



SR40 – SR120 Steam Boiler Series



Features

- Miniature boiler max. vessel volume 5ft³
- Maximum safety valve setting 100psi
- All boilers are manufactured in accordance with the requirements of the A.S.M.E. Boiler and Pressure Vessel Code and A.S.M.E. CSD-1. Each boiler bears the National Board Stamp "M".
- Dry pure saturated steam, operating pressure range 0 – 85psig
- Heavy duty 304 or 316 stainless steel pressure vessel. Vessel jacket and electrical enclosure 304 stainless steel
- Large selection of optional equipment

Standard Equipment of Each Boiler Includes:

- A.S.M.E. pressure relief valve
- One (1) quick-opening bottom blowoff valve as per A.S.M.E. Code B31.1
- Stainless steel steam outlet ball valve
- High pressure feed pump in SRH- and SRHC-models
- Low water cutoff control with manual reset
- One (1) high pressure cutoff control with manual reset
- One (1) operating pressure control for all models equipped with two heating elements or two (2) staged operating pressure controls for all models equipped with three or four heating elements
- Magnetic contactors
- Internal branch circuit fusing
- Enable/Disable switch for each heating element
- Main supply power distribution block
- Indicator lights for POWER, REFILLING, HEATING, ALARMS and Automatic Boiler Blowoff Status
- Pressure and water level gauge

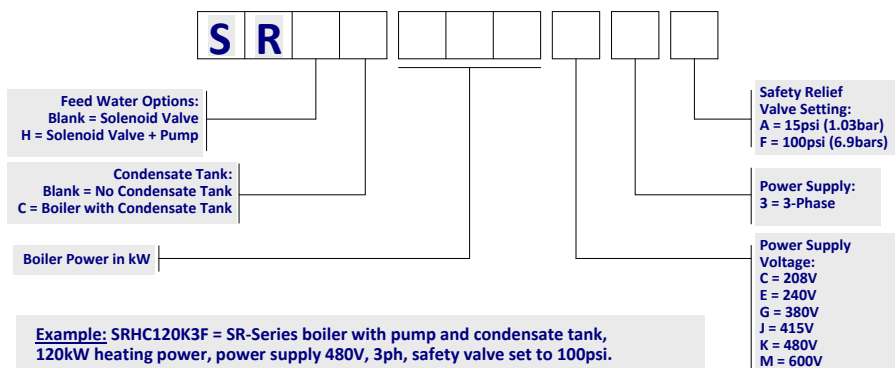
Applications

- Clean Steam Generator for Autoclaves
- Ultra pure steam for medical research, pharmaceutical and cosmetics
- Pure steam humidifiers
- Steam sterilizing
- Food service (*)
- Laboratories

(*) **DIRECT STEAM APPLICATIONS TO FOOD PRODUCTS:** Reimers Electra Steam, Inc. SR-series all stainless steel boilers generate clean steam. This alone does not guarantee the production of culinary grade steam. Applicable safety standards (i.e. 3-A T609) must be considered.

HEATING POWER kW	STEAM CAPACITY lbs/hr (kg/hr) ⁽³⁾	BHP	VOLTAGE ⁽¹⁾	PHASE	SHIP WT. ⁽²⁾ Lbs (kg)	OP. PRESS. RANGE psig (bar)	Steam Outlet (NPT)	
							LP < 15psig	HP > 15psig
40 KW	137 (62)	4.0	208/240/380/415/480/600	3	480 (218)	0-85 (0 – 5.9)	1	3/4
60 KW	205 (93)	6.0	208/240/380/415/480/600	3	530 (240)	0-85 (0 – 5.9)	1-1/4	1
80 KW	273 (124)	8.0	208/240/380/415/480/600	3	610 (276)	0-85 (0 – 5.9)	1-1/4	1
120 KW	409 (185)	12.0	208/240/380/415/480/600	3	795 (360)	0-85 (0 – 5.9)	2	1-1/4

Model Number Key



⁽¹⁾ Each boiler model requires two (2) power supplies: Primary heating power and secondary control voltage. Nominal control voltage is 120V, 50/60Hz. Boiler models rated for 380V and 415V are equipped with control voltage transformers that require 220/240V applied to their primary side in order to provide the 120V AC control voltage to the boiler. As an option, all boiler models can be equipped with control voltage transformers so that only the heating power supply needs to be connected to the boiler.

⁽²⁾ On boiler equipped with condensate tank, add 150lbs (68.0kg) to shipping weight

⁽³⁾ The STEAM CAPACITY listed above is based on the evaporation rate from and at 212°F, at 0 psig. If the boiler feed water temperature is 50°F, then the STEAM CAPACITY for each model listed above is approximately 15% lower.

