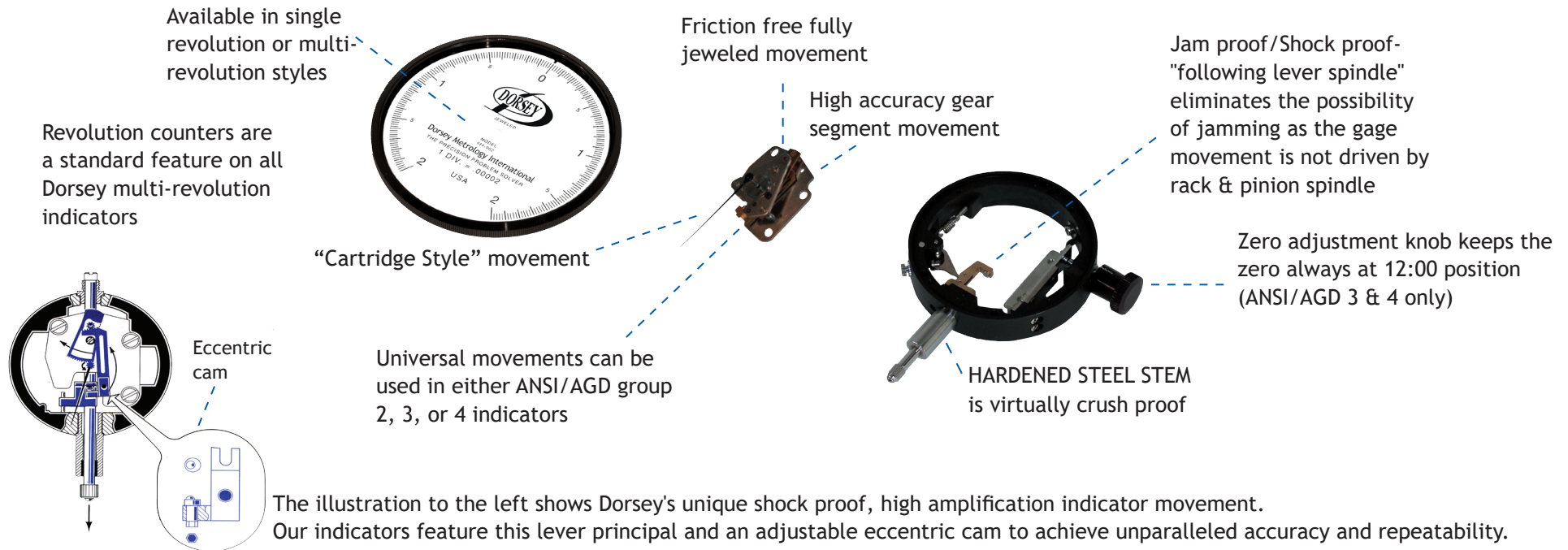


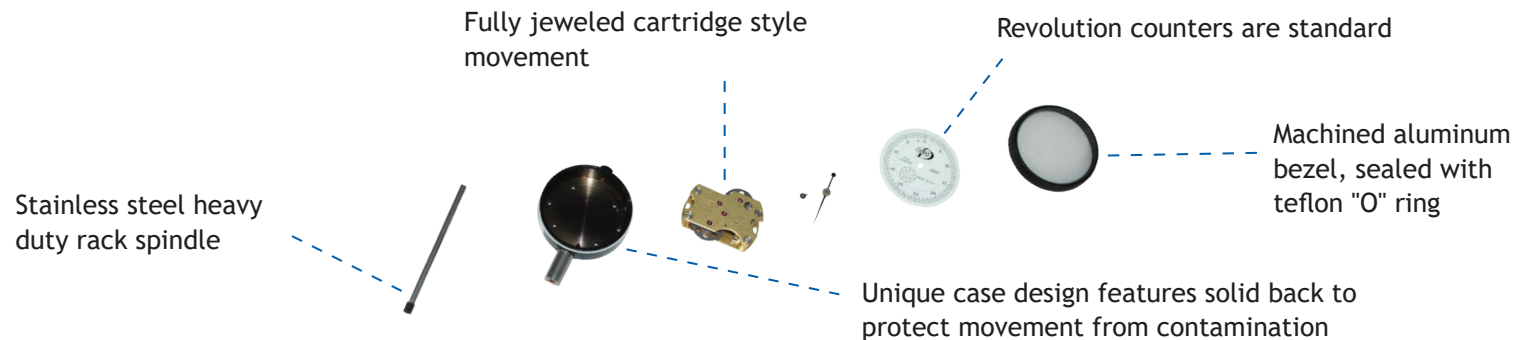
## HIGH AMPLIFICATION DIAL INDICATORS

Dorsey's high amplification dial indicators feature a shock proof "following" type jeweled movement utilizing the unique lever principle of amplification and lightweight low inertia segmented precision gears for unparalleled accuracy and repeatability.



## TRADITIONAL DIAL INDICATORS

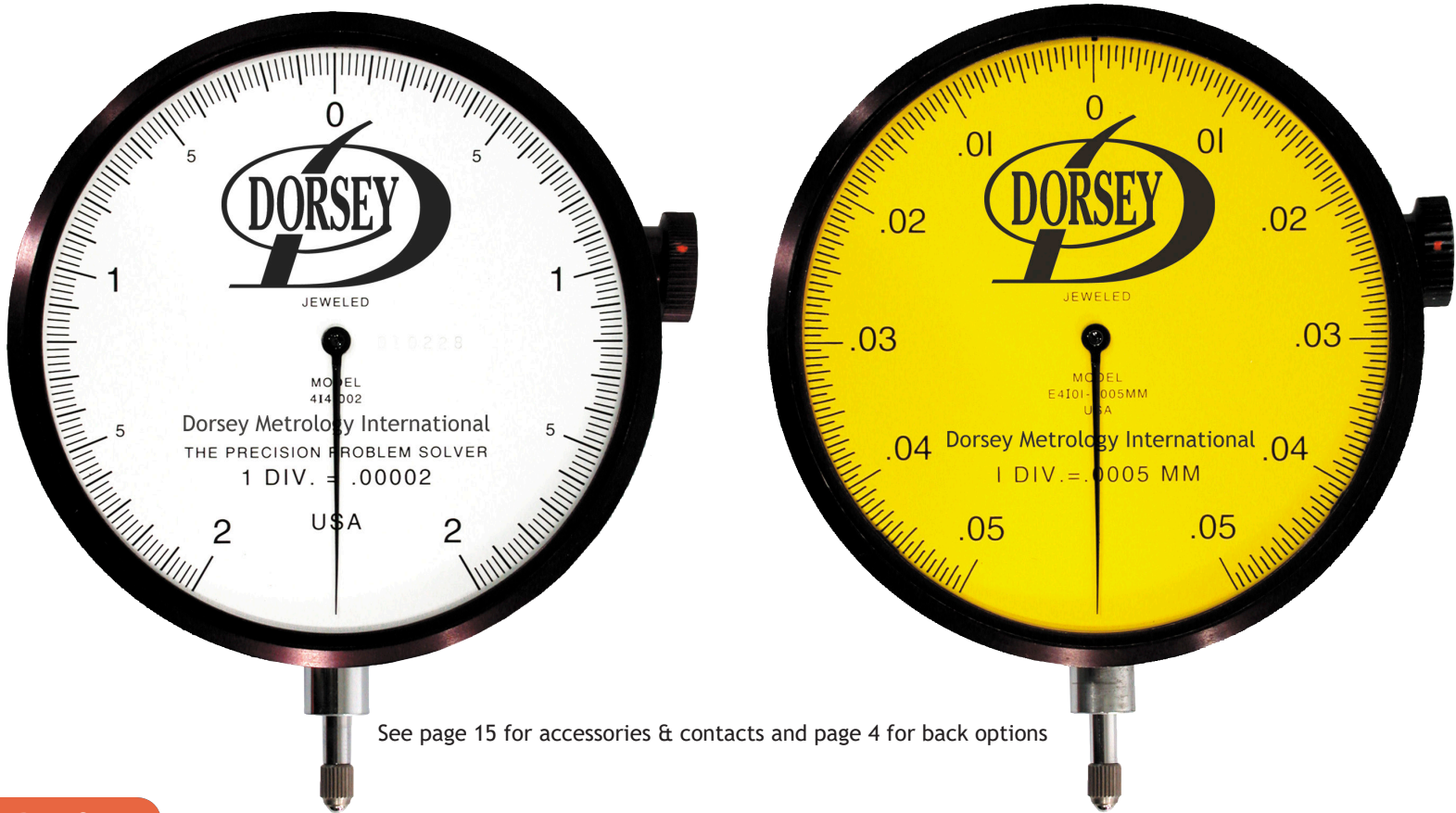
Dorsey's traditional rack and pinion dial indicators feature heavy duty cases, massive gears & spindles, and fully jeweled hardened stainless steel cartridge style movements.



20 MILLIONTHS THAT YOU CAN ACTUALLY READ!

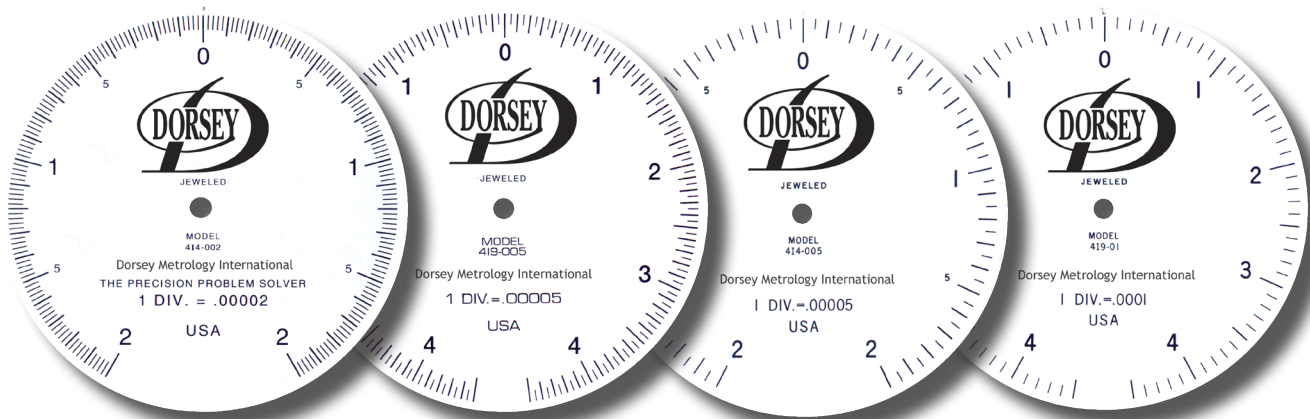
FEATURES:

- Available with ISO 17025 certification
- High amplification movement permits:
  - Graduations as fine as 0.00002"
  - Improved readability and minimized judgement error
  - Performance comparable to more expensive gaging methods
  - Convenient portability - no external connections required
  - Interchangeability - can be used in the same environment as any other mechanical dial indicator
- Lever principle of amplification - minimizes effect of spindle sideshake, linearity and repeatability maintained through millions of cycles
- 3-5/8" bezel - conforms to ANSI/AGD standards
- Adjustable gaging force - easily adjustable from 2 to 5 oz. by externally accessible screw
- External zero adjustment knob - makes possible the advantage of adjusting indicator hand to zero rather than rotating bezel to 'zero' hand



See page 15 for accessories & contacts and page 4 for back options

PRECISION PROBLEM SOLVING



| INCH MODEL    | 414-002                      | 419-005                     | 414-005                     | 419-01                      |
|---------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Graduation    | .00002"                      | .00005"                     | .00005"                     | .0001"                      |
| Total Travel  | .004"                        | .009"                       | .004"                       | .009"                       |
| Dial          | .002"-0-.002"                | .0045"-0-.0045"             | .002"-0-.002"               | .0045"-0-.0045"             |
| Revolutions   | 1 Rev.                       | 1 Rev.                      | 1 Rev.                      | 1 Rev.                      |
| Accuracy      | +/- .00002"                  | +/- .00005"                 | +/- .00005"                 | +/- .0001"                  |
| Repeatability | +/- 10 millionths (.000010") | +/-10 millionths (.000010") | +/-10 millionths (.000010") | +/- 20 millionths (.00002") |



| METRIC MODEL  | 4101-0005mm            | 4101-001mm            | *4102-002mm           |
|---------------|------------------------|-----------------------|-----------------------|
| Graduation    | 0.0005mm               | 0.001mm               | 0.002mm               |
| Total Travel  | 0.1mm                  | 0.1mm                 | 0.2mm                 |
| Dial          | 0.05-0-0.05mm          | 0.05-0-0.05mm         | 0.10-0-0.10mm         |
| Revolutions   | 1 Rev.                 | 1 Rev.                | 1 Rev.                |
| Accuracy      | less than +/- 0.0005mm | less than +/- 0.001mm | less than +/- 0.002mm |
| Repeatability | +/- 0.0001mm           | +/- 0.0002mm          | +/- 0.0004mm          |

\* Special order

Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.



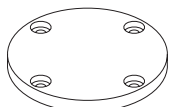


FEATURES:

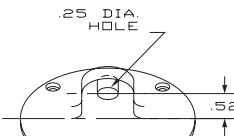
- Available with ISO 17025 certification
- High amplification movement - graduations as fine as .00005"
  - Improves readability and minimizes judgement error
- Lever principle of amplification - minimizes effect of spindle sideshake
  - Linearity and repeatability maintained through millions of cycles
- 2-15/16" Bezel - fits many existing fixtures, conforms to ANSI/AGD standards
- Adjustable gaging force - easily adjusts from 2 to 5 ounces by externally accessible screw
- External zero adjustment knob makes possible the advantage of adjusting indicator hand to zero rather than rotating bezel to 'zero' hand

See page 15 accessories and contacts options

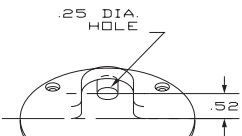
Indicator back options for Group 3 & 4



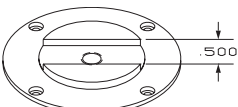
Flat  
Part # 49162



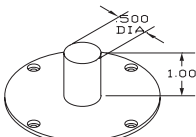
Lugback  
Part# 49161



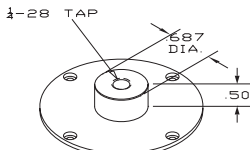
Offset Lugback  
Part # 49160



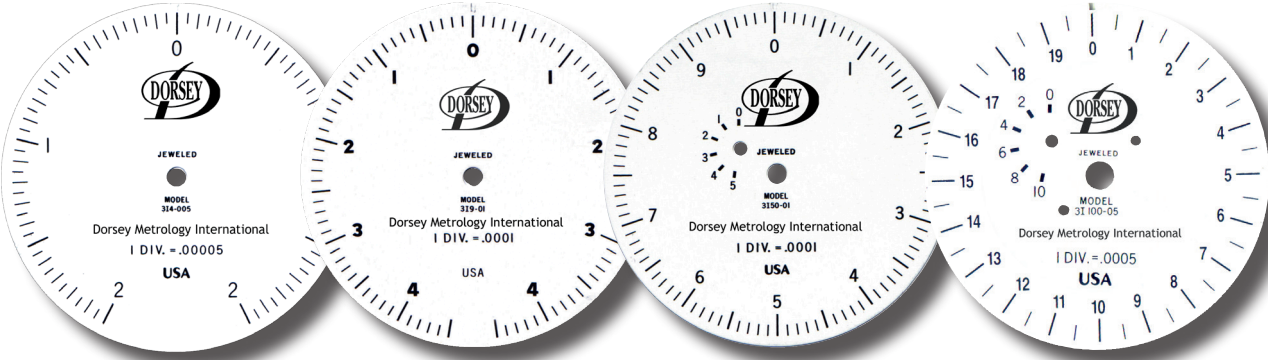
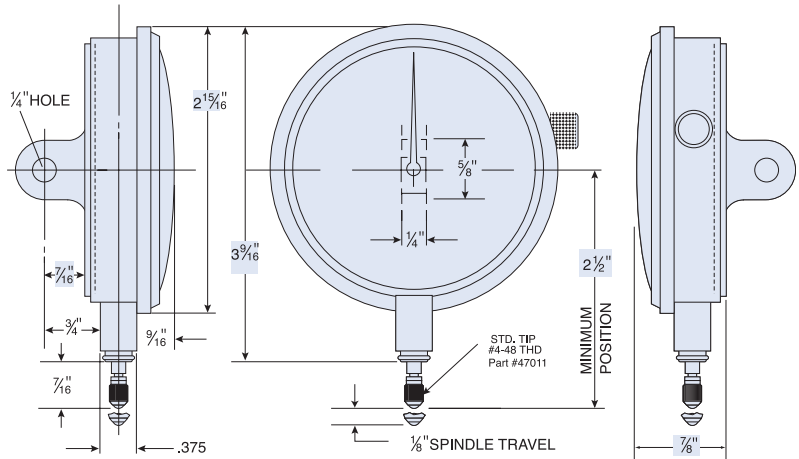
Slideback  
Part # 49188



Postback  
Part #49293

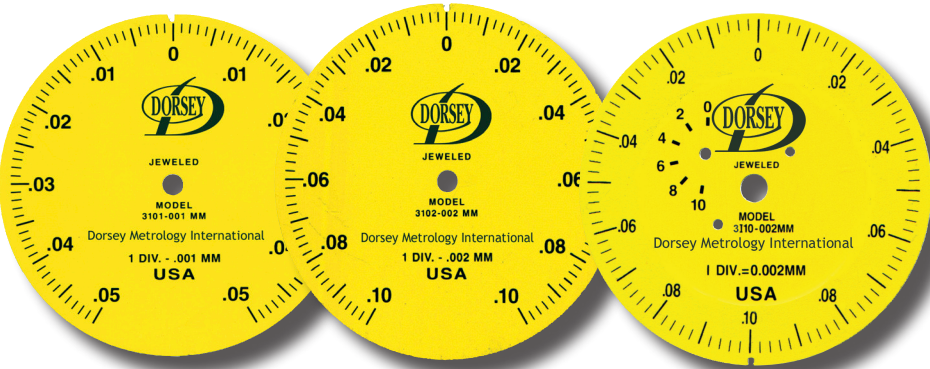


Screwback  
Part # 49201



| MODEL         | 314-005       | 319-01          | 3150-01     | *31100-05  |
|---------------|---------------|-----------------|-------------|------------|
| Graduation    | .00005"       | .0001"          | .0001"      | .0005"     |
| Total Travel  | .004"         | .009"           | .050"       | .100"      |
| Dial          | .002"-0-.002" | .0045"-0-.0045" | 0-.005"-0   | 0-.010"-0  |
| Revolutions   | 1 Rev.        | 1 Rev.          | 5 Rev.      | 5 Rev.     |
| Accuracy      | +/- .00005"   | +/- .0001"      | +/- .0001"  | +/- .0005" |
| Repeatability | +/- .00002"   | +/- .00002"     | +/- .00002" | +/- .0001" |

\* Special order



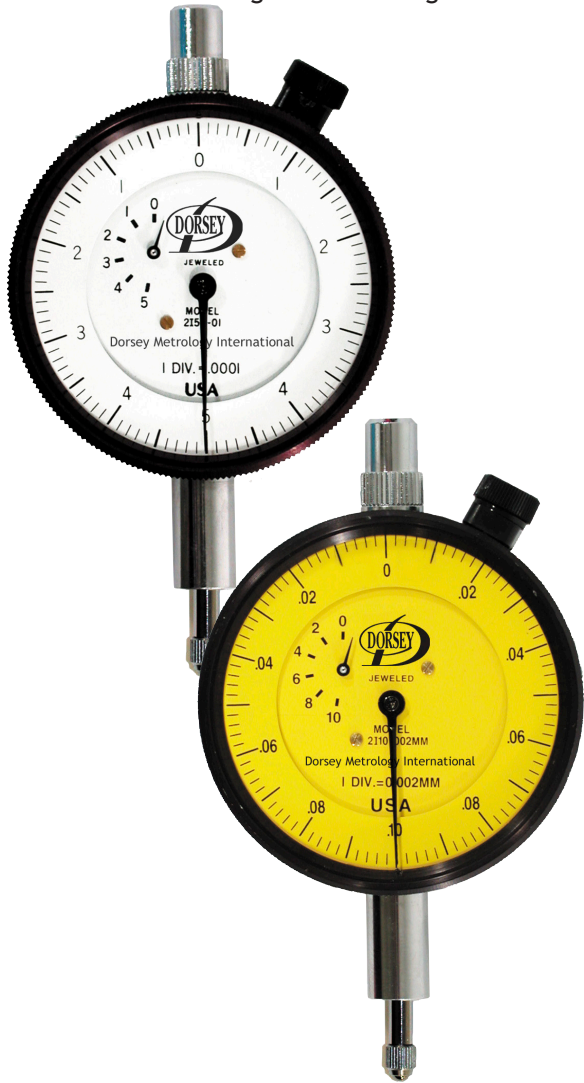
| MODEL         | 3101-001mm    | 3102-002mm    | *3110-002mm  |
|---------------|---------------|---------------|--------------|
| Graduation    | 0.001mm       | 0.002mm       | 0.002mm      |
| Total Travel  | 0.1mm         | 0.2mm         | 1.0mm        |
| Dial          | 0.05-0-0.05mm | 0.10-0-0.10mm | 0.5-0-0.5mm  |
| Revolutions   | 1 Rev.        | 1 Rev.        | 5 Rev.       |
| Accuracy      | +/- 0.001mm   | +/- 0.002mm   | +/- 0.002mm  |
| Repeatability | +/- 0.0005mm  | +/- 0.0005mm  | +/- 0.0005mm |

\* Special order

Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.

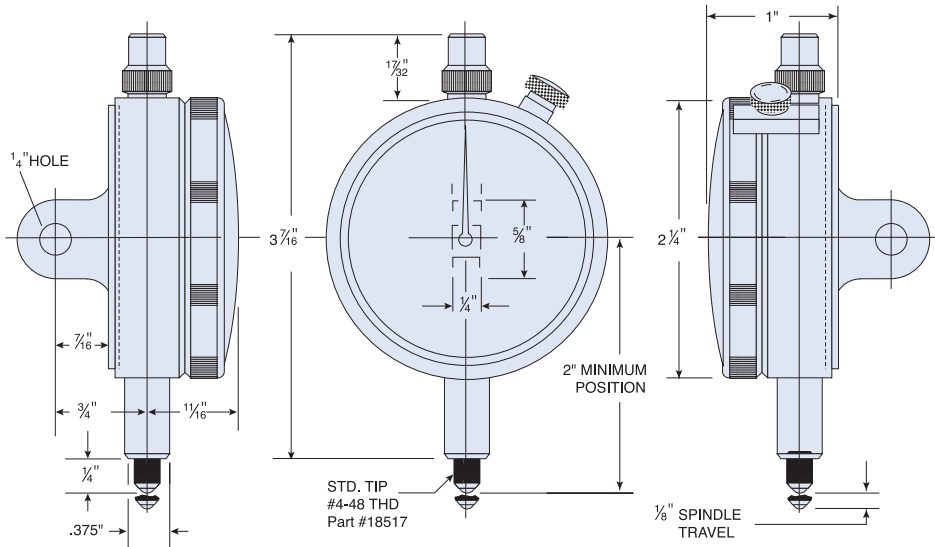


All Dorsey Ultra High Amplification Indicators utilize the lever principle of motion. They do not rely on rack and pinion motion. This eliminates the inherent error between the meshing of racks and gears.

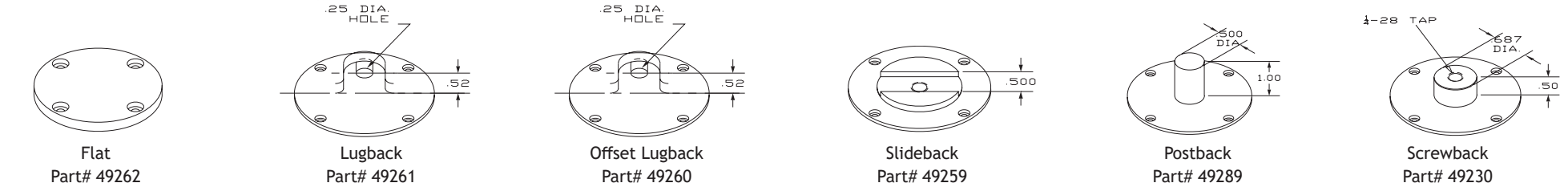


FEATURES:

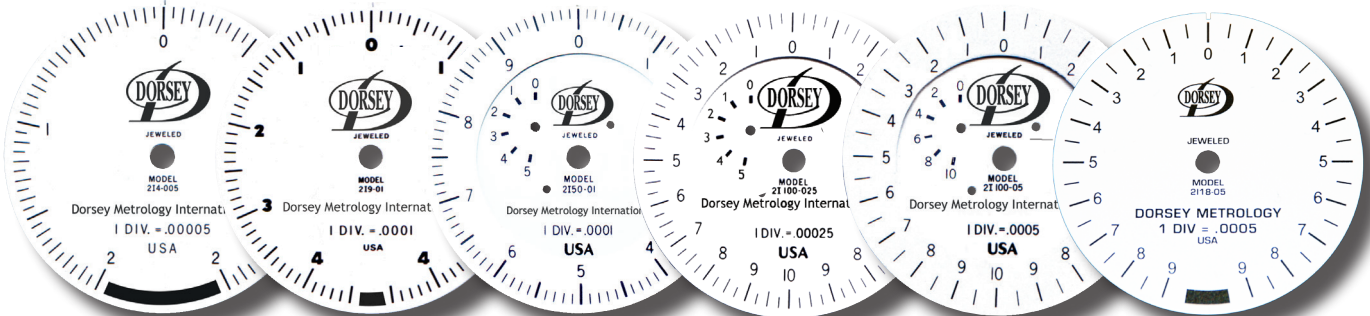
- Available with ISO 17025 certification
- High amplification movement - graduations as low as .00005"
  - Improves readability and minimizes judgement error
- Lever principle of amplification - minimizes effect of spindle sideshake
  - Linearity and repeatability maintained through millions of cycles
- 2.25" Bezel - fits many existing fixtures, conforms to ANSI/AGD standards
- Low gaging force - standard is 3 oz
- Hardened steel stem is designed for clamping; virtually crush proof
- Bezel zero adjustment - ensures positive lock
- Straight through spindle - permits installation of top mounted accessories and options
- Shaded dials to facilitate production gaging



Indicator back options for High Amplification Group 2



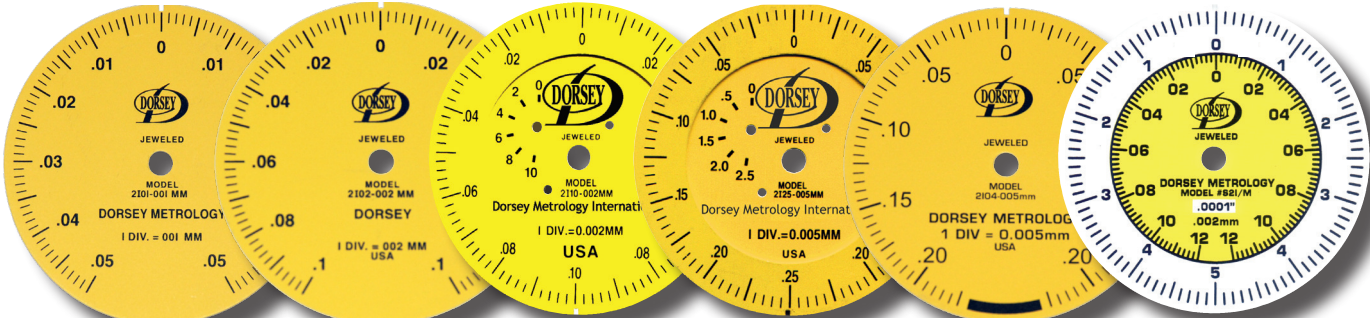
See page 14 for dial face options, page 15 for accessories and contacts.



| MODEL         | 214-005       | 219-01          | 2150-01     | 21100-025   | 21100-05   | 2118-05       |
|---------------|---------------|-----------------|-------------|-------------|------------|---------------|
| Graduation    | .00005"       | .0001"          | .0001"      | .00025"     | .0005"     | .0005"        |
| Total Travel  | .004"         | .009"           | .050"       | .100"       | .100"      | .018"         |
| Dial*         | .002"-0-.002" | .0045"-0-.0045" | 0-.005"-0** | 0-.010"-0   | 0-.010"-0  | .009"-0-.009" |
| Revolutions   | 1 Rev.        | 1 Rev.          | 5 Rev.      | 5 Rev.      | 5 Rev.     | 1 Rev.        |
| Accuracy      | +/- .00005"   | +/- .0001"      | +/- .0001"  | +/- .00025" | +/- .0005" | +/- .0005"    |
| Repeatability | +/- .00001"   | +/- .00002"     | +/- .00002" | +/- .00005" | +/- .0001" | +/- .0001"    |



For extended indicator stem of 3 inches add D4- as prefix. Example: D4-2150-01



| MODEL         | 2101-001mm   | 2102-002mm   | 2110-002mm   | 2125-005mm  | 2104-005mm  | S21/M                 |
|---------------|--------------|--------------|--------------|-------------|-------------|-----------------------|
| Graduation    | 0.001mm      | 0.002mm      | 0.002mm      | 0.005mm     | 0.005mm     | .0001" (0.002mm)      |
| Total Travel  | 0.1mm        | 0.2mm        | 1.0mm        | 2.5mm       | 0.4mm       | .010" / 0.24mm        |
| Dial*         | .05-0-.05mm  | .10-0-.10mm  | 0-.10mm-0    | 0-.25mm-0   | .20-0-.20mm | 0-.005"-0             |
| Revolutions   | 1 Rev.       | 1 Rev.       | 5 Rev.       | 5 Rev.      | 1 Rev.      | 1 Rev.                |
| Accuracy      | +/- 0.001mm  | +/- 0.002mm  | +/- 0.002mm  | +/- 0.005mm | +/- 0.005mm | +/- .0001" (0.002mm)  |
| Repeatability | +/- 0.0002mm | +/- 0.0004mm | +/- 0.0004mm | +/- 0.001mm | +/- 0.001mm | +/- .00002" (.0005mm) |



For perpendicular indicator add -90 as suffix. Example: 2101-001mm-90

Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.

