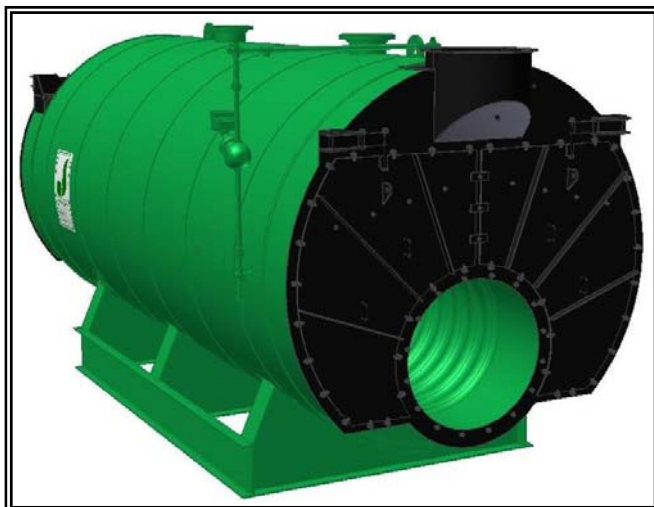




MODEL: PFTX 300-4

4-Pass Hot Water Packaged Firetube Boiler

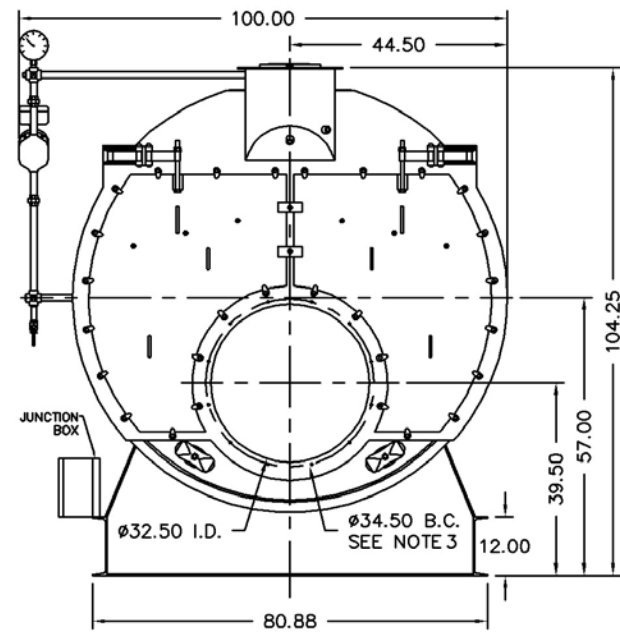


Ratings & Performance Data

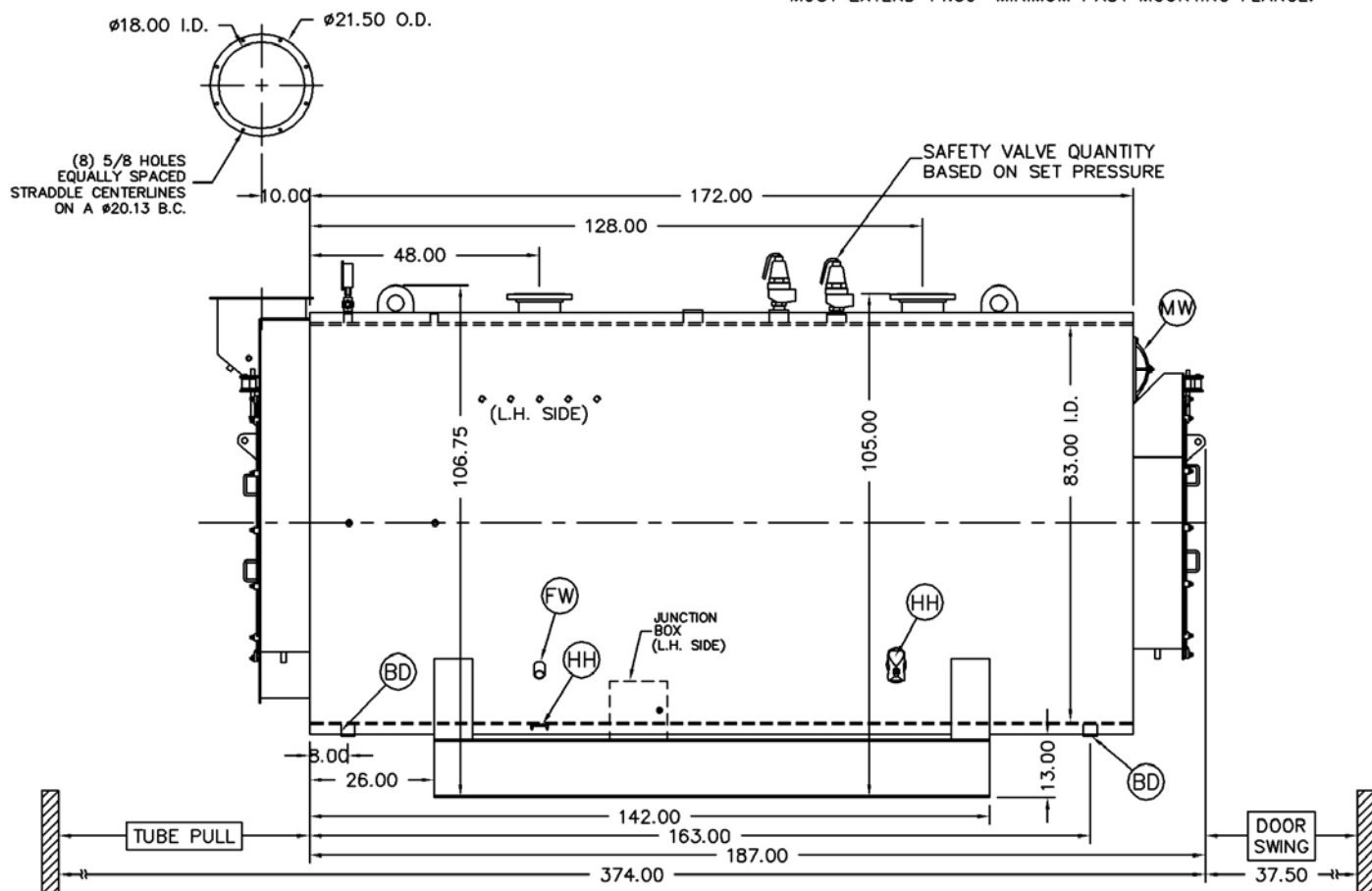
Horsepower 300		Natural Gas Flow, SCFH (1,000 Btu/ft ³)**		11,694		
Total Heating Surface, ft ²	1,527	Combustion Air (15% Excess), SCFM***		2,140		
Furnace Outside Diameter, in	38.0	Flue Gas Flow Rate, lb/hr***		10,197		
Furnace Heat Release Rate, Btu/ft ³ hr**	140,000	Stack Flue Gas Velocity, ft/min***		1,787		
Total Combustion Volume, ft ³	120.8	#2 Oil Flow, gal/hr (140,000 Btu/gal)**		80.6		
Total Heat Release Rate, Btu/ft ³ hr**	97,000	#6 Oil Flow, gal/hr (150,000 Btu/gal)**		74.6		
Water Content Flooded, gal	2,453	Flue Gas Side Pressure Drop, in. H ₂ O		4.0		
Approx. Dry Weight 30#, lb	22,600	Approx. Operating Weight 30#, lb		43,400		
Approx. Dry Weight 60#, lb	22,700	Approx. Operating Weight 60#, lb		43,500		
Approx. Dry Weight 125#, lb	23,200	Approx. Operating Weight 125#, lb		44,000		
Performance Data						
Operating Temperature (F)	Natural Gas		#2 Oil		#6 Oil	
	Stack Temp (F)	%Eff	Stack Temp	%Eff	Stack Temp (F)	%Eff
180	238	86.4	249	89.5	254	90.2
200	257	85.9	268	89.0	274	89.7
220	277	85.4	288	88.5	294	89.2
240	296	84.9	307	88.0	314	88.7
*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

