



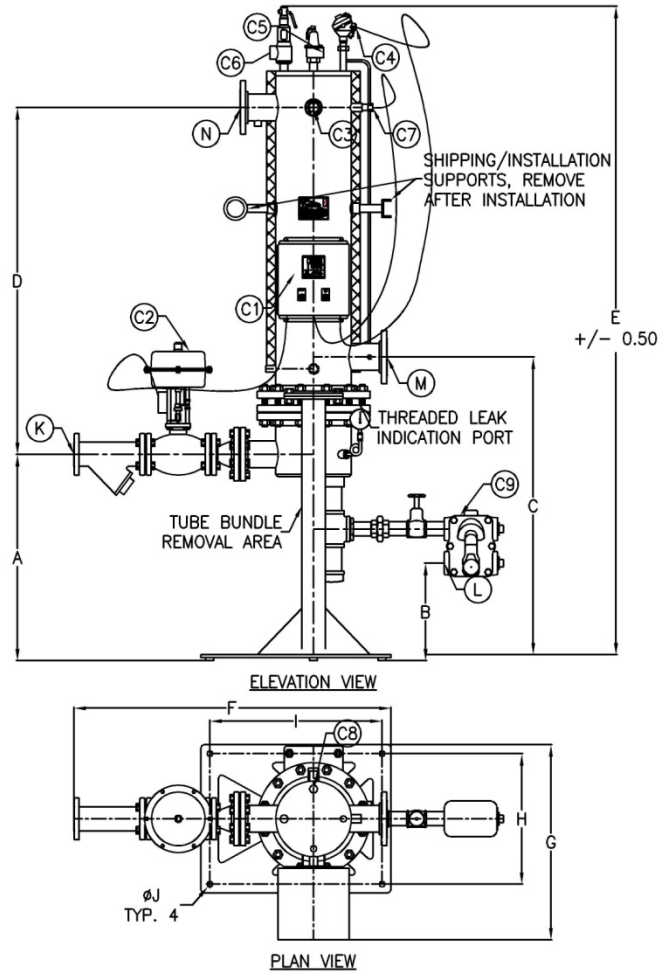
Submittal Sheet

HSWDV 600 Series

Instantaneous Water Heater Steam to Water, Vertical Orientation Double Wall Construction

Standard Product Features:

1. Designed, manufactured, tested and stamped in accordance with the ASME Code, Section VIII, Division 1, current Edition
2. Type 316/L stainless steel shellside construction
3. Type 316/L stainless steel tubesheet construction
4. Double wall seamless copper tube construction
5. Threaded leak indication port
6. Teflon baffles with stainless steel tie-rods/spacers
7. 1.5" thick insulation with stainless steel jacket
8. Internal load anticipator
9. Mechanical thermostat for over temperature protection
10. Over temperature safety solenoid purge valve
11. Water thermometer
12. ASME Code Section VIII pressure relief valve
13. ASME Code Section IV temperature and pressure relief valve
14. Steam control valve (accessories included)
 - a. Electric, fail safe, 8 second full stroke
 - b. Pneumatic, fail safe, 8 seconds full stroke
 - c. Electro-pneumatic, fail safe, 8 seconds full stroke
 - d. Self contained, fail safe, 8 seconds full stroke
15. Steam vacuum breaker
16. Steam pressure gauge
17. Float and thermostatic steam trap
18. Single power supply of 100-240 VAC, 50/60 hertz, to the control panel required
19. Recirculation pump **(optional)**
20. Feedwater pre-heater/economizer **(optional)**



H_{oward's} S_{team to} W_{ater} D_{ouble wall} V_{ertical} 6_{00 Series} 06_{Shell Size} 36_{Bundle Size} 2_{Pass}

Sales Rep: _____ Model Number: _____
 Job Name: _____ To Heat: _____ GPM of Water
 Location: _____ From: _____ °F To _____ °F
 Notes: _____ Using: _____ PSIG steam to the control valve



Dimensions (inches)

Model Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Weight
HSWDV 606-362	34.75	14.25	45.00	58.38	105.00	54.00	27.50	16.00	23.00	0.75	2-150	1½NPT	3-150	3-150	550
HSWDV 608-362	34.75	15.00	47.00	58.38	107.00	54.00	29.50	18.00	25.00	0.75	2-150	1½NPT	3-150	3-150	690
HSWDV 610-362	34.75	15.75	49.00	58.38	109.00	54.00	31.50	20.00	27.00	1.00	2-150	2NPT	4-150	4-150	1,025
HSWDV 612-362	34.75	16.38	51.00	58.38	111.00	54.00	33.50	22.00	29.00	1.00	3-150	2½NPT	4-150	4-150	1,450
HSWDV 614-362	34.75	16.38	51.00	58.38	111.00	54.00	35.50	24.00	31.00	1.00	4-150	3NPT	6-150	6-150	1,775

