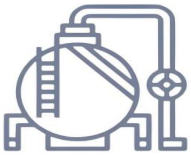


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

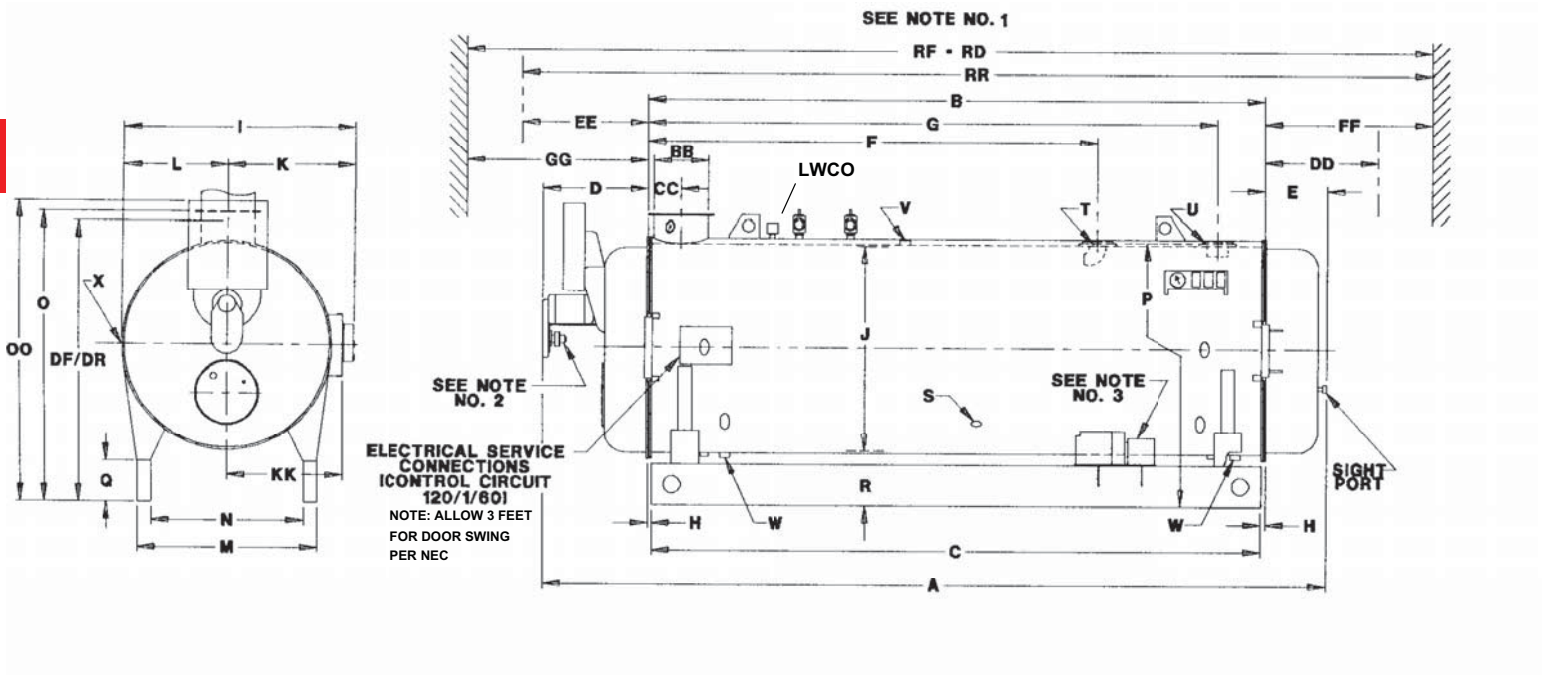
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

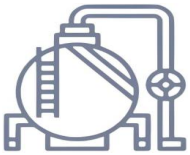
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

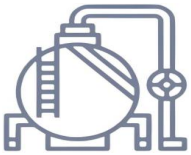


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

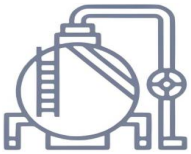


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

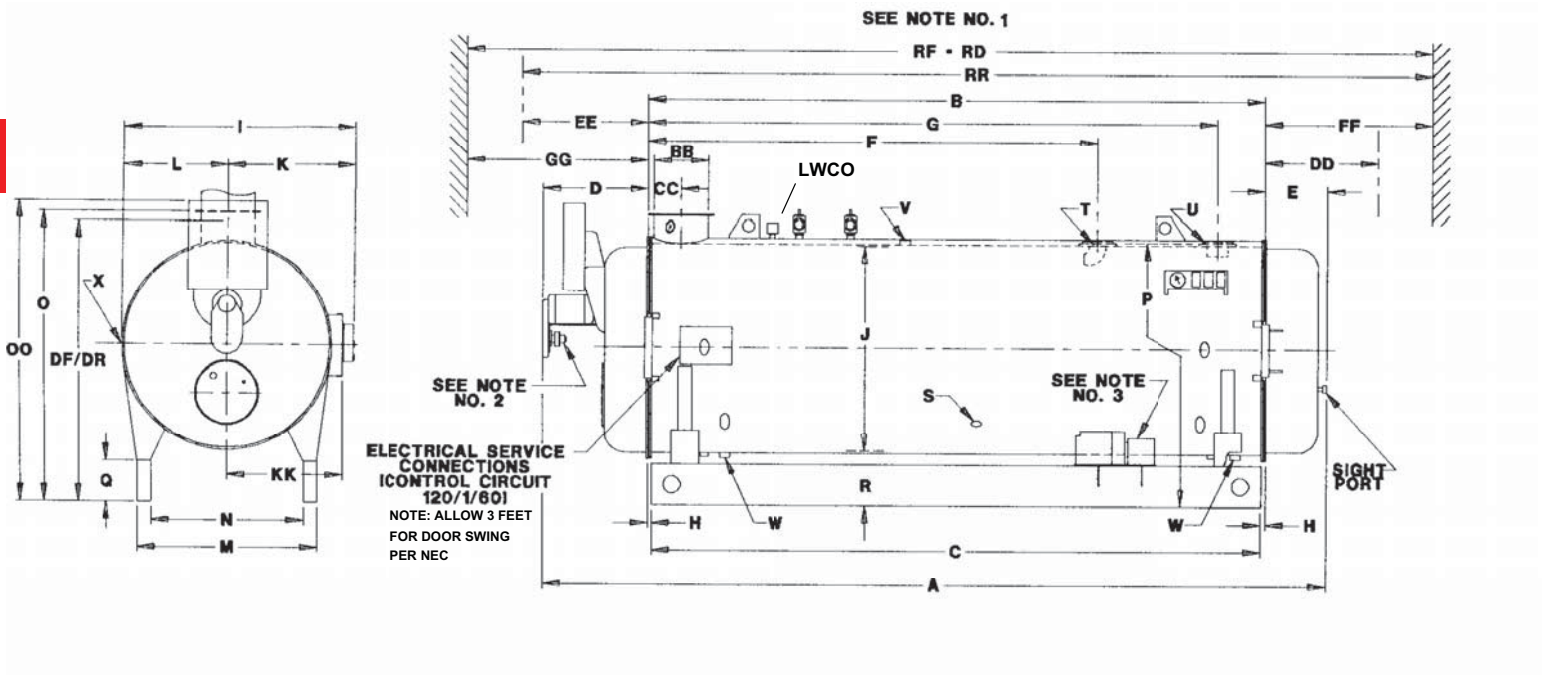
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

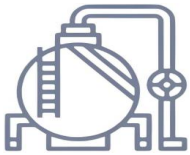
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

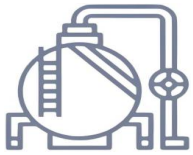


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

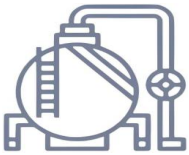


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

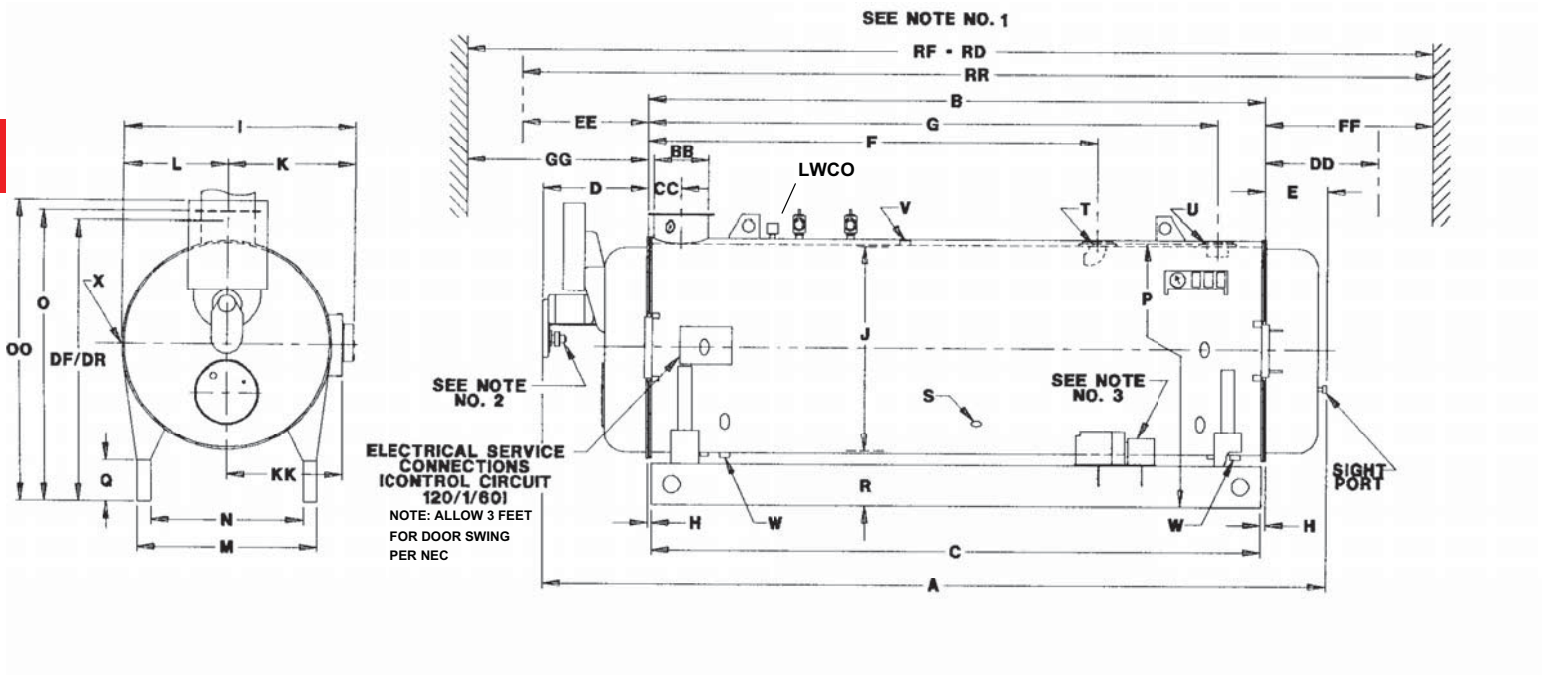
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

