

### GOLD SERIES COMMERCIAL ELECTRIC WATER HEATER

Designed for use as a recovery heater having its own storage tank.  
Note: Not recommended for sanitizing water applications.

#### FEATURES

- Meets the standby loss requirements of the U.S. Department of Energy and current edition of AHRAE/IES 90.1

#### INCOLOY ELEMENTS

- Heavy-duty medium watt density elements have incoloy sheathing: provide excellent protection against oxidation and scaling.

#### GLASSLINED TANK

- Three sizes: 50, 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

#### FUSING

- 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.

#### STANDARD VOLTAGES

- 208, 240 and 480V single-phase and three-phase delta. Convertible from three-phase to single-phase (in field) and vice versa. 277V single-phase also available.

#### TERMINAL BLOCK

- Factory installed. Just bring the electrical service to the heater and connect to block.

#### CONTROLS

- 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.

#### OTHER STANDARD FEATURES

- 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.

#### 3-YEAR LIMITED TANK / 1-YEAR LIMITED PARTS WARRANTY

- For complete warranty information, consult written warranty or go to [hotwater.com](http://hotwater.com)



MODELS  
DRE-52, 80, 120

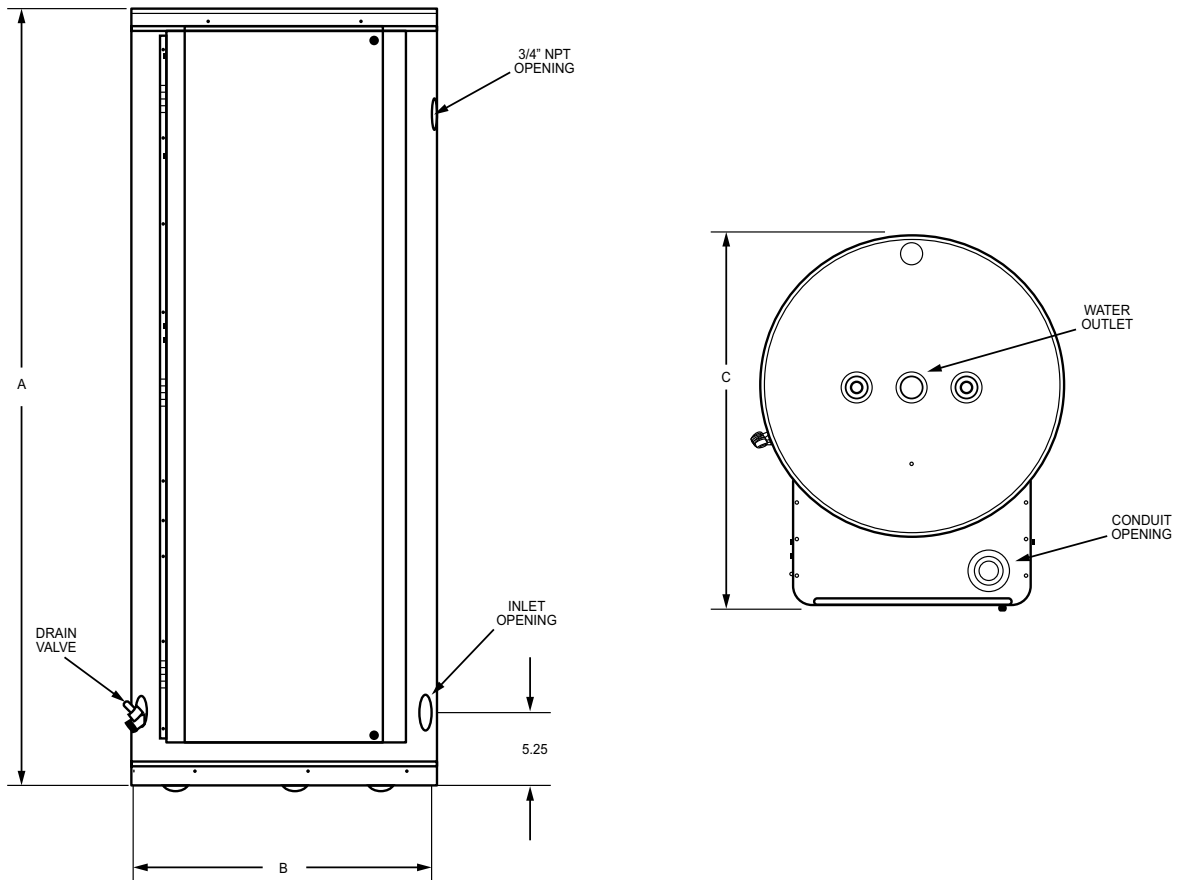


OPTIONAL



## 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 # 100109231, three heaters- part # 100109232 and four heaters- part # 100109233



## DIMENSIONS

| Model Number | Tank Capacity |       | Dimensions |       |        |      |        |      | Inlet/Outlet (NPT) | Approx. Shipping Weight |     |
|--------------|---------------|-------|------------|-------|--------|------|--------|------|--------------------|-------------------------|-----|
|              |               |       | A          |       | B      |      | C      |      |                    |                         |     |
|              | gal.          | litre | Inches     | MM    | Inches | MM   | Inches | MM   | Inches             | lbs                     | kG  |
| DRE-52       | 50            | 189   | 55-3/4     | 142   | 21-3/4 | 55.2 | 27     | 68.6 | 1-1/4              | 265                     | 120 |
| 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 52A 24).



# Commercial Electric Water Heaters

## RECOVERY RATE IN GALLONS PER HOUR AT TEMPERATURE RISE OF

| 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 |
|-------------------|-----------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
|                   |           | 17°C | 22°C | 28°C | 33°C | 39°C | 45°C | 50°C | 56°C  | 61°C  | 67°C  | 72°C  | 78°C  |
