TECHNICAL DATA

Fluke Calibration P3000 Pneumatic Deadweight Testers



Key features

- 0.015% of reading accuracy standard (0.008% optional)
- 1-30 inHg vacuum (0.03-1 bar vacuum)
- 3-500 psi (0.2-35 bar) pressure
- inH_2O and mbar ranges available
- Series 3 non-magnetic stainless steel weights
- Units can be trimmed to local gravity FOC

Product overview: Fluke Calibration P3000 Pneumatic Deadweight Testers

This versatile instrument provides calibrations from 1-30 inHg vacuum (0.03-1 bar) and 3-500 psi (0.2-35 bar) in one extremely accurate yet easy to use primary standard. A selector valve converts the unit from pressure to vacuum mode without the need to exchange pistons. Units are manufactured to the highest standards with certified accuracies traceable to International Standards Laboratories such as the National Institute of Standards and Technology (NIST). These piston/cylinder type pneumatic standards provide excellent stability, repeatability and accuracy. An optional built-in hand pump can be added for both pressure and vacuum generation.

Specifications: Fluke Calibration P3000 Pneumatic Deadweight Testers

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.		
Mass and PCU 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	
Models P3011, P3012, P3013, P3022, P3023, P3025 (V)	**Piston material**	Ceramic
	Cylinder material	Martensitic steel
	Coefficient of expansion	11 ppm/°C
Models P3014, P3015, P3025 (P) P3031, P3032 (P & V)	**Piston material**	Tungsten carbide
	Cylinder material	Martensitic steel
	Coefficient of expansion	16.5 ppm/°C
Model P3016	**Piston material**	Tungsten carbide
	Cylinder Material	Tungsten carbide
	Coefficient of Expansion	11 ppm/°C
General		
Test port adaptors	1/8, 1/4, 3/8 and ½ NPT or BSP	
Instrument weight	24 lbs	
Instrument size (W x D x H)	17.5 x 12 x 8.5	
Mass set weight (typical)	65 lbs	
Minimum Standard Weight Increments		
P3012, P3022 Pressure	1 inH_2O, (5 mbar)	
P3013, P3023 Pressure	2 inH_2O, (10 mbar)	
P3014, P3015, P3025 Pressure	1 psi, (0.1 bar)	
P3016, P3031, P3032	1 psi, (0.1 bar)	
P3011, P3022, P3023, P3025 Vacuum	0.2 inHg (10 mbar)	
Optional Fractional Weights		
P3014, P3015, P3025 Pressure	0.1 psi (0.01 bar)	
Built-in Hand Pumps		

Pressure mode	Max pressure 300 psi (20 bar)
Vacuum mode	To 90% vacuum
Operating Fluid for Liquid Lubricated Models	
55-655	Mineral oil (standard)
Krytox	For oxygen-safe applications (optional)
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.
Krytox	As operating fluid for liquid lubricated gas operated models.

Ordering information



P3031-BAR
P3031-BAR Liquid Lubricated Gas Operated Model
Pressure Range 1 to 70 bar

P3031-KGCM2
P3031-KGCM2 Liquid Lubricated Gas Operated Model
Pressure Range 1 to 70 kgf/cm

P3031-KPA
P3031-KPA Liquid Lubricated Gas Operated Model
Pressure Range 100 to 7,000 kPa

P3031-MPA
P3031-MPA Liquid Lubricated Gas Operated Model
Pressure Range 0.1 to 7 Mpa

P3031-PSI
P3031-PSI Liquid Lubricated Gas Operated Model
Pressure Range 10 to 1,000 psi

P3032-BAR
P3032-BAR Liquid Lubricated Gas Operated Model
Pressure Range 1 to 140 bar

P3032-KGCM2
P3032-KGCM2 Liquid Lubricated Gas Operated Model
Pressure Range 1 to 140 kgf/cm

P3032-KPA
P3032-KPA Liquid Lubricated Gas Operated Model
Pressure Range 100 to 14,000 kPa

P3032-MPA
P3032-MPA Liquid Lubricated Gas Operated Model
Pressure Range 0.1 to 14 Mpa

P3032-PSI
P3032-PSI Liquid Lubricated Gas Operated Model
Pressure Range 10 to 2,000 psi

P3011-INHG-P
P3011-INHG-P Pneumatic Deadweight Testers
Vacuum range 1 to 30 inHg

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Vacuum operated – single PCU
- Built-in pump optional

P3011-KPA-P
P3011-KPA-P Pneumatic Deadweight Testers
Vacuum range 3 to 100 kPa

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Vacuum operated – single PCU
- Built-in pump optional

P3011-MBAR-P
P3011-MBAR-P Pneumatic Deadweight Testers
Vacuum range 30 to 1,000 mbar

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Vacuum operated – single PCU
- Built-in pump optional