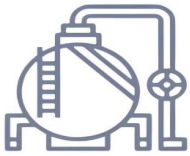
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

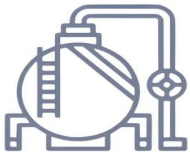


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

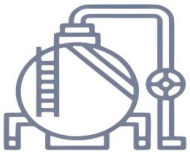


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

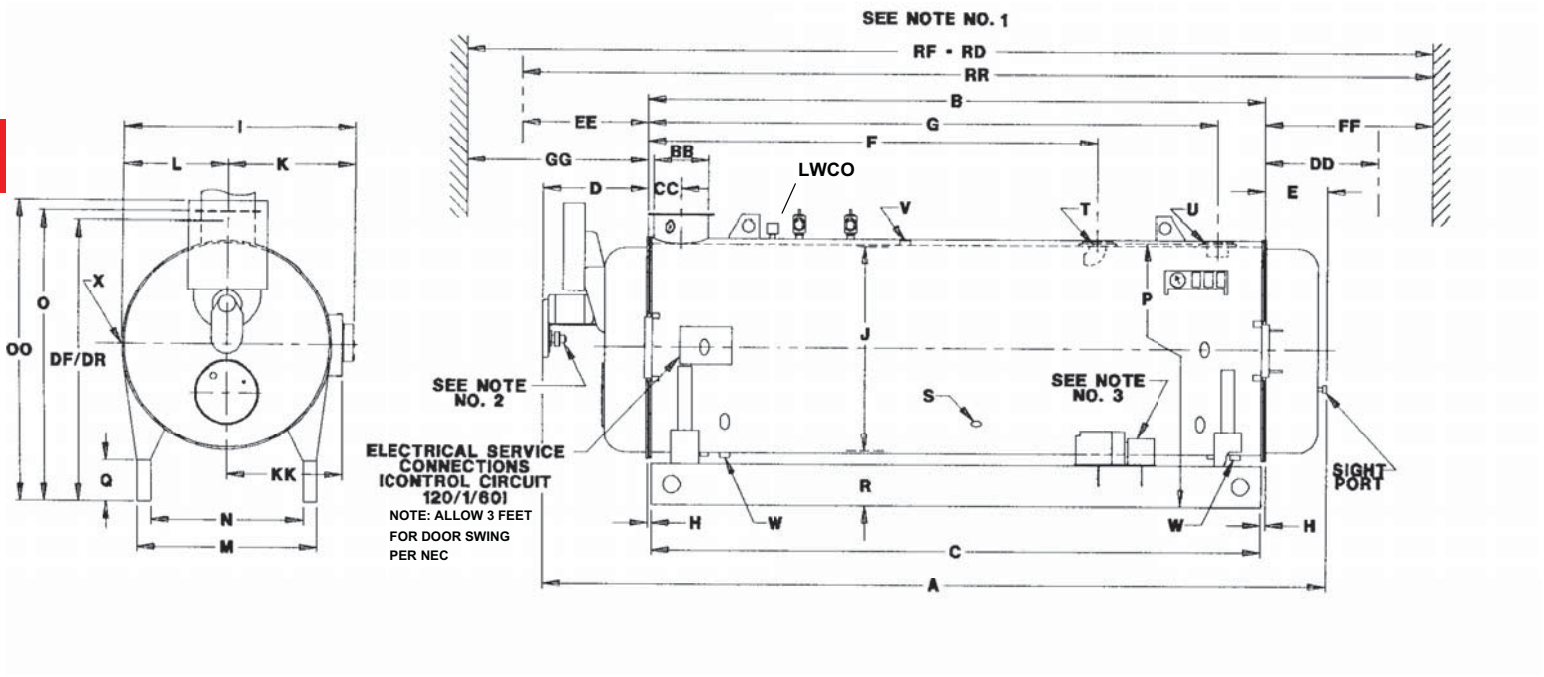
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

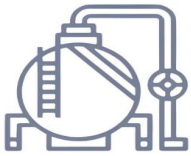
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

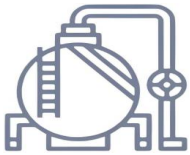


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

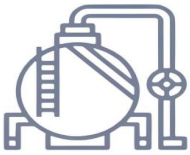


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

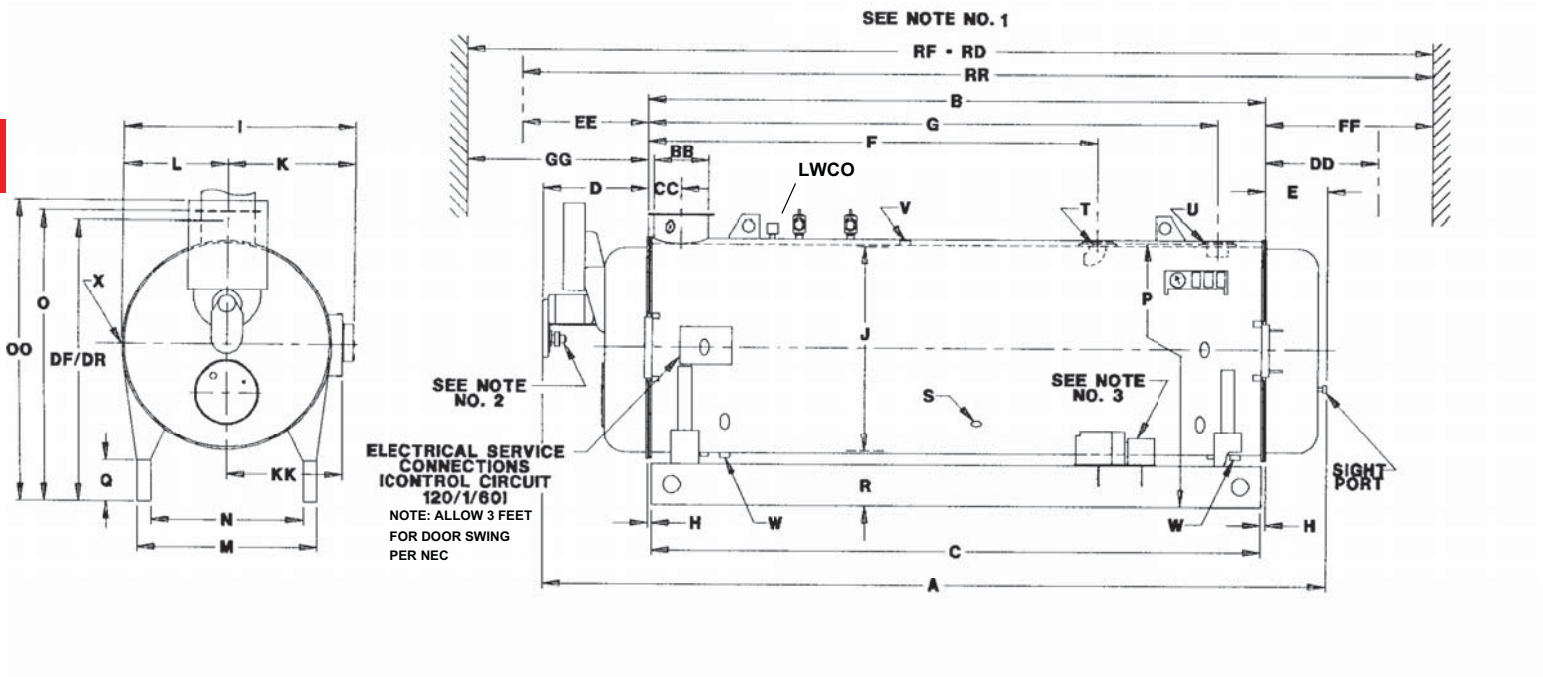
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

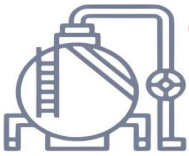
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

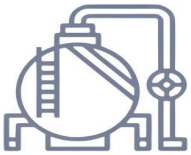


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

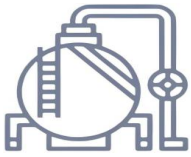


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

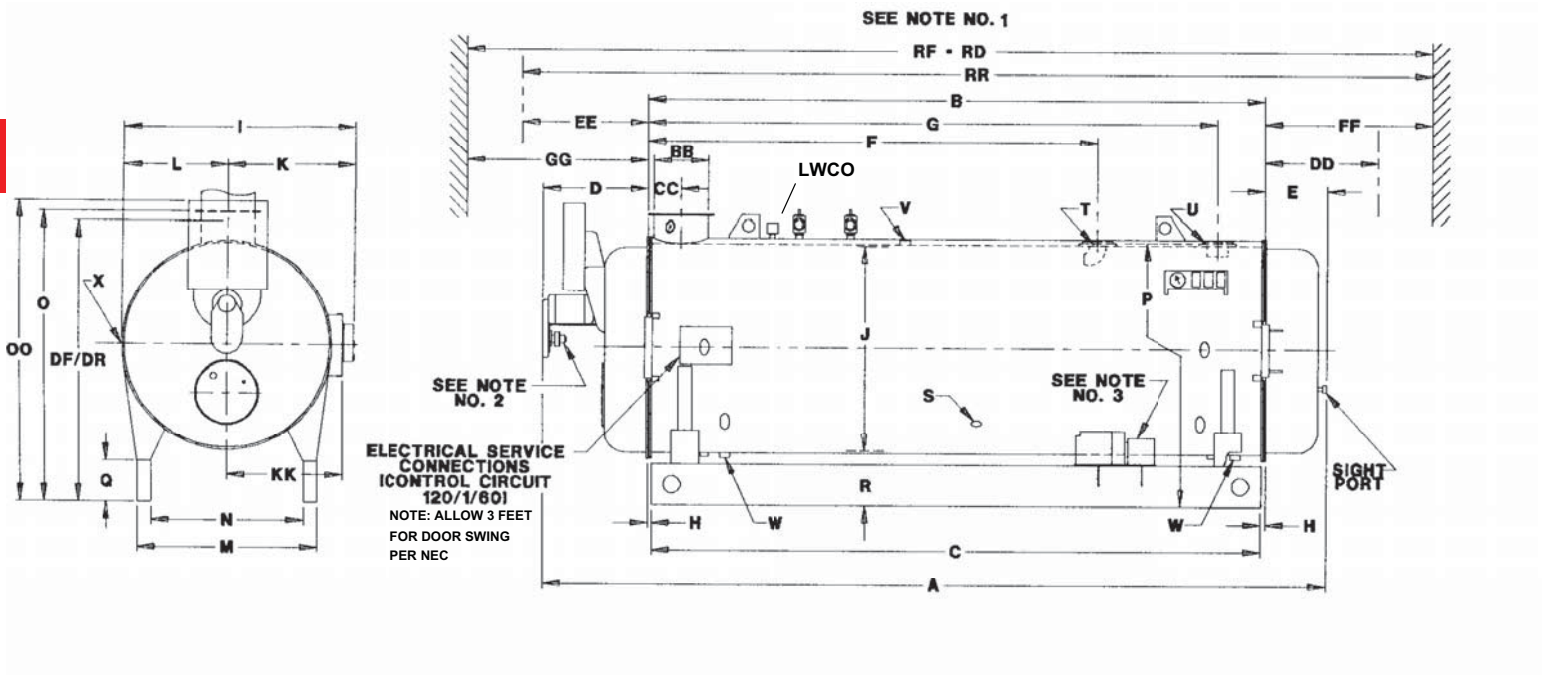
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2

BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

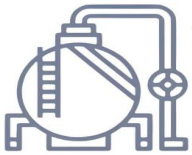


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

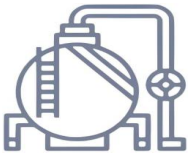


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

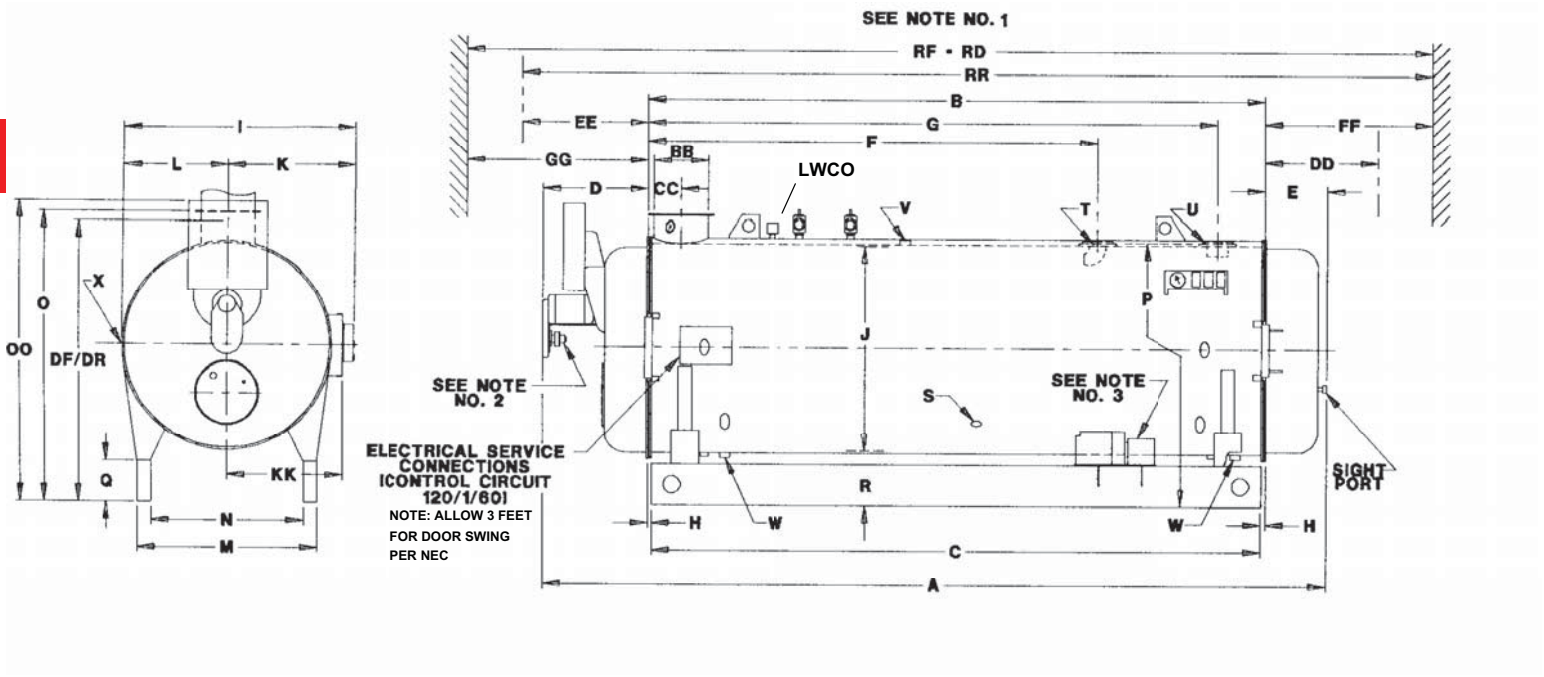
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

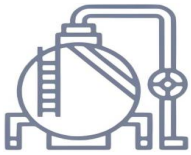
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

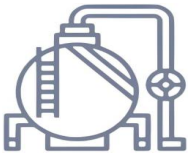


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

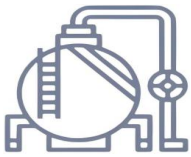


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

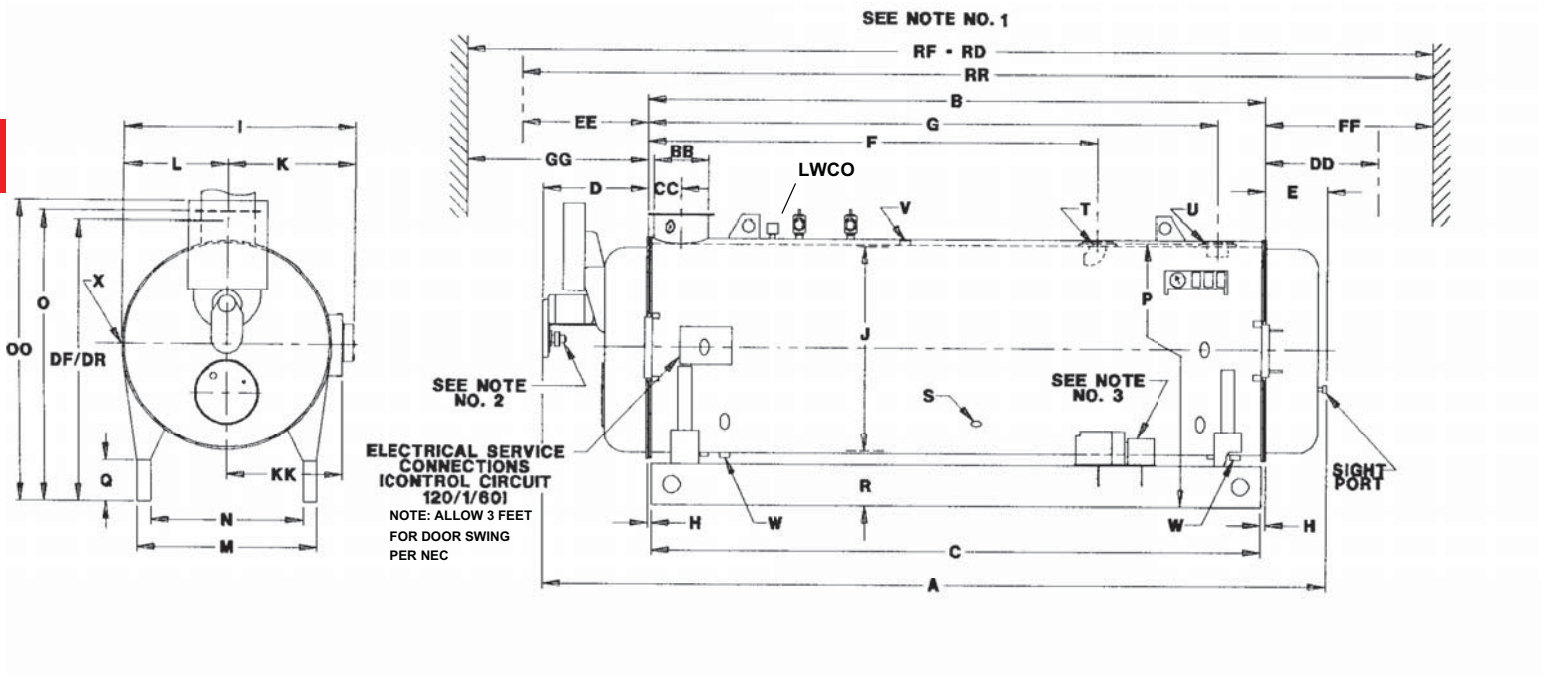
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

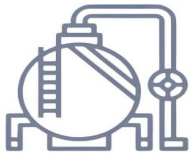
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

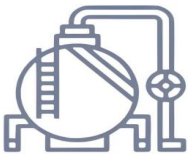


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

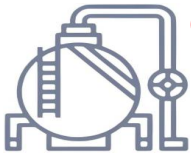


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

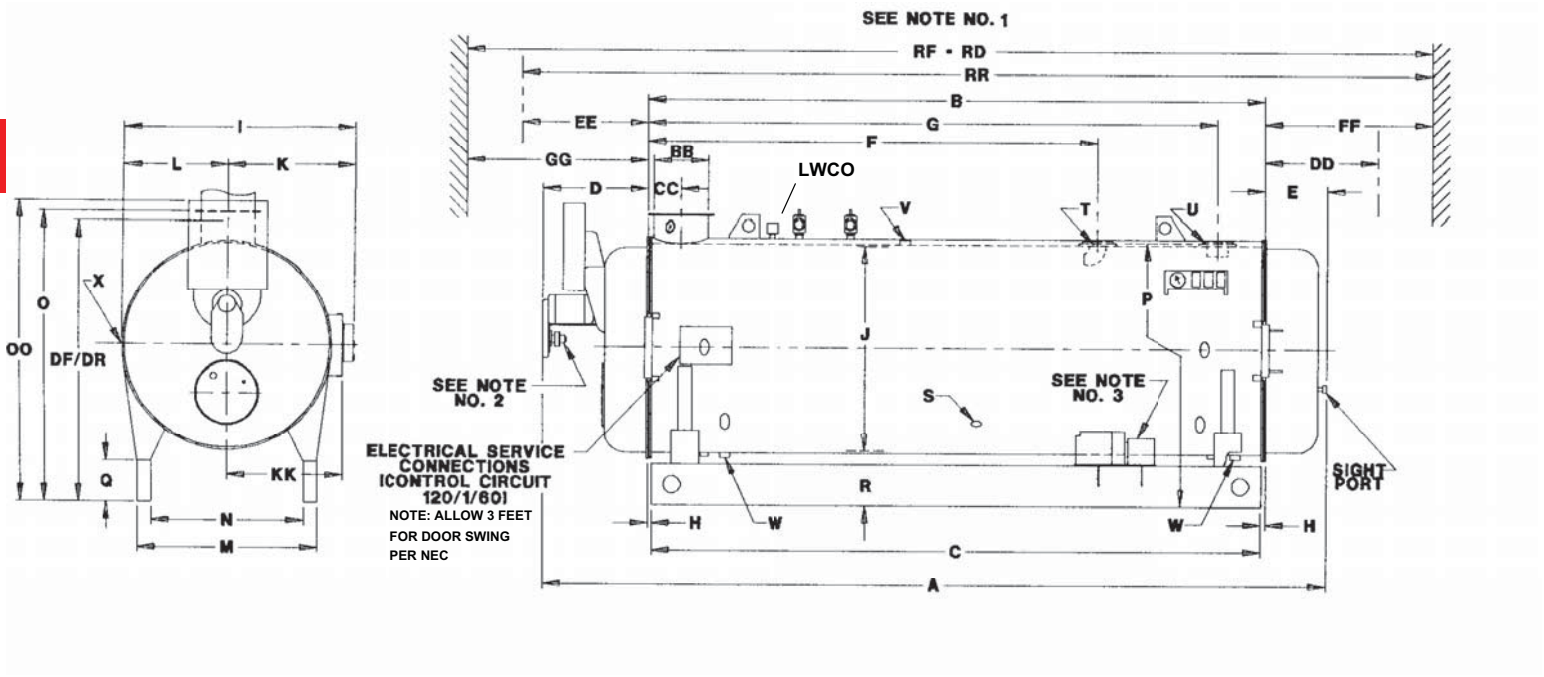
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

