

RHP360 - RHP510 STEAM BOILERS



Features

- Maximum safety valve setting 150psi
- 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 "S".
- High quality saturated steam, operating pressure range 0 – 135psig
- Heavy duty carbon steel pressure vessel. Vessel jacket and electrical enclosure made from black painted carbon steel
- Large selection of optional equipment

Standard Equipment of Each Boiler Includes:

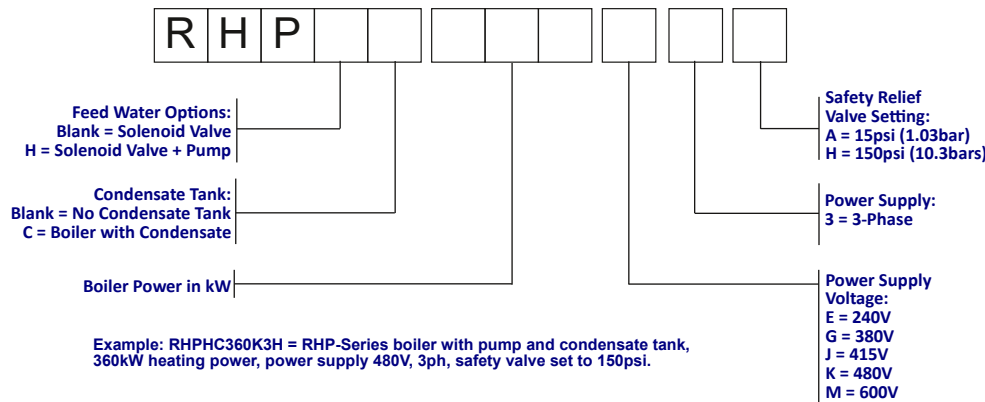
- A.S.M.E. pressure relief valve
- One (1) primary high pressure cutoff control with automatic reset and one (1) secondary high pressure cutoff control with manual reset
- One (1) primary low water cutoff control with automatic reset and one (1) secondary low water cutoff with manual reset
- PID-step controller with number of heating stages depending on the boiler heating power
- Digital readout of the operating pressure
- Magnetic contactors
- Internal branch circuit fusing
- Main supply power distribution block
- Indicator lights for POWER, REFILLING, HEATING and ALARMS
- Pressure and water level gauge

Applications

- Process Steam
- Industrial Autoclaves
- Air Humidification
- Dry Cleaning
- Food Service
- Laboratories
- Automotive Industry

HEATING POWER kW	STEAM CAPACITY lbs/hr (kg/hr) ⁽³⁾	BHP	VOLTAGE ⁽¹⁾	PHASE	NUMBER OF HEATING STAGES	SHIP WT. ⁽²⁾ lbs (kg)	PRESSURE VESSEL CAPACITY	OPERATING PRESSURE RANGE psig (bar)	STEAM OUTLET SIZE	
									LP < 15psig	HP >15psig
360	1229 (557)	36	380/415/480/600	3	6	2,460 (1114)	124 (468)	0-135 (0 – 9.3)	3"	2"
420	1434 (650)	42	380/415/480/600	3	7	2,500 (1133)	124 (468)	0-135 (0 – 9.3)	3"	2"
510	1742 (789)	51	380/415/480/600	3	8	2,600 (1178)	124 (468)	0-135 (0 – 9.3)	3"	2"

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.

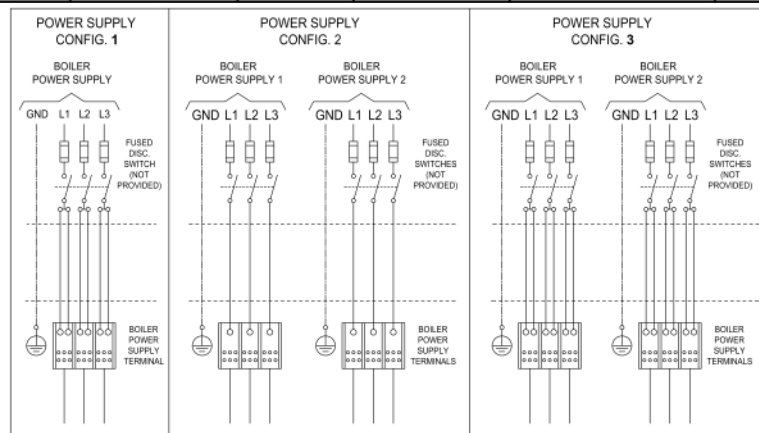
⁽²⁾ On boiler equipped with condensate tank, add 250lbs (113kg) to shipping weight

⁽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.

