

UNITED FOR YOUR SUCCESS

MAN AND MACHINE

*TRAINING PROGRAM
INJECTION MOLDING TECHNOLOGY &
AUTOMATION 2023*



KraussMaffei

Pioneering Plastics

IN PRESENCE TRAINING

HANDS-ON. INDIVIDUALIZED. FLEXIBLE.

Practical relevance, individuality, flexibility—the training opportunities from KraussMaffei are perfectly tailored to your needs. They help you to optimize the use of your system's potential while minimizing downtime. The goal is to achieve peak productivity with your injection molding system.

The content of our training courses includes a theoretical part and intensive practical exercises right on our systems. Our training courses encompass: setup and operation, configuration of special machine functions to increase availability and product quality, maintenance of electrical and hydraulic systems, troubleshooting, as well as how to operate and program the automation unit.

Your specialist knowledge will be furthered in practical exercises. Individuality is important to us. That is why you work in small groups on a training system. This allows our trainers to address your needs on an individual basis.

For all participants in combined seminars, we offer a final exam that allows you to further expand on everything you have learned and confirm your learning achievement with a successfully completed test. Then you will be awarded our KraussMaffei Test Certificate—an industry-recognized qualification.



For detailed information about our In Presence Training, visit:

kraussmaffei.com/trainingIMM

**Look out for
this icon:**



YOUR BENEFITS:

- Extensive hands-on training, right on the system
- Small groups and ample time for specific questions and problem-solving strategies

ONLINE TRAINING

LIVE. DIGITAL. EFFECTIVE.

Our online training takes place live and in real time for all participants. This means direct contact with the trainers is guaranteed at all times. Work through short and effective online units to further optimize your production expertise.

Take advantage of the benefits of the digital training world.

You can visit our online training courses in compact modules. Here is some of what we offer:

Production Management

Documenting production for a stable production process

smartOperation

Simple, fast and reliable machine operation in production

APC 1 and 2

Stability, precision and cost-efficiency in production

Core-pulling 1 Basic

Programming core-pulling processes

Core-pulling 2 Expert

Complex core-pulling processes and functions

Core-pulling 3 MultInject or Robot

Complex core-pulling processes in conjunction with MultInject or robot

LRX WizardX

Using the programming wizard

LRX Safety Monitoring

Optimizing the area monitoring

YOUR BENEFITS:

- Interactive live training
- No travel involved
- Talk with experienced trainers

Whether you are sampling/automation personnel, an assistant foreman, a foreman, the head of production, management or a managing director—we have a suitable seminar for every target group.

For more information about our additional online content:

kraussmaffe.com/training/IMM

Look out for this icon:



BLENDDED TRAINING ONLINE. IN PRESENCE. COMBINED.

With blended training you combine traditional in-person units with the new world of online training. Choose the right path to learning achievement for yourself and your employees, ensuring continuously high availability of your systems through reduced risk of operator error.

We offer two different variants here:

For example, for our "KS - Plastics and Injection Molding Processes" training you can choose the online variant, laying the foundation for later participation in the in presence training courses (such as "B1 MC6 – Operating and setting up the MC6 control system") to deepen your knowledge.

Look out for these icons:



Or, for example, choose the training called "BLR MC6 – Combined operation and programming of linear robots with the MC6 control system". The first part of this uses online training to impart the linear robot's most important functions, which you can put into practice right away on your systems. To reinforce and deepen the knowledge you gained online, you come to the training center to learn the compact and effective practical unit from us.

Look out for this icon:



YOUR BENEFITS:

- Choose the format that is right for you
- Take advantage of the benefits of both training worlds

Learn about our additional blended content at:

kraussmaffe.com/training/IMM

INDIVIDUALIZED TRAINING

Your individualized training program will be based on blended training—a continuing education concept tailored to your company. Depending on the specific task, this may consist of individual components such as In presence or online training or may include a variety of components. This ensures quick successes for your team and efficient handling of the system.



YOUR BENEFITS:

- Individualized training sessions: topics, duration and training format adapted to your needs
- Development of expertise depending on the qualification of your employees
- Also available for existing systems with MC4 or MC5 control system, for example

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[**kraussmaffe.com/trainingIMM**](https://kraussmaffe.com/trainingIMM)





DIGITAL SOLUTIONS FOR YOUR FUTURE

INFORMATION. CONSULTING. TRAINING.

To make your successes as tangible as possible, you should equip your machines, systems and process technologies to be as digital as possible. The innovative solutions and worldwide service contacts of KraussMaffei pave the way to a successful, networked future for you.



socialProduction

facilitates anytime/anywhere monitoring of injection molding machines, the production process and the condition of machine components.

- productionMonitor
- processSupport
- liveCare

remoteSupport

offers comprehensive remote support through highly secure access to the machine control system and through interactive video chats between KraussMaffei experts and operators.

- remoteAccess
- smartAssist

smartMachine

determines the optimal production parameters thanks to intelligent products and assistance systems and enables one-of-a-kind insights into the injection molding process.

- APCplus
- smartOperation
- dataXplorer

smartConnect

stands for standardized and future-ready connectivity solutions from KraussMaffei.

- smartCube
- smartLink
- blueBox



Interested?

