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IDEEN-FABRIK 
Specialist seminars for drilling machining



Welcome to the IDEEN-FABRIK+

With the IDEEN-FABRIK+ and the comprehensive seminar programme for customers and employee qualification, we aim to offer you a measurable and permanent competitive advantage in your markets.



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Organisation

TOOLS+IDEAS

Innovative tool concepts and holistic solutions for the bore machining industry distinguish the KOMET GROUP as a worldwide technology leader.

We are known by our customers as a manufacturer of premium quality tools. They recognise the ideas behind our solutions. We have set ourselves the goal of providing our customers with the added value that comes from the knowledge we have gained in our trade for the benefit of our customers.

We call it TOOLS+IDEAS. A new and innovative way of providing support and services with permanent and ongoing benefits.

Our IDEEN-FABRIK+ is the first step in this direction.





The idea lies in the detail.





The ideas factory

The IDEEN-FABRIK+ reflects the evolution of the KOMET GROUP from a tool manufacturer into a creative expert for solutions covering all aspects of boring, reaming, thread milling and mechatronic tools.

The central objective is to offer our customers and employees scope for creative working and learning.

On a total area of 2,500 m², we have created a modern, multi-storey factory environment. The IDEEN-FABRIK+ was deliberately not constructed as a separate, detached training building, but integrated directly above a manufacturing business.

While the metal swarf flies down below, ideas are exchanged above. By this, we aim to demonstrate that the work here is always associated with new ideas and creative ambition.



More ideas

The objective of our seminars is the immediate implementation of what has been learnt in practice. Our instructors are therefore all experienced application technicians. Our training content is up-to-date and focussed on day-to-day practical applications.

We want to offer more than others.

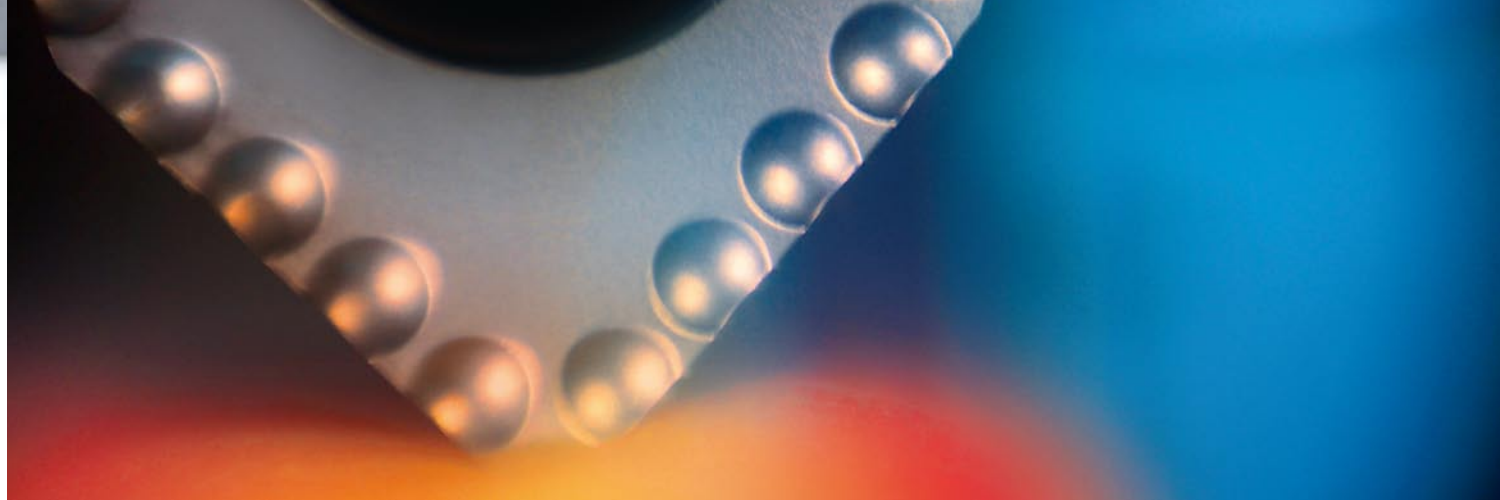
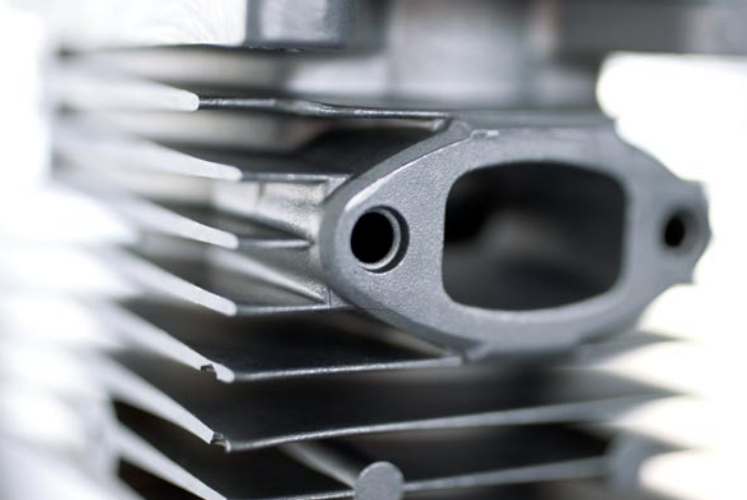
In order to achieve the greatest possible benefits for participants and companies with our seminars, we are active on your behalf both beforehand and afterwards.