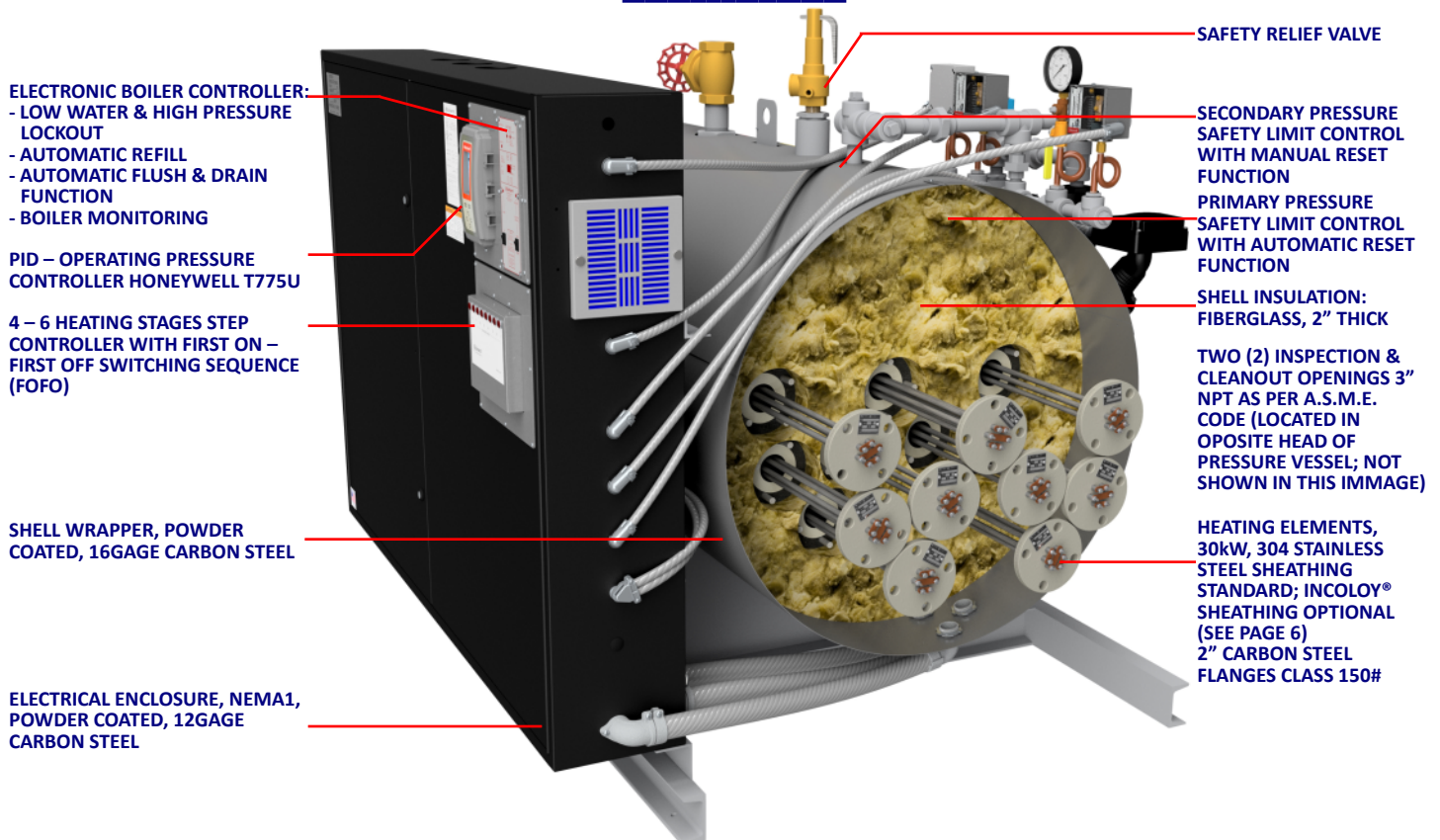
Please note that all information provided within this brochure is approximate and subject to change without notice. Please contact Reimers Electra Steam, Inc. with any questions regarding the specifications or dimensions detailed within.

