HUBBELL
a **nudyne** company

RESISTANCE SERIES

ER



Explosion Resistant Water Heater

10-119 gallon capacity standard, up to 10,000 gallon available, 1.5-58 kW, single or three phase

Built for safe operation in hazardous locations

UL and CSA listed housing rated for operation in Class I, Division 1 & 2, Groups B, C, & D (Class I, Zones 1 & 2, Groups II B&H, II B & II A) Class II, Division 1 & 2, Groups E, F, & G (Zones 21 & 22, Groups III C & III B), Temperature Class T5

HydraStone® cement lining provides long tank life

- Copper-silicon alloy tappings and high impact composite jacket cannot rust or corrode
- All controls factory selected and wired for efficient installation and operation
- Ready for electrical and plumbing service connections

Applications

Refineries, drilling platforms, paper and pulp mills, industrial facilities, and many more hazardous locations.

A long-lasting water heater for your hazardous location

The Hubbell Resistance ER (explosion resistant) water heater is specifically made for applications in hazardous locations. Operating controls are housed within a heavy-duty explosion resistant electrical enclosure to ensure safe operation. The electrical conduit is factory sealed to meet specific class and division code. The water heater also includes an explosion resistant heating element, and the entire unit is sealed and covered for locations with high hazard vapors or dust.

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 6–10,000 gallons – all designed, engineered, and manufactured for reliability and longevity coupled with unparalleled support and service.

NOTE: Manufactured in an ISO 9001:2015 facility. ASME option available upon request. BABA & BAA compliance is available upon request.

ETL C US Intertek

hubbellheaters.com **sales@hubbellheaters.com** **203.378.2650**

The Difference: HydraStone® Cement Lining

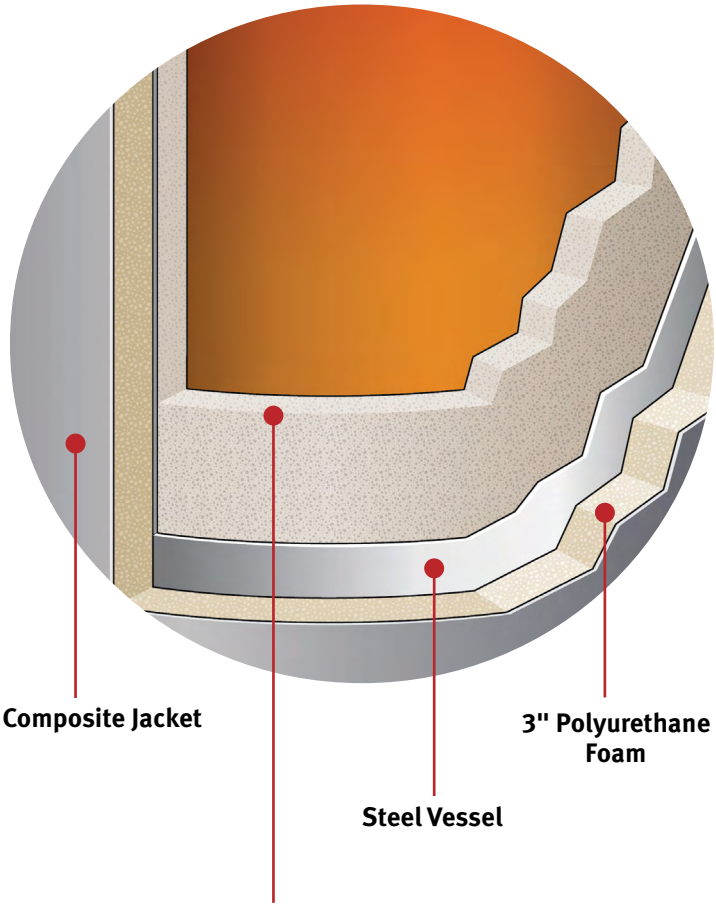
Cement lined tanks offer significant longevity, trouble-free operation and a lower lifetime cost.

