




Enka Tecnica

REIFENHÄUSER GRUPPE

The Precision Engineers







Making holes. Not just any way, but with a precision that is second to none. And with an approach to efficiency that is not focused on what is possible, but rather on your special business needs. Superior products, economical processes, trusting and reliable partnerships: that is what Enka Tecnica embodies. After all, our passion is all about the art of making the perfect hole. And we have been experts in that for more than 100 years. Now the only question is:

When can we make you excited about our love of detail?

The modern world shapes its course. With spinnerets from Enka Tecnica.

Whether cleaning cloths, wadding, cigarette filters, carpeting, sterile disposable clothing, dialysis filters, high-strength fabric, carbon composite materials, automobile tires, insulation, filters or the clothes of six billion people – it is hard to imagine today's world without synthetic fibers. Synthetic fibers started conquering the world in the first half of the last century and haven't stopped since.

And spinnerets made by Enka Tecnica were there from the very start. Because these high-tech components, with up to tens of thousands of capillary holes, are fundamental elements in the production of fibers.

As one of the pioneers in the spinneret field, Enka Tecnica has long known what really matters: perfection, efficiency and experience. Exactly what you can expect from us. And 100 % "Made in Germany". From wet and dry spinning, micro

components to melt spinning, Enka Tecnica knows the plastic extrusion market like no other. A market that offers high growth potential. In order to be one crucial step ahead in technology, Enka Tecnica builds on support from a large network: the Reifenhäuser Group. For Enka Tecnica as a separate and independent member, this means greater development capacities and an increase in the speed of delivery of technological innovations to market.

Via the Reifenhäuser Network, Enka Tecnica is present in all global markets for its customers.



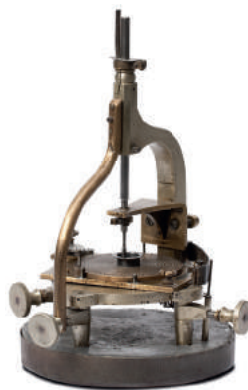
SPINNDÜSENFABRIK GRÖBZIG

1910

Spinndüsenfabrik Gröbzig spinneret factory founded. On 30 June 1909, watchmaker Christian Friedrich Eilfeld registers his patent for the world's first metal spinneret.

**1930s**

Worldwide success of the metal spinneret. Word about the first metal spinneret spreads quickly throughout the world.

**1945–1990**

Leading position in Eastern Europe. The Spinndüsenfabrik Gröbzig spinneret factory becomes one of the leading manufacturers of spinnerets in Eastern Europe – and maintains its position for decades, until the time of the German reunification.



VEREINIGTE GLANZSTOFF-FABRIKEN, LATER RENAMED ENKA / AKZO NOBEL

1899

Vereinigte Glanzstoff-Fabriken, later renamed Enka / Akzo Nobel, is founded. On the basis of the patent to manufacture cellulosic filament yarn, registered in 1897, the Vereinigte Glanzstoff-Fabriken factories were founded in 1899 in Wuppertal, Germany. Several years later, the name is changed to Enka.

**1945–1998**

From a department to an independent company.

The factory in Heinsberg-Oberbruch evolves into a leading production site for synthetic fibers in Europe. To meet the steadily growing requirements for high-end spinnerets, the in-house spinneret unit gradually develops into an extremely efficient and technically advanced department – and the nucleus of the Enka Tecnica company, established in 1998.

Enka tecnica

**1927**

The American company Engelhard Industries starts with the production of metal spinnerets for the first time in 1927.

ENGELHARD INDUSTRIES, LATER WETZEL GMBH

Most ordinary companies can look back on one history. We are backed by three of them.

Today, Enka Tecnica is one of the world's leading specialty providers of spinnerets and precision components.

And certainly not by chance – our company is backed by the bundled know-how of three industry pioneers: Spinn Düsenfabrik Gröbzig, Vereinigte Glanzstoff-Fabriken (later Enka / Akzo Nobel) and the American-Swiss company

Engelhard Industries (later renamed Wetzel GmbH). Over the years, buyouts and sales have merged the paths of the three long-established companies. And have united more than 100 years of experience and expertise to create a sustainable company with excellent prospects for the future. Medium-sized, independent and owner-managed.

2003

Company acquired by Enka Tecnica.

The long-standing company is acquired by Enka Tecnica in 2003.

2009

Enka Tecnica becomes independent.

After many decades, Enka Tecnica once again becomes an owner managed company as a result of a management buyout.

enka || tecnica

ENKA TECNICA

1998

Enka Tecnica is founded.

The present-day company, Enka Tecnica, is established in 1998 in the German city of Heinsberg (near Aachen) as an independent company under the umbrella of the Enka group.