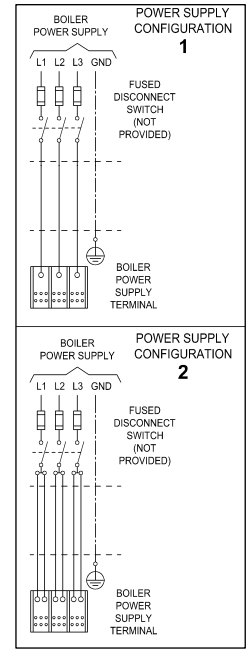
DEIONIZED WATER

ASME (PEB 5.3) requires that; boilers constructed of austenitic stainless steel be operated on deionized water only, having a minimum specific resistivity of 1 megohm/cm.

Please note that all information provided within this brochure is approximate and subject to change without notice. Please contact Reimers Electra Steam, Inc. with any questions regarding the specifications or dimensions detailed within.

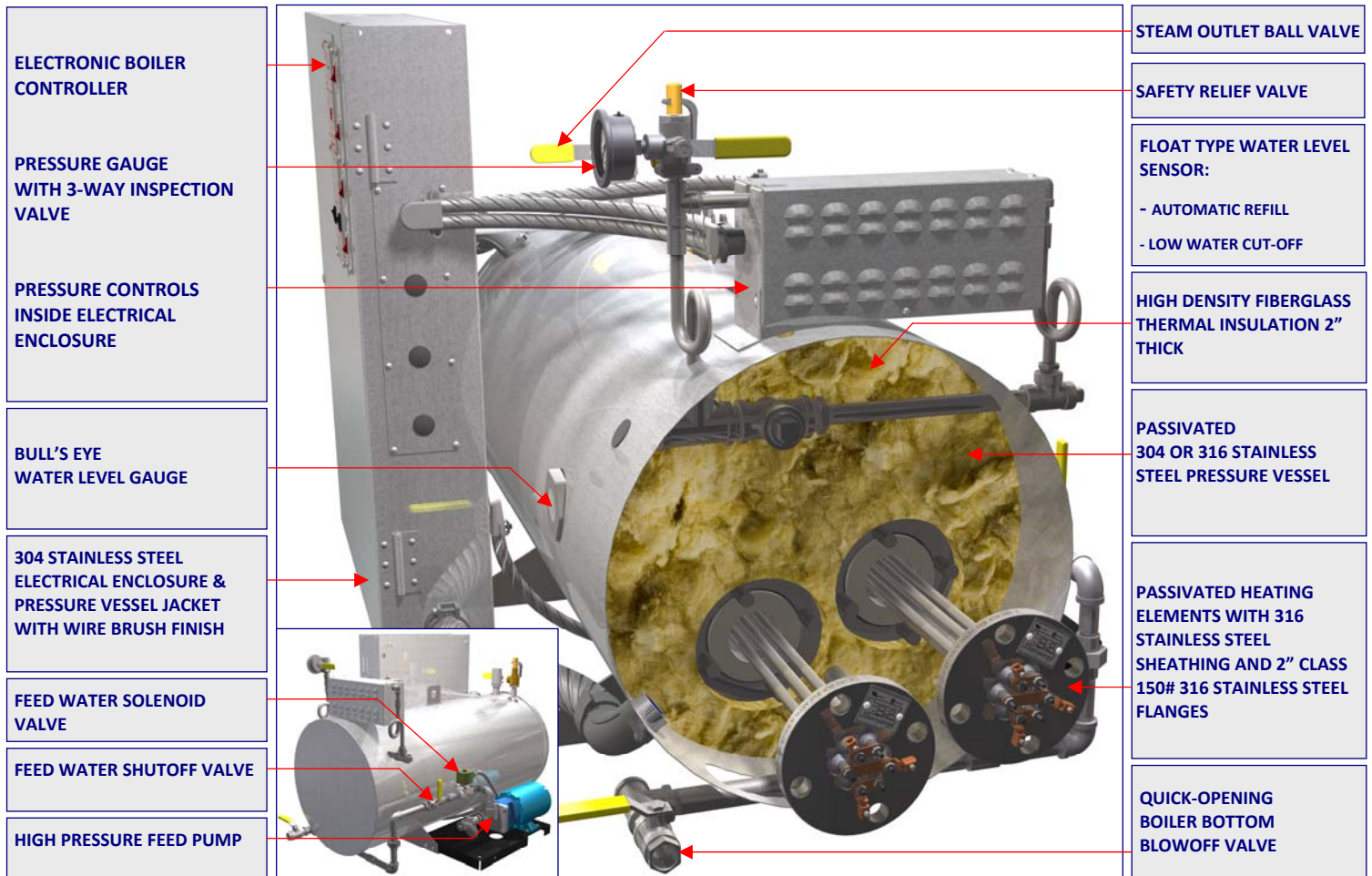
Electrical Specifications

BOILER HEATING POWER kW	PRIMARY VOLTAGE V	PHASE	AMP DRAW A	MIN REQ. N.E.C. SERVICE A	INTERNAL POWER FUSING	INTERNAL ELEMENT WIRING AWG (mm ²)	NUMBER & SIZES OF CONTACTORS (RES. LOAD)	NUMBER & SIZE OF ELEMENTS	POWER SUPPLY	
									MINIMUM REQUIRED CONDUCTOR SIZE IN BOILER ELECTRICAL ENCLOSURE AWG/MCM (*)	CONFIGURATION
40	208	3	111.0	140.0	6 x 70A, 250V	8 (8.35)	2 x 75A	2 x 20kW, 208V, 3ph	3 x AWG 2/0	1
240	3	96.2	121.0	6 x 60A, 250V	8 (8.35)	2 x 75A	2 x 75A	2 x 20kW, 240V, 3ph	3 x AWG 2/0	1
380	3	60.8	76.0	6 x 40A, 600V	8 (8.35)	2 x 50A	2 x 50A	2 x 20kW, 380V, 3ph	3 x AWG 2/0	1
415	3	55.6	70.0	6 x 40A, 600V	10 (5.27)	2 x 50A	2 x 50A	2 x 20kW, 415V, 3ph	3 x AWG 2/0	1
480	3	48.1	60.0	6 x 30A, 600V	10 (5.27)	2 x 50A	2 x 50A	2 x 20kW, 480V, 3ph	3 x AWG 2/0	1
600	3	38.5	48.0	6 x 30A, 600V	10 (5.27)	2 x 50A	2 x 50A	2 x 20kW, 600V, 3ph	3 x AWG 2/0	1
60	208	3	166.5	208.0	9 x 70A, 250V	8 (8.35)	3 x 75A	3 x 20kW, 208V, 3ph	3 x 500 MCM	1
