

# RHP600 – RHP750 Steam Boiler Series



## Features

- Maximum safety relief 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:

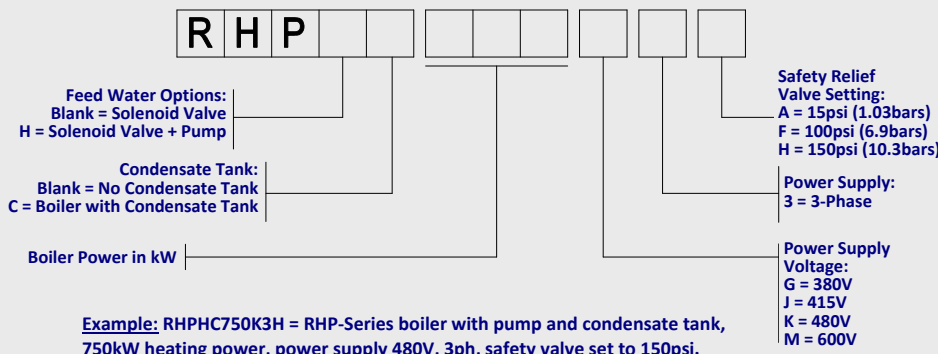
- A.S.M.E. pressure relief valve
- Two (2) boiler bottom blowoff valves (one quick-opening and one slow opening) as per A.S.M.E. Code B31.1
- 4" flanged class 150# carbon steel steam outlet valve
- High pressure feed pump in RHPH- and RHPHC-models
- One (1) primary high pressure cutoff control with automatic 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 10 heating stages
- Digital readout of the operating pressure
- Magnetic contactors
- Internal branch circuit fusing
- Main supply power distribution block
- Indicator lights for POWER, REFILLING, HEATING, ALARMS and Automatic Boiler Blowoff Status

## Applications

- Dry Cleaning
- Food Service
- Laboratories
- Automotive Industry

HEATING POWER kW	STEAM CAPACITY lbs/hr (kg/hr) <sup>(3)</sup>	BHP	VOLTAGE <sup>(1)</sup> 50/60Hz	PHASE	NUMBER OF HEATING STAGES	SHIP WT. <sup>(2)</sup> lbs (kg)	PRESSURE VESSEL CAPACITY GAL. (L)	OPERATING PRESSURE RANGE psig (bar)	Steam Outlet Size
600 KW	2049 (928)	60	380/415/480/600	3	10	2,780 (1259)	179 (677)	0-135 (0 – 9.3)	4" FLANGED
750 KW	2561 (1160)	75	380/415/480/600	3	10	2,820 (1278)	179 (677)	0-135 (0 – 9.3)	4" FLANGED

## Model Number Key



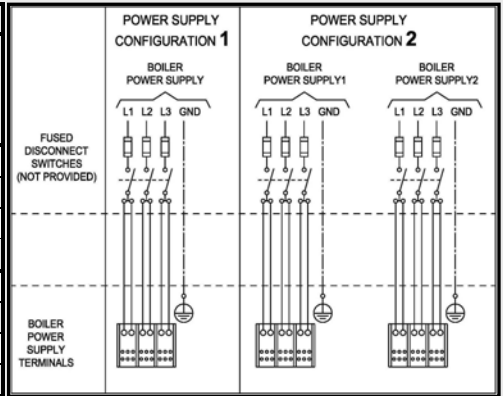
<sup>(1)</sup> Each boiler model requires two (2) power supplies: Primary heating power and secondary control voltage. Nominal control voltage is 120V, 50/60Hz. Boiler models rated for 380V and 415V are equipped with control voltage transformers that require 220/240V applied to their primary side in 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.

