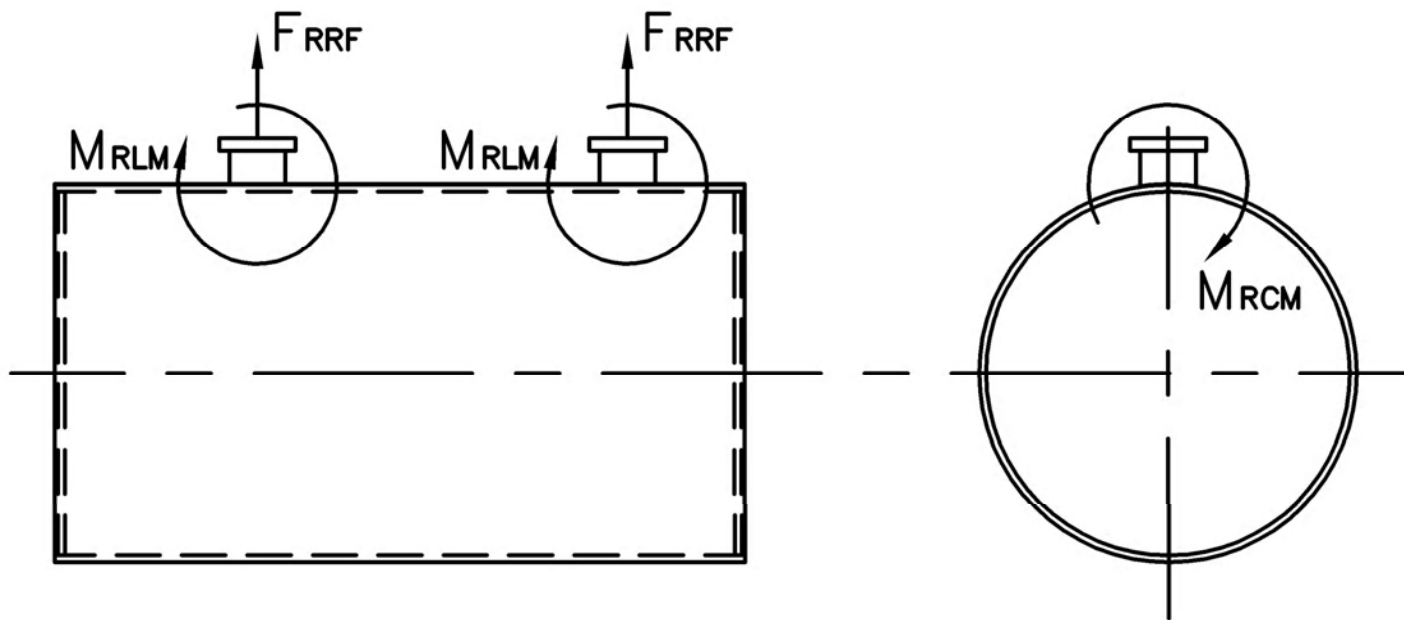


# MODEL: PFTX 100-4

## Nozzle Loadings

Maximum Allowable Load on Outlet & Return Nozzles				
	30# Design	60# Design	125# Design	160# Design
$F_{RRF}$ , lb	2,200	1,865	1,230	2,100
$M_{RCM}$ , in-lb	8,380	8,380	8,380	14,645
$M_{RLM}$ , in-lb	12,130	10,190	6,720	10,495



