

SR20-120 STEAM BOILERS



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 316 stainless steel pressure vessel. Vessel jacket 304 stainless steel, electrical enclosure powder coated carbon steel
- Large selection of optional equipment

Standard Equipment of Each Boiler Includes:

- A.S.M.E. pressure relief valve
- One (1) slow opening boiler 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

- Process Steam
- Air Humidification
- Food Service^(*)
- Autoclaves/Sterilizers
- Dry Cleaning
- Laboratories

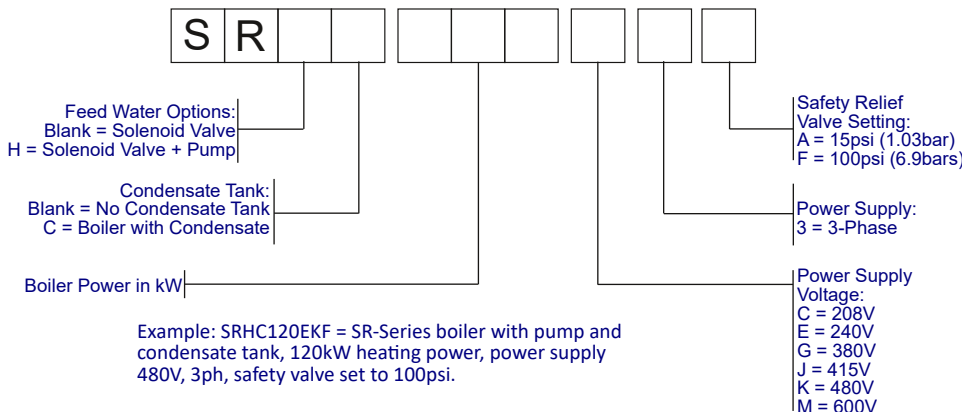
(*) DIRECT STEAM APPLICATIONS TO FOOD PRODUCTS: Reimers offers stainless steel boilers or #OPT1032 Steam Filter option (see Page 5). This alone does not guarantee the production of culinary grade steam. Applicable safety standards (i.e. 3-A T609) must be considered.

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.

HEATING POWER KW	STEAM CAPACITY lbs/hr (kg/hr)(4)	BHP	VOLTAGE ⁽¹⁾	PHASE	SHIP WT. ⁽³⁾ lbs (kg)	PRESSURE VESSEL CAPACITY GAL. (L)	OP. PRESS. RANGE psi (bar)	STEAM OUTLET (NPT)	
								LP <15psig	HP >15psig
20 KW	69 (31)	2.0	208/240/380/415/480/600	3 ⁽²⁾	430 (195)	23.08 (87.35)	0 - 85 (0 - 5.86)	1/2	1/2
40 KW	137 (62)	4.0	208/240/380/415/480/600	3 ⁽²⁾	480 (218)	23.08 (87.35)	0 - 85 (0 - 5.86)	1	3/4
60 KW	205 (93)	6.0	208/240/380/415/480/600	3	530 (240)	23.08 (87.35)	0 - 85 (0 - 5.86)	1-1/4	1
80 KW	273 (124)	8.0	208/240/380/415/480/600	3	610 (276)	23.08 (87.35)	0 - 85 (0 - 5.86)	1-1/4	1
120 KW	409 (185)	12.0	208/240/380/415/480/600	3	795 (360)	33.49 (126.78)	0 - 85 (0 - 5.86)	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⁾ Also available in 240V 1PH

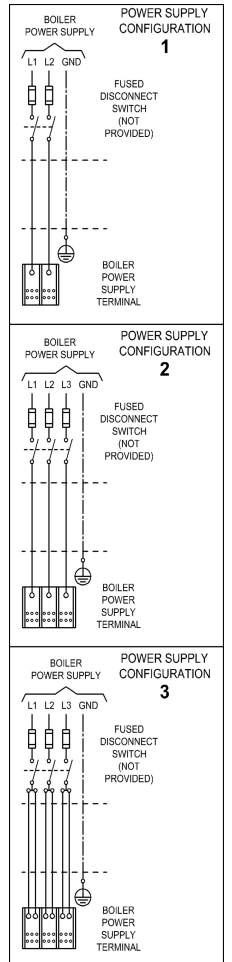
⁽³⁾ On boiler equipped with condensate tank, add 90lbs (41.0kg) to shipping weight

⁽⁴⁾ 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.

