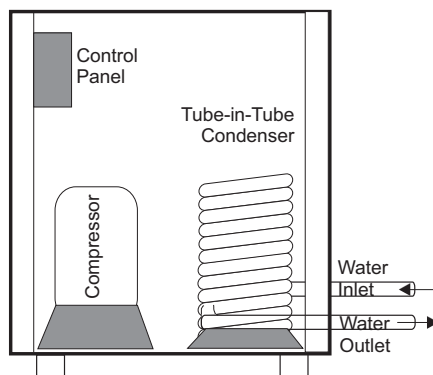
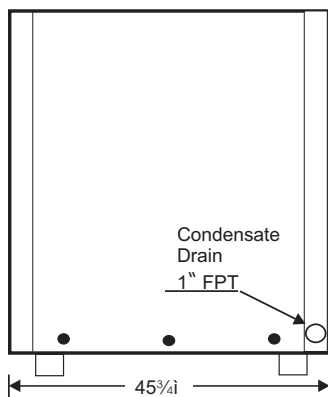


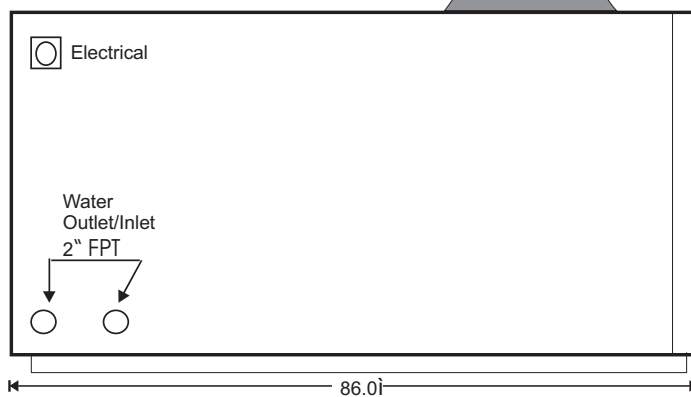
Front View



Right Side



Left Side



Back View

MODEL HPAS 5 SR 163

| | |
|-------------------------|--------------------------|
| Heating Capacity | 162,500 BTUH |
| Condenser Water Flow | 50 GPM |
| Pressure Drop (cond.) | 5.2 PSI |
| Entering Water Temp. | 100 °F |
| Leaving Water Temp. | 106.5 °F |
| COP | 3.81 |
| Compressors | (1)MTE 125 Reciprocating |
| Voltage | 460/60/3Ø |
| RLA/LRA | 14.66/105 |
| Control Voltage | 24 Volts |
| Min. Comp. Circuit Amp. | 20 |

| | |
|-------------------------|---------------------|
| Cooling Capacity | 132,100 BTUH |
| Evaporator Construction | Copper/Aluminum Fin |
| Cabinet Construction | Galvanize Steel |
| Entering Wet Bulb Temp. | 72.0°F |
| Water Pump—3/4 HP | 460/3/60 - 1.5 Amps |
| Cooling EER | 13.0 |
| Condensers | Double Wall Vented |
| Construction (Cond.) | Tube-in-Tube |
| Fan 3/4 HP | 460/3/60 - 1.6 Amps |
| Refrigerant Type | R-134A |
| Minimum Unit Amperage. | 40 Amp. |

