




HM 213008

H3 residual wood dust
content measured
at 0,1 mg/m³
dguv.de/pruefzeichen

**MultiStar
Dust Collectors**

Energy-efficient
Modular Design
Pressure shock tested
1,000+ success stories

**HÖCKER[®]
POLYTECHNIK**

Always one idea ahead

MultiStar Filter Systems.

The pinnacle of efficiency and productivity across multiple industries.

Highly efficient and automated production equipment generates high volumes of process waste, placing greater demand on your extraction technology. The amount of dust, scrap, chips, and other process waste is constantly increasing with more efficient machines.

Hocker Polytechnik is walking the evolutionary path of high-performance production equipment with the newly re-designed MultiStar filter series. The modular MultiStar filter solutions are used by many industries and are renowned for the proprietary blend of optimal extraction performance and minimum energy consumption combined with the fully automatic discharge of material. With MultiStar filter systems and the extensive range of options, you can achieve considerable increases in productivity.

The newly re-designed MultiStar filter system meets and exceeds the requirements for high-speed production equipment with extraction of dust and scrap waste. With countless housing variants as well as ventilation, filter, and discharge modules to choose from, the re-designed MultiStar Filter is the right filtration system for your application!

Each MultiStar filter system produced is custom tailored to your company and its application. The collector is designed, manufactured, installed, and maintained by experienced factory-trained teams.

The modular design was successfully surge tested in 2005 and 2023 and its safety was independently confirmed in each case, offering you peace of mind.

The flexible and modular design of the MultiStar Filter System enables it to be used in 1,000's of applications and industries worldwide. It can be used as a compact cartridge filter or as a larger filter system for air volumes of more than 600,000 m³/h.

The original MultiStar filter system was launched in 2005, a testament to the effectiveness and reliability of this system. We have continuously improved the filter systems to be more efficient, ensured optimal performance and eliminated any non-essential or sub-optimal components.

The newly re-designed MultiStar Filter System is innovation at its finest. The second generation filter system, like Hocker Polytechnik, is Always One Idea Ahead.

HÖCKER[®]
POLYTECHNIK

Always one idea ahead

Industries / Applications

Automotive industry
Woodworking and wood processing
Plastics processing
Metal trade and industry
Furniture industry
Public institutions
Paper, cardboard and printing industries
Materials recovery facilities
and many other industries

Benefits

220 mbar pressure surge tested
Bursting panels with flame deflectors as standard
Wide range of applications
Energy-efficient control
Customizable Modular Design
Greater range due to up to 6000 pa negative pressure
Newly developed fans for optimum efficiency
Optional extra: anti-noise click panel for noise reduction
Standard safety certificate for the stability of the steel structure
Top price-performance ratio

Materials

Wood chips, softwood
Wood or paper dust
Plastic chips and dust
GRP dust, PUR rigid foam
Aluminum chips
Oil mist, welding fumes
other dedusting processes



The new and improved 2nd Generation MultiStar Filter System

- Re-designed after 20 years of practical use.
- Reliability of the first generation with all the efficiencies and upgrades of the next gen.
- Successful explosion test in 2023.
- Features for even more efficiency and flexibility.

