Octagon® PRECISION

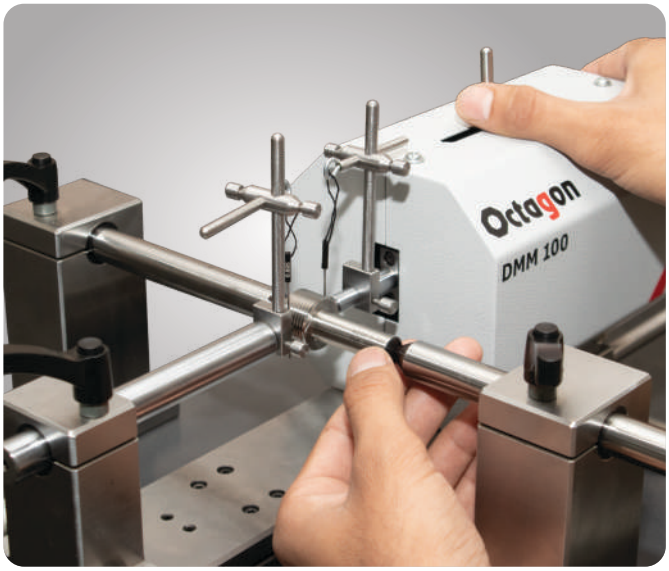
Floating Carriage Diameter Measuring Machine

Precision Diameter Measuring System

Technology of 21st Century

Designed for Perfection

Floating Carriage Diameter Measuring Machine



Cy. Thread Plug Gauge measurement (2 wire method)

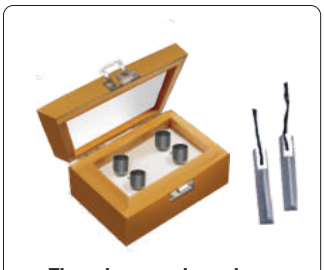
This is Octagon's latest development in Precision Screw Diameter Measuring Machine originally designed by National Physical Laboratory (NPL)- UK in 1940s. For enhancing the accuracies of the old design, Octagon has redesigned this machine with integration of the latest technologies of 21st Century and complying to the NPL specifications of MOY / SCMI/9 (issue 7) 2001.

This measuring machine is specially designed for precision measurement of screw thread gauges and cylindrical shafts. In this machine design, the measuring axis is constantly held at the right angles to the axis of the centers. This design allows precision measurement of screw threads by two wire method. The component being measured is mounted between a pair of centers and the measuring carriage float freely in the right-angle to the axis of the centers, facilitates most accurate diametrical measurements. The measuring spindle is precisely guided in the measuring carriage and is maintained in the axis of the centers to ensure compliance with Abbe's Principle.

Features :

- Specially designed for measurement of external screw thread diameters including pitch diameter, major and minor diameters of various forms including ISO Metric, Unified, Withworth, Buttress, BA, Pipe Threads, Trapezoidal, ACME, StubACME including taper threads of NPT, NPTF & BSPT.
- Compliance with Abbe's Comparator principle.
- Designed to comply requirements of NPL UK Specifications MOY/SCMI/9.
- Rugged Steel body, specially heat treated for structural stability.
- Centers provided with hardened high Carbon steel are guided in hardened carbon steel Vee guides ensures longer life.
- Measuring axis is precisely maintained in the right-angle to the centre axis facilities correct measuring alignments.
- High precision measuring spindle guided by high precision LM Guides for best performance.
- Absolute measuring range of 30mm facilitates less number of reference setting standards. Only requires cylindrical setting standards Ø10, 30, 60, 90mm for pre-setting which helps in drastic reduction in measurement cycle time.
- High Precision Optical encoder system provides higher resolution 0.1μm with lowest measurement uncertainty.
- Digital readout system helps to avoid manual calculation errors.
- Provided with accessories like threads measuring wire set for measurements of screw pitch diameter and prism set for minor diameter of screw threads.

Accessories :



Thread measuring prisms

Thread measuring wires

Digital read-out system :

- Digital read-out system with 5.7 inch Graphical display.
- Measurement of Major, Effective & Minor diameter.
- Practical wire diameter suggestion according to pitch value and automatic calculation of P-value.
- Thread formulae evaluation for over wire measurements.
- Rake correction facility for ACME thread
- Automatic calculations of gauge tolerances for various types of threads / Manual tolerance entry, Go/Nogo comparison.
- Storage of measured values
- RS232 serial interface, Serial printer interfacing

Technical Specifications:	
Measuring capacity :	0-100 mm *
Absolute Measuring Range	30mm.
Accommodation between centers	180mm.
Weight holding capacity	3 Kg.
Performance Data : Resolution	0.1 μm
Measurement Uncertainty	0.5+ L/1000 μm
Dimensions, weight and operational conditions L x W x H	400 X 300 X 250mm
Weight (kg)	40 Kg
Power supply	230VAC, 50 Hz.
Display System	Digital Read Out (DRO)

***Higher range models are available on request.**

Octagon Precision (India) Pvt. Ltd.

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