



360° TRAININGS

# Training and seminar programme 2020

- » Practice-oriented courses and seminars for the professional handling of Hennecke's machine and plant technology



# 360° TRAININGS





## Professional and practice-oriented

The contents of the 360°TRAINING are taught in the company's own training center in a theoretically descriptive manner and are tested and practiced through practical implementation on original machines. The modularity within the portfolio guarantees tailored instruction and further training. Special seminars complete the standard program.

### Explanations of the modules

The following pages contain more information regarding the individual modules and their contents. Please note potential recommendations for participation in different training modules.

- >> We recommend that novices attend the polyurethane technology [G-PU] basics seminar as a prerequisite for attending different seminars in module group II.
- >> The seminars in module group III are primarily aimed at maintenance staff, fitters, machine operators and overseers. However the seminars are also recommended for applied engineering and for heads of production and maintenance in addition.
- >> In module group IV we can offer you a series of customer-specific seminars upon request. These are carried out exclusively on the machine or plant at your premises.
- >> All seminars are also offered in English at no extra cost. For exact dates please contact our 360°Service Hotline. Upon request we can also provide assistance in other languages.

If you have any questions, we can be contacted in person at all times.





# Modules I - IV



Seminars conducted in the Hennecke training center or at the customer's premises

Module I

Basic seminars

BASICS OF POLYURETHANE TECHNOLOGY [G-PU]

One day, theory and practice

BASICS OF MIXHEAD TECHNOLOGY [G-M]

incl. mixhead series MT-A, MT, MX, MXL, MN, MEL

One day, theory and practice

Module II

Seminars for metering machine and mixhead technology

HIGH-PRESSURE METERING MACHINES [G-HP]

HIGHLINE, TOPLINE HK, PUR-CSM

incl. mixhead series MT-A, MT, MX, MXL, MN

Three days, theory and practice

Incl. MT-A

STREAMLINE [G-STL]

STREAMLINE MK2 [G-STL MK2]

incl. mixhead series MN 8 MC-SC + RTM

Three days, theory and practice

NEW

ELASTOLINE V/F [G-EL]

incl. mixhead series MEL

Three days, theory and practice

ROBOT INTEGRATION [G-IR]

One day, theory

Module III

Seminars for technical service, maintenance and electrical engineering

HIGH-PRESSURE METERING MACHINES [M-HP]

HIGHLINE, TOPLINE HK, PUR-CSM

incl. mixhead series MT-A, MT, MX, MXL

Three days, theory and practice

Incl. MT-A

STREAMLINE [M-STL]

STREAMLINE MK2 [M-STL MK2]

incl. mixhead series MN 8 MC-SC + RTM

Three days, theory and practice

NEW

ELASTOLINE V/F [M-EL]

incl. mixhead series MEL

Three days, theory and practice

Seminars conducted only at the customer's premises

Module IV

Customized Seminars

Special machines

MICROLINE

TOPLINE HK-MF (multiple components)

TOPLINE HT

incl. TOPLINE HT500 and HT30evo

HK-R5000

CARBOMAT

AEROMAT GU / ST

PENTAMAT 30i / 50i

Plant technology

Sandwich panel lines

Technical insulation lines

Slabstock lines

Moulded foam lines

PREG lines (Sandwich honeycomb elements)

i

The dates for **modules I and II** can be found in our seminar program on p. 6. The dates for modules III and IV can be obtained **upon request**. **Modules I - III** can be conducted in the **Hennecke training center** or at **your premises**. **Module IV** can **only** be conducted at your premises.

The stated seminar fees refer to the training sessions in the Hennecke training center. You can obtain the seminar fees for on-site training sessions upon request.



Please contact us at any time if you need an individual seminar date.

