



**Air Flow Technology
and Paper Waste
Disposal Systems**

for the paper industry

**HÖCKER[®]
POLYTECHNIK**

Always one idea ahead



... competing in the real world

Today's business has to excel in a world that is just as competitive as the sporting world. One challenge is to continuously improve performance and overcome perceived performance limits. Competitive spirit, continuous practice, constant learning, and trust in one's own ability are the basis for improving individual performance as well as team performance.



Since 1962 we have focussed on designing and manufacturing pneumatic paper waste disposal systems. Our designs and products have established higher standards for economical and reliable operations - standards by which we wish to be judged.

The progress of technology will enable further advances in performance and today's outstanding achievements will become tomorrow's norm. We are a focussed supplier to the manufacturing industry, we are partners with our customers and we also keep a lookout for innovations in their industry.

The requirements we will be confronted in the future arise out of the present innovations of our customers. Extending our technology lead and enhancing our partnership with customers is the vision that motivates our two hundred strong workforce in Germany and in our national and international subsidiaries.

Yesterday, today and tomorrow.



Your business, our solutions

Print shops / binderies

Efficient and individually planned HÖCKER POLYTECHNIK disposal solutions have been operating in many large print shops and binderies. Production waste is reliably disposed of, sorted by type on request and recycled. So that you can concentrate fully on the printing operations.



Folding cartons / packaging

HÖCKER POLYTECHNIK is a winner with individual solutions for the disposal of surplus production in the folding carton and packaging industry. Die-cuts and lead edges are reliably shredded, extracted and disposed of.



Paper manufacturing and processing

Years of experience in the management and disposal of production and die-cuts in the paper and tissue manufacturing industry is the basis of our facility planning. Our powerful disposal facilities ensure reliable production operations in paper mills worldwide.

Corrugated board / cardboard

HÖCKER POLYTECHNIK disposal solutions maximise production in corrugated board manufacturing and production waste. With special edge trim extraction, shredder solutions, transportation solutions and dedusting filter units, production residues and dust systematically find their way into recycling.



MultiStar filter systems

... are at the core of dust-free production. They remove production dust and residue from production machines through powerful and efficient suction action.



Our products.

Fans

... work 24/7 for clean production conditions. They tear, chop or transport with pneumatic action or ensure clean air.



Briquetting presses

.... process and convert the sensitive paper dust into robust briquettes. This allows them to be easily stored and disposed of.



Material separators

... separate the coarse production residue from the fine dust before it reaches the filter system. The filter is relieved and recycling facilitated.



Sorting

... helps you maximise your recycling revenue. Unmixed disposal routes from the machine to the container pay off.





Deduster

... impress with their wide range of applications. Simply position close to the production machine and start operating.



Energymangement

... permanently lowers energy costs and gives you convenient access to your consumption data in the disposal area.



Container- and baling presses

... provide for easy storage of their production waste and increase your recycling revenue.



Conveyor belt systems

... also transport large amounts of material reliably from production for further disposal and treatment.



Shredder

... processing paper and corrugated board waste in a central location or directly at the machine for compaction and transportation.



**Improved
production!**



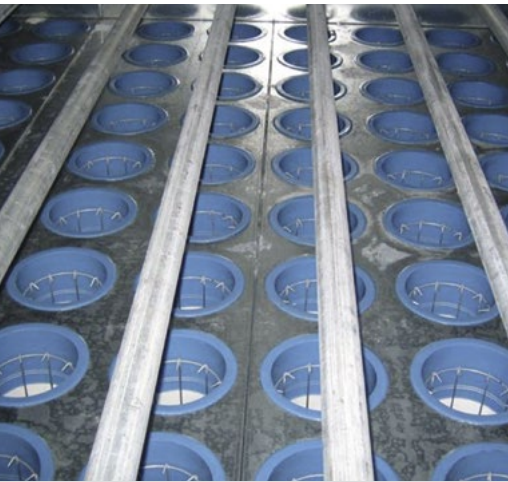
MultiStar filter systems - goodbye paper dust

Although a real all-purpose filter system does not exist, the ideal filter system for your particular application is available. MultiStar filter systems are reliable specialists, they reliably provide suction needed by production machines and are perfectly matched to handle the resulting paper dust.

