

TECHNICAL DATA SHEET

SP SERIES

INDIRECT-FIRED, SEMI-INSTANTANEOUS BOILER WATER-FIRED WATER HEATER

FEATURES:

Available with a Single Wall & Double Wall heat exchanger

- Brazed Plate - Single Wall & Double Wall Construction
- Plate and Frame - Double Wall Construction
- $\pm 4^{\circ}\text{F}$ temp control, 5°F Approach Temperature
- Fully modulating electronic 3-Way control valve
- Potable water: Stainless steel or copper alloys construction for domestic water
- For high pressure applications contact the factory for more information
- Control Panel can be rotated 180° for easy readability
- NEW Advanced Electronic PID controls with touchscreen user interface and compatible with Building Management System via ModBus IP or built-in BacNet IP
- Fully packaged solution for quick and easy single point connections
- Compact Footprint- unit can fit through standard doorways
- Compatible with Medium, Normal and Low Temperature Boiler Water
- Optional heat exchanger insulation is available
- Certifications: ANSI/AHRI 400, ASME



The DHT SP Series of advanced plate-type boiler water fired water heaters incorporates the DHT's industry leading PID controller with a high-efficiency plate and frame or brazed plate heat exchangers to satisfy potable water heating needs in commercial and institutional environments without the need for large hot water storage tanks. The packaged systems utilize simple, real-time load tracking and responsive controls to maintain accurate hot water temperature under various load patterns.

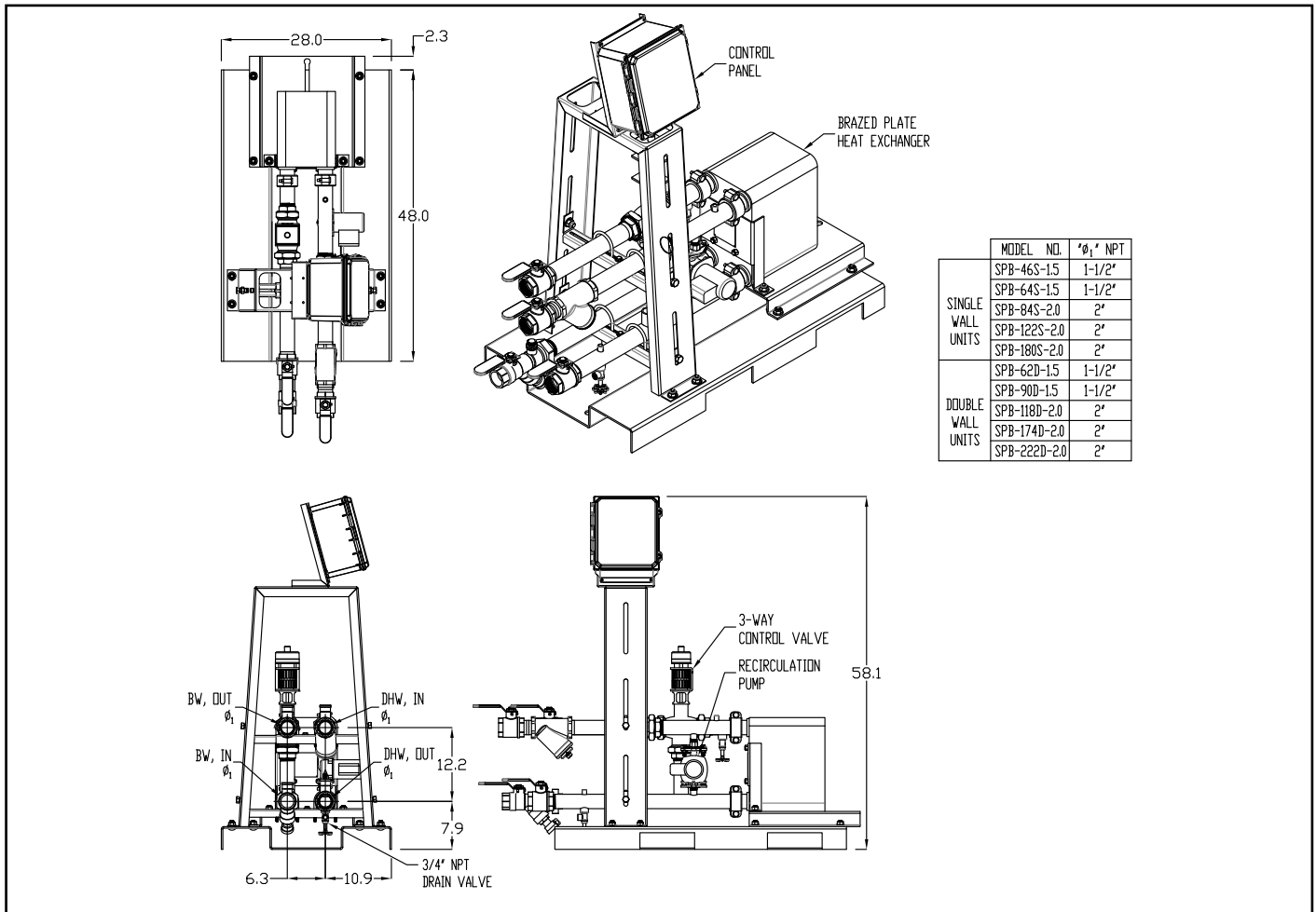
The DHT fully packaged SP Series Water Heater can efficiently produce up to 150 GPM of domestic hot water depending upon operating temperatures. Units can be coupled with all major medium-, normal-, and low-temperature condensing boiler water to achieve high efficiency in an optimal space.

