HUBBELL
a **nudyne** company

SYNERGY HYDRO SERIES

BW

ASME Packaged Indirect Fired Water Heater



Utilizes boiler water or high temperature hot water to heat domestic water, semi-instantaneous or storage type, 80-10,000 gallons

HydraStone® cement lining provides superior protection and tank longevity

Heavy duty high-grade construction withstands demanding commercial/ industrial use

- Factory selected and sized boiler water control valve simplifies installation and ensures reliable operation
- Full range of styles, sizes, and optional features to meet your exact heating needs
- Equipped with all operating controls and ready for immediate installation

Applications

Schools, office buildings, sports venues, hotels, industrial facilities, nursing homes, hospitals, and more.

A Heavy Duty Indirect Fired Water Heater

The Synergy Hydro BW is a fully packaged indirect fired water heater that utilizes boiler water or high temperature hot water (HTHW) as the energy source for heating potable water. The entire package is designed to be a reliable and long-lasting source for hot water. Each component is carefully selected to ensure high performance in even the most demanding application. Whether you are heating potable water in a commercial building or process water in an industrial application, you can select a Hubbell Synergy Hydro BW to do the job.

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. BABA & BAA compliance is available upon request.

ASME U — Meets the requirements of the ASME Boiler and Pressure Vessel Code

hubbellheaters.com **sales@hubbellheaters.com** **203.378.2659**

The Difference: HydraStone® Cement Lining

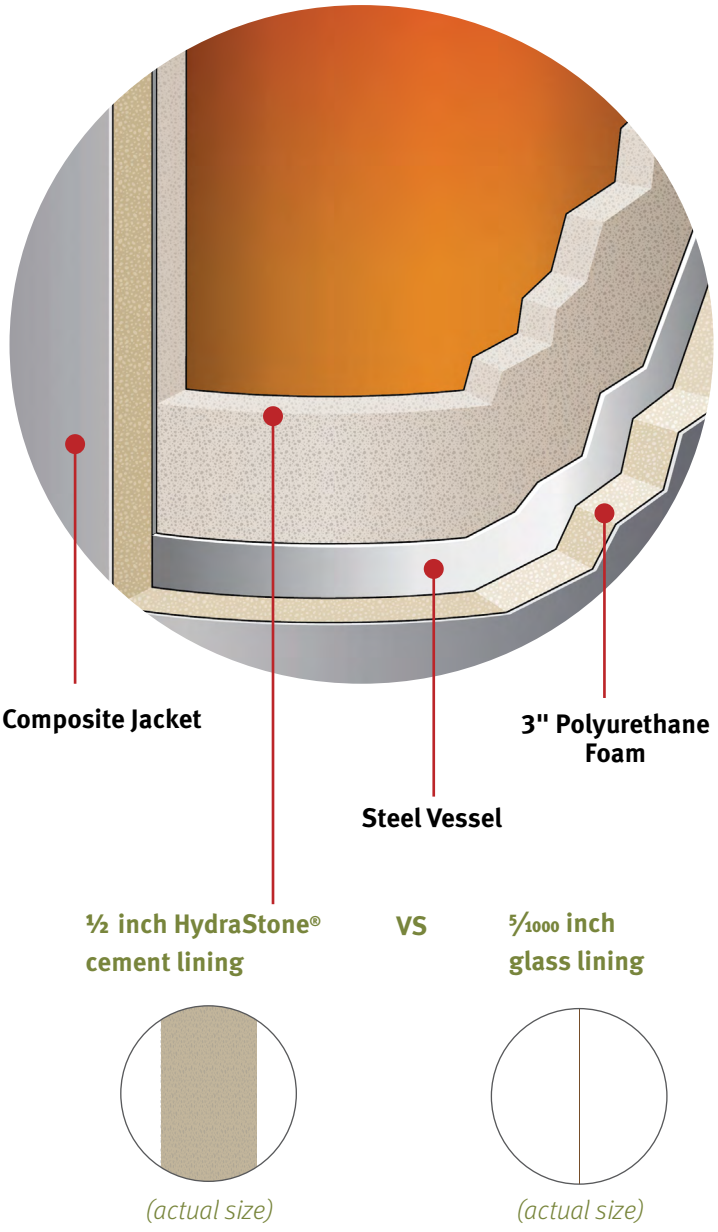
Cement lined tanks offer significant longevity, trouble-free operation and a lower lifetime cost.

