

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 compatible with Building Management Systems
- 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

DHT'S NEW 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
- Fault Log
- Trending/Graphing
- RS485 MODBUS® Data Port
- Compatibility with Modbus and BacNet BAS system standard without the need for external gateway.
- Optional gateway is available for all other protocols
- Ethernet connection
- Data Logging
- Remote Monitoring: Through Ethernet Connection

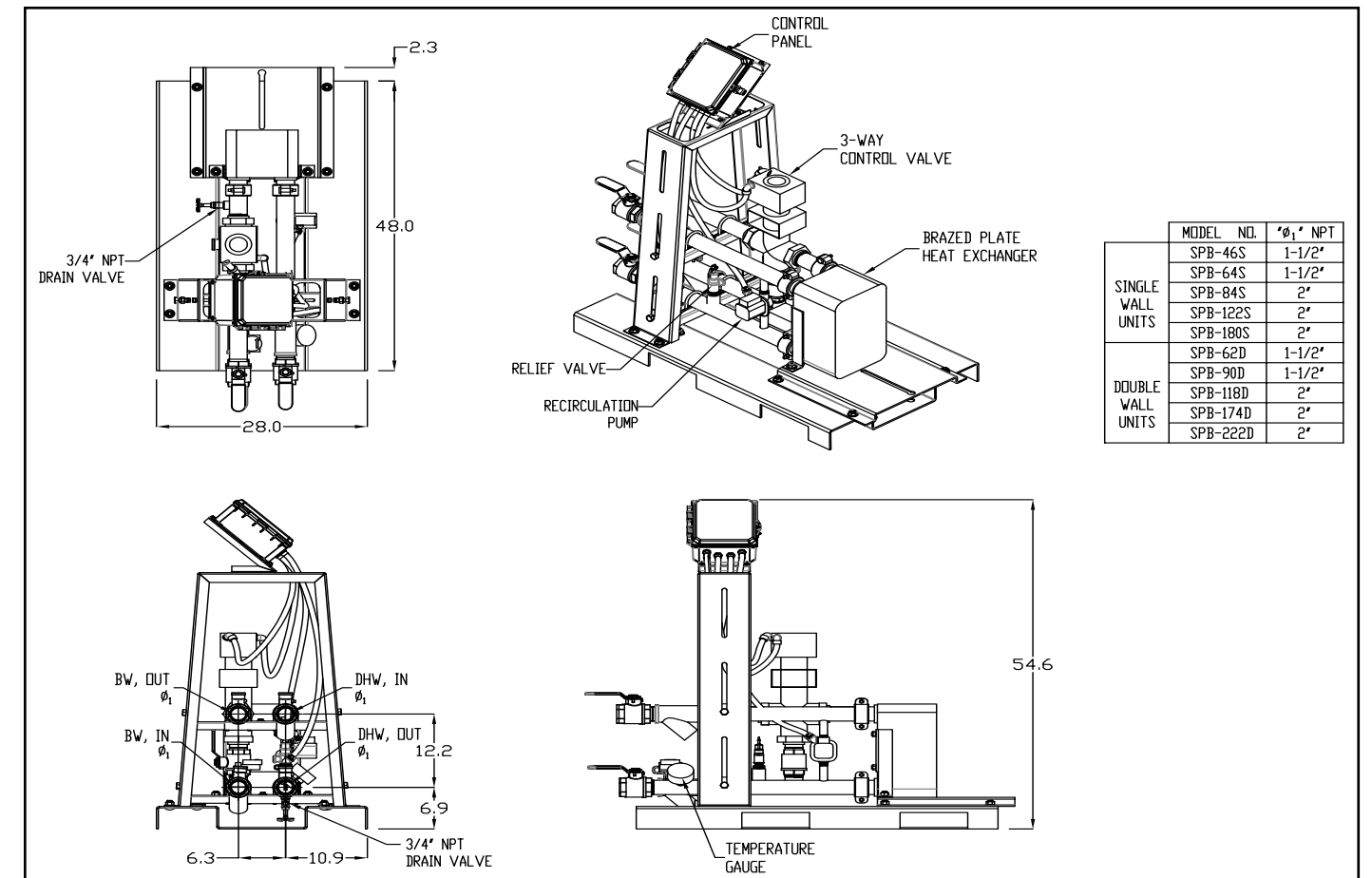


The NEW DHT state of the art control system offers unmatched performance and full user configurability for water heater applications. It features a durable temperature sensor transmitting a 4-20mA signal through quality twisted shielded wiring. The signal transmits directly into the advanced PID controller, 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 for remote monitoring or domestic supply water temperature control. Optional communications gateway is also available for other communication protocols.

