

SEPTEMBER 2018

VILEDON NEWS

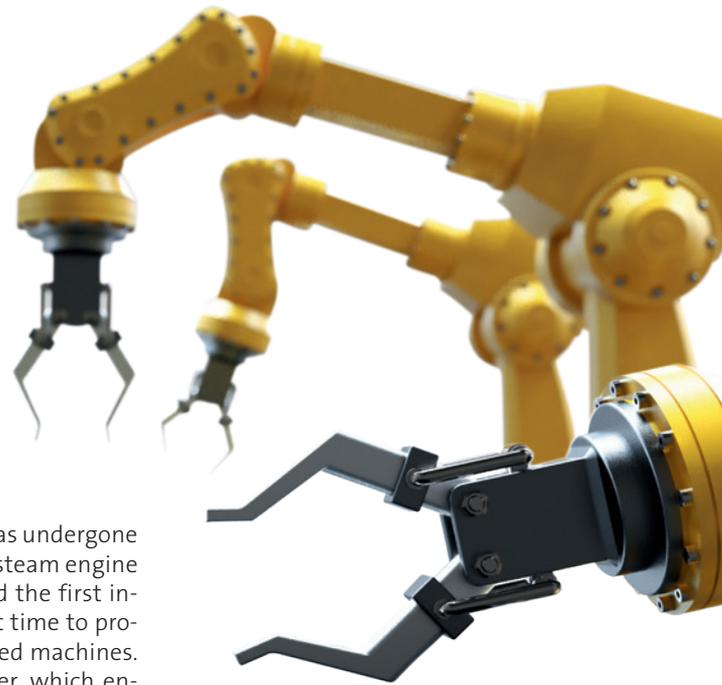
IN FOCUS: INDUSTRY 4.0

THE DIGITIZATION OF AIR FILTRATION

HOW INTELLIGENT SYSTEMS INCREASE ECONOMIC EFFICIENCY

The term Industry 4.0 is everywhere. The reason is that the fourth industrial revolution promises to set new standards in flexibility, productivity and cost efficiency. And thus to redefine the topic of cost-effectiveness. Air filtration offers great potential too.

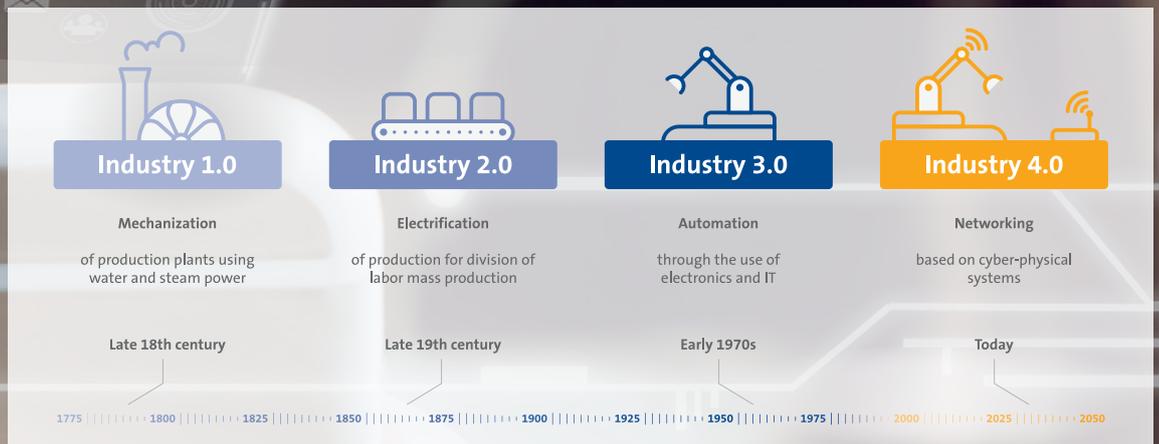
Over the past 250 years, the production of goods has undergone unprecedented change. With the invention of the steam engine at the end of the 18th century, which represented the first industrial revolution, it became possible for the first time to produce goods much more easily using steam-powered machines. The next stage saw the advent of electrical power, which enabled the development of assembly line work. This resulted in increased productivity and reduced unit costs. From the 1970s onwards, more and more computer-aided systems began entering the production process. In this way, the third industrial revolution significantly advanced automation and mass production. And today? The fourth industrial revolution promises intelligent plants and machines that can autonomously communicate with each other and make their own decisions.