The type of protective lining is the single most important feature when determining the quality of any water heater. The ability of a lining to protect the steel tank is primarily based on its thickness and complete coverage of all steel surfaces.

A glass lined tank uses only .005 inches of glass which does not cover all internal surfaces. To compensate, all glass lined tanks require a sacrificial anode rod which must be periodically inspected and replaced.

Our tanks are lined with a minimum of .5 inches of high density HydraStone® cement — 100 times thicker than glass lining. Full coverage is achieved by injecting the precise amount of HydraStone® cement into each tank and then centrifugally spinning it at 250 RPM to ensure complete and uniform coverage. This process provides maximum protection from the corrosive effects of hot water. Additionally, cement lined tanks do not require a sacrificial anode, eliminating periodic inspections and replacement costs associated with glass lined tanks.

Our water heater tanks are constructed with solid non-ferrous copper-silicon tank tappings which are impervious to the corrosive effects of hot water. Glass-lined tanks have regular steel tappings which are vulnerable to corrosion.



.5 inch HydraStone® cement lining VS .005 inch glass lining

(actual size) *(actual size)*



Heater Specifications

Tank	HydraStone® Cement Lined Steel
Capacities	10–119 Gallons Standard up to 10,000 Gallons available
Orientation	Vertical or Horizontal
Voltages	120–600 V
Phase	1 or 3 Phase
Inlet Size	¾" Female NPT
Outlet Size	¾" Male NPT
Drain Size	¾" GHT
Relief Valve Opening	¾" Female NPT
Relief Valve Type	T&P, 210°F, 150 psi
Thermostat Type	Adjustable
Thermostat Range	60–187°F
Hi-Limit	190°F
Design Pressure	150 psi WP, 225 psi TP
Elements	High Quality Immersion Electric
Insulation	3" Polyurethane Foam
Tank Warranty	3 Years Non-Pro-Rated
Electrical Warranty	1 Year
Jacket	High Impact Colorized Composite
Finish	White and Black

Note: For alternative voltages, kW sizes and/or storage capacities above 119 gallons please consult factory.