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 stainless steel tank tappings which are impervious to the corrosive effects of hot water. Glass-lined tanks have steel tappings which are vulnerable to corrosion.



Standard Features

Vessel Construction

- All welded carbon steel pressure vessel designed and built in strict accordance with the ASME Code Section VIII and stamped, certified, and registered with the National Board of Boiler and Pressure Vessel Inspectors
- All internal tank surfaces are lined with a minimum of ½" thick HydraStone cement for superior protection and tank longevity
- All tank tappings are stainless steel construction
- Designed for 150 psi working pressure and hydrostatically tested

Heating Coil

- Factory sized and installed heating coil with a generously sized heating surface designed to ensure reliable operation
- U-Tube heating coil constructed from single wall copper tubing designed for a maximum working pressure of 150 psi
- Heavy duty fabricated steel head with threaded NPT inlet and outlet connections
- All wetted parts are non-ferrous for maximum longevity



Boiler Water Operating Controls

- Operating controls are factory selected, sized, piped and tested to ensure reliable operation
- All components are factory piped and ready for boiler water in and out connections
- Modulating control valve (2-way standard or optional 3-way) to regulate the flow of boiler water through the coil. Modulating control valve to be (Specify: electric or pneumatic) powered.

General

- Heavy duty 3" thick fiberglass insulation for maximum operating efficiency and minimal stand-by heat loss
- Heavy gauge painted galvanized steel protective outer jacket
- Heavy duty integrally welded steel supports for floor mounting
- Full five (5) year Non Pro-Rated tank warranty and a one (1) year component warranty
- ASME rated combination T&P relief valve set at the tank working pressure and 210°F

Heater Specifications

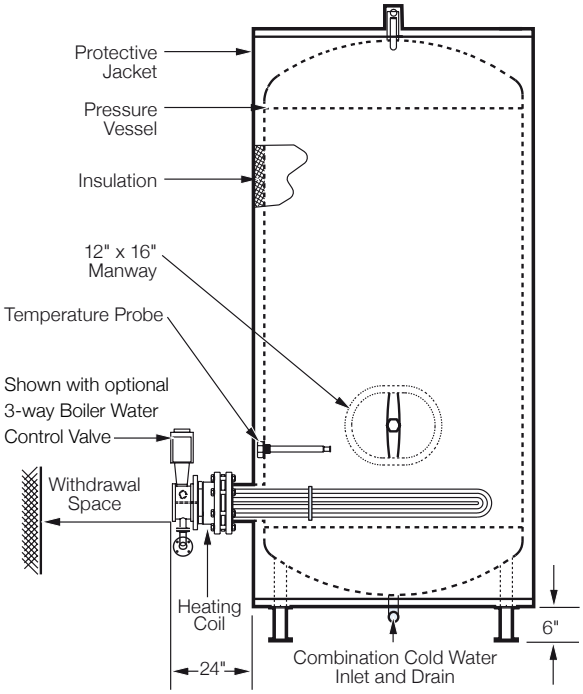
Tank	HydraStone® Cement Lined Steel Carbon Steel
Volumes	150–500 gallons standard 80-10,00 gallon sizes available
Orientation	Vertical/Horizontal
Recovery	300–12,000 GPH*
Control	2-way electric valve 3-way optional
Automation	BMS Integration available
Design WP	150 psi
Design TP	300 psi
Insulation	3" Fiberglass
Tank Warranty	
Standard	5 year Non Pro-Rated
Optional	10 year Non Pro-Rated
Jacket	Galvanneal

**Higher recovery rates available, consult factory.*

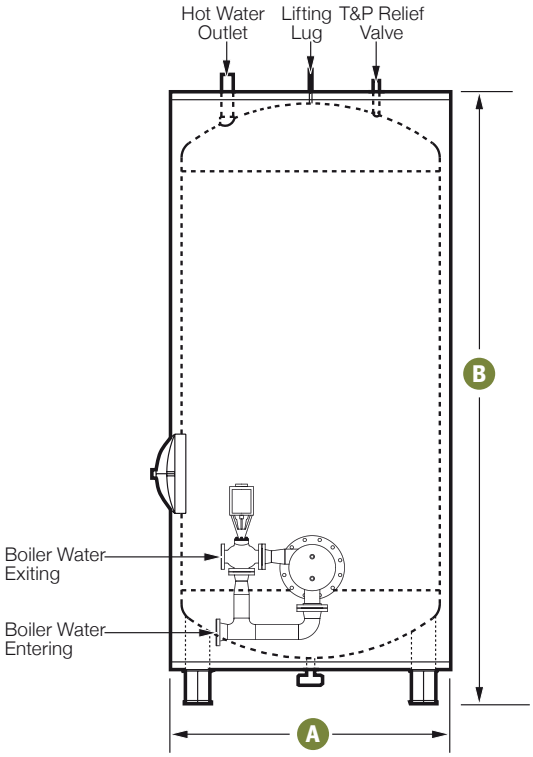
All information is subject to change without notice. Consult factory for submittal drawings.