Get customized advice at:









Phone: + 49 89 88 99 41 50

Email: Schulung.SGM@kraussmaffei.com

kraussmaffei.com/trainingIMM

YOUR GUIDELINE TO SUCCESS MACHINE & AUTOMATION OPERATION & MAINTENANCE

COMBINED TRAINING

OPERATION / PROGRAMMING	MACHINE MC6	KS Plastics and Injection Molding Processes 2 days <i>Page 10</i> 	B1 MC6 Operation and setup 3 days <i>Page 11</i>	B2 MC6 Process and product enhancement 2 days <i>Page 12</i>	B3 MC6 Energy analysis and process documentation 2 days <i>Page 13</i>	BM MC6 = B1 + B2 Combined Training 5 days <i>Page 16</i> 
	MACHINE MC P1	KS Plastics and Injection Molding Processes 2 days <i>Page 10</i> 	B1 MC P1 Operation and setup 3 days <i>Page 14</i>	B2 MC P1 Process and product enhancement 2 days <i>Page 15</i>	BM MC P1 = B1 + B2 Combined Training 5 days <i>Page 17</i> 	
MAINTENANCE	ELECTRICAL SYSTEMS MC6	E MC6 Electrical system 3 days <i>Page 32</i> 	LR MC6 Linear robots 2 days <i>Page 33</i>	PX Electrical injection molding machine 2 days <i>Page 34</i>		
	ELECTRICAL SYSTEMS MC P1 / EC	E MC P1 Electrical system 3 days <i>Page 35</i> 	LR EC (EasyControl) Linear robots 2 days <i>Page 36</i>	precisionMolding Electrical injection molding machine 2 days <i>Page 37</i>		
	HYDRAULIC SYSTEMS CX / GX / MX	HM1 Components and Hydraulic Systems 2 days <i>Page 38</i> 	HM2 CX/GX/MX Hydraulic system/mechanical system 3 days <i>Page 39</i>	HM3 CX/GX/MX Calibration 2 days <i>Page 40</i>	eHM MC6 CX/GX/MX = E + HM2 Combined Training 5 days <i>Page 41</i> 	










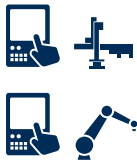




Various training formats available as in presence training, online training or blended training. Further information at:

www.kraussmaffei.com/trainingIMM

YOUR GUIDELINE TO SUCCESS AUTOMATION & SYSTEMS OPERATION & PROGRAMMING

COMBINED TRAINING

OPERATION / PROGRAMMING	LR ROBOT MC6	LR1 MC6 Operating, setting and programming 3 days Page 18 	LR2 MC6 Free programming 3 days Page 19	LR3 MC6 Advanced programming 3 days Page 20	BLR MC6 = LR1 + LR2 Combined Training 5 days Page 21 	PROLR MC6 = LR2 + LR3 Combined Training 5 days Page 22 
		LR1 EC (EasyControl) Operating, setting and programming 2 days Page 23 	LR2 EC (EasyControl) Free programming 2 days Page 24	BLR EC (EasyControl) Combined Training 4 days Page 25 		
	IR ARTICULATED-ARM ROBOTS KRC4	IR1 KRC4 Basic Operation and programming 3 days Page 26 	IR2 KRC4 Advanced Advanced programming 4 days Page 27 			
		IR1 KRC5 Basic Operation and setup 2 days Page 28 	IR2 KRC5 Advanced Advanced programming 3 days Page 29 			
SYSTEM MC6		BA LR MC6 = B1 + LR1 Combined Training 5 days Page 30 	BA IR MC6-KRC4 = B1 + IR1 Combined Training 5 days Page 31 			

TRAINING KS



PLASTICS AND INJECTION MOLDING PROCESSES

Objectives

- Basics of thermoplastics
- Basics of the injection molding process

Subjects

- Basics of plastics (thermoplastics)
- Basics of injection molding machines
- Basics of injection molds
- Design of an injection molding machine
- Basics of the injection molding process
- Overview of special processes in injection molding

Target group

Beginners in injection molding
(operating personnel, project members, procurement,
management)

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Online Training

Dates

For current dates, Online Training or Blended Training
and additional information, visit:

www.kraussmaffe.com/training/IMM

Prerequisite

No special previous knowledge required

Valid for the following series

All series



MACHINE OPERATION /
PROGRAMMING

PRACTICAL TRAINING



B1 MC6

OPERATION, SETUP AND PROGRAMMING OF INJECTION MOLDING MACHINES INCLUDING CORE-PULLING

Objectives

- Effective setup of injection molding machines
- Quick and safe operation of injection molding machines
- Quick and reliable programming of core-pulling processes
- Recognition and independent handling of error messages

Subjects

- Safety devices on the injection molding machine
- Configuration of the machine control unit and core puller program
- Procedure for setting up the machine
- Setting up the clamping unit and programming core-pulling processes
- Setting up the injection unit and determining the basic settings, mold filling study
- Optimization of machine settings
- Monitoring options
- Error messages and event log
- Practical exercises on simulators and machines

Target group

Foremen, applications engineers, toolsetters, operating personnel, beginners

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Participation in our Practical Training KS
- Basic knowledge of the injection molding process

Valid for the following series

CX, PX, GX & MX series with MC6 control system

Select the "Machine Operation" combined training

B1 + B2 = BM MC6
(see pages 11, 12 and 16)

Select the "System Operation" combined training

B1 + LR1 = BA LR MC6
(see pages 11, 18 and 21)

Select the "System Operation" combined training

B1 + IR1 = BA IR MC6-KRC4
(see pages 11, 26 and 31)



PRACTICAL TRAINING

B2 MC6



PROCESS AND PRODUCT ENHANCEMENT ON INJECTION MOLDING MACHINES

Objectives

- Efficient process and product enhancement
- Continuous monitoring of product quality
- Clearly and graphically represented processes

Subjects

- Profiles for injection/holding pressure/plasticizing
- Identification and rectification of surface and injection defects
- Quality monitoring
- Design and functional principle of the curve calculator
- Use of the curve calculator for process and product enhancement
- Use of the curve calculator for quality monitoring
- APC plus functions (Adaptive Process Control)
- Identifying sources of interference
- Practical exercises on simulators and machine

Target group

Foremen, applications engineers, assistant foremen, toolsetters

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in Practical Training B1 MC6

Valid for the following series

CX, PX, GX & MX series with MC6 control system

Select the "Machine
Operation" combined
training

B1 + B2 = BM MC6
(see pages 11, 12 and 16)



