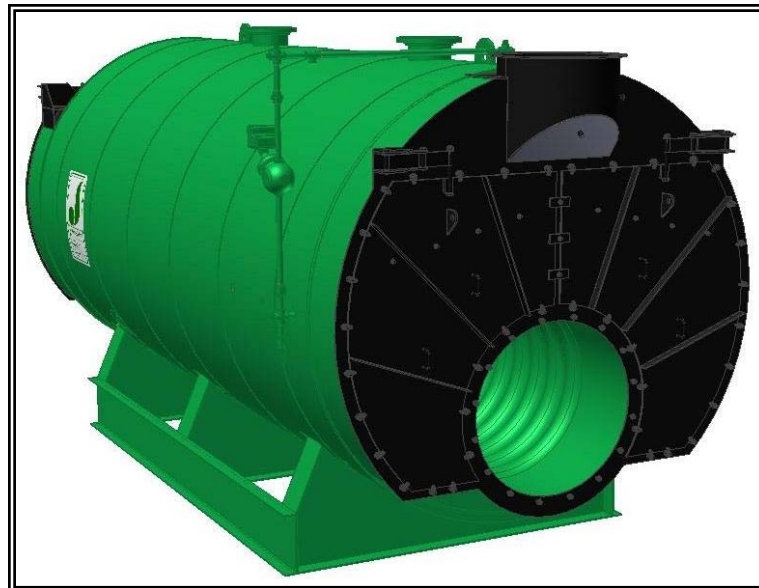


## MODEL: PFTX 350-4

### 4-Pass Hot Water Packaged Firetube Boiler



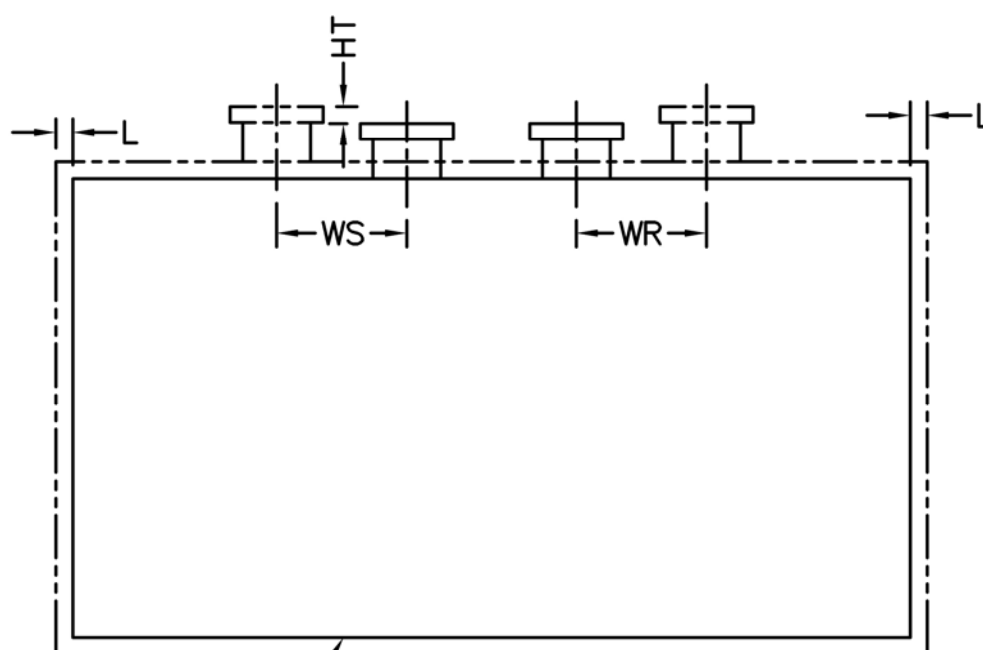
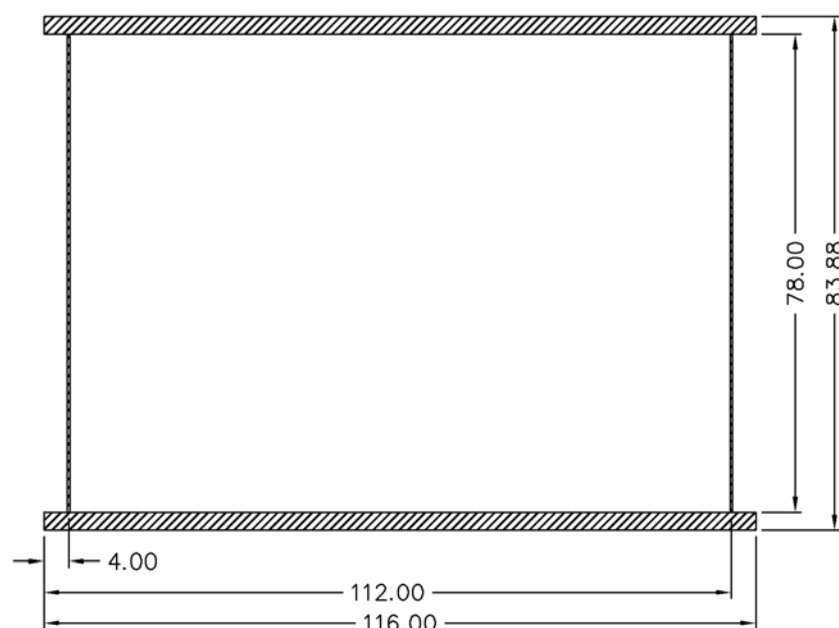
### Ratings & Performance Data

