

Mechanical Engineering.

One of the key industries of Thuringia's economy.



In recent years, despite ever intensifying competition, mechanical engineering has become the fastest-growing industry in Thuringia. As this clearly shows, the state offers excellent conditions for generating innovations and launching internationally successful products and technologies.

Mechanical engineering in Thuringia at a glance¹:

- › More than 520 businesses²
- › Around 18,000 employees
- › Sales of over € 3 billion
- › Export share of 37 %
- › 52,000 students, including 13,500 on engineering courses
- › Attractive customers, suppliers and cooperation partners in the metalworking sector are located close at hand.

Source: ¹ Thuringia State Statistical Office, ² own computations based on LEG-BID

Seize the opportunities that our region offers.

Benefit from a prime location in Europe's heartland, highly skilled workers and a world-class research infrastructure.

We provide full-service support for any investment project – from site search to project implementation and future expansions. Please contact us.

Main production areas:

Core competences:

- › Laser technology
- › Rapid tooling
- › Robotics

Special machine engineering focused on:

- › Automation engineering
- › Modern tool construction

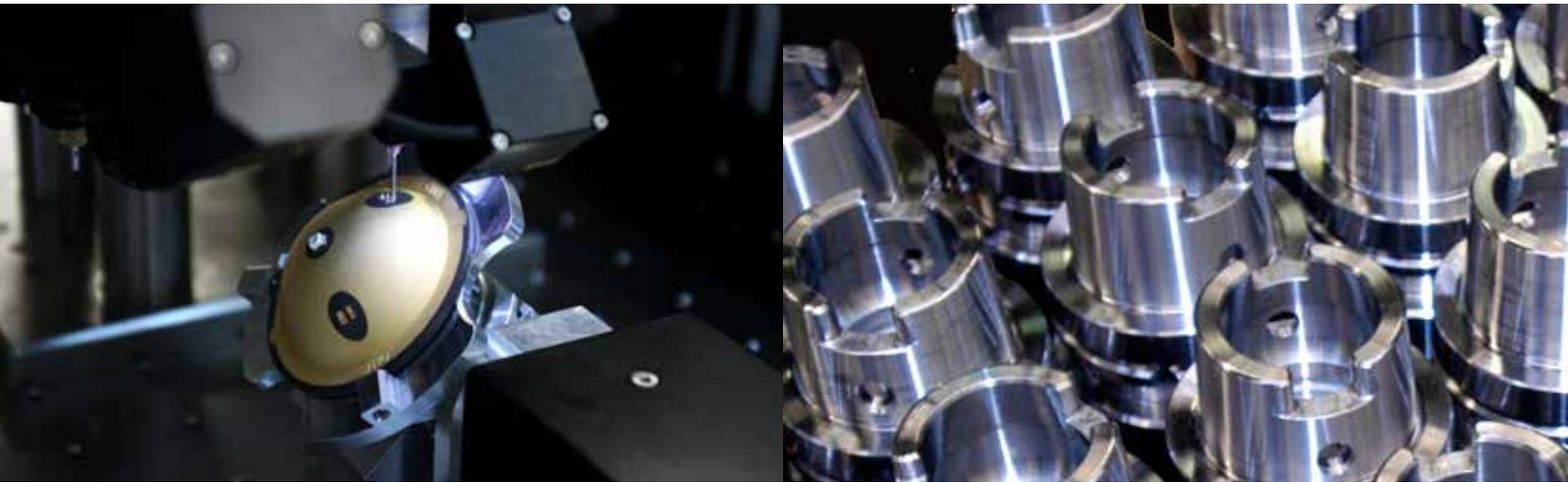
Specialist areas:

- › Fine and micromechanics
- › Precision components
- › Mechatronics
- › Automation



Innovation through cooperation.

The ThZM – the Thuringia Center for Mechanical Engineering – supports its members by serving as a central contact point for their R&D activities. It pools the mechanical engineering expertise and know-how of Thuringia’s tertiary education institutes and local research facilities, ensuring that all actors are able to access the latest scientific knowledge.



Especially for small and medium-sized mechanical engineering businesses, the ThZM is an ideal vehicle in helping them make best use of their business potential. It allows firms to make maximum use of synergy and networking potential and so increase their success in the export of new products and technologies.

