M4000/DA

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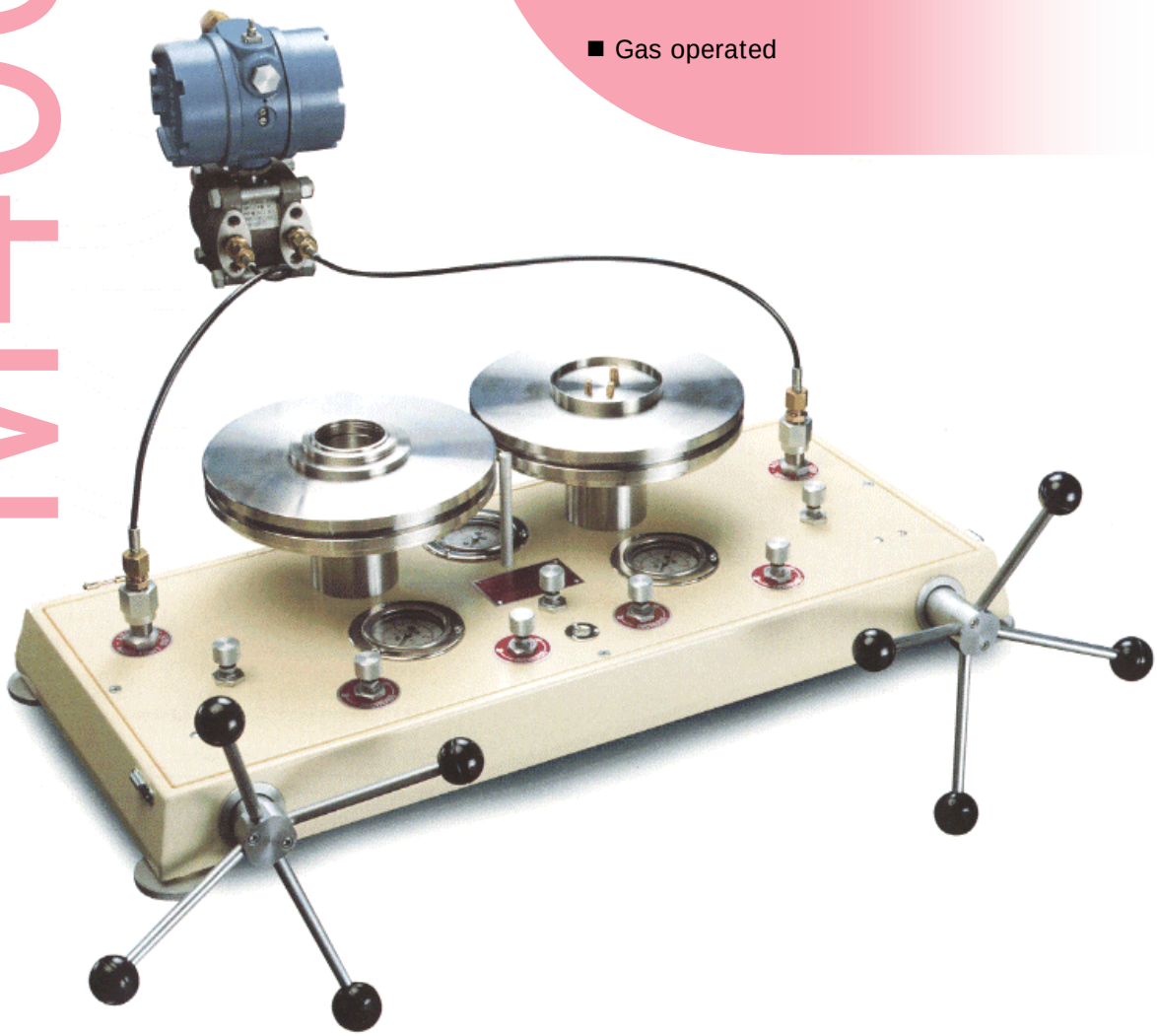
Differential Deadweight Tester

Pressurements

- Static Pressure Range 2 to 100 bar
  30 to 1500 psi
- Differential Pressure Range 0 to 2000 mbar
  0 to 800 in H_2O
- Accuracy from 0.01% of reading
- Manufactured to local gravity (on request)
- Traceable to International Standards
- Gas operated

