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plunger  
indicators  
and stands

40



Baty International has been in business since 1932. Originally, a manufacturer of high precision dial indicators and other associated instruments such as cylinder bore gauges.

Baty soon diversified into non-contact measurement with Optical Profile Projectors and the Baty 'Shadograph' series has since become an industry standard in profile projectors. These products are still manufactured in Sussex in accordance with ISO 9001:2000.

For decades Baty has employed a team of Field Based Service Engineers. Today, our service department is the largest ISO 9001:2000 accredited Projector Service Organisation in the UK offering on-site Service, Training, Retrofits, and Repair for all makes of Profile Projector and Vision Systems.

In keeping with its gauging roots, Baty acquired John Bull and British Indicators, extending its gauging range to include calipers and flexible fixturing.

The range was then completed in the eighties when our first camera based Video Inspectors were developed. Video Edge Detection (VED) was soon added giving rise to increased accuracy, repeatability and measuring speed.

Now all our vision systems offer the best of both worlds with the combination of non-contact (VED) and contact measurement using Renishaw's extensive touch probe range.

Today, Baty is an ISO 9001:2000 accredited company that offers a range of Metrology Instruments from Hand Tools to Vision Systems, offering measuring solutions for almost every measurement application in modern manufacturing and now, we've put them together into one catalogue for your convenience.

So, whether you need a digital caliper or a full CNC multi-sensing Vision system...

...it's here.

We look forward to talking to you.

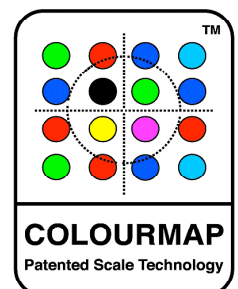
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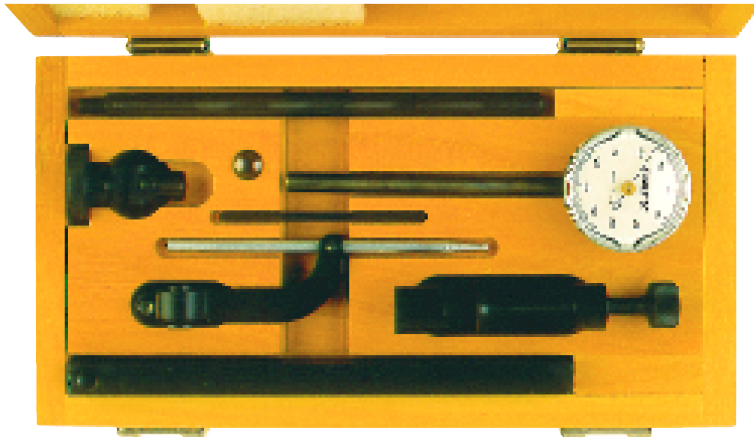
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## Back Plunger Type

These are versatile instruments with countless uses in workshops and inspection departments; for example, concentricity checks, marking-out table and surface plate work, alignment of machine tools, testing, parallelism, etc.

### The set comprises:

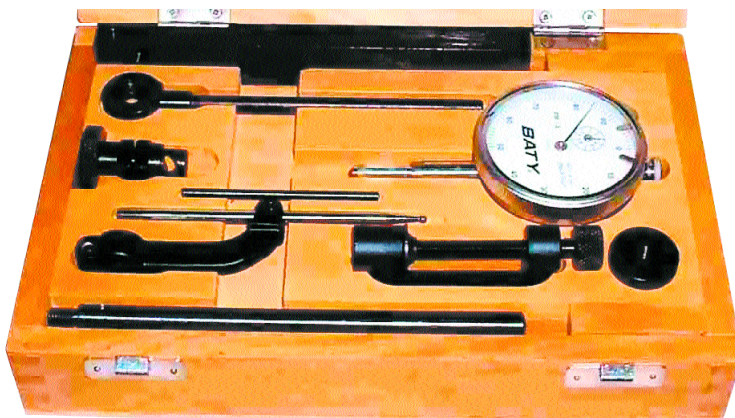
- 35mm diameter, back plunger dial indicator with holding rod
- Lever attachment
- Universal clamp
- G-clamp
- Tool post holder
- Domed anvil
- All supplied in wooden case