Electrical Specifications

HEATING POWER	VOLTAGE	PH	AMP DRAW	MIN REQ. N.E.C. SERVICE	INTERNAL POWER FUSING	INTERNAL ELEMENT WIRING	NUMBER & SIZES OF CONTACTORS	NUMBER & SIZE OF ELEMENTS	POWER SUPPLY	
kW	V		A	A		AWG (mm ²)			TERMINAL MAX. CONDUCTOR SIZE	CONFIGURATION
360	380	3	547.0	648.0	36 x 60A, 600V	8 (8.35)	12 x 75A	12 x 30kW, 380V, 3ph	6 x 500MCM	2
	415	3	500.8	626.0	18 x 100A, 600V	8 (8.35)	12 x 50A	12 x 30kW, 415V, 3ph	6 x 500MCM	2
	480	3	433.0	542.0	18 x 90A, 600V	8 (8.35)	12 x 50A	12 x 30kW, 480V, 3ph	6 x 500MCM	1
	600	3	346.4	433.0	18 x 70A, 600V	8 (8.35)	12 x 50A	12 x 30kW, 600V, 3ph	6 x 500MCM	1
420	380	3	638.1	798.0	42 x 60A, 600V	8 (8.35)	14 x 75A	14 x 30kW, 380V, 3ph	12 x 500MCM	3
	415	3	584.3	731.0	21 x 100A, 600V	8 (8.35)	14 x 50A	14 x 30kW, 415V, 3ph	6 x 500MCM	2
	480	3	505.2	632.0	21 x 90A, 600V	8 (8.35)	14 x 50A	14 x 30kW, 480V, 3ph	6 x 500MCM	2
	600	3	404.1	506.0	21 x 70A, 600V	8 (8.35)	14 x 50A	14 x 30kW, 600V, 3ph	6 x 500MCM	1
510	380	3	774.9	969.0	17 x 60A, 600V	8 (8.35)	17 x 75A	17 x 30kW, 380V, 3ph	12 x 500MCM	3
	415	3	709.5	887.0	24 x 100A, 600V 3 x 50A, 600V	8 (8.35)	17 x 50A	17 x 30kW, 415V, 3ph	12 x 500MCM	3
	480	3	613.4	767.0	24 x 90A, 600V 3 x 50A, 600V	8 (8.35)	17 x 50A	17 x 30kW, 480V, 3ph	12 x 500MCM	3
	600	3	490.7	614.0	24 x 70A, 600V 3 x 40A, 600V	8 (8.35)	17 x 50A	17 x 30kW, 600V, 3ph	6 x 500MCM	2



Construction



PRESSURE GAUGE WITH INSPECTION PORT

AUTOMATIC WATER REFILL & PRIMARY LOW WATER CUT OFF CONTROLLER WITH AUTOMATIC RESET FUNCTION, MDCONNEL & MILLER MODEL 157S

WATER LEVEL GAUGE

EXTERNAL WATER COLUMN DRAIN BALL VALVE 3/4" NPT

BOILER BOTTOM BLOWOFF VALVE: 1" NPT QUICK OPENING BALL VALVE & 1" NPT SLOW OPENING Y-VALVE OR MOTORIZED BALL VALVE IF BOILER IS EQUIPPED WITH AN AUTOMATIC BOILER BLOWOFF OPTION (OPT1016 OR OPT1002. SEE PAGE 6)

STEAM OUTLET VALVE: 2" OR 3" (DEPENDENT ON BOILER MODEL) NPT BRONZE GLOBE VALVE
PRESSURE TRANSDUCER FOR PID-OPERATING PRESSURE CONTROLLER
SECONDARY LOW WATER CUT-OFF SENSOR FOR BOILER CONTROLLER

