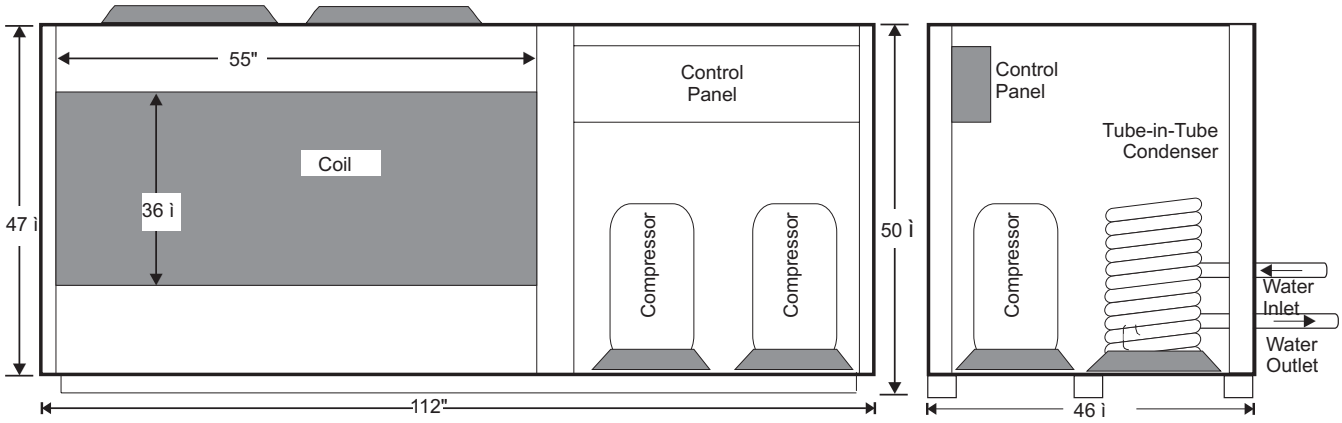
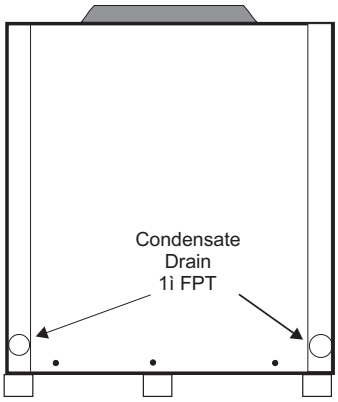
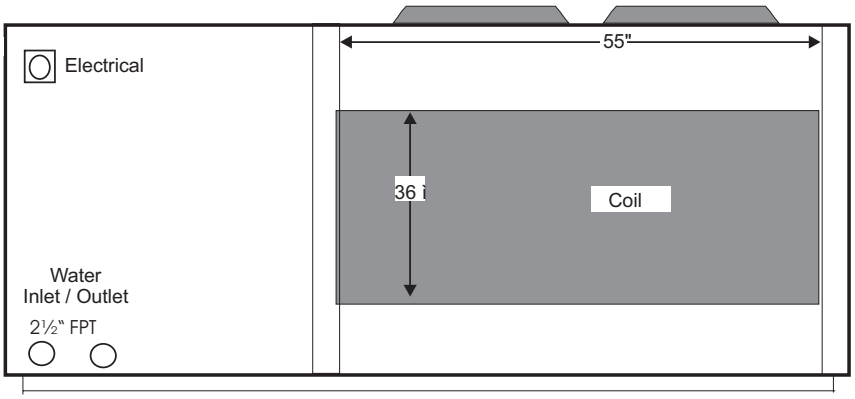




Left Side



Back View

MODEL HPAS 2 DS 613

Heating Capacity	613,100 BTUH
Condenser Water Flow	100 GPM
Pressure Drop (cond.)	5.2 PSI
Entering Water Temp.	100 °F
Leaving Water Temp.	112.27 °F
COP	5.59
Compressors	(2) SM 185 Maneurop Scroll
Voltage	460/60/3Ø
RLA/LRA	30.2/175 ea.
Control Voltage	24 Volts
Minimum Circuit Amp.	40 compressor ea.

Cooling Capacity	512,000 BTUH
Evaporator Construction	Copper/Aluminum
Cabinet Construction	Galvanized Steel
Entering Wet Bulb Temp.	72.0°F
Water Pump—2 - 1 HP	460/3/60 - 1.7 Amp ea.
Cooling EER	15.93
Condensers	Double Wall Vented
Construction (Cond.)	Tube-in-Tube
Fan 2 - 1 ½ HP	460/3/60 - 2..4 Amp ea.
Refrigerant Type	R-22
Minimum Unit Amperage.	100 Amp.

STANDARD FEATURES

Liquid Receiver
Compressors Service Valves
Liquid Line Sight Glass
Insulated Compressor Compartment
Compressors Adjustable Time Delay Relay
Single Phase/Voltage 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 Cabinet
304 or 316 Stainless Steel Cabinet
Refrigerant Pump Down Solenoid Valves
TechniCoat 10-1 Evaporator Coating
Blower
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 2 DS 613

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
72 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	583,200	572,000	560,800	549,000	537,200	524,600	512,000	498,500	485,000	470,900	456,800	441,800	426,800
HMBTUH	657,876	650,533	643,190	635,758	628,327	620,744	613,161	605,259	597,356	589,570	581,784	573,849	565,914
WATTS	24,380	25,510	26,640	27,920	29,200	30,670	32,140	33,780	35,420	37,270	39,120	41,190	43,260
EER	23.92	22.42	21.05	19.66	18.4	17.1	15.93	14.76	13.69	12.63	11.68	10.73	9.87
COP	7.91	7.47	7.07	6.67	6.3	5.93	5.59	5.25	4.94	4.63	4.36	4.08	3.83
LV. WTR	83.16	88.02	92.87	97.72	102.57	107.42	112.27	117.11	121.95	126.8	131.64	136.48	141.32

