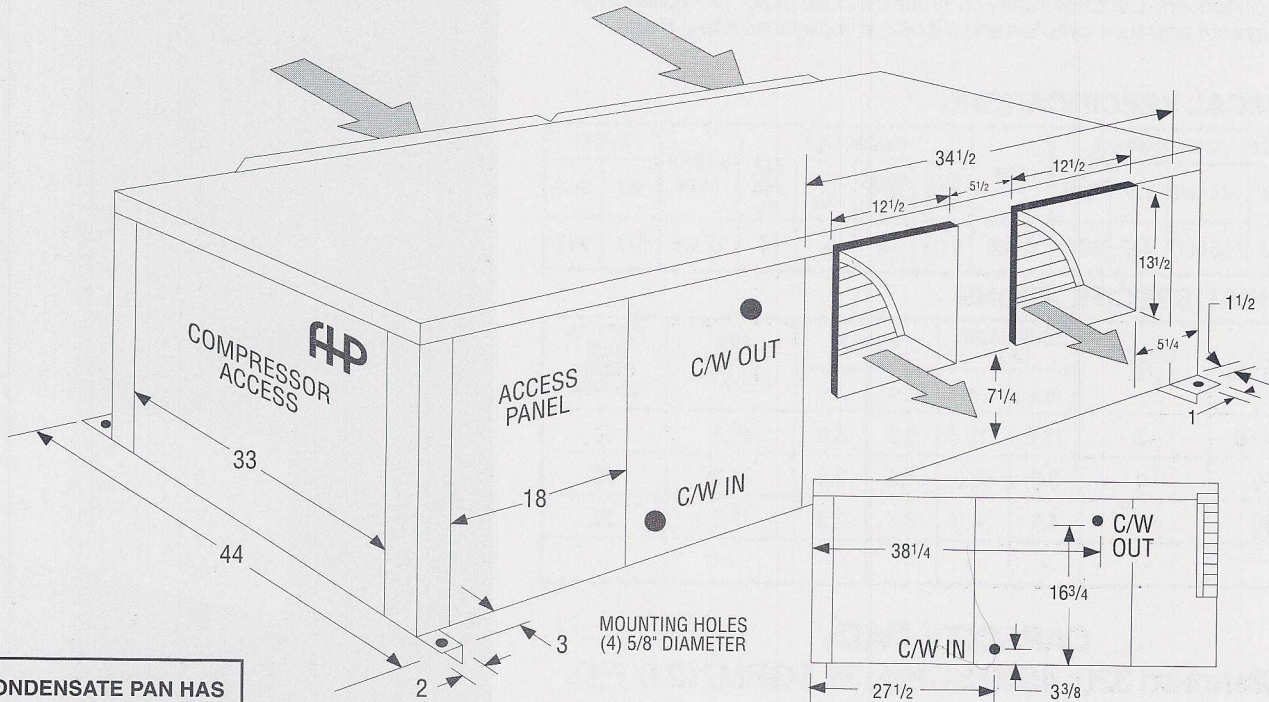
# HE121

HIGH EFFICIENCY

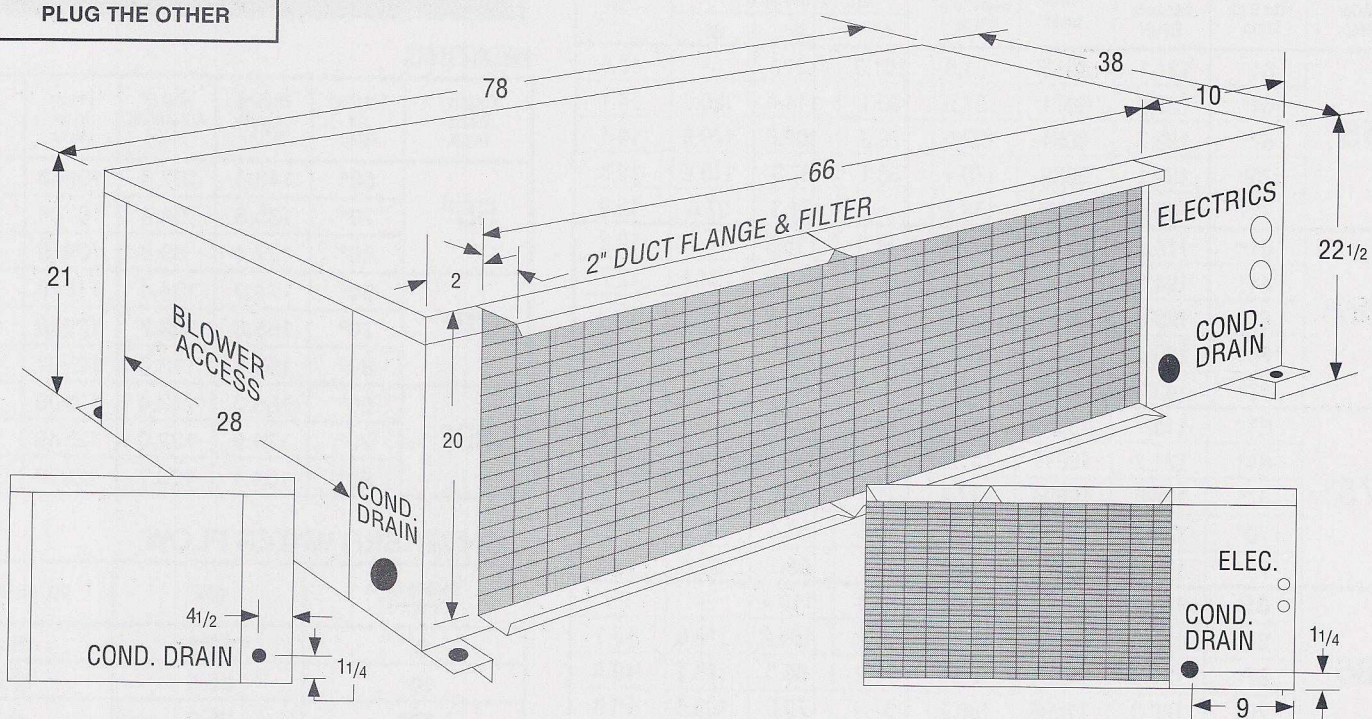
## PHYSICAL CHARACTERISTICS

### BLOWER PERFORMANCE Ratings are with standard motor pulley drives

AVAILABLE EXTERNAL STATIC PRESSURE (In. H <sub>2</sub> O including allowance for wet coil and filter)												
MOTOR PULLEY	.10	.20	.30	.40	.50	.60	.70	.80	.90	1.0	1.1	1.2
CLOSED	-	-	-	-	5000	4875	4660	4480	4270	4060	3850	3600
1/2 OPEN	4740	4600	4450	4300	4190	3960	3750	3580	3300	-	-	-
OPEN	4020	3840	3640	3440	3200	-	-	-	-	-	-	-



CONDENSATE PAN HAS (2) DRAIN CONNECTIONS. USE ONE AT LOW END OF UNIT PLUG THE OTHER




**FHP**  
a HARROW company

**FHP MANUFACTURING**  
601 N.W. 65th COURT  
FT. LAUDERDALE, FL 33309  
PHONE: (305) 776-5471  
FAX: (305) 776-5529

CONDENSER WATER CONNECTIONS: 1.25" F.P.T.  
CONDENSATE DRAIN CONNECTION: 0.75" F.P.T.  
FILTER SIZE: HZ 19" X 35" X 1" QTY. (2)

As a result of continuing research and development, all ratings and specifications are subject to change without notice. Rev. 10/94



# SPECIFICATION DATA SHEET

FLORIDA HEAT PUMP HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# HE122

HIGH EFFICIENCY

Dual circuits feature 2-stage operation. Complete package includes 2 each compressors, reversing valves, capillary tube metering devices and water-to-refrigerant condensers. Contains safety controls: overload motor protection, high and low refrigerant pressure switches and a lock-out impedance relay. Beige.