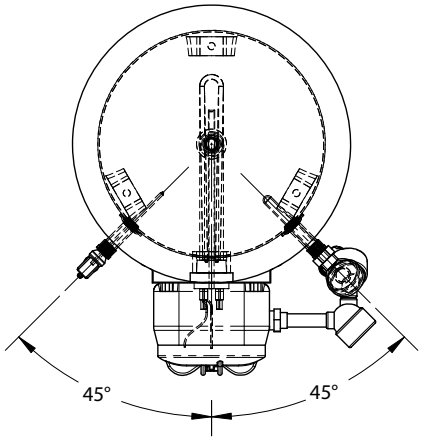
Standard Features

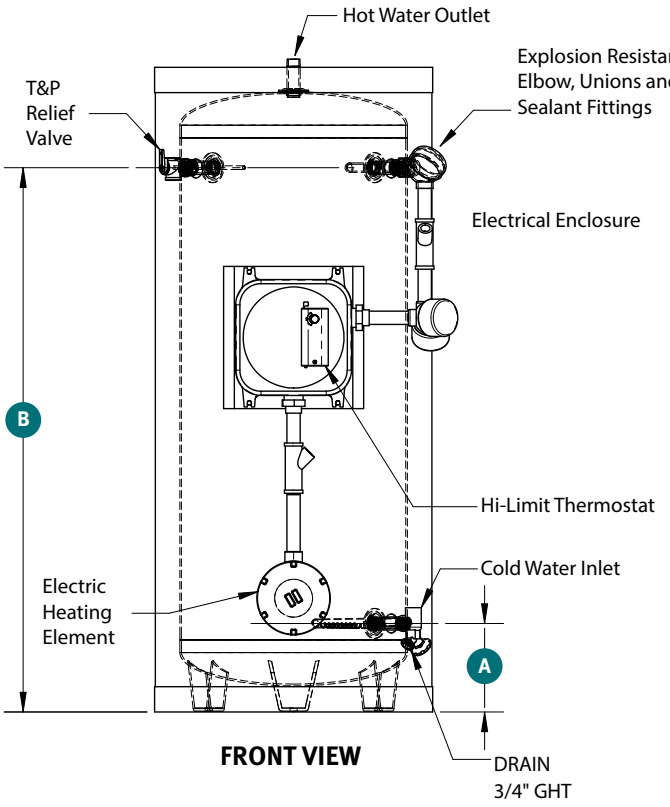
Up to 119 gallon

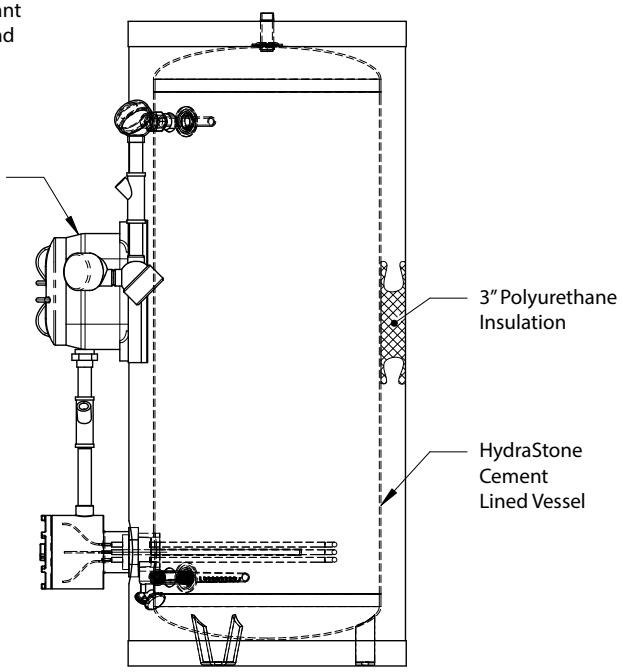
- Hazardous location electrical enclosure rated for operation in a
  - Class I, Division 1 & 2, Groups B, C, & D, (Class I, Zones 1 & 2, Groups II B & H, II B & II A), Temperature Class T5
  - Class II, Division 1 & 2, Groups E, F, & G (Zones 21 & 22, Groups III C & III B), Temperature Class T5, listed for hazardous area locations
- Heavy Duty ½" thick HydraStone® cement lined storage tank for long service life
- Non-ferrous solid copper-silicon tank openings
- Built-in heat trap to improve operating efficiency
- High-quality long-lasting immersion heating elements
- Magnetic contactor (3 Φ only)
- Adjustable temperature controller (110–170°F)
- 3" Polyurethane foam insulation for minimum standby heat loss, 2" foam available as an option
- High impact colorized composite protective jacket
- ASME/CSA rated combination temperature and pressure relief valve set at 150 psi, 210°F
- ¾" Male NPT inlet and outlet connections (except 45 and 54kW)
- Units 45 kW and over are supplied with 1-1/2" Male NPT inlet/outlet connections
- All units include immersion hi-limits. On 10 gallon units it is located in the element, for 20 gallons and up, the immersion hi-limit is located in the top of the tank

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

Dimensions







Storage Capacity (Gal)	Dimensions (Inches)				Shipping Weight (lbs.)
	Overall Diameter	Overall Height	Inlet "A"	T&P Valve "B"	
10	20"	21-1/2"	8-7/8"	12-5/8"	160
20	20"	32-3/4"	7-1/2"	26-3/4"	200
30	22-3/4"	41-5/8"	7-1/2"	34-1/4"	270
40	22-3/4"	57-1/4"	7-1/2"	50"	320
50	25"	50-1/4"	7-7/8"	42-7/8"	335
65	28"	47-1/4"	7-7/8"	39-3/8"	400
80	28"	58-1/4"	7-7/8"	49-7/8"	435
100	28"	68-1/2"	7-7/8"	60-3/8"	465
119	30"	68-3/4"	7-7/8"	60-3/8"	515

Note: For alternative voltages, kW sizes and/or storage capacities above 119 gallons please consult factory.