MACHINE OPERATION /
PROGRAMMING

PRACTICAL TRAINING

B3 MC6



ENERGY ANALYSIS & SEAMLESS PROCESS DOCUMENTATION ON INJECTION MOLDING MACHINES

Objectives

- Energy-conscious machine setting
- Recognition and effective exploitation of potential savings
- Long-term product quality assurance and documentation

Subjects

- Application of the energy analysis
- Energy consumption, energy-conscious machine setup
- ECO assistant function
- Process parameters, impacts on product quality and energy consumption
- dataXplorer, process transparency and seamless process documentation
- Practical exercises on simulators and machines

Target group

Foremen, applications engineers, toolsetters

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in Practical Training B2 MC6

Valid for the following series

CX, PX, GX & MX series with MC6 control system



PRACTICAL TRAINING

B1 MC P1



OPERATION, SETUP AND PROGRAMMING OF INJECTION MOLDING MACHINES INCLUDING CORE-PULLING

Objectives

- Effective setup of injection molding machines
- Quick and safe operation of injection molding machines
- Quick and reliable programming of core-pulling processes
- Recognition and independent handling of error messages

Subjects

- Safety devices on the injection molding machine
- Configuration of the machine control unit and core puller program
- Procedure for setting up the machine
- Setting up the clamping unit and programming core-pulling processes
- Setting up the injection unit and determining the basic settings, mold filling study
- Optimization of machine settings
- Monitoring options
- Error messages and event log
- Practical exercises on simulators and machines

Target group

Foremen, applications engineers, toolsetters, operating personnel, beginners

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Participation in our Practical Training KS
 - Basic knowledge of the injection molding process
-

Valid for the following series

precision- & powerMolding with MC P1 control system

Select the "Machine Operation" combined training

B1 + B2 = BM MC P1
(see pages 14, 15 and 17)



MACHINE OPERATION /
PROGRAMMING

PRACTICAL TRAINING

B2 MC P1



PROCESS AND PRODUCT ENHANCEMENT ON INJECTION MOLDING MACHINES

Objectives

- Efficient process and product enhancement
- Continuous monitoring of product quality
- Clearly and graphically represented processes

Subjects

- Profiles for injection/holding pressure/plasticizing
- Identification and rectification of surface and injection defects
- Quality monitoring
- Design and functional principle of the curve calculator
- Use of the curve calculator for process and product enhancement
- Use of the curve calculator for quality monitoring
- APC plus functions (Adaptive Process Control)
- Identifying sources of interference
- Practical exercises on simulators and machine

Target group

Foremen, applications engineers, assistant foremen, toolsetters

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in Practical Training B1 MC P1

Valid for the following series

precision- & powerMolding with MC P1 control system

Select the "Machine
Operation" combined
training

B1 + B2 = BM MC P1
(see pages 14, 15 and 17)



PRACTICAL TRAINING

BM MC6 = B1 + B2



COMBINED OPERATION AND PROCESS OPTIMIZATION OF INJECTION MOLDING MACHINES

PRACTICAL TRAINING B1

Operation, setup and programming of injection molding machines including core-pulling

Objectives

- Effective setup of injection molding machines
- Quick and safe operation of injection molding machines
- Quick and reliable programming of core-pulling processes
- Recognition and independent handling of error messages

Subjects

- Safety devices on the injection molding machine
- Configuration of the machine control unit and core puller program
- Procedure for setting up the machine
- Setting up the clamping unit and programming core-pulling processes
- Setting up the injection unit and determining the basic settings, mold filling study
- Optimization of machine settings
- Monitoring options
- Error messages and event log
- Practical exercises on simulators and machines

Target group

Foremen, applications engineers, toolsetters, operating personnel, beginners

Duration (Practical Training)

5 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Blended Training

PRACTICAL TRAINING B2

Process and product enhancement on injection molding machines

Objectives

- Efficient process and product enhancement
- Continuous monitoring of product quality
- Clearly and graphically represented processes

Subjects

- Profiles for injection/holding pressure/plasticizing
- Identification and rectification of surface and injection defects
- Quality monitoring
- Design and functional principle of the curve calculator
- Use of the curve calculator for process and product enhancement
- Use of the curve calculator for quality monitoring
- APC plus functions (Adaptive Process Control)
- Identifying sources of interference
- Practical exercises on simulators and machine

KraussMaffei
Test Certificate

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

- Participation in our Practical Training KS
- Basic knowledge of the injection molding process

Valid for the following series

CX, PX, GX & MX series with MC6 control system

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffe.com/trainingIMM



**MACHINE OPERATION /
PROGRAMMING**

PRACTICAL TRAINING

BM MC P1 = B1 + B2



COMBINED OPERATION AND PROCESS OPTIMIZATION OF INJECTION MOLDING MACHINES

PRACTICAL TRAINING B1 MC P1

Operation, setup and programming of injection molding machines including core-pulling

Objectives

- Effective setup of injection molding machines
- Quick and safe operation of injection molding machines
- Quick and reliable programming of core-pulling processes
- Recognition and independent handling of error messages

Subjects

- Safety devices on the injection molding machine
- Configuration of the machine control unit and core puller program
- Procedure for setting up the machine
- Setting up the clamping unit and programming core-pulling processes
- Setting up the injection unit and determining the basic settings, mold filling study
- Optimization of machine settings
- Monitoring options
- Error messages and event log
- Practical exercises on simulators and machines

Target group

Foremen, applications engineers, toolsetters, operating personnel, beginners

Duration (Practical Training)

5 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Blended Training

PRACTICAL TRAINING B2 MC P1

Process and product enhancement on injection molding machines

Objectives

- Efficient process and product enhancement
- Continuous monitoring of product quality
- Clearly and graphically represented processes

Subjects

- Profiles for injection/holding pressure/plasticizing
- Identification and rectification of surface and injection defects
- Quality monitoring
- Design and functional principle of the curve calculator
- Use of the curve calculator for process and product enhancement
- Use of the curve calculator for quality monitoring
- APC plus functions (Adaptive Process Control)
- Identifying sources of interference
- Practical exercises on simulators and machine

