



**MODEL HPAS 5 DS 290**

Heating Capacity	290.,200 BTUH	Cooling Capacity	242,200 BTUH
Condenser Water Flow	60 GPM	Evaporator Construction	Copper/Aluminum
Pressure Drop (cond.)	5.2 PSI	Cabinet Construction	Galvanized Steel
Entering Water Temp.	100 °F	Entering Wet Bulb Temp.	72.0°F
Leaving Water Temp.	109.67 °F	Water Pump—2 - 3/4 HP	460/3/60 - 1.7 Amp ea
COP	5.43	Cooling EER	15.61
Compressors	(2) SZ 125 Scroll	Condensers	Double Wall Vented
Voltage	460/60/3Ø	Construction (Cond.)	Tube-in-Tube
RLA/LRA	14.9/120 ea	Fan 2 - 3/4 HP	460/3/60 - 1.8 Amps ea
Control Voltage	24 Volts	Refrigerant Type	R-134A
Minimum Circuit Amp.	30 compressor ea.	Minimum Unit Amperage.	75 Amp.

**STANDARD FEATURES**

- Liquid Receiver
- Compressors Service Valves
- Liquid Line Sight Glass
- Insulated Compressor Compartment
- Time Delay for Compressors
- Single Phase Protection
- Five Year Compressor Warranty/One Yr. Parts
- Liquid Line Dryer
- Thermostatic Expansion Valves
- Hinged Control Panel
- Pre- Wired Mechanical Controls
- Insulated Suction Lines
- High Side Pressure Control
- Low Side Pressure Control

**Options**

- Micro-Processor Based Control System
- Painted Galvanize
- 304 or 316 Stainless Steel
- TechniCoat 10-1 Coated Evaporator Coil
- Refrigerant Pump Down Solenoid Valves
- Blower
- Warranty on all Parts & Labor 2 thru 5 Yr.

Note: In View of Continuous Product Improvements, design and specification are subject to change without Notice

Heat Harvester Energy Efficient Products  
 Manufactured by  
**H H Systems, Inc.**

