



| Compressor | HP | 200 | | | | 240 | | | |
|-------------|----------|-----------|-------|-------|-------|-----------|------|-------|-------|
| | | 208-230 V | | 460 V | | 208-230 V | | 460 V | |
| Voltage | V/3/60Hz | 410A | 134a | 410A | 134a | 410A | 134a | 410A | 134a |
| Refrigerant | | 410A | 134a | 410A | 134a | 410A | 134a | 410A | 134a |
| RLA | Amps | 94.3 | 71.5 | 46.4 | 39.6 | 107.1 | N/A | 56.4 | 44.0 |
| LRA | Amps | 560 | 560 | 260 | 220 | 680 | N/A | 320 | 320 |
| MCA | Amps | 778.0 | 589.9 | 382.8 | 326.7 | 883.6 | N/A | 352.5 | 275.0 |
| MOCP | Amps | 943.0 | 715.0 | 464.0 | 396.0 | 1071.0 | N/A | 423.0 | 330.0 |
| Dry Weight | lbs | 5900 | | | | 6630 | | | |

Note: In View of Continuous Product Improvements, design and specification are subject to change without notice. HHS can accept no responsibility for possible errors in catalogues, brochures and other printed material.

| |
|---|
| Customer: |
| Project: |
| Sales Rep: |
| Date: AUGUST 2008 Brochure No 801 |
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H H Systems, INC
SERIES: ES 200/240
Water-to-Water Heat Pumps

| Source Water Entering Temp = 90°F | HEATING MODE | | | | | | | | | | COOLING MODE | | | | |
|--------------------------------------|------------------------------|--------|--|--|--|---------|---------|--------|--------|--------|--------------|--------|--------|-----------------------------|------------------------------|
| | Units | R-410A | | | | | R-134a | | | | | R-410A | R-134a | Units | |
| | Building Water Entering Temp | °F | | | | | 100 | 110 | 120 | 130 | 140 | 55 | 55 | °F | Building Water Entering Temp |
| Building Water Leaving Temp | °F | | | | | 110 | 120 | 130 | 140 | 150 | 45 | 45 | °F | Building Water Leaving Temp | |
| Heating Capacity | MBTUH | | | | | 4857.7 | 5569.9 | 3199.6 | 3089.4 | 2984.2 | 2948.8 | 1998.4 | MBTUH | Cooling Capacity | |
| Condenser Water Flow | GPM | | | | | 971.5 | 1,114.0 | 639.9 | 617.9 | 596.8 | 589.8 | 399.7 | GPM | Evaporator Water Flow | |
| Evaporator Load | MBTUH | | | | | 4,015.6 | 4,633.3 | 2538.2 | 2355.2 | 2168.6 | 3692.6 | 2492.0 | MBTUH | Condenser Load | |
| Evaporator Water Flow | GPM | | | | | 803.1 | 926.7 | 507.6 | 471.0 | 433.7 | 738.5 | 498.4 | GPM | Condenser Water Flow | |
| Power Input | kW | | | | | 246.7 | 274.4 | 193.8 | 215.1 | 239.0 | 217.9 | 144.6 | kW | Power Input | |
| COP | - | | | | | 5.77 | 5.95 | 4.84 | 4.21 | 3.66 | 13.53 | 13.82 | - | EER | |
| Source Water Leaving Temp | °F | | | | | 80 | 80 | 80 | 80 | 80 | 100 | 100 | °F | Source Water Leaving Temp | |

