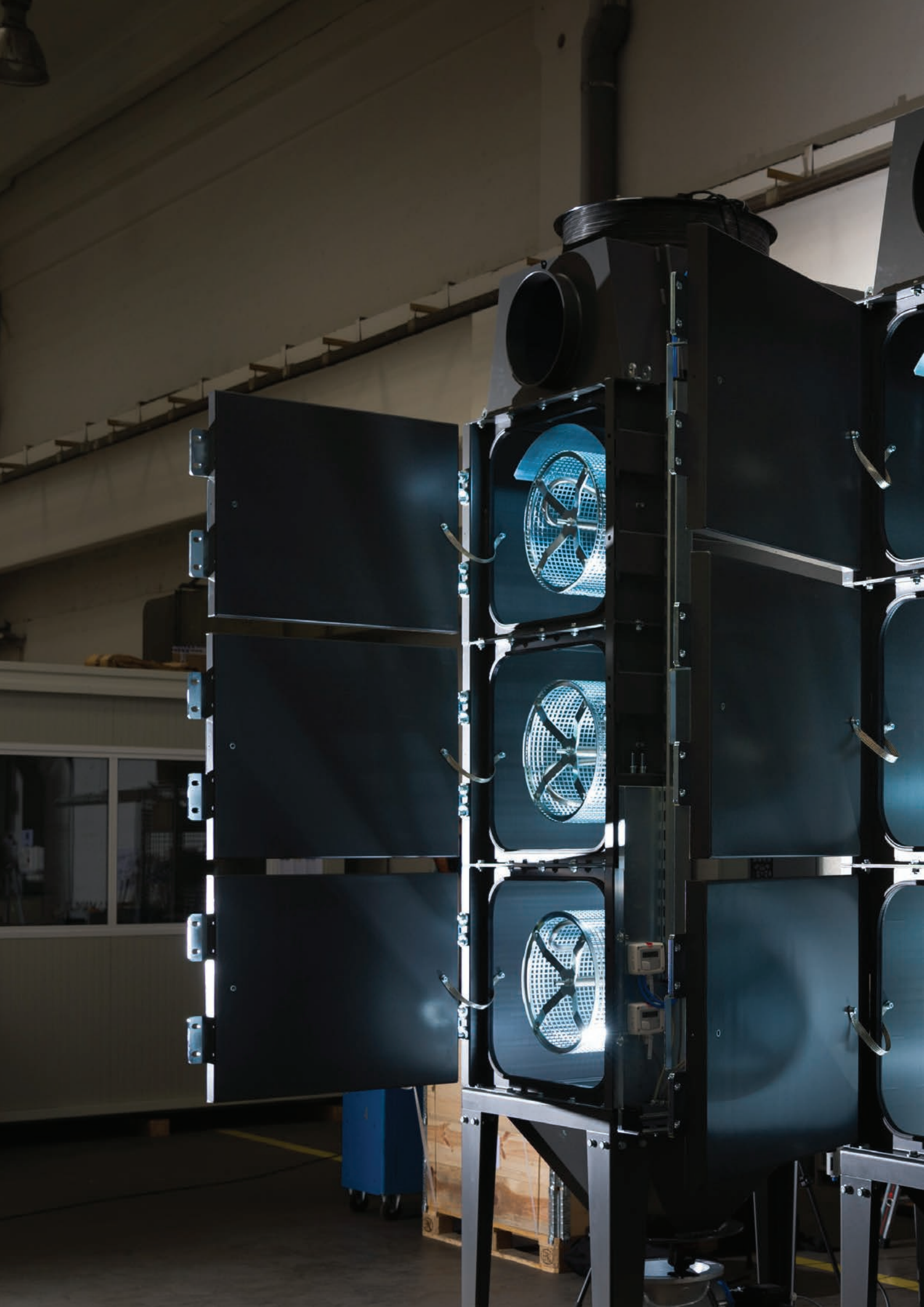




Perfection
in dedusting









Dear valued customer,



At TRM Filter we are committed to perform Perfection in Dedusting. To deliver on our commitment we nurture our three critical sources to perfection. We honor our customer relations. We started our business as a filter cartridge manufacturer in 1982 and later grew into the filter systems' approach with the support and stimulus of the people who built Slovenia's emerging top-tier pharmaceutical and chemical operations. With their challenges we built our team. We owe our competence to the fast paced evolution of themes with them. From challenging spatial requirements, ease of use and maintenance to the ATEX and containment requirements.

From our traditional involvement with filter cartridges and filter materials, as well as our exposure to filter systems' life cycle performance we felt the potential for new performance levels in dedusting filter systems. The steady and loyal exchange of views and observations between our customers and our team crystallized the goals to our innovation:

We developed an all new and proprietary ROTATRONIC Mechanics for a smooth and effective cleaning of filter cartridges from moist and sticky dusts. We pioneered the ROTATRONIC Control, smart filter cleaning technology to maximize filter cartridge life time and - more importantly - render cartridge performance foreseeable.

As competence never resides on a company's server landscape but in the actions and mind-set of the people at work, we were blessed for being an organically growing company, managing core value generation in design, engineering, assembly and validation in a concentrated team. All of us at TRM Filter are empowered to strive for perfection.

Successful references on the pharma and pharma similar applications in the domestic market have been recognized by some of the leading global pharmaceutical companies and technology OEM's which entrusted us with their challenges.

We depend on you to challenge us for perfection in dedusting.

Peter Tomšič
CEO

RATATRONIC®
Smart filter
cleaning technology

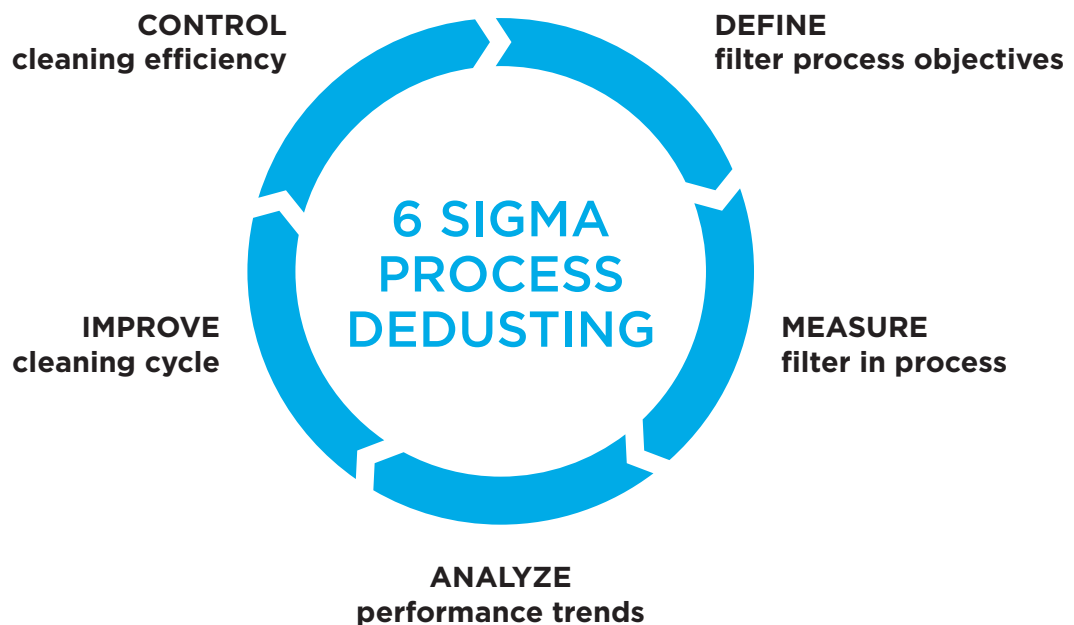


ROTATRONIC – Smart filter cleaning technology

It matters, how quickly a dust clogs a filter. Conventionally a preset change in differential pressure triggers filter cleaning by a pressurized air pulse. The set point for the differential pressure triggering the cleaning is aimed to prevent a migration of dust into the deeper layers of the filter media and to keep the pleat stability at its best performance. When the filter is cleaned too late, it does not revert to its original performance, it then operates at a higher pressure loss.

