The companies
A shared determination for success.

A shared determination for success is what drives the target-focused, qualified collaboration between an enthusiastic workforce and a management team committed to success.

It is no coincidence that the companies in the Friedhelm Loh Group share an extraordinary dynamism. We do everything possible to convince our customers of our credentials, with state-of-the-art technology, exemplary service, and global logistical expertise. This includes providing qualified advice on innovative, customised problem-solving, as well as uncompromisingly improving on our exemplary quality standards in all processes.

Our relentless exploration of new avenues enables us to build on our international leadership in many areas of the company, and tap into new, technologically pioneering segments. We are grateful to customers who challenge us to become ever more innovative and competitive, and who appreciate our commitment and achievements.

A workforce of more than 11,500 in Germany and abroad is enthusiastically dedicated to knowledge leadership, progress, competitive growth, and therefore a successful future.

This determination for success has created a lively, open and exemplary corporate culture. Our corporate principles are committed to upholding high ethical, social and eco-friendly standards in awareness of our commercial responsibilities.

We aim to inspire your enthusiasm for a shared future between customers, suppliers and employees.

We invite you to join us on this journey!

Dr Friedhelm Loh
Owner and CEO
Growth through innovation ...

Development of sales of the Friedhelm Loh Group from 1974 to date

... for a successful future.

We make the impossible a reality for our customers. **Our companies** are some of the top names in their respective industries – both as inventors and as competent producers. **Our products** revolutionise the market and give our customers a competitive edge. **Our staff** are highly qualified and committed to surprising our clients time and again. **Faster – better – everywhere.**

The Friedhelm Loh Group employs 11,500 people, with sales totalling some 2.2 billion euros in 2015. We have 78 subsidiaries operating successfully worldwide. We invent pioneering solutions for integrated value chains in control and switchgear engineering. Consistent engineering tools, standardised systems engineering and automated machine tools are dedicated to making our clients’ product origination process even more efficient. And because processes and productivity are increasingly tied to interfaces and software, we devise innovative solutions for integrating IT into industry. After all, data is the new raw material – Industry 4.0.

As a forward-thinking group, we invest in research and development. Transparency, flexibility and short decision-making paths in a family-run company help us to achieve our common aim: it’s not just about taking part, it’s about winning.
Worldwide, we are growing ...

... and remain on track for success.

Wherever our clients are, we are there too: The Friedhelm Loh Group has 18 production sites around the globe, plus 78 international subsidiaries. Our clientele includes countless high-profile global players from a wide range of industries, from machinery and plant manufacturing, to the automotive industry, through to information technology – because we delight them with our product quality and professionalism.

Many of our products are manufactured worldwide and successfully sold in more than 100 countries around the globe. Many of the companies in the Friedhelm Loh Group are global single-source suppliers, and meet this challenge with an international network of production sites and logistics centres.

In order to further enhance the value creation chain within the Group and make the best possible use of synergies, we are also consistently expanding our site concept in Germany.

We are quick to identify new trends on the international markets, and to proactively exploit new markets. The USA, China and India are our principal growth markets. We invest accordingly, and convince our customers with innovative, technologically pioneering products, even in remote markets. We are local, and growing globally – through innovation, customer focus and top quality.
Uncompromising quality ...

... globally recognised and certified.

From the raw material to the finished high-tech product, a quality management system, continuously monitored by internal audits, ensures consistent top quality for all our products.

We follow globally recognised standards, established in Germany and rolled out to our locations worldwide. From small enclosures in Herborn, to server enclosures in Plymouth, through to climate control units in Shanghai, every product meets our discerning demands in terms of reliability, function and safety.

All products worldwide are built to the same high standards. Competent, local quality management teams are in place to ensure that our high standards are upheld. We are able to guarantee high quality standards and customer satisfaction thanks to our own accredited quality laboratory in Herborn. It tests products for quality and safety, to both national and international standards.