PLUS 1. For Example.

You make your individual problem into the training subject. Participants can submit their own problems from practice corresponding to the subject, three weeks before their seminar dates. These can then be integrated into the training as examples, anonymously if preferred.

PLUS 2. Private Lesson.

You benefit from knowledge transfer with sustainability. Participating companies receive a voucher, which guarantees free support on questions of implementation of the seminar contents for three months following the training. By telephone, e-mail or by an application technician on the spot.



PLUS 3. In-house Individual.

You bring the IDEEN-FABRIK+ to your company. On request, we will analyse your cutting processes and develop solutions for the optimisation of your manufacturing environment. On this basis, we work out contents for training sessions for your employees on your own premises – designed specifically for your production.

PLUS 4. Letter of Ideas.

You remain in contact with us. Several times annually, we keep the participants of all seminars abreast of current subjects of the IDEEN-FABRIK+.





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The success factor of qualification

In the IDEEN-FABRIK+ we want to reduce your unit costs and increase your productivity.

We specifically improve your employees' qualifications. We make them aware of the performance potentials of tools and cutting materials, and the optimization of the cutting parameters which can be achieved in this way. We train them in the effective application of innovative tooling technology.

Market requirements	KOMET training concept/contents	Unit cost reduction	Result
Reduction of tool costs	Use of new technologies and modular tool concepts	1 %	Unit costs reduced by 25 %
Service life increase	Selection of suitable cutting materials	2 %	
Optimisation of cutting parameters	Exploitation of the performance potential of tools and cutting materials	20 %	
Reduction of rejects	Suitable selection of processes and methods	2 %	
Productivity increase of 25 %			

Partnership plus

The IDEEN-FABRIK+ is directed by Frank Stahl, an experienced practitioner from the KOMET GROUP application technology department. With his sound expert knowledge of tools and manufacturing processes, and his many years of experience, including at the international level, he ensures a methodical and practical approach to the subjects.

Frank Stahl is in continual contact with the development teams of the KOMET GROUP and our other partners in the sector.



Frank Stahl

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Partners for a plus
in knowledge:





Certified Quality

All compact seminars, as well as the IDEEN-FABRIK+ itself, are certified according to ISO 9001. Besides the fact that the quality has been confirmed by an independent body, the IDEEN-FABRIK+ offers you the benefit that further education and training from the compact programme counts as official vocational training and can be subsidised as such.