Maintenance is easy with SP Series. Flanged vitualic or union connections allow for the complete removal of the heat exchangers without disturbing the water heating piping. Isolation valves, inlet strainer and backflush connections are provided for scheduled maintenance.

APPLICATIONS:

- Ideal for new or retrofit installations
- Suitable for both single or multiple unit installations
- No storage tanks required
- Support variety of water to water heating applications including:
 - Apartment Complexes
 - Prisons / Correctional Facilities
 - Hospitals/ Nursing homes/ Medical Centers
 - Hotels/ Entertainment Facilities
 - Schools/ Colleges/ Universities/ Dormitories
 - Commercial laundries
 - Government & Office buildings
 - Industrial applications

BRAZED PLATE UNIT DIMENSIONS:



	MODEL NO.	" ϕ_1 " NPT
SINGLE WALL UNITS	SPB-46S-1.5	1-1/2"
	SPB-64S-1.5	1-1/2"
	SPB-84S-2.0	2"
	SPB-122S-2.0	2"
DOUBLE WALL UNITS	SPB-180S-2.0	2"
	SPB-62D-1.5	1-1/2"
	SPB-90D-1.5	1-1/2"
	SPB-118D-2.0	2"
	SPB-174D-2.0	2"
	SPB-222D-2.0	2"

BRAZED PLATE UNIT SPECIFICATIONS:

Single Wall Model #	SPB-46S-1.5	SPB-64S-1.5	SPB-84S-2.0	SPB-122S-2.0	SPB-180S-2.0
Double Wall Model #	SPB-62D-1.5	SPB-90D-1.5	SPB-118D-2.0	SPB-174D-2.0	SPB-222D-2.0
Electrical Requirements	120/1/60 Hz 2 Amp or 220/1/50 Hz 2 Amp				
Standby Amperage Draw	2 Amp				
Full Load Amperage Draw	2 Amp				
Domestic Water Pressure Drop	Under 8 PSIG @ max. rated flow				
Max. Continuous Water Flow	90 GPM				
Ambient Temperature	32-110°F				
Max. Boiler Water Pressure & Temperature	150 PSIG @ 220°F For high pressure applications contact the factory for more information				
Max. Domestic Water Operating Pressure	150PSIG (standard) For high pressure applications contact the factory for more information				
Adjustable Temperature Control Set Point	Up to 180°F				
Accuracy	+/-4°F				
Water Inlets/Outlet Connection Sizes	1.5" FNPT			2.0" FNPT	
Estimated Weight, Shipping	SPB-46S-1.5	SPB-64S-1.5	SPB-84S-2.0	SPB-122S-2.0	SPB-180S-2.0
	538 lbs	548 lbs	584 lbs	604 lbs	640 lbs
Estimated Weight, Shipping	SPB-62D-1.5	SPB-90D-1.5	SPB-118D-2.0	SPB-174D-2.0	SPB-222D-2.0
	575 lbs	605 lbs	661 lbs	722 lbs	778 lbs
Standard Listing & Approvals	ANSI / AHRI 400, ASME				

