

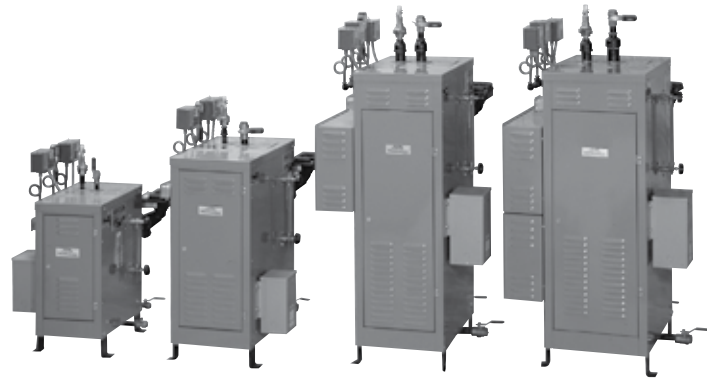
CES-B

Vertical Steam Boiler

- **Steam Capacity**
(18.1 - 542 Lbs/Hr @ 90 psig)
(8.2 - 246 kg/Hr @ 6.2 barg)
- **6-180 kW (20.5 - 614 Mwh)**
- **400 or 480 Volt, 3 Phase (208, 240, and 600V Available)**
- **PED 2014/68/EU (6.89 barg)**
- **ASME Section I Pressure Vessel Carbon Steel Code "M" (100 psig) (CRN Available)**
- **0.430 Dia. Incoloy 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)**
- **PED or ASME Safety Relief Valve**
- **Optional Transformer**
- **Optional Pressure Trims of 15, 30, 50, and 150 psig**

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, CSA, or CE 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 for mounting on boiler or remote installation.

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

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

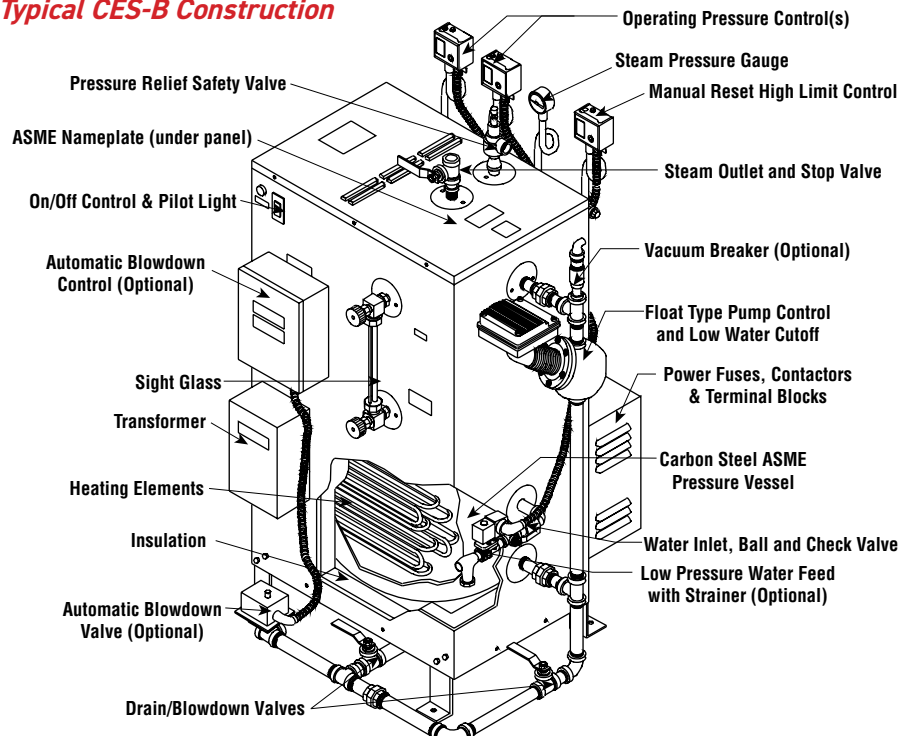
Blow Down Separator for blow down of a boiler where steam and hot water cannot be discharged directly into a drain.

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.

Boiler Manifold gives the ability to connect up to (4) boilers to obtain higher kW's.

Typical CES-B Construction



Note — A water feed system or condensate return system is required.

