

## Training Course

### Advanced Training Course

#### Advanced Tank



**Number of days: 2**

**Subjects:**

- Refresh basic training
- Advanced design
- Customer specific options
- Advanced processes
- Advanced operations HMI
- Communication (E-plan)
- Safety
- Practice: maintenance
- Practice: fault finding
- Exam

**Course Material:**

- Hand-outs
- Used technical papers
- USB
- Certificate

This training is intended to engineers and experts and additional to the basic training. It is about the operations for an engineer.

**Main subjects are:**

- Advanced design
- Advanced processes
- Operations / advanced HMI
- Maintenance
- Fault finding / alarm handling

This training is a partly classroom and partly practicing at the machine.

With this training the participants understands how to approach the fault finding and maintenance of the machine in a detailed level.

Which will also be validated by a final examination.

**Related training courses**

Introduction training Tank: 0,5 day  
Basic training Tank: 2 days

Max. 6 participants, on site, in total the machine needs to be 6 hours out of production, training language: English, interpreter needed for local languages

## Starting level participants: Certificate of the basic training

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- **Refresh basic training (2 hours)**

Sensing the level of the participants. With the basic training Tank we have a good foundation to go on with the advanced part. Subjects are: basic design, basic processes and basic operations / HMI.



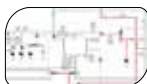
- **Advanced design (2 hours)**

After dealing with this subject, the participant understands how the machine operates in the different parts (CM level) and also how a device itself works with all elements in it. For that we use technical papers with specifications of that part in the machine with possible faults, alarms, calibration, etc.



- **Customer Specific options (0,5 hour)**

Additional at advanced design some customer specific options i.e. stirrer, Nitrogen supply, etc.



- **Advanced processes (2 hours)**

After dealing with this subject the processes of the machine are known. At phase and step level.



- **Advanced operations HMI (1 hour)**

Theory and practice. After dealing with this part, the engineer can operate the machine in a proper way. He knows where and exactly why he can change things in the settings of the machine.



- **Communication (E-plan) (1 hour)**

The electrical plan (E-Plan) is used by fault-finding. This part is done by a lot of cases for solving problems with the communication of the machine.



- **Practice maintenance (3 hours) (machine off!)**

The participants have to do tasks (in form of workinstructions) they need to do to keep the machine in a good state, preventive maintenance. I.e. clean or replace filters, check and replace the O-rings of the production valves, etc.



- **Practice fault finding (3 hours) (machine off!)**

After this practice the participant learn how to approach complex faults in the machine. All theory in coming together in this part of the training. The participant has to know exactly the design and process of the machine to solve the faults. This part has a 'classroom' and a 'at machine' part.



- **Exam and evaluation (1 hour)**

The participants have to prove that they fully understand the machine. By passing the exam they get a certificate. During the evaluation there is some time to discuss the following-up.