Model	Range	Reading	Graduation
FTSM-1 Metric Test Set	2 mm	0.01 mm	0-100
FTSI-1 Imperial Test Set	0.1"	0.001"	0-100

## Plunger Type

### The set comprises:

- 57mm diameter plunger dial indicator
- Lever attachment
- Universal clamp
- G-clamp
- Tool post holder
- All supplied in wooden case
- Spigot back



Model	Range	Reading	Graduation
FTSU-M Metric Test Set	10 mm	0.01 mm	0-100
FTSU-I Imperial Test Set	0.5"	0.001"	0-100

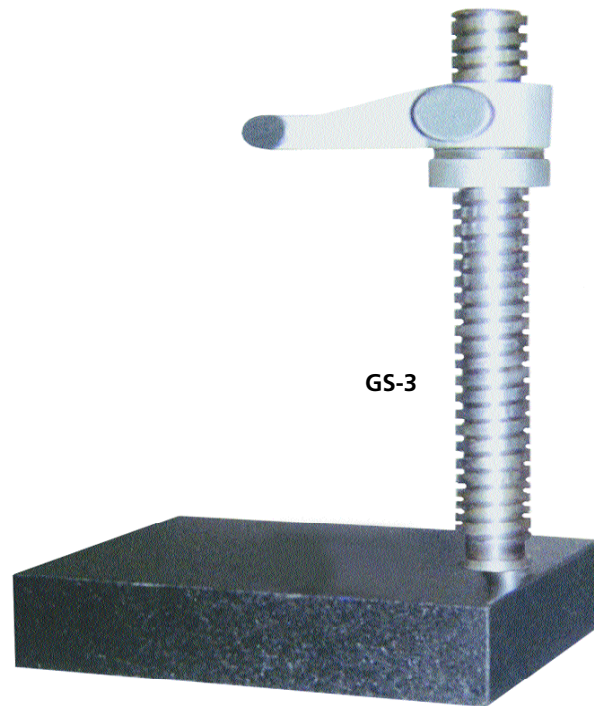
Other options of indicator available on request

## BENCH COMPARATOR STANDS

These comparator stands provide for a wide variety of applications in both the workshop and the standards room. Compatible with all Baly mechanical and digital indicators.

### GS-3

- 0.002mm flatness
- Extreme stability
- 250mm height
- Other table sizes available



Model	Measuring Height mm	Reach	Column Ø	Table Size
GS-3	180	100	35	200 x 150

### 2407

- Chrome column
- Fine adjustment
- Cast iron base with ground faces
- ø8mm stem mounting



Model	Column Ø	Arm	Base
2407	16mm x 250mm	16mm x 230mm	250 x 60 x 55mm

# PLUNGER DIAL INDICATORS – FM SERIES



FM-302



FM-3 fitted with MA-108 knife edge anvil



FM-1



D5

The Baty range of Plunger Dial Indicators includes a model for all applications. Building on decades of experience we offer standard indicators in most popular sizes. All units are supplied with 8mm stems, M2.5 threads and offset lug backs as standard.\*

Calibration certificate supplied with all Group 2 indicators reading 0.01mm or finer.

### Group 2 Features

- Solid brass case
- 57mm diameter bezel
- Tolerance pointers
- Precision movement
- Coarse and fine dials
- Range of contact tips and back plates available (see page 15)
- 3mm diameter carbide ball anvil

### FM-CSR

A single revolution dial indicator is included in the range to provide reliable reading and remove the risk of operator error. This indicator is especially useful when fitted to comparative gauging fixtures such as the Baty Checkmaster.

