HUBBELL
a **nudyne** company

SYNERGY HYDRO SERIES

BWP



Indirect Fired Heavy Duty ASME Water Heater

120–400* gallon capacity water heater utilizing low-temperature boiler water to heat domestic water to maximize condensing boiler plant efficiencies paired with the HubbellConnect Elite digital controller

A fully packaged system, ready for immediate installation

The HubbellConnect Elite digital controller gives you complete running and temperature control

A full range of styles, sizes, and optional features to meet your exact needs

- HydraStone® cement lined
- Domestic water recovery from 0–3,660** GPH
- Designed for 150 psi working pressure and hydrostatically tested to 225 psi
- Only non-ferrous surfaces on domestic water wetted side
- ASME Section VIII, DIV 1 and U-stamped, certified and registered

Applications

Schools, office buildings, sports venues, hotels, industrial facilities, nursing homes, hospitals heat recovery systems, and much more.

*150, 500–1,000 gallon capacities available, but not stocked, consult factory.

**Higher recoveries available, please consult factory.

High performing and heavy duty water heater

The Synergy Hydro BWP is a fully packaged indirect fired ASME water heater utilizing boiler water from a condensing boiler (or other heat sources) as the energy source for heating potable water. By utilizing a plate type heat exchanger, the system can provide close crossover temperature heat transfer at boiler water temperatures below traditional U-tube design. Components on the Synergy Hydro BWP, including the HubbellConnect Elite digital controller, ensure and maintain high performance even in the most demanding situations.

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.

Meets the requirements of the ASME Boiler and Pressure Vessel Code

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

Keeping you in control

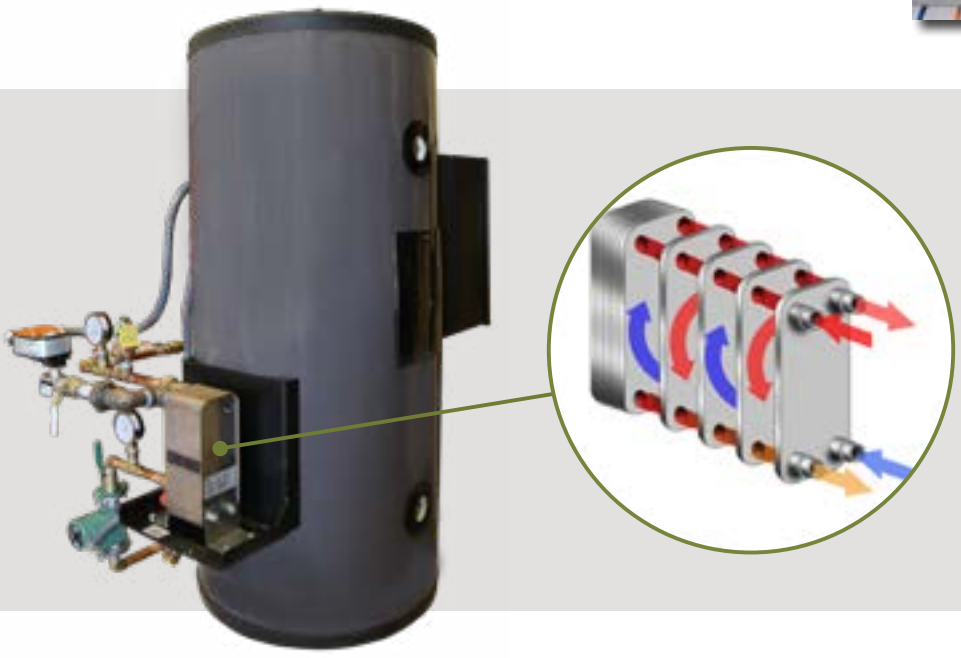
The control system on the Synergy Hydro BWP is our newest control innovation — the HubbellConnect Elite. The system allows complete heater integration into the Building Management System (BMS) right out of the box, via popular digital protocols. The core microprocessor is Hubbell factory programmed for operation sequencing of all heater components. It also offers custom programing and expansion capabilities allowing you to customize the sequence of operation.

The HubbellConnect Elite begins by monitoring and maintaining tank temperature through precise control of the boiler water supply via a control valve or pump activation. It can easily be programmed to control multiple heater plants, external recirculation pumps, and setbacks, as well as the ability to change the setpoint remotely. The HubbellConnect Elite also allows the Synergy Hydro BWP to integrate/signal into the boiler plant or heating source, and control multiple pieces of associated ancillary equipment that are coordinated with the Synergy Hydro BWP operation.