And then the optimal operating point for a filter media is yet a different issue. One worthwhile assumption is that a filter media should be cleaned when the increase of its pressure loss reaches the cleaning set point. But what is the optimal set point for cleaning? Tricky question!

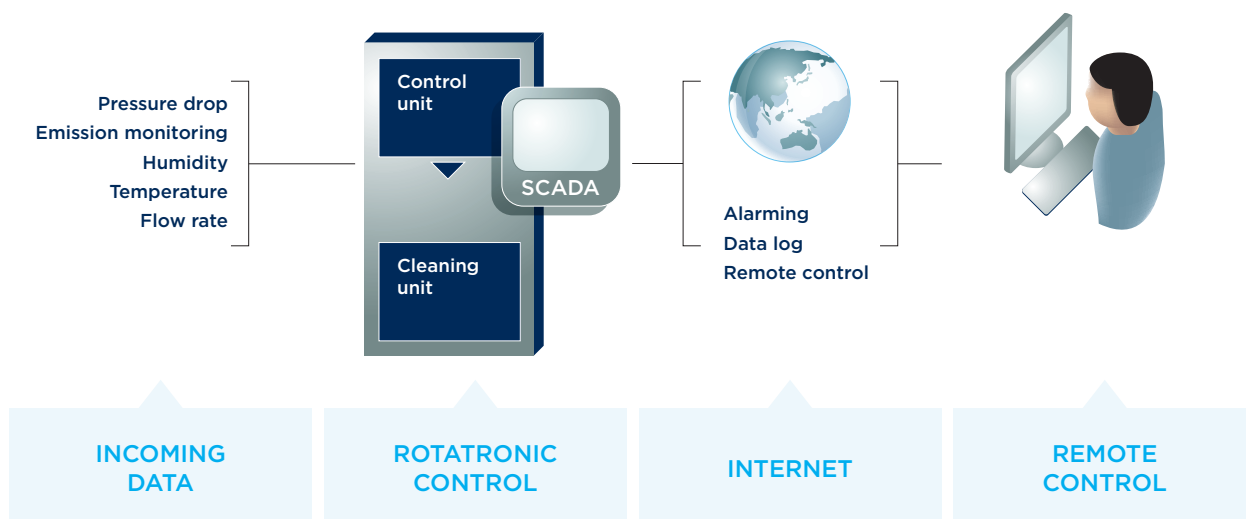
Fortunately, you do not need to worry about optimizing filter cleaning cycles. At TRM Filter we have developed a proprietary ROTATRONIC Control – smart filter cleaning technology that is based on 6 Sigma process optimization.



With the aid of the computerized algorithms of our ROTATRONIC Control our dust collecting systems learn about the clogging tendency of their filter cartridges, the evolution of differential pressure in the course of the dedusting filter's operation with the media filtered. With a starting set of cleaning trigger points, the ROTATRONIC Control monitors the evolution of differential pressure, evaluates it and sets itself new operating conditions and cleaning trigger points.

With the aid of ROTATRONIC Control an irreversible filter media dust load is prevented. The media are being air purged at a progressively ideal point of their operating cycle. Their behavior, including their aging, becomes predictable. They are being run at best efficiency.





The ROTATRONIC Control system enables numerous functional possibilities. The user does not have to ensure the optimum operational parameters setting, because the intelligent algorithm automatically adapts it according to the individual application.

An easy control and operation overview is enabled by a user-friendly interface (touch screen), where the important parameters can also be shown in a diagrammatic form. Value added for the user is the ability to monitor the operational costs.

ROTATRONIC Control enables numerous possibilities regarding upgrading and connection:

- Connection with the controlling and operating systems of an individual production process or a company's central system (SCADA) is therefore possible.
- By connecting additional sensors, we can monitor and register the following parameters: emissions at the exit of a filter, moisture, temperature and airflow.
- Possibility of a remote start-up enables the connection with other devices in the process. Possible remote control and operation is also possible.

OPTIONS

- monitoring of additional parameters (temperature, moisture, emission, etc.)
- flow measurement and regulation
- frequency regulation
- remote control
- alarm system, warning of defects in the operation
- remote start-up



 **TRMFilter**

 **TRMFilter**

 **TRMFilter**

RO-FILTER

ROTAT
cleaning

ROTATRONIC Mechanics



ROTATRONIC Mechanics - The most advanced filter cleaning system

When you plan for a new dedusting filter installation, one of your first considerations may well be the type of filter element incorporated, typically bag, cartridge or cassette.

Within that technological decision frame, the particular performance of the chosen filter execution matters significantly: with difficult dusts of widely varying particle size, moist and adhesive conditions and with bridging dusts, the choice of filter material and built of cartridges impacts the filter performance significantly. And so does the filter cleaning.

TRM Filter developed its proprietary ROTATRONIC Mechanics and ROTATRONIC Control. A rotating nozzle construction is guided closely alongside the clean air surface of the pleated filter cartridge. It thereby directs the compressed air in a short pathway to the filter media. It enhances the impact of the cleaning air pulse and allows a more smooth and steady operation at a reduced air pressure. The passage through the filter media is more direct and easy. It is guided to the mobilization of dust away from the filter media and towards dust collection. The shape of the ROTATRONIC Mechanics has been carefully engineered to minimize internal pressure loss and to ensure that the cartridge is effectively cleaned on its full surface. Further, the mechanism is built such, that the cartridge is closed towards the clean gas side during the cleaning. It therefore makes best and comprehensive use of the cleaning air stream and allows dust to settle down after the cleaning. These measures have important influence on the ageing and lifetime of filter cartridge.

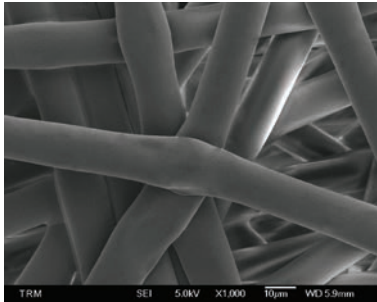
ROTATRONIC Control in combination with ROTATRONIC Mechanics also keeps the differential pressure over the filter elements on a lowest possible level which significantly decreases power consumption of the fan.

Would you like to see it to believe in it? We would be happy to work with you on your real dust samples. Please contact us.