January	February	March	April	May	June	July	August	September	October	November	December
<b>1</b> Wed 1	<b>1</b> Sat	<b>1</b> Sun	<b>1</b> Wed	<b>1</b> Fri	<b>1</b> Mon 23	<b>1</b> Wed	<b>1</b> Sat	<b>1</b> Tue G-STL G-STL MK2	<b>1</b> Thu	<b>1</b> Sun	<b>1</b> Tue G-STL G-STL MK2
<b>2</b> Thu	<b>2</b> Sun	<b>2</b> Mon 10	<b>2</b> Thu	<b>2</b> Sat	<b>2</b> Tue	<b>2</b> Thu	<b>2</b> Sun	<b>2</b> Wed G-STL G-STL MK2	<b>2</b> Fri	<b>2</b> Mon 45	<b>2</b> Wed G-STL G-STL MK2
<b>3</b> Fri	<b>3</b> Mon 6	<b>3</b> Tue	<b>3</b> Fri	<b>3</b> Sun	<b>3</b> Wed	<b>3</b> Fri	<b>3</b> Mon 32	<b>3</b> Thu G-STL G-STL MK2	<b>3</b> Sat	<b>3</b> Tue G-EL	<b>3</b> Thu G-STL G-STL MK2
<b>4</b> Sat	<b>4</b> Tue G-PU	<b>4</b> Wed	<b>4</b> Sat	<b>4</b> Mon 19	<b>4</b> Thu	<b>4</b> Sat	<b>4</b> Tue	<b>4</b> Fri	<b>4</b> Sun	<b>4</b> Wed G-EL	<b>4</b> Fri
<b>5</b> Sun	<b>5</b> Wed G-HP	<b>5</b> Thu	<b>5</b> Sun	<b>5</b> Tue G-EL	<b>5</b> Fri	<b>5</b> Sun	<b>5</b> Wed	<b>5</b> Sat	<b>5</b> Mon 41	<b>5</b> Thu G-EL	<b>5</b> Sat
<b>6</b> Mon 2	<b>6</b> Thu G-HP	<b>6</b> Fri	<b>6</b> Mon 15	<b>6</b> Wed G-EL	<b>6</b> Sat	<b>6</b> Mon 28	<b>6</b> Thu	<b>6</b> Sun	<b>6</b> Tue G-STL G-STL MK2	<b>6</b> Fri	<b>6</b> Sun
<b>7</b> Tue	<b>7</b> Fri G-HP	<b>7</b> Sat	<b>7</b> Tue	<b>7</b> Thu G-EL	<b>7</b> Sun	<b>7</b> Tue	<b>7</b> Fri	<b>7</b> Mon 37	<b>7</b> Wed G-STL G-STL MK2	<b>7</b> Sat	<b>7</b> Mon 50
<b>8</b> Wed	<b>8</b> Sat	<b>8</b> Sun	<b>8</b> Wed	<b>8</b> Fri	<b>8</b> Mon 24	<b>8</b> Wed	<b>8</b> Sat	<b>8</b> Tue	<b>8</b> Thu G-STL G-STL MK2	<b>8</b> Sun	<b>8</b> Tue
<b>9</b> Thu	<b>9</b> Sun	<b>9</b> Mon 11	<b>9</b> Thu	<b>9</b> Sat	<b>9</b> Tue G-PU	<b>9</b> Thu	<b>9</b> Sun	<b>9</b> Wed	<b>9</b> Fri	<b>9</b> Mon 46	<b>9</b> Wed
<b>10</b> Fri	<b>10</b> Mon 7	<b>10</b> Tue G-PU	<b>10</b> Fri	<b>10</b> Sun	<b>10</b> Wed G-M	<b>10</b> Fri	<b>10</b> Mon 33	<b>10</b> Thu	<b>10</b> Sat	<b>10</b> Tue G-PU	<b>10</b> Thu
<b>11</b> Sat	<b>11</b> Tue G-STL G-STL MK2	<b>11</b> Wed G-M	<b>11</b> Sat	<b>11</b> Mon 20	<b>11</b> Thu	<b>11</b> Sat	<b>11</b> Tue	<b>11</b> Fri	<b>11</b> Sun	<b>11</b> Wed G-M	<b>11</b> Fri
<b>12</b> Sun	<b>12</b> Wed G-STL G-STL MK2	<b>12</b> Thu	<b>12</b> Sun	<b>12</b> Tue G-PU	<b>12</b> Fri	<b>12</b> Sun	<b>12</b> Wed	<b>12</b> Sat	<b>12</b> Mon 42	<b>12</b> Thu	<b>12</b> Sat
<b>13</b> Mon 3	<b>13</b> Thu G-STL G-STL MK2	<b>13</b> Fri	<b>13</b> Mon 16	<b>13</b> Wed G-M	<b>13</b> Sat	<b>13</b> Mon 29	<b>13</b> Thu	<b>13</b> Sun	<b>13</b> Tue	<b>13</b> Fri	<b>13</b> Sun
<b>14</b> Tue G-STL G-STL MK2	<b>14</b> Fri	<b>14</b> Sat	<b>14</b> Tue	<b>14</b> Thu	<b>14</b> Sun	<b>14</b> Tue	<b>14</b> Fri	<b>14</b> Mon 38	<b>14</b> Wed	<b>14</b> Sat	<b>14</b> Mon 51
<b>15</b> Wed G-STL G-STL MK2	<b>15</b> Sat	<b>15</b> Sun	<b>15</b> Wed	<b>15</b> Fri	<b>15</b> Mon 25	<b>15</b> Wed	<b>15</b> Sat	<b>15</b> Tue G-PU	<b>15</b> Thu	<b>15</b> Sun	<b>15</b> Tue