Seminar overview

	No.	Seminar	Page
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C 01 Compact seminar: Ideas for solid drilling with indexable inserts

Reliable handling of high-performance indexable insert solid drilling tools

Contents

- Principles and problem areas in cutting
- Processing environment and basic machinery requirements
- Solid drill technology in comparison / Performance calculations
- Boring and rough boring situations / Problems – causes – solutions
- Selection of suitable cutting parameters, cutting materials and geometries
- Service life and wear identification
- Comprehensive, practical exercises on the machine

Objectives

Participants are shown basic procedures for the use of cutting tools in a plausible and understandable way, and the effects of different cutting geometries simulated. The correct definitions of minimum requirements with regard to the tooling machine and the fitting situation are described, in order to ensure successful processing. The processing method of “solid drilling with indexable inserts” is detailed and the correct tool combinations for the relevant processing task identified. Practical solution approaches are pointed out for any problems occurring, ensuring the correct choice of working parameters and the practiced handling of these tools.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production
Trainees nearing completion of training
Machine operators / specialists
Master / setup technicians
Technologists / application technicians
Programmers
Tool setters / administrators / controllers
Work preparation specialists

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.

C 02 Compact seminar: Ideas for rough boring and fine boring

Finished processing
with fine boring tools

Contents

- Principles of cutting and basic physical rules for “projecting” tools
- Processing environment and basic machinery requirements
- Tool technology with rough boring and fine boring tools / Performance calculations
- Rough boring strategies for large cutting depths and long projection lengths
- Selection of suitable cutting parameters, cutting materials and geometries
- Service life and wear identification
- Comprehensive, practical exercises on the machine

Objectives

The participants are provided with very practical knowledge in order to be able to keep pace with day-to-day challenges. The process of rough boring places particular requirements on the chip formation and reliable chip removal and required processing depths demand increasingly sophisticated technologies and methods.

Final processing with fine boring tools places very high requirements on the performance quality and the reliable operation of the cutter. The timely identification of signs of wear, and the associated cutter replacement intervals ensure the required quality and avoid unnecessary waste/rejects. Basic information on metallurgy of cutting materials increases the understanding of the stages of the cutting process.

Problem applications are analysed, and corresponding solution approaches developed and tested under actual conditions, ensuring the selection of economical working parameters and the efficient use of the tools.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production
Trainees nearing completion of training
Machine operators / specialists
Master / setup technicians
Technologists / application technicians
Programmers
Tool setters / administrators / controllers
Work preparation specialists

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.



C 03 Compact seminar: Ideas for precision reaming

Economic, high-quality
boring finishing

Contents

- Principles of reaming technology
- Effects of machinery, equipment, processing materials etc
- Multiblade reaming tools in comparison / Performance calculations
- Achievable bore qualities / dimensional tolerances, surfaces, as well as shape and position tolerances
- Cutting- and application values for maximum efficiency
- Basics of cutting materials, coatings and cutting geometries
- Comprehensive, practical exercises on the machine

Objectives

The tool and the processing environment are the decisive factors for the process stage of reaming.

Reaming places the maximum requirements on the combination and interaction of the tool, workpiece and machine.

The final stage of bore processing demands above all quality, fast processing times and economy.

Problem applications are pointed out and economical solutions developed. In the practical session, these are applied on the machine, ensuring the precision handling of these tools and the selection of efficient working parameters. Basic information on metallurgy of cutting materials is also conveyed, increasing the understanding of the stages of the cutting process. The timely identification of signs of wear ensures the required quality and avoids unnecessary wastage/rejects.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production

Trainees nearing completion of training

Machine operators / specialists

Master / setup technicians

Technologists / application technicians

Programmers

Tool setters / administrators / controllers

Work preparation specialists

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.





C 04 Compact seminar: Ideas for thread milling

Basic knowledge of conventional and modern thread milling

Contents

- Threads – the basics / Basic machine requirements
- Processes of thread milling / Basic machine requirements for thread milling
 - Thread milling / Clamping equipment / Cutting data
 - Thread forming / Clamping equipment / Cutting data
- Thread milling / Requirements / Advantages
 - Thread milling / Clamping equipment / Cutting data
 - Bore thread milling / Clamping equipment / Cutting data
- Selection of suitable cutting parameters and cutting materials
- CNC programming with thread milling
- Economic considerations
- Comprehensive, practical exercises on the machine

Objectives

Thread milling occupies a special place in bore processing. Safety aspects of the finished thread play just as important a role as quality and functionality. The various milling concepts are explored, take into account the machine requirements and the specific material properties. The contents conveyed thus enable the participants to select the process and tool with economic aspects in mind.

