

TRAINING PROGRAMME 2026

MAKINO EUROPE TRAINING ACADEMY



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MAKINO EUROPE GMBH Kruichling 18, 73230 Kirchheim unter Teck, Germany

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Our Mission

At Makino, our primary goal has always been to consistently provide high-quality products and services that far exceed our customers' expectations. This is accomplished daily through our INTEGRITY and commitment to nothing less than EXCELLENCE.

It's our employees' DEDICATION and DETERMINATION that enable us to achieve this goal. Our collective efforts continually focus on INNOVATION and ongoing improvements to meet the advancing needs of our customers.

We measure our success by the satisfaction of those who produce, sell, and use our products daily. We achieve this SUCCESS through RELIABILITY and ACCURACY.

Makino Training Academy

Our Training Academy is committed to helping every participant build the knowledge, skills, and confidence needed to operate and maintain Makino technologies effectively. Whether your team is new to Makino equipment or looking to advance existing expertise, we offer training programs for all experience levels, from beginner to advanced.

Our comprehensive course portfolio includes:

- **Machine Maintenance** (Horizontal, Vertical, EDM Sinkers, and Wire EDM)
- **Machine Operation**
- **Machine Controls** (Hyper-i, Professional 6)
- **NC Programming and User Macro Programming**
- **Cell Control Systems and Software Solutions**
- **Automatic Tool and Workpiece Measurement Systems**
- **Flexible Learning for Your Team**

We offer a regularly scheduled curriculum covering EDM technology, milling machines, machine operation, maintenance, and programming. All courses are delivered in a hybrid learning environment that combines expert classroom instruction with practical, hands-on machine training.

In addition to our standard courses, training programs can be tailored to your specific machines, applications, production requirements, and skill-development goals.

What Participants Will Learn

Regardless of the Makino machine platform, participants can expect to gain practical, job-focused knowledge in the following areas:

Operations Training

- Machine terminology and operating principles
- Control panel navigation and machine functions
- Best practices for safe and efficient machine operation

Maintenance Training

- Preventive maintenance procedures
- Inspection and troubleshooting techniques
- Basic to advanced maintenance of key machine components

Programming Training

- NC coding fundamentals and advanced programming techniques
- Program structure, formatting, and optimization
- Methods for improving machining efficiency and productivity
- **Invest in Expertise. Maximize Machine Performance.**

Well-trained operators and maintenance personnel help reduce downtime, improve productivity, and maximize the return on your Makino investment. Our training programs provide the practical knowledge needed to achieve consistent, high-quality manufacturing results.

Class Syllabus

All training courses are offered in either German or English. Additional languages may be available upon request and subject to feasibility.

As the number of participants per course is limited, early registration is recommended. A minimum of four participants is required for a course to take place. The registration deadline is four weeks prior to the scheduled course start date.

Training sessions typically begin at 9:00 a.m. on the first day at the designated Training Centre.

Participants who successfully complete a training course receive access to our technical support hotline. Our experts are available to answer your questions by phone or e-mail.

Training courses can also be conducted at customer premises. Please contact us to discuss available options, conditions, and requirements.

We reserve the right to modify the training programme, course content, schedules, or locations without prior notice.

For further information or assistance, please contact our training team:

Patrick Wiltschek

Manager Training Academy

Tel.: +49 40 29 809 281

p.wiltschek@makino.eu

Raul Gonzalez

Head of Customer Support

Tel.: +34 935 559 515

r.gonzalez@makino.eu

European Training Facilities

Slovakia Bratislava	
Italy Cavenago (Milano)	
Germany Kirchheim unter Teck (Stuttgart) (Headquarter)	

Overview Training Classes

Maintenance and Operation Classes						
Title	Class	Control	Duration (Dates)	Dates		
Machine Operator Training	1	Fanuc 31iB	3	19.10. – 23.10	22.02. – 26.02.	
NX Basic Maintenance	2	Fanuc 31iB	5	26.10. – 30.10.	23.11. – 27.11.	15.02. – 19.02.
NX Advanced Maintenance	3	Fanuc 31iB	5	12.10. – 16.10.	09.11. – 13.11.	
Sinker EDM Maintenance	4	Hyper i	3	Dates on request		
Wire EDM Maintenance	5	Hyper i	3	Dates on request		

Application Classes						
Title	Class	Control	Duration (Dates)	Dates		
Manual Part Programming	6	Fanuc 31iB Pro.6	5	24.08. – 28.08.	19.10. – 23.10.	09.11. – 23.11.
Manual Part Programming incl. Automatic Workpiece Measurement Function	7	Fanuc 31iB Pro.6	5	08.02. – 12.02.	01.03. – 05.03.	
User Macro Programming	8	Fanuc 31iB Pro.6	3	25.01. – 27.01.	22.02. – 24.02.	
Automatic Workpiece Measurement Function	9	Fanuc 31iB Pro.6	3	16.11. – 18.11.	30.11. – 02.12.	11.01. – 13.01.
Cell Control MAS-A5 / MAS-NX	10	---	5	Dates on request		
MAS-3i / MPMMax	11	---	1	Dates on request		
Collision Safe Guard	12	Fanuc 31iB Pro.6	2	Dates on request		