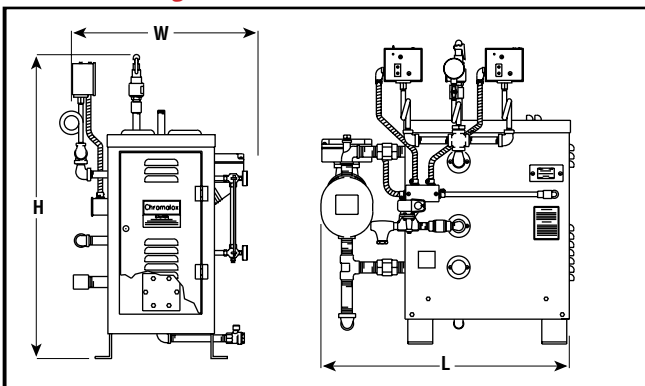
CES-B

Specifications and Ordering Information

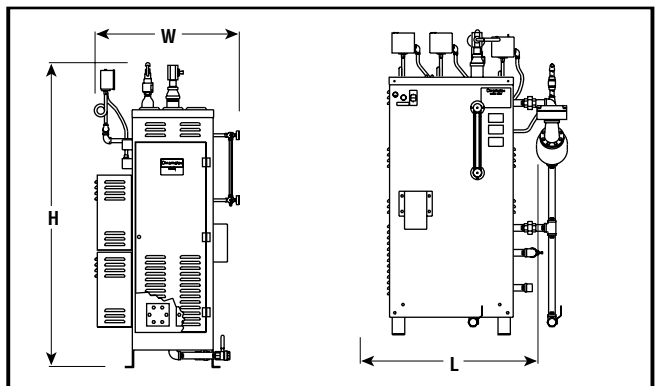
Steam*		BHP	kW	MBH	Volts**	Phase	Trim		Cert.	Dimensions (in/cm)***			Model	Weight	
lbs/hr	kg/hr						Psig	Barg		W***	L	H		Lbs	kg
CES-B with One Operating Pressure Control															
18.1	8.2	0.61	6	20.5	400	3	100	6.89	EUR	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-6B	230	105
18.1	8.2	0.61	6	20.5	480	3	100	6.89	US	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-6B	230	105
27.1	12.3	0.92	9	30.7	400	3	100	6.89	EUR	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-9B	235	107
27.1	12.3	0.92	9	30.7	480	3	100	6.89	US	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-9B	235	107
36.2	16.4	1.22	12	40.9	400	3	100	6.89	EUR	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-12B	240	109
36.2	16.4	1.22	12	40.9	480	3	100	6.89	US	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-12B	240	109
51.2	23.2	1.73	17	58	400	3	100	6.89	EUR	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-17B	245	111
51.2	23.2	1.73	17	58	480	3	100	6.89	US	23" / 58.5cm	31" / 79cm	37" / 94cm	CES-17B	245	111
72.3	32.8	2.45	24	81.9	400	3	100	6.89	EUR	28" / 71cm	35" / 89cm	44" / 112cm	CES-24B	300	136
72.3	32.8	2.45	24	81.9	480	3	100	6.89	US	28" / 71cm	35" / 89cm	44" / 112cm	CES-24B	300	136
87.4	39.6	2.95	29	99	400	3	100	6.89	EUR	28" / 71cm	35" / 89cm	44" / 112cm	CES-29B	310	141
87.4	39.6	2.95	29	99	480	3	100	6.89	US	28" / 71cm	35" / 89cm	44" / 112cm	CES-29B	310	141
102.5	46.5	3.47	34	116	400	3	100	6.89	EUR	28" / 71cm	35" / 89cm	44" / 112cm	CES-34B	315	143
102.5	46.5	3.47	34	116	480	3	100	6.89	US	28" / 71cm	35" / 89cm	44" / 112cm	CES-34B	315	143
138.7	62.9	4.69	46	157	400	3	100	6.89	EUR	28" / 71cm	35" / 89cm	44" / 112cm	CES-46B	320	145
138.7	62.9	4.69	46	157	480	3	100	6.89	US	28" / 71cm	35" / 89cm	44" / 112cm	CES-46B	320	145
174.8	79.3	5.91	58	197.9	400	3	100	6.89	EUR	28" / 71cm	35" / 89cm	44" / 112cm	CES-58B	380	172
174.8	79.3	5.91	58	197.9	480	3	100	6.89	US	28" / 71cm	35" / 89cm	44" / 112cm	CES-58B	380	172
205	93	6.93	68	232	400	3	100	6.89	EUR	28" / 71cm	35" / 89cm	44" / 112cm	CES-68B	390	177
205	93	6.93	68	232	480	3	100	6.89	US	28" / 71cm	35" / 89cm	44" / 112cm	CES-68B	390	177
CES-B with Two Operating Pressure Control															
307	139	10.4	102	348	400	3	100	6.89	EUR	32" / 82cm	38" / 97cm	58" / 148cm	CES-102B	625	284
307	139	10.4	102	348	480	3	100	6.89	US	32" / 82cm	38" / 97cm	58" / 148cm	CES-102B	625	284
410	186	13.6	136	464	400	3	100	6.89	EUR	32" / 82cm	38" / 97cm	64" / 163cm	CES-136B	785	356
410	186	13.6	136	464	480	3	100	6.89	US	32" / 82cm	38" / 97cm	64" / 163cm	CES-136B	785	356
475	215.5	16.1	158	539	400	3	100	6.89	EUR	32" / 82cm	38" / 97cm	64" / 163cm	CES-158B	785	356
475	215.5	16.1	158	539	480	3	100	6.89	US	32" / 82cm	38" / 97cm	64" / 163cm	CES-158B	785	356
542	246	18.4	180	614	400	3	100	6.89	EUR	32" / 82cm	38" / 97cm	64" / 163cm	CES-180B	790	359
542	246	18.4	180	614	480	3	100	6.89	US	32" / 82cm	38" / 97cm	64" / 163cm	CES-180B	790	359
EUR package includes: CE certification, PED 2014/68/EU															
US package includes: CSA and UL certification, ASME Section I Code "M"															
*Steaming capacity is based on producing saturated steam at 320°F 90psig with 50°F feed water. (160°C 6.2barg with 10°C feed water)															
**All boilers have a 120V/1/60Hz control circuit. 220V/1/50Hz circuits are optional.															
***Allow 21"(54cm) for element removal and 10"(26cm) around boiler for service access. Add 2"(5cm) to width dimension for optional transformer.															