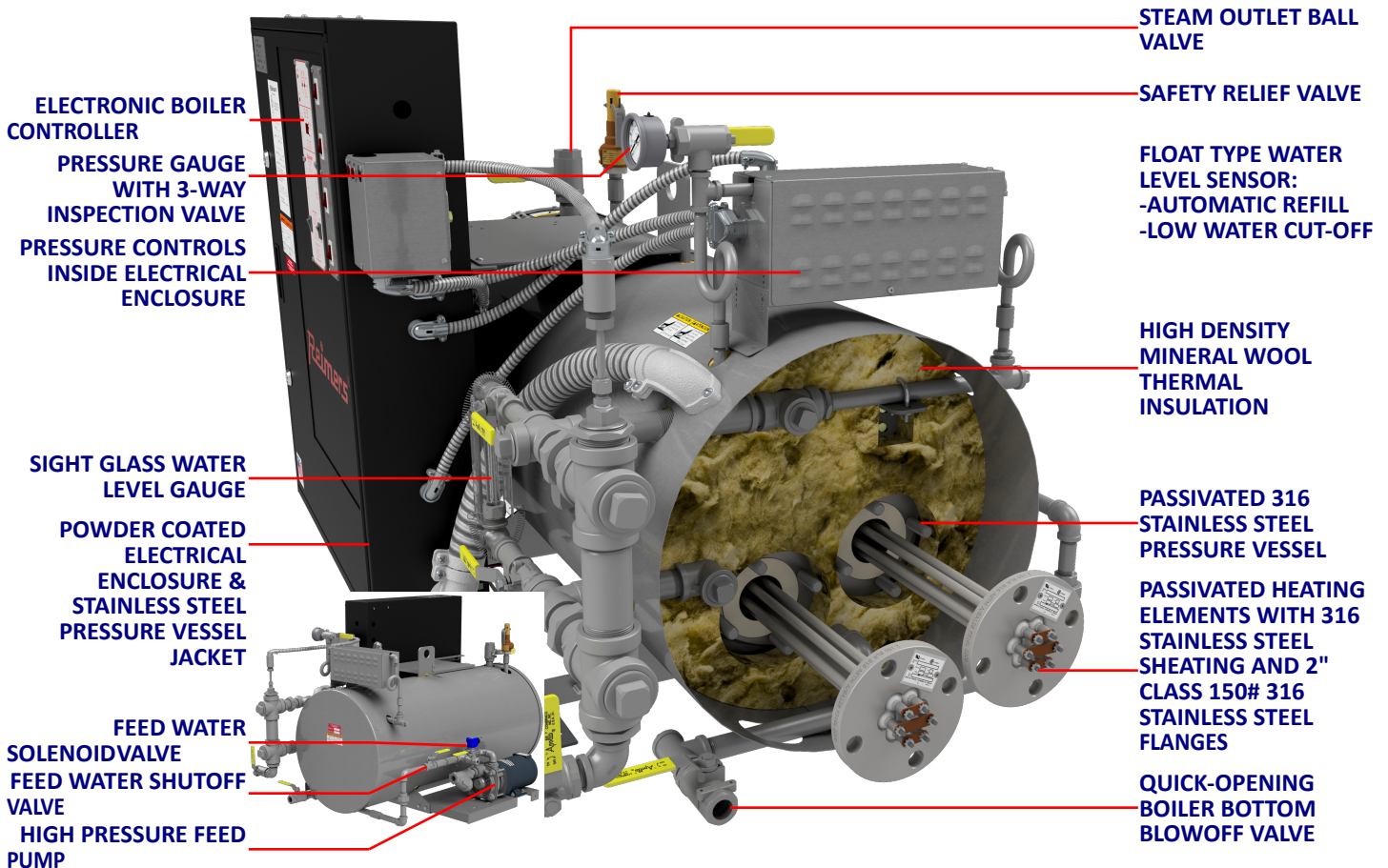
Please note that all information provided within this brochure is approximate and subject to change without notice. Please contact Reimers Electra Steam, Inc. with any questions regarding the specifications or dimensions detailed within.

