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Dead Weight Pressure Gauge Tester > DW 10 Series



Models of DW 10 series are provided with one large capacity screw pump and a removable oil reservoir with isolating valve in a simple line circuit permitting effective air removal.

WORKING PRINCIPLE: The Dead Weight Pressure Gauge Testers make use of the relationship between pressure acting on the known area of a vertically free floating piston producing a force balanced by known dead weight.

MAIN COMPONENTS of the tester are :-

Screw Pump: It is used to generate pressure in the circuit of adequate capacity and is operated by a spoked handle which permits easy and accurate setting of pressure.

Free Piston Assembly: It is made of special steel, hardened, tempered, ground and lapped to accurate size and very fine surface finish provides true floating action.

Set of Weights: Each weight is directly marked in convenient values of pressure and is easily stacked on the weight carrier which is placed on to the free piston. The calibration can be provided in various units of pressure measurement namely kgf/cm2, bar, lbf/in2, kPa, KN/m2 as per customer requirement. Weights are available in two material options: MS Phosphated black & SS 304. Storage box is provided for storing weights safely.

Gauge Connector: of 1/2" BSP (female) union for connecting the gauge to be tested. Gauges with other connecting threads may be connected using adoptors provided.

Base Plate: The instrument is mounted on a sturdy base plate provided with levelling screws. The entire circuit is covered by a sheet metal cover.

Incremental Weights: to provide smaller steps (better least count) is available for all models at extra cost.

Calibration / Traceability: Calibration is done against Master Dead Weight Pressure Gauge Tester and Master Dial Pressure Gauges using cross-float method. Our instruments are backed by test certificates traceable to National Standard to meet the requirements of ISO 9000, QS 14000 and other Inspection Agencies.

MODEL	RANGE (kgf / cm ²)			RA	RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
DW10	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	
REGULAR	0.1	0.01	2.5	1	0.1	40	0.1	0.01	2.5	0.01	0.001	0.25	
INC	0.1	0.001	2.5	1	0.005	40	0.1	0.001	2.5	0.01	0.0001	0.25	

MODEL	RANGE (kgf / cm ²)			R	RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
DW11	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	
REGULAR	0.1	0.05	6	1	0.5	80	0.1	0.05	6	0.01	0.005	0.6	
INC	0.1	0.001	6	1	0.02	80	0.1	0.001	6	0.01	0.0001	0.6	

MODEL	RANGE (kgf / cm ²)			RA	RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
DW12	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	
REGULAR	0.2	0.05	16	2	1	200	0.2	0.05	16	0.02	0.005	1.6	
INC	0.2	0.002	16	2	0.05	200	0.2	0.002	16	0.02	0.0002	1.6	

MODEL	RANGE (kgf / cm ²)			RA	RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
DW13	DW13 Min. Step Max.		Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.		
REGULAR	0.4	0.1	25	5	1	360	0.4	0.1	25	0.04	0.01	2.5	
INC	0.4	0.005	25	5	0.05	360	0.4	0.005	25	0.04	0.0005	2.5	

MODEL	RANGE (kgf / cm ²)			RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
DW14	V14 Min. Step Max.		Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	
REGULAR	0.4	0.1	40	5	1	500	0.4	0.1	40	0.04	0.01	4
INC	0.4	0.005	40	5	0.05	500	0.4	0.005	40	0.04	0.0005	4

MODEL	RANGE (kgf / cm ²)			RA	RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
DW15	DW15 Min. Step Max.		Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.		
REGULAR	1	0.1	60	10	2	800	1	0.1	60	0.1	0.01	6	
INC	1	0.01	60	10	0.1	800	1	0.01	60	0.1	0.001	6	

Ì	MODEL	RANGE (kgf / cm ²)		RA	RANGE (lbf / in ²)			RANGE (bar)			RANGE (MPa)		
- 1	DW16	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.	Min.	Step	Max.

I	REGULAR	1	0.1	100	20	5	1500	1	0.1	100	0.1	0.01	10
ſ	INC	1	0.01	100	20	0.2	1500	1	0.01	100	0.1	0.001	10

FIELDS OF APPLICATION:

- » Automobile Industry
- » Breweries & Distilleries
- » Textile Industry
- » Pipe Manufacturers
- » Pipeline Contractors
- » Metals Industry
- » Cement Industry
- » Electronics Industry
- » Paper Industry
- » Engineering Industry
- » Food & Drug Industry
- » Chemicals & Fertilizer Industry
- » Glass Industry
- » Industrial & Medical Gases
- » Sugar Industry
- » Gas & LPG Cylinders
- » Petroleum & Petrochemical Industry
- » Airlines
- » Railways
- » Defence Organisation
- » Engg. Colleges & Training Institutes
- » Ceramic Industry
- » Thermal Power Stations
- » Hydro-Electric Power Generation

STANDARD PARAMETERS

- $^{>\!>}$ Gravity : 9080665 m/s²
- » Air Density: 1.159087 Kg/m³ (For Low Pressure)

1.155872 Kg/m³ (For High Pressure)

OPERATING FLUID:

» Hydraulic Oil (Multigrade Mobil Oil)

STANDARD ACCESSORIES:

- » Storage Box for Weights
- » Set of Spare Seals
- » Dust Cover
- » Instruction Manual
- » Tin of Oil (1/2 L)
- » Adaptors : M20 x 1.5, 1/4" BSP & 3/8" BSP
- Standard Tool Kit including Spanners, Allen Key, Screw Driver, Spirit

MATERIAL OF CONSTRUCTION

- » Piston: HCHCr / Tungsten Carbide » Cylinder: HCHCr / Tungsten Carbide
- » Base Instrument : MS Painted » Pipelines : Stainless Steel
- » Weights: Stainless Steel / MS Phosphated Black

OPTIONAL ACCESSORIES

- » Adaptors 1/8", 1/4", 3/8", 1/2" NPT
- » Angle Connection (1/2" M x 1/2" F BSP)
- » Pointer Puller & Pointer Punch
- » Steel Carrying Box for Tester

ENVIRONMENTAL CONDITIONS

- » Temperature : 23°C +/- 1°C
- » Humidity : 50% +/- 10%

ACCURACIES AVAILABLE

- » +/- 0.1% of reading taken
- » +/- 0.05% of reading taken
- » +/- 0.03% of reading taken

DW 10 SERIES | DW 20 SERIES | DW 30 SERIES

<u>Dead Weight Pressure Gauge Tester</u> | <u>Dead Weight Vacuum Gauge Tester</u> | <u>Comparison Test Pump for Pressure</u> | <u>Comparison Test Pump for Vacuum Gauges</u>

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