

FOW – Superheated water sterilizer

Applications:

Bio-pharmaceutical Food

Loads:



Processes:

Sterilization



FOW water cascade sterilizers are able to perform counterpressure sterilization through superheated water: an ideal alternative to treat solutions in heat sensitive and non-heat sensitive containers. Where the product is liable to separation or for accelerating thermal transition phases, the whole load can be rotated during the entire sterilization process.

- *Process optimization:* The process is faster than the air-steam sterilization process. It is also an ideal sterilizer for <math><105\text{ }^\circ\text{C}</math> processing. Wet loads can be overcome using an automated drying extension with the installation of specific drying solutions downstream of the sterilization chamber.
- *Easy validation & integration:* Thema4 process controller is pre-validated according to GAMP5 and in compliance with CFR – part 21, thus resulting in shortest qualification time and minimizing project risks. Open system architecture that can be integrated with SCADA system and other Fedegari machines.
- *Highest productivity:* Fedegari R&D laboratory is ready to develop the best treatment solution for your specific needs. We run tests with different loads and requirements.

Fields of application

FOW superheated water sterilizer is suitable for:

- Sterilization of parenteral solutions, liquids in sealed containers not deformable (eg. glass vials) and liquids in heat sensitive sealed containers (eg. plastic bags or bottles)
- Terminal sterilization of pre-filled syringes (PFSs)

Key benefits

Easy controlled modulated heating and cooling

Short sterilization process

Faster cooling phase

No consumption of clean steam

Powered by

Thema4

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Design and technical features

- FOW superheated water sterilizer is equipped with AISI 316Ti stainless steel chamber
- Besides the standard versions (from 830l to 14.800l), loading capacity is fully customizable according to customer needs
- Chamber internal surface electropolished with a roughness $Ra < 0,4\mu m$
- One or two doors with vertical or hinged opening systems to cope with available space in the smartest possible way
- 5 probes PT100 RTD for temperature control (2 fixed – in the filter and discharge – and 3 flexible for the load)
- Automatic sterilization of the air filter with fixed temperature probe
- 2 ports for validation probes
- Fedegari exclusive patented door gaskets assure 100% tightness
- Piping and valves in stainless steel AISI 316L

Special applications

Rotating load

The load is held in rotation thanks to a special rotating drum inside the chamber. The rotating drum has a magnetic coupling and is adjustable in speed, direction of rotation and intermittently. This system finds application in the treatment of suspensions and emulsions and ensures a better performance of the tightness tests for ampoules under vacuum and a more homogeneous heat transmission in the load.