Research organizations participating in the ThZM:

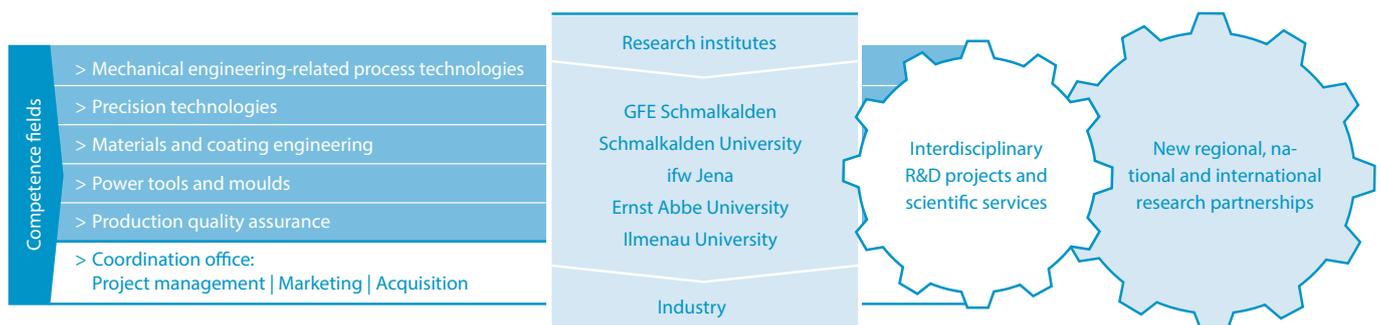
- › GFE Society for Production Engineering and Development Schmalkalden www.gfe-net.de
- › Ernst Abbe University of Applied Sciences, Jena www.fh-jena.de
- › Günter Köhler Institute of Joining Technology and Materials Testing, Jena www.ifw-jena.de
- › Schmalkalden University of Applied Sciences www.fh-schmalkalden.de
- › Ilmenau University of Technology www.tu-ilmenau.de

These bodies support businesses in all phases of product development - from the initial idea to market readiness. www.maschinenbau-thueringen.de

FerMeTh – the Cluster for Production Engineering and Metalworking in Thuringia

The FerMeTh serves as a cooperation platform for firms operating in the Thuringia metalworking industry. It helps them sustain their competitiveness and so secure their long-term market opportunities. It also assists in overcoming the structural disadvantages of SME businesses. Its activities lie especially in the fields of R&D, production cooperation, marketing and sales, and ensuring the availability of qualified labour.

Structure of the ThZM





Specialized and highly motivated workforce.

Thuringia offers mechanical engineering firms a pool of qualified personnel of outstanding quality – from excellently skilled workers in all the necessary technical trades to highly qualified graduate engineers.

University education

Thuringia's technically oriented universities are continuing the state's long engineering traditions. In the 2014/2014 winter semester alone, no fewer than 1,400 students were enrolled on mechanical engineering courses. Ilmenau University of Technology and Schmalkalden University of Applied Sciences have repeatedly achieved leading positions in the university rankings of the German weekly newspaper "DIE ZEIT" and the Centre for University Development (CHE).

Selected study programs:

Schmalkalden University of Applied Sciences

- › Mechanical Engineering (B.Eng./M.Eng.)
- › Industrial Engineering (B.Eng.)
- › Mechanical Engineering (dual study program BISS, B.Eng.): Students also acquire a Chamber of Commerce qualification as a skilled industrial mechanic or toolmaker.

Ernst Abbe University of Applied Sciences, Jena

- › Mechanical Engineering (B.Eng./M.Eng.)
- › Mechatronics (B.Eng./M.Eng.)
- › Production Technology & Production Management (M.Eng., part-time)

Eisenach University of Cooperative Education

- › Production Measurement Technology and Quality Management (B.Eng.)
- › Construction (B.Eng.)
- › Plastics Engineering (B.Eng.)
- › Mechatronics and Automation (B.Eng.)

