MEISER

Expanded Metal

Filtration

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Interesting facts

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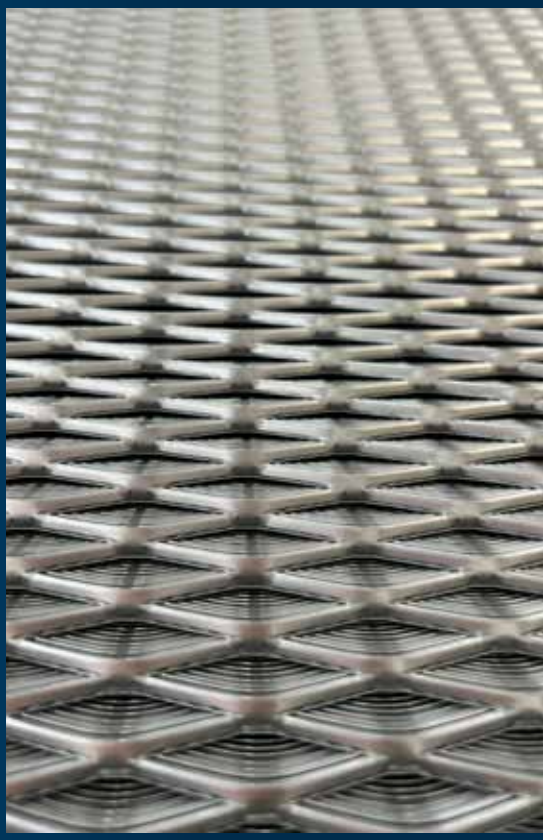

Efficiency with vision

Even after 70 years of company history, MEISER remains true to the principles that made the company strong: working reliably, thinking long term, taking responsibility and maintaining direct contact with customers. Tradition is not about looking back, but it does form the basis for the further development that extends far beyond the company's headquarters in Saarland.

Today, around 4,000 employees work for MEISER, including more than 2,800 in Germany. The two main production sites in Saarland and Saxony form the company's industrial foundation. They are complemented by production facilities in Dubai, Hungary, France, Belgium, Egypt, Brazil, Morocco, Romania, the Czech Republic, the US, Mexico and Turkey. In addition, further branches connect us with all major markets.

This creates a combination that defines MEISER: international capability and personal support on site. Customers benefit from short distances, direct communication and an understanding of regional requirements – backed by the experience of a company that has been active in different markets for decades and has a broad market presence.

As a steel-processing company, MEISER is active in the fields of gratings, sheet metal profiles, GRP, slit strip and galvanising. Further business areas, such as road safety, expanded metal, viticulture products and mounting systems for photovoltaic installations as well as scaffolding and sliding fittings, expand the portfolio and show how versatile the company's expertise can be.

Managing Directors Ulrich and Wolfgang Meiser

For us, an important factor in our quality is our high level of in-house value creation. With our own galvanising plants, slitting facilities and cold rolling mills, MEISER can control and coordinate all the central processes itself. This creates reliability – from planning through to the finished product. Modern production technology, state-of-the-art machinery and committed employees provide the foundation for stable processes and economical solutions.

Despite this growth, the focus on the customer remains decisive. For MEISER, progress means not only new technology or greater capacities, but, above all, better solutions developed through direct exchange. Many exceptional projects have emerged from this collaboration. They show what becomes possible when experience, proximity and trust come together.

We combine 70 years of company history with international presence and personal support. Customers can rely on this, today and in the future. MEISER – built for generations.

MEISER

Our business divisions are synonymous with leading solutions in steel processing.

SCAN

From the initial concept to the finished product, we support you with our expertise and innovative solutions in steel. We manufacture, finish and deliver with clearly defined responsibilities.
We operate cost-effectively and responsibly. With strong regional roots and an international presence, we provide reliable planning for your projects – from the initial consultation through to final acceptance.

