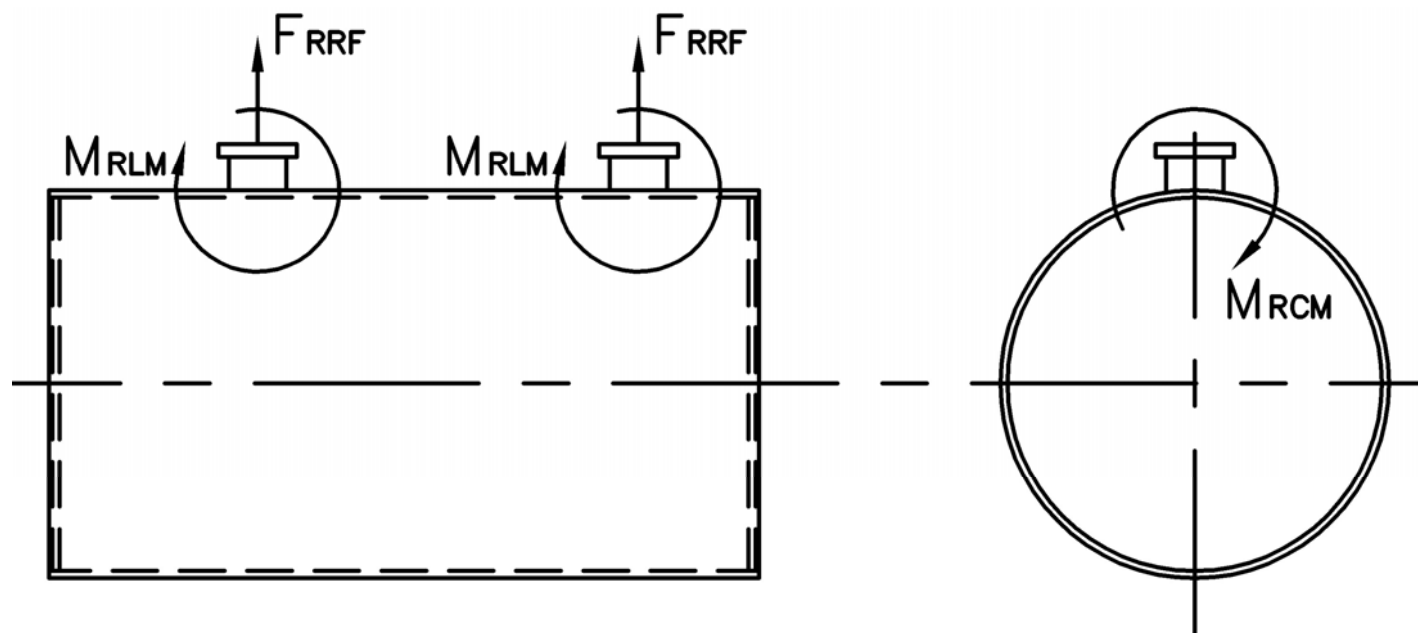


# MODEL: PFTX 200-4

## Nozzle Loadings

Maximum Allowable Load on Outlet & Return Nozzles				
	30# Design	60# Design	125# Design	160# Design
$F_{RRF}$ , lb	4,595	3,885	2,530	3,490
$M_{RCM}$ , in-lb	23,115	23,115	23,115	33,950
$M_{RLM}$ , in-lb	31,590	26,730	17,415	26,715



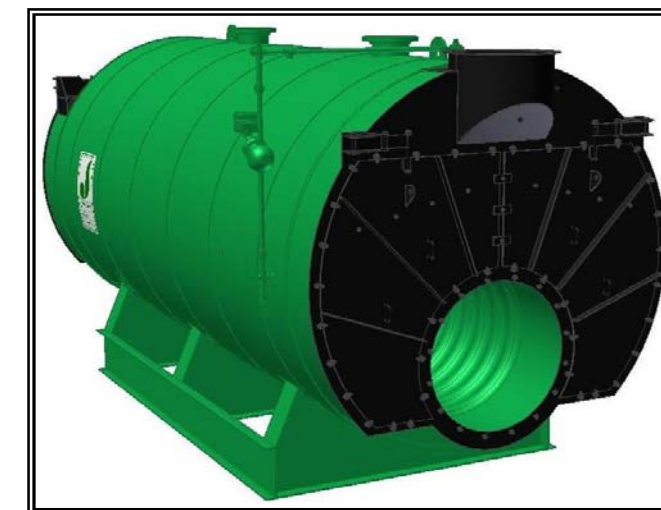
Distributed By:



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

# MODEL: PFTX 200-4

## 4-Pass Hot Water Packaged Firetube Boiler



## Ratings & Performance Data

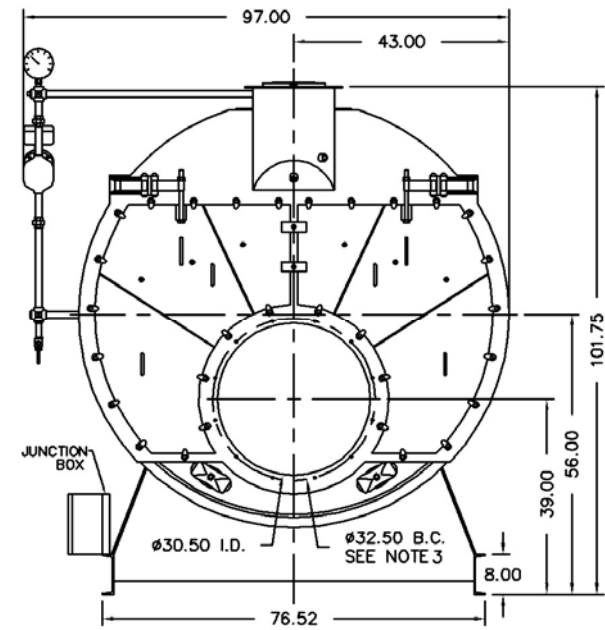
Horsepower 200		Natural Gas Flow, SCFH (1,000 Btu/ft <sup>3</sup> )**	7,839
Total Heating Surface, ft <sup>2</sup>	1,035	Combustion Air (15% Excess), SCFM***	1,434
Furnace Outside Diameter, in	36.0	Flue Gas Flow Rate, lb/hr***	6,836
Furnace Heat Release Rate, Btu/ft <sup>3</sup> hr**	160,000	Stack Flue Gas Velocity, ft/min***	1,554
Total Combustion Volume, ft <sup>3</sup>	77.3	#2 Oil Flow, gal/hr (140,000 Btu/gal)**	54.1
Total Heat Release Rate, Btu/ft <sup>3</sup> hr**	101,000	#6 Oil Flow, gal/hr (150,000 Btu/gal)**	50.1
Water Content Flooded, gal	1,622	Flue Gas Side Pressure Drop, in. H <sub>2</sub> O	3.1
Approx. Dry Weight 30#, lb	16,900	Approx. Operating Weight 30#, lb	30,800
Approx. Dry Weight 60#, lb	17,000	Approx. Operating Weight 60#, lb	30,900
Approx. Dry Weight 125#, lb	17,500	Approx. Operating Weight 125#, lb	31,400

Operating Temperature (F)	Natural Gas		#2 Oil		#6 Oil	
	Stack Temp (F)	%Eff	Stack Temp	%Eff	Stack Temp (F)	%Eff
180	255	85.9	268	88.9	275	89.7
200	275	85.4	288	88.5	295	89.2
220	294	84.9	307	88.0	315	88.7
240	314	84.4	326	87.5	335	88.2

