

SS1B+ Unfired Steam Generator

The AERCO SS1B+ unfired steam generating package produces clean steam from fresh, potable water, using treated boiler plant steam as the heat source. A quick-to-respond control system maintains accurate secondary steam pressures under the diversified load patterns of commercial humidification and sterilization applications. The unique AERCO heat exchanger design delivers dry, saturated steam while utilizing the minimum amount of floor space.

A parallel stack of helically wound coils constitute the most flexible heat exchange design available for clean steam generation. These baffle-free, flexible coils are capable of withstanding thermal shock. This provides for the ability to descale (clean) by the method of thermal shock – reducing the amount of down time required for acid cleaning. Each coil is individually replaceable, eliminating the need for entire heat exchanger replacement due to one tube failure. All clean steam surfaces are copper or copper alloy materials – the best selection for longevity in even the most aggressive of potable water supplies.

With primary steam in the tubes, this design is compatible with mid or high primary steam pressures. A footprint of less than 4 ft² and doorway size provide broad installation flexibility. Accurate pressure control, reliability, low maintenance and longevity make the AERCO SS1B+ a logical choice for commercial humidification and/or sterilization applications.



SS1B+ Features

- Accurate Pressure Control
- Compact, Space Efficient
- Standard Operating Range 2-70 PSIG
- Fully Modulating Variable Steam Input
- Ideal for New or Retrofit
- ASME B&PV Code Sec. VIII, Div. 1 Stamped
- 90 PSIG ASME Shell Working Pressure Certified
- Single or Multiple Installation
- Clean Steam Production from 100 to 1500 lbs/hr
- Applicable for 40 to 150 PSIG Primary Steam Supply
- Complete Factory Packaged Controls
- All Copper or Copper Alloy Wetted Surfaces
- 10-year Warranty on Complete Heat Exchanger
- 20-year Warranty on Pressure Vessel*

*Contact local representative for warranty details.

Applications

- | | | |
|-----------------------|--------------------|--------------------------------|
| – Hospitals | – Industrial | – Art Museums |
| – Hotels | – Pharmaceutical | – Universities |
| – Apartment Buildings | – Food Processing | – Bio-Medical Research Labs |
| – Medical Centers | – Restaurants | – Semi-Conductor Manufacturing |
| – Nursing Homes | – Photo Processing | – Commercial Laundries |

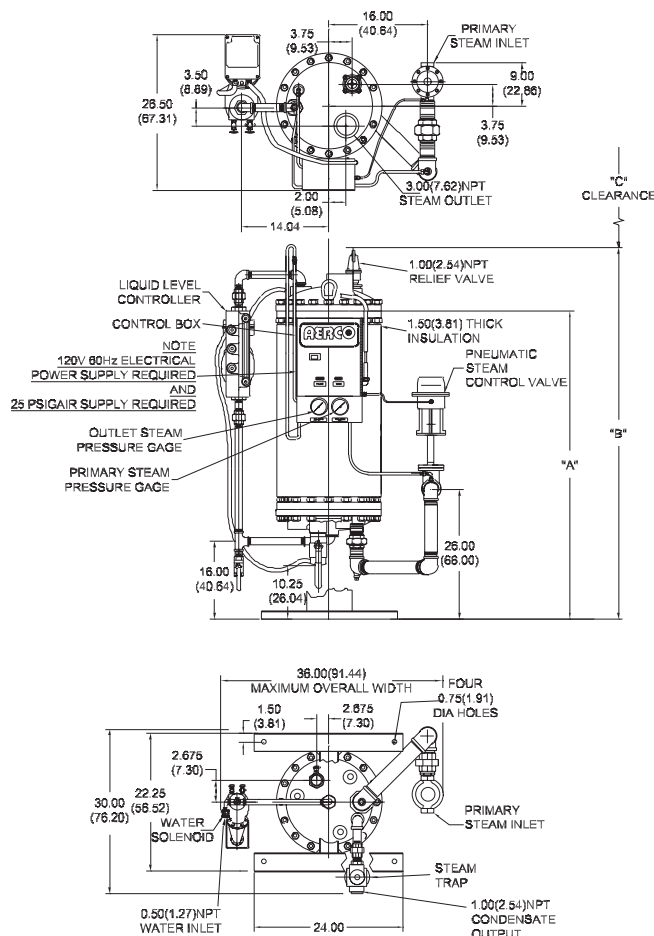
Pure Steam

Ultra pure steam generated from de-ionized water requires steam generator construction of all 316L stainless steel surfaces. Typical applications include pharmaceutical, autoclaves, medical sterilization, photo processing, etc. AERCO factory packaged Steam Generators are available constructed with these materials. Please contact your local representative for details.