<b>16</b> Thu G-STL G-STL MK2	<b>16</b> Sun	<b>16</b> Mon 12	<b>16</b> Thu G-PU	<b>16</b> Sat	<b>16</b> Tue G-STL G-STL MK2	<b>16</b> Thu	<b>16</b> Sun	<b>16</b> Wed G-M	<b>16</b> Fri	<b>16</b> Mon 47	<b>16</b> Wed
<b>17</b> Fri	<b>17</b> Mon 8	<b>17</b> Tue G-HP	<b>17</b> Fri	<b>17</b> Sun	<b>17</b> Wed G-STL G-STL MK2	<b>17</b> Fri	<b>17</b> Mon 34	<b>17</b> Thu	<b>17</b> Sat	<b>17</b> Tue G-HP	<b>17</b> Thu
<b>18</b> Sat	<b>18</b> Tue	<b>18</b> Wed G-HP	<b>18</b> Sat	<b>18</b> Mon 21	<b>18</b> Thu G-STL G-STL MK2	<b>18</b> Sat	<b>18</b> Tue	<b>18</b> Fri	<b>18</b> Sun	<b>18</b> Wed G-HP	<b>18</b> Fri
<b>19</b> Sun	<b>19</b> Wed	<b>19</b> Thu G-HP	<b>19</b> Sun	<b>19</b> Tue	<b>19</b> Fri	<b>19</b> Sun	<b>19</b> Wed	<b>19</b> Sat	<b>19</b> Mon 43	<b>19</b> Thu G-HP	<b>19</b> Sat
<b>20</b> Mon 4	<b>20</b> Thu G-PU	<b>20</b> Fri G-IR	<b>20</b> Mon 17	<b>20</b> Wed	<b>20</b> Sat	<b>20</b> Mon 30	<b>20</b> Thu	<b>20</b> Sun	<b>20</b> Tue	<b>20</b> Fri G-IR	<b>20</b> Sun
<b>21</b> Tue G-HP	<b>21</b> Fri	<b>21</b> Sat	<b>21</b> Tue	<b>21</b> Thu	<b>21</b> Sun	<b>21</b> Tue	<b>21</b> Fri	<b>21</b> Mon 39	<b>21</b> Wed	<b>21</b> Sat	<b>21</b> Mon 52
<b>22</b> Wed G-HP	<b>22</b> Sat	<b>22</b> Sun	<b>22</b> Wed	<b>22</b> Fri	<b>22</b> Mon 26	<b>22</b> Wed	<b>22</b> Sat	<b>22</b> Tue G-PU	<b>22</b> Thu	<b>22</b> Sun	<b>22</b> Tue
<b>23</b> Thu G-HP	<b>23</b> Sun	<b>23</b> Mon 13	<b>23</b> Thu	<b>23</b> Sat	<b>23</b> Tue	<b>23</b> Thu	<b>23</b> Sun	<b>23</b> Wed G-HP	<b>23</b> Fri	<b>23</b> Mon 48	<b>23</b> Wed
<b>24</b> Fri G-IR	<b>24</b> Mon 9	<b>24</b> Tue G-STL G-STL MK2	<b>24</b> Fri	<b>24</b> Sun	<b>24</b> Wed	<b>24</b> Fri	<b>24</b> Mon 35	<b>24</b> Thu G-HP	<b>24</b> Sat	<b>24</b> Tue	<b>24</b> Thu
<b>25</b> Sat	<b>25</b> Tue	<b>25</b> Wed G-STL G-STL MK2	<b>25</b> Sat	<b>25</b> Mon 22	<b>25</b> Thu	<b>25</b> Sat	<b>25</b> Tue G-EL	<b>25</b> Fri G-HP	<b>25</b> Sun	<b>25</b> Wed	<b>25</b> Fri
<b>26</b> Sun	<b>26</b> Wed G-EL	<b>26</b> Thu G-STL G-STL MK2	<b>26</b> Sun	<b>26</b> Tue G-PU	<b>26</b> Fri	<b>26</b> Sun	<b>26</b> Wed G-EL	<b>26</b> Sat	<b>26</b> Mon 44	<b>26</b> Thu	<b>26</b> Sat
<b>27</b> Mon 5	<b>27</b> Thu G-EL	<b>27</b> Fri	<b>27</b> Mon 18	<b>27</b> Wed G-HP	<b>27</b> Sat	<b>27</b> Mon 31	<b>27</b> Thu G-EL	<b>27</b> Sun	<b>27</b> Tue	<b>27</b> Fri	<b>27</b> Sun
<b>28</b> Tue G-PU	<b>28</b> Fri G-EL	<b>28</b> Sat	<b>28</b> Tue	<b>28</b> Thu G-HP	<b>28</b> Sun	<b>28</b> Tue	<b>28</b> Fri	<b>28</b> Mon 40	<b>28</b> Wed	<b>28</b> Sat	<b>28</b> Mon 53
<b>29</b> Wed G-M	<b>29</b> Sat	<b>29</b> Sun	<b>29</b> Wed	<b>29</b> Fri G-HP	<b>29</b> Mon 27	<b>29</b> Wed	<b>29</b> Sat	<b>29</b> Tue	<b>29</b> Thu	<b>29</b> Sun	<b>29</b> Tue
<b>30</b> Thu		<b>30</b> Mon 14	<b>30</b> Thu	<b>30</b> Sat	<b>30</b> Tue	<b>30</b> Thu	<b>30</b> Sun	<b>30</b> Wed	<b>30</b> Fri	<b>30</b> Mon 49	<b>30</b> Wed
<b>31</b> Fri		<b>31</b> Tue		<b>31</b> Sun		<b>31</b> Fri	<b>31</b> Mon 36		<b>31</b> Sat		<b>31</b> Thu

