

CLEAN STEAM GENERATOR HIGH TEMPERATURE HOT WATER (HTHW)-TO-STEAM

STANDARD FEATURES AND EQUIPMENT

VESSEL and EXCHANGER (all 316L or 316 SS on wetted components)

- Constructed and stamped in accordance with ASME code, Section VIII, Division I for unfired steam boilers and National Board Registered
- 316L u-tube exchanger rated for 150 psi at 300°F
- Steam de-mister
- Inspection openings or manway in accordance with ASME requirements
- Lifting lugs
- Structural steel skid and tank saddles with industrial-grade finish
- Heavy-duty fiberglass insulation
- Segmented carbon steel jacket panels with industrial-grade finish

VALVES, CONTROLS, GAUGES (CLEAN SIDE) (all 316L or 316 SS on wetted components)

- Manual-reset, high-limit pressure control
- Float-type water level control with feedwater activation switch
- Water column blowdown valve
- Water level sight glass with tri-cocks
- ASME-rated safety relief valve
- Liquid-filled dial pressure gauge, 3-inch
- Inspector's test cock for gauge (125 psi only)
- Bottom blowdown valve(s) and piping
 - one quick-opening @ ≤ 15 psi operating pressure
 - two quick and one slow-opening @ > 15 psi operating pressure

OTHER

- All electric components UL listed or recognized, and or CSA certified
- 2-way boiler water control valve and operating pressure control (pneumatic or pilot operated, select from options list)
- Carbon steel and copper piping on inlet boiler water side
- Boiler water temperature gauge, 3-inch

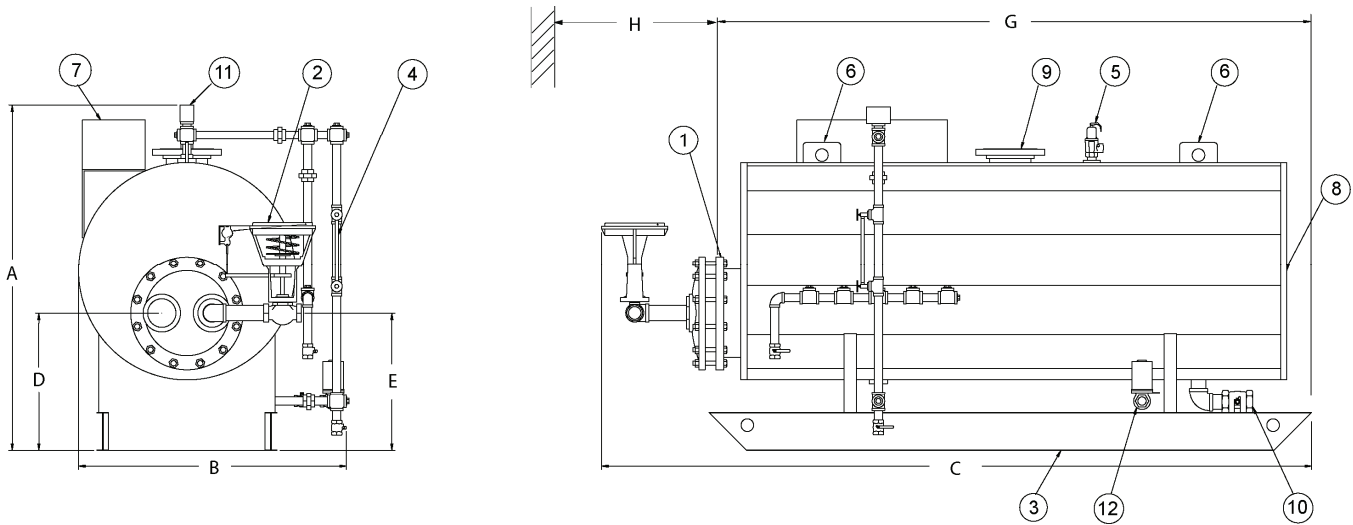
OPTIONAL FEATURES AND EQUIPMENT

- 50 psi MAWP vessel construction
- 125 psi MAWP vessel construction
- Pressure pilot operation for boiler water control valve
- Pneumatic operation for boiler water control valve
- Surface blowdown skimmer assembly with metering valves (all 316L)
- _____ psi safety valve setting
- Feedwater inlet plumbing including solenoid valve, stop valve and check valve (all 316L)
- Audible alarm for safeties with silencing switch
- Low-water alarm contacts
- Automated bottom blowdown with timer
- Automated bottom blowdown with total dissolved solids monitor
- Surface blowdown skimmer assembly with metering valves (all 316L)

