

HJS Industrial Filtration



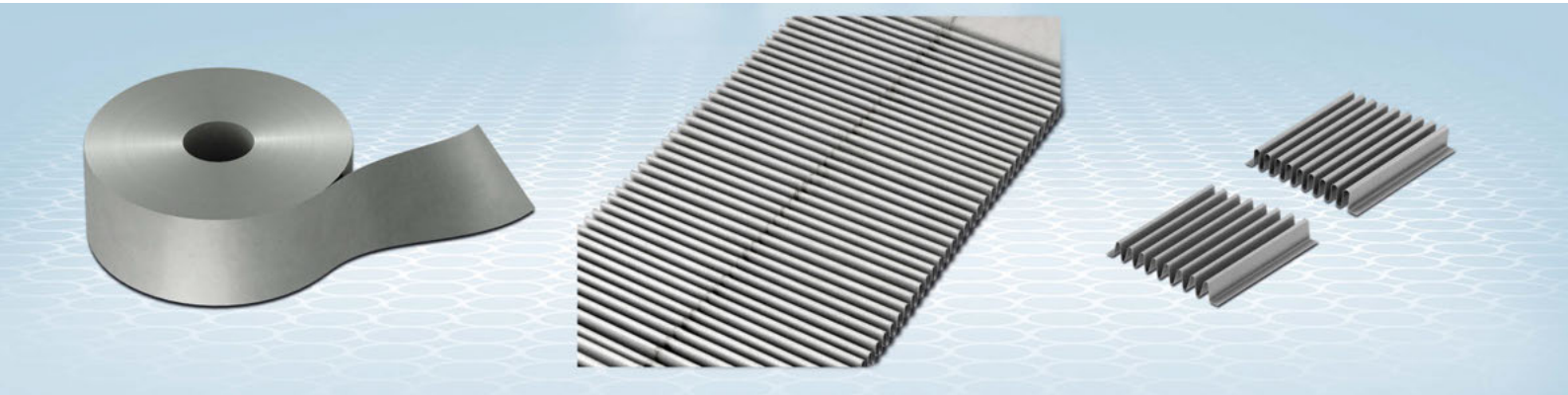
Innovation through Experience
HJS Sintered Metal Technology

HJS Emission Technology

HJS Emission Technology GmbH & Co. KG is a family-owned, medium-sized company, established in 1976 and based in Menden, Federal Republic of Germany. Around 500 employees are engaged in the development, production, and marketing of modular systems for reducing pollutant emissions from combustion engines.

Above-average investment in research and development, technological excellence, and high performance as a specialist in the market have made the company a renowned address for state-of-the-art solutions in the field of exhaust gas aftertreatment. The focus of activities is on practical solutions for diesel for on-road and off-road applications. Solutions for gasoline engines are also part of the program.

HJS is an experienced, reliable system supplier and integrator for OEM and aftermarket customers. Customer proximity, flexibility, and the broad product portfolio as well as practical designs secure the excellent market position. The company has proven international partnerships. Competent representatives on site complement the successful concept. HJS is thus making a significant contribution to meeting environmental and climate targets in Germany and worldwide.



Sintered Metal Filter Media - SMF®

More than 2 million m² of HJS Sintered Metal Filter media (SMF®) have been produced over the past 15 years, with a peak production of 300.000 m² p. a. It is the objective now to utilize the known advantages of this thin, pleatable SMF® material, such as sharp separation efficiency at 10 µm or good cleanability, for new industrial applications, like hot gas, liquid and process filtration.

SMF® material is a thin (< 0.4 mm) porous sintered metal in which a precisely defined stainless steel powder is sintered and supported by an

expanded metal carrier. This results in a mechanically and thermally highly stable filter medium, which can be pleated similar to paper or synthetic filter media.

The SMF® base material is manufactured on a highly automated continuous production line and comes as a quasi-endless strip, wrapped on a coil. In a subsequent step the material, which has been qualified for hot gas and exhaust filtration can be processed into filter elements typical for aforementioned applications.

Parameter	Unit	Value SMF®	Test Method
Weight	g/m ²	1650	
Thickness	mm	0.38	
Porosity	%	45	
Alloy		310S/1.4845*	
Air permeability @ 200 Pa	l/dm ² min	20	ISO 4022
Bubble Point	mbar	35	
Conductivity	S/m	0.5 x 10 ⁶	
Operating temperature	°C	450 (air, 50% rel. hum)	
Peak Temperature	°C	800	

HJS Sintered Metal Technology

- Sintered metal band material for flexible mass production
- Flexible metal forming and design via pleating cutting, folding and gluing
- Highest filtration efficiency
- Reduced thickness of only 0.4 mm
- Back flushable in air and liquids
- Durability up to 450 °C
- Coatable and conductive surface



