

UNITED FOR YOUR SUCCESS

MAN AND MACHINE

*SEMINAR PROGRAM
REACTION PROCESS
MACHINERY 2021*

KraussMaffei

Pioneering Plastics



MAN AND MACHINE WE BRING YOU SUCCESS

Individual challenges in mechanical engineering call for intelligent solutions.

The training program from KraussMaffei is perfectly adapted to your requirements. We teach you our special topics: operation of the RimStar and Comet machine series and give you a sound basic knowledge in the "Basics of PUR" seminar.

Your benefits

We will prepare you and your employees to make optimal cost-effective use of the reaction machines from KraussMaffei.

Our priority

Our seminars offer a high degree of practical content that perfectly complements the theory behind it. We teach you the function, operation and maintenance of our machines in a simple and straightforward way. The result: noticeably improved quality of work, higher productivity and effective troubleshooting.

Note:

Each participant receives relevant documents at the start of the seminar and a certificate upon completion.

Special courses on request

The seminars named in our Seminar program are held in German. It goes without saying that, by special agreement, all seminars and seminar combinations can also be held in English or with an interpreter.

We also offer training courses specifically tailored to your requirements in the fields of operation and maintenance – no matter whether we come to you, or you to us.

We also organize training courses in other localities, such as the KraussMaffei Sales and Service Center in Verl and facilities of partnering research institutes. We will write to our customers in the respective catchment area separately.



Subject selection for special courses:

- CCM Clear Coat Molding
- LFI Long Fiber Injection
- Spraying technologies
- Color metering
- Multicolor technique
- Multicomponent technology
- Pultrusion
- Older control systems and older series upon request

Other special topics are available upon request. Just ask us!

For detailed information, visit:
kraussmaffe.com/trainingRPM

YOUR BENEFITS

PROFIT FROM THE HANDS-ON APPROACH, PERSONAL INTERACTION AND FLEXIBILITY

KraussMaffei training is hands-on:

Our trainers have many years of experience and make use of the latest technology to offer you the highest quality of instruction. They use practical exercises, for example on the PUC07 and PUC08 computers, to impart their specialized knowledge to participants. This gives them the best possible preparation for their tasks in the workplace.

KraussMaffei offers training on a personal level:

We limit the number of participants in our training courses to a maximum of eight. Our trainers are able to respond individually to the personal needs of participants and identify concrete problem solutions.

KraussMaffei offers flexibility:

Whether you are a beginner or advanced – our program contains training courses for all knowledge levels. We also offer individual seminars on special subjects and tasks, even for older series. You can attend KraussMaffei training courses at our training center in Munich or at our Sales and Service Center in Verl. We will also gladly come directly to you.



YOUR BENEFITS:

- Comprehensive practical training
- Experienced seminar leaders
- Small learning groups
- Time for individual questions and problem-solving strategies
- Comprehensive service for your arrival, hotel reservation and visit

Seminar telephone: +49 89 88 99 31 55

kraussmaffei.com/trainingRPM

YOUR GUIDE TO SUCCESS

BASICS, FUNCTION, OPERATION AND MAINTENANCE

Basics

Specialization

Individual

PUR

Basic seminar
Polyurethane
technology
1 day

→ Page 5

RS 07, RS 08 or RS TP

Operation of RimStar
pump metering
machine with PUC07,
PUC08 or TP1200
computer
2 days

→ Page 6

MKE-3B

Repair seminar
for mixing head
MKE-3B
1 day

→ Page 11

Special seminars
(examples on page 2)

Basics with
a significant
practical
component

KK 07

Operation of Comet
and Hybrid piston
metering machine
with PUC07 or
PUC08 computer
2 days

→ Page 7

RTM

Operation of the
RTM metering system
1 day

→ Page 12

Wet side equipment

Basics of the
PUR-metering
machine and process
1-2 days

→ Page 13

EcoStar

Operation of pump
metering machine
EcoStar
2 days

→ Page 8

Pultrusion

Basics of the
pultrusion system
and process
3 days

→ Page 14

RS Smart

Operation of pump
metering machine
RimStar Smart
2 days

→ Page 9

MKP

Mixing head and
pump seminar
2 days

→ Page 10

KraussMaffei
CERTIFICATE

Each participant receives a
certificate upon completion.

PUR PRACTICAL SEMINAR

BASIC SEMINAR ON POLYURETHANE TECHNOLOGY

Learning objective

The participant learns about the structure, composition and supply of polyurethane raw materials, behavior and influences on chemical reactions and safe handling of components.

