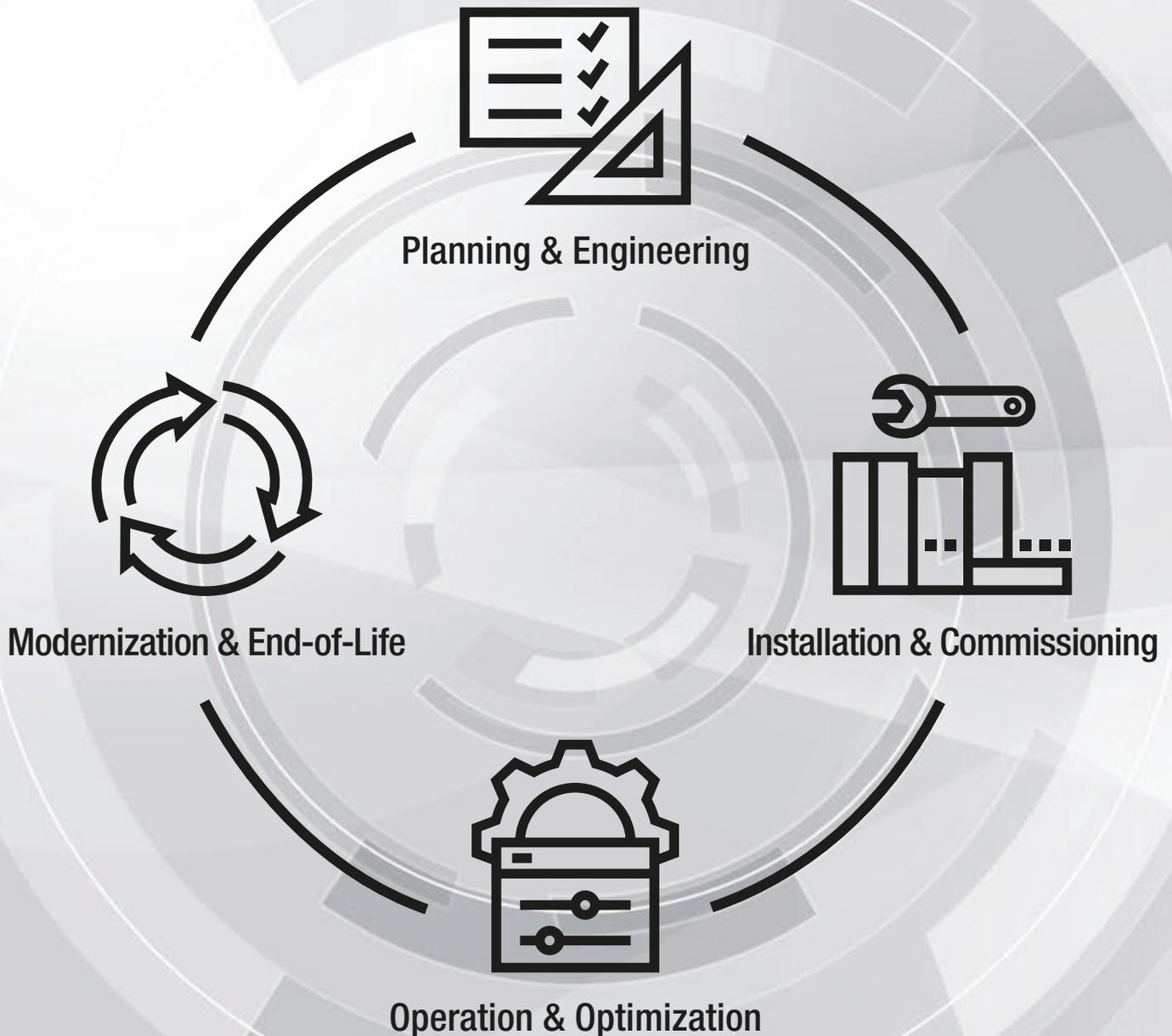


Liebherr Service Excellence

Added value across the entire life cycle



LIEBHERR



Dear Customer

Along with innovative products and processes, service excellence is the other great passion of Liebherr-Verzahntechnik GmbH. You and your requirements are always at the center. That is the only way we can generate the right added value over the entire life cycle of your machine for you – with a strong sense of purpose and as a reliable partner.

Traditional tasks such as on-site service, spare parts provision and telephone support are only the basis for this. We offer a comprehensive portfolio of products and services to ensure the productivity and availability of your machinery and equipment. Individual requirements differ. Therefore, we offer both standard and customized solutions worldwide. We accompany you from technological consultation and planning to handling, commissioning, optimization and care of ongoing production, up to the end of life of your machine or a second life cycle.