Enka tecnica

1993

After its acquisition by Wetzel GmbH, the company develops pioneering production procedures using laser technology.



2015

Acquired by Reifenhäuser. Enka Tecnica becomes a member of the Reifenhäuser Group and will remain separate and independent.

Site opening in Kabelsketal, Germany.

Enka Tecnica opened its high technological production facility at its new site in Kabelsketal, Germany.

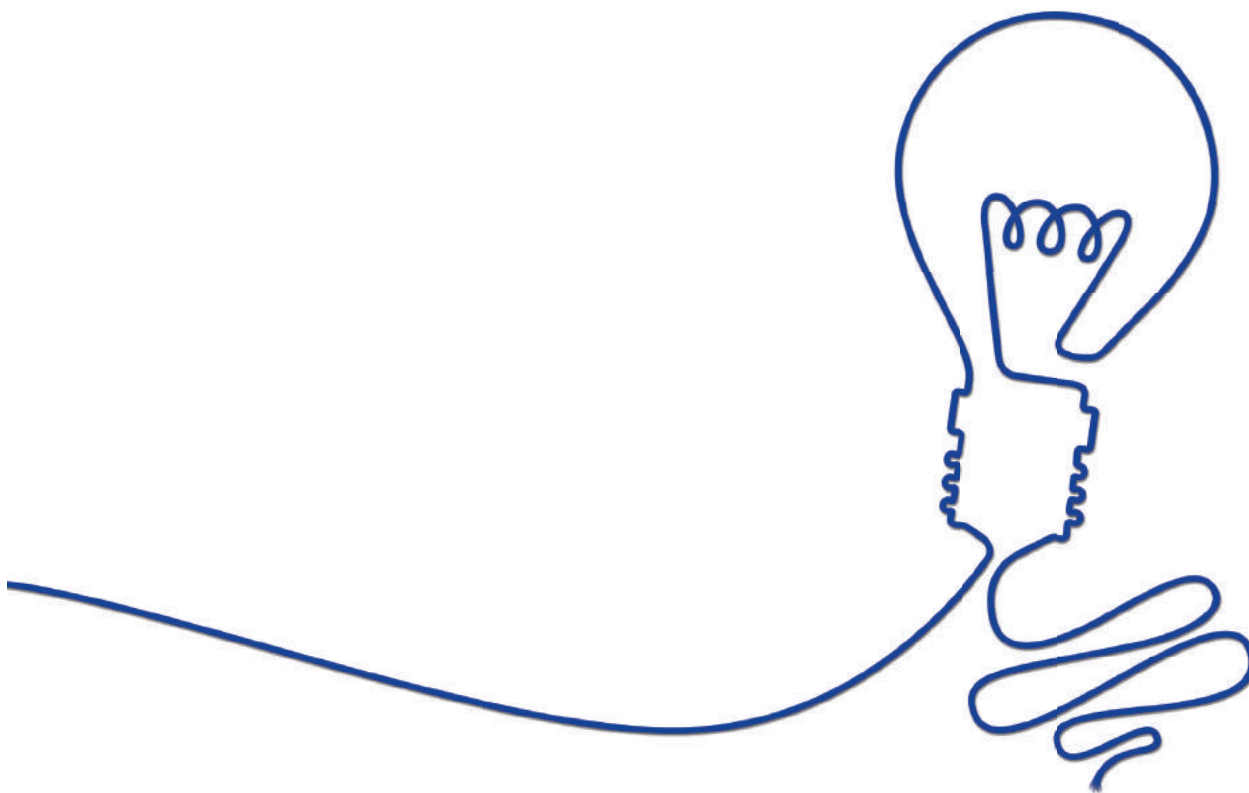


Enka Tecnica



**It starts with your idea
and ends with the perfect
fiber. And a whole lot of
precision work in between.**





Is your company a mechanical engineering firm or manufacturer of fibers and yarns? One who sets the highest standards for your products? Are you looking for new solutions? And do you need a partner who can support you in implementing your ideas? Then Enka Tecnica is just the right company for you.

As a classic contract manufacturer with vast experience in all of the customary production processes, we know exactly how to transform your ideas into customized, tailor-made fibers and yarns. We put a high priority on uncompromising quality – from selecting the materials and drilling the holes, to the surface treatment, and all the way through to economic processes and ongoing quality inspections.

That is the only way to achieve what really matters in the end: absolute precision. And, by the way, now as an independent member company within the Reifenhäuser Network, Enka Tecnica has access to greater development capacities. This is beneficial in realizing synergies within the group for even faster delivery of technological innovative solutions to our customers.