BOILER FEED WATER SOLENOID VALVE ON RHP & RHPH MODELS

BOILER FEED WATER SHUTOFF VALVE

HIGH PRESSURE BOILER FEED WATER PUMP

FIELD TERMINAL FOR POWER CIRCUITS; NUMBER AND SIZE OF TERMINALS PROVIDED PER CIRCUIT AND PHASE DEPENDS ON BOILER MODEL (REFER TO ELECTRICAL SPECIFICATION TABLE ON PAGE 2)

FIELD TERMINAL FOR CONTROL VOLTAGE HOOKUP; NOT NEEDED WHEN A CONTROL VOLTAGE TRANSFORMER (OPT1010 OR OPT1011) IS INSTALLED

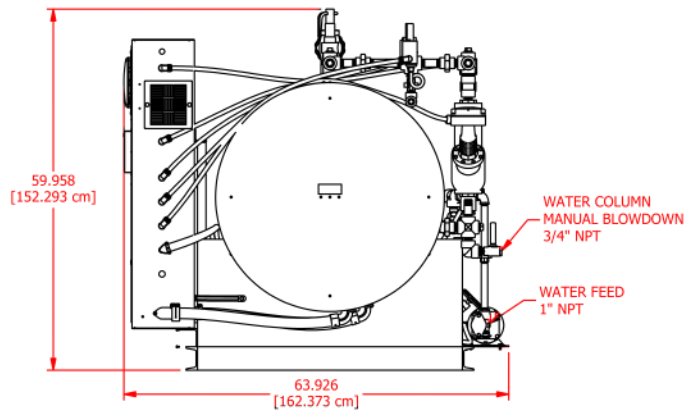
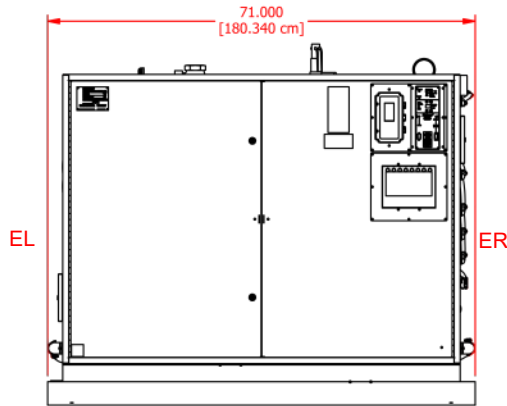
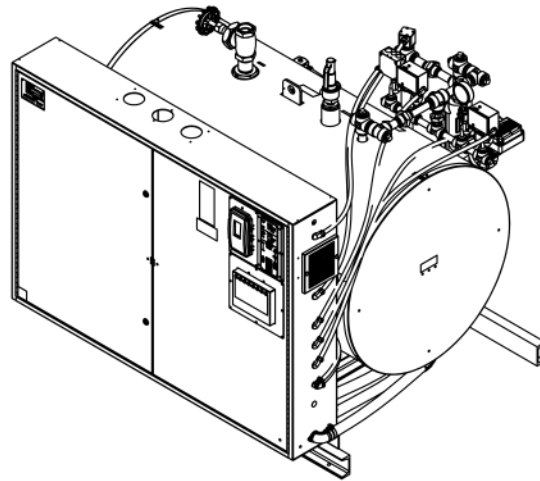
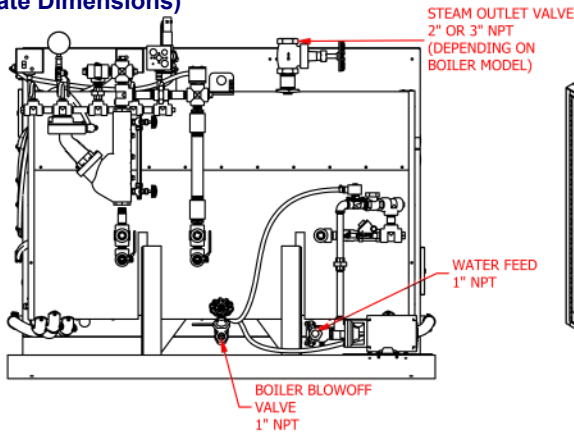
BOILER FEED WATER PUMP FUSING; UL CLASS RK5

