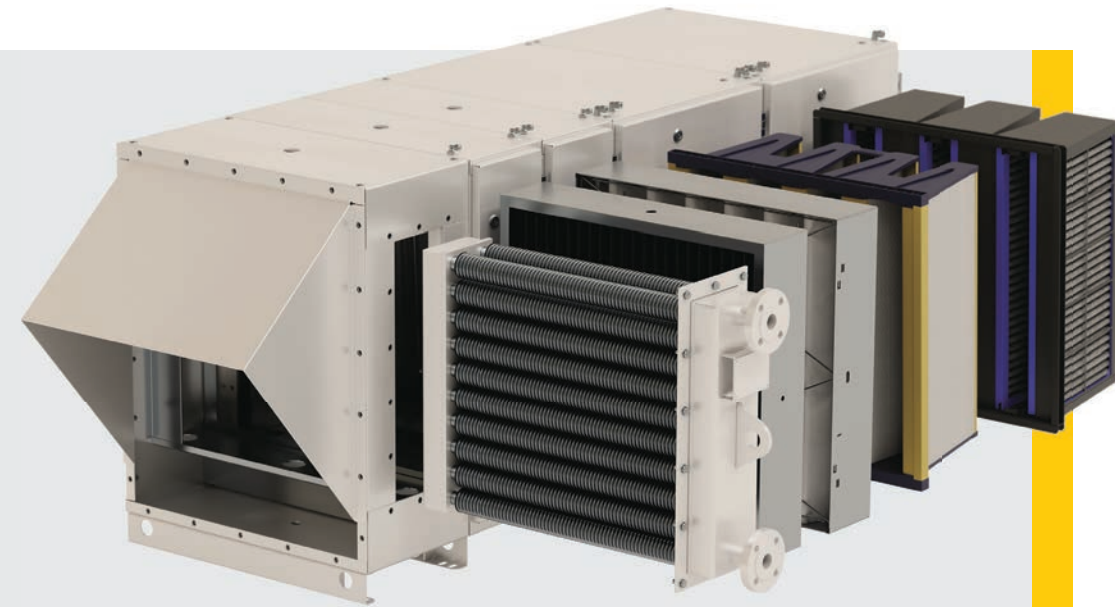


Optimum performance thanks to reliable cathode air filtration.



Blue-netic
AIR INTAKE SYSTEM

Hydrogen-powered fuel cells can make a decisive contribution to significantly reducing CO₂ emissions in the marine and industrial sectors. With a modular technology system for cathode air filtration, Hengst offers an efficient way to effectively protect fuel cells and ensure their long-term performance. This applies in particular to marine applications, large stationary systems and electrolyzers. These often have particularly adverse environmental conditions that place the highest demands on cathode air filtration.

The technology concept developed by Hengst offers free scalability of the filter areas and thus the volume flow. If the demand increases, the individual filter

stations can either be enlarged or several stages can be operated in parallel - even filter systems for fuel cells with an electrical output of several megawatts can be realized without any problems.

Overall, cathode air filtration is an important component of fuel cell systems to effectively protect them from particles, salts, moisture and harmful gases. In addition, air and harmful gas filtration can also be useful for the operational safety of electrolyzers.

The whole world of filtration.

As a family-owned company with 3,500 employees at 23 locations, Hengst Filtration stands for innovative solutions in filtration and fluid management worldwide. Our products contribute millions of times over to making the world a cleaner place. But we can do even better. We think filtration - in everything we do. We supply technologically leading filtration systems in the fields of plant and mechanical engineering, industrial filtration, hydraulics, life science and health care.

The customized solutions are used in medical cleanrooms, air conditioning systems, cleaning equipment, industrial systems, power tools and robots.

We are also a series supplier to the international vehicle and engine industry and a development partner for sustainable drive and mobility concepts. We offer high-performance and economical filtration solutions for fuel cells and hydrogen engines.



Purifying our planet.

Mobility, health, economy, environmental protection & sustainability: we work on the big issues of our time every day. And with the aim of making the planet a cleaner place. In doing so, we make future-oriented technologies possible in all industries worldwide.

Do you have any further questions?

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Hengst
FILTRATION



Filtration for a hydrogen future.

Fuel cell air treatment system for stationary and maritime applications.

Blue-netic
AIR INTAKE SYSTEM

purifying our planet

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Hengst
FILTRATION

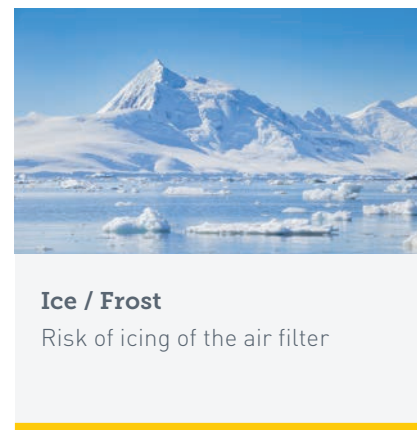
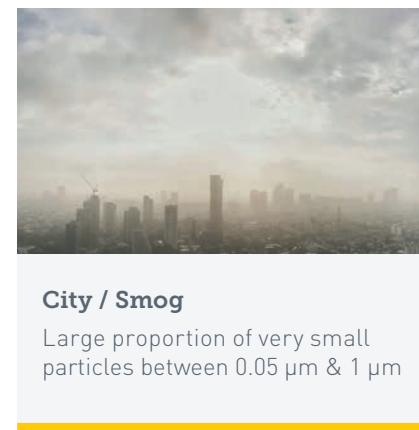
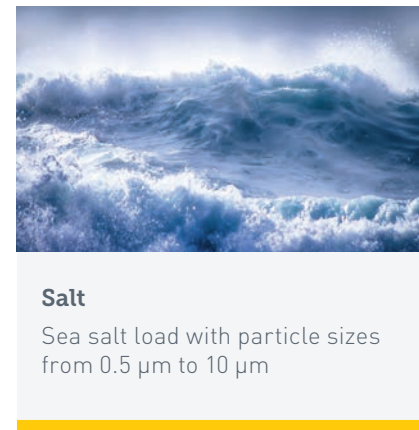
No two dusts are the same.

