



# 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 100, 140, 200, 250, 350, 500, 700, 1000, 1200, 1400 bar
- 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/cm<sup>2</sup> 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.

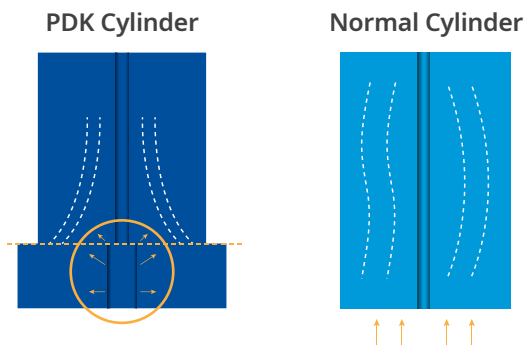
PDK's Dead-Weight Tester PDPG-HI is the result of precision machining technology and high electronic engineering technology. PDPG-HI is proud to show an advanced concept of pressure calibrator. PDPG-HI boasts the highest performance among equivalent models.

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

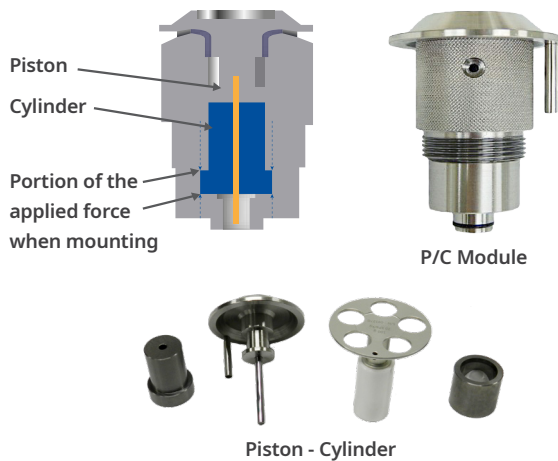
**PDPG was made in accordance with the regulations of Pressure Balance International Recommendation (OIML R110, 1994(E)).**



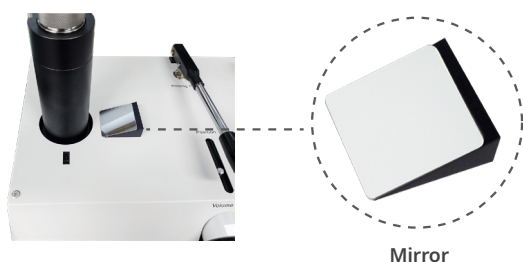
**Wing type P/C** is the most optimized and modernized design for piston-cylinder unit. A protrusion on the cylinder face enables easy and firm installation to the mount. Unique end shape of cylinder hole assures excellent metrological characteristics.



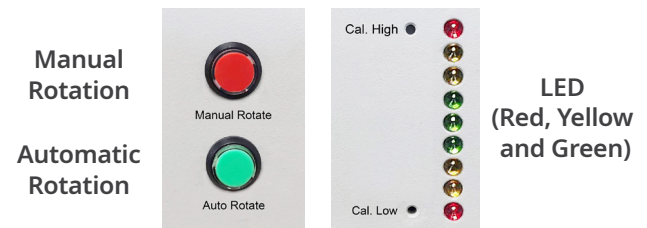
PDK's patented cylinder (Korea,10-0449151) is made of tungsten carbide. PDK's piston-cylinder shows high precision and stability. The modular piston-cylinder unit can be replaced by hands very easily and quickly without special tool. It also as excellent structure which prevents environmental contamination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



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  $\pm 3$  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.