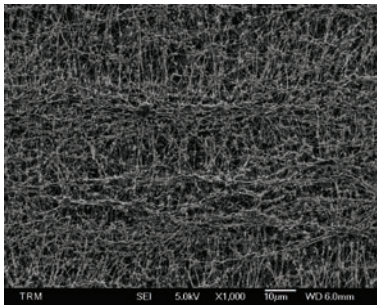
ADVANTAGES

- control over the operational costs
- longer filter elements lifetime
- energy efficiency (compressed air, electric power)
- easy control
- open connection to central control systems
- operational parameters overview and history register

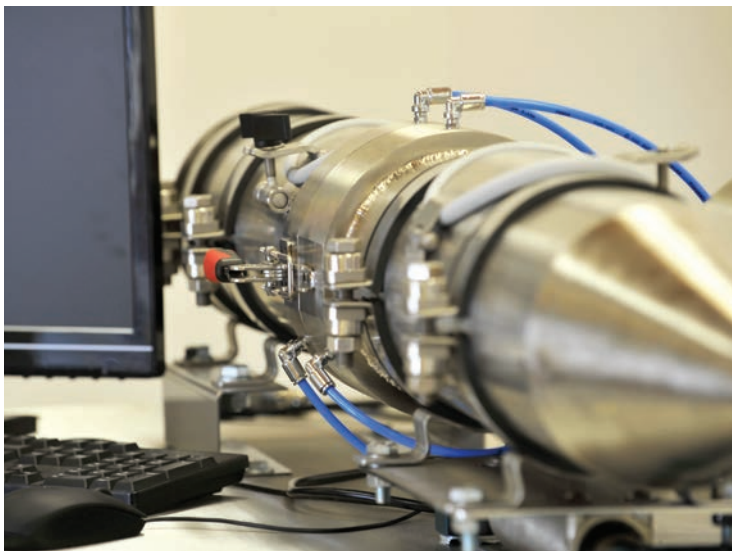
Filter cartridges for optimal performance



100% polyester



Polyester with ePTFE membrane



Filter test bench detail

At a first glance, optimal filters appear to be all about a large filter surface and low pressure resistivity that eases the cleaning of dust away from the active filter element. However, the tricky part is always in the detail.

The electron microscope picture on the left above shows an ordinary polyester material most often used in the dust collectors. As you can see, the pores between the filter fibers are rather large and allow dust under a certain particle size to penetrate and stuck between the fibers. Even the most sophisticated filter cleaning methods cannot regenerate such filter media. By contrast the polyester structure with a special laminated ePTFE membrane on the picture left in the middle possesses an extremely fine structure and consequently very small pores. So called surface filtration keeps even the finest particles on the membrane surface, which is especially important for applications with fine problematic dust. The fine dust stays on the surface of the filtration material, from where it is easily blown off in conjunction with our ROTATRONIC Mechanics, driven by ROTATRONIC Control.

So, the choice of the right filtration material is of utmost importance for effective and reliable operation. That however is not the end of the story.

With the use of innovative approaches we have been able to resolve many »filtration puzzles« which seemed to be unsolvable with the use of conventional methods.

Our experienced application engineers are using our several state of the art filter media test benches and lab scale real dust tests to precisely develop optimal filter design, which in combination with high quality manufacturing enables us to do the next, most crucial step. That is to perform real condition tests at customer site with our rental test units.

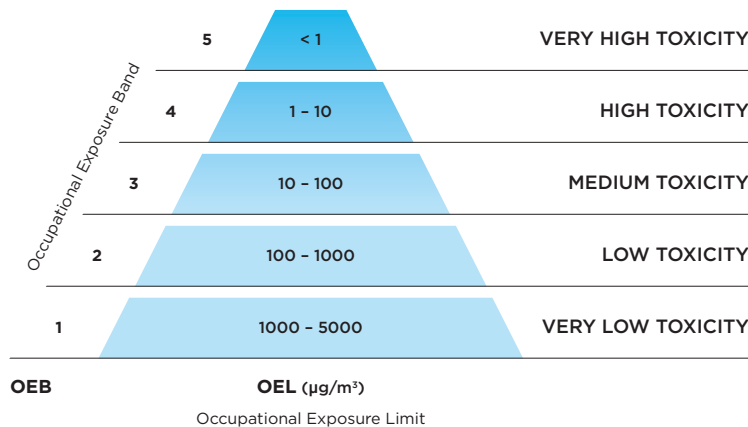
If you have a dust filtration challenge, we love to consult with you for the best choice of filtration material and application design. For additional information please contact us.



Containment

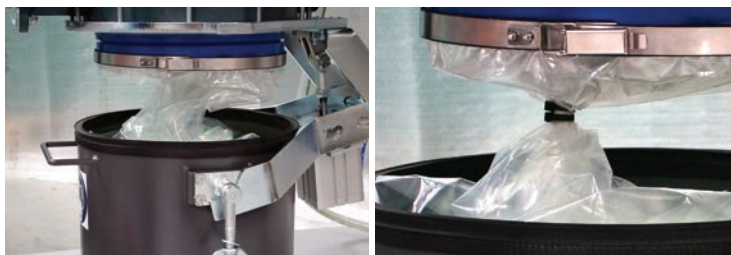
Over the last decade containment has become a functional process design element embedded already into the conceptual design stages of pharmaceutical solids' processing. Increasing drug potency from new medicines as well as a heightened awareness to the risk exposure of developmental drug candidates have set containment criteria throughout both the piloting and manufacturing steps for solid dosage forms. More recently REACH has impacted the views on containment of other organic solids throughout a far wider spread of processes.

In pharmaceutical solids handling for established products the toxicological risks of compounds and formula are well known. They can be located in the Occupational Exposure Limit in the center of the pyramid depicted. These are directly driving target Occupational Exposure Bands depicted on the left side of that pyramid.



All conceivable technical means of providing containment can be assigned to their maximal performance within the OEB system. Where it comes to dedusting filter containment two different approaches for primary protection are dominantly used: Bag-in/Bag-out is used to contain filter cartridge elements in the course of their exchange.

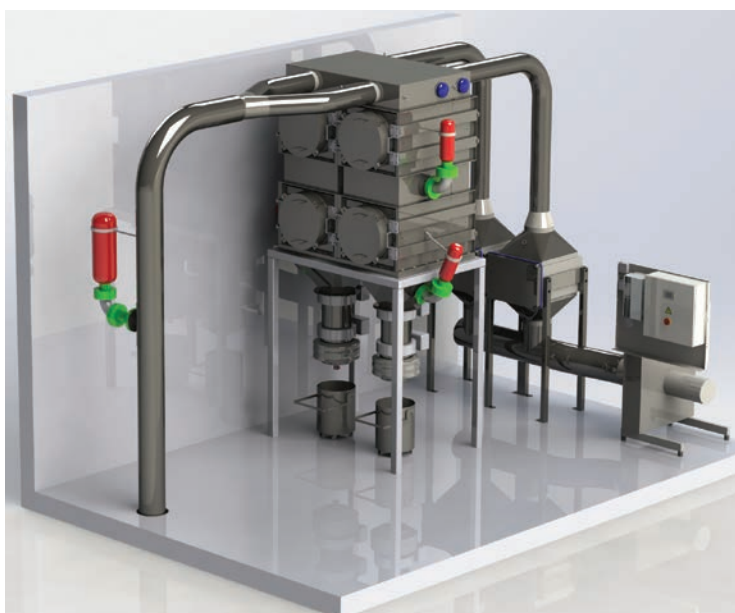
Bag-in/Bag-out can also be used for the exchange of dust collection bags



Alternatively, and in particular for dust collection bags, endless liner technology is used, providing a higher protection level. With OEB level 5 secondary protection is provided by employing glove-box technology. Additionally mobile dust deposits are wetted prior to filter exchange. While these techniques provide health safety, they obviously are more tedious to handle, than unprotected filter cartridges and dust collection bags.

Due to the higher frequency of dust collection bag exchange (dust extraction) relative to filter cartridge exchange, the use of continuous liner technology may ease the overall handling even with OEB 3 significantly, particularly when its enhanced safety (OEB 4) comes favorably into play for the more routine operation.