Dimensions

BW (Vertical)

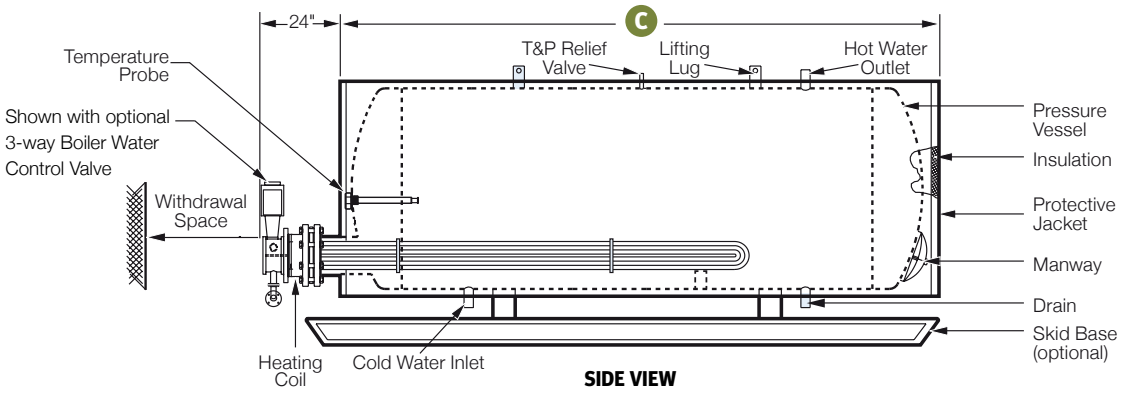


SIDE VIEW

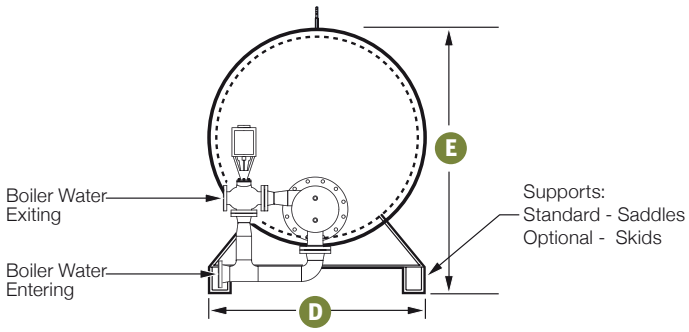


FRONT VIEW
Showing Optional 3-way valve

BWH (Horizontal)



SIDE VIEW



FRONT VIEW
Showing Optional 3-way valve

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

Dimensions

BW/BWH Dimensional Data

(See labels on previous page)

Actual Storage Capacity (Gallons)	Overall Dimensions (in inches)					Storage Tank (Diameter x Length, Inches)	Nominal Storage Capacity	Inlet Outlet Sizing (NPT)	Approx. Shipping Weight (Lbs)
	Vertical		Horizontal						
	Diameter "A"	Height "B"	Length "C"	Width "D"	Height "E"				
150	30	79	72	30	36	26 x 68	170	1.5	1100
200	36	82	76	36	44	30 x 72	220	1.5	1700
250	42	74	68	42	50	36 x 64	285	1.5	1850
300	42	88	82	42	50	36 x 78	345	1.5	2180
350	42	94	88	42	50	36 x 84	370	1.5	2500
400	48	85	79	48	56	42 x 75	450	1.5	2700
500*	54	82	76	54	62	48 x 72	565	2	3225

Notes:

*The tank selections above are shown for convenience, for other sizes consult factory.

All dimensions are approximate and subject to change. Please reference the submittal drawing for actual dimensions.



