Piston Gauges

Combined Product Line Overview

DHI PG7000

The **DHI PG7000** piston gauge product line features the highest performance available in laboratory piston gauges. PG7000 models include integrated sensors and real time display of calculated pressure. All PG7000 models feature encapsulated piston-cylinder modules for protection and ease of changing ranges. AMH automated mass handlers are available for all PG7000 models, so high end pressure calibration can be automated, running hands-free unattended tests.

DHI PG7601 Absolute Piston Gauge
- Pressures from 1 to 1000 psi (7 kPa to 7 MPa), absolute and gauge
- Maximum 35 kg mass set, 38 kg with AMH-38
- 5 piston cylinder modules available, 12 to 20 ppm:
  lowest: 1 to 55 psi (7 to 380 kPa)
  highest: 15 to 1100 psi (0.1 to 7.6 MPa)

DHI 7102 Gas Piston Gauge
- Pressures from 1.7 to 1600 psi (12 kPa to 11 MPa)
- Maximum 55 kg mass set (with 5 kg manual platters)
- 5 piston-cylinder modules available, 12 to 20 ppm:
  lowest: 1.7 to 55 psi (12 to 550 kPa)
  highest: 30 to 1600 psi (0.2 to 11 MPa)

DHI 7202 High Pressure Gas Piston Gauge
- Pressures from 15 to 16k psi (100 kPa to 110 MPa)
- Maximum 100 kg mass set (manual or AMH-100)
- 5 piston-cylinder modules available, 18 to 30+ ppm:
  lowest: 15 to 1500 psi (0.1 to 10 MPa)
  highest: 300 to 16k psi (2 to 110 MPa)
- PG7202 p-c's can use gas or oil as test medium
- PG7202 platform can accommodate most PG7302 p-c modules for hydraulic calibration to 30k psi (200 MPa)

DHI 7302 Hydraulic Piston Gauge
- Pressures from 15 to 72.5k psi (100 kPa to 500 MPa)
- Maximum 100 kg mass set (manual or AMH-100)
- 6 piston-cylinder modules available, 18 to 35+ ppm
  lowest: 15 to 1500 psi (0.1 to 10 MPa)
  highest: 300 to 72.5k psi (5 to 500 MPa)

Ruska 2400

The **Ruska 2400** piston gauge product line features high performance tools for a good value. The models are generally small, lightweight, and compact, making them well suited for onsite calibration, or in applications with limited space (equipment can be easily set aside or in storage until needed). A cost effective solution can be configured with basic hardware, or the performance can be expanded with Autofloat, sensor pack and WinPrompt software.

