



Commercial Electric Water Heater

19–119 gallon capacity, up to 58 kW
in all three phase voltages, over 12 kW
in all single phase voltages

A heavy duty commercial electric water heater built for high volume demand

HydraStone™ cement lining provides longer tank life

High impact composite jacket cannot rust or corrode

Copper-silicon alloy tappings cannot rust or corrode

- Polyurethane foam insulation reduces heat loss
- Built-in heat trap lowers operating costs
- Built to meet your exact needs
- Numerous options available for specialized applications
- Full five (5) year Non Pro-rated tank warranty is standard
- Full ten (10) year Non Pro-rated tank warranty can be specified for extended protection

Applications

Office buildings, schools, hospitals, industrial facilities, hotels, and much more.



ENDURANCE SERIES

A long lasting, trouble-free water heater

The Hubbell Endurance SE water heater incorporates a number of features not found in other conventional heaters, that make it better suited to resist the highly corrosive effects of hot water. The heart of a Hubbell water heater is a superior storage vessel which utilizes a specially formulated HydraStone cement lining, solid copper-silicon threaded tank openings and a built-in heat trap device, all of which ensure a longer lasting and energy efficient water heater.

Over 100 years of water heating expertise

Hubbell water heaters are the right choice for your commercial and industrial applications. We have water heating solutions for most energy sources with storage capacities from 1–10,000 gallons — all designed, engineered, and manufactured for reliability and longevity coupled with unparalleled support and service.

ASME option available.



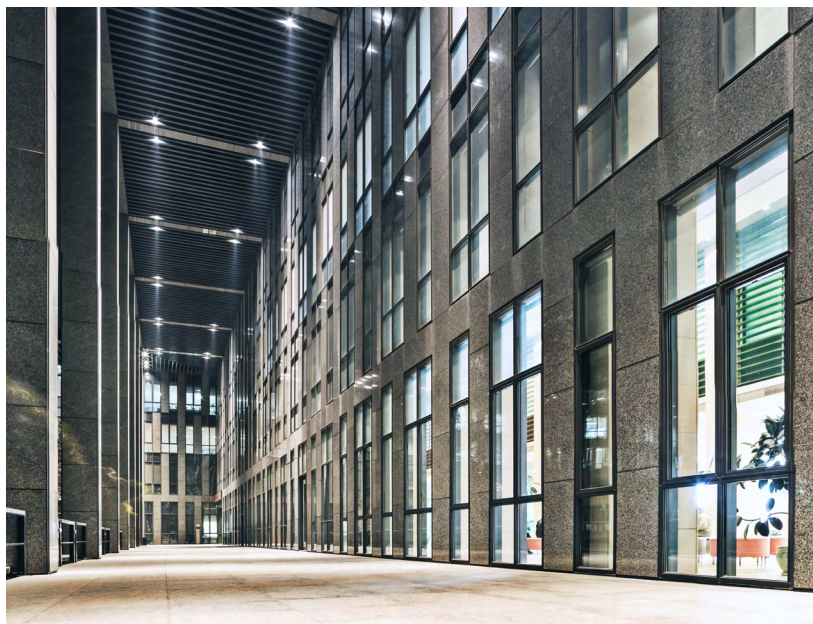
Heater Specifications

| | |
|----------------------------|--|
| Tank | HydraStone Cement Lined Steel |
| Capacities | 19–119 gallons |
| Orientation | Vertical, horizontal option available |
| Voltages | 208–600 Volt |
| Phases | 1Φ or 3Φ |
| Inlet Size | Below 40 kW: ¾" Female NPT 40 kW and over: 1-½" Male NPT |
| Outlet Size | Below 40 kW: ¾" Male NPT 40 kW and over: 1-½" Male NPT |
| Drain Size | ¾" GHT |
| Relief Valve Size | ¾" Female NPT |
| Relief Valve Type | T&P, 210°F, 150 psi |
| Thermostat Range | Surface: 110–170°F Immersion: 100–190°F |
| Hi-Limit | 190°F Manual Reset |
| Design WP | 150 psi |
| Design TP | 300 psi |
| Elements | Incoloy Sheathed |
| Insulation | 2" Polyurethane Foam on < 30 Gal 3" Polyurethane Foam on ≥ 30 Gal |
| Tank Warranty | |
| Standard | 5 year Non Pro-Rated |
| Optional | 10 year Non Pro-Rated |
| Electrical Warranty | 1 Year |
| Jacket | High Impact Colorized Composite |
| Finish | White and Black |

For horizontal ceiling hung or floor mount in 20 or 30 gallon capacity see Endurance [EH/SEH brochure](#).

