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XID

Scotch Marine Boiler



Model PFX Boiler
70 – 3,000 HP
15 – 350 PSIG
2,415 – 103,500 PPH

Johnston Boiler Company has been leading the boiler industry in design innovation for over 135 years

- 1864 – Began building Scotch Marine boilers for marine and lumber industry
- 1890 – First Single furnace waterback 2 pass Scotch Marine boiler introduced
- 1934 – First Single furnace waterback 3 pass Scotch Marine boiler introduced
- 1965 – First 1,000 HP Scotch marine firetube boiler introduced
- 1975 – First 2,000 HP Scotch marine firetube boiler introduced
- 1980 – First Single furnace waterback 4 pass Scotch Marine boiler introduced
- 1998 – First 2,500 HP Scotch marine firetube boiler introduced

The **XID Boiler** is designed specifically for industrial process steam installations requiring extremely dry steam, high peak demand and rapidly changing loads. The **XID Boiler** has several important design advantages:

- Distance from normal water line to steam nozzle is up to 2 times that of old design, competitive boilers.
- Steam volume is 2 or more times that of old design, competitive boilers.
- Generous furnace volume provides greater primary heat transfer surface and improved burner operation.
- Waterback design eliminates costly refractory repair and thermal stress on the rear tube sheet.
- 15 year warranty provided for furnace, tube sheets, combustion chamber and flue doors.

Other features include: Full factory firetest, choice of burner selection, no proprietary parts
Pre-piped and wired fuel trains, single drop electrical connection
Bottom blowdown valves mounted and piped, water level controls,
Boiler operating, limit and firing rate controls

Typical industrial processes which would benefit by using a Johnston's **XID Boiler**:

Corrugation	Food Processing
Rendering	Grain Flaking Mills
Lumber Kilns	

*Double steam volume
Double water level to steam nozzle height*



STANDARD



Model XIV

Ratings:											
Horsepower	70	80	100	150	200	250	300	350	400	500	600
# Steam/Hr. (from & @ 212°F)	2,415	2,760	3,450	5,175	6,900	8,625	10,350	12,075	13,800	17,250	20,700
Output (1,000 BTU/Hr.)	2,343	2,678	3,348	5,021	6,695	8,369	10,043	11,716	13,390	16,738	20,085
Furnace Heat Release (BTU/Ft ³)	54,500	62,200	77,800	116,800	155,700	94,500	105,700	132,200	151,000	122,200	146,600
Furnace Heat Release, Including CC	39,700	45,400	56,700	85,000	113,400	68,300	81,900	95,600	109,200	94,600	113,600
Steam Storage (Ft ³)	72	72	72	72	72	121	121	121	121	156	156
Steam Release Area (Ft ²)	56	56	56	56	56	88	88	88	88	116	116
Height - NWL to Steam Nozzle (In.)	21	21	21	21	21	23	23	23	23	23	23

Fuel Consumption:											
Natural Gas (Ft ³ /Hr.)	2,940	3,360	4,200	6,300	8,400	10,500	12,600	14,700	16,800	21,000	25,200
No. 2 Fuel Oil (Gal./Hr.)	21	24	30	45	60	75	90	105	120	150	180

Weights:											
Shipping Weight - 150 PSI	20,800	20,800	20,800	20,800	20,800	33,000	33,000	33,000	33,000	49,600	49,600
Operating Weight NWL - 150 PSI	26,800	26,800	26,800	26,800	26,800	46,800	46,800	46,800	46,800	72,300	72,300

Ratings:											
Horsepower	700	800	900	1000	1200	1500	1600	1800	2000	2500	3000
# Steam/Hr. (from & @ 212°F)	24,150	27,600	31,050	34,500	41,400	51,750	55,200	62,100	69,000	86,250	103,500
Output (1,000 BTU/Hr.)	23,433	26,780	30,128	33,475	40,170	50,213	53,560	60,255	66,950	83,688	100,425
Furnace Heat Release (BTU/Ft ³)	91,070	130,100	146,400	117,800	141,300	176,600	188,380	155,000	172,200	215,300	258,300
Furnace Heat Release, Including CC	82,320	104,500	117,600	96,900	116,300	145,600	155,310	127,360	141,500	177,000	204,500
Steam Storage (Ft ³)	240	240	240	218	218	218	218	223	223	223	378
Steam Release Area (Ft ²)	150	150	150	162	162	162	162	193	193	193	214
Height - NWL to Steam Nozzle (In.)	27	27	27	23	23	23	23	22	22	22	30

Fuel Consumption:											
Natural Gas (Ft ³ /Hr.)	29,400	33,600	37,800	42,000	50,400	63,000	67,200	75,600	84,000	105,000	126,000
No. 2 Fuel Oil (Gal./Hr.)	210	240	270	300	360	450	480	540	600	750	900

Weights:											
Shipping Weight - 150 PSI	58,800	58,800	58,800	67,800	67,800	67,800	67,800	84,800	84,800	84,800	95,800
Operating Weight NWL - 150 PSI	88,200	88,200	88,200	101,900	101,900	101,900	101,900	131,200	131,200	131,200	140,200