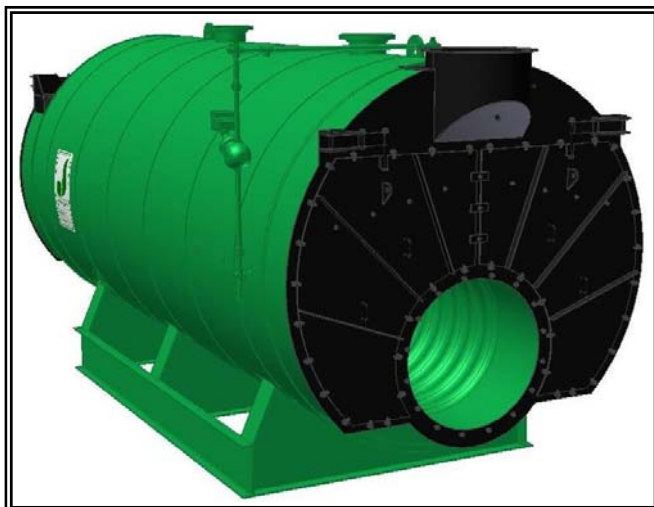




MODEL: PFTX 200-4

4-Pass Hot Water Packaged Firetube Boiler



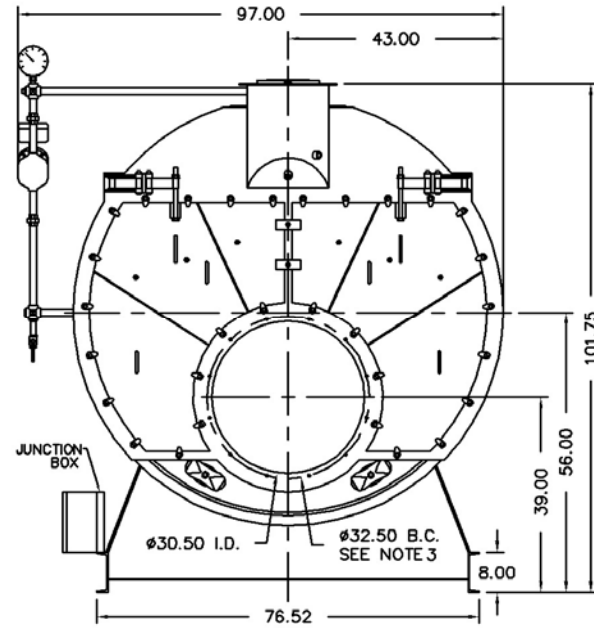
Ratings & Performance Data

Horsepower 200		Natural Gas Flow, SCFH (1,000 Btu/ft ³)**		7,839		
Total Heating Surface, ft ²	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 ³ hr**	160,000	Stack Flue Gas Velocity, ft/min***		1,554		
Total Combustion Volume, ft ³	77.3	#2 Oil Flow, gal/hr (140,000 Btu/gal)**		54.1		
Total Heat Release Rate, Btu/ft ³ 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 ₂ 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		
Performance Data						
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