## MECHANICAL SPECIFICATIONS

STANDARD RATED PERFORMANCE					CFM	EVAPORATOR				BLOWER	WEIGHT	
COOLING	EER	HEATING	COP	GPM		FACE AREA	ROWS DEEP	TUBE SIZE	FINS PER IN.		NET	SHIP
122,000	11.9	170,000	4.4	31.4	4,000	9.0	3	3/8	14	15 x 15	725	770

## ELECTRICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	ELECTR. SYM.	COMPRESSOR, EACH		BLOWER		MIN. CIRCUIT AMPACITY	FUZE (T/D) HACR CIRCUIT BREAKER
		RLA	LRA	NPA	H.P.		
208/230-1-60	-1	27.0	135.0	12.3	2.0	73.1	100
208/230-3-60	-3	16.1	137.0	6.4	2.0	42.7	50
460-3-60	-4	9.0	69.0	3.2	2.0	23.5	30
575-3-60	-5	7.7	55.0	2.5	2.0	19.9	25

## CAPACITY DATA

ARI Standard 320: 4000 SCFM, 31.4GPM/9.7' P.D.

### COOLING (All BTUH in thousands)

Entering Water Temp.	Ent. Air Wet Bulb Temp.	Total Capacity BTUH	Watts Input	Heat Rejection BTUH	Sensible Capacity BTUH Ent. Air Dry Bulb °F			EER
					75°	80°	85°	
55°	61°	122.1	7931	149.2	101.8	126.3	-	15.4
	64°	127.9	7979	155.1	90.9	115.3	127.9	16.0
	67°	133.8	8036	161.2	79.9	104.3	130.9	16.7
	70°	140.2	8084	167.8	63.6	88.1	114.6	17.4
	73°	146.6	8140	174.4	-	71.9	98.4	18.0
65°	61°	119.5	8659	149.0	99.6	123.5	-	13.8
	64°	126.1	8712	154.8	88.9	112.8	126.1	14.5
	67°	130.9	8774	160.8	78.2	102.1	128.0	14.9
	70°	137.1	8826	167.3	62.2	86.1	112.1	15.5
	73°	143.4	8888	173.8	-	70.3	96.2	16.1
75°	61°	116.7	9388	148.7	97.3	120.6	-	12.4
	64°	122.2	9445	154.4	86.8	110.1	122.2	12.9
	67°	127.8	9512	160.3	76.3	99.7	125.0	13.4
	70°	133.9	9569	166.6	60.8	84.1	109.5	14.0
	73°	140.1	9635	173.0	-	68.7	94.0	14.5
85°	61°	111.3	10116	145.9	92.8	115.1	-	11.0
	64°	116.6	10178	151.3	82.8	105.1	116.6	11.5
	67°	<b>122.0</b>	<b>10250</b>	<b>156.9</b>	72.8	<b>95.1</b>	119.3	<b>11.9</b>
	70°	127.8	10311	163.0	58.0	80.3	104.4	12.4
	73°	133.7	10383	169.1	-	65.5	89.7	12.9
95°	61°	101.5	10835	138.5	84.7	105.0	-	9.4
	64°	106.3	10900	143.5	75.5	95.8	106.3	9.8
	67°	111.2	10977	148.7	66.4	86.7	108.8	10.1
	70°	116.6	11043	154.3	52.9	73.2	95.2	10.6
	73°	121.9	11120	159.9	-	59.7	81.8	11.0



### HEATING

Entering Water Temp.	Dry Bulb	Heating Capacity BTUH	Heat Of Absorption BTUH	Power Input Watts	COP
55°	60°	147.7	113.9	9895	4.4
	70°	139.4	104.9	10097	4.0
	80°	131.0	95.8	10298	3.7
70°	60°	180.2	142.3	11093	4.8
	70°	<b>170.0</b>	<b>131.3</b>	<b>11320</b>	<b>4.4</b>
80°	80°	159.8	120.3	11546	4.1
	60°	191.0	151.7	11515	4.9
	70°	180.2	140.0	11750	4.5
	80°	169.3	128.4	11985	4.1

### CONDENSER WATER FLOW

Cooling Cycle Design ΔT	Water Flow GPM	Pressure Drop (Ft. of Hd.)
8°	39.2	14.5
10°	<b>31.4</b>	<b>9.7</b>
12°	26.2	7.0
14°	22.4	5.3
16°	19.6	4.2

BOLD DATA ARE AT ARI STANDARD 320 RATING CONDITIONS.