A large number of MultiStar systems are also in use in your industry – they protect production and improve product quality.



▼ Cleaning process:
Jet



▼ Cleaning process:
Vibration cleaning



▼ Cleaning process:
Purge air



Cleaning processes:

- Jet
The filter bags are regularly blown free with compressed air or as needed.
- Vibration cleaning
The dust is shaken from the filter bags by vibration.
- Purge air
A blower gently blows the filter bags free in an energy-saving action.

Discharge via...

- Chain belt conveyor
A long chain conveyor transports the material to the discharge point.
- Screw conveyor
A long screw conveyor transports the material to the discharge point.
- Agitator
An agitator with two paddles conveys the material to the discharge point.
- Rotary valve
Link between discharge and disposal.
- Push floor
A large "bucket" pushes the material to the briquetting press.

Disposal in...

- Bins
Cost-efficient option at low material volumes.
- Container
Filled directly under the MultiStar or by means of transport fans.
- Briquetting press
Compacting the material into briquettes. The most elegant form of disposal.



Industrial fans

The fans supplied by HÖCKER POLYTECHNIK GmbH are the smooth-running, reliable and energy-efficient core element of your suction system.

- Reinluftventilatoren
- Staubventilatoren
- Transportventilatoren
- Schneid- und Zerreißventilatoren

The power consumption of your system is also lowered through the use of energy-efficient motors and frequency converters.

◀ Highly efficient clean-air fans in the fan attachment module.

▼ Sometimes a little more power is needed. Here too HÖCKER POLYTECHNIK provides the perfect solution with a 132 kW clean-air fan.



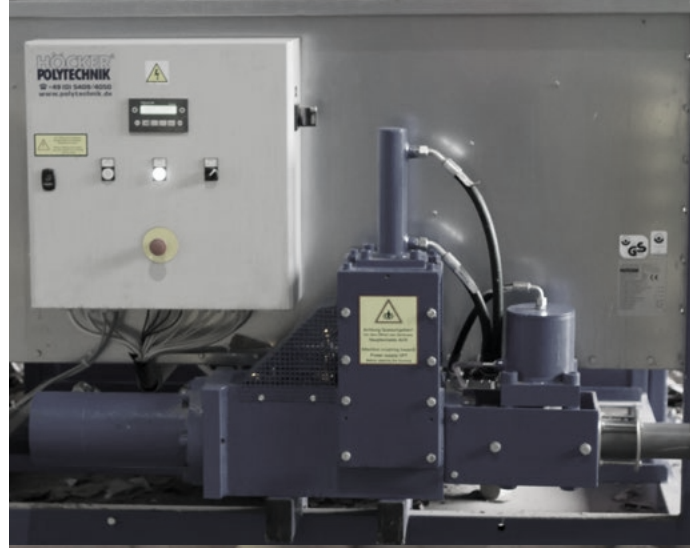
Briquetting presses

Storage and disposal of non-compacted paper dust is not only expensive, it is also potentially dangerous. Hydraulic briquetting presses simplify, without adding any additives, the disposal of your high cellulose-content production waste, and briquetting is safe and economical.

The extreme compacting of the raw material of about up to 90 % has a lasting effect in reducing your costs of storage and disposal to a minimum. Unlike to the fine particles of paper dust, the briks can be disposed of easily and inexpensively.

Briquettes simplify the handling of sensitive paper dust. ▶

Perfect teamwork.
A BrikStar C briquetting press below a MultiStar filter system. ▼





Material separators

Our PMA material separators combine proven technology and unique design features, such as continuous selfcleansing of the rotary air lock that ensures inherent reliability during continuous operation.

The operation of our separators is simple and effective. The air carrying waste material and dust is blown into the separator where the integrated rotary air lock separates solid material from the dust laden air. The air moves through the air lock to a downstream filter system that separates the dust from the air.



◀ Höcker material separators are in use worldwide – here in South Africa.

▼ The PMA material separator reliably sends larger production residue to the compactor. The MultiStar filter system takes care of the finer dust.



Sorting

Generate excellent waste paper revenue by sorting production waste in single varieties. From the variety selection switch on the machine, the subsequent pipe diverter and separate disposal routes through to the compactor, HÖCKER POLYTECHNIK reliably ensures the best paper grades.