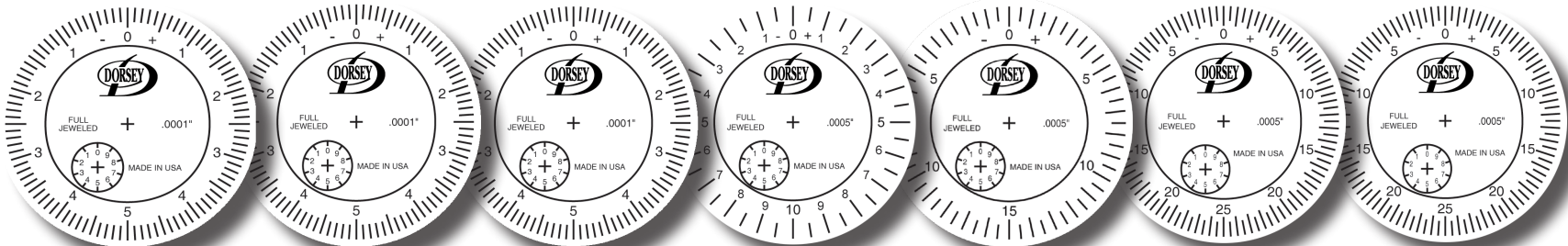
\*Balanced dial shown

\*\*Continuous dial

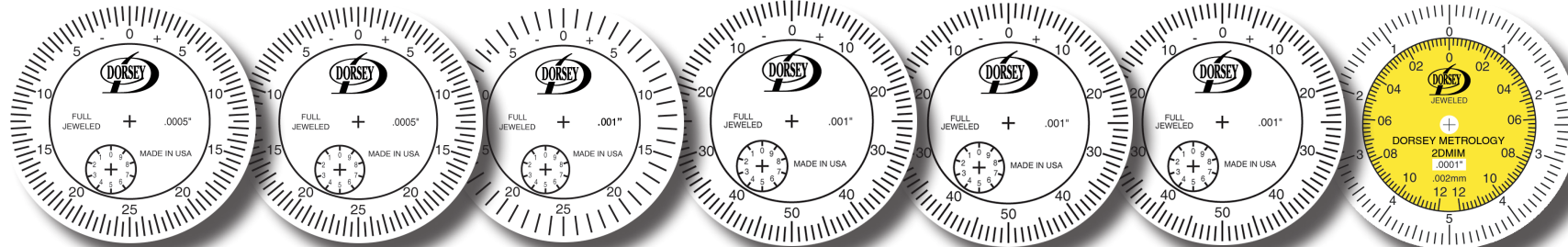


FEATURES:

- Precision rack and pinion design
- Protective case opens from front to protect movement from contamination
- Fully jeweled movement with revolution counter
- Universal .375" diameter stem with #4-48 spindle thread
- Balanced and continuous dial faces available



| MODEL        | 2DM025-01 | 2DM100-01 | 2DM500-01 | 2DM050-05 | 2DM075-05 | 2DM125-05 | 2DM250-05 |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Graduation   | .0001"    | .0001"    | .0001"    | .0005"    | .0005"    | .0005"    | .0005"    |
| Total Travel | .025"     | .100"     | .500"     | .050"     | .075"     | .125"     | .250"     |
| Dial*        | 0-.005"-0 | 0-.005"-0 | 0-.005"-0 | 0-.010"-0 | 0-.015"-0 | 0-.025"-0 | 0-.025"-0 |
| Revolutions  | 2.5 Rev.  | 10 Rev.   | 50 Rev.   | 2.5 Rev.  | 2.5 Rev.  | 2.5 Rev.  | 5 Rev.    |
| Travel/Rev.  | .010"     | .010"     | .010"     | .020"     | .030"     | .050"     | .050"     |

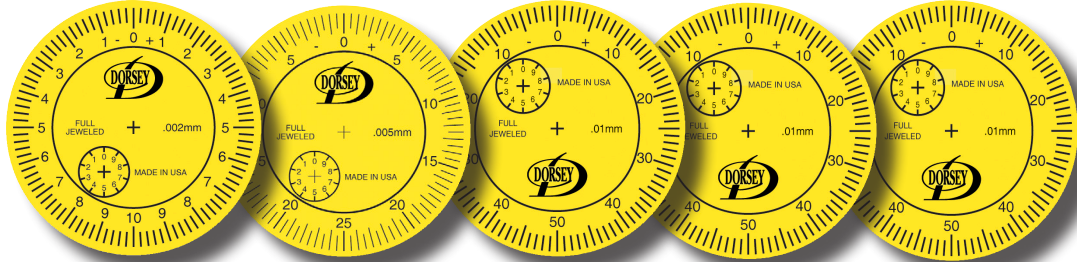


| MODEL        | 2DM500-05 | 2DM1000-05 | 2DM125-10 | 2DM250-10 | 2DM500-10 | 2DM1000-10 | 2DMIM          |
|--------------|-----------|------------|-----------|-----------|-----------|------------|----------------|
| Graduation   | .0005"    | .0005"     | .001"     | .001"     | .001"     | .001"      | .0001"/0.002mm |
| Total Travel | .500"     | 1.00"      | .125"     | .250"     | .500"     | 1.00"      | .010"/0.24mm   |
| Dial*        | 0-.025"-0 | 0-.025"-0  | 0-.025"-0 | 0-.050"-0 | 0-.050"-0 | 0-.050"-0  | 0-.005"-0      |
| Revolutions  | 10 Rev.   | 20 Rev.    | 5 Rev.    | 2.5 Rev.  | 5 Rev.    | 10 Rev.    | 1 Rev.         |
| Travel/Rev.  | .050"     | .050"      | .050"     | .100"     | .100"     | .100"      | .010"/0.24mm   |

Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.

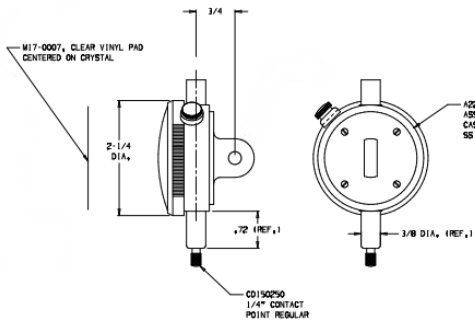
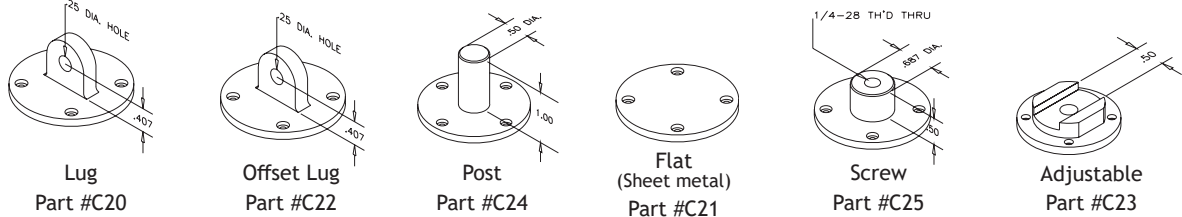
\*Balanced dial shown

TRADITIONAL DIAL INDICATORS, GROUP 2



| MODEL        | 2DM005-002mm | 2DM012-005mm | 2DM5-01mm  | 2DM10-01mm | 2DM25-01mm |
|--------------|--------------|--------------|------------|------------|------------|
| Graduation   | 0.002mm      | 0.005mm      | 0.01mm     | 0.01mm     | 0.01mm     |
| Total Travel | .5mm         | 1.25mm       | 5mm        | 10mm       | 25mm       |
| Dial*        | 0-0.10mm-0   | 0-0.25mm-0   | 0-0.50mm-0 | 0-0.50mm-0 | 0-0.50mm-0 |
| Revolutions  | 2.5 Rev.     | 2.5 Rev.     | 5 Rev.     | 10 Rev.    | 25 Rev.    |
| Travel/Rev.  | 0.200mm      | 0.50mm       | 1.0mm      | 1.0mm      | 1.0mm      |

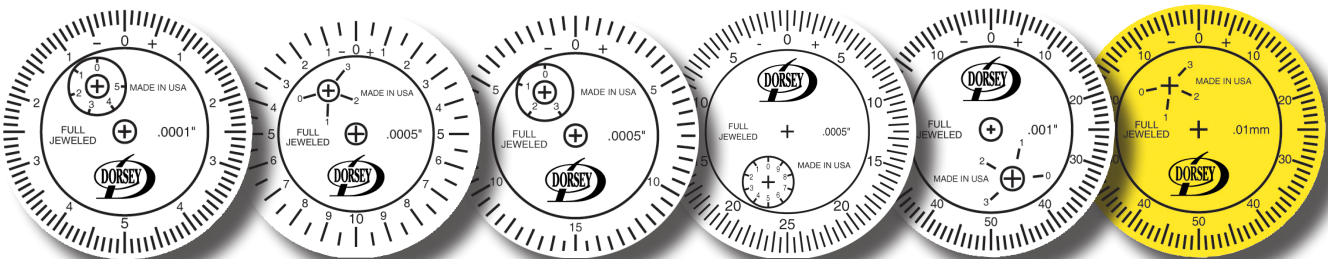
BACK OPTIONS FOR GROUP 2



Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.

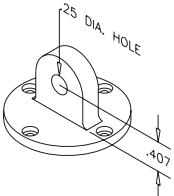
\*Balanced dial shown

GROUP 1 TRADITIONAL DIAL INDICATORS

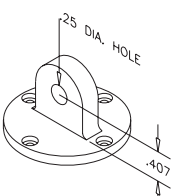


| MODEL        | 1DM025-01 | 1DM050-05 | 1DM075-05 | 1DM125-05 | 1DM250-10 | 1DM2-01mm  |
|--------------|-----------|-----------|-----------|-----------|-----------|------------|
| Graduation   | .0001"    | .0005"    | .0005"    | .0005"    | .001"     | 0.01mm     |
| Total Travel | .025"     | .050"     | .075"     | .125"     | .250"     | 2.5mm      |
| Dial*        | 0-.005"-0 | 0-.010"-0 | 0-.015"-0 | 0-.025"-0 | 0-.050"-0 | 0-.050mm-0 |
| Revolutions  | 2.5 Rev.  | 2.5 Rev.  | 2.5 Rev.  | 2.5 Rev.  | 2.5 Rev.  | 2.5 Rev.   |
| Travel/Rev.  | .010"     | .020"     | .030"     | .050"     | .100"     | 1.0mm      |

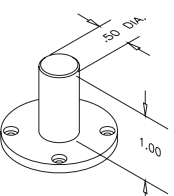
BACK OPTIONS FOR GROUP 1



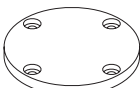
Lug  
Part #C201



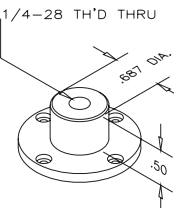
Offset Lug  
Part #C221



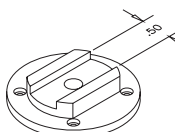
Post  
Part #C241



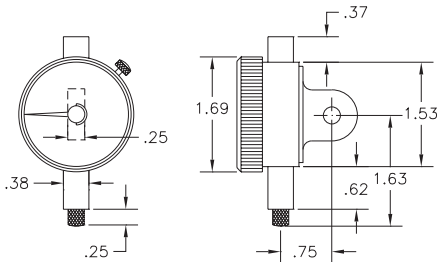
Flat  
Part #C211



Screw  
Part #C251



Adjustable  
Part #C231

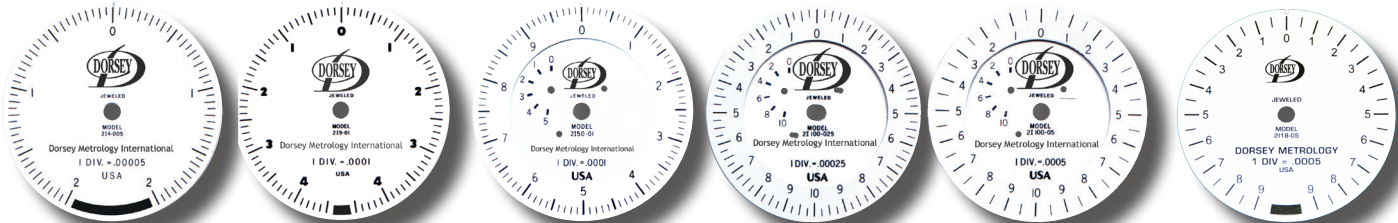


Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.

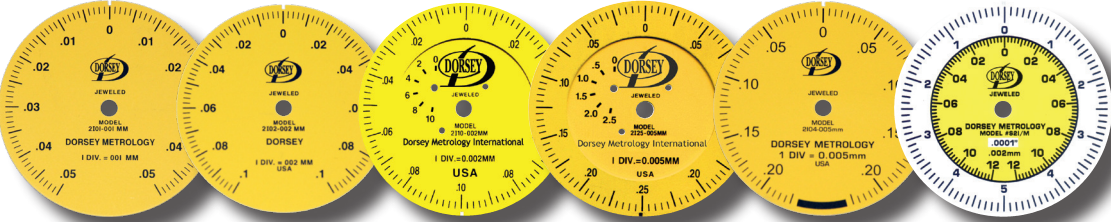
\*Balanced dial shown

HIGH AMPLIFICATION DIAL INDICATING UNIT FEATURES

- Shock proof fully jeweled Dorsey high amplification movement
- Cartridge style movement
- Heavy duty aluminum housing
- Directly interchangeable with Standard Gage® Brown and Sharp bore gaging products
- All resolutions feature .125" spindle travel



| Model          | DS-214-005    | DS-219-01       | DS-2150-01   | DS-21100-025 | DS-21100-05 | DS-2118-05    |
|----------------|---------------|-----------------|--------------|--------------|-------------|---------------|
| Graduation     | .00005"       | .0001"          | .0001"       | .00025"      | .0005"      | .0005"        |
| Total Travel** | .004"         | .009"           | .050"        | .100"        | .100"       | .018"         |
| Dial*          | .002"-0-.002" | .0045"-0-.0045" | 0-.005"-0    | 0-.010"-0    | 0-.010"-0   | .009"-0-.009" |
| Revolutions    | 1 Rev.        | 1 Rev.          | 3 Rev.       | 3 Rev.       | 3 Rev.      | 1 Rev.        |
| Accuracy       | +/- 0.00005"  | +/- 0.0001"     | +/- 0.0001"  | +/- 0.00025" | +/- 0.0005" | +/- .0005"    |
| Repeatability  | +/- 0.00001"  | +/- 0.00002"    | +/- 0.00002" | +/- 0.00005" | +/- 0.0001" | +/- .0001"    |



| Model         | DS-2101-001mm | DS-2102-002mm | DS-2110-002mm | DS-2125-005mm | DS-2104-005mm | DS-21/M               |
|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|
| Graduation    | 0.001mm       | 0.002mm       | 0.002mm       | 0.005mm       | 0.005mm       | .0001" (0.002mm)      |
| Total Travel  | 0.1mm         | 0.2mm         | 1.0mm         | 2.5mm         | 0.4mm         | .010" / 0.24mm        |
| Dial*         | 0-0.05mm-0    | 0-0.10mm-0    | 0-0.10mm-0    | 0-0.25mm-0    | 0-0.25mm-0    | 0-.005"-0             |
| Revolutions   | 1 Rev.        | 1 Rev.        | 3 Rev.        | 3 Rev.        | 1 Rev.        | 1 Rev.                |
| Accuracy      | +/- 0.001mm   | +/- 0.002mm   | +/- 0.002mm   | +/- 0.005mm   | +/- 0.005mm   | +/- .0001" (.002mm)   |
| Repeatability | +/- 0.0002mm  | +/- 0.0004mm  | +/- 0.0004mm  | +/- 0.001mm   | +/- 0.001mm   | +/- .00002" (.0005mm) |

Dials can be supplied to your specification: see page 14 for dial face options, page 15 for accessories and contacts.

\*Balanced dial shown

\*\*Indicating unit travel limited by the mechanics of the bore gage

Intended for Bore Gages

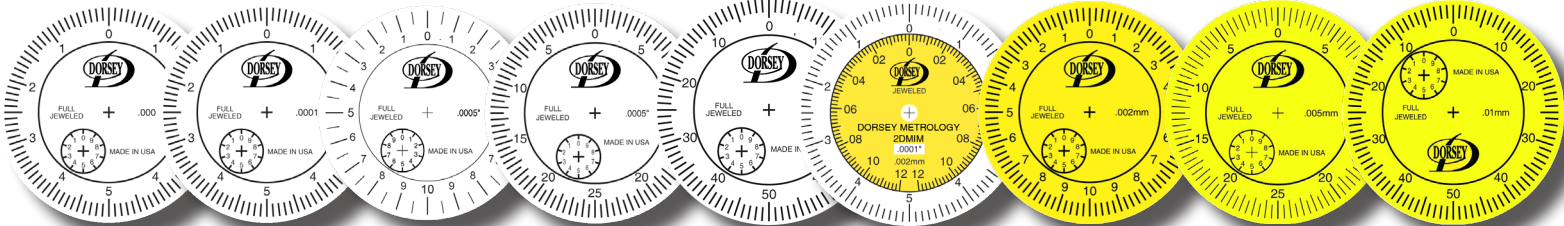


For perpendicular indicator unit add -90 as suffix.  
Example: DS-2150-01-90  
High Amplification Series only



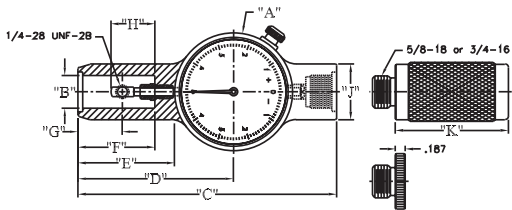
TRADITIONAL MOVEMENT (RACK & PINION MOVEMENT) FEATURES

- Precision rack and pinion design
- Protective case opens from front to protect movement from contamination
- Fully jeweled movement with revolution counter



| Model        | DS-2DM025-01 | DS-2DM100-01 | DS-2DM050-05 | DS-2DM125-05 | DS-2DM250-10 | DS-2DMIM       | DS-2DM005-002mm | DS-2DM012-005mm | DS-2DM5-01mm |
|--------------|--------------|--------------|--------------|--------------|--------------|----------------|-----------------|-----------------|--------------|
| Graduation   | .0001"       | .0001"       | .0005"       | .0005"       | .001"        | .0001"/0.002mm | 0.002mm         | 0.005mm         | 0.01mm       |
| Total Travel | .025"        | .100"        | .050"        | .125"        | .250"        | .010" / 0.24mm | .5mm            | 1.25mm          | 5mm          |
| Dial*        | 0-.005"-0    | 0-.005"-0    | 0-.010"-0    | 0-.025"-0    | 0-.050"-0    | 0-.005"-0      | 0-.10mm-0       | 0-.25mm-0       | 0-.50mm-0    |
| Revolutions  | 2.5 Rev.     | 10 Rev.      | 5 Rev.       | 2.5 Rev.     | 2.5 Rev.     | 1 Rev.         | 2.5 Rev.        | 2.5 Rev.        | 5 Rev.       |
| Travel/Rev.  | .010"        | .010"        | .020"        | .050"        | .100"        | .010"/0.24mm   | 0.200mm         | 0.50mm          | 1.0mm        |

TECHNICAL SPECIFICATIONS



Dorsey offers an integrated indicator housing for just about any application.

DIAL INDICATING UNIT HOUSING OPTIONS

| DIAL UNIT HOUSINGS |       |            |                |                     |                |
|--------------------|-------|------------|----------------|---------------------|----------------|
| DIM.               | AGD 1 | SMALL AGD2 | STANDARD AGD 2 | HEAVY DUTY AGD 2 HD | 1" SHAFT AGD 3 |
| A                  | 1.90" | 2.25"      | 2.25"          | 2.25"               | 2.75"          |
| B                  | .38"  | .50"       | .62"           | 1.00"               | 1.00"          |
| C                  | 3.50" | 4.25"      | 5.25"          | 6.12"               | 6.5"           |
| D                  | 2.42" | 2.40"      | 3.16"          | 3.66"               | 3.81"          |
| E                  | 1.50" | 1.30"      | 1.90"          | 2.40"               | 2.45"          |
| F                  | 1.00" | 1.10"      | 1.50"          | 2.00"               | 2.00"          |
| G                  | .36"  | .60"       | .84"           | 1.13"               | 1.06"          |
| H                  | .50"  | .50"       | .84"           | .88"                | 1.19"          |
| J                  | .56"  | .88"       | 1.06"          | 1.44"               | 1.44"          |
| K                  | .91"  | 2.00"      | 2.20"          | 3.00"               | 3.00"          |



For .500" dia. shaft  
Part # Example:  
DS-2I50-01-2



For .625" dia. shaft  
Part # Example:  
DS-2I50-01  
Standard unit used unless  
otherwise specified



For .625" dia shaft  
Part # Example:  
DS-2DM025-01

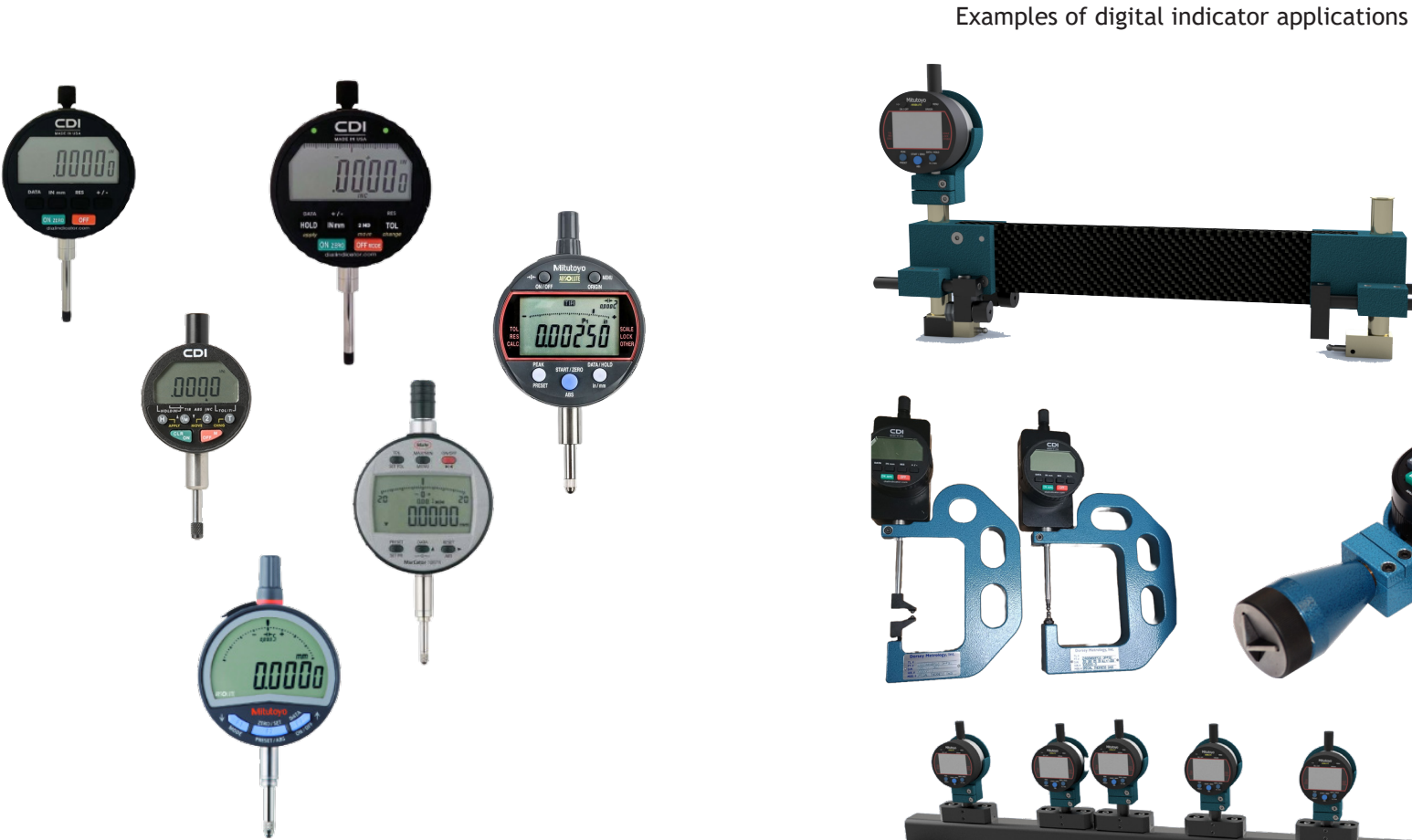


For 1" dia. shaft  
Part # Example:  
DS-2I50-01-6

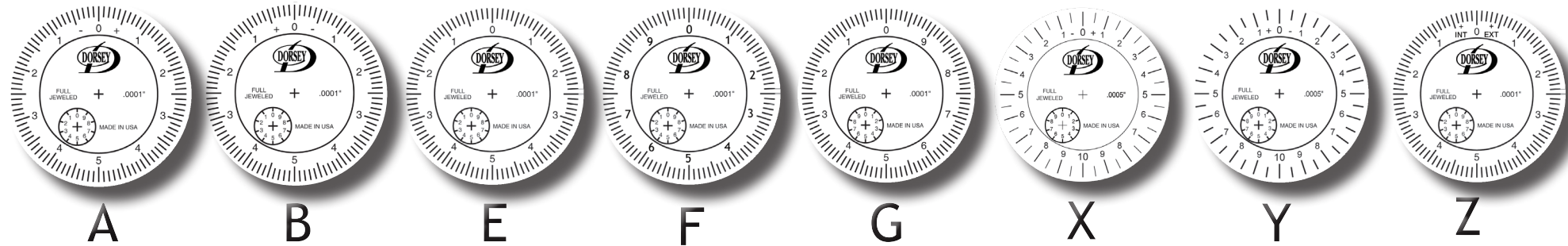


Digital or independent dial  
indicator housing  
Pt # DX4-81035 for most  
digital indicators

Dorsey offers the most popular styles of digital indicators to complement our gages. Indicators can be customer preference or we can make recommendations per application. Below are some options we offer; other manufacturers are also available.