We don't leave the development of polymers up to chance. We use ingenuity and the high art of engineering instead.


Whether dry spinning or wet spinning – 100 years after Christian Friedrich Eilfeld invented the metal spinneret, the functional principle still remains the same.

What has changed, however, are the requirements for spinnerets. Precisely, in the area of shape and surface structure. For example, spinnerets often have up to 10,000 micro-sized drill holes with widely varying dimensions and cross-sectional profiles. To meet these requirements, Enka Tecnica not only relies on the experience of its highly qualified staff, but has

been using cutting-edge measuring equipment and state-of-the-art 3D technologies for many years now. This also includes the in-house development of computer-aided production equipment and facilities. And always with one goal in mind: to supply you with the perfect spinneret for your process.







Do you have innovative ideas? With Enka Tecnica, you can be sure that they will remain yours.

As a pioneer in manufacturing spinnerets for nonwovens, wet and dry spinning, melt spinning and micro components, discretion is second nature to us – right from day one, and after the job is finished.

This has not changed with the acquisition of Enka Tecnica as a member company into the Reifenhäuser Group. Our robust independence and autonomy as a company continues forth. Our customers can depend on our confidential cooperation just as before and customers can

be sure that their know-how and development work is not shared with others.

It's a philosophy that our customers around the world have always appreciated. That much we can reveal.



You can find our spinnerets everywhere. Wherever precision is essential.



Nonwoven

**Are you looking for that special something?
Are you looking to boost the performance
of your plant and already have an idea of how
to do it?**

We will make that idea a reality. No matter how many holes or how long. Take the manufacture of different nonwovens, for example. In this sector, Enka Tecnica offers a broad spectrum of spinnerets and spinning packs for spunbond and meltblown technologies, including spinnerets, distributor plates, perforated plates, coat hangers and complete spinning beams up to eight meters in length.



Enka Tecnica Meltblown Smart

You want to expand your portfolio? Conquer new fields of application? And extend production across additional stable process steps?

Then upgrade your system with Enka Tecnica Meltblown Smart (ET MB Smart). Our completely manufacturer-independent, single component is the perfect solution for modularly expanding existing meltblown and composite facilities. Cost-efficient, can be achieved quickly and with Reicofil's proven and tested technology inside.

Wet and dry spinning

Enka Tecnica supplies high-end spinnerets for acetate tow, viscose, aramid and other fibers that are processed using wet and dry spinning methods.

These are manufactured from a variety of stainless steels, a variety of precious metal-alloys or tantalum. They feature a variety of hole shapes (round and profiled) and hole patterns, and can have far more than 100,000 orifices. Our products also include cluster and spinning packs for wet and dry spinning processes. For these we use a range of special alloys that guarantee a long service life.



Melt spinning

If you need spinnerets and spinning packs for filaments and staple fibers processed using the melt spinning method, Enka Tecnica also offers customized solutions in this sector.

Whether mono, bico, trico or microfilaments (such as sea-island, split type or sheath-core fibers), whether round or profiled capillaries – your ideas are free to take shape. Depending on the task at hand, we use various types of stainless steels with different hardness levels.

A number of high-quality coatings can be applied to prolong service life.





Micro components

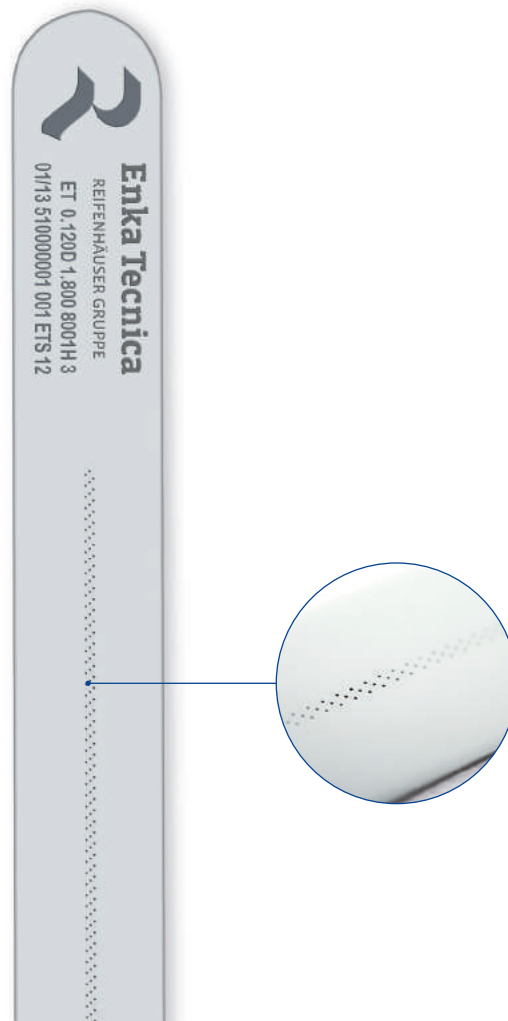
Filtering liquids with the aid of hollow fibers and membranes has become indispensable in both the health care sector and in public drinking water systems.

