



150 PSI High Pressure Steam Boilers Power Burner Fired

PRODUCT DESCRIPTION

Rite Power Burner Fired High Pressure Steam Boilers have been providing our valued customers with high quality steam safely and reliably for over forty years. From food processing to textiles, hospitals to industrial process manufacturing – these heavy duty, watertube steamers are available in 16 different models, ranging from 398 – 10,456 MBH input (9.5 – 250 Boiler Horsepower) for the widest selection possible.

So simple to maintain and operate, Rite Steam Boilers feature **complete waterside access** so that virtually all scale and mud deposits can be seen and mechanically cleaned during a single scheduled maintenance shutdown. The result – **Better fuel-to-steam efficiency and lower operating cost over the life of your boiler investment.** Consider a few of our other standard features: Rite's floating heads that eliminate pressure vessel cracks and broken welds caused by thermal stress cycling (backed by our **25 Year Thermal Shock Warranty**), Rite's "superheated" drying tubes that regularly boost steam quality at the nozzle into the 99%+ range, Rite's bolted/gasketed headplates that eliminate any possibility of hydraulic explosion in the event that safety devices fail – and you have a better boiler by design.

RITE POWER BURNER FEATURES

Rite Power Burner Fired High Pressure Steam Boilers must be specified when: Low NOx emissions are required or fuels other than natural gas will be used. While Power Burners are more expensive and use more electrical power than atmospheric, they do have one advantage: by controlling the amount of air they use for combustion, Power Burners achieve higher combustion efficiencies than atmospheric – especially at less than full fire rate.

RITE POWER BURNER FIRED BOILERS vs. "FORCED DRAFT BOILERS"

Both use Power Burners to combust the fuel, but the similarities end there. Forced draft boilers require larger fan motors to "push" the products of combustion out a sealed combustion chamber and into a positive pressure stack. Should a leak develop in the combustion chamber or stack of a forced draft boiler – potentially toxic flue gasses could escape into the boiler room.

Rite Power Burner Fired Boilers use smaller fan motors to combust the fuel only. All Rite Boilers are designed to operate with negative pressure combustion chambers and stacks, which means flue gasses are **safely** under negative draft conditions from the time the fuel is burned until they exit the stack.





150 PSI High Pressure Steam Boilers Models & Ratings / Power Burner Fired

STACK / DRAFT REQUIREMENTS

- UL listed for use with Type B Vent when power burner is for natural or L.P. gas fired only.
- Type 304 stainless steel lined stack is required when equipped with #2 oil or combination gas & #2 oil burner.
- Minimum stack height for natural or L.P. gas fired burners is 10 feet.
- Minimum height for #2 oil or combination gas & #2 oil fired boilers is 15 ft.
- The stack should be supported independently of the boiler and an adjustable length section of stack should be installed after the barometric damper to allow for future separation. All Rite Boilers have internal stack supports to handle the weight of the stack during installation.
- Power Burner fired boilers are supplied with barometric damper (shipped loose) and a draft gauge (installed) to help set and maintain a draft between -.05" to -.09" W.C. for all fuels and firing rates.

AIR REQUIREMENTS

Adequate Combustion/Ventilation Air is vital for safe, efficient operation. Refer to the latest edition of the Uniform Mechanical Code or consult your local Building and Safety Department for specific requirements.

Warning: Do not install in a room that will develop negative pressure without utilizing a properly sized induced draft fan.

ELECTRICAL REQUIREMENTS

- A single point 1 or 3 phase supply is required to the burner panel. See separate Burner Price Lists for standard electrical power requirements.
- Separate electrical supply may be required to operate boiler feed pump.

NATURAL GAS SUPPLY REQUIREMENTS

- Refer to burner specification sheet or quote.

PROPANE GAS SUPPLY REQUIREMENTS

- Refer to burner specification sheet or quote.

ELEVATION DERATION

Ratings given below are for elevations up to 2000 feet. Above 2000 feet, ratings should be reduced at the rate of 4% for every 1000 feet above sea level.

FEEDWATER SYSTEMS & BLOWDOWN TANKS

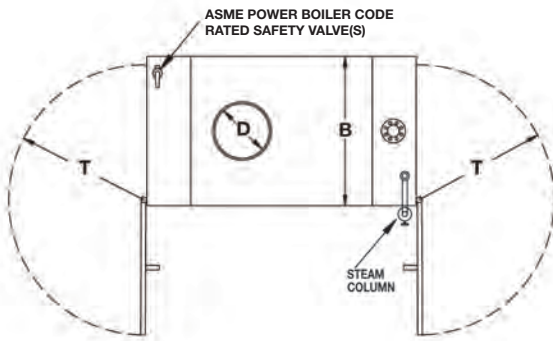
Rite manufactures a complete line of Condensate Return Feedwater Tanks and Blowdown Tanks for our Steam Boilers shown below.

