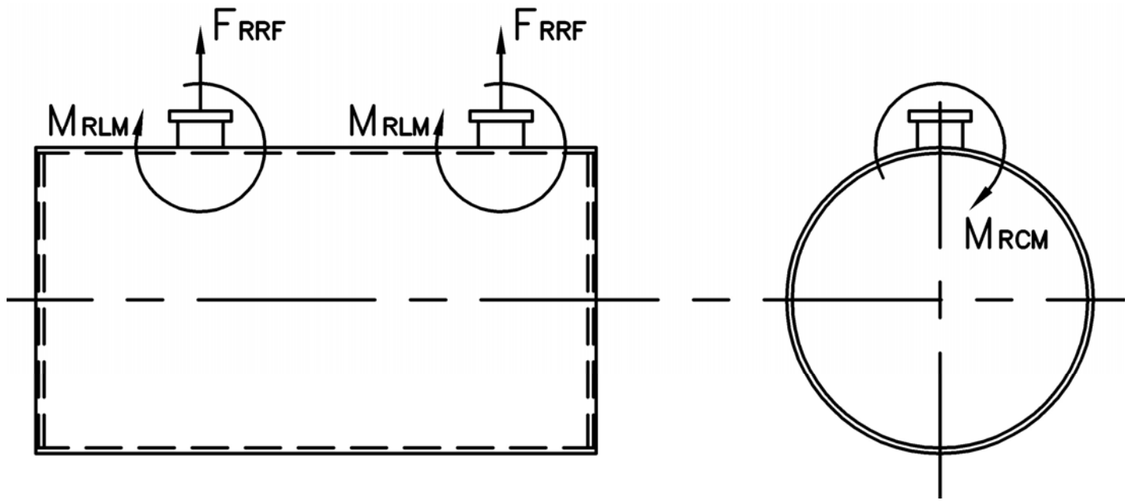
MODEL: PFTX 350-4

Nozzle Loadings

Maximum Allowable Load on Outlet & Return Nozzles				
	30# Design	60# Design	125# Design	160# Design
F_{RRF}, lb	5,890	4,890	3,290	4,340
M_{RCM}, in-lb	33,015	33,015	33,015	53,215
M_{RLM}, in-lb	45,365	37,675	25,350	39,550



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JOHNSTON BOILER COMPANY

300 Pine Street
P.O. Box 300
Ferrysburg, MI 49409-0300
Telephone: (616) 842-5050
Net: www.johnstonboiler.com

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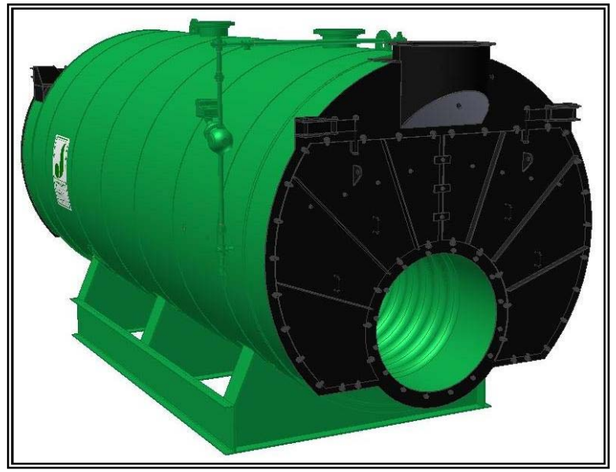
MODEL: PFTX 350-4