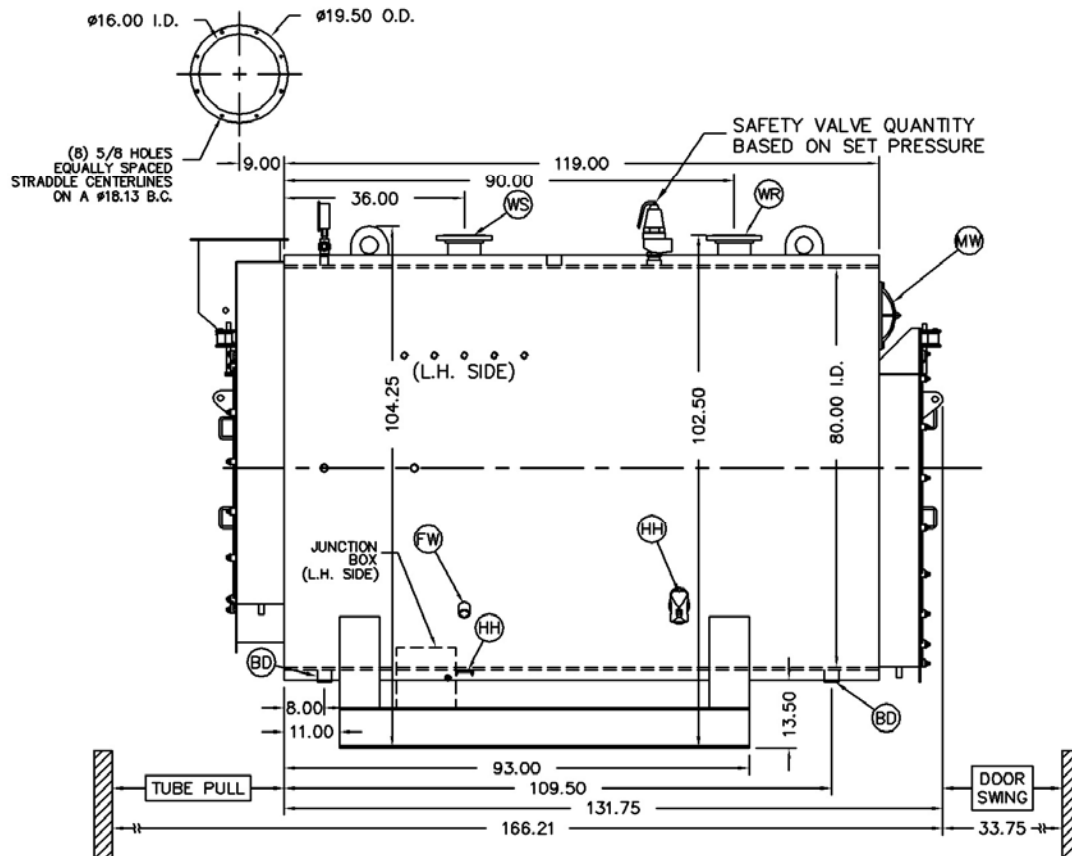
*Based on 20°F difference in supply/return, ** Values calculated at 200°F operating temperature, ***Calculated Firing Natural Gas

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	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			



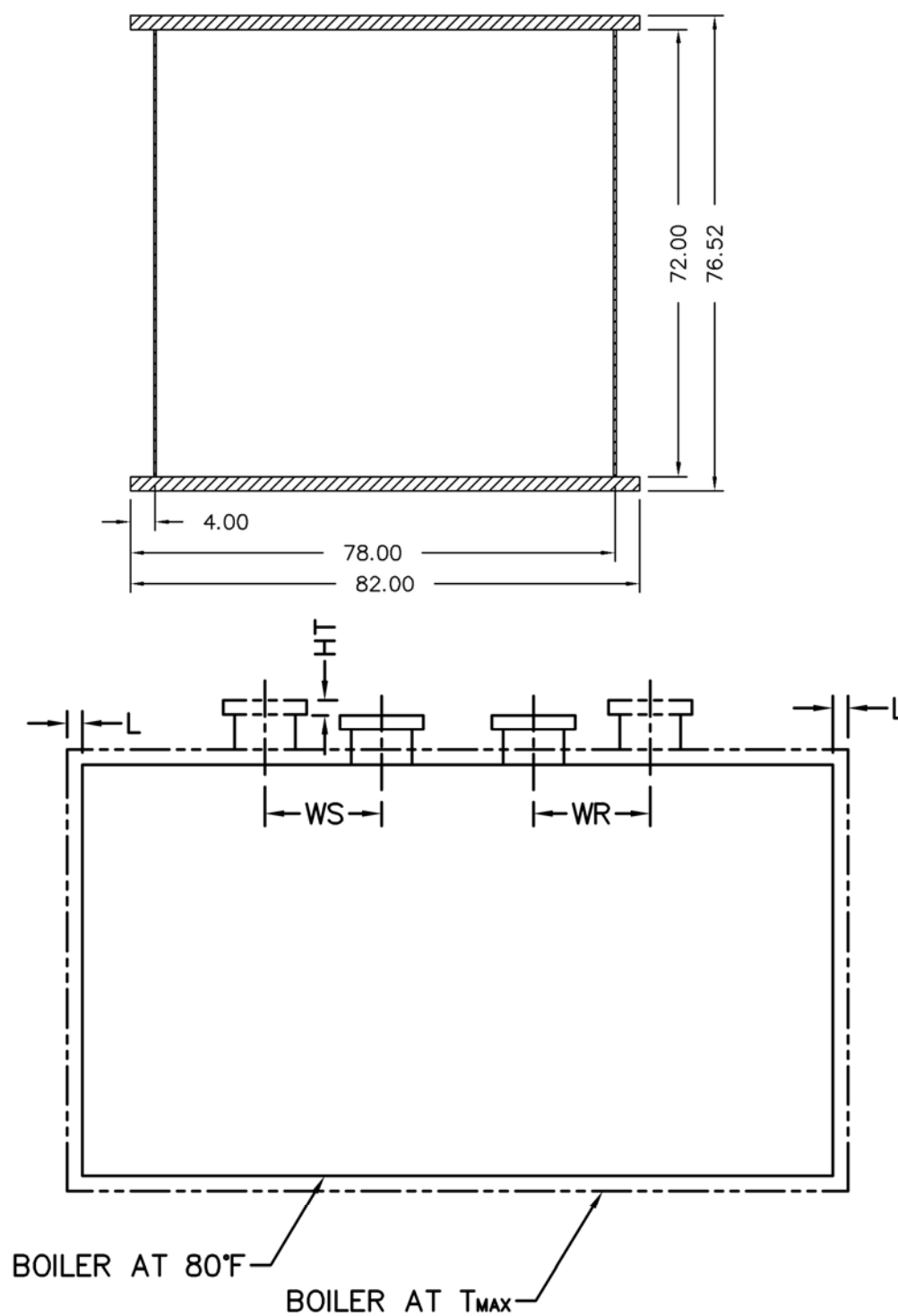
NOTE: (8) 1/2 UNC X 1.375 LONG STUDS EQUALLY SPACED STRADDLE CENTERLINES. STUDS FOR BURNER REFRACTORY (DRY OVEN) MOUNTING. REFRACTORY MUST EXTEND 13.75" MINIMUM PAST MOUNTING FLANGE.