HubbellConnect Elite gives you the ability to integrate or modify either heater or plant operation to suit your design and operational needs.







Brazed Plate Heat Exchanger
Domestic water enters and exits the heat exchanger in a cross counter flow pattern to achieve crossing outlet temperatures.

The Difference: HydraStone® Cement Lining

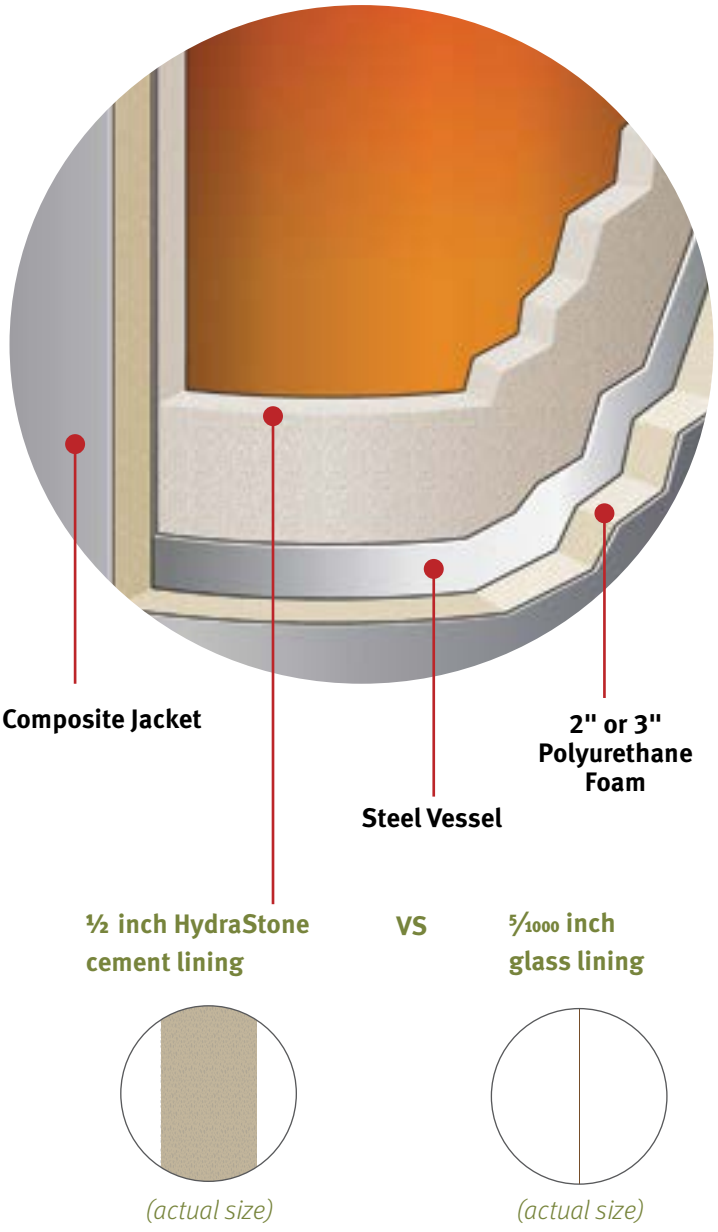
Cement lined tanks offer significant longevity, trouble-free operation and a lower lifetime cost.

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.



Heater Specifications

Tank	HydraStone® Cement Lined Steel
Volumes	120–400 gallon standard sizes Other sizes available
Orientation	Vertical
Recovery	Up to 3,660 GPH
Control	2-way electric valve
Automation	BMS Integration
Design WP	150 psi
Design TP	300 psi
Insulation	2" Polyurethane Foam
Tank Warranty	
Standard	5 year Non Pro-Rated
Optional	10 year Non Pro-Rated
Jacket	High Impact Colorized Composite

*Horizontal configuration available. Consult factory.