TRM Filter therefore builds its dedicated containment filter lines ECR and ECH with a view on the pharmaceutical manufacturing process of marketable and pilot drugs. As standards we provide Bag-in/Bag-out for both cartridges and dust extraction or alternatively Bag-in/Bag-out for cartridge and continuous liner for dust extraction.



With many self-evident exceptions the manufacturing of solid pharmaceutical intermediates and compounds, as well as other organic solid matter is viewed from an emerging REACH perspective, with an assumption that certain OEB levels should be accomplished (mostly OEB 3). Most of the time processes in this field require somewhat higher dedusting airflow. TRM Filter meets these requirements with the aid of configuration choices to several product ranges.

TRM Filter's containment version of dust collectors are configurable up to OEB 5.





Explosion protection

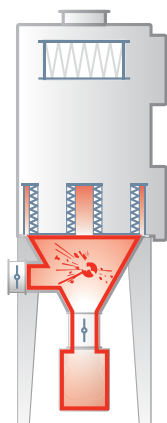


Dust extraction in potentially explosive atmospheres requires an approach which is in accordance with the ATEX Directive 2014/34/EU.

ATEX types of TRM Filter dust collectors are our company's high- technology achievement, which on the one hand meet the requirements set by legal regulation, and on the other hand present a unique answer to all the growing market needs of such applications.

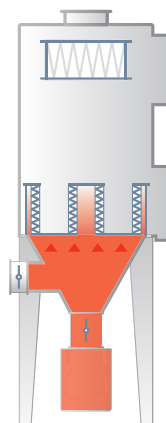
Our dust collectors have explosion protection built in their design (the working principle is presented below). To confirm this inherent explosion safety our units were subjected to strict explosion tests. Our dust collectors are explosion safe for dust and even hybrid mixtures up to $K_{st} 500 \text{ bar} \cdot \text{m/s}$ - depending on the type.

Built-in explosion protection



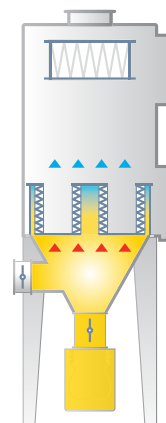
EXPLOSION OCCURANCE

Explosion typically happens on raw gas side during the filter cleaning. The inlet flap is closed in the meantime – unit is decoupled.



PRESSURE BUILDUP

The pressure from explosion equilibrates as rapidly as it builds up. Overpressure doesn't exceed 1 bar.

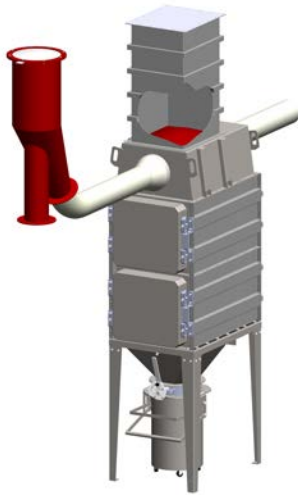


FLAME HOLD UP AND PRESSURE RELIEF

Flames are held up in primary filter cartridge. Over pressure is relieved towards outlet from dust collector. Downstream ignition of solvents is prevented.

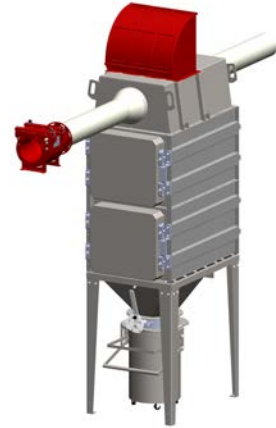
External explosion protection solutions

Sometimes the product or production process characteristics (subject to risk assessment) demand additional explosion protection. Depending to the application, we can choose between various possibilities. To select the optimum type of explosion protection for your application, contact our professionals.



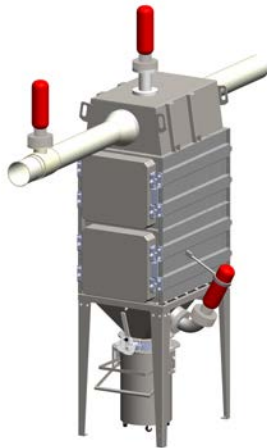
EXPLOSION VENT WITH OR WITHOUT AN EXPLOSION RELIEF CHANNEL

With the increase of the pressure, the system safely relieves the pressure through an explosion vent. Explosion isolation is performed using the explosion diverter.



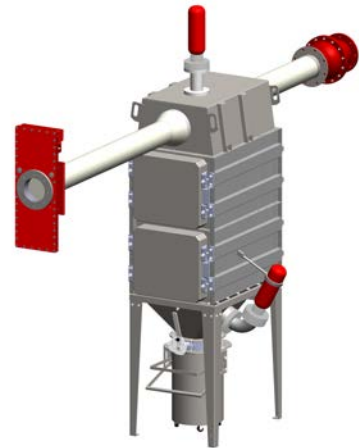
FLAMELESS VENTING

Special mechanical protection prevents the explosion flames from entering the room. Explosion isolation is performed using the explosion isolation valve.



EXPLOSION SUPPRESSION

Precise sensors detect the creation of an explosion at the very early stage and trigger the mechanism for explosion suppression. Explosion isolation is ensured by a chemical barrier.



EXPLOSION SUPPRESSION AND ISOLATION

Precise sensors detect the creation of an explosion at the very early stage and trigger the mechanism for explosion suppression. Explosion isolation is ensured by explosion isolation Slide Valve, and with a »VENTEX« valve on the clean side of the filter.



TRMFilter



TRMFi



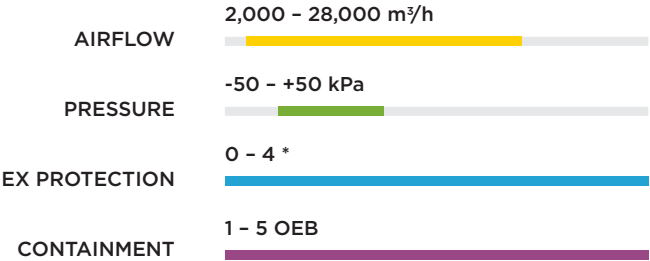
AVVERTENZA: PERICOLO DI ESPLOSIONE
L'INSTALLAZIONE E L'USO DI QUESTO FILTRO DEVE ESSERE REALIZZATO IN CONFORMITÀ CON LE NORME DI SICUREZZA IN VIGORE. PER INFORMAZIONI AGGIUNTIVE, CONSULTARE IL MANUALE DI ISTRUZIONI.