KraussMaffei
Test Certificate

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

- Participation in our Practical Training KS
- Basic knowledge of the injection molding process

Valid for the following series

precision- & powerMolding with MC P1 control system

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM



**MACHINE OPERATION /
PROGRAMMING**



PRACTICAL TRAINING

LR1 MC6

OPERATION, SETUP AND PROGRAMMING OF LINEAR ROBOTS WITH WIZARDX

Objectives

- Quick and safe operation and setup of linear robots
- Effective setup of grippers
- Independent recognition and handling of error messages
- Simple creation of programs using the WizardX programming assistant

Subjects

- Safety devices on the robot
- Data and parameter management
- Procedure for operating the robot
- "Teach-in" and adaptation of point coordinates
- Setting up the area monitoring
- Creating basic programs using WizardX
- Application of basic programs
- Starting up and optimizing the production system
- Error messages and event log
- Presentation of the LRX-ON-PC PC software
- Practical exercises on simulators and robots

Target group

Machine operators, toolsetters, sampling personnel, automation personnel

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

No special previous knowledge required

Valid for the following series

LRX series with MC6 control system

Select the "System Operation" combined training

B1 + LR1 = BA LR MC6
(see pages 11, 18 and 30)

Select the "Linear Robot Operation" combined training

LR1 + LR2 = BLR MC6
(see pages 18, 19 and 21)



OPERATION /
PROGRAMMING
LR ROBOTS



PRACTICAL TRAINING

LR2 MC6

FREE PROGRAMMING OF LINEAR ROBOTS

Objectives

- Master the free programming interface
- Modifying programs quickly and safely
- Creating new program parts effectively

Subjects

- Free programming interface and command structure
- Explanation of the basic programs and basic program structure
- Modifying basic programs (e.g. using WizardX)
- Procedure for testing program modifications
- Adapting program add-ons quickly and safely
- Working with the LRX-ON-PC PC software
- Practical exercises on simulators and robots

Target group

Advanced toolsetters, sampling personnel with advanced automation tasks, automation personnel

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in Practical Training LR1 MC6

Valid for the following series

LRX series with MC6 control system

Select the "Linear Robot Operation" combined training

LR1 + LR2 = BLR MC6
(see pages 18, 19 and 21)

Select the "Linear Robot Programming" combined training

LR2 + LR3 = PROLR MC6
(see pages 19, 20 and 22)





PRACTICAL TRAINING

LR3 MC6

ADVANCED PROGRAMMING OF LINEAR ROBOTS

Objectives

- Expert knowledge of the free programming interface
- Recognition and utilization of enhancement options
- Programming complex automation processes and applications with multiple kinematics

Subjects

- Free programming interface with advanced command structure
- Efficient enhancement of predefined program flows
- Independent development and programming of complex program parts
- Integration of peripheral systems (freely programmable I/Os)
- Special features of applications with multiple kinematics
- Testing and adapted created program parts
- Identifying and correcting program errors
- Practical exercises on simulators and robots

Target group

Sampling personnel with advanced automation tasks, automation personnel

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in Practical Training LR2 MC6

Valid for the following series

LRX series with MC6 control system

Select the "Linear Robot Programming" combined training

LR2 + LR3 = PROLR MC6
(see pages 19, 20 and 22)



OPERATION /
PROGRAMMING
LR ROBOTS

PRACTICAL TRAINING

BLR MC6 = LR1 + LR2

COMBINED OPERATION AND PROGRAMMING OF LINEAR ROBOTS



PRACTICAL TRAINING LR1

Operation, setup and programming of linear robots with WizardX

Objectives

- Quick and safe operation and setup of linear robots
- Effective setup of grippers
- Independent recognition and handling of error messages
- Simple creation of programs using the WizardX* programming assistant

Subjects

- Safety devices on the robot
- Data and parameter management
- Procedure for operating the robot
- "Teach-in" and adaptation of point coordinates
- Setting up the area monitoring
- Creating basic programs using WizardX
- Application of basic programs
- Starting up and optimizing the production system
- Error messages and event log
- Presentation of the LRX-ONPC software
- Practical exercises on simulators and robots

PRACTICAL TRAINING LR2

Free programming of linear robots

Objectives

- Master the free programming interface
- Modifying programs quickly and safely
- Creating new program parts effectively

Subjects

- Free programming interface and command structure
- Explanation of the basic programs and basic program structure
- Modifying basic programs (e.g. using WizardX)
- Procedure for testing program modifications
- Adapting program add-ons quickly and safely
- Working with the LRX-ONPC software
- Practical exercises on simulators and robots



Target group

Advanced toolsetters, sampling personnel with advanced automation tasks, automation personnel

Duration (Practical Training)

5 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Blended Training

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

No special previous knowledge required

Valid for the following series

LRX series with MC6 control system

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/trainingJMM





PRACTICAL TRAINING

PROLR MC6 = LR2 + LR3

COMBINED EXPERT PROGRAMMING OF LINEAR ROBOTS

PRACTICAL TRAINING LR2

Free programming of linear robots

Objectives

- Master the free programming interface
- Modifying programs quickly and safely
- Creating new program parts effectively

Subjects

- Free programming interface and command structure
- Explanation of the basic programs and basic program structure
- Modifying basic programs (e.g. using WizardX)
- Procedure for testing program modifications
- Adapting program add-ons quickly and safely
- Working with the LRX-ON-PC PC software
- Practical exercises on simulators and robots

PRACTICAL TRAINING LR3

Advanced programming of linear robots

Objectives

- Expert knowledge of the free programming interface
- Recognition and utilization of enhancement options
- Programming complex automation processes and applications with multiple kinematics