Dimensions

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."

CES-B

Pre-Engineered Systems

Steam*		BHP	kW	MBH	Volts**	Phase	Trim		Cert.	Dimensions (in/cm)***			Model	Part#	Weight	
lbs/hr	kg/hr						Psig	Barg		W	L	H			Lbs	kg
CES-B with One Operating Pressure Control and a 2 kVA Transformer																
102.5	46.5	3.47	34	116	400	3	100	6.89	EUR	30" / 76cm	35" / 89cm	44" / 112cm	CES-34 LWXFVB	300134001	325	148
102.5	46.5	3.47	34	116	480	3	100	6.89	US	30" / 76cm	35" / 89cm	44" / 112cm	CES-34 LWXFVB	300134002	325	148
205	93	6.93	68	232	400	3	100	6.89	EUR	30" / 76cm	35" / 89cm	44" / 112cm	CES-68 LWXFVB	300134003	400	182
205	93	6.93	68	232	480	3	100	6.89	US	30" / 76cm	35" / 89cm	44" / 112cm	CES-68 LWXFVB	300134004	400	182
CES-B with Two Operating Pressure Control and a 2 kVA Transformer																
307	139	10.4	102	348	400	3	100	6.89	EUR	34" / 87cm	38" / 97cm	64" / 163cm	CES-102 LWXFVB	300134005	790	358
307	139	10.4	102	348	480	3	100	6.89	US	34" / 87cm	38" / 97cm	64" / 163cm	CES-102 LWXFVB	300134006	790	358
410	186	13.6	136	464	400	3	100	6.89	EUR	34" / 87cm	38" / 97cm	64" / 163cm	CES-136 LWXFVB	300134007	795	361
410	186	13.6	136	464	480	3	100	6.89	US	34" / 87cm	38" / 97cm	64" / 163cm	CES-136 LWXFVB	300134008	795	361
542	246	18.4	180	614	400	3	100	6.89	EUR	34" / 87cm	38" / 97cm	64" / 163cm	CES-180 LWXFVB	300134009	800	363
542	246	18.4	180	614	480	3	100	6.89	US	34" / 87cm	38" / 97cm	64" / 163cm	CES-180 LWXFVB	300134010	800	363

Included optional equipment:

- Auxiliary Electronic Low Water Cutoff
- Automatic Blowdown Control
- Heavy Duty Vacuum Breaker
- 2 kVA Transformer

EUR package includes: CE certification, PED 2014/68/EU

US package includes: CSA and UL certification, ASME Section I Code "M"

*Steaming capacity is based on producing saturated steam at 320°F 90psig with 50°F feed water. (160°C 6.2barg with 10°C feed water)

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