Optimum cathode air filtration adapts to the respective ambient conditions and thus effectively protects the fuel cell from particles, salts, moisture and harmful gases.

Particles and harmful gas concentrations vary considerably depending on the installation location and ambient conditions..

The following criteria are decisive for the design of a filter system:

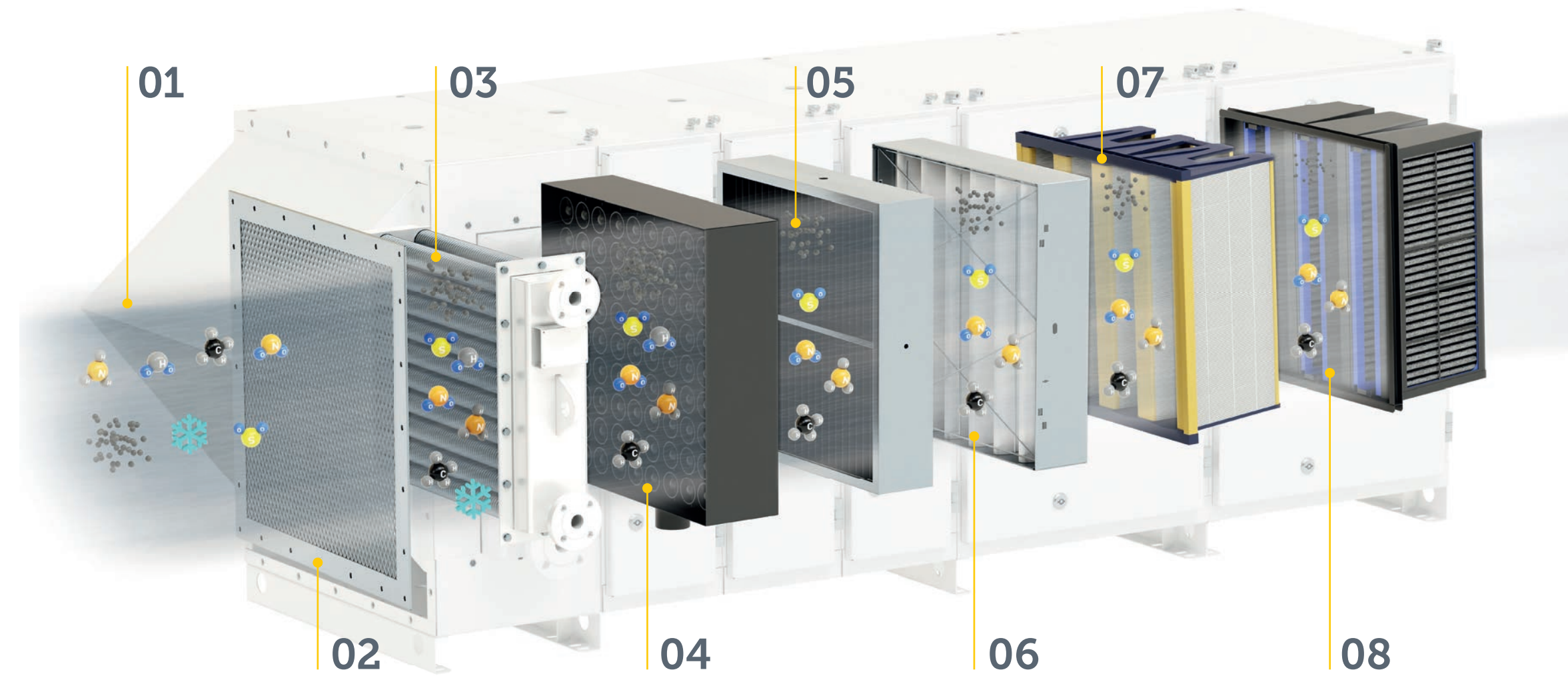
- Air flow rate
- Required maintenance interval
- Particle concentration and required separation efficiency
- Existing and permissible pollutant gas concentration
- Local climatic conditions (temperature, humidity, rain frequency, wind, salt content in the air)
- Other conditions such as intake height or neighboring systems



Cathode air filter system for stationary and maritime applications.

For large stationary systems, it is possible to integrate additional special equipment into the cathode air filter system. For example, the filter can be extended to include active cleaning systems that reliably protect the fuel cell from high dust concentrations.

If the large system is to be operated in regions with particularly low temperatures, air preheating is essential to prevent the system from freezing.



- 01 Weather hood**
Protects the system from direct influences such as rain, snow and hail.
- 02 Insect screen**
Prevents the entry of insects, coarse particles and leaves.
- 03 Air heater**
Prevents the filter element from icing up in winter.
- 04 Multicyclone**
Large quantities of dust are separated directly and reliably.
- 05 Droplet and coarse**
Separator Protects the system from liquid droplets >25 µm.
- 06 Particle pre-filter**
Are used as coalescence filters for separating large quantities of liquid aerosols.
- 07 Multiform® fine filter**
Separation of fine and ultra-fine dust and sea salt particles.
- 08 Harmful gas filter**
Gas filters or cathode air filters clean the air of harmful gases.

Add-ons

- ✓ Temperature monitoring
- ✓ Moisture measurement
- ✓ Differential pressure measurement
- ✓ Condition monitoring