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

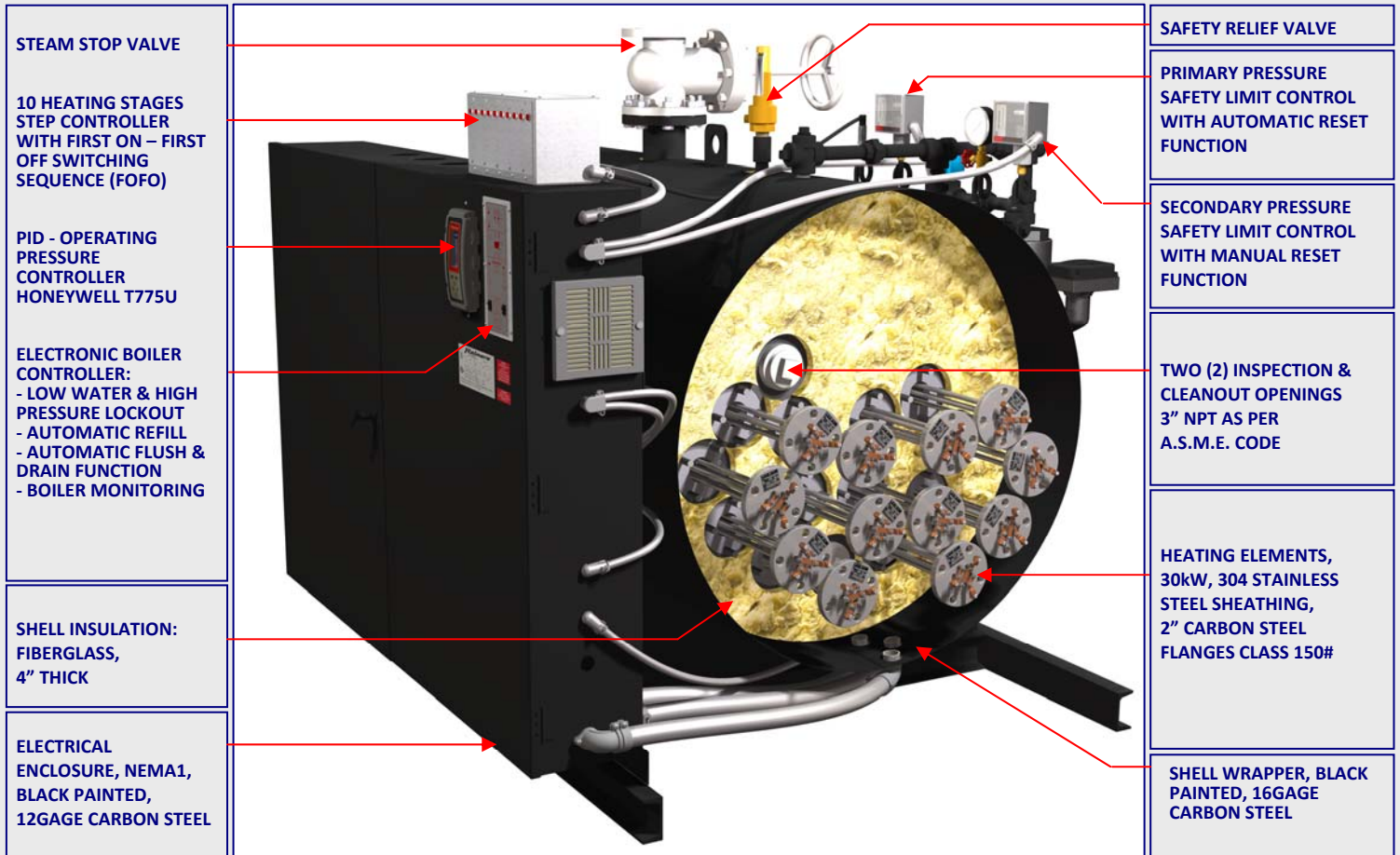
<sup>(3)</sup> The STEAM CAPACITY listed above is based on the evaporation rate from and at 212°F, at 0 psig. If the boiler feed water temperature is 50°F, then the STEAM CAPACITY for each model listed above is approximately 15% lower.

