

# Practical pressure calibration

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Trainer: Carel Adolfse, Lab Manager DHI/Ruska service center Europe

## Course description

Precision Pressure Calibration is a four days training course on the principles and practices of pressure calibration using high performance transfer standards and piston gauges. The course will give participant a deeper knowledge in practical pressure calibration with focus on transfer standards, working standards and indicators, but also gives an understanding of how to use piston gauges (deadweight testers) and pressure indicators/controllers. We will mix theory with a lot of practical examples, to simulate common applications in a pressure calibration lab.

The course includes a review of the principles and theories of pressure metrology, the measurement system and traceability, but the main emphasis is on the practical aspects of pressure calibration using different kind of standards and testing tasks. These include using piston gauges to calibrate transfer standards and transfer standards to calibrate other devices.

Participants are instructed on proper techniques for test setup, trouble shooting and execution. Practical hands on exercises with calibration equipment are used extensively.

During the course we will also go through how we can make pressure calibration more efficient using PC different software packages for automated pressure calibration.

Course enrollment is typically limited to 8 to 12 participants.

## Equipment

Instrumentation used in the practical exercises includes:

- Gas operated piston gauges in absolute and gauge modes
- Automated pressure controller/calibrators
- Reference pressure monitors with manual pressure control
- Various gauges, calibrators, transducers and transmitters
- PC based calibration assistance software

In most exercises, participants may choose from several ranges and media those most relevant to their applications.

## Course Materials

Each attendee receives a training manual, which includes copies of the visual course material presented, reference materials, relevant technical papers and related information. A certificate of completion is presented at the end of the course.

## Who Should Attend

Those who are or plan to be active in pressure calibration and/or quality assurance will gain the most benefit from the course. This includes laboratory, test or QA supervisors and technicians, metrologists and engineers that are currently or preparing to be active in precision pressure calibration and/or quality assurance.

