

Model **FLX** Hot Water
1250 - 2500 (12.5 - 25 MMBTU)
2943 - 5886 kW



Dimensions and Ratings

Figure 1. Model FLX 1250-2500 Hot Water Boiler Dimensions

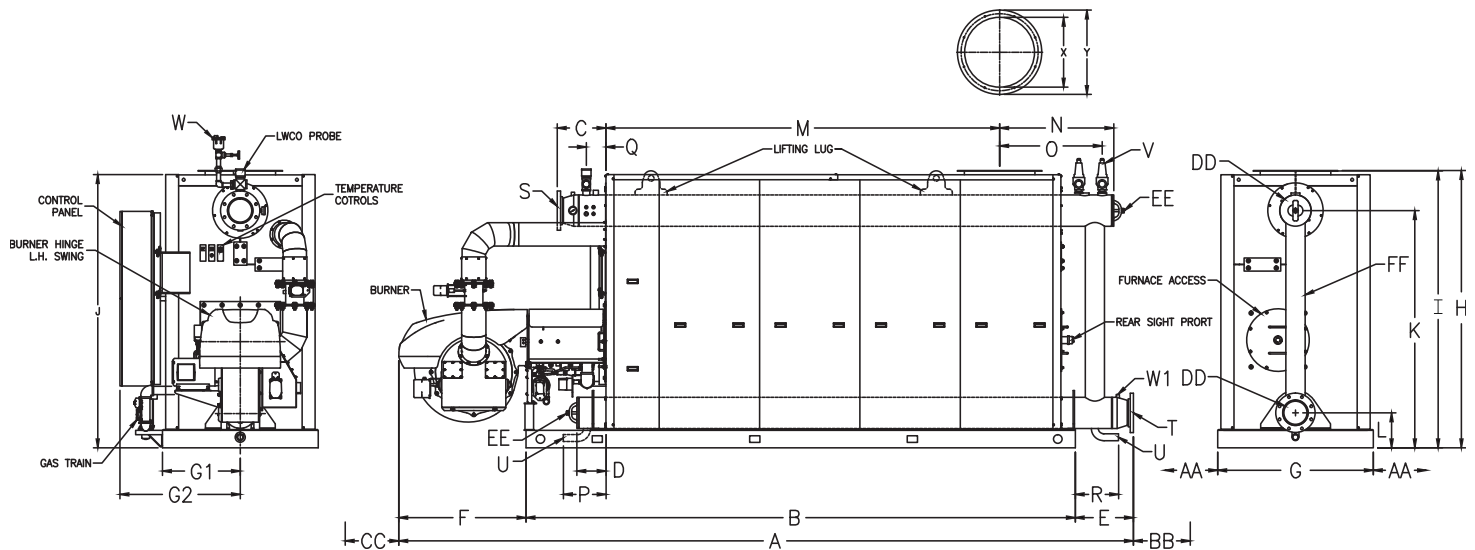


Table 1. FLX 1250-2500 Hot Water Dimensions

	Dimension	BOILER SIZE [SEE NOTE 1]					
		1250	1450	1650	1850	2100	2500
LENGTHS Inches							
Overall Length of Boiler Package [See Note 2]	A	252.5	267.5	279.25	298.25	311.25	340.25
Boiler Base Frame	B	188.75	203.75	217.75	231.75	245.75	275.75
Front Extension Upper Drum	C	16.75	16.75	16.5	16.5	17.75	17.75
Front Extension Lower Drum	D	10	10	10.75	10.75	10.75	10.75
Rear Extension Lower Drum	E	20	20	22.75	22.75	26.75	25.75
Burner Extension [See Note 2]	F	43.75	43.75	38.75	43.75	38.75	38.75
WIDTHS Inches							
Boiler Base Frame [See Note 3]	G	53.5	53.5	60	60	75	75
Centerline to Casing	G1	26.75	26.75	30	30	37.5	37.5
Centerline to outside Control Panel/ Gas Train	G2	41.5	41.5	45	45	52.5	52.5
HEIGHTS Inches							
Base to Stack Flange [overall]	H	95.5	95.5	107	107	131.5	131.5
Base to Lifting Lug	I	95.5	95.5	107	107	131.5	131.5
Base to Top of Casing	J	94	94	105.5	105.5	130	130
Base to Supply Nozzle	K	81.5	81.5	93	93	117	117
Base to Return Nozzle	L	12	12	12	12	15	15
LOCATIONS Inches							
Flue Outlet Centerline	M	135.25	150.25	164.25	178.25	192.25	222.25
Rear Extension Upper Drum	N	39.25	39.25	45.75	45.75	47.75	47.75
Safety Valves	O	35.25	35.25	41.75	41.75	43.75	43.75
Bottom Drain	P	14.75	14.75	14.75	14.75	14.75	14.75
Boiler Air Vent	Q	6.75	6.75	6.5	6.5	6.5	6.5