**Learn more about the 2nd Gen MultiStar Filter System
by contacting Höcker Polytechnik today!**

MultiStar Dust Collectors

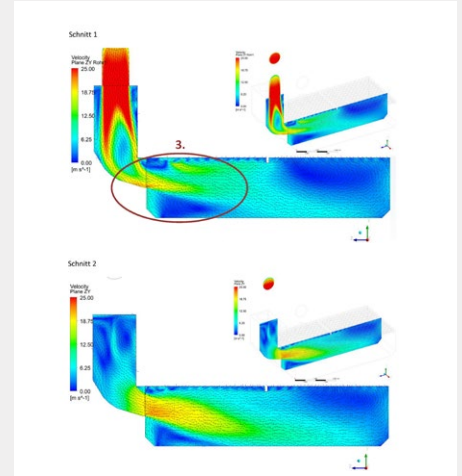
Research and Development



Data Driven Efficiency Calculations

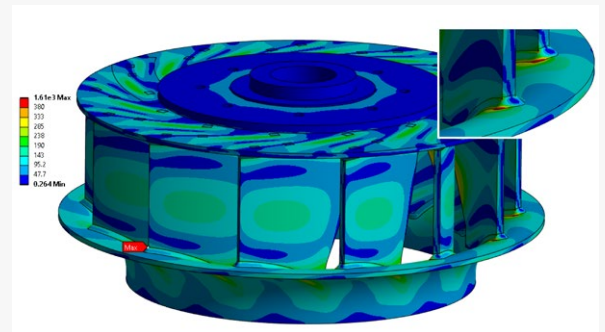
MultiStar dust collectors are continuously adapting. CFD flow simulations are used to visualise clean air and raw air flows in order to determine the best efficiency.

With this information and data, the design of each individual collector can be perfectly optimized and adapted to suit the needs of the user. The ideal inflow of the fans increases efficiency, reduces electrical consumption, ensures quiet filter operation and extends the service life of filter media.



FEM calculations

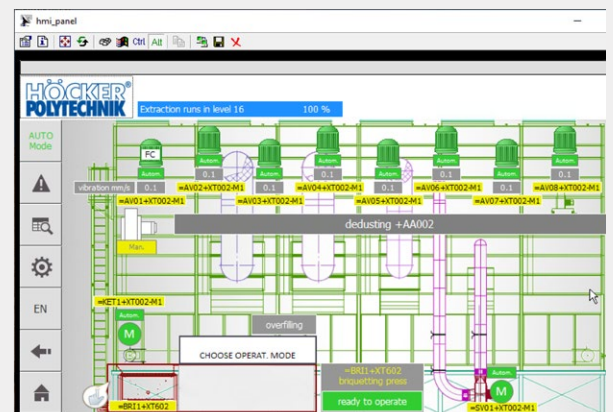
The finite element method supports the development of new, durable impellers by verifying their strength.



Real-Time Visualization

At a glance you can see the important status information of your system.

With 2-3 touches you can easily change the configuration or check consumption information. With Höcker control panels you can manage your dust collector conveniently from your smartphone.



Energy Efficiency

Often times, modern production equipment are only part of the annual electricity consumption. The big energy drains are the air and thermal systems in large scale operations, especially the exhaust systems.

Control system from Hocker Polytechnik can reduce the electrical and energy consumption of exhaust fans by up to 60%.

Heat Recovery

With MultiStar filter systems, valuable heat energy is retained. The low residual dust content $< 0.1 \text{ mg/m}^3$ (H3) of the filtered air allows your company, with an installed air recirculation system / heat recovery components, to recirculate the heated air from your production equipment back into the plant. This reduces your energy consumption to heat your building dramatically, saving you valuable operating costs.

By adding fresh air and reheating, you create the best working and room air conditions.

High-Performance Fans

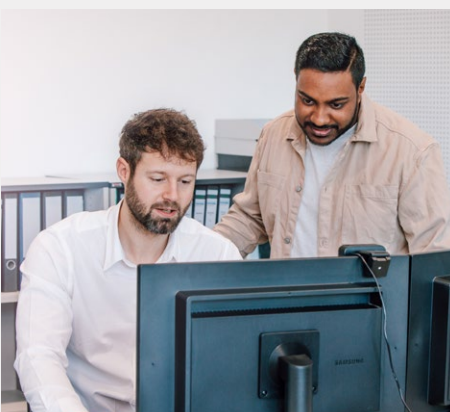
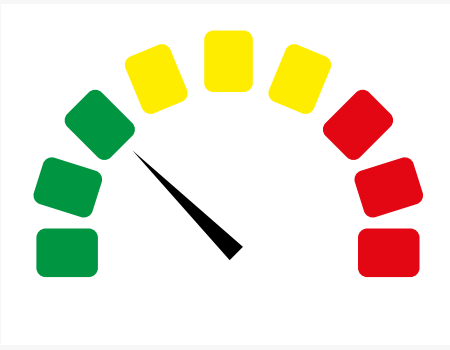
The clean air fans operate with energy-efficient IE3 motors in a space conscious and saving filter attachment module. Because these fans typically run around the clock, they tend to have some of the largest influence on the electrical consumption and costs.