Standard Equipment

- ½" thick HydraStone cement lining
- Non-ferrous solid copper-silicon threaded openings for maximum corrosion resistance
- Incoloy sheathed immersion heating elements
- Built-in heat trap to improve operating efficiency (¾" inlet/outlet models only)
- Surface thermostat 110–170°F range
- Immersion thermostat (100–190°F) furnished as standard when required due to high recovery versus storage ratio
 - On 80–119 gallon heaters over 15 kW
- Hi-limit cut out safety feature with manual reset button
 - Surface safety hi-limit cut out with manual reset button (190°F)
 - Immersion safety hi-limit cut out with manual reset button (Standard on heaters 45 kW and above)
- 1-½" Male NPT inlet/outlet connections (standard on heaters 40 kW and above)
- ASME/CSA rated temperature and pressure relief valve set at 150 psi, 210°F
- Polyurethane foam insulation helps against heat loss
- High impact non-corroding colorized composite protective jacket
- Cold water inlet diffuser with drain valve



All information is subject to change without notice. Consult factory for submittal drawings.

kW and Amperage Selection Charts

20 Gallon kW and Amperage (Amperage shown in chart below indicates available models)

| kW | Recovery (GPH) | 1 Phase Voltages | | | | 3 Phase Voltages | | | | |
|----|----------------|------------------|-----|-----|-----|------------------|-----|-----|-----|-----|
| | | 208 | 240 | 277 | 480 | 208 | 240 | 380 | 480 | 600 |
| 13 | 53 | | | | | | | | 16 | 13 |

30, 40 and 55 Gallon kW and Amperage (Amperage shown in chart below indicates available models)

| kW | Recovery (GPH) | 1 Phase Voltages | | | | 3 Phase Voltages | | | | |
|------|----------------|------------------|-----|-----|-----|------------------|-----|-----|-----|-----|
| | | 208 | 240 | 277 | 480 | 208 | 240 | 380 | 480 | 600 |
| 12.5 | 51 | | 52 | | | | 30 | | | 12 |
| 13 | 53 | | | 47 | | | | 20 | 16 | 13 |
| 14 | 57 | | | 51 | 29 | | | | 17 | |
| 15 | 61 | 72 | | | | 42 | | | | |
| 16 | 66 | | 67 | | | | 39 | | | |
| 17 | 70 | | | 61 | | | | 26 | 20 | 16 |
| 20 | 82 | | 83 | | | | 48 | | | |
| 21 | 86 | | | 76 | | | | | 25 | 20 |
| 26 | 106 | | | | | | | | | 25 |
| 27 | 111 | | | 97 | | | | | 33 | |

Under Counter 30U, 40U and 50U Gallon kW and Amperage (Amperage shown in chart below indicates available models)

| kW | Recovery (GPH) | 1 Phase Voltages | | | | 3 Phase Voltages | | | | |
|------|----------------|------------------|-----|-----|-----|------------------|-----|-----|-----|-----|
| | | 208 | 240 | 277 | 480 | 208 | 240 | 380 | 480 | 600 |
| 12.5 | 51 | | | | 26 | | | | | 12 |
| 13 | 53 | | | | | | | | 16 | 13 |
| 14 | 57 | | | | | 39 | 34 | | | |
| 15 | 61 | | | | 31 | | | | | |
| 16 | 66 | | | | | | | 24 | 19 | |
| 19 | 78 | | | | | | 46 | 29 | 23 | |

All information is subject to change without notice. Consult factory for submittal drawings.

