

# PD66

## Oil Type High Precision Deadweight Tester



### Features

- JCSS Calibration Certification
- This oil type deadweight tester designed for high precision for high pressure validation. Up to 50MPa can be measured featuring functions for efficient operation. Suitable for internal pressure standard.
- Equipped preliminary pump and fine adjustment pump contributes for work hours shortening for pressurization and depressurization.
- 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

<b>Type</b>	Bench type
<b>Operating fluid</b>	Hydraulic fluid
<b>Operation</b>	Manual
<b>Pressure range</b>	5→50MPa
<b>Accuracy</b>	±0.02% of reading ±0.05% 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
<b>Body color</b>	Pearl light green
<b>Body weight</b>	Deadweight mounting base Approx. 8kg (Deadweight not included) Pressurization part Approx.14kg (20MPa and below) Pressurization part Approx.26kg (50MPa and above)

### Deadweight composition

Measurement range MPa			Effective sectional area cm <sup>2</sup>	Deadweight MPa											Net weight of deadweight Approx. kg	
Max.	Min.	Smallest graduation		Piston · Bell weight				Number of weights by value								Total
				0.5	1	2	5	0.05	0.1	0.2	0.5	1	2	5		
5	0.5*	0.05	1/2	1				1	1	2	8				5.05	26
10	1 *	0.1	1/4		1				1	2	1	8			10	26
20	2 *	0.1				1			1	2	1	1	8		20	51
50	5	0.5	1/10				1				1	1	2	8	50.5	51

To maintain deadweight accurately, correction on gravity acceleration, operating temperature, air buoyancy and water head must be considered.

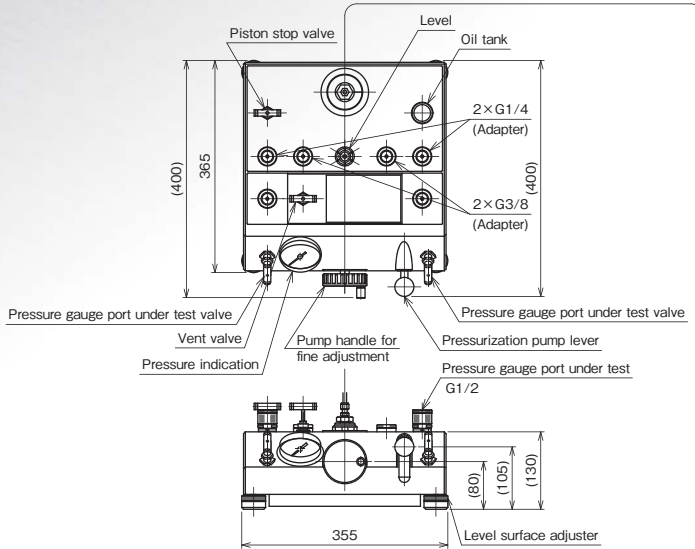
Specify local gravity acceleration on site so that factory can accommodate adjusting mass of deadweight accordingly.

If nothing specified, standard comes with 9.80665m/s<sup>2</sup> (International standard value) gravity acceleration. Correction is needed by weight if necessary.