For country-specific market segments and customer requirements, our companies offer a range of product- and industry-specific approvals and certifications, such as the VDE seal for Germany, the Lloyds Register mark of conformity for the United Kingdom, MRS for Russia, and the UL mark of conformity for the USA. The uniform global quality management system ISO 9001 is applied as standard throughout all our companies.
We create jobs ...

... and safeguard opportunities.

"The capability and cooperation of our staff harnessed to their goal focused motivation is a key asset of our company". This is the Friedhelm Loh Group’s first corporate principle, and is indicative of how our employees interact on a day-to-day basis – we have been named the top employer in Germany for the eighth time in a row. We realise that our success is also rooted in our corporate culture and the dedication of our workforce. In 11 German and 78 international subsidiaries, we employ more than 11,500 people, who are committed to our shared success.

Our products are manufactured in nearly every continent and sold in over 100 countries. Thanks to our consistent focus on international markets and customers, a study by "Manager" magazine of the world's top market leaders ranked the Friedhelm Loh Foundation in 80th place.

Through our international growth and open corporate culture, we make a significant contribution to social security and help to promote social harmony worldwide.

We see education and training as an integral part of our role as a top employer. In Germany alone, we send around 200 young trainees and students on their way to a bright future. We invest in the education and training of our workforce, and inspire them to explore new opportunities, both personal and professional, in an expanding company. The future belongs to those with knowledge and vision, who are willing to work hard and grab opportunities with both hands.
Making a difference, ...

We believe in being broad-minded, yet grounded. We are aware of our responsibility to the environment and the world in which we live. Firmly anchored in our corporate principles, this is an obligation that we take seriously, both within and outside of the Friedhelm Loh Group. Our close connection to our employees and local residents is palpable.

Our workforce is a key resource. The Friedhelm Loh Group has pioneered a forward-thinking corporate pension scheme. This nationwide concept encourages our employees to plan for their old age, something which many neglect until it is too late. Each year the Group’s companies distribute generous voluntary benefits to employees, and help to promote their quality of life with a wide range of measures.

The charitable Rittal Foundation, dedicated to projects outside of the Group, was set up by owner and CEO Dr Friedhelm Loh to mark Rittal’s 50th birthday, with an initial donation of five million euros. Up to now the Foundation has provided financial assistance of more than 600,000 euros to non-profit institutions in the local community to promote about 150 projects in the fields of social welfare, education, culture and research.

Additionally, each year, employees throughout the Group raise funds to donate to social institutions and international charities.

Information about the projects we fund can be found at www.rittal-foundation.de
Environmental protection out of conviction ...

... for a vital environment.

The environment is a topic close to our heart. Active environmental protection and ecologically-minded production and distribution structures are firmly anchored in our corporate principles. We invest in the very latest technologies in order to conserve valuable resources. The Friedhelm Loh Group has made its first successful foray into renewable energies, with five combined heating and power stations and three photovoltaic plants. A large proportion of the energy used at our production sites is supplied by these plants. For years, we have been continuously reducing the overall energy consumption of our products and buildings, and doing our bit to reduce CO₂ emissions.

The Friedhelm Loh Group has introduced an integral management system encompassing all relevant aspects such as quality, environmental protection, work safety, energy and health protection to ensure the long-term success of this commitment. The results are truly impressive. All national and international production sites, as well as Rittal’s German delivery centres, are certified to EN ISO 14001 and OHSAS 18001. Stahlo and LKH operate an energy management system which meets the requirements of EN ISO 50001.
The company principles

1. **The capability and cooperation of our staff** harnessed to their goal focused motivation is a key asset of our company.

2. We recognise the correlation between skills and knowledge development, motivation and company success. To that end, **we encourage and sponsor our staff** in training and further education and to share in the overall company success.

3. **We view our customers as partners** who determine the success of the company:
   - **We must satisfy our customers' wishes and help to solve their problems** for they are the guarantors of our future.
   - **Our products and services must offer clear benefits to our customers** in particular with regard to quality, technical capability, range and availability.

4. **We must be quicker and better than the competition** and we must prove this to our customers on a daily basis.

5. **Our inspiration and creativity result in our competitive advantage.** We must, therefore, continually strive to generate ideas and initiatives that can translate into effective implementation.