240	3	144.3	181.0	9 x 60A, 250V	8 (8.35)	3 x 75A	3 x 75A	3 x 20kW, 240V, 3ph	3 x 500 MCM	1
380	3	91.2	114.0	9 x 40A, 600V	8 (8.35)	3 x 50A	3 x 50A	3 x 20kW, 380V, 3ph	3 x AWG 2/0	1
415	3	83.5	105.0	9 x 40A, 600V	10 (5.27)	3 x 50A	3 x 50A	3 x 20kW, 415V, 3ph	3 x AWG 2/0	1
480	3	72.2	90.0	9 x 30A, 250V	10 (5.27)	3 x 50A	3 x 50A	3 x 20kW, 480V, 3ph	3 x AWG 2/0	1
600	3	57.7	72.0	9 x 30A, 250V	10 (5.27)	3 x 50A	3 x 50A	3 x 20kW, 600V, 3ph	3 x AWG 2/0	1
80	208	3	222.1	278.0	12 x 70A, 250V	8 (8.35)	4 x 75A	4 x 20kW, 208V, 3ph	3 x 500 MCM	1
240	3	192.5	241.0	12 x 60A, 250V	8 (8.35)	4 x 75A	4 x 75A	4 x 20kW, 240V, 3ph	3 x 500 MCM	1
380	3	121.5	152.0	12 x 40A, 600V	8 (8.35)	4 x 50A	4 x 50A	4 x 20kW, 380V, 3ph	3 x AWG 2/0	1
415	3	111.3	140.0	12 x 40A, 600V	10 (5.27)	4 x 50A	4 x 50A	4 x 20kW, 415V, 3ph	3 x AWG 2/0	1
480	3	96.2	120.0	12 x 30A, 250V	10 (5.27)	4 x 50A	4 x 50A	4 x 20kW, 480V, 3ph	3 x AWG 2/0	1
600	3	77.0	96.0	12 x 30A, 250V	10 (5.27)	4 x 50A	4 x 50A	4 x 20kW, 600V, 3ph	3 x AWG 2/0	1
120	208	3	333.1	417.0	12 x 100A, 600V	6 (13.3)	4 x 93A	4 x 30kW, 208V, 3ph	6 x 500 MCM	2
240	3	288.7	360.0	12 x 90A, 600V	6 (13.3)	4 x 75A	4 x 75A	4 x 30kW, 240V, 3ph	3 x 500 MCM	1
380	3	182.3	228.0	12 x 60A, 600V	8 (8.35)	4 x 50A	4 x 50A	4 x 30kW, 380V, 3ph	3 x 500 MCM	1
415	3	166.9	209.0	12 x 60A, 600V	8 (8.35)	4 x 50A	4 x 50A	4 x 30kW, 415V, 3ph	3 x 500 MCM	1
480	3	144.3	180.0	12 x 50A, 600V	8 (8.35)	4 x 50A	4 x 50A	4 x 30kW, 480V, 3ph	3 x 500 MCM	1
600	3	115.5	145.0	12 x 40A, 600V	10 (5.27)	4 x 50A	4 x 50A	4 x 30kW, 600V, 3ph	3 x AWG 2/0	1