Examples of digital indicator applications

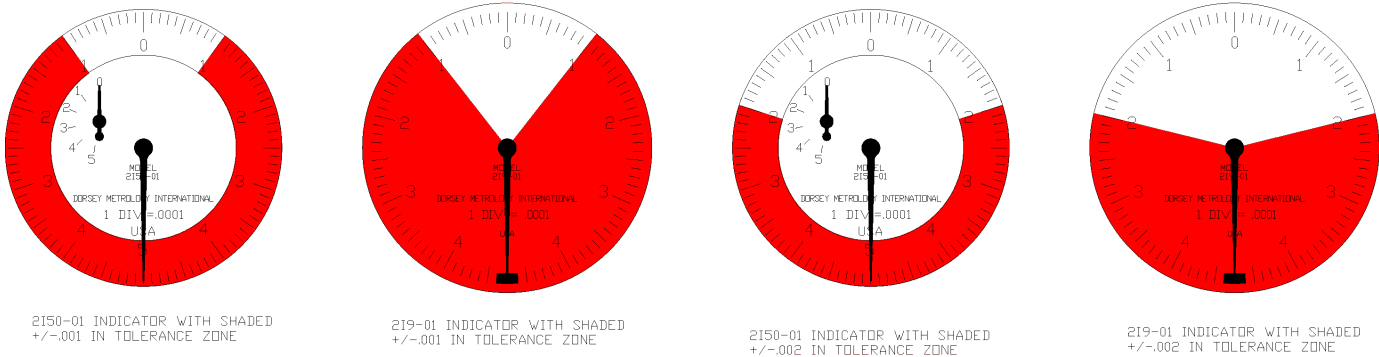


| A                               | B                               | E                        | F                              | G                                      | X  | Y                                     | Z  |
|---------------------------------|---------------------------------|--------------------------|--------------------------------|--|--|---------------------------------------|--|
| Balanced Numbering              | Balanced Numbering              | Balanced Numbering       | Continuous Clockwise Numbering | Continuous Counter-Clockwise Numbering | Preloaded  | Reversed Action                       | No Charge  |
| (Plus on right. Minus on left.) | (Plus on left. Minus on right.) | (Plus and minus omitted) |                                |  | When the indicator contact is fully depressed, the Rev. counter shows "0" and the large hand is at 6 o'clock | Indicator spindle is spring loaded up | Both internal and external on outer dial for ID/OD gages |
| Note: For Snap/OD gages         | Note: For Bore/ID gages         |                          |                                |  |  | A.K.A. pushdown indicator             |  |

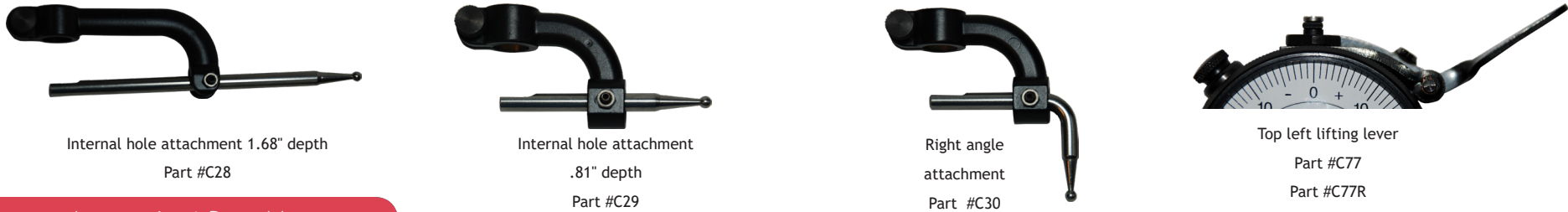
The letter designating the dial format follows the indicator part number. Example #1: 2I50-01B, Example #2: 2DM100-01B

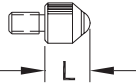
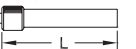
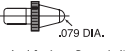

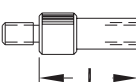
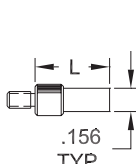
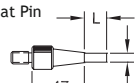
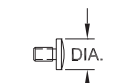
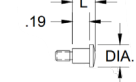
OPTIONAL SPECIAL SHADED DIALS




Note: examples shown here, please specify your required tolerance zone when ordering

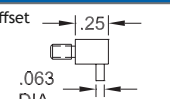
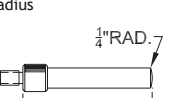
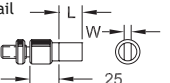
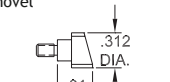
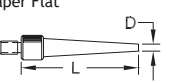
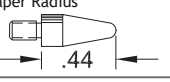


TRADITIONAL DIAL INDICATOR OPTIONS



| CONTACTS  | PART #  | MATERIAL | L      | DIA/ or RAD             |
|---|---------|----------|--------|-------------------------|
|    | 18517   | Steel    | .235"  | (#2 Std) .125" Ball     |
|   | 47011   | Steel    | .276"  | (#3 & 4 Std) .125" Ball |
|   | 18518   | Steel    | .375"  | .125" Ball              |
|   | 18519   | Ruby     | .276"  | .125" Ball              |
|   | 18520   | Carbide  | .276"  | .250" Radius            |
|   | 47936   | Ruby     | .276"  | .180" Radius            |
| Blank (Soft)<br>   | 47066   | Steel    | 1.00"  | .156" Dia.              |
| Extended Range<br><br>Standard for Long Range Indicators | 16631   | Steel    | .236"  |                         |
| Extended Shovel<br>                                      | 4082-ES | Carbide  |        | .125" Dia.              |
|    | 18531   | Steel    | .312"  | .156" Dia.              |
|   | 47072   | Steel    | .500"  | .156" Dia.              |
|   | 47071   | Steel    | 1.000" | .156" Dia.              |
|   | 162     | Steel    | .30"   | 4-48 male to M 2.5      |
|   | 163     | Steel    | .30"   | M 2.5 male to 4-48      |
|   | 164     | Steel    | .37"   | 5-44 male to 4-48       |
|    | 47937   | Steel    | .250"  | .156" Dia.              |
|   | 47076   | Steel    | .500"  | .156" Dia.              |
|   | 47079   | Steel    | .750"  | .156" Dia.              |
|   | 47074   | Steel    | 1.00"  | .156" Dia.              |
|   | 18532   | Carbide  | .250"  | .187" Dia.              |
|   | 18533   | Carbide  | .500"  | .187" Dia.              |
|   | 18534   | Carbide  | .750"  | .187" Dia.              |
|   | 18535   | Carbide  | 1.00"  | .187" Dia.              |
|   | 18524   | Steel    | .100"  | .020" Dia.              |
|   | 18525   | Steel    | .100"  | .040" Dia.              |
|    | 18526   | Steel    | .200"  | .060" Dia.              |
|   | 18527   | Steel    | .500"  | .080" Dia.              |
|   | 297-S   | Steel    |        | .250" Dia.              |
|   | 297-C   | Carbide  |        | .250" Dia.              |
|    | 298-S   | Steel    |        | .500" Dia.              |
|   | 110     | Steel    | .250"  | .250" Dia.              |
|   | 110-L   | Steel    | .350"  | .250" Dia.              |
| Needle<br>   | 3655    | Steel    |        |                         |

| CONTACTS  | PART # | MATERIAL | L                | DIA/ or RAD |
|---|--------|----------|------------------|-------------|
|                    | 175-1  |          | .040" Thick      |             |
|   | 175-2  |          | .060" Thick      |             |
|   | 175-3  |          | .090" Thick      |             |
| Use between indicator and spindle to extend contact reach.  |        |          |                  |             |
| Stem Bushing<br>   | 125    |          | .375             |             |
| Used to adapt 8mm indicator stem to 3/8" hole.  |        |          |                  |             |
| Helping Spring<br> | 120    |          | .230" Dia. X.56" |             |
| Used in conjunction with part #110 mushroom shoulder contact to increase spindle pressure.            |        |          |                  |             |

|   | PART#    | MATERIAL | L      | DIA/ or RAD            |
|---|----------|----------|--------|------------------------|
| Offset<br> | 2740     | Steel    |        |                        |
|   | 2740-C   | Carbide  |        |                        |
|            | 47075    | Steel    | .500"  | .156" Dia., .25" Rad.  |
|   | 47080    | Steel    | .750"  | .156" Dia., .25" Rad.  |
|   | 47073    | Steel    | 1.000" | .156" Dia., .25" Rad.  |
|   | 112      | Steel    | .250"  | .187" Dia., .187" Rad. |
|            | 18528    | Steel    | .100"  |                        |
|   | 18529    | Steel    | .150"  |                        |
|   | 18530    | Steel    | .200"  |                        |
|          | 4082-SN  | Steel    |        | With locknut           |
|   | 4085-CSN | Carbide  |        | With locknut           |
|   | 4082-ESN | Carbide  |        | Extended / nut         |
|          | 18522    | Carbide  | .375"  | .040" Dia.             |
|   | 47077    | Steel    | 1.00"  | .060" Dia.             |
|   | 47943    | Carbide  | 1.00"  | .060" Dia.             |
|          | 302-S    | Steel    |        |                        |
|   | 302-C    | Carbide  |        |                        |



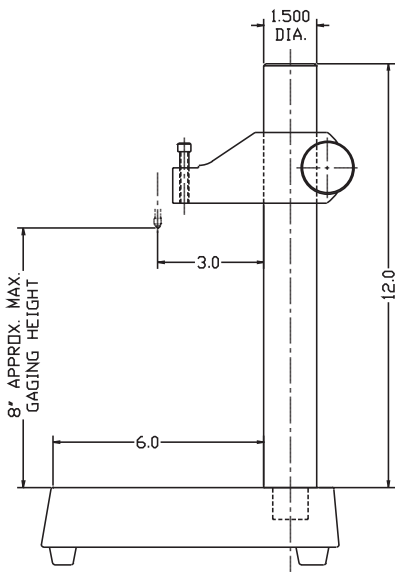
# E1 COMPARATOR STAND

www.dorseymetrology.com

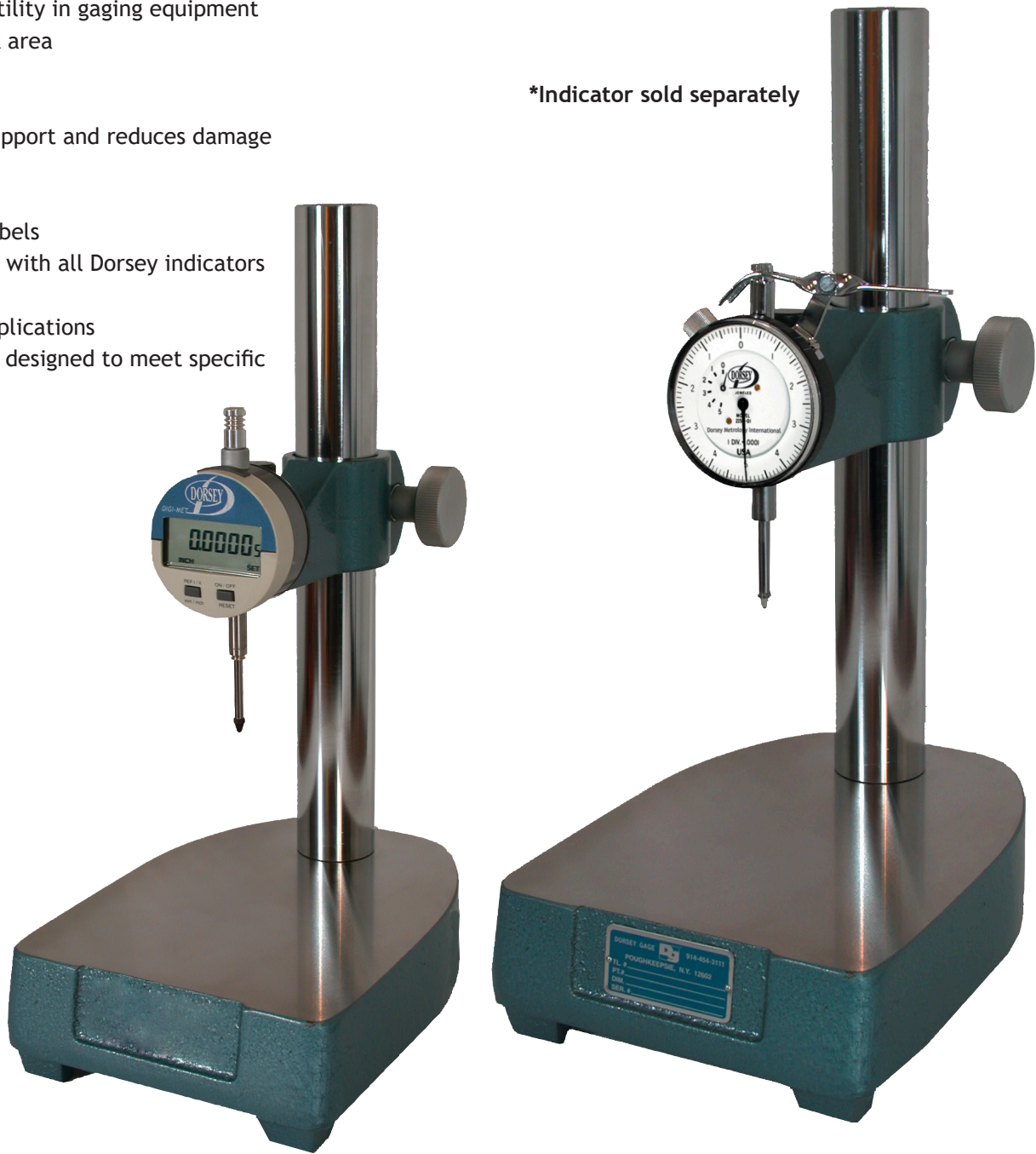
The Dorsey E1 comparator stand is specially designed for use in production and shop areas. The comparator stand has a large base and 3" throat clearance to give the user maximum flexibility for measuring various size pieces. This product may be used with any of Dorsey's dial or digital indicators.

## FEATURES:

- Rugged design - built to meet requirements for greater versatility in gaging equipment
- 6" x 5.88" machined and precision ground base - greater work area
- 9" maximum gaging capacity
- 3" throat clearance - will accommodate various size parts
- Three point head clamping - assures positive dial indicator support and reduces damage due to overtightening
- Portable from one location to another
- Recessed nameplate - provides area for shop identification labels
- Accommodates all AGD indicators - specially designed for use with all Dorsey indicators with a horizontal mounting lug
- Adjustment head can be locked and sealed for production applications
- Special applications: rests, nests, and holding fixtures can be designed to meet specific part configurations
- Steel base and stainless steel column



| PART #   | DESCRIPTION                        |
|----------|------------------------------------|
| 48656    | E1 STAND                           |
| 48656-S3 | E1 STAND WITH FINE ADJUSTMENT HEAD |



\*Indicator sold separately

# S2 COMPARATOR STAND

845-454-3111 | 800-549-4243

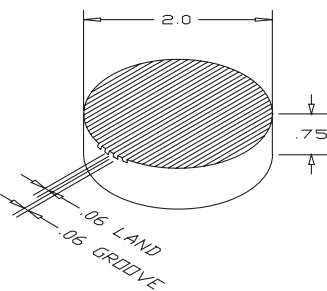
The S2 precision comparator stand was designed for manufacturing areas requiring high accuracy such as grinding and inspection departments. It is recommended for use with all Dorsey high amplification dial and digital indicators, but will accommodate other gaging devices having a standard .375" or 8mm diameter mounting stem.

The S2N production and shop area comparator stand is specifically designed without fine adjustment for use with digital indicators, long range indicators, and electronic probes with remote readouts. The S2N stand maximum gaging height is 4.0" inches and the throat clearance is 2.4".

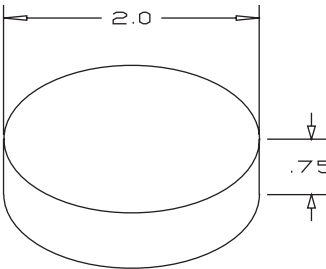
## FEATURES:

- Unique fine adjustment head - Dorsey's frictionless reed spring design prevents backlash and drifting
  - Ensures rapid, precise zero positioning of any dial indicator
  - Permits Dorsey high amplification dial indicators or other gaging instruments of equal sensitivity to perform to their full capability of measuring to millionths of an inch repetitively and accurately
- Ground stainless steel columns provide maximum wear and corrosion resistance
- Precision machined and ground cast base ensures perpendicularity of column to anvil
- Anvils for the S2 and S2N are made from hardened and lapped high grade tool steel

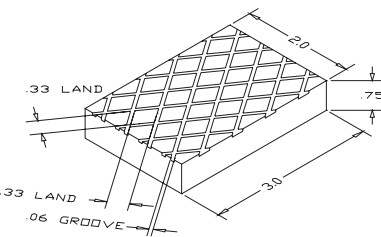
Part# 47141  
Straight serrated surface anvil 2" dia.



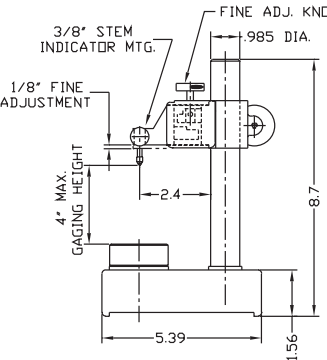
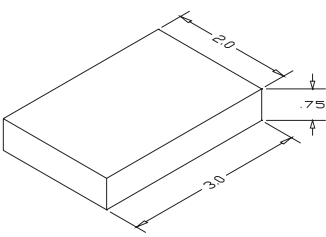
Part# 47113  
Flat surface anvil 2" dia.



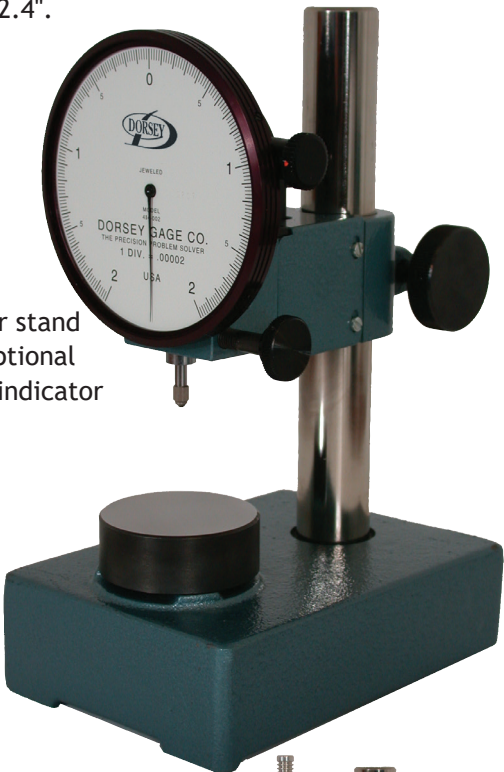
Part# 47139  
Flat diamond serrated surface anvil 2"x3"



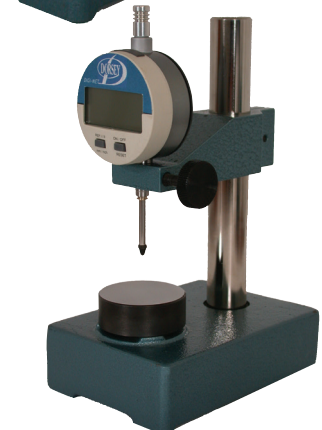
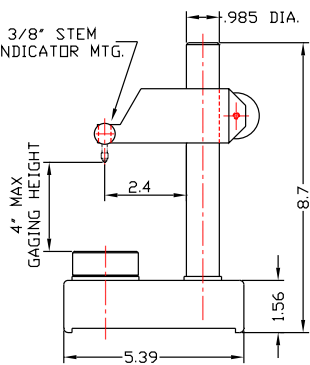
Part# 47138  
Flat surface anvil 2"x3"



S2 comparator stand shown with optional #414-002 dial indicator



\*Indicator sold separately



S2N comparator stand shown with optional extended range digital indicator

# S4 COMPARATOR HEIGHT

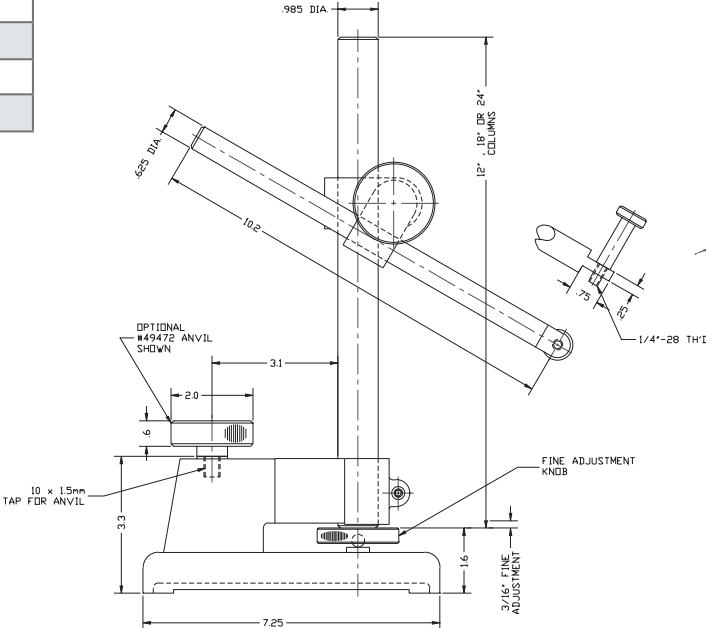
[www.dorseymetrology.com](http://www.dorseymetrology.com)

The Dorsey S4 height stand is designed for making comparative height measurements. It is designed primarily for transfer measurements on a surface plate but the optional anvil also permits its use as a conventional comparator stand. This stand will accommodate mechanical, electronic, digital indicators, or pneumatic probes with a standard mounting lug. The Model S4 stand can be adjusted vertically, horizontally, and radially to adapt to any height gaging situation.

## FEATURES:

- Fine adjustment base - original frictionless reed spring mechanism assures “no tilt” vertical adjustment of the column
- Wide fine adjustment range - total .19" range permits more rapid gaging setup
- Interchangeable columns - sturdy chrome plated steel columns, 12", 18" and 24" are easily interchangeable in the field to meet various height measuring requirements
- Triangular support - three precision flats on base assure stability of gaging setup when transferring height measurements on surface plate
- Positive clamping design - split bushing clamping arrangement provides positive locking on cross arm assembly
- Optional anvil - provisions in base for field installation of optional hardened and lapped steel anvil increases versatility of the stand

| ORDERING INFORMATION       | PART # |
|----------------------------|--------|
| S4 Stand with 12" column   | 49451  |
| S4 Stand with 18" column   | 49456  |
| S4 Stand with 24" column   | 49457  |
| OPTIONAL 2" diameter anvil | 49472  |



## The Fine Adjustment Base

By rotating the adjustment wheel, the column is raised or lowered. Motion parallel to the longitudinal axis of the column is maintained by the reed-spring assembly. Downward pressure on the wheel is sustained by the coil spring, preventing backlash and drift.



**\*Indicator sold separately**

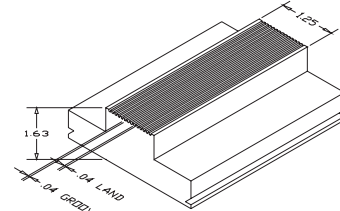
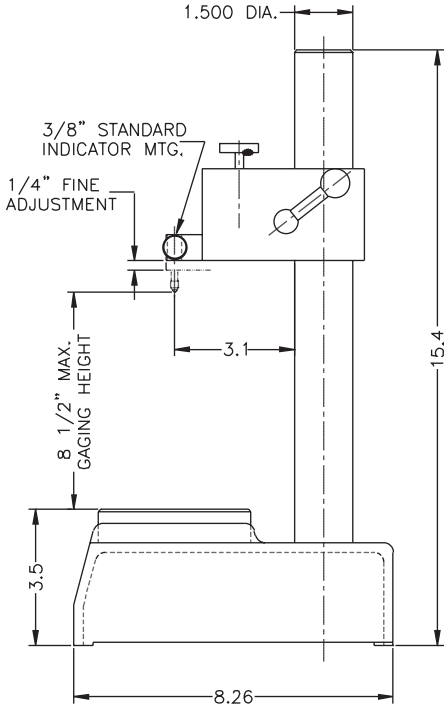
845-454-3111 | 800-549-4243

The S3 precision comparator stand was designed for manufacturing areas requiring high accuracy, such as grinding and inspection departments. It is recommended for use with all Dorsey high amplification dial and digital indicators, but it will also accommodate other gaging devices having a standard .375" or 8mm diameter mounting stem. The maximum gaging height is 8.5" as standard and the throat clearance is 3.13".

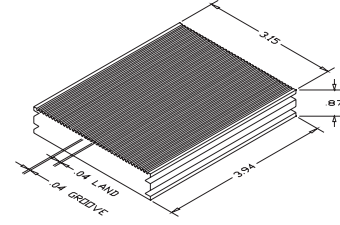
## FEATURES:

- Unique fine adjustment head - Dorsey's frictionless reed spring design prevents backlash and drifting
  - Ensures rapid, precise zero positioning of any dial indicator
  - Permits Dorsey high amplification dial indicators or other gaging instruments of equal sensitivity to perform to their full capability of measuring to millionths of an inch repetitively and accurately
- Rugged construction - provides maximum gaging stability permitting measurements in millionths
- Ground stainless steel columns provide maximum wear and corrosion resistance
- Precision machined cast base and anvil supports - ensures perpendicularity of column to anvil
- Selection of hardened and lapped anvils - increases the capability of the stands to accommodate many part configurations

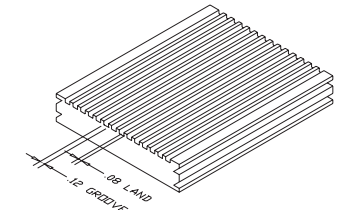
| PART #  | DESCRIPTION                  |
|---------|------------------------------|
| 47405   | S3 STAND WITHOUT ANVIL       |
| S3-HEAD | S3 FINE ADJUSTMENT HEAD ONLY |



Part# 47403  
Rail type anvil 1.25" x 3.88"

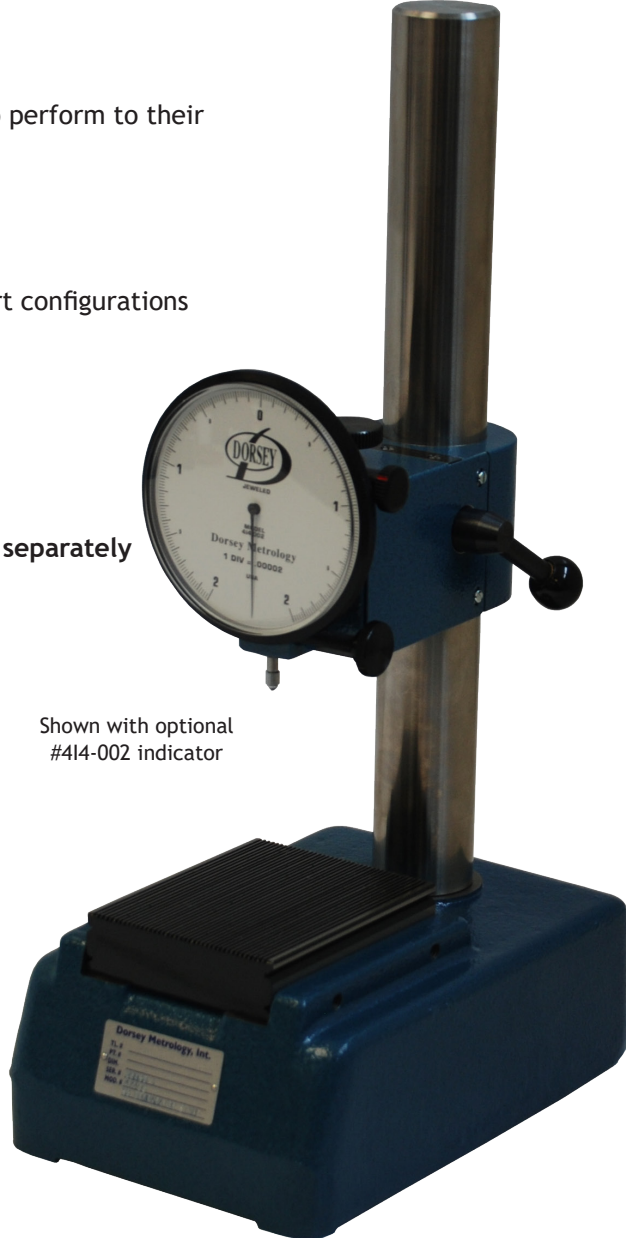


Part# 47402  
Thin serration and flat reversible anvil



Part# 47404  
Wide serration and flat reversible anvil

**\*Indicator sold separately**



Shown with optional  
#414-002 indicator



The S3 comparator stand anvil can be replaced with a radial play fixture and accessories to check the internal clearance of miniature bearings. Miniature bearing radial play fixture, part #49388-3-01 is capable of checking bearings ID range .040"-.870" OD range up to 1.0".

FEATURES:

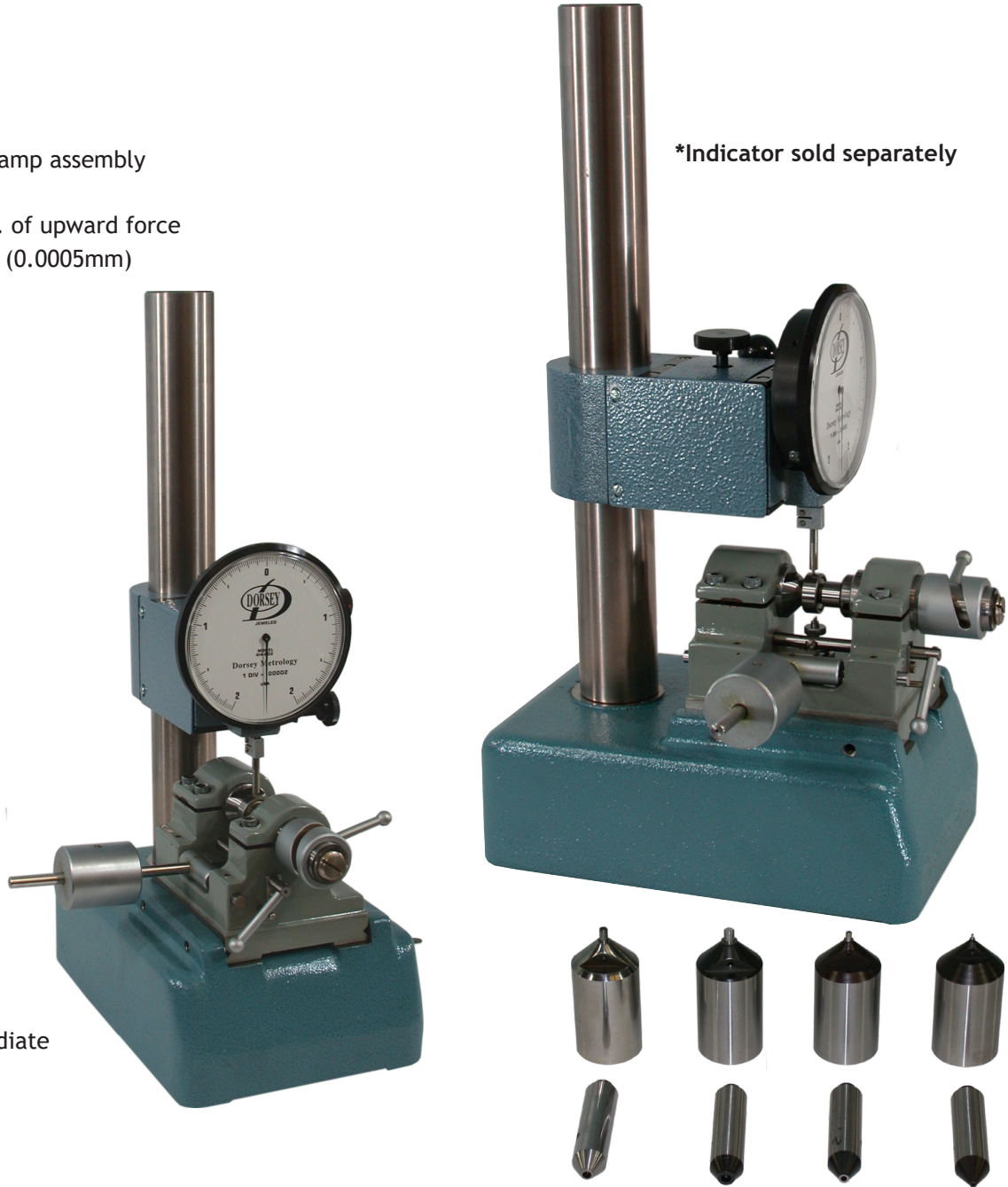
- S3 stand
- Radial play attachment
- Choice of standard anvil set which includes the carrier, anvil, and clamp assembly
- Special radial play contact
- Variable pressure weight arm assembly adjustable from 6.5 to 16 oz. of upward force
- Dial indicator model #414-002 (.00002 graduation) or #4101-0005mm (0.0005mm)

| STANDARD ANVILS<br>(CHOICE OF ONE WITH PURCHASE) |                       |
|--|-----------------------|
| Anvil Set No.                                    | Bearing Bore Diameter |
| 49388-3-01                                       | Gage with 1 Anvil     |
| 493-SET  | Gage with 9 Anvils    |
| 49373  | .0400"                |
| 49374  | .0469"                |
| 49375  | .0550"                |
| 49376  | .0781"                |
| 49377  | .0937"                |
| 49378  | .1250"                |
| 49379  | .1562"                |
| 49380  | .1875"                |
| 49381  | .2500"                |
| *INQUIRE ABOUT COMPLETE PACKAGE                  |                       |

Additional arbor bearing sets are available for any size requirement. Please contact us for details.