### Group 1 Indicators 42 mm Nominal Diameter

Model	Reading	Range	Range per Rev.	Graduation
D5	0.01 mm	8 mm	1.0 mm	0-100

Centre lug or flat back

### Group 2 Indicators 57 mm Nominal Diameter

Model	Reading	Range	Range per Rev.	Graduation
FM-1	0.01 mm	10 mm	1.0 mm	0-50-0
FM-2	0.01 mm	10 mm	1.0 mm	0-100
FM-3	0.01 mm	25 mm	1.0 mm	0-100
FM-4	0.002 mm	5 mm	0.2 mm	0-20/0-10-0
FM-8	0.002 mm	12 mm	0.2 mm	0-10-0/0-20
FM-5	0.001 mm	1 mm	0.2 mm	0-200/0-100-0
FM-9	0.001 mm	12 mm	0.2 mm	0-200
FM-6	0.1 mm	10 mm	10.0 mm	0-10
FM-7	0.1 mm	25 mm	10.0 mm	0-10
FM-CSR	0.01 mm	0.8 mm	0.8 mm	40-0-40

### Group 3 Indicators 76mm Nominal Diameter

Model	Reading	Range	Range per Rev.	Graduation
FM-302	0.01 mm	50 mm	1.0 mm	0-100



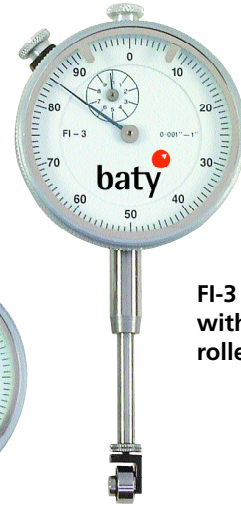
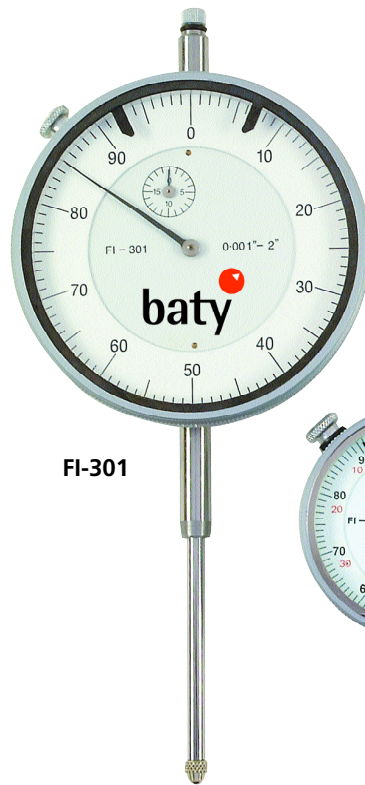
# PLUNGER DIAL INDICATORS

The Baty range of Plunger Dial Indicators includes a model for all applications. Building on decades of experience we offer standard indicators in most popular sizes. All units are supplied with 8mm stems, M2.5 threads and offset lug backs as standard.\*

Non-standard configurations are also available on request.

## Group 3 Features

- Solid brass case
- Large 76mm diameter bezel
- Tolerance pointers
- Precision movement
- Range of contact tips and back plates available (see page 15)



## Group 1 Indicators 42mm Nominal Diameter

Model	Reading	Range	Range per Rev.	Graduation
D1	0.001"	0.25"	0.1"	0-100

Centre lug or flat back

## Group 2 Indicators 2¼" Nominal Diameter

Model	Reading	Range	Range per Rev.	Graduation
FI-1	0.001"	0.5"	0.1"	0-50-0
FI-2	0.001"	0.5"	0.1"	0-100
FI-3	0.001"	1"	0.1"	0-100
FI-4	0.0005"	0.5"	0.05"	0-50 / 0-25-0
FI-5	0.0001"	0.2"	0.01"	0-100 / 0-50-0
FI-6	0.0001"	0.5"	0.01"	0-100 / 0-50-0