Subjects

- Basics of plastics
- Types and products made of polyurethane
- Polyols and their additives
- Isocyanate
- Behavior and influences during the chemical reaction
- Definitions
- Use of blowing agents
- Safety precautions and hazards when handling polyurethane raw materials
- Correct conduct in case of accidents
- Determination of physical values on finished part
- Check of reactivity (cup test)

Duration

1 day, 9:00 am to 4:30 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM



Prerequisite

No special previous knowledge required

RS 07, RS 08 OR RS TP PRACTICAL SEMINAR

OPERATION OF RIMSTAR PUMP METERING MACHINE WITH PUC07, PUC08 OR TP1200 COMPUTER

Learning objective

The participant learns about the design, functionality and operation of the machine and computer as well as the localization of faults and optimization of the machine settings. In addition, the functionality and proper handling of mixing heads and pumps is taught.

Subjects

- Mechanical design of the RimStar machine
- Safety devices
- Machine sequence based on flow charts
- Maintenance of complete machine
- Operation of the machine at the control cabinet
- Configuration of the PUC07, PUC08 or TP1200 computer and the decentralized peripherals
- Explanation of all menu screens and input parameters
- Operation of the computer with practical exercises
- Localization of faults with the help of the computer

Duration

2 days, each 9:00 am to 5:00 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM

Prerequisite

No special previous knowledge required



KK 07 PRACTICAL SEMINAR

OPERATION OF PISTON METERING MACHINE COMET AND HYBRID WITH COMPUTER PUC07 OR PUC08

Learning objective

The participant learns about the design, functionality and operation of the machine and computer as well as the localization of faults and optimization of the machine settings. In addition, the functionality and proper handling of mixing heads is taught.

Subjects

- Mechanical design of the Comet and Hybrid machines
- Safety devices
- Machine sequence based on flow charts
- Maintenance of complete machine
- Operation of the machine at the control cabinet
- Configuration of the PUC07 or PUC08 computer and the decentralized peripherals
- Explanation of all menu screens and input parameters
- Operation of the computer with practical exercises
- Localization of faults with the help of the computer

Duration

2 days, each 9:00 am to 5:00 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM

Prerequisite

No special previous knowledge required



ECOSTAR PRACTICAL SEMINAR

OPERATION OF THE PUMP METERING MACHINE ECOSTAR

Learning objective

The participant learns about the design, functionality and handling of the machine and control panel as well as the localization of faults and optimization of the machine settings. In addition, the functionality and proper handling of mixing heads and pumps is taught.

Subjects

- Mechanical design of the EcoStar machine
- Machine sequence based on flow charts
- Handling of the operating units and explanation of the menu screens
- Design and method of operation of the mixing heads
- Changing nozzles and adjusting the mixing pressure
- Functional principles of the metering pumps
- Options for adjusting the output capacity
- Flow control by means of frequency converters
- Maintenance of complete machine
- Operation and practical exercises at a machine

Duration

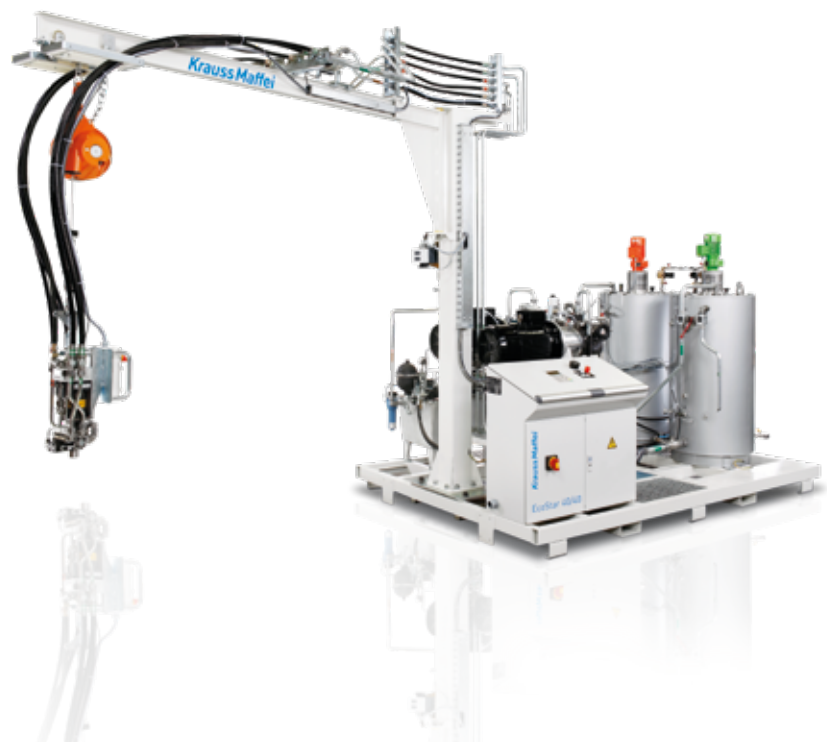
2 days, each 9:00 am to 5:00 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM

Prerequisite

No special previous knowledge required



RS SMART PRACTICAL SEMINAR

OPERATION OF THE RIMSTAR SMART PUMP METERING MACHINE

Learning objective

The participant learns about the design, functionality and handling of the machine and control panel as well as the localization of faults and optimization of the machine settings. In addition, the functionality and proper handling of mixing heads and pumps is taught.