* more sizes available upon request

Item	Description	Optional Materials of Construction	
C1	Control Panel	Shell	--
C2	Steam Control Valve	Channel	Type 316/L Stainless steel
C3	Water Thermometer	Tubesheet	Brass
C4	Resistance Temperature Detector	Tubes	Titanium
C5	Temperature and Pressure Relief Valve		90/10 Copper Nickel
C6	Pressure Relief Valve		Type 316/L Stainless steel
C7	Mechanical Thermostat		Brass
C8	Water Solenoid Valve		70/30 Copper Nickel
C9	Float and Thermostatic Steam Trap	Baffles	Type 316/L Stainless steel

Benefits of Howard's Engineering Fully Controlled Water Heaters:

1. Heat exchanger is designed to meet performance criteria and is provided with a thermal guarantee.
2. Double wall heat exchangers have a threaded leak indication port for ease of leak detection and correction.
3. All components are engineering to meet performance criteria, no wasted time sourcing parts to work in conjunction with one another.
4. Industrial quality and commercial price.
5. Increased efficiency for your system.
6. Peace of mind knowing that you will be receiving the most highly engineered heat exchanger available.

Specifications:

1. Instantaneous water heater shall be Howard's Engineering HSWV 600 series factory controlled, insulated and packaged
2. Instantaneous water heater shall be ASME Code Stamped for 150 PSI at 350°F on the shell and channel side and registered with the National Board of Boiler and pressure vessel inspectors
3. Instantaneous water heater shell to be made of type 316/L stainless steel, minimum schedule 10S for the shell thickness
4. Instantaneous water heater channel to be made of pressure vessel quality carbon steel
5. Instantaneous water heater tubesheet to be made of type 316/L stainless steel
6. Instantaneous water heater tubes to be made of double wall seamless copper
7. Threaded leak indication port
8. Shellside insulation to be 1.5" thick fiberglass with a stainless steel jacket
9. All carbon steel parts to be enameled
10. Controls to include:
 - a. PID controller with factory recommended settings
 - b. Internal load anticipator
 - c. Mechanical thermostat for over temperature protection
 - d. Over temperature safety solenoid purge valve
 - e. Water thermometer
 - f. ASME Code Section VIII pressure relief valve
 - g. ASME Code Section IV temperature and pressure relief valve
 - h. Steam control valve (choose one, accessories included)
 - i. Electric, fail safe, 8 second full stroke



- ii. Pneumatic, fail safe, 8 seconds full stroke
- iii. Electro-pneumatic, fail safe, 8 seconds full stroke
- iv. Self contained, fail safe, 10 seconds full stroke
- i. Steam vacuum breaker
- j. Steam pressure gauge
- k. Float and thermostatic steam trap
- l. Single power supply of 100-240 VAC, 50/60 hertz, to the control panel required

11. Manufacturer will assume responsibility for the correct sizing of all control components

** complete construction specifications available upon request.

Sizing Table, 40°F inlet temperature, 140°F outlet temperature (for reference only)									
St. Inlet	2	5	10	15	25	40	50	75	100
St. Outlet	1	3	7	11	18	28	35	53	70
GPM									
10	606-36	606-36	606-36	606-36	606-36	606-36	606-36	606-36	606-36
20	608-36	608-36	606-36	606-36	606-36	606-36	606-36	606-36	606-36
30	608-36	608-36	608-36	606-36	606-36	606-36	606-36	606-36	606-36
40	610-36	608-36	608-36	608-36	608-36	608-36	608-36	606-36	606-36
50	610-36	610-36	610-36	608-36	608-36	608-36	608-36	608-36	608-36
60	610-36	610-36	610-36	610-36	610-36	610-36	610-36	608-36	608-36
70	612-36	610-36	610-36	610-36	610-36	610-36	610-36	610-36	610-36
80	612-36	612-36	612-36	612-36	612-36	610-36	610-36	610-36	610-36
90	612-36	612-36	612-36	612-36	612-36	612-36	612-36	612-36	612-36
100	612-36	612-36	612-36	612-36	612-36	612-36	612-36	612-36	612-36
125	614-36	614-36	614-36	612-36	612-36	612-36	612-36	612-36	612-36
150	614-36	614-36	614-36	614-36	614-36	614-36	614-36	614-36	614-36
175	614-36	614-36	614-36	614-36	614-36	614-36	614-36	614-36	614-36
200	614-36	614-36	614-36	614-36	614-36	614-36	614-36	614-36	614-36