Hocker Polytechnik's expert designers have reduced the energy consumption on these motors to be more energy efficient. Depending on the production volume, the fans are switched on or off in cascade operation. Additionally, frequency controllers ensure smooth starting of the motors, variations in ventilation power and protects against voltage peaks.

We are there for you

Hocker Polytechnik is with you every step of the way, from planning to commissioning and beyond. Our project planning, design, electrical engineering, order processing, production, and assembly teams are always available.

Contact us today to learn more!



MultiStar Dust Collectors

with
valve filters



ca. 33,000 m³/h

MultiStar valve filter with overblowing • furniture industry



ca. 65,000 m³/h

MultiStar valve filter with overblowing • furniture suppliers

MultiStar valve filters are perfectly suited for pressureless silo and container filling with air volumes of up to 60,000 m³/h. Below the filter bags, the transport air is blown in and the material is transported to the rotary valve.

Rotary valves hermetically seal the filter interior and then transport the material out without pressure.

All rotary valves are tested and certified flame proof.



ca. 13,000 m³/h

MultiStar valve filter with container feeding



ca. 28,000 m³/h

MultiStar valve filter • vocational school



MultiStar Dust Collectors

with
chain conveyor

ca. 160,000 m³/h

MultiStar reverse air flow filter with dirty air plenum blank element • furniture industry



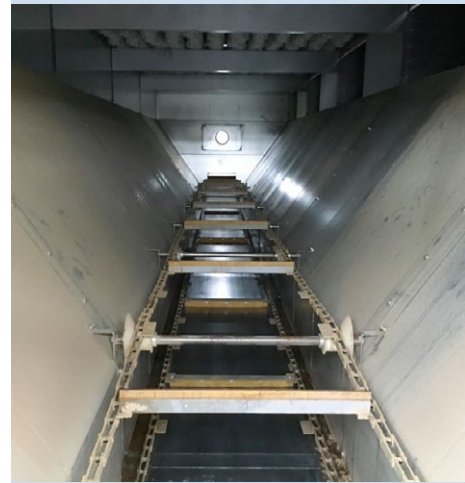
ca. 160,000 m³/h

MultiStar reverse air flow filter • furniture industry



ca. 240,000 m³/h

MultiStar reverse air flow filter • kitchen manufacturing



The integrated drag chain conveyor is used for the discharge of row filters with lengths of up to 30 meters and more.

The material is transported safely and dosed to the discharge point.

Often, the material is then discharged by means of a rotary valve and transported to the final storage or disposal site.



ca. 115,000 m³/h

MultiStar reverse air flow filter • furniture industry



ca. 190,000 m³/h

MultiStar reverse air flow filter • kitchen manufacturing

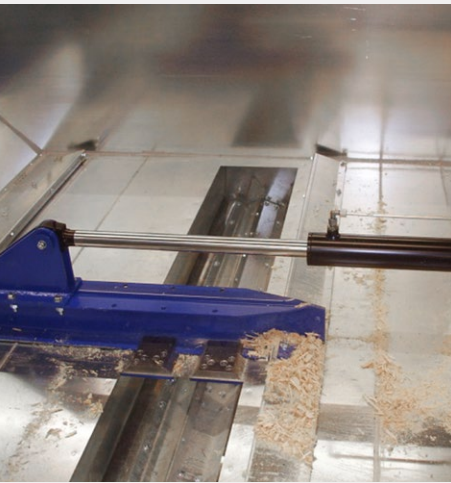
MultiStar Dust Collectors

with
push floor



ca. 57,000 m³/h

MultiStar reverse air flow filter • ship interior finishing



If the installation height is low, a hydraulically driven push floor is often integrated.