Class Layout

1 Class	Machine Operator Training	
	Title	
	Control	Fanuc 0i Modell D, Fanuc 31i B/B+ Pro.P, Pro.5, Pro.6
	Target Audience	Machine Operator and Maintenance Personnel
	Prerequisites	
	Contents	✓ Machine component review ✓ Explanation of the control panel and screens ✓ Machine and NC parameter modification ✓ MDI operation ✓ Workpiece offset definition ✓ Tool data administration, incl. spare tool ✓ Preventive Maintenance ✓ Programs review and editing ✓ Test program ✓ Backup functions ✓ Analysis and recovery of machine components (ATC, APC) ✓ Machine functions (Random operation)

2	Class	Title	NX Basic Maintenance
		Control	Fanuc 31i B/B+, Pro.5, Pro.6
		Target Audience	Maintenance Personnel
		Prerequisites	Vocational Electrical / Mechanical education
		Contents	✓ Determine a machine fault and its probable causes ✓ Perform basic electrical and mechanical adjustments ✓ General and periodic maintenance procedures ✓ Machine recovery

3	Class	Title	NX Advanced Maintenance
		Control	Fanuc 31i B/B+, Pro.5, Pro.6
		Target Audience	Maintenance Personnel
		Prerequisites	Completion of NX Basic Maintenance Course
		Contents	✓ Perform advanced machine maintenance ✓ Function, location, and principle of operation of the major machine components ✓ Teardown and rebuilding of the major machine components

4	Class	Title	Sinker EDM Maintenance
		Control	Hyper i
		Target Audience	Maintenance Personnel / Operator
		Prerequisites	Vocational Electrical / Mechanical education
		Contents	✓ EDM Theory, machine construction, and control navigation with a focus on diagnostic functions ✓ Navigating diagnostic controls to perform common mechanical adjustments ✓ Manual use and maintenance practices ✓ Data backups and basic troubleshooting

5	Class	Title	Wire EDM Maintenance
		Control	Hyper i
		Target Audience	Maintenance Personnel / Operator
		Prerequisites	Vocational Electrical / Mechanical education
		Contents	✓ EDM Theory, machine construction, and control navigation with a focus on diagnostic functions ✓ Navigating diagnostic controls to perform common mechanical adjustments ✓ Manual use and maintenance practices ✓ Data backups and basic troubleshooting

6	Class	Manual Part Programming	
		Control	Fanuc 31iB/B+, Pro.5, Pro.6
		Target personnel	NC-Programmers and Machine Operators
		Prerequisites	All Operation and Programming personnel without dedicated MAKINO programming and operation experience. All personnel without programming and operation experience on MAKINO Pro.5 / Pro.6 controls.
		Contents	✓ Programming fundamentals ✓ Composition of NC programs ✓ Work Coordinate Systems ✓ Subroutines ✓ Tool Data Management ✓ Canned Cycle Programming ✓ Machine Operation ✓ Explanation of the programming manual ✓ Programming an explanatory workpiece

7	Class	Title	NC-Programming and Automatic Workpiece Measurement Devices
		Control	Fanuc 31iB/B+, Pro.5, Pro.6
		Target Personnel	All personnel with basic programming and operation experience on MAKINO Pro.5 / Pro.6 controls. To increase the specific skill level and focus on individual targets.
		Prerequisites	Programming and operation experience on MAKINO Pro.5 / Pro.6 controls.
		Contents	✓ Composition of NC programs ✓ Subroutines ✓ Tool Data Management ✓ Canned Cycle Programming ✓ Sample Programs ✓ Tool Life and Performance Monitoring ✓ Introduction to Measurement Probes ○ Handling ○ Maintenance and Calibration ✓ Manual and Semi-Automatic setting of Work Coordinate Offsets ✓ Automatic Workpiece Origin adjustment ✓ Integration in NC- Programs (In-Process Measurement) ✓ Operation on Machine

8	Class	Title	User Macro Programming
		Control	Fanuc 31iB/B+, Pro.5, Pro.6
		Target Personnel	All personnel with basic programming and operation experience on MAKINO Pro.5 / Pro.6 controls. To increase the specific skill level and focus on individual targets.
		Prerequisites	Programming and operation experience on MAKINO Pro.5 / Pro.6 controls.
		Contents	✓ User Macro Introduction ✓ Arithmetic and Logic Operations ✓ Use of Variables in NC programs ✓ Executing Subroutines by Macro ✓ Program samples and description ✓ Modal Macro execution and data transfer by NC program ✓ Macro execution using G- or M-functions

9	Class	Automatic Workpiece Measurement	
	Control	Fanuc 31i, Pro.5, Pro.6	
	Target Personell	All personnel with basic programming and operation experience on MAKINO Pro.5 / Pro.6 controls. To increase the specific skill level and focus on individual targets.	
	Prerequisites	Programming and operation experience on MAKINO Pro.5 / Pro.6 controls.	
	Contents	✓ Introduction to Measurement Probes ○ Handling ○ Maintenance and Calibration ✓ Makino Measurement Cycles ✓ Special machine functions	