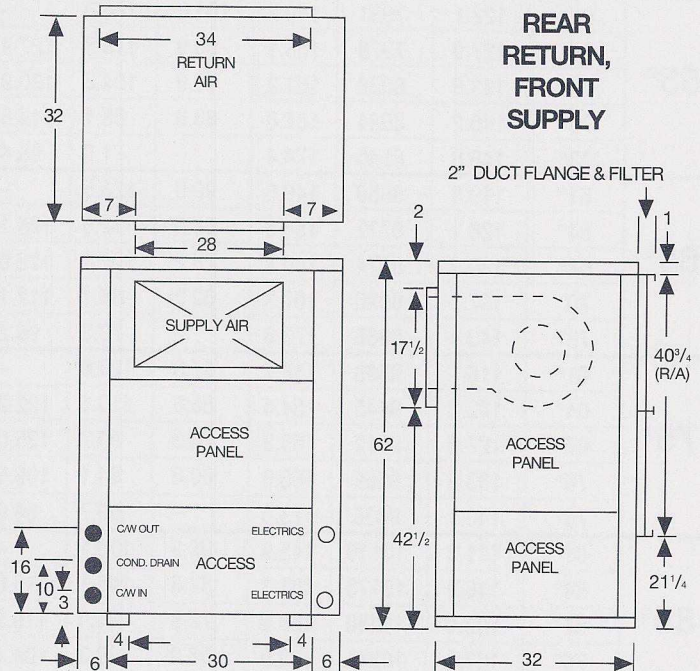
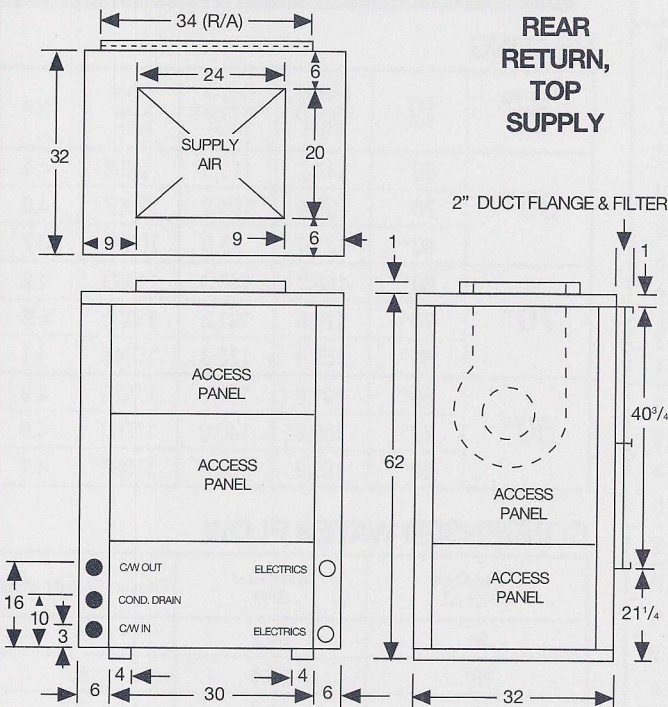
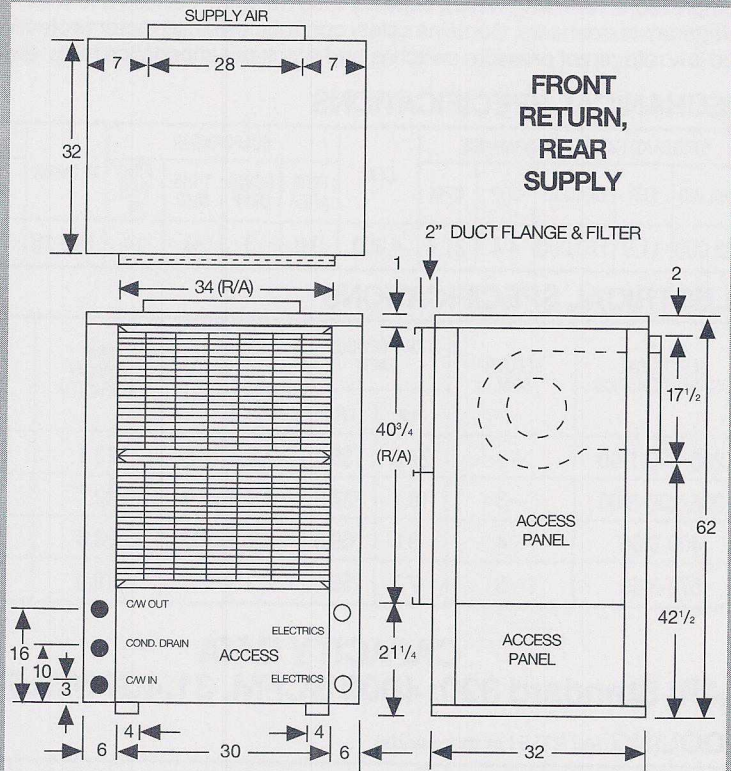
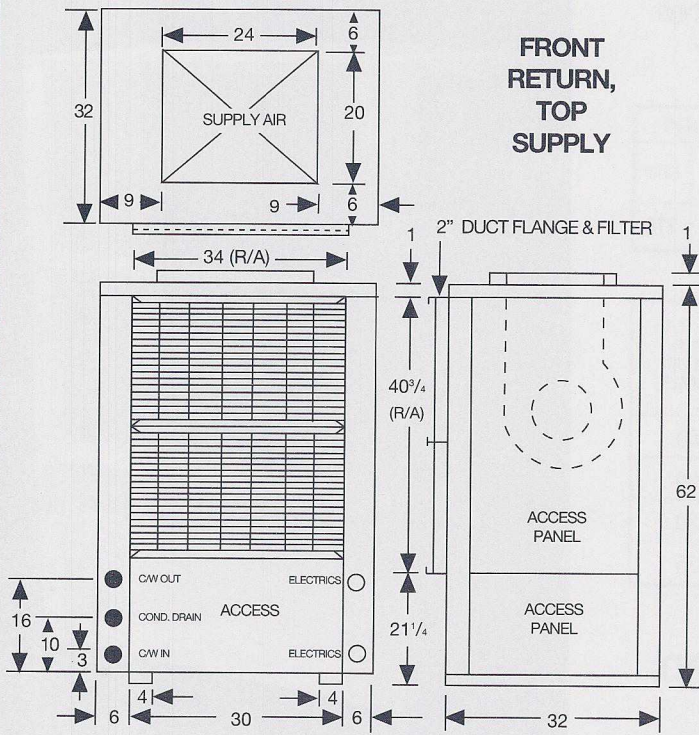
# HE122

HIGH EFFICIENCY

## PHYSICAL CHARACTERISTICS

**BLOWER PERFORMANCE Ratings are with standard motor pulley drives**

AVAILABLE EXTERNAL STATIC PRESSURE (In. H <sub>2</sub> O including allowance for wet coil and filter)												
MOTOR PULLEY	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
CLOSED	-	-	-	-	-	-	-	-	-	-	4150	3830
1/2 OPEN	-	-	-	-	4660	4490	4240	3950	3600	3000	-	-
OPEN	4680	4490	4270	4000	3700	3370	-	-	-	-	-	-



a HARROW company

**FHP MANUFACTURING**

601 N.W. 65th COURT  
 FT. LAUDERDALE, FL 33309  
 PHONE: (305) 776-5471  
 FAX: 776-5529

CONDENSER WATER CONNECTIONS: 1.5" F.P.T.  
 CONDENSATE DRAIN CONNECTION: .75" F.P.T.  
 FILTER SIZES: VT, 19" X 35" X 1" QTY: (2)

As a result of continuing research and development, all ratings and specifications are subject to change without notice. Rev. 9/94



# SPECIFICATION DATA SHEET

FLORIDA HEAT PUMP HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# HE140

HIGH EFFICIENCY

Dual circuits feature 2-stage operation. Complete package includes 2 each compressors, reversing valves, capillary tube metering devices and water-to-refrigerant condensers. Contains safety controls: overload motor protection, high and low refrigerant pressure switches and a lock-out impedance relay. Beige.

## MECHANICAL SPECIFICATIONS

STANDARD RATED PERFORMANCE					CFM	EVAPORATOR				BLOWER	WEIGHT	
COOLING	EER	HEATING	COP	GPM		FACE AREA	ROWS DEEP	TUBE SIZE	FINS PER IN.		NET	SHIP
140,000	10.7	180,000	4.0	37.5	5000	10.83	3	3/4	14	15 X 15	651	687

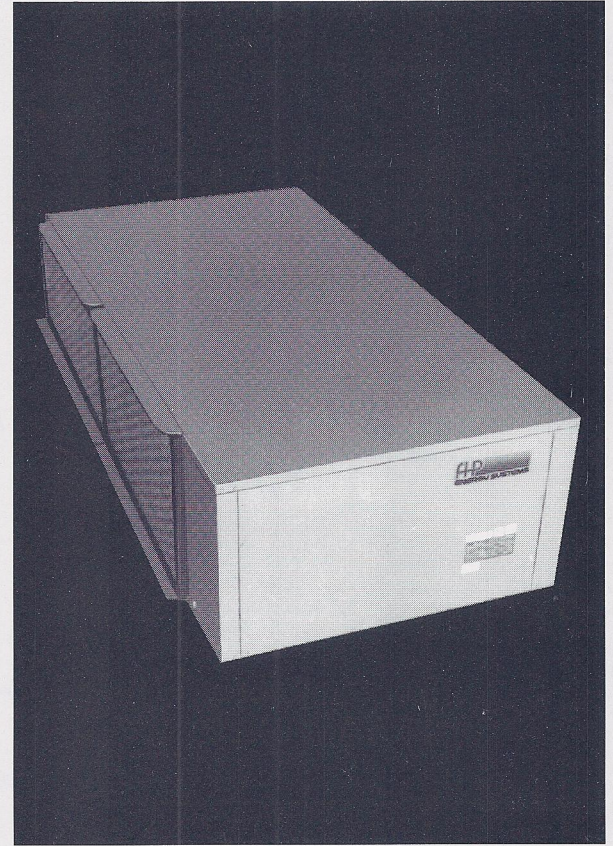
## ELECTRICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	ELECTR. SYM.	COMPRESSOR EACH		BLOWER		MIN. CIRCUIT AMPACITY	FUSE (T/D) HACR CIRCUIT BREAKER
		RLA	LRA	NPA	H.P.		
208/230-3-60	-3	21.4	130	9.2	3.0	57.8	70
460-3-60	-4	9.6	65	4.6	3.0	26.2	35
575-3-60	-5	7.9	52	3.7	3.0	21.5	25
-	-	-	-	-	-	-	-