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 200-4

Base Diagram

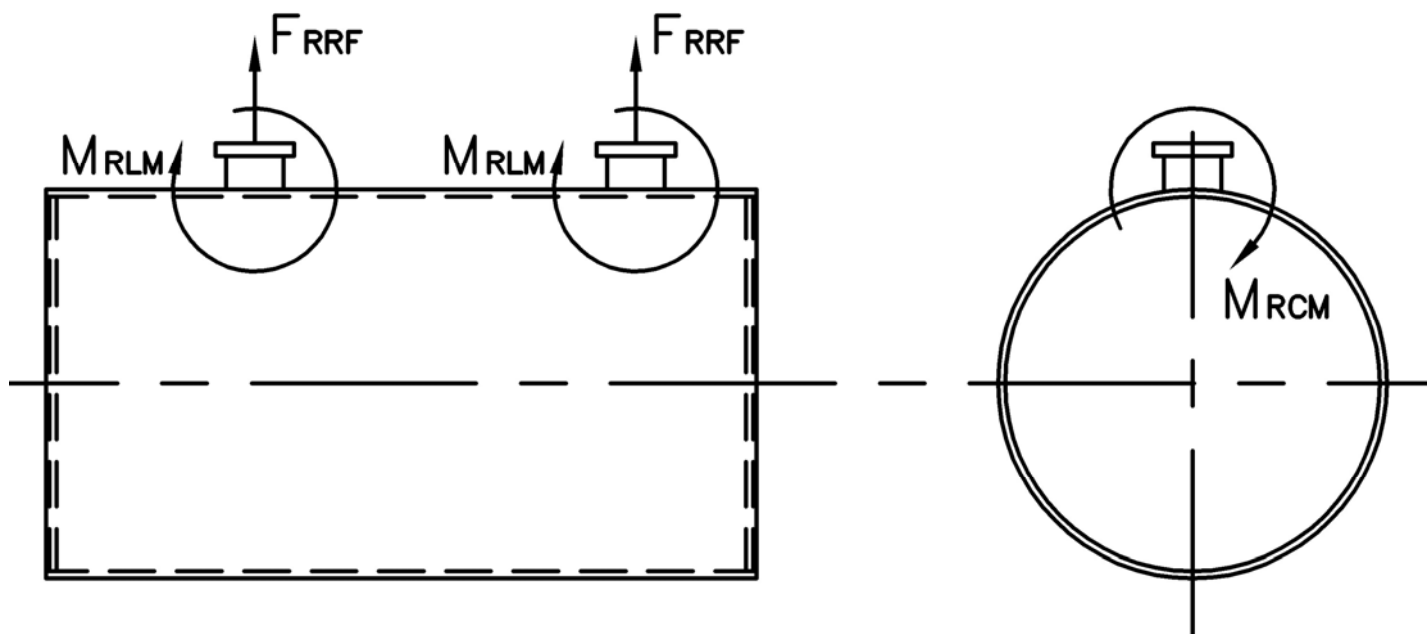


Thermal Expansion				
Metal T _{MAX} (F)	180	200	220	240
L (in)	0.036	0.043	0.050	0.057
WS (in)	0.014	0.017	0.020	0.023
WR (in)	0.018	0.022	0.026	0.029
HT (in)	0.048	0.058	0.068	0.077

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



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

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