Our objective is the highest level of quality, focused competence, fast response times, customer proximity and partnership support.

Planning and engineering

Shaping progress and creating value together



We demonstrate what is possible, what fits your needs and your products and creates lasting value

For decades, Liebherr has been manufacturing gear cutting machines and tools as well as automation systems for a wide range of industries – from the automotive industry to the industrial gear and wind power sectors to the aerospace industry. We see ourselves as a reliable partner who, in close cooperation with you as our customer, can make a value-adding contribution throughout the entire product life cycle.

We demonstrate what is possible and which technological manufacturing solution fits your products – holistically. This means we are at your side from the initial design to technical consulting to support for the introduction of series processes in your manufacturing environment.

Of course, this applies to all areas of our sector, because we see ourselves as a holistic solution provider.

Our offer

Gear technology:

- Technological support for process design
- Selection of suitable tool systems, machining strategies and cutting values
- Supervision of testing in your manufacturing environment, for example for the introduction of new technologies
- Analysis and evaluation of technology processes
- Optimization of technology data, tool life and workpiece quality
- Considerations of processes from an economic standpoint
- Holistic project management

Automation systems:

- Complete project planning and system specification
- Layout creation and availability analysis
- Preparation of control books, interface specifications and system descriptions
- Supervision of customer tests and feasibility studies
- Holistic project management



Planning & Engineering

Liebherr Academy: seminars

Learning and knowledge are the basis for success



Further education is further development

The competitiveness of a company depends heavily on its employees. To optimally utilize this potential, regular training is required. Liebherr's seminar program addresses this issue. We offer a broad selection of seminars and training courses. The wide range of gear technology covers all needs – from job shops to large-scale manufacturers. We also provide your employees with essential knowledge about automation technology in numerous training courses.

Our goal is to increase the technological understanding of your employees, thus making their day-to-day production easier and reducing errors. By evaluating the level of knowledge of the participants in our seminars, a solid foundation of knowledge can be created, new ideas generated and personal development promoted.

Our offer:

- Basic seminar on gearing and machining processes
- Theory and practical seminar on specific gear cutting methods
- Advanced seminar on gear cutting methods and gear technology
- PC training for process time calculation
- System-specific and project-specific operator training
- Training on the maintenance and repair of mechanical and electrical equipment or components
- Customer-specific workshops and special topic training on request

All seminars and training courses are offered in the Liebherr Academy or directly at the customer's location. Standard languages for all training courses are German or English (other languages on request).



Planning & Engineering



Installation and commissioning

A successful start for your production



A partner at your side – from the very beginning

Further support and advice during the installation and commissioning phase guarantees maximum reliability and efficiency. In combination with our technical know-how and our experience in project management, we can shorten the commissioning time and ensure the required level of availability. You can thus get your production started on time and with purpose.

From the awarding of the contract to the acceptance of the system, you have a contact person who ensures that the agreed scope of services is provided by the planned start of production.

In addition to the project manager, an installation expert is available from the start. Together with you, they develop the best possible solution for the installation and commissioning of the machine or system, all the way up to final acceptance.

Our offer:

- Expert advice on installation and commissioning
- One central contact person through holistic project management
- Machine acceptance testing in the production facility and final acceptance at the customer's location
- Installation and commissioning by experienced technicians on site
- Instruction and training of customer personnel on site

Our service offer guarantees maximum reliability and efficiency.



Installation & Commissioning

Production and optimization

For reliability and efficiency in your production



Our multi-faceted service portfolio guarantees fast, reliable support to ensure reliable, predictable production. This starts with the qualification of the employees. Our training allows you to develop a deeper understanding of how to work with our machines. However, specific additional questions often arise during operation that cannot be covered even in a very comprehensive training. That is why we are happy to assist you during production to help you operate your systems as effectively and efficiently as possible. However, if your machines or systems should fail, then ultimately only one thing counts: the fastest possible resumption of production. We ensure this through our global network of more than 100 experienced service technicians: A local presence and personal contact contribute to fast, structured and efficient troubleshooting.

In order to further improve our response time, we are pleased to assist you with our remote maintenance models: With your consent, our experts can access the machine remotely via a

secure Internet connection at any time. Remote diagnostics and troubleshooting can reduce repair and travel costs by up to 70%. In addition, parameters can be changed and current software versions can be downloaded.

Of course, we always ensure a fast, global supply of high quality and original spare parts at competitive terms throughout the product life cycle.

