

# GR Series Ground Loader Sterilizers Product Specification

## Product Description

The GR Series of horizontal slide door steam sterilizers are designed to provide user selectable gravity and pre-vac steam sterilization cycles. A vacuum pump and efficient handling of the condensate cooling enables minimal use of water. Unique Smart Dry™ Technology varies the dry time based upon load size to ensure consistent, complete drying.

## Application

For general purpose steam sterilization of unwrapped equipment, wrapped instruments and utensils, glassware, stainless steel components and liquids in vented or unsealed containers.

## Models & Dimensions

| Model    | Chamber Size<br>w x h x d | Chamber<br>Volume<br>ft <sup>3</sup> , (ltr) | Dimensions<br>w x h x d<br>in (mm)            |
|----------|---------------------------|--|---|
| GR9612HS | 26" x 48.4" x 55"         | 40.2<br>(152)                                | 74.8" x 78.7" x 74.8"<br>(1900 x 2000 x 1900) |
| GR9615HS | 26" x 48.4" x 67"         | 48.7<br>(184)                                | 74.8" x 78.7" x 86.6"<br>(1900 x 2000 x 2200) |
| GR9618HS | 26" x 48.4" x 78.7"       | 57.4<br>(217)                                | 74.8" x 78.7" x 98.4"<br>(1900 x 2000 x 2500) |

## Configuration & Options

### Door Selections

- Single Door, GR HS1
- Double Door, GR HS2

### Service Side

- Right Side
- Left Side

### Installation Type

- Recessed
- Cabinet

### Options

- Integrated Steam Boiler
- Chilled Water Connection
- Steam to Steam Heat Exchanger (external)
- Load & Unload Automation

### Accessories

- Transport Cart
- Loading Rack
- Seismic Anchoring Kit

### Standards

UL61010A-1, UL61010A-2-041, AAMI ST-08



## Standard Features

### Construction / Design

**Loading Height** – All GR sterilizers loading at ground level. The loading cart is rolled into the chamber and there is no transfer of a rack from the cart to the chamber

**Chamber** - Stainless steel, type 316L, with dedicated steam line

**Chamber Insulation** – Mineral wool totally encased by aluminum sheet metal to protect the insulation and hold in heat

**Doors** – Horizontally sliding, powered, stainless steel. The motor includes a safety clutch which will stop the door if an obstruction is encountered

**Door Seal** – A precision milled stainless steel channel in the front of the chamber holds the round, silicone seal. The seal is activated, after door closure, by compressed air and is retracted using a vacuum created by the vacuum pump

**Mechanical Vacuum Pump** – A highly efficient, liquid ring vacuum pump is provided to remove air during pre-vac, aid in the drying phase and draw in the door seal

**Valves** – Pneumatic control valves are used for precise control of steam flow in and out of the chamber and jacket.

**Jacket** – Stainless steel, type 316L, segmented jacket, with separate steam line, provides improved control of temperature by eliminating steam overshoot reducing the possibility of superheated steam

**Drain Tempering** – Condensate is cooled to below 140F° (60°C) before being discharged

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**Control System** –PLC based controller

**Display Panel** – A TFT color touch panel is used for operator control and display of cycle parameters

**Piping** – All wetted surfaces are stainless and can be used with clean steam

**Printer** – Built in 42 column impact dot matrix

**Temperature Measurement** – Twin PT-1000 RTD's, in a 3 wire circuit, are used to monitor temperatures

## Options

**Integrated Steam Boiler** – An electric boiler can be installed in the top area of the sterilizer to provide local steam when house steam is not available. The boiler can be fed with tap water or DI/RO water can be used to provide clean steam

**Chilled Water Connection** – The sterilizer can be connected to a chilled water system to essentially eliminate potable water use. Cooling of the condensate and vacuum are improved with the consistent lower temperature of the chilled water

**Steam to Steam Heat Exchanger** – Uses house steam as a heat source to boil DI or RO water to produce clean steam for the sterilizer

## Cycle Description

All GR series sterilizers are factory pre-programmed with 9 cycles, 3 gravity, 4 pre-vac, liquid and Air Removal (Bowie-Dick) cycles as well as a leak test. A total of 10 cycles, maximum, can be stored.

## Automation

Optional automatic unload is available for single and double door units, automatic load and unload is available for 2 door units.

## Installation

Matching stainless enclosures, fabricated for various ceiling heights, are included to provide a smooth finish to wall recessed sterilizers. For standalone cabinet type units, a full stainless enclosure is provided.

## Preventive Maintenance

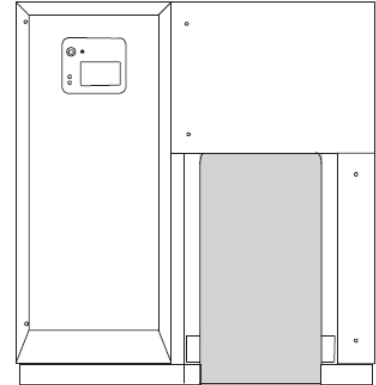
Belimed recommends regular preventive maintenance to ensure proper operation of the equipment. Belimed maintains a nationwide, factory trained Service Technician Group which can perform this maintenance and/or train Biomedical staff on the proper procedure. Belimed also offers a number of PM Plans. Contact Belimed Technical Service for more details.