## CAPACITY DATA – Tested in accordance with ARI Standard 320: 5000 SCFM, 37.5GPM/10.4' P.D.

### COOLING (All BTUH in thousands)

Entering Water Temp.	Ent. Air Wet Bulb Temp.	Total Capacity BTUH	Watts Input	Heat Rejection BTUH	Sensible Capacity BTUH Ent. Air Dry Bulb °F			EER
					75°	80°	85°	
55°	61°	140.2	10125	174.7	116.9	140.2	-	13.8
	64°	146.8	10186	181.5	104.3	132.3	146.8	14.4
	67°	153.5	10258	188.5	91.7	119.7	146.6	15.0
	70°	160.9	10320	196.1	73.0	101.1	131.5	15.6
	73°	168.3	10392	203.7	-	82.5	112.9	16.2
65°	61°	137.1	11055	174.8	114.3	137.1	-	12.4
	64°	143.6	11122	181.5	102.0	129.4	143.6	12.9
	67°	150.2	11200	188.4	89.7	117.1	143.4	13.4
	70°	157.4	11267	195.8	71.4	98.8	128.6	14.0
	73°	164.6	11346	203.3	-	80.7	110.4	14.5
75°	61°	133.9	11985	174.8	111.6	133.9	-	11.2
	64°	140.2	12057	181.4	99.6	126.4	140.2	11.6
	67°	146.7	12142	188.1	87.6	114.4	140.0	12.1
	70°	153.7	12215	195.4	69.8	96.5	125.6	12.6
	73°	160.8	12300	202.7	-	78.8	107.9	13.1
85°	61°	127.8	12914	171.9	106.5	127.8	-	9.9
	64°	133.8	12993	178.1	95.1	120.6	133.8	10.3
	67°	140.0	13085	184.6	83.6	109.2	133.6	10.7
	70°	146.7	13163	191.6	66.1	92.1	119.9	11.1
	73°	153.4	13255	198.6	-	75.2	102.9	11.6
95°	61°	116.5	13831	163.7	97.2	116.5	-	8.4
	64°	122.0	13915	169.5	86.7	110.0	110.0	8.8
	67°	127.6	14014	175.5	76.2	99.5	109.8	9.1
	70°	133.8	14098	181.9	61.7	84.0	109.3	9.5
	73°	139.9	14196	188.3	-	68.6	93.9	9.9



### HEATING

Entering Water Temp.	Entering Air Temp.	Heating Capacity BTUH	Heat Of Absorption BTUH	Power Input Watts	COP
55°	60°	156.4	117.1	11530	4.0
	70°	147.6	107.4	11765	3.7
	80°	138.7	97.7	12000	3.4
70°	60°	190.8	146.6	12926	4.3
	70°	180.0	134.9	13190	4.0
	80°	169.2	123.2	13453	3.7
80°	60°	202.2	156.4	13417	4.4
	70°	190.8	144.0	13691	4.1
	80°	179.3	131.6	13965	3.8

### CONDENSER WATER FLOW

Cooling Cycle Design ΔT	GPM	P.D. (Ft. of Hd.)
8°	42.4	12.7
10°	37.5	10.4
12°	31.9	7.9
14°	27.0	5.8
16°	22.4	4.2