DHT CONTROL 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	85dB @20V, 61cm
Memory:	8Gb
Interfaces:	Ethernet 10/100 Base-T, USB 2.0 Type A with 5V DC PSU and mini B
Supply Voltage	24VDC
Certifications	NEMA 4, UL

BRAZED PLATE UNIT DIMENSIONS:



BRAZED PLATE UNIT SPECIFICATIONS:

Single Wall Model #	SPB-46S	SPB-64S	SPB-84S	SPB-122S	SPB-180S
Double Wall Model #	SPB-62D	SPB-90D	SPB-118D	SPB-174D	SPB-222D
Electrical Requirements	120VAC/1/60 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 538 lbs	SPB-64S 548 lbs	SPB-84S 584 lbs	SPB-122S 604 lbs	SPB-180S 640 lbs
	SPB-62D 575 lbs	SPB-90D 605 lbs	SPB-118D 661 lbs	SPB-174D 722 lbs	SPB-222D 778 lbs
Standard Listing & Approvals	ANSI / AHRI 400, ASME				

Note: Dimensions and Specifications subject to change without notice.

PLATE AND FRAME UNIT DIMENSIONS:

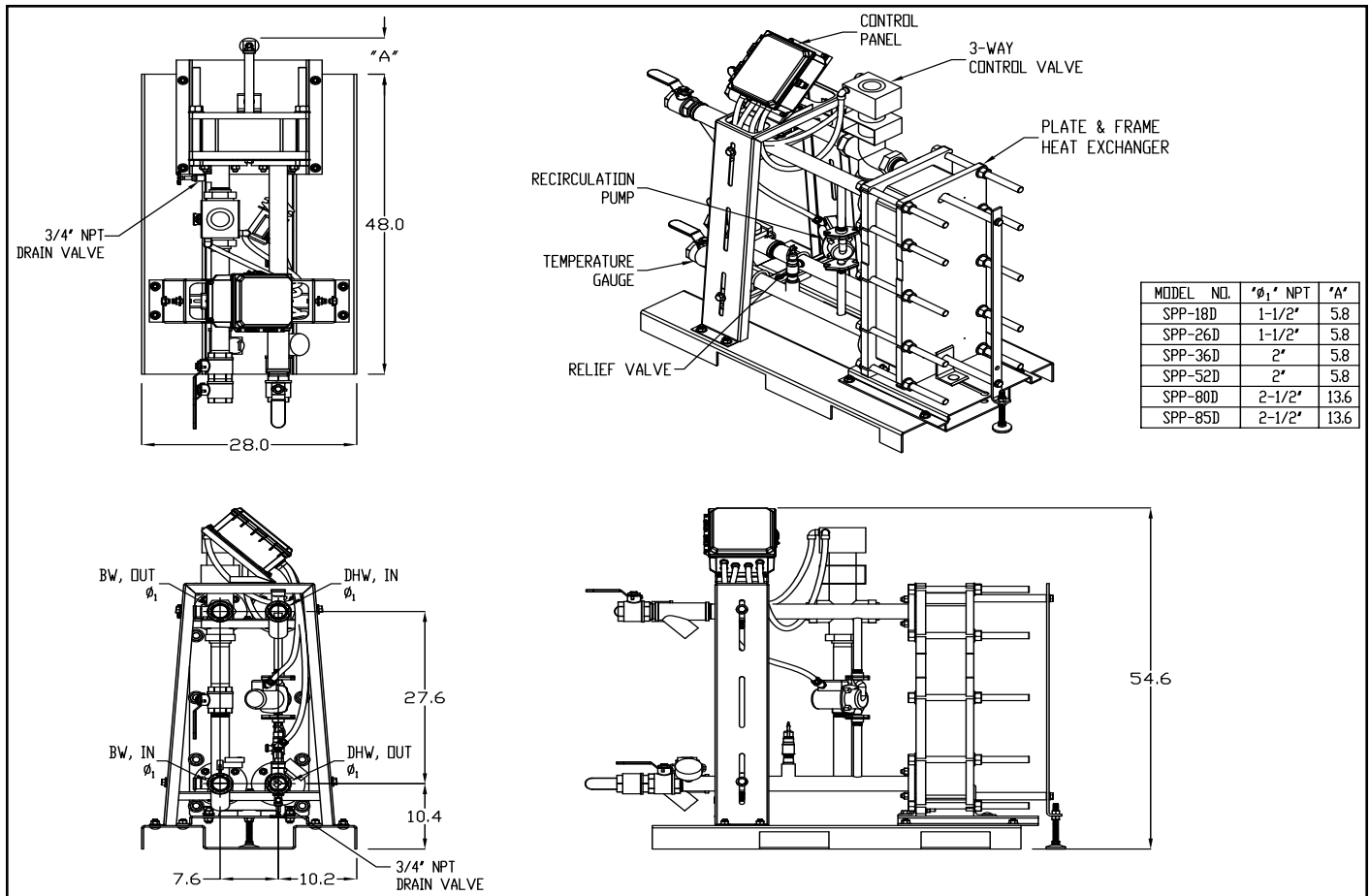


PLATE AND FRAME UNIT SPECIFICATIONS:

Double Wall Model #	SPP-18D	SPP-26D	SPP-36D	SPP-52D	SPP-80D	SPP-85D
Electrical Requirements	120VAC/1/60 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					

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