TRM FILTER SYSTEM
CON FILTRO BOTTONE
COD. FIL 7 007 23 19

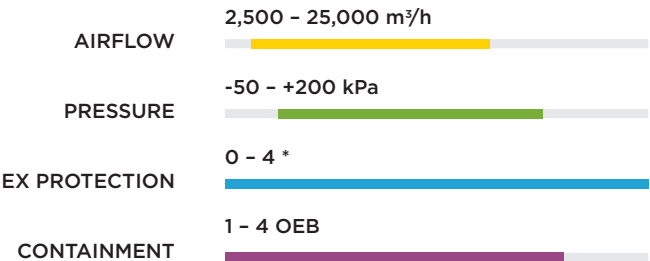


Product overview

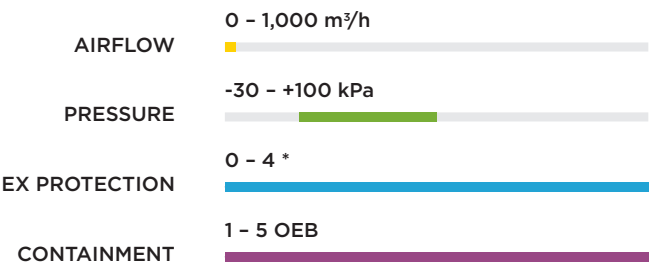
ECR



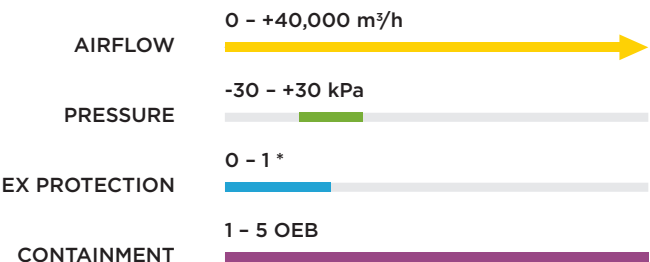
ECB



ECH

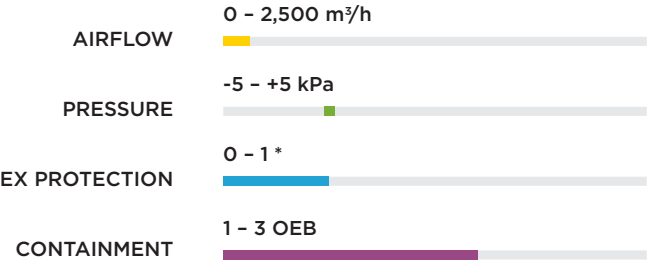


ECK

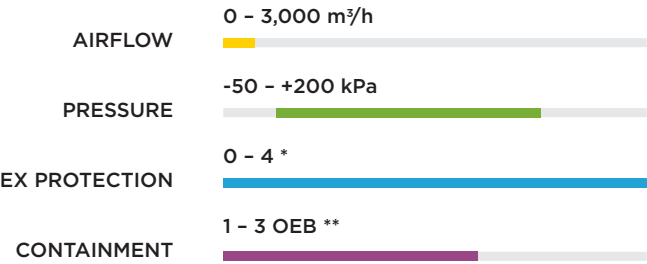


* 1 – MIE > 3 mJ 2 – St1 @ MIE < 3 mJ 3 – St2 @ MIE < 3 mJ 4 – Hybrid mixtures

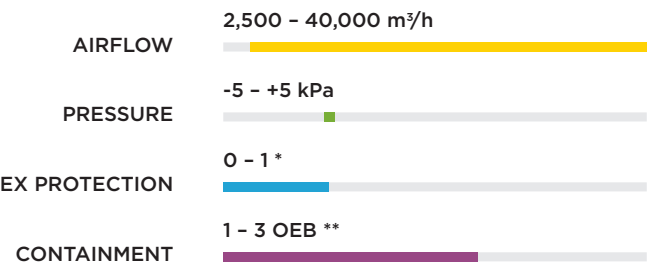
ECM



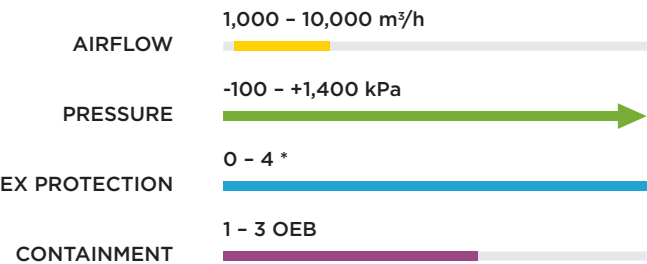
ECS



ECV



ECO



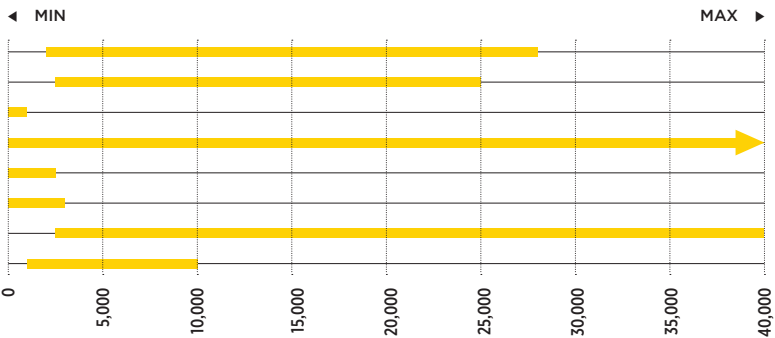
* 1 – MIE > 3 mJ 2 – St1 @ MIE < 3 mJ 3 – St2 @ MIE < 3 mJ 4 – Hybrid mixtures
** OEB3 only with appropriate provisions for dust discharge



Product positioning diagram

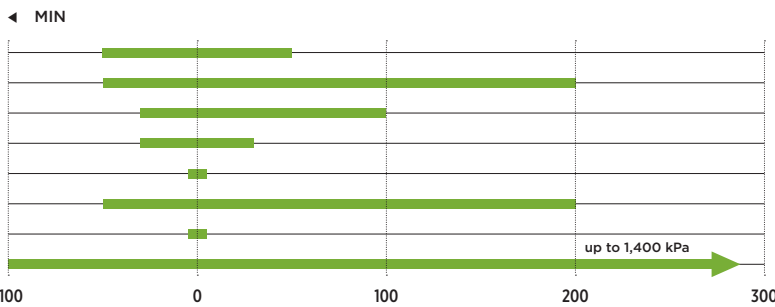
Airflow (m³/h)

	min	max
ECR	2,000	28,000
ECB	2,500	25,000
ECH	0	1,000
ECK	0	+40,000
ECM	0	2,500
ECS	0	3,000
ECV	2,500	40,000
ECO	1,000	10,000



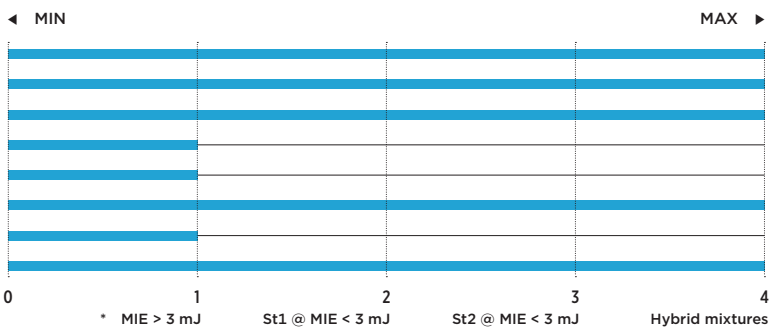
Pressure (kPa)

	min	max
ECR	-50	+50
ECB	-50	+200
ECH	-30	+100
ECK	-30	+30
ECM	-5	+5
ECS	-50	+200
ECV	-5	+5
ECO	-100	+1,400