6. **Perfect mastery of our daily business secures our existence** and positions us to meet the challenges of the future.

7. **Our goal is to develop long term and meaningful relationships on a partnership basis with our suppliers.** This requires a strategic outlook based on competitive focused quality, delivery service, price and cooperative problem solving.

8. **We focus all of our energies on cost effective designing, developing and delivery of products, system solutions and services** in a professional and timely manner.

9. **We are aware of our responsibility to the environment and society in which we live.** We want, therefore, to take part in shaping and improving it.
Awards

Fairness, progressive attitudes, and technically competent employees make the Friedhelm Loh Group an innovative and successful employer.

Employees & training
- Top employer eight years in a row
- Awarded the Fair Company quality seal
- Hermann Schmidt Prize for Innovative Vocational Training
- Prize-winner in the "Skills Germany" vocational competition

Commitment to the environment
- Climate protection prize from the Hessian Environment Ministry
- International Bionic Award
- Best energy efficiency project for spray-finishing plants in Rittershausen

Innovative strength
- German Industry Innovation Award in the "Best Product 2015" category for Blue e+
- DataCenter Insider Award
- Axia Award in the "Internationalisation, branding and company takeovers" category
- Diesel Medal (also known as the "Inventors' Oscar") in the category "Most Successful Innovation"
- Rhineland-Palatinate Innovation Award two years in succession
- Innovation award from "Initiative Mittelstand" in the "Green IT" category
- Pro-K award for the LKH "Flex-Block"
- Partner of the Year Manufacturer Award, Meyer Werft
- Best Product Award for flexible climate control
- Galaxy Award, Fox Award, Communicator Award for our company magazine "be top"
- Marketing Award for the "RiMatrix S Roadshow"
- VDI Best Practice Award
Rittal – The System.

Faster – better – everywhere.
“Rittal – The System.
Faster – better – everywhere.”

Everything we do centres around the benefits to you. With you in mind, we have developed a perfectly coordinated system platform that unites innovative products, pioneering engineering solutions and comprehensive service. We plan and implement your infrastructure, ensure reliable power distribution, boost energy efficiency through innovative climate control, and develop complete data centres.

**Faster**
- System solutions from a single partner
- The perfect interplay between development, engineering, products and service
- A single point of contact, thanks to process-optimised system consulting

**Better**
- Innovative strength secures competitive advantages
- Cost savings with proven energy efficiency
- Certified quality in management, production and environmental protection

**Everywhere**
- 58 subsidiaries, more than 150 service partners with over 1,000 service engineers worldwide
- Country-specific expertise from Rittal industry experts
- International approvals provide peace of mind
Be it automation, communications or power supply technology, Rittal offers the correct enclosures and cabinets to suit virtually all requirement profiles in modern industrial technology. All from a single source, all in top quality. Perfect, cost-effective solutions to suit every application.

- One enclosure system for all applications
- An extensive range of accessories for maximum flexibility
- Tested product quality for the most discerning demands
- Efficient engineering with standardised CAD data

Enclosures that set technological standards.
The requirements placed on modern power distribution systems are constantly growing. For this reason, more and more users are insisting on the security of internationally recognised and approved power distribution components. "Rittal – The System." offers innovative enclosure and busbar systems conforming with the relevant regulations. Tested by independent experts, and proven a million times over.

- Maximum reliability, thanks to tested system technology
- Greater efficiency with standardised assemblies
- Design verification to IEC 61439 helps to accelerate processes
- Significant time savings with engineering and machining
**Major energy savings with optimum climate control.**

"Rittal – The System." guarantees comprehensive process control protection with the minimum possible energy consumption. Modern cooling units with excellent efficiency and perfect interface technology, together with liquid cooling concepts, offer fresh new perspectives for the correct cooling of electronic components. This is crucial to the availability and reliability of machinery and IT technology.