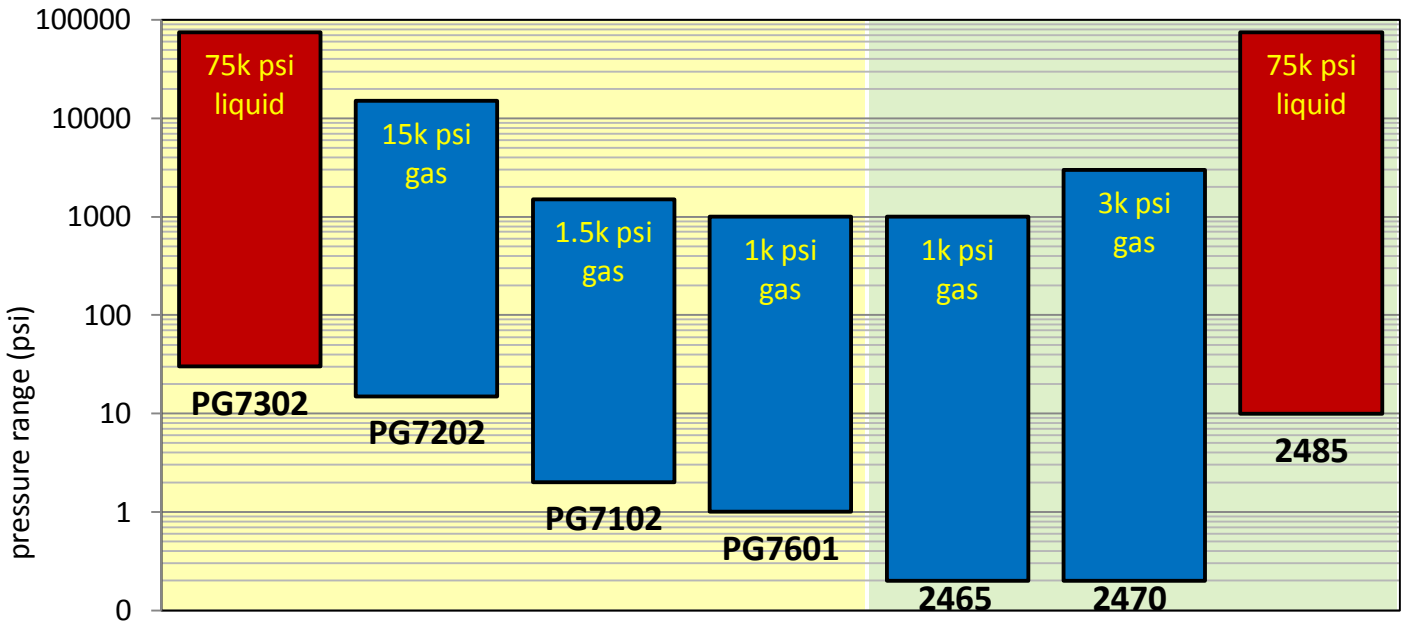
Ruska 2465 Absolute Pressure Piston Gauge
- Pressures from 0.2 to 1000 psi (1.4 kPa to 7 MPa), absolute and gauge
- Autofloat and sensor pack options available to automatically float the piston, monitor conditions and calculate pressure with WinPrompt software
- Maximum 6 kg mass set, with 1 kg platters
- 4 piston-cylinder ranges available, 10 to 26 ppm:
  lowest: 0.2 to 25 psi (1.4 to 170 kPa)
  highest: 2 to 1000 psi (14 kPa to 7 MPa)
- 2468 specialized model for air data calibration range

Ruska 2470 High Pressure Gas Piston Gauge
- Pressures from 0.2 to 3000 psi (1.4 kPa to 20 MPa)
- Maximum 17.7 kg mass set, with 2.4 kg platters
- 3 piston-cylinder ranges available, 10 to 30 ppm:
  lowest: 0.2 to 50 psi (1.4 to 350 kPa)
  highest: 100 to 3000 psi (0.7 kPa to 20 MPa)
- Uses gas lubrication - no potential oil contamination

Ruska 2485 Hydraulic Piston Gauge
- Pressures from 10 to 72.5k psi (70 kPa to 500 MPa)
- Maximum 100 kg mass set, with 5 kg platters
- 4 piston-cylinder ranges available, 25 to 100 ppm:
  lowest: 10 to 1000 psi (70 kPa to 7 MPa)
  highest: 1k to 72.5k psi (7 to 500 MPa)
- model 2485LP – compact design with integrated pressure generation and control to 20k psi (140 MPa)
- model 2585HP – integrated pressure and control with intensifier to 72.5k psi (500 MPa)

Piston Gauges

Complementary Product Line Unique Model Features



Absolute Pressure Piston Gauges

typical/recommended applications

DHI PG7601

- *-High end laboratory use*
- *-Automated calibration*
- *-User with little training*

Ruska 2465

- *-Onsite calibration, limited space*
- *-Need to cover low pressures*
- *-Customer has limited budget*

Unique Features:
- integrated sensors and pressure calculation
- completely automated with AMH and PPC
- easy to use and change ranges with P-C modules
- large pistons for best measurement and performance

Unique Features:
- economical price, good value
- small, lightweight, transportable
- uses smaller mass load and platters
- low minimum pressure of 0.2 psi (1.5 kPa)

High Pressure Gas Piston Gauges

typical/recommended applications

DHI PG7102 / PG7202

- *-High end laboratory use*
- *-Automated calibration*
- *-User with little training*

Ruska 2470

- *-Onsite calibration, limited space*
- *-Customer has limited budget*
- *-Zero tolerance for contamination*

