

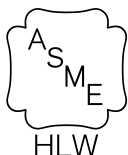
DRE COMMERCIAL ELECTRIC WATER HEATER

DRE - 80/120



Designed for use as a recovery heater having its own storage tank.

- Meets the standby loss requirements of the U.S. Department of Energy and current edition of AHRAE/IES 90.1. Energy efficiency per IEC 60379:2007 is 93.7 %
- Heavy-duty medium watt density elements (three/immersion heater) have incoloy sheathing: provide excellent protection against oxidation and scaling.
- Glasslined tank. Two sizes: 80 and 119 gallon capacity. Tank interior is coated with glass specially developed by A. O. Smith for water heater use. Tanks rated at 150 PSI (1034 kPa) working pressure
- Protects all elements, thermostats, and internal wiring circuits against excess current flow. Meets National Electrical Code requirements that non-ASME tanks must have internal fusing when current draw exceeds 48 amps. Available as an option on Canadian built heaters.
- Terminal block is factory installed. Just bring the electrical service to the heater and connect to block.
- One temperature control (adjustable through a range of 120° to 181°F) and manual reset high temperature cut-off per element. Thermostat step control may be achieved by varying settings on individual temperature controls. Located behind hinged control compartment door for quick, easy access.
- Surface mounted thermostats
- Simplified circuitry, color coded for ease of service
- Two anode rods for maximum corrosion protection
- Cabinet has bonderized undercoat with baked enamel finish
- Bottom inlet and top outlet openings
- Brass drain valve
- CSA Certified and ASME rated T&P relief valve
- Single panel control box
- Foam insulation reduces costly heat loss

