



125 PSI Hot Water Boilers Power Burner Fired

PRODUCT DESCRIPTION

Rite Power Burner Fired Watertube Boilers are found at the heart of better engineered closed-loop heating systems all over North America. From conventional space heating to low temperature return systems to industrial process loads, Rite offers 47 basic models, ranging from 480 – 12,499 MBH input (11 – 300 Boiler Horsepower). These heavy duty, long lasting boilers have been providing heat to schools, commercial buildings, airports, dairies and the automotive industry (to name a few) – **Safely and reliably for nearly fifty years.**

So simple to maintain and operate, Rite 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 efficiency and lower operating cost over the life of your boiler investment.** Consider a few of our other standard features: Floating heads that eliminate pressure vessel cracks and broken welds caused by thermal stress cycling (backed by **Rite's 25 year Thermal Shock Warranty**), Top supply and return water connections, Rugged Heat Exchangers with minimal pressure drop at normal flow rates can also handle the boiler firing under no flow conditions, Rite's bolted/gasketed headplates that virtually 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 Low Pressure Water 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.





125 PSI Water Heating 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 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.

#2 OIL SUPPLY REQUIREMENT

- Supply to oil pump: minimum gravity flow to maximum 3 psi.

WATER TEMPERATURES & PRESSURE DROPS

- Minimum return water temperature is 135° F (after start-up). Lower temperature return factory options available.
- Maximum practical supply water temperature is 235° F. Higher temperature/pressure Rite Boilers are available (Section I Boilers).
- Pressure drop for all models is less than 3 feet of total head.

ELEVATION DERATION

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

B.T.U. FORMULA

- BTU Output @ 0-2000' elevation = 60 x 8.3 x T x G.P.M.

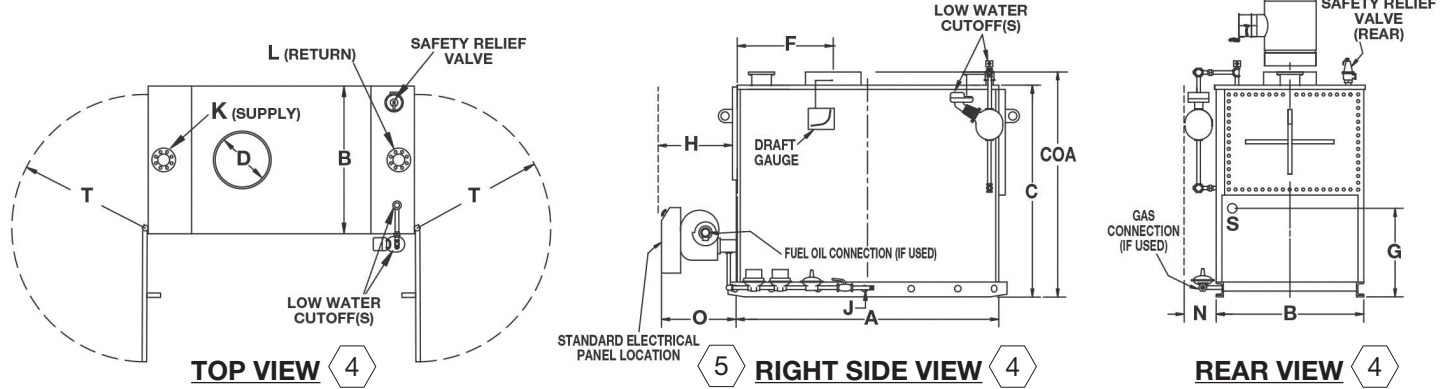
BOILER MODEL	Input MBH	Nominal Output		E.D.R.	Heating Surface Sq. Ft.	Water Content Gallons	G.P.M. 20° F Rise	G.P.H. 100° F Rise	Nominal Shipping Weight (lbs)
