



15 PSI Low Pressure Steam Boilers Atmospheric / Natural Gas Fired

PRODUCT DESCRIPTION

Rite atmospheric gas fired low pressure steam boilers are the boiler of choice for breweries, bakeries, distilleries and building heat throughout North America.

Some of our most important features include: A broad range of sizes - from 3 to 300 horsepower. Lower water content steams faster and uses less fuel than other designs. Extra tubes in the convective section deliver dry 99% high quality steam. Whisper quiet operation (between 20-30 dBA at 3 feet). Burner has no moving parts, and can be permanently set in a few minutes with a screwdriver and a gas pressure gauge. Flame safeguard controls are microprocessor based and can support a keyboard display module. Header box expansion joint allows free movement of tubes. Heavy duty steel base and construction throughout. Document holder on side of boiler (with complete O & M Manual). Headplates are hinged for easy access and insulated to improve efficiency. 100% access to waterside surfaces = maintainable efficiency for the life of the boiler.

RITE ATMOSPHERIC BURNER FEATURES

Rite Atmospheric Boilers are an excellent choice when: Low NOx emissions are not required, natural gas will be the only fuel used, the installation is indoors (See our line of weatherproof models for outdoor applications), and when lower combustion efficiencies at less than full firing rate are acceptable.

Atmospheric burners are far less expensive than power burners, so when the above criteria is met, then Atmospherics are a strong economical alternative to Rite's outstanding line of power burner fired steam boilers. Other factors favoring Atmospherics are: Extremely low electrical power consumption (no energy hogging fan motors), Rapid start-up on demand (No pre-purge blower fan), Lighter weight, Lower height, and Whisper-quiet burner operation.





Low Pressure Steam Boilers / Atmospheric 15 PSI Models & Ratings / Natural Gas Fired

STACK / DRAFT REQUIREMENTS

- UL listed for use with Type B Vent.
- Minimum stack height including Draft Control is 10 feet.
- The stack should be supported independently of the boiler and an adjustable length section of stack should be installed after the draft control to allow for future separation. All Rite Boilers have internal stack supports to handle the weight of the stack during installation.
- Boilers with barometric damper draft control should draft between -.05" to -.09" W.C. when firing. Boilers with draft diverters will draft between -.02" to -.04" W.C.
- A draft gauge is installed on all boilers equipped with barometric dampers to help set and maintain the draft.

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 120/60/1 8 amp supply is required to boiler-burner circuit.
- Separate electrical supply may be required to operate boiler feed pump.

NATURAL GAS SUPPLY REQUIREMENTS

(STATIC AND AT FLOW)

- Models 15 S * - 76 S * 6" w.c. min. to 14" w.c. max.
 - Models 85 S * - 400 S * 7" w.c. min. to 14" w.c. max.
 - Models 425 S * - 750 S * 15" w.c. min. to 28" w.c. max.
 - Models 840 S * - 1250 S * 20" w.c. min. to 28" w.c. max.
 - For other gas pressures, consult factory or your Rite Representative.
- *Propane Supply Requirements: 11" w.c. min. to 14" w.c.

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.