Gratings

Customised solutions for complex tasks

meiser.de/en/business-areas/gratings

Road Safety

Well-thought-out solutions for the most stringent safety requirements

meiser.de/en/business-areas/road-safety

Solar Systems

Innovative mounting technology for the energy of tomorrow

meiser.de/en/business-areas/solar-systems

Agri Solutions

Genuine expertise for growing demands

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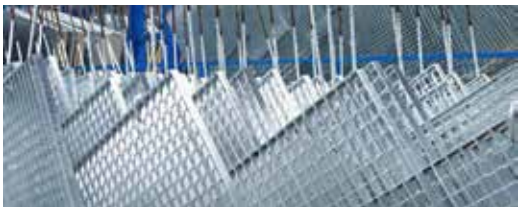
Expanded Metal

Custom-made expanded metal designs at their best

meiser.de/en/business-areas/expanded-metal



Coating

Precision coatings for reliable corrosion protection

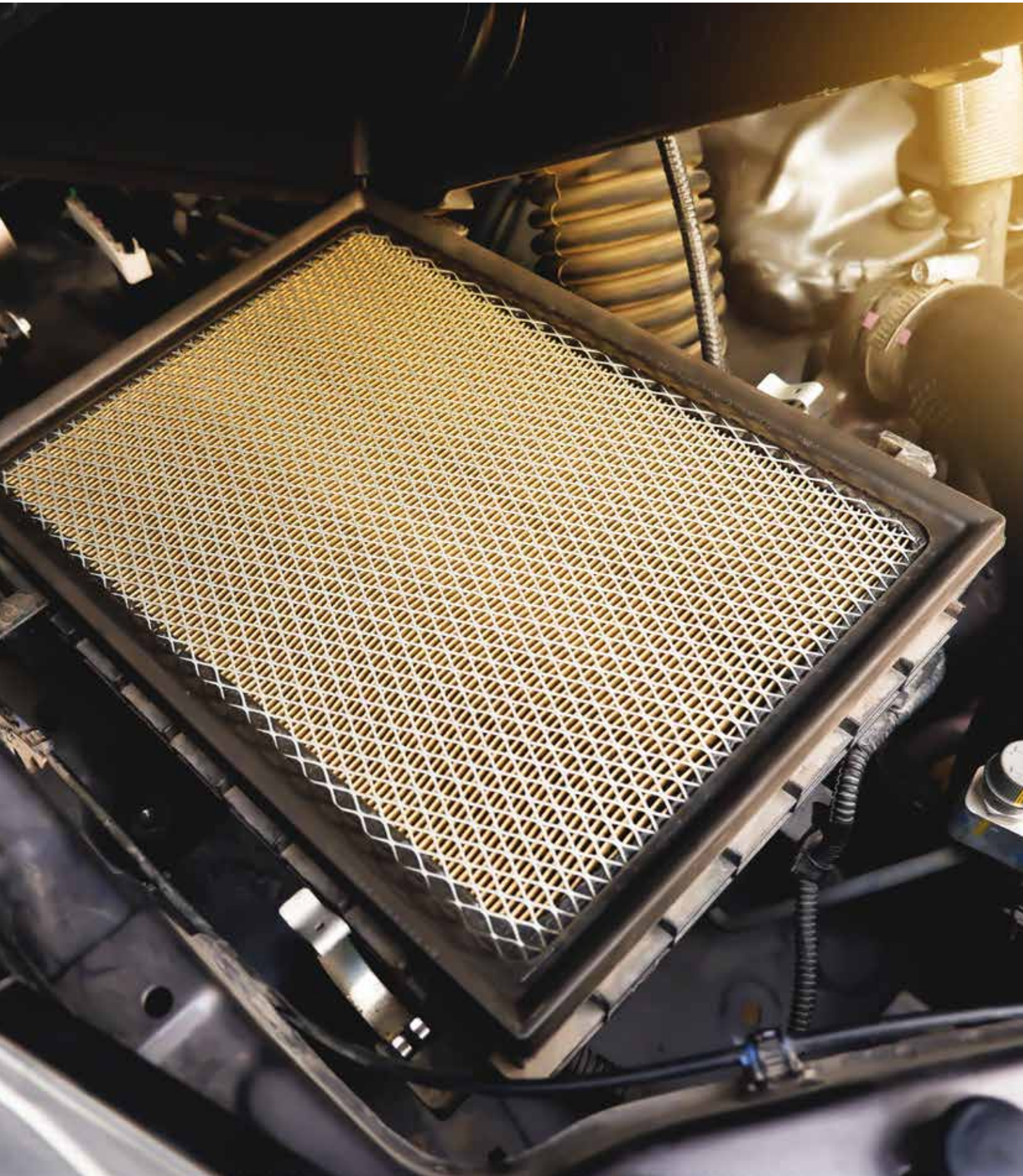
meiser.de/en/business-areas/coating

Other Solutions

Versatile solutions for specific challenges

meiser.de/en/business-areas/other-solutions

OVERVIEW -
Expanded Metal