		MBH	Horsepower						
48 WO	480	384	11	2400	49	21	38	465	900
55 WO	550	440	13	2750	56	23	44	535	1000
63 WO	630	506	15	3162	63	24	51	615	1100
76 WO	760	608	18	3800	75	27	61	740	1300
85 WO	850	680	20	4250	88	40	69	930	2100
90 WO	900	720	21	4500	88	40	72	875	2100
105 WO	1050	840	25	5250	101	43	84	1015	2250
120 WO	1200	960	28	6000	115	47	97	1165	2400
135 WO	1350	1080	32	6750	131	50	110	1315	2550
150 WO	1500	1200	35	7500	145	54	120	1460	2700
165 WO	1650	1320	39	8250	159	57	135	1600	2850
180 WO	1800	1440	43	9000	174	61	145	1750	3000
200 WO	2000	1600	47	10000	192	66	160	1950	3250
A150 WO	1500	1200	35	7500	160	71	120	1460	2700
A165 WO	1650	1320	39	8250	168	75	135	1600	2950
A180 WO	1800	1440	43	9000	190	79	145	1750	3275
A200 WO	2000	1600	47	10000	205	83	160	1950	3525
225 WO	2250	1800	53	11250	230	89	180	2190	3775
250 WO	2500	2000	59	12500	252	94	200	2430	4100
275 WO	2750	2200	65	13750	273	100	220	2670	4425
300 WO	3000	2400	71	15000	295	105	240	2920	4750
325 WO	3250	2600	77	16250	318	111	265	3160	5075
350 WO	3500	2800	83	17500	340	116	285	3400	5400
375 WO	3750	3000	89	18750	362	122	305	3650	5725
400 WO	4000	3200	95	20000	383	127	325	3900	6600
425 WO	4250	3400	101	21250	405	133	345	4140	7000
450 WO	4500	3600	107	22500	428	139	365	4380	7350
475 WO	4750	3800	113	23750	450	145	385	4630	7700
500 WO	5000	4000	119	25000	473	151	405	4870	8100
550 WO	5500	4400	131	27500	526	190	445	5370	8800
600 WO	6000	4800	143	30000	574	213	485	5850	9500
A650 WO	6500	5200	155	32500	622	240	520	6250	10300
A700 WO	7000	5600	167	35000	670	255	560	6720	11000
A750 WO	7500	6000	180	37500	722	270	600	7200	11700
A400 WO	4000	3200	95	20000	390	160	325	3900	6800
A450 WO	4500	3600	107	22500	440	180	365	4380	7400
A500 WO	5000	4000	119	25000	486	195	405	4870	8000
A550 WO	5500	4400	131	27500	535	215	445	5370	8500
A600 WO	6000	4800	143	30000	584	235	485	5850	9000
650 WO	6500	5200	155	32500	632	250	520	6250	9600
700 WO	7000	5600	167	35000	680	275	560	6720	10100
750 WO	7500	6000	180	37500	730	290	600	7200	10700
840 WO	8400	6700	200	41875	800	320	650	7800	15500
940 WO	9400	7500	225	46875	900	345	770	9270	16250
1050 WO	10500	8400	250	52500	1000	370	810	9740	17000
1150 WO	11500	9200	275	57500	1100	395	925	11000	17750
1250 WO	12499	9999	300	62494	1200	420	1005	12100	18500