Electrical Specifications

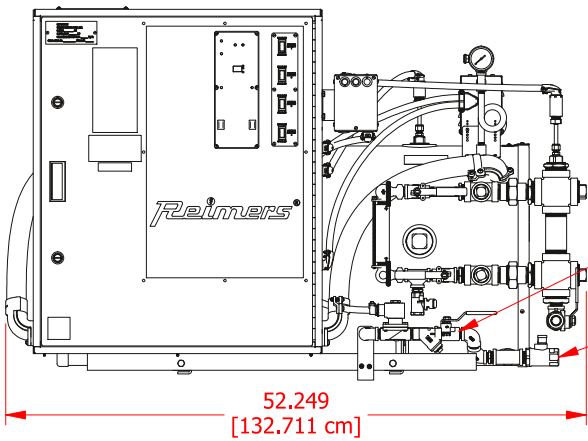
BOILER HEATING POWER	PRIMARY VOLTAGE	PHASE	AMP DRAW	MIN REQ. N.E.C. SERVICE	INTERNAL POWER FUSING	NUMBER & SIZES OF CONTACTORS	NUMBER & SIZE OF ELEMENTS	POWER SUPPLY	
								MIN. REQUIRED CONDUCTOR SIZE IN BOILER ELECTRICAL ENCLOSURE	CONFIGURATION
kW	V		A	A					
20	208	3	55.5	70	3 x 70A, 250V	1 x 75A	1 x 20kW, 208V, 3ph	3 x AWG 4	2
240	1	83.3	105	6 x 70A, 250V	2 x 50A	1 x 20kW, 240V, 1ph	2 x AWG 2	1	
240	3	48.1	61	3 x 60A, 250V	1 x 75A	1 x 20kW, 240V, 3ph	3 x AWG 6	2	
380	3	30.4	38	3 x 40A, 600V	1 x 50A	1 x 20kW, 380V, 3ph	3 x AWG 8	2	
415	3	27.8	35	3 x 40A, 600V	1 x 50A	1 x 20kW, 415V, 3ph	3 x AWG 8	2	
480	3	24.1	31	3 x 30A, 600V	1 x 50A	1 x 20kW, 480V, 3ph	3 x AWG 8	2	
600	3	19.2	25	3 x 30A, 600V	1 x 50A	1 x 20kW, 600V, 3ph	3 x AWG 10	2	
40	208	3	111.0	139	6 x 70A, 250V	2 x 75A	2 x 20kW, 208V, 3ph	3 x AWG 1/0	2
240	1	166.7	209	9 x 70A, 250V	4 x 50A	2 x 20kW, 240V, 1ph	2 x AWG 4/0	1	
240	3	96.2	121	6 x 60A, 250V	2 x 75A	2 x 20kW, 240V, 3ph	3 x AWG 1	2	
380	3	60.8	76	6 x 40A, 600V	2 x 50A	2 x 20kW, 380V, 3ph	3 x AWG 4	2	
415	3	55.6	70	6 x 40A, 600V	2 x 50A	2 x 20kW, 415V, 3ph	3 x AWG 4	2	
480	3	48.1	61	6 x 30A, 600V	2 x 50A	2 x 20kW, 480V, 3ph	3 x AWG 6	2	
600	3	38.5	49	6 x 30A, 600V	2 x 50A	2 x 20kW, 600V, 3ph	3 x AWG 8	2	
60	208	3	166.5	209	9 x 70A, 250V	3 x 75A	3 x 20kW, 208V, 3ph	3 x AWG 4/0	2
240	3	144.3	181	9 x 60A, 250V	3 x 75A	3 x 20kW, 240V, 3ph	3 x AWG 3/0	2	
380	3	91.2	114	9 x 40A, 600V	3 x 50A	3 x 20kW, 380V, 3ph	3 x AWG 1	2	
415	3	83.5	105	9 x 40A, 600V	3 x 50A	3 x 20kW, 415V, 3ph	3 x AWG 2	2	
480	3	72.2	91	9 x 30A, 250V	3 x 50A	3 x 20kW, 480V, 3ph	3 x AWG 3	2	
600	3	57.7	73	9 x 30A, 250V	3 x 50A	3 x 20kW, 600V, 3ph	3 x AWG 4	2	
80	208	3	222.1	278	12 x 70A, 250V	4 x 75A	4 x 20kW, 208V, 3ph	3 x 350 MCM	2
240	3	192.5	241	12 x 60A, 250V	4 x 75A	4 x 20kW, 240V, 3ph	3 x 250 MCM	2	
380	3	121.6	152	12 x 40A, 600V	4 x 50A	4 x 20kW, 380V, 3ph	3 x AWG 2/0	2	
415	3	111.3	140	12 x 40A, 600V	4 x 50A	4 x 20kW, 415V, 3ph	3 x AWG 1/0	2	
480	3	96.2	121	12 x 30A, 250V	4 x 50A	4 x 20kW, 480V, 3ph	3 x AWG 1	2	
600	3	77.0	97	12 x 30A, 250V	4 x 50A	4 x 20kW, 600V, 3ph	3 x AWG 3	2	
120	208	3	333.1	417	12 x 100A, 600V	4 x 93A	4 x 30kW, 208V, 3ph	6 x AWG 4/0	3
240	3	288.7	361	12 x 90A, 600V	4 x 75A	4 x 30kW, 240V, 3ph	3 x 500 MCM	2	
380	3	182.3	228	12 x 60A, 600V	4 x 50A	4 x 30kW, 380V, 3ph	3 x AWG 4/0	2	
415	3	166.9	209	12 x 60A, 600V	4 x 50A	4 x 30kW, 415V, 3ph	3 x AWG 4/0	2	
480	3	144.3	181	12 x 50A, 600V	4 x 50A	4 x 30kW, 480V, 3ph	3 x AWG 3/0	2	
600	3	115.5	145	12 x 40A, 600V	4 x 50A	4 x 30kW, 600V, 3ph	3 x AWG 1/0	2	