- Efficient system solutions for every climate control requirement
- Professional design with user-friendly software and app
- Global peace of mind, thanks to international approvals and certifications
- User-friendly assembly saves time and money

**The Blue e+ cooling unit series – the ultimate in efficiency. Worldwide.**

- **Efficiency** – Up to 75% energy saved due to speed-regulated components and heat pipe technology
- **Versatility** – Suitable for international use due to unique multi-voltage capability
- **Safety** – Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- **User-friendliness** – Intuitive operation due to touch display and intelligent interfaces
Data centres are complex systems. Software, hardware and IT infrastructure must work together efficiently in order to supply the user with inexpensive, reliable IT services. The IT infrastructure must be fail-proof and expandable. It must guarantee a high level of availability coupled with low energy consumption. It must meet a wide range of requirements from various different sectors.

Above all, these include powerful climate control, reliable power distribution, and comprehensive monitoring. With "Rittal – The System." we have therefore created a platform that satisfies these requirements while at the same time minimising complexity and reducing the number of interfaces. "Rittal – The System." guarantees everything from a single source, with one point of contact who is familiar with the specific requirements of your industry.

- Intelligent modular principle – from IT racks to complete data centres
- Energy-efficient solutions for rack, suite and room cooling
- Powerful management software (DCIM) with coordinated interfaces
- Simple selection using online tools

IT infrastructure – Flexible, standardised, custom-fit.
Today, end-to-end data is the key to saving time and money in any automated process. Make the most of the engineering expertise of Eplan, the System and automation know-how of Rittal. The virtual prototype is the heart of the digital workflow, linking together all process steps seamlessly and thus establishing the basis for efficiency and effectiveness – from engineering through to automated production and beyond.

**Engineering**
Use our carefully coordinated engineering solutions: The EPLAN Data Portal gives you access to all the article data you need for integration into the Eplan Engineering Platform. Interfaces with Rittal tools complete the planning stage.

**System**
By using Rittal system solutions, you benefit from our perfectly coordinated modular system comprising enclosure, climate control, power distribution and IT infrastructure systems. The benefits to you: time savings, reliability and standardisation.

**Automation**
Rittal supports all process steps in manufacturing through its comprehensive portfolio of solutions that cover everything from manual tools to fully automated plants. Using custom solutions, you can optimise your processes and workshop sequences to significantly boost their effectiveness.
The new Rittal Automation Systems business unit extends Rittal’s broad portfolio of control and switchgear manufacturing to include all the required machining and handling technologies, for time- and cost-saving manufacturing processes from a single source.

Rittal Automation Systems covers the full product spectrum, from machining of enclosures and components to the assembly of terminal blocks on DIN rails, wire processing through to the fully automated wiring of mounting plates. Handling systems and tools round off the product range.
Rittal operates a professional sector management system, concentrating on established markets such as mechanical engineering, information technology and transport technology.

Rittal also selectively targets future sectors such as renewable energies and electromobility. Through our close, face-to-face contacts with customers, we devise creative solutions based on the modular system platform "Rittal – The System." in order to boost energy efficiency, for example. Our regular exchanges with leading industry representatives enable Rittal to identify future trends early on. Our product development teams pick up on these trends and develop innovations in collaboration with customers, before positioning them on the market.

**Industries**
- Mechanical engineering
- Food and luxury goods industry
- Electrical engineering & automation
- Infrastructure
- Transport technology
- Process industry
- Regenerative energies
- Information technology
Consistent quality management ensures that Rittal’s products, services and internal processes are continuously improved. Over 1,500 global patents and more than 300 registered designs bear testimony to the fact that we experience quality as a customer benefit.

The implementation of our quality philosophy is confirmed by the large number of national and international approvals (e.g. to CSA, VDE, GS, UL/CUL) and by the accreditation of our quality laboratory by the German Accreditation Body (DAkkS GmbH), CSA, and Underwriters Laboratories (UL). The Rittal quality management system is certified by the Swiss certification company Schweizerische Vereinigung für Qualitäts- und Managementsysteme (SQS). Our unfailing emphasis on quality is confirmed in annual audits by independent institutions and by numerous customers. In order to ensure that this high standard of quality reaches our customers, Rittal’s products undergo comprehensive electrical, mechanical, surface finish, material, dimensional accuracy, software, climate and eco-friendliness testing at our laboratories.