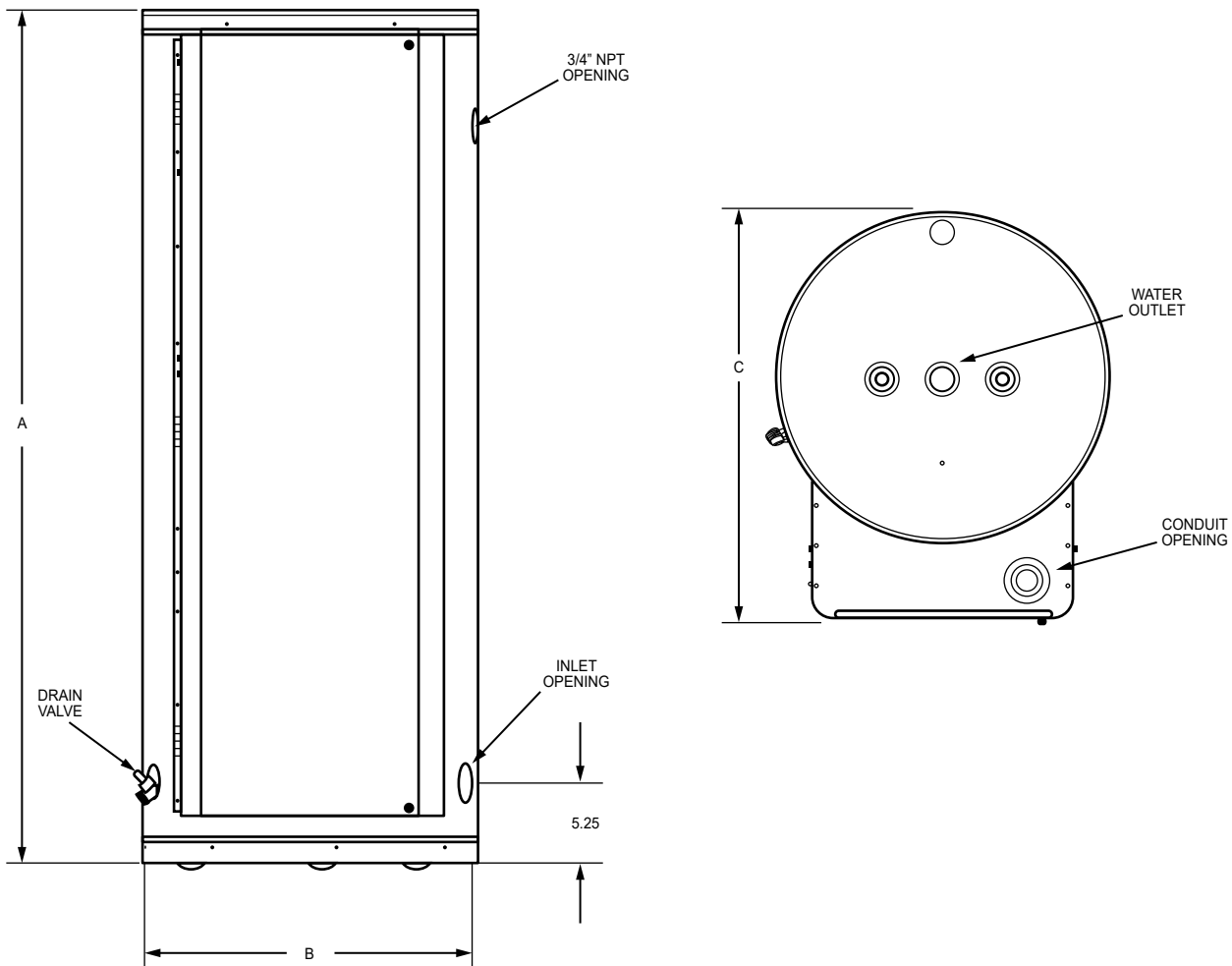


SAMPLE SPECIFICATION

The heater(s) shall be Gold Series Commercial Electric Model Number _____ as manufactured by A. O. Smith. Heater(s) shall be rated at _____ kW, _____ volts, _____ phase, 60 cycle AC, and listed by Underwriters' Laboratories and approved to the NSF Standard 5 by UL. Tank(s) shall be _____ (80 or 119) gallon capacity. Tanks shall have _____ (150 [Std] or 160 [ASME]) psi working pressure and be equipped with extruded high density anode. All internal surfaces of the heater(s) exposed to water shall be glasslined with an alkaline borosilicate composition that has been fused-to-steel by firing at a temperature range of 1400°F to 1600°F. Electric heating elements shall be low watt density. Each element shall be controlled by an individually mounted thermostat and high temperature cut-off switch. All internal circuits shall be fused. The outer jacket shall be of baked enamel finish and shall be provided with full size control compartment for performance of service and maintenance through hinged front panel and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided. The drain valve shall be located in the front for ease of servicing. Heater tank shall have a three year limited warranty as outlined in the written warranty. Manufacturer shall supply ASME rated temperature and pressure relief valve. Fully illustrated instruction manual to be included. Meets standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IES 90.1.

OPTIONS

- UL and cUL listed conversion kits to adjust voltage and kW requirements in the field before and after installation
- ASME 160 psi (1103 kPa) tank construction
- International voltages – 220, 380, 400, 415, 575, and 600 volts, three phase available with Y connected elements
- Manifold kits – for multiple tank installations. Two heaters part # 9003429205, three heaters part # 9003430205 and four heaters part # 9003431205



| Model number | Gallon capacity | | Dimensions | | | | | | Inlet/Outlet (NPT) | Approx. shipping weight | |
|--------------|-----------------|-------|------------|-------|--------|------|--------|------|--------------------|-------------------------|-----|
| | | | A | | B | | C | | | | |
| | gal. | litre | Inches | cm | Inches | cm | Inches | cm | Inches | lbs | kg |
| DRE-80 | 80 | 302 | 60-1/4 | 153 | 25-1/2 | 64.8 | 31 | 78.7 | 1-1/4 | 280 | 127 |
| DRE-120 | 119 | 450 | 62-1/4 | 158.1 | 29-1/2 | 75 | 35 | 88.9 | 1-1/4 | 390 | 177 |

For ASME Construction add "A" to the model number (example: DRE 80A 24).