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

kW and Amperage Selection Charts

10 & 20 Gallon (2" Insulation), 30, 40, & 50 Gallon (3" Insulation)

(Amperage shown in chart below indicates available models)

kW	1 Phase Voltages					3 Phase Voltages				Recovery (GPH)
	120	208	240	277	480	208	240	277	480	
1.5	13									6
2		10	8	7	4					8
2.5		12	10	9	5					10
3		14	13	11	6	8	7	6	4	12
3.5		17	15	13	7					14
4		19	17	14	8	11	10	8	5	16
4.5		22	19	16	9					18
5		24	21	18	10	14	12	10	6	21
5.5		26	23	20	11					23
6		29	25	22	13	17	14	13	7	25
8						22	19	17	10	33
10						28	24	21	12	41

* 10 and 20 gallon are 2" Insulation

65, 80, 100, and 120 Gallon (3" Insulation)

(Amperage shown in chart below indicates available models)

kW	3 Phase Voltages				Recovery (GPH)
	208	240	277	480	
3	8	7	6	4	12
4	11	10	8	5	16
5	14	12	10	6	21
6	17	14	13	7	25
8	22	19	17	10	33
10	28	24	21	12	41
12	33	29	25	14	49
12.5	35	30	26	15	51
15	42	36	31	18	62
20	56	48	42	24	82
30	83	72	63	36	123
35	97	84	73	42	144
40	111	96	83	48	164
45	125	108	94	54	185
54	150	130	113	65	221
58	161	140	121	70	238

Notes

1. Recovery calculated is at 100 °F ΔT Rise
2. Units 45 kW and over are supplied with 1-1/2" Male NPT inlet/outlet connections and immersion hi-limit.
3. For alternative voltages, including 220, 415, 440, 460 volt, please consult factory for available kW selection.

Formulas to Solve For:

kW Required

GPH x _____°F ΔT x 0.00244 = kW

Temperature Rise

kW x 410 ÷ GPH = _____°F Rise

Recovery

kW x 410 ÷ _____°F ΔT Rise = GPH

Amperage

1 PHASE: kW x 1000 ÷ Voltage = Amps 1Φ

3 PHASE: kW x 1000 ÷ Voltage ÷ 1.73 = Amps 3Φ

Notes: 1kW will heat 4.1 GPH at a 100°F Rise

All information is subject to change without notice.

Consult factory for submittal drawings.

Resistance ER Model Number Designation

MODEL	MODEL NUMBER*	HORIZONTAL	kW SELECTION	TANK	VOLTAGE / PHASE	OPTIONAL EQUIPMENT
ER	10 20 30 40 50 65 80 100 120	*Leave blank for standard* **A** = ASME	1.5 – 58**	**SL** = HydraStone® cement lined **CN** = Copper-Nickel **SS** = Stainless steel 316L *CN and SS tanks come standard with galvanneal jacket and fiberglass insulation.*	**A** = 120-1 **RS** = 208-1 **S** = 240-1 **W** = 277-1 **T4S** = 480-1 **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 (–)

ER			–			–	

* For larger vessel capacity, consult factory.
** Higher kW available. Consult factory.

Example: ER10-1.5SLA-G25

Is a hazardous location Resistance ER water heater with 10 gallons of storage and 1.5 kW heating element. It is a cement lined steel vessel and has an electrical rating of 120 volt, single phase, 60 Hz, with optional outdoor weather package.

Note: For alternative voltages, kW sizes and/or storage capacities above 119 gallons please consult factory.

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

Controller

C5 Low water cut-off

General

G25 Outdoor Weather Package (304 SS Jacket and 6" Legs, NEMA 4X Electrical Housing

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

Vessel

V1 NSF5 Approved Legs
V3 3" Polyurethane Foam Insulation
V4 2" Polyurethane foam insulation
V10 1-½" Male NPT brass inlet and outlet water connections
V20 Integrally welded seismic attachment points

Available Accessories *(Fill out form below to order 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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