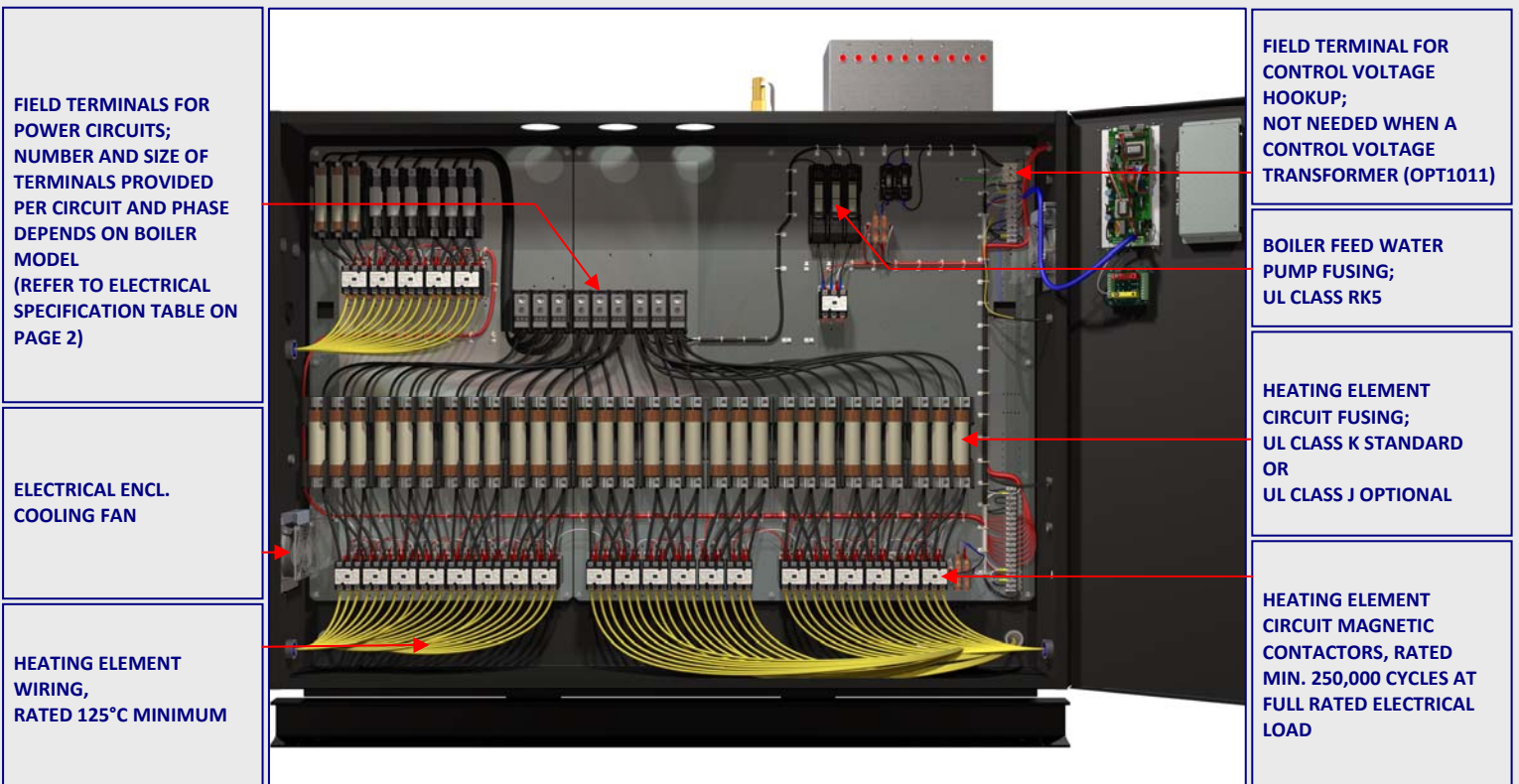
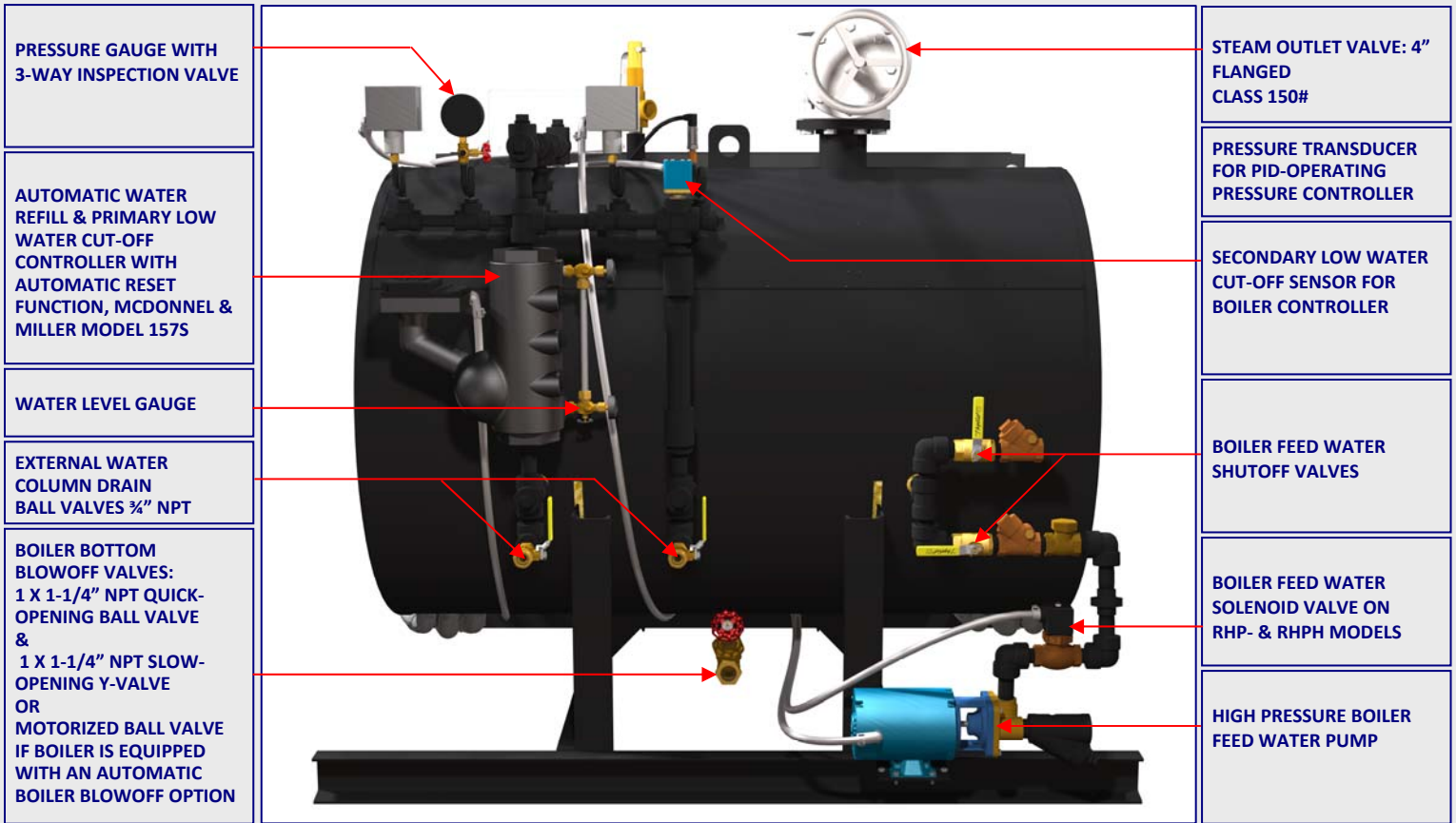
# Electrical Specifications