P3011-MMHG-P

P3011-MMHG-P Pneumatic Deadweight Testers
Vacuum range 30 to 760 mmHg

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Vacuum operated – single PCU
- Built-in pump optional

P3012-INH20-P

P3012-INH20-P Pneumatic Deadweight Testers
Pressure range 5 to 400 inH_20

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3012-KPA-P

P3012-KPA-P Pneumatic Deadweight Testers
Pressure range 1.5 to 1,000 kPa

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3012-MBAR-P

P3012-MBAR-P Pneumatic Deadweight Testers
Pressure range 15 to 1,000 mbar

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3013-INH20-P

P3013-INH20-P Pneumatic Deadweight Testers
Pressure range 12 to 800 inH_2O

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3013-KPA-P

P3013-KPA-P Pneumatic Deadweight Testers
Pressure range 3 to 200 kPa

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3013-MBAR-P

P3013-MBAR-P Pneumatic Deadweight Testers
Pressure range 30 to 2,000 mbar

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3014-BAR-P

P3014-BAR-P Pneumatic Deadweight Testers
Pressure range 0.2 to 10 bar

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3014-KGCM2-P

P3014-KGCM2-P Pneumatic Deadweight Testers
Pressure range 0.2 to 10 kgf/cm^2

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3014-KPA-P

P3014-KPA-P Pneumatic Deadweight Testers
Pressure range 20 to 1,000 kPa

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3014-MPA-P

P3014-MPA-P Pneumatic Deadweight Testers
Pressure range 0.02 to 1 Mpa

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3014-PSI-P

P3014-PSI-P Pneumatic Deadweight Testers
Pressure range 3 to 150 psi

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU

P3015-BAR-P

P3015-BAR-P Pneumatic Deadweight Testers
Pressure range 0.2 to 35 bar

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU
- Built-in pump optional

P3015-KGCM2-P

P3015-KGCM2-P Pneumatic Deadweight Testers
Pressure range 0.2 to 35 kgf/cm^2

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU
- Built-in pump optional

P3015-KPA-P

P3015-KPA-P Pneumatic Deadweight Testers
Pressure range 20 to 3,500 kPa

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU
- Built-in pump optional

P3015-MPA-P

P3015-MPA-P Pneumatic Deadweight Testers
Pressure range 0.02 to 3.5 Mpa

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU
- Built-in pump optional

P3015-PSI-P

P3015-PSI-P Pneumatic Deadweight Testers
Pressure range 3 to 500 psi

Includes:

- P3000 Series Single Pressure Model
- Air operated – single PCU
- Built-in pump optional

P3022-INH20-P

P3022-INH20-P Pneumatic Deadweight Testers
Pressure range 5 to 400 inH_2O

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 1 to 30 inHg
- Built-in pump optional

P3022-KPA-P

P3022-KPA-P Pneumatic Deadweight Testers
Pressure range 1.5 to 100 kPa

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 3 to 100 kPa
- Built-in pump optional

P3022-MBAR-P

P3022-MBAR-P Pneumatic Deadweight Testers
Pressure range 15 to 1,000 mbar

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 30 to 1,000 mbar
- Built-in pump optional

P3023-INH20-P

P3023-INH20-P Pneumatic Deadweight Testers
Pressure range 12 to 800 inH_2O

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 1 to 30 inHg
- Built-in pump optional

P3023-KPA-P

P3023-KPA-P Pneumatic Deadweight Testers
Pressure range 3 to 200 kPa

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 3 to 100 kPa
- Built-in pump optional

P3023-MBAR-P

P3023-MBAR-P Pneumatic Deadweight Testers
Pressure range 30 to 2,000 mbar

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 30 to 1,000 mbar
- Built-in pump optional

P3025-BAR-P

P3025-BAR-P Pneumatic Deadweight Testers
Pressure range 0.2 to 35 bar

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 30 to 1,000 mbar
- Built-in pump optional

P3025-KGCM2-P

P3025-KGCM2-P Pneumatic Deadweight Testers
Pressure range 0.2 to 35 kgf/cm^2

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 30 to 760 mmHg
- Built-in pump optional

P3025-KPA-P

P3025-KPA-P Pneumatic Deadweight Testers
Pressure range 20 to 3,500 kPa

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 3 to 100 kPa
- Built-in pump optional

P3025-MPA-P

P3025-MPA-P Pneumatic Deadweight Testers
Pressure range 0.02 to 3.5 Mpa

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model

- Air operated - dual PCU
- Vacuum Range 3 to 100 kPa
- Built-in pump optional

P3025-PSI-P

P3025-PSI-P Pneumatic Deadweight Testers
Pressure range 3 to 500 psi

Includes:

- P3000 Series Vacuum and Dual Vacuum/Pressure Model
- Air operated - dual PCU
- Vacuum Range 1 to 30 inHg
- Built-in pump optional

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