| Standard kW input | BTU/hour | 30 °F | 40 °F | 50 °F | 60 °F | 70 °F | 80 °F | 90 °F | 100 °F | 110 °F | 120 °F | 130 °F | 140 °F |
|-------------------|----------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|
| | | 16.7 °C | 22.3 °C | 27.8 °C | 33.4 °C | 38.9 °C | 44.5 °C | 50 °C | 55.6 °C | 61.2 °C | 66.7 °C | 72.3 °C | 77.8 °C |
| 9 | 30,708 | 124 | 93 | 75 | 62 | 53 | 47 | 41 | 37 | 34 | 31 | 29 | 27 |
| | | 469 | 352 | 284 | 235 | 201 | 178 | 155 | 140 | 129 | 117 | 110 | 102 |
| 12 | 40,944 | 166 | 124 | 99 | 83 | 71 | 62 | 55 | 50 | 45 | 41 | 38 | 35 |
| | | 628 | 469 | 375 | 314 | 269 | 235 | 208 | 189 | 170 | 155 | 144 | 132 |
| 15 | 51,180 | 207 | 155 | 124 | 104 | 89 | 78 | 69 | 62 | 56 | 52 | 48 | 44 |
| | | 783 | 587 | 469 | 394 | 337 | 295 | 261 | 235 | 212 | 197 | 182 | 167 |
| 18 | 61,416 | 248 | 186 | 149 | 124 | 106 | 93 | 83 | 75 | 68 | 62 | 57 | 53 |
| | | 939 | 704 | 564 | 469 | 401 | 352 | 314 | 284 | 257 | 235 | 216 | 201 |
| 24 | 81,888 | 331 | 248 | 199 | 166 | 142 | 124 | 110 | 99 | 90 | 83 | 76 | 71 |
| | | 1253 | 939 | 753 | 628 | 537 | 469 | 416 | 375 | 341 | 314 | 288 | 269 |
| 27 | 92,124 | 373 | 279 | 224 | 186 | 160 | 140 | 124 | 112 | 102 | 93 | 86 | 80 |
| | | 1412 | 1056 | 848 | 704 | 606 | 530 | 469 | 424 | 386 | 352 | 326 | 303 |
| 30 | 102,360 | 414 | 311 | 248 | 207 | 177 | 155 | 138 | 124 | 113 | 104 | 96 | 89 |
| | | 1567 | 1177 | 939 | 783 | 670 | 587 | 522 | 469 | 428 | 394 | 363 | 337 |
| 36 | 122,832 | 497 | 373 | 298 | 248 | 213 | 186 | 166 | 149 | 135 | 124 | 115 | 106 |
| | | 1881 | 1412 | 1128 | 939 | 806 | 704 | 628 | 564 | 511 | 469 | 435 | 401 |
| 40.5 | 138,186 | 559 | 419 | 335 | 279 | 240 | 210 | 186 | 168 | 152 | 140 | 129 | 120 |
| | | 2116 | 1586 | 1268 | 1056 | 908 | 795 | 704 | 636 | 575 | 530 | 488 | 454 |
| 45 | 153,540 | 621 | 466 | 373 | 311 | 266 | 233 | 207 | 186 | 169 | 155 | 143 | 133 |
| | | 2350 | 1764 | 1412 | 1177 | 1007 | 882 | 783 | 704 | 640 | 587 | 541 | 503 |
| 54 | 184,248 | 745 | 559 | 447 | 373 | 319 | 279 | 248 | 224 | 203 | 186 | 172 | 160 |
| | | 2820 | 2116 | 1692 | 1412 | 1207 | 1056 | 939 | 848 | 768 | 704 | 651 | 606 |

Figured at 1 kW (3413 BTU) = 4.1 Gallons at 100°F temperature rise.

| kW input | Number of elements | Element wattage | Full load current in amperes | | |
|----------|--------------------|-----------------|------------------------------|-------------|----------|
| | | | Single phase | Three phase | |
| | | | 230V | 380V | 400/415V |
| 9 | 3 | 3000 | 37,5 | 13,6 | 12,5 |
| 12 | 3 | 4000 | 50,0 | 18,2 | 16,7 |
| 15 | 3 | 5000 | 62,5 | 22,7 | 20,8 |
| 18 | 3 | 6000 | 75,0 | 27,3 | 25,0 |
| 24 | 6 | 4000 | 100,0 | 36,4 | 33,3 |
| 27 | 6 | 4500 | 112,5 | 40,9 | 37,5 |
| 30 | 6 | 5000 | 125,0 | 45,5 | 41,7 |
| 36 | 6 | 6000 | 150,0 | 54,5 | 50,0 |
| 40,5 | 9 | 4500 | 168,8 | 61,4 | 56,3 |
| 45 | 9 | 5000 | 187,5 | 68,2 | 62,5 |
| 54 | 9 | 6000 | 225,0 | 81,8 | 75,0 |

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