Numerous internal process audits in all international production sites by auditors from the Rittal headquarters help to ensure the same level of quality worldwide. "Quality – Made by Rittal".

"Test the Best" – Rittal quality management transcends national borders.
We take care of everything. Rittal International Service is there for peace of mind and availability. We are on a worldwide mission to ensure that every aspect of our products is exactly as it should be: perfect.

Our all-round service is available to our industry and IT customers worldwide, 24 hours a day, 7 days a week, 365 days a year. From planning to assembly, installation and commissioning, through to maintenance and upgrading, we are on hand to support our customers at any time, on site, and as quickly as possible. Spare parts can be sent anywhere in the world within 24 hours. Individual service contracts offer additional peace of mind.

Rittal International Service:
• Assembly, installation and commissioning
• Inspection, maintenance
• Repairs on site or in the factory
• Spare parts
• Customer training, trainings
• Individual and modular contracts
• Modernisation and retrofit

Always on hand, whenever you need us!
Close to our customers. Everywhere.

Wherever in the world enclosure and housing solutions, power distribution systems, system climate control and IT infrastructure are used, we are close at hand. As a global player, Rittal combines the performance capabilities of its network with solution-centric, personalised customer support.

Each day, 18 production sites and 58 subsidiaries on five continents offer the very highest levels of customer service. On a global production space of 250,000 m², we manufacture more than 16,000 enclosures a day, and more than 230,000 cooling units a year. In Germany alone, 7 sales and logistics centres offer unlimited service. In Europe, we promise to deliver within 48 hours! Internationally, we have more than 80 warehouses with more than 160,000 pallet locations and warehousing space in excess of 225,000 m². Take advantage of our Rittal immediate delivery programme anywhere in the world, and in addition to quality and service, benefit from our intelligent logistics concept which ensures ultimate delivery capabilities.

- 18 production sites
- 58 subsidiaries
- 7 distribution and logistics centres in Germany
- More than 80 warehousing sites
EPLAN

efficient engineering.
As one of the world’s leading suppliers, Eplan develops solutions for software and service CAx, configuration and mechatronics, while advising enterprises on streamlining their engineering processes. Customers benefit from increased product development efficiency thanks to standardised procedures, automated operations and integrated workflows.

Eplan supplies tailor-made concepts for system introduction, set-up and custom-fit integration into the IT/PLM system landscape, based on standard engineering solutions. The portfolio of services also includes customising, consulting and training. The development of customised and standardised interfaces for ERP, PDM and PLM ensures data consistency in product development, order processing and manufacture. Eplan is the first and so far only CAE system with certified direct integration to the SAP price list. The company is continuously developing interfaces to leading ERP/PDM systems.

A consistent customer focus, plus global support and innovative development and interface expertise are key success factors. Together with its sister company Cideon, Eplan has developed solutions for mechatronic engineering under the name of the "House of Mechatronics". As a member of the Friedhelm Loh Group, continuity and investment security are part of the Eplan philosophy.
With about 800 employees Eplan offers value-creating advice and implementation services for optimising core engineering processes in product origination, from the initial product idea through to sign-off by the customer. Eplan analyses the entire customer workflow, taking into account the company organisation, processes and systems, and offers recommendations to enhance efficiency in engineering – process-oriented, methodical and individual. Eplan process consulting culminates in efficient processes, standardised procedures, automated operations and integral IT solutions.

**EPLAN implementation**
Based on individual customer requirements and defined action areas, Eplan offers a range of services for standardised process introduction, the setting up of CAx systems, and custom-fit integration of Eplan software solutions into a company’s IT/PLM system landscape. The broad range of Eplan training courses supports customers with efficient knowledge application and learning.

**EPLAN Global Support**
provides professional support for efficient engineering to more than 50 countries worldwide.
EPLAN engineering solutions.