AUXILLARY EQUIPMENT

- Blowdown separator

CLEAN STEAM GENERATORS - HTHW-TO-STEAM DIMENSIONS AND COMPONENT IDENTIFICATION



		250 * SERIES VESSEL	600 SERIES VESSEL
A	Overall Height	55	63
B	Overall Width	43	57
C	Overall Length	113	149
D	Height to Boiler Water Inlet	22	26
E	Height to Boiler Water Outlet	22	26
G	Rear to Flange Length	95	121
H	Pull Space Required for U-tube	See form 34-706	
12	Make-up Water Inlet	1 NPT	1-1/2 NPT
	Tank Diameter Jacketed	35	46
	Weight	See form 34-715	

* 250 series vessel is used for models that produce ≤ 2000 lbs per hour.

Dimensions are in inches unless otherwise noted.

For boiler water valve size, and clean steam outlet flange size, refer to performance tables (form 34-702 to 34-705)

Steam valves up to 2 inch are NPT.
Steam valves larger than 2 inch are flanged.

RIVERSIDE HYDRONICS RESERVES THE RIGHT TO CHANGE THE DESIGN AND SPECIFICATION WITHOUT NOTICE.

Electrical Requirement

120V, 1Ø, 60 Hz.
20 amps maximum
Single point connection

Component Identification

1	316 S.S. U-TUBE HEAT EXCHANGER	7	CONTROL ENCLOSURE
2	BOILER WATER CONTROL VALVE	8	12" X 16" MANWAY
3	SUPPORT ASSY 6" CHANNEL	9	STEAM OUTLET
4	WATER LEVEL GAUGE GLASS	10	BLOWDOWN - 1" NPT
5	ASME PRESSURE RELIEF VALVE - 316 S.S.	11	ELECTRONIC WATER LEVEL & MAKEUP WATER CONTROL
6	LIFTING LUGS	12	MAKEUP WATER SOLENOID VALVE



CLEAN STEAM GENERATORS - HTHW-TO-STEAM PERFORMANCE AND SELECTED DIMENSIONS BY MODEL

Water Entering U-tube °F	380	380	380	380	380
Water Leaving U-tube °F	350	350	350	360	360
Output Steam Pressure	5	10	15	50	80
	▼	▼	▼	▼	▼

LB PER HOUR OUTPUT	1975	1940	1925	1775	1200
MODEL	71 SSHE 250A-CW	71 SSHE 250A-CW	71 SSHE 250A-CW	71 SSHE 250A-CW	71 SSHE 250A-CW
BOILER WATER VALVE	2	2	2	2	2
STEAM OUTLET FLANGE	4	4	4	4	4
GPM BOILER WTR INPUT	167	165	164	229	156

LB PER HOUR OUTPUT
MODEL
BOILER WATER VALVE
STEAM OUTLET FLANGE
GPM BOILER WTR INPUT

1975	1375
78 SSHE 250A-CW	78 SSHE 250A-CW
2	2
4	4
255	179

LB PER HOUR OUTPUT
MODEL
BOILER WATER VALVE
STEAM OUTLET FLANGE
GPM BOILER WTR INPUT

1525
86 SSHE 250A-CW
2
4
199

LB PER HOUR OUTPUT
MODEL
BOILER WATER VALVE
STEAM OUTLET FLANGE
GPM BOILER WTR INPUT

1875
101 SSHE 250A-CW
2
4
244

LB PER HOUR OUTPUT	2900	2850	2825	2600	1800
MODEL	104 SSHE 600A-CW	104 SSHE 600A-CW	104 SSHE 600A-CW	104 SSHE 600A-CW	104 SSHE 600A-CW
BOILER WATER VALVE	2	2	2	3	2
STEAM OUTLET FLANGE	8	8	8	8	8
GPM BOILER WTR INPUT	245	242	241	336	234