INTERMEDIATE AND LARGE SIZE BEARINGS

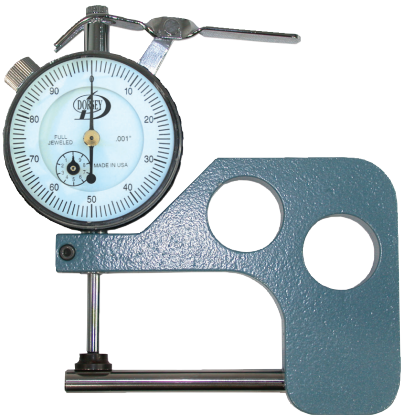
Dorsey also offers fixtures to inspect radial play on large and intermediate sized bearings. Contact us for details.



Recommended for quick thickness checks of flat sheet materials and wide variety of small parts. Supplied with hardened steel gaging contacts, lifting levers, and clockwise continuous dial indicators. Special frames, throat depths, and contacts can be made to suit application. **Available with ISO 17025 certification.**



Part #FC1 1/2" dia. anvils,1" opening, 2" throat depth, with 2DM500-10F .001" Grad. dial with .5" travel

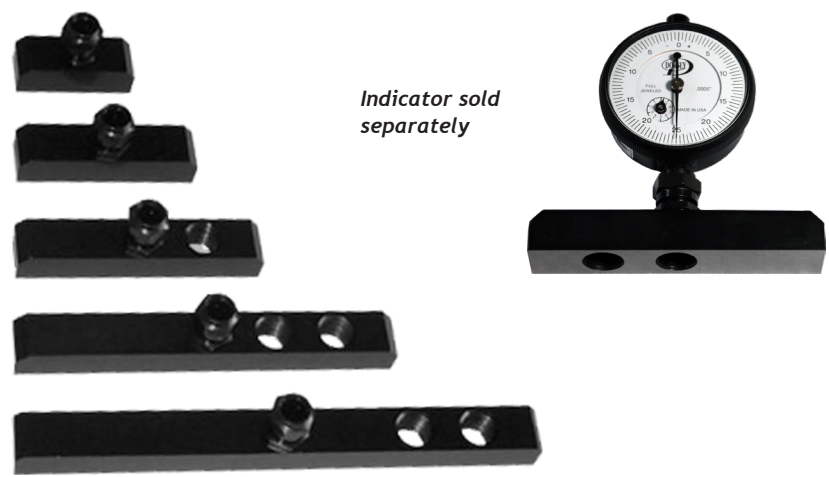


Part #FC2 Tube wall thickness  
1.5" opening, 2" throat depth, .312 dia. lower anvil with part# 2DM1000-10F .001" Grad. dial with 1" travel



Part #FC3 Spherical contacts  
1.5" opening, 1" throat depth with part# 2DM1000-10F .001" Grad. dial with 1" travel

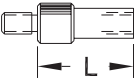
Part #FC3-NI Frame and contacts, less indicator



Indicator sold separately

FEATURES:

- Ground & hardened steel base
- Base is .75" wide x .62" high
- Holes located 1" and then 2" from end
- Includes 3/8" dia indicator collet
- Available with dial or digital indicators



| BASES                   |        |
|-------------------------|--------|
| DESCRIPTION             | PART # |
| 2" long, 1 central hole | C-512  |
| 3" long, 1 central hole | C-513  |
| 4" long, 2 holes        | C-514  |
| 6" long, 3 holes        | C-516  |
| 8" long, 3 holes        | C-518  |

| CONTACT EXTENSIONS        |         |
|---------------------------|---------|
| DESCRIPTION               | PART #  |
| Contact                   | 112     |
| 1" Extension              | 47071   |
| 2" Extension              | 47071-2 |
| 3" Extension              | 47071-3 |
| 4" Extension              | 47071-4 |
| 5" Extension              | 47071-5 |
| Contact/extension set 6pc | DDGCS   |

“V” BASE DIAL DEPTH GAGE

Used to measure depths of small holes, engravings, rivets, or slots with extreme accuracy. Knife edge base with center cut permits unobstructed view of point for exact positioning.



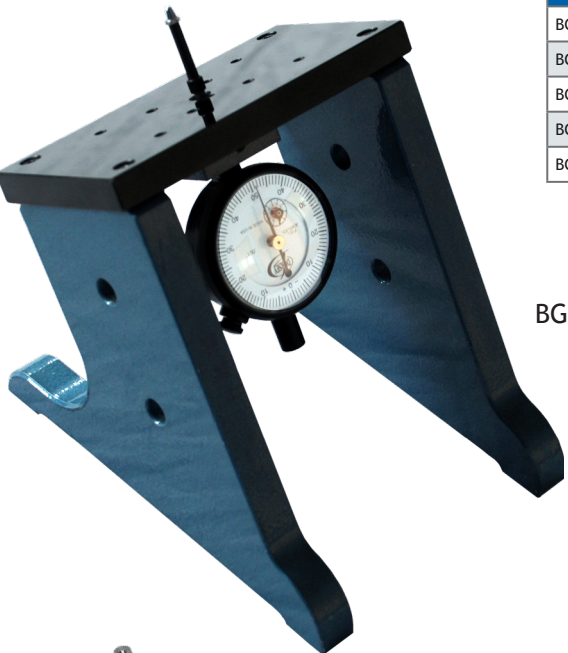
Shown is DDG-125C

FEATURES:

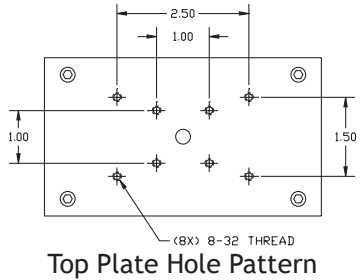
- .125" Range
- .0005" Graduation dial indicator
- Ground hardened steel base
- Base is 2.5" x .5"
- Interchangeable hardened steel gaging contact
- Also available with digital indicator

| PART #      | DESCRIPTION  |
|-------------|--|
| DDG-125B    | “V” Base dial depth gage with .0005” graduation, .125” range balanced dial (Mil. Spec.)  |
| DDG-125C    | “V” Base dial depth gage with .0005” graduation, .125” range continuous dial             |
| 2DM125-05AY | Replacement indicator, .0005” graduation, .125” range, balanced dial, push down series   |
| 2DM125-05GY | Replacement indicator, .0005” graduation, .125” range, continuous dial, push down series |
| DDG-125NI   | “V” Base with contact, less indicator  |
| DDG-CASE    | Fitted Storage Box   |

BG Series bench gages are universal indicating depth or flush pin gages used to check depths, lengths, face concentricity, or locations. The BG Direct utilizes various models of dial or digital indicators. The indicator is protected from damage as it is enclosed beneath the gage itself. The rest plate is 3" x 5" hardened and ground steel which has a series of threaded holes. Special nesting rests or holding fixtures and clamps can be mounted to orient parts for measurement of specific dimensions.



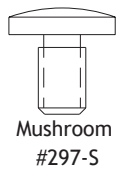
BG Direct



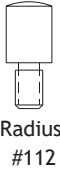
Top Plate Hole Pattern



Offset  
#2740



Mushroom  
#297-S  
#297-C



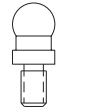
Radius  
#112



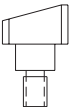
Needle  
#3655



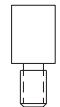
Taper  
#302



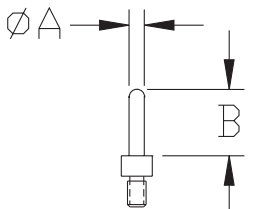
Ball  
#4082-187-B



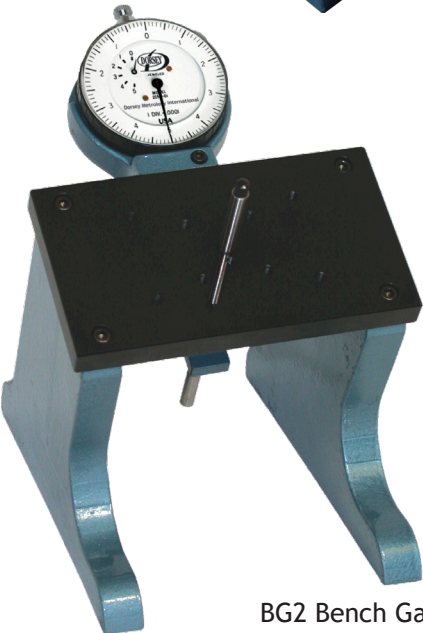
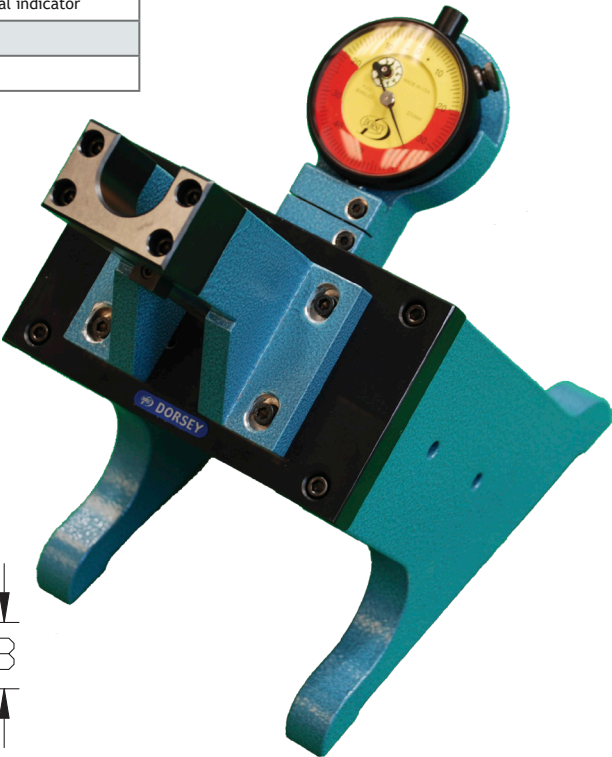
Shovel  
#4082-S  
#4082-CS



Flat  
#47076



Special contacts  
specify A and B dimensions



BG2 Bench Gage

| PART #    | DESCRIPTION  |
|-----------|--|
| BGD       | Model BG Direct with Part #112 steel pin contact and (1" range, .001" graduation) dial indicator     |
| BGD-NI    | Model BG Direct with Part #112 steel pin contact less indicator                                      |
| BGD-SET   | Model BG Direct with set of steel contacts (shown below) (1" range, .001" graduation) dial indicator |
| BGD-SETNI | Model BG Direct with set of steel contacts less indicator  |
| BGD-CASE  | Fitted Storage Case  |

The BG2 utilizes a right angle movement that offers substantial benefits. The indicator, in a protective housing, is mounted above the rest plate in a position that minimizes operator eye movement. The gaging mechanism is reversible, retractable, has a 3" range of measurement travel, and .075" of gaging travel.

| PART #    | DESCRIPTION  |
|-----------|--|
| BG2       | Model BG with Part #112 steel pin contact and (.0005" graduation) dial indicator         |
| BG2-NI    | Model BG with Part #112 steel pin contact and less indicator                             |
| BG2-SET   | Model BG with set of steel contacts (shown above) and (.0005" graduation) dial indicator |
| BG2-SETNI | Model BG with set of steel contacts less indicator                                       |
| BGD-CASE  | Fitted Storage Case  |



FEATURES:

- Hardened and ground steel plunger and rest plate
- Masters on any flat surface, no special master required
- The angle of the gage must be larger than the angle of the part to be inspected
- Measures the top diameter directly on the dial indicator or digital indicator
- 3 Blade contact ensures accurate, repeatable readings
- .001”/0.02mm dial indicator, standard
- Inch or metric dial or digital indicators available
- Optional ring gage setting masters are available
- Gage accuracy +/- .001"

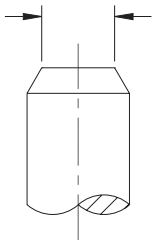


| ID- COUNTERSINK MODEL 0-90 °   |             |          |              |               |
|--------------------------------|-------------|----------|--------------|---------------|
| RANGE                          | INCH PART#  | RANGE    | METRIC PART# | DIGITAL PART# |
| 0-3/8"                         | DC-90-375   | 0-9.5MM  | DC-90-375M   | DC-90-375-D   |
| 0-1/2"                         | DC-90-500   | 0-12.7MM | DC-90-500M   | DC-90-500-D   |
| 0-1"                           | DC-90-1000  | 0-25MM   | DC-90-1000M  | DC-90-1000-D  |
| 1-2"                           | DC-90-2000  | 25-50MM  | DC-90-2000M  | DC-90-2000-D  |
| 2-3"                           | DC-90-3000  | 50-75MM  | DC-90-3000M  | DC-90-3000-D  |
| 3-4"                           | DC-90-4000  | 75-100MM | DC-90-4000M  | DC-90-4000-D  |
| ID- COUNTERSINK MODEL 90-127 ° |             |          |              |               |
| RANGE                          | INCH PART#  | RANGE    | METRIC PART# | DIGITAL PART# |
| 0-3/8"                         | DC-127-375  | 0-9.5MM  | DC-127-375M  | DC-127-375-D  |
| 0-1/2"                         | DC-127-500  | 0-12.7MM | DC-127-500M  | DC-127-500-D  |
| 0-1"                           | DC-127-1000 | 0-25MM   | DC-127-1000M | DC-127-1000-D |
| 1-2"                           | DC-127-2000 | 25-50MM  | DC-127-2000M | DC-127-2000-D |
| 2-3"                           | DC-127-3000 | 50-75MM  | DC-127-3000M | DC-127-3000-D |
| 3-4"                           | DC-127-4000 | 75-100MM | DC-127-4000M | DC-127-4000-D |

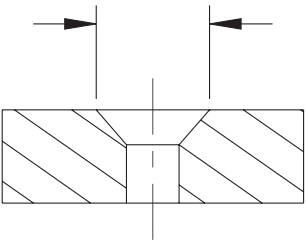
| OD- CHAMFER MODEL 0-90 °  |             |            |              |               |
|---------------------------|-------------|------------|--------------|---------------|
| RANGE                     | INCH PART#  | RANGE      | METRIC PART# | DIGITAL PART# |
| 1/8-1/2"                  | DO-90-500   | 3.2-12.7MM | DO-90-500M   | DO-90-500-D   |
| 3/16-1"                   | DO-90-1000  | 4.7-25MM   | DO-90-1000M  | DO-90-1000-D  |
| 1-2"                      | DO-90-2000  | 25-50MM    | DO-90-2000M  | DO-90-2000-D  |
| 2-3" *                    | DO-90-3000  | 50-75MM    | DO-90-3000M  | DO-90-3000-D  |
| 3-4" *                    | DO-90-4000  | 75-100MM   | DO-90-4000M  | DO-90-4000-D  |
| OD-CHAMFER MODEL 90-127 ° |             |            |              |               |
| RANGE                     | INCH PART#  | RANGE      | METRIC PART# | DIGITAL PART# |
| 1/8-1/2"                  | DO-127-500  | 3.2-12.7MM | DO-127-500M  | DO-127-500-D  |
| 3/16-1"                   | DO-127-1000 | 4.7-25MM   | DO-127-1000M | DO-127-1000-D |
| 1-2"                      | DO-127-2000 | 25-50MM    | DO-127-2000M | DO-127-2000-D |
| 2-3" *                    | DO-127-3000 | 50-75MM    | DO-127-3000M | DO-127-3000-D |
| 3-4" *                    | DO-127-4000 | 75-100MM   | DO-127-4000M | DO-127-4000-D |

\* Special Order

OD gage measures this diameter



ID gage measures this diameter

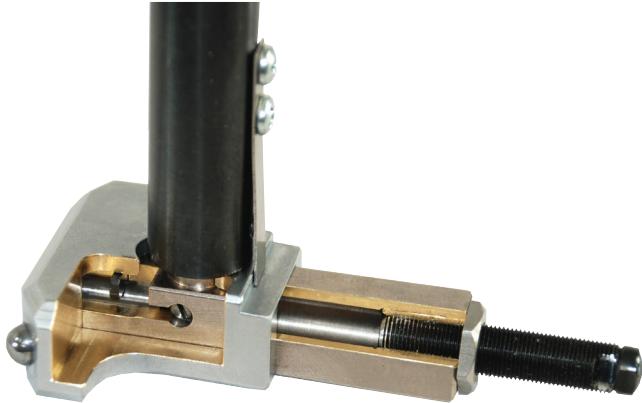


Bore gages are comparative instruments designed to check hole diameter and condition. Bore gages use the principle of two point gaging and three point centralization. The gaging contacts are diametrically opposed which allows the most accurate reading of a bore. The reference contact is constructed to allow range extensions and adapters to be added to change the measuring size of the gage without loss of accuracy or balance. During use, the gage is inserted on an angle for easy entry into the bore. The centralizer ensures locating on the true diameter. The gage is "rocked" and the indicator is observed to find the lowest measurement to obtain a true diameter reading.

Dorsey offers a variety of reference masters from specific size master rings to Dorsey's corresponding family of adjustable bore gage setmasters.

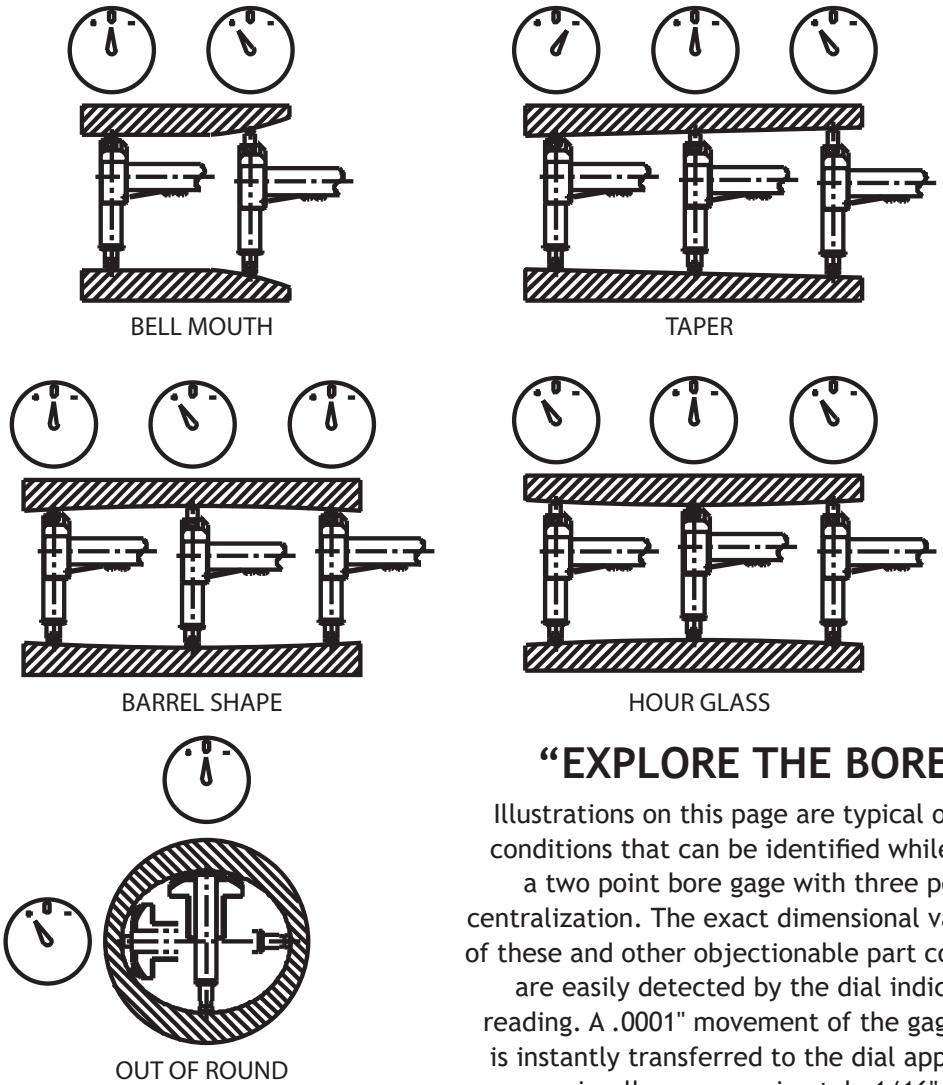
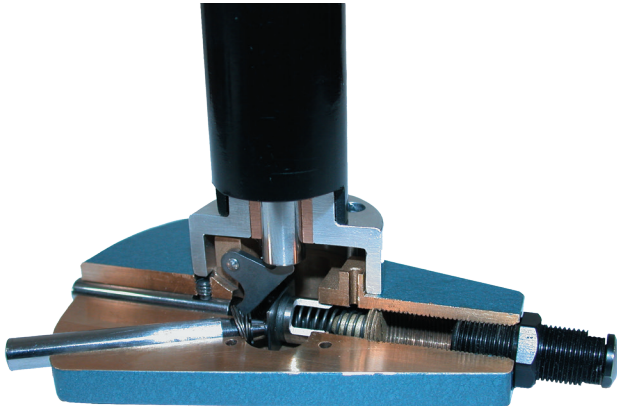
DBL SERIES BORE GAGES

The independent dynamic centralizer secures two carbide balls on one easy to clean and compact unit.



DORSEY STANDARD BORE GAGES

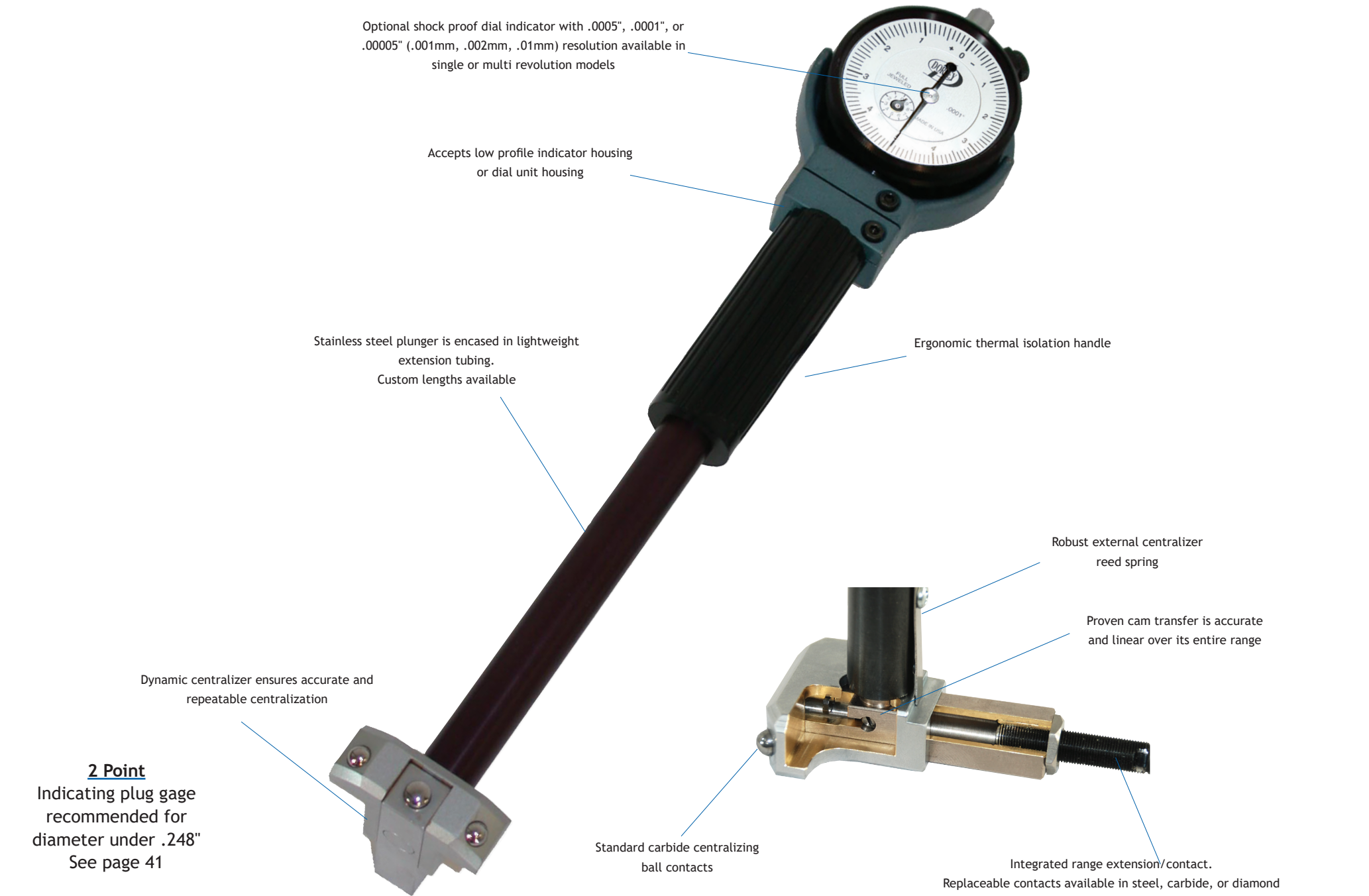
A single piece gaging head encloses both gaging pin centralizing pins in one rugged, compact, and durable unit.



“EXPLORE THE BORE”

Illustrations on this page are typical of bore conditions that can be identified while using a two point bore gage with three point centralization. The exact dimensional variations of these and other objectionable part conditions are easily detected by the dial indicator reading. A .0001" movement of the gaging pin is instantly transferred to the dial appearing visually as approximately 1/16".

DBL self centralizing bore gages are ideal for toolroom and production applications. Easy to use, easy to disassemble, and easy to clean. Only 4 moving parts are used in this precision economical gage.



DBL bore gages are designed to be lightweight, versatile, accurate, and are ideal for toolroom and production applications. The DBL series bore gages feature two point gaging and three point centralization. The gaging contacts are diametrically opposed, providing the most accurate reading of the bore. The reference contact accepts various length range extensions and adapters to change the measuring size of the gage without the loss of accuracy or balance. The independent external centralizer with two fixed carbide ball locators aligns and self-centers the gaging pin and reference contact during operation. The centralizer ensures locating and reading the true diameter.