Note: Dimensions and Specifications subject to change without notice.

PLATE AND FRAME UNIT DIMENSIONS:

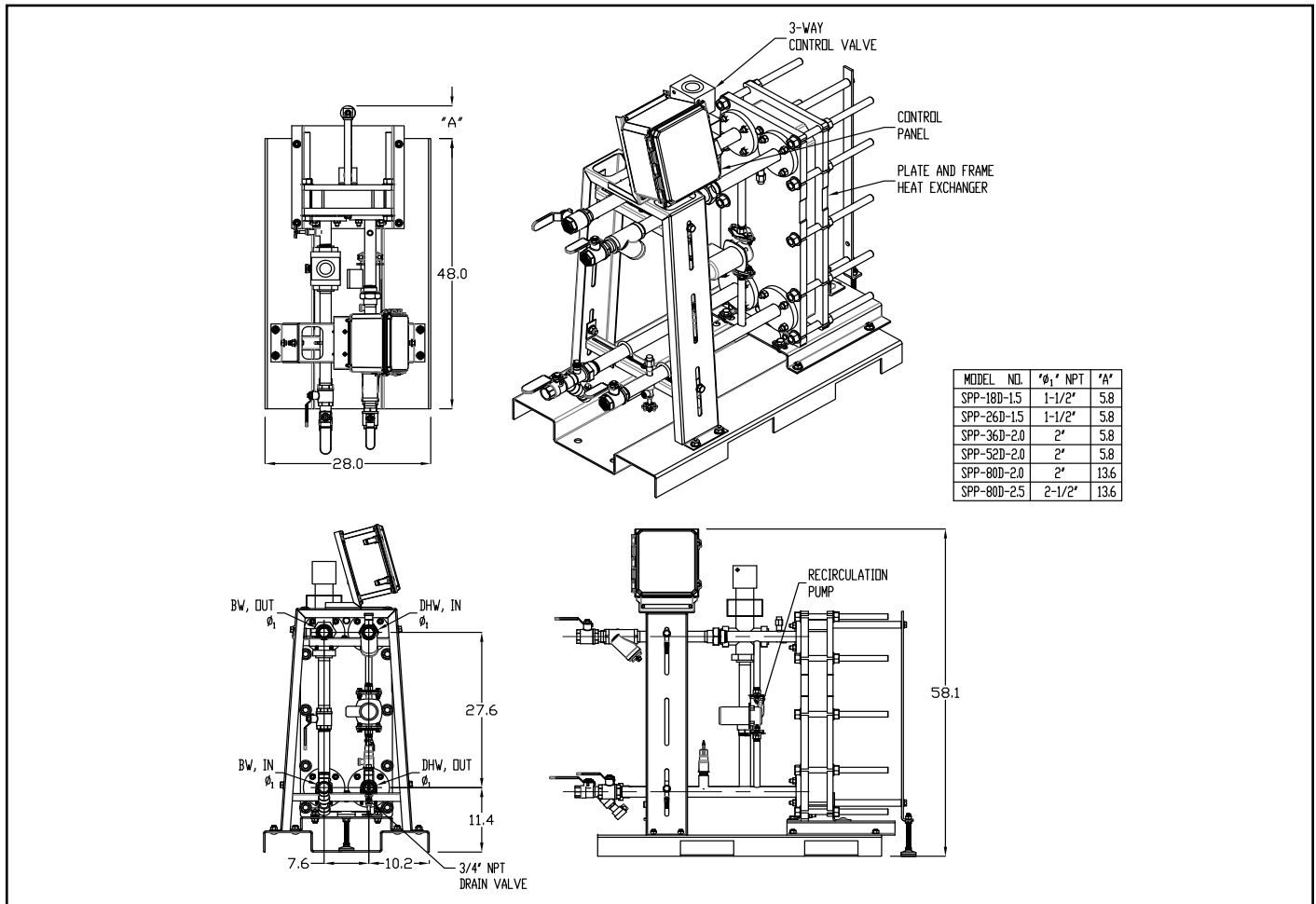


PLATE AND FRAME UNIT SPECIFICATIONS:

Double Wall Model #	SPP-18D-1.5	SPP-26D-1.5	SPP-36D-2.0	SPP-52D-2.0	SPP-80D-2.0	SPP-80D-2.5
Electrical Requirements	120/1/60 Hz 2 Amp or 220/1/50 Hz 2 Amp					
Standby Amperage Draw	2 Amp					
Full Load Amperage Draw	2 Amp					
Domestic Water Pressure Drop	Under 8 PSIG @ max. rated flow					
Max. Continuous Water Flow	90 GPM					150 GPM
Ambient Temperature	32-110°F					
Max. Boiler Water Pressure & Temperature	150 PSIG @ 220°F For high pressure applications contact the factory for more information					
Max. Domestic Water Operating Pressure	150PSIG (standard) For high pressure applications contact the factory for more information					
Adjustable Temperature Control Set Point	Up to 180°F					
Accuracy	+/-4°F					
Water Inlets/Outlet Connection Sizes	1.5" FNPT		2.0" FNPT			2.5" FNPT
Estimated Weight, Shipping	934 lbs	963 lbs	1024 lbs	1082 lbs	1315 lbs	1333 lbs
Standard Listing & Approvals	ANSI / AHRI 400, ASME					

Note: Dimensions and Specifications subject to change without notice.

PID CONTROL SYSTEM:

FEATURES:

- 4.3 HMI Touchscreen
- Feedforward Logic Controller includes 1/8 DIN with LCD display (back-up interface)
- Boiler Water Inlet and Outlet Temp Sensors (optional)
- Data Logging
- Fault Log
- Trending/Graphing
- Compatibility with Modbus IP and BacNet IP BAS system standard without the need for external gateway.