10	Class	Cell Control Solutions: MAS-A5 / MAS-NX
	Title	
	Control	Control system
	Target Personell	Operators, Programmers, Cell and Production Managers
	Prerequisites	
	Contents	System commissioning at Makino Training center: ✓ System Hierarchy, System Philosophy, Environmental Organization ✓ Systems Functions and Options ✓ Data Input and Operation ✓ Customer oriented example ✓ Introduction to Tool Management and realization in Factory environment Training at Installation: ✓ Data Input and Operation ✓ Understanding Alarm Situations using practical exercises, i.e. Analysis of the various alarms resulting of wrong Operation ✓ Semi- Automatic Operation at various levels ✓ System Care and Maintenance

11	Class	Title	MAS-3i / MPmax Machine Data Acquisition and Analytics
		Control	Production Data Monitoring
		Target Personell	Operators, Programmers, Cell and Production Managers
		Prerequisites	
		Contents	✓ Practical use of all Functions and options of the system ○ MAS-3i ○ MPmax ✓ Customization, adjustment and installation

12	Class	Title	Collision Safe Guard
		Control	Simulation Software
		Target Personell	NC-Programmer and Operating Personnel
		Prerequisites	CAM or Simulation Software experience
		Contents	✓ Simulation of machining situation ✓ Setup of the Simulation ✓ Practical use ✓ Use of Machine Codes to manipulate the simulation ✓ Editing individual projects and their automated selection ✓ Import of customers models

Registration Form

Company			
Order number			
Class			
Titel			
Date:	cw:	from:	till:
Registration:	Name:	Name:	
	Dept.:	Dept.:	
	Function:	Function:	
	Name:	Name:	
	Dept.:	Dept.:	
	Function:	Function:	
Hotel reservation	from:	till:	
Binding reservation for single rooms will be placed in your name and at your expense.			
Requested Training Center (please indicate)			
☐ Makino GmbH Kruichling 18 73230 Kirchheim unter Teck		☐ Makino s.r.o. Tuhovska 31 85101 Bratislava	
		☐ Makino Italia S.r.l. Strada privata delle Orobie, 5 Località Santa Maria in Campo 20873 Cavenago Brianza (MB)	
☐ Kundenwerk			
Registration by:		Dept.:	
Phone:		E-mail:	
Street		Code, City	
Signature and Company stamp			

Training Terms and Conditions

I. Registration

All students are required to fill out an enrolment form to register for classes. Please use the included form. Registration is closed 4 weeks before start of the class.

Minimum Class size: 4 Students

Maximum Class size: 6 Students

Please send your registration to:

MAKINO GmbH

Training Department

Mr. P. Wiltschek

Kruichling 18

73230 Kirchheim unter Teck

p.wiltschek@makino.eu

II. Registration Confirmation

Prior to begin of the training class, a written enrollment confirmation as well as information for travel and arranged Hotel accommodation is send to your attention.

III. Services of MAKINO GmbH during trainings

- Execution of the Training
- Training Materials
- Drinks during Breaks
- Lunch during Training time
- Hotel reservations (Specific requests are respected)

IV. Pricing

Training costs are offered without VAT, which will be added to the invoice in the current legal amount.

Accommodation, Hospitality and Travel Cost are not included in the Training Cost.

V. Copyright

It is prohibited to copy and multiply the training materials provided for unauthorized purposes. Furthermore, it is prohibited to promote, use or distribute the trained content without prior authorization by Makino Training Dept. to others.

VI. Safety regulations

Course participants are obliged to observe the safety and accident prevention regulations relevant to the MAKINO factory premises as well as the applicable regulations governing the maintenance of order, particularly those relating to access. Personal Safety Equipment is not provided by Makino is therefor a liability of the participant. Makino refuses to conduct Training for participants not following safety regulations or lacking sufficient Personal Safety Equipment.

VII. Right to alterations

We reserve the right to the following changes:

- Cancellation of training courses. No liability in terms of damages or cancellation claims will be accepted.
- Updating the technical content of training courses without prior notice.

VIII. Attention

Please note that MAKINO refuses any liability for damages on the machine or workpiece caused by your operation during the training program. According to No. IV and VI of the conditions of VDW-502 for the delivery of machine tools, the risk for damages/defects is transferred to the machine owner after final acceptance of the machine. This also includes the risk for consequential harms of this defect like: Loss of production capacity, earnings or orders.

Issued: 01. October 2026

Attachments

Regional Addresses:

Makino Italia S.r.l.
Strada privata delle Orobie, 5
Località Santa Maria in Campo
20873 Cavenago Brianza (MB), Italia
Tel. +39 02 95 94 82 90

MAKINO GmbH
Kruichling 18
73230 Kirchheim unter Teck
Deutschland
Tel.: +49 (0)7021 / 503 - 0

Makino s.r.o.
Tuhovska 31
83107 Bratislava
Slovakia
Tel.: +421 (0) 2 496 12 132