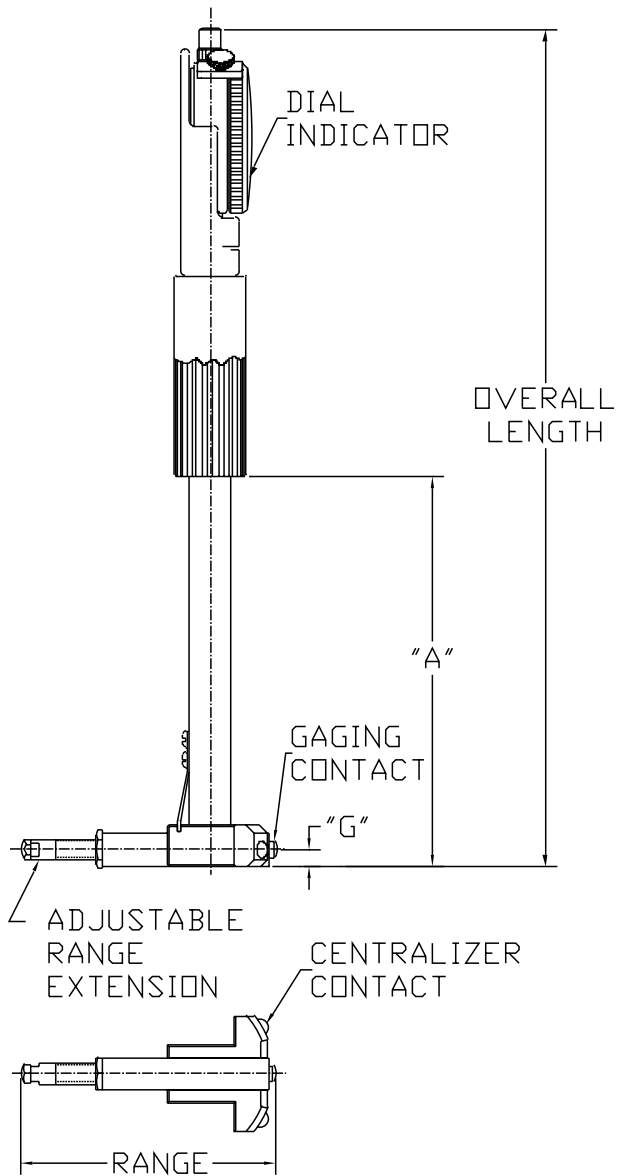


| MODEL  | RANGE (inches) | OVERALL LENGTH (inches) | RANGE (metric) | "A" GAGING DEPTH (inches) | "G" DIMENSION (inches) | GAGING CONTACT TRAVEL |                   |
|--|----------------|-------------------------|----------------|---------------------------|------------------------|-----------------------|-------------------|
|  |                |                         |                |                           |                        | STANDARD (inches)     | OPTIONAL (inches) |
| DBL-248-S  | .248-.501      | 6.31                    | 6.299-12.725   | 2.25                      | .140                   | .010                  | .016              |
| DBL-248-C  | .248-.501      | 6.31                    | 6.299-12.725   | 2.25                      | .140                   | .010                  | .016              |
| DBL-499-S  | .499-1.001     | 9.75                    | 12.674-25.425  | 3.00                      | .188                   | .016                  | .022              |
| DBL-499-C  | .499-1.001     | 9.75                    | 12.674-25.425  | 3.00                      | .188                   | .016                  | .022              |
| DBL-998-S  | .998-1.501     | 9.75                    | 25.349-38.125  | 3.00                      | .188                   | 0.25                  | .050              |
| DBL-998-C  | .998-1.501     | 9.75                    | 25.349-38.125  | 3.00                      | .188                   | 0.25                  | .050              |
| DBL-1499-S   | 1.499-3.00     | 10.75                   | 38.0746-76.200 | 4.00                      | .188                   | .025                  | .050              |
| DBL-1499-C   | 1.499-3.00     | 10.75                   | 38.0746-76.200 | 4.00                      | .188                   | .025                  | .050              |
| DBL-300-S  | 3.00-6.00      | 11.75                   | 76.200-152.400 | 5.00                      | .250                   | .025                  | .070              |
| DBL-300-C  | 3.00-6.00      | 11.75                   | 76.200-152.400 | 5.00                      | .250                   | .025                  | .070              |
| SPECIAL RANGE MODELS   |                |                         |                |                           |                        |                       |                   |
| DBL-365-S  | .365-.620      | 6.31                    | 9.271-15.748   | 2.25                      | .140                   | .010                  | .016              |
| DBL-365-C  | .365-.620      | 6.31                    | 9.271-15.748   | 2.25                      | .140                   | .010                  | .016              |
| DBL-620-S  | .620-1.001     | 9.75                    | 15.748-25.425  | 3.00                      | .188                   | .016                  | .022              |
| DBL-620-C  | .620-1.001     | 9.75                    | 15.748-25.425  | 3.00                      | .188                   | .016                  | .022              |
| DBL-200-S  | 2.00-4.00      | 10.75                   | 50.800-101.600 | 4.00                      | .188                   | .025                  | .050              |
| DBL-200-C  | 2.00-4.00      | 10.75                   | 50.800-101.600 | 4.00                      | .188                   | .025                  | .050              |
| DBL-400-S  | 4.00-10.00     | 11.75                   | 101.60-254.000 | 5.00                      | .250                   | .025                  | .070              |
| DBL-400-C  | 4.00-10.00     | 11.75                   | 101.60-254.000 | 5.00                      | .250                   | .025                  | .070              |
| Note: For optional gaging contact travel add -GC to part #.<br>For gage less indicator, add -NI to part #.<br>Special gaging depths available per application.<br>-S – Steel, -C – Carbide |                |                         |                |                           |                        |                       |                   |

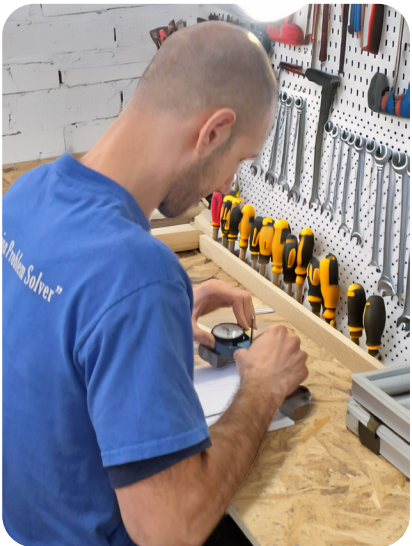
Also available with ISO 17025 certifications.



Proudly made in the USA



This type of gaging is used during machining or jig grinding operations to avoid disturbing machine tool setup. It's also used to avoid obstructions in the measurement area. Fitted storage case included.



Dorsey Products - proudly made in the USA

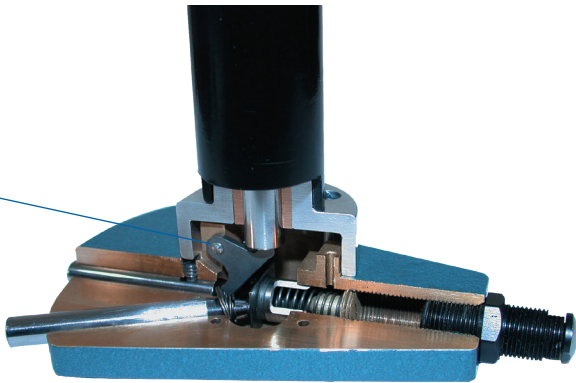
| ORDERING INFORMATION   |              |     |       |
|------------------------|--------------|-----|-------|
| MODEL                  | INCHES       |     |       |
|                        | DIAMETER "A" | "B" | "C"   |
| DBL-499-OSS            | .5"-1"       | 3"  | 1.56" |
| DBL-499-OSC            | .5"-1"       | 3"  | 1.56" |
| DBL-998-OSS            | 1"-1.5"      | 5"  | 2.00" |
| DBL-998-OSC            | 1"-1.5"      | 5"  | 2.00" |
| DBL-1499-OSS           | 1.5"-3"      | 5"  | 2.00" |
| DBL-1499-OSC           | 1.5"-3"      | 5"  | 2.00" |
| S – Steel, C – Carbide |              |     |       |

## A TIME PROVEN DESIGN MADE BETTER BY DORSEY

This design of rugged production line bore gages has been an industry standard for more than 95 years. Dorsey offers precise replacement models built to the same exacting specifications but with a choice of any of Dorsey's "High Amplification", "Traditional", or digital indicators. We continue to provide the original Standard Gage Company® customers with high quality interchangeable parts. All models can be modified to meet customer specifications.

- Available with ISO 17025 certification
- Comfortable & ergonomic, this well balanced handle can be removed to gain clearance in restricted areas
- Optional shock proof dial indicator with .0005", .0001", or .00005" (.001mm, .002mm, .01mm) resolution available in single or multi revolution models
  - Available with Dorsey's digital housings for use with most digital indicator models
- Precisely machined cast phosphor bronze gaging head for sensitivity and durability
- Thermally insulated high impact resistant shield protects extension tubing
- Unique "tandem" centralizer uses matched and lapped components to ensure accurate and repeatable centralization
- Precision machined aluminum dial unit housing
- Replaceable contacts available in steel, carbide, or diamond
- Stainless steel extension tubing in a wide variety of standard and special lengths

Proven bell crank transfer is accurate and linear over its entire range.



## STYLE 1 - All sizes utilize the same dial unit housing for extreme versatility (with exception of Size 1).

| Size 1                             | Size 2        | Size 3        | Size 4        | Size 5       | Size 6          |
|------------------------------------|---------------|---------------|---------------|--------------|-----------------|
| .63" - 1.00"                       | 1.00"-1.53"   | 1.50"-2.16"   | 2.12"-3.13"   | 3.09"-6.13"  | 6.00"-12.13"    |
| 16mm - 25.4mm                      | 25.4 - 38.9mm | 38.1 - 54.8mm | 54.0 - 79.5mm | 78.5 - 156mm | 152.5 - 308.0mm |
| Not available in additional depths |               |               |               |              |                 |





The time tested, proven design of the Dorsey Standard bore gage that has been depended on for generations, now it comes in a new versatile Modular series. This product allows you to purchase the gage and attachments ala carte. You pick your indicating unit, gage size and depth extension for today's application and add only what you need later on.

- Dorsey patented threaded Bore Gage System
- Same great features of the Standard style you depend on
- .625” dia shaft with available adapter for existing indicating units to use with modular heads and extensions
- Additional gaging heads available to purchase at any time
- Carbon Fiber depth extensions standard
- Order in any length combination
- Add lengths for deeper depths at anytime
- Easy to order instead of the DS-B1 part number use DS-MB to order
- Available in Combination Kit (helps ensure spring and parts cannot be lost)
- Wooden storage box included

| MODULAR BORE GAGE EXTENSION |                          |
|-----------------------------|--------------------------|
| PART #                      | DESCRIPTION              |
| DM2-81005-05                | 5" "A" LENGTH EXTENSION  |
| DM2-81005-06                | 6" "A" LENGTH EXTENSION  |
| DM2-81005-08                | 8" "A" LENGTH EXTENSION  |
| DM2-81005-10                | 10" "A" LENGTH EXTENSION |
| DM2-81005-12                | 12" "A" LENGTH EXTENSION |
| DM2-81005-14                | 14" "A" LENGTH EXTENSION |
| DM2-81005-16                | 16" "A" LENGTH EXTENSION |
| DM2-81005-18                | 18" "A" LENGTH EXTENSION |
| DM2-81005-24                | 24" "A" LENGTH EXTENSION |
| DM2-81005-30                | 30" "A" LENGTH EXTENSION |
| DM2-81005-36                | 36" "A" LENGTH EXTENSION |
| Other Lengths Available     |                          |
| 37-71"                      |                          |
| 72-144"                     |                          |

| MODULAR BORE GAGES HEADS |             |             |
|--------------------------|-------------|-------------|
| HEAD                     | SIZE RANGE  | PART #      |
| #2                       | 1.00-1.53"  | DS-MB-15102 |
| #3                       | 1.50-2.16"  | DS-MB-15103 |
| #4                       | 2.12-3.13"  | DS-MB-15104 |
| #5                       | 3.09-6.13"  | DS-MB-15105 |
| #6                       | 6.00-12.13" | DS-MB-15106 |

How to order:  
Pick your Indicating unit

- DS-MB-2I50-01
- DS-MB-2I10-002mm
- DX4-MB-81035



Various depth extensions



MODELS 2,3,4,5

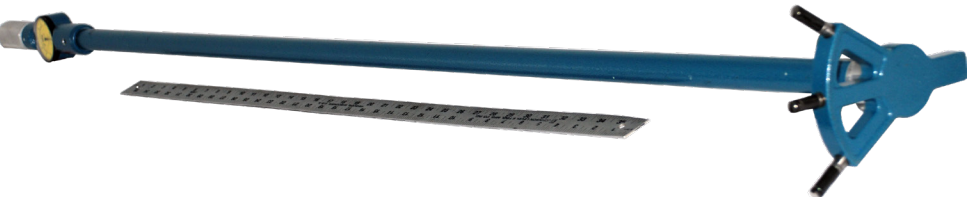
FEATURES:

- Industry’s most popular dial bore gage now available in an easy-to-use combination kit
- Standard with jeweled shock proof indicator movement
- Available with a wide variety of indicators including .00005" or 0.001mm
- Replaces separate dial bore gages covering the same ranges as models # 2, 3, 4, and 5
- Convenient carrying case included
- Ideal for small shops or short production runs
- Interchangeable gage heads and range extensions to cover diameters from 1.000" to 8.000" or 25.4mm to 203.2mm

| PART #       | DESCRIPTION                      |
|--------------|----------------------------------|
| DS-B1-K2345  | WITH .0001" GRAD DIAL INDICATOR  |
| DS-B1-K2345M | WITH 0.002mm GRAD DIAL INDICATOR |

EXTRA LENGTH BORE GAGE EXTENSIONS:

Bore gage extension housings with gaging depths up to 36” are normally manufactured from stainless steel tubing. See the price list for ordering data for each model. Bore gages with extra length extensions beyond 36” are now standard in carbon fiber. Most long bore gages are normally produced from stainless steel tubing up to 72” depths. Traditionally, beyond this length, the #4, #5 and #6 bore gages are constructed using segmented steel tubing. All extra length bore gage tubing are now provided with carbon fiber extensions that are lighter weight, more thermally stable, and structurally stronger.



#6 Dorsey/Standard bore gage with 5’ steel extension housing. The Weight is 7¾ lbs/3.52kg (less range extensions).



#4 Dorsey/Standard bore gage with 4’ carbon fiber extension housing. The weight is 2½ lbs/1.13kg (less range extensions).



#6 Dorsey/Standard bore gage with 4’ carbon fiber extension housing. The weight is 4 lbs/1.8kg (less range extensions).



Available in Carbon Fiber

Maximum Recommended Gaging Depths

| GAGE SIZE | INCH DEPTH   |
|-----------|--------------|
| SIZE #2   | 60" maximum  |
| SIZE #3   | 72" maximum  |
| SIZE #4   | 96" maximum  |
| SIZE #5   | 144" maximum |
| SIZE #6   | 144" maximum |

| GAGE<br>SIZE | STANDARD STYLE 1 |       |        | RIGHT ANGLE STYLE 2 |       |       |       | VERTICAL STYLE 3 |       |       | PERPENDICULAR STYLE 4 |       |       | PISTOL GRIP STYLE 5 |       |       | FLUSH<br>STYLE 7 |
|--------------|------------------|-------|--------|---------------------|-------|-------|-------|------------------|-------|-------|-----------------------|-------|-------|---------------------|-------|-------|------------------|
|              | A                |       | B      | A                   |       | B     | C     | A                |       | B     | A                     |       | B     | A                   |       | B     | B                |
|              | STD              | MIN   |        | STD                 | MIN   |       |       | STD              | MIN   |       | STD                   | MIN   |       | STD                 | MIN   |       |                  |
| 1            | 2.70"            | 2.70" | 7.27"  | -                   | -     | -     | -     | -                | -     | -     | -                     | -     | -     | -                   | -     | -     | -                |
| 2            | 5.00"            | 2.31" | 8.12"  | 2.53"               | 2.35" | 3.88" | 6.25" | 6.00"            | 2.31" | 8.75" | 6.00"                 | 2.31" | 8.13" | 1.63"               | 1.63" | 5.75" | -                |
| 3            | 5.00"            | 2.63" | 10.50" | 2.53"               | 2.35" | 3.88" | 6.25" | 6.00"            | 2.63" | 9.00" | 6.00"                 | 2.63" | 8.13" | 1.63"               | 1.63" | 5.75" | -                |
| 4            | 5.00"            | 2.63" | 10.50" | 2.53"               | 2.35" | 3.88" | 6.25" | 6.00"            | 2.63" | 9.00" | 6.00"                 | 2.63" | 8.13" | 1.63"               | 1.63" | 5.75" | -                |
| 5            | 6.00"            | 2.63" | 11.50" | 2.53"               | 2.35" | 3.83" | 6.25" | 6.00"            | 2.63" | 9.00" | 6.00"                 | 2.63" | 8.13" | 1.63"               | 1.63" | 5.75" | -                |
| 6            | 6.00"            | 2.63" | 12.00" | 2.50"               | 2.50" | 4.44" | 6.69" | 6.00"            | 5.50" | 9.44" | 6.00"                 | 4.00" | 8.13" | 3.00"               | 3.00" | 9.38" | 1.50"            |

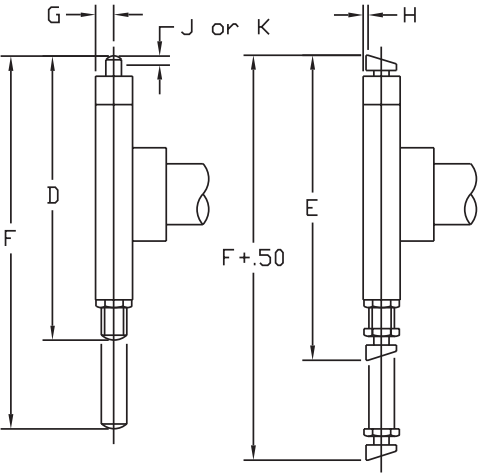
D = Standard gaging range  
E = Gaging range with optional offset contacts  
F = Maximum gaging range with extension adapters  
G = Standard center line  
H = Offset center line modification add -H to part #  
J = Standard gaging plunger travel  
K = Optional extended plunger travel add -K to part #

GAGE-HEAD DIMENSIONS (ALL STYLES)

| SIZE | D     |        | E     |        | F      | G     | H     | J     | K     | RANGE<br>EXTENSION<br>ADAPTER PART # |
|------|-------|--------|-------|--------|--------|-------|-------|-------|-------|--------------------------------------|
|      | MIN   | MAX    | MIN   | MAX    |        |       |       |       |       |                                      |
| 1    | .63"  | 1.00"  | -     | -      | -      | .100" | -     | .015" | -     | -                                    |
| 2    | 1.00" | 1.53"  | 1.19" | 1.69"  | 1.75"  | .195" | .140" | .025" | .050" | DS-B0-85929                          |
| 3    | 1.50" | 2.16"  | 1.69" | 2.56"  | 3.13"  | .224" | .156" | .025" | .050" | DS-B0-85934                          |
| 4    | 2.12" | 3.13"  | 2.56" | 3.56"  | 4.00"  | .224" | .032" | .025" | .075" | DS-B0-85942                          |
| 5    | 3.09" | 6.13"  | 3.50" | 6.44"  | 8.00"  | .224" | .032" | .025" | .075" | DS-B0-85952                          |
| 6    | 6.00" | 12.13" | 6.44" | 12.63" | 24.00" | .312" | .032" | .030" | .100" | DS-B0-85966                          |

BORE GAGE EXTENSION HOUSING #3, 4 & 5

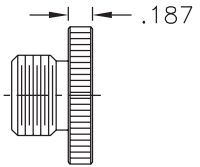
| EXTENSION HOUSING ASSEMBLY |                          |
|----------------------------|--------------------------|
| PART #                     | DESCRIPTION              |
| DX2-81005-03               | 3" "A" LENGTH EXTENSION  |
| DX2-81005-04               | 4" "A" LENGTH EXTENSION  |
| DX2-81005-05               | 5" "A" LENGTH EXTENSION  |
| DX2-81005-06               | 6" "A" LENGTH EXTENSION  |
| DX2-81005-08               | 8" "A" LENGTH EXTENSION  |
| DX2-81005-10               | 10" "A" LENGTH EXTENSION |
| DX2-81005-12               | 12" "A" LENGTH EXTENSION |
| DX2-81005-14               | 14" "A" LENGTH EXTENSION |
| DX2-81005-16               | 16" "A" LENGTH EXTENSION |
| DX2-81005-18               | 18" "A" LENGTH EXTENSION |
| DX2-81005-24               | 24" "A" LENGTH EXTENSION |
| DX2-81005-30               | 30" "A" LENGTH EXTENSION |
| DX2-81005-36               | 36" "A" LENGTH EXTENSION |
| Other Lengths Available    |                          |
| 37-71"                     |                          |
| 72-144"                    |                          |



BORE GAGE DUST CAP

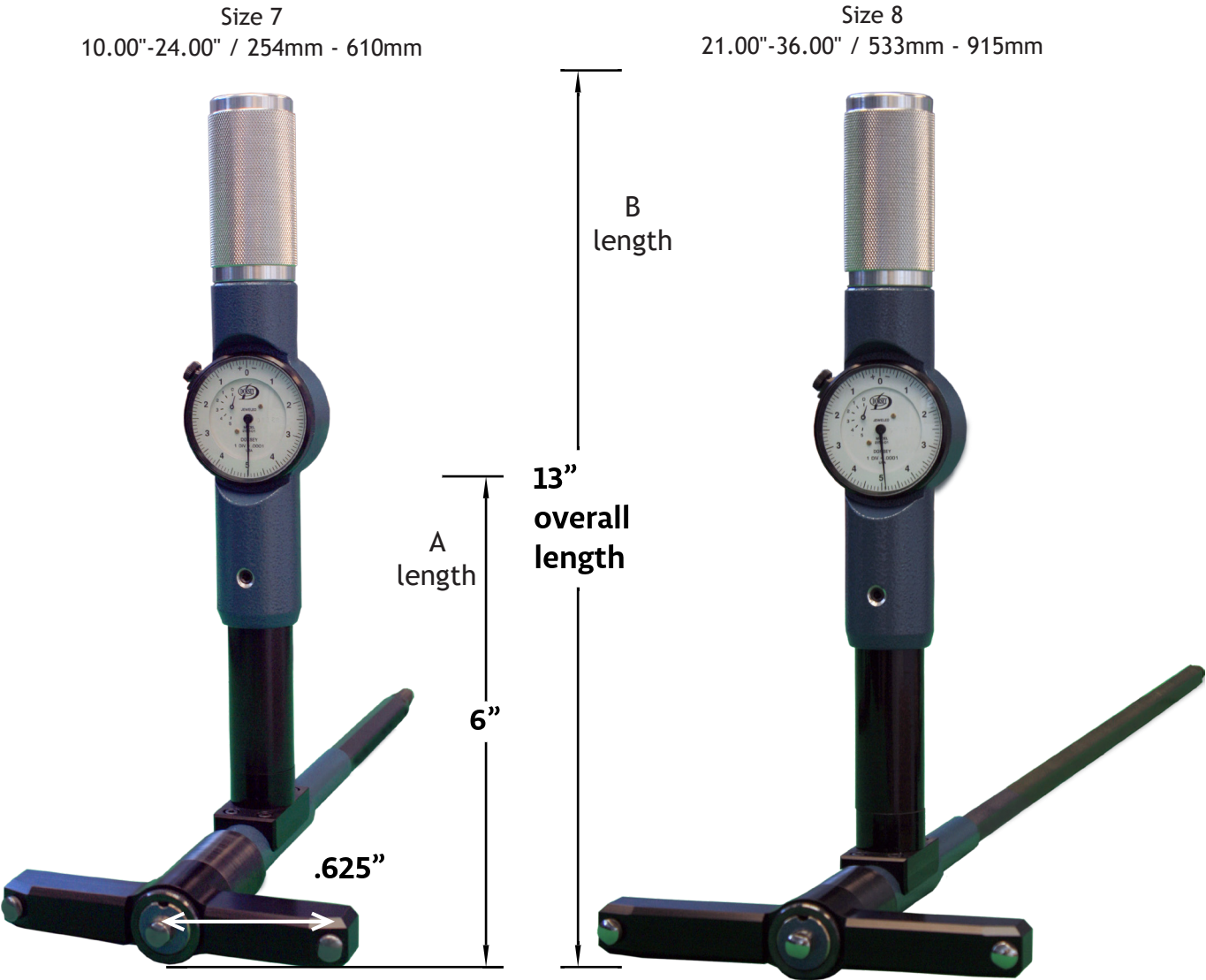
- Replaces standard handle
- Minimize overall length ("B" dimension)

| SIZE         | REDUCES "B" DIM. BY | PART #      |
|--------------|---------------------|-------------|
| 2-6          | 2.06"               | DS-B0-84725 |
| 6 Heavy Duty | 2.81"               | DS-B0-84731 |
| 7-8          | 2.81"               | DS-B0-84731 |



A TIME PROVEN DESIGN EXPANDED TO MEASURE LARGE BORE SIZES

- Style 1- Both models utilize the same robust 1" heavy duty dial unit housing with a choice of various resolutions and spindle travel in both inch or metric readings.
- Both the #7 and #8 bore gages measure .625" from the bottom of a blind bore
  - The standard gaging depth is 6" but can be supplied with depth extensions to 144"
  - Besides these large bore gages, we also offer two companion bore gage setting masters that are set to size with gage block combinations
    - Setmaster #DBM-12000 (10"-24") and #DBM-24000 (20" to 36") are adjustable, more convenient to handle, and less expensive than a library of traditional large rings (see page 40)

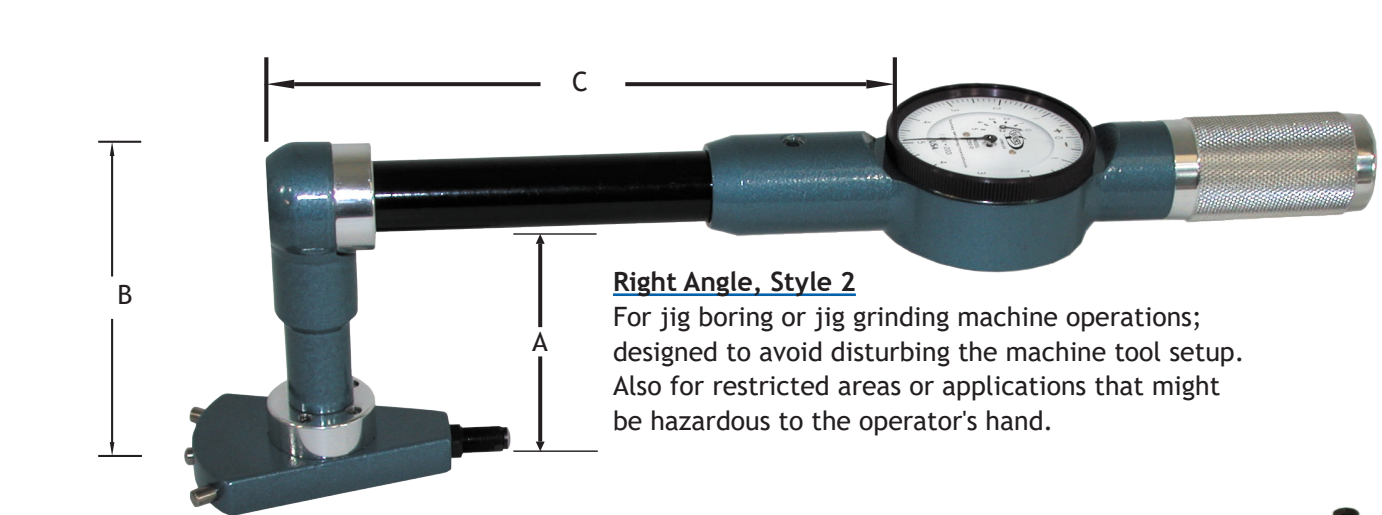


OPTIONAL: BORE GAGE DEPTH EXTENSIONS

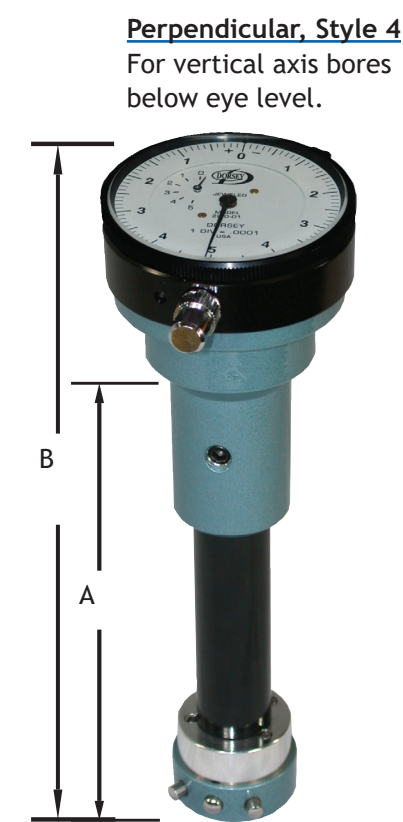
|                         |
|-------------------------|
| 4" DEPTH EXTENSION      |
| 5" DEPTH EXTENSION      |
| 6" DEPTH EXTENSION      |
| 8" DEPTH EXTENSION      |
| 10" DEPTH EXTENSION     |
| 12" DEPTH EXTENSION     |
| 14" DEPTH EXTENSION     |
| 16" DEPTH EXTENSION     |
| 24" DEPTH EXTENSION     |
| 30" DEPTH EXTENSION     |
| 36" DEPTH EXTENSION     |
| Other Lengths Available |
| 37-72"                  |
| 72-144"                 |



There are 5 optional styles that are designed especially for applications where space restrictions or gaging positions are not suitable for the use of the Style 1.



**Right Angle, Style 2**  
For jig boring or jig grinding machine operations; designed to avoid disturbing the machine tool setup. Also for restricted areas or applications that might be hazardous to the operator's hand.



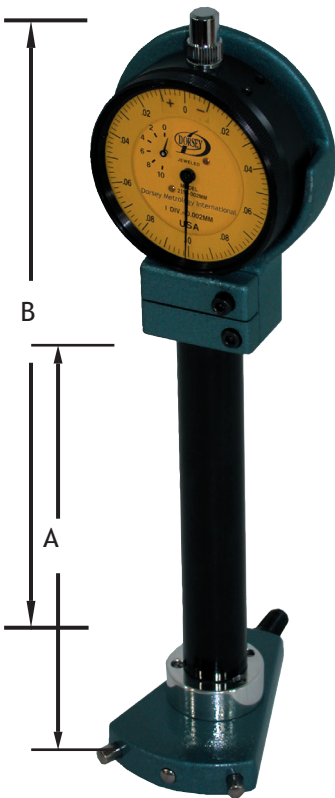
**Perpendicular, Style 4**  
For vertical axis bores below eye level.