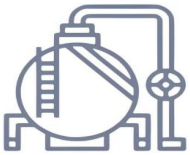
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
LENGTHS										
Overall	A	97	97	114-5/8	140-5/8	129	129	168	168	187
Shell	B	62-5/8	62-5/8	80-5/8	106-5/8	92	92	131	131	150
Base Frame	C	59	59	77	103	91	91	130	130	148
Front Head Ext.	D	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Rear Head Ext.	E	15-1/2	15-1/2	15-1/2	15-1/2	18-1/2	18-1/2	18-1/2	18-1/2	18-1/2
Front Ring Flange to Return	F	43-5/8	43-5/8	62	81	69	69	108	108	127
Front Ring Flange to Outlet	G	55-1/8	55-1/8	73-1/8	98-1/2	84-5/8	84-5/8	123-5/8	123-5/8	142-5/8
Ring Flange to Base	H	1-13/16	1-13/16	1-13/16	1-13/16	5/8	5/8	5/8	5/8	1
WIDTHS										
Overall	I	48-3/4	48-3/4	48-3/4	48-3/4	63	63	63	63	63
ID, Boiler	J	36	36	36	36	48	48	48	48	48
Center to Entrance Box	K	28-3/4	28-3/4	28-3/4	28-3/4	36	36	36	36	36
Center to Outside Hinge	KK	22	22	22	22	29	29	29	29	29
Center to Lagging	L	20	20	20	20	27	27	27	27	27
Base, Outside	M	28	28	28	28	37-5/8	37-5/8	37-5/8	37-5/8	37-5/8
Base, Inside	N	22	22	22	22	29-5/8	29-5/8	29-5/8	29-5/8	29-5/8

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig and 125 psig Design Pressure - 15 to 100 hp) - Sheet 1 of 2



BOILER HP	DIM	15	20	30	40	50	60	70	80/ 100A	100/ 125A
HEIGHTS										
Overall	OO	66	66	66	66	72-5/8	72-5/8	72-5/8	72-5/8	72-5/8
Base to Vent Outlet	O	53-1/2	53-1/2	53-1/2	53-1/2	70	70	70	70	70
Base to Return and outlet	P	50	50	50	50	67	67	67	67	67
Davit (Front)	DF	-	-	-	-	-	-	-	-	-
Davit (Rear)	DR	-	-	-	-	-	-	-	-	-
Height of Base	Q	8	8	8	8	12	12	12	12	12
Base to bottom of boiler	R	12	12	12	12	16	16	16	16	16
BOILER CONNECTION										
Waterfill Conn. Right & Left	S	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Water Return - Threaded	T	2-1/2	2-1/2	3	3	4	4	4	4	4
Water Outlet - Threaded[A]	U	2-1/2	2-1/2	3	3	4	4	4	4	4
Air Vent	v	1	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
Drain, Front and Rear	W	1	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Auxiliary Connection	X	1	1	1	1	1	1	1	1	1
VENT STACK										
Diameter (flgd. connection)	BB	6	6	8	8	10	10	12	12	12
Front Ring Flange to vent C_L	CC	4	4	5	5	6	6	7	7	7
MINIMUM CLEARANCES										
Rear Door Swing	DD	44	44	44	44	55	55	55	55	55
Front Door Swing	EE	44	44	44	44	55	55	55	55	55
Tube Removal, Rear	FF	56	56	74	100	84	84	123	123	142
Tube, Removal, Front	GG	46	46	64	90	74	74	113	113	132
MINIMUM BOLER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:										
Rear of Boiler	RR	163	163	199	251	231	231	309	309	347
Front of Boiler	RF	153	153	189	241	221	221	299	299	337
Thru Window or Doorway	RD	151	151	169	195	202	202	241	241	260
WEIGHT IN LBS										
Water Capacity Flooded		1500	1460	1915	2585	3665	3500	5420	5250	5960
Approx. Ship. Wgt. – 30 psig Approx. Ship. Wgt. – 125 psig		3000 3300	3100 3400	3650 3880	4350 4580	6800 7100	7000 7300	8000 8350	8100 8450	8800 9150

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Air compressor belt driven from blower motor on sizes 15 thru 40 hp.
3. Air compressor module on sizes 50 thru 100 hp.
4. 15 - 100 hp, hinged door standard.
5. Add 370lbs to the 80 hp ship weight for 100A and 485 lbs to the 100 hp ship weight for the 125A.

A. Dip Tube included.

Figure A2-3. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 15 to 100 hp) - Sheet 2 of 2

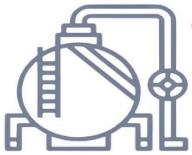


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

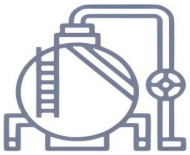


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

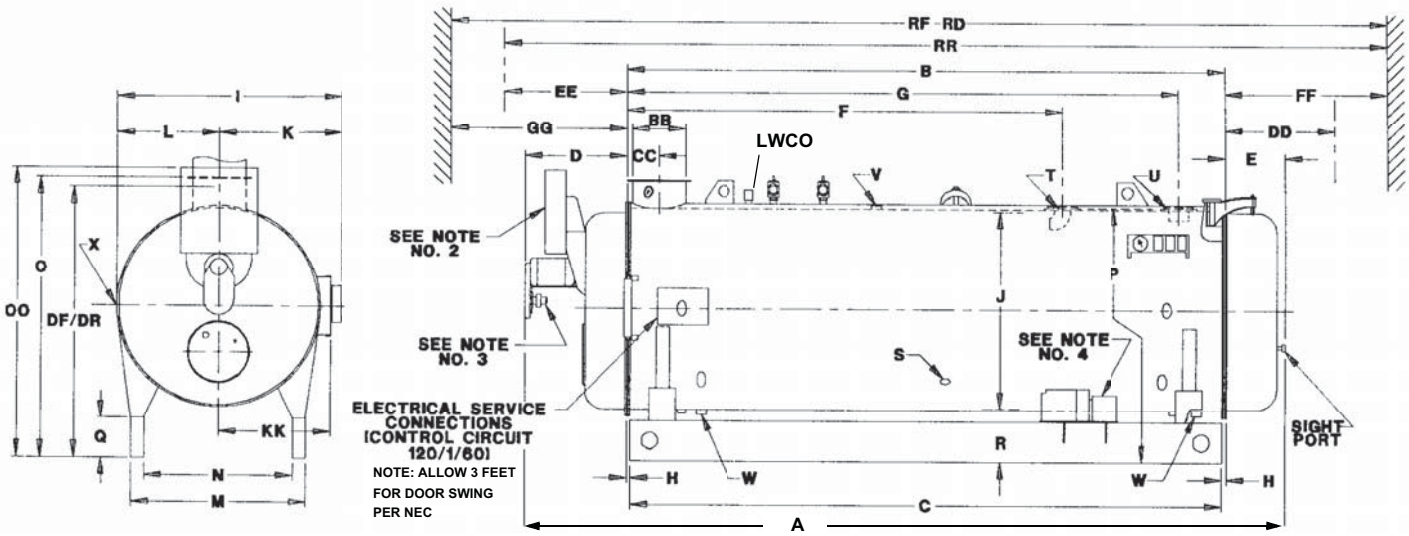
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

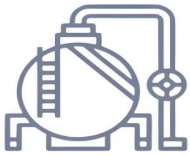
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

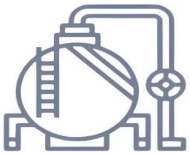


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

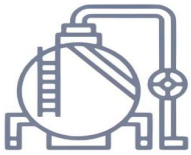


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

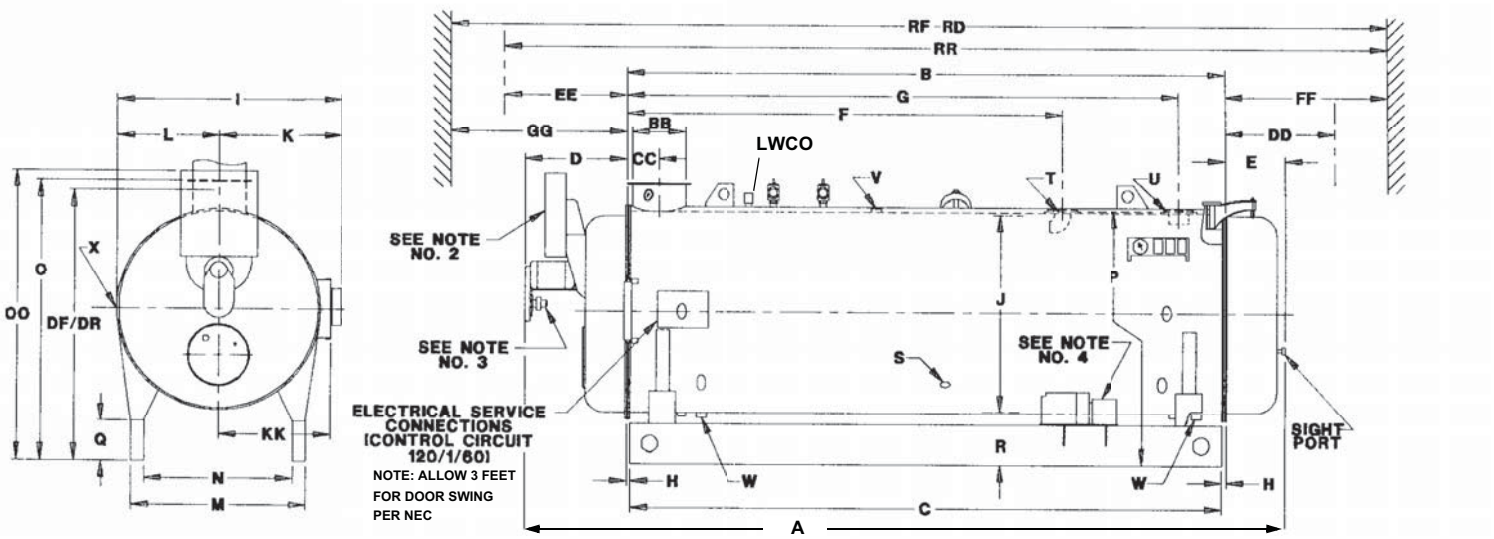
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

