
  
HO 213008  
  
**H3** residual wood dust  
content measured  
at 0,1 mg/m<sup>3</sup>  
[dguv.de/pruefzeichen](http://dguv.de/pruefzeichen)

## MultiStar Dust Collectors

energy-saving  
flexible  
pressure shock tested  
1000 success stories

**HÖCKER<sup>®</sup>**  
**POLYTECHNIK**

*Always one idea ahead*





MultiStar press top filter • Curative education institution ▲

## Advantages

- individual filter elements
- versatile range
- modular design
- tested explosion protection
- proven structural stability
- maximum energy efficiency
- unrivalled price-performance ratio

## MultiStar Dust Collectors Efficiency in Trade and Industry

The machinery in industry and trade is more powerful than ever before. The processes are largely automated and high-performance processing machines ensure an enormous throughput. But with every leap in productivity, however, the output of dust, chips or process waste increases exponentially.

Höcker Polytechnik follows the evolutionary path of machine manufacturers with the MultiStar filter series. The modular MultiStar filter solutions are used by trade and industry professionals (or companies) and achieve maximum extraction performance with minimum energy consumption. And as the material can be discharged automatically, considerable productivity increases can be achieved.



# Our All-rounder for Demanding Applications

Flexibility is our advantage – for practically any dry separation use, we produce to your specifications a precisely-adapted dust collector from the modules in the MultiStar range. For this purpose, we have access to a comprehensive selection of housings and filter hoses of various sizes, lengths and diameters. We offer professional technology at the best possible price

## Measure for Measure

We can supply numerous housing sizes and versions of the smooth-walled dust collectors, ranging from the compact cartridge filter to the large dust collector for air flow volumes of over 600,000 m<sup>3</sup>/h.

The design is always based on an optimised structural module which is ideally suited to your conditions. MultiStar versions of the appropriate size can be supplied to small workshops or large industrial sites. Examples are the paper and printing industry, furniture manufacturers, metal and wood working workshops, recycling companies or the automotive industry.

## For any Project

Using the modular assembly principle, we put together the best configuration for your requirements.

From wood dust to paper dust, wood chips, softwood, plastic dust or chips, GRP dust, polyurethane foam, aluminium chips to zinc dust, oil mist or welding fumes and other dedusting processes: We individually specify length, diameter, geometry and cleaning procedures for the filter elements, as well as the discharge of the material.

MultiStar jet filtration plant • furniture industry ▼

MultiStar discharge hopper with stirrer • furniture industry ►



## Areas of Application

- paper and printing industry
  - woodworking trade
  - plastics processing industry
  - furniture industry
  - metal trades and industry
  - automotive industry
  - recycling companies
  - public institutions
- and many more

# MultiStar Dust Collectors

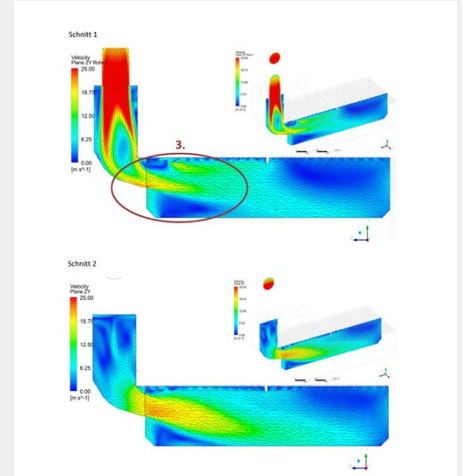
## Features



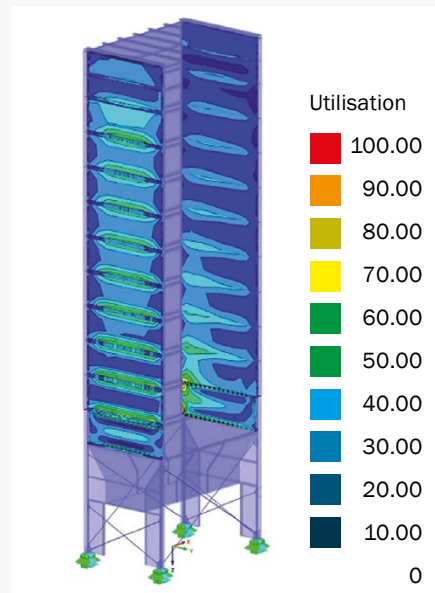
## Analyses and calculations

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

With this information, the structure of the MultiStar dust collector can be perfectly optimised and adapted accordingly. The ideal inflow of the fans increases efficiency, reduces overall plant resistance and ensures quiet filter operation with long filter service life.