STANDARD FEATURES

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

Options

- Micro-Processor Based Control System
- Painted Galvanize
- 304 or 316 Stainless Steel
- TechniCoat 10-1 Coated Evaporator Coil
- Blower
- Refrigerant Pump Down Solenoid Valves
- 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 SR 163 | | | | | | | | | | | | | | | |
|---------------------|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 72 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 161,731 | 156,793 | 151,854 | 146,916 | 141,977 | 137,039 | 132,100 | 126,791 | 121,483 | 116,174 | 110,865 | 105,556 | 100,248 | 94,939 | 89,630 |
| HMBTUH | 185,588 | 181,742 | 177,895 | 174,049 | 170,203 | 166,357 | 162,510 | 158,225 | 153,941 | 149,656 | 145,370 | 141,085 | 136,801 | 132,516 | 128,231 |
| WATTS | 8,240 | 8,560 | 8,880 | 9,200 | 9,520 | 9,840 | 10,160 | 10,460 | 10,760 | 11,060 | 11,360 | 11,660 | 11,960 | 12,260 | 12,560 |
| EER | 19.63 | 18.32 | 17.1 | 15.97 | 14.91 | 13.93 | 13 | 12.12 | 11.29 | 10.5 | 9.76 | 9.05 | 8.38 | 7.74 | 7.14 |
| COP | 5.75 | 5.37 | 5.01 | 4.68 | 4.37 | 4.08 | 3.81 | 3.55 | 3.31 | 3.08 | 2.86 | 2.65 | 2.46 | 2.27 | 2.09 |
| LV. WTR | 77.43 | 82.27 | 87.12 | 91.96 | 96.81 | 101.66 | 106.5 | 111.33 | 116.16 | 120.99 | 125.82 | 130.65 | 135.47 | 140.3 | 146.41 |
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 67 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 145,689 | 141,066 | 136,443 | 131,820 | 127,197 | 122,574 | 117,951 | 113,031 | 108,111 | 103,191 | 98,272 | 93,352 | 88,432 | 83,512 | 78,592 |
| HMBTUH | 169,290 | 165,657 | 162,023 | 158,390 | 154,757 | 151,124 | 147,491 | 143,472 | 139,453 | 135,430 | 131,412 | 127,393 | 123,374 | 119,352 | 115,333 |
| WATTS | 8,165 | 8,455 | 8,745 | 9,035 | 9,325 | 9,615 | 9,905 | 10,169 | 10,433 | 10,696 | 10,960 | 11,224 | 11,488 | 11,751 | 12,015 |
| EER | 17.84 | 16.68 | 15.6 | 14.59 | 13.64 | 12.75 | 11.91 | 11.12 | 10.36 | 9.65 | 8.97 | 8.32 | 7.7 | 7.11 | 6.54 |
| COP | 5.23 | 4.89 | 4.57 | 4.27 | 4 | 3.74 | 3.49 | 3.26 | 3.04 | 2.83 | 2.63 | 2.44 | 2.26 | 2.08 | 1.92 |
| LV. WTR | 76.77 | 81.63 | 86.48 | 91.34 | 96.19 | 101.05 | 105.9 | 110.74 | 115.58 | 120.42 | 125.26 | 130.1 | 134.94 | 139.78 | 145.77 |
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 62 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 129,647 | 125,340 | 121,032 | 116,725 | 112,417 | 108,110 | 103,802 | 99,271 | 94,740 | 90,209 | 85,678 | 81,147 | 76,616 | 72,085 | 67,554 |
| HMBTUH | 152,992 | 149,572 | 146,152 | 142,732 | 139,311 | 135,892 | 132,471 | 128,118 | 124,962 | 121,209 | 117,453 | 113,700 | 109,944 | 106,191 | 102,435 |
| WATTS | 8,090 | 8,350 | 8,610 | 8,870 | 9,130 | 9,390 | 9,650 | 9,878 | 10,105 | 10,333 | 10,560 | 10,788 | 11,015 | 11,243 | 11,470 |
| EER | 16.03 | 15.01 | 14.06 | 13.16 | 12.31 | 11.51 | 10.76 | 10.05 | 9.38 | 8.73 | 8.11 | 7.52 | 6.96 | 6.41 | 5.89 |
| COP | 4.7 | 4.4 | 4.12 | 3.86 | 3.61 | 3.37 | 3.15 | 2.94 | 2.75 | 2.56 | 2.38 | 2.2 | 2.04 | 1.88 | 1.73 |
| LV. WTR | 76.12 | 80.99 | 85.85 | 90.71 | 95.57 | 100.44 | 105.3 | 110.15 | 115 | 119.85 | 124.7 | 129.55 | 134.4 | 139.25 | 145.12 |
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 57 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 116,016 | 111,982 | 107,948 | 103,913 | 99,879 | 95,845 | 91,811 | 87,617 | 83,423 | 79,228 | 75,034 | 70,840 | 66,646 | 62,451 | 58,257 |