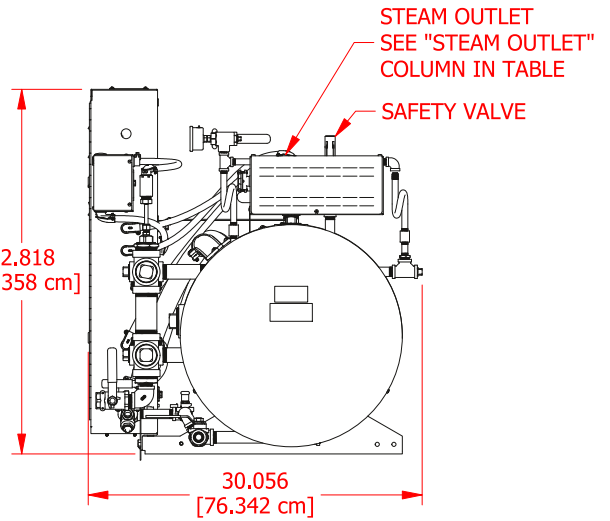
Construction



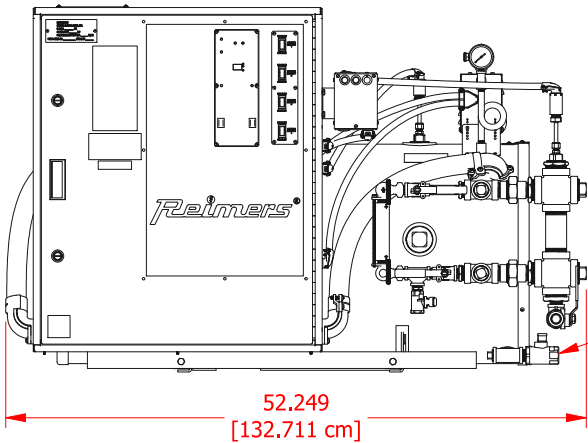
SR 20-80



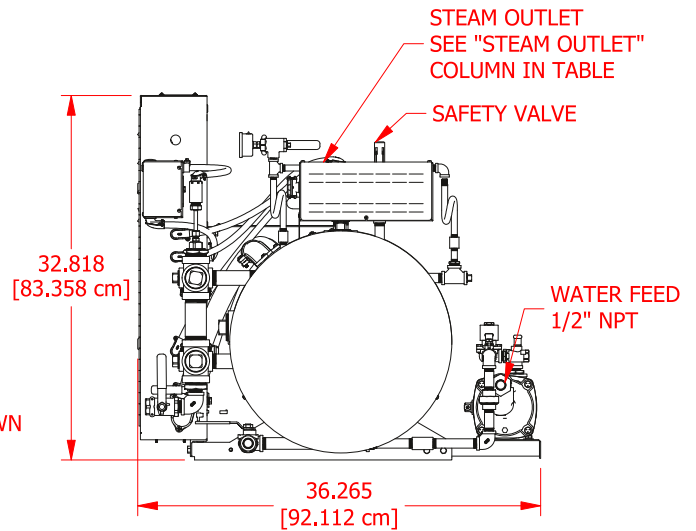
WATER FEED
1/2" NPT
MANUAL
BLOWDOWN
3/4" NPT



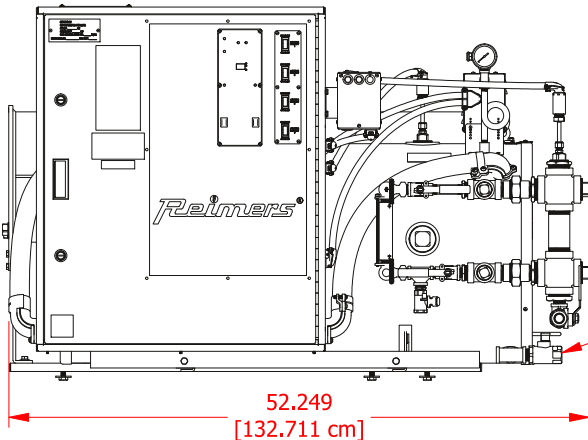
SRH 20-80



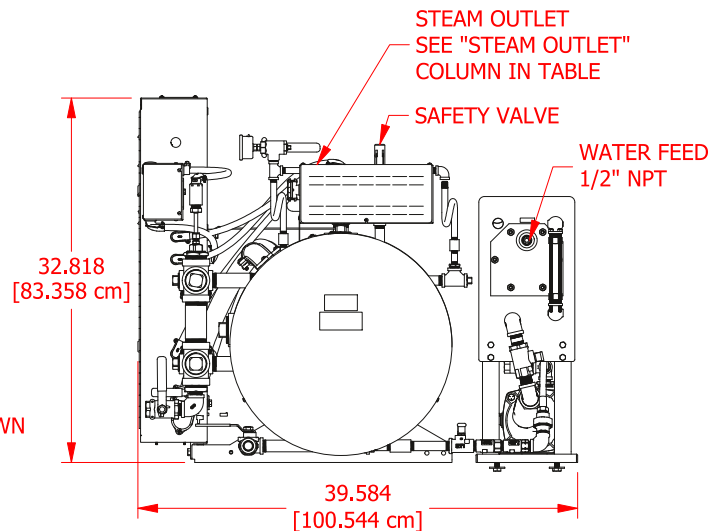
MANUAL
BLOWDOWN
3/4" NPT



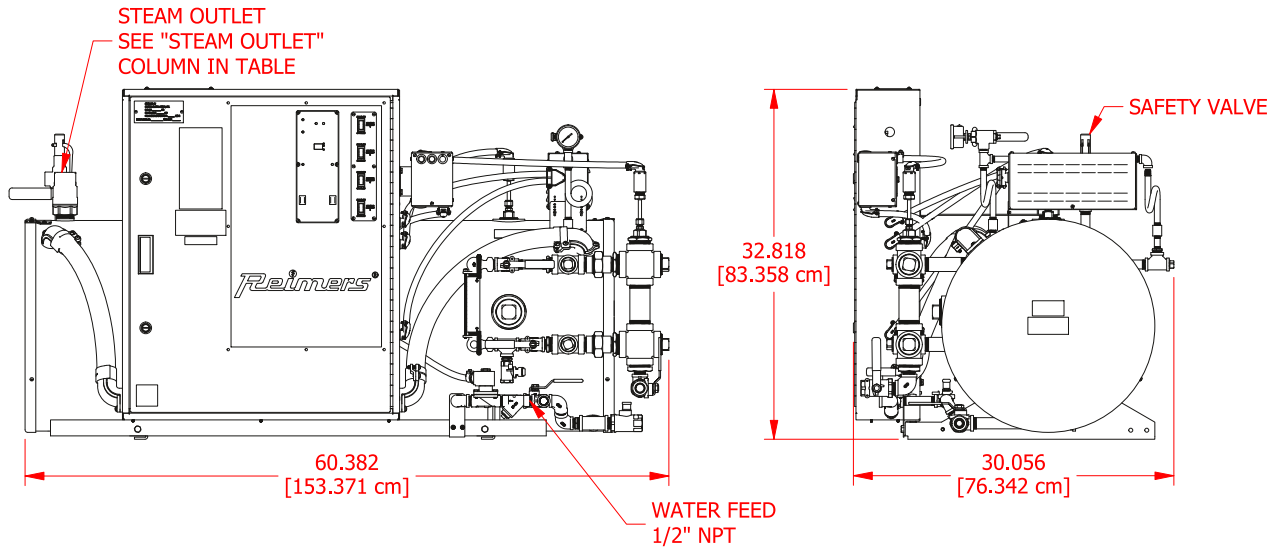
SRHC 20-80



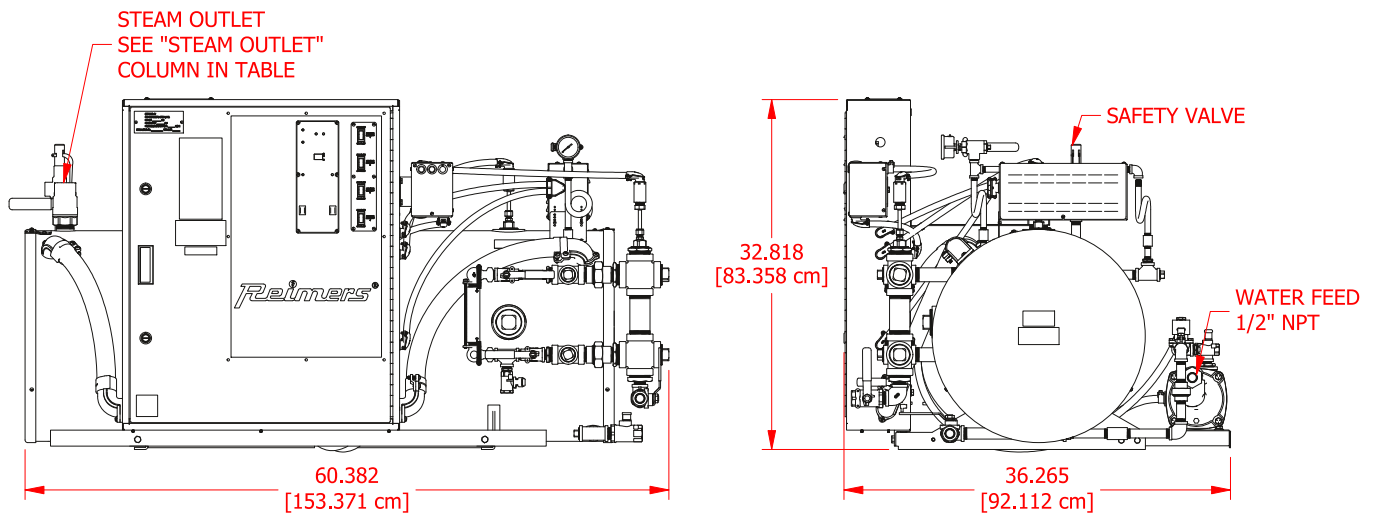
MANUAL
BLOWDOWN
3/4" NPT



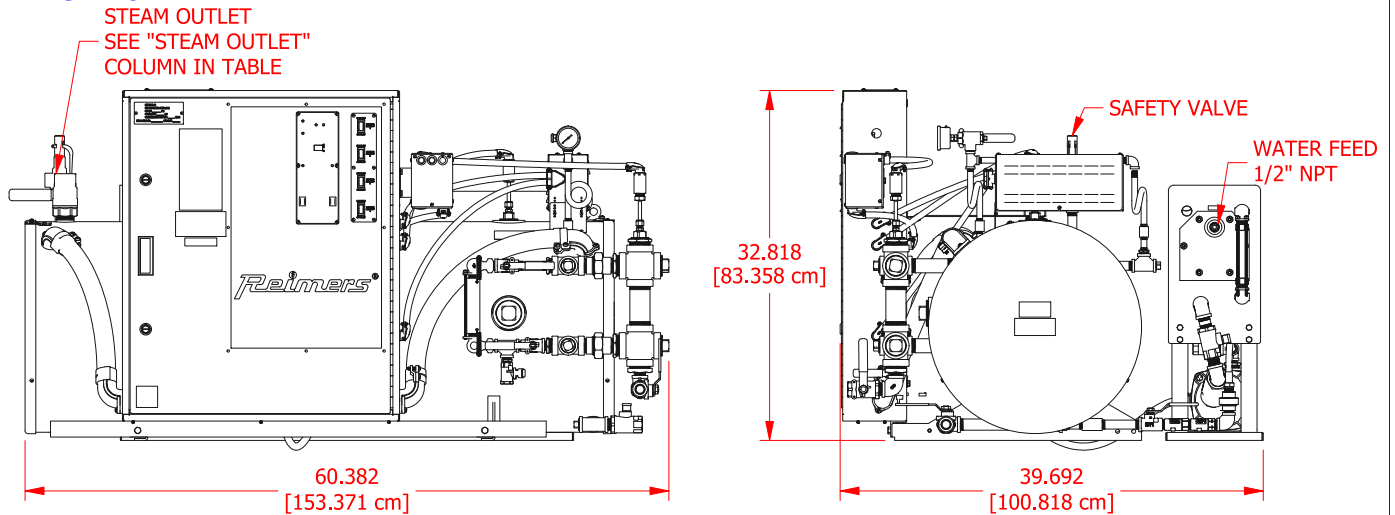
SR 120



SRH 120



SRHC 120



Optional Equipment and Accessories

Pressure Controlled Boiler Blowoff System Automatic Flush & Drain # OPT1016-SS (Not suitable for 24/7 operation):

Boiler Power OFF

Blowoff Enable

