



PDPG-HI

DEAD-WEIGHT TESTER



Dead-Weight Tester is used as a generator of an accurately known pressure. It measures pressure as force per unit area. Therefore, Dead-Weight Tester is the most accurate pressure calibrator.

- Pressure ranges Oil 10 , 14 , 20 , 25 , 35 , 50 , 70 , 100 , 120 , 140 MPa
- 0.01 % of reading uncertainty (0.008% Optional)
- Specially designed Wing type cylinder
- Quick & Easy installation of Piston/Cylinder module
- Using mirror for piston float-position detect
- 9 LED for piston float-position display (Optional)
- Automatic-Intelligent piston rotation (Optional)
- MPa, bar, kgf/cm² and psi ranges available
- Built-in hand pumps standard
- Trimmed mass set for local gravity and pressure deformation coefficient at no extra cost

The advantages of Dead-weight tester are excellent long-term stability, small measurement uncertainty, good repeatability and excellent reproducibility. Therefore, national standard laboratories, calibration institutions, research institutes and industrial calibration laboratories have used it as the primary pressure calibrator for a long time.

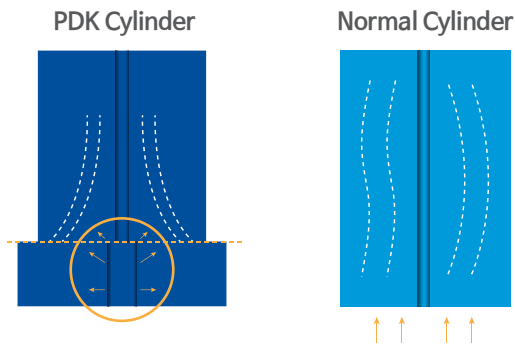
PDK's Dead-Weight Tester PDPG-HI is the result of precision machining technology and high electronic engineering technology. PDPG-HI is proud to show an advanced concept of pressure calibrator. PDPG-HI boasts the highest performance among equivalent models.

PDPG-HI is suitable to test and calibrate various kinds of pressure gauges including pressure transducers, digital manometers, pressure transmitters, pressure switches.

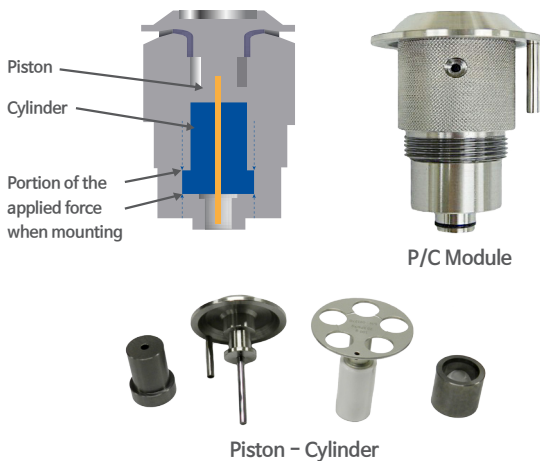
PDPG was made in accordance with the regulations of Pressure Balance International Recommendation (OIML R110, 1994(E)).



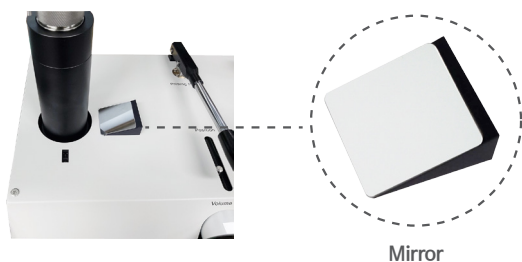
Wing type P/C is the most optimized and modernized design for piston-cylinder unit. A protrusion on the cylinder face enables easy and firm installation to the mount. Unique end shape of cylinder hole assures excellent metrological characteristics.



PDK's patented cylinder (Korea, 10-0449151) is made of tungsten carbide. PDK's piston-cylinder shows high precision and stability. The modular piston-cylinder unit can be replaced by hands very easily and quickly without special tool. It also as excellent structure which prevents environmental contamination from outside.



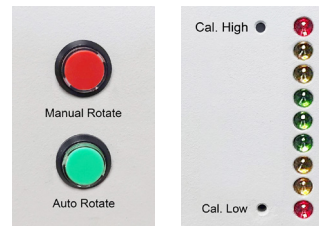
Standard version of PDPG-HI has built-in mirror for easy to identify piston float position.



In order to monitor the float position of piston, non-contact height sensor was developed. In total, 9 LEDs are attached on the front panel of PDPG-HI. Each LED will be lighting at 1 mm interval according to piston movement. When green LED is shining, it indicates 'measurement available.' (Optional function)

Manual
Rotation

Automatic
Rotation



In order to rotate piston, two methods are available. The first one is to press the red button on the front panel of PDPG-HI. The piston can be rotated only when you want to rotate. Second method is to press the green button. When the piston is located in a suitable operation position, the piston rotates automatically. The operation interval covers ± 3 mm from reference float line. If out of range, piston stops automatically.

Pressure values are marked in Stainless steel mass set and trip mass set is available as optional item.