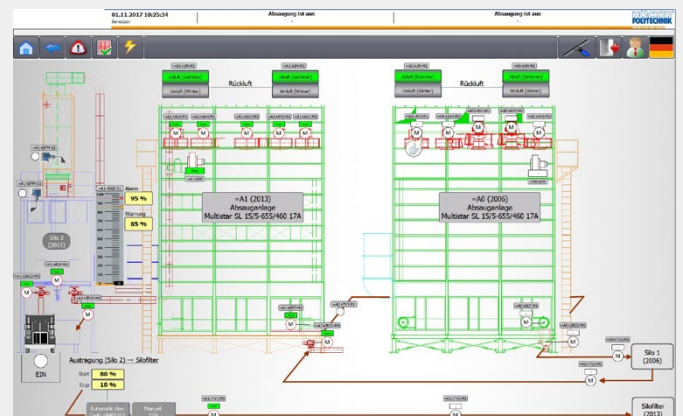
## FEM calculations



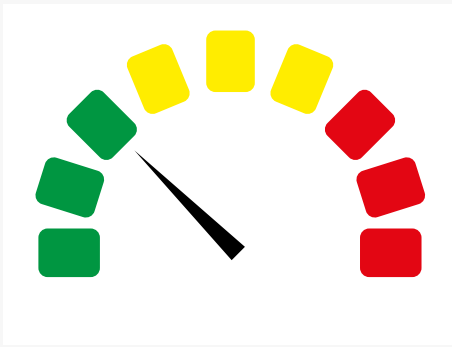
Finite Element Method is used to calculate the stability of the structure when stressed by strong force winds and heavy snow loads.

## Visualisation

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.



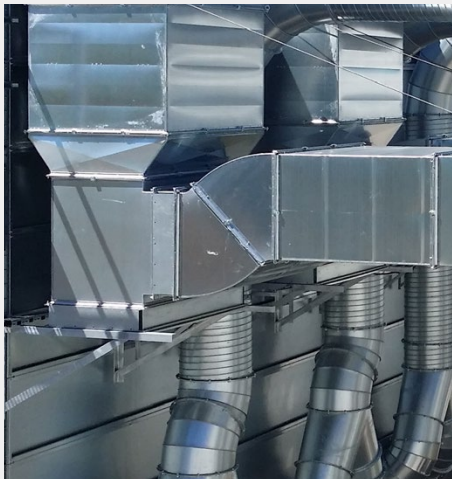




Often the processing machines cause only part of the annual electricity consumption. The big energy guzzlers are the air and thermal systems, especially the exhaust system.

Control systems from Höcker Polytechnik can reduce the energy consumption of exhaust fans by up to 60%.

## Energy efficiency



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 installed air recirculation / heat recovery, to continue to use the heated room air. This pays off for you during the colder months.

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

## Heat recovery



Space-saving in the filter attachment module, the clean air fans operate with energy-efficient IE3 motors. They often work around the clock and thus have a significant influence on the electricity bill.

Our control experts minimize the energy hunger of the ventilation motors. Depending on the production volume, the fans are switched on or off in cascade operation. Frequency controllers additionally ensure smooth starting of the motors, infinitely variable ventilation power and protect against voltage peaks.

## High-performance fans



## We are there for you

# MultiStar Dust Collectors

as  
valve filters



ca. 33,000 m<sup>3</sup>/h

MultiStar valve filter with overblowing • furniture industry



ca. 65,000 m<sup>3</sup>/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 m<sup>3</sup>/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 for flame proof.



ca. 13,000 m<sup>3</sup>/h

MultiStar valve filter with container feeding



ca. 28,000 m<sup>3</sup>/h

MultiStar valve filter • vocational school





**MultiStar  
Dust Collectors**

**with  
chain conveyor**

ca. 160,000 m<sup>3</sup>/h

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



ca. 160,000 m<sup>3</sup>/h

MultiStar reverse air flow filter • furniture industry



ca. 240,000 m<sup>3</sup>/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 site.



ca. 115,000 m<sup>3</sup>/h

MultiStar reverse air flow filter • furniture industry



ca. 190,000 m<sup>3</sup>/h

MultiStar reverse air flow filter • kitchen manufacturing

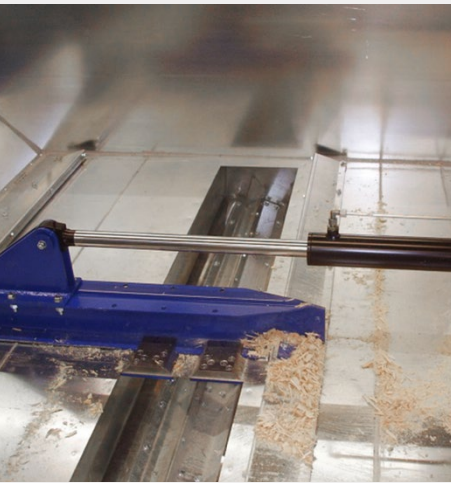


# MultiStar Dust Collectors

with  
push floor



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.



