HUBBELL
a **nudyne** company

ENDURANCE SERIES

Light Duty Commercial Electric Water Heater

6–55 gallon capacity, up to 12 kW, single phase and three phase options available



HydraStone® cement lining provides longer tank life

High impact composite jacket eliminates damage during transit and installation and cannot rust or corrode

Copper-silicon tappings cannot rust or corrode

- Polyurethane foam insulation reduces heat loss
- Built-in heat trap lowers operating costs
- DOE compliant
- 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.

A long lasting, trouble-free water heater

The Hubbell Endurance E water heater has a number of features not found in other conventional heaters making it better suited to resist the corrosive effects of hot water. The heart of the Endurance E is a superior storage vessel with HydraStone cement lining, solid copper-silicon threaded tank openings and a built-in heat trap, 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.

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

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

The Difference: HydraStone® Cement Lining

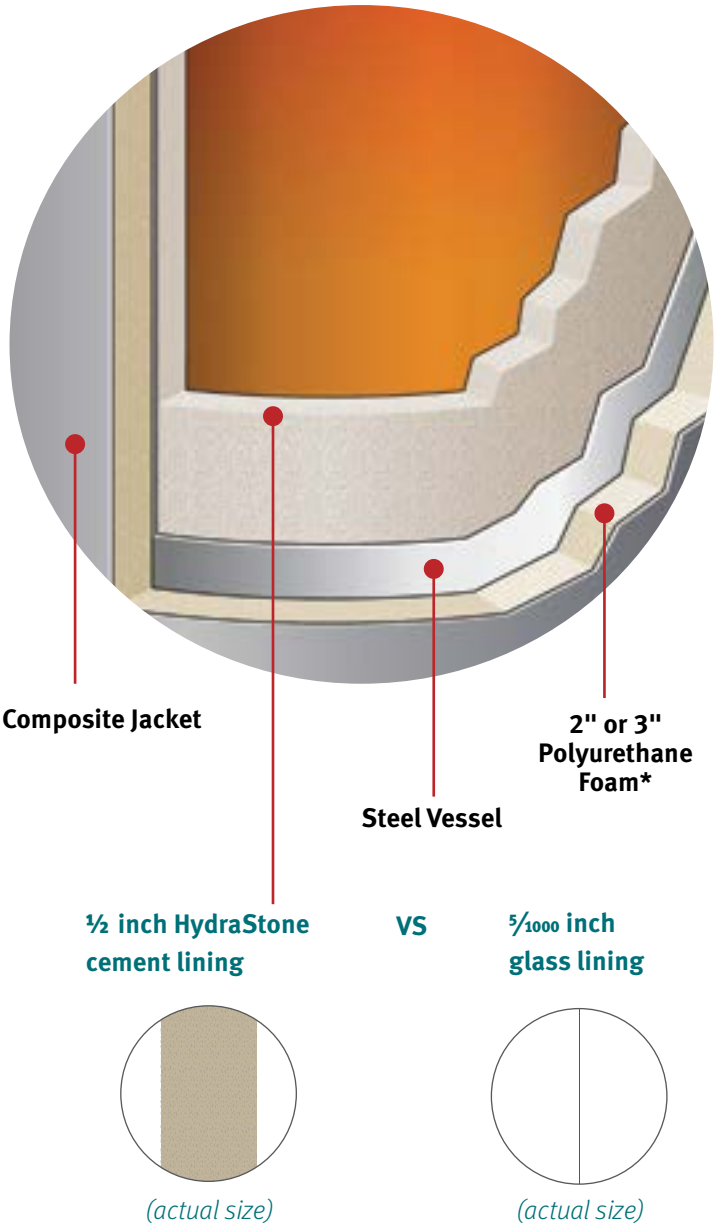
Cement lined tanks offer significant longevity, trouble-free operation and a lower lifetime cost.

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 5/1000 inches of glass (the thickness of a sheet of paper) 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 ½ 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 steel tappings which are vulnerable to corrosion.