65 Gallon kW and Amperage *(Amperage shown in chart below indicates available models)*

| kW | Recovery (GPH) | 1 Phase Voltages | | | | 3 Phase Voltages | | | | |
|------|----------------|------------------|-----|-----|-----|------------------|-----|-----|-----|-----|
| | | 208 | 240 | 277 | 480 | 208 | 240 | 380 | 480 | 600 |
| 12.5 | 51 | | 52 | | 26 | | 30 | | | 12 |
| 13 | 53 | | | | 27 | | | 20 | 16 | 13 |
| 14 | 57 | | | | 29 | 39 | 34 | | 17 | |
| 15 | 61 | 72 | | | 31 | 42 | | | | |
| 16 | 66 | | 67 | | 33 | | 39 | 24 | 19 | |
| 17 | 70 | | | 61 | | 48 | | 26 | 20 | 16 |
| 18 | 74 | 87 | | | | | | | | |
| 19 | 78 | | | | 40 | | 46 | 29 | 23 | |
| 20 | 82 | | 83 | | | | 48 | 30 | | |
| 21 | 86 | | | 76 | | 58 | | | 25 | 20 |
| 23 | 94 | | | | | | 64 | | | |
| 24 | 98 | | | | | | 58 | 37 | | |
| 25 | 102 | | | | 52 | | | | | |
| 26 | 106 | | | | | | | | | 25 |
| 27 | 111 | | | | | | | | 33 | |
| 29 | 119 | | | | | 81 | 70 | | | |
| 31 | 127 | | | | 65 | | | | | |
| 32 | 131 | | | | | | | 49 | 39 | |
| 38 | 156 | | | | | | 92 | 58 | 46 | |



All information is subject to change without notice. Consult factory for submittal drawings.

80, 100 and 120 Gallon kW and Amperage

(Amperage shown in chart below indicates available models)

| kW | Recovery (GPH) | 1 Phase Voltages | | | | 3 Phase Voltages | | | | |
|------|----------------|------------------|-----|-----|-----|------------------|-----|-----|-----|-----|
| | | 208 | 240 | 277 | 480 | 208 | 240 | 380 | 480 | 600 |
| 12.5 | 51 | | 52 | | 26 | | 30 | 19 | | 12 |
| 13 | 53 | | | 47 | 27 | | | 20 | 16 | 13 |
| 14 | 57 | 67 | | | 29 | 39 | 34 | | 17 | |
| 15 | 61 | 72 | 63 | | 31 | 42 | 36 | | | |
| 16 | 66 | | 67 | 58 | 33 | | 39 | 24 | 19 | |
| 17 | 70 | | | 61 | | 48 | | 26 | 20 | 16 |
| 18 | 74 | 87 | | | 38 | 50 | | | | |
| 19 | 78 | | 79 | | 40 | | 46 | 29 | 23 | 18 |
| 20 | 82 | | 83 | 72 | 42 | | 48 | 30 | 24 | |
| 21 | 86 | | | 76 | | 58 | | | 25 | 20 |
| 23 | 94 | 111 | | | | 64 | 56 | | | |
| 24 | 98 | | 100 | | 50 | | 58 | 37 | 29 | |
| 25 | 102 | | | 90 | 52 | | | 38 | 30 | 24 |
| 26 | 106 | | | | | | | | | 25 |
| 27 | 111 | 130 | | | | 75 | | | 33 | |
| 29 | 119 | | | | 60 | 81 | 70 | | | |
| 30 | 123 | | 125 | | | | 72 | 46 | | |
| 31 | 127 | | | | 65 | | | | | 30 |
| 32 | 131 | | | 116 | | 89 | | 49 | 39 | |
| 36 | 147 | | | | | | 87 | 55 | | |
| 38 | 156 | | | | 79 | | 92 | 58 | 46 | |
| 39 | 160 | | | | | | | | | 38 |
| 41 | 168 | | | | | | | | 49 | |
| 43 | 176 | | | | | 119 | 104 | | | |
| 46 | 188 | | | | 96 | | | | | |
| 48 | 197 | | | | | | | 73 | 58 | |
| 57 | 233 | | | | | | 137 | | 69 | |
| 58 | 237 | | | | | | | 88 | | |

Notes:

- Units 40 kW and over are supplied with 1-1/2" Male NPT inlet/outlet connections and immersion hi-limit.
- For alternative voltages, including 220, 415, 440, 460 volt, please consult factory for available kW selection.

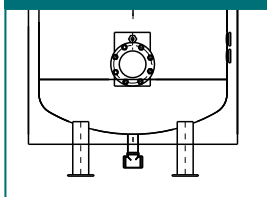
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Dimensions

