

Manual Pressure Calibration

Combined Product Line Overview

FLUKE

Calibration

DHI E-DWT DHI RPM4



DHI RPM4 reference pressure monitors cover a wide range of gas and hydraulic pressures. RPM4 flexibility paired with DHI manual pressure controllers offers a manual calibration solution for most applications.

DHI E-DWT electronic deadweight testers combine RPM4 measurement technology with an integrated reservoir, priming pump and variable volume. The result is performance of a high end deadweight tester, in a tool with improved portability and the features and usability of an advanced laboratory instrument.

DHI RPM4 Reference Pressure Monitor

- Gas ranges from 2 to 15k psi (15 kPa to 100 MPa)
- Hydraulic ranges from 1k to 40k psi gas (7 to 280 MPa)
- Available with 1 or 2 quartz reference pressure transducers (Q-RPTs), with optional accuracy classes:
 - (p) premium class, <A20M Q-RPT (<3k psi) gas: $\pm(0.008\%$ rdg or 0.0024% autorange span), autorange 30%-100% Q-RPT FS
 - (s) standard class, <A20M Q-RPT (less than 3k psi): $\pm(0.01\%$ rdg or 0.003% Q-RPT FS)
 - (s) standard class, A20M to A140M (3k to 20k psi): $\pm(0.013\%$ rdg or 0.0039% Q-RPT FS)
 - (s) standard class, A200M & A280M (30k & 40k psi): $\pm(0.018\%$ rdg or 0.0054% Q-RPT FS)
- Many Q-RPTs offer absolute, gauge and negative gauge measurement
- Can be used as an external pressure measurement reference for PPC controllers
- Gas Q-RPTs lower than 2k psi (14 MPa) feature SDS electronic valve isolation to prevent overpressure

DHI Manual Pressure Control Products

- MPC1: gas pressure control to 3k psi (20 MPa)
- GPC1: gas pressure control to 15k psi (100 MPa)
- MPG2: hydraulic gen and control to 30k psi (200 MPa)
- OPG1: assisted hydraulic control to 30k psi (200 MPa)

DHI E-DWT Electronic Deadweight Tester

- Pressure ranges from 1k to 30k psi (7 to 200 MPa)
- Available with 1 or 2 Q-RPTs
- Each Q-RPT with accuracy of $\pm 0.02\%$ rdg from 10% to 100% of Q-RPT span (0.025% rdg 2-yr specification)
- Battery operation optional

Ruska 7050 Pressurements P3000 M3800



The **Ruska 7050** pressure monitor offers the same outstanding measurement performance as the 7250 controller, with quartz bourdon tube technology.

The Pressurements family of deadweight testers includes a complete line up of cost effective calibration tools from vacuum to 60k psi. All models feature series 3 non-magnetic stainless steel weights, available in multiple units of measure, and can be trimmed to local gravity. Other standard features include mounted spirit level, piston floatation indicator and adjustable feet.

Ruska 7050 Reference Pressure Monitor

- Gas ranges from 1 to 2500 psi (7 kPa to 18 MPa)
- 7050 – 0.003% FS precision, 0.0075% rdg/yr stability
- 7050i – 0.005% rdg precision, 0.0075% rdg/yr stability
- model 7050LP specially configured instrument for low pressure applications

Pressurements P3010 & 3020 Gas Deadweight Testers

- 3010: 1 piston, ranges vacuum to 1000 psi (7 MPa)
- 3020: 2 pistons, 1 piston is vacuum and the other is positive ranges from 15 to 500 psi (0.1 to 3.5 MPa)
- 0.015% of reading accuracy (0.008% optional)
- Optional hand pump, capable to generate 300 psi

Pressurements P3030 Gas Deadweight Testers

- 3030: 1 piston, ranges of 1k and 2k psi (7 and 14 MPa)
- 0.015% of reading accuracy (0.008% optional)
- Screw press for fine pressure control
- Oil-lubricated, prevents contamination, longer float

Pressurements P3100 Hydraulic Deadweight Testers

- 3110: 1 piston, ranges to 20k psi (140 MPa)
- 3120: 2 pistons, ranges to 16k psi (110 MPa)
- 0.015% of reading accuracy (0.008% optional)
- Built-in hand pump and screw press are standard

