



**ZERO EMISSION, ZERO TEMPERING, ZERO CLEANING:
THE FIRST H14 HIGH TEMPERATURE HEPA FILTER**



ZERO EMISSION ZERO TEMPERING ZERO CLEANING

In the Life Science industry, aseptic filling is one of the most critical parts of the process. No wonder that more and more customers require H14 filter grade both outside and within the tunnel to achieve efficiency, consistency and to fully eliminate contamination.

For this critical process, Camfil now introduces Absolute D-Pyro. It's the all new high temperature filter for depyrogenation tunnels. It may look familiar on the outside, but it's ground breaking inside.

Absolute D-Pyro can go straight up to 350° C – without tempering. This high temperature filter does not release any emission. Its sealed airtight filter pack is enclosed in a reinforced frame providing for durability which reduces downtime, and ultimately leading to increased profitability.



Absolute D-Pyro can go straight up to 350° C without tempering and achieves H14 in the production "hot zone".

ABSOLUTE D-PYRO

INNOVATION IN HIGH TEMPERATURE FILTRATION

Absolute D-Pyro is a totally new innovative air filter construction for high temperature environments requiring maximum production uptime and safety. And it achieves H14 in the production "hot zone" with zero emissions, zero tempering and zero cleaning.

Technical description:

Efficiency: H14 (99,995%) and H13 (99,95%) at MPPS (acc. to EN 1822)

Rated Airflow: From 0,5 m/s to 1 m/s, depends on filter size

Temperature: Working temperature: up to 350 °C to peaks at 400°C

Cleanroom class: < ISO 5, in hot zone of tunnel (even when temperature is varying)

Leak freeness: Leak free even after minimum 200 cycles (stable value during process)

Max. pressure drop: 700 Pa

Quality:

Raw material qualification: FDA / REACH / EC1935:2004 / VDI6022 / ISO 846

Quality control: Entire filter is scanned according to EN 1822 with individual scan test report

Benefits and features:

Highest efficiency:

First filter with H14 (also available in H13) consistently ISO 5 (eg. "hot zone" vs "cool zone")

Zero emission:

Maintaining quality performance in all production phases even when temperature can vary at 350°C. The media is free from Bisphenol A, Phthalate's and Formaldehyde.

Zero tempering:

- No tempering needed
- Heating/cooling ramp: 5°C/min (tested)

Fast set-up:

No more "pre baking" operations before production. Short ISO stabilisation phase of 2 h at 320°C or 1 h at 350°C.

Zero cleaning:

Filter is operational right after installation: no fumes.

Qualified components:

Qualified components by Camfil

Superior production quality:

Leak free and tested construction, reinforced frame. Qualified components with ProSafe mark

Energy saving:

No need for constant temp during downtime (eg. night shift)

Cleanroom packaging:

Handling cleanliness to production zone: filter in clean bag and in plastic box

Ultra clean

Sealed airtight filter pack in a reinforced frame. No emission, no tempering, no cleaning.