- Intergrated 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  $9.80665 \text{ m/s}^2$



## 01 Specification

Maximum Pressure	200 mbar to 100 bar / 200 mbar to 140 bar / 500 mbar to 200 bar / 500 mbar to 250 bar 1 to 350 bar / 1 to 500 bar / 1 to 700 bar / 2 to 700 bar 2 to 1000 bar / 2 to 1200 bar / 2 to 1400 bar
Measurement uncertainty	0.01 % of reading (optional : 0.008%)
Piston cylinder material	Tungsten carbide
Mass material	Stainless Steel
Test port	1/4" BSPP
Media	Oil (Tellus Oil)

## 02 Order Information

Model PDPG-HI	I-01002		I-01402		I-02005		I-02505		I-03510		I-05010	
Min Pressure	200 mbar		200 mbar		500 mbar		500 mbar		1 bar		1 bar	
Max Pressure	100 bar		140 bar		200 bar		250 bar		350 bar		500 bar	
Piston	200 mbar		200 mbar		500 mbar		500 mbar		1 bar		1 bar	
Bell	800 mbar		800 mbar		2 bar		2 bar		4 bar		4 bar	
Make-up	9 bar		9 bar		22.5 bar		22.5 bar		45 bar		45 bar	
Main Mass 1	10 bar	8 ea	10 bar	12 ea	25 bar	6 ea	25 bar	8 ea	50 bar	5 ea	50 bar	8 ea
Sub Mass 1	5 bar	1 ea	5 bar	1 ea	10 bar	1 ea	10 bar	1 ea	25 bar	1 ea	25 bar	1 ea
Sub Mass 2	2 bar	2 ea	2 bar	2 ea	5 bar	2 ea	5 bar	2 ea	10 bar	2 ea	10 bar	2 ea
Sub Mass 3	1 bar	1 ea	1 bar	1 ea	2.5 bar	1 ea	2.5 bar	1 ea	5 bar	1 ea	5 bar	1 ea
Sub Mass 4	500 mbar	1 ea	500 mbar	1 ea	2 bar	1 ea	2 bar	1 ea	2.5 bar	1 ea	2.5 bar	1 ea
Sub Mass 5	200 mbar	2 ea	200 mbar	2 ea	1 bar	2 ea	1 bar	2 ea	1 bar	2 ea	1 bar	2 ea
Sub Mass 6	100 mbar	1 ea	100 mbar	1 ea	500 mbar	1 ea	500 mbar	1 ea	500 mbar	1 ea	500 mbar	1 ea
Fine Increment Masses(Optional)	20 mbar	5 ea	20 mbar	5 ea	100 mbar	5 ea	100 mbar	5 ea	100 mbar	5 ea	100 mbar	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	1 bar		2 bar		2 bar		2 bar		2 bar	
Max Pressure	700 bar		700 bar		1000 bar		1200 bar		1400 bar	
Piston	1 bar		2 bar		2 bar		2 bar		2 bar	
Bell	4 bar		8 bar		8 bar		8 bar		8 bar	
Make-up	45 bar		90 bar		90 bar		90 bar		90 bar	
Main Mass 1	50 bar	12 ea	100 bar	5 ea	100 bar	8 ea	100 bar	10 ea	100 bar	12 ea
Sub Mass 1	25 bar	1 ea	50 bar	1 ea	50 bar	1 ea	50 bar	1 ea	50 bar	1 ea
Sub Mass 2	10 bar	2 ea	20 bar	2 ea	20 bar	2 ea	20 bar	2 ea	20 bar	2 ea
Sub Mass 3	5 bar	1 ea	10 bar	1 ea	10 bar	1 ea	10 bar	1 ea	10 bar	1 ea
Sub Mass 4	2.5 bar	1 ea	5 bar	1 ea	5 bar	1 ea	5 bar	1 ea	5 bar	1 ea
Sub Mass 5	1 bar	2 ea	2 bar	2 ea	2 bar	2 ea	2 bar	2 ea	2 bar	2 ea
Sub Mass 6	500 mbar	1 ea	1 bar	1 ea	1 bar	1 ea	1 bar	1 ea	1 bar	1 ea
Fine Increment Masses(Optional)	100 mbar	5 ea	200 mbar	5 ea	200 mbar	5 ea	200 mbar	5 ea	200 mbar	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