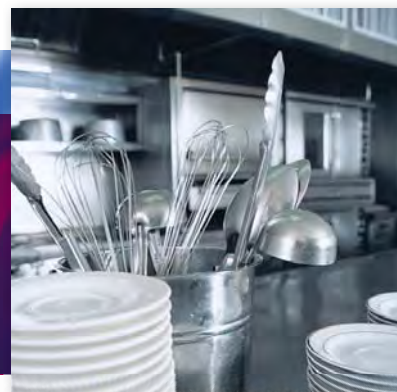


steam &
condensate
solutions

CSF16

clean service filters



First for Steam Solutions

spirax/sarco

EXPERTISE | SOLUTIONS | SUSTAINABILITY

CSF16

clean service filters

High performance filtration for improved steam, air and gas system quality

The CSF16 helps to control product quality by safely removing impurities from process steam, air and gas.



Steam is an essential source of heat for product and equipment decontamination within the food, beverage and dairy industries, as well as many sanitary pharmaceutical and biopharmaceutical applications. The CSF16 helps control and maintain the product quality within these applications by safely removing impurities from the process steam, air and gas.

Since these industries need to conform to the most stringent standards of hygiene and contamination control, it is critical that the quality of the steam they use – and the performance of the steam filters installed within the steam production system - supports the need to consistently produce contaminate-free products.

The same is true of compressed air and gas where many applications require sterile air filters capable of safeguarding products from being exposed to bacteria, other micro-organisms and contaminants.

With Spirax Sarco's range of CSF16 clean service filters, you have the reassurance of knowing that our high efficiency point-of-use solutions for steam, air and gas applications will help ensure your process not only meets but exceeds the required purity standard. So you can reduce waste and costly batch spoilage, extend the shelf life of consumable products and minimise the risk of product recalls.

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The CSF16 is available in a range of sizes and pipeline connections for better performance and versatility of use in many applications:

¼" to 3" screwed and DN8 to DN200 flanged.

Every filter is designed with a stainless steel housing for a lifetime of trouble-free service and the materials used and surface finishes, including the filters, meet all the applicable requirements stipulated by US FDA regulations and comply with 3-A accepted practices.

All of our air, gas and steam system filters, are based on the same compact design which is easy to install and maintain, and delivers high performance filtration for most standard applications.



The CSF16-S high efficiency steam filter for better quality steam

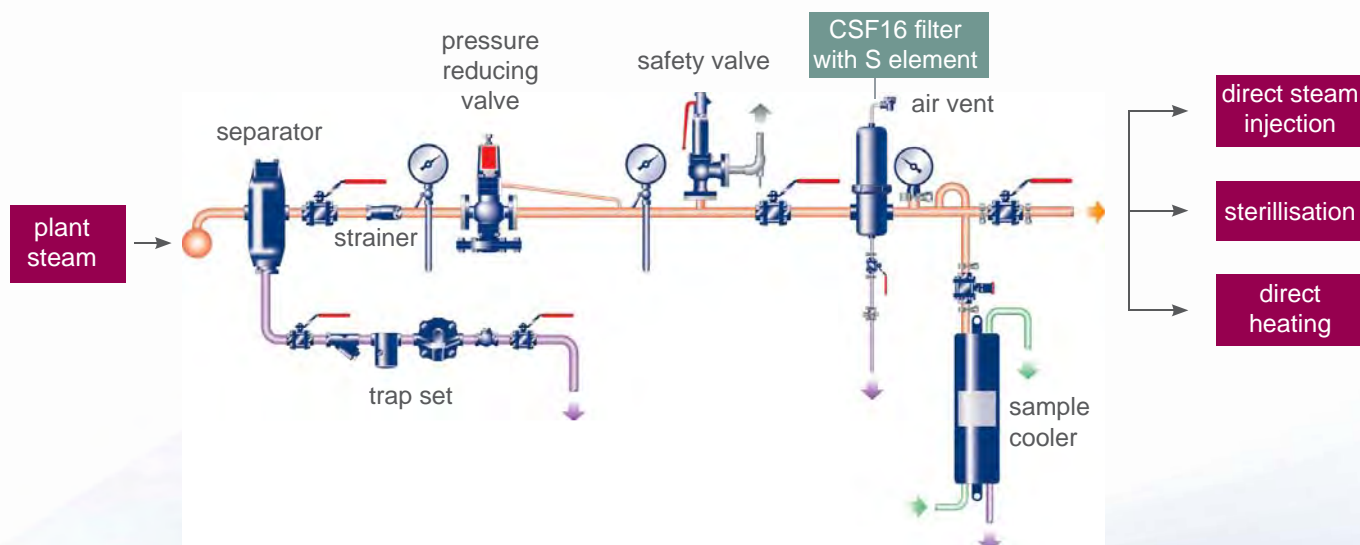
Steam is often considered to be the ideal sterile and contaminate-free energy source for an endless number of applications in the food, beverage, dairy, pharmaceutical and healthcare process industries. Its flexibility means it can be used to cook, sterilize, humidify, dry and heat and - because it's the perfect medium at many points throughout the production, processing, handling and packaging of food and beverage products - it often comes into direct contact with the product itself and product contact surfaces.