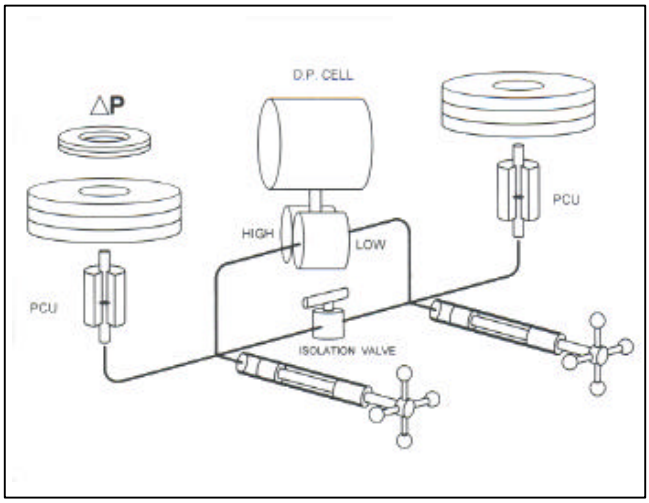


DIFFERENTIAL DEADWEIGHT TESTER MODEL M4000/DA

The M4000/DA is designed to calibrate Differential Pressure Cells or Transmitters on gas at raised static pressure. It is important to ensure DP Cells are calibrated in the pressure environment they are used. Line pressure or static pressure significantly alters the DP Cell performance.

The M4000/DA combines the practicality and stability of liquid lubricated piston and cylinder units (PCU's) with an easy to use gas operated system. As standard the PCU's are oil lubricated, however, oxygen safe fluid can be provided if required. To prevent fluid contamination of the DP Cell, the gas flow within the system is always from the test port (DP Cell) towards the PCU's. Pressure gauges, needle valves and volume adjusters are fitted for fine control. A protective metal lid allows portability and on-site calibration.

MODEL	RANGE
M4000/1DA	2 to 100 bar
M4000/2DA	2 to 100 kgf/cm ^{2}
M4000/3DA	30 to 1500 psi
M4000/4DA	200 to 10000 kPa



OPERATING PRINCIPLE

The two PCU's are connected to the DP Cell, one on each side, and balanced against each other at the static pressure. The PCU's are then isolated and weights are added to the PCU on the high side of each of the DP Cell to generate the differential pressure.

Non-contracting displacement sensors can be supplied to assist in monitoring the piston position. As standard a vertical indicator rod is fitted. To limit thermal effects both the piston and cylinder are manufactured from tungsten carbide. The M4000/DA can also be operated as a standard Deadweight Tester.

SPECIFICATION

Pressure range:	2 to 100 bar/ 30 to 1500 psi *
Static Pressure range:	10 to 100 bar/ 150 to 1500 psi *
Differential Pressure range:	0 to 2000 mbar/ 0 to 800 inH_2O
* Other ranges and pressure units available	
Accuracy:	0.015% of reading
	0.01% available
	+0.2 mbar/ 0.08inH_2O for differential pressure
Gravity:	As requested on order, if unspecified then 980.665 cm/s^2
Weight material:	Series 3 non-magnetic austenitic stainless steel
Weight density:	7.9 g/cm^3
Weights can be manufactured to local gravity - as standard international gravity 980.665 cm/s^2 is used	
Minimum standard weight increment:	
Pressure & Static Pressure	1bar/ 20 psi
Differential Pressure	50 mbar/ 20 inH_2O
Optional Fractional Weights:	
Pressure & Static Pressure	0.1 bar/ 1 psi †
Differential Pressure	5 mbar/ 2 inH_2O †
† Finer Increments available	
Piston Material:	Tungsten Carbide
Cylinder Material:	Tungsten Carbide
Optional displacement sensors:	Inductance type
Accuracy:	0.02 mm
Resolution:	0.001 mm
Test Station Adaptors:	$^1/_8$", $^1/_4$", $^3/_8$", $^1/_2$" BSP (F) or NPT (F), (please specify).
Gas supply inlet port:	$^1/_4$" BSP (F) or NPT (F), (please specify).
Temperature: Reference	20°C
Operating:	12 to 28°C
Storage:	-45 to 70°C
Pressure medium:	clean dry gas, nitrogen or similar
PCU medium:	oil (oxygen safe fluid available)
Size: Instrument, including lid:	70 x 30 x 20 cm L x D x H
Weight box:	24 x 24 x 18 cm per set (2 sets per instrument)
Weight: Instrument	20 kg
Boxed weight set:	25 kg per set (2 sets per instrument)

A complete range of hydraulic, pneumatic, differential and absolute deadweight testers are available

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