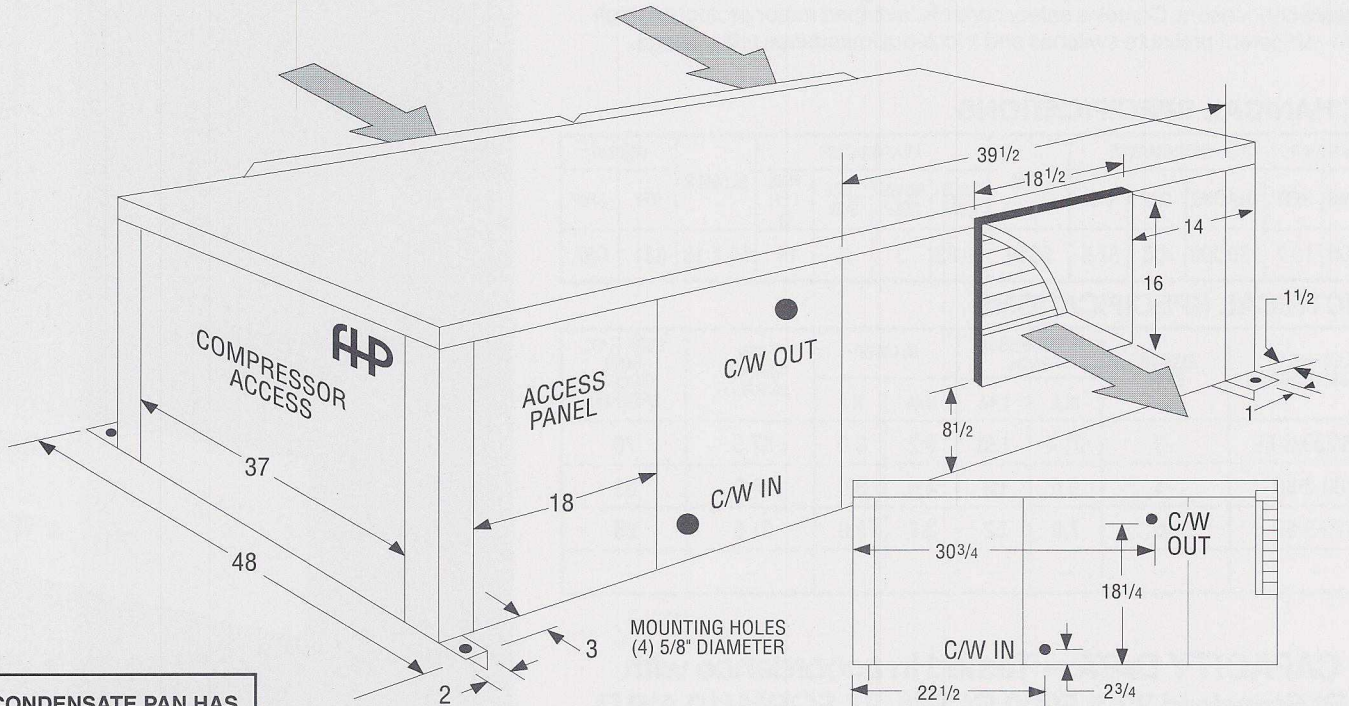
# HE140

HIGH EFFICIENCY

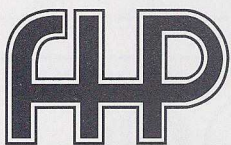
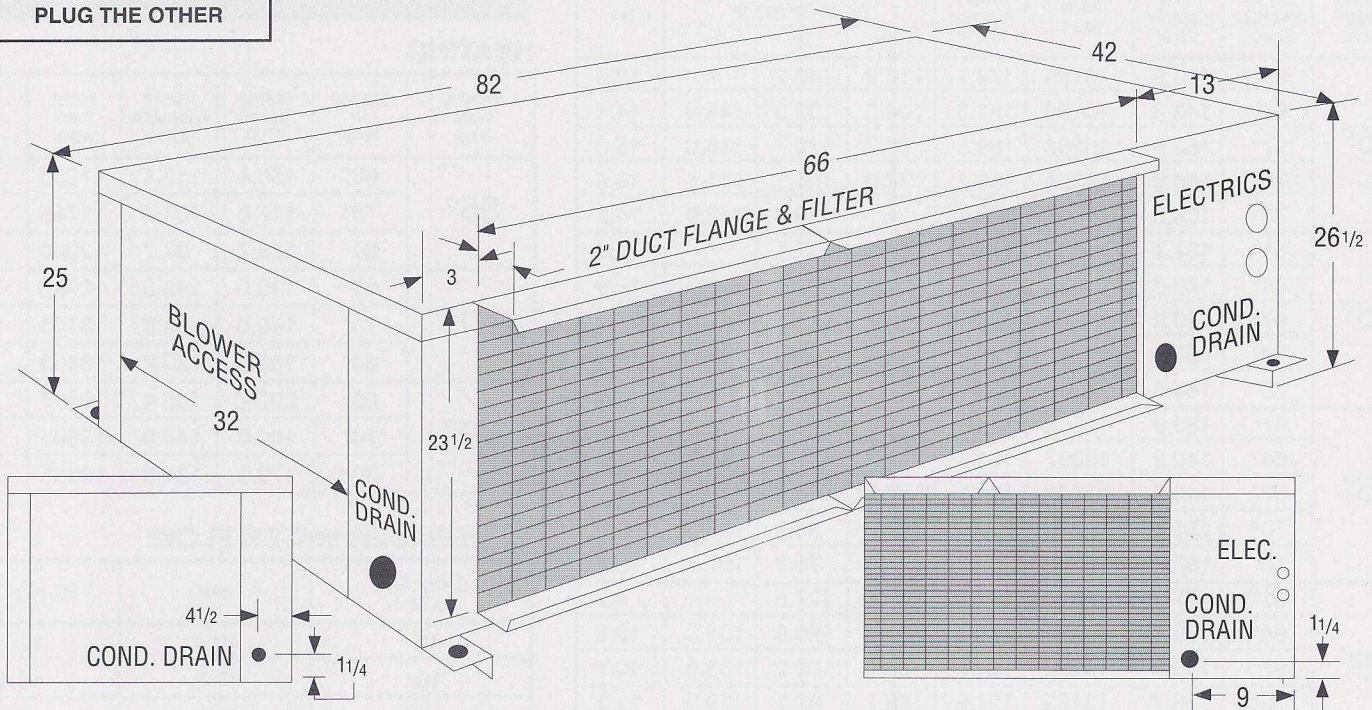
## PHYSICAL CHARACTERISTICS

### BLOWER PERFORMANCE Ratings are with standard motor pulley drives

AVAILABLE EXTERNAL STATIC PRESSURE (In. H2O including allowance for wet coil and filter)												
MOTOR PULLEY	.10	.20	.30	.40	.50	.60	.70	.80	.90	1.0	1.1	1.2
CLOSED	-	-	-	-	-	-	-	-	5300	5020	4750	4410
1/2 OPEN	-	-	-	5280	5080	4850	4610	4350	4050	3680	-	-
OPEN	5050	4820	4580	4300	4000	3680	-	-	-	-	-	-



CONDENSATE PAN HAS (2) DRAIN CONNECTIONS. USE ONE AT LOW END OF UNIT PLUG THE OTHER



a HARROW company

FHP MANUFACTURING  
601 N.W. 65th COURT  
FT. LAUDERDALE, FL 33309  
PHONE: (305) 776-5471  
FAX: (305) 776-5529

CONDENSER WATER CONNECTIONS: 1.50" F.P.T.  
CONDENSATE DRAIN CONNECTION: 0.75" F.P.T.  
FILTER SIZE: HZ 24" X 30" X 1" QTY. (2)

As a result of continuing research and development, all ratings and specifications are subject to change without notice.

Rev. 10/94



# SPECIFICATION DATA SHEET

# HE150

HIGH EFFICIENCY

## FLORIDA HEAT PUMP HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

Dual circuits feature 2-stage operation. Complete package includes 2 each compressors, reversing valves, expansion valve metering devices and water-to-refrigerant condensers. Contains safety controls: overload motor protection, high and low refrigerant pressure switches and a lock-out impedance relay. Beige color.

### MECHANICAL SPECIFICATIONS

STANDARD RATED PERFORMANCE					CFM	EVAPORATOR				BLOWER, EACH	WEIGHT	
COOLING MBH	EER	HEATING MBH	COP	GPM		FACE AREA	ROWS DEEP	TUBE SIZE	FINS PER IN.		NET	SHIP
149.0	13.3	182.0	4.9	37.5	5000	14.0	3	3/8	14	12 X 12	1019	1109

### ELECTRICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	ELECTR. SYM.	COMPRESSOR EACH		BLOWER, EACH		MIN. CIRCUIT AMPACITY	FUSE (T/D) HACR CIRCUIT BREAKER
		RLA	LRA	NPA	HP		
208/230-3-60	-3	17.3	150	5.2	1.5	49.3	60
460-3-60	-4	9.6	73	2.6	1.5	26.8	35
575-3-60	-5	7.1	62	2.0	1.5	20.0	25
-	-	-	-	-	-	-	-

### CAPACITY DATA – Tested in accordance with ARI Standard 320: 5000 SCFM, 37.5GPM/13.2' P.D.

#### COOLING (All BTUH in thousands)

Entering Water Temp.	Ent. Air Wet Bulb Temp.	Total Capacity BTUH	Watts Input	Heat Rejection BTUH	Sensible Capacity BTUH Ent. Air Dry Bulb °F			EER
					75°	80°	85°	
55°	61°	149233	8669	178820	124433	154267	-	17.2
	64°	156261	8722	186028	111047	140880	156261	17.9
	67°	163453	8783	193430	97660	127493	159877	18.6
	70°	171299	8836	201456	77771	107604	139988	19.4
	73°	179144	8897	209511	-	87843	120226	20.1
65°	61°	145968	9465	178272	121711	150892	-	15.4
	64°	152842	9523	185343	108617	137798	152842	16.0
	67°	159877	9590	192607	95523	124704	156379	16.7
	70°	167551	9647	200477	76069	105250	136925	17.4
	73°	175225	9714	208381	-	85921	117596	18.0
75°	61°	142567	10261	177588	118875	147376	-	13.9
	64°	149281	10324	184516	106087	134587	149281	14.5
	67°	156152	10396	191635	93298	121799	152735	15.0
	70°	163647	10459	199343	74297	102798	133735	15.6
	73°	171143	10532	207087	-	83919	114856	16.2
85°	61°	136037	11057	173776	113431	140626	-	12.3
	64°	142666	11125	180412	101228	128423	142666	12.8
	67°	149000	11203	187236	89025	116220	145740	13.3
	70°	156152	11270	194617	70894	98090	127610	13.9
	73°	163304	11349	202037	-	80076	109595	14.4
95°	61°	124066	11842	164484	103449	128251	-	10.5
	64°	129909	11914	170573	92320	117122	129909	10.9
	67°	135888	11998	176839	81190	105993	132915	11.3
	70°	142411	12070	183607	61656	89458	116380	11.8
	73°	148933	12154	190416	-	73029	99951	12.3