*6, 10 and 20 gallon capacities have 2" polyurethane foam, 30 gallon and above have 3"

Heater Specifications

Tank	HydraStone® Cement Lined Steel
Volumes	6, 10, 19, 30, 40 and 55 gallons
Orientation	Vertical, horizontal option available
Voltages	120 – 480 Volt
Phases	1Φ or 3Φ
Inlet Size	3/4" Female NPT
Outlet Size	3/4" Male NPT
Drain Size	3/4" GHT
Relief Valve Size	3/4" Female NPT
Relief Valve Type	T&P, 210°F, 150 psi
Thermostat Range	110–170°F (surface)
Hi-Limit	190°F Manual Reset
Design WP	150 psi
Design TP	300 psi
Elements	
1Φ or 3Φ open delta	Copper sheathed
3Φ balanced	Incoly sheathed
Insulation	• 3" Polyurethane Foam • 2" Polyurethane Foam for 6, 10, and 19 gallon tanks
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 with Black Trim

Under counter/low boy sizes available – see chart on page 4.

For horizontal ceiling hung or floor mounted see Endurance EH/SEH brochure.

Standard Features

Tank

The Hubbell Endurance E tank is welded heavy steel construction designed for 150 psi working pressure and tested to 300 psi. All tank openings are non-ferrous solid copper-silicon and are resistant to the corrosive effects of hot water.

Plumbing

A ¾" combination cold water inlet and drain, with non-corrosive strata flow diffuser which prevents incoming cold water from mixing too rapidly with the hot water in the tank and assures delivery of more hot water — not lukewarm water.

A ¾" hot water outlet with a uniquely designed built-in heat trap prevents heated water from radiating through the piping during standby periods.

Electrical

Copper sheathed (single phase or three phase open delta) or incoly sheathed (three phase balanced) immersion heating elements with low watt density for prolonged life — up to 10 kW in 120, 208, 240, 277, 480 volt single phase and 3 phase (see chart for details). An adjustable surface thermostat operates in 110–170°F range. Integral hi-limit with manual reset button for over-temperature protection is factory set at 190°F. Single phase upper and lower element configurations are factory wired for non-simultaneous operation. Three phase are wired for simultaneous operation.

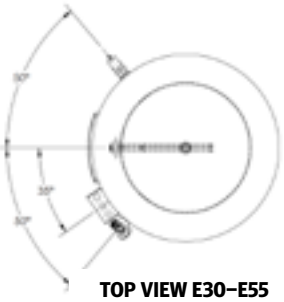
Insulation

Meets the new NAECA III efficiency requirements. Highly efficient polyurethane foam insulation meets or exceeds the requirements of ANSI/ASHRAE/IESNA 90.1–2007 standards for energy efficiency and heat loss. Insulation R value = 7.2/inch

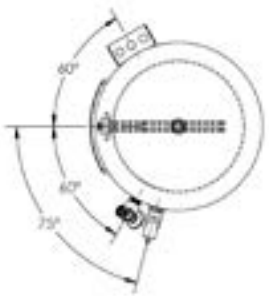
Jacket

The exterior protective jacket is constructed from composite material which cannot rust or corrode and does not require painting.