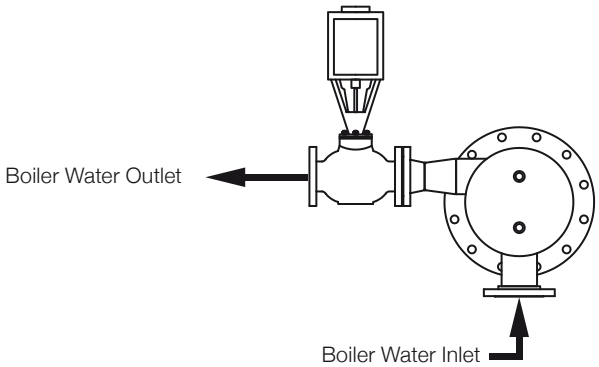
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Boiler Water Control Valve Selection

Hubbell Model BW indirect fired water heaters are factory furnished with a boiler water control system to regulate the flow of boiler water through the heating coil. The following is an overview of the various Boiler Water Control Systems available.

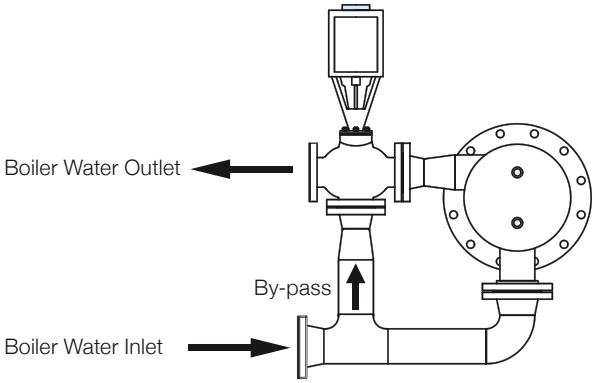
Modulating 2-Way Diverting Valve

This is the most commonly selected method for regulating the boiler water. A 2-Way control valve allows only the required amount of boiler water into the heating coil in order to satisfy the demand. Any excess boiler water is diverted back to the boiler water circulating loop. This valve type can be selected as either electric or pneumatic powered.



Modulating 3-Way Diverting Valve

This is the most commonly selected method for regulating the boiler water. A 3-Way control valve allows only the required amount of boiler water into the heating coil in order to satisfy the demand. Any excess boiler water is diverted back to the boiler water circulating loop. This valve type can be selected as either electric or pneumatic powered.







Synergy Hydro BW and BWH Model Number Designation

MODEL	STORAGE CAPACITY (GAL)	VESSEL TYPE	RECOVERY RATING In GPH at 100°F Δ T	COIL TYPE	OPTIONAL EQUIPMENT
BW = Vertical **BWH** = Horizontal	80 – 10,000	**SL** = HydraStone® cement lined tank **CN** = 90/10 copper-nickel **SS** = Stainless steel 316L *CN and SS tanks come standard with galvanneal jacket and fiberglass insulation.*	300–12,000*	**S** = Single wall **D** = Double wall	Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (–)
			–		–

**Higher recovery rates available, consult factory.*

Example: BW600SL-850-G13

A vertically installed 600 gallon storage capacity Synergy Hydro BW indirect fired water heater with a cement lined steel storage tank with a single wall heating coil rated to heat 850 GPH at a 100°F temperature rise. Includes optional skid assembly.

Optional Equipment

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

Controller

- **C20** Enable/disable relay (specify voltage)
- **C21** Dry contact for remote alarm capability (specify condition)
- **C31** Leak detection - includes sensor pad and dry contact for BMS notification
- **C36** BACnet Gateway Module
- **C37** Lontalk Gateway Module
- **C60** Single solenoid safety system, closes the supply to the heating coil
- **C61** Double solenoid safety system, closes the supply to the coil and opens the hot water outlet to drain

Electrical

- **E2** Indicating lamps (specify color and what it is indicating)
- **E3** Audible alarm (specify fault)

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

General

- **G1** Combination T&P gauge: 3.5" dial, 70°F - 250°F, 0 - 200 PSI, tank mounted
- **G13** Fully packaged skid assembly
- **G22** 316L Stainless Steel T&P relief valve

Heat Exchanger

- **H12** Double wall copper U-tube heating coil
- **H13** Single wall Copper-Nickel U-tube heating coil
- **H14** Double wall Copper-Nickel U-tube heating coil