BOILER MODEL	Input MBH	Nominal Output		E.D.R.	Heating Surface Sq. Ft.	Flooded Water Content Gallons	Normal Water Level Content Gallons	Pounds of Steam per Hour @ 212 F	Nominal Shipping Weight (lbs)
		MBH	Boiler Horsepower						
P9.5*	398	318	9.5	1325	65	35	27	328	2500
P10*	419	335	10	1745	65	35	27	345	2500
P15*	628	502	15	2616	85	40	31	518	2900
P20*	838	670	20	3491	105	45	35	690	3200
P25*	1046	837	25	4358	115	65	53	863	4150
P35*	1465	1172	35	6104	156	85	62	1208	4800
P48*	1950	1560	48	8125	214	100	73	1656	5500
P50*	2093	1674	50	8720	214	100	73	1725	5500
P75*	3139	2511	75	13079	349	15	120	2588	8250
P100*	4185	3348	100	17437	460	175	140	3450	10000
P125*	5230	4184	125	21791	571	195	160	4313	12000
P150*	6276	5021	150	26150	733	280	220	5175	19000
P175*	7323	5858	175	30512	851	320	250	6038	20000
P200*	8369	6695	200	34870	969	360	280	6900	21000
P225*	9425	7540	225	39270	1020	390	300	7763	22000
P250*	10456	8365	250	43566	1125	420	320	8625	23000

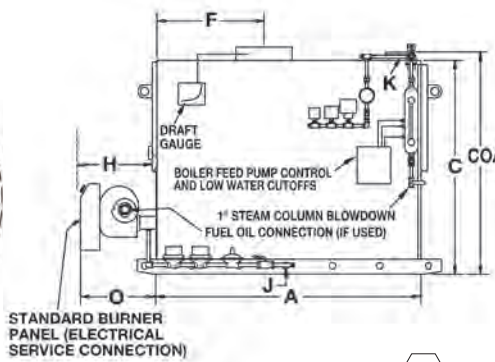
* Add **G** for natural gas or propane, **O** for #2 oil or **GO** for combination gas & #2 oil.



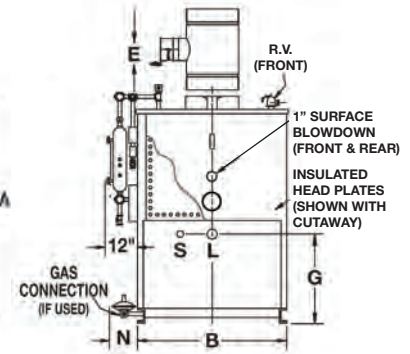
150 PSI High Pressure Steam Boilers Models & Dimensions / Power Burner Fired



TOP VIEW ④



RIGHT SIDE VIEW ④



REAR VIEW ④

- **DIMENSIONS ARE IN INCHES - SUBJECT TO PRODUCTION TOLERANCES AND CHANGE WITHOUT NOTICE. CERTIFIED DIMENSIONS AVAILABLE UPON REQUEST.**
- **BOILERS APPROVED FOR INSTALLATION ON NON-COMBUSTIBLE FLOORS ONLY.**

- ① Barometric Damper will be shipped one size smaller than **D** dimension for stacks up to 25 feet of vertical height (as shown below in column **E**), full size (same as **D** dimension) for stacks 25 to 50 feet tall and one size larger for stacks over 50 feet tall. Barometric Damper Tee by others.
- ② May vary - sizes shown are for UL gas trains at standard supply pressures. Gas connections can be male or female NPT. All other threaded connections are female NPT.
- ③ 1-1/2" and 2-1/2" connections are Female NPT. 4" and 6" flanges are ANSI 300 lb. SA-105 raised face. Flanged outlets may be reduced upon special request and/or supplied ANSI 300 lb SA-105 raised face.
- ④ Standard right hand construction shown illustrated above. Left hand construction available at no extra charge.

BOILER MODEL	A	B	C	COA	D	E ①	F	G	H	J ②	K ③	L	N	O	S	T
	Length Jacket	Width Jacket	Height Flush	Height Overall	Stack Dia.	Draft Control	Stack Conn.		Tube Maint.	Gas Conn.	Steam Supply	Feed Water	Side Space	Power Burner	Blow Down	Head Swing
P9.5*	44	34	71	75	9	8 BARO	17	38	37	3/4	1 1/2	1	10	26	1	24
P10*	44	34	71	75	9	8 BARO	17	38	37	3/4	1 1/2	1	10	26	1	24
P15*	54	34	71	75	10	9 BARO	20	38	47	1	1 1/2	1	12	26	1	24
P20*	64	34	71	75	12	10 BARO	24	38	57	1	1 1/2	1	12	26	1	24
P25*	56	42	76	80	14	12 BARO	22	35	46	1 1/4	2 1/2	1	12	26	1 1/2	32
P35*	70	42	76	80	16	14 BARO	27	35	60	1 1/2	2 1/2	1	12	31	1 1/2	32
P48*	90	42	76	80	18	16 BARO	34	35	80	2	2 1/2	1	12	31	1 1/2	32
P50*	90	42	76	80	18	16 BARO	34	35	80	2	2 1/2	1	14	31	1 1/2	32
P75*	89	59	84	89	22	20 BARO	37	44	75	2	4 FL	1 1/2	14	35	1 1/2	49
P100*	111	59	84	89	24	20 BARO	44	44	97	2	4 FL	1 1/2	16	35	1 1/2	49
P125*	133	59	84	89	26	24 BARO	52	44	119	2	4 FL	1 1/2	16	35	1 1/2	49
P150*	124	78	96	101	28	24 BARO	45	46	109	2 1/2	6 FL	1 1/2	16	35	2	70
P175*	139	78	96	101	30	28 BARO	50	46	124	2 1/2	6 FL	1 1/2	16	35	2	70
P200*	154	78	96	101	30	28 BARO	55	46	139	2 1/2	6 FL	1 1/2	18	42	2	70
P225*	165	78	96	101	32	28 BARO	59	46	150	2 1/2	6 FL	1 1/2	18	42	2	70
P250*	176	78	96	101	34	28 BARO	62	46	161	2 1/2	6 FL	1 1/2	18	42	2	70

* Add **G** for natural gas or propane, **O** for #2 oil or **GO** for combination gas & #2 oil.