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

Rev. 2/2014



125 PSI Water Heating Boilers Models & Dimensions / Power Burner Fired



• 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 Dampers 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, except where noted.
- ③ Flanges are ANSI 150 lb SA-105 flat face.
- ④ Standard right hand construction shown illustrated above. Left hand construction available at no extra charge.
- ⑤ Models 48-375 have **hinged burner doors - Do Not** stub electrical conduit up in front of door or run rigid conduit direct to the panel as this will prevent access to the combustion chamber.

BOILER MODEL	A Length Jacket	B Width Jacket	C Height Flush	COA Height Overall	D Stack Dia.	E ^① Draft Control	F Stack Conn.	G	H Tube Maint.	J ^② Gas Conn.	K ^③ Water Supply	L ^③ Water Return	N Side Space	O Power Burner	S Drain	T Head Swing
48 WO	40	33	54	58	10	9 BARO	15	32	40	3/4	2 MNPT	2 MNPT	10	26	1	20
55 WO	45	33	54	58	10	9 BARO	16	32	45	1	2 MNPT	2 MNPT	10	26	1	20
63 WO	50	33	54	58	10	9 BARO	18	32	50	1	2 MNPT	2 MNPT	10	26	1	20
76 WO	58	33	54	58	12	10 BARO	20	32	58	1	2 MNPT	2 MNPT	10	26	1	20
85 WO	46	39	68	72	12	10 BARO	18	39	46	1	3 FL	3 FL	12	26	1 1/4	26
90 WO	46	39	68	72	12	10 BARO	18	39	46	1	3 FL	3 FL	12	26	1 1/4	26
105 WO	52	39	68	72	12	10 BARO	20	39	52	1	3 FL	3 FL	12	26	1 1/4	26
120 WO	58	39	68	72	14	12 BARO	22	39	58	1 1/4	3 FL	3 FL	12	31	1 1/4	26
135 WO	64	39	68	72	14	12 BARO	24	39	64	1 1/4	3 FL	3 FL	12	31	1 1/4	26
150 WO	70	39	68	72	16	14 BARO	26	39	70	1 1/4	3 FL	3 FL	12	31	1 1/4	26
165 WO	76	39	68	72	16	14 BARO	28	39	76	1 1/4	3 FL	3 FL	12	31	1 1/4	26
180 WO	82	39	68	72	16	14 BARO	30	39	82	1 1/4	3 FL	3 FL	12	31	1 1/4	26
200 WO	90	39	68	72	18	16 BARO	33	39	90	1 1/2	3 FL	3 FL	12	31	1 1/4	26
A150 WO	55	46	72	76	16	14 BARO	20	40	55	1 1/4	4 FL	4 FL	14	31	1 1/2	34
A165 WO	59	46	72	76	16	14 BARO	21	40	59	1 1/2	4 FL	4 FL	14	31	1 1/2	34
A180 WO	65	46	72	76	16	14 BARO	22	40	65	1 1/2	4 FL	4 FL	14	31	1 1/2	34
A200 WO	69	46	72	76	18	16 BARO	23	40	69	1 1/2	4 FL	4 FL	14	31	1 1/2	34
225 WO	73	46	72	76	18	16 BARO	25	40	73	1 1/2	4 FL	4 FL	16	31	1 1/2	34
250 WO	79	46	72	76	20	18 BARO	27	40	79	2	4 FL	4 FL	16	35	1 1/2	34
275 WO	85	46	72	76	20	18 BARO	29	40	85	2	4 FL	4 FL	16	35	1 1/2	34
300 WO	91	46	72	76	20	18 BARO	31	40	91	2	4 FL	4 FL	16	35	1 1/2	34
325 WO	97	46	72	76	22	20 BARO	33	40	97	2	4 FL	4 FL	16	35	1 1/2	34
350 WO	103	46	72	76	22	20 BARO	35	40	103	2	4 FL	4 FL	16	35	1 1/2	34
375 WO	109	46	72	76	22	20 BARO	35	40	109	2	4 FL	4 FL	16	35	1 1/2	34
400 WO	82	57	83	87	24	20 BARO	28	46	82	2	4 FL	4 FL	16	35	2	44
425 WO	87	57	83	87	24	20 BARO	28	46	87	2	4 FL	4 FL	16	35	2	44
450 WO	91	57	83	87	26	24 BARO	31	46	91	2	4 FL	4 FL	16	35	2	44
475 WO	95	57	83	87	26	24 BARO	31	46	95	2	4 FL	4 FL	16	35	2	44
500 WO	100	57	83	87	26	24 BARO	34	46	100	2	4 FL	4 FL	16	35	2	44
550 WO	109	57	83	87	28	24 BARO	37	46	109	2 1/2	4 FL	4 FL	16	35	2	44
600 WO	118	57	83	87	28	24 BARO	40	46	118	2 1/2	4 FL	4 FL	16	35	2	44
A650 WO	129	57	83	87	28	24 BARO	45	46	129	2 1/2	5 FL	5 FL	16	35	2	44
A700 WO	138	57	83	87	28	24 BARO	48	46	138	2 1/2	5 FL	5 FL	16	35	2	44
A750 WO	147	57	83	87	30	28 BARO	51	46	147	2 1/2	5 FL	5 FL	16	35	2	44
A400 WO	79	67	83	87	22	20 BARO	29	46	79	2	4 FL	4 FL	16	35	2	56
A450 WO	87	67	83	87	24	20 BARO	32	46	87	2	4 FL	4 FL	16	35	2	56
A500 WO	95	67	83	87	26	24 BARO	34	46	95	2	4 FL	4 FL	16	35	2	56
A550 WO	102	67	83	87	26	24 BARO	37	46	102	2 1/2	4 FL	4 FL	16	35	2	56
A600 WO	109	67	83	87	28	24 BARO	39	46	109	2 1/2	4 FL	4 FL	16	35	2	56
650 WO	117	67	83	87	28	24 BARO	42	46	117	2 1/2	5 FL	5 FL	16	35	2	56
700 WO	124	67	83	87	28	24 BARO	44	46	124	2 1/2	5 FL	5 FL	16	35	2	56
750 WO	132	67	83	87	30	28 BARO	47	46	132	2 1/2	5 FL	5 FL	16	35	2	56
840 WO	116	82	91	95	30	28 BARO	43	54	116	2 1/2	6 FL	6 FL	18	42	2	69
940 WO	128	82	91	95	32	28 BARO	47	54	128	2 1/2	6 FL	6 FL	18	42	2	69
1050 WO	140	82	91	95	34	28 BARO	51	54	140	2 1/2	6 FL	6 FL	18	42	2	69
1150 WO	152	82	91	95	36	28 BARO	55	54	152	2 1/2	6 FL	6 FL	18	42	2	69
1250 WO	164	82	91	95	36	28 BARO	59	54	164	2 1/2	6 FL	6 FL	18	42	2	69

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