

3 Pass
Low Pressure

BARON SERIES

BF3 FIREBOX BOILERS

High
Efficiency

can be arranged for

- Gas Firing • Solid Fuel Firing • Oil Firing •

General

The Baron Series boiler is used for either gas and oil firing or wood burning installations. The floor space required is minimal yet the firebox boiler offers substantial furnace volume and a large primary heat transfer area.

With suitable firing equipment the efficiency compares favourably with other types of generators on the market including three and four pass Scotch, multi-pass watertube and coil tube designs.

The customer has the option of supplying suitable firing equipment. Factory personnel will mount and test fire gas or oil burners. Optional trim can be mounted or packed and shipped separately. Wiring of the burner to the limits is also available.

Design features include:

- 3 Pass full wet back design for maximum durability and economy
- Abundant heat transfer surface per boiler horsepower is available.
- Generous furnace volume with resulting conservative heat release.
- Large steam space and steam release area.
- No possibility of short circuiting between tube passes as in dry back designs.
- Minimum refractory. Maintenance and replacement of available floor of burner plate refractory is fast and simple.
- Extra heavy construction.
- Adaptable to many makes of conversion type burners as well as solid fuel burning systems.
- Large primary heat transfer surface reduces stress on tube sheets.

Standard Equipment

1. 3-pass firebox boiler designed and constructed to the ASME low pressure boiler code and the requirements of the authorities of the Provinces of Canada.
2. 2½" tubes, rolled, beaded and rerolled, providing maximum seal and strength.
3. Covered with mineral fibre insulation and steel jacket with light blue one colour high temperature enamel finish. 2" insulation on sizes 400 sq. ft. heating surface and above, 1" below.
4. Insulated, gas-tight front smoke box. Davit hinges are supplied at extra cost.
5. Removable, gas-tight rear smoke box c/w cleanout port. Your choice of vertical or horizontal flue gas outlet.
6. Refractory filled, reinforced steel base on gas or oil fired models providing ease of handling.
7. Gas or oil fired models have a blank burner mounting plate on dry furnace front (burner plate refractory not included).
8. Solid fuel fired models have available wet or dry furnace front and are less refractory furnace floor and steel skid base leaving an open bottom.
9. Rear observation sight glass. Rear 16 in. diameter bolt on access door c/w sight glass on sizes over 177 sq. ft. heating surface.
10. Flue brush and rod.
11. Lifting eye(s) for handling.
12. Shell handhole above tubes on sizes 250-750 sq. ft., 11 x 15 manhole on sizes over 750 sq. ft. heating surface.

Optional Equipment

See either Envoy Bulletin No. 202-85 or Victor Bulletin No. 107-85 for optional steam trim or hot water trim and other optional features.

Bulletin No. 112-85

BOILERSMITH^{CO}
CANADA'S BOILER MAKER

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BULLETINS OF INTEREST

For boilers with other available features, yet similar firebox construction, see the following bulletins.

1. Envoy Series Bulletin 202-85 and Compak Series (Packaged) Bulletin 103-82 for 2" tubes up to 992 sq. ft. and 2½" tubes over 992 sq. ft.
2. Victor Series Bulletin 107-85 for 3" tubes.
3. Sovereign Series Bulletin 106-85 for high pressure applications.

EASY TO INSTALL AND SERVICE

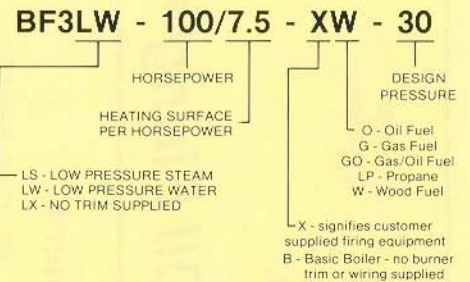
Baron Series boilers provide easy access to all firing surfaces for cleaning and inspection. Ample openings are provided for internal waterside inspection of the boiler.