Subjects

- Free programming interface with advanced command structure
- Efficient enhancement of predefined program flows
- Independent development and programming of complex program parts
- Integration of peripheral systems (freely programmable I/Os)
- Special features of applications with multiple kinematics
- Testing and adapted created program parts
- Identifying and correcting program errors
- Practical exercises on simulators and robots

KraussMaffei
Test Certificate

Target group

Advanced toolsetters, sampling personnel with advanced automation tasks, automation personnel

Duration [Practical Training]

5 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

Participation in Practical Training LR1 MC6

Valid for the following series

LRX series with MC6 control system



OPERATION /
PROGRAMMING
LR ROBOTS

PRACTICAL TRAINING

LR1 EC (EASYCONTROL)

OPERATION, SETUP AND PROGRAMMING OF LINEAR ROBOTS WITH WIZARDX



Objectives

- Quick and safe operation and setup of linear robots
- Effective setup of grippers
- Independent recognition and handling of error messages
- Simple creation of programs using the WizardX* programming assistant

Subjects

- Safety devices on the robot
- Data and parameter management
- Procedure for operating the robot
- "Teach-in" and adaptation of point coordinates
- Setting up the area monitoring
- Creating basic programs using WizardX
- Application of basic programs
- Starting up and optimizing the production system
- Error messages and event log
- Presentation of the EasyControl-ON-PC software
- Practical exercises on simulators and robots

Target group

Machine operators, toolsetters, sampling personnel, automation personnel

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

No special previous knowledge required

Valid for the following series

LRX series with EasyControl system

Select the "Linear Robot Operation" combined training

LR1 + LR2 =
BLR EC (EasyControl)
(see pages 23, 24 and 25)



OPERATION /
PROGRAMMING
LR ROBOTS

PRACTICAL TRAINING

LR2 EC (EASYCONTROL)

FREE PROGRAMMING OF LINEAR ROBOTS



Objectives

- Master the free programming interface
- Modifying programs quickly and safely
- Creating new program parts effectively

Subjects

- Free programming interface and command structure
- Explanation of the basic programs and basic program structure
- Modifying basic programs (e.g. using WizardX)
- Procedure for testing program modifications
- Adapting program add-ons quickly and safely
- Working with the EasyControl-ON-PC software
- Practical exercises on simulators and robots

Target group

Advanced toolsetters, sampling personnel with advanced automation tasks, automation personnel

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in LR1 EasyControl (EC) Practical Training

Valid for the following series

LRX series with EasyControl system

Select the "Linear Robot Operation" combined training

LR1 + LR2 =
BLR EC (EasyControl)
(see pages 23, 24 and 25)



OPERATION /
PROGRAMMING
LR ROBOTS

PRACTICAL TRAINING BLR EC (EASYCONTROL)



= LR1 + LR2

COMBINED OPERATION AND PROGRAMMING OF LINEAR ROBOTS

PRACTICAL TRAINING LR1

Operation, setup and programming of linear robots with WizardX

Objectives

- Quick and safe operation and setup of linear robots
- Effective setup of grippers
- Independent recognition and handling of error messages
- Simple creation of programs using the WizardX* programming assistant

Subjects

- Safety devices on the robot
- Data and parameter management
- Procedure for operating the robot
- "Teach-in" and adaptation of point coordinates
- Setting up the area monitoring
- Creating basic programs using WizardX
- Application of basic programs
- Starting up and optimizing the production system
- Error messages and event log
- Presentation of the EasyControl-ON-PC software
- Practical exercises on simulators and robots

PRACTICAL TRAINING LR2

Free programming of linear robots

Objectives

- Master the free programming interface
- Modifying programs quickly and safely
- Creating new program parts effectively

Subjects

- Free programming interface and command structure
- Explanation of the basic programs and basic program structure
- Modifying basic programs (e.g. using WizardX)
- Procedure for testing program modifications
- Adapting program add-ons quickly and safely
- Working with the EasyControl-ON-PC software
- Practical exercises on simulators and robots

KraussMaffei
Test Certificate

Target group

Advanced toolsetters, sampling personnel with advanced automation tasks, automation personnel

Duration (Practical Training)

4 days, each day from 8:30 am to 4:30 pm

Other variants

Blended Training

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

No special previous knowledge required

Valid for the following series

LRX series with EasyControl system

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM



OPERATION /
PROGRAMMING
LR ROBOTS



PRACTICAL TRAINING

IR1 KRC4 BASIC

OPERATION AND PROGRAMMING OF ARTICULATED-ARM ROBOTS

Objectives

The objective of the training is to gain all the essential skills required to operate and create simple handling tasks for the KraussMaffei robot system (KUKA).

Subjects

- Setup and operation of a KraussMaffei robot system (KUKA)
- Moving robots, reading and interpreting messages from the robot control system
- Operation with VisuX
- Programming with ProgTechX
- Using robot programs
- Handling program files, creating program modules
- Creating and changing programmed movements, generating new movement commands

Target group

Operators and toolsetters

Remarks

The course ends with a final test. A KraussMaffei certificate is awarded on successful completion of the course.

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

No special previous knowledge required

Valid for the following series

IR series with KRC4 control system

Select the "System Operation" combined training

B1 + IR1 = BA IR MC6-KRC4
(see pages 11, 26 and 31)

KraussMaffei
Test Certificate



OPERATION /
PROGRAMMING
IR ROBOTS



PRACTICAL TRAINING

IR2 KRC4 ADVANCED

OPERATION, SETUP AND PROGRAMMING OF ARTICULATED-ARM ROBOTS

Objectives

The objective of the training is to gain the additional skills required to set up and create complex handling tasks for the KraussMaffei robot system (KUKA).