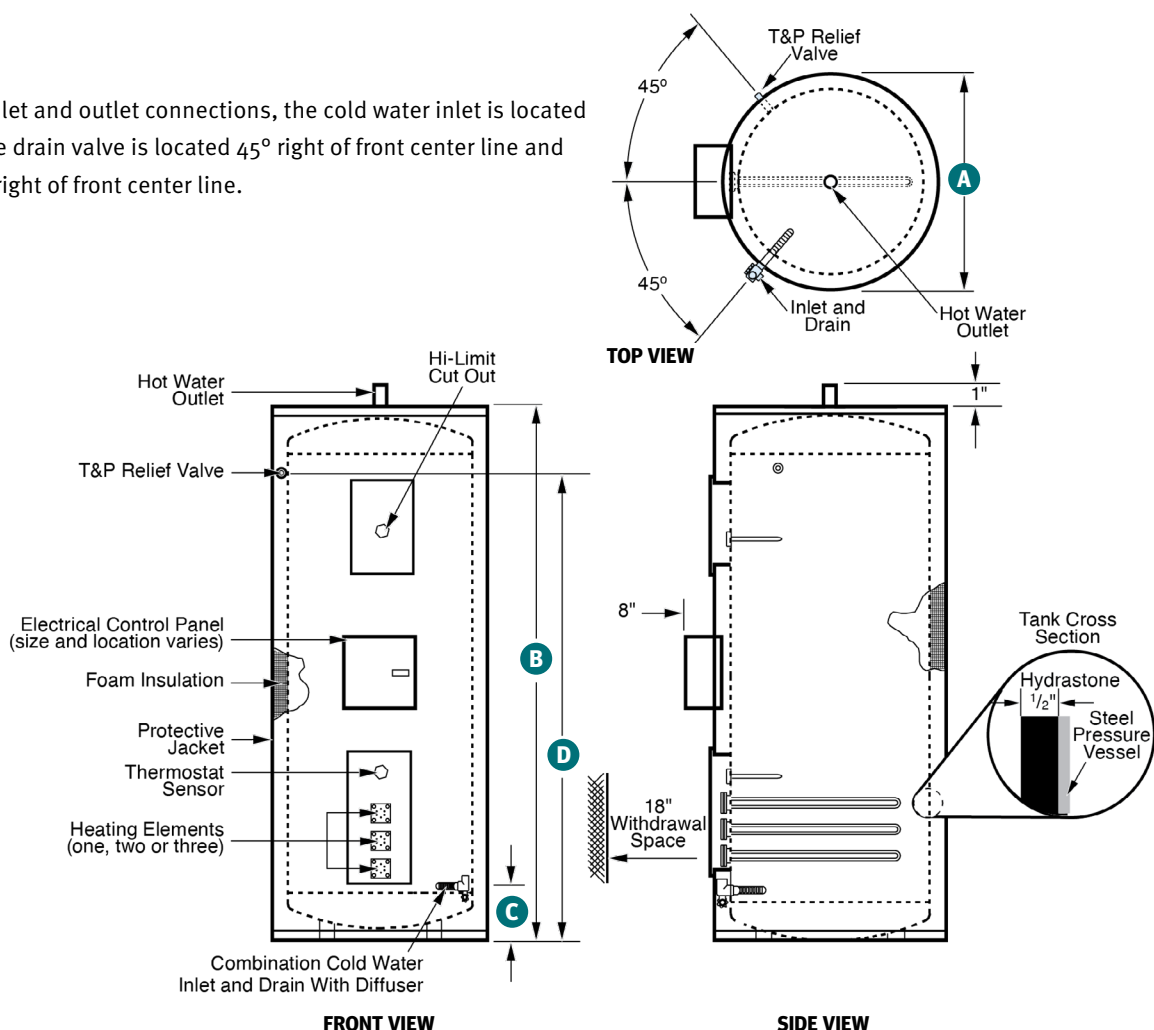
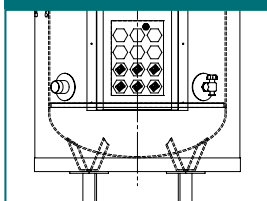
Note: On models with 1-1/2" inlet and outlet connections, the cold water inlet is located 45° left of front center line, the drain valve is located 45° right of front center line and the relief valve is located 55° right of front center line.

Note: Hubbell utilizes both flanged elements or grouped screw plug elements depending on total applied kW and specific application.