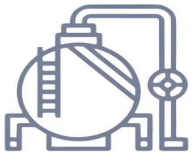
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

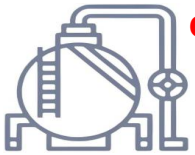


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

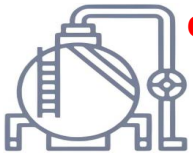


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

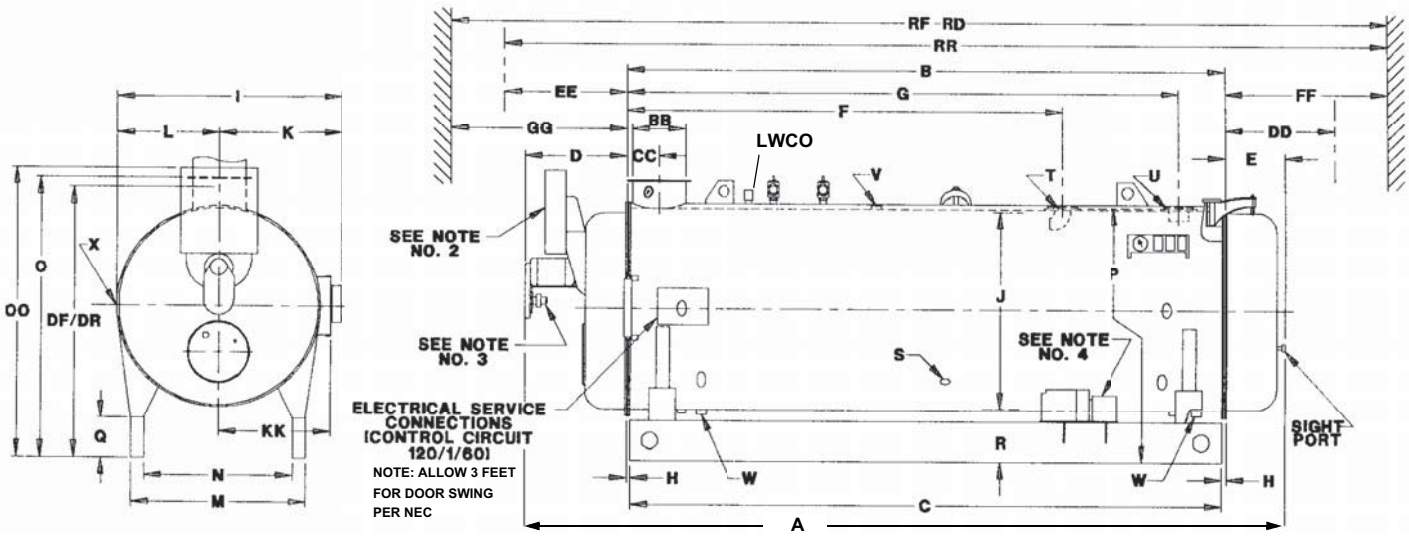
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

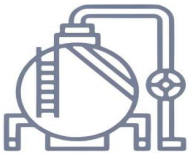
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

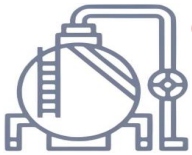


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

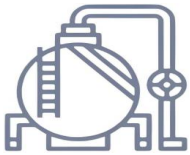


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

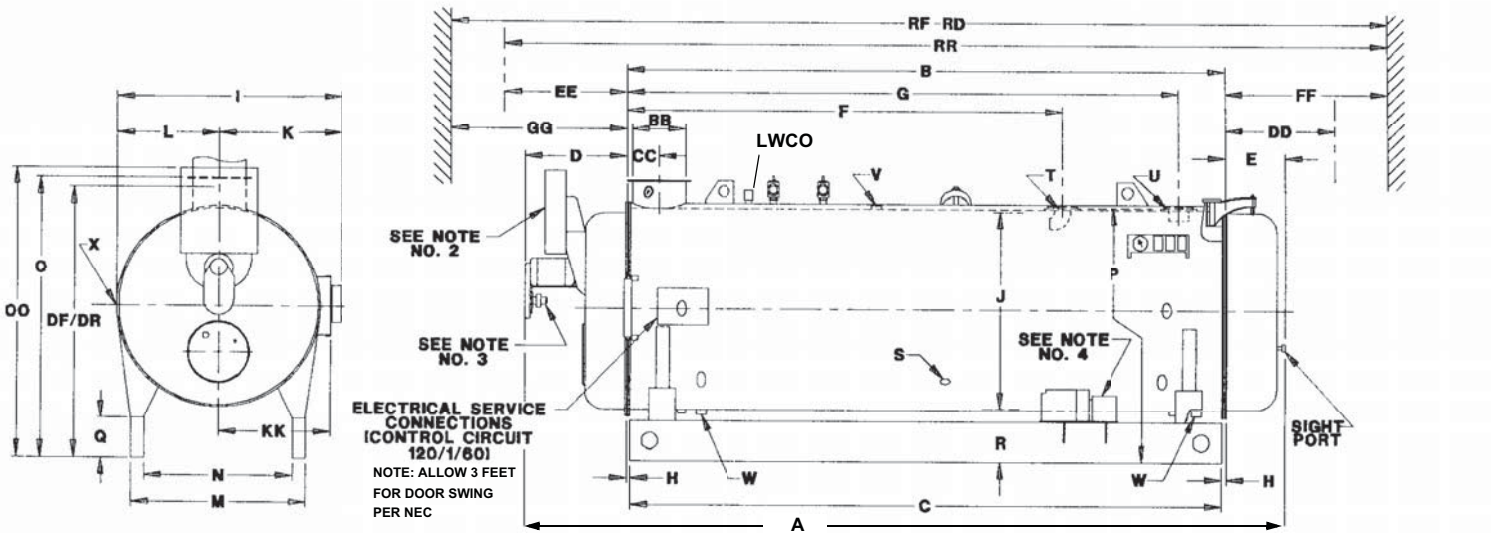
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

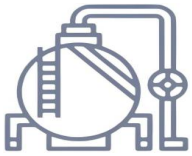
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

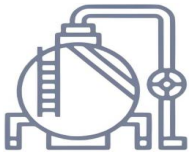


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

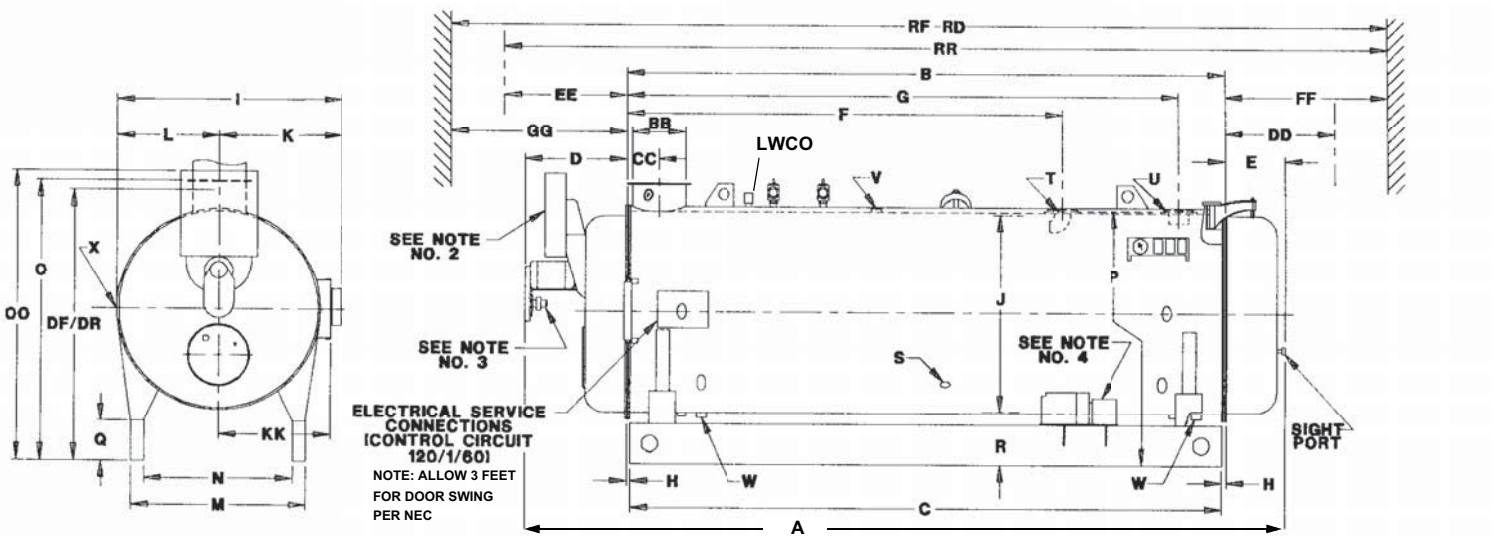
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

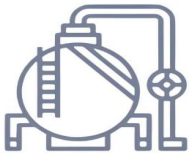
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

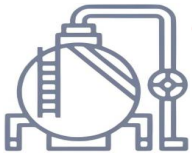


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

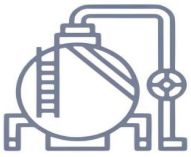


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

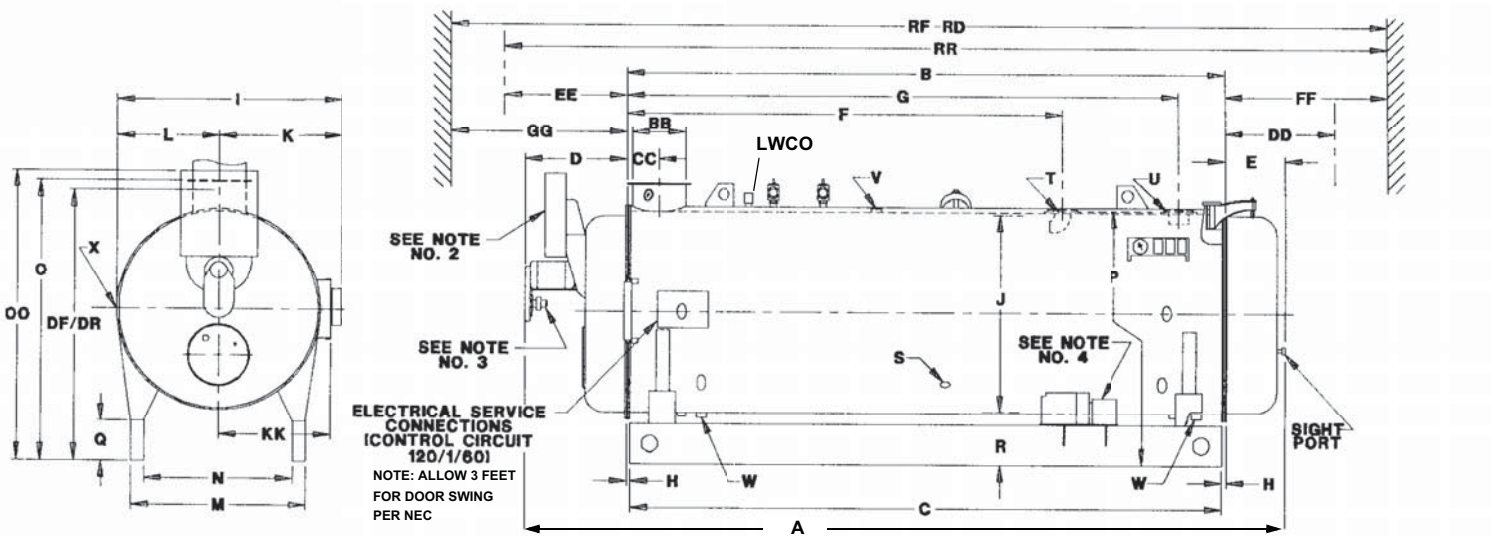
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

