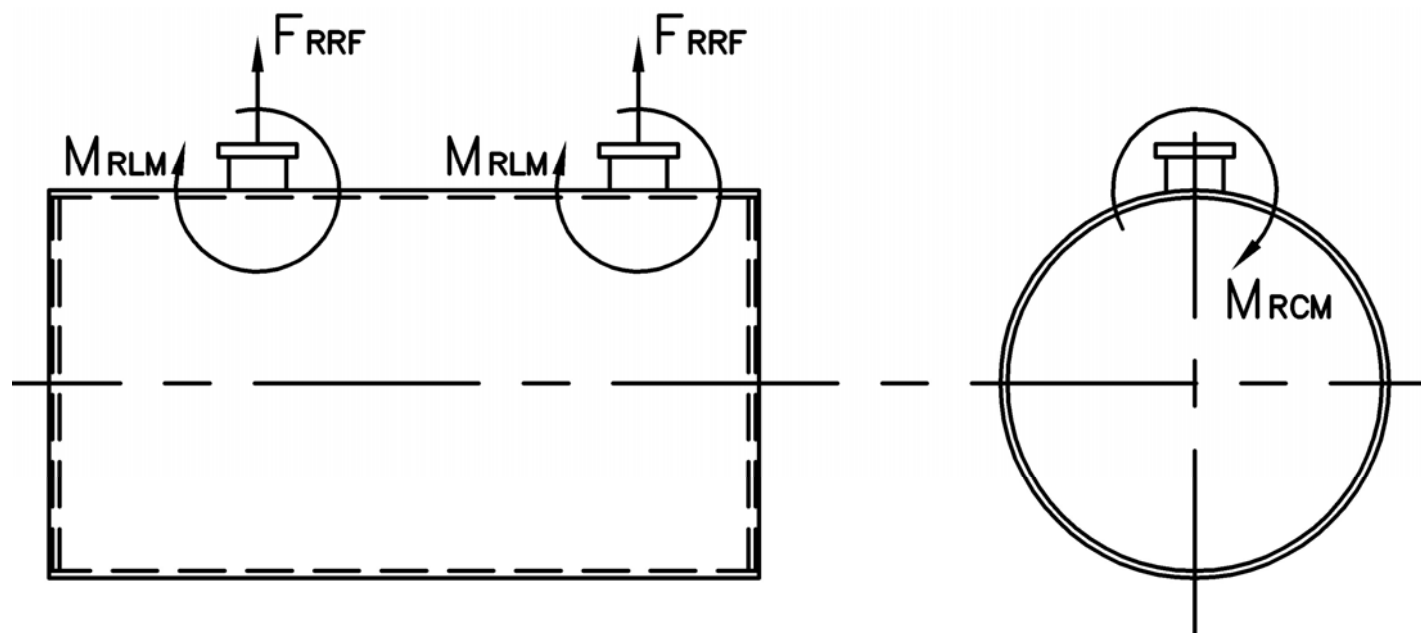


# MODEL: PFTX 500-4

## Nozzle Loadings

Maximum Allowable Load on Outlet & Return Nozzles				
	30# Design	60# Design	125# Design	160# Design
$F_{RRF}$ , lb	5,210	4,245	4,935	7,605
$M_{RCM}$ , in-lb	36,000	36,000	69,860	94,410
$M_{RLM}$ , in-lb	56,925	46,350	57,485	76,655