The EPLAN Platform integrates expert systems for the various disciplines, such as electrical, fluid and EI&C engineering and enclosure manufacturing. All applications – EPLAN Electric P8 (electrical engineering), EPLAN Fluid (fluid engineering), Eplan Preplanning (E&IC engineering), EPLAN Pro Panel (enclosure assembly) and EPLAN Harness proD (cable harness engineering) – are equipped with the same basic data and functions, thereby ensuring high project quality coupled with a mechatronic work approach.

With its EPLAN Engineering Configuration (EEC), Eplan offers customers an interdisciplinary configuration tool. This integrated solution performs the mechatronic configuration and automated documentation for sales, engineering and production. It means reductions in time and cost in engineering, and an optimised documentation quality.

EPLAN Data Portal
The EPLAN Data Portal is an integrated, web-based data platform for supplying up-to-date device data from the market’s leading component manufacturers, for use directly in project planning with Eplan software solutions.
CIDEON

efficient engineering.
Cideon advises and helps you to optimise your engineering processes. This improves your company's customer benefits, performance capability and value. The different sections of the design department are examined, as are the administration and maintenance of product data, up to integration into the material management system. Cideon is one of two "Autodesk Platinum" partners in German-speaking Europe, a PROCAD partner, an SAP SE development partner and software partner of Dassault Systèmes. With around 300 employees at 16 locations in Germany, Austria, Switzerland and the USA, Cideon is part of the Friedhelm Loh Group, where it represents mechanical and mechatronic expertise, as well as know-how in ERP/PLM integration and engineering.

Cideon’s expertise is pooled in two business divisions:

**CIDEON Software**
- Integrated PDM solutions and best-in-class direct PLM integration to leading CAD and PLM systems
- Output management, conversion and process-optimising add-ons for SAP ERP/PLM

**CIDEON Systems**
- Configuration and implementation of CAD and PDM/PLM solutions in mechanical and plant engineering
- Development and consultation for product configuration and modularisation, as well as factory planning and layout
Efficient engineering.

A global team. Hundreds of solutions that have been proven in practice. Over two decades of expertise in the CAD and PLM segment. As an international consulting, implementation and development partner, Cideon can help you.

Our added value for you
- An increased level of reusability by standardising the IT environment: shorter development and project times
- Automated routine method instead of manual activities: greater added value and more satisfied employees
- Integration of technical and commercial processes: quality optimisation and increased efficiency
- Central data storage: Back-up of company expertise – independence from personal knowledge
- Technology transfer and controllable innovation management: enhanced innovatory power with short time-to-market
- Global access to consistent data: increased international competitiveness with balanced resource utilisation and minimised error potential
STAHLO
Processing steel straight from the line.
A powerful steel service centre.

As one of the largest independent steel service centres in Germany, we offer a complete steel service with high-end products, quality and logistics at our Dillenburg and Gera sites. Providing customers with qualified advice is our main priority. Our technical application consultants are experts at finding the right steel quality for your precise requirements. We work with the full range of SAP information and communications technology, including the SAP automotive module. Certified to DIN ISO/TS 16949, we deliver the quality standards and flexibility you demand.

Our particular strengths include many years of experience in the steel market, and direct access to all the world’s major steel manufacturers. Because we are efficiently incorporated into a powerful purchasing and logistical alliance, we fulfil complex requirements in next to no time via a series of coordinated processes.
The very best service for our customers.

Stahlo's philosophy centres around providing good, customer-centric service in all areas. Our experts collaborate on an interdisciplinary basis to ensure that their expertise accompanies you every step of the way, from the selection of materials, to the design phase, through to on-time delivery. We provide your entire project coordination from a single source.

Our delivery range includes:
- Slitted coils
- Cut-to-size sheets
- Standard sheets
- Blanks
- Contoured blanks
Technical application consulting.

The highly qualified technical application consultants at Rittal's Steel Service Centre will help you to identify the correct steel for your individual application and maximise potential savings. We can draw on many years of expertise across a wide range of industries, from the automotive industry, to the construction sector, through to mechanical engineering.