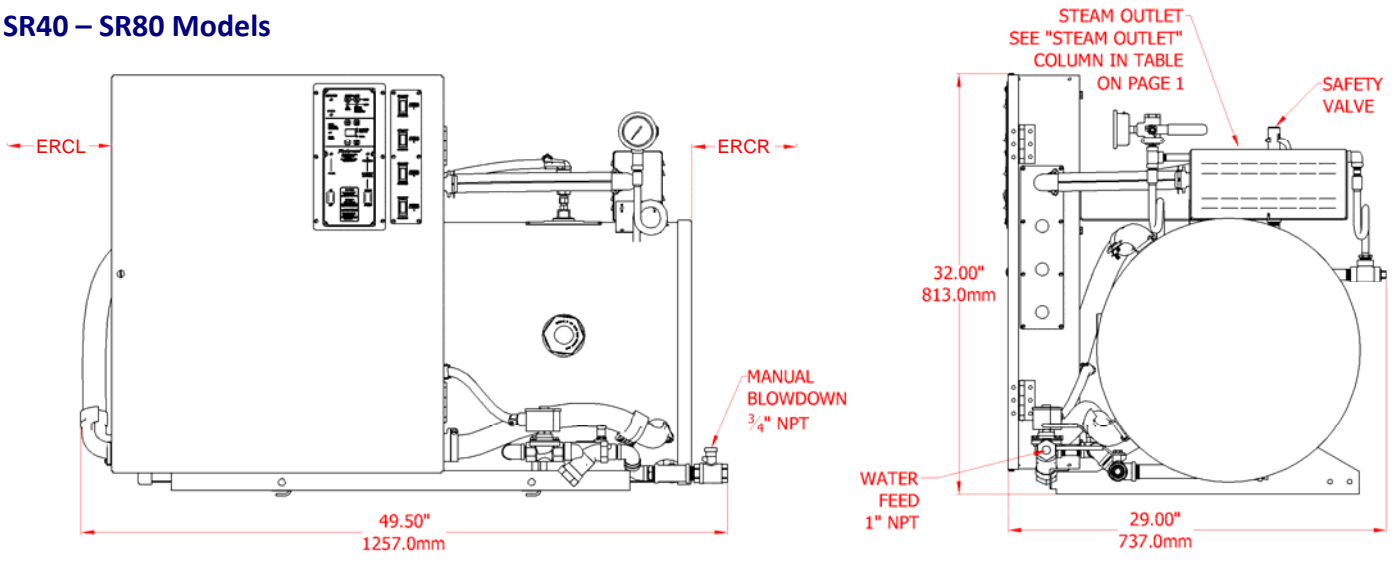
(*) The sizes shown in the above tabulation are the minimum required conductor sizes to be installed inside the boiler electrical enclosure as per the UL-File in which these boiler models are listed. The conductors must be rated at minimum 75°C. If the National Electrical Code (N.E.C.) or any other local code requires larger supply conductors at the boiler installation site then those conductor sizes shall be used.