Subjects

- Operation with VisuX
- Commissioning activities at the robot:
 - principle of adjustment
- Programming collision detection
- Using logic functions in the robot program, introduction to logic programming
- Variables and agreements
- Successful programming in KRL structure and configuration of robot programs
- Use of program sequence controls, programming requests or branchings
- Programming with ProgTechX
- Parallel processes

Target group

Operators and toolsetters, maintenance personnel and programmers

Remarks

The course ends with a final test. A KM/KUKA certificate is awarded on successful completion of the course. Participants who successfully complete this course will be eligible to attend continuation courses at the KUKA College. For example: advanced robot programming, electrical service, mechanical service.

Duration (Practical Training)

4 days, each day from 8:30 am to 4:30 pm

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Participation in our Practical Training IR1 KRC4
 - Basic knowledge of programming
 - Experience with automation systems
-

Valid for the following series

IR series with KRC4 control system





PRACTICAL TRAINING

IR1 KRC5 BASIC

OPERATION & SETUP OF ARTICULATED-ARM ROBOTS

Objectives

The objective of the training is to gain basic skills required to safely and reliably operate the KraussMaffei robot system (KUKA).

Subjects

- Safe and reliable use of KraussMaffei robot systems (KUKA)
- Basic knowledge of the structure of a KraussMaffei robot system (KUKA)
- Manual movement of the robot
- Starting robot programs and letting them run manually and in automatic operation
- Selecting and configuring a suitable operating mode
- Performing an initialization run
- Using robot programs
- Carrying out preparations for starting the robot program
- Move robot program back to home position after interruption
- Reading and interpreting messages from the robot control system
- Correction and adaptation of positions
- Query of current robot position
- Gripper operation
- Setting various parameters on KraussMaffei robot systems (KUKA)

Target group

Operators and toolsetters

Remarks

The course ends with a final test. A KraussMaffei certificate is awarded on successful completion of the course.

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

No special previous knowledge required

Valid for the following series

IR series with KRC5 control system



OPERATION /
PROGRAMMING
IR ROBOTS



PRACTICAL TRAINING IR2 KRC5 ADVANCED EXTENDED PROGRAMMING OF ARTICULATED-ARM ROBOTS

Objectives

The objective of the seminar is to gain the additional skills required to set up and create complex handling tasks for the KraussMaffei robot system (KUKA).

Subjects

- Adjustment on the robot
- Tool calibration
- Base calibration
- Creating and adapting movements
- Expanding the home traverse
- Query of current robot position
- Using logical functions in the program
- Setting various parameters on KraussMaffei robot systems (KUKA)
- Handling program files
- Handling variables
- Programming in KRL structure
- Benefits of program sequence controls

Target group

Operators, toolsetters and programmers

Remarks

The course ends with a final test. A KM/KUKA certificate is awarded on successful completion of the course. Participants who successfully complete this course will be eligible to attend continuation courses at the KUKA College. For example: advanced robot programming, electrical service, mechanical service.

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Participation in our Practical Training IR1 KRC5
 - Basic knowledge of programming
 - Experience with automation systems
-

Valid for the following series

IR series with KRC5 control system



PRACTICAL TRAINING

BA LR MC6 = B1 + LR1

COMBINED OPERATION AND PROGRAMMING OF INJECTION MOLDING MACHINES AND LINEAR ROBOTS



PRACTICAL TRAINING B1

Operation, setup and programming of injection molding machines including core-pulling

Objectives

- Effective setup of injection molding machines
- Quick and safe operation of injection molding machines
- Quick and reliable programming of core-pulling processes
- Recognition and independent handling of error messages

Subjects

- Safety devices on the injection molding machine
- Configuration of the machine control unit and core puller program
- Procedure for setting up the machine
- Setting up the clamping unit and programming core-pulling processes
- Setting up the injection unit and determining the basic settings, mold filling study
- Optimization of machine settings
- Monitoring options
- Error messages and event log
- Practical exercises on simulators and machines

PRACTICAL TRAINING LR1

Operation, setup and programming of linear robots with WizardX

Objectives

- Quick and safe operation and setup of linear robots
- Effective setup of grippers
- Independent recognition and handling of error messages
- Simple creation of programs using the WizardX* programming assistant

Subjects

- Safety devices on the robot
- Data and parameter management
- Procedure for operating the robot
- "Teach-in" and adaptation of point coordinates
- Setting up the area monitoring
- Creating basic programs using WizardX
- Application of basic programs
- Starting up and optimizing the production system
- Error messages and event log
- Presentation of the LRX-ON-PC PC software
- Practical exercises on simulators and robots

KraussMaffei
Test Certificate

Target group

Machine operators, toolsetters, foremen, sampling personnel, automation personnel

Duration (Practical Training)

5 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Blended Training

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

- Participation in our Practical Training KS
- Basic knowledge of the injection molding process

Valid for the following series

CX, PX, GX & MX series incl. LRX series with MC6 control system

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/imm



OPERATION /
PROGRAMMING
OF THE SYSTEM

PRACTICAL TRAINING BA IR MC6-KRC4 = B1 + IR1



COMBINED OPERATION AND PROGRAMMING OF INJECTION MOLDING MACHINES AND ARTICULATED-ARM ROBOTS

PRACTICAL TRAINING B1

Operation, setup and programming of injection molding machines including core-pulling

Objectives

- Effective setup of injection molding machines
- Quick and safe operation of injection molding machines
- Quick and reliable programming of core-pulling processes
- Recognition and independent handling of error messages

Subjects

- Safety devices on the injection molding machine
- Configuration of the machine control unit and core puller program
- Procedure for setting up the machine
- Setting up the clamping unit and programming core-pulling processes
- Setting up the injection unit and determining the basic settings, mold filling study
- Optimization of machine settings
- Monitoring options
- Error messages and event log
- Practical exercises on simulators and machines

PRACTICAL TRAINING IR1 KRC4 BASIC

Operation and programming of articulated-arm robots

Objectives

The objective of the training is to gain all the essential skills required to operate and create simple handling tasks for the KraussMaffei robot system (KUKA).