Standard Features

- All welded steel construction cement lined to minimum ½" thickness
- ASME Section VIII, DIV 1, and U-stamped, certified, and registered with the National Board of Boiler and Pressure Vessel Inspectors
- Designed for 150 psi working pressure, 225 psi test, and 300°F design temperature
- Vertical construction (horizontal optional)
- Units designed to heat inlet water from 40°F–140°F when supplied with boiler water from 150°F–90°F
- Integrally packaged 316L S/S, double-wall, brazed plate heat exchanger, see options list for alternatives
- Duplex models are designed so each leg is rated for the system's full capacity for 100% redundancy
- Systems include a standard 5-year non-prorated warranty for tank and 1-year component warranty
- Factory packaged with isolation valves for servicing of recirculation line
- All components are factory piped, tested, and ready for process connections
- All domestic wetted components are non-ferrous or lined with a protective barrier



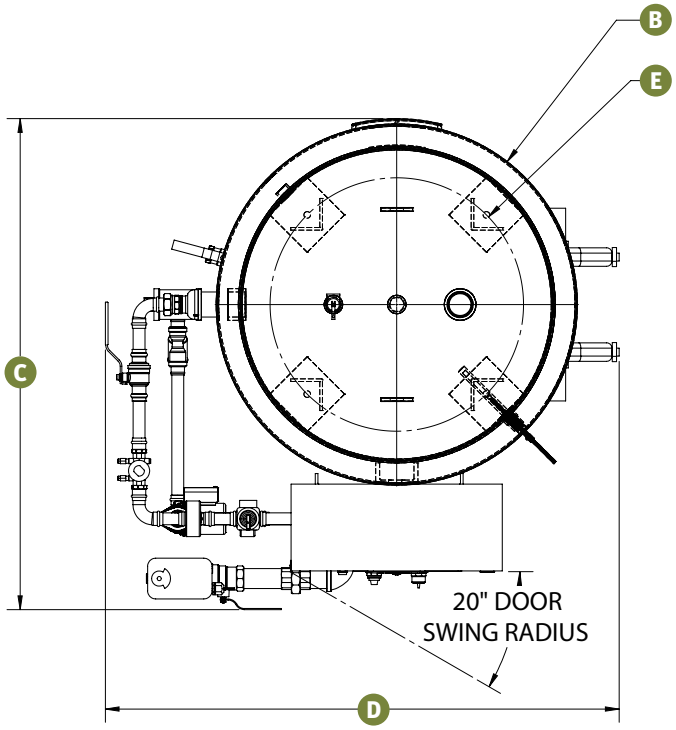
HubbellConnect Elite Standard Features

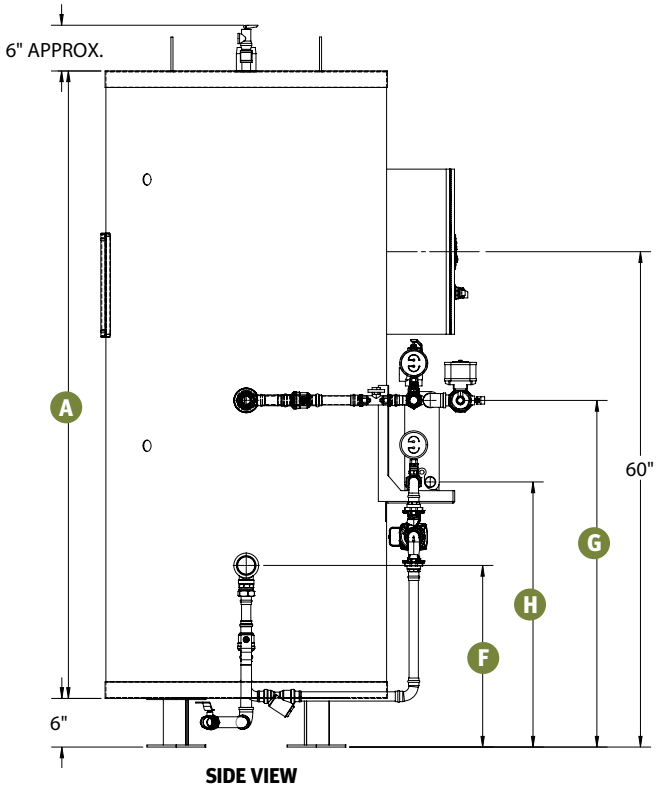
- "On/Off " manual power switch with remote shutdown
- Motor/pump control starter circuits with pump "running" indications
- Manual selector switch for pump
- Modulating control valve with 2-10VDC actuator
- Four (4) SSR control circuits for control relays (pumps) or ancillary equipment
- Thermistor technology (10K, NTC)
- Two (2) temperature control circuits
  - Adjustable set point temp
  - Adjustable high limit temp
- Independent hi-limit system
  - Manual reset required
  - Local indication
  - Dry contact relay indication for external alarm
- Human Machine Interface (HMI)
  - Local alarm(s)/fault indication
  - Reset alarms
  - Adjustable set point on High limit temps
  - Display tank / high / low point temps
  - Real time clock (RTC independent to World Clock)
  - Pump indications and manual controls