Our offer:

- Production support by trained personnel to ensure availability of the machine or system
- Fast response times through our global, decentralized service network
- Service hotline guarantees fast assistance in case of malfunctions, minimizing downtimes
- Efficient diagnosis and targeted remote troubleshooting
- Worldwide availability of spare parts through a central warehouse and additional service hubs



Operation & Optimization

Production and optimization

For reliability and efficiency in your production



In light of increasing demands on the availability and productivity of manufacturing facilities, we want to guarantee the highest machine efficiency and performance to our customers. To this end, we also offer tailor-made, preventive maintenance contracts for all aspects of inspection and maintenance, based on our years of manufacturing and service expertise.

In addition to classic service, we also offer annual calibration as part of a maintenance contract for our gear inspection machines.

Increased market demands also necessitate a steady increase in technical productivity. Our experienced experts are happy to advise you on how to strengthen production in your company and optimize systems and processes.

Our offer:

- Tailored solutions and concepts for inspection and maintenance of your machines and systems
- Expertise for system and process optimization
- Professional calibration by the manufacturer for your gear inspection machine



Operation & Optimization

Modernization

Stay up to date with the latest technology



The REMAN program

Experience makes the difference

In 2011, Liebherr set up a specialist department for repairs, which has now been expanded to cover used machines and general machine overhauls. Qualified and experienced employees, who have many years' experience working on the assembly of the machines and are also familiar with older control systems, work in the REMAN area. Only the most qualified technicians are able to give these machines or components a second life with full performance and to make the machines or components available to you again as quickly as possible.

A general overhaul for all types of technology can be offered for equipment built in the year 2000 or later.



Modernization & End-of-Life



Our offer:

Used equipment program

- Cost-effective alternative to new machines
- Repurchase of older machines when ordering a new or used machine
- Rental machines to reduce downtime during a general overhaul of your machine
- Used machines that comply with the latest technical standards and provide the same level of manufacturing quality as new machines

Machine overhaul

- Replacement and reconditioning of all the necessary components
- The customer's specifications regarding machine and workpiece quality define the overhaul stage
- From maintenance of the current machine quality to re-establishment of the delivery quality, including an upgrade in terms of performance and control generation

Assembly overhaul

- Inspection and identification of damaged parts
- Professional repair in a specialized department
- Inspection of overhauled assemblies before delivery
- Delivery with warranty

Modernization

Stay up to date with the latest technology



Conversions

The foundation for optimum productivity and efficiency is the technical state of your machine or system. Conversions, upgrades and retrofits can ensure the availability of your machine or system and increase productivity.

Would you like to produce new products on your manufacturing system, restore or improve system availability, necessitating changes to the system or process? Our experienced experts will gladly support you with their expertise and develop tailor-made solutions for you.

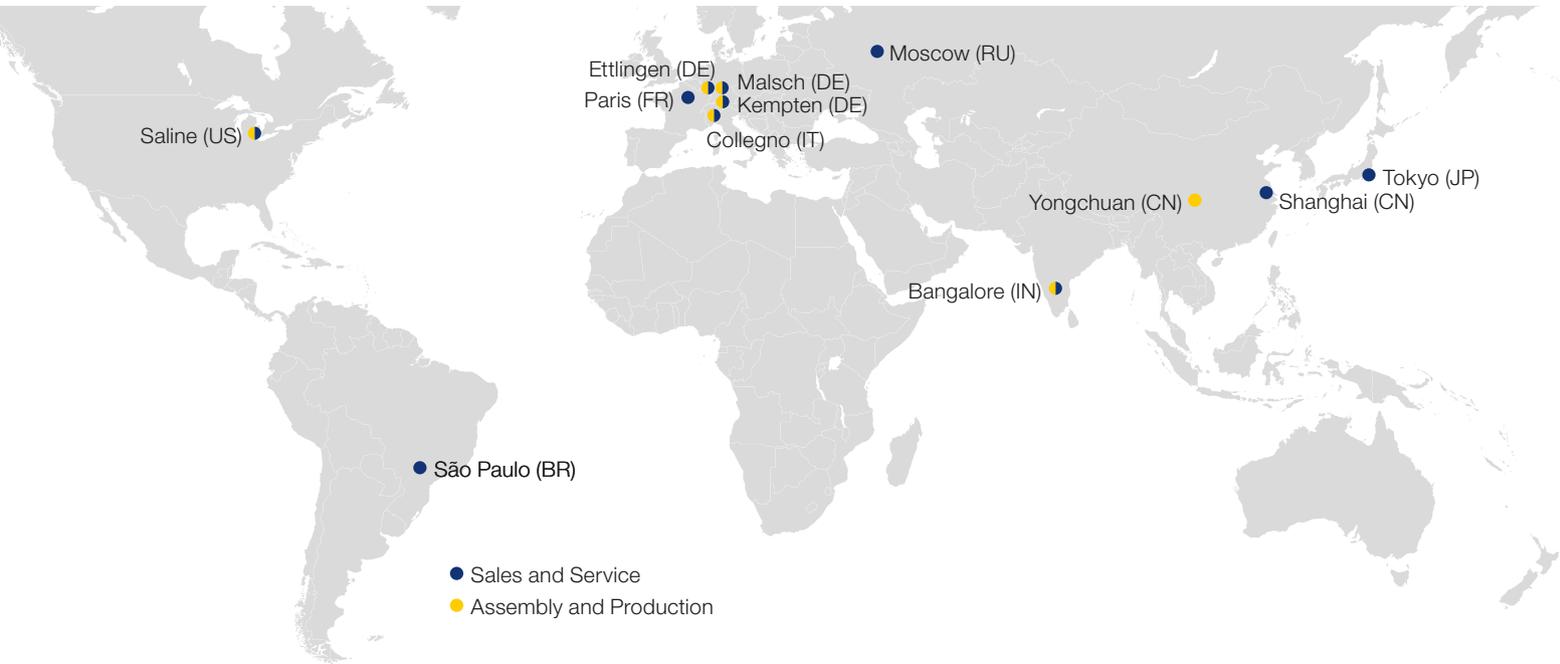
Our offer:

- Consultation, planning and realization of conversions and extensions for your machine or system
- Upgrade of control generations or individual components
- Execution of all the necessary work by our specialists



Modernization & End-of-Life

Your solution provider



Liebherr-Verzahntechnik GmbH Gear Technology and Automation Systems

Kaufbeurer Strasse 141
87437 Kempten
Germany
☎ +49 831 786-0
☎ +49 831 786-1279
info.lvt@liebherr.com

Liebherr-Verzahntechnik GmbH

Plant Ettlingen/Gear Tools
Hertzstrasse 9-15
76275 Ettlingen
Germany
☎ +49 7243 708-0
☎ +49 7243 708-685
tools.lvt@liebherr.com

Liebherr-Verzahntechnik GmbH

Plant Malsch/Metrology
Dieselstrasse 1
76316 Malsch
Germany
☎ +49 721 17087-0
☎ +49 721 17087-200
info.lvt@liebherr.com

Liebherr-Verzahntechnik GmbH

6 Place Du Village
92230 Gennevilliers, Paris
France
☎ +33 1 412110-35
info-machineoutil@liebherr.com

Liebherr-Utensili S.r.l.

Via Nazioni Unite 18
10093 Collegno TO
Italy
☎ +39 114 248711
☎ +39 114 559964
info.lut@liebherr.com

Liebherr-Gear Technology, Inc. Liebherr Automation Systems Co.

1465 Woodland Drive
Saline, MI 48176-1259
USA
☎ +1 (734) 429-7225
☎ +1 (734) 429-2294
info.lgt@liebherr.com

Liebherr Brasil Guindastes e Máquinas Operatrizes Ltda.

Rua do Rocio, 288 Salas 81 / 82
Vila Olímpia
04552-000 São Paulo - SP
Brazil
☎ +55 11 3538 1509
info.lbr@liebherr.com

Liebherr-Russland OOO

1-st Borodinskaya, 5
121059 Moscow
Russia
☎ +7 (495) 710 83 65
office.lru@liebherr.com

Liebherr Machine Tools India Private Limited

353/354, 4th Main, 9th Cross,
4th Phase, Peenya Industrial Area
Bangalore – 560 058
India
☎ +91 80 41 1785-91
☎ +91 80 41 272625
info.mti@liebherr.com

Liebherr (China) Co., Ltd.

Building 1, 88 Maji Road
Pilot Free Trade Zone
Shanghai 200131
China
☎ +86 21 5046 1988
info.lms@liebherr.com

Liebherr-Japan Co.,Ltd.

1-21-7 Hatagaya
Shibuya-ku Tokyo
151-0072
Japan
☎ +81 3 6272-8645
info.lvt.ljc@liebherr.com

Liebherr-Verzahntechnik GmbH
Gear Technology and Automation Systems
Kaufbeurer Straße 141, 87437 Kempten
☎ +49 (0)831 786-0, Fax +49 (0)831 786-1279
www.liebherr.com, E-Mail: info.lvt@liebherr.com



Liebherr-LinkedIn
<https://go.liebherr.com/E8ByKq>



Liebherr-Twitter
<https://go.liebherr.com/T92xu7>



Liebherr-YouTube
<https://go.liebherr.com/QDydXV>