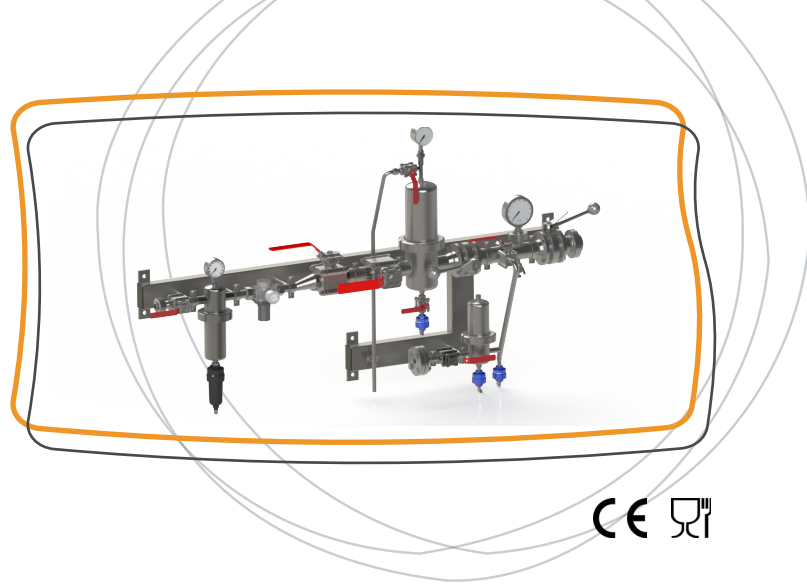


XFI[®]

Pressure-reducing & gas filtration station
for process line



Presentation

Remaining true to its culture of innovation and development of specific solutions, Servinox has designed a compact air or CO² treatment module, fully adapted to the needs of the user and to existing installations. It traps micro-organisms in order to generate food-grade compressed air or CO².

Depending on the quality of the incoming gas, the expansion and filtration unit is based on a pre-filter with automatic drain, an adjustable regulator and a sterile filter, guaranteeing high particle retention capacity. In addition, the XFI station incorporates a clean steam supply to sterilise the main filter.

Key features

- Multifunction assembly: pressure reduction and filtration
- Easy integration and customised manufacture, with easy installation on existing systems
- Cost-effective, minimum pressure losses
- Wide range of sizes to suit expected flowrate
- Hygienic design
- Small footprint

Applications

- System particularly suited to breweries, dairies, the food and drinks industry

General technical features

The gas filtration station is equipped with an automatic internal pre-filter/drain (1), a pressure reducer (pressure regulator with purge), ball and/or butterfly valves, a steam filter (2), a sterile filter with thermometer (3), a pressure gauge with separator, thermostatic drains and a sampling valve.

Maximum inlet pressure: 10 bar

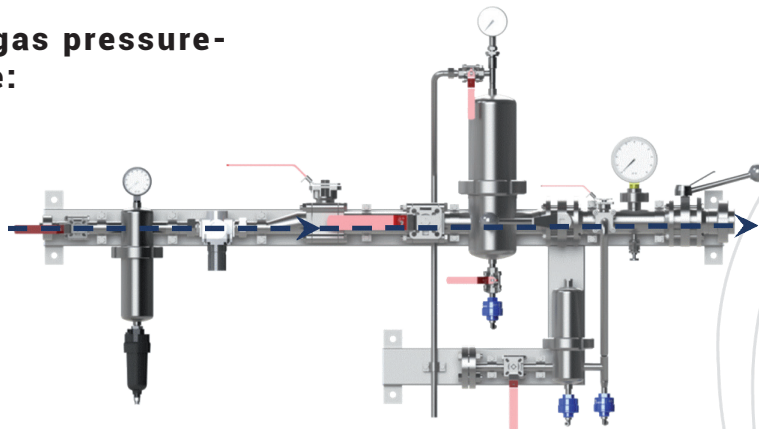
Maximum operating temperature:

Sterile part: +1°C to +121°C

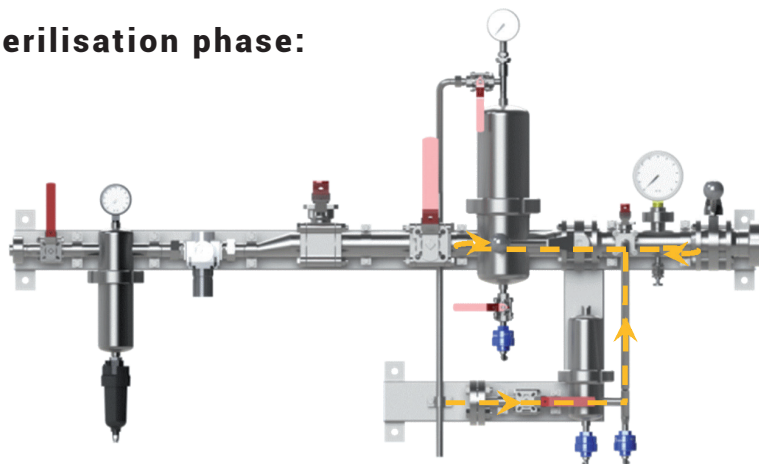
Non-sterile part: -5°C to +60°C

Assembly made of 1.4301 (304) stainless steel.