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			



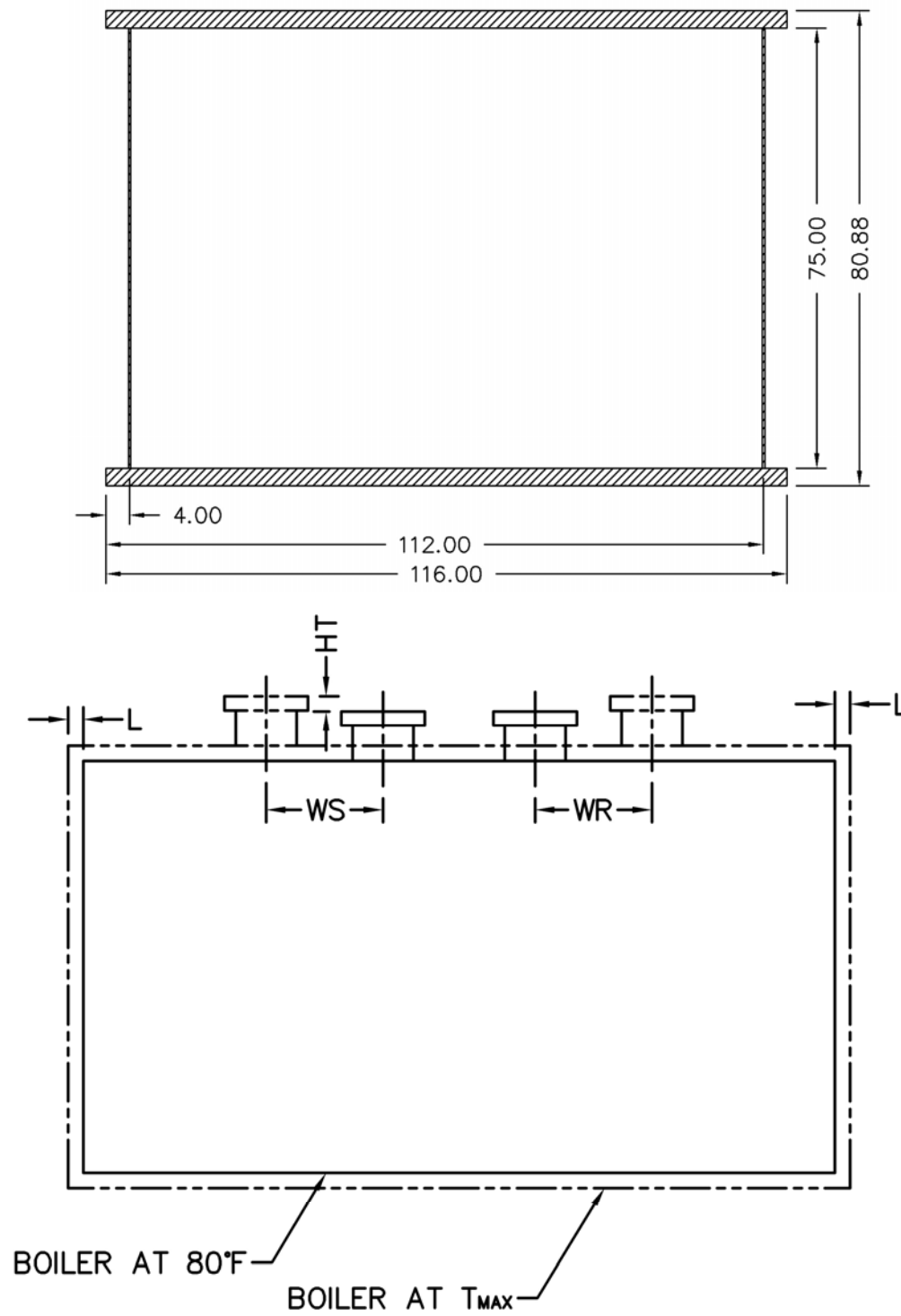
NOTE: (12) 1/2 UNC X 1.375 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 14.50" MINIMUM PAST MOUNTING FLANGE.