The correct application of processing software for the reliable processing of threads is a decisive plus in the production process.

The production of the CNC programmes with the aid of readymade programme macros (software-assisted programming) is practiced. These form the basis for the reliable use and handling of the selected tools.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production

Machine operators / specialists

Master / setup technicians / foremen / shift leaders

Technologists / application technicians

Programmers

Tool setters / administrators / controllers

Work preparation specialists / technical designers

Production managers

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.

S 01 Special seminar: Ideas for aluminium processing

Making better use of proven
and new technologies

Contents

- Aluminium components – new materials – new challenges
- Solid / rough boring
- Fine boring / reaming
- PCD reaming – maximum feed speeds and surface qualities
- Threads – consideration of methods and techniques
- Service life and wear identification
- Determination of parameters and cutting material types
- Challenges of surfaces / bore diameters / bore depths

Objectives

The increasing use of aluminium alloys and composite materials in aerospace and vehicle construction for the reduction of weight and consequent saving of fuels is a logical consequence of drastically rising energy costs.

The common processing methods generally use the HSC (High Speed Cutting) process. The numbers produced in this way generally go into large series production. The focus is on the shortest possible processing times, while still maintaining the maximum quality and process reliability. Such components, often characterised by thin walls and high complexity, present great challenges for users.

The processing methods, with the corresponding tool and cutting technology, are presented by means of clear application examples, demonstrating the economy of the process.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production
Machine operators / specialists
Master / setup technicians / foremen / shift leaders
Technologists / application technicians
Programmers
Tool setters / administrators / controllers
Work preparation / technical designers
Production managers

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.

S 02 Special seminar: Ideas on cast processing

Production methods as
the decisive factor for quality

Contents

- Cast components – processing covering all aspects of boring
- Solid boring / rough boring / fine boring
- Reaming
- Reaming or fine boring? Cost-effectiveness is decisive!
- Threading – consideration of methods and techniques
- Individual and large series production
- From GG25 to GJV – abrasive in any case
- Automobile components – new materials – new challenges
- Standard or special tools?
- Service life and wear identification
- Determination of parameters and cutting material types
- Clamping situations
- Challenges of bore diameters / bore depths

Objectives

The processing of components made of cast materials is often underestimated.

Stresses following roughing processing and clamping errors have a significant effect on the final quality of the component. Production methods can represent a decisive factor in this respect and contribute greatly to the improvement of the situation.

Maximum process reliability and the shortest possible processing times are the major requirements in the series and large series production. The basic requirements to achieve this objective include the optimum working parameters and mature tool technologies. Application examples enhance the knowledge conveyed and give it a practical reference.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production

Machine operators / specialists

Master / setup technicians / foremen / shift leaders

Technologists / application technicians

Programmers

Tool setters / administrators / controllers

Work preparation specialists / technical designers

Production managers

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.

S 03 Special seminar: Ideas for steel, cast steel and other material processing

The correct handling
of specific material properties

Contents

- Steel components – processing covering all aspects of boring
- Solid boring / rough boring / fine boring
- Final processing, reaming with linear feeds, reliable and effective
- Threading – consideration of methods and techniques
- Individual and large series production
- From construction steel to Inconel – abrasive in any case
- Automobile components – new materials – new challenges
- Service life and wear identification
- Determination of parameters and cutting material types
- Challenges of bore diameters / bore depths

Objectives

The processing of steel components of weldable construction steel places high demands on the processing method due to the creation of chips and lack of stability. Production methods can represent a decisive factor in this respect and contribute greatly to the improvement of the situation.

New materials such as CFK composite materials and highly heat-resistant steels such as nickel based alloys represent a particular challenge for all processors.