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Small changes, major effects

Current studies emphasize the relevance of intelligent systems in industry. In the coming years, around 907 billion US dollars per year are set to be invested in Industry 4.0. This is expected to save production costs of more than 400 billion US dollars in 2020, and that figure will rise. In this context, even small projects can have significant effects on the production costs of companies. On the way to the digital factory – in which procedures are automated and production processes are constantly optimized by the system – not only robots and machines but also qualified employees have a major role to play. This is because they continue to be problem solvers and, in the event of downtime, need to be able to make the right decisions spontaneously while keeping an eye on the entire system.



Saving costs with intelligent air filters

A first step in the direction of Industry 4.0 is the networking of indoor air monitoring in industrial air filtration. Measuring instruments continuously monitor air quality and transmit their results to the system. The filtration system is controlled as required on the basis of previously defined parameters. The system runs only as long and as intensively as necessary.

In spray booths, the networking of pre-filter stages, ceiling and floor filtration enables major energy savings – with consistently good painting results at the same time.

Pre-filters are only activated when the filtration performance of the preliminary stages is no longer sufficient to ensure the required air quality. The paint mist separators of the floor filtration system also follow this principle and only become active when required. Otherwise, they remain in energy-saving sleep mode. As a result, less energy is consumed, the filter elements can remain in use for longer and operating costs are significantly reduced. In short, Industry 4.0 also has enormous potential in filtration that must be exploited. ■

You can find more information about Industry 4.0 at

www.freudenberg-filter.com
 > News & Stories > Digital networking

DOUBLE AWARD WINNERS

TWO AWARDS FOR EXCEPTIONAL PERFORMANCE IN QUALITY AND SERVICE



Groupe PSA recently presented the European team at Freudenberg Filtration Technologies with the „Aftermarket Performance“ Award. The decisive factors were the company’s special commitment and internal quality standards combined with maximum flexibility in planning. „We are very honored that PSA rates our company as a leading supplier in all areas“, said Barry Kellar, Global Vice President Automotive Filters at Freudenberg Filtration Technologies.



In addition, our North American colleagues received the „Supplier Performance“ Award from Honda – for the sixth time in succession. With this award, the automotive manufacturer honors outstanding supplier performance.

Thanks to the high-quality micronAir® particle filters, punctual deliveries and individual services, Freudenberg has been one of the Group’s top suppliers for years. ■

Detailed information on our cabin air filters can be found at

www.freudenberg-filter.com
> World of Automotive
> Products > Cabin Air Filters

TRAINING

LEARNING 4.0: LEARNING WORLDS FOR THE FUTURE

FREUDENBERG GROUP OPENS NEW EDUCATION CENTER

Industrial production is becoming increasingly autonomous and networked. This is also changing the demands placed on modern training. The Freudenberg Group has invested around 8.5 million euros in the construction of a new training center to prepare apprentices for the future challenges of their careers.

Diverse learning and working environments

In March 2018, the education center was ceremoniously inaugurated. Alongside technical workshops and welding facilities, seminar rooms and areas for free learning, the concept of the center includes digital learning islands and a media library. The heart of the concept is a fully automatic training factory consisting of four modules, which on a small scale form a complete production line – including high-bay warehouse, drilling station and quality control. Here, trainees can experience the industry trends of digitization and automation at first hand. In this way, anyone who later wants to work in an ultra-modern manufacturing facility will already have gained valuable experience.

Fit for the labor market of the future

With the education center, the Freudenberg Group aims to provide apprentices with the best possible preparation for working in a digital environment. This includes the teaching of process management and IT skills as well as working in interdisciplinary teams. „Our primary goal is to develop trainees into independent workers and innovative thinkers so that they can be successful at work and in life“, explained Dr. Tilman Krauch, Member of the Board of Management of the Freudenberg Group. The better and more broadly employees are trained, the easier it will be for them to find their way in even unfamiliar situations. Ultimately, this will be to the benefit of the Group companies and their research and development activities. ■

Detailed information about our education center can be found at

www.freudenberg.com
> News + Media





AIR POLLUTION CONTROL

ON THE SAFE SIDE

OPTIMAL ADVICE WITH VILEDON FILTERCAIR SERVICE FOR AIR POLLUTION CONTROL

The effectiveness of dedusting systems is essentially determined by the filtration concept. With the Viledon® filterCair Service, existing systems can be analyzed and optimized and new systems can be specially tailored to the requirements on site. This results in reduced downtime, less maintenance and lower operating costs. In this context, the modular service portfolio offers maximum flexibility. From filter changing to status analyses and leakage tests to emission or workplace analyses, the modules offer a wide range of optimization options. By discussing your needs with our Viledon® filterCair experts, you can choose exactly the services that make sense for your plant. ■

