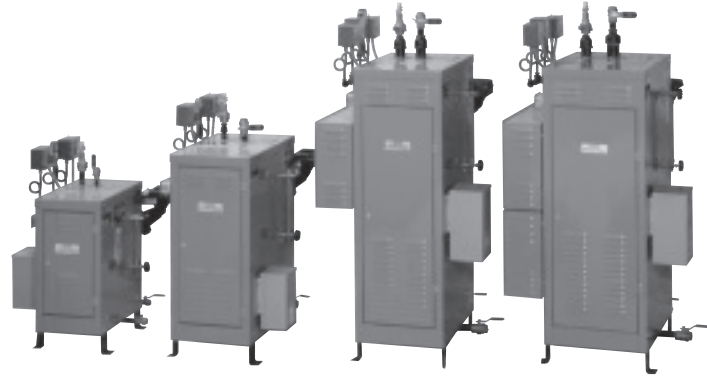


## CES-B Vertical Steam Boiler

- Steam Pressures to 135 psig
- Steam Capacity  
(18 - 542 Lbs/Hr @ 0 - 135 psig)
- 6 - 180 kW (21 - 614 Mbh)
- 208, 240 and 480 Volt,  
1 & 3 Phase (600 V Available)
- ASME Section I Pressure Vessel  
Carbon Steel Code "M"  
(100 psig) (CRN Available)
- 0.430 Dia. Copper Sheath  
Heating Elements
- One or Two Operating Controls  
Manual Reset High Limit
- Mechanical Float Water Feed  
Control with Low Water Cutoff
- Pressure Gauge, Water Level  
Sight Glass and Blow Down  
Drain Valve(s)
- ASME Safety Relief Valve
- Optional Transformer

### Applications

**CES-B Medium Capacity Steam Boilers** are sized to match the most common requirements for steam in many commercial applications, laboratories, hospitals and industrial plants. CES-B boilers are ideal for stand-by operations requiring high pressure steam in remote areas of an industrial plant which might incur excessive pipe losses or expensive piping costs to supply from a central steam supply. They are ideal for off season periods when steam is needed for critical processes or humidification when the main boiler is shut down.



### Features

**CES-B Stock Steam Boilers are Trimmed at 100 psig for operation to 90 psig** — They are also available (on order) with 15, 30, 50 and 150 psig trim. Boilers trimmed at 150 psig can be operated up to 135 psig corresponding to 353°F. Boilers trimmed at 150 psig use a special ASME Section I, Code "S" pressure vessel. All catalog CES boilers are UL Listed and CSA Certified.

### Optional Equipment

**Auxiliary Electronic Low Water Cutoff** — This option is required by some state or local boiler codes.

**Low or High Pressure Water Feed or Condensate Return System** for boiler water feed.

**Heavy Duty Vacuum Breaker** prevents siphoning of condensate in condensate return systems.

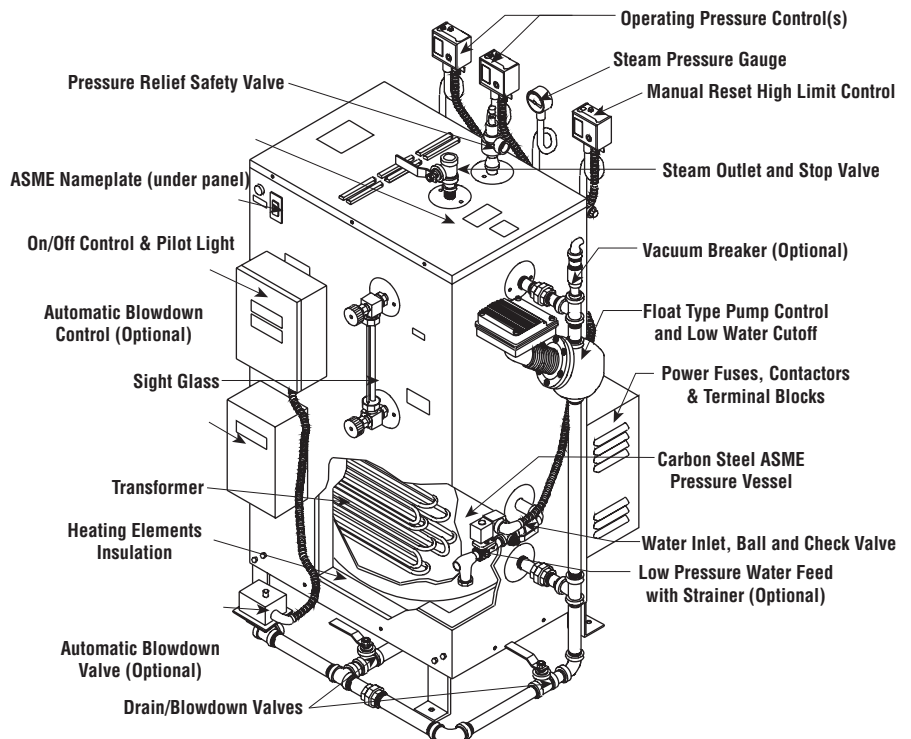
**Automatic Blow Down System** eliminates daily manual blow-down maintenance.