Steam pressure drops below setting of blowoff pressure control set at 15psig or less.

Boiler Blowoff Valve At the end of the boiler blowoff cycle, valve closes automatically.

Control Voltage Transformer Options: Use one of these options for single point boiler power supply.

Boiler Voltage	Transformer Option Part Number	
	SR Series	SRH- & SRHC- Series
208V	OPT1010 – 208R	OPT1011 – 208RH
240V	OPT1010 – 240R	OPT1011 – 240RH
380V	OPT1010 – 380R	OPT1011 – 380RH
415V	OPT1010 – 380R	OPT1011 – 380RH
480V	OPT1010 – 480R	OPT1011 – 480RH
600V	OPT1010 – 600R	OPT1011 – 600RH

Timer Controlled Boiler Blowoff System (Suitable for 24/7 operation), # OPT1001-SS:

Program boiler blowoff day time and duration

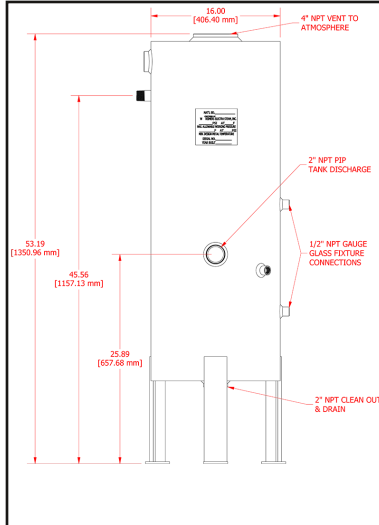
When boiler blowoff time is reached, boiler controls turn off automatically and the blowoff valve opens.

At the end of the boiler blowoff cycle the blowoff valve closes, boiler controls turn on, the water level in boiler restores and boiler resumes operation automatically.

Boiler Blowoff Tank, #BTANK-16:

- Designed in accordance with the National Board Guide for Blowoff Vessels NB-27

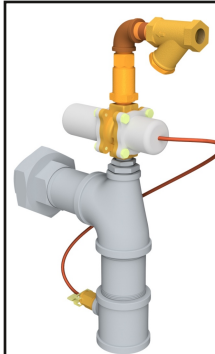
- Designed and manufactured in accordance with the requirements of the A.S.M.E. Boiler and Pressure Vessel Code Section VIII, Division 1. Each tank bears the National Board Stamp "U". The design pressure is 100psig.



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.



Proportional Step Control, #OPT20802-RX

316-Stainless Steel Pressure Transducer

PID - Controller

4-Stage Step Control

Steam Filter for Culinary Steam Applications, #OPT1032:

Use this filter with FDA listed materials in food processing applications where the steam comes in direct contact with food. The 3 or 5 micron cartridges employed in this steam filter meet or exceed the 3-A guidelines for the production of Culinary Steam under Accepted Practice T609. NOTE: The installation of this filter alone does not guarantee that the steam produced by your system meets all applicable culinary steam standards.

Timer Controlled Boiler On/Off, #OPT1017