| 12.3              | 41,980    | 168  | 126  | 101  | 84   | 72   | 63   | 56   | 50    | 46    | 42    | 39    | 36    |
|                   |           | 636  | 477  | 382  | 318  | 273  | 238  | 212  | 189   | 174   | 159   | 148   | 136   |
| 13.5              | 46,075    | 184  | 138  | 111  | 92   | 79   | 69   | 62   | 55    | 50    | 46    | 43    | 40    |
|                   |           | 698  | 523  | 419  | 349  | 299  | 262  | 233  | 209   | 190   | 174   | 161   | 150   |
| 15                | 51,195    | 205  | 154  | 123  | 102  | 88   | 77   | 68   | 61    | 56    | 51    | 47    | 44    |
|                   |           | 775  | 582  | 465  | 388  | 332  | 291  | 258  | 233   | 211   | 194   | 149   | 166   |
| 18                | 61,434    | 246  | 184  | 148  | 123  | 105  | 92   | 82   | 74    | 67    | 62    | 57    | 53    |
|                   |           | 930  | 698  | 558  | 465  | 399  | 349  | 310  | 279   | 254   | 233   | 215   | 199   |
| 24                | 81,912    | 328  | 246  | 197  | 164  | 140  | 123  | 109  | 98    | 90    | 82    | 76    | 70    |
|                   |           | 1241 | 930  | 744  | 620  | 532  | 465  | 414  | 372   | 338   | 310   | 286   | 266   |
| 27                | 92,151    | 369  | 276  | 221  | 185  | 158  | 138  | 123  | 111   | 101   | 92    | 85    | 79    |
|                   |           | 1396 | 1047 | 938  | 609  | 509  | 523  | 465  | 410   | 391   | 340   | 322   | 299   |
| 30                | 102,390   | 410  | 307  | 246  | 205  | 176  | 154  | 137  | 123   | 112   | 102   | 95    | 88    |
|                   |           | 1551 | 1163 | 930  | 775  | 665  | 582  | 517  | 465   | 423   | 388   | 358   | 332   |
| 36                | 122,868   | 492  | 369  | 295  | 246  | 211  | 184  | 164  | 148   | 134   | 123   | 113   | 105   |
|                   |           | 1861 | 1396 | 1117 | 930  | 798  | 698  | 620  | 556   | 508   | 465   | 429   | 399   |
| 40.5              | 138,226   | 554  | 418  | 332  | 277  | 237  | 208  | 185  | 166   | 151   | 138   | 128   | 119   |
|                   |           | 2094 | 1570 | 1256 | 1047 | 897  | 785  | 698  | 628   | 634   | 582   | 537   | 498   |
| 45                | 153,585   | 615  | 461  | 369  | 307  | 263  | 230  | 205  | 184   | 168   | 154   | 142   | 132   |
|                   |           | 2326 | 1745 | 1398 | 1163 | 997  | 872  | 755  | 698   | 634   | 582   | 537   | 498   |
| 54                | 184,302   | 738  | 554  | 443  | 359  | 316  | 277  | 246  | 221   | 201   | 185   | 170   | 158   |
|                   |           | 2791 | 2094 | 1675 | 1396 | 1196 | 1047 | 930  | 837   | 761   | 696   | 644   | 598   |

