



Total Metrology Solutions



B.S.PYROMATIC INDIA (P) LTD.,

AN ISO 9001 - 2000 CERTIFIED COMPANY

Autocollimator Dual-Axis - BSPIL-MTR-03001



Reflecting Mirror

Prism

Reflecting mirror:

Material : optical glass bsc/bk-7 front-surface coated mirror

Diameter : 40 mm, rollers with c.d of 50mm.

Optical square 20 x 20mm opening.

Bottom and sides are optically lapped.

Mirror is mounted on the base at $90^\circ \pm 2'$.

This system is used in glass shop for checking straightness and flatness, Checking square and V blocks, checking deflection of a structure under load Measuring tapers, checking the angles of small castings. Checking the cutting angle of tools, setting angles of jigs and machine tool heads. Dark field graticules is used to get good image from un silvered glass surface or surfaces having poor reflection. Eye piece have a long eye relief, important for spectacle user. Direct reading to one minute of arc. Total measuring range of 60 minutes for measurements in both axis simultaneously. Anti-fungus coating is done on optics.

Specifications:

Objective focal length	300 mm
Objective clear aperture	25 mm
Barrel diameter	38 mm
Barrel length	200mm
Eye piece magnification	10x
Measuring range	25'
Read out	On direct graticule at 1'
Telescope length	380mm
Illuminating bulb rating	6 v 10 watts comes with transformer.
Dimension of base	Solid rugged cast iron base 75 x 250mm
Flatness of base As per ISI standard i.e.	0.1 mm over 250mm
Weight	7Kg(approx)

Floating Carriage Diameter Micrometer - BSPIL-MTR-03002 (For 2 / 3Wire Method) Floating Carriage Diameter Micrometer - BSPIL-MTR-03002 DIGI

Effective Diameter Measuring Micrometer (EDMM) is also commonly known as FCM or Floating Carriage Micrometer. This instrument is used for accurate measurement of 'Thread Plug Gauges'. Gauge dimensions such as Outside diameter, Pitch diameter, and Root diameter are measured with the help of this instrument. All these dimensions have a vital role in the thread plug gauges, since the accuracy and interchangeability of the component depends on the gauges used. To reduce the effect of slight errors in the micrometer screws and measuring faces, this micrometer is basically used as comparator.

Robust graded cast iron body. Seasoned for dimensional stability. Integrated "V" guide ways ground to finest accuracy. Micrometer least count - 0.0002 mm or 0.001 / 0.002 / 0.005 with non rotary spindle. Micrometer & fiducial have 8 mm dia spindle. Instrument accuracy maintained in accordance with NPL UK specifications The instrument is very useful for thread plug gauge manufacturers, gauge calibration laboratories, established under NABL accreditation and in standard room where inhouse gauge calibration is carried out.

Specifications

Base	Made of rugged C.I Metal
Maximum longitudinal measurement	90mm
Maximum transverse measurement	30mm (Each Side)
L.C for Zero Indicator	0.01mm
L.C for Micrometer	0.001mm
Micrometer range	0-25mm
Masterpiece Diameter	16mm
Specimen size	M16X2 mm terrain
Wire size	1.35mm (3 Wire Method)
Overall size	300x300x200mm
Weight	10Kg(approx)

Optional Accessories

BSPIL-MTR-A-03002A
BSPIL-MTR-A-03002B
BSPIL-MTR-A-03002C
BSPIL-MTR-A-03002D
BSPIL-MTR-A-03002E

Female Center 1 set
Thread Measuring Wire One Pairs
Thread Measuring Wire 21 Pairs
Cylindrical Master One No.
Cylindrical Master 28 Nos.

BSPIL-MTR-A-03002F
BSPIL-MTR-A-03002G
BSPIL-MTR-A-03002H
BSPIL-MTR-A-03002I

Thread Measuring Prisms Two Nos.
Thread Measuring Prisms Four Pairs (8 Nos)
Thread Measuring Wire 10 pairs
Thread Measuring Wire 8 pairs



Digital

Tool Makers Microscope - BSPIL-MTR-03003

Tool Makers Microscope offers a wide range of applications which include dimensional, angle and contour measurements of miniature parts as well as inspection of machined surfaces.

Specifications:

Eye Piece	30 X Standard Magnification
Objective	2 X Magnification
Eye Piece	W.F. 15X with cross reticule
Field of View	8 mm diameter
Working Distance	115 mm approximately
Image	Erect Image
Observation	Tube Monocular inclined at 30°
Stand	Large & heavy base provide extra overall rigidity
Measuring Stage	150 x 150mm .travel upto 25mm. In each direction having least count 0.01mm
Eye-piece Protractor	Graduated 0 to 360° with adjustable vernier of least count 6 minutes
Illumination	Built in base Transmitted from 6V - 20W Halogen Lamp and optional light from any source with suitable MOUNTING on front panel
Weight	8 kg (approx)

Optional Accessories:

BSPIL-MTR-A-03003A
BSPIL-MTR-A-03003B
BSPIL-MTR-A-03003C
BSPIL-MTR-A-03003D
BSPIL-MTR-A-03003E

Depth Measuring Attachment
Center Holding Device Attachment
Rotary Stage
V-Block
Vee Support

BSPIL-MTR-A-03003F
BSPIL-MTR-A-03003G
BSPIL-MTR-A-03003H
BSPIL-MTR-A-03003I
BSPIL-MTR-A-03003J

Measuring Eye Pieces with Reticles [PER SET]
Metric Coarse Thread (0.25-1.0mm)
Metric Coarse Thread (1.25-2.0mm)
Concentric Circle (0.5-10mm)
60 degree Angle

Other models available are:

BSPIL-MTR-03003 (A) With Projection Screen
BSPIL-MTR-03003 (B) Magnification 150 X



Projection Tool Makers Microscope - BSPIL-MTR-03003A



TMM is a highly precision and versatile instrument designed for most diversified jobs in tool room workshop with projection screen of 4" dia.

This instrument is provided with X-Y movement of 120mm x 120mm measuring stage, equipped with zero adjustment Micrometers of 25mm graduation having least count of 0.001mm. Eye protractor of 0-360 degree of least count 6 minutes is provided in TMM. A total magnification of 30x to 50x is achieved in TMM through 3x, 4x and 5x objectives equipped with triple revolving nose piece and WF 10x (cross) eye piece.

TMM has both transmitted and incident light inside a wooden box. Gear Concentricity Tester with dial attachment of Least Count of 0.01 mm – setup mandrels and gears comes with setup. Mandrels distance between centers 300mm with height of centers 125mm. Weight - 12kg (approx).

Profile Projector - BSPIL-MTR-03004, Optical Profile Projector - BSPIL-MTR-03004 DIGI

It is specifically designed for all types of measurements and inspection at industries and engineering institutes.

Optical Profile Projectors DRD Systems are used to compare and measure the contours of the stamping, gear wheels and samples with a complicated shape and deliver a high working efficiency, hence becoming a user friendly DRD System for measurement purpose. They have been widely applied in the machinery making, clock making, electronics, apparatuses and device industries, scientific research institutes and measurement bodies at all levels, aviation and aerospace sectors, as well as testing and measuring stations.

Specifications

Max distance of view recovery	500mm (approx)
Magnification range	10X, 15X, 20X, 30X, 100X
Projection screen size	300mm
L Count of linear movement	0.005mm
L.C of angular movement	2minutes
Contour light illuminator	Halogen Lamp 12V 100W, 10A
Surface illumination	Halogen Lamp 24V 100W, 10A
Cooling fan capacity	20W, 220V, 110V/6A
Magnification accuracy	±1% Contour, ±0.5% Surface
work stage dimension	200x200mm
Overall size	L:800mm W: 800mm H:1420mm DRD Model
Weight	65kg (approx)

BSPIL-MTR-A-03004A Rotary stage 360° of reading graduated at 6 min 50mm dia
 BSPIL-MTR-A-03004B Center holding device
 BSPIL-MTR-A-03004C Collect holding device for angular
 BSPIL-MTR-A-03004D Precision vice
 BSPIL-MTR-A-03004E V block one pair
 BSPIL-MTR-A-03004F Vee Support

DRD Specifications

Model Name : SD55-3PJ
 Number of Axis : 2-Linear length measurement
 1-Rotary angle measurement
 Package material : SD55-3PJ-DPP DRD DISPLAY
 X-KAS90-Scale-1 micron-1 no
 Y-KAS90-Scale-1 micron-1 no
 Optical edge sensor assembly
 Cables & Display mounting accessories-1 set

Vertical type Round screen

BSPIL-MTR-03004Va with Screen diameter : 300mm (12")
 BSPIL-MTR-03004Vb with Screen diameter : 450mm (18")
 BSPIL-MTR-03004Vc with Screen diameter : 600mm (24")

Horizontal floor type Round screen

BSPIL-MTR-03004Ha with Projection screen : 300mm
 BSPIL-MTR-03004Hb with Projection screen : 450mm

BSPIL-MTR-A-03004G Stage Micrometer
 BSPIL-MTR-A-03004H Standard measuring reticules
 BSPIL-MTR-A-03004I Halogen bulb
 BSPIL-MTR-A-03004J Projection lens 100x
 BSPIL-MTR-A-03004K Green Filter
 BSPIL-MTR-A-03004L Projection Lens 50x



Gear Tester Parkinson Type - BSPIL-MTR-03008

The two steel plates are placed vertically in which the linear guide bar are inserted. The linear guide bars are also inserted inside the holes of the bearing fixed in slides A, B and C. The straight edge is mounted on the slide A with the bolt. The gear holding mandrels are mounted on the slide B and C. Three vertical supports are fitted in the appropriate position. The square bar is placed in between the slide B and slide C in which the projector is mounted. The two lead screws are attached with slide A, when the one knob is rotated the straight edge moves longitudinally and another knob is for the cross movement of slide A. The light source is placed in between the slide B and slide C.

