

Pure Steam Generator



Stilmas PSG – DTS Pure Steam Generators are designed and constructed according to the latest International Pharmacopeias and the cGMP FDA. They are capable of solving any problem of sterilisation of pharmaceutical equipment and process lines. Standard models range is from 50 to 6.000 kgs/h output.

Main features os Stilmas PSG - DTS

- The pure steam is immediately available due the accumulating boiler technology. The unit is able to pass from stand-by to full capacity in a few seconds.
- The production capacity can be varied from 0 to 100% according the demand
- High quality steam due the gravitational purification principle
- Extremely limited maintenance due the simple and clean mechanical construction and no moving parts
- Compact construction and low weight

Operating principle

The system is composed by two parallel bodies: the heat exchanger and the evaporator – decontamination column. Feed water is fed to 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

- 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; and mechanically polished where required.
- The heat exchanger is a DTS type, totally separate from the main column; the pipes are expanded into the plates avoiding any welding for a totally hygienic solution and better resistance against dilation stress.
- The design and construction of the decontamination chamber, which is a totally empty column, ensures the possibility for inspection. The absence of complex welded structures in this area reduces the risk of corrosion.



Non-condensable-gases reduction (NCG)

Stilmas has developed two alternative solutions, in case compliance with international rules. (EN285, HTM2010)

First solution

This solution foresees the installation of an external degassing tank, in which preheated feed water is sprayed for NCG removal.

Second solution

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 feed water.

Contact

Steritec Belgium
Av. J. Wybran 45 B
BE-1070 Brussels
T + 32 (0)2 520 11 50
[E esteritec@steritec.be](mailto:Esteritec@steritec.be)

Steritec The Netherlands
Van Nelleweg 6060 * NL-3044 BC Rotterdam
Postbox 13060 * NL-3004 HB Rotterdam
T + 31 (0)10 753 72 21
[E info@steritec.nl](mailto:Einfo@steritec.nl)

Electrically heated Pure Steam Generator

For capacities up to 500kg/hr, Stilmas PSG's can be purely electrically heated. The Stilmas design of a large evaporation chamber is ideal for such application.

Advantages

- Maximum operation flexibility
- The unit produces automatically in the range of 0 to 100% according to the demand
- The quality of DWI is always perfect
- Independent the pressure and production flow-rate
- Quick response after start-up
- The temperature and water volume in the decontamination chamber allow the unit to respond rapidly in a few seconds from stand-by to maximum production capacity
- Compact design and the silent operation
- Extremely limited maintenance