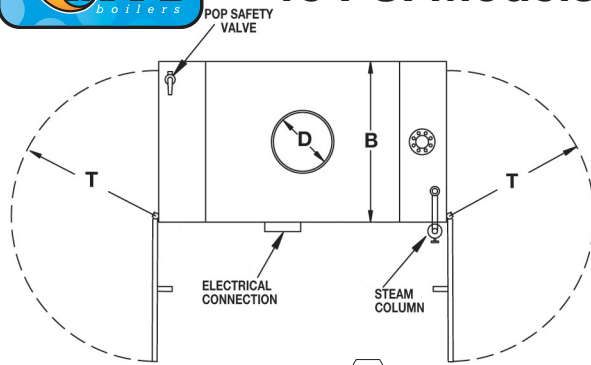
FEEDWATER SYSTEMS & BLOWDOWN TANKS

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

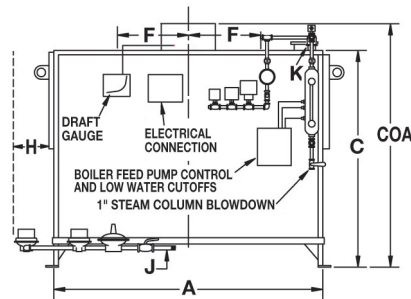
BOILER MODER	Input MBH	Nominal Output		E.D.R.	Heating Surface Sq. Ft.	Flooded Water Content Gallons	Normal Water Level Content Gallons	Pounds of Steam per Hour @ 212 F	Nominal Shipping Weight (lbs)
		MBH	Boiler Horsepower						
15 S	150	120	4	500	14	11	7	123	670
20 S	200	160	5	666	19	14	9	164	710
25 S	250	200	6	843	22	18	11	206	750
30 S	300	240	7	100	28	22	14	247	950
36 S	360	288	9	1200	33	26	17	296	1100
42 S	420	336	10	1400	39	30	19	346	1400
48 S	480	384	11	1600	49	35	25	395	1525
55 S	550	440	13	1833	56	40	27	453	1585
63 S	630	506	15	2108	63	45	29	519	1650
76 S	760	608	18	2533	75	54	32	626	1720
85 S	850	680	20	2833	88	61	49	700	2150
90 S	900	720	21	3000	88	64	49	742	2150
105 S	1050	840	25	3500	101	76	52	865	2350
120 S	1200	960	28	4000	115	85	55	989	2550
135 S	1350	1080	32	4500	131	97	58	1113	2750
150 S	1500	1200	35	5000	145	105	60	1236	2950
165 S	1650	1320	39	5500	159	118	64	1360	3150
180 S	1800	1440	43	6000	174	130	68	1484	3350
200 S	2000	1600	47	6667	192	140	74	1649	3550
A150 S	1500	1200	35	5000	160	120	74	1236	3000
A165 S	1650	1320	39	5500	168	128	78	1360	3200
A180 S	1800	1440	43	6000	190	140	81	1484	3400
A200 S	2000	1600	47	6667	205	150	84	1649	3550
225 S	2250	1800	53	7500	230	162	87	1855	3800
250 S	2500	2000	59	8333	252	180	92	2061	4100
275 S	2750	2200	65	9167	273	196	96	2267	4350
300 S	3000	2400	71	10000	295	215	100	2473	4600
325 S	3250	2600	77	10833	318	234	105	2679	4850
350 S	3500	2800	83	11667	340	251	110	2885	5100
375 S	3750	3000	89	12500	362	268	115	3091	5350
400 S	4000	3200	95	13333	383	287	125	3297	6000
425 S	4250	3400	101	14167	405	304	129	3504	6300
450 S	4500	3600	107	15000	428	322	132	3710	6600
475 S	4750	3800	113	15833	450	337	135	3916	6900
500 S	5000	4000	119	16667	473	352	140	4122	7200
550 S	5500	4400	131	18333	526	370	147	4534	7800
600 S	6000	4800	143	20000	574	387	158	4946	8400
A650 S	6500	5200	155	21667	622	405	166	5359	8900
A700 S	7000	5600	167	23333	670	430	174	5731	9450
A750 S	7500	6000	180	25000	722	455	179	6183	9900
A400 S	4000	3200	95	13333	390	300	165	3297	7200
A450 S	4500	3600	107	15000	440	325	174	3710	7800
A500 S	5000	4000	119	1667	486	345	183	4122	8400
A550 S	5500	4400	131	18333	535	380	199	4534	9100
A600 S	6000	4800	143	20000	584	405	207	4946	9700
650 S	6500	5200	155	21667	632	425	215	5359	10300
700 S	7000	5600	167	23333	680	450	223	5771	10900
750 S	7500	6000	180	25000	730	470	232	6183	11500
840 S	8400	6700	200	27917	800	490	399	6935	12800
940 S	9400	7500	225	31250	900	515	419	7250	13500
1050 S	10500	8400	250	35000	1000	540	439	8657	14100
1150 S	11500	9200	275	38333	1100	565	459	9481	15000
1250 S	12499	9999	300	41662	1200	590	480	10300	15800