HEATING POWER kW	VOLTAGE V	PHASE	FREQU.	AMP DRAW A	MIN REQ. N.E.C. SERVICE A	INTERNAL ELEMENT WIRING AWG (mm <sup>2</sup> )	NUMBER & SIZES OF CONTACTORS (RES. LOAD)	NUMBER & SIZE OF ELEMENTS	POWER SUPPLY	
									FIELD TERMINAL MAX. CONDUCTOR SIZE	POWER SUPPLY CONFIG.
600	380	3	50	911.6	1,140.0	8 (8.35)	20 x 75A	20 x 30kW, 380V, 3ph	12 x 350MCM	2
	415	3	50	834.7	1,044.0	8 (8.35)	20 x 50A	20 x 30kW, 415V, 3ph	12 x 300MCM	2
	480	3	60	721.7	902.0	8 (8.35)	20 x 50A	20 x 30kW, 480V, 3ph	12 x 250MCM	2
	600	3	60	577.4	722.0	10 (5.30)	20 x 50A	20 x 30kW, 600V, 3ph	6 x 500MCM	1
750	380	3	50	1139.5	1425.0	8 (8.35)	25 x 75A	25 x 30kW, 380V, 3ph	12 x 500MCM	2
	415	3	50	1043.4	1305.0	8 (8.35)	25 x 50A	25 x 30kW, 415V, 3ph	12 x 500MCM	2
	480	3	60	902.1	1128.0	8 (8.35)	25 x 50A	25 x 30kW, 480V, 3ph	12 x 350MCM	2
	600	3	60	721.7	903.0	10 (5.30)	25 x 50A	25 x 30kW, 600V, 3ph	12 x 250MCM	2



