

## RHP120 – RHP300 Steam Boiler Series



### 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".
- Dry saturated steam, operating pressure range 0 – 135psi
- Heavy duty carbon steel pressure vessel. Vessel jacket and electrical enclosure made from black painted carbon steel
- Large selection of optional equipment

### Applications

- Process steam
- Industrial Autoclaves
- Air humidification
- Dry cleaning
- Food service
- Laboratories
- Automotive Industry

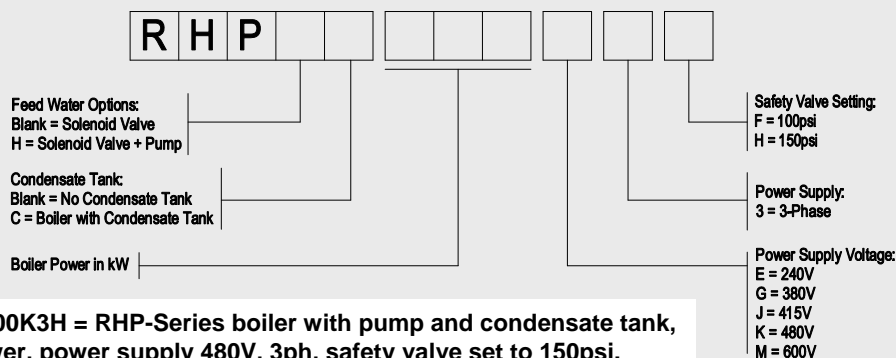
**Standard equipment of each boiler includes:** Primary low water cutoff control with automatic reset, secondary low water cut off with manual reset, safety relief valve, pressure gauge, one (1) primary high pressure cutoff control with automatic reset, one (1) secondary high pressure control with manual reset and PID-step control with number of heating stages depending on boiler size.

RHP SERIES LOW & HIGH PRESSURE STEAM BOILERS									
KW	STEAM LB/HR	BHP	VOLTAGE*	PHASE	NUMBER OF HEATING STAGES	SHIP WT. ** LB	OP. PRESS. RANGE	BTU/HR	Steam Outlet (NPT)
120 KW	418	12	240/380/415/480/600	3	4	1,370	0-135 PSIG	409,440	1-1/4"
150 KW	522	15	240/380/415/480/600	3	5	1,370	0-135 PSIG	511,800	1-1/4"
180 KW	626	18	240/380/415/480/600	3	6	1,370	0-135 PSIG	614,160	1-1/4"
210kW	730	21	240/380/415/480/600	3	6	1,370	0-135 PSIG	716,520	1-1/4"
240kW	835	24	380/415/480/600	3	6	1,450	0-135 PSIG	818,880	2"
300kW	1044	30	380/415/480/600	3	6	1,500	0-135 PSIG	1,023,600	2"

\* Each boiler model requires two (2) power supplies: Primary heating power and secondary control voltage. Nominal control voltage is 120V, 50/60Hz. When boiler equipped with transformer option, only heating power supply required.

\*\* Shipping weight for models with feed water solenoid. For models with feed water solenoid + pump and pump + condensate tank, see page 5.

### Model Number Key



**Example:** RHPHC300K3H = RHP-Series boiler with pump and condensate tank, 300kW heating power, power supply 480V, 3ph, safety valve set to 150psi.