4-Pass Hot Water Packaged Firetube Boiler



Ratings & Performance Data

Horsepower 350		Natural Gas Flow, SCFH (1,000 Btu/ft^3)**	13,660
Total Heating Surface, ft^2	1,756	Combustion Air (15% Excess), SCFM***	2,500
Furnace Outside Diameter, in	40.0	Flue Gas Flow Rate, lb/hr***	11,912
Furnace Heat Release Rate, Btu/ft^3 hr**	147,000	Stack Flue Gas Velocity, ft/min***	1,703
Total Combustion Volume, ft^3	134.3	#2 Oil Flow, gal/hr (140,000 Btu/gal)**	94.2
Total Heat Release Rate, Btu/ft^3 hr**	102,000	#6 Oil Flow, gal/hr (150,000 Btu/gal)**	87.2
Water Content Flooded, gal	2,637	Flue Gas Side Pressure Drop, in. H_2O	3.9
Approx. Dry Weight 30#, lb	24,200	Approx. Operating Weight 30#, lb	46,700
Approx. Dry Weight 60#, lb	24,300	Approx. Operating Weight 60#, lb	46,800
Approx. Dry Weight 125#, lb	25,300	Approx. Operating Weight 125#, lb	47,800

Performance Data

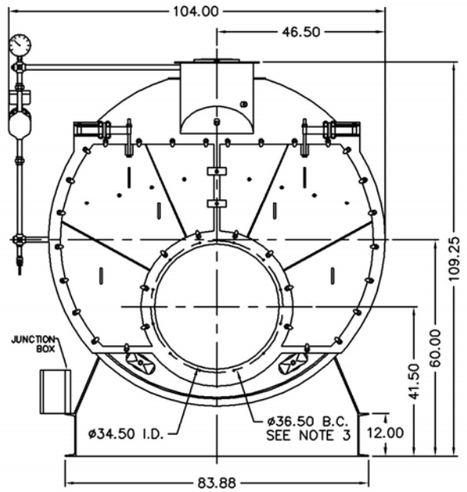
Operating Temperature (F)	Natural Gas		#2 Oil		#6 Oil	
	Stack Temp (F)	%Eff	Stack Temp	%Eff	Stack Temp (F)	%Eff
180	242	86.3	254	89.4	261	90.1
200	262	85.8	274	88.9	281	89.6
220	275	85.2	284	88.3	321	89.1
240	301	84.8	313	87.9	321	88.6

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

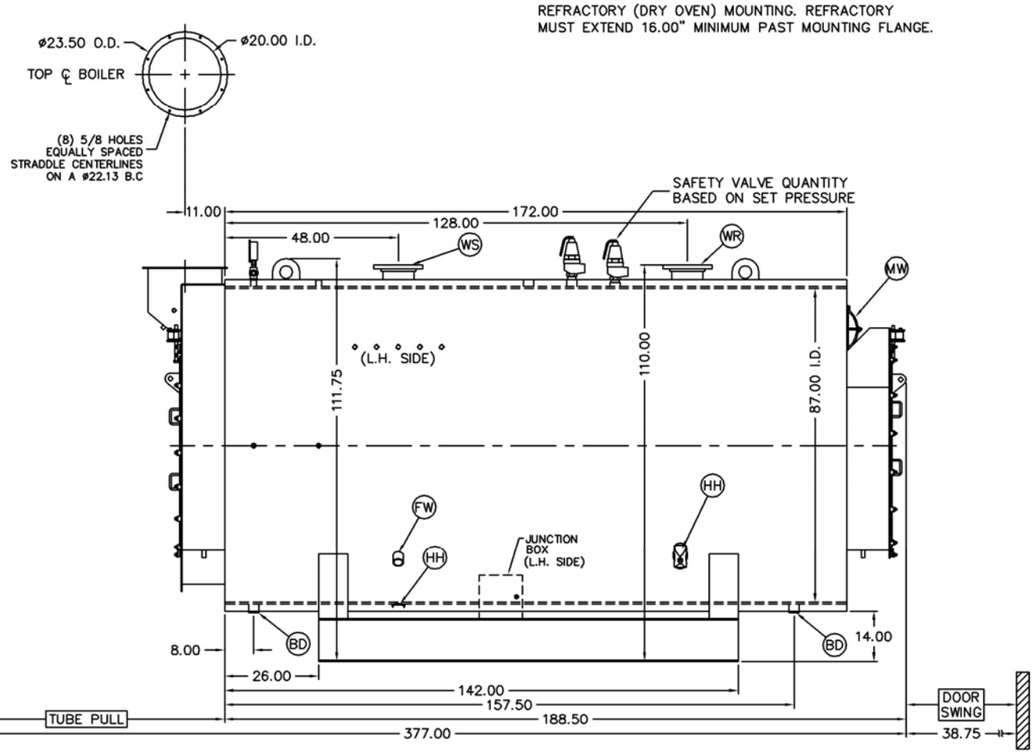
Drawings - 4-Pass Hot Water Packaged Firetube Boiler

