



MODEL HPAS 5 DS 430

Heating Capacity	428,800 BTUH	Cooling Capacity	360,200 BTUH
Condenser Water Flow	100 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.	108.58 °F	Water Pump—2 - 1 1/2 HP	460/3/60 - 2.4 Amp ea
COP	4.67	Cooling EER	15.92
Compressors	(2) SZ185 Maneurop Scroll	Condensers	Double Wall Vented
Voltage	460/60/3Ø	Construction (Cond.)	Tube-in-Tube
RLA/LRA	22.3/175 ea.	Fan 2 - 1 HP	460/3/60 - 1.8Amp ea.
Control Voltage	24 Volts	Refrigerant Type	R-134A
Minimum Circuit Amp.	30 compressor - ea.	Minimum Unit Amperage.	100 Amp.

STANDARD FEATURES

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

Options

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

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.

MODEL HPAS 5 DS 430															
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
72 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	415,600	402,300	398,400	384,100	380,200	365,900	360,200	346,700	339,400	323,400	317,200	301,600	293,600	281,800	270,000
HMBTUH	464,815	460,014	453,281	442,189	441,497	430,884	428,870	419,397	416,124	404,698	403,071	392,591	389,710	383,030	376,349
WATTS	17,420	19,910	19,080	20,020	20,960	22,040	23,120	24,300	25,480	26,820	28,160	29,660	31,160	32,660	34,160
EER	23.86	20.21	20.88	19.19	18.14	16.6	15.58	14.27	13.32	12.06	11.26	10.17	9.42	8.63	7.9
COP	7.82	6.77	6.96	6.47	6.17	5.73	5.44	5.06	4.79	4.42	4.19	3.88	3.66	3.44	3.23
LV. WTR	79.3	84.2	89.07	93.85	98.83	103.62	108.58	113.39	118.33	123.1	128.06	132.85	137.8	142.66	147.53
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
67 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	379,600	369,500	363,600	352,500	346,600	335,500	328,200	317,500	308,800	295,800	288,200	275,400	266,400	255,500	244,600
HMBTUH	428,815	427,111	418,413	410,487	407,761	400,279	396,597	389,924	385,251	376,790	373,730	365,981	362,032	356,184	350,335
WATTS	17,420	19,880	19,060	19,990	20,920	21,980	23,040	24,220	25,400	26,730	28,060	29,540	31,020	32,500	33,980
EER	21.79	18.59	19.08	17.63	16.57	15.26	14.24	13.11	12.16	11.07	10.27	9.32	8.59	7.86	7.2
COP	7.21	6.29	6.43	6.02	5.71	5.34	5.04	4.72	4.44	4.13	3.9	3.63	3.42	3.21	3.02
LV. WTR	78.58	83.55	88.37	93.21	98.16	103.01	107.94	112.8	117.71	122.54	127.48	132.32	137.24	142.13	147.01
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
62 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	343,600	336,700	328,800	320,900	313,000	305,100	296,200	288,300	278,200	268,200	259,200	249,200	239,200	229,200	219,200
HMBTUH	392,815	394,209	383,545	378,409	374,024	368,889	364,323	360,929	354,378	348,883	344,388	338,894	334,354	329,337	324,320
WATTS	17,420	19,850	19,040	19,850	20,880	21,690	22,960	24,280	25,320	26,640	27,960	29,280	30,880	32,340	33,800
EER	19.72	16.96	17.27	16.17	14.99	14.07	12.9	11.87	10.99	10.07	9.27	8.51	7.75	7.09	6.49
COP	6.61	5.82	5.9	5.59	5.25	4.98	4.65	4.36	4.1	3.84	3.61	3.39	3.17	2.98	2.81
LV. WTR	77.86	82.89	87.67	92.57	97.48	102.38	107.29	112.22	117.09	121.98	126.89	131.78	136.69	141.59	146.49