# Basic Seminars

I

## BASICS OF POLYURETHANE TECHNOLOGY [G-PU]

### Learning objective:

The participants shall gain basic knowledge of polyurethane chemistry. They shall become familiar with the composition and behavior of the components during the chemical reaction. In addition the seminar shall impart useful information relating to safe utilization of chemicals and correct storage of raw materials.

### Seminar contents:

Basics of polyurethane raw materials
Products manufactured from polyurethane
Hazards and how to avoid them in the processing of polyurethane materials
The reaction mixture
Practical “manual” exercises
Determining the characteristic parameters during the course of the reaction
Determining the bulk density of the finished product



#### Target group

Novices, machine fitters, machine operators, heads of production, quality assurance personnel

#### Number of participants

Three to six people

#### Duration of seminar

One day, 9:00 – 16:00 hrs

#### Seminar fee

490.00 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**

**Learning objective:**

The participant will learn about the functioning and operation of the respective mixhead series. They will learn everything to do with necessary maintenance work, correct disassembly and independent repair of wear parts. Furthermore, the seminar participants will be shown how to determine errors and faults on the mixhead and how to rectify them.

**Seminar contents:**

Functional principle and configuration of the mixhead

Selection and replacement of the nozzle

- Conventional and balanced-pressure nozzle (series MT, MT-A, MX, MXL)
- Hydraulically controlled nozzle (series MQ)

Adjusting the foaming pressure

Throttling the mixing chamber

Electric, hydraulic and pneumatic (series MXL)  
Control of the mixhead

Troubleshooting and rectification

Maintenance and practical instruction on mixhead

- Changing seals on ejector and nozzles
- Replacing and adjusting the proximity switch in the mixhead

**Target group**

Novices, machine fitters,  
machine operators,  
maintenance staff

Each seminar relates to  
one mixhead series  
[MT, MT-A, MX, MXL, MN, MEL]

**Number of participants**

Three to six people

**Duration of seminar**

One day, 9:00 – 16:00 hrs

**Seminar fee**

490 euros per participant  
(plus VAT)

**Please contact us at any time  
if you require a specific  
seminar date**

# Seminars for Metering Machine Operators

II

HIGH-PRESSURE METERING MACHINES [G-HP]

**Learning objective:**

After the seminar, participants will have mastered the operation and adjustment of high-pressure metering machines. They will be able to name the components used and know their function and mode of operation. They will be able to perform production adjustments and changes to the plant parameters independently and effectively. Furthermore the functioning principle and adjustment of the pumps, mixhead and nozzles are performed and explained. In addition the participants will be able to localize errors that occur on the machine and mixhead and rectify them (error simulation).

**Seminar contents:**

Configuration of a high-pressure metering machine based on the schematics (wet part and hydraulics)
Working with the documentation and spare parts lists
Safety devices and their functions
Functional principle and structure of metering pumps
Functional principle and configuration of the mixhead series MT-A, MT, MX, MXL, MN
Machine operation at HMI, overview of the individual menus and explanation of the adjustable parameters
Recording and function of a pump characteristic curve
Practical system operation and handling
Adjusting the foaming pressure, nozzle selection and nozzle change
Electric, hydraulic and pneumatic (MXL series) control of the mixhead
Localization and elimination of malfunctions and errors



**Target group**

Novices, machine fitters, machine operators, foremen, application engineers, quality assurance staff, heads of production or maintenance

For new users, we recommend taking part in our basic seminar on polyurethane technology [G-PU]

**Number of participants**

Three to six people

**Duration of seminar**

Three days, 9:00 – 16:00 hrs

**Seminar fee**

1,470 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**



### Learning objective:

After the seminar the participants will have mastered the operation and adjustment of high-pressure metering machine STREAMLINE/ STREAMLINE MK2. You can name the components used and know their function and mode of operation. Production adjustments and changes to the plant parameters can be performed independently and effectively. In addition, the participants shall be able to localize errors that occur on the machine and mixhead and rectify them (error simulation).