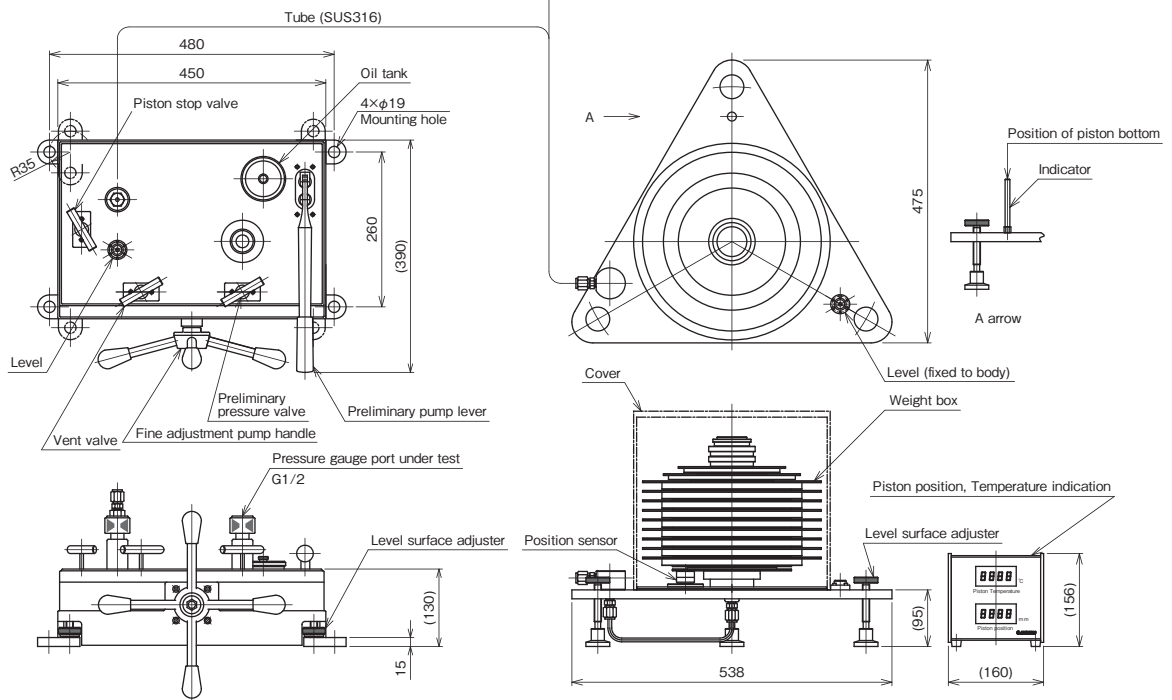
\*Accuracy assures ±0.05%O.R. for 1MPa and above, ±0.02%O.R. for 3.5MPa and above.

## Dimensions

### Maximum pressure measurement. Pressurization part for 20MPa and below



### Maximum pressure measurement. Pressurization part for 50MPa and above



## ACCESSORIES & OPTIONS

Model	Mounting base		Spare parts, tools, accessories								
	Connection	Connecting method	Adapter				O-ring and gasket	Piston Gasket	Wrench and other tools	Case (option)	
			G1/4	G3/8	G1/2	G3/4				Carrying case	Weight box
PD66	Adapter	Quick fastening nut	20MPa and below 2	20MPa and below 2	20MPa and below 2	20MPa and below —	P7-10	20MPa and below —	20MPa and below —	—	3
			50MPa and above 1	50MPa and above 1	50MPa and above 1	50MPa and above —		50MPa and above φ8-2	50MPa and above Complete set		

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### Model number configuration

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

Model

**P D 6 6** — **M** **1** — **0** **X** **X** **X** **X** **X** **X** **X** **X**

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)	
① Units	M	MPa			
② Accuracy	0	±0.05%O.R. (Body color: Pearl light green)			
	1	±0.02%O.R. (Body color: Pearl light green)			
(Please specify pressure range and unit of measure along with corresponding ordering code.)	④ Pressure range (MPa)	1	5		
		2	10		
		3	20		
		4	50		
⑤ Deadweight finish	0	Non-polished stainless steel (Standard)			
⑦ Weight box	0	Not required			
	1	With case for 5MPa			
	2	With case for 10MPa			
	3	With case for 20MPa			
⑧ Pressure standard inspection / certification	3	JCSS certificate of calibration			
	4	Inspection certificate, Traceability certificate (NCSS)			
⑨ Other additional spec.	0	Not required			
	1	Required (Specify required additional specs below) Other units than "SI" (Export purpose only)			
⑮ Documents	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 PD66 is not only dangerous but possibly damage the tester.
- The deadweights are precisely manufactured. Do not fabricate with sandpaper or drop them.
- Use a tank siphon to calibrate "Use no oil" pressure gauges and be sure that oil does not ingress into pressure gauge under test.
- Use clean hydraulic oil.

#### Operating oil

Special oil (Specified by Nagano Keiki)

## 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

