

PRODUCTS & SERVICES  
FROM FEINTOOL  
SYSTEM PARTS



# POWER FOR DRIVE TECHNOLOGY

Electro laminations and core  
stacks for your success



EXPANDING HORIZONS



# WELCOME TO THE FAST LANE

Quality and expertise from Feintool

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We take your production to full speed. Feintool is your system partner along the entire process chain relating to electro sheet. We support you from the first laser-cut prototypes to the design and production of tools and fixtures, through to high-volume manufacturing. Alongside individual components, we also provide you with windable assemblies in the form of plastic-insulated core stacks. Our plants on three continents allow us to manufacture with identical processes and standards of quality around the world and across the board.

## KEY TECHNOLOGIES FROM A SINGLE SOURCE

- ▶ Laser cutting and stamping
- ▶ Lamination core stacks (punch-packaging, welding, gluing, baking, riveting)
- ▶ Metal and plastic connections
- ▶ Engineering, prototyping
- ▶ Tools and fixtures
- ▶ Project management





# PRODUCTS. TOUGHNESS AS STANDARD

Built for peak performance



Product dimensions of 1 - 1,250 mm can be manufactured

We have the right solution for every output scenario: laser-cut sheets for prototypes and small series, combinations of laser-cutting and stamping as well as sheets and core stacks stamped in series for greater volumes. Our goal is to cater to your needs each and every day, so that your products meet the requirements of your customers.

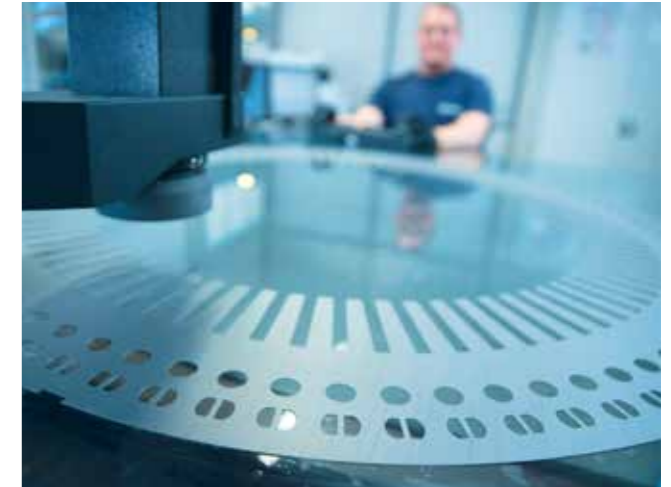
We build soft tools for you, ranging from the first stamped sheets to multi-track tools in tungsten carbide, which are used for the greatest production volumes requiring the utmost precision. Every year, our production plants execute several hundred million strokes as we process more than 20,000 tons of electro sheet. Our processes are certified according to IATF 16949:2016 and ISO 9001:2015.

## Your benefits

- ▶ Slitting and cut-to-length parts: Material cutting in-house ensures short delivery times.
- ▶ Utmost precision and efficiency thanks to dual-head laser-cutters: We supply you with prototypes and small series in a short space of time and tool-free. We produce sheets in bulk and baked, welded and glued lamination stacks in all requested variations and outputs.
- ▶ Manually operated or automated: Single notching machines with a press force of between 4 and 20 kN permit the production of sheets in medium outputs with all conceivable diameters.
- ▶ All tool sizes are welcome: High-speed blanking presses with a press force of between 20 and 400 kN and with clearances for any tool dimensions permit the production of various diameters.
- ▶ Quality-assurance measurements and inspections ensure the quality of your products.



In-tool stacked rotor and stator cores



Sheets in various volumes, laser-cut or punched

## Our offering –

### innovative and future-oriented

- ▶ In-tool stacks for rotors and stators
- ▶ In-tool stacked single- or multi-part sets
- ▶ Full circular blanks, segments, single poles, rod cores and linear stacks
- ▶ Stator grooves optionally with or without twist
- ▶ Optional sheet thickness compensation in core stacks by means of in-tool rotation

## Lamination core stacks

- ▶ Welded
- ▶ Baked
- ▶ Riveted
- ▶ Glued
- ▶ From full circular blanks or segments