CLEAN STEAM GENERATORS - HTHW-TO-STEAM PERFORMANCE AND SELECTED DIMENSIONS BY MODEL

Water Entering U-tube °F	380	380	380	380	380
Water Leaving U-tube °F	350	350	350	360	360
Output Steam Pressure	5	10	15	50	80
	▼	▼	▼	▼	▼

LB PER HOUR OUTPUT	3175	3150	3125	2875	2025
MODEL	115 SSHE 600A-CW	115 SSHE 600A-CW	115 SSHE 600A-CW	115 SSHE 600A-CW	115 SSHE 600A-CW
BOILER WATER VALVE	2	2	2	2	2
STEAM OUTLET FLANGE	8	8	8	8	8
GPM BOILER WTR INPUT	268	267	266	371	264

LB PER HOUR OUTPUT	3500	3450	3425	3750	2275
MODEL	126 SSHE 600A-CW	126 SSHE 600A-CW	126 SSHE 600A-CW	126 SSHE 600A-CW	126 SSHE 600A-CW
BOILER WATER VALVE	2	2	2	3	2
STEAM OUTLET FLANGE	8	8	8	8	8
GPM BOILER WTR INPUT	296	293	292	406	296

LB PER HOUR OUTPUT	4150	4050	4000	3700	2750
MODEL	147 SSHE 600A-CW	147 SSHE 600A-CW	147 SSHE 600A-CW	147 SSHE 600A-CW	147 SSHE 600A-CW
BOILER WATER VALVE	3	3	3	3	3
STEAM OUTLET FLANGE	8	8	8	8	8
GPM BOILER WTR INPUT	351	344	341	477	358

LB PER HOUR OUTPUT	4900	4825	4750	4425	3275
MODEL	175 SSHE 600A-CW	175 SSHE 600A-CW	175 SSHE 600A-CW	175 SSHE 600A-CW	175 SSHE 600A-CW
BOILER WATER VALVE	3	3	3	3	3
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	414	410	405	571	426

LB PER HOUR OUTPUT	5700	5650	5600	5175	3925
MODEL	204 SSHE 600A-CW	204 SSHE 600A-CW	204 SSHE 600A-CW	204 SSHE 600A-CW	204 SSHE 600A-CW
BOILER WATER VALVE	3	3	3	4	3
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	482	480	477	599	511

**CLEAN STEAM GENERATORS - HTHW-TO-STEAM
PERFORMANCE AND SELECTED DIMENSIONS BY MODEL**

Water Entering U-tube °F	380	380	380	380	380
Water Leaving U-tube °F	350	350	350	360	360
Output Steam Pressure	5	10	15	50	80
	▼	▼	▼	▼	▼

LB PER HOUR OUTPUT	6550	6500	6425	2950	4600
MODEL	234 SSHE 600A-CW	234 SSHE 600A-CW	234 SSHE 600A-CW	234 SSHE 600A-CW	234 SSHE 600A-CW
BOILER WATER VALVE	3	3	3	3	3
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	554	552	547	768	599

LB PER HOUR OUTPUT	6950	6900	6825	6350	4925
MODEL	249 SSHE 600A-CW	249 SSHE 600A-CW	249 SSHE 600A-CW	249 SSHE 600A-CW	249 SSHE 600A-CW
BOILER WATER VALVE	3	3	3	4	4
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	587	586	581	819	641

LB PER HOUR OUTPUT	7400	7325	7250	6650	5100
MODEL	265 SSHE 600A-CW	265 SSHE 600A-CW	265 SSHE 600A-CW	265 SSHE 600A-CW	265 SSHE 600A-CW
BOILER WATER VALVE	3	3	3	4	4
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	625	622	618	858	664

LB PER HOUR OUTPUT	8500	8425	8375	7750	6000
MODEL	304 SSHE 600A-CW	304 SSHE 600A-CW	304 SSHE 600A-CW	304 SSHE 600A-CW	304 SSHE 600A-CW
BOILER WATER VALVE	4	4	4	4	4
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	718	715	713	1000	781