Subjects

- Setup and operation of a KraussMaffei robot system (KUKA)
- Moving robots, reading and interpreting messages from the robot control system
- Operation with VisuX
- Programming with ProgTechX
- Using robot programs
- Handling program files, creating program modules
- Creating and changing programmed movements, generating new movement commands



Target group

Toolsetters and operators, machine operators, foremen, sampling personnel with advanced automation tasks, automation personnel

Duration (Practical Training)

5 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Blended Training

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

- Participation in our Practical Training KS
- Basic knowledge of the injection molding process

Valid for the following series

CX, PX, GX & MX series with MC6 control system incl. IR series with KRC4 control system

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/trainingIMM



OPERATION /
PROGRAMMING
OF THE SYSTEM

PRACTICAL TRAINING

E MC6



TROUBLESHOOTING OF ELECTRICAL SYSTEM ON INJECTION MOLDING MACHINES

Objectives

- Rapid detection and clearance of faults
- Systematic troubleshooting in electrical systems

Subjects

- Machine operation for maintenance personnel
- Error messages, event log and status displays on the screen
- Design and functional principle of the control unit
- Expert use of electric circuit diagrams
- Diagnosis functions
- Systematic approach to troubleshooting
- Procedure for hardware component replacement
- Preventive maintenance
- Practical exercises on simulators and machine

Target group

Maintenance and servicing personnel for electrical systems/electronics

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Electrically skilled person
- Basic knowledge of how to operate KraussMaffei injection molding machines (recommended)

Valid for the following series

CX, PX, GX & MX series with MC6 control system

Select the "Machine Maintenance" combined training

e MC6 + HM2 CX/GX/MX
= eHM
(see pages 32, 39 and 41)



MAINTENANCE
ELECTRICAL SYSTEM

PRACTICAL TRAINING

LR MC6



MAINTENANCE AND TROUBLESHOOTING OF LINEAR ROBOTS

Objectives

- Optimal maintenance of linear robots
- Rapid detection and clearance of faults

Subjects

- Robot operation for maintenance personnel
- System configuration of linear robots
- Diagnosis functions
- Systematic approach to troubleshooting
- Calibrating robot axes
- Preventive maintenance
- Practical exercises on simulators and robots

Target group

Maintenance and servicing personnel for electrical systems/electronics and/or automation

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffe.com/training/IMM

Prerequisite

- Electrically skilled person
 - Basic knowledge of how to operate KraussMaffei linear robots recommended
-

Valid for the following series

LRX series with MC6 control system



PRACTICAL TRAINING



PX

MAINTENANCE AND TROUBLESHOOTING OF PX ELECTRICAL INJECTION MOLDING MACHINES

Objectives

- Know differences in relation to hydraulic machines
- Perform optimal maintenance on the PX electric injection molding machine
- Rapid detection and clearance of faults

Subjects

- Special features of operation (zero points, mold area protection, clamping force measurement)
- Mechanical design of the locking and injection unit
- Knowledge of electrical drive systems
- Preventive maintenance
- Expert use of electric circuit diagrams
- MC6 control concept with S-DIAS module
- Modules in the converter network
- Bus connections
- Diagnosis functions
- Troubleshooting in the control system
- Configuring displacement/force transducers

Target group

Maintenance and servicing personnel for electrical systems/electronics

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Electrically skilled person
- Participation in Practical Training E MC6
- Basic knowledge of how to operate KraussMaffei injection molding machines (recommended)

Valid for the following series

PX series with MC6 control system





PRACTICAL TRAINING

E MC P1

TROUBLESHOOTING OF ELECTRICAL SYSTEM ON INJECTION MOLDING MACHINES

Objectives

- Rapid detection and clearance of faults
- Systematic troubleshooting in electrical systems

Subjects

- Machine operation for maintenance personnel
- Error messages, event log and status displays on the screen
- Design and functional principle of the control unit
- Expert use of electric circuit diagrams
- Diagnosis functions
- Systematic approach to troubleshooting
- Procedure for hardware component replacement
- Preventive maintenance
- Practical exercises on simulators and machine

Target group

Maintenance and servicing personnel

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffe.com/trainingIMM

Prerequisite

- Electrically skilled person
 - Basic knowledge of how to operate KraussMaffei injection molding machines with MC P1 control system recommended
-

Valid for the following series

precision- & powerMolding with MC P1 control system





PRACTICAL TRAINING

LR EC (EASYCONTROL)

MAINTENANCE AND TROUBLESHOOTING OF LINEAR ROBOTS

Objectives

- Optimal maintenance of linear robots
- Rapid detection and clearance of faults

Subjects

- Robot operation for maintenance personnel
- System configuration of linear robots
- Diagnosis functions
- Systematic approach to troubleshooting
- Calibrating robot axes
- Preventive maintenance
- Practical exercises on simulators and robots

Target group

Maintenance and servicing personnel for electrical systems/electronics and/or automation

Duration (Practical Training)

1 day, each day from 8:30 am to 4:30 pm

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffe.com/training/IMM

Prerequisite

- Electrically skilled person
 - Basic knowledge of how to operate KraussMaffei linear robots with EasyControl system recommended
-

Valid for the following series

LRX series with EasyControl system



PRACTICAL TRAINING FOR PRECISIONMOLDING



MAINTENANCE AND TROUBLESHOOTING OF PRECISIONMOLDING ELECTRICAL INJECTION MOLDING MACHINES

Objectives

- Know differences in relation to hydraulic machines
- Perform optimal maintenance on the precision Molding electric injection molding machine
- Rapid detection and clearance of faults

Subjects

- Special features of operation (zero points, mold area protection, clamping force measurement)
- Mechanical design of the locking and injection unit
- Knowledge of electrical drive systems
- Preventive maintenance
- Expert use of electric circuit diagrams
- MC P1 control concept with KEBA modules
- Converter systems
- Bus connections
- Diagnosis functions
- Troubleshooting in the control system
- Configuring displacement/force transducers