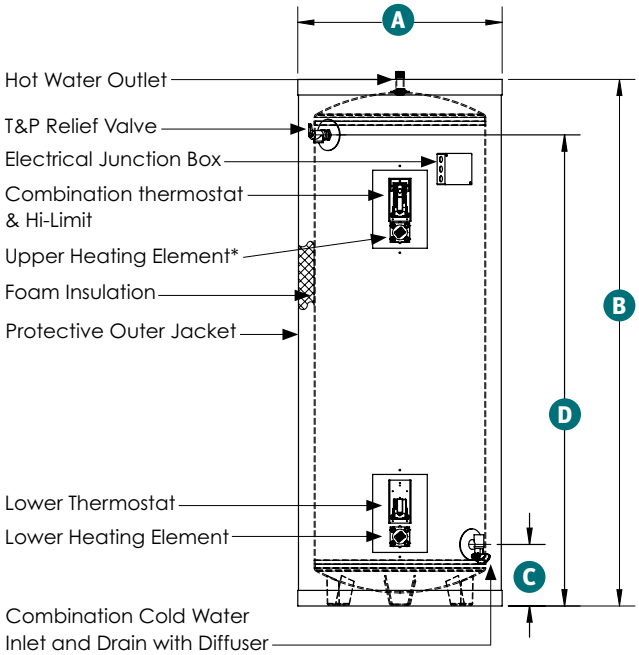
Dimensions



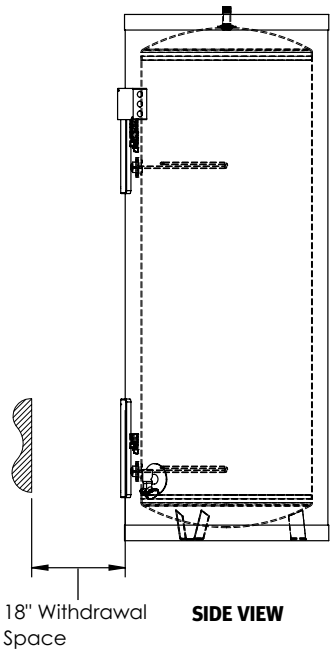
TOP VIEW E30–E55



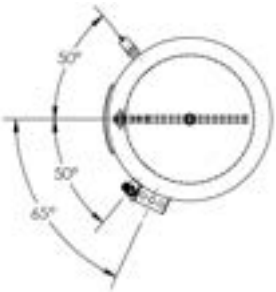
TOP VIEW E06



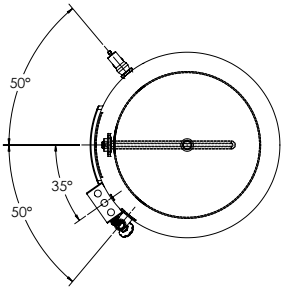
FRONT VIEW



SIDE VIEW



TOP VIEW E10



TOP VIEW E20

** Three phase balanced includes only Lower Heater Element.*

Endurance E Dimensional Data

Base Model Number	Storage Capacity (Gallons)	Dimensions (inches)				Shipping Weight (lbs.)
		Overall Diameter "A"	Overall Height "B"	Floor to Inlet "C"	Floor to T&P "D"	
E06	6	15	18.0625	6.125	12.875	105
E10	10	20	21.5	7.5	14.75	120
E20	19	20	32.75	7.5	26.75	150
E30	30	22.75	41.625	7.5	34.25	225
E40	40	22.75	57.25	7.5	50	240
E55	55	25	59.25	7.875	50.875	375
E30U	30	25	34.25	7	24	205
E40U	40	28	31.75	7	24	270
E50U	50	30	37.25	7	27	300

Under counter options

Notes:

1. 120 volt models are available in 1500, and 2500 Watts only.
2. The 6, 10, and 19 gallon models are available in lower element design only and come standard with 2" insulation. All other sizes have both upper and lower element banks of identical wattage and are wired for non-simultaneous operation and come standard with 3" insulation.
3. 6 gallon available in single phase only.
4. For under counter models E30U, E40U, and E50U the hot water outlet is located on the side.

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

kW and Amperage Selection Charts

Note: 1 kW will heat 4.1 GPH at 100°F rise



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

	kW	Recovery (GPH)	1 Phase Voltages				
			120	208	240	277	480
SINGLE ELEMENT	1	4		5		4	
	1.5	6	13		6		3
	2	8		10		7	4
	2.5	10	21	12	10		
	3	12		14	13		6
	3.5	14		17	15	13	
	4	16		19	17	14	
	4.5	18			19		
	5	21			21		10
	6	25					13

XX = Amperages shown in red use an Immersion Thermostat, all others use a Surface Thermostat

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

	kW	Recovery (GPH)	1 Phase Voltages					3 Phase Voltages – Balanced (lower element only)		
			120	208	240	277	480	208	240	480
SINGLE ELEMENT	1	4		5	4	4				
	1.5	6	13	7	6	5	3			
	2	8	17	10	8	7	4	6		
	2.5	10	21	12	10	9	5			
	3	12		14	13		6	8	7	
	3.5	14		17	15	13	7			
	4	16		19	17	14	8	11	10	5
	4.5	18		22	19	16	9			
	5	21		24	21	18	10	14	12	6
	6	25		29	25	22	13	17	14	7
	8	33		38	33	29		22	19	10
	10	41			42	36			24	12

Contactor Required

XX = Amperages shown in red use an Immersion Thermostat, all others use a Surface Thermostat

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

kW	Recovery (GPH)	1 Phase Voltages (Dual element non-simultaneous standard)					3 Phase Voltages (Single element balanced with contactor(s))			3 Phase Voltages (Dual element simultaneous open delta)		
		120	208	240	277	480	208	240	480	208	240	480
1	4		5	4	4							
1.5	6	13	7	6	5	3						
2	8	17	10	8	7	4	6	5		8	7	
2.5	10	21	12	10	9	5						
3	12		14	13		6	8	7		13	11	5
3.5	14		17	15	13	7						
4	16		19	17	14	8	11	10	5	17	14	7
4.5	18		22	19	16	9						
5	21		24	21	18	10	14	12	6	21	18	9
6	25		29	25	22	13	17	14	7	25	22	11
7	29									29	25	13
8	33		38*	33*	29*		22	19	10	33	29	14
9	37									37	32	16
10	41			42*	36*			24	12	42	36	18
12	49									50	43	22

