

PD82·89

Gas Type High Precision Deadweight Tester



Features

- JCSS Calibration Certification
- The Models PD82 and 89 are high-precision dead-weight testers which use dry nitrogen as the medium.
- These models are suitable for validation for the precision pressure devices or as the pressure generation standard for various equipment.
- Sensor detects position and temperature of piston indicating measured values with indicator to recognize generated pressure easily. Also utilized for data correction.
- Deadweight made of stainless steel to fight with rust, wear or magnetic.

Specifications

Type	Bench type
Operating fluid	Nitrogen gas
Operation	Manual
Pressure range	0.3 to 2MPa
Accuracy	±0.02% of reading
	Primary pressure measurement only. Secondary pressure measurement range covers lower outside range of primary pressure measurement range (10% of maximum rated pressure). Primary pressure measurement range: Range between 10% to maximum range of rated pressure Secondary pressure measurement range: Range between minimum to 10% of rated pressure
Body color	Pearl light green
Body weight	15kg

Deadweight composition

Model number	Measurement range Mpa			Effective sectional area cm ²	Deadweight Mpa											Net weight of deadweight Approx. kg
	Max.	Min.	Smallest graduation		Piston Bell weight		Number of weights by value								Total	
					0.03	0.15	0.001	0.002	0.005	0.01	0.02	0.05	0.1	0.2		
PD82- M01	0.3	0.03 ^{**}	0.001	5	1		1	2	1	1	1	5			0.32	16
	0.5				1		1	2	1	1	1	1	4		0.52	26
	1	0.15 ^{**}	0.005	1		1			1	1	2	1	8		1.055	10
	2					1			1	1	2	1	2	8	2.055	21
PD89- M01	0.3	Combination use with PD82														
	0.5															
	1															
	2															
	5															

Gas type high precision deadweight tester is preferably used in 20°C temperature chamber. Select appropriate usage environment in accordance with the condition. Specify local gravity acceleration on site so that factory can accommodate adjusting mass of deadweight accordingly. If nothing specified, standard comes with 9.80665m/s² (International standard value) gravity acceleration. Correction is needed by weight if necessary.