You can find more information about Viledon® filterCair for air pollution control at

www.freudenberg-filter.com > World of Industrial > Air Pollution Control > filterCair Services

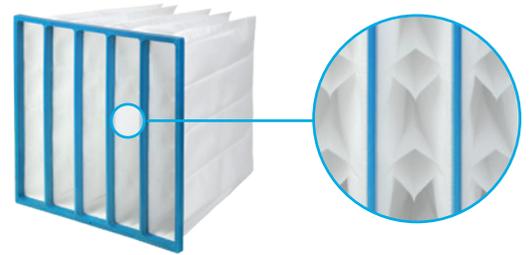
FOOD & BEVERAGE

ENSURING MAXIMUM HYGIENE

ECONOMICAL AND RELIABLE: THE NEW COMPACT POCKET FILTER F 90

Molds, bacteria and airborne contaminants all endanger process reliability in the food and beverage industry. That is why effective and hygienic air filtration has the highest priority. For reliable filtration from the first filter stage onwards, the compact pocket filter F90 is the ideal solution. This ISO ePM1 filter

contains no glass fibers and is microbiologically inactive. In this way, it permanently protects especially sensitive production and packaging areas against microorganisms and impurities. Robust and moisture resistant, it also provides highly economical filtration. ■



Detailed information about the compact pocket filter F 90 can be found at

www.freudenberg-filter.com
> Products > Pocket filters
> Compact > Compact F90

GAS TURBINES AND COMPRESSORS

PARTICULATE MATTER UNDER CONTROL

OPTIMUM SYSTEM PROTECTION WITH THE NEW GTG EPA SERIES OF DEPTH-LOADING FILTER CARTRIDGES

Gas turbines and compressors used at locations with high concentrations of fine dust are exposed to severe stresses. The depth-loading filter cartridges of the new GTG EPA series have been designed to optimize the number and depth of pleats so that the filter surface remains fully active over the entire service life of the filter. Contamination and damage to turbine blades as well as associated downtime and maintenance costs are practically eliminated with these EPA filters (E10 and E12 according to EN 1822). Coalescer or pre-filtering wrappers offer additional protection against moisture and dust, thus extending the service life of the filter.

Is the conversion of your system worthwhile? With our e.FFECT tool, we can jointly calculate your ideal filter solution and determine potential savings. ■

e.FFECT
electronic Freudenberg Filter
Efficiency Calculation Tool

**EPA FILTRATION
LEVEL!**



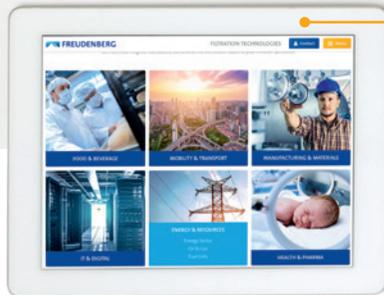
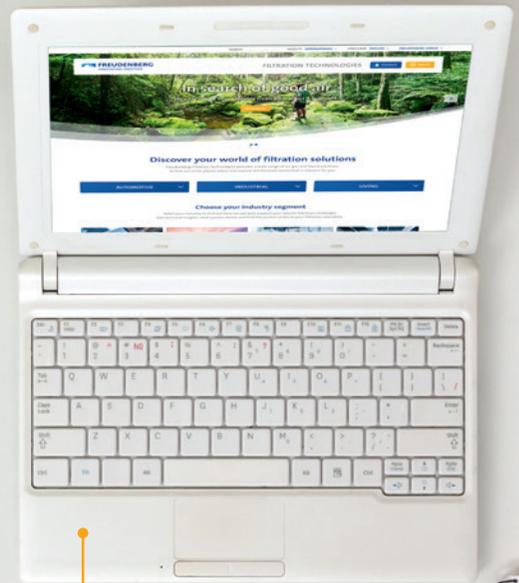
More information about the GTG EPA series depth-loading filter cartridges at

www.freudenberg-filter.com
> Products > Filter cartridges for turbomachinery > Depth-loading filter cartridges > GTG EPA

INNOVATION

IN A NEW DIGITAL GUIDE

COMPLETELY REVAMPED FREUDENBERG FILTRATION TECHNOLOGIES WEBSITE ONLINE



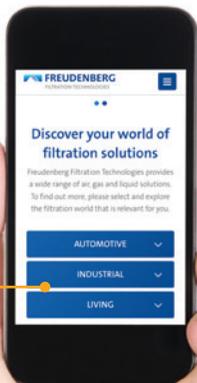
Our new website has recently gone live. We are very proud of the relaunch, which is more than just an optical makeover. The focus is on short, intuitive paths to applications, solutions and a premium user experience.