| HMBTUH | 138,798 | 135,566 | 132,334 | 129,101 | 125,869 | 122,637 | 119,405 | 115,880 | 112,358 | 108,832 | 105,307 | 101,782 | 98,261 | 94,735 | 91,210 |
| WATTS | 7,925 | 8,160 | 8,395 | 8,630 | 8,865 | 9,100 | 9,335 | 9,531 | 9,728 | 9,924 | 10,120 | 10,316 | 10,513 | 10,709 | 10,905 |
| EER | 14.64 | 13.72 | 12.86 | 12.04 | 11.27 | 10.53 | 9.84 | 9.19 | 8.58 | 7.98 | 7.41 | 6.87 | 6.34 | 5.83 | 5.34 |
| COP | 4.29 | 4.02 | 3.77 | 3.53 | 3.3 | 3.09 | 2.88 | 2.69 | 2.51 | 2.34 | 2.17 | 2.01 | 1.86 | 1.71 | 1.57 |
| LV. WTR | 75.55 | 80.42 | 85.3 | 90.17 | 95.04 | 99.91 | 104.78 | 109.64 | 114.5 | 119.36 | 124.21 | 129.07 | 133.93 | 138.79 | 144.56 |
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 52 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 116,016 | 111,982 | 107,948 | 103,913 | 99,879 | 95,845 | 91,811 | 87,617 | 83,423 | 79,228 | 75,034 | 70,840 | 66,646 | 62,451 | 58,257 |
| HMBTUH | 138,235 | 134,917 | 131,600 | 128,282 | 124,965 | 121,647 | 118,330 | 114,699 | 111,068 | 107,436 | 103,806 | 100,175 | 96,544 | 92,912 | 89,281 |
| WATTS | 7,760 | 7,970 | 8,180 | 8,390 | 8,600 | 8,810 | 9,020 | 9,185 | 9,350 | 9,515 | 9,680 | 9,845 | 10,010 | 10,175 | 10,340 |
| EER | 14.95 | 14.05 | 13.2 | 12.39 | 11.61 | 10.88 | 10.18 | 9.54 | 8.92 | 8.33 | 7.75 | 7.2 | 6.66 | 6.14 | 5.63 |
| COP | 4.38 | 4.12 | 3.87 | 3.63 | 3.4 | 3.19 | 2.98 | 2.79 | 2.61 | 2.44 | 2.27 | 2.11 | 1.95 | 1.8 | 1.65 |
| LV. WTR | 75.53 | 80.4 | 85.27 | 90.13 | 95 | 99.87 | 104.74 | 109.59 | 114.44 | 119.3 | 124.15 | 129.01 | 133.86 | 138.72 | 144.47 |
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 47 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 102,385 | 98,624 | 94,863 | 91,102 | 87,342 | 83,581 | 79,820 | 75,963 | 72,105 | 68,248 | 64,390 | 60,533 | 56,675 | 52,818 | 48,960 |
| HMBTUH | 123,829 | 120,710 | 117,594 | 114,478 | 111,363 | 108,243 | 105,127 | 101,745 | 98,361 | 94,975 | 91,592 | 88,209 | 84,825 | 81,439 | 78,056 |
| WATTS | 7,533 | 7,721 | 7,910 | 8,099 | 8,288 | 8,476 | 8,665 | 8,804 | 8,943 | 9,081 | 9,220 | 9,359 | 9,498 | 9,636 | 9,775 |
| EER | 13.59 | 12.77 | 11.99 | 11.25 | 10.54 | 9.86 | 9.21 | 8.63 | 8.06 | 7.52 | 6.98 | 6.47 | 5.97 | 5.48 | 5.01 |
| COP | 3.98 | 3.74 | 3.51 | 3.3 | 3.09 | 2.89 | 2.7 | 2.53 | 2.36 | 2.2 | 2.05 | 1.9 | 1.75 | 1.61 | 1.47 |
| LV. WTR | 74.96 | 79.83 | 84.71 | 89.58 | 94.46 | 99.33 | 104.21 | 109.07 | 113.94 | 118.8 | 123.67 | 128.53 | 133.39 | 138.26 | 143.9 |
| WB TEMP. | ENTER WATER TEMP. F @ 50 GPM, | | | | | | | | | | | | | | |
| 42 DEG . | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |
| CMBTUH | 90,904 | 87,378 | 83,852 | 80,326 | 76,801 | 73,275 | 69,749 | 66,181 | 62,614 | 59,046 | 55,478 | 51,910 | 48,343 | 44,775 | 41,207 |
| HMBTUH | 111,570 | 108,617 | 105,661 | 102,708 | 99,753 | 96,801 | 93,845 | 90,662 | 87,478 | 84,295 | 81,110 | 77,927 | 74,743 | 71,560 | 68,374 |
| WATTS | 7,305 | 7,473 | 7,640 | 7,808 | 7,975 | 8,143 | 8,310 | 8,423 | 8,535 | 8,648 | 8,760 | 8,873 | 8,985 | 9,098 | 9,210 |
| EER | 12.44 | 11.69 | 10.98 | 10.29 | 9.63 | 9 | 8.39 | 7.86 | 7.34 | 6.83 | 6.33 | 5.85 | 5.38 | 4.92 | 4.47 |
| COP | 3.65 | 3.43 | 3.22 | 3.01 | 2.82 | 2.64 | 2.46 | 2.3 | 2.15 | 2 | 1.86 | 1.71 | 1.58 | 1.44 | 1.31 |
| LV. WTR | 74.46 | 79.35 | 84.23 | 89.11 | 93.99 | 98.87 | 103.76 | 108.63 | 113.5 | 118.37 | 123.25 | 128.12 | 132.99 | 137.86 | 143.42 |