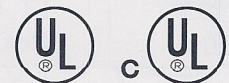


### HEATING

Entering Water Temp.	Dry Bulb	Heating Capacity BTUH	Heat of Absorption BTUH	Power Input Watts	COP
55°	60°	158194	125726	9513	4.9
	70°	149240	116109	9707	4.5
	80°	140286	106492	9902	4.2
70°	60°	192920	156520	10665	5.3
	70°	182000	144857	10883	4.9
	80°	171080	133194	11100	4.5
80°	60°	204495	166712	11070	5.4
	70°	192920	154366	11296	5.0
	80°	181345	142019	11522	4.6

### CONDENSER WATER FLOW

Cooling Cycle Design ΔT	Water Flow GPM	Pressure Drop (Ft. of Hd.)
8°	46.8	19.3
10°	37.5	13.2
12°	31.2	9.7
14°	26.7	7.5
16°	23.4	6.1



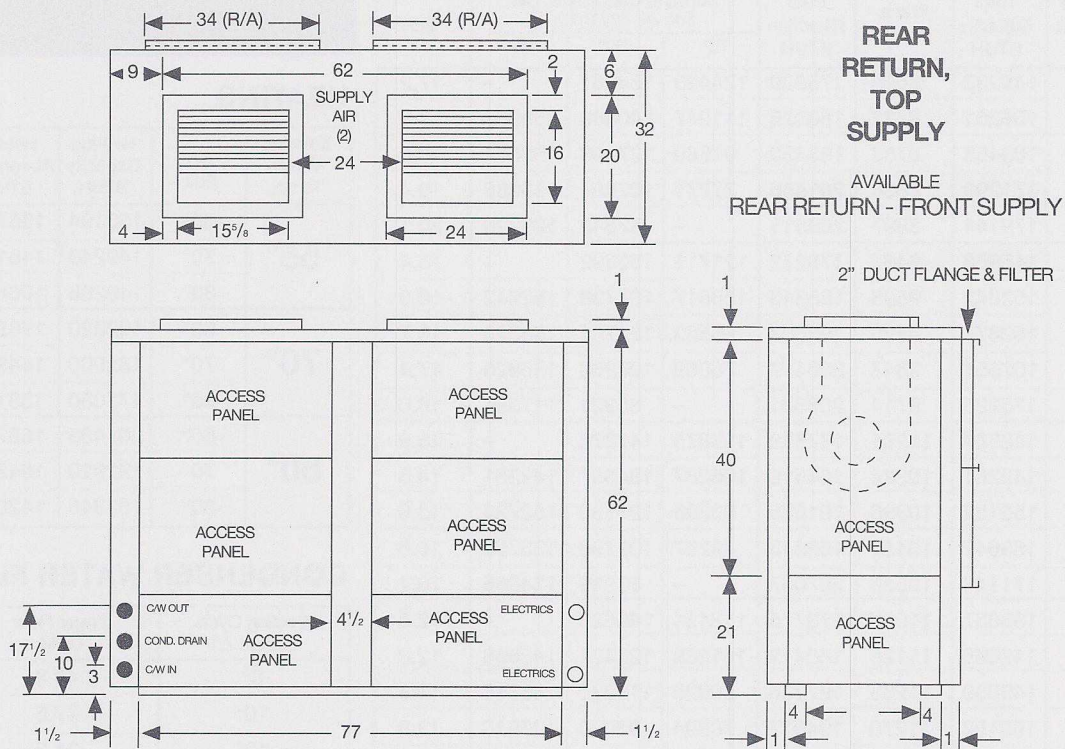
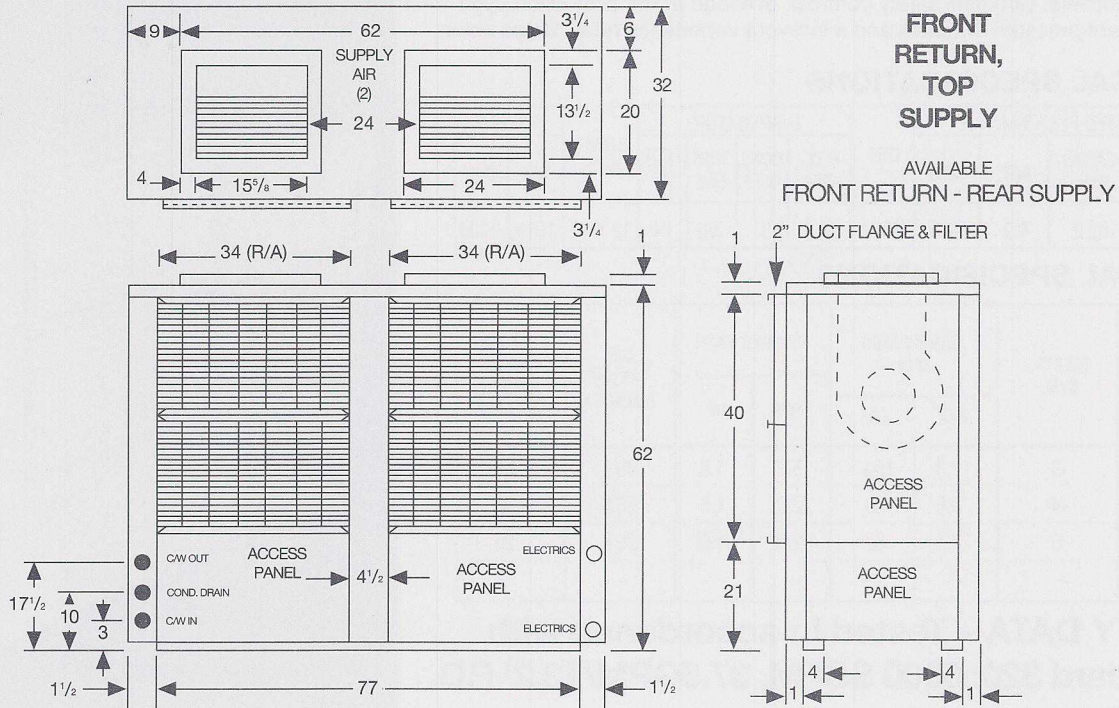
# HE150

HIGH EFFICIENCY

## PHYSICAL CHARACTERISTICS

### BLOWER PERFORMANCE Ratings are with standard motor pulley drives

AVAILABLE EXTERNAL STATIC PRESSURE (In. H <sub>2</sub> O including allowance for wet coil and filter)												
MOTOR PULLEY	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
CLOSED	-	-	-	-	-	-	7120	6920	6530	6080	5660	5120
1/2 OPEN	-	-	-	6860	6530	6120	5780	5380	4880	4090	-	-
OPEN	6670	6300	5880	5430	4970	4340	3750	-	-	-	-	-



### FHP MANUFACTURING

601 N.W. 65th COURT  
 FT. LAUDERDALE, FL 33309  
 PHONE: (305) 776-5471  
 FAX: 776-5529

CONDENSER WATER CONNECTIONS: 1.5" F.P.T.  
 CONDENSATE DRAIN CONNECTION: 1.25" F.P.T.  
 FILTER SIZES: VT, 19" X 35" X 1" QTY: (4)

As a result of continuing research and development, all ratings and specifications are subject to change without notice.

Rev. 10/94





# SPECIFICATION DATA SHEET

FLORIDA HEAT PUMP HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# HE170

HIGH EFFICIENCY

Dual circuits feature 2-stage operation. Complete package includes 2 each compressors, reversing valves, expansion valve metering devices and water-to-refrigerant condensers. Contains safety controls: overload motor protection, high and low refrigerant pressure switches and a lock-out impedance relay. Beige color.