It is critical that the steam you use is supplied in the optimum condition and contains nothing likely to spoil the product or otherwise cause harm.

All Spirax Sarco CSF16-S steam filters comply with US FDA and 3-A accepted practice No 609-03 sanitary regulation for the production of 'culinary' steam where absolute filtration down to 1 micron is required to safeguard against the transfer of any potential contaminants to the product or process.

The CSF16-S is a stainless steel unit with a removable sintered stainless steel filter element which conforms to the high standards required in the food, beverage and pharmaceutical industries and is highly reliable even under extreme operating conditions. The sintered element is extremely robust and can be ultrasonically cleaned to extend its service life. When degradation of the element reaches an unacceptable level it can be quickly and easily replaced without the use of special tools or equipment.

Typical application using CSF16-S



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Key benefits of the CSF16-S:

- **1, 5 or 25 micron rated elements** offering an exact defined particle retention rate at a given pore size.
- **Welded element design**, therefore there is no use of chemical binders required.
- **Sintered element** that can be ultrasonically cleaned to extend service life.
- **Double 'O' ring seal** eliminating risk of cross contamination.

For more details of how our clean service filters can help prevent contamination to keep your system running at optimum efficiency, contact Spirax Sarco.

Available types

The CSF16 is available in a range of sizes and pipeline connections: ¼" to 3" screwed and DN8 to DN200 flanged and for better performance and versatility of use in many applications it can be supplied with a 1, 5 or 25 micron absolute rated element.

While the standard 5 micron element will remove 95% of all particles larger than 2 microns, a 1 micron element will give a filtration efficiency of greater than 99% against 0.1 micron elements.

- CSF16-S 304 stainless steel housing.
- CSF16T-S 316L stainless steel housing.

Typical applications

The CSF16-S steam filter has been designed to reduce the risk of product or process contamination across many industries and applications, including:

- Culinary steam for direct cooking of food products and sterilisation of food and beverage containers.
- Filtered steam for humidification of clean rooms in the pharmaceutical, biotechnology and electronic industries.
- Filtered/steam for autoclaves in the health care industry.

Steam filters:

- Remove 100% of all visible particles and 99% of 0.01 micron particles.
- Remove liquid condensate at the same efficiency as for solid particles.
- Are fully compliant with:
Applicable US FDA regulations and
Meet with 3-A accepted practices.