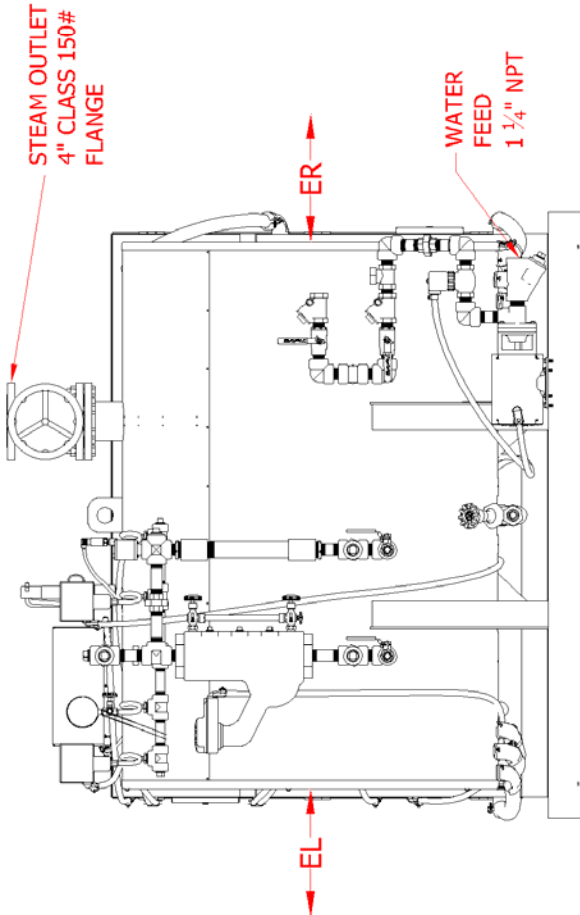
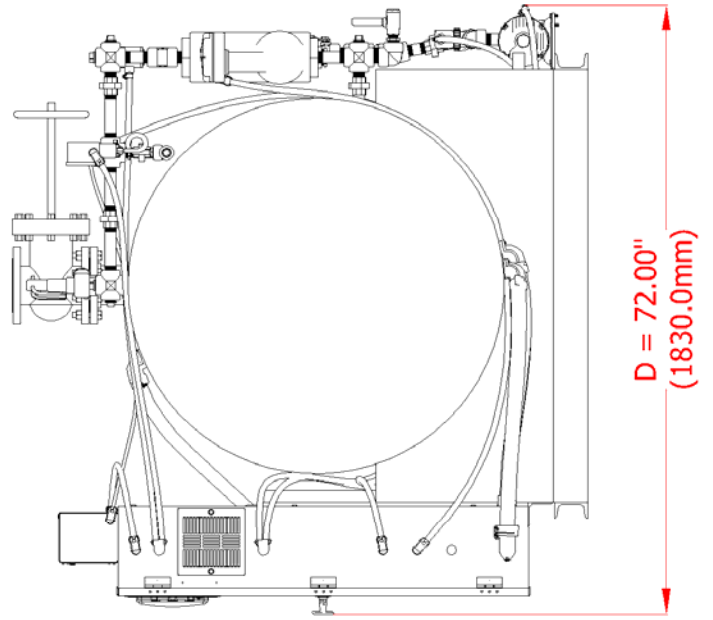
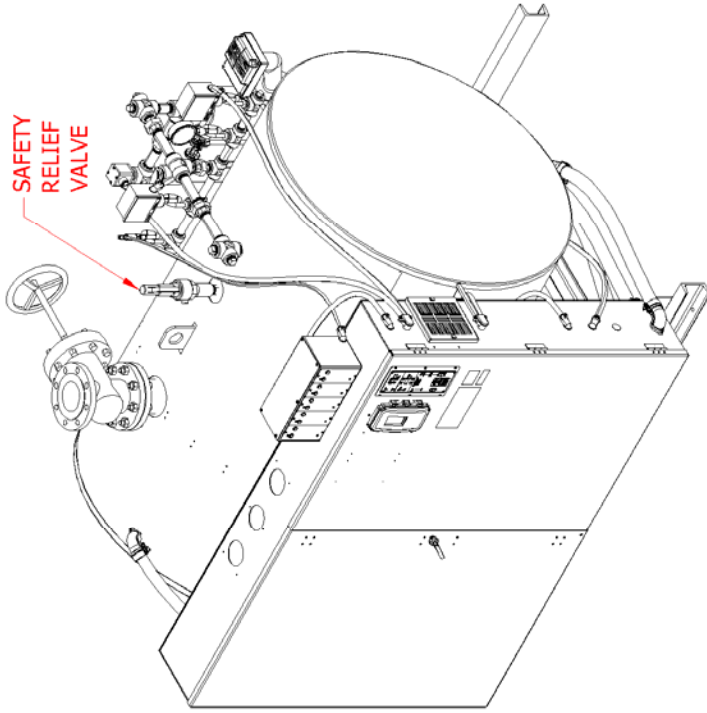
# Construction