Subjects

- Mechanical design of the RimStar Smart machine
- Machine sequence based on flow charts
- Handling the TP1200 Comfort Pro control panel
- Explanation of the screen pages and input parameters
- Design and method of operation of the mixing heads
- Changing nozzles and adjusting the mixing pressure
- Functional principles of the metering pumps
- Options for adjusting the output capacity
- Flow control by means of frequency converters
- Maintenance of complete machine
- Operation and practical exercises at a machine

Duration

2 days, each 9:00 am to 5:00 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM



Prerequisite

No special previous knowledge required

MKP PRACTICAL SEMINAR

MIXING HEAD AND PUMP SEMINAR

Learning objective

The participant learns about the method of operation and correct handling of the mixing heads and pumps as well as the disassembly and independent maintenance of a mixing head.

Subjects

Mixing head

- General presentation of the mixing head types
- Design and functional explanation
- Selecting and changing nozzles as well as adjusting the mixing pressure
- Hydraulic and electric activation
- Fault detection at the mixing head
- Maintenance
- Practical exercises at the mixing head

Metering pump

- Functional principles of the pumps
- Effect of various operating statuses on pump behavior
- Options for adjusting the output capacity
- Flow control
- Maintenance
- Practical exercises at the pumps
- Magnetic coupling

Duration

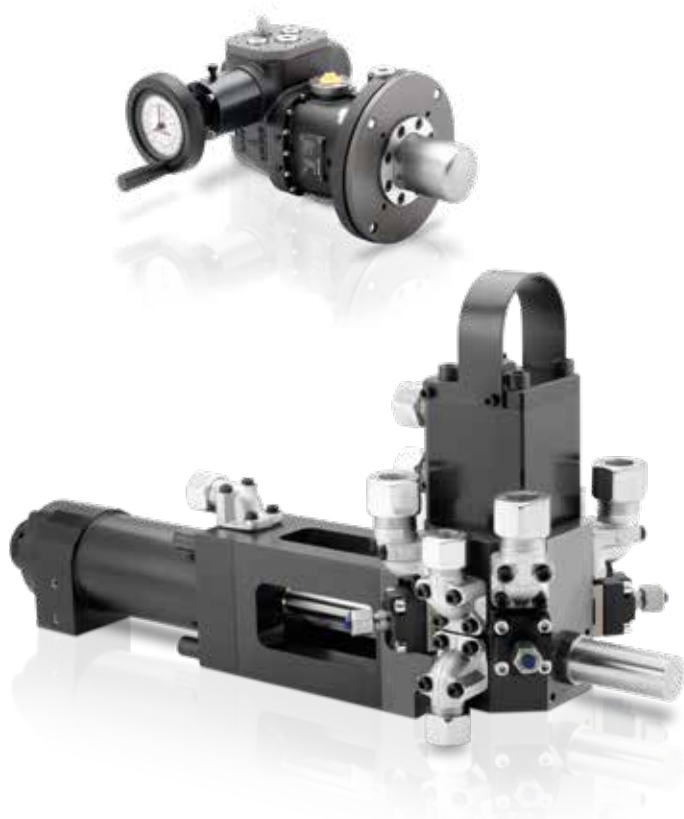
2 days, each 9:00 am to 5:00 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM

Prerequisite

No special previous knowledge required



MKE-3B PRACTICAL SEMINAR

REPAIR SEMINAR FOR MIXING HEAD

MKE-3B

Learning objective

Participants learn about the design, method of operation and correct handling of this mixing head type. By means of practical exercises, they also acquire knowledge of how to repair the mixing head.

Subjects

- General presentation of mixing head types
- Design and functional explanation
- Hydraulic and electric activation
- Selection criteria and nozzle changing
- Fault detection at the mixing head
- Practical exercises on disassembling, repairing, sealing and assembly with subsequent function test

Duration

1 day, 9:00 am to 4:30 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: [kraussmaffe.com/trainingRPM](https://www.kraussmaffe.com/trainingRPM)

Prerequisite

No special previous knowledge required



RTM PRACTICAL SEMINAR

OPERATION OF THE RTM METERING SYSTEM (RTM – RESIN TRANSFER MOLDING)

Learning objective

Participants learn about the design, method of functioning and operation of the RTM metering system as well as the specific parameters for the RTM process and the screen pages for PUC08 process data acquisition.