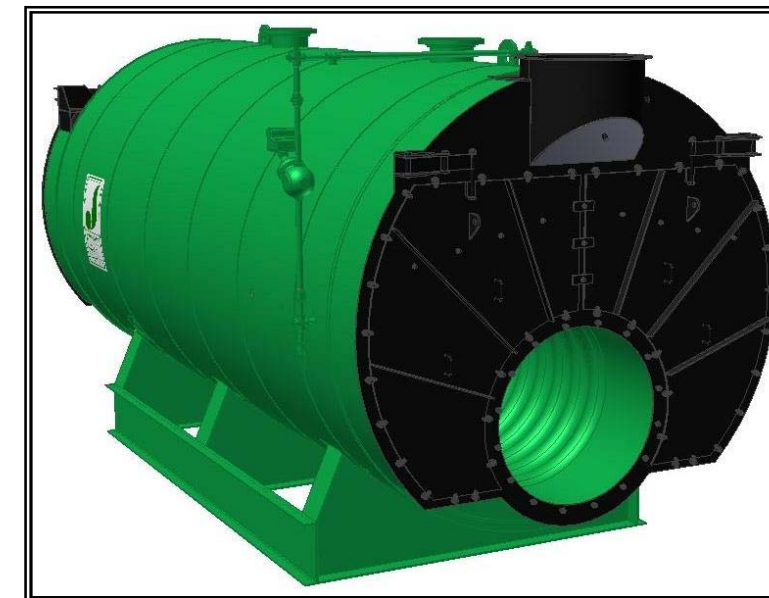
Distributed By:



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

# MODEL: PFTX 500-4

## 4-Pass Hot Water Packaged Firetube Boiler



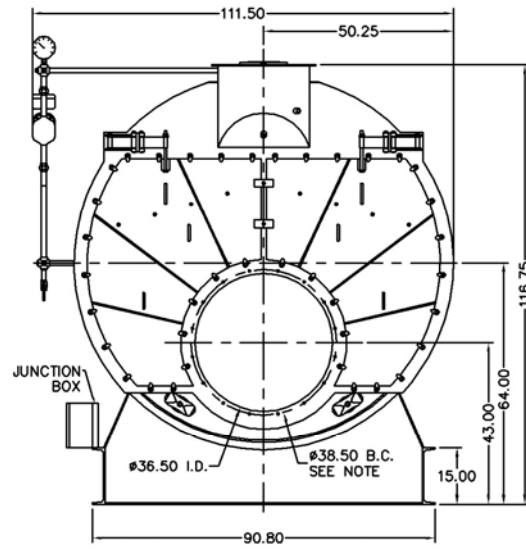
## Ratings & Performance Data

Horsepower 500		Natural Gas Flow, SCFH (1,000 Btu/ft <sup>3</sup> )**	19,379
Total Heating Surface, ft <sup>2</sup>	2,556	Combustion Air (15% Excess), SCFM***	3,546
Furnace Outside Diameter, in	42.0	Flue Gas Flow Rate, lb/hr***	16,899
Furnace Heat Release Rate, Btu/ft <sup>3</sup> hr**	149,000	Stack Flue Gas Velocity, ft/min***	1,624
Total Combustion Volume, ft <sup>3</sup>	179.8	#2 Oil Flow, gal/hr (140,000 Btu/gal)**	133.5
Total Heat Release Rate, Btu/ft <sup>3</sup> hr**	108,000	#6 Oil Flow, gal/hr (150,000 Btu/gal)**	123.7
Water Content Flooded, gal	3,895	Flue Gas Side Pressure Drop, in. H <sub>2</sub> O	6.1
Approx. Dry Weight 30#, lb	38,200	Approx. Operating Weight 30#, lb	70,300
Approx. Dry Weight 60#, lb	38,400	Approx. Operating Weight 60#, lb	70,500
Approx. Dry Weight 125#, lb	40,100	Approx. Operating Weight 125#, lb	72,200

Operating Temperature (F)	Natural Gas		#2 Oil		#6 Oil	
	Stack Temp (F)	%Eff	Stack Temp	%Eff	Stack Temp (F)	%Eff
180	219	86.9	228	90.0	237	90.7
200	239	86.4	247	89.5	257	90.2
220	259	85.9	267	89.0	277	89.7
240	279	85.4	287	88.5	297	89.2