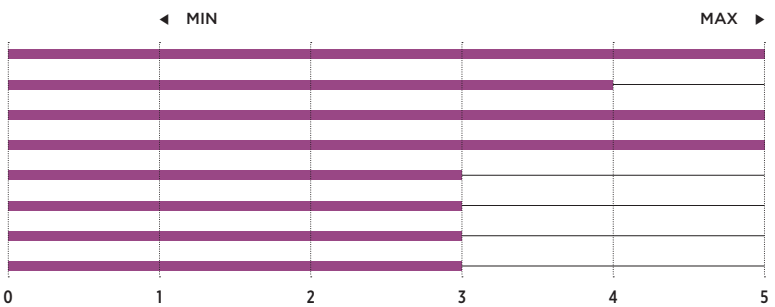
Ex Protection (*)

	min	max
ECR	0	4
ECB	0	4
ECH	0	4
ECK	0	1
ECM	0	1
ECS	0	4
ECV	0	1
ECO	0	4



Containment (OEB)

	min	max
ECR	1	5
ECB	1	4
ECH	1	5
ECK	1	5
ECM	1	3
ECS	1	3
ECV	1	3
ECO	1	3





TRMFilter

TRMFilter



TRMFilter

Total pharma dedusting filter systems



AIRFLOW	2,000 - 28,000 m ³ /h
PRESSURE	-50 - +50 kPa
EX PROTECTION	0 - 4 *
CONTAINMENT	1 - 5 OEB

* 1 - MIE > 3 mJ 2 - St1 @ MIE < 3 mJ 3 - St2 @ MIE < 3 mJ 4 - Hybrid mixtures

TYPICAL APPLICATIONS:

- Dry form manufacturing: weighing, milling, sieving, screening, sampling, mixing, FB coating, tablet pressing, drum coating, packaging.
- Industries: Pharmaceutical, Chemical

BENEFITS:

- In-built explosion protection
- Explosion safe with organic dusts and hybrid mixtures
- Highest filtration and energy efficiency
- ROTATRONIC Mechanics for superb cleaning performance
- In-built secondary filtration stage (up to H14)
- Predictable and optimized performance with ROTATRONIC Control
- Ease of use and maintenance

OPTIONS:

- Preparations for retrofit OEB upgrades
- Containment configurable up to OEB5
- Continuous dedusting
- Stainless steel construction
- High temperature version

ADDITIONAL EQUIPMENT & ACCESSORIES:

- Fan or blower
- Frequency drive and airflow regulation
- Emission, Airflow, Temperature & Humidity monitoring
- Fieldbus communication
- Pre-clean and rinse (WIP)

For detailed description and technical data please request the product leaflet.

Dedusting filter systems for difficult dust and demanding requirements



AIRFLOW	2,500 - 25,000 m ³ /h
PRESSURE	-50 - +200 kPa
EX PROTECTION	0 - 4 *
CONTAINMENT	1 - 4 OEB

* 1 - MIE > 3 mJ 2 - St1 @ MIE < 3 mJ 3 - St2 @ MIE < 3 mJ 4 - Hybrid mixtures

TYPICAL APPLICATIONS:

- Dry form manufacturing: weighing, milling, sieving, screening, sampling, mixing, FB coating, tablet pressing, drum coating, packaging.
- Industries: Pharmaceutical, Cosmetics, fine chemicals

BENEFITS:

- ROTATRONIC Control, smart filter cleaning technology
- ROTATRONIC Mechanics for superb cleaning performance
- Highest filtration and energy efficiency
- Rugged design and high quality manufacturing
- Modular design = Spatial flexibility, 3 housing strengths
- Suitable for high vacuum applications
- Ease of use and maintenance

OPTIONS:

- Full range explosion protection for dust and hybrid mixtures up to KSt 500 bar*m/s
- Containment configurable up to OEB4
- Stainless steel construction
- High temperature version

ADDITIONAL EQUIPMENT & ACCESSORIES:

- Secondary HEPA filter
- Fan or blower
- Frequency drive and airflow regulation
- Emission, Airflow, Temperature & Humidity monitoring
- Fieldbus communication
- Cyclone or fibre pre-separator

For detailed description and technical data please request the product leaflet.

ECH

Occupational hygiene dedusting filter units



AIRFLOW	0 - 1,000 m ³ /h
PRESSURE	-30 - +100 kPa
EX PROTECTION	0 - 4 *
CONTAINMENT	1 - 5 OEB

* 1 - MIE > 3 mJ 2 - St1 @ MIE < 3 mJ 3 - St2 @ MIE < 3 mJ 4 - Hybrid mixtures

BENEFITS:

- Containment up to OEB5
- Fully welded construction
- GMP design and high quality manufacturing
- Two stage filtration H13 and H14 with Bag-in/Bag-out
- Integrated powerful fan with flow regulation
- ROTATRONIC Control, smart filter cleaning technology
- ROTATRONIC Mechanics for superb cleaning performance
- Ease of use and maintenance
- Highest filtration and energy efficiency
- Stainless steel construction
- High performance ePTFE and nanofibre filter media
- Explosion-resistant design

OPTIONS:

- Higher grade stainless steel
- Customized versions for OEMs

ADDITIONAL EQUIPMENT & ACCESSORIES:

- External Fan if preferred instead of integrated
- Emission, Airflow, Temperature & Humidity monitoring
- Fieldbus communication

For detailed description and technical data please request the product leaflet.

ECK

HEPA grade passive filter units with containment capability



AIRFLOW	0 - +40,000 m ³ /h
PRESSURE	-30 - +30 kPa
EX PROTECTION	0 - 1 *
CONTAINMENT	1 - 5 OEB

* 1 - MIE > 3 mJ 2 - St1 @ MIE < 3 mJ 3 - St2 @ MIE < 3 mJ 4 - Hybrid mixtures

BENEFITS:

- Single or multiple stage filtration up to HEPA and ULPA grades
- High quality manufacturing
- User friendly mechanism for filter fastening

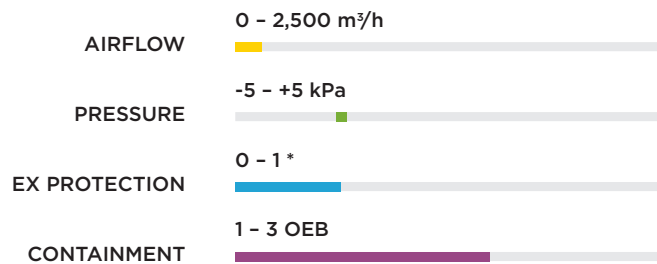
OPTIONS:

- Fully welded construction
- Safe change for contact free filter exchange (up to OEB 5)
- Stainless steel construction
- Customized versions for OEMs
- Differential pressure gauge, switch or transmitter

For detailed description and technical data please request the product leaflet.

ECM

All-in-one highly compact dedusting filter units



* 1 - MIE > 3 mJ 2 - St1 @ MIE < 3 mJ 3 - St2 @ MIE < 3 mJ 4 - Hybrid mixtures

TYPICAL APPLICATIONS:

- Point of use dust extraction in food, tea, spices and food supplements industry.
- Non critical pharmaceutical applications
- General industry applications (chemical, metal, plastic, composites,...)
- Customized OEM applications

BENEFITS:

- Integrated powerful fan with flow regulation
- Configurable functionality with life-time upgrade possibilities / HEPA or activated carbon secondary filter integrated or available for later upgrade
- Compact and user friendly design
- Flow rated to operating conditions / Full nominal airflow
- Automated filter cleaning

OPTIONS:

- Stainless steel construction
- ROTATRONIC Control, smart filter cleaning technology
- Mobile version for ECM-6
- Customized versions for OEMs
- Configurable to ATEX Zone 22*
- High performance ePTFE and nanofibre filter media

ADDITIONAL EQUIPMENT & ACCESSORIES:

- External Fan if integrated not sufficient
- Emission, Airflow, Temperature & Humidity monitoring - only with ROTATRONIC Control
- Fieldbus communication - only with ROTATRONIC Control
- Cyclone or fibre pre-separator
- Piping, silencer, flexible arms

For detailed description and technical data please request the product leaflet.