▶ Sorting according to grades in production via three main lines.

▼ Material separators send the sorted paper grades as single varieties to the respective containers. This increases recycling revenue.





Compact deduster

The Vacumobil compact deduster from HÖCKER POLYTECHNIK sets entirely new standards in the extraction of production machinery and air pollution control. Vacumobil units are energy efficient, compact and powerful.

They can be perfectly matched to the specific application through the different cleaning processes, discharge systems and power levels (5.5 to 11 kW).



◀ The Vacumobil JP250 with integrated briquetting press.

▼ With suction power of up to 8,000 m³/h, the Vacumobil 350 is equipped to handle power-hungry tasks.



Energymanagement

Cost management is one of the most important tasks of our time. Vacuum systems, high-efficiency clean-air fans combined with programmable controllers, frequency controllers and analysis modules from HÖCKER POLYTECHNIK reduce the power consumption of your extraction units by up to 60%.



Frequency-controlled motors significantly minimise energy use. ▶

Visualisation systems facilitate system operation and provide access to consumption histories and much more. ▼

HÖCKER POLYTECHNIK SIMATIC HMI
Always one idea ahead.

ANLAGE AUTO

16.01.2014 18:54:57 Benutzer: Verbindung mit SPS: nicht verbunden FU: 48 Hz Absaugung läuft in Stufe 7

Aktuell gemessene Realtimewerte:

Strom:	Leistung:	Scheinleistung:	Blindleistung:	Leistung:
102 A	54649 W	70667 VA	5480 var	55 KW

Berechnung Energiekosten:

Eingabe Strompreis in Cent: 19 Ct

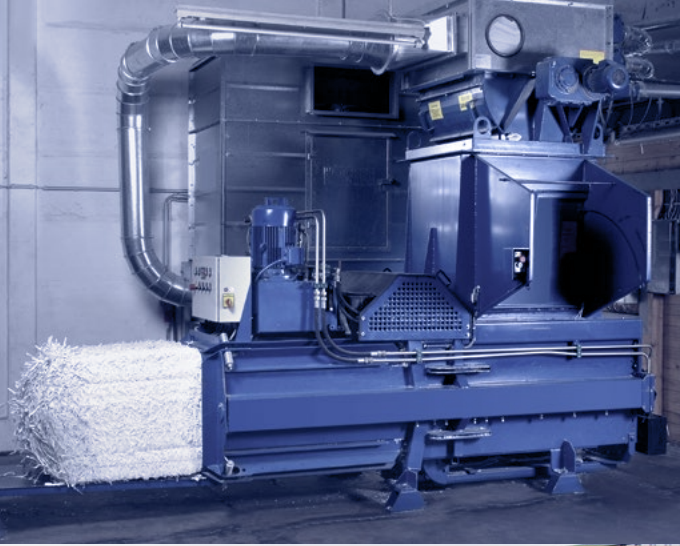
Aktuelles Jahr		Zähler	Kosten
Tag	Reset	64 kWh	12,2 €
Woche	Reset	168 kWh	31,9 €
Monat	Reset	5281 kWh	1003,2 €
Jahr	Reset	5281 kWh	1003,2 €

Die Zähler werden automatisch am Ende des Tages / Woche / Monats / Jahres zurückgesetzt! Oder manuell bei Bedarf!

ACHTUNG! Alle Messwerte im aktuellen Jahr werden resettet! **Neustart der Messung**

Jahreswerte:

Jahr	Zähler	Kosten
2014	5281 kWh	1003,2 €
2015	0 kWh	0,0 €
2016	0 kWh	0,0 €
2017	0 kWh	0,0 €
2018	0 kWh	0,0 €
2019	0 kWh	0,0 €
2020	0 kWh	0,0 €
2021	0 kWh	0,0 €
2022	0 kWh	0,0 €
2023	0 kWh	0,0 €
2024	0 kWh	0,0 €



Compactor / balers

For the disposal of production waste, we put our money on the balers, stationary compactors and vertical rotary compactors of well known manufacturers.

HÖCKER POLYTECHNIK systems make the handling of production waste child's play.