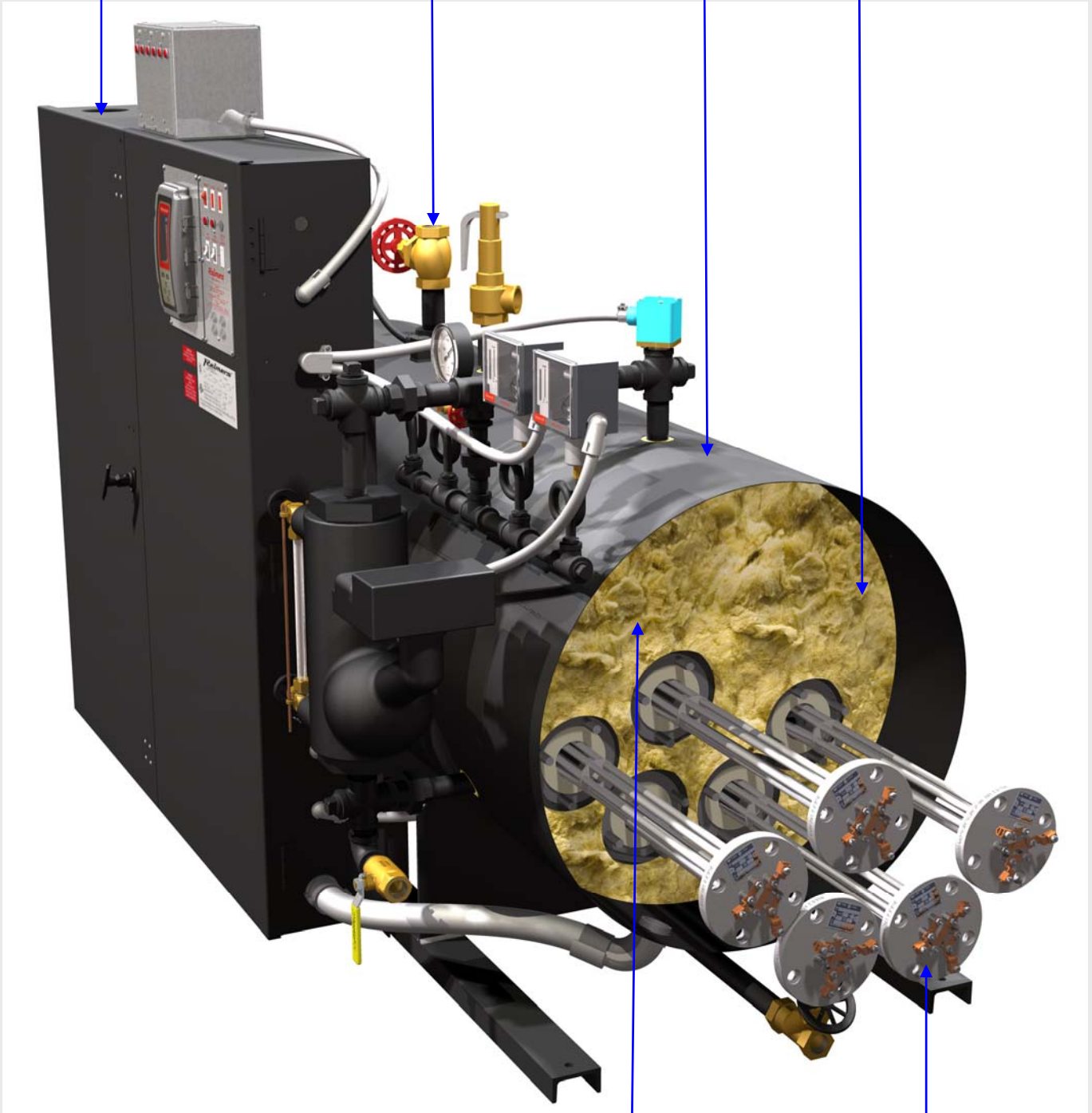
## Construction

Electrical Enclosure:  
black painted 12gauge  
carbon steel

Steam Outlet:  