Construction

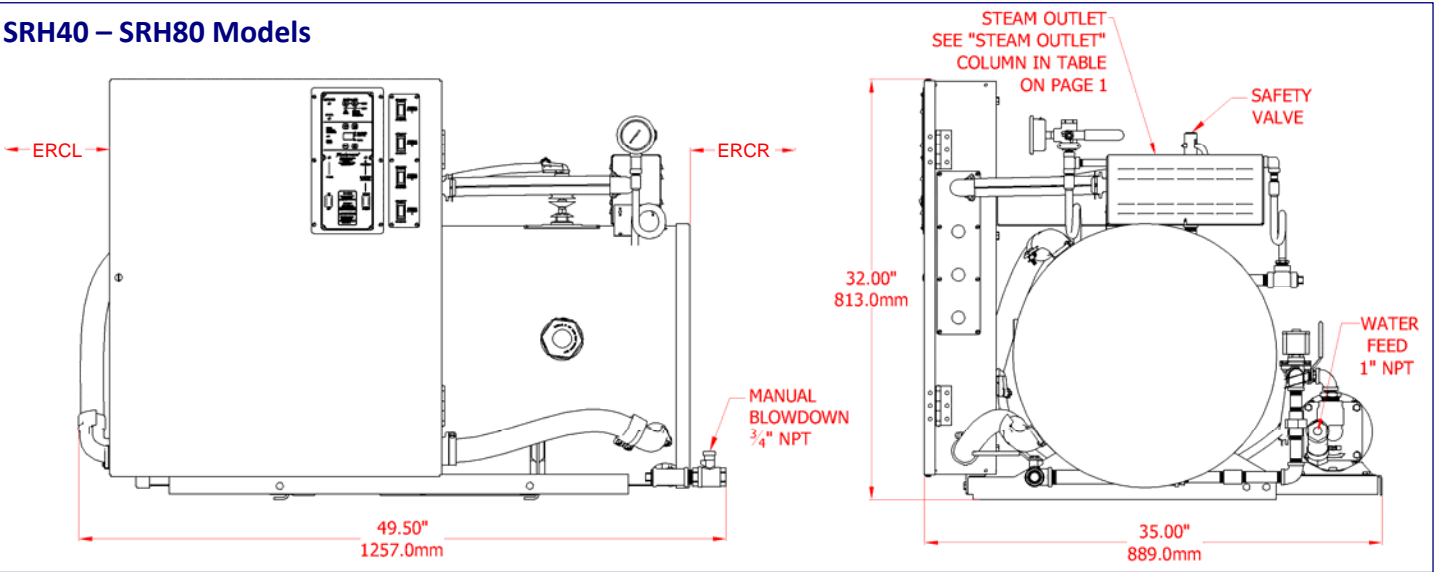


Dimensional Drawings

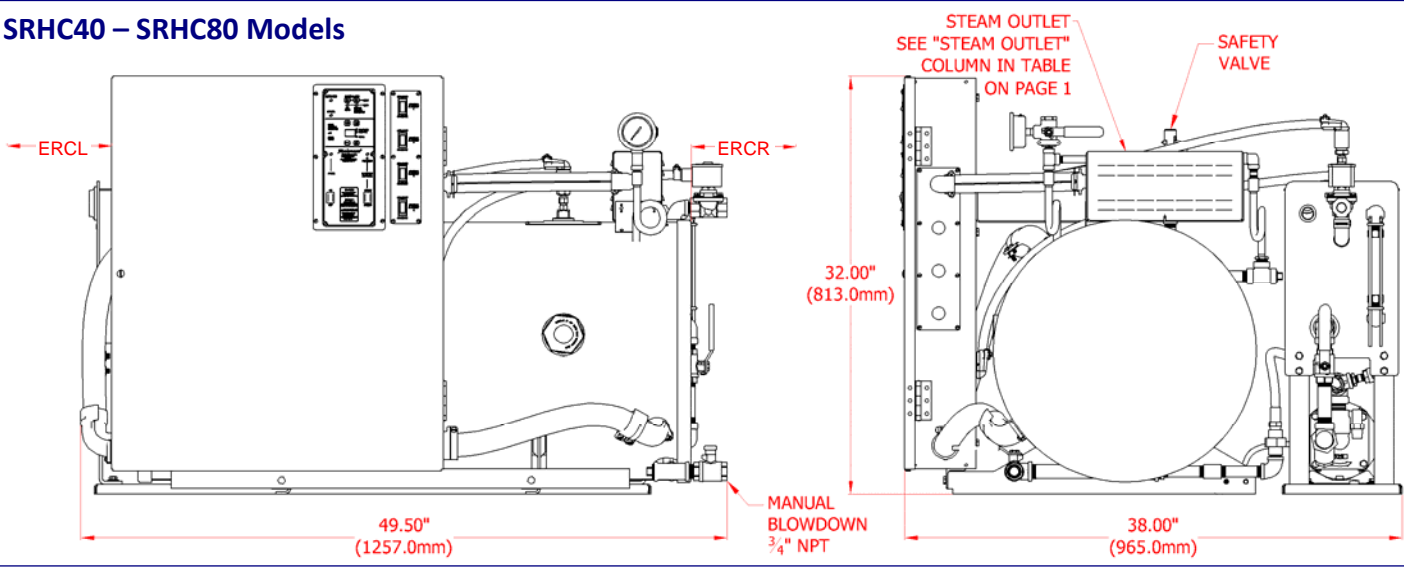
SR40 – SR80 Models



SRH40 – SRH80 Models



