LKH
We make more out of plastic.

Plastics expertise at the highest level
LKH – your strong partner for mutual success

LKH has been one of Germany’s leading plastics processors for over 30 years. Everything we do is geared to the benefit of our customers. We think proactively and get involved in your processes from the outset. We use our understanding of customer requirements to develop and manufacture optimum products for your specific application and also ensure we meet delivery deadlines. We have over 180 qualified staff whose expertise you can rely on. The everyday focus of LKH’s engineering, project management, production, quality assurance and assembly teams is on customer satisfaction and the associated successful partnerships. As a member of the Friedhelm Loh Group – a successful international player with 78 subsidiaries and 11,500 employees worldwide – we offer you the ultimate in continuity, reliability and innovative strength.

The Friedhelm Loh Group has been named one of Germany’s leading employers by the independent Top Employers Institute CRF no fewer than eight times.
Component development geared to plastics

Strong development from the outset

We give you peace of mind for your products right from the initial development phase. We offer you support in preparing the functional and requirement specifications, selecting materials and designing components, including 2D and 3D designs geared specifically to plastics. The need for multifunctionality, lightweight design through material substitution and sustainable use of resources is taken into consideration from the outset.

LKH’s scope of services includes:

- Mouldflow analyses
- Warpage calculations
- FEM calculations
- Rapid prototyping
- Rapid tooling (use of original material)
- Value analysis of the manufacturing chain
- Preparation of requirement / functional specifications
- Component design
- Process planning
With the focus firmly on the benefits for customers, all departments at LKH are involved in finding the ideal solution from the very start of the project. At the component development stage, the mould management team continuously checks subsequent feasibility in the mould, while the production team helps design the ideal production processes. Working closely with our customers, we create the basis for sophisticated, high-quality components. Our professional and experienced team tackles even complex requirements to provide you with fault-free products.

**Rapid prototyping**

Save time and money between the design, prototype development and series production phases, and react quickly when you need new products. With cutting-edge laser sintering technology, we can quickly produce even complex functional models, parts and moulds – layer by layer. This innovative process offers impressive benefits for both prototypes and series production.

We use state-of-the-art development and simulation software in conjunction with high-performance rapid prototyping processes to achieve perfect development results. Our superior know-how and technology mean far shorter development times and help get your products ready for the market faster.

**From idea to award**

**Engineering expertise for complex tasks**

Mouldflow analyses
In-process component simulation for the perfect development result

Rapid prototyping
Cutting-edge laser sintering technology saves time and money

Flex-Block mould
Used to create the Flex-Block base/plinth system, which won the pro-K award
Short development periods and a fast time-to-market are key criteria for our customers in opting for LKH. When developing and producing highly complex and innovative injection-moulded parts and assemblies, LKH therefore draws on a strong network of strategic development partners to fully meet these customer requirements. LKH also has its own technology scouting operation and works with leading research institutes.

pro-K award

One result of this was the Flex-Block base/plinth system, a modular assembly system that saves switchgear manufacturers time compared with conventional steel solutions and has been presented with the pro-K award. The main customer requirement was replacing metal with plastic while still supporting the same mechanical loads. Furthermore, virtually all screw connections were to be replaced by a clip system so that the end customer could benefit from faster base/plinth assembly. All requirements were met to the complete satisfaction of the customer. This was confirmed in 2015 when LKH was presented with the pro-K award. The verdict of the panel of judges was as follows: “The winning product, Flex-Block, combines practical features with impressive creativity.”
Machine performance for the highest demands

LKH benefits from ultramodern equipment, including over 50 high-performance injection moulding machines. All our machines have linear handling systems or 5-axis robots to ensure fully automatic parts production around the clock. Materials are supplied via a central, energy-efficient material processing plant. A production data acquisition system is responsible for process monitoring and control. We make over 1,500 different components weighing from just 1 g to 9 kg and process all thermoplastics – from standard PE to high-temperature PPS – in the full range of colours. We have particular expertise in processing highly filled, flame-retardant (UL-compliant) and high-tech materials.