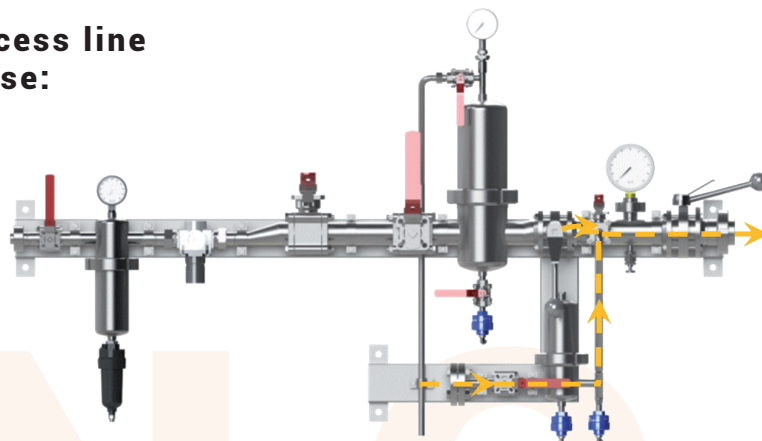
Filtration and gas pressure-reducing phase:



Sterile filter sterilisation phase:



Downstream process line sterilisation phase:



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Characteristics of the main components

1) Pre-filter:

The pre-filter with automatic drain is equipped with a coalescing and particulate cartridge for the retention of water and oil aerosols, as well as particles contained in gases and compressed air in industrial applications.

Particle retention rate at 0.01 µm: 99.99998 %

Materials:

- Filter media layer: Glass microfibres
- Coalescence layer: Polyester
- Inner and outer filter media support: Stainless steel 1.4301 (304L)
- Cups: Polymer-reinforced glass fibres
- Seals: EPDM (Ethylene Propylene Diene Monomer)
- Cup / filter media connection and media support: Polyurethane

Conformity: ISO 12500-1 and ISO 12500-3

2) Steam filtration:

The steam filtration unit comprises a sintered stainless steel filter, which retains particulate pollution in gases, liquids and steam, caused by the abrasion of valves, fittings and rust. The design of the filter element offers particularly economical filtration, and can be regenerated using an ultrasonic bath, essential for fluids with a high particle content. The porosity level is greater than 50 %, guaranteeing high particle retention and excellent flow characteristics with low pressure losses.

Absolute retention rate: 1 µm

Materials:

- Filter media: Sintered stainless steel 1.4404 (316L)
- Cups: Stainless steel SS 1.4301 (304)
- Bonding material: Plastic steel
- Seals in contact with the product: EPDM (Ethylene Propylene Diene Monomer)

Conformity: ISO 12500-1 and ISO 12500-3

3) Sterile filter with thermometer:

The sterile depth filter is designed for filtering compressed process air and technical gases. It is made up of several layers of media sandwiched between internal and external support grids and stainless steel cups. Efficiency is 99.99998 % for a filtration threshold of 0.01 µm. The depth filter is a three-dimensional, binder-free borosilicate media with a 95 % vacuum, guaranteeing high particle retention capacity and high flowrates. It is naturally hydrophobic.

Maximum differential pressure: 5 bar at an operating temperature of 35°C

In-line sterilisation with saturated steam at very low flowrates: 30 min. at 121°C, 20 min. at 131°C, 10 min. at 141°C

Autoclave sterilisation: 121°C - 125°C for 30 minutes

Absolute retention rate: 99.99998 % at 0.01 µm

Bacteriological retention: LRV > 7 /cm² for T1 Coliphages

Filtration area: 494 cm² for a 10''' (10/30) element

Materials:

- Filter media: Borosilicate

- Upstream and downstream supports: Stainless steel SS 1.4301 (304)
- Protective media: Polyester
- Bonding material: VMQ (Silicone)
- Seals: EPDM (Ethylene Propylene Diene Monomer)

Filter compliance:

- FDA-compliant equipment, in accordance with CFR (Code of Federal Regulation) Title 2, and USP Class VI
- Manufactured in accordance with cGMP (current Good Manufacturer Practice) and DIN EN ISO 9001 certification
- No risk of fibre release
- Contains no asbestos, adhesive or other chemical additives
- Laboratory tests guarantee 100 sterilisation cycles without loss of integrity

Full module options

- Automatic control to reduce the risk of mishandling and guarantee filtration quality

Warranty

12 months as from the date of dispatch (except for special conditions)

Conformity

- Pipe fitting compliant with Paragraph 4.3 of the PED 2014/68/EU

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Non-contractual document and visuals, subject to change without notice.

Only the commercial offer and the technical manual supplied with the equipment may be used for technical and legal purposes.