*Single element only XX = Amperages shown in red use an Immersion Thermostat, all others use a Surface Thermostat

40 and 55 Gallon kW and Amperage Chart *(Amperage shown in chart below indicates available models)*

kW	Recovery (GPH)	1 Phase Voltages (Dual element non-simultaneous standard)					3 Phase Voltages (Single element balanced with contactor(s))			3 Phase Voltages (Dual element simultaneous open delta)		
		120	208	240	277	480	208	240	480	208	240	480
1	4		5	4	4							
1.5	6	13	7	6	5	3						
2	8	17	10	8	7	4	6	5		8	7	
2.5	10	21	12	10	9	5						
3	12		14	13		6	8	7		13	11	5
3.5	14		17	15	13	7						
4	16		19	17	14	8	11	10	5	17	14	7
4.5	18		22	19	16	9						
5	21		24	21	18	10	14	12	6	21	18	9
6	25		29	25	22	13	17	14	7	25	22	11
7	29									29	25	13
8	33		38*	33*	29*		22	19	10	33	29	14
9	37									37	32	16
10	41			42*	36*			24	12	42	36	18
12	49									50	43	22

*Single element only XX = Amperages shown in red use an Immersion Thermostat, all others use a Surface Thermostat

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

Endurance E Model Number Designation 6, 10, and 20 Gallon

MODEL	MODEL NUMBER	STYLE	See charts on pages 5 & 6 LOWER KW*	TANK	See charts on pages 5 & 6 VOLTAGE / PHASE	OPTIONAL EQUIPMENT
E 2" Foam Insulation	6 10 20	*Leave blank for standard* **A** = ASME	1 1.5 2 3 3.5 4 4.5 5 6	**SL** = HydraStone® cement lined tank **CN** = Solid copper-nickel tank **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 **Balanced 3Φ and 3Φ open delta**** **R** = 208/3 **T** = 240/3 **T4** = 480/3	Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (–). Available options are on page 8.

E			–				–	

* 6, 10 and 20 gallon models are lower element only

**10 and 20 gallon available in 3 phase balanced only

Endurance E Model Number Designation 30–55 Gallon

MODEL	MODEL NUMBER	STYLE	See charts on pages 5 & 6 UPPER KW	LOWER KW	TANK	See charts on pg. 5 & 6 VOLTAGE / PHASE	OPTIONAL EQUIPMENT
E 3" Foam Insulation	30 40 50† 55	*Leave blank for standard* **A** = ASME **U** = Under counter *Available in 30, 40 and 50 gallon sizes only*	0** 1.5 2 3 3.5 4 4.5 5 6	1 1.5 2 3 3.5 4 4.5 5 6 7 8 9 10 12	**SL** = HydraStone cement lined tank **CN** = Solid copper-nickel tank **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 **Balanced 3Φ and 3Φ open delta** R = 208/3 T = 240/3 T4 = 480/3	Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (–). Available options are on page 8.

E			–		–			–	

**Upper kW "0" is only available in balanced 3 phase †50 gallon only available in ASME or Under Counter

Example: E55A–4.5-4.5SLS–C1–V10

Model E with 3" foam insulation storage tank of 55 gallons, ASME certified, with 4.5 kW upper and lower heating elements, HydraStone cement lined steel storage tank, 240 V, single phase, 60 Hz power. Includes optional immersion thermostat and optional 1-½" MALE NPT inlet/outlet.

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

Optional Equipment

Note: *Optional equipment must be called out in the written 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)
C6	Off-Peak Wiring for Load Management Savings
C30	Heating Elements Wired for Simultaneous Operation
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

E5	Three Phase Open Delta Wiring (Must Be Simultaneous Operation; Reference 3-Phase kW Selection Charts on Previous Pages)

General

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

Vessel

V1	NSF5 Approved Legs
V10	1-1/2" Male NPT Inlet and Outlet Water Connections
V15	Additional 3/4" FNPT Tappings
V16	Additional 1-1/2" FNPT Tappings
V20	Integrally Welded Seismic Attachment Points

Note: Horizontal ceiling hung or floor mount available – see EH/SEH brochure.

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

Available Accessories

Wall Shelf: A wall shelf is available for 6–40 gallon models only, to order specify part number "WALL SHELF"

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

Fill out form below to order accessories.

Accessories Name **Part #**

Accessories Name **Part #**

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

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