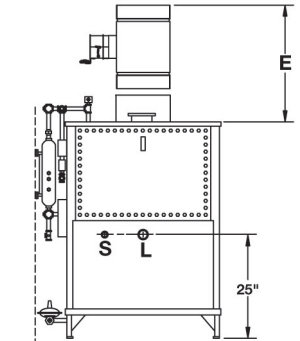
Low Pressure Steam Boilers / Atmospheric 15 PSI Models & Dimensions / Natural Gas Fired



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 Draft Diverters are supplied standard on Models 15S-120S only. 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 are male NPT pipe thread. All other threaded connections are female NPT.
- 3 Flanges are ANSI 150 lb SA-105 flat face. Models A150S - 375S: 6" FLG STD. for U.S. locations, 5" FLG for Canadian locations.
- 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	H	J (2)	K (3)	L	N	S	T
	Length Jacket	Width Jacket	Height Flush	Height Overall	Stack Dia.	Draft Control (Space Req'd.)	Twin Stacks	Tube Maint.	Gas Conn.	Steam Supply	Feed Water	Side Space	Blow Down	Head Swing
15 S	26	21	56	65	6	6 D.D (28)	-	19	3/4	2 1/2*	1	8	1	14
20 S	31	21	56	65	6	6 D.D (28)	-	24	3/4	2 1/2*	1	8	1	14
25 S	35	21	56	65	7	7 D.D (28)	-	28	3/4	2 1/2*	1	8	1	14
30 S	41	21	56	65	8	8 D.D (28)	-	34	3/4	2 1/2*	1	8	1	14
36 S	46	21	56	65	9	9 D.D (33)	-	39	3/4	2 1/2*	1	8	1	14
42 S	52	21	56	65	9	9 D.D (33)	-	45	3/4	2 1/2*	1	8	1	14
48 S	47	26	57	66	9	9 D.D. (33)	-	40	3/4	3 FL	1 1/4	10	1	20
55 S	52	26	57	66	10	10 D.D. (34)	-	45	1	3 FL	1 1/4	10	1	20
63 S	56	26	57	66	10	10 D.D. (34)	-	49	1	3 FL	1 1/4	10	1	20
76 S	64	26	57	66	12	12 D.D. (36)	-	57	1	3 FL	1 1/4	10	1	20
85 S	59	32	63	72	12	12 D.D. (36)	-	47	1	4 FL	1 1/2	12	1 1/4	26
90 S	59	32	63	72	12	12 D.D. (36)	-	47	1	4 FL	1 1/2	12	1 1/4	26
105 S	65	32	63	72	14	14 D.D. (38)	-	53	1	4 FL	1 1/2	12	1 1/4	26
120 S	71	32	63	72	14	14 D.D. (38)	-	59	1 1/4	4 FL	1 1/2	12	1 1/4	26
135 S	77	32	63	72	14	12 BARO	-	65	1 1/4	4 FL	1 1/2	12	1 1/4	26
150 S	83	32	63	72	14	12 BARO	-	71	1 1/4	4 FL	1 1/2	12	1 1/4	26
165 S	89	32	63	72	14	12 BARO	-	77	1 1/4	4 FL	1 1/2	12	1 1/4	26
180 S	96	32	63	72	16	14 BARO	-	84	1 1/4	4 FL	1 1/2	12	1 1/4	26
200 S	103	32	63	72	16	14 BARO	-	91	1 1/2	4 FL	1 1/2	12	1 1/4	26
A150 S	69	42	69	78	14	12 BARO	-	53	1 1/4	6 FL	2	14	1 1/2	34