Horsepower 350		Natural Gas Flow, SCFH (1,000 Btu/ft <sup>3</sup> )**		13,660		
Total Heating Surface, ft <sup>2</sup>	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 <sup>3</sup> hr**	147,000	Stack Flue Gas Velocity, ft/min***		1,703		
Total Combustion Volume, ft <sup>3</sup>	134.3	#2 Oil Flow, gal/hr (140,000 Btu/gal)**		94.2		
Total Heat Release Rate, Btu/ft <sup>3</sup> 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 <sub>2</sub> O		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		
<b>Performance Data</b>						
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						



# MODEL: PFTX 350-4

## Base Diagram



BOILER AT 80°F

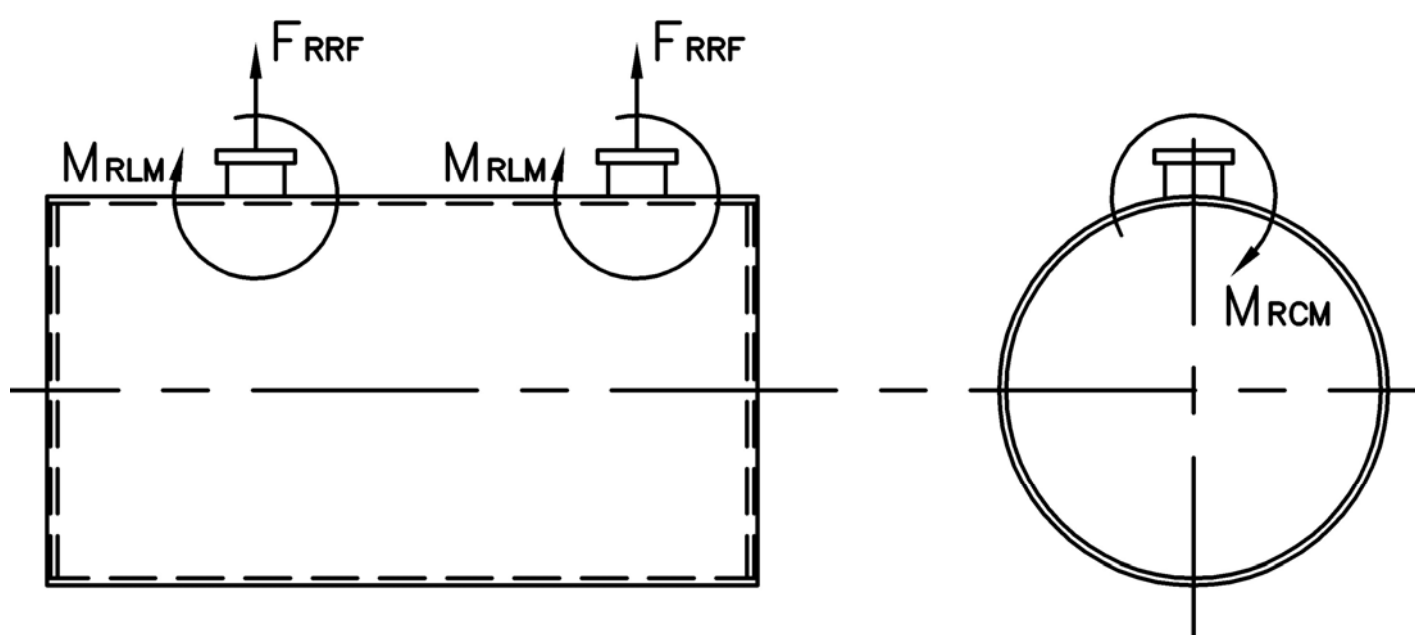
BOILER AT  $T_{MAX}$

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

# 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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