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
57 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	310,000	303,900	296,600	289,300	282,000	274,700	266,400	259,100	249,800	240,600	232,200	223,000	213,800	204,600	195,400
HMBTUH	359,079	361,170	351,140	346,570	342,820	338,250	334,250	331,421	325,637	320,908	316,979	312,250	308,477	304,225	299,974
WATTS	17,380	19,780	18,980	19,780	20,820	21,620	22,880	24,190	25,220	26,530	27,840	29,150	30,740	32,190	33,640
EER	17.84	15.36	15.63	14.63	13.54	12.71	11.64	10.71	9.9	9.07	8.34	7.65	6.96	6.36	5.81
COP	6.05	5.35	5.42	5.13	4.82	4.58	4.28	4.01	3.78	3.54	3.34	3.14	2.94	2.77	2.61
LV. WTR	77.18	82.23	87.03	91.93	96.86	101.77	106.69	111.63	116.52	121.42	126.34	131.25	136.17	141.09	146
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
52 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	279,000	273,300	266,600	259,900	253,200	246,500	238,800	230,400	223,600	215,200	207,400	199,000	190,600	182,200	173,800
HMBTUH	327,942	330,331	320,935	316,931	313,747	309,743	306,377	302,414	299,027	295,064	291,701	287,738	284,799	281,348	277,897
WATTS	17,340	19,710	18,920	19,710	20,740	21,530	22,800	24,100	25,100	26,400	27,700	29,000	30,600	32,050	33,500
EER	16.09	13.87	14.09	13.19	12.21	11.45	10.47	9.56	8.91	8.15	7.49	6.86	6.23	5.68	5.19
COP	5.54	4.91	4.97	4.71	4.43	4.22	3.94	3.68	3.49	3.27	3.09	2.91	2.73	2.57	2.43
LV. WTR	76.56	81.61	86.42	91.34	96.28	101.2	106.13	111.05	115.98	120.9	125.84	130.76	135.7	140.63	145.56
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
47 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	250,400	245,200	239,000	232,800	226,600	220,400	213,400	205,700	199,400	191,700	184,600	176,900	169,200	161,500	153,800
HMBTUH	299,138	302,026	293,130	289,626	286,874	283,370	280,568	277,271	274,418	271,121	268,423	265,126	262,853	260,067	257,282
WATTS	17,280	19,650	18,860	19,650	20,660	21,450	22,680	23,970	24,980	26,270	27,560	28,850	30,440	31,880	33,320
EER	14.49	12.48	12.67	11.85	10.97	10.28	9.41	8.58	7.98	7.3	6.7	6.13	5.56	5.07	4.62
COP	5.07	4.5	4.55	4.32	4.07	3.87	3.62	3.39	3.22	3.02	2.85	2.69	2.53	2.39	2.26
LV. WTR	75.99	81.04	85.86	90.79	95.74	100.67	105.61	110.55	115.49	120.42	125.37	130.3	135.26	140.2	145.15
WB TEMP.					ENTER WATER TEMP. F @ 100 GPM,										
42 DEG .	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
CMBTUH	224,000	219,000	213,400	207,800	202,200	196,600	190,000	183,000	177,000	170,000	163,600	156,600	149,600	142,600	135,600
HMBTUH	272,465	275,451	267,189	264,251	262,132	259,194	256,827	254,195	251,608	248,977	246,945	244,314	242,638	240,485	238,331
WATTS	17,200	19,540	18,760	19,540	20,560	21,340	22,580	23,860	24,860	26,140	27,420	28,700	30,260	31,680	33,100
EER	13.02	11.21	11.38	10.63	9.83	9.21	8.41	7.67	7.12	6.5	5.97	5.46	4.94	4.5	4.1
COP	4.64	4.13	4.17	3.96	3.74	3.56	3.33	3.12	2.97	2.79	2.64	2.49	2.35	2.22	2.11
LV. WTR	75.45	80.51	85.35	90.29	95.24	100.19	105.14	110.09	115.03	119.98	124.94	129.89	134.85	139.81	144.77