TECHNICAL DATA

Fluke Calibration P3100 Hydraulic Deadweight Testers



Key features

- Pressure ranges to 60,000 psi (4000 bar)
- 0.015% of reading accuracy standard (0.008% optional)
- Single or dual piston format
- Built-in hand pumps standard
- Mounted spirit level with adjustable feet
- Units can be trimmed to local gravity FOC

Product overview: Fluke Calibration P3100 Hydraulic Deadweight Testers

The P3100 models are available in single or dual piston format. Unit can be supplied in psi, bar, kgf/cm², and MPa. This robust instrument is highly accurate, quick and easy to use. Units feature a built-in priming pump for large volume applications, piston flotation indicators and a high quality screw press for fine pressure control.

Specifications: Fluke Calibration P3100 Hydraulic Deadweight

Testers

Pressure Ranges	
Oil operated	Ranges to 20,000 psi (1400 bar)
Accuracy	
Accuracy[1]	±0.015% of reading (±0.008% optional)
1. Accuracy 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/cm³
Optional fractional weights	Solution heat treated aluminum
Weight density	2.7 g/cm³
Piston material	Tungsten carbide with nickel binder Density- 15.0 g/cm³
Cylinder material	Hardened martensitic steel Tungsten carbide (water above 500 psi, 35 bar)
Thermal coefficients of expansion	Oil piston/cylinder 16.5 ppm/°C Water (above 500 psi, 35 bar) 11 ppm/°C
General	
Test port adaptors	1/8, 1/4, 3/8 and ½ NPT or BSP
Instrument weight	36 lbs (16 kg)
Instrument size (W x D x H)	17.5 x 12 x 8.5
Mass set weight (typical)	80 lbs (36 kg)
Reservoir volume	150 cc
Screw press displacement	5.5 cc
Pump displacement	4.7 cc per stroke
O-ring seal materials	Buna N as standard, Viton and EPDM available
Weight Increments	
Minimum standard weight increments	Up to 500 psi (35 bar): 1 psi (0.1 bar) 500 to 5000 psi (35 to 350 bar): 10 psi (1 bar) 5000 to 20,000 psi (350 to 1400 bar): 20 psi (2 bar) Model P3112: 1 psi (0.1 bar)
Optional fractional weights	Up to 500 psi (35 bar): 0.1 psi (0.01 bar) 500 to 5000 psi (35 to 350 bar): 1 psi (0.1 bar) 5000 to 20,000 psi (350 to 1400 bar): 2 psi (0.2 bar)
Operating Fluid	
Mineral oil	Shell spindle oil 22, our reference 55-655, viscosity 40 cs @ 20°C
Options	

PressCal software	Windows-based software program that allows users to easily apply all necessary corrections to enhance the deadweight tester performance. Calibration details are then stored and/or used to automatically create a calibration certificate. PressCal is provided as standard with all 0.008% instruments.
Fluids	Instruments can be supplied for use with Skydrol or brake fluids. Due to the aggressive nature of these fluids the standard nitrile seals and the acrylic reservoir tube will be replaced by either Viton or EPDM seals (as applicable) and an aluminum reservoir tube. For these or any other specialty fluid applications, please consult the factory.

Ordering information



Fluke P3111-2

Fluke Calibration P3111-2 Hydraulic Deadweight Testers
Calibration Hydraulic Deadweight Testers

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU
- Pressure Range 1 to 35 kgf/cm²

Fluke P3111-1

Fluke Calibration P3111-1 Hydraulic Deadweight Testers
Calibration Hydraulic Deadweight Testers

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU
- Pressure Range 1 to 35 bar

Fluke P3111-3

Fluke Calibration P3111-3 Hydraulic Deadweight Testers
Calibration Hydraulic Deadweight Testers

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU
- Pressure Range 10 to 500 psi

Fluke P3111-4

Fluke Calibration P3111-4 Hydraulic Deadweight Testers
100 to 3,500 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3111-5

Fluke Calibration P3111-5 Hydraulic Deadweight Testers
0.1 to 3.5 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3112-1

Fluke Calibration P3112-1 Hydraulic Deadweight Testers
4 to 140 bar

Includes:

- Hydraulic Deadweight
- Oil operated - single PCU

Fluke P3112-2

Fluke Calibration P3112-2 Hydraulic Deadweight Testers
4 to 140 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3112-3

Fluke Calibration P3112-3 Hydraulic Deadweight Testers
40 to 2,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3112-4

Fluke Calibration P3112-4 Hydraulic Deadweight Testers
400 to 14,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3112-5

