



**MAIOCCO & ASSOCIATES**

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# HOT PAK™ INSTANTANEOUS WATER HEATER | THRU

## SH SERIES - STEAM TO WATER - VERTICAL DESIGN | SINGLE WALL CONSTRUCTION

Model Selected: \_\_\_\_\_ Heat: \_\_\_\_\_ GPM of Water \_\_\_\_\_  
 From \_\_\_\_\_ °F to \_\_\_\_\_ °F With \_\_\_\_\_ PSIG Steam to Control the Valve \_\_\_\_\_

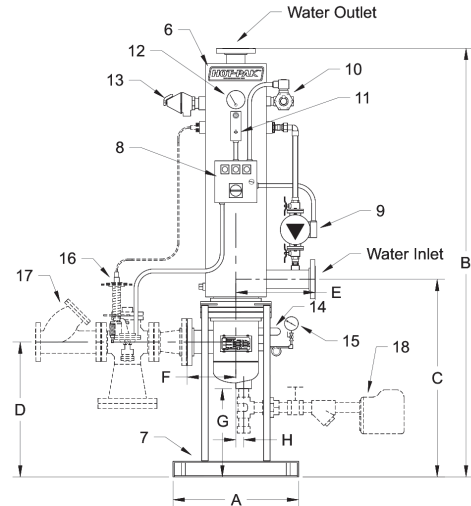
**We have many VERTICAL and HORIZONTAL Models. Call us for the best option for you.**

**Standard Product Features:**

1. Designed and Constructed to ASME Section VIII Divison 1 for 150 psig @ 300 F
2. 304 SS Shell and Anticipation Plate
3. Naval Brass Tubesheet
4. 3/4" Copper Tubing
5. Brass Baffles and Tube Supports
6. Shell Insulation and Jacket
7. Support Stand and Base
8. Electrical Panel - to supply a Single Point Power Connection and to distribute power to solenoids, circulator, and aquastat.
9. Copper Piped Ultra Efficient Circulator with isolation valves
10. High Temp. Safety Solenoid Purge Valve
11. High Temp. Limit Aquastat
12. Water Temperature Gauge
13. T & P Relief Valve - ASME Rated at 150 PSIG
14. Vacuum Breaker
15. Steam Pressure Gauge

**Optional Equipment:**

16. Steam Control Valve/Temperature Regulator with Temperature Probe and Safety Solenoid Shutoff on Steam Pilot or Electrically Actuated Steam Control Valve with Fail Close Capacitor and RTD Temperature Sensor
17. Steam Inlet Y-strainer (Rotated for Clarity)
18. F & T Steam Trap with Y-Strainer (Rotated for Clarity)
19. Electronic Panel w/ 4 - 20 mA Signal



Model Designation

Steam to Water **S** Vertical Design **V** Bundle Diameter (IN) **6** Bundle Length (FT) **2** No. of Tube Passes **2**

**Dimensions**

Model	A (in)	B (in)	B1* (in)	B2* (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	Water Connections	Steam Inlet	Condensate Drain	T&P Valve	Ship Wt. (lbs.)
SV622	24	67.75	73.75	85.75	35.25	25.75	12.63	8.31	18.50	1.13	2" FLG	2.5" FLG	1.25" NPT	1"	475
SV632	24	79.75	85.75	97.75	35.25	25.75	12.63	8.31	18.50	1.13	2" FLG	2.5" FLG	1.25" NPT	1"	500
SV642	24	91.75	97.75	109.75	35.25	25.75	12.63	8.31	18.50	1.13	2.5" FLG	2.5" FLG	1.25" NPT	1.25"	525
SV832	24	84.50	90.50	102.50	36.50	24.50	13.63	9.31	15.69	1.25	3" FLG	4" FLG	1.5" NPT	1.5"	600
SV842	24	96.50	102.50	112.50	36.50	24.50	13.63	9.31	15.69	1.25	3" FLG	4" FLG	1.5" NPT	1.5"	650
SV1032	30	93.25	N/A	105.25	45.50	31.56	14.69	10.38	21.00	1.50	4" FLG	6" FLG	2" NPT	2"	850
SV1042	30	105.25	N/A	117.25	45.50	31.56	14.69	10.38	21.00	1.50	4" FLG	6" FLG	2" NPT	2"	900
SV1232	30	93.75	N/A	105.75	46.38	30.00	16.38	13.38	17.44	1.81	5" FLG	8" FLG	2.5" NPT	2"	1150
SV1242	30	105.75	N/A	117.75	46.38	30.00	16.38	12.38	17.44	1.81	6" FLG	8" FLG	2.5" NPT	2"	1300

\*B1 and B2 are optional stand heights. If optional heights are ordered, C and D will increase also.  
 B allow s a 24" bundle removal w ithout breaking shell connections. (B allow s 36" bundle removal on 10" and 12" models.)  
 B1 allow s a 36" bundle removal w ithout breaking shell connections on 6" and 8" models.  
 B2 allow s a 48" bundle removal w ithout breaking shell connections.

