

# Powermaster WB-A2-3P Three Pass Wet Back A2 Boilers

MAWP 150 psig



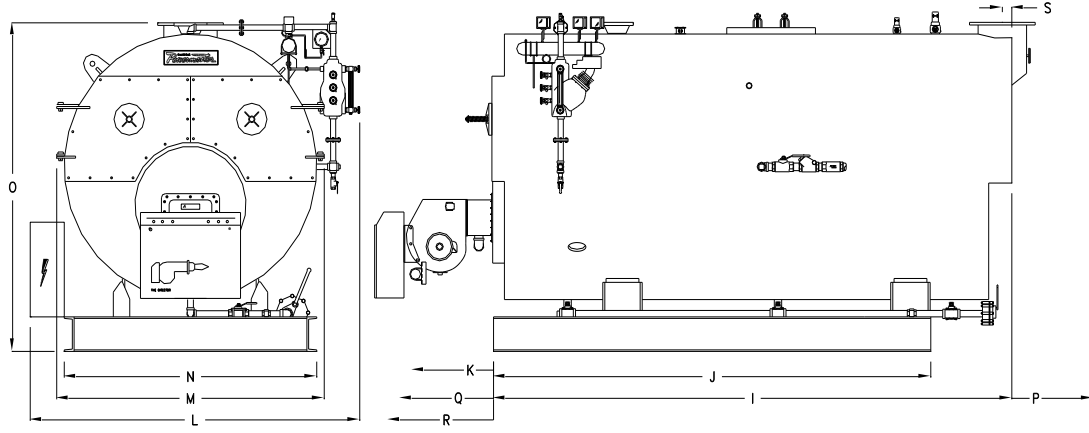
## Boiler Data Sheet

		MODEL BHP																			
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	ft <sup>2</sup>	400	500	625	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000	3,500	3,792	4,032	4,160	4,477	4,800	5,122	5,474	5,895
Boiler Output	MBTU/hr	2.68	3.35	4.18	5.02	6.70	8.37	10.04	11.72	13.39	16.74	20.09	23.43	26.78	30.13	33.48	36.82	40.17	43.52	46.87	50.22

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 <sup>3</sup> )	ft <sup>3</sup> /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	11,585	12,937	15,267	16,854	23,029	27,716	31,802	35,944	40,543	47,706	58,037	66,745	71,566	74,135	75,588	77,735	80,339	80,559	83,703	87,204
Flooded Boiler	lb	18,786	20,723	24,921	27,220	36,520	44,827	50,969	58,453	65,105	75,398	91,628	104,530	115,553	118,706	121,325	122,863	124,402	128,664	132,112	135,789

**Burner:**  
**PowerFlame NP-2 (Not Shown)**  
**Call for Burner Dimensions**



DIMENSIONS		MODEL BHP																												
		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	26.21	26.21	26.38	26.54	27.26									
J	Base Length	ft	9.84	10.73	11.38	11.58	13.06	13.81	14.14	18.11	18.60	20.05	21.46	23.56	23.56	23.56	23.79	23.79	23.85	23.95	24.57									
K	Burner Platform **	ft	None																		3.61	3.61	3.61	4.99	4.99	4.99	4.99	6.56	6.56	6.56
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	11.84	11.98	12.07	12.07								
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	10.66	10.79	10.89	10.89								
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	10.01	10.14	10.24	10.24								
O	Total Height (to steam outlet)	ft	6.66	6.75	7.10	7.35	7.74	8.33	8.73	8.73	9.32	9.71	10.20	10.50	11.02	11.19	11.29	11.84	11.98	12.11	12.27	12.27								
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	5.00	5.07	5.12	5.12								
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	5.00	5.07	5.12	5.12								
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	0.31	0.31	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.16	0.16	0.16	0.07	0.02	0.03	0.00	0.00	0.03	0.07									

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	3	3	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12
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	2	2	2	2	2	2	2
Water Softener feedwater diameter	in	3/4	3/4	3/4	3/4	3/4	3/4	1	1	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2	2	2
Bottom blowdown diameter	in	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2	2	2	2	2	2	2	2	2	2
Level Control blowdown diameter	in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Surface blowdown diameter	in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

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	10.73	10.86	10.96	10.96
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	8.50	8.63	8.76	8.89	8.99	8.99
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	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Length of bases	ft	10.50	11.38	12.04	12.24	13.71	14.47	14.80	18.77	19.26	20.70	22.11	24.21	24.21	24.21	24.21	24.44	24.44	24.61	24.61	25.23
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  
 Powermaster Boilers reserves the right to make notifications to this sheet without notice. All dimensions are approximated and indicative only.