HEATING ELEMENT CIRCUIT FUSING; UL CLASS K STANDARD OR UL CLASS J OPTIONAL

HEATING ELEMENT CIRCUIT MAGNETIC CONTACTORS, RATED MIN. 250,000 CYCLES AT FULL RATED ELECTRICAL LOAD

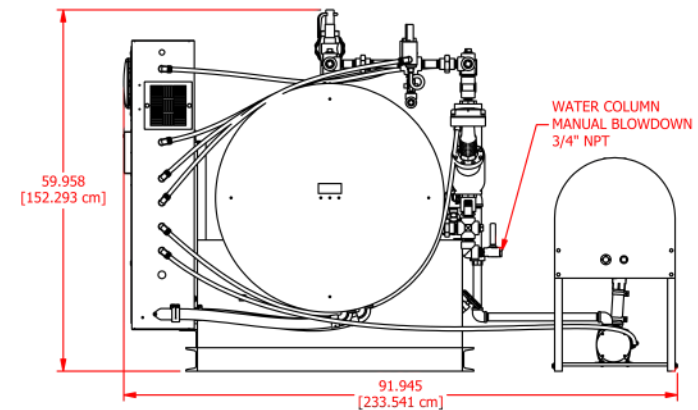
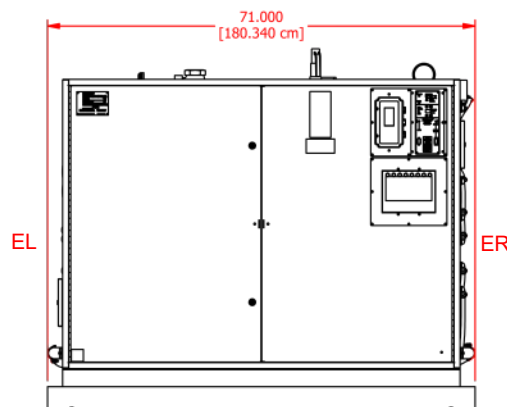
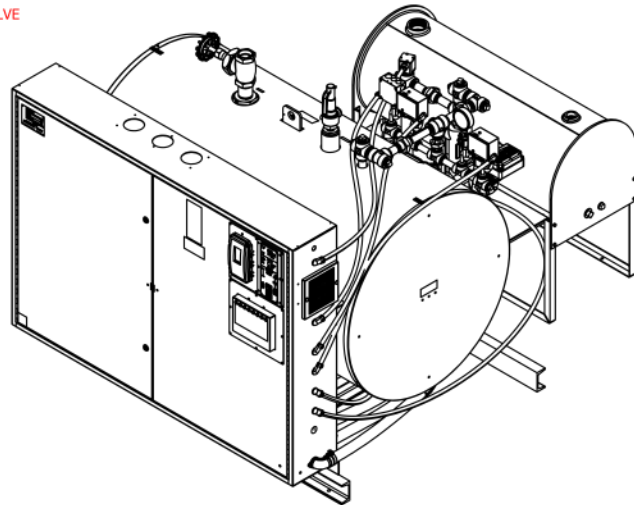
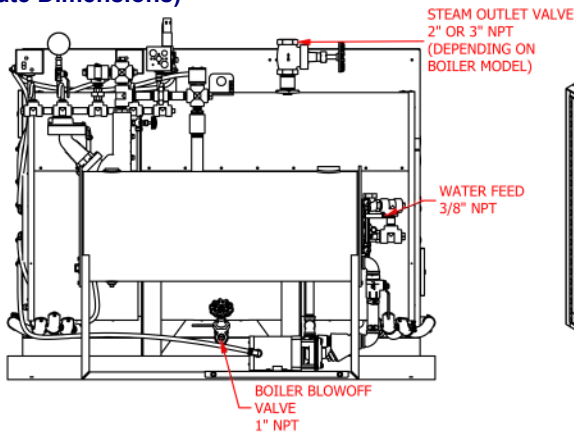
HEATING ELEMENT WIRING, RATED 125°C MINIMUM

RHP & RHPH 360-510 MODELS (Approximate Dimensions)



CLEARANCE FOR ELEMENT REMOVAL
RHP & RHPH360-510: EL = ER = 36" (915.0mm)

RHPHC 360-510 MODELS (Approximate Dimensions)