Subjects

- Presentation of the RTM process and comparison of different resin injection methods
- Design of the RTM metering system
- Machine sequence based on flow charts
- Functional principle of the RTM-specific metering units
- Design and method of operation of the RTM mixing head
- Changing nozzles and adjusting the mixing pressure
- Metering of release agent into resin component at mixing head
- Maintenance of complete machine
- Use of mold cavity pressure for control of the resin injection
- Explanation of the input parameters relevant to the RTM process and screen pages in PUC08 process data acquisition

Duration

1 day, 9:00 am to 4:30 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: kraussmaffe.com/trainingRPM

Prerequisite

Basic knowledge on the function and operation of a reaction machine, for example, through participation in an "RS 08" seminar (page 6)



WET SIDE PRACTICAL SEMINAR

BASICS OF THE PUR-METERING MACHINE AND PROCESS

Learning objective

The participants learn about the configuration and operation of the individual function elements of a 2-component high pressure metering machine with associated mixing head. This instruction is partly theoretical but mostly hands-on. In addition, participants learn the meaning of the most important process-guiding parameters, safety instructions and maintenance measures.

At the machine, the participants learn the actions needed to prepare the machine for operation, calibrate it and optimize the foam discharge, and they become familiar with the most frequently occurring potential process errors and component defects.

Subjects

- Design of the metering machine
- Function elements such as material supply, metering line, flow control, mixing head
- Safety and maintenance instructions
- Preparing the machine for operation and calibrating it
- First steps in the reaction injection molding process, optimization and troubleshooting

Remarks

1-day seminar as a supplement to the metering machine training (only in combination with the metering machine training)
2-day seminar as a standalone concept

Duration

1 day or 2 days, each 9:00 am to 5:00 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: [kraussmaffe.com/trainingRPM](https://www.kraussmaffe.com/trainingRPM)



Prerequisite

No special previous knowledge required

PULTRUSION PRACTICAL SEMINAR

BASICS OF THE PULTRUSION SYSTEM AND PROCESS

Learning objective

The participants learn about the configuration and individual function elements of a pultrusion system that is ready to operate. This instruction is partly theoretical but primarily hands-on. In particular, the differences and properties of the two impregnation variants are explained. In addition, participants learn the meaning of the most important process-guiding parameters, as well as instructions for safety, operation and maintenance.

At the machine, the participants learn the actions needed to prepare the system, impregnation unit and mold and to optimize the start-up manufacturing process. The participants become familiar with the most frequently occurring potential component defects and learn how to recognize when a certain product can be manufactured using pultrusion.

Subjects

- Design of the pultrusion system
- Function elements such as fiber feed, injection box/impregnation bath, metering machine, mixing head, mold, haul-off, saw, fabrication
- Safety and maintenance instructions
- Preparing the machine for operation and calibrating it
- Starting up a pultrusion process, optimization and troubleshooting
- Pultrudability of a profile

Remarks

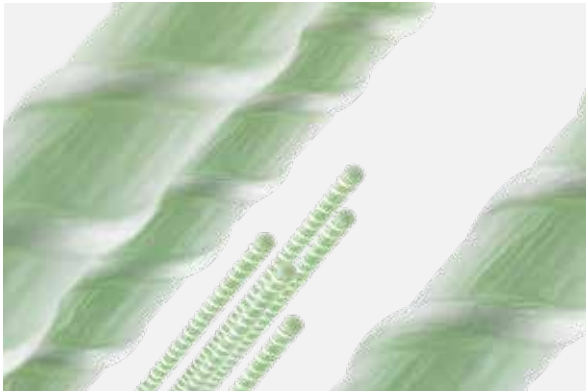
3-day seminar on profile pultrusion
(1 day of theory, 2 days at the machine) or
3-day seminar on rebar pultrusion
(1 day of theory, 2 days at the machine)

Duration

3 days, each 9:00 am to 4:30 pm

DATES AND COSTS

Dates, costs and other information (e.g. online training) available on request and at: [kraussmaffe.com/trainingRPM](https://www.kraussmaffe.com/trainingRPM)



Prerequisite

No special previous knowledge required

CONTACT INFORMATION FOR REACTION PROCESS MACHINERY SEMINAR REGISTRATION

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You will find our conditions for participation here:

[***https://www.kraussmaffe.com/en/terms-and-conditions-of-participation.html***](https://www.kraussmaffe.com/en/terms-and-conditions-of-participation.html)

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