## Group 3 Indicators 3" Nominal Diameter

Model	Reading	Range	Range per Rev.	Graduation
FI-301	0.001"	2"	0.1"	0-100

# PLUNGER DIAL INDICATOR – WS SERIES



## Features

Standard: DIN 878

- Satin-chromed body
- With Tungsten carbide measuring tip
- With double dial indicator for measuring mm stroke
- Shockproof
- Micron versions are jewelled
- Adjustable scale with stop screw
- Some models offer tolerance indicators, see picture
- Packed in foam box

Model	Range	Resolution	Diameter
WS-01	0-1mm	0.001mm	58mm / flat
WS-02	0-1mm	0.001mm	58mm / lug
WS-03	0-3mm	0.01mm	42mm / lug
WS-04	0-5mm	0.01mm	42mm / lug
WS-05	0-10mm	0.01mm	58mm / flat
WS-06	0-10mm	0.01mm	58mm / lug
WS-07	0-10mm	0.01mm	54mm / waterproof
WS-08	0-10mm	0.1mm	54mm / lug
WS-09	0-30mm	0.01mm	58mm / lug
WS-10	0-50mm	0.01mm	58mm / lug

## DIGITAL INDICATOR

- **Inch / metric**  
0-12.7mm (0-0.5") measuring range  
0.001mm (0.00005") resolution
- **Zero / on / off**  
Zero setting at any position / manual power on / off
- **Data hold**  
TIR, min and max hold functions
- **TOL**  
Set tolerance for pass / fail indication
- **ABS**  
Switch between absolute and incremental mode
- **Universal 8mm stem mount**
- **Supplied with 3mm diameter steel ball contact**
- **Rotating bezel**
- **Dual analogue and digital display**



Model	Range	Accuracy
DI-1	0 - 12.7mm / 0.5"	0.008mm / 0.0003"

## DIGITAL INDICATOR

### Features

- Direct inch / metric conversion
- 58mm dial face
- Lugback and 8mm stem mountings
- Resolution 0.01mm / 0.0005"
- Absolute / Incremental reading
- Floating Zero



Model	Range	Accuracy
DI-2	0 - 12.7mm / 0.5"	0.02mm / 0.0008"
DI-3	0 - 25.0mm / 1.0"	0.03mm / 0.0012"



# PLUNGER DIAL INDICATORS ACCESSORIES



The applications of a plunger dial indicator can be extended and facilitated by a wide range of options and accessories. Changing anvils allows access to measurements that might be difficult to achieve with the standard anvils supplied.

<p><b>Needle-point</b></p> <p><b>MA-106</b></p>	<p><b>Knife-Edge</b></p> <p><b>MA-108</b></p>	<p><b>Offset Knife-Edge</b></p> <p><b>MA-109</b></p>
<p><b>Roller</b></p> <p><b>MA-110</b></p>	<p><b>Domed</b></p> <p><b>MA-111</b></p>	<p><b>Taper</b></p> <p><b>MA-130</b></p>
<p><b>Larger Flat Anvils</b></p> <p><b>MA-115</b> D = 6.0      <b>MA-119</b> D = 15.0  <b>MA-116</b> D = 8.0      <b>MA-120</b> D = 20.0  <b>MA-117</b> D = 10.0     <b>MA-121</b> D = 25.0  <b>MA-118</b> D = 12.0</p>		<p><b>Rack Extensions</b></p> <p><b>MA-136</b> L = 15 mm    <b>MA-140</b> L = 40 mm  <b>MA-137</b> L = 20 mm    <b>MA-141</b> L = 50 mm  <b>MA-138</b> L = 25 mm    <b>MA-142</b> L = 60 mm  <b>MA-139</b> L = 30 mm</p> <p>Rack extensions in a range of lengths are available to fit between the indicator and contact point</p>