Depending on the type and quantity of waste, we use vertical rotary compactors, mobile and stationary compactors or horizontal balers, which significantly reduces energy and labour costs.



◀ Container exchange made easy with container presses.

▼ Balers are also available in an ultra-compact version or as an automatically operating baler for maximum material throughput.



Conveyor belts

Depending on machinery and production profile, conveyor belts and underfloor belt conveyors are suitable for use in different areas of the cardboard and packaging industry. They are ideal to convey resulting production waste to the central waste disposal facility with a minimum input of energy. Here, our belt conveyor system brings tremendous energy-saving potential with it.

A chain belt supplies the baler ▶

▼
All waste from production processes can be disposed of using well-designed belt conveyor systems. They form an energy-efficient bridge over several hundred metres to the disposal centre.



Shredder universal

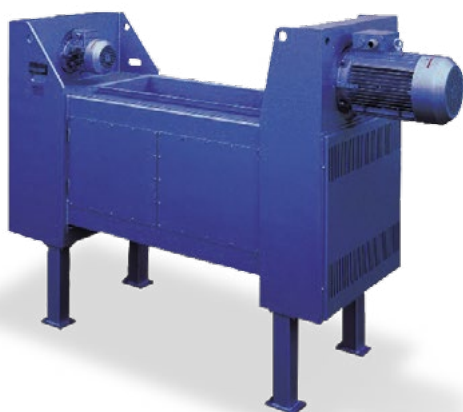
for cores, macculation sheets and large papers

High performance shredders by HÖCKER POLYTECHNIK offer tailor-made solutions for volume reduction and processing treatment for large-sized paper and corrugated cardboard. Our low-speed shredders work on the cut-and-rip principle, in which the toothed-shafts turn in opposing directions and rotate at different speeds. This reduces the noise level and the wear and tear on the machinery since the toothed shafts mesh without touching and rotate at low circumferential speed.

All our shredders can be fed by hand, either horizontally or vertically by means of a separate conveyor belt. Our high performance shredders fulfill the demands placed on modern production processes and can be seamlessly integrated into existing plants.



◀ The PHH shreds a 2.50 metre-long core in only 21 seconds.



◀ The PHS-0 for automatic feed from above via a central conveying system.

▼ The PSH-shredder comminutes not only large-sized paper and corrugated board waste but also cardboard cores.



Shredder / die cutter

Processing lead edges, skeletons and gripper margins automatically

HÖCKER POLYTECHNIK shredders in the PHSS range are high-speed single rotor shredders with counter comb to process front waste and large-sized die-cuttings, skeletons and gripper margins from solid and corrugated board.

The PHSS shredders are designed for the requirements of modern die cutters:

- Waste volumes of up to 10,000 sheets/hour and up to 1,600 mm can be processed.

This way, even large-format die-cutting waste can be handled by pneumatic means, and additional booster fan can be dispensed with. The PHSS is usually placed at the end of the die cutter and is mounted either below the die cutter or at the end of the conveyor belt of the front waste station.