MultiStar reverse air flow filter • thermo-twood manufacturing



MultiStar jet filter • prefabricated house production



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





## MultiStar Dust Collectors

with  
screw conveyor

ca. 80,000 m<sup>3</sup>/h

MultiStar screw filter with scavenging air cleaning • sport equipment production



ca. 110,000 m<sup>3</sup>/h

MultiStar screw filter with jet cleaning • interior fittings



ca. 58,000 m<sup>3</sup>/h

MultiStar screw filter with scavenging air • interior fittings



ca. 110,000 m<sup>3</sup>/h

MultiStar screw filter with scavenging air



Flexible transport disposal with two outlets



Depending on the design of the trough screw, MultiStar screw filters are suitable for materials particularly heavy and tightly compacted. They are also suitable for volumes of course 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 m<sup>3</sup>/h

MultiStar stirrer device filter with jet cleaning • kitchen manufacturing



ca. 100,000 m<sup>3</sup>/h

MultiStar stirrer device filter with jet cleaning



ca. 50,000 m<sup>3</sup>/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 and push it out of the filter housing when the defined fill level is reached.

As a result, transport systems can operate discontinuously and energy costs can be reduced in an optimised manner.

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



ca. 22,000 m<sup>3</sup>/h

MultiStar stirrer device filter • laminated beams production



ca. 65,000 m<sup>3</sup>/h

MultiStar stirrer device filter • plywood production





# MultiStar Dust Collectors

as  
press filters

ca. 33,000 m<sup>3</sup>/h

MultiStar press filter with heat recovery • vocational school



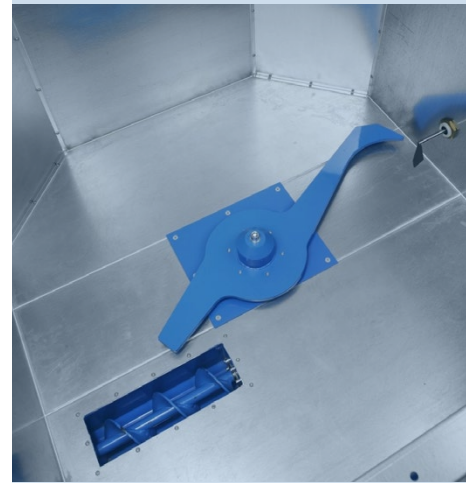
ca. 16,000 m<sup>3</sup>/h

MultiStar press filter • interior fitting



ca. 20,000 m<sup>3</sup>/h

MultiStar press filter • interior fitting



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

Sensitive dusts can be stored in the form of a briquette, and wood chips can be transformed into high-quality heating material.



ca. 18,000 m<sup>3</sup>/h

MultiStar press filter • interior fitting



ca. 24,000 m<sup>3</sup>/h

MultiStar press filter • printing industry



ca. 25,000 m<sup>3</sup>/h

MultiStar press filter • interior fitting



# MultiStar Dust Collectors

## Safely and Efficiently Store Dusts

### Material handling

Höcker Polytechnik offers solutions for automated discharge handling, such as pneumatic container / silo transport or briquetting.

With less material flow, 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

There is hardly any greater flexibility in the positioning of your dust collector. MultiStar dust collectors can be positioned on hall roofs, at hall corners and in workshops.

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 m<sup>3</sup>/h

MultiStar container bag filter in the wood processing industry



ca. 13,000 m<sup>3</sup>/h

MultiStar container bag filter in the furniture industry



Cartridge jet filter for blasting cabins



ca. 23,000 m<sup>3</sup>/h

MultiStar jet filter in the plastics industry



ca. 18,000 m<sup>3</sup>/h

MultiStar jet filter in the prefabricated house industry



ca. 90,000 m<sup>3</sup>/h

MultiStar jet filter in the recycling industry





ca. 15,000 m<sup>3</sup>/h



MultiStar jet filter with Sulo container in plastics recycling



## MultiStar Dust Collectors

for interior  
installation

### Flameless pressure relief with Hörbiger valves

Of course, MultiStar dust collectors can also be positioned in production halls. The correct constructive integration of Hörbiger relief valves offers unique, efficient explosion protection.

