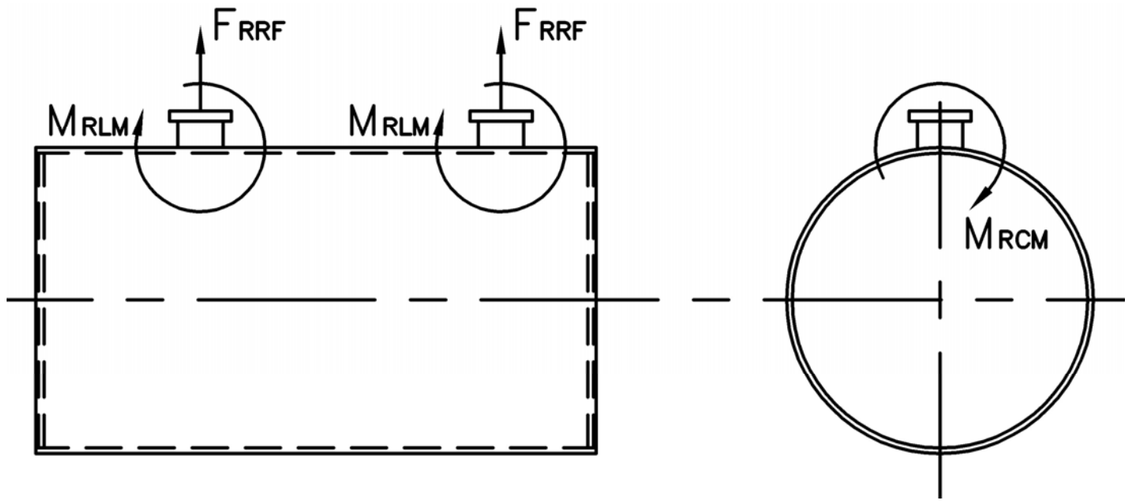
MODEL: PFTX 800-4

Nozzle Loadings

Maximum Allowable Load on Outlet & Return Nozzles				
	30# Design	60# Design	125# Design	160# Design
F_{RRF}, lb	4,985	3,865	5,260	6,590
M_{RCM}, in-lb	36,915	36,915	73,425	92,710
M_{RLM}, in-lb	48,235	37,405	58,470	70,870



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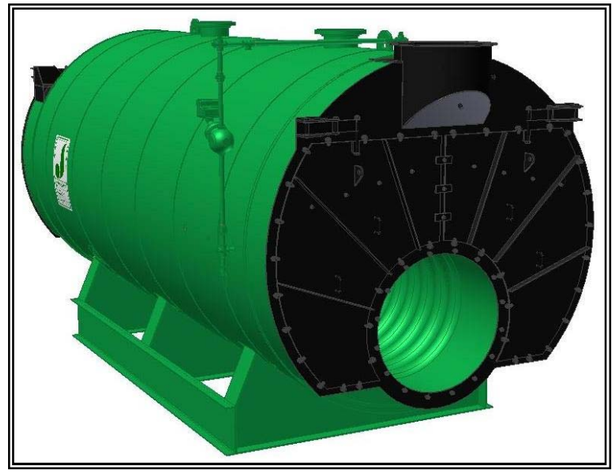
Printed Feb. 2008

MODEL: PFTX 800-4

4-Pass Hot Water Packaged Firetube Boiler



Ratings & Performance Data

Horsepower 800		Natural Gas Flow, SCFH (1,000 Btu/ft^3)**	30,952
Total Heating Surface, ft^2	4,041	Combustion Air (15% Excess), SCFM***	5,664
Furnace Outside Diameter, in	49.5	Flue Gas Flow Rate, lb/hr***	26,992
Furnace Heat Release Rate, Btu/ft^3 hr**	152,000	Stack Flue Gas Velocity, ft/min***	1,892
Total Combustion Volume, ft^3	267.5	#2 Oil Flow, gal/hr (140,000 Btu/gal)**	213.3
Total Heat Release Rate, Btu/ft^3 hr**	116,000	#6 Oil Flow, gal/hr (150,000 Btu/gal)**	197.4
Water Content Flooded, gal	5,553	Flue Gas Side Pressure Drop, in. H_2O	7.0
Approx. Dry Weight 30#, lb	53,500	Approx. Operating Weight 30#, lb	98,700
Approx. Dry Weight 60#, lb	53,600	Approx. Operating Weight 60#, lb	98,800
Approx. Dry Weight 125#, lb	55,500	Approx. Operating Weight 125#, lb	100,700