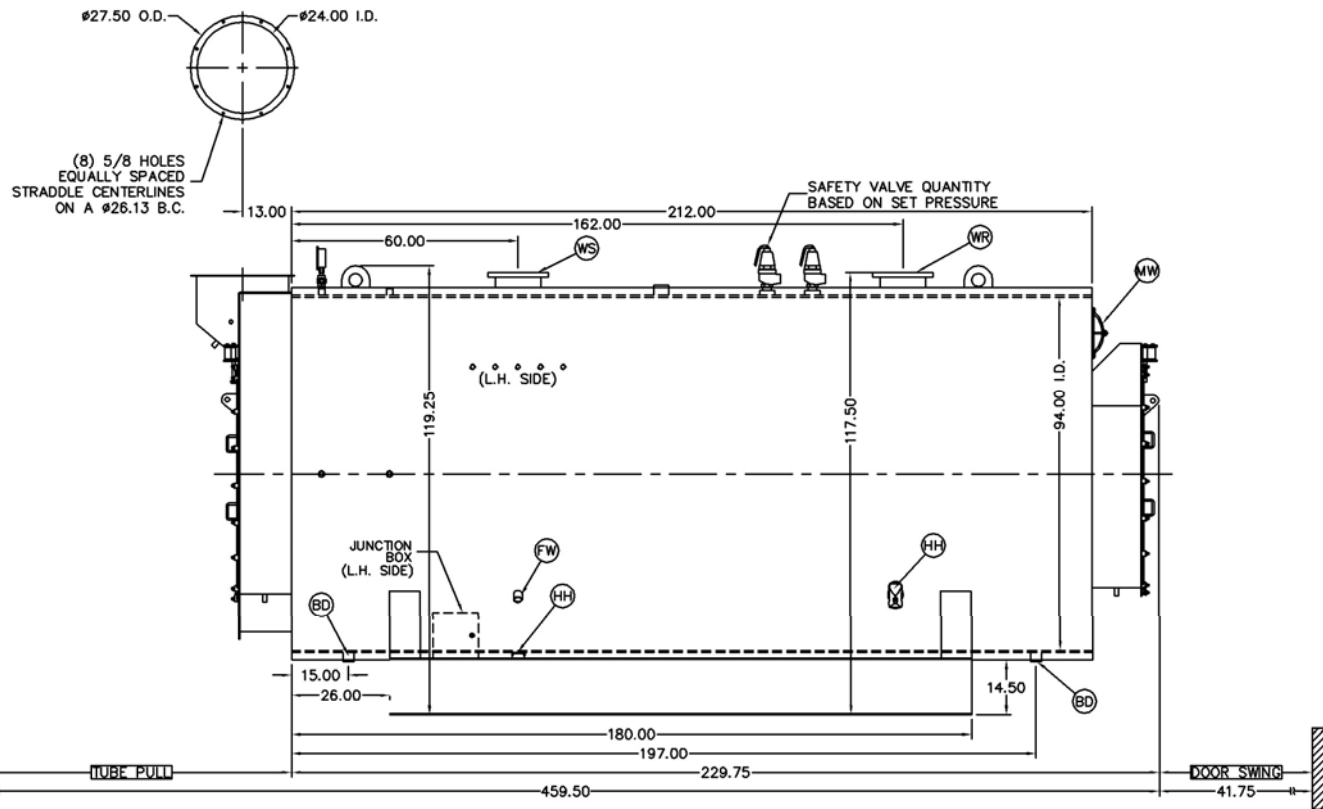
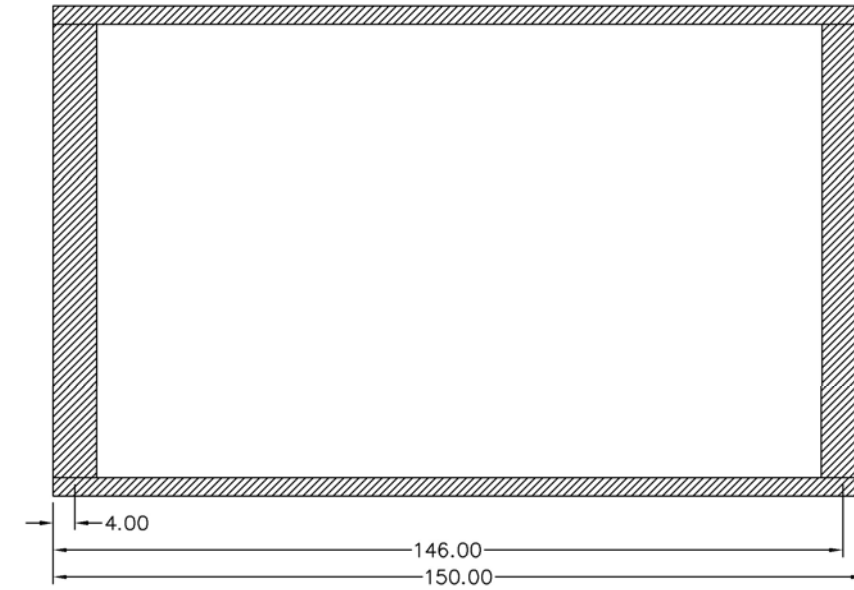
\*Based on 20°F difference in supply/return, \*\* Values calculated at 200°F operating temperature, \*\*\*Calculated Firing Natural Gas