Our expanded metal stands for high-quality, versatile mesh solutions “Made in Germany”. Expanded metal is produced by uniformly stretching and cutting metal sheets – resulting in a particularly lightweight yet extremely sturdy material with an open cross-section. This unique combination of dimensional stability, load-bearing capacity and flexibility makes expanded metal an indispensable material for industry, architecture and many technical applications.

As a medium-sized branch with around 65 dedicated employees at our production site in Hanover, we manufacture just under 6,000 tonnes of expanded metal grilles annually – made from aluminium, steel, stainless steel, galvanised steel, nickel, copper, titanium and other materials. With our many years of experience, we cover the entire spectrum: from micro mesh with the finest meshes for filtration and the automotive industry to large-mesh screens for demanding architectural projects.

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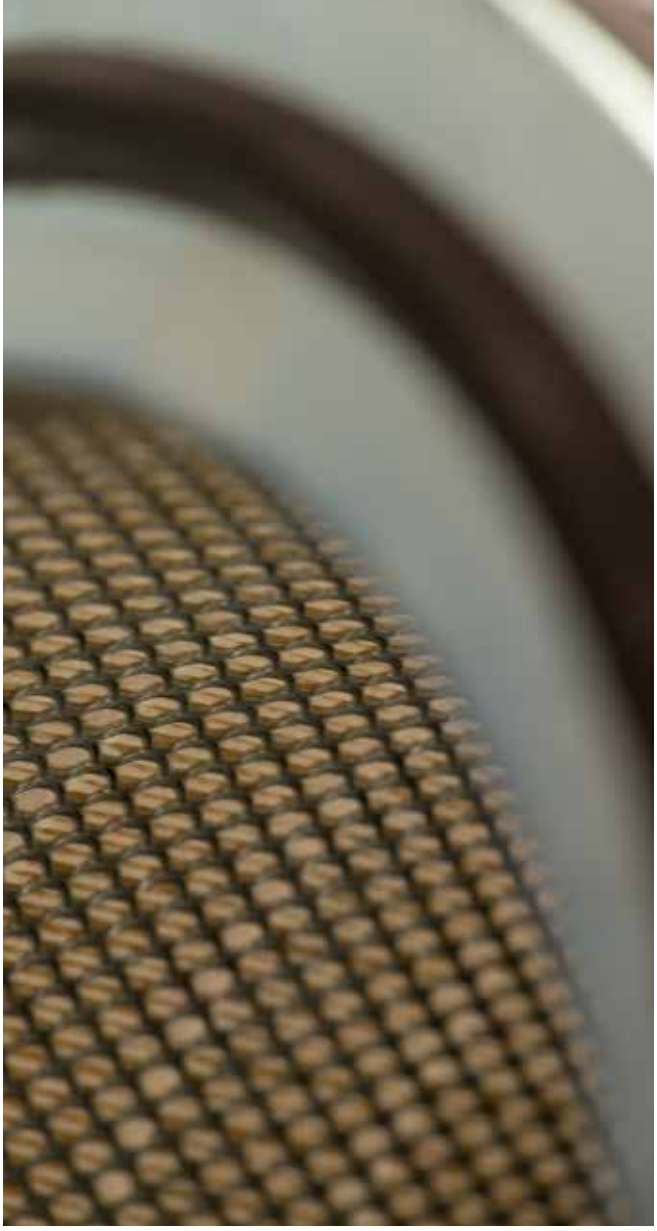
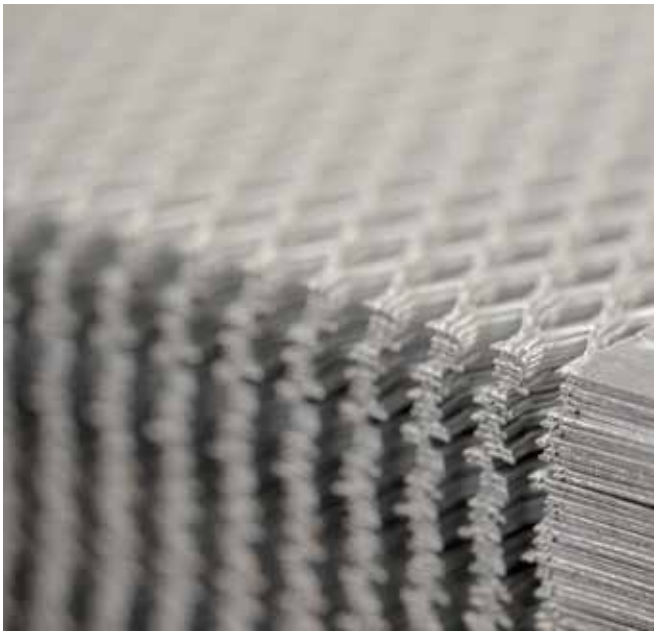