**Pistol Grip, Style 5**  
For limited access applications.

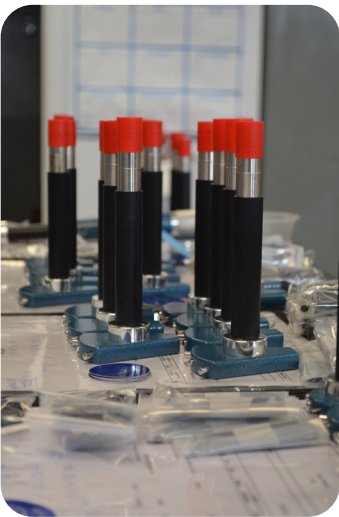


**Flush Mount, Style 7**  
For limited access applications.



**Vertical, Style 3**  
For vertical axis bores at eye level; best choice for bench inspection applications.

|               | DS-                          | B1-MB-<br>(for modular)      | 1<br>Style                     | 2<br>Indicator        | 1<br>Contacts           |
|---------------|------------------------------|------------------------------|--------------------------------|-----------------------|-------------------------|
| GAGE SIZE     | INDICATOR GRADUATION         | HIGH AMPLIFICATION INDICATOR | HIGH AMPLIFICATION PART NUMBER | TRADITIONAL INDICATOR | TRADITIONAL PART NUMBER |
| .63" - 1.00"  | .00005 <sup>s</sup>          | DS-214-005                   | DS-B1-10101                    |                       |                         |
|               | .0001 <sup>s</sup>           | DS-219-01                    | DS-B1-11101                    |                       |                         |
|               | .0001"                       | DS-2150-01                   | DS-B1-12101                    |                       |                         |
|               | .00025"                      | DS-21100-025                 | DS-B1-10111                    |                       |                         |
|               | .0005"                       | DS-21100-05                  | DS-B1-14101                    |                       |                         |
|               | NONE                         | LESS INDICATING UNIT         | DS-B1-15101                    |                       |                         |
| 1             | 0.005mm                      | DS-2125-005mm                | DS-B1-17101                    |                       |                         |
|               | 0.002mm                      | DS-2110-002mm                | DS-B1-18101                    |                       |                         |
|               | 0.002mm <sup>s</sup>         | DS-2102-002mm                | DS-B1-19101                    |                       |                         |
|               | 0.001mm <sup>s</sup>         | DS-2101-001mm                | DS-B1-10121                    |                       |                         |
|               | .0001" / .002mm <sup>s</sup> | S21.M                        | DS-B1-12101M                   |                       |                         |
|               | .00005" / 0.001mm            | DIGITAL                      | DS-B5-10101                    |                       |                         |
| 16 - 25.4mm   | .00005 <sup>s</sup>          | DS-214-005                   | DS-B1-10102                    |                       |                         |
|               | .0001 <sup>s</sup>           | DS-219-01                    | DS-B1-11102                    |                       |                         |
|               | .0001"                       | DS-2150-01                   | DS-B1-12102                    | DS-2DM025-01          | DS-B2-12102             |
|               | .00025"                      | DS-21100-025                 | DS-B1-10112                    |                       |                         |
|               | .0005"                       | DS-21100-05                  | DS-B1-14102                    | DS-2DM050-05          | DS-B2-14102             |
|               | NONE                         | LESS INDICATING UNIT         | DS-B1-15102                    |                       |                         |
| 2             | 0.005mm                      | DS-2125-005mm                | DS-B1-17102                    | DS-2DM012-005mm       | DS-B2-17102             |
|               | 0.002mm                      | DS-2110-002mm                | DS-B1-18102                    | DS-2DM005-002mm       | DS-B2-18102             |
|               | 0.002mm <sup>s</sup>         | DS-2102-002mm                | DS-B1-19102                    |                       |                         |
|               | 0.001mm <sup>s</sup>         | DS-2101-001mm                | DS-B1-10122                    |                       |                         |
|               | .0001" / .002mm <sup>s</sup> | S21.M                        | DS-B1-12102M                   |                       |                         |
|               | .00005" / 0.001mm            | DIGITAL                      | DS-B5-10102                    |                       |                         |
| 25.4 - 38.9mm | .00005 <sup>s</sup>          | DS-214-005                   | DS-B1-10103                    |                       |                         |
|               | .0001 <sup>s</sup>           | DS-219-01                    | DS-B1-11103                    |                       |                         |
|               | .0001"                       | DS-2150-01                   | DS-B1-12103                    | DS-2DM025-01          | DS-B2-12103             |
|               | .00025"                      | DS-21100-025                 | DS-B1-10113                    |                       |                         |
|               | .0005"                       | DS-21100-05                  | DS-B1-14103                    | DS-2DM050-05          | DS-B2-14103             |
|               | NONE                         | LESS INDICATING UNIT         | DS-B1-15103                    |                       |                         |
| 3             | 0.005mm                      | DS-2125-005mm                | DS-B1-17103                    | DS-2DM012-005mm       | DS-B2-17103             |
|               | 0.002mm                      | DS-2110-002mm                | DS-B1-18103                    | DS-2DM005-002mm       | DS-B2-18103             |
|               | 0.002mm <sup>s</sup>         | DS-2102-002mm                | DS-B1-19103                    |                       |                         |
|               | 0.001mm <sup>s</sup>         | DS-2101-001mm                | DS-B1-10123                    |                       |                         |
|               | .0001" / .002mm <sup>s</sup> | S21.M                        | DS-B1-12103M                   |                       |                         |
|               | .00005" / 0.001mm            | DIGITAL                      | DS-B5-10103                    |                       |                         |
| 38.1 - 54.8mm | .00005 <sup>s</sup>          | DS-214-005                   | DS-B1-10104                    |                       |                         |
|               | .0001 <sup>s</sup>           | DS-219-01                    | DS-B1-11104                    |                       |                         |
|               | .0001"                       | DS-2150-01                   | DS-B1-12104                    | DS-2DM025-01          | DS-B2-12104             |
|               | .00025"                      | DS-21100-025                 | DS-B1-10114                    |                       |                         |
|               | .0005"                       | DS-21100-05                  | DS-B1-14104                    | DS-2DM050-05          | DS-B2-14104             |
|               | NONE                         | LESS INDICATING UNIT         | DS-B1-15104                    |                       |                         |
| 4             | 0.005mm                      | DS-2125-005mm                | DS-B1-17104                    | DS-2DM012-005mm       | DS-B2-17104             |
|               | 0.002mm                      | DS-2110-002mm                | DS-B1-18104                    | DS-2DM005-002mm       | DS-B2-18104             |
|               | 0.002mm <sup>s</sup>         | DS-2102-002mm                | DS-B1-19104                    |                       |                         |
|               | 0.001mm <sup>s</sup>         | DS-2101-001mm                | DS-B1-10124                    |                       |                         |
|               | .0001" / .002mm <sup>s</sup> | S21.M                        | DS-B1-12104M                   |                       |                         |
|               | .00005" / 0.001mm            | DIGITAL                      | DS-B5-10104                    |                       |                         |
| 54.0 - 79.5mm | .00005 <sup>s</sup>          | DS-214-005                   | DS-B1-10105                    |                       |                         |
|               | .0001 <sup>s</sup>           | DS-219-01                    | DS-B1-11105                    |                       |                         |
|               | .0001"                       | DS-2150-01                   | DS-B1-12105                    | DS-2DM025-01          | DS-B2-12105             |
|               | .00025"                      | DS-21100-025                 | DS-B1-10115                    |                       |                         |
|               | .0005"                       | DS-21100-05                  | DS-B1-14105                    | DS-2DM050-05          | DS-B2-14105             |
|               | NONE                         | LESS INDICATING UNIT         | DS-B1-15105                    |                       |                         |
| 5             | 0.005mm                      | DS-2125-005mm                | DS-B1-17105                    | DS-2DM012-005mm       | DS-B2-17105             |
|               | 0.002mm                      | DS-2110-002mm                | DS-B1-18105                    | DS-2DM005-002mm       | DS-B2-18105             |
|               | 0.002mm <sup>s</sup>         | DS-2102-002mm                | DS-B1-19105                    |                       |                         |
|               | 0.001mm <sup>s</sup>         | DS-2101-001mm                | DS-B1-10125                    |                       |                         |
|               | .0001" / .002mm <sup>s</sup> | S21.M                        | DS-B1-12105M                   |                       |                         |
|               | .00005" / 0.001mm            | DIGITAL                      | DS-B5-10105                    |                       |                         |
| 78.5 - 156mm  | .00005 <sup>s</sup>          | DS-214-005                   | DS-B1-10106                    |                       |                         |
|               | .0001 <sup>s</sup>           | DS-219-01                    | DS-B1-11106                    |                       |                         |
|               | .0001"                       | DS-2150-01                   | DS-B1-12106                    | DS-2DM025-01          | DS-B2-12106             |
|               | .00025"                      | DS-21100-025                 | DS-B1-10116                    |                       |                         |
|               | .0005"                       | DS-21100-05                  | DS-B1-14106                    | DS-2DM050-05          | DS-B2-14106             |
|               | NONE                         | LESS INDICATING UNIT         | DS-B1-15106                    |                       |                         |
| 7             | 0.005mm                      | DS-2125-005mm                | DS-B1-17106                    | DS-2DM012-005mm       | DS-B2-17106             |
|               | 0.002mm                      | DS-2110-002mm                | DS-B1-18106                    | DS-2DM005-002mm       | DS-B2-18106             |
|               | 0.002mm <sup>s</sup>         | DS-2102-002mm                | DS-B1-19106                    |                       |                         |
|               | 0.001mm <sup>s</sup>         | DS-2101-001mm                | DS-B1-10126                    |                       |                         |
|               | .0001" / .002mm <sup>s</sup> | S21.M                        | DS-B1-12106M                   |                       |                         |
|               | .00005" / 0.001mm            | DIGITAL                      | DS-B5-10106                    |                       |                         |



<sup>s</sup> = single revolution indicator.

OPTIONAL CONTACT POINTS

| OPTION               | 1     | 2       | 4       | 5       | 7       | 8                            |
|----------------------|-------|---------|---------|---------|---------|------------------------------|
| Gaging Contact       | Steel | Carbide | Diamond | Carbide | Diamond | Offset Contact Configuration |
| Centralizing Contact | Steel | Steel   | Steel   | Carbide | Carbide | H Dimension                  |

| GAGE SIZE       | INDICATOR GRADUATION          | HIGH AMPLIFICATION INDICATOR | HIGH AMPLIFICATION PART NUMBER | TRADITIONAL INDICATOR | TRADITIONAL PART NUMBER |
|-----------------|-------------------------------|------------------------------|--------------------------------|-----------------------|-------------------------|
| 6.00 - 12.13"   | .00005 <sup>s</sup>           | DS-214-005                   | DS-B1-10106                    |                       |                         |
|                 | .0001 <sup>s</sup>            | DS-219-01                    | DS-B1-11106                    |                       |                         |
|                 | .0001"                        | DS-2150-01                   | DS-B1-12106                    | DS-2DM025-01          | DS-B2-12106             |
|                 | .00025"                       | DS-21100-025                 | DS-B1-10116                    |                       |                         |
|                 | .0005"                        | DS-21100-05                  | DS-B1-14106                    | DS-2DM050-05          | DS-B2-14106             |
|                 | NONE                          | LESS INDICATING UNIT         | DS-B1-15106                    |                       |                         |
|                 | 0.005mm                       | DS-2125-005mm                | DS-B1-17106                    | DS-2DM012-005mm       | DS-B2-17106             |
|                 | 0.002mm                       | DS-2110-002mm                | DS-B1-18106                    | DS-2DM005-002mm       | DS-B2-18106             |
|                 | 0.002mm <sup>s</sup>          | DS-2102-002mm                | DS-B1-19106                    |                       |                         |
|                 | 0.001mm <sup>s</sup>          | DS-2101-001mm                | DS-B1-10126                    |                       |                         |
| 152.5 - 308.0mm | .0001" / 0.002mm <sup>s</sup> | S2I.M                        | DS-B1-12106M                   |                       |                         |
|                 | .00005" / 0.001mm             | DIGITAL                      | DS-B5-10106                    |                       |                         |
| 10.00 - 24.00"  | .00005 <sup>s</sup>           | DS-214-005                   | DS-B1-10107                    |                       |                         |
|                 | .0001 <sup>s</sup>            | DS-219-01                    | DS-B1-11107                    |                       |                         |
|                 | .0001"                        | DS-2150-01                   | DS-B1-12107                    | DS-2DM025-01          | DS-B2-12107             |
|                 | .00025"                       | DS-21100-025                 | DS-B1-10117                    |                       |                         |
|                 | .0005"                        | DS-21100-05                  | DS-B1-14107                    | DS-2DM050-05          | DS-B2-14107             |
|                 | NONE                          | LESS INDICATING UNIT         | DS-B1-15107                    |                       |                         |
|                 | 0.005mm                       | DS-2125-005mm                | DS-B1-17107                    | DS-2DM012-005mm       | DS-B2-17107             |
|                 | 0.002mm                       | DS-2110-002mm                | DS-B1-18107                    | DS-2DM005-002mm       | DS-B2-18107             |
|                 | 0.002mm <sup>s</sup>          | DS-2102-002mm                | DS-B1-19107                    |                       |                         |
|                 | 0.001mm <sup>s</sup>          | DS-2101-001mm                | DS-B1-10127                    |                       |                         |
| 254 - 610mm     | .0001" / .002mm <sup>s</sup>  | S2I.M                        | DS-B1-12107M                   |                       |                         |
|                 | .00005" / 0.001mm             | DIGITAL                      | DS-B5-10107                    |                       |                         |
| 21.00 - 36.00"  | .00005 <sup>s</sup>           | DS-214-005                   | DS-B1-10108                    |                       |                         |
|                 | .0001 <sup>s</sup>            | DS-219-01                    | DS-B1-11108                    |                       |                         |
|                 | .0001"                        | DS-2150-01                   | DS-B1-12108                    | DS-2DM025-01          | DS-B2-12108             |
|                 | .00025"                       | DS-21100-025                 | DS-B1-10118                    |                       |                         |
|                 | .0005"                        | DS-21100-05                  | DS-B1-14108                    | DS-2DM050-05          | DS-B2-14108             |
|                 | NONE                          | LESS INDICATING UNIT         | DS-B1-15108                    |                       |                         |
|                 | 0.005mm                       | DS-2125-005mm                | DS-B1-17108                    | DS-2DM012-005mm       | DS-B2-17108             |
|                 | 0.002mm                       | DS-2110-002mm                | DS-B1-18108                    | DS-2DM005-002mm       | DS-B2-18108             |
|                 | 0.002mm <sup>s</sup>          | DS-2102-002mm                | DS-B1-19108                    |                       |                         |
|                 | 0.001mm <sup>s</sup>          | DS-2101-001mm                | DS-B1-10128                    |                       |                         |
| 533 - 915mm     | .0001" / .002mm <sup>s</sup>  | S2I.M                        | DS-B1-12108M                   |                       |                         |
|                 | .00005" / 0.001mm             | DIGITAL                      | DS-B5-10108                    |                       |                         |

<sup>s</sup> = single revolution indicator.

WOODEN STORAGE BOX



DS Series bore gages are shipped in disposable shipping containers. To order a fitted wooden storage box please refer to the chart below.

\*Special box available to accommodate larger sizes.

| PART #    | GAGE SIZE       |
|-----------|-----------------|
| DX2-89951 | 1               |
| DX2-89952 | 2               |
| DX2-89953 | 3               |
| DX2-89954 | 4               |
| DX2-89955 | 5               |
| DX2-89956 | 6               |
| DX2-89957 | 7               |
| DX2-89927 | COMBINATION KIT |

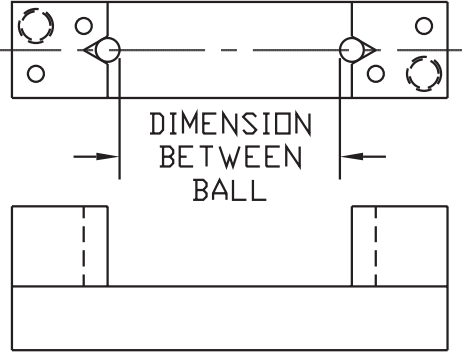
FEATURES:

- Range ext up to 36" are available
- Larger than 36" available by special request
- All models come with steel contacts but carbide and diamond contacts are also available

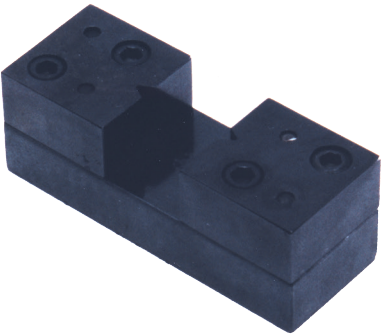
The Internal Pitch Diameter gage is ideally suited to check the internal pitch diameter of gears and splines. It can also be used to check any internal dimension where centralization is not necessary. Production models are available for a specific “best wire size” dimension. Models over 1.25" are supplied with interchangeable screw-in contacts. Special Fixed “V” masters are available to suit the application.

FEATURES:

- Carbide ball contacts (best wire size)
- Interchangeable screw in contacts (4-48 threads)
- Can be used to check PD or major root diameter of gears and splines
- Optional fitted storage case available



“V” Style pitch diameter setmaster, built per application



Order Model: PD-1000-A

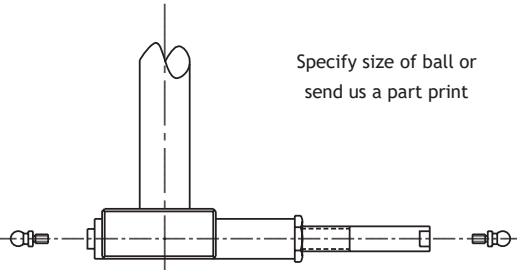


Order Model: PD-3000-A

\*Indicator sold separately

| PART #      | CONTACT TYPE    | GAGING DEPTH (INCHES) | BOTTOM OF HEAD TO CENTERLINE OF CONTACT | FRAME STYLE | BETWEEN BALL/ ROLL DIMENSION | STORAGE BOX PART # |
|-------------|-----------------|-----------------------|---|-------------|------------------------------|--------------------|
| PD-500      | FIXED           | 3"                    | .188"                                   | DBL-499     | .50" - 1.25"                 | 9005               |
| DSPD-1000-A | INTERCHANGEABLE | 5"                    | .224"                                   | DS # 3      | 1.25" - 3.00"                | DX2-89953          |
| PD-1000-A   | INTERCHANGEABLE | 4"                    | .188"                                   | DBL-998     | 1.25" - 3.00"                | 9005               |
| DSPD-3000-A | INTERCHANGEABLE | 6"                    | .224"                                   | DS # 5      | 3.00" - 6.00"                | DX2-89955          |
| PD-3000-A   | INTERCHANGEABLE | 5"                    | .250"                                   | DBL-300     | 3.00" - 6.00"                | 9005               |
| DSPD-6000-A | INTERCHANGEABLE | 6"                    | .312"                                   | DS # 6      | 6.00" - 13.00"               | DX2-89956          |

To order a fitted wooden storage box see the chart.



Specify size of ball or send us a part print



Bore gages are comparative instruments used to compare parts being manufactured to known dimensions. “Setting” the bore gage to a known dimension requires the use of a reference master. The master ring is the most common type reference master used in the industry and each ring is limited to one specific hole size. This means that a master ring inventory can reflect a large investment. Dorsey’s adjustable bore gage setmasters maintain all the advantages of master rings, but provide the added feature of adjustability. Within the specified capacity of each Dorsey “Setmaster”, any dimension can be set by easily adjusting the master to a preset combination of gage blocks.

FEATURES:

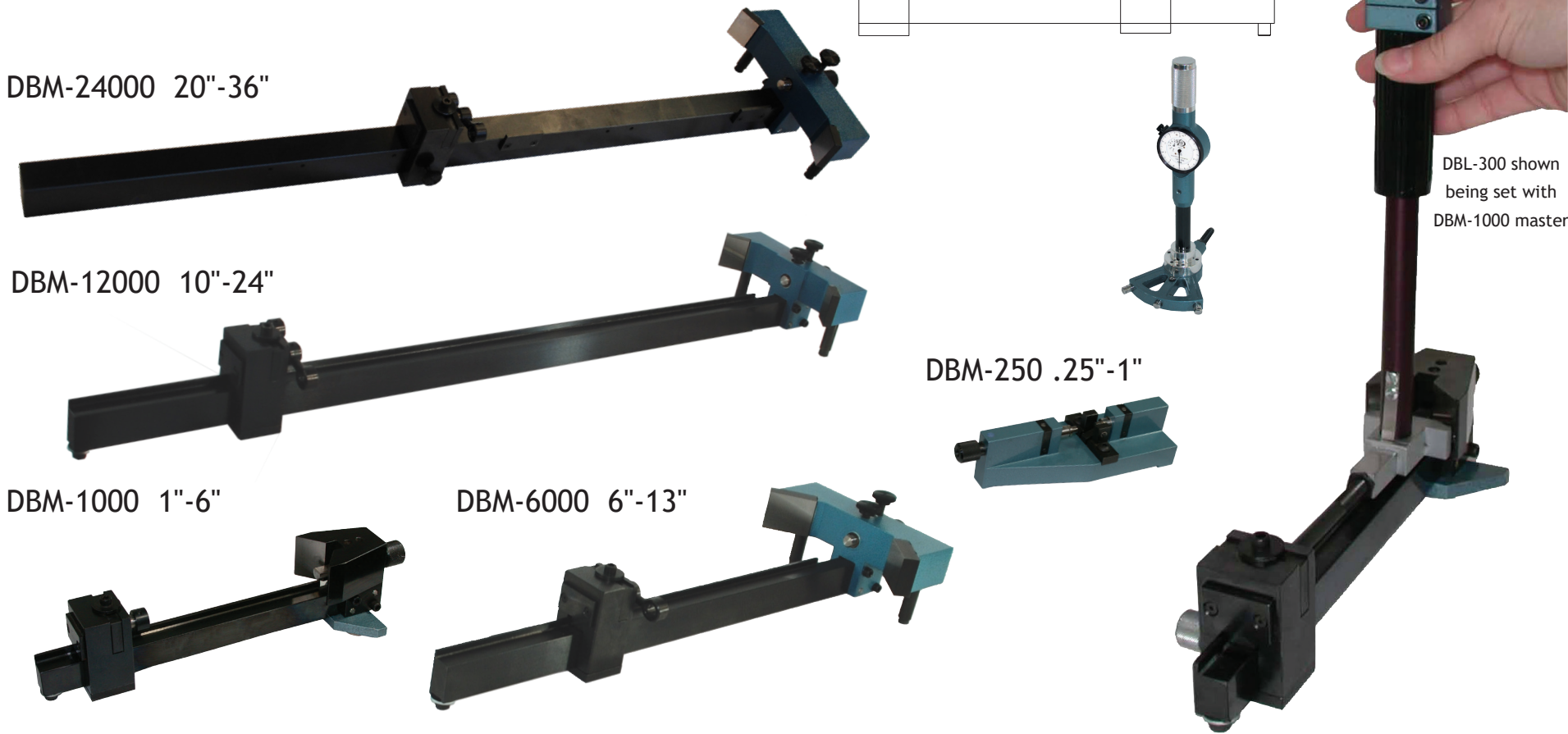
- Only five setmasters are required to cover a range between .25" and 36"
- Mastering cycle repeatability within .000050"
- Setting cycle repeatability within +/- .00010"
- Ring correlation accuracy within +/- .00010"
- Used to set Dorsey DBL or Dorsey/Standard Series bore gages
- Can also be used to set many other brands of bore gages - *contact us for details*

DBM-24000 20"-36"

DBM-12000 10"-24"

DBM-1000 1"-6"

DBM-6000 6"-13"



DBL-300 shown being set with DBM-1000 master

DBM-250 .25"-1"

Dorsey’s indicating plug gages are used for repetitive bore measurement applications where extreme accuracy is important. These high accuracy gages often take the place of air or electronic bore gages.

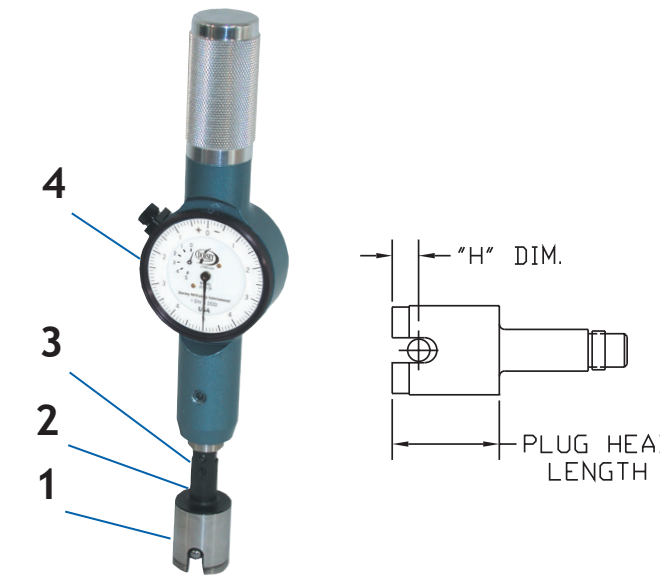
FEATURES:

- Self centering plug head eliminates operator influence for extremely accurate applications
- Non tipping design offers fast, simple, and accurate results
- Carbide contacts are housed and protected by a dedicated hardened steel sleeve which is ground approximately .001" smaller than the lower limit of the bore being inspected
- Single dial unit housing can be used with interchangeable plug heads
- Plug heads: choice of 3 "H" dimensions allows measurement of thru bores, blind holes, or super blind holes

| PLUG HEAD DIAMETER |   | THRU BORES<br>H=.400" | BLIND BORES |       | SUPER BLIND BORES<br>H=.039" |
|--------------------|---|-----------------------|-------------|-------|------------------------------|
| INCHES             | MM  | HEAD                  | HEAD        | H DIM | HEAD PART #                  |
| .098 - .117        | 2.5 - 2.9                                     | N/A                   | D240-035    | 1.5mm | N/A                          |
| .118 - .157        | 3.0 - 4.0                                     | D240-400              | D240-040    | 1.5mm | D240-500                     |
| .158 - .236        | 4.1 - 6.0                                     | D240-405              | D240-050    | 1.8mm | D240-505                     |
| .237 - .472        | 6.1 - 12.0                                    | D240-410              | D240-052    | 2.5mm | D240-510                     |
| .473 - .787        | 12.1 - 20.0                                   | D240-415              | D240-055    | 2.5mm | D240-515                     |
| .788 - 1.181       | 20.1 - 30.0                                   | D240-420              | D240-060    | 2.5mm | D240-520                     |
| 1.182 - 1.574      | 30.1 - 40.0                                   | D240-425              | D240-065    | 3.5mm | D240-525                     |
| 1.575 - 2.362      | 40.1 - 60.0                                   | D240-430              | D240-070    | 3.5mm | D240-530                     |
| 2.363 - 3.150      | 60.1 - 80.0                                   | D240-435              | D240-075    | 4.0mm | D240-535                     |
| 3.151 - 3.937      | 80.1 - 100.0                                  | D240-440              | D240-080    | 4.0mm | D240-540                     |
| 3.938 - 4.331      | 100.1 - 110.0                                 | D240-445              | D240-085    | 4.0mm | D240-545                     |
| 4.332 - 4.724      | 110.1 - 120.0                                 | D240-450              | D240-090    | 4.0mm | D240-550                     |
| 4.725 - 5.118      | 120.1 - 130.0                                 | D240-455              | D240-095    | 4.0mm | D240-555                     |
| 5.119 - 5.512      | 130.1 - 140.0                                 | D240-460              | D240-100    | 4.0mm | D240-560                     |
| 5.513 - 5.906      | 140.1 - 150.0                                 | D240-465              | D240-105    | 4.0mm | D240-565                     |
| 5.907 - 6.299      | 150.1 - 160.0                                 | D240-470              | D240-110    | 4.0mm | D240-570                     |
| 6.300 - 6.693      | 160.1 - 170.0                                 | D240-475              | D240-115    | 4.0mm | D240-575                     |
| 6.694 - 7.087      | 170.1 - 180.0                                 | D240-480              | D240-120    | 4.0mm | D240-580                     |
| 7.088 - 7.480      | 180.1 - 190.0                                 | D240-485              | D240-125    | 4.0mm | D240-585                     |
| 7.481 - 7.874      | 190.1 - 200.0                                 | D240-490              | D240-130    | 4.0mm | D240-590                     |
| 7.875 - 9.000      | 200.1 - 230.0                                 | D240-616              | D240-617    | 4.0mm | N/A                          |
| PART# 1199         | Plug head adapter, (to 5/8 dial unit housing) |                       |             |       |                              |
| -DS                | Depth stop                                    |                       |             |       |                              |
| D240-315           | Right angle attachment w/.040" (1mm) Travel   |                       |             |       |                              |

HOW TO ORDER:

1. Select measurement head size, specify check diameter and min/max bore sizes
2. Determine if extension is required
3. Select adapter # for dial unit housing
4. Select an indicating device (see pages 10, 11 & 12)



Part #DX4-81035  
Digital indicator housing  
(indicator not included)



Depth stops available upon request

| DEPTH EXTENSIONS FOR USE ON HEADS WITH DIAMETERES GREATER THAN .49" (12.5mm) |                                      |
|--|--------------------------------------|
| PART #   | DESCRIPTION                          |
| D240-309   | 3.9" (100mm) X .47" (12mm) DIAMETER  |
| D240-310   | 9.8" (250mm) X .47" (12mm) DIAMETER  |
| D240-311   | 19.7" (500mm) X .47" (12mm) DIAMETER |
| D240-312   | 29.5" (750mm) X .47" (12mm) DIAMETER |
| D240-313   | 40" (1000mm) X .47" (12mm) DIAMETER  |

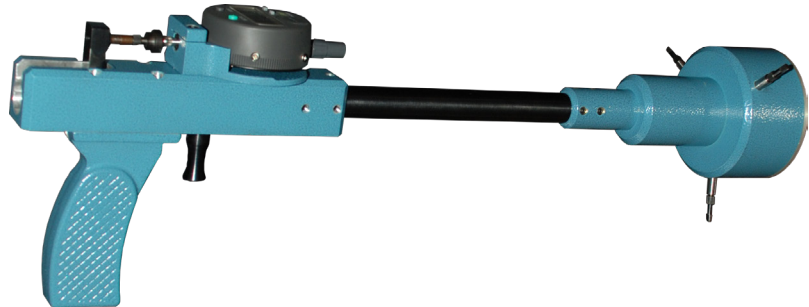
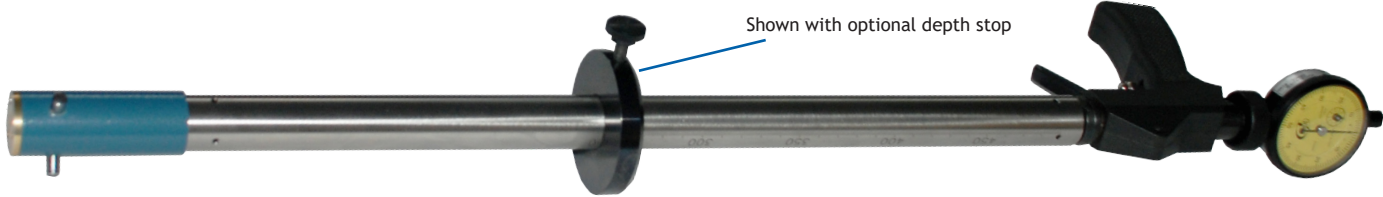
# RLBG SERIES - RETRACTABLE BORE GAGE

www.dorseymetrology.com

The RLBG Series retractable bore gages are designed per application. They are primarily used to check deep holes where long retraction is required. Recessed diameters and grooves can be checked for size, taper, or out of roundness. Trigger action retracts and expands contacts. The gage has a fast, smooth, and uniform gaging pressure over its entire range. **Please supply Dorsey with part print for quoting.**



*Deep Depths Available  
in Carbon Fiber*

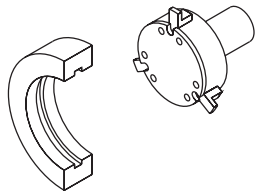


## DESIGN FEATURES:

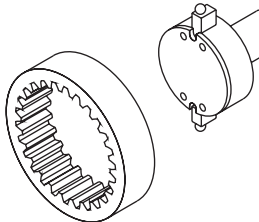
- Aluminum or lightweight composite pistol grip housing
- Gage can be designed to retract into or away from the indicator
- Fixed or interchangeable contacts
- Depth stop or scale-on-shaft facilitates checking at a specific depth
- Single piece or multiple screw together gaging shafts
- 2 or 3 point measurement

## RETRACTABLE BORE GAGE APPLICATIONS

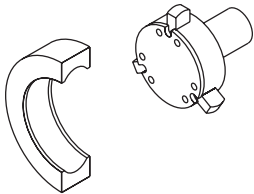
**Groove measurement**  
Precise groove measurements can be made easily and accurately.