Specifications:

Overall size	500x300x425mm
Max dia of gear	100-200 dia mm
Involute profile checking	Spur gear
Max helix angle	Up to 30
Incorporated projector screen size	50mm dia
Projector magnification	5x
projector light source Transformer	6v 10w
Halogen bulb	6v 10w
L.C for Lever dial gauge	0.01mm (Range 0-0.8mm)
L.C for dial gauge	0.01mm (Range 0-10mm)
Max thickness of the gear	30mm
Concentric diameter checking	Spur and Helical Gears
Weight	55Kg (approx)



Gear Tester - BSPIL-MTR-03008A

Gear Concentricity Tester With Dial Attachment of LC 0.01mm - Setup Mandrels and Gears comes with set up Mandrels Distance between Centres 300mm with Height of Centres 125mm

Specifications:

Base made of rugged	Cast iron
Max dia of gear to be checked	250 dia mm
Gears comes with mandrel	(max run out)3microns
Distance between centers	300
Center height	125mm
L.C for baker dial gauge	(0-10mm)0.01mm
Max thickness of the gear can be	Checkedmax.
Concentric diameter checking	Spur and Helical And worm gears
Overall size	850X400X400mm
Weight	75Kg (approx)



Dial Calibration Tester - BSPIL-MTR-03082 Dial Calibration Tester - BSPIL-MTR-03082 DIGI

The Dial Calibration setup is a highly finished surface plate to calibrate any dial gauge.

Specifications:

Surface Roughness	0.1 microns
Surface Flatness	± 1 microns
Over all Size	295 mm x 215 mm x 85 mm
Weight	14Kg (approx)

Gauge blocks can be supplied in various specs.



Angle Dekkor - BSPIL-MTR-03034

Angle Dekkor unit comes with Objective lens aperture of 28mm. Measuring range of 100°. Read out of 1 mtr. Telescope length of 250mm. Brass Body of 240x300mm, closed grains casting hardened, stabilities and scrapped. Light Source of 6v 15w.

Specifications:

Objective Focal Length	280 mm	Accuracy over 1°	4"
Objective Clear aperture	32 mm	Accuracy over total measuring range	20 seconds
Barrel Dia	44 mm	Maximum height of job to be tested in vertical	150 mm
Barrel Length	200 mm	Illuminating bulb rating	12 V ; 6 W
Eye Piece Magnification	10X, wide field	Dimension of base	295 mm x 215 mm
Range Of Measurements	50°X & 50°Y	Height of base	85 mm
Field Of View	120°	Flatness of base	As per IS:1 standard i.e. 0.7 micron over 25 mm diameter over the entire surface
Read Out	On graticule directly	Angle Dekkor length right from objective to eye piece	330 mm
Direct Reading on graticule	1'	Total Wt. (Wt. of Angle Dekkor + Wt. of its base and stand)	18 Kg. (approx.)
Graticule Type	Dark field		
Least Count of Micrometer	4"	Ht. of stand and base	330 mm



Gauges - BSPIL-MTR-03013

a. Plain plug gauge d/f, Snap gauge s/f, Snap gauge d/f. Measuring pin, Key way width gauge, Slip gauge, Taper plug, Taper ring, Plain ring gauge, Adj. Snap, Thread ring, Plug gauges

Digital Comparator - BSPIL-MTR-03016

Twin channel for differential gauging, Tolerance Indicator for accept/reject, Plus or minus polarity switch, RS-232 interface for data/print. Two metric ranges a) 200mm of LC 0.1mm



Mechanical Comparator - BSPIL-MTR-03017



Measuring base size of : 125 mm x 125 mm and 60 mm ø. Material Hardened Tempered & Precision Ground Alloy Steel, Vertical Range : 130 mm & 130 mm, Horizontal Displacement : 40 mm Throat Depth : 130 mm & 45 mm, Pillar Diameter : 31 mm, Net Weight : 11.500kgs & 2.500kgs.

Precision Balls - BSPIL-MTR-03035

Precision balls are available from range 3mm to 24mm.



Sine Center - BSPIL-MTR-03036



Sine Centers are available from Range 100mm to 500mm

Sine Bar - BSPIL-MTR-03037

Sine Bars are available from Range 100mm to 500mm



We do manufacture and deal other mechanical labs such as : Imaging, Metallurgy, Instrumentation, Dynamics, Heat Transfer, Thermal, Biotechnology, Refrigeration & Air-Conditioning, Fluid Mechanics, Foundry, Non Destructive Testing, Strength Of Materials and Workshop.

* Above Specifications are indicative and may have variations as per Current R&D

Marketed by:



B.S.PYROMATIC INDIA (P) LTD.,
"The Engg. Lab People"

P.B.No.6033,27/1,XII Avenue,
Ashok Nagar,Chennai-600 083,INDIA.

Phone : +91-44-24890009 / 24890710. Fax: +91-44-24897880
E-Mail: pyromat@satyam.net.in. Website : www.bsipyromatic.com.



AN ISO 9001:2008 Certified Company

