



# Basics of gear technology

## Training course

Voith has been one of the leading manufacturers of high-speed gearboxes for more than 80 years. Today more than ever, engineers and companies operating turbo machinery need to understand the decisive factors for the reliability, operational safety and high efficiency of turbo gears. This half-day basic training course gives participants fundamental knowledge of customized, practical and cost-effective turbo gearboxes.

### Who is the course intended for?

The course is designed for managers, technicians, engineers, graduates, operating and maintenance personnel and other employees who require basic knowledge of turbo gearboxes, particularly in the areas of specifications, engineering, operation and maintenance of rotating machines. It is also ideal for those who want to refresh their knowledge of turbo gears, such as experienced technicians.

### Who conducts the training?

The training is conducted by experienced engineers. If maintenance aspects are part of the program, they will be supported by a technician.

### Can the training program be customized?

The training program can be adapted to the needs of the participants. This is agreed upon by both parties beforehand. For example, parts of the standard program can be expanded or skipped.



### Course program

- Introduction to turbo gearboxes
  - History and areas of application
  - Definition and limitations
  - Structure of the drive train, industries served
- Design and features of high-speed gearboxes
  - Parallel shaft gearbox
  - Planetary gearbox
  - Power distribution gearbox
  - Integral gearbox
- Types of gear faults – causes and prevention
  - Pitting, bending, seizure damage
- Internal gearbox standards and calculation methods
  - Calculation and design of the gearing
  - API613, API672, AGMA6011, ISO 13691, etc.
- Optimizing transmission system solutions
  - Gear design
  - Bearing
  - Housing design
- Drive train
  - Reducing space requirements and weight
  - Increase in efficiency

Duration: 3–4 hours  
Group size: up to 25 participants  
Training materials: Each participant receives materials for future reference  
Booking: [info.bhs@voith.com](mailto:info.bhs@voith.com)

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**“An excellent seminar from gearbox specialists who know exactly what operators need to know. Other OEMs can learn a lot from Voith customer service.”**

**Talisman, United Kingdom**

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**“A useful and intensive discussion about gearbox technology. It felt more like a ‘gearbox school’ than a sales talk.”**

**BP, United Kingdom**

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**“The gearbox training was very useful for understanding how the machines are designed, manufactured, assembled and tested. ... I would recommend it to ... people with limited prior knowledge ... as an introduction. ... Just the right length.”**

**Shell, United Kingdom**

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**“The focus was on the latest innovative developments in gear design and construction rather than basic design and machining – just right. The training ... just seemed like a technical presentation ...”**

**Total, United Kingdom**

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