The CSF16-A high efficiency sterile air filter for better quality air and gas

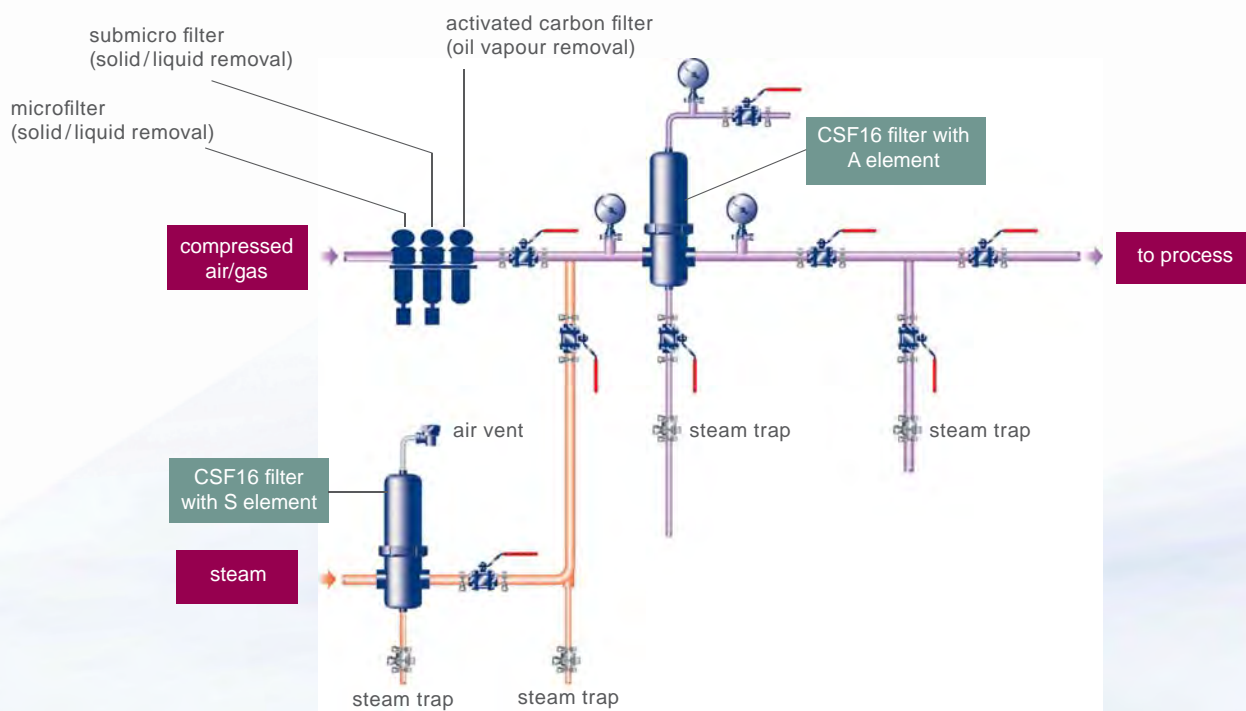
All compressed air used for sanitary and sterile applications in the food, beverage and dairy industries, as well as in pharmaceutical and biopharmaceutical processes, must be free from any substances – including bacteria and other contaminants such as dust, pollen and hydrocarbon or other vapours – with the potential to contaminate or even taint or colour products or present any kind of risk to health.

For some applications, including the carbonation of beverages and nitrogen blanketing of produce packaging, other gases also need to be filtered to a sterile condition.

The Spirax Sarco CSF16-A sterile air filter is designed to provide high performance filtration of compressed air and other process gases, such as carbon dioxide, that come into direct contact with product to control the levels of particulates and microbial contamination, supplying sterile air or gas.

All components comply with the US FDA regulations for contact with food and comply with 3-A accepted practices.

Typical application using CSF16-A for sterile air/gas with forward Sterilise-In-Place sterilisation using CSF16-S



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Key benefits of the CSF16-A:

- The **depth filter medium is non-fibre-releasing** and is constructed of several layers which are embedded in stainless steel supports and bound to stainless steel end caps.
- The **sturdy stainless steel construction** permits one hundred possible steam sterilisation cycles at specified conditions without loss of integrity.
- **Patented binder free microfiber medium** made of borosilicate which realises high particle holding capacity and long service life.
- **A void volume of 95%**, ensuring a high containment capacity at high flowrates and low differential pressure.
- An **efficiency rating of >99.999998%** at 0.01 micron pore size.

For more details of how our clean service filters can help prevent contamination to keep your system running at optimum efficiency, contact Spirax Sarco.

Available types

The CSF16 is available in a range of sizes and pipeline connections for better performance and versatility of use in many applications: ¼" to 3" screwed and DN8 to DN200 flanged.

- CSF16-A 304 stainless steel housing.
- CSF16T-A 316L stainless steel housing.