- A gateway can be used for all other protocols
- Data Logging
- Ethernet Connection



The NEW DHT state of the art control system offers unmatched performance and full user configurability for water heater applications. It features a durable temperature sensor transmitting a millivolt signal through quality twisted shielded wiring. The signal transmits directly into the advanced PID controller, which in turn sends a signal to the electrically activated fully modulating and fast acting three-way control valve with high turndown to achieve accurate temperature control over various demand situations. The control valve can also be configured for straight through two-way operation when used with VFD pumps. Unit can also be integrated with Building Management System via Modbus IP and BacNet IP standard for remote monitoring or domestic supply water temperature control. A communication gateway can be used for all other protocols.

SPECIFICATIONS:

Enclosure Dimensions	12”H x 10” W x 7” D
Display	4.3” TFT Color LCD
Graphics Display Resolution/ Colors	480 x 272 pixels w/ 65,536 display colors
Backlight	White LED, service life 50,000 hours and 24hr operation
Brightness control	16 Levels (Adjusted with touch panel)
Operating Mode	Single Tone, Visual Indicator
Sound Level	80dB @ 10cm, 24VAC
Memory:	8Gb
Interfaces:	Ethernet 10/100 Base-T, USB 2.0 Type A with 5V DC PSU and mini B
Supply Voltage	120/240 VAC
Certifications	NEMA 4, UL

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