The latest tool technologies and optimum working parameters enable fast and reliable processing, and form the essential requirements for high cost-effectiveness. The advantages are illustrated by processing examples.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Employees involved in cutting production

Machine operators / specialists

Master / setup technicians/ foremen / shift leaders

Technologists / application technicians / programmers

Tool setters / administrators / controllers

Work preparation specialists / technical designers

Production managers

Duration 1 day

Start 8:30 a.m.

End 5:15 p.m.



S 04 Special seminar: Ideas for production optimisation

From preliminary tools
setting to quality assurance

Contents

- Easy tool administration – even for demanding working environments
- Reliable preliminary setting and processing
- Successful processing covering all aspects of boring
- In-process measurement with laser technology
- Reliable clamping, tool clamping technology comparison
- Applying surface measurement technology skilfully, guaranteeing quality

Objectives

Complex manufacturing processes from preliminary tool setting to the final product are placing increasingly great demands of the personnel involved. The individual manufacturing steps make the overall view more difficult.

The knowledge conveyed gives an insight into the sequence of the overall production process. This enables situations and influencing factors to be recognised more easily.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Machine operators / specialists
Master / setup technicians
Work preparation
Tool setters / administrators / controllers
Programmers
Technologists / application technicians
Technical designers
Production managers

Duration 2 days

Day 1 9:00 a.m. – 5:00 p.m.

Day 2 8.30 a.m. – 4:30 p.m.

BLUM
focus on productivity

ZOLLER
measure fascination

Mahr
EXACTLY

SCHUNK

KOMET
GROUP

S 05 Special seminar: Ideas with KomFace Tools

Cost-effective and reliable working –
the marathon runner in continuous operation

Contents

- Processing methods
- Arrangement and method of operation of mechanical u-axis systems
- Machine requirements, interface
- Possibilities of internal/external processing
- Achievable accuracies
- Savings effects
- Maintenance intervals
- Processing examples, actual installations

Objectives

The use of facing tools and boring bars is today indispensable when it comes to large series production. The special machine or transfer line forms the basis for the use of these multi-functional tools.

One- or two-edged, with or without imbalance correction, HSC or conventional? Correct handling and maintenance enable an extremely long service life and ensure the necessary performance capability and quality. These and other questions are answered comprehensively, clearly and practically by the specialist.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Technologists

Programmers

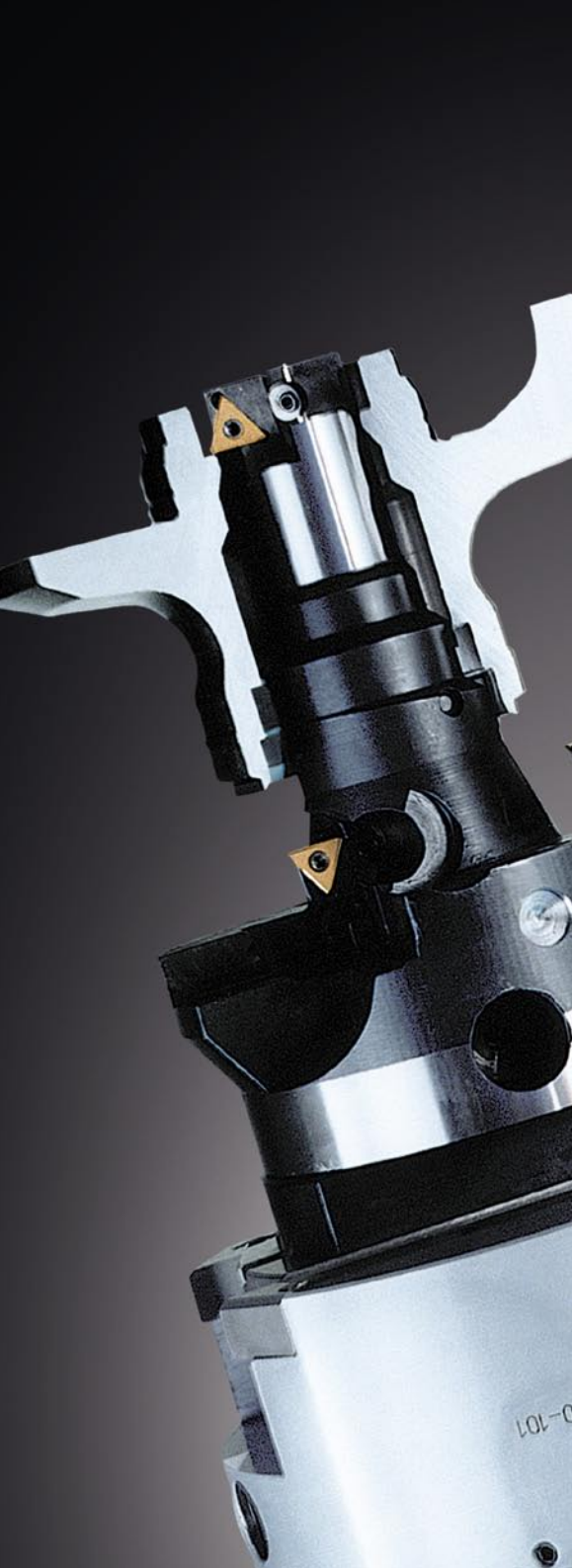
Technical designers, process planners, product developers