### Seminar contents:

Structure of the STREAMLINE metering machine based on the schematics (wet part and hydraulics)

Working with the documentation and spare parts lists

Safety devices and their functions

Functional principle and structure of metering pumps

Functional principle and configuration of the mixhead

Machine operation at HMI, overview of the individual menus and explanation of the adjustable parameters

Recording and function of a pump characteristic curve

Practical system operation and handling

Adjusting the foaming pressure, nozzle selection and nozzle change

Electric, hydraulic control of the mixhead

Localization and elimination of malfunctions and errors



#### Target group

Novices, machine fitters, machine operators, foremen, application engineers, quality assurance staff, heads of production or maintenance

#### Number of participants

Three to six people

#### Duration of seminar

Three days, 9:00 – 16:00 hrs

#### Seminar fee

1,470 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**

**Learning objective:**

After the seminar the participants will have mastered the independent operation and adjustment of the low-pressure reaction casting machine ELASTOLINE. They will learn the function and mode of operation of all the assemblies and individual parts installed in the machine. Production adjustments and changes to the plant parameters can be performed independently and in a process-oriented way. In addition, the participants will be able to localize errors that occur on the machine and mixhead and rectify them (error simulation).

**Seminar contents:**

Configuration of the ELASTOLINE reaction casting machine based on the schematics and layouts

Working with the documentation and spare parts lists

Safety devices and their functions

Functional principle and structure of metering pumps

Functional principle and configuration of the mixhead

Function and principle of the heating systems

Machine operation at HMI, overview of the individual menus and explanation of the adjustable parameters

Recording and function of a pump characteristic curve

Practical system operation and handling

Adjusting all relevant process pressures

Electric, hydraulic and pneumatic control of the MEL mixhead

Localization and elimination of malfunctions and errors

**Target group**

Novices, machine fitters, machine operators, foremen, application engineers, quality assurance staff, heads of production or maintenance

**Number of participants**

Three to six people

**Duration of seminar**

Three days, 9:00 – 16:00 hrs

**Seminar fee**

1,470 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**

**Learning objective:**

The participants are taught the operating sequence of the standardized interface between the coupling control and the robot controller (make ABB or FANUC). This includes the hardware interface with the safety signals and the software interfaces with the program number transfer and the corresponding reference signals. This training offer consists of theoretical training.

**Seminar contents:**

Structure of the PLC program

Structure of the robot program

Hardware interface

- System signals
- Safety signals

Software interface

- Signal exchange
- Program number transfer

**Target group**

Programmers (PLC knowledge and knowledge of robots required)

Participation in the seminar [G-HP] is recommended

**Number of participants**

Three to six people

**Duration of seminar**

One day, 9:00 – 16:00 hrs

**Seminar fee**

490 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**

# Seminars for Technical Service and Maintenance

III

HIGH-PRESSURE METERING MACHINES [M-HP]

**Learning objective:**

After the seminar, participants will have mastered how to maintain and service high-pressure metering machines. They will be able to carry out necessary maintenance work and repairs independently, effectively and promptly.

**Seminar contents:**

Configuration of a high-pressure metering machine based on the schematics (wet part and hydraulics)
Safety devices and their function
Checking and filling the hydraulic bladder accumulators
Basic requirements for operating the machine (power supply)
Maintaining and repairing the tank periphery (refill pump)
Checking and replacing component filters
Checking the function of the metering pumps
Checking the sealant receptacle on the seals (agitator, metering pump, high/low pressure switchover)
Checking the nozzles and carrying out maintenance work
Providing instruction in the necessary maintenance work on the mixhead series MT-A, MT, MX, MXL
Troubleshooting and eliminating these errors
Handling the lubrication and maintenance plan of the machine
Structural layout of circuit diagrams
Performing restores and backups on HMI's (depending on the hardware)
Hardware layout and function of the standardized interface between reaction casting machines and dry parts or robots



**Target group**

Maintenance, service personnel, foremen, heads of production

For new users, we recommend taking part in the seminar  
Metering machine technology [G-HP]

**Number of participants**

Three to six people

**Duration of seminar**

Three days, 9:00 – 16:00 hrs

**Seminar fee**

1,470 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**

### Learning objective:

After the seminar, the participants will have mastered how to maintain and service STREAMLINE series high-pressure metering machines. They will be able to carry out necessary maintenance work and repairs independently, effectively and promptly

### Seminar contents:

Configuration of a STREAMLINE metering machine based on the schematics (wet part and hydraulics)

Safety devices and their function

Checking and filling the hydraulic bladder accumulators

Basic requirements for operating the machine (power supply)

Maintaining and repairing the tank periphery (vacuum pump, refill- diaphragm pump)

Checking and replacing component filters

Checking the function of the feed and metering pumps

Checking the nozzles and carrying out maintenance work

Providing instruction in the necessary maintenance work on the mixhead

Troubleshooting and eliminating these errors

Handling the lubrication and maintenance plan of the machine

Structural layout of circuit diagrams

Performing restores and backups on HMIs (depending on the hardware)

Hardware layout and function of the standardized interface between reaction casting machines and dry parts or robots



#### Target group

Maintenance, service personnel, foremen, heads of production

For new users, we recommend taking part in the seminar metering machine technology [G-STL / G-STL MK2]

#### Number of participants

Three to six people

#### Duration of seminar

Three days, 9:00 – 16:00 hrs

#### Seminar fee

1,470 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**



**Learning objective:**

After the seminar, participants will have mastered how to maintain and service low-pressure metering machines from the ELASTOLINE F und ELASTOLINE V series. They will be able to carry out necessary maintenance work and repairs independently, effectively and promptly.