Versatile and customisable to suit any application



A stack of expanded metal awaiting further processing

Our particular area of expertise lies in the field of air filters. Five of Europe’s largest air filter manufacturers use our expanded metal mesh in their products. These are used, for example, in the automotive and agricultural sectors, as well as in air purification. Other areas of application include:

- Air filters
- Activated carbon filters
- Oil filters
- Grease filters
- Cleanroom filters
- An integral component of heat shieldsin automotive powertrains
- and many more

Filtration -
Purity through geometry

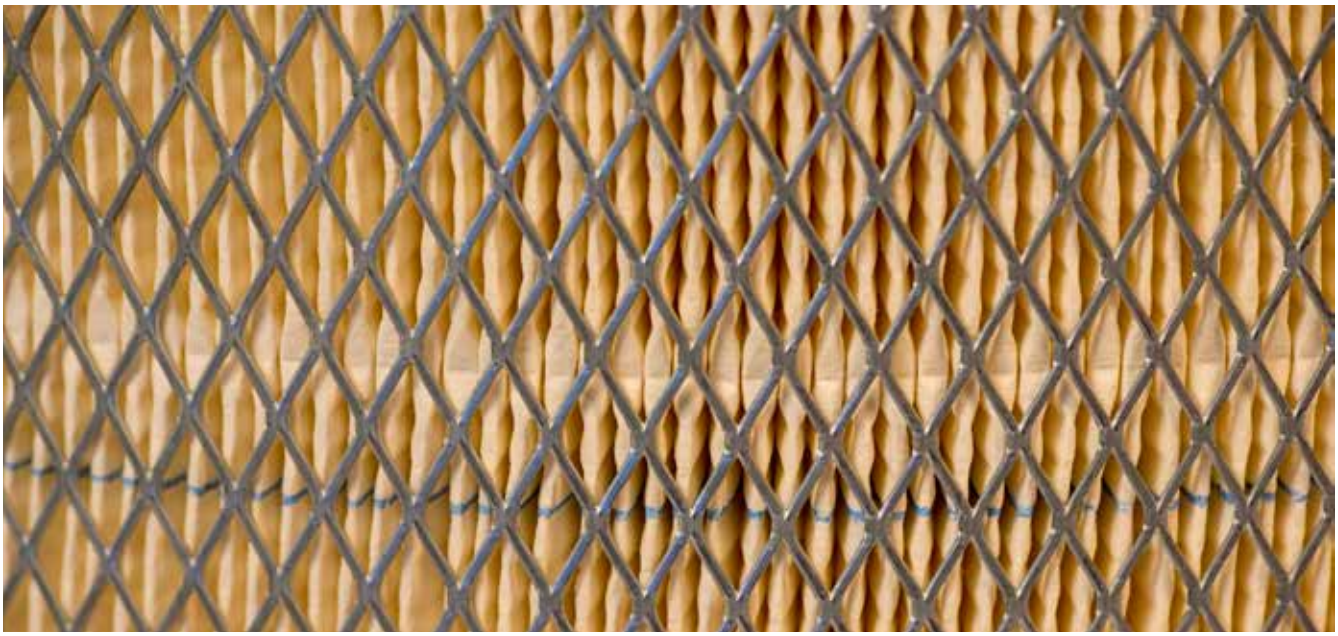
Round expanded metal filters, ideal for filtering air and liquids