Disposal is carried out by rotary valve(s) or briquetting press(es).

Sliding bar solutions enable discontinuous filter disposal and prevent the material from bridging.

Hydraulic sliding shelves work similarly to penny pushers at fairs; instead of very few coins, a constant number of chips fall into the discharge opening.



ca. 28,000 m³/h

MultiStar reverse air flow filter • thermo-wood manufacturing



ca. 45,000 m³/h

MultiStar jet filter • prefabricated house production



ca. 50,000 m³/h

MultiStar sliding bar filter with jet cleaning • printing and packaging industry



MultiStar Dust Collectors

with
screw conveyor

ca. 80,000 m³/h

MultiStar screw filter with scavenging air cleaning • sport equipment production



ca. 110,000 m³/h

MultiStar screw filter with jet cleaning • interior work



ca. 58,000 m³/h

MultiStar screw filter with scavenging air • interior work



ca. 110,000 m³/h

MultiStar screw filter with scavenging air



Flexible transport disposal with two outlets

MultiStar screw filters are suitable for materials particularly heavy and tightly compacted, depending on the design of the trough screw. They are also suitable for volumes of coarse material.

The screw conveyors with a diameter of 500 mm and lengths of up to 11 metres continuously transport large quantities of material to the discharge point.

In combination with a rotary valve, they offer many possible applications and a very high level of operating safety.

MultiStar Dust Collectors

with
stirrer device



ca. 680,000 m³/h

MultiStar stirrer device filter with jet cleaning • kitchen manufacturing



ca. 100,000 m³/h

MultiStar stirrer device filter with jet cleaning



ca. 50,000 m³/h

MultiStar stirrer device filter • biomass power plant

MultiStar stirrer device filters ensure efficient material discharge in compact filter housings. The stirring units with one or two arms discharge the material from the filter housing when the defined fill level is reached.

As a result, transport systems can operate intermittently and energy costs can be optimized for decreased costs and maximum efficiency.

Stirrer device filters are available in basic dimensions from 2m x 2m to 6m x 6m.



ca. 22,000 m³/h

MultiStar stirrer device filter • laminated beams production



ca. 65,000 m³/h

MultiStar stirrer device filter • plywood production



MultiStar Dust Collectors

with
press filters

ca. 33,000 m³/h

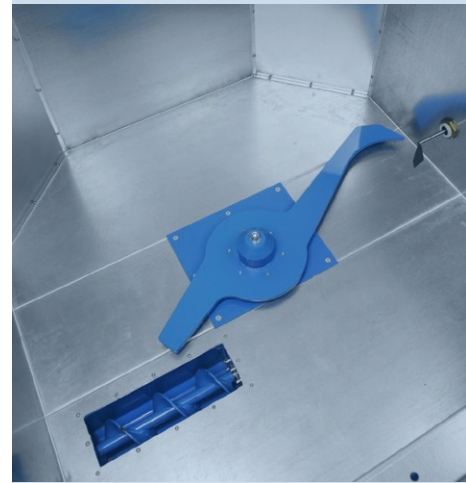
MultiStar with integrated briquetting press and heat recovery system • vocational school



MultiStar press filter • interior work



MultiStar press filter • interior work



MultiStars with an integrated briquetting press process the material directly into briquettes. They are the ideal solution for applications with low or medium material volume.

Combustible dusts can be stored in the form of briquettes to be further recycled or up-cycled for high-quality heating materials.



MultiStar press filter • interior work



MultiStar press filter • printing industry



MultiStar press filter • interior work

MultiStar Dust Collectors

Safely and Efficiently Store Dusts

Material handling

Höcker Polytechnik offers solutions for automated discharge of dust/waste material such as pneumatic compactors / silo transport or briquetting.

For lower volume applications, MultiStars with containers such as

- dust collection bins
- BigBags and chip bins
- Sulo containers

an alternative that is clean and easy to exchange.