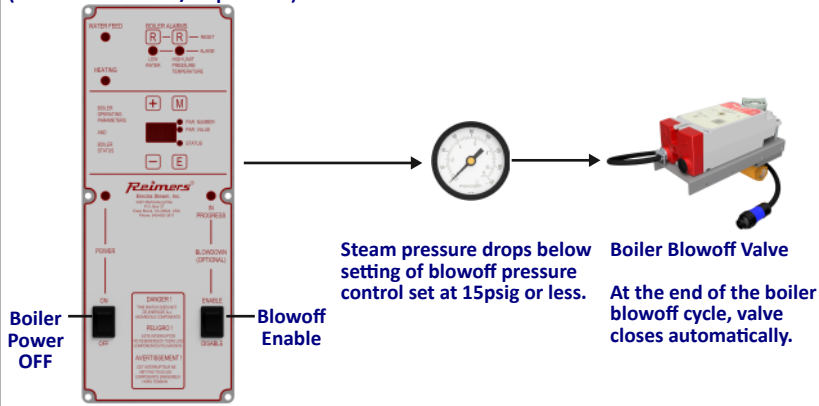


CLEARANCE FOR ELEMENT REMOVAL
RHP & RHPH360-510: EL = ER = 36" (915.0mm)

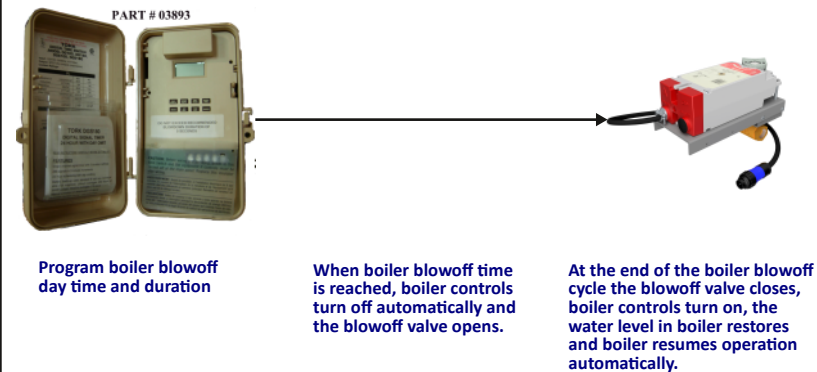
Optional Equipment and Accessories

Pressure Controlled Boiler Blowoff System Automatic Flush & Drain # OPT1016

(Not suitable for 24/7 operation):

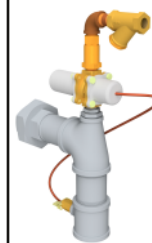
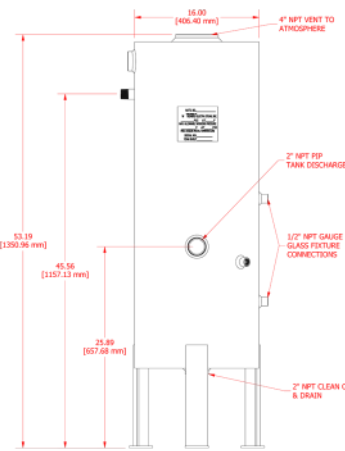
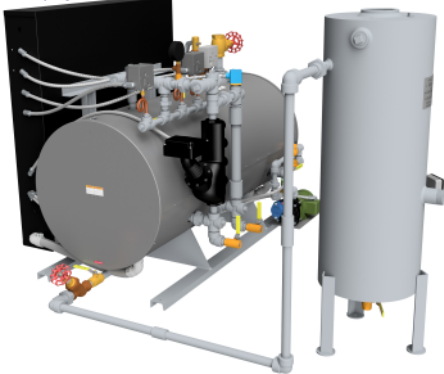


Timer Controlled Boiler Blowoff System (Suitable for 24/7 operation), # OPT1001:



Boiler Blowoff Tank, #BTANK300USA/CRN:

- 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.

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

Boiler Voltage	Transformer Option Part Number
380V	OPT1011 - 380RHP
415V	OPT1011 - 380RHP
480V	OPT1011 - 480RHP
600V	OPT1011 - 600RHP

Timer Controlled Boiler On/Off, #OPT1017



INCOLOY® HEATING ELEMENT SHEATHING, #OPT-INCOLOY®