Table 1. FLX 1250-2500 Hot Water Dimensions (Continued)

	Dimension	BOILER SIZE [SEE NOTE 1]					
		1250	1450	1650	1850	2100	2500
Bottom Drain Rear	R	14.75	14.75	16.5	16.5	20.5	19.5
PIPING CONNECTIONS Inches							
Supply Nozzle [See Note 4]	S	8	8	10	10	10	12
Return Nozzle [See Note 4]	T	8	8	10	10	10	12
Bottom Drain	U	2	2	2	2	2	2
Safety Valves, 30 psig [qty and outlet size] [Note 5]	V	2 @ 2-1/2	2 @ 2-1/2	1 @ 2 2 @ 2-1/2	1 @ 2 2 @ 2-1/2	4 @ 2-1/2	4 @ 2-1/2
Safety Valves, 60 psig [qty and outlet size] [Note 5]	V	1 @ 2 1 @ 2-1/2	1 @ 2 1 @ 2-1/2	1 @ 2 1 @ 2-1/2	1 @ 2 1 @ 2-1/2	1 @ 2 2 @ 2-1/2	1 @ 2 2 @ 2-1/2
Safety Valves, 125 psig [qty and outlet size] [Note 5]	V	1 @ 2-1/2	1 @ 2-1/2	1 @ 2-1/2	1 @ 2-1/2	1 @ 2 1 @ 2-1/2	1 @ 2 1 @ 2-1/2
Safety Valves, 160 psig [qty and outlet size] [Note 5]	V	1 @ 2	1 @ 2	1 @ 1 1 @ 2	1 @ 1 1 @ 2	2 @ 2	2 @ 2
Boiler Air Vent	W	2	2	2	2	2	2
Tapping for optional temp sensor.	W1	1/2	1/2	1/2	1/2	1/2	1/2
Flue Gas ID	X	24	24	24	24	24	24
Flue Gas Outlet Flange	Y	29	29	29	29	29	29
Flange Bolt Circle Diameter	Z	26.5	26.5	26.5	26.5	26.5	26.5
Number of holes in bolt circle.	ZZ	8	8	8	8	8	8
MINIMUM SERVICE CLEARANCES							
Tube removal each side	AA	40	40	47	47	62	62
Rear service area	BB	24	24	24	24	24	24
Front service area - burner removal	CC	36	36	36	36	36	36
PERIPHERAL DATA							
Upper/Lower Drum OD	DD	10.75	10.75	10.75	10.75	12.75	12.75
Handhole Inspection	EE	4x5	4x5	4x5	4x5	4x5	4x5
Rear Downcomer Size [NPS]	FF	6	6	8	8	8	8

Notes:

- Multiply size by 10,000 to obtain BTU/hr input of the boiler.
- Subtract 5 inches to the overall length (A) and burner extension (F) for FLX 1250, 1450, 1850 with uncontrolled burner.
Add 5 inches to the overall length (A) and burner extension (F) for FLX 2500 with NT burner.
- Add 4 inches to each side of base frame width (G) to account for optional seismic anchor pads on each side.
- Supply and return nozzle flanges are Class 150 Flat Face.
- Quantity and size of valves are based on the standard valve settings noted; quantity and size may change for non standard settings.