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



# Commercial Electric Water Heaters

| kW Input | Model Numbers Tank Capacity in Gallons |             |              | Number of Elements | Element Wattage | Full Load Current in Amperes |       |       |       |             |       |      |
|----------|--|-------------|--------------|--------------------|-----------------|------------------------------|-------|-------|-------|-------------|-------|------|
|          |  |             |              |                    |                 | Single Phase                 |       |       |       | Three Phase |       |      |
|          | 50                                     | 80          | 119          |                    |                 | 208V                         | 240V  | 277V  | 480V  | 208V        | 240V  | 480V |
| 12.3     | DRE-52-12                              | DRE-80-12   | DRE-120-12   | 3                  | 4,100           | 59                           | 51    | 44    | 26    | 34          | 30    | 15   |
| 13.5     | DRE-52-13.5                            | DRE-80-13.5 | DRE-120-13.5 | 3                  | 4,500           | 64.9                         | 56.3  | 48.7  | 28.1  | 37.5        | 32.5  | 16.2 |
| 15       | DRE-52-15                              | DRE-80-15   | DRE-120-15   | 3                  | 5,000           | 72.1                         | 62.5  | 54.2  | 31.3  | 41.6        | 36.1  | 18   |
| 18       | DRE-52-18                              | DRE-80-18   | DRE-120-18   | 3*                 | 6,000           | 86.5                         | 75    | 65    | 37.5  | 50          | 43.3  | 21.7 |
| 24       | DRE-52-24                              | DRE-80-24   | DRE-120-24   | 6                  | 4,000           | 115.4                        | 100   | 86.6  | 50    | 66.6        | 57.7  | 28.9 |
| 27       | DRE-52-27                              | DRE-80-27   | DRE-120-27   | 6                  | 4,500           | 129.8                        | 112.5 | 97.5  | 56.3  | 74.9        | 65    | 32.5 |
| 30       | DRE-52-30                              | DRE-80-30   | DRE-120-30   | 6                  | 5,000           | 144.2                        | 125   | 108.3 | 62.5  | 83.3        | 72.2  | 36.1 |
| 36       | DRE-52-36                              | DRE-80-36   | DRE-120-36   | 6*                 | 6,000           | 173.1                        | 150   | 130   | 75    | 99.9        | 86.6  | 43.3 |
| 40.5     | N/A                                    | DRE-80-40.5 | DRE-120-40.5 | 9                  | 4,500           | 194.7                        | 168.8 | 146.2 | 84.4  | 112.4       | 97.4  | 48.7 |
| 45       | N/A                                    | DRE-80-45   | DRE-120-45   | 9                  | 5,000           | 216.3                        | 187.5 | 162.5 | 93.8  | 124.9       | 108.3 | 54.1 |
| 54       | N/A                                    | DRE-80-54   | DRE-120-54   | 9                  | 6,000           | N/A                          | 225   | 194.9 | 112.5 | 149.9       | 129.9 | 65   |

\*208 volt models may contain three (3) additional elements.  
 For ASME Construction add "A" to the model number (example: DRE 52A 24).

## SUGGESTED 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 \_\_\_\_\_ (50, 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.

For technical information, call 800-527-1953. A. O. Smith Corporation reserves the right to make product changes or improvements without prior notice.