**Job Name** \_\_\_\_\_  
**Location** \_\_\_\_\_  
**Engineer** \_\_\_\_\_  
**Architect** \_\_\_\_\_  
**Sales Rep.** \_\_\_\_\_  
**Contractor** \_\_\_\_\_

**Model Number** \_\_\_\_\_  
**Heat** \_\_\_\_\_ **GPM of water** \_\_\_\_\_  
**From** \_\_\_\_\_ **Deg. F to** \_\_\_\_\_ **Deg. F** \_\_\_\_\_  
**With** \_\_\_\_\_ **PSIG steam to the control valve.** \_\_\_\_\_  
**Notes** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ORDERING GUIDE

### Materials of Construction - Heat Exchanger

Item	Standard	Optional
Head	Carbon Steel	N/A
Shell	304 Stainless Steel	316 Stainless Steel
Tubesheet	Naval Brass (300°F MAX)	304 Stainless Steel 316 Stainless Steel
3/4" OD Tubes	20 Ga. Copper	18 Ga. Copper 18 Ga. 90/10 CU-NI 18 Ga. 304 Stainless Steel 18 Ga. 316 Stainless Steel
Baffles	Brass	Stainless Steel PTFE
Tube Supports	Brass	Stainless Steel

### T&P Relief Valve Size Info

T&P Valve Size	ASME rating BTU/HR @ 150 PSI
3/4"	1,601,000
1"	4,200,000
1.25"	4,586,000
1.5"	7,763,000
2"	9,262,000

For additional relief valve capacity, additional relief valves should be installed on the discharge piping.

### Maximum Operating Conditions

Designed & Constructed to ASME Section VIII, Division 1

Maximum Tubeside Working Pressure	150 PSIG
Maximum Shellside Working Pressure	150 PSIG
Hydrostatic Test Pressure - Tubeside	195 PSIG
Hydrostatic Test Pressure - Shellside	195 PSIG
*Maximum Temperature	300°F

\*Maximum Temperature can be increased to 375° F with the use of S.S. Tubesheet

### Quick Sizing Table - With Armstrong OB-2000 Temperature Regulator

40 Deg.F to 140 Deg. F Temperature Rise (100 Deg. F Delta T) with 15 PSIG steam to Control Valve

Model Number	Steam to Valve (PSIG)	Steam out of Valve (PSIG)	Maximum Flow (GPM)	Steam Load (BTU/HR)	Steam Required (LB/HR)	Steam Valve Size	Steam Trap Size	Water Pressure Drop (FT HD)
SV622	15	8	10	500,000	529	1.5"	1.25"	0.1
SV632	15	8	21	1,050,000	1111	2"	1.5"	0.4
SV642	15	8	32	1,600,000	1693	2.5"	1.5"	1.4
SV832	15	8	41	2,050,000	2169	2.5"	1.5"	0.5
SV842	15	8	62	3,100,000	3280	3"	2" std	1.2
SV1032	15	8	68	3,400,000	3598	4"	2" hi-cap	0.4
SV1042	15	8	100	5,000,000	5291	6"	2.5"	1.0
SV1232	15	8	92	4,600,000	4868	6"	2.5"	0.3
SV1242	15	8	134	6,700,000	7090	6"	2.5"	0.5

### Quick Sizing Table - With Spence E2T14 Temperature Regulator

40 Deg.F to 140 Deg. F Temperature Rise (100 Deg. F Delta T) with 15 PSIG steam to Control Valve

Model Number	Steam to Valve (PSIG)	Steam out of Valve (PSIG)	Maximum Flow (GPM)	Steam Load (BTU/HR)	Steam Required (LB/HR)	Steam Valve Size	Steam Trap Size	Water Pressure Drop (FT HD)
SV622	15	12	12	600,000	635	1.25"	1.25"	0.1
SV632	15	12	23	1,150,000	1217	2"	1.5"	0.5
SV642	15	12	36	1,800,000	1905	2.5"	1.5"	1.7
SV832	15	12	46	2,300,000	2434	3"	1.5"	0.6
SV842	15	12	69	3,450,000	3651	4"	2" std	1.5
SV1032	15	12	75	3,750,000	3968	4"	2" hi-cap	0.5
SV1042	15	12	110	5,500,000	5820	5"	2.5"	1.2
SV1232	15	12	102	5,100,000	5397	5"	2.5"	0.3
SV1242	15	12	148	7,400,000	7831	6"	2.5"	0.6

Note: Maximum Working Pressure for the E2T14 Valve is 15 PSIG.

For Sizing Requirements for Alternate Valve or Different Temperature Ranges, Refer to the HOT-PAK® Sizing Tables.