Model	Description	Size
<b>BMS038</b>	Carbide ball anvil	3mm
<b>DQ10-142</b>	Spindle brake attachment	Fits to the indicator stem end. Retains hand & spindle at max. reading position. Spindle released by pressing button
<b>DQ20-11</b>	Universal clamp	Ø 1/4" & 5/16" holes
<b>DQ20-11a</b>	Universal clamp	Ø 1/4" & 3/8" holes
<b>DQ20-11b</b>	Universal clamp	Ø 1/4" & 1/4" holes
<b>DQ20-50</b>	Universal clamp	Ø 1/2" & 7/8" holes
<b>DQ100/M</b>	Lifting lever	12mm lift to fit 8mm stem
<b>DQ122/M</b>	Lifting lever	25mm lift to fit 8mm stem

<b>DQ30-14/B</b>	Lever attachment	45mm reach, to fit 8mm stem
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<b>MA-102</b>	Radiused anvil	6mm
<b>MA-106</b>	Needle anvil	
<b>MA-108</b>	Knife edge anvil	
<b>MA-109</b>	Off-set knife edge anvil	
<b>MA-110</b>	Roller anvil	
<b>MA-111</b>	Radiused anvil	Ø 8mm radius x 9.5mm
<b>MA-112</b>	Anvil	Ø 12mm radius x 9.5mm
<b>MA-115</b>	Flat anvil	Ø 6mm
<b>MA-116</b>	Flat anvil	Ø 8mm
<b>MA-117</b>	Flat anvil	Ø 10mm
<b>MA-118</b>	Flat anvil	Ø 12mm
<b>MA-119</b>	Flat anvil	Ø 15mm
<b>MA-120</b>	Flat anvil	Ø 20mm
<b>MA-121</b>	Flat anvil	Ø 25mm
<b>MA-130</b>	Long taper anvil	5mm
<b>MA-132</b>	Long taper anvil	20mm
<b>MA-133</b>	Long taper anvil	25mm

<b>MA-136</b>	Rack extension	15mm long
<b>MA-137</b>	Rack extension	20mm long
<b>MA-138</b>	Rack extension	25mm long
<b>MA-139</b>	Rack extension	30mm long
<b>MA-140</b>	Rack extension	40mm long
<b>MA-141</b>	Rack extension	50mm long
<b>MA-142</b>	Rack extension	60mm long



Group 2 Back Plates – FM & FI Series

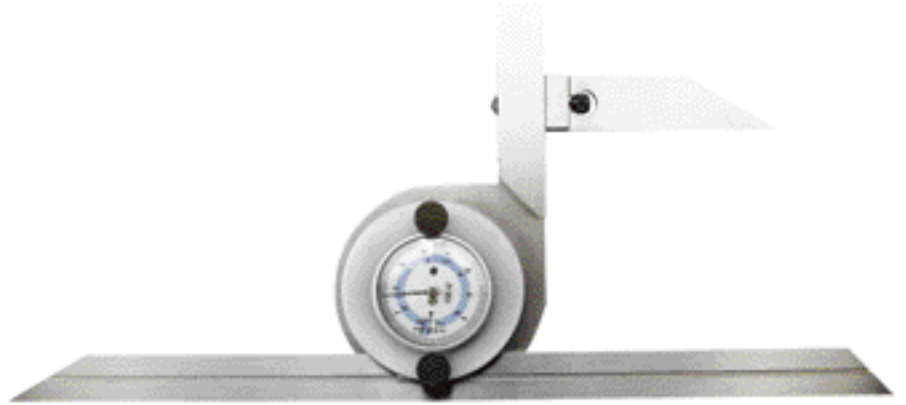
Model	Description
<b>BMS018</b>	Flat back
<b>BMS036</b>	Centre lug
<b>BMS037</b>	Off-set (fitted as standard)

<b>T-5</b>	Holding rod	Ø 1/2" x 19" long
<b>T-7</b>	Holding rod	Ø 1/4" x 134mm long

## DIAL ANGLE PROTRACTOR

### Features

- Features high quality indicator
- Made of high quality hardened and ground stainless steel
- High precision satin chromed scale
- Minimum reading 5 minutes
- Magnifying glass for easy reading
- With fine adjustment and height gauge attachment
- 300mm / 12" rule and 150mm / 6" rule
- Packed as set in plastic box