**Blow Down Separator** for blow down of a boiler where steam and hot water cannot be discharged directly into a drain.

**Electronic Water Level Control** with automatic water feed and low water cutoff (dual probe).

**Proportional Control** with electronic solid state sequencer for modulated pressure control.

### Typical CES-B Construction



**Note** — A water feed system or condensate return system is required. See Optional Equipment.

## CES-B

### Vertical Steam Boiler (cont'd.)

#### Specifications and Ordering Information

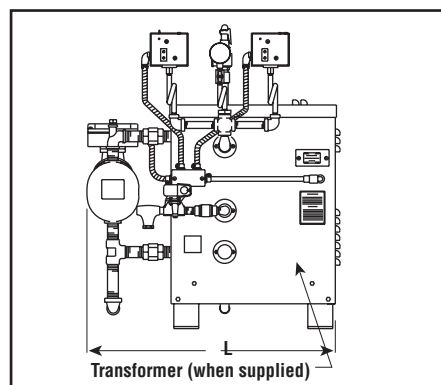
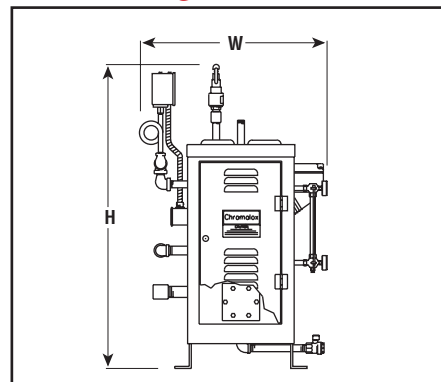
Steam <sup>1</sup> Lbs/Hr	Bhp	kW	Volts <sup>2</sup>	Ph	3 Ph <sup>2</sup> Amps	Service <sup>4</sup> Wire Size	Dimensions (In.)			Model	Stock	Wt. (Lbs.)
							W	L <sup>5</sup>	H			
<b>CES-B with One Operating Pressure Control and a 1 kVA Transformer<sup>3</sup></b>												
18.1	0.61	6	208	3	17	12	23	31	35	CES-006B	NS	230
18.1	0.61	6	240	3	15	12	23	31	37	CES-006B	NS	230
18.1	0.61	6	480	3	8	12	23	31	37	CES-006B	NS	230
27.1	0.92	9	208	3	25	10	23	31	37	CES-009B	NS	235
27.1	0.92	9	240	3	22	10	23	31	37	CES-009B	NS	235
27.1	0.92	9	480	3	11	12	23	31	37	CES-009B	NS	235
36.2	1.22	12	208	3	34	8	23	31	37	CES-012B	NS	240
36.2	1.22	12	240	3	29	10	23	31	37	CES-012B	NS	240
36.2	1.22	12	480	3	15	12	23	31	37	CES-012B	NS	240
51.2	1.73	17	208	3	48	6	23	31	37	CES-018B	NS	245
51.2	1.73	17	240	3	42	6	23	31	37	CES-018B	NS	245
51.2	1.73	17	480	3	21	12	23	31	37	CES-018B	AS	245
72.3	2.45	24	208	3	67	4	28	35	44	CES-024B	NS	300
72.3	2.45	24	240	3	58	4	28	35	44	CES-024B	NS	300
72.3	2.45	24	480	3	29	10	28	35	44	CES-024B	NS	300
87.4	2.95	29	208	3	81	3	28	35	44	CES-030B	NS	310
87.4	2.95	29	240	3	70	4	28	35	44	CES-030B	NS	310
87.4	2.95	29	480	3	35	8	28	35	44	CES-030B	NS	310
102.5	3.47	34	208	3	95	2	28	35	44	CES-036B	NS	315
102.5	3.47	34	240	3	82	3	28	35	44	CES-036B	NS	315
102.5	3.47	34	480	3	41	6	28	35	44	CES-036B	NS	315
138.7	4.69	46	208	3	128	2/0	28	35	44	CES-048B	NS	320
138.7	4.69	46	240	3	111	1	28	35	44	CES-048B	NS	320
138.7	4.69	46	480	3	56	6	28	35	44	CES-048B	NS	320
174.8	5.91	58	208	3	161	3/0	28	35	44	CES-060B	NS	380
174.8	5.91	58	240	3	140	2/0	28	35	44	CES-060B	NS	380
174.8	5.91	58	480	3	70	4	28	35	44	CES-060B	NS	380
205	6.93	68	208	3	189	250 MCM	28	35	44	CES-072B	NS	390
205	6.93	68	240	3	164	3/0	28	35	44	CES-072B	NS	390
205	6.93	68	480	3	82	3	28	35	44	CES-072B	NS	390
<b>CES-B with Two Operating Pressure Controls and a 1.5 kVA Transformer<sup>3</sup></b>												
307	10.4	102	208	3	284	400 MCM	32	38	58	CES-100B	NS	625
307	10.4	102	240	3	246	350 MCM	32	38	58	CES-100B	NS	625
307	10.4	102	480	3	123	1/0	32	38	58	CES-100B	NS	625
410	13.6	136	240	3	327	600 MCM	32	38	64	CES-135B	NS	785
410	13.6	136	480	3	164	3/0	32	38	64	CES-135B	NS	785
475	16.1	158	240	3	379	700 MCM	32	38	64	CES-160B	NS	785
475	16.1	158	480	3	190	250 MCM	32	38	64	CES-160B	NS	785
542	18.4	180	240	3	433	2-300 MCM	32	38	64	CES-180B	NS	790
542	18.4	180	480	3	217	300 MCM	32	38	64	CES-180B	NS	790

