

# Honing Process & Honing Tools (Basics) - Course No. A100014

# **Short Description**

The course provides fundamental knowledge on honing, different honing processes, parameters, applied tooling, abrasives and measuring equipment. Practical exercises will complete the training.

# **Course Objectives**

- · Basic knowledge on the honing process
- Basic knowledge of the general honing processes with the applied tooling, fixtures, abrasives and measuring equipment
- State of the art and R&D topics

# Prerequisites

Basic knowledge of manufacturing

# Target Group

Planning, purchasing and production personnel, operators and set-up personnel.

# Language

This course will be held in German.

# Duration

2 days

# Notice

This course is designed as an in-house training module in Ostfildern. If you are interested in taking this training course at your own facility, please contact us directly. The cost of the course includes meals and beverages during the course.

## Next Inhouse-Training

3-4 November 2016

# Contents

- Honing basics (terminology, kinematics, machining, process time)
- Cutting material and cooling lubricants (components: Honing ledge, abrasives, coolant function)
- · Demonstration of honing process
- Tooling (function principle, tool types, tool refurbishment, tool adaptions)
- Fixtures (rigid, floating, cardanic)
- Machine and components (expansion systems, stroke drives, measuring controls)
- Function and quality (quality terms, topography, contact roughness, form, cross hatch)
- Measuring of honed bores (size-, form-, and surface measuring, display of topography)
- · Practical measuring demonstration
- Honing process I (form honing light/professional, expansion systems, stroke controls, quality values)
- Honing process II (honing of thermal coatings, material structure, position honing, rough honing, process layout, quality values)
- Honing process III (gear bores, small bores, match honing)
- Honing process IV (control sleeves, conrods)
- Current development / trends



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# **Registration form**

### Sender:

Company	Purchase order number	
VAT No.	P.O. Box	
Contact person Mr. / Mrs.	Street	
E-Mail	ZIP code / City	
Phone	Country	
Date / Signature / Company stamp		

### Registration for the following courses:

Course No.	Course Description	CW / Date	Surname / First name participant

# **Training Conditions**

### Enrollment

Enrollment can be made via Internet, letter, fax or by email. Bookings must be made in writing. The booking is binding upon the receipt of an order confirmation from the Gehring Academy to the registrant.

### Dates

Course dates are available on request. Current dates for in-house training can be found on the Academy website www.gehring-academy.de. Please contact us promptly so that your desired date request can be considered. Reservations may only be made upon presentation of a written order. The Gehring Academy reserves the right to cancel the courses offered in the case of low bookings or for an important reason (for example, illness). Gehring will immediately inform the client about the cancellation of the course for the above stated cases. Full refund will be made to the client. Further claims of the client are excluded.

### Costs

The costs and payment conditions are listed on the order confirmation. The prices are subject to VAT. Unless the order confirmation indicates otherwise, the registration fee is understood to mean the cost per person and per event date and includes training materials, as well as in-house training at locations of the Gehring Academy and a catered lunch and refreshments. Travel costs for our trainer for customer onsite training are not included in the price and are invoiced separately.

### Accommodation

Unfortunately Hotel reservations cannot be made for in-house training due to the wide range of dates and individual wishes and company requirements. We ask for your understanding regarding this matter.

### Course Times / starting times

Please refer to your order confirmation for the exact course times, since these can be variable, depending on the rate booked. In general a course day is max. 6 hours - including pre and post-discussions with the trainer, the maximum duration is 7.5 hours.

### Certificate

Upon completion of the course, the attendee is issue with a certificate. Participants who cannot follow the course content due to insufficient prior subject knowledge or who have communication challenges, receive a confirmation of attendance.

#### Training materials

All course materials are provided exclusively only during the training. Unfortunately no training materials can be sent in advance. The training materials are copyright protected for Gehring and intended only for the personal use of the student. They may not be copied, distributed, translated or otherwise reproduced without the written consent by Gehring.

### Cancellations

After the registration is confirmed by the Gehring Academy, cancellation requests can only be accepted in writing. The cancellation fee is as follows: 10% of the course fee if cancellation is within 14 calendar days of the course date, 50% of the course fee if cancellation is within 7 calendar days. If cancellation is made less than 7 days before the course runs, the full course fee will be charged. Of course, there is the possibility of the applicant to name substitute participants in the case they cannot attend the course.

#### Liability a) in our facility:

Gehring Technologies is not liable for damages caused by accidents in our facility or for any loss of items. Also, we assume no liability for damages incurred by the customer in the implementation of operations presented in the training course.

### b) at customer facility:

We would like to point out that a maximum of 6 people can be trained effectively simultaneously. Moreover, there is a risk to the system reliability through operating errors of the trainees during the training course. Injury and resulting costs are not covered by Gehring Technologies GmbH.

Furthermore, we refer to our General Terms and Conditions listed on our corporate website www.gehring.de

Different terms and conditions of the corporate entity of the customer are not valid