Connection & Opening Schedule			
Conn.	Description	Type	Qty
FW	Feedwater Inlet	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			

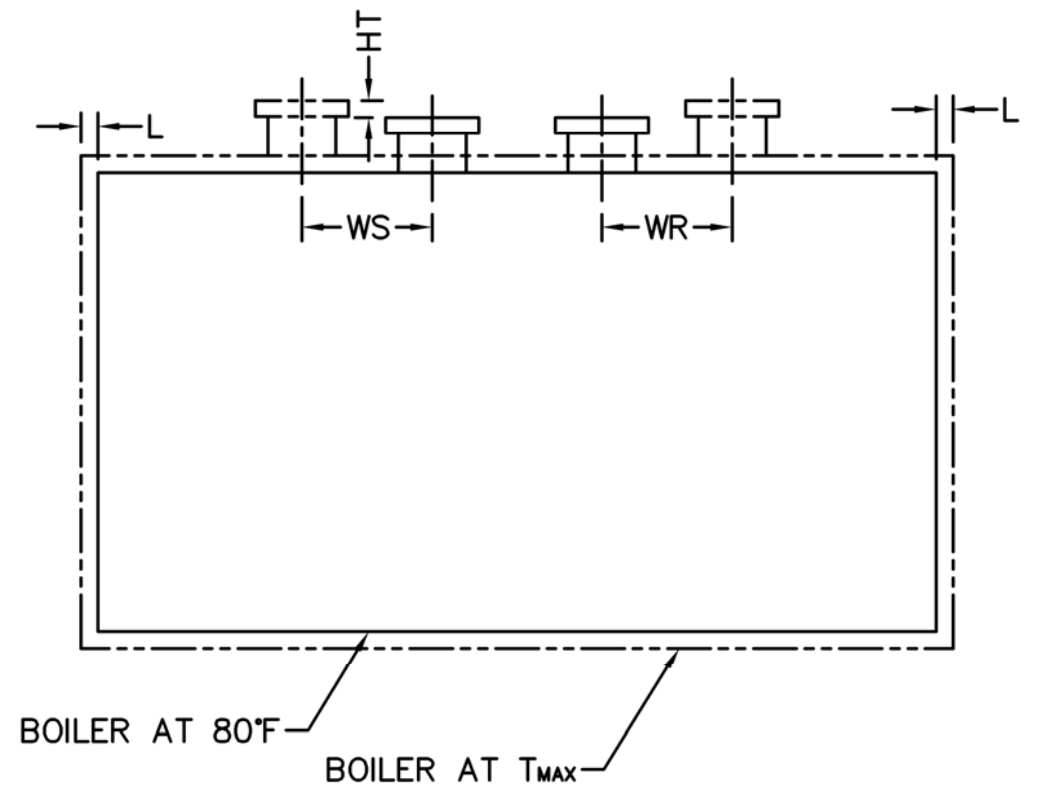


NOTE: (16) 1/2 UNC X 1.50 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 18.00" MINIMUM PAST MOUNTING FLANGE.

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)	0.064	0.076	0.089	0.102
WS (in)	0.028	0.033	0.039	0.044
WR (in)	0.034	0.040	0.047	0.054
HT (in)	0.057	0.068	0.079	0.091