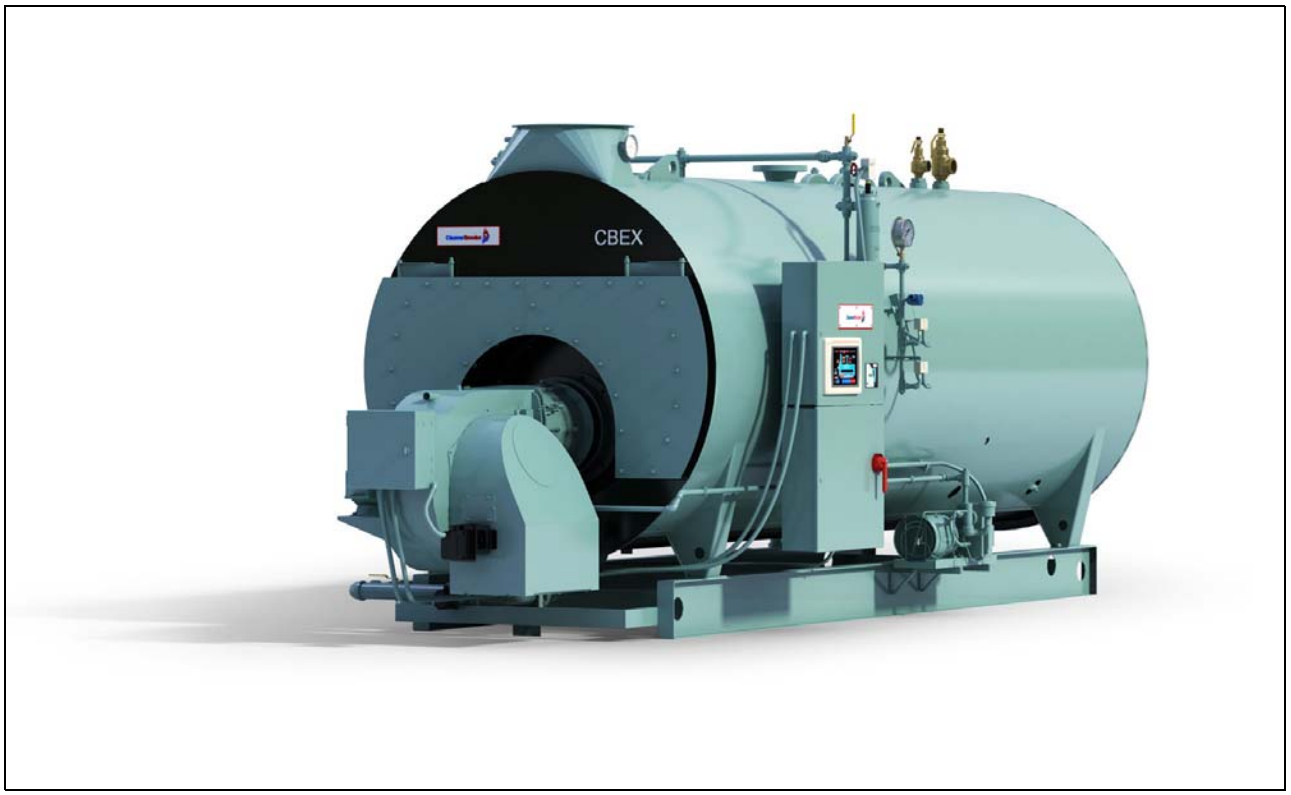
MODEL CBEX PREMIUM BOILERS
100 - 800 HP



Dimensions and Ratings

Table 1. CBEX Premium Steam Ratings

BOILER H.P.	100	125	150	200	250	300	350	400	500	600	700	800
Burner Model (Standard)	VLG-42	VLG-54	VLG-63	VLG-84	ELG-105	ELG-126	ELG-147	ELG-168	ELG-210	ELG-252	ELG-294-3	ELG-336-3
Burner Model (30 ppm	LNVLG-42	LNVLG-54	LNVLG-63	LNVLG-84	LNELG-105	LNELG-126	LNELG-147	LNELG-168	LNELG-210	LNELG-252	LNELG-294-3	LNELG-336-3
RATINGS SEA LEVEL TO 700 FT.												
Rated Capacity (lbs-steam/hr from and at 212 0F)	3450	4313	5175	6900	8625	10350	12075	13800	17250	20700	24150	27600
Btu Output (1000 Btu/hr)	3348	4184	5021	6695	8369	10043	11716	13390	16738	20085	23433	26780
APPROXIMATE FUEL CONSUMPTION AT RATED CAPACITY BASED ON NOMINAL 80% EFFICIENCY												
Light Oil gph (140,000 Btu/gal)	29.9	37.4	44.8	59.8	74.7	89.7	104.6	119.6	149.4	179.3	209.2	239.1
Gas CFH (1000 Btu)	4184	5230	6277	8369	10461	12553	14645	16738	20922	25106	29291	33475
Gas (Therm/hr)	41.8	52.3	62.8	83.7	104.6	125.5	146.5	167.4	209.2	251.1	292.9	334.8
POWER REQUIREMENTS - SEA LEVEL TO 700 FT. (60 HZ)												
Blower Motor hp (Standard)[A]	2	3	5	7 1/2	5	7 1/2	10	15	15	15	20	25
Blower Motor hp (30 ppm)[A]	3	5	5	7 1/2	7 1/2	7 1/2	10	15	20	25	30	40
Circulating Oil Pump Motor hp[B]	1/2	3/4	3/4	1	1/2	3/4	3/4	3/4	3/4	3/4	1	1
Oil Metering Pump Motor hp[B]	n/a	n/a	n/a	n/a	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4
Air Compressor Motor hp[B]	**	**	**	**	3	3	5	5	5	7 1/2	7 1/2	7 1/2

NOTES:
A. Blower motor size for boiler operating pressures 125 psig and less, contact your local Cleaver-Brooks authorized representative for higher pressures and altitude.
B. Required for #2 Oil Firing.