Target group

Maintenance and servicing personnel for electrical systems/electronics

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Electrically skilled person
 - Participation in Practical Training E MC P1
 - Basic knowledge of how to operate KraussMaffei injection molding machines with MC P1 control system recommended
-

Valid for the following series

precisionMolding with MC P1 control system



PRACTICAL TRAINING



HM1

COMPONENTS AND HYDRAULIC SYSTEMS

Objectives

- Basics of hydraulic systems
- Design and handling of the hydraulic diagram

Subjects

- The hydraulic system's physical principles and interconnections
- Hydraulic components
- Design and functional principle of the hydraulic system
- Function and properties of the hydraulic components being used
- Practical exercises on the machine

Target group

Maintenance and servicing personnel for electrical systems/electronics

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Other variants

Online Training

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

No special previous knowledge required

Valid for the following series

All hydraulic series



HYDRAULIC SYSTEM/
MECHANICAL SYSTEM
MAINTENANCE



PRACTICAL TRAINING

HM2 CX/GX/MX

TROUBLESHOOTING OF THE HYDRAULIC/MECHANICAL SYSTEM ON INJECTION MOLDING MACHINES

Objectives

- Rapid detection and clearance of faults
- Professional, systematic troubleshooting in hydraulic/mechanical systems

Subjects

- Machine operation for maintenance personnel
- Error messages and event log
- Hydraulic components and their mode of operation in the machine hydraulic system
- Diagnosis functions
- Systematic approach to hydraulic troubleshooting
- Design and handling of the hydraulic diagram
- Mechanical design of the locking and injection unit
- Practical exercises on simulators and machine

Target group

Maintenance and servicing personnel

Duration (Practical Training)

3 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

- Basic knowledge of hydraulic/mechanical systems
- Participation in Practical Training HM1
- Basic knowledge of how to operate KraussMaffei injection molding machines recommended

Valid for the following series

CX, GX & MX series

Select the "Machine Maintenance" combined training

e MC6 + HM2 CX/GX/MX
= eHM
(see pages 32, 39 and 41)



HYDRAULIC SYSTEM/
MECHANICAL SYSTEM
MAINTENANCE

PRACTICAL TRAINING

HM3 CX/GX/MX



CALIBRATING INJECTION MOLDING MACHINES

Objectives

- Independent calibration and adjustment
- Increasing process and machine capability

Subjects

- Calibration procedures following module replacement
- Functional principle of the controller
- Calibrating pressure and displacement transducers
- Calibrating proportional valves and variable delivery pumps
- Practical exercises on simulators and machine

Target group

Maintenance and servicing personnel

Duration (Practical Training)

2 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

Prerequisite

Participation in Practical Training HM2 CX/GX/MX

Valid for the following series

CX, GX & MX series



HYDRAULIC SYSTEM/
MECHANICAL SYSTEM
MAINTENANCE

PRACTICAL TRAINING

eHM = e MC6 + HM2 CX/GX/MX

COMBINED TROUBLESHOOTING OF INJECTION MOLDING MACHINES (ELECTRICAL/HYDRAULIC/MECHANICAL SYSTEMS)



PRACTICAL TRAINING E

Troubleshooting of electrical system on injection molding machines

Objectives

- Rapid detection and clearance of faults
- Systematic troubleshooting in control technology

Subjects

- Machine operation for maintenance personnel
- Electrical safety rules and what they mean
- General hazards of electric current
- Working area for electricians and non-electricians
- Concept and electrical diagrams of the various control system variants
- Symbols and location identifiers in the electrical diagram
- Control system components in the low-voltage range
- Diagnostics on the screen and electrical diagram
- Systematic approach to troubleshooting
- Practical exercises on simulators and machine

PRACTICAL TRAINING HM2

Troubleshooting of the hydraulic/mechanical system on injection molding machines

Objectives

- Rapid detection and clearance of faults
- Professional, systematic troubleshooting in hydraulic/mechanical systems

Subjects

- Machine operation for maintenance personnel
- Error messages and event log
- Hydraulic components and their mode of operation in the machine hydraulic system
- Diagnosis functions
- Systematic approach to hydraulic troubleshooting
- Design and handling of the hydraulic diagram
- Mechanical design of the locking and injection unit
- Practical exercises on simulators and machine

Target group

Maintenance and servicing personnel

Duration (Practical Training)

5 days, each day from 8:30 a.m. to 4:30 p.m.

Dates

For current dates, Online Training or Blended Training and additional information, visit:

www.kraussmaffei.com/training/IMM

KraussMaffei
Test Certificate

YOUR ADVANTAGE

Compact, in-depth practical training with KraussMaffei certification

Prerequisite

- Electrically skilled person (recommended)
- Basic knowledge of hydraulic/mechanical systems
- Participation in Practical Training HM1
- Basic knowledge of how to operate KraussMaffei injection molding machines (recommended)

Valid for the following series

CX, GX & MX series with MC6 control system



MAINTENANCE / SERVICING
ELECTRICAL/HYDRAULIC/MECHANICAL
SYSTEMS

YOUR ROUTE TO KRAUSSMAFFEI MUNICH-PARSDORF AND SURROUNDING AREA



CONTACT INFO – INJECTION MOLDING TECHNOLOGY TRAINING REGISTRATION

Call: +49 (0)89 8899 4150

E-mail: Schulung.SGM@kraussmaffei.com

Write to: Training Academy
Team Training

Krauss-Maffei-Strasse 1
85599 Parsdorf

Am Gewerbepark 2
85599 Parsdorf (supplier check-in / truck gate)

Internet: www.kraussmaffei.com/trainingIMM

You will find our conditions for participation here:

<https://km.kraussmaffei.com/de/teilnahmebedingungen.html>

**UNITED FOR YOUR
SUCCESS.**

TRAINING FOR INJECTION MOLDING
TECHNOLOGY & AUTOMATION 2023.



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