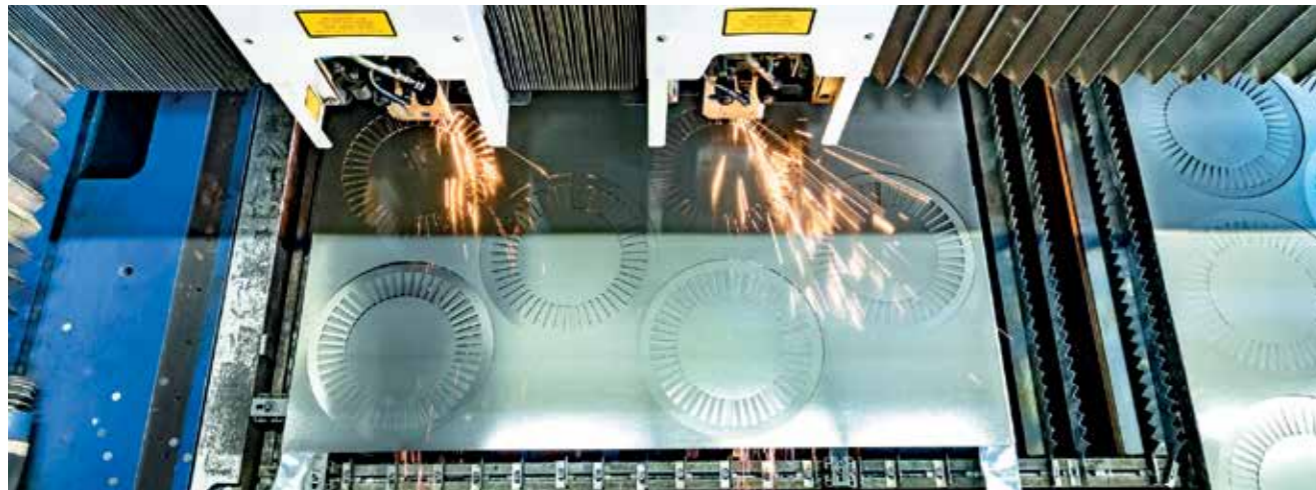
## Laminations – laser-cut or stamped

- ▶ Rotor
- ▶ Stator
- ▶ Segmented
- ▶ Single-pole
- ▶ Strips
- ▶ EI standard
- ▶ Special cuts
- ▶ Slit strips and plates

You can't find the product you need? Talk to us. We have the right solution for all your requirements.

# TECHNOLOGIES. WE GET THE FUTURE MOVING.

Everything from a single source



Laser cutting: Highly flexible manufacturing of prototypes and small production runs on state of the art laser equipment

**You can rely on our expertise. We are competent in all processes related to manufacturing high-quality products made of electro sheet. We keep our knowledge of connection technology thoroughly up to date and thus find carefully considered, economical solutions even for highly complex lamination core stacks.**

Decades of experience as well as current research and development results give us the innovative power to rise above the crowd: An advantage that helps you as our customer to get ahead of the competition. We pay particular attention to the development of new technologies, materials, products and processes, as well as checking and trying these out.

## **Laser cutting: for prototypes and small- and medium-sized series**

Developing prototypes and manufacturing tool-free: Our laser-based production technologies are ideally suited for this. With a cutting accuracy of a few hundredths of a millimeter, we produce electro sheets in thicknesses ranging from 0.10 to 1.00 mm. We can also produce small- and medium-sized series for you in an economical way. With the utmost flexibility, the laser process provides convincing solutions to challenges arising from falling outputs and growing variation. Other areas of application include manufacturing repair and upgrade components as well as implementing special contours.



Metal/Plastic combinations: Ready to assemble components from overmolded lamination core stacks

## **Stamping and in-tool lamination core stacks: for medium and large series.**

The stamping of electro-steel coils is the basis for an almost limitless variety of products. There are virtually no limits to the dimensions of your components – the possible applications range from the drive unit for dental drills to a torque motor. The maximum table length of our presses is 3.10 m. Diameters up to 600 mm can be processed in progressive blanking. In-tool lamination core stacks with finished parts is likewise among our competences, and we offer stud contours to suit any requirements here. In-tool punch rotation makes it possible to incorporate a twist or sheet thickness compensation.