| Source Water Entering Temp = 60°F | HEATING MODE | | | | | | | | | | COOLING MODE | | | | |
|--------------------------------------|------------------------------|--------|--|--|--|---------|---------|---------|--------|--------|--------------|---------|---------|-------|-----------------------------|
| | Units | R-410A | | | | | R-134a | | | | | R-410A | R-134a | Units | |
| | Building Water Entering Temp | °F | | | | | 90 | 100 | 110 | 120 | 130 | 140 | 55 | 55 | °F |
| Building Water Leaving Temp | °F | | | | | 100 | 110 | 120 | 130 | 140 | 150 | 45 | 45 | °F | Building Water Leaving Temp |
| Heating Capacity | MBTUH | | | | | 5073.9 | 4857.7 | 4633.3 | 3199.6 | 3089.4 | 2984.2 | 3149.0 | 2111.9 | MBTUH | Cooling Capacity |
| Condenser Water Flow | GPM | | | | | 1,014.8 | 971.5 | 926.7 | 639.9 | 617.9 | 596.8 | 629.8 | 422.4 | GPM | Evaporator Water Flow |
| Evaporator Load | MBTUH | | | | | 4,312.9 | 4,015.6 | 3,696.8 | 2538.2 | 2355.2 | 2168.6 | 3,819.1 | 2,561.1 | MBTUH | Condenser Load |
| Evaporator Water Flow | GPM | | | | | 862.6 | 803.1 | 739.4 | 507.6 | 471.0 | 433.7 | 763.8 | 512.2 | GPM | Condenser Water Flow |
| Power Input | kW | | | | | 223.0 | 246.7 | 274.4 | 193.8 | 215.1 | 239.0 | 196.4 | 131.6 | kW | Power Input |
| COP | - | | | | | 6.67 | 5.77 | 4.95 | 4.84 | 4.21 | 3.66 | 16.04 | 16.04 | - | EER |
| Source Water Leaving Temp | °F | | | | | 70 | 70 | 70 | 70 | 70 | 70 | 90 | 90 | °F | Source Water Leaving Temp |

| Source Water Entering Temp = 70°F | HEATING MODE | | | | | | | | | | COOLING MODE | | | | | |
|--------------------------------------|------------------------------|--------|--|--|--|--------|--------|--------|--------|--------|--------------|--------|--------|--------|-------|-----------------------------|
| | Units | R-410A | | | | | R-134a | | | | | R-410A | R-134a | Units | | |
| | Building Water Entering Temp | °F | | | | | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 55 | 55 | °F |
| Building Water Leaving Temp | °F | | | | | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 45 | 45 | °F | Building Water Leaving Temp |
| Heating Capacity | MBTUH | | | | | 4874.0 | 4689.3 | 4496.3 | 4296.4 | 2943.1 | 2847.8 | 2757.7 | 3332.6 | 2210.8 | MBTUH | Cooling Capacity |
| Condenser Water Flow | GPM | | | | | 974.8 | 937.9 | 899.3 | 859.3 | 588.6 | 569.6 | 551.5 | 666.5 | 442.2 | GPM | Evaporator Water Flow |
| Evaporator Load | MBTUH | | | | | 4189.0 | 3934.0 | 3658.6 | 3363.2 | 2285.7 | 2117.8 | 1946.5 | 3939.2 | 2624.6 | MBTUH | Condenser Load |
| Evaporator Water Flow | GPM | | | | | 837.8 | 786.8 | 731.7 | 672.6 | 457.1 | 423.6 | 389.3 | 787.8 | 524.9 | GPM | Condenser Water Flow |
| Power Input | kW | | | | | 200.7 | 221.3 | 245.4 | 273.4 | 192.6 | 213.9 | 237.7 | 177.8 | 121.2 | kW | Power Input |
| COP | - | | | | | 7.12 | 6.21 | 5.37 | 4.60 | 4.48 | 3.90 | 3.40 | 18.75 | 18.24 | - | EER |
| Source Water Leaving Temp | °F | | | | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 80 | 80 | °F | Source Water Leaving Temp |

| Source Water Entering Temp = 60°F | HEATING MODE | | | | | | | | | | COOLING MODE | | | | | | |
|--------------------------------------|------------------------------|--------|--|--|--|--------|--------|--------|--------|--------|--------------|--------|--------|-------|--|-------|-----------------------------|
| | Units | R-410A | | | | | R-134a | | | | | R-410A | R-134a | Units | | | |
| | Building Water Entering Temp | °F | | | | | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | | | °F |
| Building Water Leaving Temp | °F | | | | | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | | | °F | Building Water Leaving Temp |
| Heating Capacity | MBTUH | | | | | 4281.7 | 4144.6 | 3999.9 | 3849.4 | 3694.6 | 2488.3 | 2419.9 | 2357.1 | | | MBTUH | Cooling Capacity |
| Condenser Water Flow | GPM | | | | | 856.3 | 828.9 | 800.0 | 769.9 | 738.9 | 497.7 | 484.0 | 471.4 | | | GPM | Evaporator Water Flow |
| Evaporator Load | MBTUH | | | | | 3669.8 | 3470.5 | 3253.1 | 3018.2 | 2766.5 | 1839.0 | 1698.7 | 1555.8 | | | MBTUH | Condenser Load |
| Evaporator Water Flow | GPM | | | | | 734.0 | 694.1 | 650.6 | 603.6 | 553.3 | 367.8 | 339.7 | 311.2 | | | GPM | Condenser Water Flow |
| Power Input | kW | | | | | 179.3 | 197.5 | 218.8 | 243.5 | 271.9 | 190.2 | 211.3 | 234.8 | | | kW | Power Input |
| COP | - | | | | | 7.00 | 6.15 | 5.36 | 4.63 | 3.98 | 3.83 | 3.36 | 2.94 | | | - | EER |
| Source Water Leaving Temp | °F | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | | | °F | Source Water Leaving Temp |