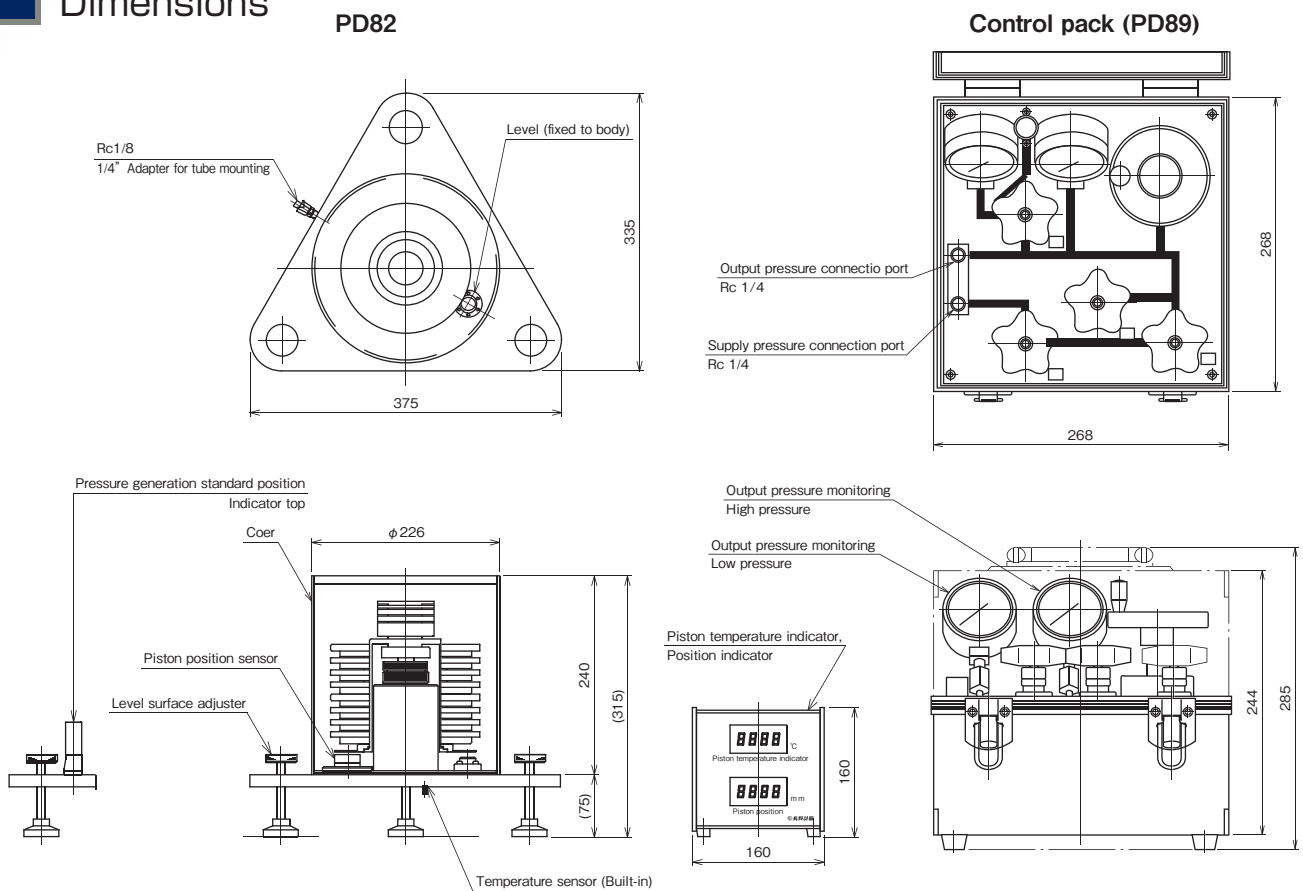
Specifications

PD89-M01: Control pack

The control pack is primarily designed for accurate adjustment of gas pressure with precise control applied to deadweight tester. Built-in fine adjustment valve and hand pump can control pressure easily. Ensure the use of PD82 with PD89 or equivalent devices prepared by customer. PD82 used with our PD89 is recommended.

Body weight 15kg

Dimensions



ACCESSORIES & OPTIONS

Model	Adapter	Spare parts, accessories				Carrying case	Weight box
PD82	<ul style="list-style-type: none"> • 1/4"-R1/4 Straight 1 • 1/4"-R1/4 Elbow 1 • 1/4"-R1/4 Sirbity 1 • Connecting tube 2m 	<ul style="list-style-type: none"> • Brush 1 • Blower 1 • Wiper holder 1 • Handle for wiper holder 1 	<ul style="list-style-type: none"> • Screw ba for filter replacement 1 • Wiper 20 pcs. • O-ring (P18) 1 • O-ring (P22 or P40) 1 • Filter 1 		1 (option)	1	
PD89	<ul style="list-style-type: none"> • 1/4"-R1/4 Straight 1 • 1/4"-R1/4 Elbow 2 • 1/4"-R1/4 Sirbity 1 • G1/4-Rc1/4 Adapter 1 • R1/4 Plug 1 • G1/4 Plug 1 • Connecting tube 4m 				1	—	

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Model number configuration

Please specify the model number, each specs and the range for ordering.

Model

PD8 — M01 — 0 — × × × × ×

Deadweight type pressure standard ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

Model number			Product specifications		Additional specifications (Optional)	
Model	2	—	M01	Type: Bench type	Range: 0 to 2MPa	Deadweight: Stainless Accuracy: ±0.02%O.R.
	9	—	M01	Type: Controller (with PD82)		
(Please specify pressure range and unit of measure along with corresponding ordering code.)	④ Pressure range (MPa)		1	0.3		
			2	0.5		
			3	1		
			4	2		
			5	5 (PD89 only)		
⑤ Deadweight finish		0	Stainless steel (Standard)			
⑥ Carrying case		For PD82				
		0	Not required			
		1	With case			
⑦ Weight box		For PD82				
		1	With case			
⑧ Pressure standard inspection / certification		For PD89				
		X	Not required			
⑨ Other additional spec.		3	JCSS certificate of calibration			
		4	Inspection certificate, Traceability certificate (NCSS)			
⑮ Documents		0	Not required			
		1	Required (Specify required additional specs below) Other units than "SI" (Export purpose only)			
		0	Not required			
		1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Attending inspection			

* Specify code "X" to refer N/A

OPERATING INSTRUCTIONS

- Avoid installation in places exposed to places that excessive vibration, dirt, dust, corrosive atmosphere, and direct sunlight are present.
- Ensure to install the deadweight tester horizontally. If not installed horizontally, the test result may not be accurate.
- Do not try to increase or decrease the pressure suddenly. (Ensure to open and close the valves slowly.)
- Applying a pressure over the maximum allowable pressure on PD82 is not only dangerous but possibly damage the tester.
- The deadweights are precisely manufactured. Do not fabricate with sandpaper or drop them.

Documents

Specify "Document name" when required

Document name	Applicable document	Explanation
Additionally available traceability certificate	Certificate of calibration and inspection for pressure standard used for inspection (Copy)	Copy of certificate that pressure gauge or pressure standard used for the inspection is traceable to National Secondary Standard owned by qualified company.
	JCSS certificate of calibration (Copy)	Copy of certificate of working standard that the working standard is traceable to National Secondary Standard owned by qualified company.
	jcass test report (Copy)	Copy of certificate of National Secondary Standard that the National Secondary Standard owned by qualified company is traceable to National Standard.

Traceability Chart of Measurement Standard

