CFLC

ClearFire® large condensing boiler

4000-12,000 MBTU

Dimensions and Ratings

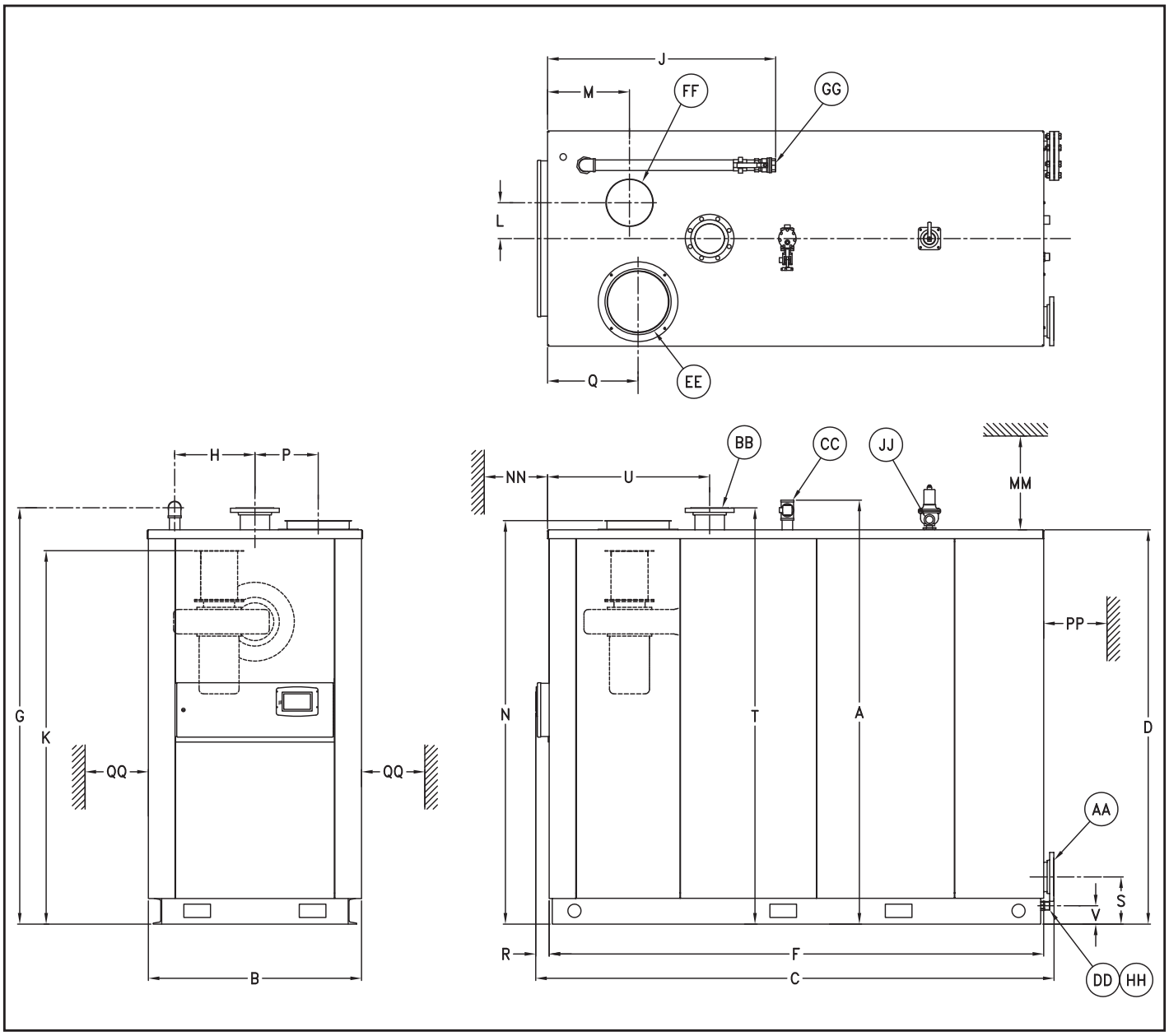
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Table 1. U.S. Standard Dimensions Model CFLC Boiler