**Seminar contents:**

Configuration of an ELASTOLINE metering machine based on the schematics (wet part and hydraulics)

Safety devices and their function

Checking and filling the hydraulic bladder accumulators

Basic requirements for operating the machine (power supply)

Maintaining and repairing the tank periphery (vacuum pump, refill- diaphragm pump)

Checking the tank temperature control (oil)

Checking and replacing component filters

Checking the function of the metering pumps

Checking the nozzles and carrying out maintenance work

Performing maintenance work on the MEL type agitator mixhead

Troubleshooting and eliminating these errors

Handling the lubrication and maintenance plan of the machine

Structural layout of circuit diagrams

Performing restores and backups on HMI's (depending on the hardware)

Hardware layout and function of the standardized interface between reaction casting machines and dry parts or robots

**Target group**

Maintenance, service personnel, foremen, heads of production

For new users, we recommend taking part in the seminar  
Metering machine technology [G-EL]

**Number of participants**

Three to six people

**Duration of seminar**

Three days, 9:00 – 16:00 hrs

**Seminar fee**

1,470 euros per participant (plus VAT)

**Please contact us at any time if you require a specific seminar date**

# Customized Seminars

## IV

### SPECIAL MACHINES

Additional special seminars and special topics are possible.  
The prerequisites for customer-specific seminars are available on request.

#### MICROLINE

Operating and adjusting the MICROLINE metering machine. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters. Adjusting the discharge capacities of the pumps. Adjusting the metering pressure on the nozzles / mixhead.

#### TOPLINE HK-MF (multiple components)

Operating and adjusting the TOPLINE HK-MF metering machine with four or six components. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters. Adjusting the discharge capacities of the pumps. Adjusting the metering pressure on the nozzles / mixhead.

#### TOPLINE HT / TOPLINE HT500evo / HT30evo

Operating and adjusting the HT metering machines. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters. Adjusting the discharge capacities of the plunger pumps. Adjusting the metering pressure on the nozzles / mixhead. Each seminar focuses on one HT machine system.

#### HK-R 5000

Operating and adjusting the HK-R 5000 metering machine. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters. Highlighting the special features of the agitator mixhead and the tandem metering pumps.

#### CARBOMAT

Operating and adjusting the CARBOMAT blowing agent metering unit. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters. Device-specific advantages / savings potential of the blowing agent metering unit.

#### AEROMAT GU / ST

Operating and adjusting the AEROMAT gas loading unit. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters.

#### PENTAMAT 30i / 50i

Operating and adjusting the PENTAMAT blowing agent metering unit. Naming the components and becoming familiar with their function and mode of operation. Adjusting and changing the production parameters.

## IV

### PLANT TECHNOLOGY

Additional special seminars and special topics are possible.  
The prerequisites for customer-specific seminars are available on request.

#### **Sandwich Panel Lines**

Operating and adjusting CONTIMAT plants. Becoming familiar with the special features of the plant's wet part.  
Adjusting and changing the production parameters.

#### **Technical insulation lines**

Operating and adjusting plants for technical insulation. Becoming familiar with the special features of the plant's wet part.  
Adjusting and changing the production parameters.

#### **Slabstock Lines**

Operating and adjusting slabstock plants. Becoming familiar with the special features of the plant's wet part.  
Adjusting and changing the production parameters.

#### **Moulded Foam Lines**

Operating and adjusting slabstock plants. Becoming familiar with the special features of the plant's wet part.  
Adjusting and changing the production parameters.