Model	Range
AP-SET	360°

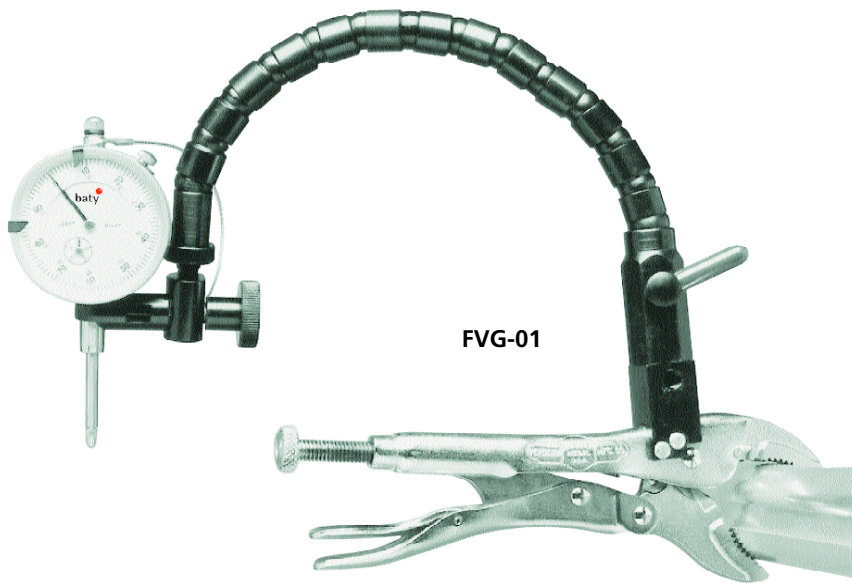
## DIGITAL ANGLE PROTRACTOR

### Features

- 360° measuring range (4 x 90°)
- Manufactured from stainless steel
- Displays in degree / minute / second and decimal
- Resolution 30"
- Accuracy +/- 5'
- Fine adjustment
- Supplied with 300mm blades
- Supplied with acute angle attachment
- Battery CR2032



Model	Range
DAP-SET	Digital protractor 0-360°



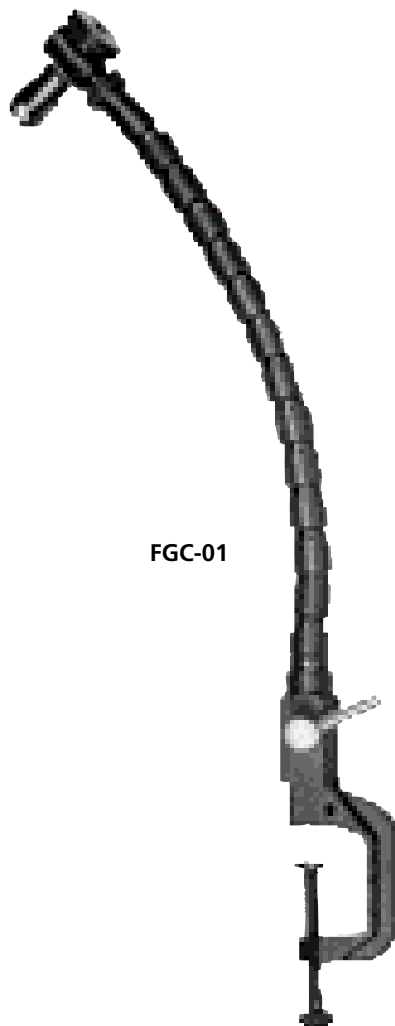
FVG-01

## Features

These flexible gauge arms feature multiple swivel joints connected by a cable running through their centre for the length of the arm. Cable tension is released to allow the arm to be positioned exactly where required and then re-applied via a locking lever to form a solid gauge mounting arm in the desired shape.

## FVG-01

325mm length flexible gauge arm attached to vice grips. Fitted with universal stem clamp accepts 3mm-13mm dia.



FGC-01

## FGC-01

As FVG-01 but mounted to G-Clamp. Clamp capacity: 35mm x 19mm throat.