## MECHANICAL SPECIFICATIONS

STANDARD RATED PERFORMANCE					CFM	EVAPORATOR				BLOWER, EACH	WEIGHT	
COOLING MBH	EER	HEATING MBH	COP	GPM		FACE AREA	ROWS DEEP	TUBE SIZE	FINS PER IN.		NET	SHIP
170.0	12.3	200.0	4.4	43.4	6000	14.0	3	3/8	14	12 X 12	1006	1096

## ELECTRICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	ELECTR. SYM.	COMPRESSOR, EACH		BLOWER, EACH		MIN. CIRCUIT AMPACITY	FUSE (T/D) HACR CIRCUIT BREAKER
		RLA	LRA	NPA	HP		
208/230-3-60	-3	21.8	158	6.4	2.0	61.9	80
460-3-60	-4	10.3	79	3.2	2.0	29.6	35
575-3-60	-5	9.0	65	2.5	2.0	25.3	30
-	-	-	-	-	-	-	-

**CAPACITY DATA – Tested in accordance with ARI Standard 320: 6000 SCFM, 43.4GPM/16.9' P.D.**

## COOLING (All BTUH in thousands)

Entering Water Temp.	Ent. Air Wet Bulb Temp.	Total Capacity BTUH	Watts Input	Heat Rejection BTUH	Sensible Capacity BTUH Ent. Air Dry Bulb °F			EER
					75°	80°	85°	
55°	61°	170265	10695	206767	141971	176009	-	15.9
	64°	178284	10760	215008	126698	160736	178284	16.6
	67°	186490	10836	223472	111424	145462	182410	17.2
	70°	195442	10901	232646	88732	122770	159717	17.9
	73°	204393	10977	241856	-	100223	137171	18.6
65°	61°	166540	11677	206394	138865	172159	-	14.3
	64°	174384	11748	214480	123926	157219	174384	14.8
	67°	182410	11831	222789	108986	142280	178419	15.4
	70°	191166	11902	231787	86791	120084	156223	16.1
	73°	199921	11985	240825	-	98031	134170	16.7
75°	61°	162660	12659	205866	135630	168147	-	12.8
	64°	170321	12736	213790	121038	153556	170321	13.4
	67°	178160	12826	221935	106447	138965	174262	13.9
	70°	186712	12903	230750	84769	117286	152583	14.5
	73°	195263	12993	239608	-	95747	131044	15.0
85°	61°	155210	13641	201768	129418	160446	-	11.4
	64°	162520	13724	209361	115495	146523	162520	11.8
	67°	170000	13821	217172	101572	132600	166280	12.3
	70°	178160	13904	225615	80886	111914	145595	12.8
	73°	186320	14001	234105	-	91361	125042	13.3
95°	61°	141552	14610	191415	118029	146327	-	9.7
	64°	148218	14699	198385	105331	133629	148218	10.1
	67°	155040	14802	205561	92633	120931	151648	10.5
	70°	162482	14891	213306	73768	102066	132782	10.9
	73°	169924	14995	221101	-	83322	114038	11.3

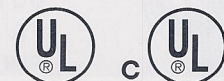


## HEATING

Entering Water Temp.	Dry Bulb	Heating Capacity BTUH	Heat of Absorption BTUH	Power Input Watts	COP
55°	60°	173840	134105	11642	4.4
	70°	164000	123455	11880	4.0
	80°	154160	112804	12117	3.7
70°	60°	212000	167455	13052	4.8
	70°	200000	154545	13318	4.4
	80°	188000	141636	13584	4.1
80°	60°	224720	178482	13548	4.9
	70°	212000	164818	13824	4.5
	80°	199280	151155	14101	4.1

## CONDENSER WATER FLOW

Cooling Cycle Design ΔT	Water Flow GPM	Pressure Drop (Ft. of Hd.)
8°	54.3	26.3
10°	43.4	16.9
12°	36.2	12.4
14°	31.0	9.7
16°	27.1	7.9



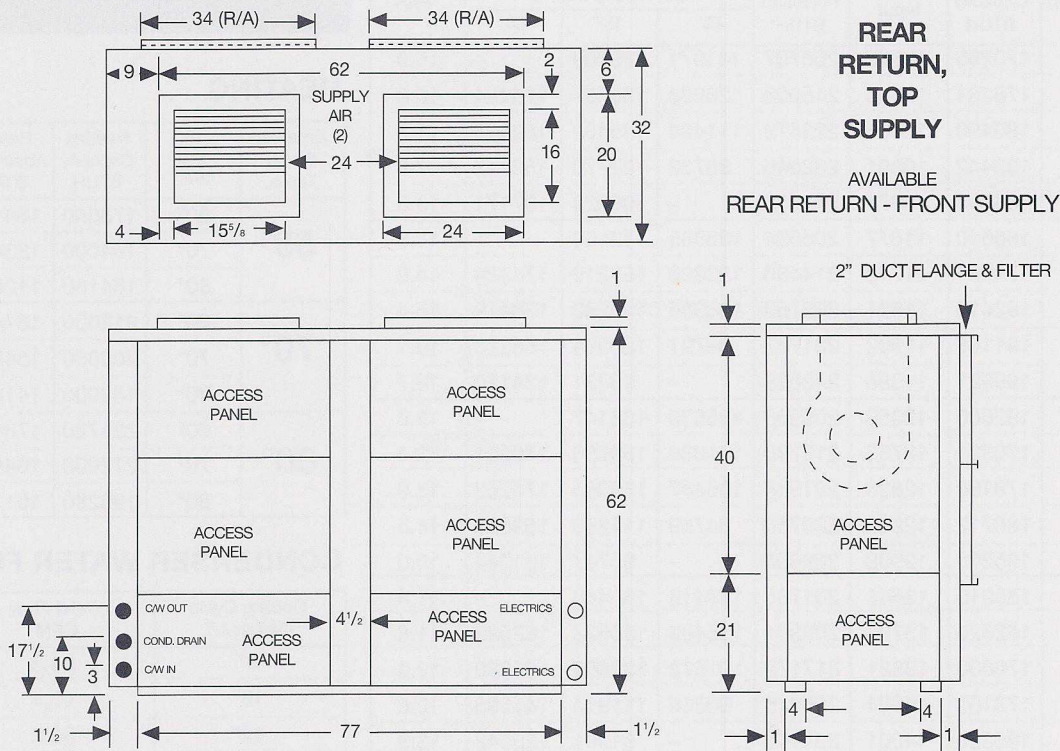
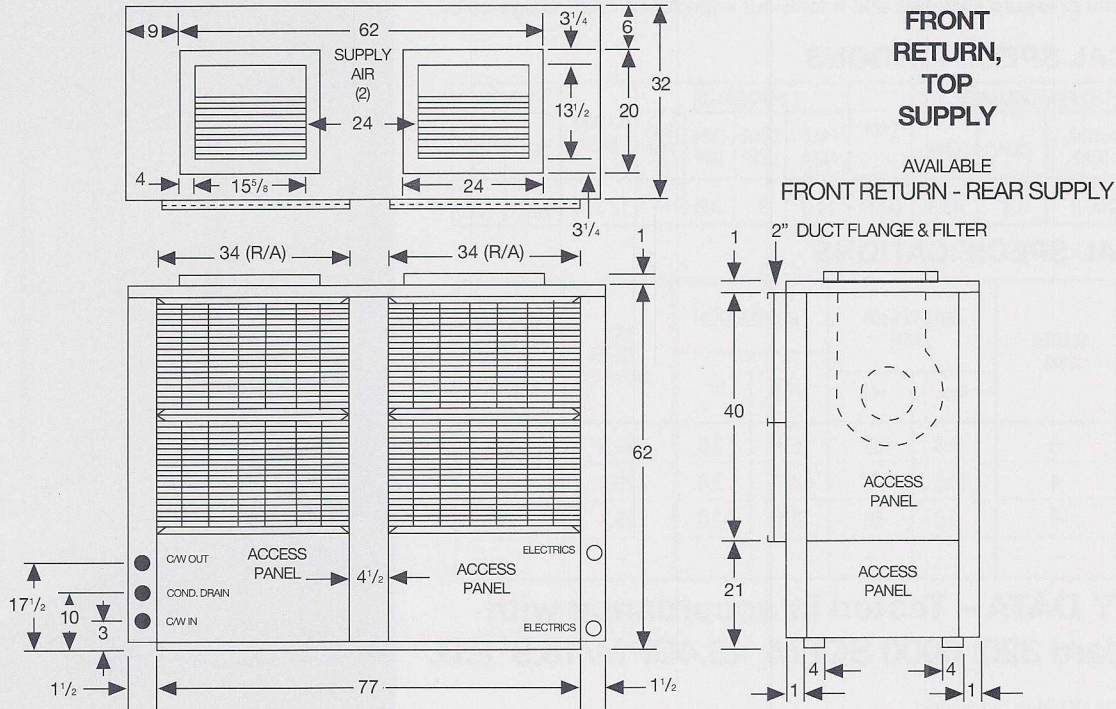
# HE170