C. All fractional hp motors will be single phase voltage except oil metering pump motors which are three phase. Integral hp motors will be three phase voltage.
** Air compressor not required for 100-200hp as these burners are pressure atomized.

Table 2. CBEX Premium Hot Water Ratings

BOILER H.P.	100	125	150	200	250	300	350	400	500	600	700	800
Burner Model (Standard)	VLG-42	VLG-54	VLG-63	VLG-84	ELG-105	ELG-126	ELG-147	ELG-168	ELG-210	ELG-252	ELG-294-3	ELG-336-3
Burner Model (30 ppm)	LNVLG-42	LNVLG-54	LNVLG-63	LNVLG-84	LNELG-105	LNELG-126	LNELG-147	LNELG-168	LNELG-210	LNELG-252	LNELG-294-3	LNELG-336-3
RATINGS - SEA LEVEL TO 700 FT.												
Btu Output (1000 Btu/hr)	3348	4184	5021	6695	8369	10043	11716	13390	16738	20085	23433	26780
APPROXIMATE FUEL CONSUMPTION AT RATED CAPACITY BASED ON NOMINAL 83% EFFICIENCY												
Light Oil gph (140,000 Btu/gal)	28.8	36.0	43.2	57.6	72.0	86.4	100.8	115.2	144.0	172.8	201.7	230.5
Gas CFH (1000 Btu)	4033	5041	6050	8066	10083	12099	14116	16133	20166	24199	28232	32265
Gas (Therm/hr)	40.3	50.4	60.5	80.7	100.8	121.0	141.2	161.3	201.7	242.0	282.3	322.7
POWER REQUIREMENTS - SEA LEVEL TO 700 FT. (60 HZ)												
Blower Motor hp (Standard)	2	3	5	7 1/2	5	7 1/2	10	15	15	15	20	25
Blower Motor hp (30 ppm)	3	5	5	7 1/2	7 1/2	7 1/2	10	15	20	25	30	40
Circulating Oil Pump Motor hp[A]	1/2	3/4	3/4	1	1/2	3/4	3/4	3/4	3/4	3/4	1	1
Oil Metering Pump Motor hp[A]	n/a	n/a	n/a	n/a	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4
Air Compressor Motor hp[A]	**	**	**	**	3	3	5	5	5	7 1/2	7 1/2	7 1/2

NOTES:
A. Required for #2 Oil Firing.
B. All fractional hp motors will be single phase voltage except oil metering pump motors which are three phase. Integral hp motors will be three phase voltage.
** Air compressor not required for 100-200hp as these burners are pressure atomized.