Table 2. FLX 1250-2500 Hot Water Ratings

	Boiler Model					
	1250	1450	1650	1850	2100	2500
Ratings [Note A]						
Rated Horsepower	300	350	400	450	500	600
Output Btu/hr [1,000 Btu/h]	10,043	11,716	13,390	15,064	16,738	20,085
Output Kcal/Hr [1,000 Kcal/h]	2,530	2,952	3,374	3,796	4,218	5,061
Output KW	2943	3434	3924	4414	4905	5886
Approximate Fuel Consumption [Input - Note B]						
Natural Gas [ft3/hr]	12,247	14,288	16,329	18,370	20,412	24,494
Natural Gas [m3/hr]	355	414	473	533	592	711
Natural Gas [Therms/Hour]	122.5	142.9	163.3	183.7	204.1	245
Propane Gas [ft3/hr]	4,899	5,715	6,532	7,348	8,165	9,798
Propane Gas [m3/hr]	138.7	161.8	185	208.1	231.2	277.5
No.2 Oil Fuel - gph	87.5	102.1	116.6	131.2	145.8	175
No.2 Oil Fuel - liters/hour	331.2	386.5	441.4	496.6	551.9	662.4
Power Requirements - Standard [Note A & C]						
Blower Motor HP [Note D]	10/15	15	15	20	10/15	20/25
Air Compressor Motor [Oil or Combination Gas/Oil]	5	5	7.5	7.5	7.5	7.5
Oil Pump [Straight Oil or Combination Gas/Oil]	1/2	1/2	1/2	1/2	3/4	3/4
Minimum Ampacity - Standard						
Blower Motor 230/3/60 [Note D]	28/42	42	42	54	28/42	54/68
Blower Motor - 460/3/60 [Note D]	14/21	21	21	27	14/21	27/34
Blower Motor - 575/3/60 [Note D]	11/17	17	17	22	11/17	22/27
Air Compressor Motor - Oil or Combination, 230/3/60	15	15	22	22	22	22
Air Compressor Motor - Oil or Combination, 460/3/60	7.6	7.6	11	11	11	11
Air Compressor Motor - Oil or Combination, 575/3/60	6.1	6.1	9	9	9	9
Metering Oil Pump, [230]460/3/60	[2] 1.1	[2] 1.1	[2] 1.1	[2] 1.1	[3] 1.6	[3] 1.6
Metering Oil Pump, 575/3/60	0.9	0.9	0.9	0.9	1.3	1.3
Control Circuit	1.7	1.7	1.7	1.9	1.9	1.9
Weights						
Operating Weight, lbs.	15,400	16,600	21,200	22,400	31,000	34,800
Operating Weight, kg	6,985	7,530	9,616	10,161	14,062	15,785
Water Content Normal, gallons	306	335	513	558	800	912
Water Content Normal, liters	1,158	1,267	1,943	2,111	3,028	3,453
Shipping Weight, approximate lbs.	12,800	13,800	16,900	17,700	24,300	27,200
Shipping Weight, approximate kg	5,806	6,260	7,666	8,029	11,022	12,338

Notes:

- A. Ratings shown for elevation to 1000 Feet. For ratings above 1000 Feet, contact your local Cleaver-Brooks Representative.
- B. Input calculated with Nat. Gas @ 1000 Btu/ft3, Propane @ 2500 Btu/ft3, and Oil @ 140,000Btu/gal.
- C. Standard Motors meet the requirements of UL & NEMA and include the following:
 - Open drip proof design
 - NEMA Design "B"
 - 1.15 Service Factor
 - Ball Bearing
 - Class "B" Insulation
 - Continuous Duty, 400 C ambient
- D. Motor HP and amp ratings are for uncontrolled/30ppm configurations