Materials

MultiStar Dust Collectors efficiently handle dust and chips from cellulose, metal, plastics, organic waste and more.

The material is stored, briquetted or transported. Individual disposal concepts and automation options meet every customer requirement.

In all wind and weather conditions

MultiStar dust collectors work both on the polar circle and on the equator. They fulfil their tasks worldwide, even under extreme climatic conditions.

Positioning

The MultiStar dust collectors offer the highest degree of flexibility of where it can be positioned and installed. They can be installed on building roofs, building corners, workshops and production halls.

The scalable construction and the pressure shock tested design provide almost unlimited freedom when choosing the installation site, whether indoors or outdoors.



MultiStar jet filter in the recycling industry



ca. 13,000 m³/h

MultiStar container bag filter in the wood processing industry



ca. 13,000 m³/h

MultiStar container bag filter in the furniture industry



Cartridge jet filter for blasting cabins



ca. 23,000 m³/h

MultiStar jet filter in the plastics industry



ca. 18,000 m³/h

MultiStar jet filter in the prefabricated house industry



ca. 90,000 m³/h

MultiStar jet filter in the recycling industry



ca. 15,000 m³/h



MultiStar jet filter with Sulo container in plastics recycling



MultiStar Dust Collectors

for interior
installation

Flameless pressure relief with Hörbiger valves

MultiStar dust collectors can also be positioned inside production facilities. With the integration of Hörbiger relief valves ensures unique and effective explosion protection to protect your assets.

In the event of an explosion, the Hörbiger relief valves react within fractions of a second due to the low-mass valve plate and the low response pressure. They are certified according to the latest ATEX regulation EN 16009 - equipment for flameless explosion pressure relief. Your employees and your plant are thus reliably protected.



MultiStar jet filter in the packaging industry

Cleaning of the filter media



The dust-laden air is transported through the filter socks. The dust settles on the filter material and the pressure losses increase. The filter socks must then be cleaned regularly or continuously at a defined pressure loss so that the suction performance remains constant.

The right choice of the cleaning method depends on the amount of material, particle size, the properties of the dust and the mode of operation of the production.

via vibration

In the vibration process, the filter cake is shaken off the filter socks by means of a shaker motor, double shaft ends and unbalanced pieces. Mechanical cleaning is carried out after interruption of the filtration operation.

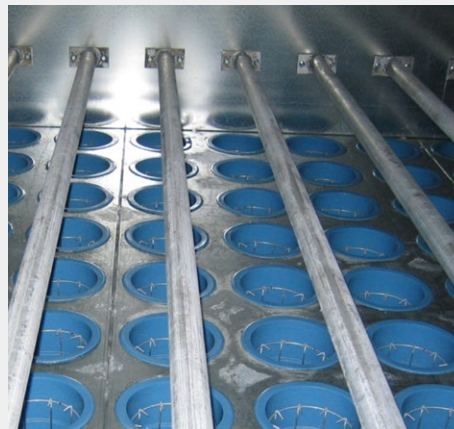


Properties:

- Discontinuous cleaning of the filter material during production breaks
- Low energy requirement
- Very long service life and durability of the filter media

via impulse of compressed air

For jet or compressed air pulse cleaning, a nozzle is positioned above each filter sock. A short burst of compressed air briefly inflates the filter socks so the filter cake is loosened. The filter material is regenerated periodically or depending on the differential pressure.



Properties:

- Continuous cleaning of the filter media without production breaks
- Low energy requirement
- Suitable for almost all materials
- Constant high suction power due to low filter contamination
- Cleaning can be carried out based on timed intervals or based on pressure readings
- Very long service life and durability of the filter media