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 hoses



The dust-containing air is transported through the filter hoses. The dust settles on the filter material and the pressure losses increase. The filter hoses must therefore 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 hose by means of a shaker motor, double shaft ends and unbalance pieces. Mechanical cleaning is carried out after interruption of the filtration operation.

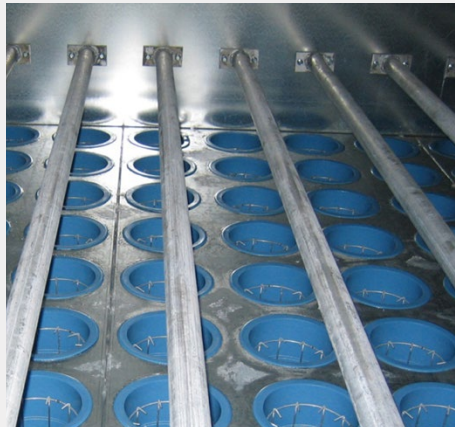


## Properties:

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

## via impulse of compressed air

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



## Properties:

- Continuous cleaning of the filter material 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 time-dependently or differential pressure-dependently
- Very long service life and durability of the filter hoses

## 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 hoses.

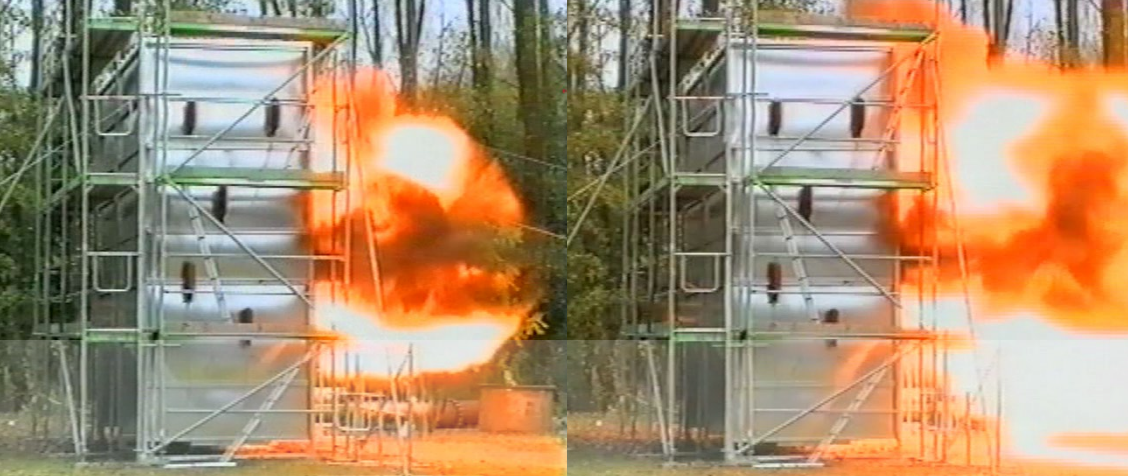
For a short time, the flow direction in the filter hose is reversed and adhering dust is released.



## Properties:

- Continuous cleaning of the filter material 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 time-dependently or differential pressure-dependently
- Very long service life and durability of the filter hoses
- 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. 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 there's even more than that: 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 to Höcker Polytechnik GmbH for their MultiStar filter system, certifying its explosion resistance.
- DEKRA Certificate:** ISO 9001:2015 certification for the company's quality management system.
- GS Safety Mark:** Certification for the safety of the filter system for users.
- DEKRA Explosion Protection:** Certification for the MultiStar filter system's resistance to explosion.
- Technical Drawing:** A detailed diagram of the filter system's structure.
- Authorized Representatives:** A list of contact persons for various countries including Germany, France, Italy, Spain, and others.

### 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 officially tested and validated.

### EW90 – proven fire safety

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





HÖCKER POLYTECHNIK GmbH  
Borgloher Straße 1  
49176 Hilter a.T.W.  
Germany

phone +49 5409 405 0  
email [info@hpt.net](mailto:info@hpt.net)



[www.hoecker-polytechnik.com](http://www.hoecker-polytechnik.com)

**HÖCKER<sup>®</sup>**  
**POLYTECHNIK**

*Always one idea ahead*