High vacuum dedusting filter units for pneumatic conveying and central vacuuming



AIRFLOW	0 – 3,000 m³/h
PRESSURE	-50 – +200 kPa
EX PROTECTION	0 – 4 *
CONTAINMENT	1 – 3 OEB **

* 1 – MIE > 3 mJ 2 – St1 @ MIE < 3 mJ 3 – St2 @ MIE < 3 mJ 4 – Hybrid mixtures
 ** OEB3 only with appropriate provisions for dust discharge

TYPICAL APPLICATIONS:

- Pharmaceutical Central vacuuming of dust in the production clean rooms
- Pharmaceutical – Central vacuum system for ampoule production
- Extraction from PCB manufacturing
- Aspiration for heavy and abrasive dust (up to 3,000 m³/h)

BENEFITS:

- Ease of use and maintenance
- Rugged design and high quality manufacturing
- Suitable for high vacuum applications

OPTIONS:

- ROTATRONIC Control, smart filter cleaning technology
- Full range explosion protection for dust and hybrid mixtures up to KSt 500 bar*m/s
- Secondary filter stage section – HEPA or activated carbon
- Stainless steel construction
- High temperature version
- High performance ePTFE and nanofibre filter media

ADDITIONAL EQUIPMENT & ACCESSORIES:

- Fan or blower
- Frequency drive and airflow regulation
- Emission, Airflow, Temperature & Humidity monitoring – only with ROTATRONIC Control
- Fieldbus communication – only with ROTATRONIC Control
- Cyclone or fibre pre-separator
- Constructional explosion protection
- Piping, silencer, flexible arms
- Clean room suction outlets, flexible hoses, hoovering accessories

For detailed description and technical data please request the product leaflet.



TRMFilter

TRMFilter

High airflow dedusting filter units for common industrial applications



AIRFLOW	2,500 – 40,000 m³/h
PRESSURE	-5 – +5 kPa
EX PROTECTION	0 – 1 *
CONTAINMENT	1 – 3 OEB **

* 1 – MIE > 3 mJ 2 – St1 @ MIE < 3 mJ 3 – St2 @ MIE < 3 mJ 4 – Hybrid mixtures
 ** OEB3 only with appropriate provisions for dust discharge

TYPICAL APPLICATIONS:

- Various industrial process steps such as grinding, polishing, cutting, dispensing and packaging.
- Industries: chemical, metal, plastic, mineral, composites

BENEFITS:

- Ease of use and maintenance
- Rugged design and high quality manufacturing
- Explosion protection for dusts up to KSt 200 bar*m/s

OPTIONS:

- Stainless steel construction
- High temperature version
- High performance ePTFE and nanofibre filter media
- ROTATRONIC Control, smart filter cleaning technology
- Customized versions for OEMs

ADDITIONAL EQUIPMENT & ACCESSORIES:

- Secondary HEPA filter
- Fan or blower
- Frequency drive and airflow regulation
- Emission, Airflow, Temperature & Humidity monitoring – only with ROTATRONIC Control
- Fieldbus communication – only with ROTATRONIC Control
- Cyclone or fibre pre-separator
- Piping, silencer, flexible arms

For detailed description and technical data please request the product leaflet.

Explosion resistant dedusting filter units



AIRFLOW	1,000 – 10,000 m³/h
PRESSURE	-100 – +1,400 kPa
EX PROTECTION	0 – 4 *
CONTAINMENT	1 – 3 OEB

* 1 – MIE > 3 mJ 2 – St1 @ MIE < 3 mJ 3 – St2 @ MIE < 3 mJ 4 – Hybrid mixtures

BENEFITS:

- Rugged design and high quality manufacturing
- Suitable for vacuum or pulsating applications

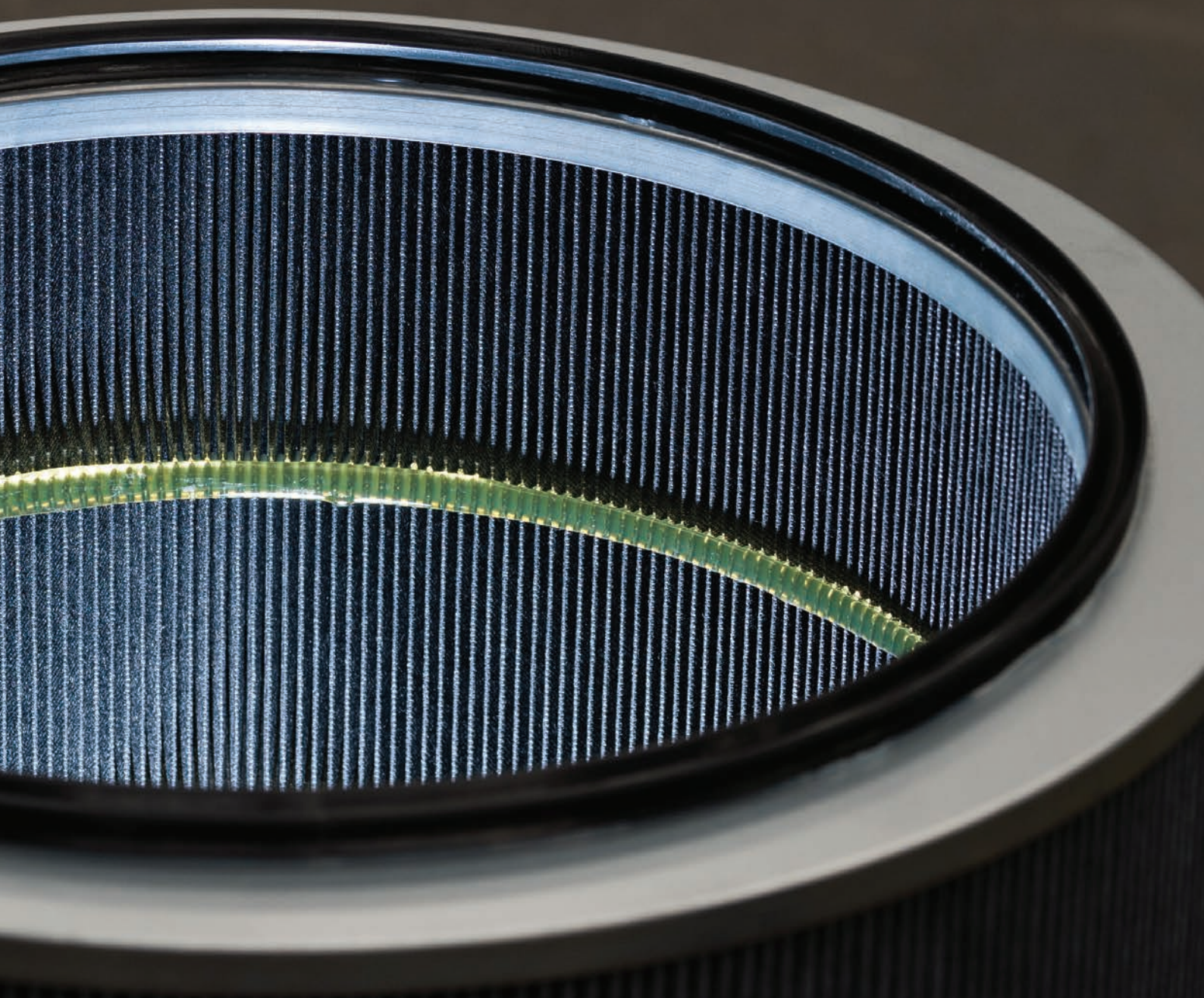
OPTIONS:

- ROTATRONIC Control, smart filter cleaning technology
- Explosion protection for dust and hybrid mixtures up to KSt 400 and Pmax 14 bar
- Secondary filter stage section – HEPA or activated carbon
- Stainless steel construction
- High temperature version
- High performance ePTFE and nanofibre filter media

ADDITIONAL EQUIPMENT & ACCESSORIES:

- Fan or blower
- Frequency drive and airflow regulation
- Emission, Airflow, Temperature & Humidity monitoring – only with ROTATRONIC Control
- Fieldbus communication – only with ROTATRONIC Control
- Cyclone or fibre preseparator
- Piping, silencer, flexible arms
- Clean room suction outlets, flexible hoses, hoovering accessories

For detailed description and technical data please request the product leaflet.