Pressurements P3200 Water Deadweight Testers

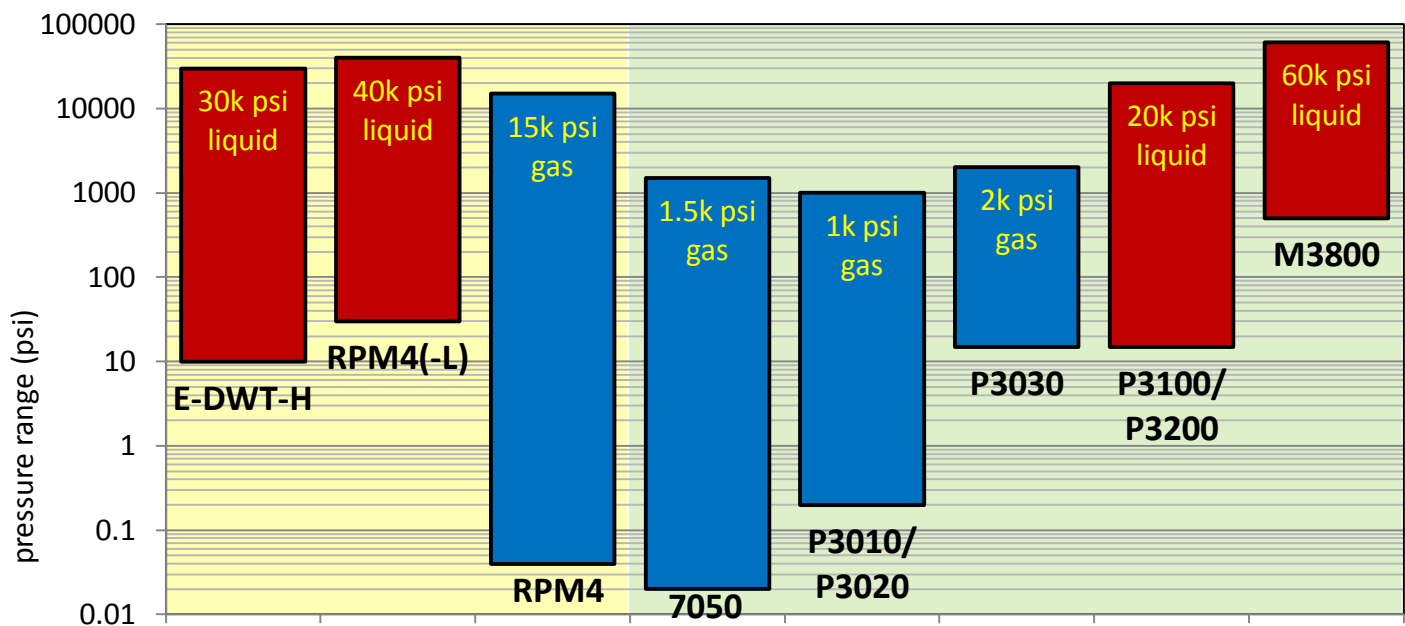
- 3210: 1 piston, ranges to 10k psi (70 MPa)
- 3220: 2 pistons, ranges to 10k psi (70 MPa)
- 0.015% of reading accuracy (0.008% optional)
- Built-in hand pump and screw press are standard

Pressurements M3800 Hydraulic Deadweight Testers

- 1 piston, ranges to 60k psi (400 MPa)
- 0.02% of reading accuracy (0.015% optional)
- Built-in pressure generation and intensifier

Manual Pressure Calibration

Complementary Product Line Unique Model Features



RPM4



- Onsite calibration, limited space
- General calibration

Pressure Monitors

typical/recommended applications

- High end lab measurement
- Best low pressure accuracy needed

Ruska 7050



Unique Features:

- short warm up & small package (transportable)
- flexible, 1 or 2 standard or premium Q-RPTs
- available in wide range, gas and liquid

Unique Features:

- graphical user interface
- uses true differential sensor
- quartz bourdon tube, precision & low hysteresis

DHI RPM4 + MPC1 DHI RPM4 + GPC1



- General lab calibration
- User with little training
- Electronic interface needed

Gas Pressure Calibrators

typical/recommended applications

- Onsite calibration
- Customer has limited budget
- Stable pressure generation needed

Pressurements P3000



Unique Features:

- no weights (ergonomic)
- digital display, remote communications (less error)
- infinite set point resolution
- 1 or 2 standard or premium Q-RPTs (flexible)
- SDS to protect gas Q-RPTs to 1500 psi (10 MPa)

Unique Features:

- economical price (value)
- Small and compact, lightweight (transportable)
- dual piston offers wide range, with 0.015% or 0.008% rdg
- floating piston holds stable pressure (performance)
- integrated pressure generation and control

DHI E-DWT



- User with little training
- Electronic interface needed
- Data storage needed in field

Hydraulic Pressure Calibrators

typical/recommended applications

- Customer has limited budget
- Stable pressure generation needed
- Max pressure 60k psi needed

Pressurements P3100 Pressurements M3800



Unique Features:

- no weights, single piece
- digital display, remote communications
- infinite set point resolution
- store calibration data

Unique Features:

- economical price, good value
- dual piston, wide turndown
- floating piston holds stable pressure
- integrated priming and hand pump
- M3800 for pressures to 60000 psi (400 MPa)