Performance Data

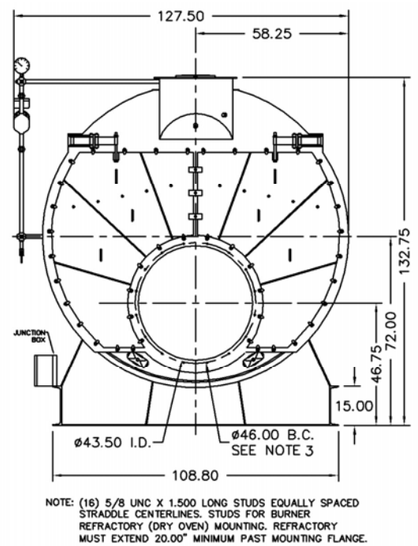
Operating Temperature (F)	Natural Gas		#2 Oil		#6 Oil	
	Stack Temp (F)	%Eff	Stack Temp	%Eff	Stack Temp (F)	%Eff
180	214	87.0	222	90.2	228	90.9
200	234	86.5	242	89.7	248	90.5
220	254	86.0	261	89.2	267	90.0
240	273	85.6	281	88.7	287	89.5

*Based on 20°F difference in supply/return, ** Values calculated at 200°F operating temperature, ***Calculated Firing Natural Gas

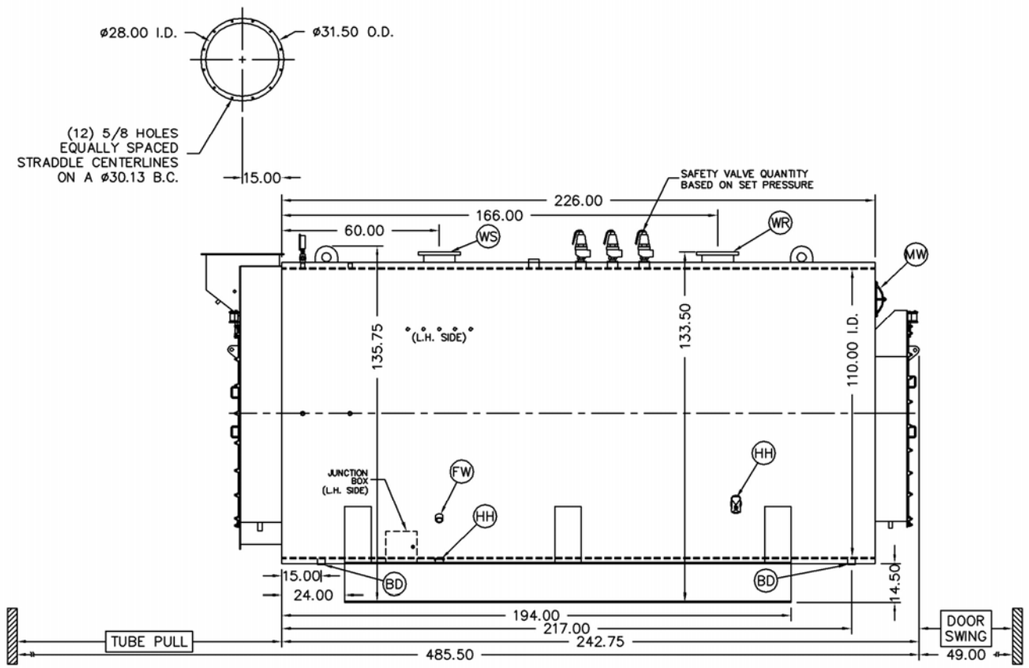
Drawings - 4-Pass Hot Water Packaged Firetube Boiler