Ilmenau University of Technology

- › Mechanical Engineering (B.Sc./M.Sc.)
- › Mechatronics (B.Sc./M.Sc.)
- › Innovative Product Development in Machinery and Equipment Engineering (distance-learning degree course)

Basic and further training

To ensure that the mechanical engineering sector continues to have a sufficient pool of skilled labour to draw on in future, Thuringia places a strong focus on qualification. Young people can train for skills, for example, in the fields of metal cutting, mechanical and plant engineering and tool and mould making.

Selected training vocations:

- › Cutting machine operator
- › Industrial mechanic
- › Metalworker

Thuringia also specifically promotes and supports training cooperations in the metalworking sector. For example, businesses and vocational training institutes have formed alliances at regional and local level to be able to train more young people and retrainees. The Chambers of Industry and Commerce (CIC's) and Chambers of Craft Trades also offer further training programs.



"There is a tradition of mechanical engineering in Thuringia, which manifests itself in the form of innovative products. It is the supply of good and skilled labor that was a decisive factor for us."

Horst Keller, CEO of Horsch Maschinen GmbH

WIS – the further training information system of the CIC:

www.wis.ihk.de

Further training activities offered by the Erfurt Chamber of Craft Trades:

www.hwk-erfurt.de



Thuringia: where success is made.

Thuringia offers outstanding innovation and growth opportunities for firms working in the mechanical engineering industry. This is clearly demonstrated by the following companies that have set up operations here in recent years.

Horsch Maschinen GmbH

HORSCH operates one of the most modern production facilities for agricultural machinery in Europe in Ronneburg near Gera. The plant has been running at full capacity since January 2007. The plant displays great potential for further growth and additional production expansion. HORSCH has invested about € 20 m in the 14 ha site located directly adjacent to the A4 motorway near the Hermsdorf interchange.

Schuler Pressen GmbH, branch "Umformtechnik Erfurt"

Umformtechnik Erfurt is a subsidiary of the Schuler Group in Europe devoted exclusively to production and service. It manufactures systems for the automotive, supplier, electrical and domestic appliance industries. Its products range from welding components of up to 230 tonnes in weight to mechanical machining and installations involving a variety of mechanically driven presses as well as complex plants and machinery, also for customers outside the group.

Bystronic Maschinenbau GmbH

Bystronic is a Swiss company with worldwide operations, supplying application-compliant systems and services for laser and water jet cutting processes and bending technology: efficient, powerful and reliable. Every consumer comes into indirect contact with the bending machines produced by about 200 employees at the production and development center in Gotha. It is here that, among many other things, aircraft components, automobile parts and even washing machine panels are formed.

Siemens AG, Sektor Energy, Generatorenwerk Erfurt

The Siemens Generatorenwerk Erfurt is a competence center for the development and manufacture of generators with outputs of up to 200 megawatts. Siemens generators from Erfurt are used in the paper and pulp industries, gas and steam power stations, and in heating and industrial power stations all over the world.

Selected companies

Böhm Fertigungstechnik Suhl GmbH,
Zella-Mehlis

Deckel Maho Seebach GmbH, *Seebach*

Gebr. Becker GmbH, *Apolda*

Glatt Ingenieurtechnik GmbH, *Weimar*

Häcker Automation GmbH,
Schwarzhausen

Hydrema Produktion Weimar GmbH,
Weimar

**Jenoptik AG, Geschäftsbereich
Laser- und Materialbearbeitung,** *Jena*

Kaesar Kompressoren AG, *Gera*

Kern Technik GmbH & Co. KG,
Schleusingen

Köberlein & Seigert GmbH, *Grabfeld*

Lemuth GmbH, *Meiningen*

ruhlamat GmbH, *Marksuhl*

Samag Saalfelder Werkzeugmaschinen GmbH, *Saalfeld*

**Sumitomo (SHI) Demag Plastics
Machinery GmbH,** *Wiehe*

Wincor Nixdorf Technology GmbH,
Ilmenau

Viega GmbH & Co. KG, *Großheringen*

ZF Friedrichshafen AG, *Gotha*

Picture Credit: LEG Thüringen/Andreas Hultsch, Kadmy/fotolia, Häcker Automation, Horsch Maschinen GmbH, ZF Friedrichshafen AG

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