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

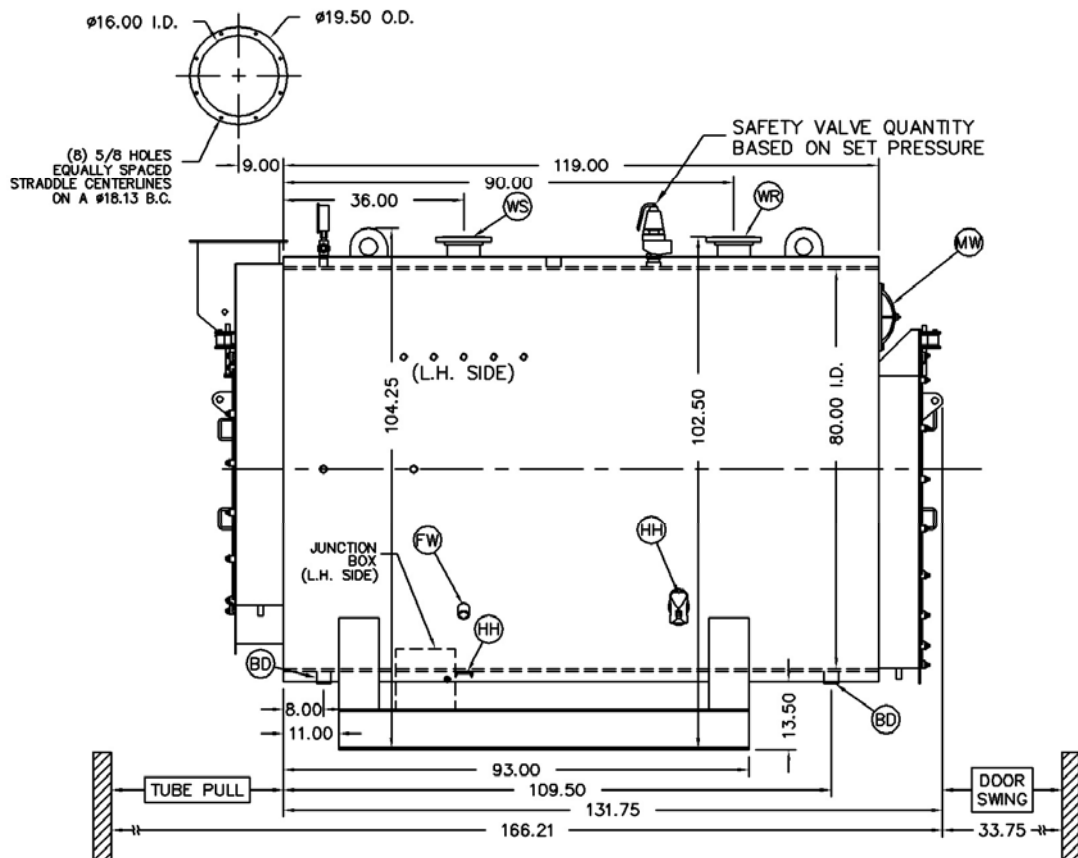
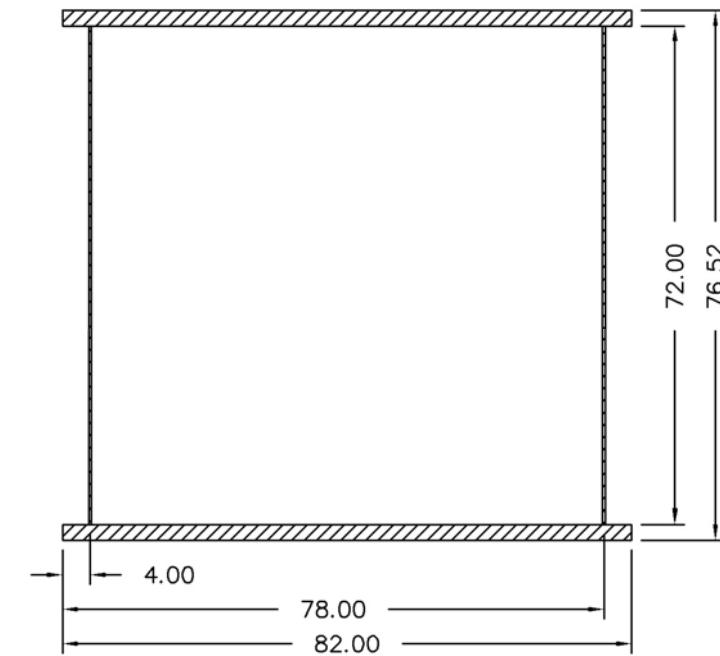
Connection & Opening Schedule			
Conn.	Description	Type	Qty
FW	Feedwater Inlet	1.50 FNPT	2
WS	Water Supply	6.00 150#RF	1
WR	Water Return	6.00 150#RF	1
DO	Drain Outlet	2.00 FNPT	2
MW	Manway	12 X 16	1
HH	Hand Hole	4 X 6	6