## **Metal and plastic connections: for high-volume production**

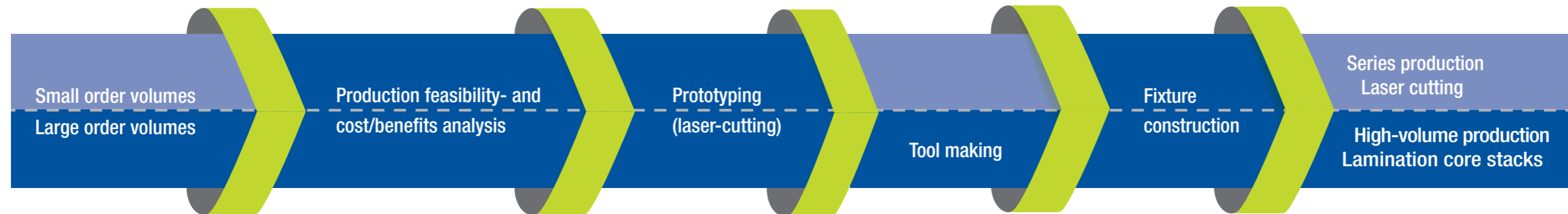
Injection-molded plastic slot insulators are a worthwhile alternative to conventional paper insulators for electric motor components. With this process we manufacture windable components for you. The utmost quality is guaranteed – because stamping and injection-molding take place under one roof and are perfectly coordinated with each other.

## **Welding, baking, gluing: for prototypes and high-volume production**

Our extensive technology portfolio is rounded off by the baking, welding and gluing of stator and rotor packages. The only way to increase productivity, ensure quality and reduce development times is through a holistic approach to process chains.

# SERVICES. IMPLEMENTING PLANS QUICKLY

Room to maneuver in any direction



Competence in all essential connection technologies:  
in-tool stacking, riveting, welding, baking, plastic-packaging

**Short development times and economical production are key success factors in your market. We provide the lift to get your ideas off the ground. With every project step, you'll benefit from our expertise and get optimally suited precision tools.**

We always view process chains from a holistic perspective. This way, we can identify potential for economical and ecological optimization as well as any risks in your plans early on.

### Production feasibility analysis

You have exact requirements regarding the lamination core stacks you need. We check these requirements and, where necessary, develop feasible solutions in cooperation with you. Our shared aim is a product for which an optimally suited technology can be employed

and which can be manufactured reliably and with the best possible price-performance ratio.

### Cost-benefit analysis

We evaluate the planned output scenario. You get a recommendation for the manufacturing process (stamping or laser-cutting, type of connection technology).

### Prototyping

How can prototypes be used to gain reliable findings for the development of products suitable for high-volume production? Laser-cutting is the ideal production process to manufacture these prototypes. No tools are required, which has a positive impact on costs, and the precision of the cut is close to series tolerances.

### Design, tool making and fixtures, maintenance

Experienced constructing engineers work on your behalf to develop tool concepts perfectly tailored to your requirements. The focus here is on process security, ease of maintenance, and high run times. We produce the precision tools made of steel and tungsten carbide and the corresponding fixtures in our in-house tool construction department. In order to ensure maximum availability of production facilities, we are careful to maintain the tools appropriately.

### Our range of tools:

- ▶ Pilot production tools and soft tools
- ▶ Progressive cutting tools
- ▶ In-tool stacking tools
- ▶ Single notching tools
- ▶ Baking and welding fixtures
- ▶ Spare tool parts and parts subject to wear and tear



# APPLICATIONS. PERSPECTIVE GUARANTEED

Get ahead in your market with Feintool

Electric motors of all sizes are playing an increasingly important role, and this trend is set to continue in future. In boom disciplines such as electromobility, renewable energies and robotics, manufacturers need to offer innovativeness, the utmost product quality, and optimized costs. With our products and services, you can put yourself in an excellent starting position within this highly dynamic environment.



Our products cover a broad range of applications. Thanks to our economical and high-precision production and our claim to the highest quality, we offer you the best opportunities in lucrative growth markets.