Fluke Calibration P3112-5 Hydraulic Deadweight Testers
0.4 to 14 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3113-1

Fluke Calibration P3113-1 Hydraulic Deadweight Testers
10 to 350 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3113-2

Fluke Calibration P3113-2 Hydraulic Deadweight Testers
10 to 350 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3113-3

Fluke Calibration P3113-3 Hydraulic Deadweight Testers
100 to 5,000 psi

Includes:

- Hydraulic Deadweight
- Oil operated - single PCU

Fluke P3113-4

Fluke Calibration P3113-4 Hydraulic Deadweight Testers
1,000 to 35,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3113-5

Fluke Calibration P3113-5 Hydraulic Deadweight Testers
1 to 35 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3114-1

Fluke Calibration P3114-1 Hydraulic Deadweight Testers
20 to 700 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3114-2

Fluke Calibration P3114-2 Hydraulic Deadweight Testers
20 to 700 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3114-3

Fluke Calibration P3114-3 Hydraulic Deadweight Testers
200 to 10,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3114-4

Fluke Calibration P3114-4 Hydraulic Deadweight Testers
2,000 to 70,000 kPa

Includes:

- Hydraulic Deadweight Tester

- Oil operated - single PCU

Fluke P3114-5

Fluke Calibration P3114-5 Hydraulic Deadweight Testers
2 to 70 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3115-1

Fluke Calibration P3115-1 Hydraulic Deadweight Testers
20 to 1,100 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3115-2

Fluke Calibration P3115-2 Hydraulic Deadweight Testers
20 to 1,100 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3115-3

Fluke Calibration P3115-3 Hydraulic Deadweight Testers
200 to 16,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3115-4

Fluke Calibration P3115-4 Hydraulic Deadweight Testers
2,000 to 110,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3115-5

Fluke Calibration P3115-5 Hydraulic Deadweight Testers
2 to 110 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3116-1

Fluke Calibration P3116-1 Hydraulic Deadweight Testers
20 to 1,400 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3116-2

Fluke Calibration P3116-2 Hydraulic Deadweight Testers
20 to 1,400 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3116-3

Fluke Calibration P3116-3 Hydraulic Deadweight Testers
200 to 20,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3116-4

Fluke Calibration P3116-4 Hydraulic Deadweight Testers
2,000 to 140,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3116-5

Fluke Calibration P3116-5 Hydraulic Deadweight Testers

2 to 140 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - single PCU

Fluke P3123-1

Fluke Calibration P3123-1 Hydraulic Deadweight Testers
1 to 350 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3123-2

Fluke Calibration P3123-2 Hydraulic Deadweight Testers
1 to 350 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3123-3

Fluke Calibration P3123-3 Hydraulic Deadweight Testers
10 to 5,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3123-4

Fluke Calibration P3123-4 Hydraulic Deadweight Testers
100 to 35,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3123-5

Fluke Calibration P3123-5 Hydraulic Deadweight Testers
0.1 to 35 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3124-1

Fluke Calibration P3124-1 Hydraulic Deadweight Testers
1 to 700 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3124-2

Fluke Calibration P3124-2 Hydraulic Deadweight Testers
1 to 700 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3124-3

Fluke Calibration P3124-3 Hydraulic Deadweight Testers
10 to 10,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3124-4

Fluke Calibration P3124-4 Hydraulic Deadweight Testers
100 to 70,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3124-5

Fluke Calibration P3124-5 Hydraulic Deadweight Testers
0.1 to 70 MPa

Includes:

- Hydraulic Deadweight Tester

- Oil operated - dual PCU

Fluke P3125-1

Fluke Calibration P3125-1 Hydraulic Deadweight Testers
1 to 1,100 bar

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3125-2

Fluke Calibration P3125-2 Hydraulic Deadweight Testers
1 to 1,100 kgf/cm²

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3125-3

Fluke Calibration P3125-3 Hydraulic Deadweight Testers
10 to 16,000 psi

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3125-4

Fluke Calibration P3125-4 Hydraulic Deadweight Testers
100 to 110,000 kPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke P3125-5

Fluke Calibration P3125-5 Hydraulic Deadweight Testers
0.1 to 110 MPa

Includes:

- Hydraulic Deadweight Tester
- Oil operated - dual PCU

Fluke. *Keeping your world up and running.®*

Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

For more information call:
In the U.S.A. (800) 443-5853
In Canada (800) 36-FLUKE
From other countries +1 (425) 446-5500
www.fluke.com

©2022 Fluke Corporation.
Specifications subject to change without notice.
11/2022

Modification of this document is not permitted without written permission from Fluke Corporation.