ITEM	DIMENSIONS (inches)	4000	5000	6000	8000	10000	12000
A	Overall Height	96	96	106	106	126	126
B	Overall Width	48	48	57.5	57.5	69	69
C	Overall Depth	117	117	131	131	147	147
D	Casing Height	89	89	99	99	119	119
F	Casing Depth	111.5	111.5	125.5	125.5	141.5	141.5
G	Gas Connection to Floor	94	94	104	104	124	124
H	Gas Connection to Boiler Centerline	18	18	21	21	26	26
J	Gas Connection to Front of Boiler	56.5	56.5	58	58	60	60
K	Air Inlet Venturi to Floor	84	84	95	95	114	114
L	Air Inlet Centerline to Boiler Centerline	8	8	10.5	10.5	10	10
M	Air Inlet Centerline to Front of Boiler	18.5	18.5	21	21	30.5	30.5
N	Stack Connection to Floor	91	91	101	101	121	121
P	Stack Connection to Boiler Centerline	14.5	14.5	18	18	21	21
Q	Stack Connection to Front of Boiler	20.5	20.5	23	23	32	32
R	Control Panel Projection	3	3	3	3	3	3
S	Return Connections to Floor	11	11	14.5	14.5	16	16
T	Supply Connection to Floor	94	94	104	104	124	124
U	Supply Connection to Front of Boiler	36.5	36.5	40.5	40.5	50	50
V	Floor to Drain Connection	4.5	4.5	6	6	7.5	7.5
CONNECTIONS							
AA	Water Return, 150# RF Flg	6”	6”	6”	6”	8”	8”
BB	Water Supply, 150# RF Flg	6”	6”	6”	6”	8”	8”
CC	Boiler Air Vent, NPT	2”	2”	2”	2”	2”	2”
DD	Boiler Drain, NPT	1-1/2”	1-1/2”	1-1/2”	1-1/2”	1-1/2”	1-1/2”
EE	Flue Gas, Nominal OD	14”	14”	16”	16”	20”	20”
FF	Combustion Air Option	8”	8”	10”	10”	12”	12”
GG	Gas Connection, NPT	2”	2”	2-1/2”	2-1/2”	2-1/2”	2-1/2”
HH	Condensate Drain, FPT	1-1/4”	1-1/4”	1-1/4”	1-1/4”	1-1/2”	1-1/2”
JJ	Relief Valve outlet @ 160# Setting	1-1/4”	1-1/4”	1-1/4”	1-1/2”	1-1/2”	2”
CLEARANCES							
MM	Overhead	36	36	36	36	36	36
NN	Front	36	36	36	36	36	36
PP	Rear	36	36	36	36	36	36
QQ	Side	24	24	24	24	24	24

Table 2. Metric Dimensions Model CFLC Boiler

ITEM	DIMENSIONS (mm)	4000	5000	6000	8000	10000	12000
A	Overall Height	2438	2438	2692	2692	3200	3200
B	Overall Width	1219	1219	1461	1461	1753	1753
C	Overall Depth	2972	2972	3327	3327	3734	3734
D	Casing Height	2261	2261	2515	2515	3023	3023
F	Casing Depth	2832	2832	3188	3188	3594	3594
G	Gas Connection to Floor	2388	2388	2642	2642	3150	3150
H	Gas Connection to Boiler Centerline	457	457	533	533	660	660
J	Gas Connection to Front of Boiler	1435	1435	1473	1473	1524	1524
K	Air Inlet Venturi to Floor	2134	2134	2413	2413	2896	2896
L	Air Inlet Centerline to Boiler Centerline	203	203	267	267	254	254
M	Air Inlet Centerline to Front of Boiler	470	470	533	533	775	775
N	Stack Connection to Floor	2311	2311	2565	2565	3073	3073
P	Stack Connection to Boiler Centerline	368	368	457	457	533	533
Q	Stack Connection to Front of Boiler	521	521	584	584	813	813
R	Control Panel Projection	76	76	76	76	76	76
S	Return Connections to Floor	279	279	368	368	406	406
T	Supply Connection to Floor	2388	2388	2642	2642	3150	3150
U	Supply Connection to Front of Boiler	927	927	1029	1029	1270	1270
V	Floor to Drain Connection	114	114	152	152	191	191
	CONNECTIONS						
AA	Water Return, 150# RF Flg	6”	6”	6”	6”	8”	8”
BB	Water Supply, 150# RF Flg	6”	6”	6”	6”	8”	8”
CC	Boiler Air Vent, NPT	2”	2”	2”	2”	2”	2”
DD	Boiler Drain, NPT	1-1/2”	1-1/2”	1-1/2”	1-1/2”	1-1/2”	1-1/2”
EE	Flue Gas, Nominal OD	14”	14”	16”	16”	20”	20”
FF	Combustion Air Option	8”	8”	10”	10”	12”	12”
GG	Gas Connection, NPT	2”	2”	2-1/2”	2-1/2”	2-1/2”	2-1/2”
HH	Condensate Drain, FPT	1-1/4”	1-1/4”	1-1/4”	1-1/4”	1-1/2”	1-1/2”
JJ	Relief Valve outlet @ 160# Setting	1-1/4”	1-1/4”	1-1/4”	1-1/2”	1-1/2”	2”
	CLEARANCES						
MM	Overhead	914	914	914	914	914	914
NN	Front	914	914	914	914	914	914
PP	Rear	914	914	914	914	914	914
QQ	Side	610	610	610	610	610	610

