

Piston gauge is a pressure standard that generates accurate pressure values. In many areas this type of pressure standard is being replaced by modern digital pressure gauges and pressure controllers/calibrators. In high accuracy pressure metrology the piston gauge is irreplaceable even today.



The calibration of piston gauges is a very specific process that requires not only state of the art pressure standards (usually piston gauges) but also high-quality scales, special auxiliary equipment and long-term experience with calibration of piston gauges.



Calibration Laboratory BD SENSORS s.r.o. is one of the few accredited calibration laboratories offering calibration of piston gauges:

- more than 20 years' experience of piston gauge calibration;
- high-quality instrumentation: piston gauges, electronic scales and accessories (measurement of piston position, temperature, media separators,...);
- extensive database of constants of various piston gauge models (temperature and deformation coefficients, first load correction, reference level data, etc.);
- knowledge of the determination of the first load correction of the piston gauge (fundamental correction for oil piston gauges in the range up to 7 MPa):
 - calculation from geometric dimensions of piston-cylinder unit;
 - method of calculating the „residual mass“;
 - calibration of oil piston gauges up to 7 MPa with a pneumatic pressure controller/calibrator and a unique pressure media separator.

Calibration Laboratory BD SENSORS s.r.o. is equipped with a unique piston gauge for negative gauge pressure. With this special pressure standard we are able to calibrate the piston gauges directly in the negative gauge mode, i.e. the piston-cylinder unit is not in „inverse“ connection and working in unreal conditions.