Optimal permeability combined with high stability

We provide innovative solutions for efficient filters.

Expanded metal is ideal as a support material for filter media. The flow rate and particle size distribution of the filtered material can be precisely controlled through the wide range of variations in the height and open area of the cross-section, whilst maintaining the stability of the filter body. We develop the mesh dimensions and size of our filter elements in collaboration with our customers.

We look forward to finding the right solution for your requirements too!

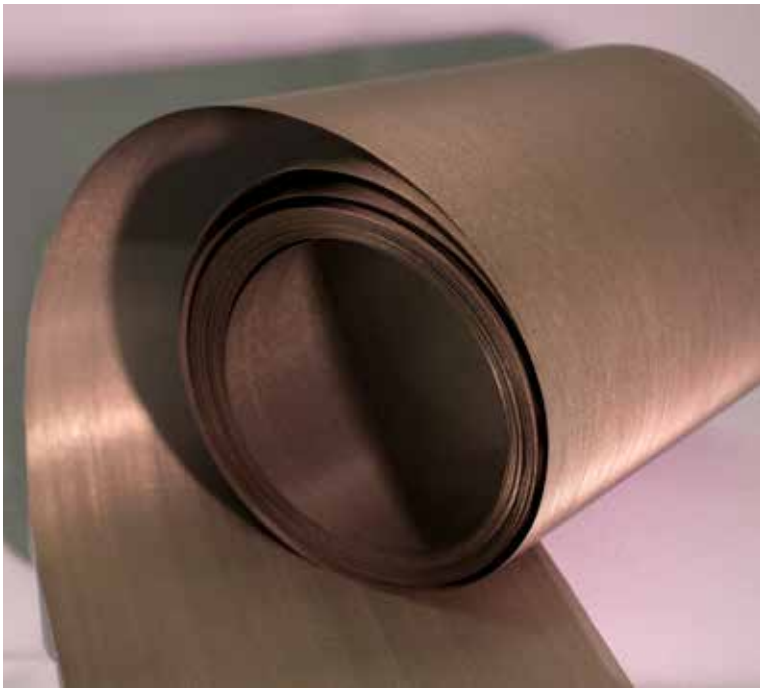


Cabin or engine air filters often contain expanded metal to support the paper or fleece media