Flanged Elements



Grouped Screw Plug Elements



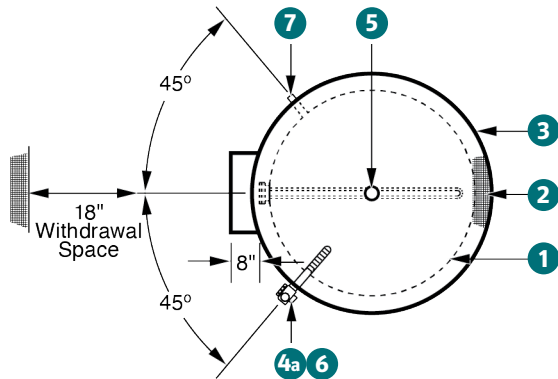
Endurance SE Dimensional Data

| Base Model Number | Storage Capacity (Gal) | Maximum kW Input | Dimensions (Inches) | | | | Shipping Weight (lbs.) |
|-------------------|------------------------|------------------|---------------------|------------|--------------------|------------------|------------------------|
| | | | Diameter "A" | Height "B" | Floor to Inlet "C" | Floor to T&P "D" | |
| SE20 | 19 | 15 | 20 | 32.75 | 7.5 | 26.75 | 175 |
| SE30 | 30 | 30 | 22.75 | 41.625 | 7.5 | 34.25 | 210 |
| SE40 | 40 | 30 | 22.75 | 57.25 | 7.5 | 50 | 265 |
| SE55 | 55 | 45 | 25 | 58.25 | 7.875 | 50.875 | 375 |
| SE65 | 65 | 57 | 28 | 47.25 | 7.875 | 38.875 | 335 |
| SE80 | 80 | 57 | 28 | 58.25 | 7.875 | 49.875 | 410 |
| SE100 | 100 | 57 | 28 | 68.5 | 7.875 | 60.5 | 425 |
| SE120 | 119 | 57 | 30 | 68.75 | 7.875 | 60.375 | 495 |
| SE30U | 30 | 30 | 25 | 35.75 | 7 | 24 | 215 |
| SE40U | 40 | 45 | 28 | 31.75 | 7.875 | 25.375 | 295 |
| SE50U | 50 | 45 | 30 | 37.25 | 7.875 | 27.625 | 300 |

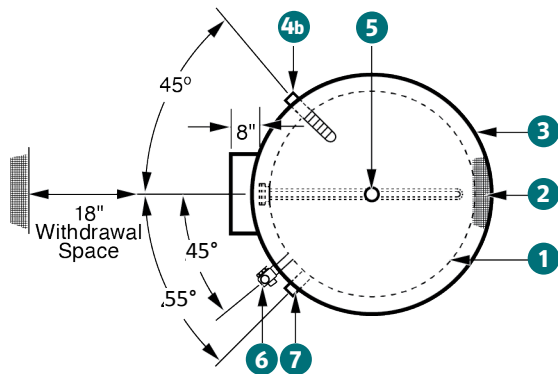
Under counter options

Note: Under counter models SE30U, SE40U, and SE50U have hot water outlet located on the side.

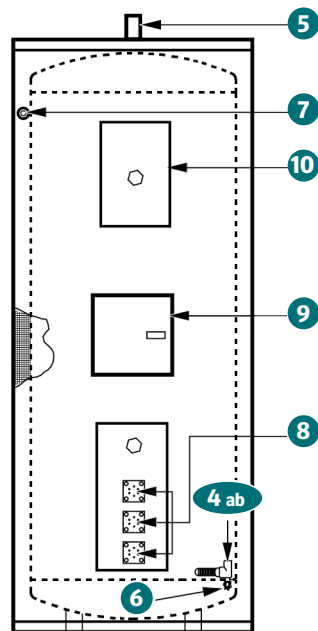
All information is subject to change without notice. Consult factory for submittal drawings.



TOP VIEW – 3/4" INLET/OUTLET MODELS



TOP VIEW – 1 1/2" INLET/OUTLET MODELS



FRONT VIEW

Diagram Key

| Number | Description |
|--------|--------------------------------|
| 1 | HydraStone cement lined tank |
| 2 | Polyurethane foam insulation |
| 3 | Corrosion resistant jacket |
| 4A | Cold water inlet 3/4" models |
| 4B | Cold water inlet 1-1/2" models |
| 5 | Hot water outlet |
| 6 | Drain connection 3/4" GHT |
| 7 | Relief valve connection 3/4" |
| 8 | Heating element(s) |
| 9 | Electrical control panel |
| 10 | Hi-limit / upper panel |

Formulas to Solve For:

Recovery

$$\text{GPH} \times \text{ } ^\circ\text{F}\Delta\text{T} \times 0.00244 = \text{kW}$$

$$\text{kW} \times 410 \div \text{GPH} = \text{ } ^\circ\text{F}\Delta\text{T}$$

$$\text{kW} \times 410 \div \text{ } ^\circ\text{F}\Delta\text{T} = \text{GPH}$$

Note: 1 kW will heat 4.1 GPH at a 100 °FΔT

Electrical

$$\frac{\text{kW} \times 1000}{\text{Volts}} \div 1.73 = \text{Amps } 3 \phi$$

$$\frac{\text{kW} \times 1000}{\text{Volts}} = \text{Amps } 1 \phi$$

Notes:

1. Storage tank rated for 150 psi WP
2. ASME rated T&P relief valve shipped loose
3. Built-in heat trap supplied in hot water outlet (3/4" inlet/outlet models only)
4. All electrical controls are factory wired and tested
5. Exact size and location of electrical control panel varies depending upon model

Note: Horizontal available – see [EH/SEH brochure](#).