- Integrated Mass set
- Stainless steel
- Mass set tray included
- Hard case included

- Trimmed mass set for local gravity and pressure deformation coefficient at no extra cost
- If unspecified, instruments will be calibrated to Standard Gravity at 9.80665 m/s^2



01 Specification

Maximum Pressure	0.02 to 10 MPa / 0.02 to 14 MPa / 0.05 to 20 MPa / 0.05 to 25 MPa
	0.1 to 35 MPa / 0.1 to 50 MPa / 0.1 to 70 MPa / 0.2 to 70 MPa
	0.2 to 100 MPa / 0.2 to 120 MPa / 0.2 to 140 MPa
Measurement uncertainty	0.01 % of reading (optional : 0.008%)
Piston cylinder material	Tungsten carbide
Mass material	Stainless Steel
Test port	1/4" PF
Media	Oil (Tellus Oil)

02 Order Information

Model PDPG-HI	I-01002		I-01402		I-02005		I-02505		I-03510		I-05010	
Min Pressure	0.02 MPa		0.02 MPa		0.05 MPa		0.05 MPa		0.1 MPa		0.1 MPa	
Max Pressure	10 MPa		14 MPa		20 MPa		25 MPa		35 MPa		50 MPa	
Piston	0.02 MPa		0.02 MPa		0.05 MPa		0.05 MPa		0.1 MPa		0.1 MPa	
Bell	0.08 MPa		0.08 MPa		0.2 MPa		0.2 MPa		0.4 MPa		0.4 MPa	
Make-up	0.9 MPa		0.9 MPa		2.25 MPa		2.25 MPa		4.5 MPa		4.5 MPa	
Main Mass 1	1 MPa	8 ea	1 MPa	12 ea	2.5 MPa	6 ea	2.5 MPa	8 ea	5 MPa	5 ea	5 MPa	8 ea
Sub Mass 1	0.5 MPa	1 ea	0.5 MPa	1 ea	1 MPa	1 ea	1 MPa	1 ea	2.5 MPa	1 ea	2.5 MPa	1 ea
Sub Mass 2	0.2 MPa	2 ea	0.2 MPa	2 ea	0.5 MPa	2 ea	0.5 MPa	2 ea	1 MPa	2 ea	1 MPa	2 ea
Sub Mass 3	0.1 MPa	1 ea	0.1 MPa	1 ea	0.25 MPa	1 ea	0.25 MPa	1 ea	0.5 MPa	1 ea	0.5 MPa	1 ea
Sub Mass 4	0.05 MPa	1 ea	0.05 MPa	1 ea	0.2 MPa	1 ea	0.2 MPa	1 ea	0.25 MPa	1 ea	0.25 MPa	1 ea
Sub Mass 5	0.02 MPa	2 ea	0.02 MPa	2 ea	0.1 MPa	2 ea	0.1 MPa	2 ea	0.1 MPa	2 ea	0.1 MPa	2 ea
Sub Mass 6	0.01 MPa	1 ea	0.01 MPa	1 ea	0.05 MPa	1 ea	0.05 MPa	1 ea	0.05 MPa	1 ea	0.05 MPa	1 ea
Fine Increment Masses(Optional)	0.002 MPa	5 ea	0.002 MPa	5 ea	0.01 MPa	5 ea	0.01 MPa	5 ea	0.01 MPa	5 ea	0.01 MPa	5 ea
Total Mass(kg)	50 kg		70 kg		40 kg		50 kg		35 kg		50 kg	
Model PDPG-HI	I-07010		I-07020		I-10020		I-12020		I-14020			
Min Pressure	0.1 MPa		0.2 MPa		0.2 MPa		0.2 MPa		0.2 MPa			
Max Pressure	70 MPa		70 MPa		100 MPa		120 MPa		140 MPa			
Piston	0.1 MPa		0.2 MPa		0.2 MPa		0.2 MPa		0.2 MPa			
Bell	0.4 MPa		0.8 MPa		0.8 MPa		0.8 MPa		0.8 MPa			
Make-up	4.5 MPa		9 MPa		9 MPa		9 MPa		9 MPa			
Main Mass 1	5 MPa	12 ea	10 MPa	5 ea	10 MPa	8 ea	10 MPa	10 ea	10 MPa	12 ea		
Sub Mass 1	2.5 MPa	1 ea	5 MPa	1 ea	5 MPa	1 ea	5 MPa	1 ea	5 MPa	1 ea		
Sub Mass 2	1 MPa	2 ea	2 MPa	2 ea	2 MPa	2 ea	2 MPa	2 ea	2 MPa	2 ea		
Sub Mass 3	0.5 MPa	1 ea	1 MPa	1 ea	1 MPa	1 ea	1 MPa	1 ea	1 MPa	1 ea		
Sub Mass 4	0.25 MPa	1 ea	0.5 MPa	1 ea	0.5 MPa	1 ea	0.5 MPa	1 ea	0.5 MPa	1 ea		
Sub Mass 5	0.1 MPa	2 ea	0.2 MPa	2 ea	0.2 MPa	2 ea	0.2 MPa	2 ea	0.2 MPa	2 ea		
Sub Mass 6	0.05 MPa	1 ea	0.1 MPa	1 ea	0.1 MPa	1 ea	0.1 MPa	1 ea	0.1 MPa	1 ea		
Fine Increment Masses(Optional)	0.01 MPa	5 ea	0.02 MPa	5 ea	0.02 MPa	5 ea	0.02 MPa	5 ea	0.02 MPa	5 ea		
Total Mass(kg)	70 kg		35 kg		50 kg		60 kg		75 kg			



03 Option

- 0.008% of reading
- Piston position LED indicator with automatic piston rotation
- Trim Mass
- KOLAS Certificated calibration report
- Liquid to Liquid Separator
- Sebacate Oil

04 Accessories

- Main unit and mass set
- P/C case and mass set case
- Mass tray
- Fitting adaptor set
- Tellus Oil

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