Material experts
Choosing the correct composition, optimum machinability and appropriate surface properties calls for specialist expertise. There are currently more than 3,500 different types of steel on the market, each of which offers further variations in terms of physical, chemical and ecological properties. There is a specific steel quality to suit any given product, be it an enclosure, bread-slicing machine or motor vehicle.

The fastest way to your steel grade
If you want more efficient, faster, and more transparent advice, our revamped technical application consulting service should be your first port of call. The Steel Service Centre from Stahlo will help you to identify the perfect steel quality for your requirements in next to no time.

No case too complex
- Consulting even at the planning and development phase
- Potential savings from selecting the correct steel quality
- Material analyses
- Material training
Intelligent steel solutions for optimised production.

Our proximity to the German market and to the markets of neighbouring European countries, thanks to our sites in Dillenburg and Gera, is the best prerequisite for optimised, integrated logistical concepts. The intelligent, specific stocking of materials and products in proximity to our customers is an important parameter with regard to cost optimisation, flexibility and speed, for just-in-time delivery. We slot into your workflow with perfect steel logistics, and help to ensure reliable, optimised production processes.
Modern production technology, combined cut-to-width/cut-to-length plants, slitting plants and shearing centres ensure perfect quality, enhanced productivity and maximum process reliability.

Our plant in Gera is home to one of the largest and most modern blank cutting plants in Europe. Equipped with a 10,000 MPa press and a work table of 4,750 x 2,750 mm, the plant processes 40 t coils into trapezoids, lozenges and large blanks suitable for use as an outer skin. At the same time, we take care of tool management and tool storage. Your press capacity is optimised because you are able to start metalworking directly in the first process stage, and you benefit from reduced capital tie-up in your production (lean production) and reduced scrap handling.
Uncompromising quality in all processes.

Stringent quality assurance measures throughout every stage of the process chain are self-evident for us, and in everyone’s interest. With certification to DIN ISO/TS 16949, continuous improvements are systematically integrated into all operations.

Our quality management system is based on clear process operations that are transparent and logical to all employees. From the moment goods are delivered, our uncompromising chemical and mechanical testing ensures a high standard of quality in all materials used. Continuous monitoring subsequently accompanies the entire production process; various control devices allow uninterrupted material tracking. With a broad range of input materials and customer-specific stocking, you can rely on the smooth transfer and incorporation of the required material into your production process at any time.
Processing steel straight from the line.

Put our performance to the test and see for yourself what benefits working with Stahlo can bring:

- Many years of experience in the international steel market
- Technical application consulting even at the planning and development phase
- Global, independent procurement expertise
- Processing of high- to ultra-strength qualities with up to 1,450 MPa tensile strength
- Production of automotive outer skins
- Targeted stocking of materials and continuous delivery availability
- State-of-the-art plant technology
- JIT delivery directly into your production process
LKH

We make more out of plastic.
We make more out of plastic.

As one of the leading German plastics processors, LKH focuses on customer benefits: "We make more out of plastic". LKH thinks with you. Not only does the company manufacture sophisticated, high-end plastic components using the injection moulding system, but also supports customers in every key respect, from engineering, to powerful production, through to intelligent logistics. With wide-ranging expertise and many years of experience, LKH is dedicated to its customers' processes, for the shared success of both partners.
Experience is our strength.

With more than 30 years on the market, we have gained a reputation for innovative developments and product solutions in plastic. A core base of international customers in the automotive, mechanical engineering and electrical engineering industries trust in our expertise.

To illustrate the breadth of our plastics processing capabilities, here are just some of our product solutions:

**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
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.

Quality standards
- ISO/TS 16949:2009
- ISO 50001:2011
Our motto: "Full Service" throughout the entire product lifecycle.

As innovative plastic specialists with extensive development expertise, we help to drive your success. Even at the predevelopment stage, we will support you with advice, planning, concept development and rapid prototyping (3D printing). Throughout the entire development phase, you can rely on us for project management, component configuration, design and tool development, as well as component and process validation. The latter enables us to achieve efficient small-scale production to your precise requirements.

