

Powermaster Series WB-A2-3P

Three pass Wet-Back Steam Boilers



Boiler Data Sheet

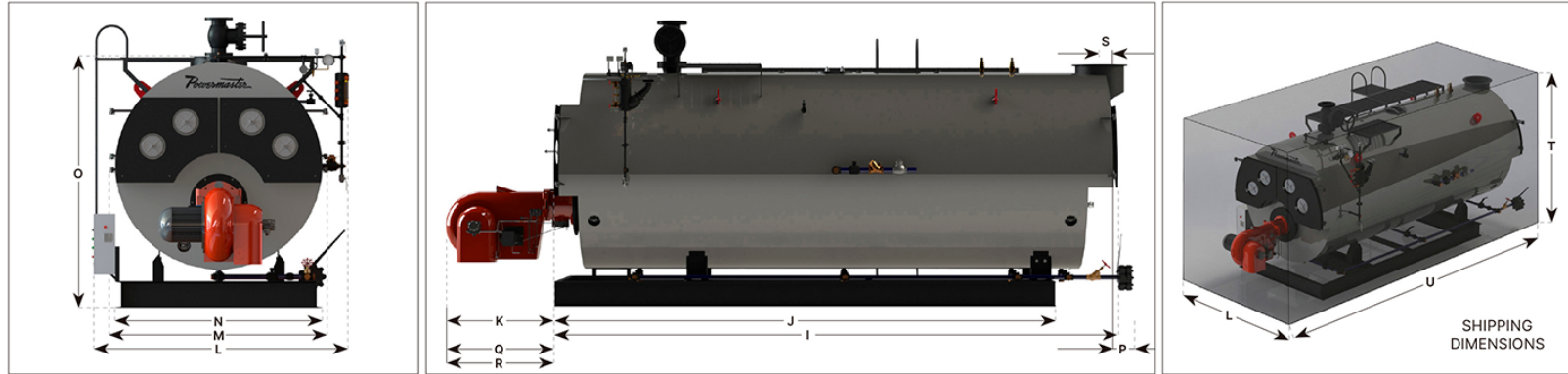
MODEL BHP

Maximum allowable working pressure 250 psig

NOMINAL CAPACITIES		80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Steam generation from and at 212 °F & 1 atm.	lb/hr	2,760	3,450	4,313	5,175	6,900	8,625	10,350	12,075	13,800	17,250	20,700	24,150	27,600	31,050	34,500	37,950	41,400	44,850	48,300	51,750
Heating Surface	SQFT	400	500	625	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000	3,500	4,032	4,160	4,477	4,800	5,122	5,474	5,895	
Boiler Output	MBH	2,678	3,348	4,185	5,022	6,695	8,369	10,043	11,717	13,391	16,738	20,086	23,434	26,781	30,129	33,477	36,824	40,172	43,520	46,867	

FIRING RATE FOR BURNER SELECTION*																					
No. 2 Oil - Diesel (140,000 BTU/gal)	gal/hr	23.9	29.9	37.4	44.8	59.8	74.7	89.7	104.6	119.6	149.4	179.3	209.2	239.1	269.0	298.9	328.8	358.7	388.6	418.5	448.3
Natural Gas (1,000 BTU/ft ³)	ft ³ /hr	3,348	4,185	5,231	6,277	8,369	10,461	12,554	14,646	16,738	20,923	25,107	29,292	33,476	37,661	41,845	46,030	50,214	54,399	58,583	62,768
LP Gas (91,500 BTU/gal)	gal/hr	36.6	45.7	57.2	68.6	91.5	114.3	137.2	160.1	182.9	228.7	274.4	320.1	365.9	411.6	457.3	503.1	548.8	594.5	640.3	686.0
Heavy Oil (150,000 BTU/gal)	gal/hr	22.3	27.9	34.9	41.8	55.8	69.7	83.7	97.6	111.6	139.5	167.4	195.3	223.2	251.1	279.0	306.9	334.8	362.7	390.6	418.5

WEIGHTS																					
Empty Boiler	lb	13,854	15,556	18,671	21,069	26,456	32,090	37,345	41,977	47,832	54,822	68,574	79,255	87,075	89,808	93,269	96,410	104,808	109,329	113,026	117,436
Flooded Boiler	lb	22,264	24,593	29,926	33,380	42,626	52,629	60,684	69,355	78,412	89,898	111,435	126,488	141,770	146,490	150,739	155,366	170,799	179,187	185,327	193,237