Filter elements - Efficiency with expanded metal

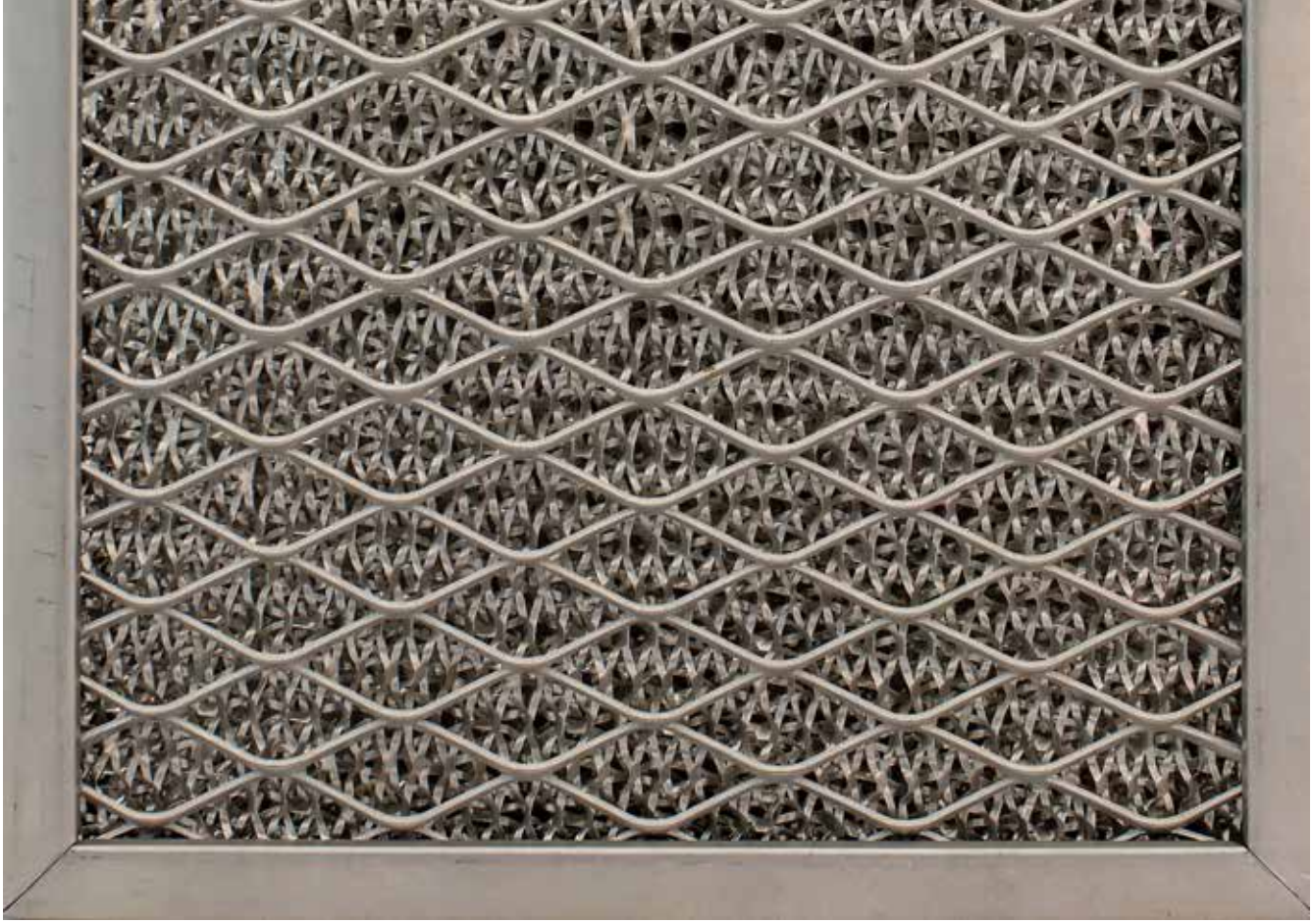
Advantages and characteristics of expanded metal

- Low purchase and maintenance costs
- Washable and reusable
- Low flow resistance
- High efficiency
- Robust construction
- Maintaining and cleaning your filter in accordance with our recommendations keeps your maintenance costs to a minimum and ensures a long service life