MODEL: PFTX 800-4

Connection & Opening Schedule			
Conn.	Description	Type	Qty
FW	Feedwater Inlet	2.00 FNPT	2
WS	Water Supply	10.00 150#RF	1
WR	Water Return	10.00 150#RF	1
DO	Drain Outlet	2.00 FNPT	2
MW	Manway	12 X 16	1
HH	Hand Hole	4 X 6	7
Supply and return outlets ASME flanged drilling			

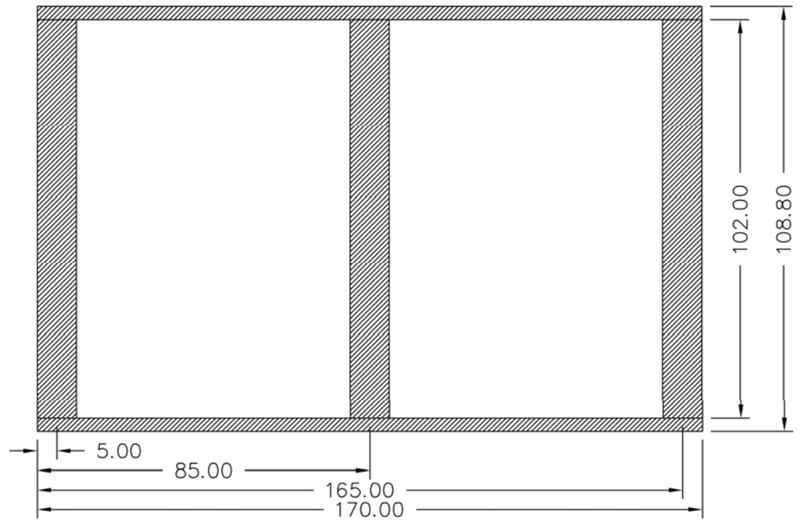


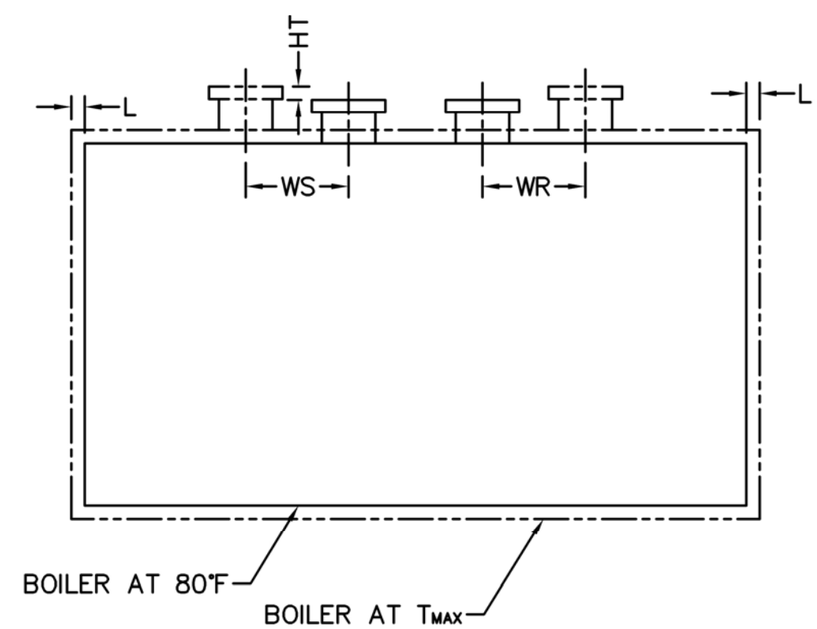
NOTE: (16) 5/8 UNC X 1.500 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 20.00" MINIMUM PAST MOUNTING FLANGE.



Notes:
30# Hot Water design shown, all dimensions given in inches.
Fuel piping and/or optional boiler trim may increase overall width.
Specifications subject to change to incorporate engineering advances.

Base Diagram





Thermal Expansion				
Metal T_{MAX} (F)	180	200	220	240
L (in)	0.068	0.081	0.095	0.108
WS (in)	0.032	0.038	0.045	0.051
WR (in)	0.032	0.038	0.045	0.051
HT (in)	0.066	0.080	0.093	0.106