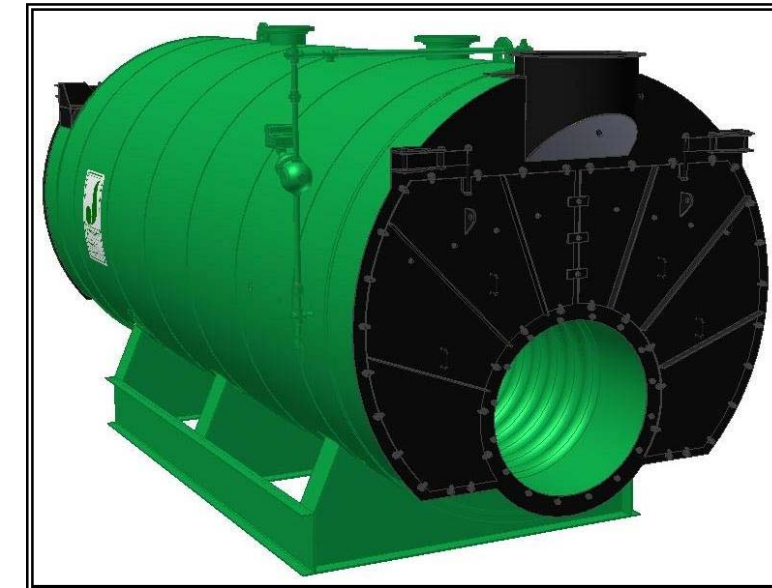
Distributed By:



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

# MODEL: PFTX 100-4

## 4-Pass Hot Water Packaged Firetube Boiler



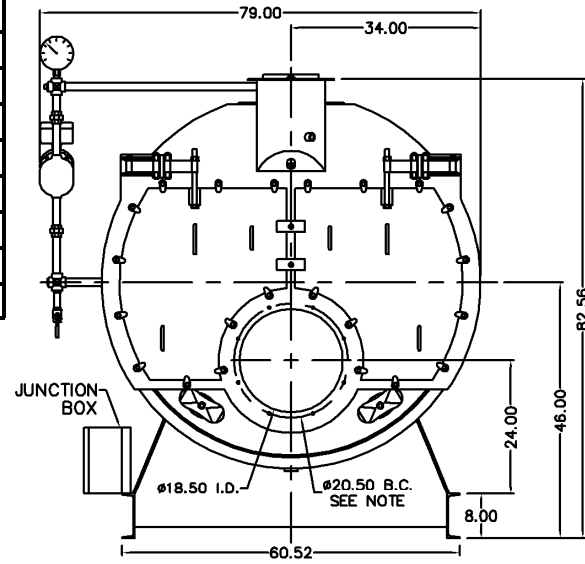
## Ratings & Performance Data

Horsepower 100		Natural Gas Flow, SCFH (1,000 Btu/ft <sup>3</sup> )**	3,929
Total Heating Surface, ft <sup>2</sup>	507	Combustion Air (15% Excess), SCFM***	719
Furnace Outside Diameter, in	24.0	Flue Gas Flow Rate, lb/hr***	3,427
Furnace Heat Release Rate, Btu/ft <sup>3</sup> hr**	206,000	Stack Flue Gas Velocity, ft/min***	1,393
Total Combustion Volume, ft <sup>3</sup>	33.8	#2 Oil Flow, gal/hr (140,000 Btu/gal)**	27.1
Total Heat Release Rate, Btu/ft <sup>3</sup> hr**	116,000	#6 Oil Flow, gal/hr (150,000 Btu/gal)**	25.0
Water Content Flooded, gal	982	Flue Gas Side Pressure Drop, in. H <sub>2</sub> O	2.8
Approx. Dry Weight 30#, lb	11,900	Approx. Operating Weight 30#, lb	20,100
Approx. Dry Weight 60#, lb	12,000	Approx. Operating Weight 60#, lb	20,200
Approx. Dry Weight 125#, lb	12,400	Approx. Operating Weight 125#, lb	20,600

Operating Temperature (F)	Natural Gas		#2 Oil		#6 Oil	
	Stack Temp (F)	%Eff	Stack Temp (F)	%Eff	Stack Temp (F)	%Eff
180	260	85.7	273	88.7	270	89.7
200	279	85.2	292	88.2	289	89.2
220	298	84.7	311	87.7	309	88.7
240	317	84.2	330	87.2	328	88.2