Higher productivity

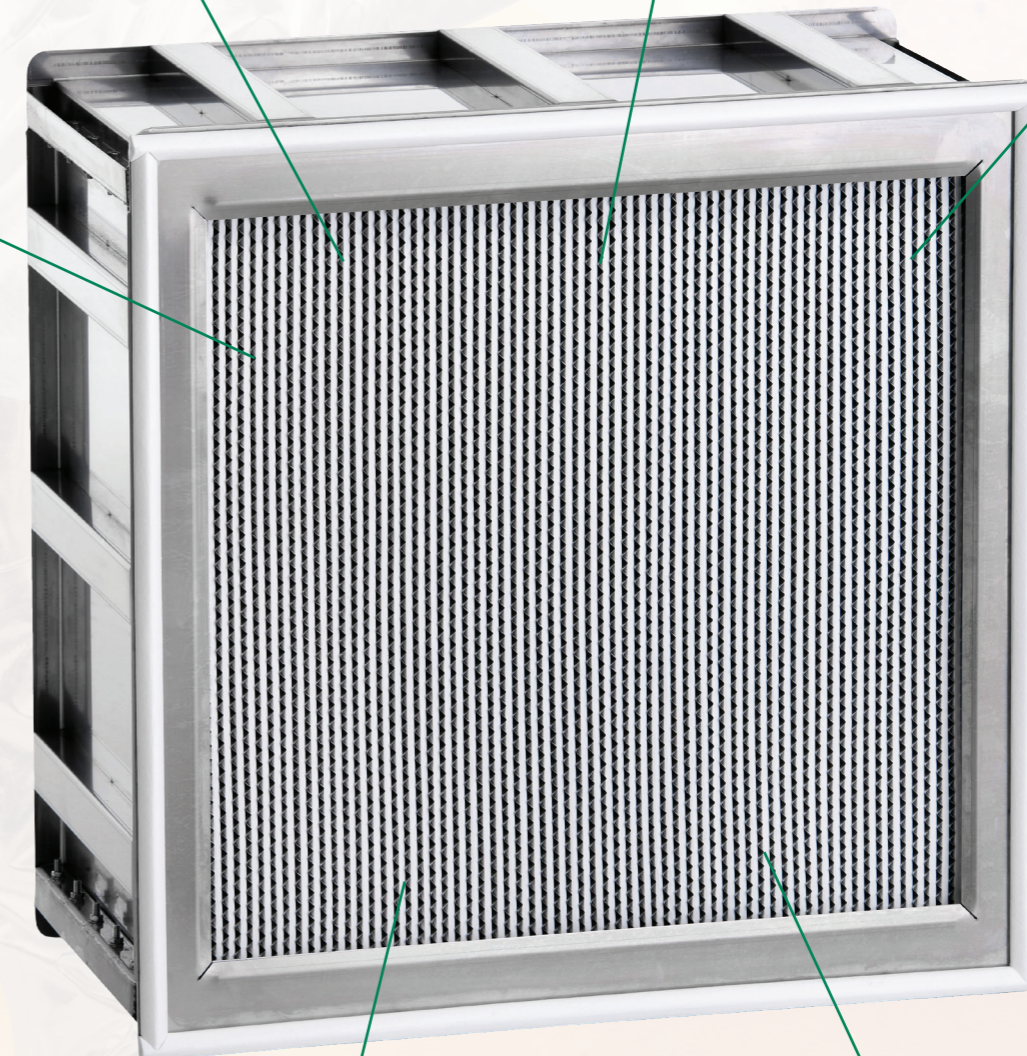
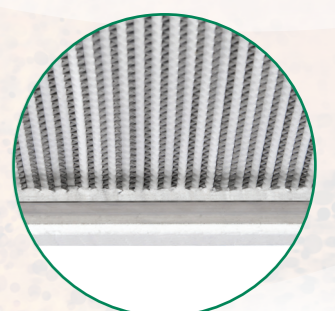
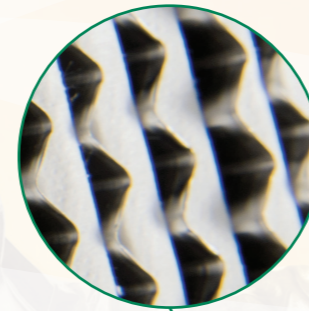
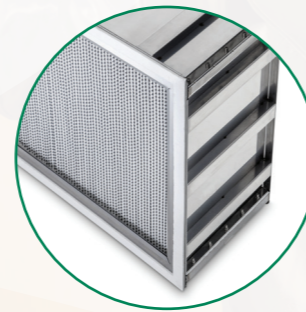
Fast ramping up (tested in lab environment to +5°C per minute).

High reliability

Leakfree filter over many production cycles.

High compliance

First H14 in the market: consistent ISO class 5 all across the tunnel. Designed and manufactured under Camfil ProSafe Quality & Certification Program.

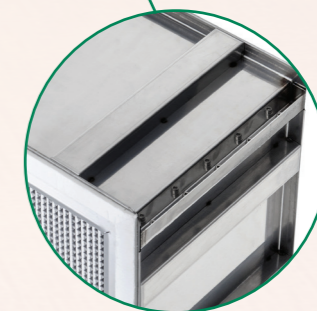
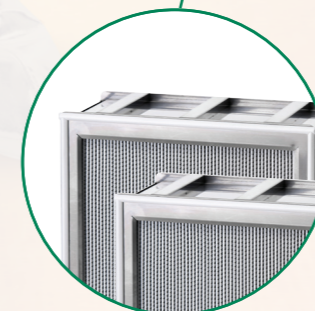


Flexible dimensions

Depths at 150 and 292 mm.

Leak free

Different gaskets for perfect fitting.



PROSAFE – AIR FILTERS FOR YOUR MOST SENSITIVE PROCESSES

Life Science industries demand more than Clean Air. It's not enough that the filter protects your products from undesirable particles. The filter must also be manufactured from materials that are proven not to contaminate the sensitive process.