Unique Features:
- integrated sensors and pressure calculation
- completely automated with AMH and PPC
- easy to use and change ranges with P-C modules
- PG7202 up to 15k psi (100 MPa) gas
- PG7202 can be used in gas and oil

Unique Features:
- economical price, good value
- small, lightweight, transportable
- uses smaller mass load and plates
- wide range, 0.2 psi to 3k psi (1.5 kPa to 20MPa)

Hydraulic Piston Gauges

typical/recommended applications

DHI PG7302

- *-High end laboratory use*
- *-Automated calibration*
- *-User with little training*

Ruska 2485

- *-Onsite calibration, limited space*
- *-Limited laboratory space*
- *-Ergonomic concerns (5 kg platters)*

Unique Features:
- integrated sensors and pressure calculation
- completely automated with AMH and PPC
- easy to use and change ranges with P-C modules

Unique Features:
- integrated pressure generation and control
- uses 5 kg platters to achieve max mass load
- compact design

Specialty Pressure Calibration Solutions

Combined Product Line Overview

FLUKE Calibration

FPG8601

DHI FPG8601 force-balance piston gauge is a specialized primary standard for fully automated testing and calibration of very low pressure absolute and differential pressure devices

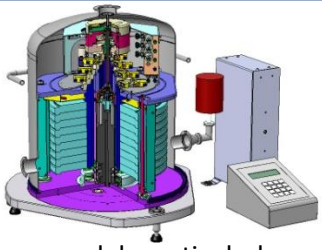
- 0 to 15 kPa (113 Torr) gauge, differential & absolute
- Resolution to 1 mPa (0.0075 mTorr, 0.000004 inwa)
- ±(8 mPa + 30 ppm of reading) in absolute mode
- ±(5 mPa + 30 ppm of rdg) in gauge & differential
- thermal transpiration correction when needed
- fully automated, comprehensive software included

Ruska 2482

Ruska 2482 differential piston gauge is a specialized primary standard for the testing and calibration of differential pressure devices at high line pressure.

- Accuracy 40 ppm of reading +0.0013 psi
- Static pressure range to 2900 psi (200 bar)
- Differential pressures to 850 inH2O (2100 mbar)
- Hydraulic and pneumatic operation
- Software provided for operation & data management
- Extremely fast and easy to operate

DHI PG7607
DHI PG7307
DHI PG9607



DHI offers several piston gauge models particularly well suited for use by National Metrology Institutes.

DHI PG7607 50mm Absolute Piston Gauge

DHI PG7307 Controller Clearance Hydraulic PG

- Controlled clearance for pressure deformation study

DHI PG9607 50mm Absolute PG (Q3 2010)

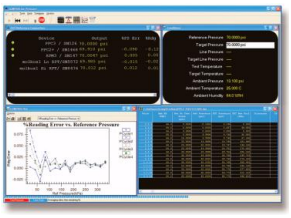
- Improved geometry for dimensional traceability
- 100 kg mass set for better overlap/comparison

Ruska 2413
Ruska 2417

A differential cell with null indicator allows calibration using different media in the test & reference. It can also be a time-saving tool for cross float calibrations.

- Diaphragm isolation provides physical separation between different media
- Compatible with most non-corrosive gases & liquids
- Maximum error contribution of 5 PPM
- model 2413 – pressures up to 15k psi (100 MPa)
- model 2417 – pressures up to 40k psi (280 MPa)

DHI COMPASS for Pressure



DHI COMPASS for Pressure calibration software provides the missing link needed to get from automated hardware components to fully automated calibrations.

- Supports all brands & types of pressure standards, as well as support equipment (DMMs, ovens, etc.)
- Exports to Fluke MET/TRACK calibration database
- Available for single license applications, or multiple license, multiple site installations

NOTE: Ruska WinPrompt is another solution specifically targeted at operation of piston gauges

Ruska 7250sys

Ruska 7250sys Multi-range Pressure Calibration System is a complete, turn-key solution for wide pressure range applications. It features automatic range switching and high speed control.

- 3 configurations available:
  - Eight ranges to 1000 psi
  - Eight ranges to 2500 psi
  - Twelve ranges to 2500 psi
- Single test port to connect DUT
- Internal vacuum for absolute and negative gauge
- Optional internal gas booster