## MAGNETIC INDICATOR STAND

### MB 15

Heavy duty stand with 12mm diameter vertical column. 230mm height x 160mm reach with lug back clamp, 4mm and 8mm stem mounting. Switchable heavy duty magnetic base.

### Features

- Basic type
- With powerful on/off magnetic base
- Magnetic force 80Kg / 175 LBS
- Universal model which can be used for indicators with or without 'lug' on back plate
- Accepts dial test indicators, digital indicators and normal indicators
- Extra rigid



Model	Description
MB-15	Adjustable gauge stand with ON/OFF magnetic base

## MAGNETIC INDICATOR STAND

### MB15-FA

Heavy duty stand with 12mm dia. vertical column. 230mm height x 160mm reach with lug back clamp, 4mm and 8mm stem mounting. Switchable heavy duty magnetic base.

### Features

- Features fine adjustment
- With powerful on / off magnetic base
- Magnetic force 80Kg / 175 LBS
- Universal model which can be used for indicators with or without 'lug' on back plate
- Accepts dial test indicators, digital indicators and normal indicators
- Extra rigid



Model	Description
MB-15FA	Adjustable gauge stand with ON/OFF magnetic base and fine adjustment

## MAGNETIC INDICATOR STAND



### Features

- Versatile magnetic base that can be adjusted in almost unlimited ways
- Fine adjustment
- 30kg clamp force
- V-slotted base
- Universal model which can be used for indicators with or without 'lug' on back plate
- Accepts dial test indicators, digital indicators and normal indicators

### Model

MB15-AB

### Description

Articulating arm magnetic base

## HYDRAULIC INDICATOR STAND



### Features

- Features a unique hydraulic central lock for all arms and swivel positions
- Super solid model
- With fine adjustment
- With powerful on/off magnetic base
- Magnetic force 80Kg / 175 LBS
- Universal model which can be used for indicators with or without 'lug' on back plate
- Accepts dial test indicators, digital indicators and normal indicators
- Dovetail groove for clamping a dial test indicator
- Super rigid

### Model

HGS-1

### Description

Hydraulic lock adjustable gauge stand with ON/OFF magnetic base

## FLEXIBLE MAGNETIC BASE

### FMB-01

400mm length with switchable mag. base and base mounted fine adjust. Fitted with universal stem clamp accepts 3mm-13mm diameter

### Features

- Corrosion resistant chrome plated flex arm
- Magnetic force 40kg / 85 lbs
- Holds rigidly in almost any position
- V-base for mounting on rounded surfaces



Model	Description
FMB-01	Flexible arm gauge stand with ON/OFF magnetic base

## MINI MAGNETIC BASE

### 945

Budget stand for lever indicators only. 135mm vertical height to dovetail mounting with 80mm extension rod providing 6mm stem clamp. Permanent magnetic base with fine adjustment.

### Features

- 2 universal ball sockets
- Microfine adjustment screw
- Dovetail mounting
- Chuck adapter
- Indicator sold separately (see section 1)



Model	Description
945-LI	Mini magnetic base supplied without indicator



## MAGNETIC BASE SETS

Supplied with our DI-3 digital indicator.