#### **PREG lines**

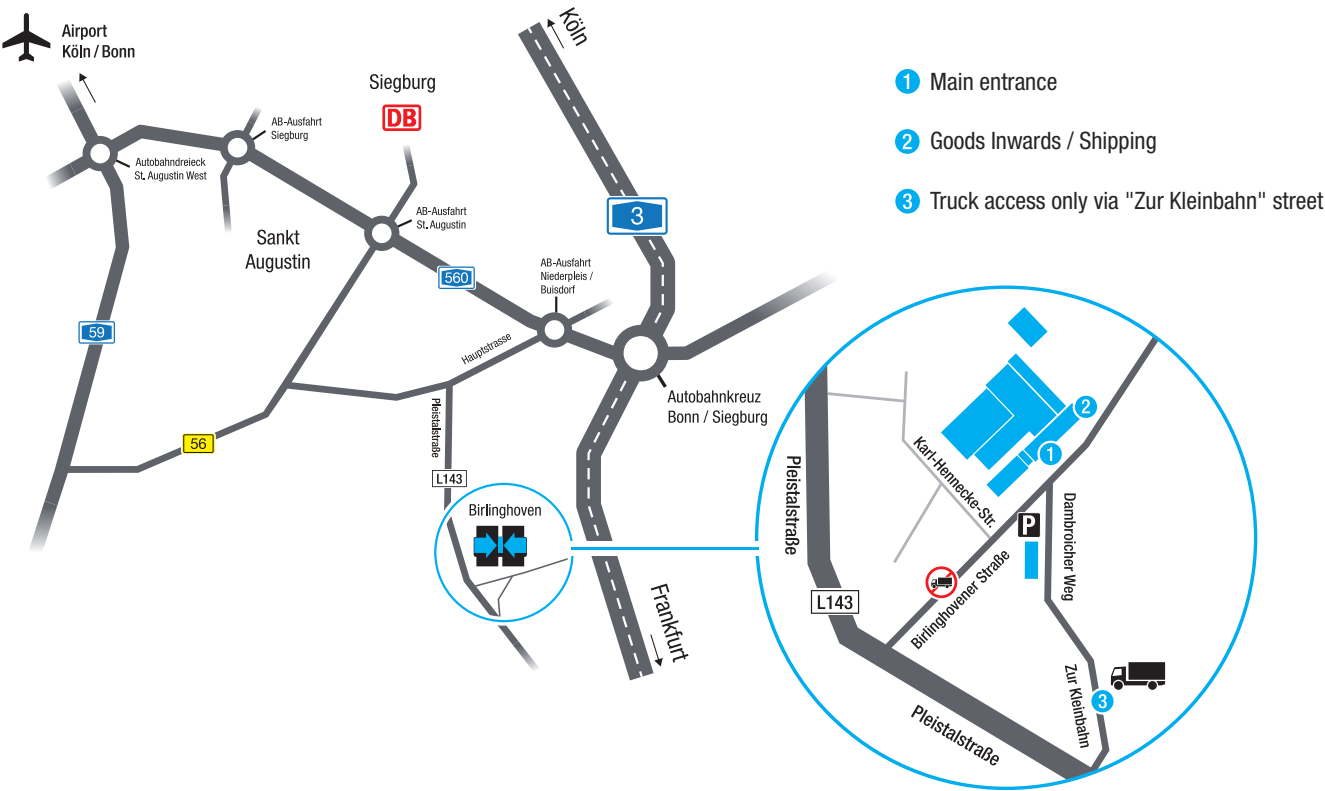
Operating and adjusting machines for the production of sandwich honeycomb elements. Becoming familiar with the special features of the plant's wet part. Adjusting and changing the production parameters.

# Hotel Recommendations



<b>Hotel Herting</b>  53721 Siegburg	Europaplatz 16 Phone: +49 22 41 / 99 99 9-0 · Fax: +49 22 41 / 99 99 9-9 <a href="http://www.hotel-herting.de">www.hotel-herting.de</a> <a href="#">Room/Night incl. breakfast from 80,00 euros - 102,00 euros</a>
<b>Hotel Kaiserhof</b>  53721 Siegburg	Kaiserstr. 80 Phone: +49 22 41 / 17 23-0 · Fax: +49 22 41 / 17 23-50 <a href="http://www.kaiserhof-siegburg.de">www.kaiserhof-siegburg.de</a> <a href="#">Room/Night incl. breakfast from 70 euros - 95 euros</a>
<b>Gut Grossenbusch Golf Course Hotel</b>  53757 Sankt Augustin	Konrad-Adenauer-Straße 100 Phone: +49 22 41 / 39 88-0 · Fax: +49 22 41 / 39 88 88 <a href="http://www.gcbonn.de">www.gcbonn.de</a> <a href="#">Room/Night incl. breakfast from 74 euros</a>
<b>Euro Park Hotel</b>  53773 Hennef	Reutherstr. 1 a-c Phone: +49 22 42 / 87 60 · Telefax: +49 22 42 / 87 61 99 <a href="http://www.euro-park-hotel.de">www.euro-park-hotel.de</a> <a href="#">Room/Night incl. breakfast from 74 euros - 89 euros</a>
<b>Cityhotel Oktopus</b>  53721 Siegburg	Zeithstraße 110 Phone: +49 22 41 / 8 46 40-0 · Fax: +49 22 41 / 8 46 40-444 <a href="http://www.friendly-cityhotel-siegburg.de">www.friendly-cityhotel-siegburg.de</a> <a href="#">Room/Night incl. breakfast from 87 euros - 165 euros</a>
<b>Kranz Parkhotel</b>  53721 Siegburg	Mühlenstraße 32-44 Phone: +49 22 41 / 5 47-0 · Fax: +49 22 41 / 5 47-444 <a href="http://www.kranzparkhotel.de">www.kranzparkhotel.de</a> <a href="#">Room/Night incl. breakfast from 107 euros - 144 euros</a>

# Directions





## Conditions of Participation for training courses and seminars

(as of 2017)

### General, scope

Hennecke GmbH's Conditions of Participation apply to entrepreneurs (§ 14 German Civil Code), public-sector legal entities or special bodies or funds under public law (hereinafter referred to as "participants") for all of our trainings, seminars and courses etc. (hereinafter referred to as "courses"). We do not accept any terms and conditions of the participant.