via low pressure scavenging air

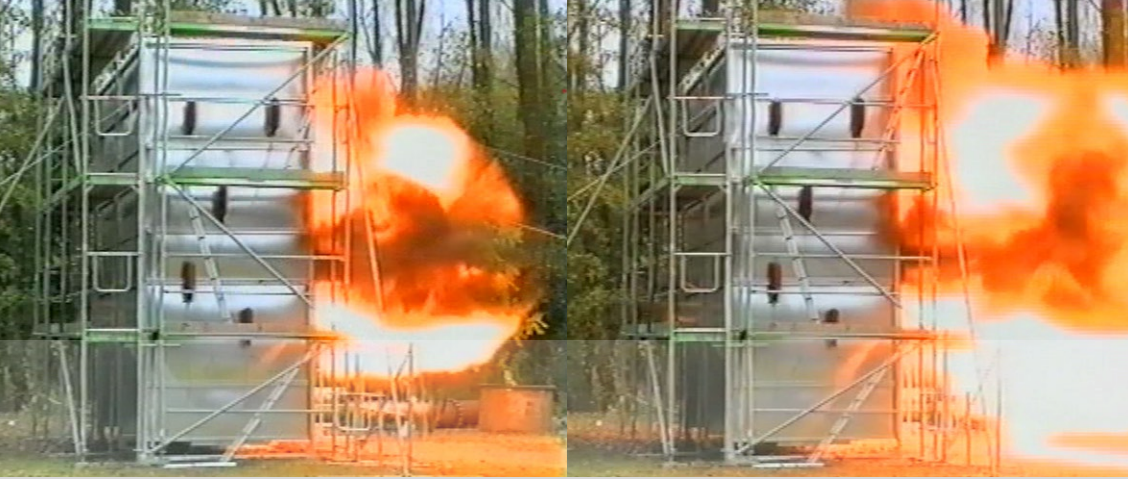
During the scavenging air process, a scavenging air cart equipped with nozzles drives along the filter openings and blows an air flow into the filter socks.

For a short time, the flow direction in the filter socks are reversed and adhering dust is released.



Properties:

- Continuous cleaning of the filter media without production breaks
- Low energy requirement
- Suitable for almost all materials
- Constant high suction power due to low filter contamination
- Cleaning can be carried out based on timed intervals or based on pressure readings
- Very long service life and durability of the filter media
- Extremely protective and effective



**Approved
and
certified**

220 mbar explosion test

Approved explosion resistance

Test passed. The recognised specialist institute for explosion tests "BG-Exam" has already certified the pressure shock resistance of our MultiStar in 2005 and 2023. All relevant laws and standards (ATEX, DIN EN 12779 Industrial Safety Regulation, VDI guidelines, trade association regulations and rules) can be adhered to easily and safely.

And further, the bursting discs and inspection doors are also BG or FSA tested.

Safe and certified!

The collage features several key documents:

- DGUV Test Certificate:** Issued by DGUV Test (Research, Test, and Monitor) for a filtration plant in modular design. It includes details about the manufacturer, Hocker Polytechnik GmbH, and the product specifications.
- DEKRA Certificate:** A Certificate of Conformity for ISO 9001:2015, issued to Hocker Polytechnik GmbH. It states that the company's quality management system complies with the standard.
- GS Safety Mark Certificate:** A certificate for explosion-protected products, issued by DEKRA. It certifies that the MultiStar filter systems, rotary valves, and swing check valves have been successfully fire safety tested.

Quality management system

We have full control over all the processes within our company and continuously strive to perfect them. We have been operating in compliance with ISO 9001 guidelines since 2011.

Quality assurance

The quality of our products is regularly reviewed and optimised.

Energy management

Our energy management system was certified to the ISO 50001 standard in 2016. Our customers are of course also able to reap the benefit generated from our sophisticated control solutions.

DGUV tested products

Our dedusters are continuously DGUV tested and can be easily integrated into operational areas (residual dust content of <math><0.1 \text{ mg/m}^3</math>).

GS tested safety mark

Our products must be safe for the user to handle, which is why many Höcker products are GS tested.

Explosion protected products

The pressure shock resistance of our MultiStar filter systems, Vacuumobile de-dusters and rotary valves has been tested and validated.

EW90 – proven fire safety

Our MultiStar filter systems, rotary valves and swing check valves have been successfully fire safety tested.



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