Our range of intensive preproduction services at our ultra-modern LKH high-tech production facility includes the following:

- Injection moulding (precision parts, 2-components, hybrids)
- PUR foaming machine
- Module assembly
- JIT, JIS and Ship to Line
- SAP R/3 as an ERP system
- CAD, Solid Works
- Moldflow analysis
LOH SERVICES

Intelligent services for a powerful group.
Service is our strength – Customer satisfaction is our goal.

As a Shared Service Center to the Friedhelm Loh Group, the following central functions are concentrated at Loh Services in Haiger:

- Human resources
- Information technology and organisation
- Controlling
- Accounting
- Security, energy, environment, facilities

A team of almost 300 qualified and motivated employees manages these tasks on behalf of all companies in the Group. By supporting and advising our colleagues at national and international locations on the efficient completion of their day-to-day business, we play a vital role in helping the company to achieve its goals.
Training is a vital resource.

Knowledge – ability – action: These are the cornerstones of a successful future in the Friedhelm Loh Group.

In 2002, this conviction drove us to establish the Loh Academy as our central training and HR development organisation, offering individual skills development for employees of the Friedhelm Loh Group.

The education and training of our employees is particularly important.

The Friedhelm Loh Group offers numerous young people a successful start to their careers in a variety of professions. As well as practical vocational training, the Friedhelm Loh Group firmly believes in linking theory and practice. The first step in this process is the "LehrePlus" (Apprenticeship Plus) scheme, which allows apprentices to complete their vocational training and college qualifications at the same time. The Friedhelm Loh Group is also one of the co-initiators of "StudiumPlus" (Degree Plus), the successful dual course which combines a degree course at a technical university with a practical vocational qualification.

Our degree programme StudiumPlus gives young people an opportunity to study for a highly regarded, practical qualification and take the first step onto the career ladder at the Friedhelm Loh Group.

The Loh Academy coordinates the entire StudiumPlus process, maintains contact with the mentors, and provides individual support to students.
Success through continuous training and development!

Moreover, the Loh Academy offers an extensive range of training and development programmes for employees and managers at the Friedhelm Loh Group and its cooperation partners. Training courses are available in the areas of methodology and interpersonal skills, as well as social and leadership skills. Foreign languages, software and technology round off the curriculum at the central Human Resources Development and Training department.

More than 42,500 participants have been trained and qualified by the Loh Academy’s extensive range of courses.

In addition to its standard catalogue, the Loh Academy also develops customised, targeted solutions for sustainable skills development. These are designed and implemented individually in close collaboration with the respective unit. From the initial analysis of requirements, to the design, through to the execution and evaluation of comprehensive development and change processes, your departmental projects are in excellent hands with the Loh Academy team.

The teaching methods used are equally innovative. As well as a comprehensive range of e-learning courses, all training courses are also devised as “blended learning”.

Investing in success.

Above all, the successful implementation of an investment project requires secure and stable financing. We want to help our customers to concentrate effectively on their core business. With this in mind, Loh Finance are reliable partners for the financing business.

By working together with some of Germany’s leading finance and lease companies, Loh Finance develops individually tailored leasing and financing solutions for products in the Friedhelm Loh Group, providing an investment basis to safeguard a company’s future viability and facilitate optimum positioning in the relevant markets.

Our customers will benefit from the decisive benefits of powerful, individual and secure financial planning, designed to protect liquidity while ensuring maximum flexibility.
COMPANIES IN THE FRIEDHELM LOH GROUP
AT A GLANCE.

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RITTAL – The System.
Faster – better – everywhere.

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Fax +49(0)2773 924-3129
E-mail: info@lkh-kunststoff.de
www.lkh-kunststoff.de

LKH – We make more out of plastic.

EPLAN – efficient engineering.

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Fax +49(0)2771 302-6914
E-mail: info@stahlo.de
www.stahlo.de

STAHLO – Processing steel straight from the line.

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## F.L.G. International

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<th>Country</th>
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The companies of the Friedhelm Loh Group

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