MODEL: PFTX 350-4

Connection & Opening Schedule			
Conn.	Description	Type	Qty
FW	Feedwater Inlet	1.50 FNPT	2
WS	Water Supply	8.00 150#RF	1
WR	Water Return	8.00 150#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			

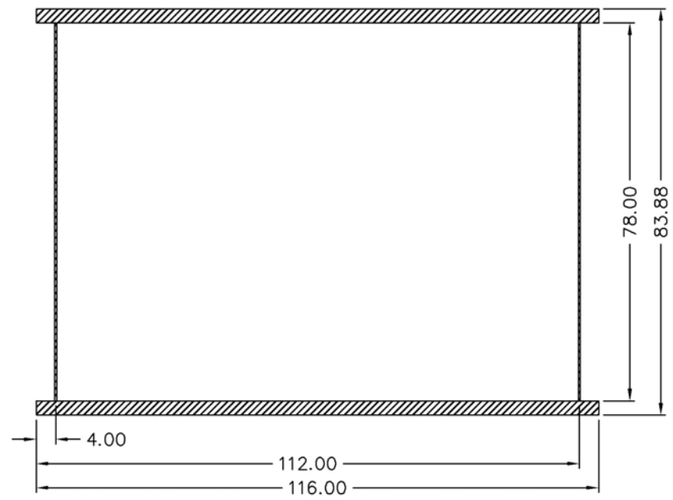


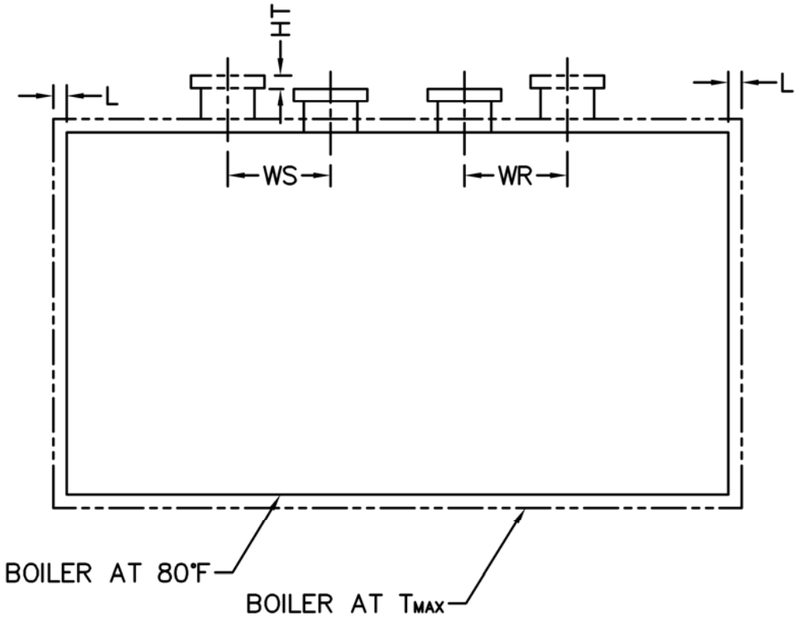
NOTE: (12) 1/2 UNC X 1.375 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 16.00" MINIMUM PAST MOUNTING FLANGE.



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)	0.052	0.062	0.072	0.083
WS (in)	0.023	0.027	0.032	0.036
WR (in)	0.025	0.030	0.035	0.040
HT (in)	0.052	0.063	0.073	0.084