2" NPT

Shell Wrapper:  
16gauge carbon  
steel black painted

Shell Insulation:  
Mineral wool  
minimum 4" thick

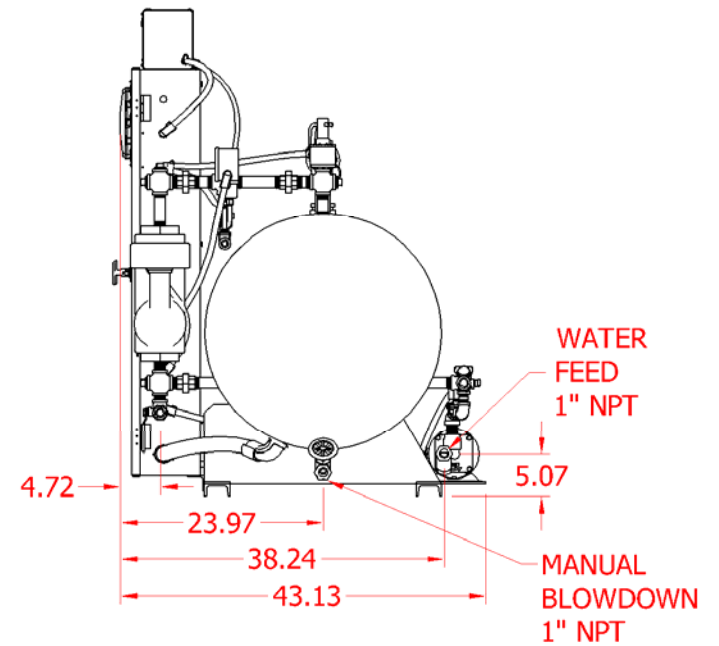