Figure 1. Model CBEX Premium Steam Boiler Dimensions 100 - 800 HP

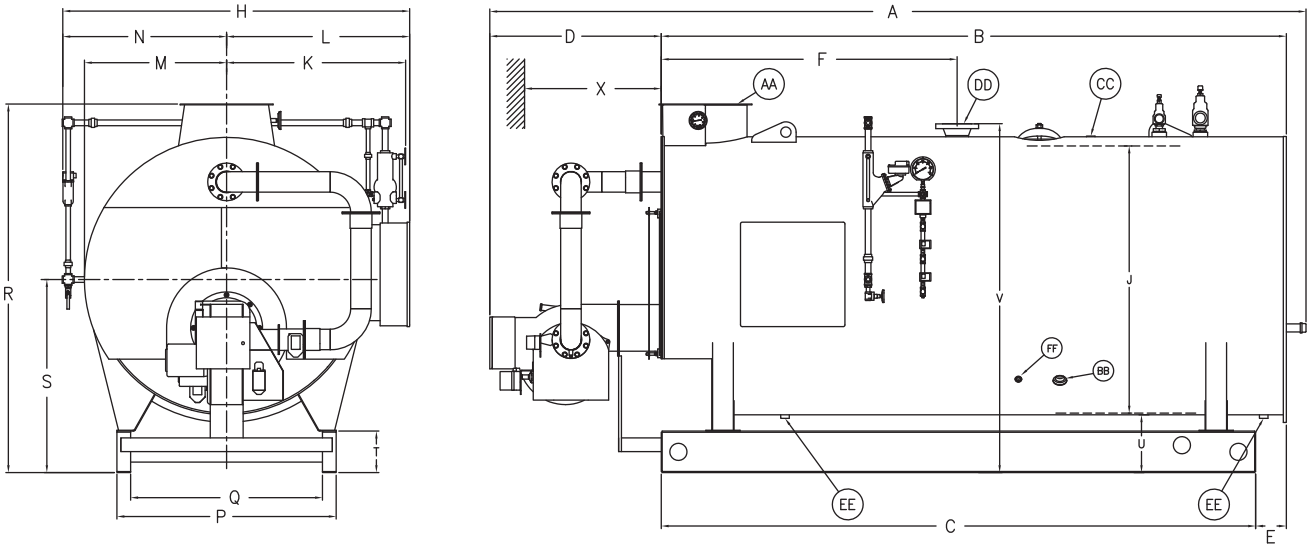


Table 3. **Model CBEX Premium Steam Boiler Dimensions 100 - 800 HP**

BOILER H.P.	DIM	100	125	150	200	250	300	350	400	500	600	700	800
LENGTHS													
Overall Length	A	179.5	184.5	190	213	232	238	238.5	258.5	261	267	287	287
Shell	B	132.5	137.5	140	163	174	180	182.5	190.5	193	199	207	207
Base Frame	C	125.5	130.5	131	154	164	170	173.5	181.5	183.5	189.5	197.5	197.5
Burner Extension	D	41	41	44	44	52	52	50	62	62	62	74	74
Rear Ring Flange to Base	E	7	7	9	9	10	10	9	9	9.5	9.5	9.5	9.5
Shell Flange to Steam Nozzle	F	60.5	63	64.5	74.5	80.5	83.5	86.5	90.5	110.5	183.5	104.5	104.5
WIDTHS													
Overall Width	H	81	81	86	86	94	94	105	105	112	112	119	119
I.D. Boiler	J	55	55	60	60	67	67	78	78	85	85	92	92
Center to Water Column	K	42.5	42.5	45	45	48.5	48.5	54	54	57.5	57.5	61	61
Center to Panel	L	44.5	44.5	47	47	50.5	50.5	56	56	59.5	59.5	63	63
Center to Lagging	M	30.5	30.5	33	33	36.5	36.5	42	42	45.5	45.5	49	49
Center to Auxiliary LWCO	N	36.5	36.5	39	39	43.5	43.5	49	49	52.5	52.5	56	56
Base Outside	P	47.5	47.5	52.5	52.5	51	51	64	64	60	60	68	68
Base Inside	Q	39.5	39.5	44.5	44.5	43	43	56	56	47	47	55	55
HEIGHTS													
Base to Vent Outlet	R	81	81	87	87	94.5	94.5	108	108	114.5	114.5	122.5	122.5
Base to Boiler Centerline	S	41	41	46	46	50	50	56.5	56.5	61	61	65.5	65.5
Height of Base Frame	T	12	12	12	12	12	12	12	12	12	12	12	12
Base to Bottom of Boiler	U	13	13	15.5	15.5	16	16	17	17	18	18	19	19
Base to Steam Outlet	V	78.5	78.5	82.5	82.5	90	90	102	102	110	110	118	118
BOILER CONNECTIONS													
Feedwater Inlet (Both Sides)	BB	1.25	1.5	1.5	2	2	2	2.5	2.5	2.5	2.5	2.5	2.5
Surface Blowoff	CC	1	1	1	1	1	1	1	1	1	1	1	1
Steam Nozzle (300# ANSI Flange)	DD	4	4	4	4	6	6	6	6	8	8	8	8
Blowdown-Front & Rear	EE	1.25	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2
Chemical Feed	FF	1	1	1	1	1	1	1	1	1	1	1	1
VENT STACK													
Vent Stack Diameter (Flanged)	AA	16	16	16	16	20	20	24	24	24	24	24	24