Customised solutions

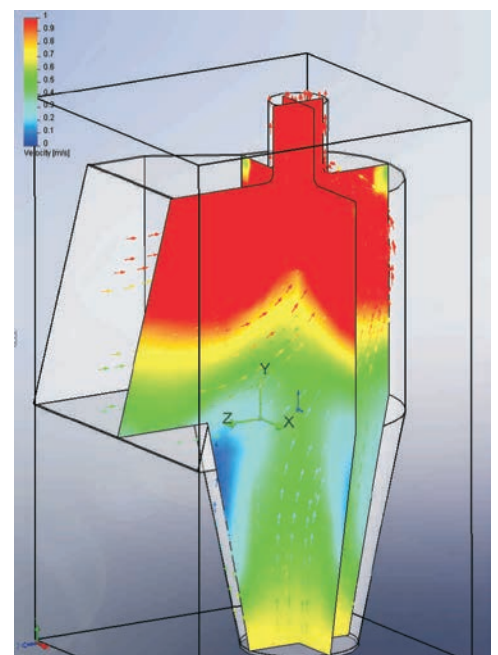


Our research and development center is highly qualified and always ready to help customers to find the best possible solution for specific and »nonstandard« applications.

With a professional attitude, continuous education and the introduction of modern technologies, our clients always receive the best state-of-the-art solutions in all the areas of dust extraction and filtering.

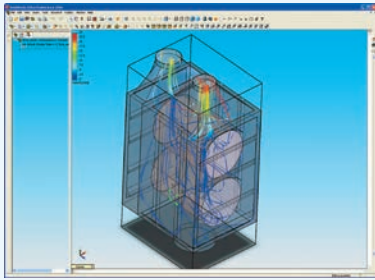
»Customized« products are a challenge, which we enjoy to meet. Our long-standing involvement in this field allows us to work with different partners, which in the case of difficult projects help us create interdisciplinary groups to find optimum solutions to a specific problem and to perform the whole project, from project concept stage, to system start-up.

Solution propositions are normally supported with computer simulations and conversions, and are also practically checked on the test line.





Profesional project preparation

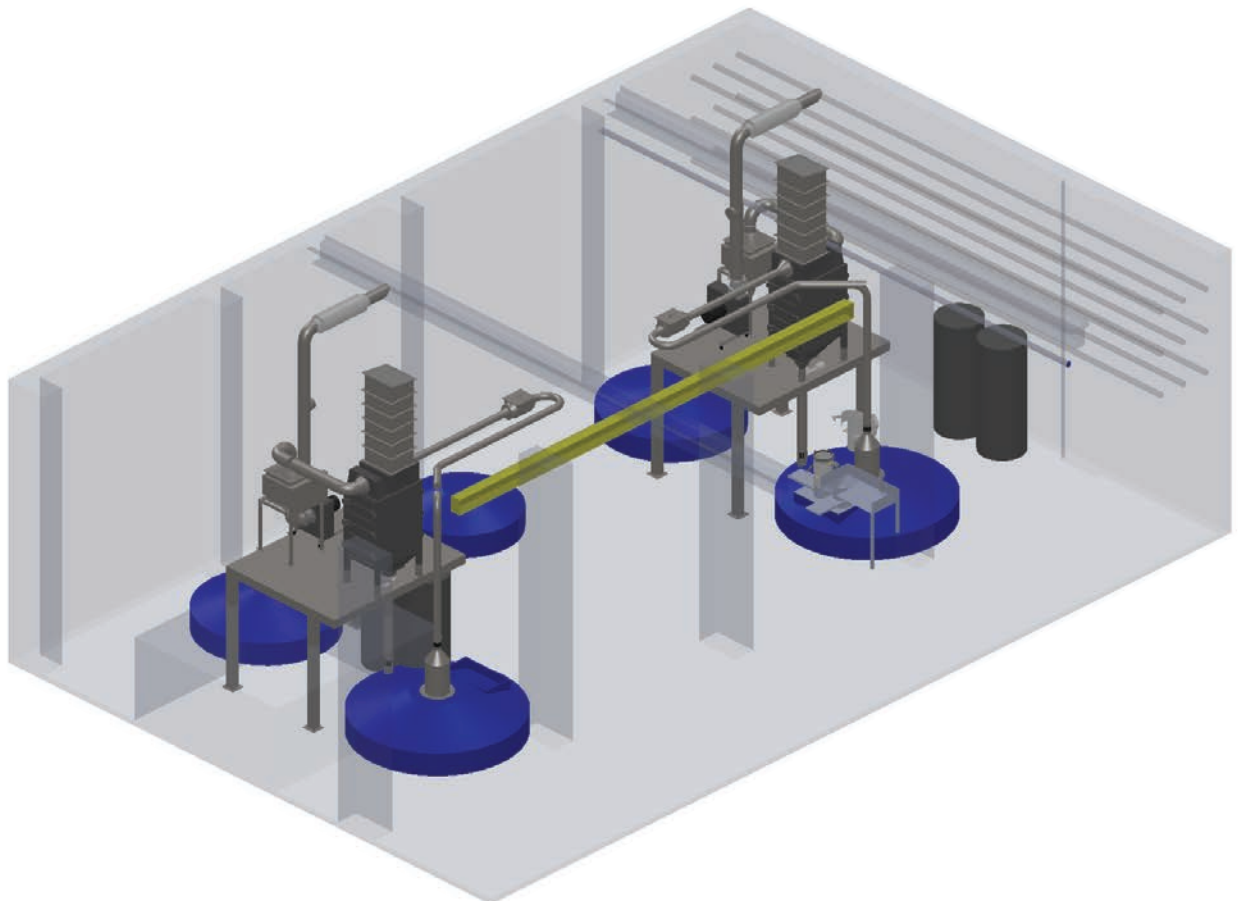


- measurements of the concentration of the pollutants
- laboratory testing
- calculation of the cost-effectiveness of operation
- computer simulation of the operation

The fear of purchasing an inappropriate device is unnecessary. Our professionals carefully examine all entered information needed for the right project preparation. According to the need, measurements of the concentration the pollutants, laboratory testing, calculation of the cost-effectiveness of the operation and a computer simulation of the operation are carried out.

All of the above ensures a reliable and economical operation of the dust collector for which a 100% functional guarantee is applied.

Project engineers are provided with all the necessary support and cooperation in project preparation. With a professional attitude, continuous education and the introduction of modern technologies, our clients always receive the best state-of-the-art solutions.









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