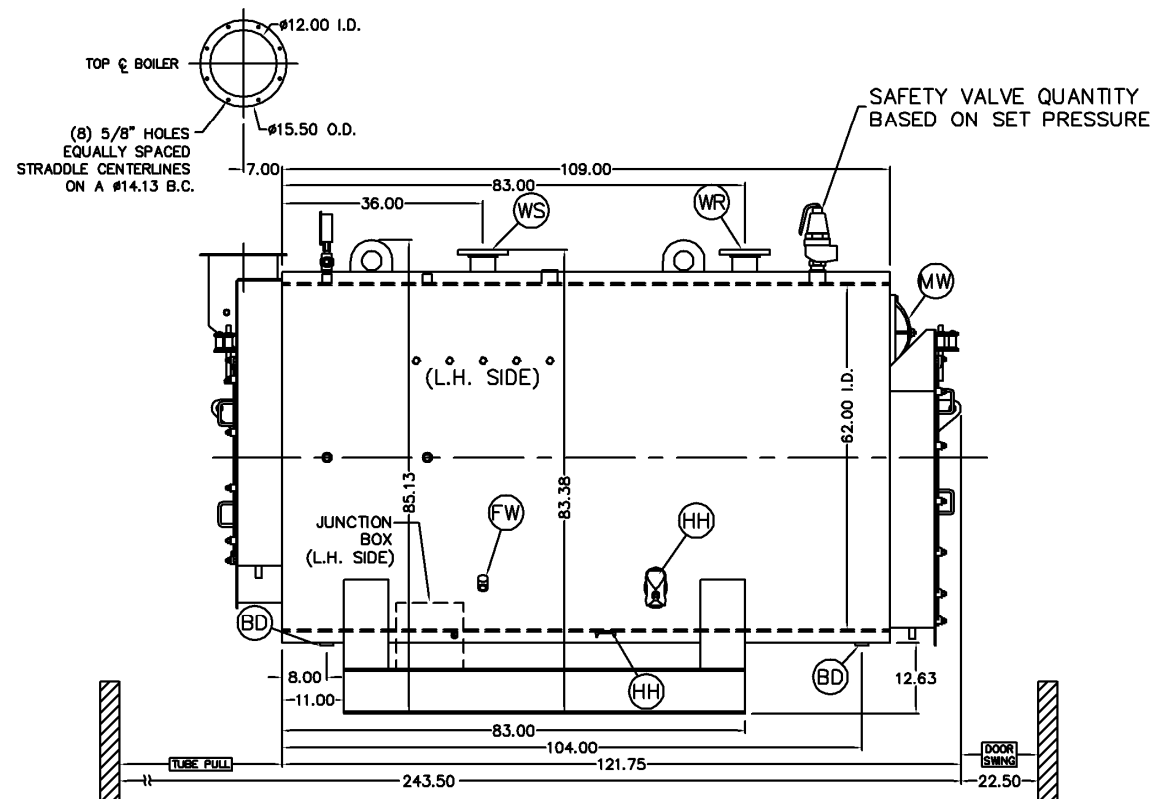
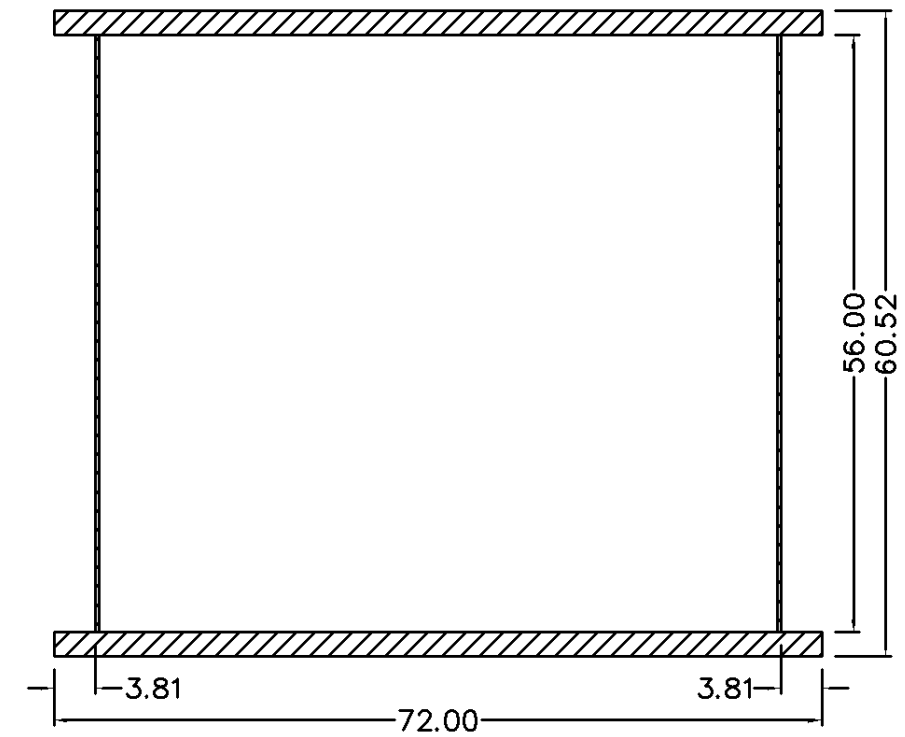
\*Based on 20°F difference in supply/return, \*\* Values calculated at 200°F operating temperature, \*\*\*Calculated Firing Natural Gas