Table 3. Model CBEX Premium Steam Boiler Dimensions 100 - 800 HP (Continued)

BOILER H.P.	DIM	100	125	150	200	250	300	350	400	500	600	700	800
MINIMUM CLEARANCES													
Tube Removal - Front Only	X	84	89	92	115	120	126	125	133	136	142	150	150
MINIMUM BOILER ROOM LENGTH ALLOWING FOR TUBE REMOVAL:													
Thru Window or Door		208.5	220.5	223	246	274	280	280.5	300.5	303	309	329	329
Front of Boiler		252.5	262.5	268	314	330	342	343.5	359.5	365	377	393	393
WEIGHTS IN LBS													
Normal Water Weight		6,260	6,540	7,420	8,830	10,110	10,550	15,820	16,300	16,600	17,110	20,000	20,000
Approx. Shipping Weight - (150psig)		9,710	10,480	11,750	13,250	15,670	16,090	19,650	21,050	24,600	26,000	32,100	32,250

NOTES:
Accompanying dimensions, while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension diagram/drawing.
All connections are threaded unless otherwise indicated:

Figure 2. Model CBEX Premium Hot Water Boiler Dimensions 100 - 800 HP

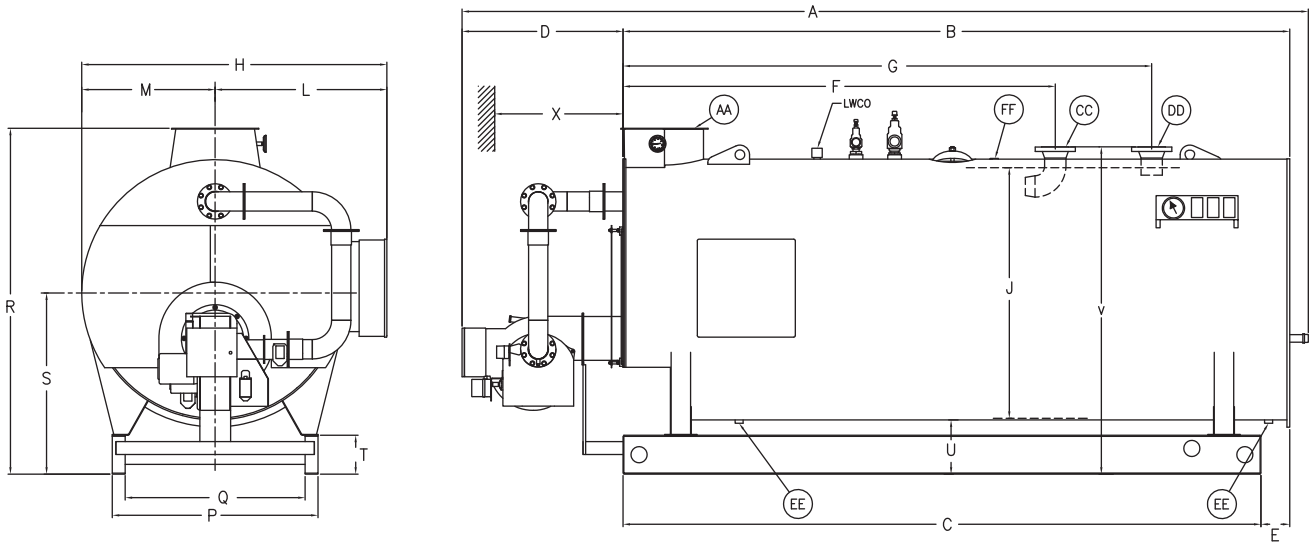


Table 4. **Model CBEX Premium Hot Water Boiler Dimensions 100 - 800 HP**

BOILER H.P.	DIM	100	125	150	200	250	300	350	400	500	600	700	800
LENGTHS													
Overall Length	A	179.5	184.5	190	213	232	238	238.5	258.5	261	267	287	287
Shell	B	132.5	137.5	140	163	174	180	182.5	190.5	193	199	207	207
Base Frame	C	125.5	130.5	131	154	164	170	173.5	181.5	183.5	189.5	197.5	197.5
Burner Extension	D	41	41	44	44	52	52	50	62	62	62	74	74
Rear Ring Flange to Base	E	7	7	9	9	10	10	9	9	9.5	9.5	9.5	9.5
Shell Flange to Water Return	F	88.5	93.5	96	119	128.5	134.5	137	145	137.5	143.5	151.5	151.5
Shell Flange to Water Outlet	G	113.5	118.5	121	144	154.5	160.5	163	171	173.5	179.5	187.5	187.5
WIDTHS													
Overall Width	H	75	75	80	80	87	87	98	98	105	105	112	112
I.D. Boiler	J	55	55	60	60	67	67	78	78	85	85	92	92
Center to Panel	L	44.5	44.5	47	47	50.5	50.5	56	56	59.5	59.5	63	63
Center to Lagging	M	30.5	30.5	33	33	36.5	36.5	42	42	45.5	45.5	49	49