Our scope of services at a glance:

- Standard injection moulding with a clamping force of up to 1,600 t and a shot weight of 9 kg
- 3 multi-component machines (2 x 80 t and 1 x 320 t)
- 1 vertical system with rotary platform (1 x 80 t)
- Semi- and fully automated production of hybrid (steel-plastic) components
- All machines with linear handling or 5-axis robot
- 2 PUR foam moulding plants
- Hydra production data acquisition system for process monitoring
- Fully automatic material processing
- Processing all thermoplastics and colours
- Use of stack moulds
Manufacture of large components

1,600 t injection moulding machine

- Shot weight of up to 9 kg
- 2 exchangeable injection cylinders
- Cascade control
- Fully automatic material processing
- Linear handling system
- Internal mould pressure monitoring
- Link to production data acquisition system

Component carrier and housing for recessed floor installation
Component weight: 6 kg and 4.5 kg
Assembly and quality management

The value added factor at LKH

Assembly for the perfect component

LKH’s support extends beyond the injection moulded part. We are happy to undertake assembly and surface finishing work for our customers – even for the most complex of assemblies and systems – using experienced personnel and fully automated assembly lines. Assemblies comprising 60 separate parts are no problem for us. We also deal with the procurement of bought-in parts and design customised packaging trays. Further services we offer our customers include machining, coating, printing, bonding and welding components.

Winning quality

LKH has established a sophisticated quality management system for all operating processes. The zero error strategy is the challenge we set ourselves and a promise we make our customers. In addition to 3D measuring machines, production cells monitored by cameras and check weighers for 100% component checking, a further cornerstone of quality assurance is our employees’ know-how. Initial sampling is performed in line with VDA and PPAP specifications.

Certified to:
- ISO/TS 16949:2009
- ISO 50001:2011
Assembly according to customer specifications on customised assembly lines

End-to-end quality management ensuring series quality
Taking service to the next level

Want your product to have a modern design – with a pink ribbon to add the finishing touch if you like – and be delivered to customer centres located across the globe? Not a problem. LKH will also meet your specific packaging and transport requirements.

Our services include:
- Customised packaging trays
- Transport packaging with customer label
- Reusable systems (KLT)
- Just-in-time deliveries

When making deliveries to customers, LKH uses modern, standardised TÜV-certified logistics processes that enable SAP tracking at any time using handling unit management. Over 130 million parts are picked, packaged and shipped each year from our 3,000 m² storage facility with 3,200 pallet spaces.
Scanner-based use
of handling unit management in the SAP R/3 environment
Industry know-how

Satisfied customers are the best reference.

We carry out challenging projects day in, day out in a great many sectors with numerous prestigious companies and contribute to their success.

With extensive know-how in all kinds of sectors, the LKH team is familiar with the specific requirements of the relevant markets. In addition to being a plastics producer with high-performance capacities, we also act as a development partner for our customers – right from the very earliest product planning stage.

As one of the leading plastics specialists in Germany and the Friedhelm Loh Group’s plastics competence centre, LKH supplies customers with precisely the solutions they need. Our innovative spirit, knowledge and experience know no limits. Benefit from our services. Benefit from LKH.

Automotive
- Air spring systems for cars and HGVs
- Engine suspension
- Kinematic systems for doors and hatchbacks
- Heating systems for car interiors
- Housings for electronic components
- Powertrain components
- Closing systems for car doors
- Interior covers
- Fasteners for fluid lines
**Electrical engineering**
- Power distribution components
- Climate control units and roof-mounted fans
- Components for frequency converters
- Lighting technology
- Induction cooker housings
- Enclosure heating systems
- Control components
- Fan-and-filter units

**Universal**
- Transport spools for food packaging
- Heavy-duty headboards for transport systems
- Housings and gear systems for agricultural engineering
- Mechanical engineering components
- Large covers for compressors
- Housings and filters for sanitary engineering
- Covers for heating technology
- Covers for sports grounds
LKH

We make more out of plastic.

- Product development
- Tool production
- High-tech injection moulding
- Finishing
- Assembly
- Logistics