**Spline & Gear measurement**  
Spline or gear measurement of pitch diameter or major diameter is available.



**Spherical or irregular shape measurement**  
Spherical shaped contacts can be useful in deep bores where holding the bore gage straight in the bore is difficult. Depth stops are also very helpful in the alignment of bore gages.



**Ball race or radius groove measurement**  
The RLBG can be configured to quickly and accurately check ball races and spherical grooves.

845-454-3111 | 800-549-4243

# INDICATING DISC GAGE

Indicating disc gages are used to measure ID's or OD's around shafts and other obstructions such as grooves, stepped areas, boss type obstacles in the shaft area, or any other configuration that prevents the use of a standard snap, bore, or straight frame shallow diameter gage. Indicating disc gages feature the principle of two point measurement and fixed centralizing locators. Disc gages are made for a specific size with adjustment contacts for minimal bore changes. This gage requires 1" of clearance around the frame.

## FEATURES:

- Standard 2 point measurement, optional 3 point contact
- Adjustable centralizing locators within 1/8"
- .025" gaging contact travel
- Can be used with digital or dial indicator
- Available with perpendicular indicator



Dorsey Products -  
proudly made in the USA



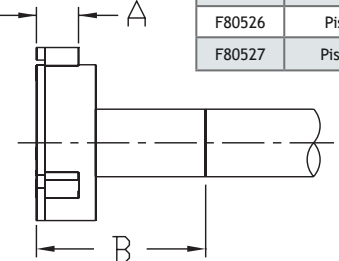

| ID         |                                |
|------------|--------------------------------|
| PART #     | WITHIN DIAMETER RANGE (INCHES) |
| IDG-ID-200 | 1.75 - 2.75                    |
| IDG-ID-300 | 2.75 - 3.75                    |
| IDG-ID-400 | 3.75 - 4.75                    |
| IDG-ID-500 | 4.75 - 5.75                    |
| IDG-ID-600 | 5.75 - 6.75                    |
| IDG-ID-700 | 6.75 - 7.75                    |
| IDG-ID-800 | 7.75 - 8.75                    |

| OD         |                                |
|------------|--------------------------------|
| PART #     | WITHIN DIAMETER RANGE (INCHES) |
| IDG-OD-200 | 1.50-2.75                      |
| IDG-OD-300 | 2.75-3.75                      |
| IDG-OD-400 | 3.75-4.75                      |
| IDG-OD-500 | 4.75-5.75                      |
| IDG-OD-600 | 5.75-6.75                      |
| IDG-OD-700 | 6.75-7.75                      |
| IDG-OD-800 | 7.75-8.75                      |

Dorsey Metrology requires part print to quote and build.  
This gage is made-to-order and non-returnable.



These retractable bore gages are ideal for inspection on the shop floor. They feature a series of 24 interchangeable heads and 2 handles to accommodate the complete range of diameters between .236" and 7.87".

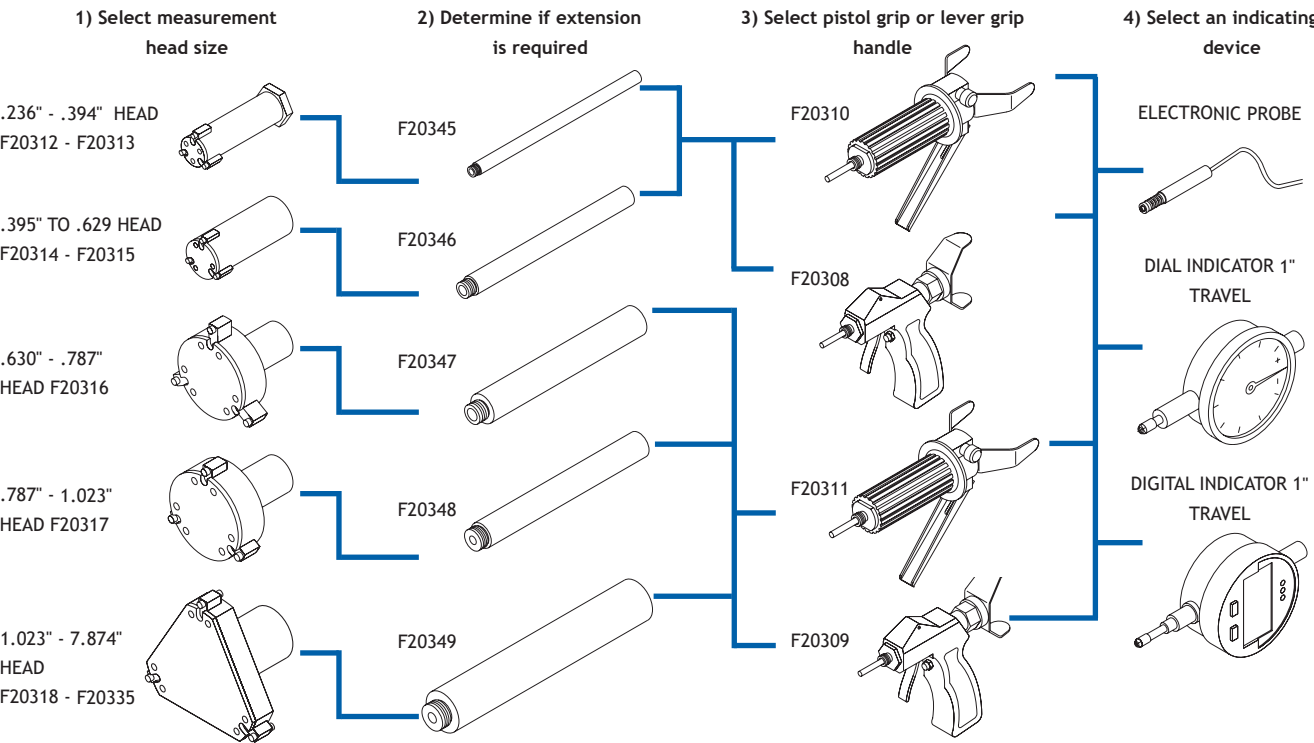


| PART # | PISTOL GRIP & LEVER HANDLE DESCRIPTION |
|--------|--|
| F20308 | Pistol grip for .236" - .629" diameter |
| F20309 | Pistol grip for .630" - 7.87" diameter |
| F20310 | Lever grip for .236" - .629" diameter  |
| F20311 | Lever grip for .630" - 7.87" diameter  |

| PART # | FITTED STORAGE CASE DESCRIPTION      |
|--------|--------------------------------------|
| F80524 | Pistol grip head and master 16-40mm  |
| F80525 | Pistol grip head and master 41-60mm  |
| F80526 | Pistol grip head and master 61-80mm  |
| F80527 | Pistol grip head and master 81-100mm |

| HEAD PART # | HEAD SIZE |              | LINE A | LINE B | MASTER SETTINGS BILATERAL SIZE |        |
|-------------|-----------|--------------|--------|--------|--------------------------------|--------|
|             | MM        | INCH         |        |        | PART #                         | INCH   |
| F20312      | 6-8       | .236-.315    | .109   | 2.36   | F21162                         | .2912  |
| F20313      | 8-10      | .315-.394    | .118   | 2.36   | F21164                         | .3437  |
| F20314      | 10-13     | .394-.511    | .157   | 2.36   | F21167                         | .3475  |
| F20315      | 13-16     | .511-.630    | .236   | 2.36   | F21172                         | .5025  |
| F20316      | 16-20     | .630-.787    | .295   | 2.36   | F21177                         | .7187  |
| F20317      | 20-26     | .787-1.023   | .433   | 2.36   | F21185                         | .9062  |
| F20318      | 26-32     | 1.023-1.260  | .433   | 2.36   | F21191                         | 1.0312 |
| F20319      | 32-40     | 1.260-1.575  | .433   | 2.75   | F21205                         | 1.4062 |
| F20320      | 40-50     | 1.575-1.968  | .591   | 2.75   | F21450                         | 1.7500 |
| F20321      | 50-60     | 1.968-2.362  | .591   | 2.75   | F21451                         | 2.1875 |
| F20322      | 60-70     | 2.362-2.756  | .591   | 2.75   | F21452                         | 2.5625 |
| F20323      | 70-80     | 2.756-3.150  | .591   | 2.75   | F21453                         | 2.9375 |
| F20324      | 80-90     | 3.150-3.543  | .591   | 2.75   | F21454                         | 3.3437 |
| F20325      | 90-100    | 3.543-3.937  | .591   | 2.75   | F21455                         | 3.7500 |
| F20326      | 100-110   | 3.937- 4.330 | .767   | 2.75   | F21456                         | 4.1250 |
| F20327      | 110-120   | 4.330-4.724  | .767   | 2.75   | F21457                         | 4.5625 |
| F20328      | 120-130   | 4.724-5.118  | .767   | 2.75   | F21458                         | 4.9062 |
| F20329      | 130-140   | 5.118-5.512  | .767   | 2.75   | F21459                         | 5.3125 |
| F20330      | 140-150   | 5.512-5.906  | .767   | 2.75   | F21460                         | 5.7187 |
| F20331      | 150-160   | 5.906-6.299  | .767   | 2.75   | F21461                         | 6.1093 |
| F20332      | 160-170   | 6.299-6.693  | .866   | 2.75   | F21462                         | 6.5000 |
| F20333      | 170-180   | 6.693-7.087  | .866   | 2.75   | F21463                         | 6.9062 |
| F20334      | 180-190   | 7.087-7.480  | .866   | 2.75   | F21464                         | 7.2912 |
| F20335      | 190-200   | 7.480-7.874  | .866   | 2.75   | F21465                         | 7.6875 |

INDIVIDUAL GAGE SELECTION GUIDE



| EXTENSIONS |                                 |        |        |
|------------|---------------------------------|--------|--------|
| PART #     | GAGE HEAD                       | METRIC | INCH   |
| F20345     | F20312 - F20313                 | 100mm  | 3.937" |
| F20346     | F20314 - F20315                 | 100mm  | 3.937" |
| F20347     | F20316                          | 100mm  | 3.937" |
| F20348     | F20317                          | 150mm  | 5.905" |
| F20349     | F20318 - F20335                 | 150mm  | 5.905" |
| F20336     | Stand for pistol grip bore gage |        |        |

Pin type dial bore gages are an accurate, economical, and versatile alternative to the ID micrometer. These gages do not reference or rest on a datum surface and are therefore ideally suited for applications such as ID splines, gears, or threads.

How to order DS-B4 Pin gage assembly: select gage dial unit which includes gaging contacts and then select a spacer or adapter as required.

| GAGE (INCLUDING DIAL UNIT AND GAGING CONTACTS) |                 |             |
|--|-----------------|-------------|
| PART #   | GRAD            | RANGE       |
| DS-B4-219-01                                   | .0001"          | .009"       |
| DS-B4-2DM025-01                                | .0001"          | .025"       |
| DS-B4-2150-01                                  | .0001"          | .050"       |
| DS-B4-21100-025                                | .00025"         | .100"       |
| DS-B4-21100-05                                 | .0005"          | .100"       |
| DS-B4-S2I/M                                    | .0001"/0.0025mm | .010"/.25mm |
| DS-B4-2102-002mm                               | 0.002mm         | 0.2mm       |
| DS-B4-2110-002mm                               | 0.002mm         | 1.0mm       |
| DS-B4-2125-005mm                               | 0.005mm         | 2.5mm       |

| PIN GAGE MASTERS "PM SERIES" |          |            |
|------------------------------|----------|------------|
| PART #                       | RANGE    |            |
|                              | INCHES   | METRIC     |
| PM-6                         | 6 - 12"  | 150 to 300 |
| PM-12                        | 12 - 18" | 300 to 450 |
| PM-18                        | 18 - 24" | 450 to 600 |
| PM-24                        | 24 - 30" | 600 to 750 |
| PM-30                        | 30 - 36" | 750 to 900 |

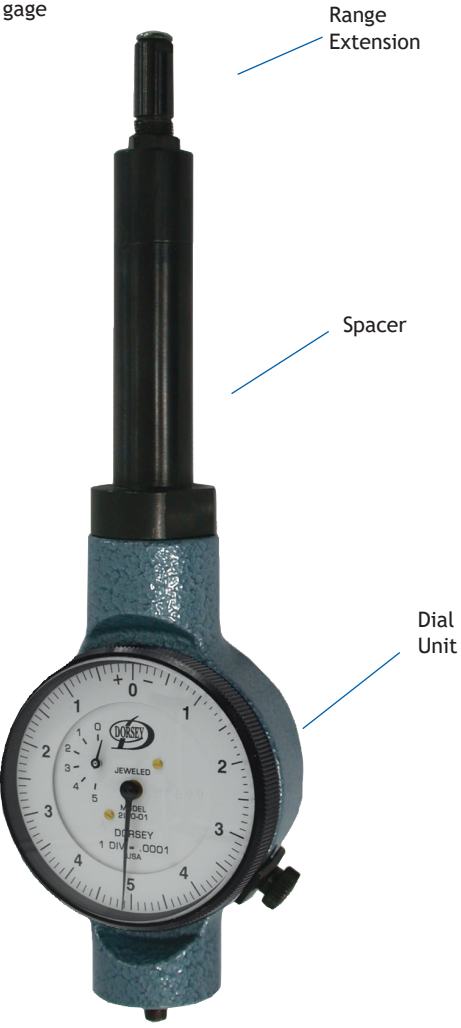
| PART #      | SPACER LENGTH | RANGE    |            |
|-------------|---------------|----------|------------|
|             |               | INCHES   | METRIC     |
| DS-B4-85140 | Adapter       | 4.5 - 7  | 114 - 178  |
| DS-B4-81845 | 3"            | 7 - 10   | 178 - 254  |
| DS-B4-81849 | 6"            | 10 - 13  | 254 - 330  |
| DS-B4-81853 | 9"            | 13 - 16  | 330 -406   |
| DS-B4-81857 | 12"           | 16 - 19  | 406 - 483  |
| DS-B4-81861 | 15"           | 19 - 22  | 483 - 559  |
| DS-B4-81865 | 18"           | 22 - 25  | 559 - 635  |
| DS-B4-81869 | 21"           | 25 - 28  | 635 - 711  |
| DS-B4-81873 | 24"           | 28 - 31  | 711 - 787  |
| DS-B4-81877 | 27"           | 31 - 34  | 787 - 864  |
| DS-B4-81881 | 30"           | 34 - 37  | 864 - 940  |
| DS-B4-81885 | 33"           | 37 - 40  | 940 - 1016 |
| DS-B4-81886 | Full Set      | 4.5 - 40 | 114 - 1016 |

PM Series adjustable setmaster  
6" diameter range adjustment and  
.50" fine adjustment



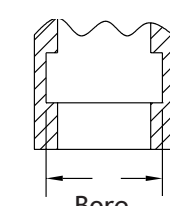
**\*Note:** Gage pictured features DS-B4-21100-05 dial unit and DS-B4-81853 9" spacer

DS-B4 series dial pin gage

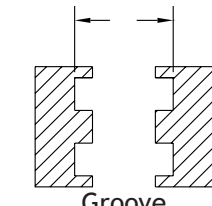


Adjustable inside diameter pin gages are used to check various applications including, Straight bores, Inside grooves, spherical radii, spline, gear and pitch diameters. We offer a variety of interchangeable threaded contacts to suit each application. The Retractable pin gage provide the principle and portability of an inside diameter micrometer with the accuracy and speed of a dial indicator. Total retraction of the gage is dependant on the range of the indicator. It can be provided with a dial indicator balanced or contiuous or digital indicator of your choosing.

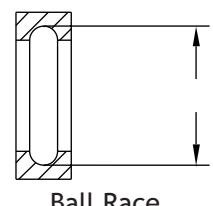
TYPICAL APPLICATIONS



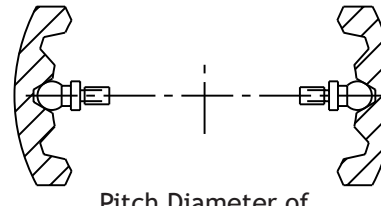
Bore



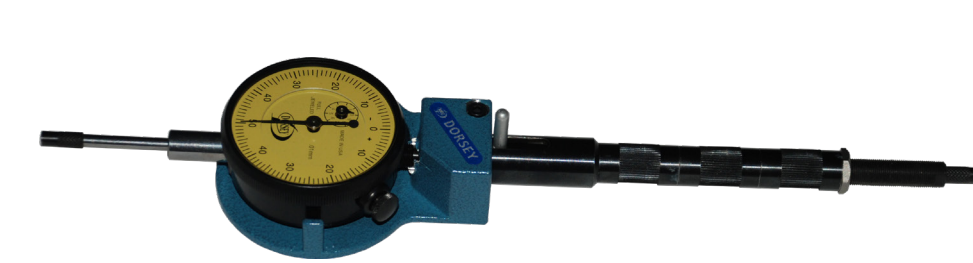
Groove Diameter



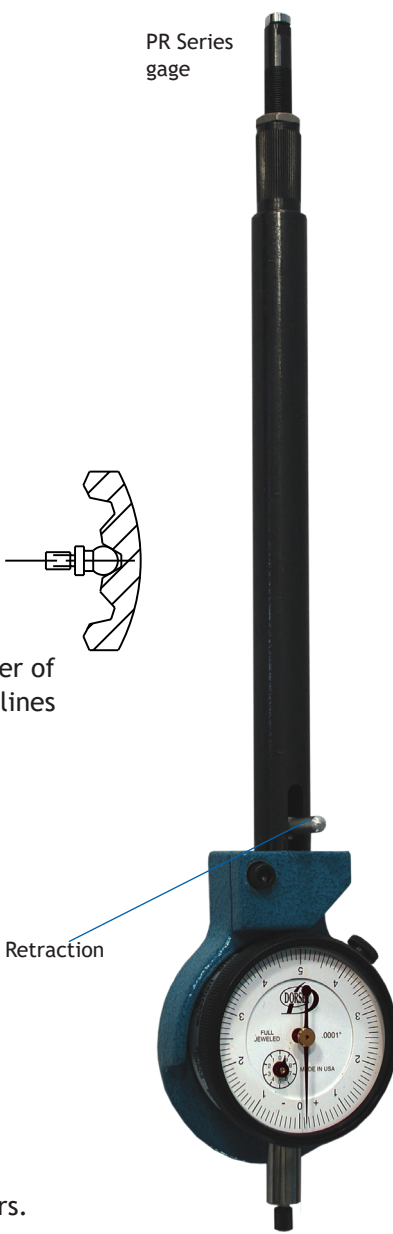
Ball Race Radius Grooves



Pitch Diameter of Gears and Splines



PR Series gage



Retraction


| RETRACTABLE PIN GAGE "PR SERIES" |          |            |
|----------------------------------|----------|------------|
| PR6                              | 6 - 12"  | 150 to 300 |
| PR12                             | 12 - 18" | 300 to 450 |
| PR18                             | 18 - 24" | 450 to 600 |
| PR24                             | 24 - 30" | 600 to 750 |
| PR30                             | 30 - 36" | 750 to 900 |

PR Series pin gages have retraction based on the indicator travel and is best suited with a longer travel indicator. These are available with a choice of any of Dorsey's #2 "High Amplification", "Traditional" dial indicators, or digital indicators.

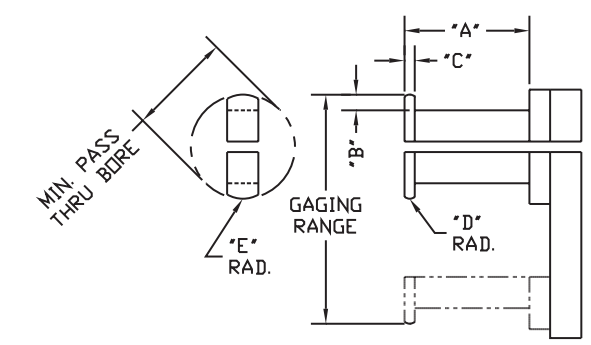
Dorsey's Dynamike Model DYS groove gage combines a lightweight, compact, rigid cast frame and a patented ball bushing slide with a series of interchangeable gaging arms to suit virtually any application.

FEATURES:


- 25" (6mm) of gaging travel / retraction
- .25" to .75"(6mm-19mm) diameter range
- 1.25" (32mm) long precision ground adjustment rail
- Can accommodate dial or digital indicator
- Retraction pulls away from indicator



Gage shown is DYS with special metric indicator, part #2305-2 arms part #2349 bench stand



MIN. PASS THRU BORE  
"E" RAD.  
GAGING RANGE  
"A"  
"C"  
"B"  
"D" RAD.



Contact retraction button  
Patented ball slide movement  
Shown actual size

The DYS Groove Gage is supplied per model # below with DYS Groove Gage body, model # 1DM125-05 dial indicator, .0005" graduation, and the appropriate contact arm set for the range noted below. Other indicators can be subsituted.

| PART #    | RANGE       | MIN / BORE | TYPE    | "A" Dim. | "B" Dim. | "C" Dim. | "D" Dim. | "E" Dim. | CONTACT ARM # |
|-----------|-------------|------------|---------|----------|----------|----------|----------|----------|---------------|
| DYS-250-2 | .250 - .500 | .187       | 2 Point | .500     | .030     | .030     | .030     | .092     | # 2305-2      |
| DYS-250-3 | .250 - .500 | .187       | 3 Point | .500     | .030     | .030     | .030     | .092     | # 2305-3      |
| DYS-500-2 | .500 - .750 | .350       | 2 Point | 1.000    | .075     | .060     | .060     | .172     | # 2306-2      |
| DYS-500-3 | .500 - .750 | .350       | 3 Point | 1.000    | .075     | .060     | .060     | .172     | # 2306-3      |

| PART #    | DESCRIPTION   |
|-----------|---|
| DYS-FRAME | DYS Groove Gage body only, less gaging arms and indicator |
| 2349      | For the Bench Stand used with the DYS gages               |
| 2335      | Clamp nut used with part #2305 & #2306 contact arms       |

**\*Note:** For pricing on special gaging arms to suit a specific application, submit the part print with your quotation. Arms can be ordered separately.



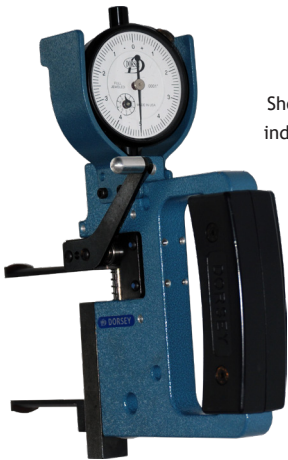
# DYN GROOVE GAGE

www.dorseymetrology.com

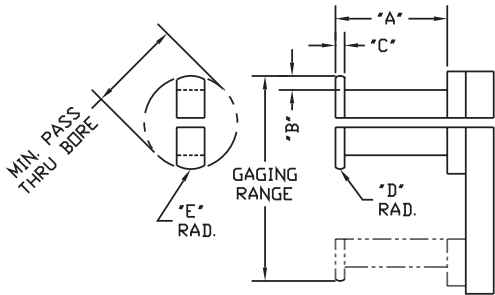
Dorsey's Dynamike Model DYN groove gage combines a patented ball bushing slide with a series of gaging arms to suit almost any application. Gaging contact retraction is accomplished by using a conveniently mounted thumb lever while gaging range adjustment is accomplished by sliding the static gaging arm along its precision ground rail.

## FEATURES:

- .500" (13mm) of gaging travel/retraction
- .75" to 3.50" (19mm - 88mm) diameter range
- 3" Long precision ground adjustment rail
- Precision machined cast jig plate frame
- Thermal isolation grips
- Can accommodate any of Dorsey "High Amplification", "Traditional", or digital indicator
- Retraction pulls away from indicator
- Indicator can be rotated 360 degrees to suit any application



Shown with 2DM125-05 dial indicator .0005" graduation.



The DYN Goove Gage is supplied per model # below with DYN Groove Gage body, model # 2DM125-05 dial indicator, .0005" graduation, and the appropriate contact arm set for the range noted below.

| PART #     | RANGE       | MIN / BORE | TYPE    | "A" Dim. | "B" Dim. | "C" Dim. | "D" Dim. | "E" Dim. | CONTACT ARM # |
|------------|-------------|------------|---------|----------|----------|----------|----------|----------|---------------|
| DYN-750-2  | .750 - 2.00 | .500       | 2 Point | 1.50     | .125     | .125     | .125     | .245     | # 2405-2      |
| DYN-750-3  | .750 - 2.00 | .500       | 3 Point | 1.50     | .125     | .125     | .125     | .245     | # 2405-3      |
| DYN-2000-2 | 2.00 - 3.50 | 2.000      | 2 Point | 2.00     | .125     | .125     | .125     | .750     | # 2465-2      |
| DYN-2000-3 | 2.00 - 3.50 | 2.000      | 3 Point | 2.00     | .125     | .125     | .125     | .750     | # 2465-3      |

| PART #    | DESCRIPTION   |
|-----------|---|
| DYN-FRAME | DYN Groove Gage body only, less gaging arms and indicator |
| 48502-S   | For the Bench Stand used with the DYN gages               |
| 2335      | Clamp nut used with part # 2405 & #2465 contact arms      |

**\*Note:** For pricing on special gaging arms to suit a specific application, submit the part print with your quotation. Arms can be ordered separately.

845-454-3111 | 800-549-4243

# UNIVERSAL GAGE- ID/OD/LOCATION

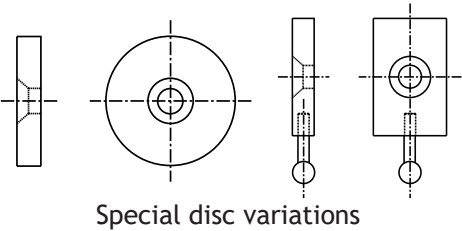
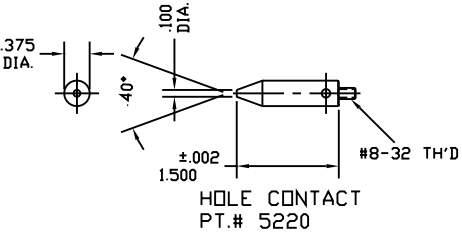
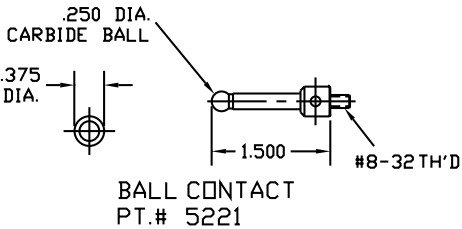
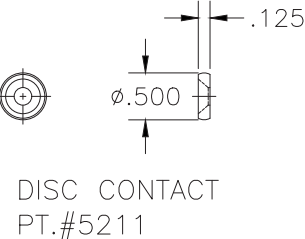
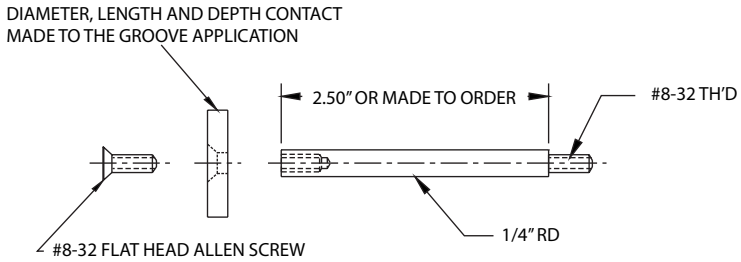
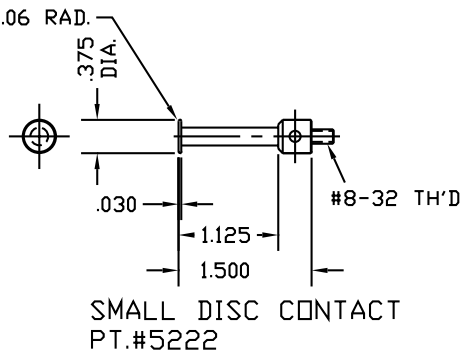
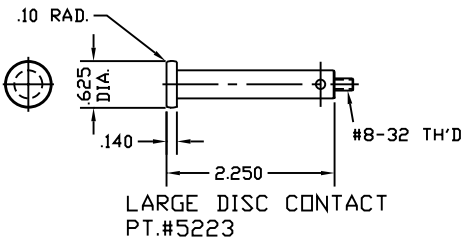
Dorsey's universal measuring gage was designed to combine our proven patented precision linear movement with a frame that accommodates a wide variety of contacts. This gage can precisely measure various internal and external dimensions such as diameters, grooves, splines, tapers, wall thickness, counterbores, hole locations, and even threads.