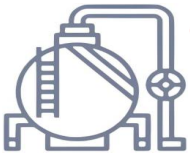
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

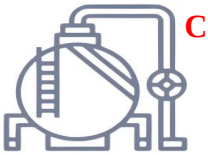


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

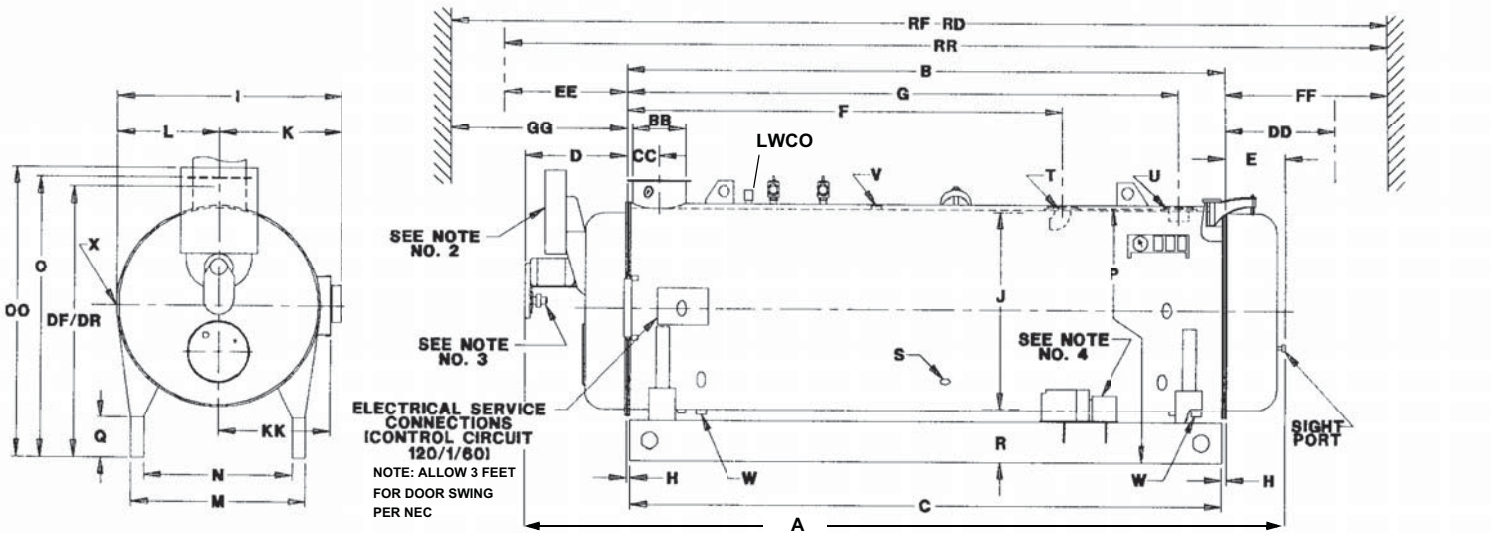
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

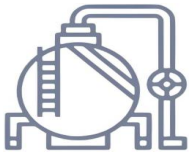
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

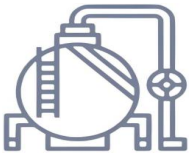


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

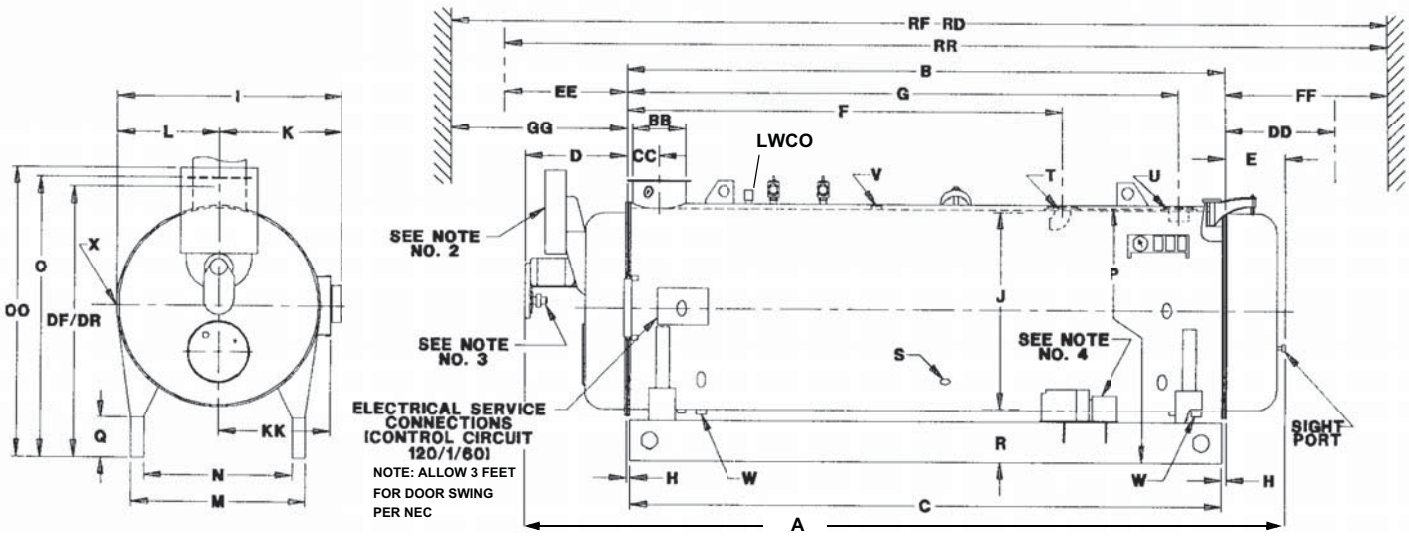
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

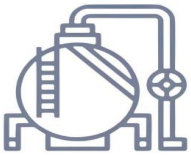
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

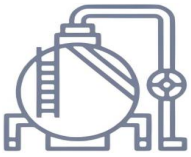


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

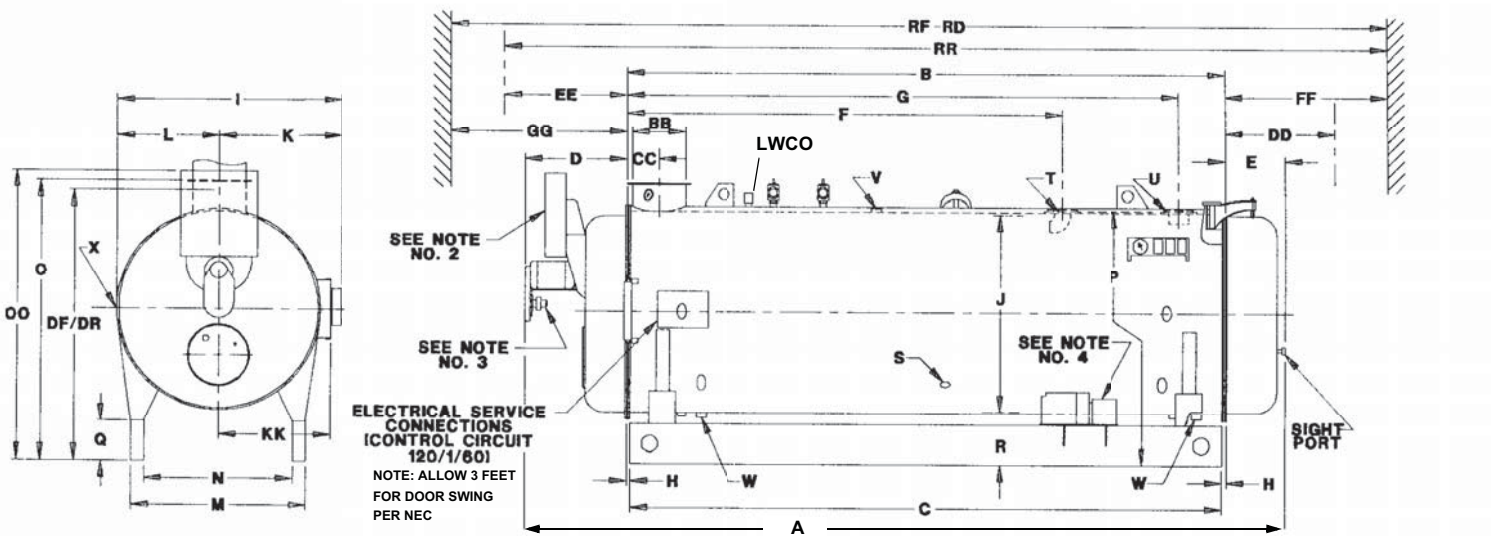
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

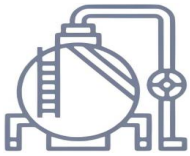
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