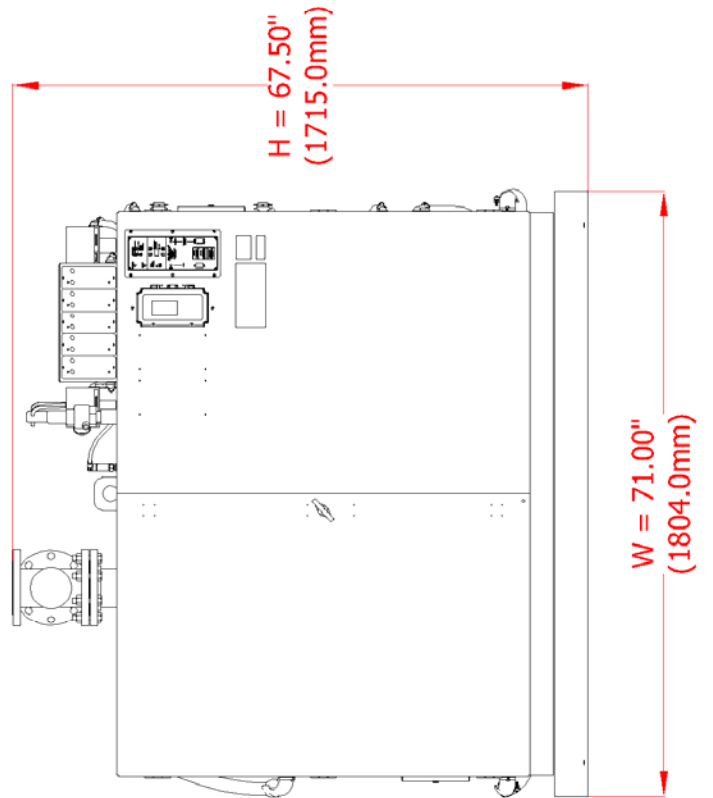


# Dimensional Drawings (approximate)

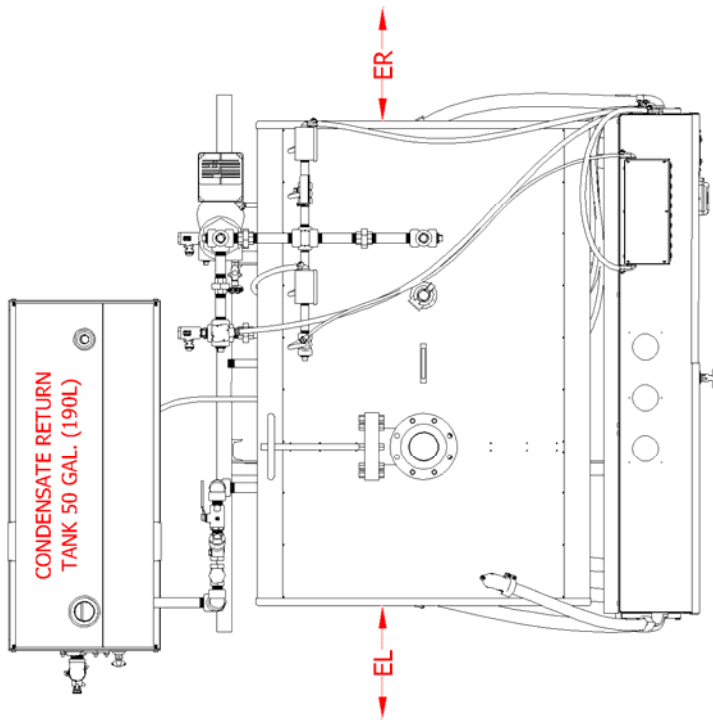
## RHP/RHPH600 – RHP/RHPH750



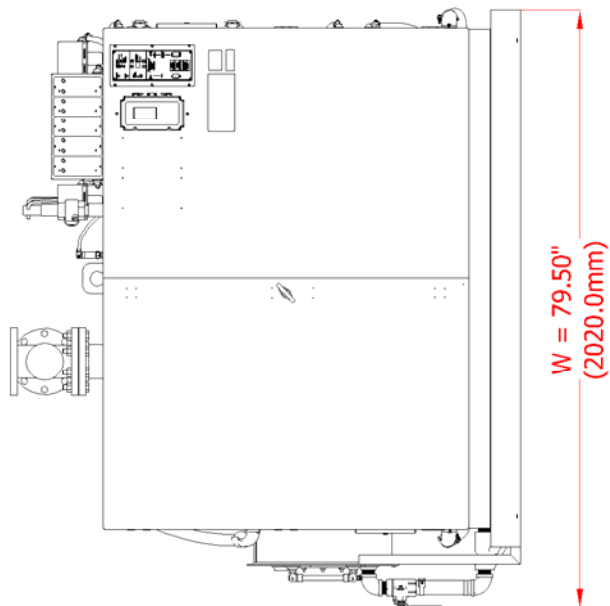