HIGH EFFICIENCY

## PHYSICAL CHARACTERISTICS

### BLOWER PERFORMANCE Ratings are with standard motor pulley drives

AVAILABLE EXTERNAL STATIC PRESSURE (In. H <sub>2</sub> O including allowance for wet coil and filter)												
MOTOR PULLEY	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
CLOSED	-	-	-	-	-	-	7200	6840	6460	6050	5610	5140
1/2 OPEN	-	-	7200	6930	6580	6200	5790	5360	4870	-	-	-
OPEN	6720	6350	5970	5540	5050	4510	-	-	-	-	-	-



**FHP MANUFACTURING**  
 601 N.W. 65th COURT  
 FT. LAUDERDALE, FL 33309  
 PHONE: (305) 776-5471  
 FAX: 776-5529

CONDENSER WATER CONNECTIONS: 1.5" F.P.T.  
 CONDENSATE DRAIN CONNECTION: 1.25" F.P.T.  
 FILTER SIZES: VT, 19" X 35" X 1" QTY: (4)

As a result of continuing research and development, all ratings and specifications are subject to change without notice.

Rev. 10/94

# HP SPECIFICATION DATA SHEET

FLORIDA HEAT PUMP HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# HE214

HIGH EFFICIENCY

Dual circuits feature 2-stage operation. Complete package includes 2 each compressors, reversing valves, expansion valve metering devices and water-to-refrigerant condensers. Contains safety controls: overload motor protection, high and low refrigerant pressure switches and a lock-out impedance relay. Beige.

## MECHANICAL SPECIFICATIONS

STANDARD RATED PERFORMANCE					CFM	EVAPORATOR				BLOWER	WEIGHT	
COOLING	EER	HEATING	COP	GPM		FACE AREA	ROWS DEEP	TUBE SIZE	FINS PER IN.		NET	SHIP
213,000	12.5	274,000	4.6	54.2	7000	18.1	3	3/8	14	15x15	1170	1260

## ELECTRICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	ELECTR. SYM.	COMPRESSOR		BLOWER		MIN. CIRCUIT AMPACITY	FUSE (T/D) HACR CIRCUIT BREAKER
		RLA	LRA	NPA	H.P.		
208/230-3-60	-3	24.1	164.0	5.2	1.5	64.7	80
460-3-60	-4	10.7	79.0	2.6	1.5	29.3	35
575-3-60	-5	8.4	63.0	2.0	1.5	22.9	30
-	-	-	-	-	-	-	-

## CAPACITY DATA - Tested in accordance with ARI Standard 320: 7000 SCFM, 54.2GPM/17.1' P.D.

### COOLING (All BTUH in thousands)

Entering Water Temp.	Ent. Air Wet Bulb Temp.	Total Capacity BTUH	Watts Input	Heat Rejection BTUH	Sensible Capacity BTUH Ent. Air Dry Bulb °F			EER
					75°	80°	85°	
<b>55°</b>	61°	213.3	13170	258.2	177.8	213.3	-	16.2
	64°	223.3	13250	268.6	158.7	201.3	223.3	16.9
	67°	233.6	13344	279.2	139.6	182.2	228.5	17.5
	70°	244.8	13424	290.6	111.1	153.8	200.1	18.2
	73°	256.0	13517	302.2	-	125.5	171.8	18.9
<b>65°</b>	61°	208.6	14379	257.7	173.9	208.6	-	14.5
	64°	218.4	14467	267.8	155.2	196.9	218.4	15.1
	67°	228.5	14569	278.2	128.4	178.2	223.5	15.7
	70°	239.5	14656	289.5	102.3	150.4	195.7	16.3
	73°	250.4	14758	300.8	-	122.8	168.1	17.0
<b>75°</b>	61°	203.8	15589	257.0	169.9	203.8	-	13.1
	64°	213.4	15684	266.9	151.6	192.3	213.4	13.6
	67°	223.2	15794	277.1	133.3	174.1	218.3	14.1
	70°	233.9	15889	288.1	106.2	146.9	191.1	14.7
	73°	244.6	16000	299.2	-	119.9	164.1	15.3
<b>85°</b>	61°	194.4	16799	251.8	162.1	194.4	-	11.6
	64°	203.6	16901	261.3	144.7	183.5	203.6	12.0
	67°	213.0	17020	271.0	127.2	166.1	208.3	12.5
	70°	223.2	17122	281.6	101.3	140.2	182.4	13.0
	73°	233.4	17241	292.2	-	114.4	156.6	13.5
<b>95°</b>	61°	177.3	17991	238.7	147.8	177.3	-	9.9
	64°	185.7	18101	247.4	131.9	167.4	185.7	10.3
	67°	194.2	18228	256.4	116.0	151.5	190.0	10.7
	70°	203.5	18338	266.1	92.4	127.8	166.3	11.1
	73°	212.9	18465	275.9	-	104.3	142.8	11.5

BOLD DATA ARE AT ARI STANDARD 320 RATING CONDITIONS.



## HEATING

Entering Water Temp.	Entering Air Temp.	Heating Capacity BTUH	Heat of Absorption BTUH	Power Input Watts	COP
<b>55°</b>	60°	238.1	185.6	15394	4.5
	70°	224.6	171.0	15708	4.2
	80°	211.1	156.5	16022	3.9
<b>70°</b>	60°	290.4	231.5	17258	4.9
	70°	274.0	213.8	17610	4.6
	80°	257.5	196.2	17962	4.2
<b>80°</b>	60°	307.8	246.7	17914	5.0
	70°	290.4	228.0	18279	4.7
	80°	273.0	209.3	18645	4.3

## CONDENSER WATER FLOW

Cooling Cycle Design ΔT	GPM	P.D. (Ft. of Hd.)
8°	67.8	25.2
10°	54.2	17.1
12°	45.2	13.6
14°	38.7	10.1
16°	33.9	8.3