Dimensions

With single wall BPHE and standard leg support





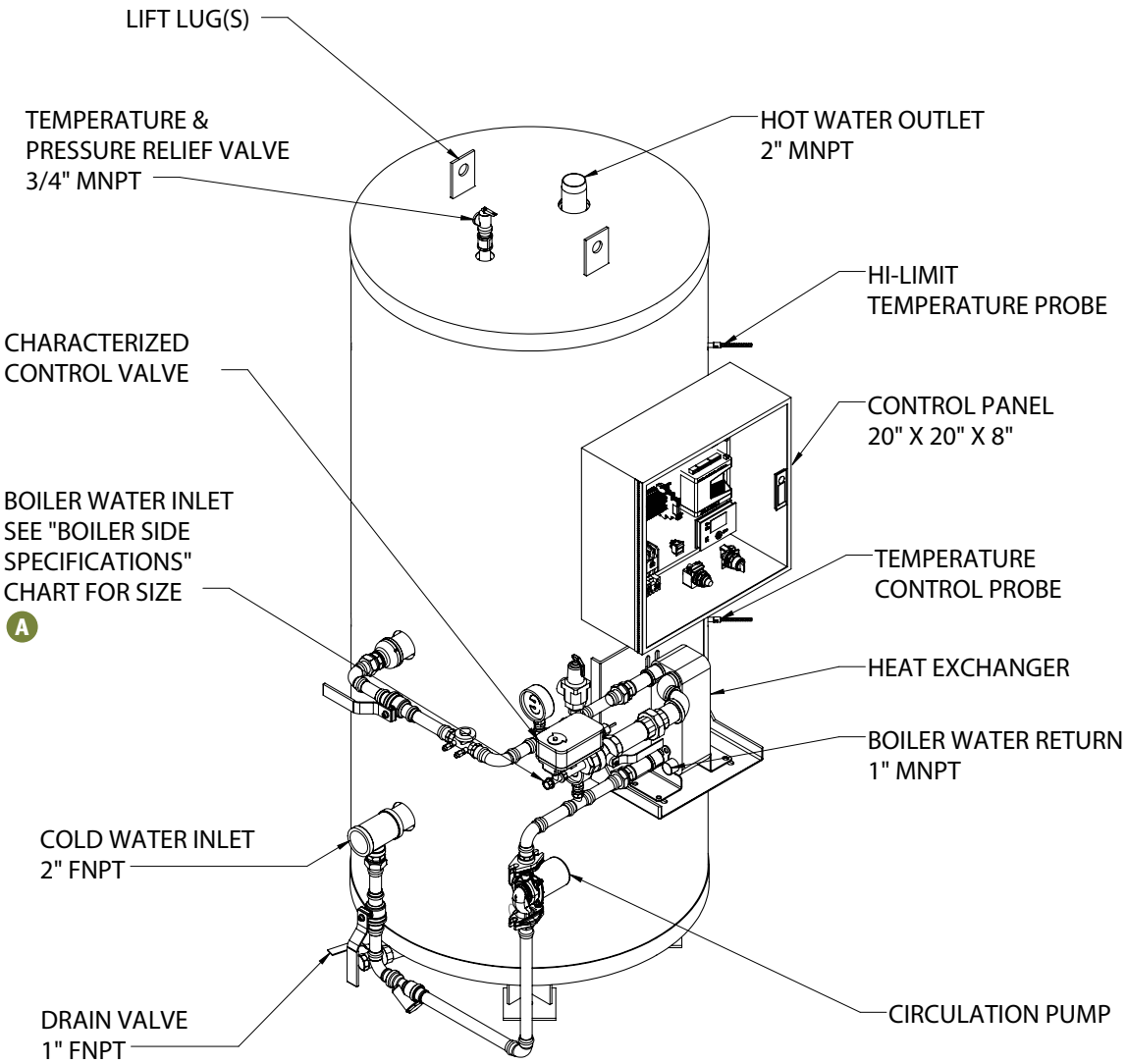
SIDE VIEW

Note: Welded Steel Skid option adds 9" to overall height of unit

Storage Capacity* (Nominal Gal.)	Dimensions (inches)							
	Jacketed Height "A"	Jacketed Diameter "B"	Depth "C"	Width "D"	Support Bolt Circle "E"	Tank Inlet Height "F"	Boiler Inlet Height "G"	Boiler Outlet Height "H"
120	66	28	39	39	18	26	42	24-½
200	76	34	49	45	24	22	42	32
250	68	40	55	51-½	30	22-½	40	30
300	82	40	55-½	50-½	30	24	42	32
400	83	46	57	61	36	28	44	34

*150, 500–1,000 gallon capacities available, but not stocked, consult factory.

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



Domestic Recovery Rating (GPH at 100°F Temp Rise)	Boiler Water Inlet Size (FNPT) "A"
0–300	½"
301–540	¾"
541–600	1"
601–840	1"
841–1260	1-¼"

Domestic Recovery Rating (GPH at 100°F Temp Rise)	Boiler Water Inlet Size (FNPT) "A"
1261–1800	1-½"
1801–2820	2-½"
2821–3300	2-½"
3301–3660	2-½"

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

Synergy Hydro BWP Model Number Designation

MODEL	MODEL NUMBER*	TANK	RECOVERY RATE** Based on corresponding 100°F temp rise (GPH)	ARRANGEMENT	OPTIONAL EQUIPMENT
BWP	120 200 250 300 400	**SL** = HydraStone® cement lined tank **BL** = unlined carbon steel **SS** = Stainless steel 316L **CN** = Solid Copper-Nickel *CN and SS tanks come standard with galvanneal jacket and fiberglass insulation.*	**0300** – 0-300 **0540** – 301-540 **0600** – 541-600 **0840** – 601-840 **1260** – 841-1260 **1800** – 1261-1800 **2820** – 1801-2820 **3300** – 2821-3300 **3660** – 3301-3660	**1** = Simplex **2** = Duplex	Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (–)

BWP			–			–	

Example: BWP300SL–05401–C45

Synergy Hydro BWP with 300-gallon ASME cement lined storage tank. Recovering a maximum of 540 GPH at a 100°F temperature rise in a simplex arrangement. The water heater will be equipped with an optional 3-way boiler control valve. All other features will be the standard offering.