A165 S	73	42	69	78	14	12 BARO	-	57	1 1/4	6 FL	2	14	1 1/2	34
A180 S	79	42	69	78	16	14 BARO	-	63	1 1/2	6 FL	2	14	1 1/2	34
A200 S	83	42	69	78	16	14 BARO	-	67	1 1/2	6 FL	2	14	1 1/2	34
225 S	87	42	69	78	18	16 BARO	-	71	1 1/2	6 FL	2	16	1 1/2	34
250 S	93	42	69	78	18	16 BARO	-	77	2	6 FL	2	16	1 1/2	34
275 S	99	42	69	78	18	16 BARO	-	83	2	6 FL	2	16	1 1/2	34
300 S	105	42	69	78	20	18 BARO	-	89	2	6 FL	2	16	1 1/2	34
325 S	111	42	69	78	20	18 BARO	-	95	2	6 FL	2	16	1 1/2	34
350 S	117	42	69	78	20	18 BARO	-	101	2	6 FL	2	16	1 1/2	34
375 S	123	42	69	78	20	18 BARO	-	107	2	6 FL	2	16	1 1/2	34
400 S	98	51	79	88	22	20 BARO	-	80	2	8 FL	2	16	2	45
425 S	103	51	79	88	22	20 BARO	-	85	2	8 FL	2	16	2	45
450 S	107	51	79	88	22	20 BARO	-	89	2	8 FL	2	16	2	45
475 S	111	51	79	88	24	20 BARO	-	93	2 1/2	8 FL	2	16	2	45
500 S	116	51	79	88	24	20 BARO	-	98	2 1/2	8 FL	2	16	2	45
550 S	125	51	79	88	26	24 BARO	-	107	2 1/2	8 FL	2	16	2	45
600 S	139	51	79	88	26	24 BARO	-	117	2 1/2	8 FL	2	16	2	45
A650 S	149	51	79	88	28	24 BARO	-	127	2 1/2	8 FL	2	16	2	45
A700 S	158	51	79	88	28	24 BARO	-	136	2 1/2	8 FL	2	16	2	45
A750 S	167	51	79	88	30	28 BARO	-	147	2 1/2	8 FL	2	16	2	45
A400 S	89	63	79	88	22	20 BARO	-	72	2	8 FL	2	16	2	56
A450 S	97	63	79	88	22	20 BARO	-	80	2	8 FL	2	16	2	56
A500 S	105	63	79	88	24	20 BARO	-	88	2 1/2	8 FL	2	16	2	56
A550 S	119	63	79	88	26	24 BARO	-	102	2 1/2	8 FL	2	16	2	56
A600 S	126	63	79	88	26	24 BARO	-	109	2 1/2	8 FL	2	16	2	56
650 S	134	63	79	88	28	24 BARO	-	117	2 1/2	8 FL	2	16	2	56
700 S	141	63	79	88	28	24 BARO	-	124	2 1/2	8 FL	2	16	2	56
750 S	149	63	79	88	30	28 BARO	-	132	2 1/2	8 FL	2	16	2	56
840 S	138	77	79	88	(2) 24	(2) 20 BARO	23	116	2 1/2	10 FL	2	18	2	69
940 S	150	77	79	88	(2) 24	(2) 20 BARO	26	128	2 1/2	10 FL	2	18	2	69
1050 S	162	77	79	88	(2) 26	(2) 24 BARO	29	140	2 1/2	12 FL	2	18	2	69
1150 S	174	77	79	88	(2) 26	(2) 24 BARO	32	152	2 1/2	12 FL	2	18	2	69
1250 S	186	77	79	88	(2) 26	(2) 24 BARO	35	164	2 1/2	12 FL	2	18	2	69