Ace Heaters
130 Klug Circle
Corona, CA 92880
United States

(951) 738-2230
info@aceheaters.com
www.aceheaters.com

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Unfired Clean Steam Generator

Unfired Clean Steam Generator



Fully packaged system ready for immediate installation. Utilizes high pressure steam and high temperature water to generate clean steam.

Features

- Square pitch tube bundle for efficient steam generation with minimized scaling
- Shoulder bolts to retain the tubesheet without having to drain the shell
- Two 2” NPT bundle inspection openings
- Non-proprietary controls allow for quick and easy replacement with minimized downtime
- Fully controlled and insulated, ready to operate with level, pressure, and double safety controls
- All 316/L wetted surfaces on the clean steam side
- Integral steam separator produces dry steam
- Single point connections minimizing field installation costs
- Horizontal, combination and vertical configurations available
- Steam output pressures up to 150 PSI
- Fully modulating energy input
- Fully modulating feedwater input
- Steam, boiler water, thermal fluids, and high temperature water as the heat source
- Building management system capable via ModBus IP or built-in BacNet IP
- ASME B&PV Code Sec. VIII, Div. 1, U/UB stamped

Applications

Steam humidification in hospitals, clean steam, pharmaceutical manufacturing, and product sterilization



Standard UCSG Controls Package

- Electronic feedwater control system (normally closed – fail safe) with isolation valve and modulating valve
- Digital steam pressure readout
- Analog steam pressure gauge
- Low water cut-off with alarm, relay and manual reset
- High water cut-off
- High pressure cut-out switch with alarm, relay and manual reset
- Continuous level control system - requires coordination from the deaerator tank/feedwater pump manufacturer for start/stop
- Stainless steel sight glass
- ASME Code and National Board Section I stamped pressure relief valve (bronze – stainless steel wetted parts)
- Automatic surface blowdown system, conductivity based with isolation valve and on/off valve
- Quick and slow opening tandem bottom blowdown valves
- 3.0” thick rigid fiberglass insulation, 26-gauge stainless steel jacket
- Liquid tight non-metallic conduit and fasteners for all external wiring

NEMA 4X control panel with:

- On/Off power switch, illuminated green
- (2) 1/8 DIN single loop process (level and pressure) controller, RS 485, present value, set value, valve output, valve feedback
- High pressure alarm, audible and illuminated red
- Low water alarm, audible and illuminated red
- Surface blowdown indicator, illuminated yellow
- Low water reset
- Conductivity based blowdown controller
- Power supply for control panel components
- Power supply for steam control valve
- Terminal strip with connections for individual wire termination
- RS 485 serial communication/BACnet interface
- Remote enable/disable
- Remote alarms – high pressure, low water

Steam Specific Standard Controls Package

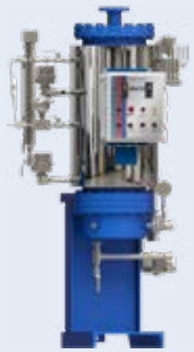
- Electronic 2-way high pressure steam control valve (normally closed – fail safe) – 8 second full stroke
- Process steam pressure gauge with siphon, snubber and isolation valve
- Process steam vacuum breaker
- Process steam strainer (inlet)
- Main float and thermostatic steam trap with interconnecting piping and blowdown valve
- Drip float and thermostatic steam trap with interconnecting piping
- Inlet steam y-strainer with blowdown valve
- High Temperature Water Specific Standard Controls Package
- Electronic 2-way high temperature water control valve (normally closed – fail safe) – 8 second full stroke
- High temperature water thermometers and thermowells

OPTIONS

- Timed bottom blowdown
- Blowdown cooler
- Skid mounting
- PLC panel
- Tube Material – Titanium, Duplex Alloys
- 18”-150# ASME B16.5 flanged and hinged manway
- Touchsafe/IP rated control panels

Ace Unfired Clean Steam Generators come in Vertical (HSGV), Combination (HSGC), and Horizontal (HSGH) configurations. All are available as:

High temperature water to steam | Steam to steam | Thermal fluid to steam



16" Vertical



20" Combo



36" Horizontal

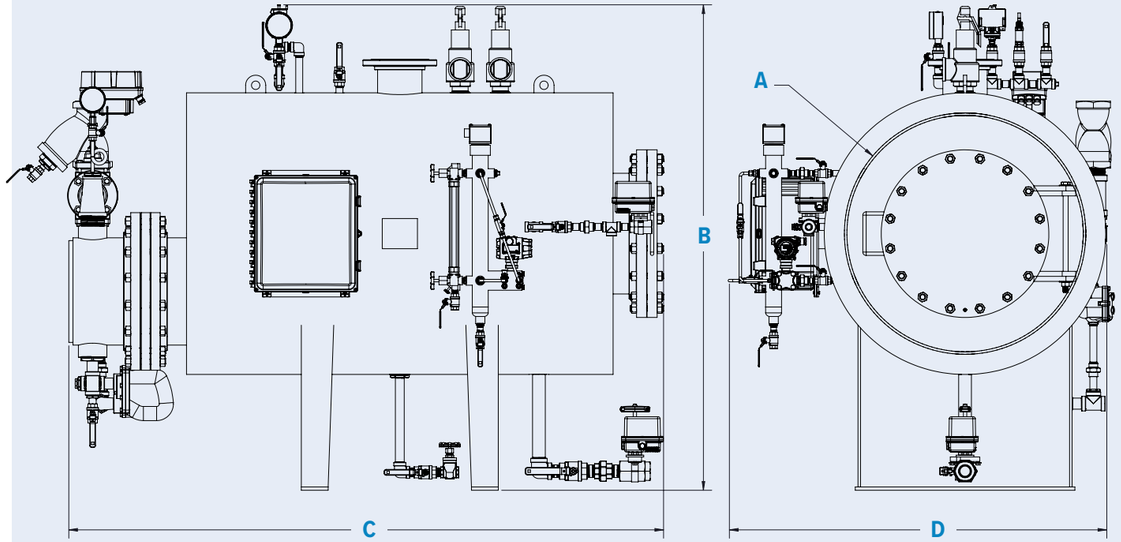
Dimensions

Horizontal Steam Generator

Shell Diameter "A"	Height "B"	Width "C"	Depth "D"
20	61	90	42
24	65	93	47
30	71	97	54
36	76	92	60
42	83	107	67
48	89	111	73
54	95	114	79
60	101	117	86

All dimensions in inches. Dimensions are subject to change.



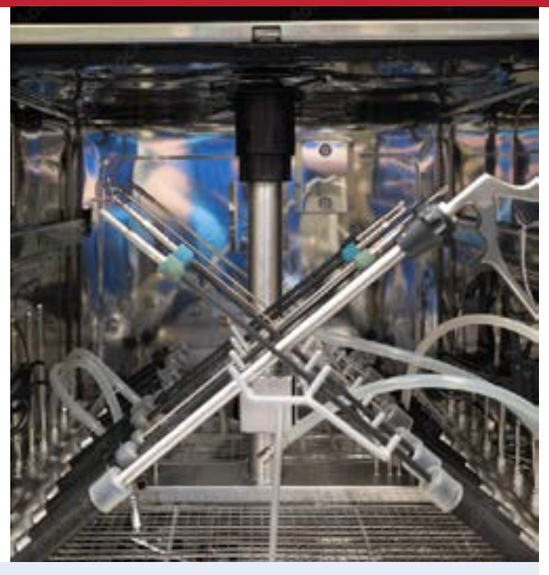


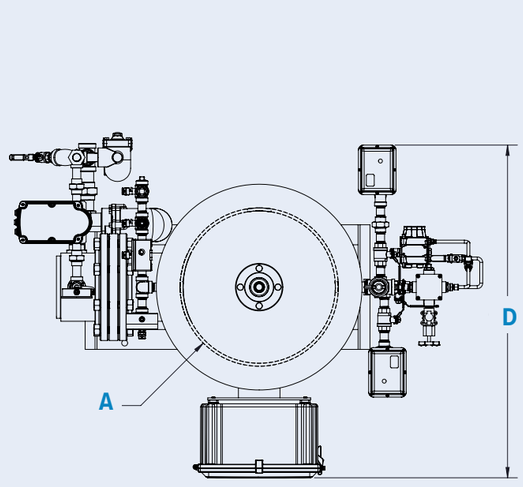
Dimensions

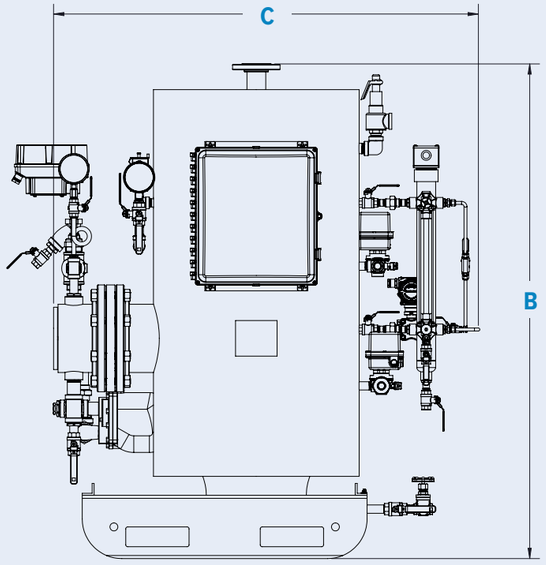
Combination Steam Generator

Shell Diameter "A"	Height "B"	Width "C"	Depth "D"
20	66	57	46
24	74	67	48
30	82	73	51
36	86	82	57
42	95	90	63
48	100	97	69
54	101	103	75
60	103	109	81

All dimensions in inches. Dimensions are subject to change.







Vertical Steam Generator

Shell Diameter "A"	Height "B"	Width "C"	Depth "D"
12	85	45	49
14	87	46	50
16	88	48	52
18	92	50	54
20	94	52	56

All dimensions in inches. Dimensions are subject to change.