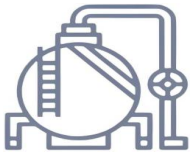


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

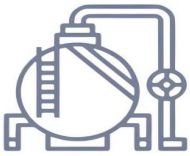


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

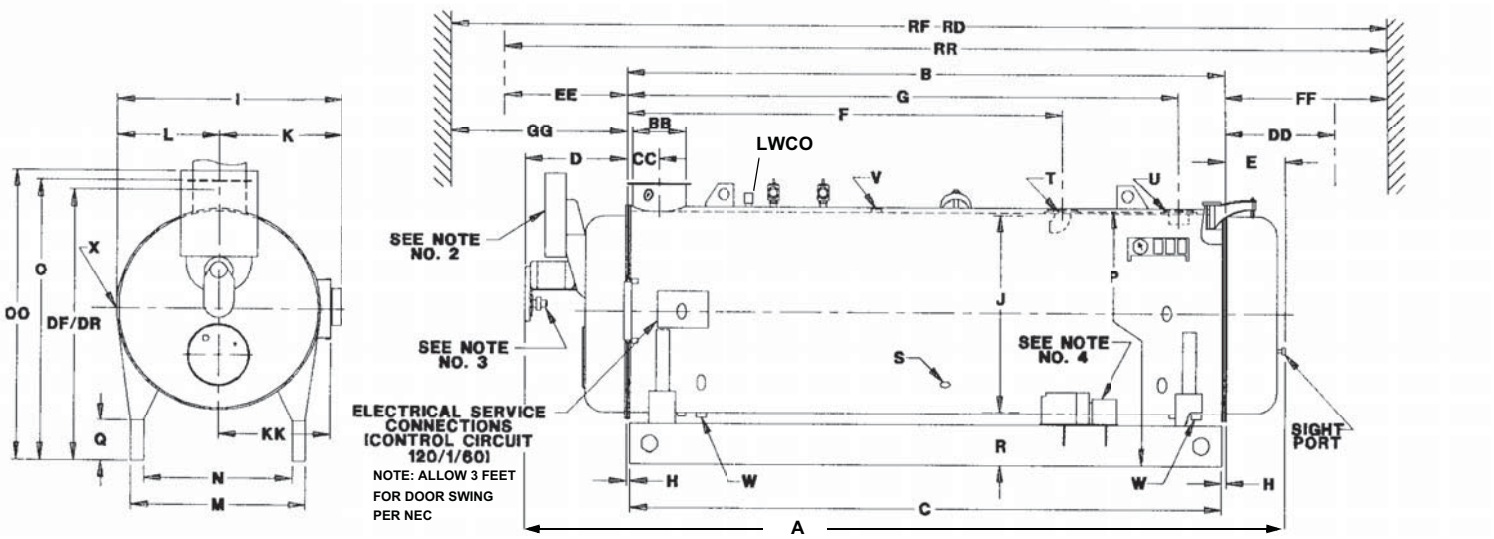
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

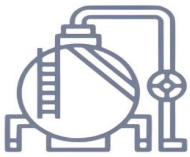
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

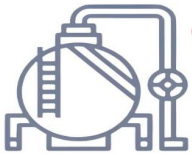


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

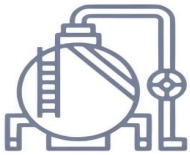


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

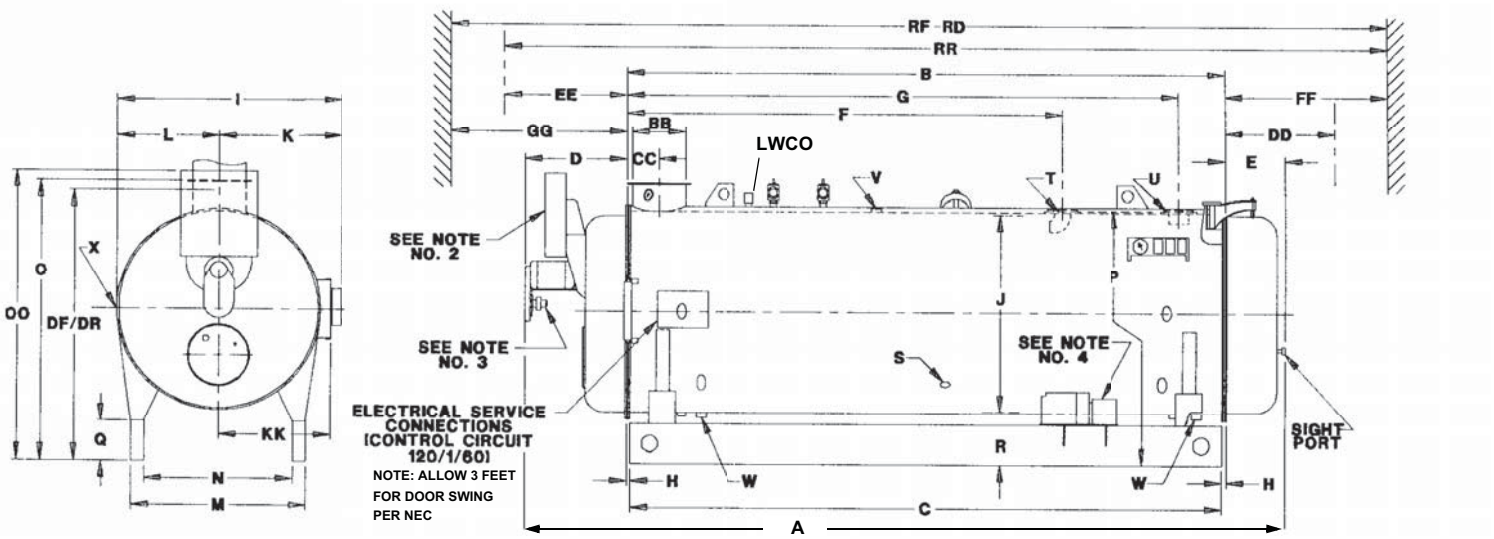
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2

BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

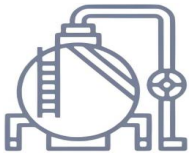


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

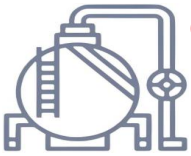


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

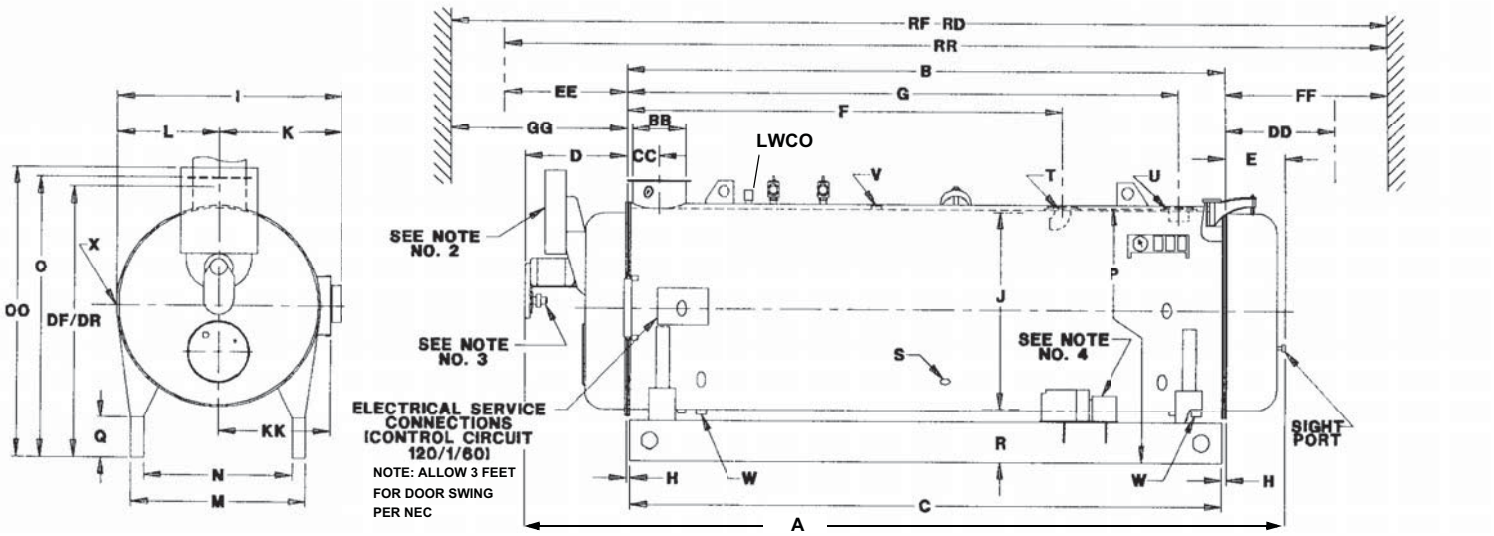
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

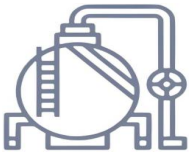
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.

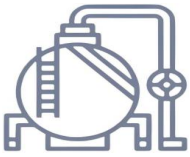


Table A2-3. Model CB Hot Water Boiler Ratings (15 - 100 hp)

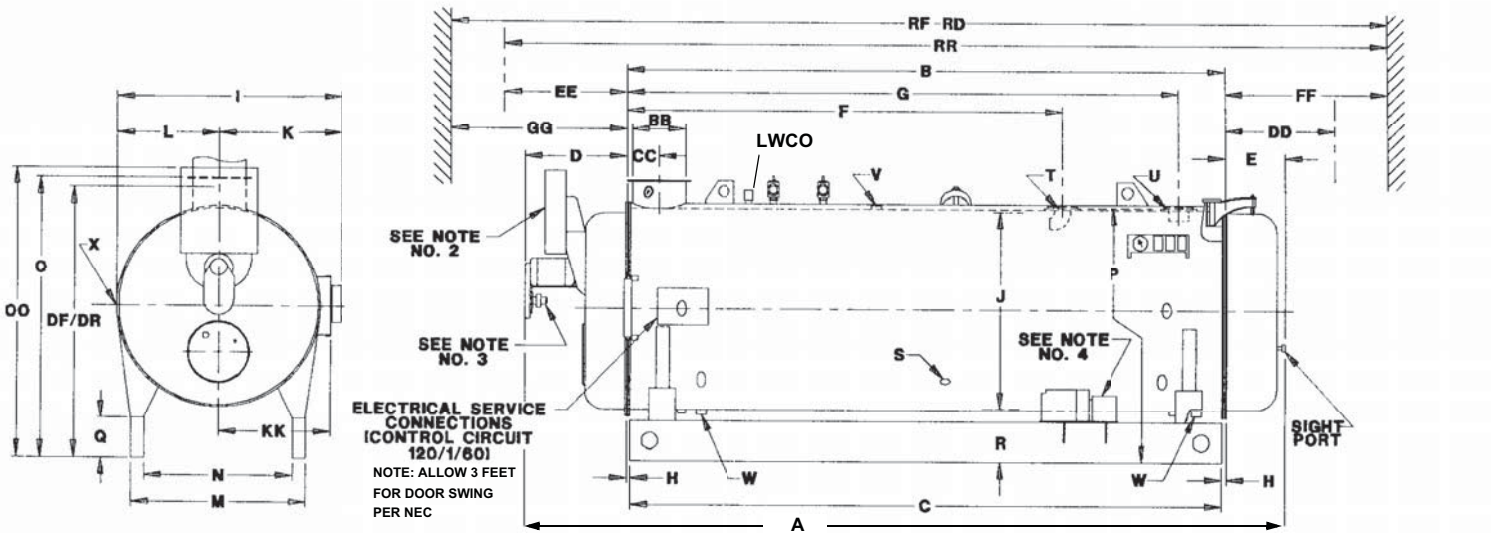
BOILER HP	15[C]	20[C]	30[C]	40[C]	50	60	70	80	100A	100	125A
RATINGS - SEA LEVEL TO 3000 FT											
Rated Cap Btu Output (1000 Btu/hr)	502	670	1004	1339	1674	2009	2343	2678	3348	3348	4184
APPROXIMATE FUEL CONSUMPTION AT RATED CAPCITY											
Light Oil (gph)[A]	4.5	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0	30.0	37.5
Heavy Oil (gph)[B]	-	-	-	-	14.0	16.5	19.5	22.5	28.0	28.0	35.0
Gas (cfh) MBtu- nat Gas (Therm/hr)	625 6.3	835 8.4	1255 12.6	1675 16.8	2095 21.0	2510 25.1	2930 29.3	3350 33.5	4185 41.9	4185 41.9	5230 52.3
POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Gas Models (only)	1	1	1-1/2	2	2	2	2	2[D]	3	3	3
Oil Pump Motor, hp No. 2 Oil	Belt-Driven From Blower				1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Pump Motor, hp No. 6 Oil	-	-	-	-	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Oil Heater kW No. 6 Oil	-	-	-	-	5	5	5	5	5	5	5
Air Compressor Motor hp (Oil firing Only)	Air Compressor Belt-Driven from Blower Motor				2	2	2	2	2	2	2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. No. 6 Oil not available in 15-40 hp range.
D. 3 hp above 2000 ft.