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.

MODEL: PFTX 300-4

Base Diagram

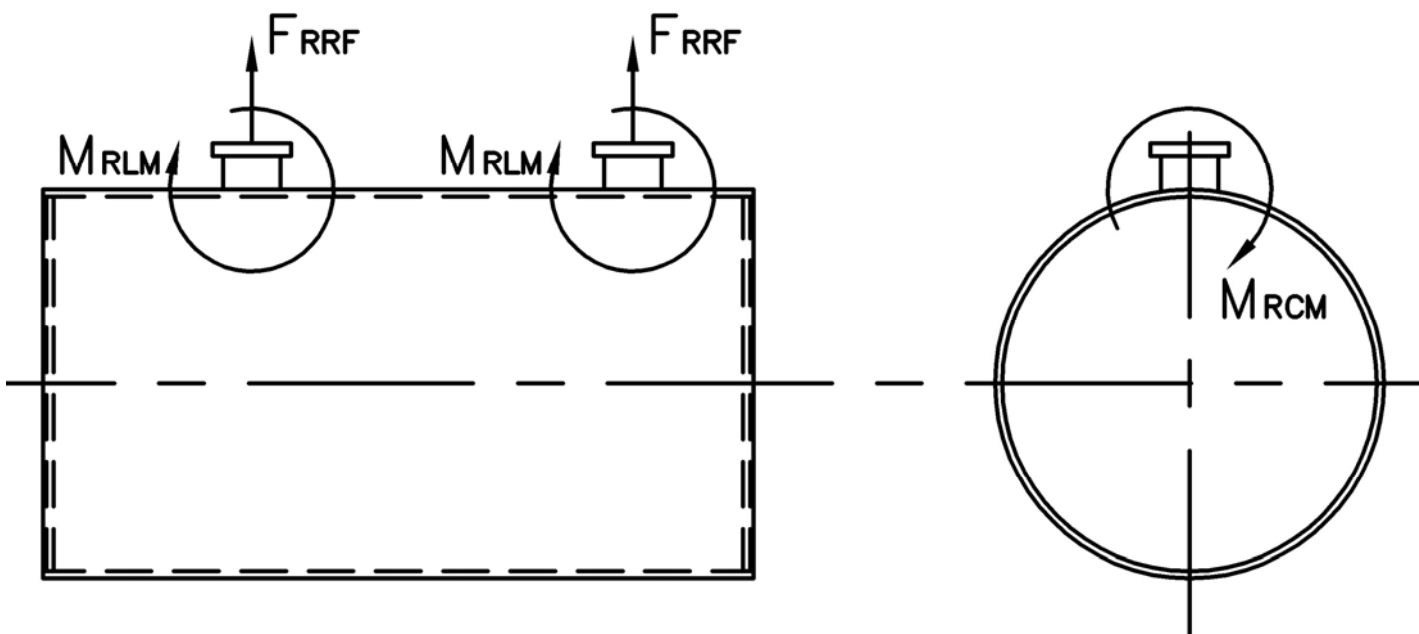


Thermal Expansion				
Metal T_{MAX} (F)	180	200	220	240
L (in)	0.052	0.062	0.072	0.083
WS (in)	0.023	0.027	0.032	0.036
WR (in)	0.025	0.030	0.035	0.040
HT (in)	0.050	0.060	0.070	0.080

MODEL: PFTX 300-4

Nozzle Loadings

Maximum Allowable Load on Outlet & Return Nozzles				
	30# Design	60# Design	125# Design	160# Design
F_{RRF} , lb	6,140	5,150	3,565	3,855
M_{RCM} , in-lb	35,605	35,600	41,335	37,695
M_{RLM} , in-lb	46,635	39,145	31,770	36,020



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