Fluke Calibration P3800 Series Hydraulic Deadweight Tester

Key features

- Pressure ranges to 60,000 psi (4000 bar)
- Select from two accuracy classes; 0.02% or 0.015% of reading
- Includes hand pump and intensifier for generating high pressures
- Tungsten carbide piston and cylinder provides long term stability and durability
- Mass set can be trimmed to local gravity FOC

Product overview: Fluke Calibration P3800 Series Hydraulic Deadweight Tester

P3830 High Pressure Hydraulic Deadweight Tester

The Pressurements P3800 Series High Pressure Hydraulic Deadweight Testers are the culmination of over 50 years experience in the design and manufacture of primary pressure standards. With features and options designed to improve accuracy, increase reliability, and simplify operation, the P3800 Series can be used to calibrate virtually any high pressure sensing device including transducers, transmitters, gauges, pressure switches or other calibrators.

Three models are available, P3830, P3840 and P3860 offering pressure ranges of 30,000, 40,000 and 60,000 psi respectively (2000, 3000 and 4000 bar). All models are available in two accuracy classes, 0.02% or 0.015% of Reading. The Series P3800 offers an accurate and economical approach to calibrating high pressure devices.

Options

- PressCal software for pressure calculations and certificate generation
- Conversion weight sets
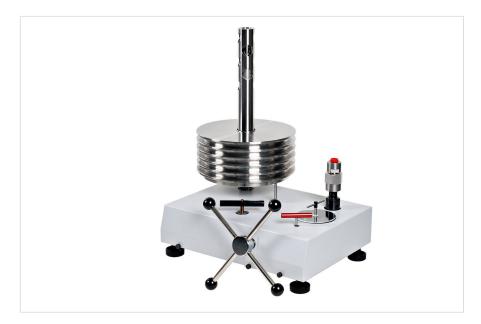- Accredited calibration certificate (ISO/IEC 17025)

Specifications: Fluke Calibration P3800 Series Hydraulic Deadweight Tester

Pressure Ranges	
P3830	500 to 30,000 psi, or 40 to 2,000 bar, or 4 to 200 MPa, or 40 to 2000 kgf/cm^2
P3840	500 to 40,000 psi, or 40 to 2,600 bar, or 4 to 260 MPa, or 40 to 2600 kgf/cm^2
P3860	500 to 60,000 psi or 40 to 4,000 bar or 4 to 400 MPa or 40 to 4000 kgf/cm^2
Accuracy	
Accuracy[1]	Standard accuracy is 0.02% of Reading[1]. Optional accuracy of 0.015% of Reading is vailable. Calibration certificate with traceability to NIST is provided with each instrument. An optional ISO/IEC 17025 accredited calibration certificate is available.
1. Accuracy is based on % of Reading from 10% to 100% of the piston range when used in accordance with the corrections found on the calibration certificate. Below 10%, ± (accuracy class) x 10% of the piston range.	
Materials of Construction	
Standard weight material	Series 3 non-magnetic, austenitic, stainless steel
Weight density	7.8 g/cm^3
Piston material	Tungsten carbide with nickel binder
Cylinder material	Tungsten carbide with cobalt binder
Thermal coefficient of expansion	11 ppm/°C
General	
Test port adapters	9/16 – 18 UNF (Autoclave); 3/8 BSP; 1/2 BSP and 3/4 BSP
Instrument weight	66 lbs. (30 Kg) Instrument Base only
Instrument size	18 x 13.5 x 19 in (455 x 340 x 478 mm)
Reservoir volume	235 cc (14.3 in^3)
Intensifier ratio	7 to 1
Seal materials	Nitrile
Operating fluid	Dioctyl Sebacate (DOS), our reference 55-600
Options	
Presscal software	Windows based software program that allows users to easily apply all necessary corrections to enhance the deadweight tester performance. Supports additional 12 pressure units (bar, mbar, MPa, kPa, psi, kg/cm^2, atm, inH$_2$O, mH$_2$O, mmH$_2$O, inHg, mmHg).

Conversion weight sets	For applications that require nominal pressure increments in measurement units different than the main unit, conversion weight sets are available. Available measurement units are: psi, bar kgf/cm^2 or MPa.

Ordering information

Fluke P3830

Fluke Calibration P3830 Hydraulic Deadweight Tester
500 to 30,000 psi, or 40 to 2,000 bar, or 4 to 200 MPa, or 40 to 2000 kgf/cm2

Fluke P3840

Fluke Calibration P3840 Hydraulic Deadweight Tester
500 to 40,000 psi, or 40 to 2,600 bar, or 4 to 260 MPa, or 40 to 2600 kgf/cm2

Fluke P3860

Fluke Calibration P3860 Hydraulic Deadweight Tester
500 to 60,000 psi or 40 to 4,000 bar or 4 to 400 MPa or 40 to 4000 kgf/cm2

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