The front smokebox door is easily removed for the inspection and cleaning of the tubes. The smokeboxes are of heavy 10 ga or 3/16" thick steel.

ENGINEERED TO LAST

The wetback firebox design is recommended for superior internal water circulation. Two rear tubesheets separated by water virtually eliminate any unequal thermal stresses. Single rear tubesheet designs do not obtain the same natural circulation patterns and thermal stresses can lead to premature tube and tubesheet failure.

MODEL No. DESIGNATION



Consult factory for auxiliary firing on wood fired units

For dimensional drawing see either Envoy Bulletin No. 202-85 or Victor Bulletin No. 107-85.

BF3 BARON SERIES SPECIFICATIONS 15# STEAM/30# WATER

BOILER NO.	15	20	25	30	35	40	45	47	50	53	60	70	80	90	95	100	113	115	125	136	150	160	175	200
HORSEPOWER AT 5 SQ. FT.	16	21	26	30	35	41	45	47	50	53	60	72	80	90	93	100	113	115	125	136	150	160	175	200
HORSEPOWER AT 6.5 SQ. FT.	13	16	20	23	27	32	35	36	38	40	46	55	62	69	71	77	87	89	96	105	115	123	135	154
HORSEPOWER AT 7.5 SQ. FT.	11	14	17	20	24	27	30	31	33	35	40	48	53	60	62	67	75	77	83	91	100	106	117	133
CAPACITY AT 5 SQ. FT. LBS./HR. F & A 212°F	552	725	897	1035	1208	1415	1553	1622	1725	1829	2070	2484	2760	3105	3209	3450	3899	3968	4313	4692	5175	5520	6038	6900
CAPACITY AT 6.5 SQ. FT. LBS./HR. F & A 212°F	449	552	690	794	932	1104	1208	1242	1311	1380	1587	1898	2139	2381	2450	2657	3002	3071	3312	3623	3968	4244	4658	5313
CAPACITY AT 7.5 SQ. FT. LBS./HR. F & A 212°F	380	483	587	690	828	932	1035	1070	1139	1208	1380	1656	1829	2070	2139	2312	2588	2657	2864	3140	3450	3657	4037	4589
GROSS OUTPUT AT 5 SQ. FT. MBH	536	704	871	1005	1173	1374	1508	1575	1675	1776	2010	2412	2680	3015	3116	3350	3786	3853	4189	4556	5025	5360	5863	6700
GROSS OUTPUT AT 6.5 SQ. FT. MBH	435	536	670	771	905	1072	1173	1206	1273	1340	1541	1843	2077	2312	2379	2580	2915	2982	3216	3518	3853	4121	4523	5759
GROSS OUTPUT AT 7.5 SQ. FT. MBH	368	469	570	670	804	905	1005	1039	1106	1173	1340	1608	1776	2010	2077	2245	2513	2580	2781	3049	3350	3551	3920	4456
HEATING SURFACE SQ. FT.	82	106	130	153	177	206	225	236	250	265	300	358	400	450	464	500	564	575	625	682	750	797	875	1000
FURNACE VOLUME CU. FT.	15.9	18.1	20.7	25.6	28.6	32.5	35.0	36.7	38.5	39.5	44.1	50.8	61.3	68.0	70.0	74.8	83.5	82.0	88.2	95.2	104.0	109.1	132.5	149.4
WATER CAPACITY FULL IMP. GAL.	120	139	161	203	230	265	287	303	310	320	364	428	534	594	606	654	728	679	732	793	869	915	909	1026
WATER CAPACITY N.W.L. IMP. GAL.	106	122	142	171	193	223	242	255	267	276	314	370	409	454	464	500	558	543	585	634	694	732	715	807
SHIPPING WEIGHT LBS.	1700	2400	2700	3500	3900	4200	4400	4600	4750	4900	5450	5600	6350	6900	7100	7500	8100	8000	8400	8950	9500	10500	11900	13300
