

Central extraction of brushing machines

Reliable collection, extraction and separation of very fine dust from grinding, polishing, deburring and brushing processes



Soundproofing cabin with integrated collection and filtering system. Application: Grinding of FGRP materials (rotor blades).

The Problem

Grinding, and related application processes, produce emissions of fine dust particles which, even using the most advanced production technologies, are impossible to avoid.

Collecting and removing these fine dusts by suction is often required for technical, product-specific, environmental and legal reasons.

Handling these fine dust particles is often made even more difficult by the fact that they can represent a health hazard, be toxic or even carcinogenic.

The Solution

Keller has many years of experience and extensive know-how in pneumatic removal and filtering of fine dust particle emissions.

The modular design of our filtration systems and their components lets us offer you the best possible solution for your specific needs.

Typical Applications and Separation Processes

Grinding/Polishing/Deburring/Brushing

	Dry	Wet
Steel/iron	•	•
Titanium	•	•
Aluminium	•	•
Magnesium	•	•
Wood	•	
Ceramics	•	
Plastics	•	
FGRP/CFRP	•	
Rocks/Bricks	•	

Collection

How dust particles are collected depends on the specific production process. For optimal collection of fine dusts, suction at the point of origin is ideal.

Correctly designed collectors ensure that only a minimum volume of air is required, thus minimizing your investment and operating costs.



Soundproofing cabin with integrated collection and filtering systems
Application: Grinding of machine tool bodies.



Pneumatic removal and filtering during grinding of FGRP materials.

Advantages

- Individual consulting based on our wide range of experience
- Efficient pneumatic removal and filtering of ultra-fine grinding dust
- Protection of the workers in the workplace
- High-efficiency filtration technologies
- Recirculation of clean air
- Constantly high airflow due to continuous cleaning with compressed air

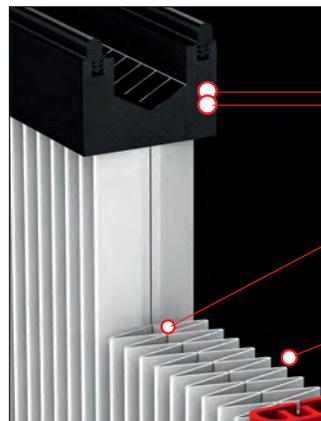
KLR-Filter® elements: powerful and energy-efficient

KLR-Filter® elements are proven effective for a variety of applications. Due to their pleated design, they ensure a large filtration surface while maintaining a compact construction (i.e. they increase surface area without increasing the collector's size).

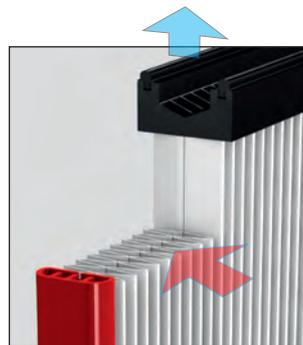
High separation efficiencies are achieved at a very small pressure loss. Since each fold is attached separately, the filter elements no longer require a support body, reducing the weight of each element.

Additional options are available with the KLR-Filter® design, which allows optimal filtration for a diverse range of applications at a reduced cost.

The original Keller KLR-Filter® set a new service life record in this filter design, with up to 120.000 cleaning intervals.



- Head gasket
- Solid head construction
- High rigidity created by pleated filter material that forms separate filter chambers
- Trouble-free flow of recirculated air due to high separation efficiency



Advantages

- 2-3 fold filter surface compared to filter bags → ensures compact filter construction
- Low filter resistance → low energy consumption
- High separation efficiency
- Self-supporting construction → no support bodies required
- Installation possible on the dirty and clean air side
- Easy and quick assembly and disassembly
- Long service life → 20,000 operating hours (max. 3 years)
- Easily cleaner
- Various filter options available: PTFE membrane, antistatic, and/or silicone-free
- Temperature resistant up to 160 °F, as an option up to 230°F



Option: Cartridge filter elements

Pneumatic Removal and Filtering Grinding, Polishing, Deburring and Brushing Processes



Examples of implemented systems



VARIO, dust collector



Venturi wet scrubber (open system)

References

You'll find our systems in the most diverse applications, among them, the plastics industry (FGRP/CFRP), the ceramics industry, as well as in the metal industry, (e.g. in grinding spring seats and in body-in-white shops).

We'll be glad to provide references upon request.



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