**FMB-Set**



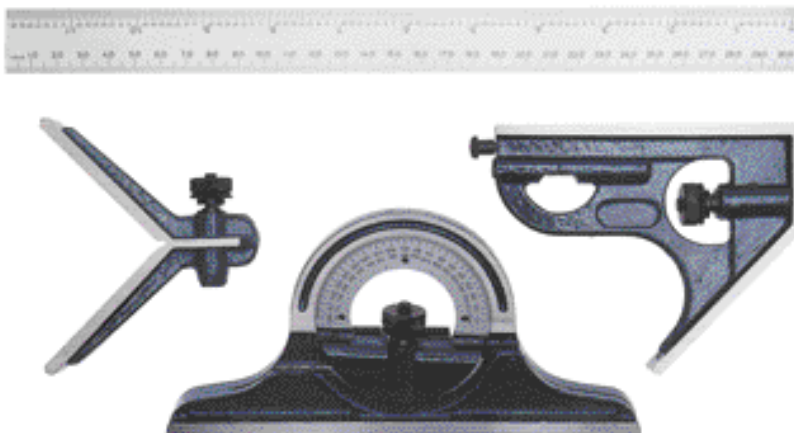
**MB15-FASET**

### Features

- Direct inch / metric conversion
- 58mm dial face
- Lugback and 8mm stem mountings
- Resolution 0.01m / 0.0005"
- Absolute / incremental reading
- Floating Zero

Model	Description
<b>FMB-SET</b>	Snake stand with DI-3
<b>MB15-FASET</b>	Articulating magnetic base with DI-3 digital indicator

## COMBINATION SET



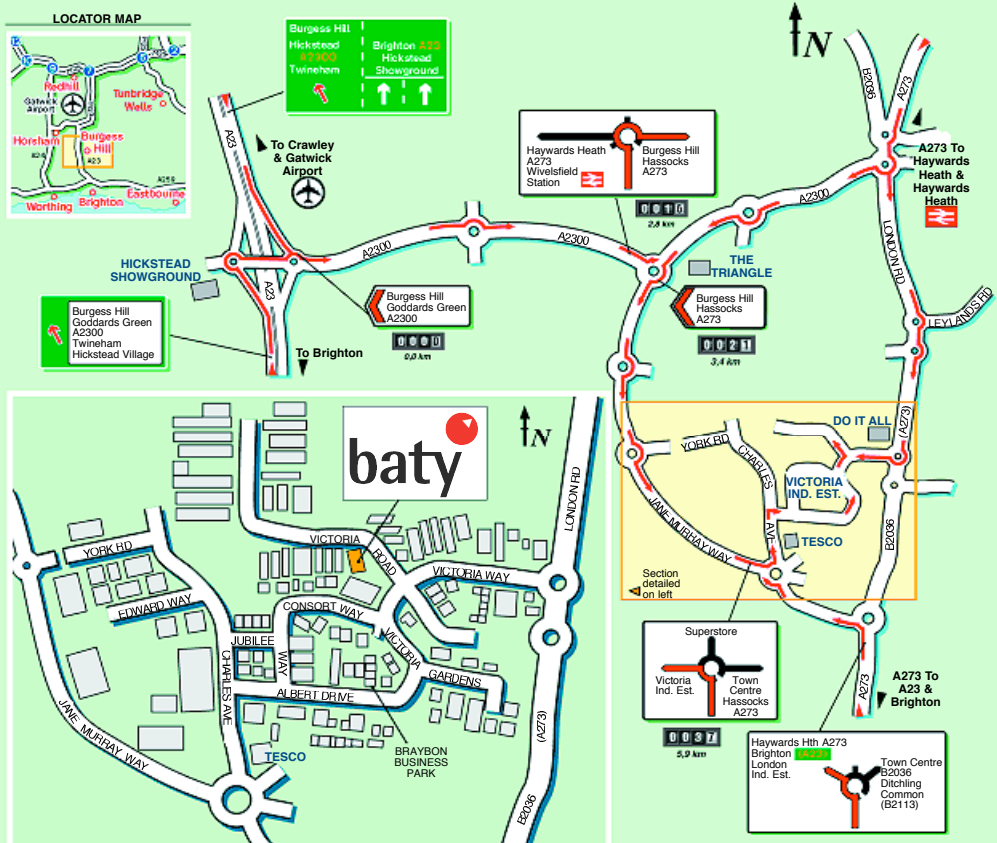
### Features

- Three measuring heads are attached to the stainless steel ruler, allowing versatile measurements on various types of work pieces
- Square head, protractor head and centrehead
- For various measuring and marking applications
- Hardened and ground slide ways
- Stainless steel rule with engraved graduations

Model	Description	Items in Set
<b>CSS-300</b>	180°	4

\* Metric and inch scale rule

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