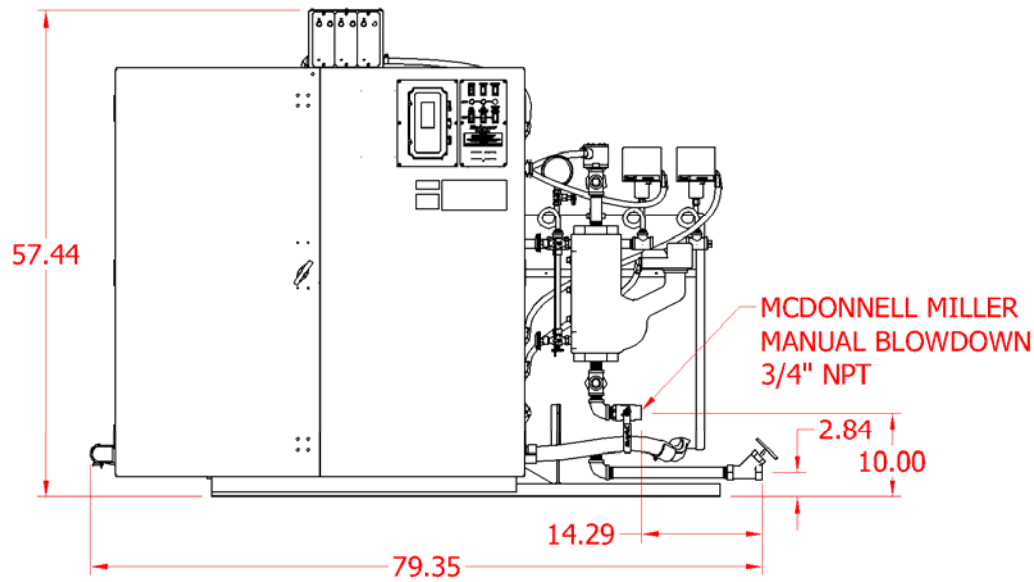
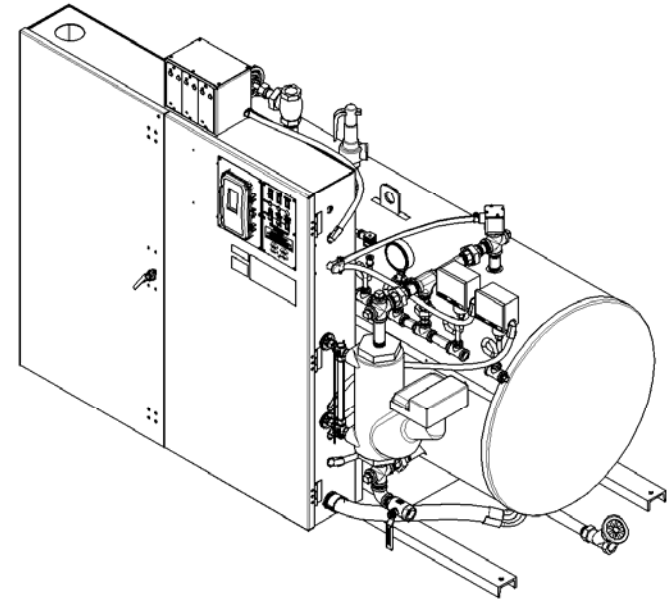
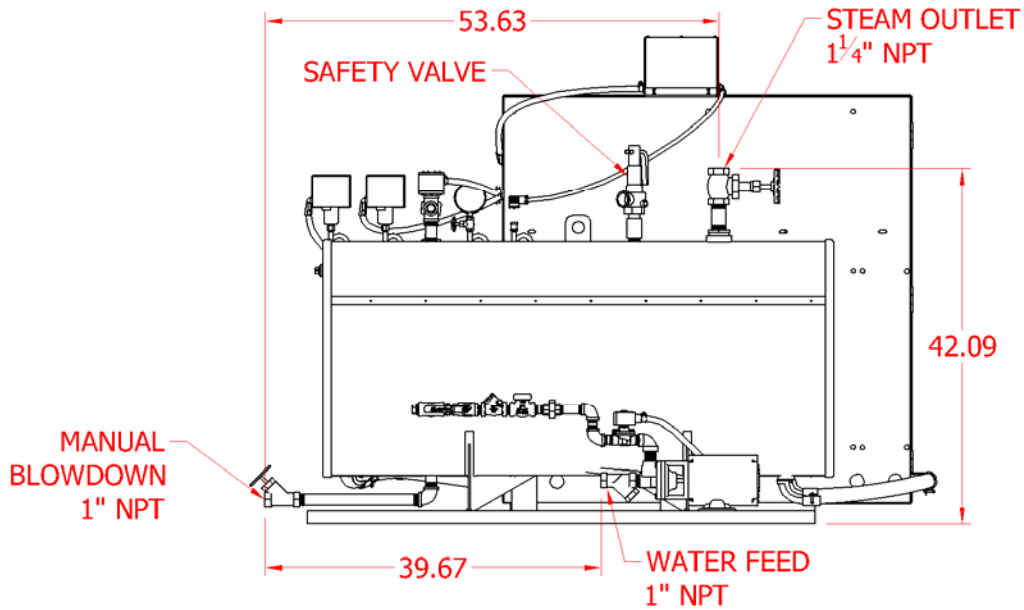