Vessel

- **V23** 304 Stainless Steel protective outer jacket (painted upon request)
- **V24** Field removable 304 SS jacket
- **V25** Field removable 316L SS jacket
- **V26** Field removable galvanneal jacket
- **V43** Horizontal shipping saddles (required on all vertical models with crated shipping dimension over 96" high)

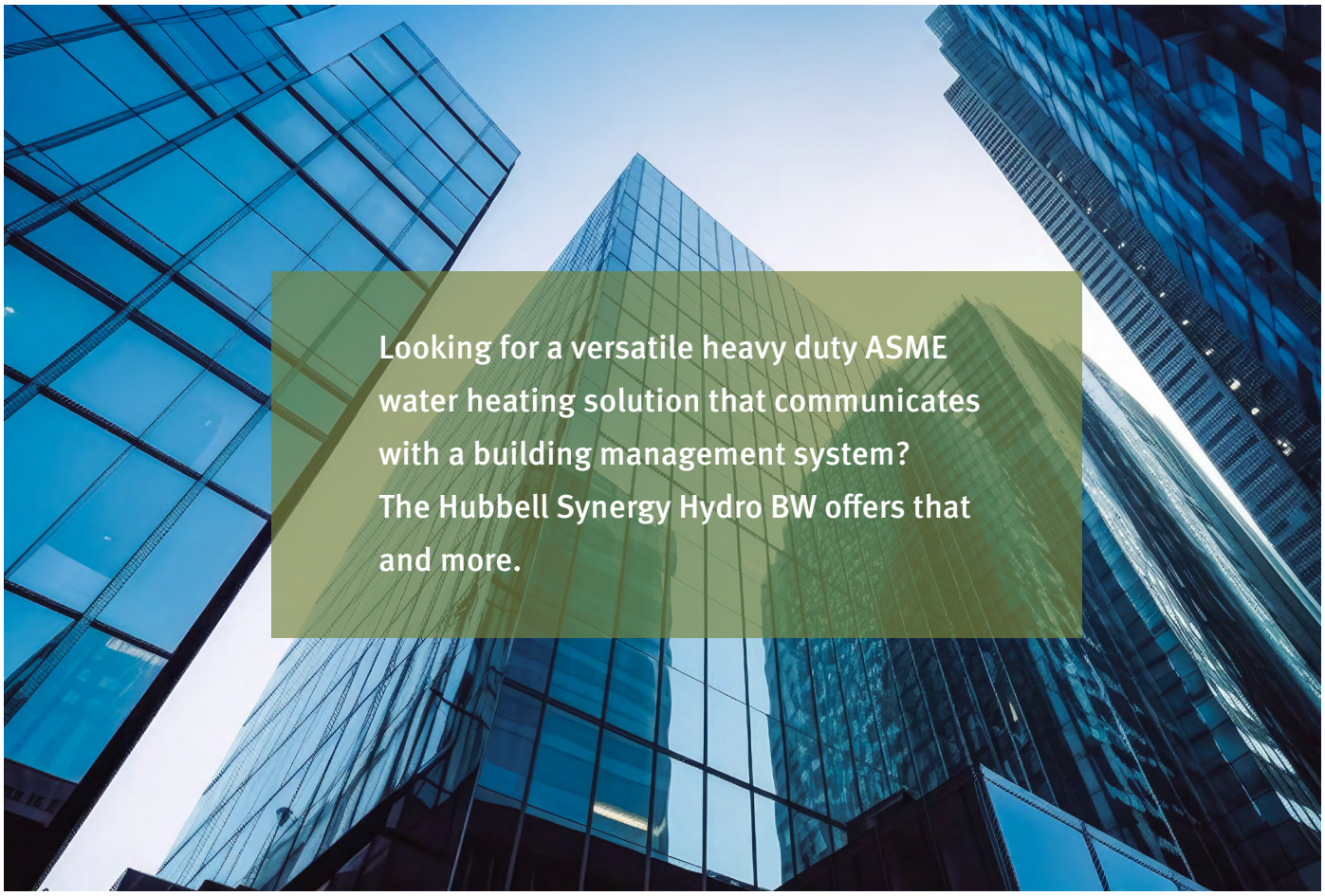
Available Accessories *(Fill out form below to order accessories.)*

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.

Notes


Looking for a versatile heavy duty ASME water heating solution that communicates with a building management system? The Hubbell Synergy Hydro BW offers that and more.