

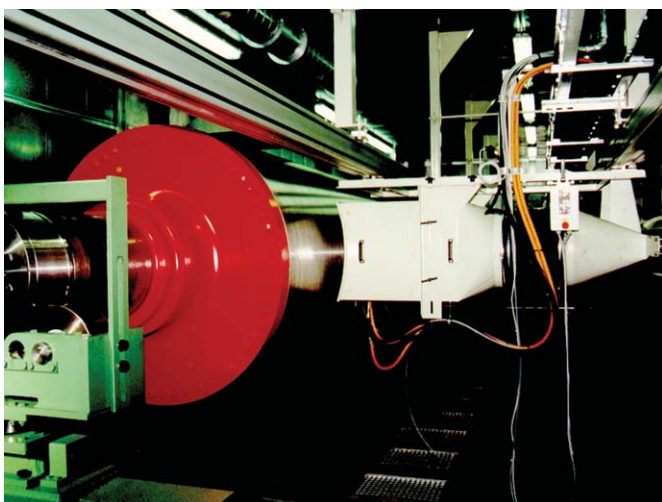
EXTRACTION AND SEPARATION FOR THE THERMAL SPRAYING PROCESS

THE TASK

To efficiently collect the overspray in thermal spraying processes, it is necessary to install an adequate extraction system. The extraction ensures a uniform quality of the required material characteristics of your components. Hazardous substances in different concentrations are created and must be treated based on their chemical composition, temperature and velocity. Consideration must be given to the production processes specific to the product, affecting the manner of collection, separation and extraction, as well as protective measures affecting personnel with respect to environmental quality. Managing air quality can often be very complex because of the presence of extremely fine, explosive, harmful or toxic dust.

THE SOLUTION

Keller Lufttechnik relies on many years of experience and skill in extraction and separation during thermal spraying processes. Our technology has proven itself in a variety of projects. The modular design of our filtration systems and their components enable us to recommend the best solutions for your requirements.



THE KELLER ADVANTAGE

Our long-standing experience demonstrates that a reliable, trouble-free and environmentally-sound operation can be ensured with our system solutions.

High efficiency	Consistent air flow
-----------------	---------------------

Compact design	System solutions
----------------	------------------

Reliable references.

What that means for you: fully engineered systems utilizing the latest process technologies.

ADVANTAGE . HIGH AVAILABILITY

Extremely long service life when using our SINBRAN® filtration technology. Keller warrants 20,000 operating hours and high availability ensuring economical operation.

What that means for you: fewer spare parts and lower disposal costs, as well as reduced production downtimes and maintenance.

ADVANTAGE . CONSTANT AIR FLOW

Constant air flow through uniform surface filtration is achieved with compressed air pulse de-dusting during operation.

What that means for you: consistent operating conditions despite large volumes of dust.

ADVANTAGE . COMPACT DESIGN

Modular, compact design for optimal extraction efficiency.

What that means for you: optimized investment costs and minimized space requirements.

ADVANTAGE . SYSTEM SOLUTIONS

Project planning solutions for specific collection and separation technology, ductwork, noise insulation, advanced fire and explosion protection methods, and comprehensive service.

What that means for you: experienced Keller contacts - no warranty issues

FILTER ELEMENTS

SINBRAN® is a combination of sintered, porous polyethylene with a GORE™ PTFE membrane laminated onto it which combines the advantages of membrane filtration with those of rigid body filtration. The solid rigid body with a large filter area in minimum space ensures low pressure loss and a long filter life cycle.

The GORE™ PTFE membrane results in surface filtration with extremely high efficiency. The dust particles are almost completely retained at the filter surface and cannot clog the sintered body as it is penetrated by the cleaned air. SINBRAN® differs from conventional filter media because of extremely low pressure drop. Short pulses of compressed air during the filtration process ensure effective filter cleaning.

SINBRAN® is a joint product of Keller Lufttechnik and W. L. Gore & Associates GmbH.

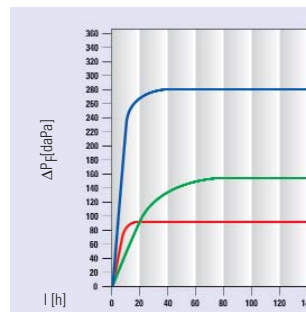
As an alternative to our SINBRAN® filter elements, we also offer you our superior "Meltblown" quality cartridge filters.