Pressure Vessel:  
Manufactured from low carbon  
steel to comply under the "S"  
symbol of the A.S.M.E. Code and  
are individually inspected.

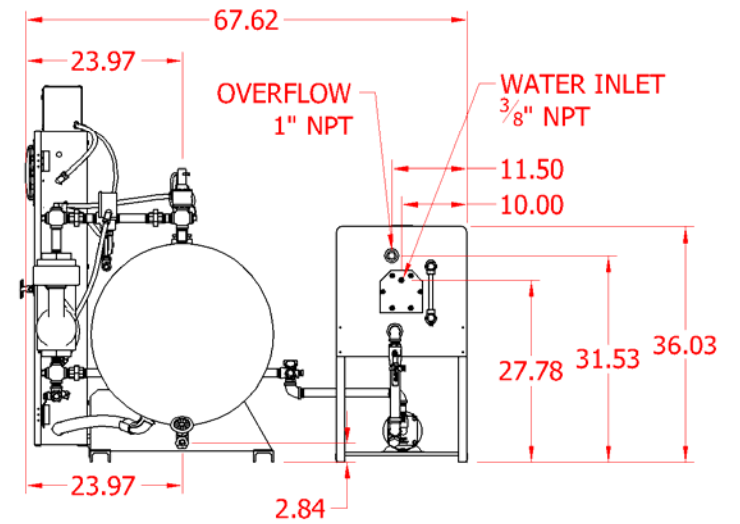
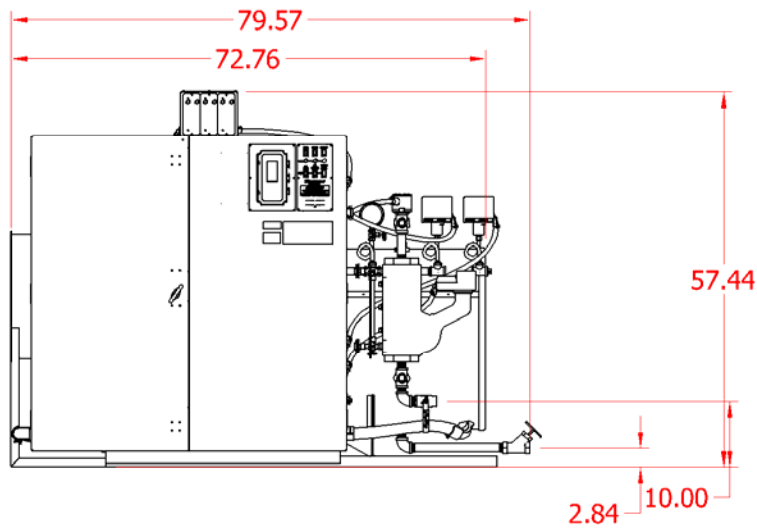
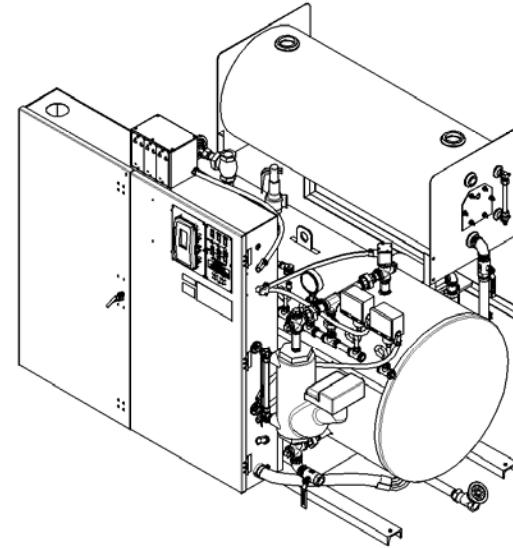
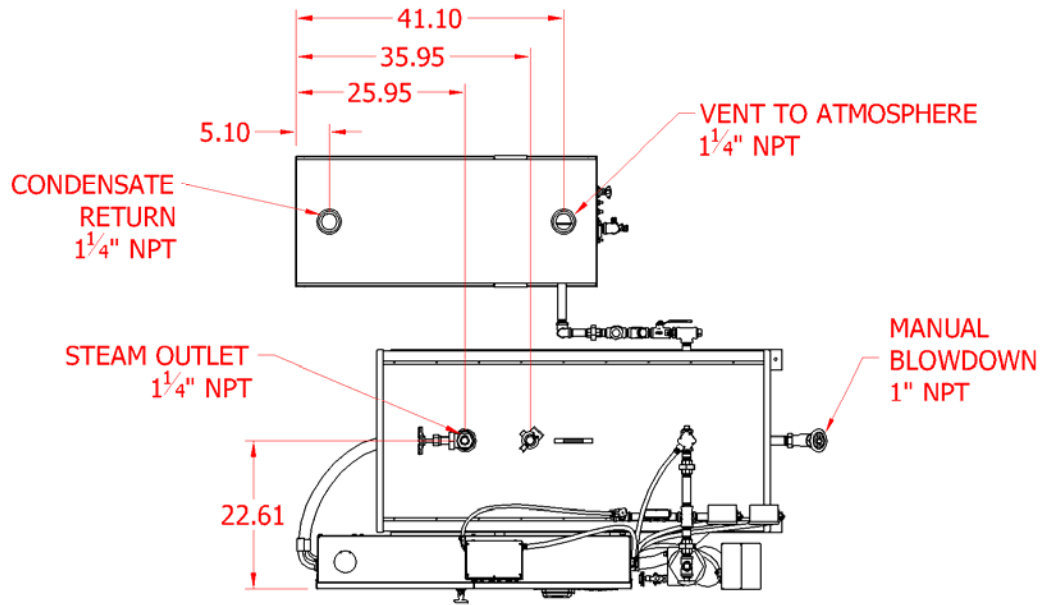
Heating Elements:  
Manufactured from  
Incoloy for high  
corrosion protection