**REQUIRED CLEARANCE FOR ELEMENT REMOVAL (EL & ER)  
RHP/RHPH600 - RHP/RHPH750: EL = ER = 36" (915.0mm)**



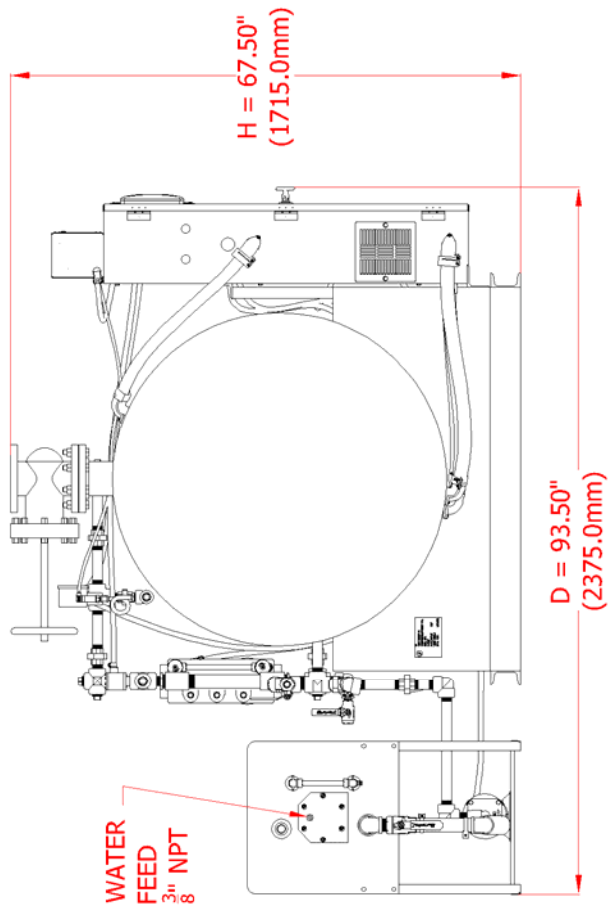
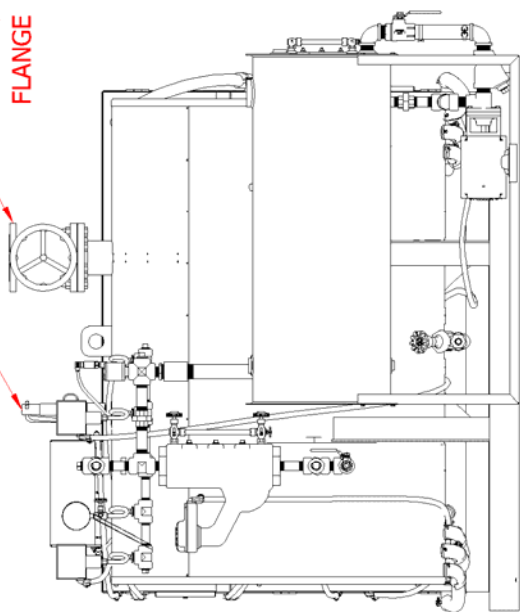
**RHPHC600 – RHPHC750**