LB PER HOUR OUTPUT	9050	8950	8950	8250	6450
MODEL	323 SSHE 600A-CW	323 SSHE 600A-CW	323 SSHE 600A-CW	323 SSHE 600A-CW	323 SSHE 600A-CW
BOILER WATER VALVE	4	4	4	4	4
STEAM OUTLET FLANGE	10	10	10	10	10
GPM BOILER WTR INPUT	765	760	759	1065	840

**CLEAN STEAM GENERATORS - HTHW-TO-STEAM
PERFORMANCE AND SELECTED DIMENSIONS BY MODEL**

Water Entering U-tube °F	380	380	380	380	380
Water Leaving U-tube °F	350	350	350	360	360
Output Steam Pressure	5	10	15	50	80
	▼	▼	▼	▼	▼

LB PER HOUR OUTPUT	9475	9400	9325	8625	6625
MODEL	339 SSHE 600A-CW	339 SSHE 600A-CW	339 SSHE 600A-CW	339 SSHE 600A-CW	339 SSHE 600A-CW
BOILER WATER VALVE	4	4	4	4	4
STEAM OUTLET FLANGE	12	12	12	12	12
GPM BOILER WTR INPUT	801	798	791	1113	862

LB PER HOUR OUTPUT	10775	10700	10650	9850	7700
MODEL	387 SSHE 600A-CW	387 SSHE 600A-CW	387 SSHE 600A-CW	387 SSHE 600A-CW	387 SSHE 600A-CW
BOILER WATER VALVE	4	4	4	6	4
STEAM OUTLET FLANGE	12	12	12	12	12
GPM BOILER WTR INPUT	911	908	903	1271	1002

LB PER HOUR OUTPUT	11500	11350	11375	10500	8200
MODEL	411 SSHE 600A-CW	411 SSHE 600A-CW	411 SSHE 600A-CW	411 SSHE 600A-CW	411 SSHE 600A-CW
BOILER WATER VALVE	4	4	4	6	4
STEAM OUTLET FLANGE	12	12	12	12	12
GPM BOILER WTR INPUT	972	963	965	1355	1067

LB PER HOUR OUTPUT	12225	12050	12050	11450	8775
MODEL	435 SSHE 600A-CW	435 SSHE 600A-CW	435 SSHE 600A-CW	435 SSHE 600A-CW	435 SSHE 600A-CW
BOILER WATER VALVE	4	4	4	6	4
STEAM OUTLET FLANGE	12	12	12	12	12
GPM BOILER WTR INPUT	1033	1023	1022	1478	1142

**CLEAN STEAM GENERATORS - HTHW-TO-STEAM
WEIGHT BY MODEL NUMBER**

MODEL	SHIPPING WEIGHT LBS	OPERATING WEIGHT LBS	FLOODED WEIGHT LBS
71 SSHE 250A-CW	2215	4915	6215
78 SSHE 250A-CW	2225	4925	6225
86 SSHE 250A-CW	2235	4935	6235
101 SSHE 250A-CW	2258	4958	6258
104 SSHE 600A-CW	2900	6200	6900
115 SSHE 600A-CW	2915	6215	6915
126 SSHE 600A-CW	2930	6230	6930
147 SSHE 600A-CW	2965	6265	6965
175 SSHE 600A-CW	3030	6330	7030
204 SSHE 600A-CW	3070	6370	7070
234 SSHE 600A-CW	3115	6415	7115
249 SSHE 600A-CW	3140	6440	7140
265 SSHE 600A-CW	3230	6530	7230
304 SSHE 600A-CW	3285	6585	7285
323 SSHE 600A-CW	3315	6615	7315
339 SSHE 600A-CW	3365	6665	7365
387 SSHE 600A-CW	3430	6730	7430
411 SSHE 600A-CW	3500	6800	7500
435 SSHE 600A-CW	3570	6870	7570

**CLEAN STEAM GENERATORS
STEAM-TO-STEAM or HTHW-TO-STEAM**

**PULL SPACE REQUIRED FOR HEAT EXCHANGER
DIMENSION "H" ON FORM 34-701 or 34-712**

Model Number Prefix	Pull Space Required for U-tube Exchanger
71	60
78	66
86	72
101	84
104	60
115	66
126	72
147	84
175	72
204	84
234	96
249	102
265	84
304	96
323	102
339	84
387	96
411	102
435	108