# Overall Dimensions

## RHP-Series with Feed Water Solenoid or Feed Water Solenoid + Pump



## RHP-Series with Feed Water Pump + Condensate Tank



## Optional Equipment

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



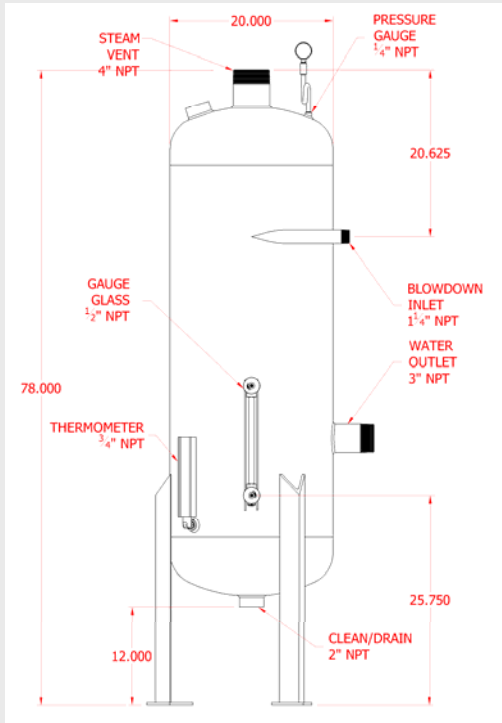
Program boiler blowoff day time and duration

When boiler blowoff time reached, boiler controls turn off automatically.



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

### 2. Blowoff Tanks: #BTANK-300-USA/CRN



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



Program timer to turn boiler on/off automatically

### 3. Control Voltage Transformer. When using this option, only main power supply required to operate boiler.

Boiler Voltage	Transformer Option Part Number	
	RHP-120 - RHP-210	RHP-240 - RHP-300
240V	OPT1010-240R	
380V	OPT1010-380	OPT1011 - 380RHP
415V	OPT1010-380	OPT1011 - 380RHP
480V	OPT1010-480R	OPT1011 - 480RHP
600V	OPT1010-600R	OPT1011 - 600RHP

## Mechanical Specifications

Model	Output Capacity	Steam Outlet Size	Operating Steam Pressure Range	Steam Capacity	Dimensions L x H x W	Approx. Shipping Weight
	BTU/hr (kW)		psig (bar)	lbs (kg)	in (mm)	lbs (kg)
RHP-120 RHPH-120 RHPHC-120	409,440 (120)	1-1/4"	0-135 (0 - 9.3)	418	79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.6 x 57.5 x 67.6 (2022 x 1461 x 1717)	1,370 1,410 1,590
RHP-150 RHPH-150 RHPHC-150	511,800 (150)	1-1/4"	0-135 (0 - 9.3)	522	79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.6 x 57.5 x 67.6 (2022 x 1461 x 1717)	1,370 1,410 1,590
RHP-180 RHPH-180 RHPHC-180	614,160 (180)	1-1/4"	0-135 (0 - 9.3)	626	79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.6 x 57.5 x 67.6 (2022 x 1461 x 1717)	1,370 1,410 1,590
RHP-210 RHPH-210 RHPHC-210	716,520 (210)	1-1/4"	0-135 (0 - 9.3)	730	79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.6 x 57.5 x 67.6 (2022 x 1461 x 1717)	1,370 1,410 1,590
RHP-240 RHPH-240 RHPHC-240	818,880 (240)	2"	0-135 (0 - 9.3)	835	79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.6 x 57.5 x 67.6 (2022 x 1461 x 1717)	1,450 1,500 1,670
RHP-300 RHPH-300 RHPHC-300	1,023,600 (300)	2"	0-135 (0 - 9.3)	1044	79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.4 x 57.5 x 43.1 (2017 x 1461 x 1095) 79.6 x 57.5 x 67.6 (2022 x 1461 x 1717)	1,500 1,550 1,720