Production managers

Duration 1 day

Start 9:30 a.m.

End 3:00 p.m.



S 06 Special seminar: Ideas with KomTronic® systems

New perspectives for
construction and design

Contents

- Processing methods
- Arrangement and method of operation of mechatronic cutting tools
- CNC-controlled u-axis systems in the processing centre
- Wear compensation in the μ range
- Machine requirements, interface
- Possibilities of internal/external processing
- Achievable accuracies
- Savings effects
- Processing examples, actual installations

Objectives

Future viability means of facing up to the requirements of tomorrow today. Continually progressing globalisation and the resulting greater competitive pressure increasingly require the use of the very latest technologies. KomTronic® represents an important component for the reduction of ancillary costs and the improvement of machine effectiveness. Tasks which until now could only be performed in several steps or on special machines can now be carried out accurately and reliably in one step on a standard machine.

The presentation of this innovative technology is intended to provide initial ideas and suggestions for your production facilities.

Beginning with product development, when manufacturing feasibility should also be considered, through to current manufacturing problems, solution approaches are pointed out with regard to quality improvement, better feasibility and reduced unit costs.

Methods

- Systematically organised presentations and lectures
- Application examples with direct reference to the presentations given
- Demonstration videos
- Handling and exercises in work groups
- Processing examples on the tooling machine
- Group discussion

Target groups

Technologists

Programmers

Technical designers, process planners, product developers

Production managers

Duration 1 day

Start 9:30 a.m.

End 3:00 p.m.

Seminar enquiry / registration

Please complete and sign the form and return it to us by e-mail, post or fax.
Registration may be carried out only by authorised persons.

For telephone inquiries, please contact Mrs. Kußmaul:

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IDEEN-FABRIK+
Zeppelinstraße 3 · 74354 Besigheim
ideenfabrik@kometgroup.com

Seminar no. _____

Seminar title _____

Seminar location **Besigheim** _____

Seminar date _____

Please give your company data (invoice address)

Customer of the KOMET GROUP Yes No

Company _____

Customer no. (if known) _____

Address _____

Postcode/town _____

Please give your contact data as the authorised person

Title _____

Name _____

Department _____

Telephone _____

Telefax _____

E-mail _____

Please provide the corresponding data for correct participant confirmation

Participant 1 · Last name/first name _____

Participant 1 · Last name/first name _____

Participant 1 · Last name/first name _____

Participant 1 · Last name/first name _____

Participant 1 · Last name/first name _____

I am aware of the participation conditions.

Place / date _____ Signature _____

You will receive within the next few days a written confirmation providing detailed information on the selected seminar, and an invoice, with the request for payment. The general terms and conditions of business of the KOMET GROUP GmbH apply.

Registration

The number of participants at our specialist seminars is limited. Please register early using the attached form by fax or e-mail. Advance reservations cannot be accepted. Registrations are accepted in the order received. Confirmation of your registration will be sent out immediately following successful registration.