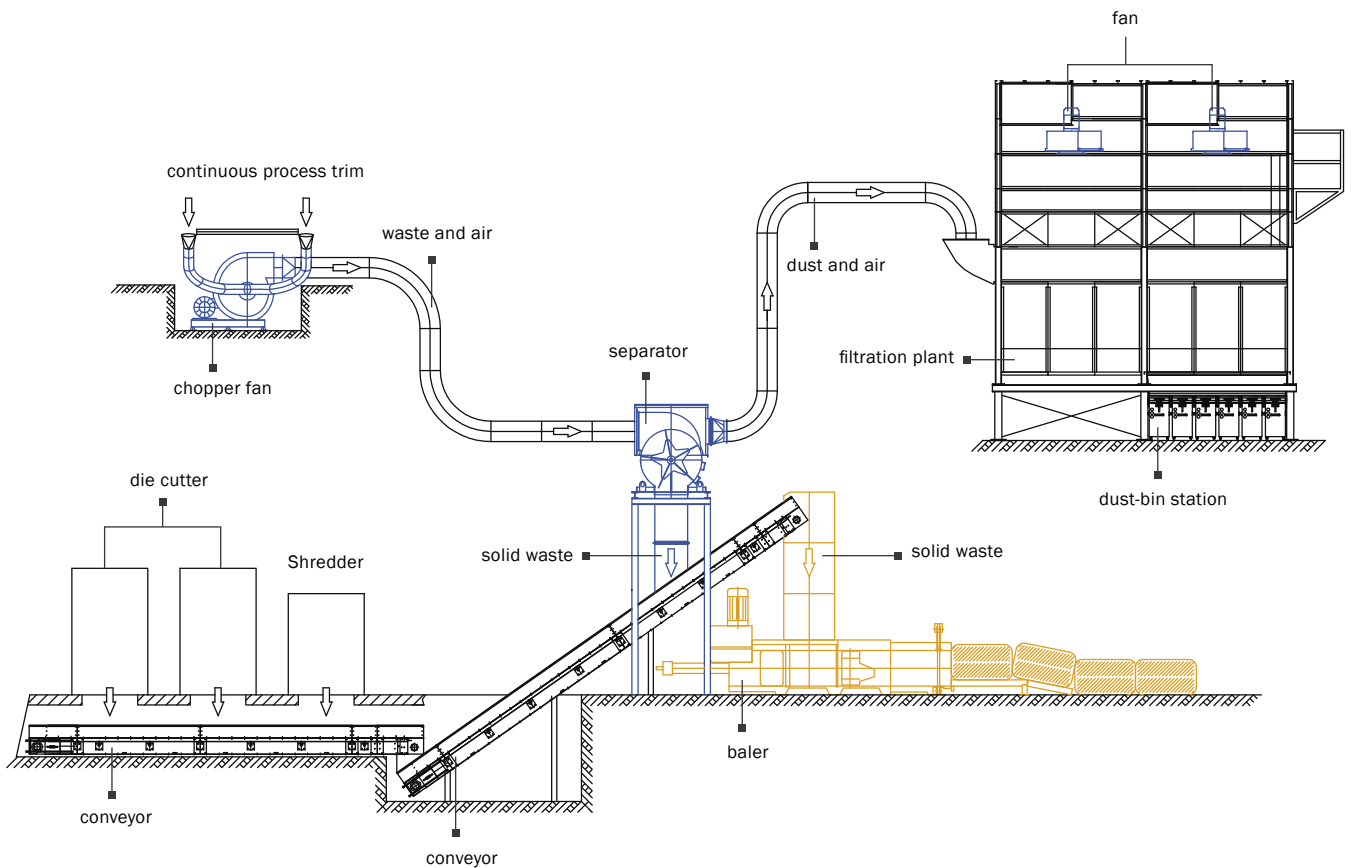
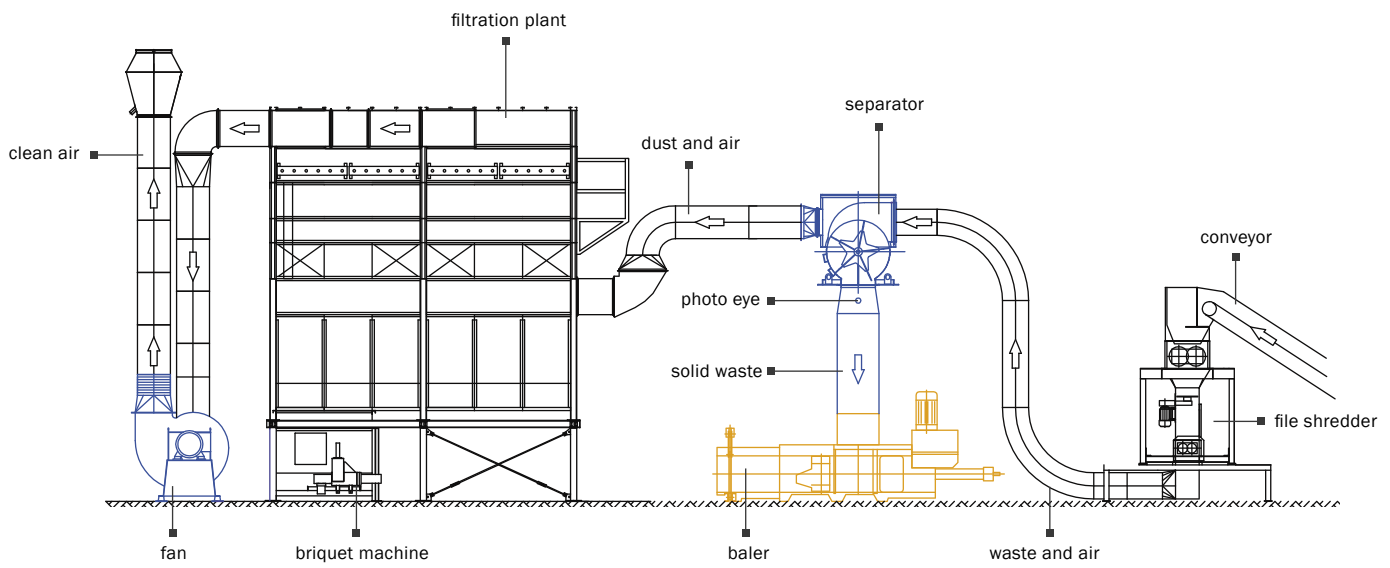
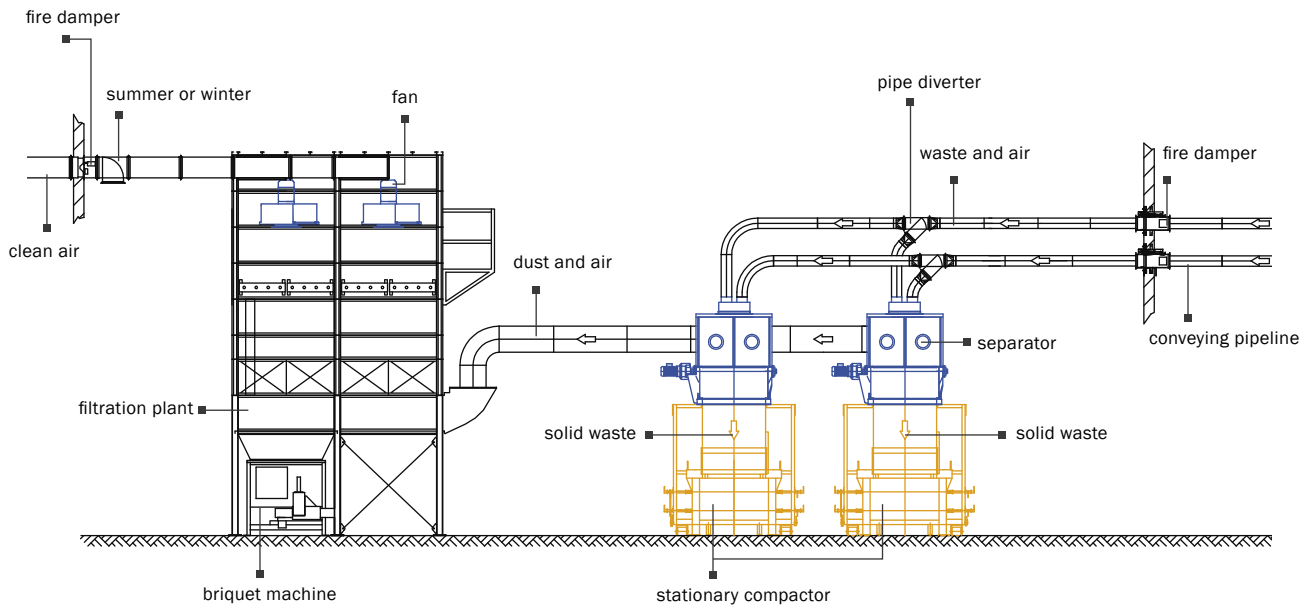
The PHSS-shredders are designed for the requirements of high performance die cutters



◀ PHSS K/G, shredder for die-cuttings, skeletons, gripper margins and lead edges with docking station ▶

PHSS K/B, shredder for stripping station and conveying systems ▶





◀ Suction system feeding two stationary container compactors.

◀ Maculation shredder with suction system for waste extraction. The material is separated, the solids are conveyed to a baler while the dust is transported to a filter and discharged into a briquet machine.

◀ Suction system feeding two stationary container compactors.



The best plant for any case



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