Table A2-4. Model CB Hot Water Boiler Ratings (125 - 800 hp)

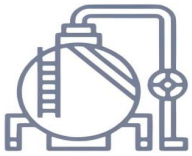
BOILER HP	150	175A	200	250	300	350	400	500	600	700	750	800
	RATINGS - SEA LEVEL TO 3000 FT [J]											
Rated Cap. Btu Output (1000 Btu/hr)	5021	5858	6695	8369	10043	11716	13390	16738	20085	23432	25106	26779
	APPROXIMATE FUEL CONSUMPTON AT RATED CAPCITY											
Light Oil (gph)[A]	45.0	52.5	60.0	74.5	89.5	104.5	119.5	149.5	179.5	209.0	224.2	239.3
Heavy Oil (gph)[B]	42.0	49.0	56.0	69.5	83.5	97.5	111.5	139.5	167.5	195.5	209.3	223.4
Gas (cfh) MBtu-Natural Gas (Therm/hr)	6280 62.8	7320 73.2	8370 83.7	10460 104.6	12555 125.5	14650 146.5	16750 167.5	20925 209.3	25100 251.0	29300 293.0	31385 313.8	33480 334.8
	POWER REQUIREMENTS - SEA LEVEL TO 3000 FT, 60 HZ											
Blower Motor hp (except gas)	7-1/2	7-1/2	15	7-1/2	10[C]	15[D]	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Gas Models (only)	5	5	10	7-1/2	7-1/2[I]	15	10[C]	15[E]	20[F]	30[G]	40[K]	50[H]
Oil Pump Motor, hp No. 2 Oil	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	1	1	1
Oil Pump Motor, hp No. 6 Oil	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Oil Heater kW No. 6 Oil	5	5	5	7-1/2	7-1/2	7-1/2	10	10	10	10	10	10
Air Compressor Motor hp (Oil firing Only)							7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2

NOTES:
1. For altitudes above 3000 ft, contact your local Cleaver-Brooks authorized representative for verification of blower motor hp.
A. Based on 140,000 Btu/gal.
B. Based on 150,000 Btu/gal.
C. 15 hp above 2500 ft.
D. 20 hp above 2500 ft.
E. 20 hp above 2000 ft.
F. 30 hp above 2500 ft.
G. 40 hp above 2000 ft.
H. 60 hp above 3000 ft.
I. 10 hp above 2500 ft.
J. Sea level to 2,500 ft for 300 and 350 hp sizes.
K. 50 hp above 2500 ft.



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
LENGTHS													
Overall	A	174-1/2	199-1/2	232-1/2	197	227	257	210	244	284	317	319	319
Shell	B	125	149	180	144	171	201	152	186	222	255	255	255
Base Frame	C	124	148	179	143	170	200	151	185	221	254	254	254
Front Head Extension	D	30	31	33	29	32	32	26	26	30	30	32	32
Rear Head Extension	E	19-1/2	19-1/2	19-1/2	24	24	24	32	32	32	32	32	32
Front Ring Flange to Return	F	91	102	131	104-1/2	131-1/2	161-1/2	111-1/2	139	175	207	207	207
Front Ring Flange to Outlet	G	114	136	167	131	158	188	146	170	206	239	239	239
Ring Flange to Base	H	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
WIDTHS													
Overall	I	75-1/2	75-1/2	75-1/2	93	93	93	113	113	113	113	113	113
ID, Boiler	J	60	60	60	78	78	78	96	96	96	96	96	96
Center to Entrance Box	K	42-1/2	42-1/2	42-1/2	51	51	51	62	62	62	62	62	62
Center to Outside Hinge	KK	35	35	35	51	51	51	62	62	62	62	62	62
Center to Lagging	L	33	33	33	42	42	42	51	51	51	51	51	51
Base, Outside	M	52-1/2	52-1/2	52-1/2	64-3/8	64-3/8	64-3/8	72	72	72	72	72	72
Base, Inside	N	44-1/2	44-1/2	44-1/2	52-3/8	52-3/8	52-3/8	56	56	56	56	56	56

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 1 of 2



BOILER HP	DIM	125	150/ 175A	200	250	300	350	400	500	600	700	750	800
HEIGHTS													
Overall	OO	88	88	88	106	106	106	126	126	126	126	126	126
Base to Vent Outlet	O	85	85	85	106	106	106	126	126	126	126	126	126
Base to Return and Outlet	P	77	77	77	96	96	96	116	116	116	116	116	116
Davit (Front)	DF	-	-	-	104	104	104	125	125	125	125	125	125
Davit (Rear)	DR	84-3/4	84-3/4	84-3/4	104	104	104	126	126	126	126	126	126
Height of Base	Q	12	12	12	10	10	10	12	12	12	12	12	12
Base to Bottom of Boiler	R	16	16	16	17	17	17	19	19	19	19	19	19
BOILER CONNECTION													
Waterfill Conn. Right & Left	S	1-1/2	1-1/2	2	2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2
Water Return Flange[A]	T	6	6	6	8	8	8	10	10	12	12	12	12
Water Outlet Flange	U	6	6	6	8	8	8	10	10	12	12	12	12
Air Vent	V	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2	2	2
Drain, Front and Rear	W	1-1/2	1-1/2	2	2	2	2	2	2	2	2	2	2
Auxiliary Connection	X	1	1	1	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
VENT STACK													
Diameter (flgd. connection)	BB	16	16	16	20	20	20	24	24	24	24	24	24
Front Ring Flange to vent C_L	CC	9	9	9	10-1/2	10-1/2	10-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
MINIMUM CLEARANCES													
Rear Door Swing	DD	32[B]	32[B]	32[B]	43[B]	43[B]	43[B]	53[B]	53[B]	53[B]	53[B]	53[B]	53[B]
Front Door Swing	EE	67	67	67	89B	89B	89B	108B	108B	108B	108B	108B	108B
Tube Removal, Rear	FF	115	139	170	131	157	187	135	169	205	238	238	238
Tube, Removal, Front	GG	103	127	158	116	142	172	117	151	187	220	220	220
MINIMUM BOILER ROOM LENGTH ALLOWING FOR DOOR SWING AND TUBE REMOVAL FROM:													
Rear of Boiler	RR	307	355	417	364	417	477	395	463	535	601	601	601
Front of Boiler	RF	260	308	370	303	356	416	322	390	462	528	528	528
Thru Window or Doorway	RD	224	248	279	275	302	332	313	347	383	416	416	416
WEIGHT IN LBS													
Water Capacity Flooded		7670	9295	11130	13880	16840	20090	20630	25925	31510	36600	36600	36600
Approx. Ship. Wgt. – 30 psig		12100	12800	15100	21700	23900	27200	33400	38300	43900	51300	51300	51300
Approx. Ship. Wgt. – 125 psig		12500	13200	15500	22500	24700	28000	34400	39300	44900	52300	52300	52300

NOTES:
1. Accompanying dimensions and ratings while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
2. Control panel relocated on boilers 250 hp and up.
3. Air compressor belt driven from blower motor on sizes 125 thru 350 hp.
4. Air compressor module on sizes 400 thru 800 hp.
5. Davited front doors are standard on 250 - 800 hp.
6. Add 480 lbs to the 150 hp ship weight for 175A.
A. Dip Tube included.
B. Davited rear doors are standard on 125 - 800 hp units.

Figure A2-4. Model CB Hot Water Boiler Dimensions (30 psig Design Pressure - 125 - 800 hp) - Sheet 2 of 2

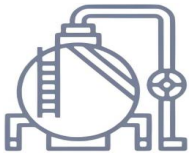


Table A2-16. Water Circulation Rate and Temperature Drop for Hot Water Boiler

BOILER HP	BOILER OUTPUT (1000) BTU/HR	SYSTEM TEMPERATURE DROP - DEGREES F									
		10	20	30	40	50	60	70	80	90	100
		MAXIMUM CIRCULATING RATE - GPM									
15	500	100	50	33	25	20	17	14	12	11	10
20	670	134	67	45	33	27	22	19	17	15	13
30	1005	200	100	67	50	40	33	29	25	22	20
40	1340	268	134	89	67	54	45	38	33	30	27
50	1675	335	168	112	84	67	56	48	42	37	33
60	2010	402	201	134	101	80	67	58	50	45	40
70	2345	470	235	157	118	94	78	67	59	52	47
80	2680	536	268	179	134	107	90	77	67	60	54
100 & 100A	3350	670	335	223	168	134	112	96	84	75	67
125 &125A	4185	836	418	279	209	168	140	120	105	93	84
150	5025	1005	503	335	251	201	168	144	126	112	100
175A	5858	1172	586	391	293	234	195	167	147	130	117
200	6695	1340	670	447	335	268	224	192	168	149	134
250	8370	1675	838	558	419	335	280	240	210	186	167
300	10045	2010	1005	670	503	402	335	287	251	223	201
350	11720	2350	1175	784	587	470	392	336	294	261	236
400	13400	2680	1340	895	670	535	447	383	335	298	268
500	16740	3350	1675	1120	838	670	558	479	419	372	335
600	20080	4020	2010	1340	1005	805	670	575	502	448	402
700	23450	4690	2345	1565	1175	940	785	670	585	520	470
750	25106	5025	2510	1675	1255	955	840	720	625	555	500
800	26780	5360	2680	1785	1340	1075	895	765	670	595	535

NOTES: 1. Minimum recommended return water temperature is 150 °F. Minimum recommended outlet temperature for Model CB Hot Water Boilers is 170 °F. Contact your local Cleaver-Brooks authorized representative for special hot water application information.
2. See Section H2 for over-pressure requirements.