

**TECHNICAL DATA** 

# 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

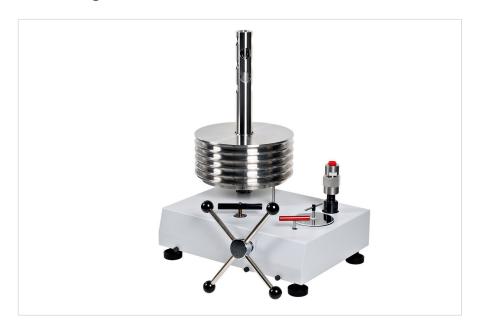
| Pressure Ranges                  |   |
|----------------------------------|---|
| P3830                            | 500 to 30,000 psi, or 40 to 2,000 bar, or 4 to 200 MPa, or 40 to 2000 kgf/cm <sup>2</sup>   |
| P3840                            | 500 to 40,000 psi, or 40 to 2,600 bar, or 4 to 260 MPa, or 40 to 2600 kgf/cm <sup>2</sup>   |
| P3860                            | 500 to 60,000 psi or 40 to 4,000 bar or 4 to 400 MPa or 40 to 4000 kgf/cm <sup>2</sup>  |
| Accuracy                         |   |
| Accuracy <sup>1</sup>            | Standard accuracy is 0.02% of Reading <sup>1</sup> . 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. |
|                                  | Reading from 10% to 100% of the piston range when used in accordance with the pration 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 <sup>3</sup>   |
| 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 <sup>3</sup> )  |
| 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/cm², atm, inH₂O, mH₂O, mmH₂O, inHg, mmHg).                 |



|                        | For applications that require nominal pressure increments in measurement units different                            |
|------------------------|---|
| Conversion weight sets | than the main unit, conversion weight sets are available. Available measurement units are: psi, bar kgf/cm² or MPa. |
|                        | psi, bai kgi/cm oi iviPa.   |



## **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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