Camfil's ProSafe Program offers various relevant compliances such as microbial inertness acc. to ISO 846 / VDI6022 and food contact acc. to EC1935/2004 and 10/2011, as well as absence of harmful chemicals such as Phthalates and Formaldehyde. Camfil's material components have been tested to prove their resistance to decontamination agents over time.

Letters of conformance accompany every filter to meet product assurance compliance. This also demonstrates Camfil's capability to test and work in partnership with its Life Science customers and their specific requirements.

With a Camfil ProSafe-marked filter, customers can rest assured their processes will be safe from any root causes of critical issues that commonly affects the Life Science industry. This brings confidence and peace of mind.

To be absolutely sure you have the right filter, look for the ProSafe symbol. When you see it, you can be sure the filter has been certified for use in processes with strict demands on safety, traceability and control.

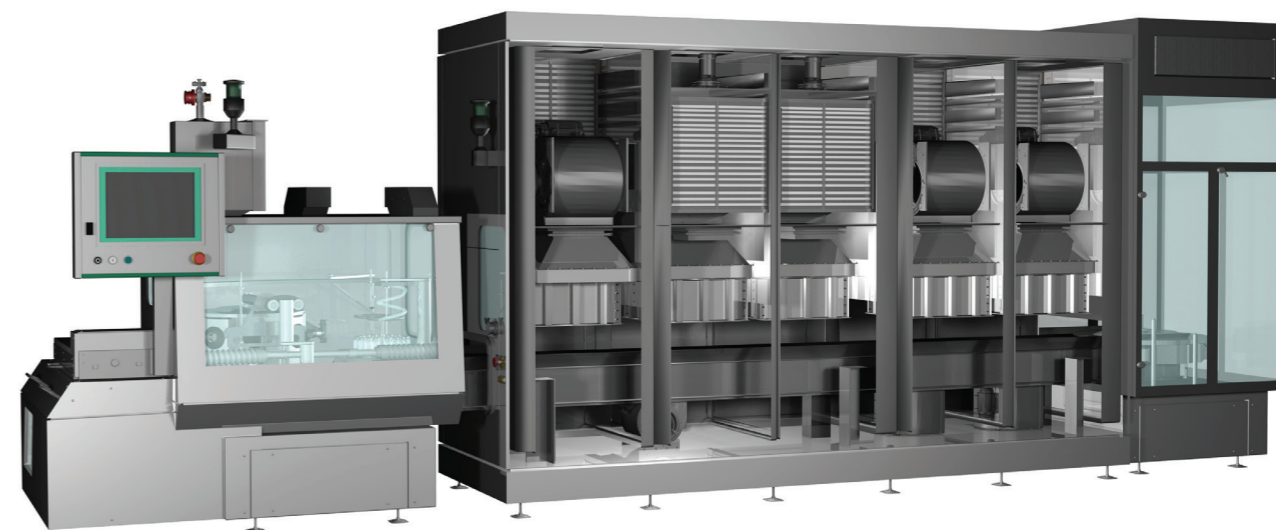


WE KNOW WHAT IT TAKES

We at Camfil have delivered filter systems for over 50 years. Our high demands on research, development and quality assurance mean you can feel secure.

We know all about the demands on clean air in the pharmaceutical industrie. Which is why we offer a complete range of ProSafe filters – specially designed for your needs.

Read more about ProSafe at www.camfil.com/prosafe



Camfil – a global leader in air filters and clean air solutions

For more than half a century, Camfil has been helping people breathe cleaner air. As a leading manufacturer of premium clean air solutions, we provide commercial and industrial systems for air filtration and air pollution control that improve worker and equipment productivity, minimize energy use, and benefit human health and the environment.

We firmly believe that the best solutions for our customers are the best solutions for our planet, too. That's why every step of the way – from design to delivery and across the product life cycle – we consider the impact of what we do on people and on the world around us. Through a fresh approach to problem-solving, innovative design, precise process control and a strong customer focus we aim to conserve more, use less and find better ways – so we can all breathe easier.

The Camfil Group is headquartered in Stockholm, Sweden, and has 28 manufacturing sites, six R&D centres, local sales offices in 26 countries, and 4,180 employees and growing. We proudly serve and support customers in a wide variety of industries and in communities across the world. To discover how Camfil can help you to protect people, processes and the environment.

www.camfil.com

