

Assembly training to become a certified specialist in accordance with DIN EN 1591-4

Topic

Training in accordance with DIN EN 1591-4 to become a specialist for the assembly of sealing connections in flanges in accordance with PED 92/23/EC and DIN EN 1591-4.

The entry of EN 1591, part 4 into force provides operators with a standard that standardises the training of assembly fitters. It is possible to select assembly personnel based upon the criterion of individual assembly expertise. In future, gaskets in flanges that are subject to PED 92/23/EC will be professionally assembled by certified personnel.

The required training measures were formulated by Kempchen upon the basis of the current standard and have been certified within the context of ISO 9001. In compliance with the standard, we offer a basic module that provides the necessary fundamental knowledge in order to produce a tight flange connection.

The training modules described by DIN EN 1591-4, including:

- Hydraulic, torque-controlled tightening techniques
- Assembly of heat exchangers
- Determination of the screw force
- Compression fittings
- Responsible persons for flange boltings

are constantly amended to comply with the current status of the standard.

Content

Assembly-related fundamentals of the gasket system.

Following successful completion, the participants will be able to answer the following questions:

- What must be taken into account during storage, transport and handling of various types of gaskets?
- What must be taken into account when installing the gasket?
- Which work-safety requirements must be fulfilled during assembly and disassembly?
- Depending upon the case, which tools and tightening techniques must be used?
- How should the bracing elements (how, which and when) be handled?
- What must be taken into account when disassembling a gasket?



In the general practice module, the participants are able to practice assembly procedures using the most diverse of flange shapes and types. The assembly technician should develop a feel for the significance of the correct selection and application of the required torques, in particular through the measuring technology available at the training centres in particular.

This includes:

- Demonstration of the various flange shapes and defective sealing surfaces.
- Presentation of suitable types of gaskets / suitable geometries.
- Practical application of various tightening techniques. Investigation of the various impacts upon the flange connection (from impact wrench to torque wrench).
- Investigation of the impact of the tightening method.
- Presentation of commonly used screws and auxiliary equipment.
- Illustration of the impact of lubrication and screw condition.
- The impact of assembly errors and defective elements upon the gasket function.

Service

In this context, Kempchen offers the following services:

- ➔ Kempchen assumes the entire organisational management of the certification, from technician registration to the delivery of the certificate and monitoring right through to recertification.
- ➔ Kempchen performs the training courses in accordance with the contents listed in DIN EN 1591.
- ➔ Kempchen organises the examinations and provides the necessary documents, such as the classification exam.

Assembly training

- Kempchen uses a modular training plan that is structured according to a standard-compliant curriculum.
- Kempchen has access to well-equipped training rooms in which various, practical assembly techniques can be performed.

The training sessions take place regularly or by appointment at the Kempchen in-house training centres in Augsburg, Hamburg, Leuna and Oberhausen. The participation fee includes lunch and beverages.

Who, what, where

The instructors:

Experienced application consultants and engineers from Kempchen Dichtungstechnik GmbH and Kempchen Leuna GmbH.

Further information regarding contact partners, participation fees, examination fees and training date can be found online at www.kempchen.de, "Service | Technical Service | Training".

Engineer training

Topic block 1

Fundamentals of gasket technology

- The steps towards a premium sealing connection
- Rules, regulations, latest developments
- Fundamental gasket types
- Selection of the "correct" gasket
- Selection of the gasket values
- Evaluation of the gasket values
- Impacts upon the sealing behaviour
 - Quality of the sealing surfaces
 - Impact of the assembly

Topic block 2

Calculation

- Fundamentals of the sealing connection calculation
- Presentation of calculation methods
 - DIN EN 1591-1
 - Kempchen algorithm
- Performance of calculations
 - DIN EN1591-1 program
 - KemProof

Target group:

All persons who must calculate sealing elements in a verifiable manner and in accordance with existing regulations or who are responsible for this: Technicians, engineers.