### Registration

All our offers for courses are subject to confirmation and are non-binding. The participant's registration is deemed to be a binding offer of contract. Incoming applications will be considered in chronological order until the maximum number of participants has been reached.

### Prices and services

The participation fees as stated in the respective seminar description shall apply. The fees do not include the applicable VAT. The participation fee shall be due without deduction after the issuance of the invoice. The fees include all costs for instruction material, use of technical equipment, beverages during the breaks and (in case of whole-day events) a lunch in our canteen. The participant shall bear all costs for travel and accommodation. Each participant shall receive a certificate after successfully completing the course. The course description complies with the state at the time of printing. We reserve the right to update and enhance the agenda of the course

### Cancellation and postponement of courses

We reserve the right to cancel, postpone or combine courses in cases of insufficient number of participants, shortfall of trainers, force majeure or any other reasons beyond our control. The participant will be informed immediately and payments already effected will be reimbursed.

### Cancellation by the participant

After confirmation of a participant's registration by us, requests for cancellation must be made in writing. If a participant cancels more than 14 days before the course begins, we will charge 50 percent of the participation fees. We will charge 100 percent of the fees if we receive the cancellation less than 14 days before the course begins. We will not, however, charge any lump-sums for cancellations if the participant appoints a replacement for the person not being able to take part in the course. If a participant does not attend a course without giving prior notice, the full fees shall become due.

### Liability

If we are in breach of material contractual obligations, i.e. contractual obligations the performance of which characterizes the contract and which are necessary for its proper implementation, we shall be liable in accordance with the statutory provisions. For all other breaches of duty we shall only be liable for damages caused by intentional or grossly negligent acts or omissions of our statutory representatives ("gesetzlicher Vertreter") or any persons engaged by us to assist us in complying with our obligations in terms hereof ("Erfüllungsgehilfen"). In the absence of intentional conduct, we shall be liable only for reasonably foreseeable damage that occurs. The foregoing shall neither effect the liability of the Supplier under the German Product Liability Act (Produkthaftungsgesetz), nor its liability for culpable ("schuldhaft") injury to life, body or health. If a guarantee has been assumed the Supplier shall be liable in accordance with the statutory provisions.

### Accommodation

A list of accommodations is included in our seminar catalogue. If a participant needs a room, he will book a room directly with the respective hotel.

### Information and Technical Advice

Information and recommendations provided by the Supplier (whether included in instruction materials or orally) are not binding and are made excluding all liability unless the Supplier has expressly and in writing undertaken otherwise.

### Choice of law, Court of jurisdiction

German law shall apply. The court of jurisdiction shall be Cologne. In addition, we shall be entitled to assert our claims at the participant's place of general jurisdiction.

# Application Form for training courses

Applicant:

Company

Order number (A 0100-XXXX or P000XXX)

Address

Contact person

Tel.

Fax

E-mail

Course participant:

Name / Position

Seminar code

Date

Name / Position

Seminar code

Date

Name / Position

Seminar code

Date

Our general participation conditions for training courses and seminars apply (see page 21).

Please send Hennecke your application form:

- By fax + 49 1806 / 339 201\*
- By E-mail [service@hennecke.com](mailto:service@hennecke.com)

Place / Date

Signature / Company stamp



>> The application form can also be found online at [www.hennecke.com/en/services/360/trainings](http://www.hennecke.com/en/services/360/trainings)

\* The connection costs amount to 20 Cent per call / fax from the German fixed network or 60 Cent per call from the German cellular network. The amount charged may vary when calling from other countries.

Tear along the dotted line!

# Notes



**>> FASCINATION PUR**



Contact our service experts directly to find out more about our 360°TRAININGS – by e-mail or phone. We 'll be happy to hear from you!



#### 360°SERVICE



Hotline  
+ 49 1806 **339-200**<sup>1</sup>



Technical Service Support  
+ 49 2241 / 339-360<sup>2</sup>



Internet [www.hennecke.com/360](http://www.hennecke.com/360)



Email [service@hennecke.com](mailto:service@hennecke.com)



Fax + 49 1806 / 339-201<sup>1</sup>

<sup>1</sup> The connection costs amount to 20 Cent per call / fax from the German fixed network or 60 Cent per call from the German cellular network. The amount charged may vary when calling from other countries.

<sup>2</sup> The technical service support team can be reached on business days from 7 a.m. to 5 p.m. German time. Additional call charges from your telecommunications provider may be incurred.