ALL DIMENSIONS TO THE NEAREST INCH																								
A BARE BOILER LENGTH	64	71	79	79	86	95	101	108	92	95	105	121	116	126	128	136	148	114	121	129	139	145	135	149
B BARE BOILER HEIGHT	55	55	55	62	62	65	65	65	74	74	74	74	80	80	80	80	80	91	91	91	91	91	98	98
C BARE BOILER WIDTH	33	33	33	41	41	41	41	41	44	44	44	44	52	52	52	52	52	59	59	59	59	59	66	66
D BASE LENGTH	47	54	62	59	66	75	81	85	69	72	82	95	93	103	105	113	125	94	101	109	119	125	111	125
E SHELL LENGTH	44	51	59	56	63	72	78	82	66	69	79	92	88	98	100	108	120	89	96	104	114	120	106	120
F REAR SMOKEBOX DEPTH	12	12	12	14	14	14	14	14	16	16	16	16	18	18	18	18	18	14	14	14	14	14	16	16
G FRONT SMOKEBOX DEPTH	7	7	7	8	8	8	8	8	9	9	9	9	9	9	9	9	9	10	10	10	10	10	12	12
H FLUE GAS VENT DIA.	8	8	8	10	10	10	10	10	12	12	12	12	14	14	14	14	14	18	18	18	18	18	24	24
J FLUE GAS VENT LOCATION	41	41	41	44	44	44	44	44	52	52	52	52	54	54	54	54	54	63	63	63	63	63	69	69
K SUPPLY SIZE	4	4	4	4	4	6	6	6	6	6	6	6	8	8	8	8	8	8	8	8	8	8	8	8
L SUPPLY LOCATION	16	16	16	16	16	16	16	16	24	24	24	24	36	36	36	36	36	36	36	36	36	36	40	40
M RETURN SIZE (WATER)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
N RETURN LOCATION (WATER)	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
O TUBE REMOVAL	38	45	53	49	56	65	71	75	58	61	71	84	80	90	92	100	112	80	87	95	105	111	95	109
P FURNACE CENTRE LINE	13	13	13	12	12	12	12	12	13	13	13	13	13	13	13	13	13	14	14	14	14	14	18	18
Q FURNACE CL TO SMOKEBOX	11	11	11	12	12	12	12	12	16	16	16	18	20	20	20	20	20	22	22	22	22	22	20	20
R SAFETY/RELIEF SIZE	1.5	1.5	1.5	2.2	2.2	2.2	2.2	2.2	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5	2.2,5
S RETURN SIZE (STEAM)	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
T RETURN LOCATION (STEAM)	26	26	26	29	29	29	29	29	30	30	30	30	33	33	33	33	33	39	39	39	39	39	34	34
U NORMAL WATER LINE HEIGHT	47	47	47	51	51	51	51	51	59	59	59	59	61	61	61	61	61	72	72	72	72	72	78	78
V DRAIN SIZE	1.5	1.5	1.5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
W L.W.C.O. BOTTOM CONNECTION	29	29	29	29	29	29	29	29	37	37	37	37	40	40	40	40	40	44	44	44	44	44	52	52
WH OVERALL HEIGHT HOT WATER	60	60	60	70	70	70	70	70	79	79	79	79	88	88	88	88	88	100	100	100	100	100	108	108
SH OVERALL HEIGHT STEAM	63	63	63	72	72	72	72	72	81	81	81	81	89	89	89	89	89	102	102	102	102	102	110	110
WW OVERALL WIDTH HOT WATER	39	39	39	47	47	47	47	47	50	50	50	50	59	59	59	59	59	65	65	65	65	65	72	72
SW OVERALL WIDTH STEAM	41	41	41	49	49	49	49	49	52	52	52	52	61	61	61	61	61	67	67	67	67	67	74	74

We assume no responsibility for errors in data.

Certified Dimensions, Specifications and Drawings on the above and on other sizes are available on request. Metric data available on request.

Add 1.5 inches to dim "D" each for front and rear insulation.