Dimensions

MODEL SS1B+ STYLE 210310

/ / P
(# COILS) (VALVE SIZE)



| GENERATOR MODEL | NO. OF COILS | HEATING SURFACE SQ. FT. (SQ. M.) | DIM. IN (CM) | | | WT. LBS. (Kg) | |
|-----------------|--------------|----------------------------------|----------------|----------------|---------------|---------------|------------|
| | | | "A" | "B" | "C" | DRY | WET |
| SS1B-02 | 2 | 15 | 40.75 (103.5) | 55.00 (139.7) | 21.00 (53.3) | 520 (237) | 600 (272) |
| SS1B-03 | 3 | 20 | 45.75 (116.2) | 60.00 (152.4) | 26.00 (66.0) | 570 (259) | 720 (327) |
| SS1B-04 | 4 | 25 | 49.75 (126.3) | 64.00 (162.5) | 30.00 (76.2) | 610 (277) | 770 (350) |
| SS1B-05 | 5 | 30 | 54.75 (139.0) | 68.00 (172.7) | 35.00 (88.9) | 640 (291) | 830 (377) |
| SS1B-06 | 6 | 35 | 59.75 (151.8) | 72.00 (182.9) | 40.00 (101.6) | 670 (304) | 880 (400) |
| SS1B-07 | 7 | 40 | 64.75 (164.7) | 76.00 (193.0) | 45.00 (114.3) | 710 (322) | 930 (422) |
| SS1B-08 | 8 | 45 | 69.75 (177.0) | 80.00 (203.2) | 50.00 (127.0) | 740 (336) | 980 (445) |
| SS1B-09 | 9 | 50 | 74.75 (189.9) | 84.00 (213.4) | 55.00 (139.7) | 770 (350) | 1030 (468) |
| SS1B-10 | 10 | 55 | 79.75 (202.6) | 88.00 (223.6) | 60.00 (152.4) | 800 (363) | 1080 (490) |
| SS1B-11 | 11 | 60 | 84.75 (215.3) | 92.00 (233.7) | 65.00 (165.1) | 840 (381) | 1130 (513) |
| SS1B-12 | 12 | 65 | 89.75 (227.8) | 96.00 (243.8) | 70.00 (177.8) | 870 (395) | 1180 (536) |
| SS1B-13 | 13 | 70 | 94.75 (240.6) | 100.00 (254.0) | 75.00 (190.5) | 900 (409) | 1230 (558) |
| SS1B-14 | 14 | 75 | 99.75 (253.3) | 104.00 (264.2) | 80.00 (203.2) | 930 (422) | 1280 (581) |
| SS1B-15 | 15 | 80 | 104.75 (266.0) | 108.00 (274.3) | 85.00 (213.4) | 960 (436) | 1330 (604) |

| HEAT EXCHANGER DESIGN STANDARDS | | | |
|---------------------------------|--------------------------------|--------------------|------------------------|
| | MAX. WORKING PRESS. PSIG (KPa) | MAX. TEMP. °F (°C) | TEST PRESS. PSIG (KPa) |
| SHELL SIDE | 90 (620) | 350 (177) | 135 (931) |
| TUBE SIDE | 250 (1723) | 400 (204) | 375 (2584) |
| ASME CODE CERTIFICATION | | | U |

| MATERIALS OF CONSTRUCTION | |
|---------------------------|---|
| SHELL | 1/4" (0.64) 14" (35.56) DIAM., SA53 GRD (B) (ERW) CARB. ST. |
| LINER | COPPER, ASTM B-370 ALLOY 122 |
| HEADS | BRONZE 99-02 |
| COILS | COPPER, 0.048" (0.12) WALL, SB-111 ALLOY 122 |

| OPERATING CONDITIONS | | |
|----------------------|------------------------|---------------------|
| SHELL | CAPACITY, LB/HR (Kg/S) | PRESSURE PSIG (KPa) |
| | | |
| TUBES | LB/HR (Kg/S) | PRESSURE PSIG (KPa) |
| | | |
| INLET STEAM PRESS. | PSIG (KPa) | |
| | | |

DIMENSIONS ARE SHOWN IN INCHES (CENTIMETERS)

SS1B+ Specifications

Max. Shell Side Velocity 200 FPM
 Max. Radiation Losses @ 50 PSIG 30 Btu/H/ft²
 Electrical Requirements 120V/60 1 Amp
 Standby Amperage Draw 0.1 Amp
 Over Pressure Limit "Tripped" Amperage Draw 0.5 Amp
 Max. Primary Steam Supply Pressure 150 PSIG

Max. Clean Steam Pressure 70 PSIG
 Adjustable Pressure Control 2 to 100 PSIG
 Adjustable Over Pressure Limit Control 2 to 150 PSIG
 Air Supply Requirements 25 PSIG
 Steam Outlet Connections 3.00" FNPT

Available Options

- 0.065" thick copper or copper-nickel tubing for increased corrosion resistance and longevity
- 316L Stainless Steel surfaces for generating steam from de-ionized water (product configuration may vary)
- Relay contacts for remote "Over Pressure Limit Tripped Status" indication

Specifications and dimensions are subject to change. Certified drawings are available on request.

Represented by:

Specifications subject to change.
 Consult website or contact AERCO.
 SG-1 4/06 5M
 New DOC 4/06

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