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## Technical Information

For REFERENCE Only – Refer to Cutsheets for Construction Purposes

| Model       |             | Outside Dimensions<br>w x h x d (mm)          | Loading<br>Height |
|-------------|-------------|---|-------------------|
| Single door | Double Door |   |                   |
| GR9612HS1   | GR9612HS2   | 74.8" x 78.7" x 74.8"<br>(1900 x 2000 x 1900) | Ground Level      |
| GR9615HS1   | GR9615HS2   | 74.8" x 78.7" x 86.6"<br>(1900 x 2000 x 2200) | Ground Level      |
| GR9618HS1   | GR9618HS2   | 74.8" x 78.7" x 98.4"<br>(1900 x 2000 x 2500) | Ground Level      |



| GR ( 9-6-9 , 9-6-12 , 9-6-15 , 9-6-18 ) HS1/HS2 STERILIZERS - TECHNICAL DATA |                 |                                |        |        |        |        |          |        |        |        |                   |       |        |         |                   |       |       |        |        |                 |
|--|-----------------|--------------------------------|--------|--------|--------|--------|----------|--------|--------|--------|-------------------|-------|--------|---------|-------------------|-------|-------|--------|--------|-----------------|
| Ref.   | Utility         | Connection                     |        |        |        | Type   | Pressure |        |        |        | Peak Consumption* |       |        |         | Consumption/Load* |       |       |        |        |                 |
|  |                 | 9-6-9                          | 9-6-12 | 9-6-15 | 9-6-18 |        | 9-6-9    | 9-6-12 | 9-6-15 | 9-6-18 | units             | 9-6-9 | 9-6-12 | 9-6-15  | 9-6-18            | units | 9-6-9 | 9-6-12 | 9-6-15 | 9-6-18          |
| SS   | Steam supply    | 1 1/4"                         | 1 1/2" |        | NPT    | 40-50  |          |        |        | PSIG   | 4.4               | 5.7   | 7      | 8.6     | lb/min            | 66    | 88    | 110    | 132    | lb              |
| CW   | Cold Water      | 3/4"                           |        | 1"     |        | 30-70  |          |        |        |        | 8.8               | 11    | 13.2   |         | gal/min           | 93    | 119   | 159    | 185    | gal             |
| CA   | Compressed Air  | 1/4"                           |        |        |        | 70-100 |          |        |        |        | 0.28              |       |        |         | CFM               | 17    |       |        |        | ft <sup>3</sup> |
| EL   | Electric Supply | 4x4 junction box w/ receptacle |        |        |        |        |          |        |        | 2.5    |                   | 3.4   |        | kW      | 1.2               |       | 1.7   |        | kWh    |                 |
| DR   | Open Drain      | Indirect drain                 |        |        |        |        |          |        |        | 9.2    | 12                | 17    |        | gal/min | 101               | 130   | 172   | 201    | gal    |                 |
| CD   | Condensate      | 3/4"                           |        |        | NPT    |        |          |        |        |        |                   |       |        |         |                   |       |       |        |        |                 |

Optional utilities for chilled water cooling (used for reduction of cold water consumption).

|    |                      |        |  |    |       |     |       |  |      |     |      |         |     |    |         |     |     |      |      |     |
|----|----------------------|--------|--|----|-------|-----|-------|--|------|-----|------|---------|-----|----|---------|-----|-----|------|------|-----|
| CS | Chilled Water supply | 1 1/4" |  |    |       | NPT | 30-70 |  |      |     | PSIG | 17      | 22  | 26 | gal/min | 63k | 82k | 107k | 119k | BTU |
| CR | Chilled Water Return | 1 1/4" |  |    |       |     |       |  |      |     |      |         |     |    |         |     |     |      |      |     |
| CW | Cold Water           | 3/4"   |  | 1" | 30-70 |     |       |  | PSIG | 4.4 |      | gal/min | 2.6 |    |         |     | gal |      |      |     |

| Carry-in Dimensions | 9-6-9 | 9-6-12 | 9-6-15 | 9-6-18 | units |
|---------------------|-------|--------|--------|--------|-------|
| Height              | 66.5  | 66.5   | 66.5   | 66.5   | in.   |
| Width               | 46.5  | 46.5   | 46.5   | 46.5   |       |
| Length              | 51.5  | 61.8   | 73.5   | 85.5   |       |

| Weights   | 9-6-9 HS1 | 9-6-12 HS1 | 9-6-15 HS1 | 9-6-18 HS1 | units | 9-6-9 HS2 | 9-6-12 HS2 | 9-6-15 HS2 | 9-6-18 HS2 | units |
|-----------|-----------|------------|------------|------------|-------|-----------|------------|------------|------------|-------|
| Transport | 2425      | 2870       | 3310       | 3530       | lb    | 3200      | 3530       | 3860       | 4300       |       |
| Operating | 4190      | 4630       | 6395       | 5300       |       | 4960      | 5295       | 5625       | 6070       |       |
| Test      | 6615      | 7720       | 8820       | 9590       |       | 7385      | 8380       | 9855       | 10370      |       |