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
67 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	538,000	527,600	517,200	506,100	495,000	483,200	471,400	458,800	446,200	433,000	419,800	405,800	391,800
HMBTUH	612,267	605,724	599,180	592,449	585,718	578,901	572,084	565,081	558,078	551,158	544,238	537,269	530,300
WATTS	24,260	25,390	26,520	27,800	29,080	30,540	32,000	33,640	35,280	37,120	38,960	41,020	43,080
EER	22.18	20.78	19.5	18.21	17.02	15.82	14.73	13.64	12.65	11.66	10.78	9.89	9.09
COP	7.39	6.99	6.62	6.24	5.9	5.55	5.24	4.92	4.63	4.35	4.09	3.84	3.61
LV. WTR	82.25	87.12	91.99	96.85	101.72	106.58	111.45	116.31	121.17	126.03	130.89	135.75	140.61

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
62 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	492,800	483,200	473,600	463,200	452,800	441,800	430,800	419,100	407,400	395,100	382,800	369,800	356,800
HMBTUH	566,657	560,914	555,171	549,139	543,108	537,057	531,006	524,903	518,800	512,746	506,692	500,689	494,685
WATTS	24,140	25,270	26,400	27,680	28,960	30,410	31,860	33,500	35,140	36,970	38,800	40,850	42,900
EER	20.41	19.12	17.94	16.73	15.64	14.53	13.52	12.51	11.59	10.69	9.87	9.05	8.32
COP	6.88	6.5	6.16	5.81	5.49	5.17	4.88	4.59	4.33	4.06	3.83	3.59	3.38
LV. WTR	81.34	86.22	91.11	95.99	100.87	105.75	110.62	115.5	120.38	125.26	130.14	135.02	139.9

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
57 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	450,400	441,400	432,400	422,800	413,200	402,900	392,600	381,700	370,800	359,400	348,000	335,900	323,800
HMBTUH	523,848	518,670	513,493	508,262	503,030	497,645	492,260	486,957	481,654	476,466	471,278	466,174	461,071
WATTS	24,020	25,140	26,260	27,540	28,820	30,260	31,700	33,340	34,980	36,800	38,620	40,670	42,720
EER	18.75	17.56	16.47	15.35	14.34	13.31	12.38	11.45	10.6	9.77	9.01	8.26	7.58
COP	6.39	6.04	5.73	5.41	5.11	4.82	4.55	4.28	4.03	3.79	3.58	3.36	3.16
LV. WTR	80.48	85.38	90.27	95.17	100.06	104.96	109.85	114.74	119.64	124.53	129.43	134.33	139.23

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
52 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	410,400	402,100	393,800	384,800	375,800	366,300	356,800	346,700	336,600	325,900	315,200	304,100	293,000
HMBTUH	483,370	478,893	474,415	469,750	465,084	460,499	455,914	458,203	460,492	449,178	437,863	433,726	429,588
WATTS	23,880	25,000	26,120	27,390	28,660	30,100	31,540	35,170	38,800	38,620	38,440	40,480	42,520
EER	17.19	16.08	15.08	14.05	13.11	12.17	11.31	9.86	8.68	8.44	8.2	7.51	6.89
COP	5.93	5.61	5.32	5.03	4.75	4.48	4.24	3.82	3.48	3.41	3.34	3.14	2.96
LV. WTR	79.67	84.58	89.49	94.4	99.31	104.21	109.12	114.17	119.21	123.99	128.76	133.68	138.6

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
47 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	373,200	365,400	357,600	349,300	341,000	332,100	323,200	313,800	304,400	294,600	284,800	274,500	264,200
HMBTUH	445,624	441,646	437,669	433,703	429,738	425,719	421,699	417,862	414,026	410,437	406,849	403,477	400,106
WATTS	23,720	24,840	25,960	27,230	28,500	29,930	31,360	32,990	34,620	36,440	38,260	40,290	42,320
EER	15.73	14.71	13.78	12.83	11.96	11.1	10.31	9.51	8.79	8.08	7.44	6.81	6.24
COP	5.5	5.21	4.94	4.67	4.42	4.17	3.94	3.71	3.5	3.3	3.12	2.93	2.77
LV. WTR	78.92	83.84	88.76	93.68	98.6	103.52	108.44	113.36	118.28	123.21	128.14	133.07	138.01

WB TE,P					ENTERING WATER TEMP. F @ 100 GPM								
42 DEG	70	75	80	85	90	95	100	105	110	115	120	125	130
CMBTUH	338,400	331,100	323,800	316,000	308,200	300,000	291,800	283,100	274,400	265,300	256,200	253,000	249,800
HMBTUH	410,278	406,766	403,255	399,789	396,324	393,004	389,685	386,514	383,343	380,420	377,498	381,431	385,364
WATTS	23,560	24,670	25,780	27,050	28,320	29,750	31,180	32,800	34,420	36,230	38,040	40,130	42,220
EER	14.36	13.42	12.56	11.68	10.88	10.08	9.36	8.63	7.97	7.32	6.74	6.3	5.92
COP	5.1	4.83	4.58	4.33	4.1	3.87	3.66	3.45	3.26	3.08	2.91	2.78	2.67
LV. WTR	78.21	83.14	88.07	93	97.93	102.86	107.8	112.73	117.67	122.61	127.55	132.63	137.71