Connection & Opening Schedule			
Conn.	Description	Type	Qty
FW	Feedwater Inlet	1.00 FNPT	2
WS	Water Supply	4.00 150#RF	1
WR	Water Return	4.00 150#RF	1
DO	Drain Outlet	1.50 FNPT	2
MW	Manway	12 X 16	1
HH	Hand Hole	4 X 6	6
Supply and return outlets ASME flanged drilling			

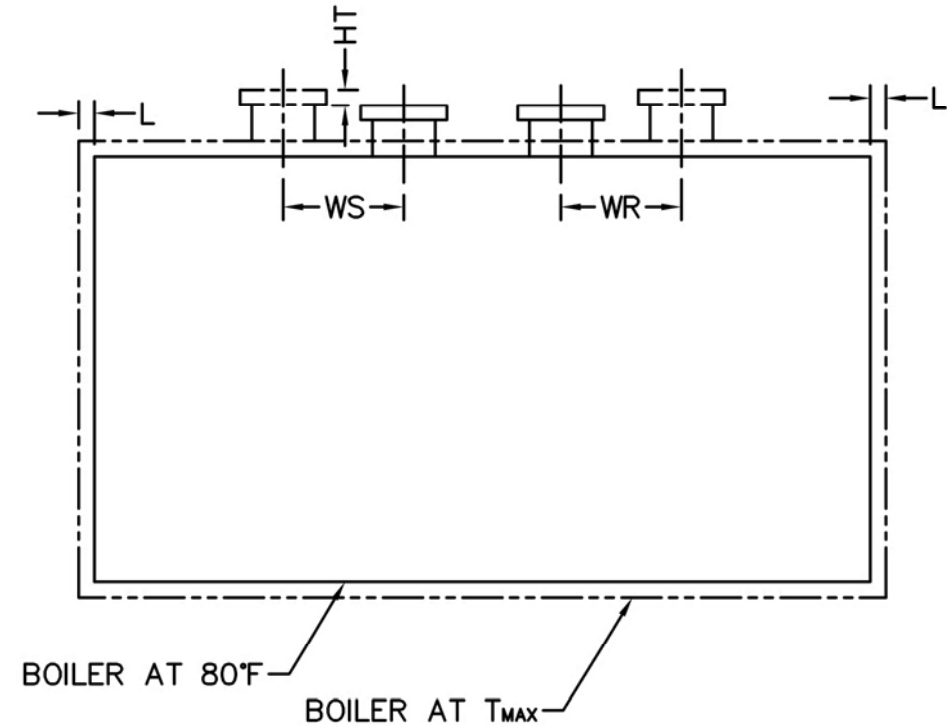


NOTE: (8) 1/2 UNC X 1.375 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 12.25" MINIMUM PAST MOUNTING FLANGE.

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)	0.033	0.039	0.046	0.052
WS (in)	0.011	0.013	0.016	0.018
WR (in)	0.017	0.021	0.024	0.027
HT (in)	0.037	0.045	0.052	0.060