In this area, Enka Tecnica manufactures ultra-high precision hollow spinnerets and spinning packs in a wide variety of designs. Whether bico or trico – Enka Tecnica has long-standing expertise. The product spectrum includes calibration nozzles, sonic nozzles, tactile probes, glue nozzles, custom-made precision parts with micro structures as well as special tools for micro machining.

He-JET Strip

Also available: jet strips for hydroentangling.

Compared with conventionally coated solutions, ours stand out on account of their greater durability, unbeatable price-performance ratio, and very fast delivery times.



In the spinnerets arena, nobody else compares.

Enka Tecnica is at the top of the list when it comes to the manufacture or redesign of spinnerets. Our motto is: we deliver any spinneret, regardless of whether or not you have a technical specification or drawing. Our engineers measure and create specifications for your spinnerets, record their requirements and verify their status. With the utmost precision and wherever your spinnerets are in use.

Even if your older spinnerets must only be restored for further use, we are your point of contact. Furthermore, we are the first company worldwide to design and implement a procedure for refreshing used spinnerets and integrating them back into production. In addition to refreshing spinnerets, preventive maintenance, repairs, modifications and optimizations are also performed on spinnerets for re-entry into production.

Short and simple: the Enka Tecnica Refresh Service.

Transforming old into new. Our Refresh Service for your spinnerets.

Spinnerets are exposed to extreme forces and loads. So it's no surprise that they have to be replaced on a regular basis at relatively short intervals.

At least that is the prevailing opinion – and one that Enka Tecnica has proven wrong. Our engineers have developed methods for re-vamping spinnerets and getting them right back into the production process – at extremely attractive financial conditions and without sacrificing any quality.

Our Refresh Service includes preventive maintenance and refurbishment of capillaries and surfaces, repairing damage to capillaries and nozzle surfaces, modifying and optimizing nozzles, and more. Furthermore, we can drill

new or close existing holes and refurbish entire meltblown systems.

Are you uncertain whether your existing spinnerets can be refreshed? Get in touch with us. We will come to your company to determine the current status and work together with you to develop refurbishment options. And what if you have extremely long nozzle plates? No problem at all. With our state-of-the-art machinery and the latest inspection methods and technologies using our own specially developed optical devices, we can transform old into new in this area too.





Success stories are all the same. They all start with passion.

At Enka Tecnica that passion is for innovative spinnerets and high-end micro components, high-precision products of which we are one of the world's leading suppliers.

We have the experience that comes with more than a century of company history, and we also have the expertise and technical equipment we need to launch pioneering technical developments on a regular basis. It goes without saying that we can only achieve such precision work

with staff who are driven by the same passion: our precision engineers. It is their commitment and inventiveness, their openness and imagination – in short, their pioneering spirit – that makes Enka Tecnica succeed. And to ensure this remains the case, we do everything to support our employees, whether they are new in their professions or seasoned professionals. Exceptional training and educational schemes and a secure position are just the beginning.

We highly value career starters. We offer them many dynamic entry and training opportunities every year. Our technician training and apprenticeship programs include, for example, specializations in industrial mechanics, machining or electro-mechanical engineering. There's more: Dual-track training and cooperative studies in partnership with Enka Tecnica can be combined into a bachelor degree program with a major in "Mechanical Engineering". The most important groundwork laid for the future success of the company.

"I will be graduating very soon from my apprenticeship program. Now, my career outlook involves more than a steady job at Enka Tecnica – it's about completing my first advanced training program."

Philipp Goldacker,
Trainee Mechatronics



"Making the transition from working as a chef to machinist – with top training within the framework of retraining at Enka Tecnica, I have made the right decision for my future career."

René Schild,
Trainee - Vocational Career Transition
Machinist



"Training and career-oriented studies? A huge challenge for me from the very beginning, and I could rely on the support from Enka Tecnica."

Reijk van der Velde,
Dual Studies "Mechanical Engineering"





And when will you benefit from our precision work?

Enka Tecnica GmbH

Orionstr. 2
06184 Kabelsketal
Germany
T +49 34602 9599-0

Gladbacher Str. 31
52525 Heinsberg
Germany
T +49 2452 98896-0

sales@enkatecnica.com

www.enkatecnica.com