SINBRAN® filter elements

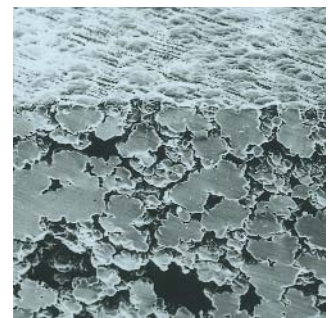


Cartridge filter elements



- standard rigid body filter
- textile filter media
- SINBRAN®

The SINBRAN® filter elements show distinctly less pressure drop in comparison to conventional filter elements during the entire operating period and at the same air-to-cloth ratio. In this case we have a pollination with limestone powder at a constant surface load.



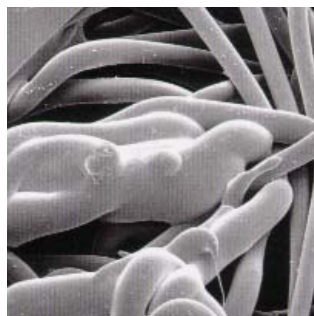
The extremely thin and smooth GORE™-membrane creates high filtration efficiency with low pressure loss.

THE RIGHT FILTER MEDIUM FOR EACH TYPE OF DUST

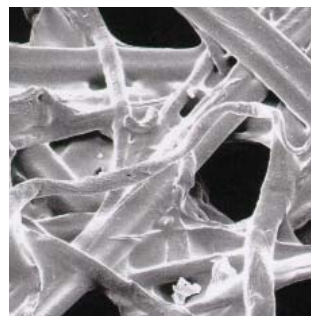
With our large choice of filter media, it is possible to select the appropriate filter for your applications efficiently and economically. Whether you are purchasing a new system or retrofitting an old one, we can supply the proper filter medium for you.



SINBRAN® filter surface filtration, smooth surface, fine texture



pocket-type filter (polyester needle felt) deep-bed filtration, large texture



cartridge filter (cellulose) deep-bed filtration, rough surface, large texture

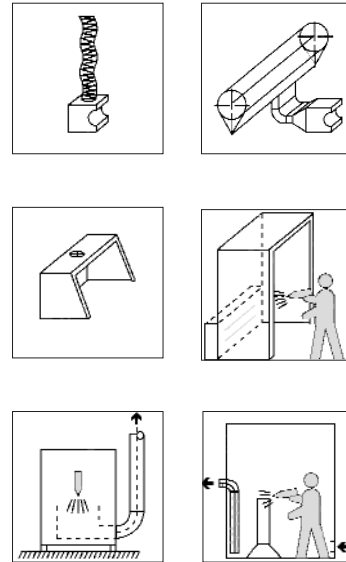
Types of filter media - available on the market

- Mat filters
- Filter bags
- Pocket-type filters
- Cartridge filters
- Rigid body membrane filters

COLLECTION

The type of collection is determined by the thermal spraying process and the size of the part. All excess material should ideally be extracted at the source. This reduces the extraction flow volume to a minimum. Production processes are confined mainly to closed booths equipped with extraction systems to prevent dust from escaping, to protect machinery, and for quality assurance purposes, as well as for noise insulation and maintaining the ambient air temperature. Keller Lufttechnik offers all types of collection methods appropriate for the production process - from extraction hoods to booths. With properly designed systems, minimal air volume is required for extraction, which reduces investment and operating costs.

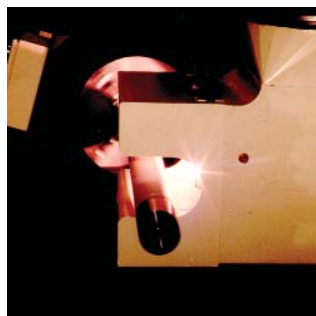
Benefit from our experience!



Robotic spraying cell with capturing element AZ 25



Customized capturing element



Capturing element



VARIO 4 with additional dosing unit

AIR FILTRATION

SYSTEM SOLUTIONS



SAMPLE INSTALLATIONS



REFERENCES - brief version

- BMW, Landshut
- Euroflamm, Bremen
- Federal Mogul, Friedberg
- Leistner, München
- MTU, München
- Praxair, Ratingen
- Siemens, Berlin
- Saint Gobain, Belgien
- Zecher, Paderborn

GTS-ASSOCIATION MEMBERSHIP

(German Association for Thermal Spraying)

Keller Lufttechnik has been a member of the GTS Association for many years, and is well-informed of the latest technical data concerning thermal spraying.

© Keller Lufttechnik - all rights reserved. Subject to modifications 07/2008 www.keller-company.de



Keller USA, Inc.
P.O. Box 546, 54 Great Hill Road
Naugatuck, CT 06770
Phone (203) 729-0145 . Fax (203) 729-0148
E-mail: info@kellerusa.com
www.kellerusa.com