Power Magnetics at a Glance
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Editorial

Who are we?

Schaffner is the global leader in solutions that ensure the efficient and reliable operation of power electronic systems by shaping electrical power. The company portfolio includes EMC filters, power magnetic components, power quality filters, and the related services. For the automotive industry, Schaffner develops and manufactures components for convenience features in cars as well as filter solutions for electric vehicles.

The Power Magnetics Division supports engineers developing systems according to your customer’s needs. As a result, Schaffner designs transformers or reactors which perfectly fit into your customer’s requirements. We are able to provide those services in Europe, Asia, and North America and also can serve local and multinational companies alike.

The brochure in front of you introduces the services and products of the Power Magnetics Division to you. The Power Magnetics Division offers tailored, customer-specific low voltage and medium voltage power magnetic products. It is project driven. The product range includes mainly transformers, inductors, combinations of the two, and filters to serve various applications. Our primary markets are rolling stock, traction substations, motor drive applications, and fast-charging stations in e-mobility.

Besides our global reach, Schaffner is equipped with advanced calculation and simulation tools as well as with test facilities to prove the outstanding quality of our products. Over 30 years of experience in Power Magnetics support our innovative products in our targeted markets. As a result, Schaffner offers products which are meeting your specific requirements of our customer in a short time to the market.

Follow us and our team of more than 400 employees to the world of Power Magnetics.

Daniel Zeidler
Head of Power Magnetics Division
From Switzerland to the rest of the world

Electromagnetic filtering was still in its infancy when Schaffner was founded over 50 years ago in Luterbach, Switzerland. Half a century later, we are now internationally recognized for the highest level of expertise in our field.

Schaffner was founded in 1962 by Hans Schaffner, a pioneer in the field of electromagnetic compatibility. It rapidly developed into a market-leading, global company, generating annual sales of CHF 185 million by the year 2000. Schaffner expanded its know-how of power magnetic components by acquiring Jacke Transformatoren GmbH in 2006. In the years following after that, Schaffner also started up production in Kecskemét, Hungary, as well as sales, development, and production of power magnetic components in Shanghai, China.
To gain access to the North American market, Schaffner decided to acquire the companies MTC and Treco in 2011 and 2014 respectively. The company thereby expanded its expertise in the area of the construction of dry-type transformers for both medium voltage applications and special applications.
Country-specific requirements are often a challenge when technical solutions are concerned. However that’s not the case with Schaffner! Our locations in Europe, Asia, and America enable us to always stay on top of our customers and to know what requirements are relevant in the target markets. That’s how we always find the right solution.

Technical reliability is no accident: Regardless of whether you request a standard component or an element custom-made to your application, our development centers in Germany, China, and the USA offer you comprehensive technical advice for optimal integration into your end product. Our engineers on-site know the local requirements very well and they speak your language to ensure optimal communication. They are also fully integrated into a global team of expert engineers so you can benefit from a wealth of knowledge acquired around the globe. Therefore our engineers have the overall system in mind and are always there to advise you on how to further optimize your application.

Welcome to our global service!

“Employees at Schaffner have the opportunity to grow personal and professional within the company, both on a personal and professional level.”

Kim McFarland
Human Resources, Wytheville

“I believe it’s important to recognize how to reduce costs early on to ensure competitive prices.”

Grayson Coe
Accountant, Wytheville

“Open and transparent communication as well as a cooperative relationship with our customers are crucial to me.”

Sonja Braun
Key Account Manager, Paderborn
Networked thinking on three continents

Schaffner operates globally and follows its customers to their target markets. Standardized development and production processes, as well as uniform product documentation ensure our products from Europe, Asia, and North America are supplied to our customers in no time.

«My goal is to ensure the best possible designs by constantly improving our simulation capabilities.»

Frank Bürvenich
Chief Technology Manager, Paderborn

«Schaffner stands out thanks to a consistently high level of product quality.»

Cai Lichun
Quality Engineer, Shanghai

«I love finding ways to optimize our production processes.»