The three worlds of filtration

Perhaps the biggest change is the division of the website into three worlds: Automotive, Industrial and Living. In each of these worlds you will find an overview of the specific applications, products and services. The route to the ideal filter solution is therefore more convenient than ever.

Making it easy to get in touch

Numerous solutions are individually tailored. To enable you to contact us at any time, we have simplified access to suitable contact persons or the responsible service team.



The fastest way to your goal

40 industry segments open up a sector-specific entry point. This allows you to access solutions and products that are suitable for your areas of application even faster.

Convenient downloading

This new function makes it easier for you to download documents. Necessary information is stored securely on your device as a cookie – there is no need to enter it again.

Optimized for all end devices

Whether smartphone, tablet or PC – our new website is optimally displayed on every end device thanks to „Responsive Design“. Its appearance is clear, modern and reduced to the essentials.

Experience it worldwide

The website is available in English and German. In addition, regional pages for China and North America offer locally relevant content. Further country pages will soon make contact even easier.

Viledon® e-catalog

With the Viledon® e-catalog, you also have convenient browser access to our extensive product portfolio. You can now find the product you are looking for even faster. ■

Visit our website as usual at

[www www.freudenberg-filter.com](http://www.freudenberg-filter.com)

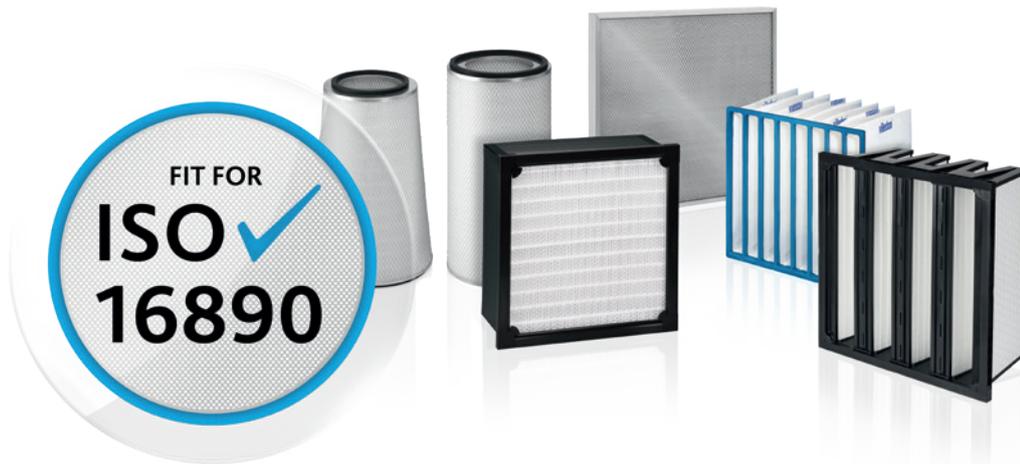
If you have feedback about our new website, feel free to contact us by e-mail at

[@ marketing@freudenberg-filter.com](mailto:marketing@freudenberg-filter.com)



Discover the new world of Freudenberg Filtration Technologies with our video on

[www www.youtube.com/user/FreudenbergFilter](http://www.youtube.com/user/FreudenbergFilter)



ISO 16890

TURN OLD TO NEW

ISO 16890 REPLACES EN 779 AS TEST STANDARD

Since July 1, 2018, ISO 16890 has been the sole test standard for the classification of coarse and fine dust filters in Europe, finally replacing the industry standard EN 779.

Since January 2017, the new ISO 16890 test standard has made it possible to achieve a more transparent and practical evaluation of air filter elements. Separation efficiencies are realistically determined on the basis of four dust classes across a broad particle spectrum, making the performance of a filter apparent at first glance. This facilitates the precise needs-based selection of a filter, thus ensuring greater operational reliability and lower costs. Our e.FFECT tool can be used in this context to identify a suitable filter solution by taking into account local fine dust pollution according to ISO 16890. This enables us to optimize your system to your precise requirements in just a few steps. ■

Our team of experts will be happy to answer your questions about the new testing standard at

@ ISO16890@freudenberg-filter.com

Learn more about filter selection using e.FFECT at

www www.freudenberg-filter.com > News & Stories > e.FFECT

Detailed information on ISO 16890 can be found at

www www.freudenberg-filter.com > World of Industrial > Standards and certifications > ISO 16890

TRADE FAIRS AND EVENTS

November 7–8, 2018

SOLIDS: Trade show for granules, powder & bulk solids technologies, Dortmund, Germany

November 21–22, 2018

EHEDG World Congress: Hygienic Engineering & Design, London, United Kingdom

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