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, volts, phase, kW and PCN, if applicable.

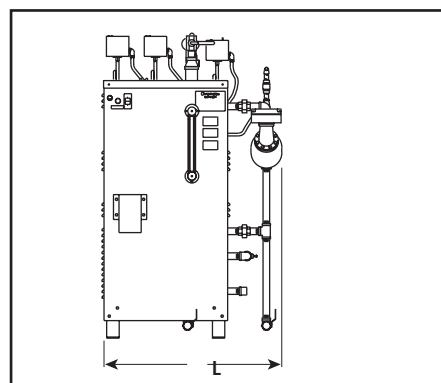
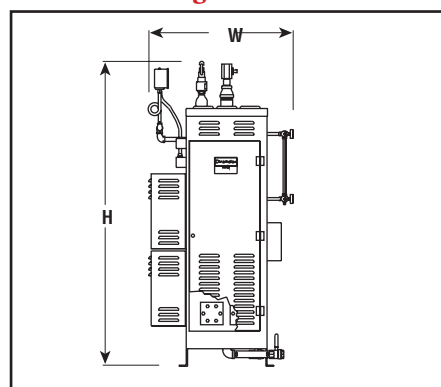
1. Steaming capacity based on producing saturated steam at 212°F with 50°F feed water.
2. Single phase and other voltages available. Contact your Local Chromalox Sales office.
3. All boilers have 120V/1/60Hz control circuit. 220V/1/50Hz circuits are available for export boilers.
4. Copper 90°C AWG unless indicated otherwise. Contact your Local Chromalox Sales office for the size and number of contactors.
5. Allow 21" for element removal and 10" around boiler for service access. Add 2" to width dimension for optional transformer.

#### Dimensions (Inches)

#### CES-6B through -18B



#### CES-24B through -180B



#### Plumbing Connections

Boiler	NPT	
	Water Inlet	Steam Outlet
CES 6-18	1/2	1/2
CES 24-72	3/4	1
CES 100	3/4	1-1/2
CES 135-180	3/4	2

*"Under the U.S. Federal Safe Drinking Water Act, it is unlawful to install or use this product in any service that comes into contact with water for human consumption (including drinking, food or beverage preparation, hand washing, or teeth brushing). This product is intended exclusively for use in non-potable service."*