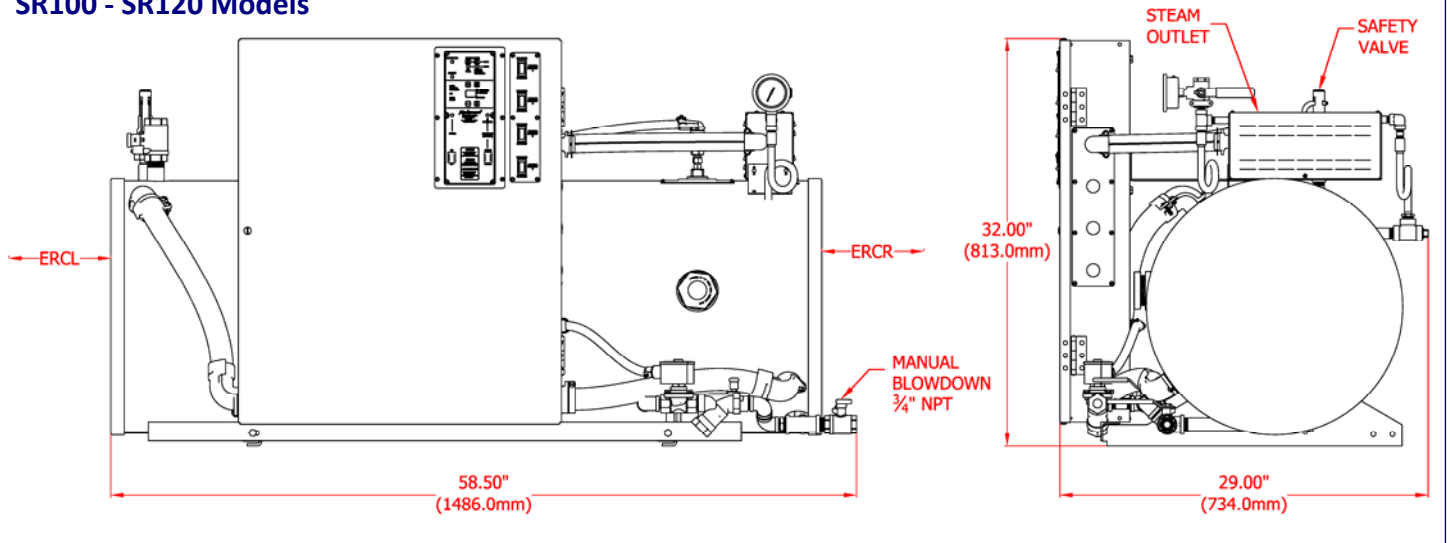
SRHC40 – SRHC80 Models



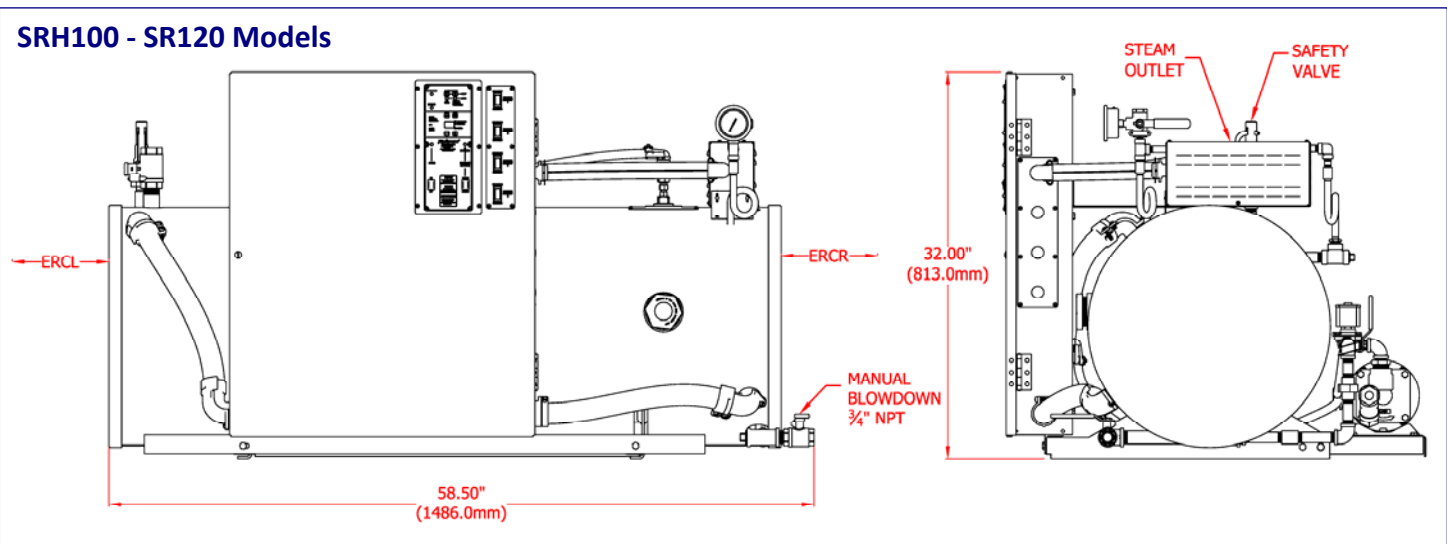
Element Removal Clearance Left & Right (ERCL & ERCR)