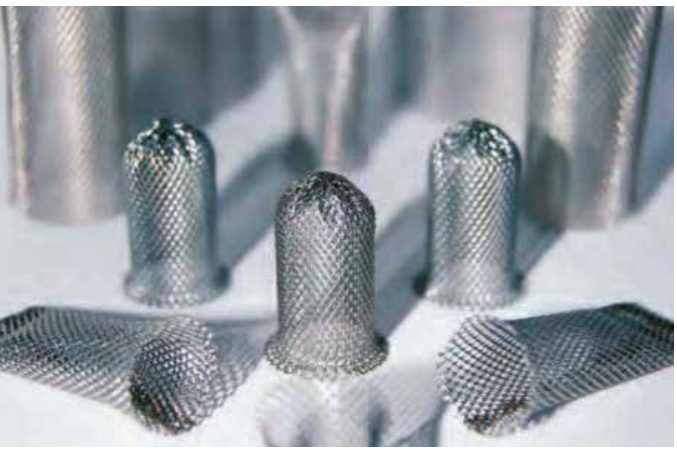


The smaller the mesh size, the finer the filtration

Expanded metal is found in many filter systems – including in the home



In this filter, multi-layer expanded metal ensures fine particle separation and maximum stability – ideal for air, oil or industrial processes



Top: Expanded metal keeps unwanted guests out reliably
Bottom: Round cartridge filter elements are often used in engine oil, fuel or hydraulic filters

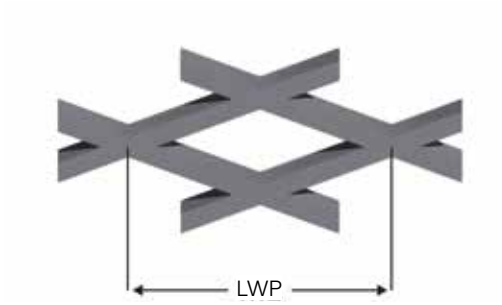
Expanded metal can be manufactured specifically to meet your particular filtration and performance requirements, offering the advantage of cost savings compared to other types of mesh.

Working closely with our customers, we have developed numerous prototypes and filtration applications that help our customers increase efficiency and minimise production costs.

Take advantage of this wealth of experience for your products and filtration solutions! Our extensive and modern range of machinery enables us to implement your specific requirements quickly and comprehensively.

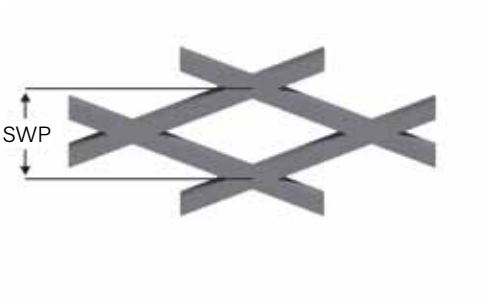
Interesting facts – about expanded metal

Long way pitch (LWP)



The distance between two opposite nodes along the long diagonal of the mesh – an important parameter for the sizing of expanded metal.

Short way pitch (SWP)



The distance between the nodes along the short diagonal of the mesh – this affects air and light permeability as well as strength.

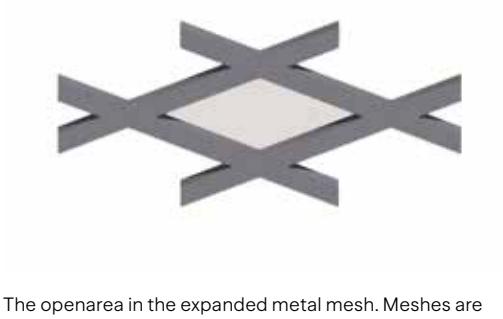
Strand width (SWDT)

The width of the metal material between the openings – this affects the stability, load-bearing capacity and appearance of the mesh.