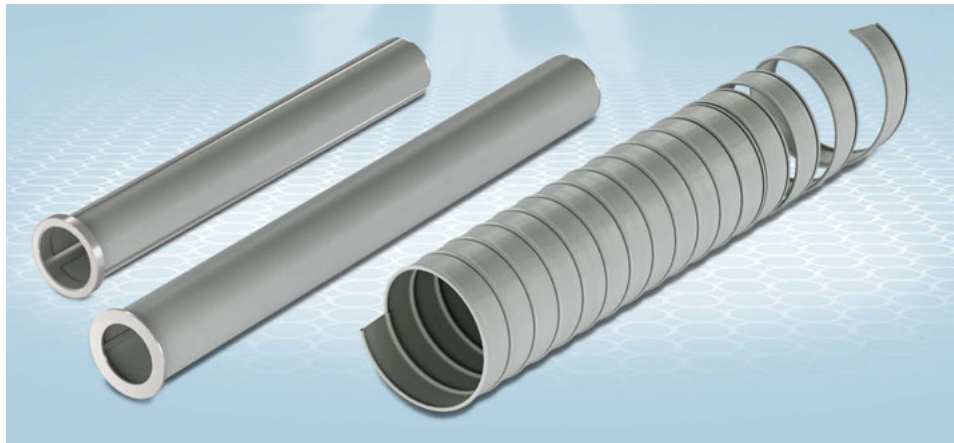
LIQUID SMF®-Liquid Filtration

SMF® serial material has subsequently been qualified in the multi-pass test recognised in the hydraulic and process filtration industry in order to obtain a meaningful classification of the SMF® serial material. These tests have been performed in the very well-equipped new development centre of BOLLFILTER in Kerpen, Germany. The average results of these multi-pass tests according to ISO 16889 carried out on several discs with a diameter of 125 mm.



GAS SMF®-Hot Gas Filtration

To meet the specific requirements in air pollution control applications, the SMF® serial media has been adapted and qualified at a renowned test institute according to the test standards relevant for APC. The tests, which were carried out according to VDI 3926 and ISO 16890 standards, using 125 mm diameter flat sheet probes, show a F9 filtration efficiency (according to old EN779).



DUST SMF® target segments & applications Air Pollution Control

Industries across the globe produce an ever increasing amount of harmful emissions of dust smoke, and aerosols which further contributes to greenhouse gases and global warming. New environmental regulations will require filter manufacturers to provide new and inventive solutions to address this.

The cement industry is responding to an increasing world demand, however, it's one of the most emission-intensive industrial processes. The manufacturing process generates huge air volumes of up to 1,000,000 m³/h to move and collect the cement dust which is cleaned in large filter bag houses.

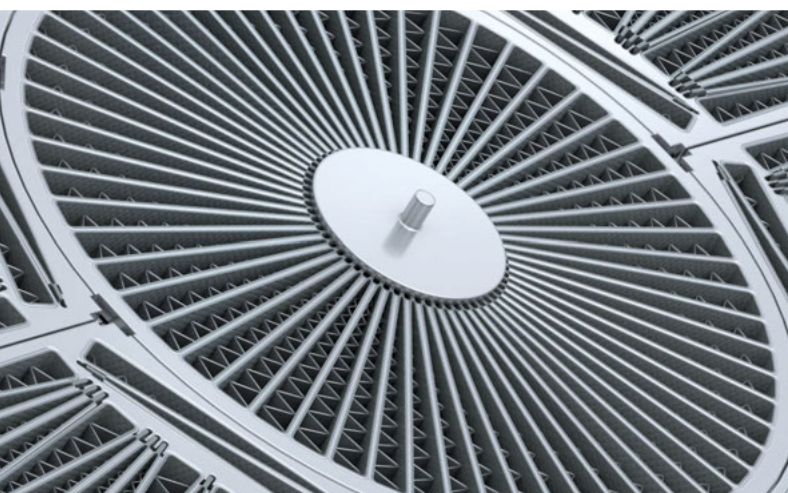
HJS Sintered Metal Filter Technology (SMF®) offers very specific material advantages which will serve as a growth platform. Due to the high inherent stability and strength of the SMF material, existing fabric filters can be replaced by modular filter cartridge elements. Tests have proven the high filter efficiency and cleanability of SMF®.

In contrast to the current filters used, filtration with SMF® can take place at up to 450 °C in continuous operation. This results in an immense reduction of the energy requirement (CO₂) that would normally be necessary for cooling the exhaust gas. In addition, the material offers the possibility of a catalytic coating, e.g. for the reduction of harmful carbon monoxides.

The SMF® filter material is currently being mass-produced on highly automated production lines.

Put your trust in **HJS** and benefit from our extensive experience

- > Products for liquid and hot gas filtration
- > Certified reduction of emissions
- > Products for OEM and retrofit
- > Protection of human health and the environment



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