MODEL	SR/SRH/SRHC-40	SR/SRH/SRHC-60	SR/SRH/SRHC-80
ERCL in (mm)	0	24 (610)	24 (610)
ERCR in (mm)	24 (610)	24 (610)	24 (610)

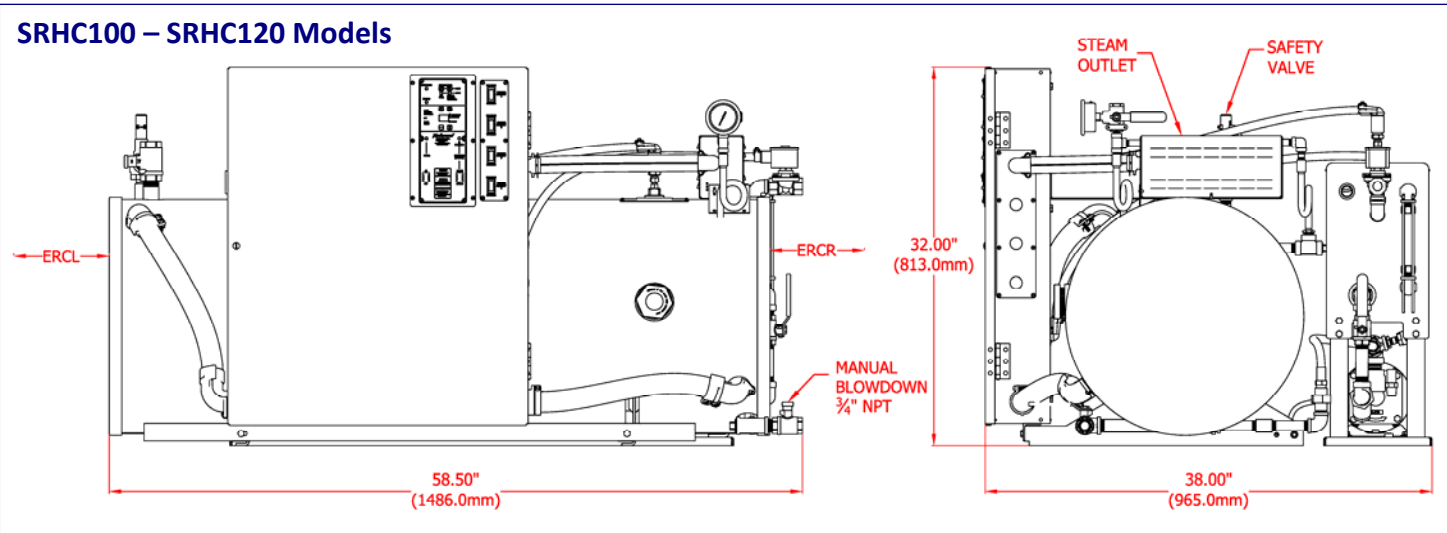
SR100 - SR120 Models



SRH100 - SR120 Models



SRHC100 - SRHC120 Models

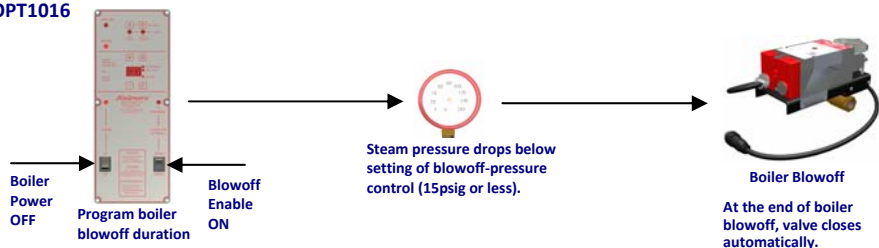


Element Removal Clearance Left & Right (ERCL & ERCR)