## Product segments:

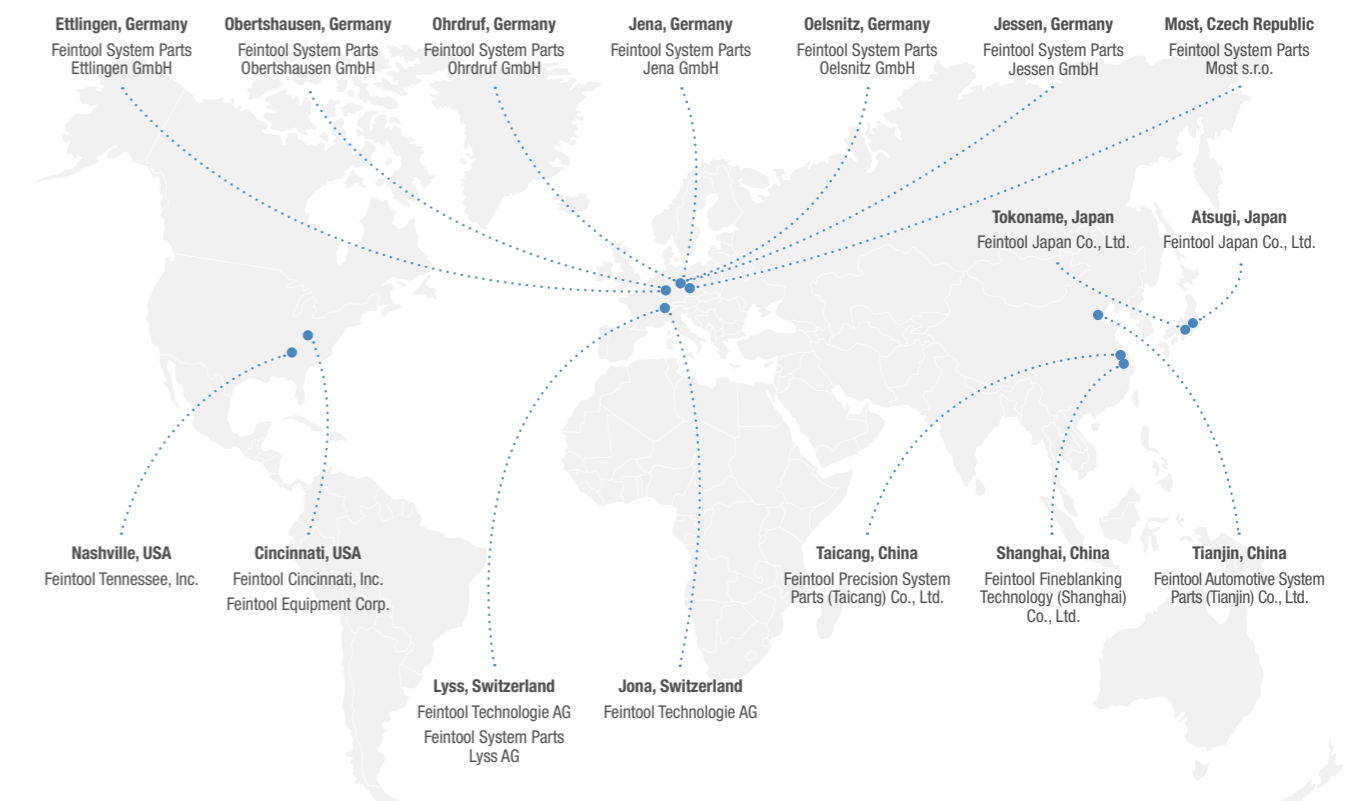
### Your area of interest!

- ▶ Automotive applications (e.g. drive, water pump, heating, throttle valve controller, variable valve timing, coolant pumps, ventilation, windshield wipers)
- ▶ Industrial drives, industrial applications
- ▶ Energy generation and distribution, renewable energies (wind, water, photovoltaics)
- ▶ Transport and robotics
- ▶ Pumps for building applications
- ▶ Generators
- ▶ Household appliances



# FEINTOOL. YOUR STRONG PARTNER

Global competence with local representation on three continents



**Feintool is the world's leading technology and solution provider for fineblanking, forming and electro sheet stamping technology. We offer our customers a complete service and product portfolio covering electric motors, automotive drive and non-drive, industrial applications, transformers, energy and rail technology, and other industries.**

Feintool's headquarters are in the Swiss town of Lyss. The company has its own production plants and technology centers in Europe, the US, China and Japan, and is thus never far from its customers. Since 2018 the Group has owned Feintool System Parts Jessen GmbH – a specialist in electro laminations and stacks.

This business is defined by its combination of stamping and plastic injection over-molding, its extensive experience, its innovativeness, and its consistent customer focus.

### By your side around the world

Feintool's approximately 2,700 employees are working worldwide on new solutions and providing Feintool customers with decisive advantages in their relevant markets. Thus you benefit, among other things, from a strong service and support network with a local presence in some of the world's most important economies.

**Feintool System Parts**

**Jessen GmbH**

Stamping technology  
Rehainer Strasse 14  
06917 Jessen  
Germany  
Telephone +49 3537 272 0  
feintool-psej@feintool.com  
feintool.com

**Feintool System Parts**

**Jessen GmbH**

Laser technology  
Alte Wittenberger Strasse 22  
06917 Jessen  
Germany  
Telephone +49 3537 272 0  
feintool-psej@feintool.com  
feintool.com