*Stocked sizes shown, other sizes available. Consult sales representative.

**Recovery ranges exceeding 4,500 GPH are available. Consult sales representative.

Optional Equipment

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

Controller

C5 Low Water Cutoff
C31 Leak Detection - Includes Sensor Pad and Dry Contact for BMS Notification
C41 Communications for Integrated Control Systems (Specify MS/IP or MS/TP)
C42 Single Solenoid Safety System (Closes B.W. Inlet in Event of Hi-Limit Trip)
C43 Remote Start/Stop
C44 HVAC Pump Enable
C45 3-Way Boiler Control Valve
C46 Heater Exchanger Fouling Indication (Pump DPSH)
C47 Touchscreen Display
C48 Audio Fault Alert

Electrical

E2 Indicating Lamps (Specify Color and What it is Indicating)
E3 Audible Alarm (Specify Fault)

General

G1 Combination Temperature & Pressure Gauge: 3.5" Dial, 70°F - 250°F, 0 - 200 PSI, Tank Mounted
G11 High Pressure, Domestic (250 PSIG, Includes Tank)
G12 High Pressure, Boiler Side (250 PSIG)
G13 Fully Packaged Skid Assembly
G14 Integration of User Specified Pump or Other Components
G16 NEMA 4X Rating
G17 NEMA 4 Rating

Heat Exchanger

H1 Plate & Frame Single Wall Design
H2 Brazed Plate, Single Wall Design
H3 Plate & Frame Double Wall Design

Vessel

V3 3" Polyurethane Foam Insulation
V15 Additional 3/4" FNPT Tappings
V16 Additional 1-1/2" FNPT Tappings
V20 Integrally Welded Seismic Attachment Points
V21 Horizontal Construction
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
V40 Flanged Inlet and Outlet Connections (ANSI Class 150, Please Specify Size)
V43 Horizontal Shipping Saddles (Required on All Vertical Models with Crated Shipping Dimension Over 96" High)

***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"

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

H1001-H-20260310