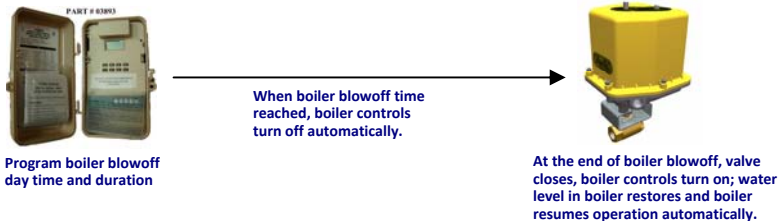
MODEL	SR/SRH/SRHC-120
ERCL in (mm)	36 (915)
ERCR in (mm)	36 (915)

Optional Equipment

1. Pressure Controlled Boiler Blowoff System Automatic Flush & Drain (Not suitable for 24/7 operation), #OPT1016

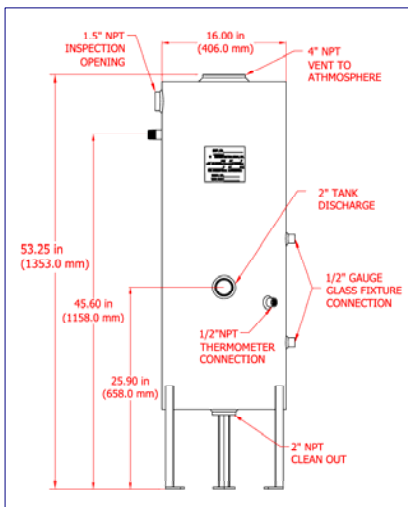


2. Timer Controlled Boiler Blowoff System, (Suitable for 24/7 operation), #OPT1001



3. Boiler Blowoff Tank, #BTANK-16 (#BTANK-16CAN for Canada)

- Designed in accordance with the National Board Guide for Blowoff Vessels NB-27
- Designed and manufactured in accordance with the requirements of the A.S.M.E. Boiler and Pressure Vessel Code Section VIII, Division 1. Each tank bears the National Board Stamp "U". The design pressure as per NB-27 is 50psig.



Typical Blowoff Tank Installation



3A. Boiler Blowoff Tank After-Cooler #OPT1027

Most States and Local Municipalities require that fluids drained to the sewer shall have a maximum temperature of not more than 140°F.

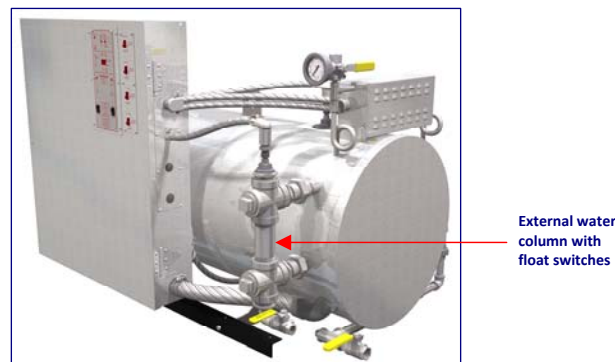
Install this after-cooler to the blowoff tank discharge line when boiler operates with one of the above automatic blowoff options.



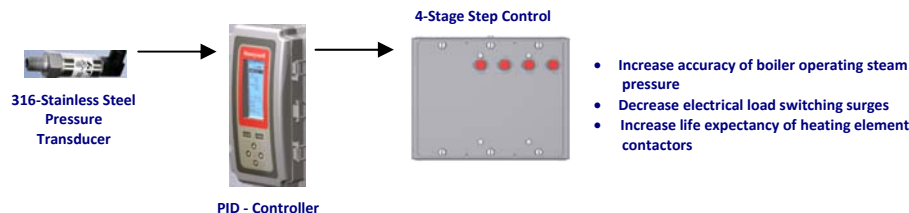
4. Control Voltage Transformer. Use this option for single point boiler power supply.

Main Boiler Supply Voltage	Transformer Option Part Number	
	Boiler Model	
	R-	RH- and RHC-
208V	OPT1010 - 208R	OPT1011 - 208RH
240V	OPT1010 - 240R	OPT1011 - 240RH
380V	OPT1010 - 380	OPT1011 - 380RH
415V	OPT1010 - 380	OPT1011 - 380RH
480V	OPT1010 - 480R	OPT1011 - 480RH
600V	OPT1010 - 600R	OPT1011 - 600RH

5. Auxiliary Low Water Cut-Off in External Water Column, #OPT1012



6. Proportional Step Control, #20802-SS



7. Boiler Stacking:



Operate two boilers in parallel for higher steam loads and save floor space.

Boiler Model	Stacking Frame
SR, SRH, SRHC40-80	20562
SR, SRH, SRHC120	20570

8. Timer Controlled Boiler On/Off, #OPT1017