Participation conditions

All prices are subject to VAT at the current applicable rate. The participation fee includes the seminar costs, training materials, certificate, lunch and beverages and dinner (in case of seminars lasting more than one day). The seminar fees do not include overnight accommodation. Please reserve your accommodation yourself, making reference to the KOMET IDEEN-FABRIK+.

Cancellation

Cancellations must be made in writing. In case of cancellation, the following periods and charges apply: Up to 2 weeks before the start of the seminar, 25 % of the invoice amount is due, and from 2 weeks before the start of the seminar, the full invoice amount. A replacement participant may be nominated at any time.

Data protection

By registering for a seminar, all participants give their agreement that their personal data may be recorded by the KOMET GROUP GmbH for the purposes of preparation, organisation and billing of the seminar.

Payment terms

The invoice must be paid, without deduction, by the start of the seminar at the latest.



Nearby hotels

- Hotel am Markt**, Besigheim (www.besigheim-hotel.de)
- Parkhotel**, Bietigheim (www.parkhotel-bietigheim.de)
- Hotel Otterbach**, Bietigheim (www.hotel-otterbach.de)
- Schlosshotel Liebenstein**, Neckarwestheim (www.liebenstein.com)

How to find us

Coming from the north:

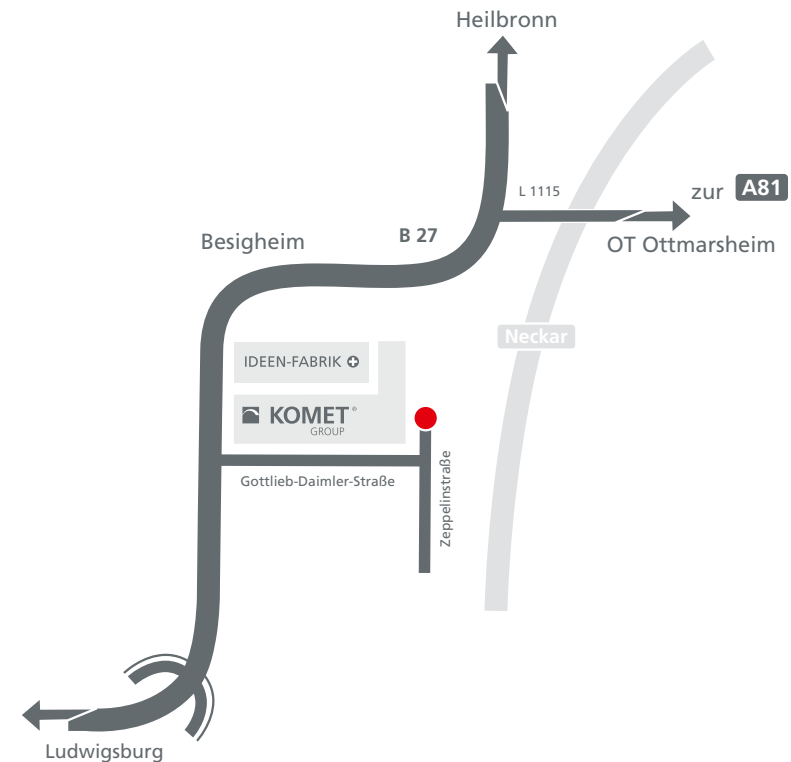
Motorway A 81, Mundelsheim exit. Turn left onto the L1115 signposted Besigheim, at the second roundabout turn left, continuing on the L1115. In Besigheim, turn left onto the B27 signposted Ludwigsburg. Turn left into the Gottlieb-Daimler-Straße, then left again into the Zeppelinstraße.

Coming from the south:

Motorway A 81, Ludwigsburg-Nord exit. Turn left onto the B27 signposted Bietigheim-Bissingen as far as Besigheim. In Besigheim, take the 3rd street on the right after the tunnel into the Gottlieb-Daimler-Straße, then turn left into the Zeppelinstraße.

KOMET GROUP GmbH

Zeppelinstraße 3 · 74354 Besigheim





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