REQUIRED CLEARANCE FOR ELEMENT REMOVAL (EL & ER)  
 RHPHC600 - RHPHC750: EL = ER = 36" (915.0mm)



SAFETY RELIEF VALVE  
 STEAM OUTLET  
 4" CLASS 150#  
 FLANGE



# Optional Equipment

## 1. Timer Controlled Boiler Blowoff System, #OPT1001:

Programmable Digital Timer



Program boiler blowoff day time and duration

When boiler blowoff time is reached:  
 - Boiler control circuits turn off automatically  
 - Boiler Blowoff Valve opens

Boiler Blowoff Valve installed between boiler and blow down



At the end of boiler blowoff:  
 - Boiler Blowoff Valve closes  
 - Boiler control circuits turn on automatically  
 - The water level in boiler restores  
 - Boiler resumes operation automatically

## 2. Automatic Flush & Drain System, #OPT1016

Electronic Boiler Controller



Boiler Power OFF

Steam pressure drops below setting of blowoff-pressure controller (15psig or less).

Blowoff Enable ON



At the end of boiler blowoff, valve closes automatically.

Boiler Blowoff Valve installed between boiler and blow down



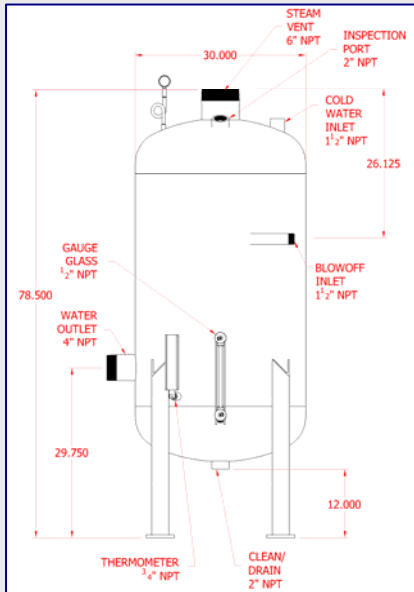
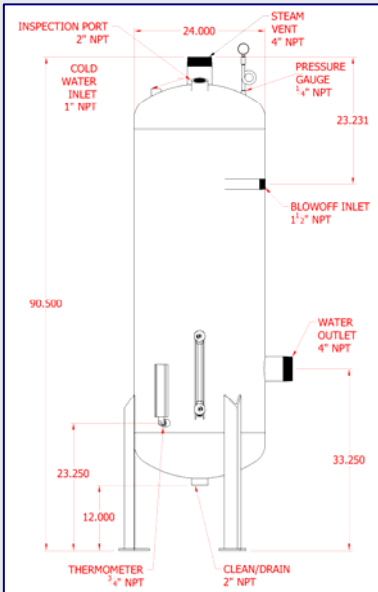
## 3. Blowdown Tank: #BTANK-750-USA & BTANK-750-CRN

- 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 Blowdown tank bears the National Board Stamp "U". The design pressure as per NB-27 is 50psig.
- BTANK-750-CRN meets also the Canadian Standard CSA-B51.1 Boiler, Pressure Vessel and Pressure Piping Code

#BTANK-750-USA for all countries except Canada

#BTANK-750-CRN for Canada

Typical Blowdown Tank Installation; RHP750 model shown with BTANK-750-CRN



## 4. Control Voltage Transformer

When using this option, only the main power supply is required to operate the boiler.

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

## 5. Timer Controlled Boiler On/Off #OPT1017



Program timer to turn boiler ON/OFF automatically