DIMENSIONS		80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
I Boiler Length	ft	12.50	13.42	14.34	14.50	16.50	17.32	17.75	20.34	20.93	22.44	23.85	26.05	26.12	26.12	26.12	26.21	26.21	26.38	26.54	27.26
J Base Length	ft	9.84	10.73	11.38	11.58	13.12	13.81	14.14	18.11	18.60	20.05	21.52	23.56	23.56	23.56	23.56	23.72	23.72	23.79	23.88	24.51
K Burner Length (estimated) **	ft	2.40	2.40	2.85	2.85	3.64	3.64	3.64	5.41	5.25	5.38	5.38	5.09	5.31	5.31	5.31	6.92	6.92	6.86	6.76	6.69
L Total Width	ft	7.15	7.22	7.55	7.81	8.27	8.83	9.25	9.25	9.65	9.97	10.50	10.79	11.32	11.52	11.58	11.71	12.07	12.34	12.50	12.60
M Limit Width***	ft	5.97	6.04	6.36	6.63	7.09	7.64	8.07	8.07	8.46	8.79	9.32	9.61	10.14	10.33	10.40	10.53	10.89	11.15	11.32	11.42
N Base Width	ft	5.31	5.38	5.71	5.97	6.43	6.99	7.41	7.41	7.81	8.14	8.66	8.96	9.48	9.68	9.74	9.88	10.24	10.50	10.66	10.76
O Total Height (to steam outlet)	ft	6.66	6.75	7.19	7.45	7.91	8.50	8.92	8.92	9.51	9.88	10.37	10.66	11.22	11.38	11.75	11.88	12.27	12.57	12.73	12.80
P Back access clearance for maintenance	ft	2.66	2.69	2.85	2.99	3.22	3.49	3.71	3.71	3.90	4.07	4.33	4.48	4.74	4.84	4.87	4.94	5.12	5.25	5.33	5.38
Q Front access clearance for maintenance	ft	2.66	2.69	2.85	2.99	3.22	3.49	3.71	3.71	3.90	4.07	4.33	4.48	4.74	4.84	4.87	4.94	5.12	5.25	5.33	5.38
R Front flux tubes exchange clearance	ft	10.27	11.18	11.94	12.10	14.01	14.60	14.93	17.52	17.68	19.13	20.54	22.28	22.28	22.28	22.28	22.28	22.28	22.21	22.11	22.57
S Smoke stack center to back of boiler	ft	0.23	0.30	0.16	0.16	0.16	0.16	0.23	0.16	0.16	0.16	0.10	0.10	0.10	0.00	-0.10	-0.10	-0.13	-0.13	-0.10	-0.03
T Shipping height	ft	7.25	7.35	7.74	8.01	8.46	9.02	9.45	9.45	10.01	10.37	10.86	11.15	11.68	11.84	12.17	12.34	12.70	12.93	13.09	13.19
U Estimated shipping length (includes burner)	ft	15.29	16.14	17.75	17.91	20.83	21.75	22.18	26.61	27.10	28.81	30.38	32.38	32.78	32.94	33.10	34.88	34.97	35.14	35.24	35.86

CONNECTIONS																					
Smoke Stack Diameter	in	12	12	14	14	16	18	20	20	22	24	26	28	30	32	34	36	37	39	40	41
Main steam outlet diameter	in	2 1/2	2 1/2	3	3	4	4	4	4	6	6	6	6	6	8	8	8	8	10	10	10
Boiler feedwater diameter	in	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2	2	2	2	2	2	2	2.5 ****	2.5 ****	3	3	3	3	3	3
Bottom blowdown diameter	in	1	1	1	1	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
Level Control blowdown diameter	in	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Surface blowdown diameter	in	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

FOUNDATION BASES																					
Total width of base	ft	6.04	6.10	6.43	6.69	7.15	7.71	8.14	8.14	8.53	8.86	9.38	9.68	10.20	10.40	10.47	10.60	10.96	11.22	11.38	11.48
Distance between bases	ft	4.07	4.13	4.46	4.72	5.18	5.74	6.17	6.17	6.56	6.89	7.41	7.71	8.23	8.43	7.71	7.84	8.20	8.46	8.63	8.73
Width of each bases	ft	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	1.38	1.38	1.38	1.38	1.38	1.38	1.38
Length of bases	ft	10.50	11.38	12.04	12.24	13.78	14.47	14.80	18.77	19.26	20.70	22.18	24.21	24.21	24.21	24.38	24.38	24.38	24.44	24.54	25.16
Height of bases	ft	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66

* The actual firing rate depends on fuel quality, burner selection and adjustment, combustion controls, operating pressure, etc. For an estimated calculation of a specific configuration contact your Powermaster salesman.
 ** Dimensions varies based on burner selection.
 *** Width for freight clearance.
 **** The boiler shell has a 2.5 in coupling. If the boiler is acquired with feed-water piping it will be delivered with a reduction and 2 in valves.

Date: NOV 11, 2022
 Creator: SZ
 Revision: LN

Powermaster Boilers reserves the right to make modifications to this sheet without notice. All dimensions are approximate and indicative only.

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