| Source Water Entering Temp = 50°F | HEATING MODE | | | | | | | | | | COOLING MODE | | | | |
|--------------------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|--------|--------|-----------------------------|------------------------------|
| | Units | R-410A | | | | | R-134a | | | | | R-410A | R-134a | Units | |
| | Building Water Entering Temp | °F | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | | | °F | Building Water Entering Temp |
| Building Water Leaving Temp | °F | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | | | °F | Building Water Leaving Temp | |
| Heating Capacity | MBTUH | 3719.4 | 3622.3 | 3517.9 | 3408.3 | 3295.3 | 3180.4 | 2103.1 | 2058.1 | 2018.8 | | | MBTUH | Cooling Capacity | |
| Condenser Water Flow | GPM | 743.9 | 724.5 | 703.6 | 681.7 | 659.1 | 636.1 | 420.6 | 411.6 | 403.8 | | | GPM | Evaporator Water Flow | |
| Evaporator Load | MBTUH | 3172.7 | 3019.9 | 2851.0 | 2667.0 | 2468.4 | 2256.0 | 1463.0 | 1347.2 | 1229.3 | | | MBTUH | Condenser Load | |
| Evaporator Water Flow | GPM | 634.5 | 604.0 | 570.2 | 533.4 | 493.7 | 451.2 | 292.6 | 269.4 | 245.9 | | | GPM | Condenser Water Flow | |
| Power Input | kW | 160.2 | 176.5 | 195.4 | 217.2 | 242.3 | 270.9 | 187.5 | 208.3 | 231.3 | | | kW | Power Input | |
| COP | - | 6.80 | 6.01 | 5.28 | 4.60 | 3.99 | 3.44 | 3.29 | 2.90 | 2.56 | | | - | EER | |
| Source Water Leaving Temp | °F | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | | | °F | Source Water Leaving Temp | |

| Source Water Entering Temp = 40°F | HEATING MODE | | | | | | | | | | COOLING MODE | | | | |
|--------------------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----|--------------|--------|--------|-----------------------------|------------------------------|
| | Units | R-410A | | | | | R-134a | | | | | R-410A | R-134a | Units | |
| | Building Water Entering Temp | °F | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | | | | °F | Building Water Entering Temp |
| Building Water Leaving Temp | °F | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | | | | °F | Building Water Leaving Temp | |
| Heating Capacity | MBTUH | 3130.5 | 3059.0 | 2982.5 | 2903.2 | 2743.1 | 2777.9 | 1777.9 | 1752.4 | | | | MBTUH | Cooling Capacity | |
| Condenser Water Flow | GPM | 626.1 | 611.8 | 596.5 | 580.6 | 564.6 | 548.6 | 355.6 | 350.5 | | | | GPM | Evaporator Water Flow | |
| Evaporator Load | MBTUH | 2592.1 | 2462.9 | 2320.5 | 2165.8 | 1999.4 | 1822.1 | 1148.7 | 1054.1 | | | | MBTUH | Condenser Load | |
| Evaporator Water Flow | GPM | 518.4 | 492.6 | 464.1 | 433.2 | 399.9 | 364.4 | 229.7 | 210.8 | | | | GPM | Condenser Water Flow | |
| Power Input | kW | 157.8 | 174.6 | 194.0 | 216.1 | 241.3 | 269.9 | 184.3 | 204.6 | | | | kW | Power Input | |
| COP | - | 5.81 | 5.13 | 4.51 | 3.94 | 3.43 | 2.98 | 2.83 | 2.51 | | | | - | EER | |
| Source Water Leaving Temp | °F | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | | | | °F | Source Water Leaving Temp | |

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ES 240 Data Sheet