Qin Xiaogang
Winder, Shanghai
We develop advanced technology for ideal customer solutions

High-tech is not an end in itself. That’s why we collaborate closely with our customers to develop the right solution. After all, we know that we can only achieve the best results when all components work in perfect harmony with each other.

That’s our goal – every single day.

The Power Magnetics division’s focus is on customized solutions for technically advanced requirements. We are equipped to support both project and OEM businesses alike.

Advanced (electrical and mechanical) calculation and simulation tools, for example, in terms of FEM and CFD are the backbone of our product development, and that’s how we ensure optimally designed and «first time fit» products.

This approach also enables us to reduce the time to market for our customers. Our advanced knowledge in power magnetics and power electronics coupled with joint cooperation with our customers often result in unique overall solutions that outperform conventional products in terms of performance, weight, and/or size.

At Schaffner, you can rely on innovation-driven developments based on your needs – cost-efficient, perfectly designed, and «first time fit». 
Understanding challenges and solving them globally

Our customers’ concept phases for product requirements occasionally involve long-term system platforms. It’s important to remember that for each target market, the required production locations may differ from the original sites for design and type testing. To open up our international experience at an early stage, Schaffner Power Magnetics advises its customers at all locations with the experience of a globally operating component manufacturer. Our network of key account managers ensures a common understanding of our customers’ requirements as well as holistic product management. Market-specific requirements of technical standards are therefore factored into the product design right from the very beginning, and their feasibility is coordinated with every production site of the division.

The Schaffner Group designed a defined process for relocating production many years ago and has continued to develop it in order to guarantee the reliable and flexible delivery from all production sites. It defines, among other things, the company-wide uniform management of product and manufacturing documentation, and the assurance as well as the standardized development of process expertise for the division’s production. All these measures are aimed at achieving a higher goal: Schaffner Power Magnetics wants to offer its customers an unrivaled and recognizable service at all its locations.
Schaffner predominantly deals with applications where high requirements are placed on technology, lifetime, and reliability. Such markets include traction rolling stock, wind turbines, traction power substations, and the marine/navy to name but just a few. Wherever an inverter or motor drive is in use, Schaffner products are in use nearby.
Products developed for and with you

Reactors and filters

With over 30 years of experience developing sophisticated filters for use in railway technology and the industry, Schaffner develops filter components for your demanding applications in accordance with your requirements and design standards. Whether it is for use in oil, water, or forced cooled environments, our sales teams and development engineers advise and assist you throughout your concept phase. Our parts for sine wave filters, dv/dt filters and air chokes are available as well.

Special applications

Schaffner is your reliable development partner for sophisticated special applications. Your engineering requirements are our incentive to transform physics into hardware, no matter if it’s for creating a tailor-made design to fit your application, integrating magnetic components into an overall system, or adjusting filter components for the railway industry.
Medium-frequency applications

Galvanic isolation is increasingly occurring in the medium-frequency range for energy conversion with modern power electronics. Schaffner has been keeping up with this trend and offers made-to-measure solutions for a variety of applications, such as auxiliary power converters or battery charging stations. Whether for demanding environmental conditions in railway engineering or for stationary solid-state transformers, Schaffner develops and produces the right solution for your power and frequency range.

Transformers

Schaffner offers low voltage to medium voltage transformers worldwide in the power range up to 12 MVA. Our wide array of applications ranges from distribution transformers, transformers used in loss-optimized power electronics applications to e-mobility applications.
We think globally – wherever you are

We are sure to be at the forefront of all new global trends and developments thanks to development centers based in Europe, North America, and Asia. Material science (e.g. new core and insulation materials) but also new applications such as medium-frequency transformers and inductors play key roles here. With our global sales, design, development, and production networks, we can offer our globally operating customers tailor-made support – worldwide. We’re operating design centers and production facilities on three continents, close to our customers and the products’ final destinations.
We’ll find the right solution for you

Are you facing a challenge concerning power magnetic components? Then look no further than Schaffner! We provide extensive advice about our products and work closely with you to find the right solution – at a reasonable price for standard components or as a «single-fit» product especially attuned to your needs. Simply pick up the phone and call us. We cannot wait to hear from you!

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We care for the right transformation