<b>MODEL HPAS 5 DS 290</b>															
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
72 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	280,400	274,500	268,600	262,400	256,200	249,500	242,800	236,500	230,200	221,900	213,600	205,800	198,000	190,200	182,400
HMBTUH	314,189	310,132	306,382	302,332	298,521	294,210	290,207	286,603	283,409	278,215	273,396	269,077	264,758	260,440	274,210
WATTS	12,200	12,740	13,370	14,000	14,700	15,400	16,190	16,980	17,890	18,800	19,820	20,840	21,860	22,880	29,200
EER	22.98	21.55	20.09	18.74	17.43	16.2	15	13.93	12.87	11.8	10.78	9.88	9.06	8.31	6.25
COP	7.55	7.13	6.71	6.33	5.95	5.6	5.25	4.95	4.64	4.34	4.04	3.78	3.55	3.34	2.75
LV. WTR	80.48	85.34	90.22	95.08	99.95	104.81	109.68	114.56	119.45	124.28	129.12	133.97	138.83	143.68	149.14
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
67 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	256,000	250,600	245,200	239,400	233,600	227,400	221,200	215,000	208,800	201,400	194,000	186,700	179,400	172,100	164,800
HMBTUH	289,925	286,368	283,084	279,400	275,989	272,179	268,675	265,171	262,043	257,715	253,762	249,909	246,056	242,203	256,064
WATTS	12,240	12,780	13,400	14,020	14,720	15,420	16,210	17,000	17,900	18,800	19,810	20,820	21,830	22,840	29,040
EER	20.92	19.61	18.3	17.08	15.87	14.75	13.65	12.65	11.66	10.71	9.79	8.97	8.22	7.54	5.67
COP	6.94	6.57	6.19	5.84	5.49	5.17	4.86	4.57	4.29	4.02	3.75	3.52	3.3	3.11	2.58
LV. WTR	79.67	84.55	89.44	94.32	99.2	104.08	108.96	113.84	118.74	123.59	128.46	133.33	138.21	143.08	148.54
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
62 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	231,600	226,700	221,800	216,400	211,000	205,300	199,600	193,500	187,400	180,900	174,400	167,600	160,800	154,000	147,200
HMBTUH	265,662	262,605	259,787	256,469	253,458	250,147	247,143	243,739	240,677	237,215	234,128	230,741	227,354	223,967	237,918
WATTS	12,280	12,820	13,430	14,040	14,740	15,440	16,230	17,020	17,910	18,800	19,800	20,800	21,800	22,800	28,880
EER	18.86	17.68	16.52	15.41	14.31	13.3	12.3	11.37	10.46	9.62	8.81	8.06	7.38	6.75	5.1
COP	6.34	6	5.67	5.35	5.04	4.75	4.46	4.2	3.94	3.7	3.46	3.25	3.06	2.88	2.41
LV. WTR	78.86	83.76	88.66	93.55	98.45	103.34	108.24	113.13	118.03	122.91	127.81	132.69	137.58	142.47	147.93
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
57 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	209,000	204,400	199,800	194,900	190,000	184,700	179,400	173,800	168,200	162,200	156,200	150,000	143,800	137,600	131,400
HMBTUH	243,096	240,305	237,787	234,969	232,458	229,547	226,943	224,039	221,477	218,515	215,893	213,072	210,251	207,430	221,708
WATTS	12,290	12,820	13,430	14,040	14,740	15,440	16,230	17,020	17,910	18,800	19,790	20,780	21,770	22,760	28,760
EER	17.01	15.94	14.88	13.88	12.89	11.96	11.05	10.21	9.39	8.63	7.89	7.22	6.61	6.05	4.57
COP	5.8	5.49	5.19	4.9	4.62	4.36	4.1	3.86	3.62	3.41	3.2	3	2.83	2.67	2.26
LV. WTR	78.11	83.01	87.93	92.84	97.75	102.65	107.57	112.47	117.39	122.29	127.2	132.11	137.01	141.92	147.39
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
52 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	188,000	183,800	179,600	175,000	170,400	165,600	160,800	155,600	150,400	164,900	179,400	153,700	128,000	102,300	76,600
HMBTUH	222,130	219,705	217,587	215,069	212,892	210,515	208,343	205,771	203,575	221,078	238,991	216,704	194,417	172,130	166,430
WATTS	12,300	12,820	13,430	14,040	14,750	15,460	16,230	17,000	17,880	18,760	19,760	20,760	21,760	22,760	28,620
EER	15.28	14.34	13.37	12.46	11.55	10.71	9.91	9.15	8.41	7.79	7.2	6.6	6.05	5.5	4.2
COP	5.29	5.02	4.75	4.49	4.23	3.99	3.76	3.55	3.34	3.15	2.96	2.78	2.62	2.47	2.1
LV. WTR	77.41	82.33	87.26	92.17	97.1	102.02	106.95	111.86	116.79	122.37	127.97	132.23	136.48	140.74	145.55
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
47 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	168,600	164,700	160,800	156,600	152,400	147,900	143,400	138,700	134,000	129,000	124,000	118,800	113,600	108,400	103,200
HMBTUH	202,662	200,537	198,718	196,600	194,755	192,610	190,772	188,735	187,038	185,041	183,420	181,599	179,778	177,957	192,484
WATTS	12,280	12,800	13,410	14,020	14,710	15,400	16,180	16,960	17,840	18,720	19,710	20,700	21,690	22,680	28,460
EER	13.73	12.87	11.99	11.17	10.36	9.6	8.86	8.18	7.51	6.89	6.29	5.74	5.24	4.78	3.63
COP	4.84	4.59	4.34	4.11	3.88	3.66	3.45	3.26	3.07	2.9	2.73	2.57	2.43	2.3	1.98
LV. WTR	76.76	81.69	86.63	91.56	96.49	101.42	106.36	111.29	116.24	121.17	126.12	131.06	136	140.93	146.42
WB TEMP.	ENTER WATER TEMP. F @ 60 GPM,														
42 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	150,600	147,000	143,400	139,600	135,800	131,700	127,600	123,200	118,800	114,300	109,800	105,000	100,200	95,400	90,600
HMBTUH	184,559	182,768	181,216	179,464	177,985	176,206	174,543	173,030	171,633	170,137	169,016	167,594	166,173	164,752	179,338
WATTS	12,250	12,780	13,380	13,980	14,660	15,340	16,000	16,900	17,780	18,660	19,650	20,640	21,630	22,620	28,300
EER	12.29	11.5	10.72	9.99	9.26	8.59	7.93	7.29	6.68	6.13	5.59	5.09	4.63	4.22	3.2
COP	4.41	4.19	3.97	3.76	3.56	3.37	3.2	3	2.83	2.67	2.52	2.38	2.25	2.13	1.86
LV. WTR	76.15	81.09	86.04	90.98	95.94	100.88	107.89	110.77	115.72	120.67	125.64	130.59	135.54	140.49	145.98