Supply and return outlets ASME flanged drilling

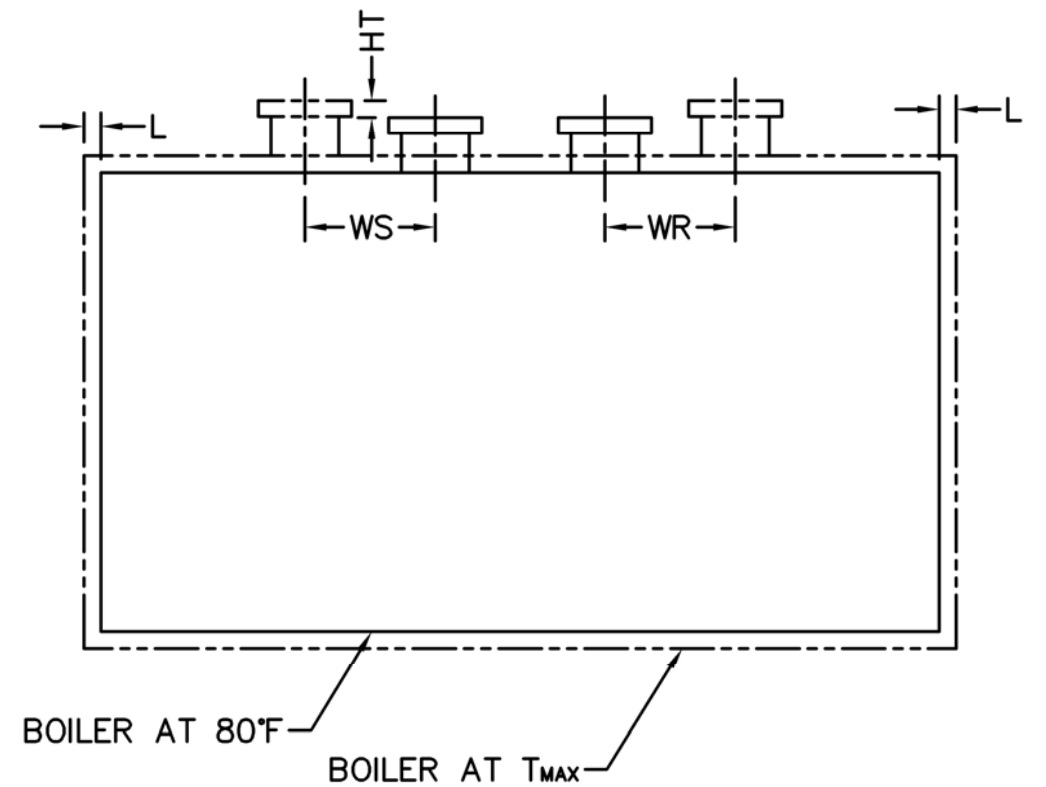


NOTE: (8) 1/2 UNC X 1.375 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 13.75" MINIMUM PAST MOUNTING FLANGE.

Base Diagram



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.



Thermal Expansion				
Metal T <sub>MAX</sub> (F)	180	200	220	240
L (in)	0.036	0.043	0.050	0.057
WS (in)	0.014	0.017	0.020	0.023
WR (in)	0.018	0.022	0.026	0.029
HT (in)	0.048	0.058	0.068	0.077