Base Outside	P	47.5	47.5	52.5	52.5	51	51	64	64	60	60	68	68
Base Inside	Q	39.5	39.5	44.5	44.5	43	43	56	56	47	47	55	55
HEIGHTS													
Base to Vent Outlet	R	81	81	87	87	94.5	94.5	108	108	114.5	114.5	122.5	122.5
Base to Boiler Centerline	S	41	41	46	46	50	50	56.5	56.5	61	61	65.5	65.5
Height of Base Frame	T	12	12	12	12	12	12	12	12	12	12	12	12
Base to Bottom of Boiler	U	13	13	15.5	15.5	16	16	17	17	18	18	19	19
Base to Water Return & Outlet	V	78.5	78.5	82.5	82.5	90	90	102	102	110	110	118	118
BOILER CONNECTIONS													
Water Return (150# ANSI Flange)	CC	4	6	6	6	8	8	8	10	10	12	12	12
Water Outlet (150# ANSI Flange)	DD	4	6	6	6	8	8	8	10	10	12	12	12
Drain-Front & Rear	EE	1.5	1.5	1.5	2	2	2	2	2	2	2	2	2
Air Vent	FF	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2
VENT STACK													
Vent Stack Diameter (Flanged)	AA	16	16	16	16	20	20	24	24	24	24	24	24

Table 4. Model CBEX Premium Hot Water Boiler Dimensions 100 - 800 HP (Continued)

BOILER H.P.	DIM	100	125	150	200	250	300	350	400	500	600	700	800
MINIMUM CLEARANCES													
Tube Removal - Front Only	X	84	89	92	115	120	126	125	133	136	142	150	150
MINIMUM BOILER ROOM LENGTH ALLOWING FOR TUBE REMOVAL:													
Thru Window or Door		208.5	220.5	223	246	274	280	280.5	300.5	303	309	329	329
Front of Boiler		252.5	262.5	268	314	330	342	343.5	359.5	365	377	393	393
WEIGHTS IN LBS													
Normal Water Weight		6,960	7,250	8,540	10,140	12,540	13,040	18,870	19,480	21,650	22,300	26,650	26,650
Approx. Shipping Weight - (30 psig)		8,190	8,430	9,570	10,830	13,100	13,450	16,240	17,640	20,680	21,480	26,500	26,500
Approx. Shipping Weight - (125 psig)		9,050	9,300	11,250	13,000	15,800	16,500	20,650	21,050	25,950	26,900	33,100	33,250

NOTES:
Accompanying dimensions, while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension diagram/drawing.
All connections are threaded unless otherwise indicated:

e-mail: info@cleaverbrooks.com
Web address: http://www.cleaverbrooks.com