Typical applications

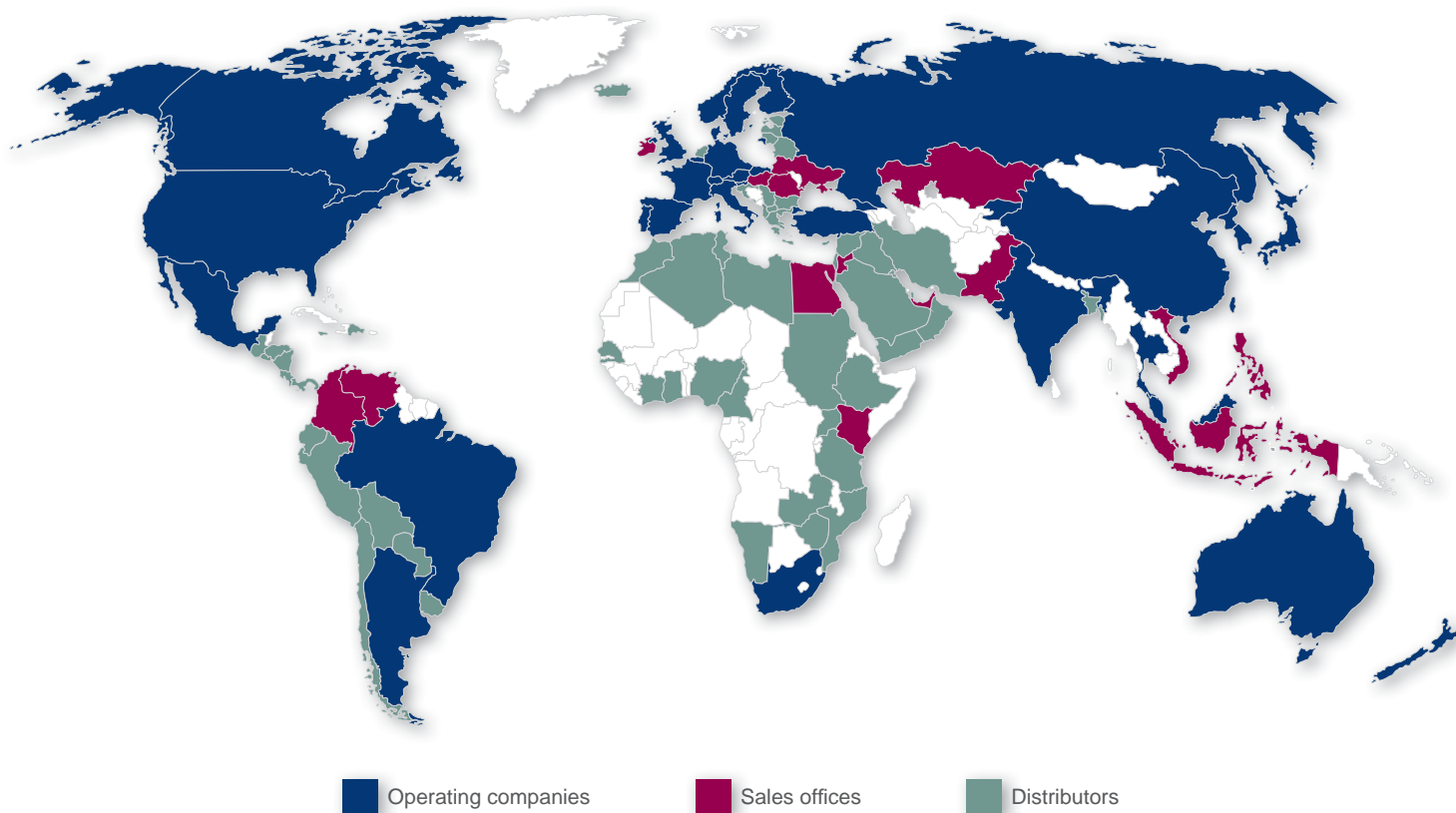
The Spirax Sarco CSF16-A sterile air filter has been designed and developed for use in many applications including:

- Aseptic processing and packaging.
- Biotechnology.
- Blanketing/tank pressurisation.
- Food and Beverages.
- Carbonation of liquids.
- PET bottle blowing.

Sterile air filters:

- Remove all viable organisms.
- Delivers up to 100 steam sterilization cycles with no integrity loss.
- Have a low pressure drop.
- Have a high flowrate.
- Are fully compliant with:
Applicable US FDA regulations and
Meet with 3-A accepted practices.

Global coverage



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