## Electrical Specifications

Model	Boiler Models Equipped with 100W/in <sup>2</sup> Watt Density Heating Elements							
	Voltage		Amps	No. and Size of Elements	No. and Sizes of Contactors	No. and Sizes of Fuses	Gage of Power Entry Wires	Power Entry Wire Conduits
	Volts	Phase	A				AWG/MCM	
RHP-120	240	3	288.7	4 x 30kW	4 x 93A	12 x 90A, 250V	3 x 500MCM	1 x 3"
	380	3	182.3			12 x 60A, 600V	3 x 4/0AWG	1 x 2-1/2"
	415	3	166.9			12 x 50A, 600V	3 x 4/0AWG	1 x 2-1/2"
	480	3	144.3			12 x 50A, 600V	3 x 3/0AWG	1 x 2"
	600	3	115.5			12 x 40A, 600V	3 x 1/0AWG	1 x 2"
RHP-150	240	3	360.8	5 x 30kW	5 x 93A	15 x 90A, 250V	6 x 4/0AWG	1 x 2-1/2"
	380	3	227.9			15 x 60A, 600V	3 x 300MCM	1 x 2-1/2"
	415	3	208.7			15 x 50A, 600V	3 x 300MCM	1 x 2-1/2"
	480	3	180.4			15 x 50A, 600V	3 x 4/0AWG	1 x 2-1/2"
	600	3	144.3			15 x 40A, 600V	3 x 3/0AWG	1 x 2"
RHP-180	240	3	433.0	6 x 30kW	6 x 93A	18 x 90A, 250V	6 x 300MCM	2 x 2-1/2"
	380	3	273.5			18 x 60A, 600V	3 x 500MCM	1 x 3"
	415	3	250.4			18 x 50A, 600V	3 x 400MCM	1 x 3"
	480	3	216.5			18 x 50A, 600V	3 x 300MCM	1 x 2-1/2"
	600	3	173.2			18 x 40A, 600V	3 x 4/0AWG	1 x 2-1/2"
RHP-210	240	3	505.2	7 x 30kW	7 x 93A	21 x 90A, 250V	6 x 400MCM	2 x 3"
	380	3	319.9			21 x 60A, 600V	6 x 3/0AWG	1 x 2-1/2"
	415	3	292.2			21 x 50A, 600V	3 x 500MCM	1 x 3"
	480	3	252.6			21 x 50A, 600V	3 x 400MCM	1 x 3"
	600	3	202.1			21 x 40A, 600V	3 x 250MCM	1 x 2-1/2"
RHP-240	380	3	364.6	8 x 30kW	8 x 75A	24 x 60A, 600V	6 x 4/0AWG	1 x 2-1/2"
	415	3	333.9			24 x 50A, 600V	6 x 4/0AWG	1 x 2-1/2"
	480	3	288.7			24 x 50A, 600V	3 x 500MCM	1 x 3"
	480	3	230.9			24 x 40A, 600V	3 x 350MCM	1 x 2-1/2"
	600	3	230.9			24 x 40A, 600V	3 x 350MCM	1 x 2-1/2"
RHP-300	380	3	455.8	10 x 30kW	10 x 75A	30 x 60A, 600V	6 x 300MCM	2 x 3"
	415	3	417.4			12 x 100A, 600V + 6 x 50A, 600V	6 x 300MCM	2 x 3"
	480	3	360.8			12 x 90A, 600V + 6 x 50A, 600V	6 x 4/0AWG	1 x 2-1/2"
	480	3	360.8			12 x 90A, 600V + 6 x 50A, 600V	6 x 4/0AWG	1 x 2-1/2"
	600	3	288.7			12 x 70A, 600V + 6 x 40A, 600V	3 x 500MCM	2 x 3"