Endurance SE Model Number Designation

| MODEL | MODEL NUMBER | STYLE | See charts on pages 3-5 | | TANK | VOLTAGE / PHASE | OPTIONAL EQUIPMENT |
|-------|--------------|---|---|-------------------------|--------------------------------|---|--|
| | | | UPPER kW | LOWER kW | | | |
| SE | 20* | Leave blank for standard A = ASME‡ U = Under counter† H = Horizontal†† | Element bank 0–57 kW (typically 0) Not available in 19 Gallon capacity heaters | Element bank 12.5–58 kW | SL = HydraStone cement lined | RS = 208/1 S = 240/1 W = 277/1 T4S = 480/1 Balanced 3Φ only R = 208/3 T = 240/3 T3 = 380/3 T7 = 415/3 T5 = 440/3 T4 = 480/3 T6 = 600/3 | Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (–). |
| | 30 | | | | CN = Solid 90/10 Copper Nickel | | |
| | 40 | | | | | | |
| | 50** | | | | | | |
| | 55 | | | | | | |
| | 65 | | | | | | |
| | 80 | | | | | | |
| | 100 | | | | | | |
| | 120 | | | | | | |

Example: SE120–0–18SLT4–V15

Endurance SE, 119 gallons with 0 kW in upper element bank and 18 kW in the lower element bank. Storage tank is lined with HydraStone cement and the electrical controls operate at 480 V, three phase, 60 Hz power. Includes additional 3/4" FNPT tapping.

Important notes:

- * 2" foam insulation standard on 20 gallon models, 30 gallon and larger include standard 3" foam insulation
- **50 gallon available only for under counter
- ‡ ASME models have slightly different dimensions, consult factory
- † Available in 30, 40 and 50 gallon sizes only
- †† For 20-55 gallon capacity, see Endurance [EH/SEH brochure](#)

Optional Equipment Optional equipment must be called out in specifications, use the codes below.

Controller

- C1** Immersion Thermostat (100°F - 190°F)
- C2** Low Range Immersion Thermostat (30°F - 110°F)
- C3** Immersion Adjustable Safety Hi-Limit Cutout with Manual Reset (100°F - 240°F)
- C5** Low Water Cutoff
- C10** Fused Power Circuits
- C15** Non-Fused Disconnect Switch
- C16** Fused Disconnect Switch
- C20** Enable/Disable Relay (Specify Voltage)
- C21** Dry Contact for Remote Alarm Capability (Specify Condition)
- C25** Upgrade to a 40XL 3.4" T&P Relief Valve (A 100XL 3/4" T&P is Standard and Included in Pricing)
- C31** Leak Detection - Includes Sensor Pad and Dry Contact for BMS Notification
- C32** Leak Detection - Includes Sensor Pad, Dry Contact for BMS Notification, and 3/4" Solenoid Valve
- C35** BACnet Communication Module with T1000 Digital Controller

Electrical

- E1** Fused Low Voltage Transformer

General

- G1** Combination Temperature & Pressure Gauge: 3.5" Dial, 70°F - 250°F, 0 - 200 PSI, Tank Mounted

Vessel

- V1** NSF5 Approved Legs
- V3** 3" Polyurethane Foam Insulation
- V4** 2" Polyurethane Foam Insulation
- V5** Optional 200 PSI Working Pressure. If Other than 200, Use Code -V5-XX and Specify Pressure
- V10** 1-1/2" Male NPT Inlet and Outlet Water Connections
- V11** 2" Inlet/Outlet Connections
- V15** Additional 3/4" FNPT Tappings
- V16** Additional 1-1/2" FNPT Tappings
- V20** Integrally Welded Seismic Attachment Points

Please note: Optional equipment may impact overall dimensions and weight. Please request submittal drawing from factory.

Available Accessories

10-year Warranty: 10-year non pro-rated tank warranty, specify part number "VESSEL WARRANTY"

Accessories Name

Part

All information is subject to change without notice. Consult factory for submittal drawings.

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