

Stilmas Pure Steam Generators

Stilmas Pure Steam Generators



Stilmas Pure Steam Generators are designed and constructed to produce endotoxin-free pure steam in accordance with the latest International Pharmacopeias and the latest cGMP. The range of PSGs available is capable of supplying any pharmaceutical autoclave, steam for humidification systems, for sterilizing tanks, vessels, process lines.

Standard steam heated models range from 50 – 6,000 kg/hr production; Electrically heated models available up to 500 kg/hr production

PSG-DTS Main Features

Many features make the Stilmas PSG-DTS system one of the best pure steam generators available for example:

Pure steam output varies automatically from 0% - 100% as demand fluctuates.

Response time is exceptional; the unit is able to change from standby to full production within a few second, without significant pressure drop.

The low-velocity gravitational separation system delivers the highest standard of steam purity.

The quality of the pure steam is constant in terms of pyrogen content, superheat and dryness fraction. Steam quality is not dependent on pressure or production flow rate

Baffle free decontamination chamber – no welding

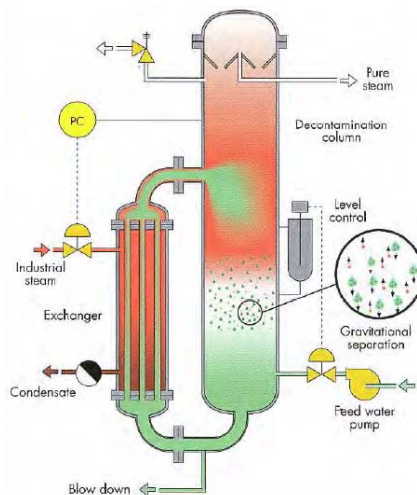
The units are designed and built requiring extremely limited maintenance, are of a compact construction and low weight



Operating Principles

The system is composed of two parallel bodies, the heat exchanger and the evaporator-decontamination column. Feed water is fed into the main body of the decontamination column while industrial steam is fed into the heat exchanger shell.

The industrial steam heats the feed water to evaporation temperature creating a strong circulation through both bodies. Low velocity of steam and the height of the decontamination column eliminate any possibility of impure water droplet entrapment



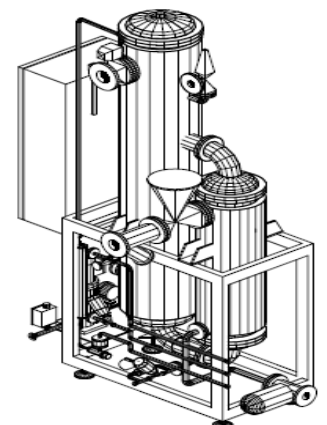
Construction Characteristics

The plant is made completely of AISI 316L stainless steel. The supporting frame is epoxy-coated steel as standard, AISI 304 option.

The standard finishing of the active surface is pickled and passivated; mirror polishing is available as a paid option

The heat exchanger is a DTS type; the pipes are expanded into the plates avoiding any welding for a totally hygienic execution and better resistance against dilation stress

The design and construction of the decontamination chamber, which is a totally empty column, ensuring the best inspectability. The absence of welding in this area dramatically reduces the risk of corrosion



SteriTech

Stilmas Equipment

- Pre-treatment
- Purified Water
- Multi Effect Still
- Vapour Compression Still
- Pure Steam Generators
- PS & WFI Combinations
- Storage & Distribution Systems

Fedegari Equipment

- Saturated Steam Sterilisers
- Counterpressure Sterilisers
- UltraWashers
- Dry Heat Sterilisation
- Pathogen Sterilisers
- Combined Units

Fedegari Autoklaven

- Laboratory Sterilisers

Fedegari-Bio Com Equipment

- Low Temperature Surface Decontamination Stations
- Laminar Flow Carts
- Isolators and Cleanroom Contamination Controls

Bano Equipment

- Stainless Steel Cleanroom Furniture
- Specialist Cleanroom Equipment

SteriTech Limited

- Complete Turn-Key Projects

SteriTech Limited
1 Oxted Chambers
185 Station Road East
Oxted RH8 0QE
www.steritech.co.uk

Stilmas Pure Steam Generators



EN285 (HTM2010) Options

SteriTech Services

SteriTech, like our suppliers are solely dedicated to the regulated pharmaceutical sector. This enables us to fully understand not only the quality of performance required, but the documented evidence of all activities.

Project Management

A dedicated Project Manager follows each sale through to OQ handover. Liaising with customers, suppliers and field operations team to ensure effective project delivery.

Project Sitework

From our local highly trained team offering

- Installation Assistance
- Start-up & Commissioning
- SAT, IQ/OQ
- Calibration
- Thermal Mapping
- Cycle & Process Development

After-Sales

Full life-time local support for equipment including

- Full Training Packages
- Technical & Process support
- Spare parts supply
- Preventative Maintenance
- Calibration
- Routine Validation
- Upgrades and revampings

SteriTech Limited

1 Oxted Chambers
185 Station Road East
Oxted RH8 0QE

www.steritech.co.uk



For installations where compliance with international rules (EN285, HTM2010) is required Stilmas have developed a number of alternative solutions:

Stilmas Patented Internal Gasbuster:

Pre-heated feed water is fed directly to the decontamination column through a specially designed device. A stream of pure steam is used to strip the NCG's from the incoming feedwater.

External Break Tank/ Degasser

This system is an external tank where feed water is circulated, heated and sprayed into the break tank. This removes NCG's which are then vented off.

Steam quality test points can be included in the pure steam outlet for full EN285 (HTM2010) testing.

Options/Advantages of Stilmas Plant

There are a number of options and advantages offered by the Stilmas PSG-DTS Pure Steam Generator:

A unique and careful design of the decontamination chamber allows Stilmas to guarantee the highest standards of endotoxin reduction. Feedwater spiked to artificially high endotoxins levels was used to challenge the equipment; this demonstrated its capability of reducing endotoxins from 2500 Eu/ml to 0.25 (Log 4)

The Stilmas range also includes electrically heated units. In these the unit is fitted with electrical heaters made in a resistant alloy. Electrically heated generators are supplied up to 500Kg/hr

Where a limited supply of WFI is required it is possible to incorporate a Pure Steam Condensing unit with Double Tube Sheet heat exchanger and automatic regulation system. The PSC unit allows partial or full Pure Steam flow condensation into WFI



SteriTech/Stilmas Customer Support

SteriTech and Stilmas have been partners for over 20 years building a good relationship allowing SteriTech to offer customers full support:

Feasibility studies

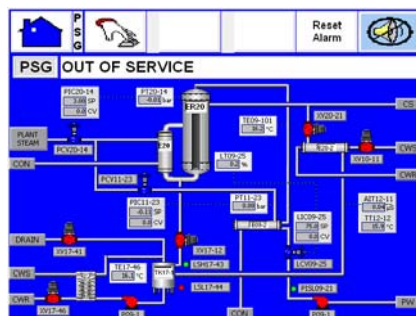
Advice and guidance to machine specifications

Full project management

DQ/HAZOP expertise

Sitework/Preventative maintenance from full qualified, experienced, FAS trained local engineers

Support for the lifetime of the machine



SteriTech