Table 3. Model CFLC Boiler Ratings (Sea Level to 2000 Feet)

Description	Units	4000	5000	6000	8000	10000	12000
Input Max.	BTU/Hr.	4,000,000	5,000,000	6,000,000	8,000,000	10,000,000	12,000,000
	KCAL/Hr.	1,008,000	1,260,000	1,512,000	2,016,000	2,520,000	3,024,000
Natural Gas (1000 Btu/ft3)	FT3/Hr	4000	5000	6000	8000	10000	12000
Natural Gas	M3/Hr	113	142	170	226	283	340
Output at 130/80 F [54/27 C] 100% Firing	BTU/Hr.	3,760,000	4,700,000	5,640,000	7,520,000	9,400,000	11,280,000
	KCAL/Hr.	947,520	1,184,400	1,421,280	1,895,040	2,368,800	2,842,560
	BHP	112	140	168	225	281	337
	KW	1102	1377	1653	2204	2755	3305
Output at 180/140 F [82/60 C] 100% Firing	BTU/Hr.	3,520,000	4,400,000	5,280,000	7,040,000	8,800,000	10,560,000
	KCAL/Hr.	887,040	1,108,800	1,330,560	1,774,080	2,217,600	2,661,120
	BHP	105	131	158	210	263	315
	KW	1031	1289	1547	2063	2579	3094
MAWP	PSI	160	160	160	160	160	160
	BAR	11	11	11	11	11	11
MAWT	°F	250	250	250	250	250	250
	°C	121	121	121	121	121	121
Operating Temperature, Max.	°F	230	230	230	230	230	230
	°C	110	110	110	110	110	110
Water Content	Gallons	395	374	559	511	871	819
	Liters	1495	1416	2116	1934	3297	3100
Weight w/o Water (Shipping)	Pounds	7,450	7,800	9,800	10,500	15,300	16,100
	Kg	3379	3538	4445	4763	6940	7303
Operating Weight	Pounds	10,743	10,918	14,460	14,760	22,562	22,928
	Kg	4873	4952	6559	6695	10234	10400
Fireside Heating Surface	ft2	756	915	1,123	1,454	1,885	2,223
	m2	70	85	104	135	175	207
Waterside Heating Surface	ft2	298	344	441	546	750	862
	m2	28	32	41	51	70	80
Standby Heat Loss	BTU/Hr	8,000	10,000	12,000	16,000	20,000	24,000
	Watts	2344	2930	3516	4689	5861	7033
Fan Motor Size	HP	5	5	7.5	10	15	20
Operating Voltage, Fan [A]	Volts/Ph/Hz	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60
Control Circuit [B]	Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60
Incoming Power (Ampacity)	Amps	10.5	10.5	14.8	18.5	27.3	34.8
Flue Gas Mass Flow @ 100% Firing (Natural Gas)	lb/hr	4532	5665	6,798	9,064	11,330	13,596
	kg/h	2056	2570	3084	4111	5139	6167

Notes:
A. Consult Cleaver Brooks for alternate voltage requirements.
B. Transformer is provided as standard

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