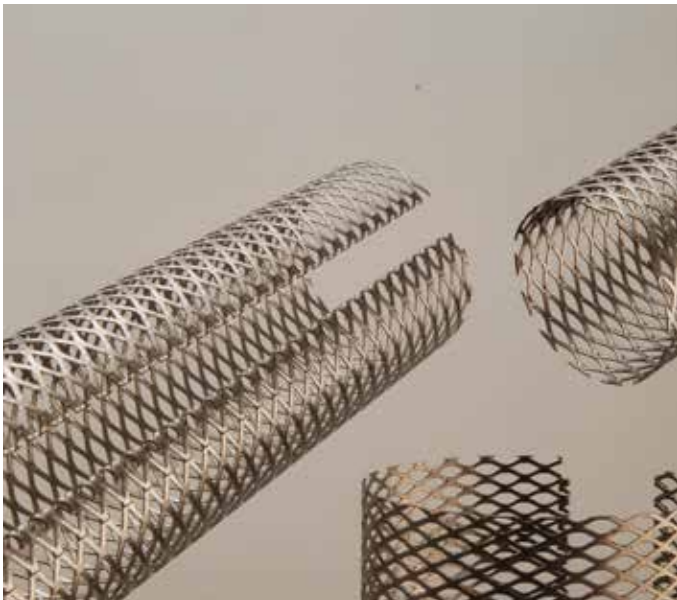
Strand thickness (STK)

Thickness of the material used – important for load-bearing capacity, weight and finish.

Mesh aperture



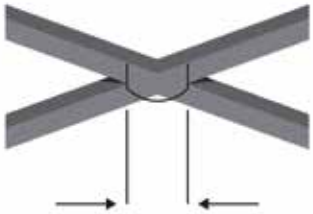
The openarea in the expanded metal mesh. Meshes are classified according to their mesh length and width and are selected depending on the intended application.



Knuckle

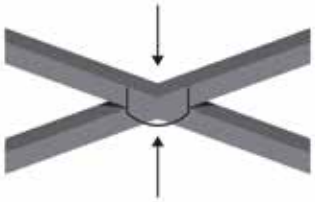
The area where four strands intersect – a structural reference point for determining mesh parameters and strength.

Knuckle length



Dimensions that describe the distance between two long diagonals and affect dimensional stability and aesthetics.

Knuckle width

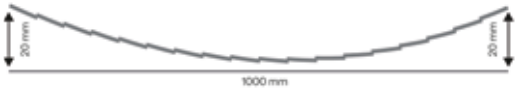


Dimensions, approximately twice the strand width (SWDT), and their impact on dimensional stability and aesthetics.

Expanded metal thickness

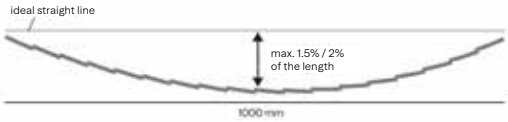
Total thickness of the expanded metal

Planarity



Expanded metal is considered flat if, when laid on a flat surface with the curvature facing upwards, the greatest distance between the sheets and that surface does not exceed 20 mm (per 1000 mm width). For heat-resistant sheets, this distance may be 40 mm.

Curvature



Expanded metal is considered to be straight along its longitudinal edge if, for sheet thicknesses up to 3 mm, the centre of curvature deviates from the straight line by no more than 1.5% of the length; for sheet thicknesses exceeding 3 mm, it deviates by no more than 2% of the length of the straight line.

since 1956
in Schmelz-Limbach

since 1991
in Oelsnitz/Vogtland

1. Meiser UK Ltd
2. The Expanded Metal Company
3. RST Meiser Nederland B.V.
4. Meiser Sarl
5. Meiser Fameco S.A.
6. Distriroute SAS
7. Gebrüder Meiser GmbH
   Meiser Solar GmbH
   Meiser Road Safety GmbH
8. PMI MEISER Gitterroste AG
9. Meiser Agriculture Solutions S.A.S.
10. Meiser Rejillas Hispania S.L.
11. Meiser Agriculture Solutions Italia
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34. Hady MEISER Egypt
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36. Lionweld MEISER LLC

MEISER's production sites and branches. Nationally and internationally

Production sites

Offices

MEISER Worldwide

SCAN

Scan here to see all MEISER locations and other branches – worldwide

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