## FEATURES:

- Patented linear slide with 1" (25.4 mm) of gaging travel / retraction
- Indicator can be rotated 360 degrees to suit application
- Measurement range 0-5" OD / 2-5" ID
- Lightweight precision machined aluminum frame
- Can accommodate dial or digital indicators



\*Indicator sold separately



**Dorsey can design and make contacts specific to the customers application. For this service a part print is required.**

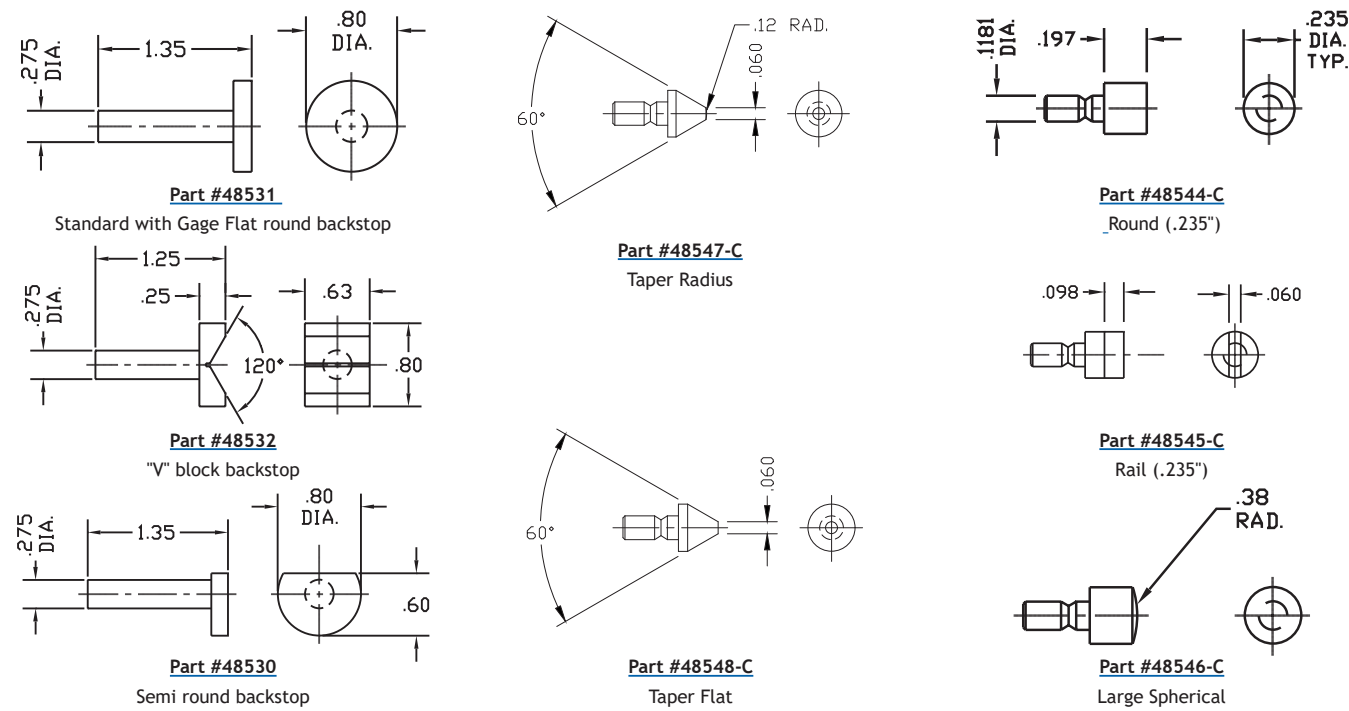
| MODEL   | DESCRIPTION   |
|---------|---|
| UG-1    | Universal gage complete with standard disc contact (part #5211)   |
| UG-KIT  | Universal gage complete with standard disc contact, ball contacts, .25" disc contacts, and digital indicator. |
| 48502-S | Bench Stand for UG  |



FEATURES:

- Checks multiple shapes: a combination of contact points, backstops, and accessories may be selected and custom assembled to meet the most exacting needs
- Comparative measurements can be made of almost any shape: diameters, spheres, grooves, shafts, flats, etc.
- Specifically designed for Dorsey’s high amplification dial indicators with graduations as fine as .00002" (0.0005mm)
- Two frame sizes are available
- Hand held or mounted on an optional bench stand
- Utilizes dial and digital indicators as well as electronic transducers
  - Display on electronic columns or remote digital devices, SPC compatible
- Tailstock fine adjustment of 1" maintains contact parallelism throughout the gaging range
- Standard thumb actuated retraction of .100" makes part loading easy
- Contacts suitable for most applications can be supplied from a wide variety in stock
  - All anvils utilize shank-lock design for maximum holding pressure
- Several backstop designs are available to accommodate a variety of part configurations

| ORDERING INFORMATION |   |
|----------------------|---|
| PART #               | DESCRIPTION   |
| 48554                | 0 - 1" range versatile snap gage with choice of one set of contacts |
| 48555                | 1 - 2" range versatile snap gage with choice of one set of contacts |
| 48502-V              | Bench Stand for versatile snap gage                                 |

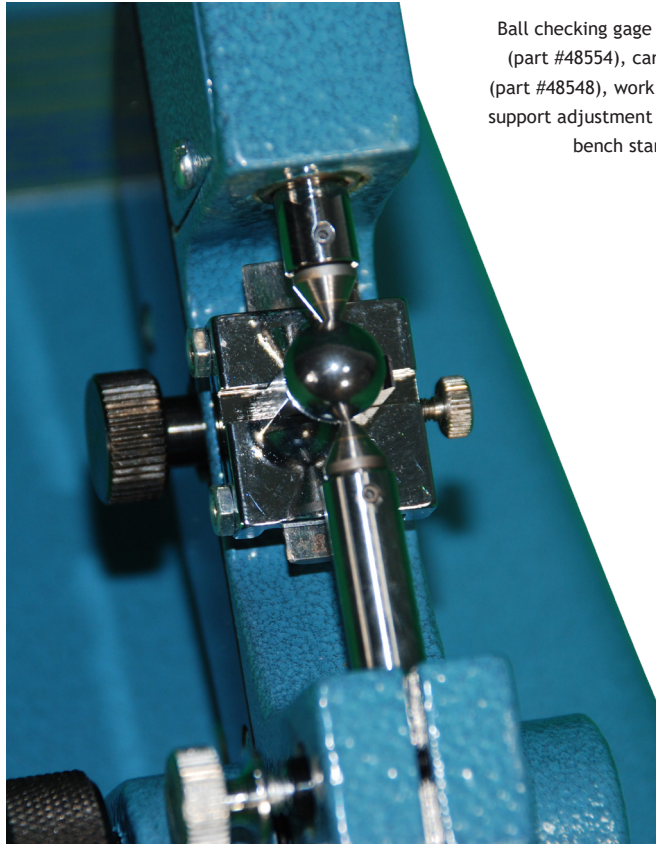


Part #48554 shown with dial indicator (part #414-002) and bench stand (part #48502-V). Indicator sold separately.



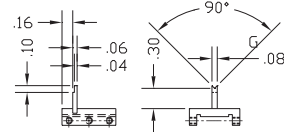
Additional contacts can be found on page 52.

Measuring balls and other spherical items is one of the most popular applications of the Versatile Snap Gage. Two snap gage frames, 0-1" (Part #48554) and 1"-2" (Part #48555) cover the range of ball diameters from the smallest manufactured up to 2" diameter. The "V" backstops have been specially designed to facilitate the measurement of balls.

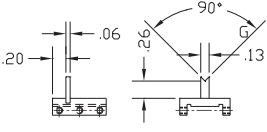


Ball checking gage shown is comprised of gage (part #48554), carbide tapered flat contacts (part #48548), work support (part #48569), work support adjustment assembly (part #48581), and bench stand (part #48502-V)

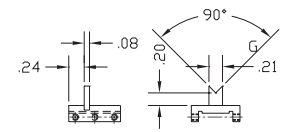
**Work Support Note:** Work support adjustment assembly part #48581 must be used with work support No.1 through No.6



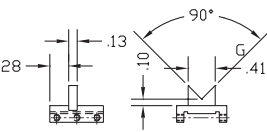
Work support No.1  
**Part #48568**  
.060" - .100" balls



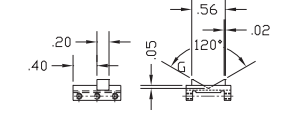
Work support No.2  
**Part #48569**  
.100" - .160" balls



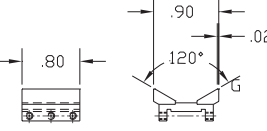
Work support No.3  
**Part #48570**  
.160" - .250" balls



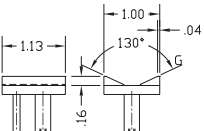
Work support No.4  
**Part #48571**  
.250" - .500" balls



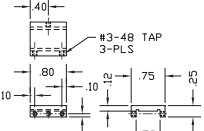
Work support No.5  
**Part #48572**  
.500" - 1.000" balls



Work support No.6  
**Part #48574**  
1.000" - 1.750" balls



"V" block screw controlled backstop  
**Part #48583**  
1.000" - 2.000" balls



Work support blank  
**Part #48582**

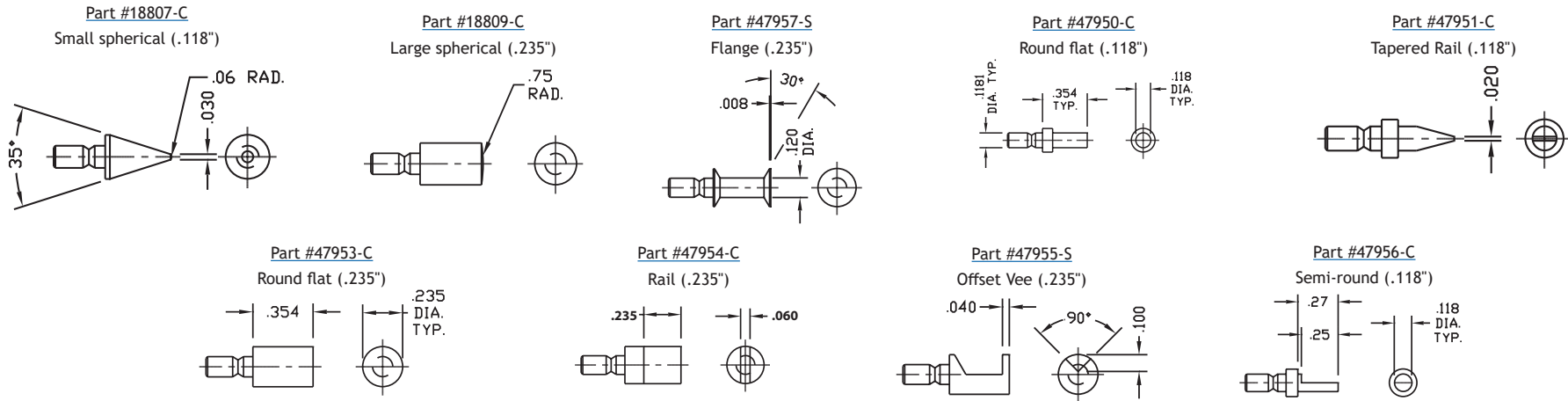




The model J2 jaw gage features Dorsey’s proven precision lapped chrome/steel bushing in a rigid steel frame. A series of interchangeable contacts and adjustable two axis rest stage along with a micrometer type adjustment tail stock combine to make the J2 jaw gage suitable for most high accuracy OD inspection tasks.

FEATURES:

- Check diameters, widths, lengths, and locations. Ideal for screw machine and small parts applications
- Specifically designed for Dorsey’s high amplification dial indicators with graduations as fine as .00002" (0.0005mm)
- Utilizes dial and digital indicators or electronic displays and is SPC compatible
- Standard thumb actuated retraction of .100" makes part loading easy
- Tailstock fine adjustment of 1" maintains contact parallelism throughout the gaging range
- Interchangeable contact points are available for a variety of part configurations, each set of contacts utilizes a shank-lock design for maximum holding pressure
- Backstop for locating the part may be adjusted both horizontally or vertically to suit the part configuration



Gage shown features round carbide contacts (part #47950) and model #414-002 dial indicator (sold separately).

Additional contacts can be found on page 50.

J-2 WITH #47950 CONTACTS

This design of rugged production line snap gages has been the industry standard for more than 75 years. Dorsey offers this easily adjusted gage built to the same exacting specifications and precision as the original Standard Gage® product. Interchangeable repair parts for Standard Gage® products are also available.

FEATURES:

- .060" gaging travel is standard, optional with .100"
- Adjustable gaging pressure
- Lower anvil features 1" travel micrometer style adjustment with rapid lock nut
- Well balanced precision machined aluminum jig plate frame with thermal isolation grips
- Collet mounted indicator can be rotated to suit application
- Available with any Dorsey dial or digital indicator
- 5/8" square solid carbide lapped anvils with generous lead radius
- Anvils are flat & parallel within .00015" below 4", .0002" in 4"-8", .0003" in 8-12", and .0005" above 12"
- Nylon backstop protects parts during loading



\*Shown with #2110-002mm indicator and optional #48502-S bench stand



For snap gages with carbon fiber frame 6" diameter and above, add -CF to model number. For example: DS-S2-12376-CF

Available in Carbon Fiber



| OPTIONAL CONTACT TRAVEL   | INTERCHANGABLE BLADE ANVILS |                |                 |
|---|-----------------------------|----------------|-----------------|
|   | PART #                      | A DIM. (WIDTH) | B DIM. (HEIGHT) |
| To specify extended gaging contact travel, add "TXX" to end of part number.<br>-T100 = .100" Travel<br>Lifting Lever (-L) | 2274-1                      | .040" (1.0mm)  | .08" (2.0mm)    |
|   | 2274-2                      | .060" (1.5mm)  | .12" (3.0mm)    |
|   | 2274-3                      | .080" (2.0mm)  | .16" (4.0mm)    |
|   | 2274-4                      | .100" (2.5mm)  | .20" (5.0mm)    |
|   | 2274-5                      | .125" (3.2mm)  | .31" (7.9mm)    |
|   | 2274-6                      | .156" (4.0mm)  | .31" (7.9mm)    |
|   | 2274-7                      | .187" (4.7mm)  | .31" (7.9mm)    |

| Range    |             | Flat 5/8" sq. anvils   |                    |                   |
|----------|-------------|------------------------|--------------------|-------------------|
|          |             | .0001" grad multi rev. | 0.002mm multi rev. | Without Indicator |
| Inch     | Metric      |                        |                    |                   |
| 0 - 1"   | 0 - 25mm    | DS-S2-12371            | DS-S2-18371        | DS-S2-15371       |
| 1 - 2"   | 25 - 51mm   | DS-S2-12372            | DS-S2-18372        | DS-S2-15372       |
| 2 - 3"   | 51 - 76mm   | DS-S2-12373            | DS-S2-18373        | DS-S2-15373       |
| 3 - 4"   | 76 - 102mm  | DS-S2-12374            | DS-S2-18374        | DS-S2-15374       |
| 4 - 5"   | 102 - 127mm | DS-S2-12375            | DS-S2-18375        | DS-S2-15375       |
| 5 - 6"   | 127 - 152mm | DS-S2-12376            | DS-S2-18376        | DS-S2-15376       |
| 6 - 7"   | 152 - 178mm | DS-S2-12377            | DS-S2-18377        | DS-S2-15377       |
| 7 - 8"   | 178 - 203mm | DS-S2-12378            | DS-S2-18378        | DS-S2-15378       |
| 8 - 9"   | 203 - 229mm | DS-S2-12379            | DS-S2-18379        | DS-S2-15379       |
| 9 - 10"  | 229 - 254mm | DS-S2-12380            | DS-S2-18380        | DS-S2-15380       |
| 10 - 11" | 254 - 279mm | DS-S2-12381            | DS-S2-18381        | DS-S2-15381       |
| 11 - 12" | 279 - 305mm | DS-S2-12382            | DS-S2-18382        | DS-S2-15382       |
| 12 - 13" | 305 - 330mm | DS-S2-12383            | DS-S2-18383        | DS-S2-15383       |
| 13 - 14" | 330 - 356mm | DS-S2-12384            | DS-S2-18384        | DS-S2-15384       |
| 14 - 15" | 356 - 381mm | DS-S2-12385            | DS-S2-18385        | DS-S2-15385       |
| 15 - 16" | 381 - 406mm | DS-S2-12386            | DS-S2-18386        | DS-S2-15386       |
| 16 - 17" | 406 - 432mm | DS-S2-12387            | DS-S2-18387        | DS-S2-15387       |
| 17 - 18" | 432 - 458mm | DS-S2-12388            | DS-S2-18388        | DS-S2-15388       |
| 18 - 19" | 458 - 483mm | DS-S2-12389            | DS-S2-18389        | DS-S2-15389       |
| 19 - 20" | 483 - 508mm | DS-S2-12390            | DS-S2-18390        | DS-S2-15390       |
| 20 - 21" | 508 - 533mm | DS-S2-12391            | DS-S2-18391        | DS-S2-15391       |
| 21 - 22" | 533 - 559mm | DS-S2-12392            | DS-S2-18392        | DS-S2-15392       |
| 22 - 23" | 559 - 584mm | DS-S2-12393            | DS-S2-18393        | DS-S2-15393       |
| 23 - 24" | 584 - 610mm | DS-S2-12394            | DS-S2-18394        | DS-S2-15394       |
| 48502-S  | BENCH STAND |                        |                    |                   |

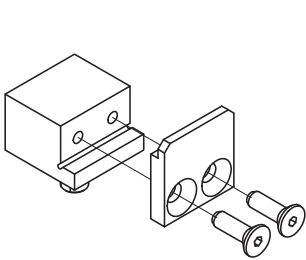
Special Large Carbon Fiber Snap Gages available to quote by request

This rugged snap gage features a precision box-way range adjustment channel to protect the anvil shafts and maximize frame clearance.

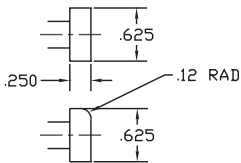
FEATURES:

- .090" gaging travel is standard
- Precision box-way slide allows 1" of range adjustment
- Rugged frame is machined from 5/8" thick aluminum jig plate
- 5/8" solid carbide lapped anvils with generous lead radius
- Anvils are flat and parallel within .00015" on frame sizes below 4", within .0002" on 4"-8" frames, .0003" on 8-12" frames and within .0005" above 12"
- Heat insulating impact resistant handles
- Adjustable nylon backstop protects parts
- Collet mounted indicator can be rotated to suit application
- May be used with any Dorsey "High Amplification", "Traditional", or digital indicator

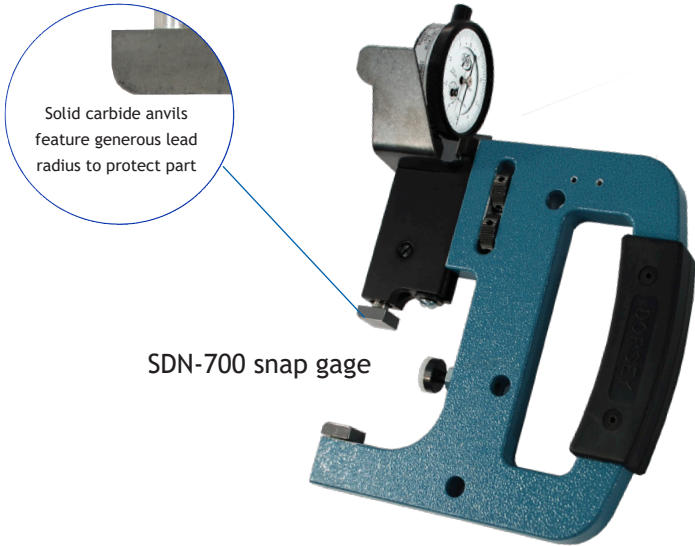
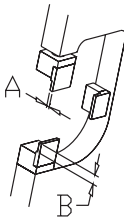
| Range    |             | Flat 5/8" sq. anvils   |                   |
|----------|-------------|------------------------|-------------------|
|          |             | .0001" grad multi rev. | Without Indicator |
| Inch     | Metric      |                        |                   |
| 0 - 1"   | 0 - 25mm    | SDN-00                 | SDN-00NI          |
| 1 - 2"   | 25 - 51mm   | SDN-100                | SDN-100NI         |
| 2 - 3"   | 51 - 76mm   | SDN-200                | SDN-200NI         |
| 3 - 4"   | 76 - 102mm  | SDN-300                | SDN-300NI         |
| 4 - 5"   | 102 - 127mm | SDN-400                | SDN-400NI         |
| 5 - 6"   | 127 - 152mm | SDN-500                | SDN-500NI         |
| 6 - 7"   | 152 - 178mm | SDN-600                | SDN-600NI         |
| 7 - 8"   | 178 - 203mm | SDN-700                | SDN-700NI         |
| 8 - 9"   | 203 - 229mm | SDN-800                | SDN-800NI         |
| 9 - 10"  | 229 - 254mm | SDN-900                | SDN-900NI         |
| 10 - 11" | 254 - 279mm | SDN-1000               | SDN-1000NI        |
| 11 - 12" | 279 - 305mm | SDN-1100               | SDN-1100NI        |
| 12 - 13" | 305 - 330mm | SDN-1200               | SDN-1200NI        |
| 13 - 14" | 330 - 356mm | SDN-1300               | SDN-1300NI        |
| 14 - 15" | 356 - 381mm | SDN-1400               | SDN-1400NI        |
| 15 - 16" | 381 - 406mm | SDN-1500               | SDN-1500NI        |
| 16 - 17" | 406 - 432mm | SDN-1600               | SDN-1600NI        |
| 17 - 18" | 432 - 458mm | SDN-1700               | SDN-1700NI        |
| 18 - 19" | 458 - 483mm | SDN-1800               | SDN-1800NI        |
| 19 - 20" | 483 - 508mm | SDN-1900               | SDN-1900NI        |
| 20 - 21" | 508 - 533mm | SDN-2000               | SDN-2000NI        |
| 21 - 22" | 533 - 559mm | SDN-2100               | SDN-2100NI        |
| 22 - 23" | 559 - 584mm | SDN-2200               | SDN-2200NI        |
| 23 - 24" | 584 - 610mm | SDN-2300               | SDN-2300NI        |
| 48502-S  | BENCH STAND |                        |                   |



Blade type anvil  
Special sizes available



Part #2029  
Standard carbide anvil



SDN-700 snap gage

| OPTIONAL CONTACT TRAVEL | INTERCHANGABLE BLADE ANVILS   |                |                 |
|-------------------------|---|----------------|-----------------|
|                         | PART #  | A DIM. (WIDTH) | B DIM. (HEIGHT) |
|                         | To specify extended gaging contact travel, add "TXX" to end of part number.<br>-T100 = .100" Travel<br>Lever (-L) | 2274-1         | .040" (1.0mm)   |
|                         |   | 2274-2         | .060" (1.5mm)   |
|                         |   | 2274-3         | .080" (2.0mm)   |
|                         |   | 2274-4         | .100" (2.5mm)   |
|                         |   | 2274-5         | .125" (3.2mm)   |
|                         |   | 2274-6         | .156" (4.0mm)   |
|                         |   | 2274-7         | .187" (4.7mm)   |

Dorsey's long range snap gages feature .50"/12mm of gaging travel and are used to replace many fixed disc setmasters. This option can be fitted to either the SDN or SSG series frame.

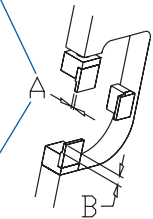
| SSG FRAME | SDN FRAME | RANGE      |                 |
|-----------|-----------|------------|-----------------|
| PART #    | PART #    | INCH       | METRIC          |
| LRS-15371 | LRS-00    | 0 - 1"     | 0 - 25.4mm      |
| LRS-15372 | LRS-100   | .5 - 2"    | 12.7 - 50.8mm   |
| LRS-15373 | LRS-200   | 1.5 - 3"   | 38.1 - 76.2mm   |
| LRS-15374 | LRS-300   | 2.5 - 4"   | 63.5 - 101.6mm  |
| LRS-15375 | LRS-400   | 3.5 - 5"   | 88.9 - 127mm    |
| LRS-15376 | LRS-500   | 4.5 - 6"   | 114.3 - 152.5mm |
| LRS-15377 | LRS-600   | 5.5 - 7"   | 139.7 - 177.8mm |
| LRS-15378 | LRS-700   | 6.5 - 8"   | 165.1 - 203.2mm |
| LRS-15379 | LRS-800   | 7.5 - 9"   | 190.5 - 228.6mm |
| LRS-15380 |           | 8.5 - 10"  | 215.9 - 254mm   |
| LRS-15381 |           | 9.5 - 11"  | 241.3 - 279.4mm |
| LRS-15382 |           | 10.5 - 12" | 266.7 - 304.8mm |
| LRS-15383 |           | 11.5 - 13" | 292.1 - 330.2mm |
| LRS-15384 |           | 12.5 - 14" | 317.5 - 355.6mm |
| LRS-15385 |           | 13.5 - 15" | 342.9 - 381mm   |
| LRS-15386 |           | 14.5 - 16" | 368.3 - 406.4mm |
| LRS-15387 |           | 15.5 - 17" | 393.7 - 431.8mm |
| LRS-15388 |           | 16.5 - 18" | 419.1 - 457.2mm |

SDN STYLE

\*Indicator sold separately

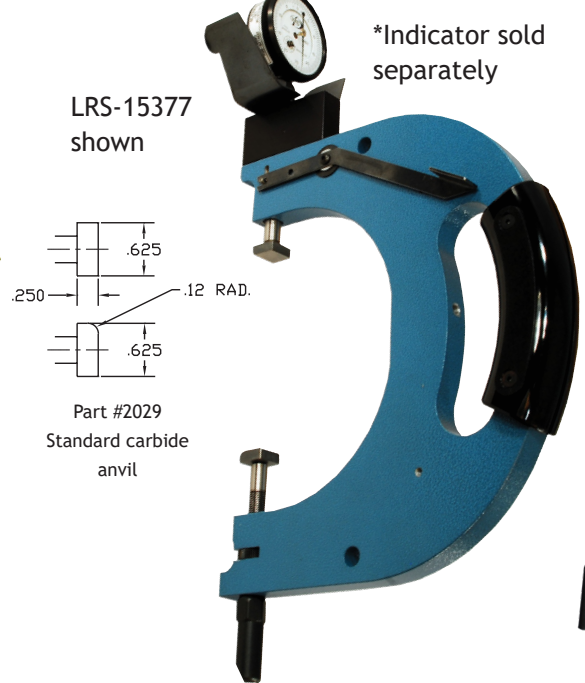


LRS Snap Gage with optional bench stand #48502-S

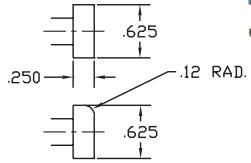


SSG STYLE

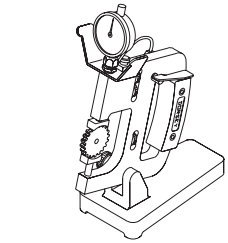
\*Indicator sold separately



LRS-15377 shown



Part #2029  
Standard carbide anvil

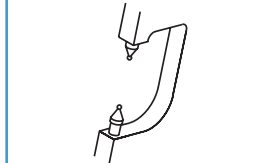


Self centerizing form anvils  
Applications include measurement of major diameter

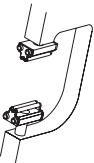
SDN Series frame shown with 2 wire floating rolls and thumb retraction



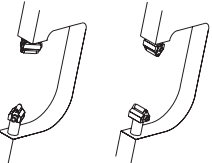
PITCH DIAMETER GEAR AND SPLINE CONTACTS



Fixed ball or roll contacts  
Can be used in conjunction with side stops to check pitch diameter of helical gears



2 wire or 3 wire self aligning floating rolls on interchangeable carriers  
Best suited for pitch diameter measurement on threads, screw forms, helical gears, and splines



2 Wire or 3 wire floating carbide rolls on fixed carriers (plus special master)  
Best suited for heavy production inspection of pitch diameter on threads, screw forms, helical gears, and splines

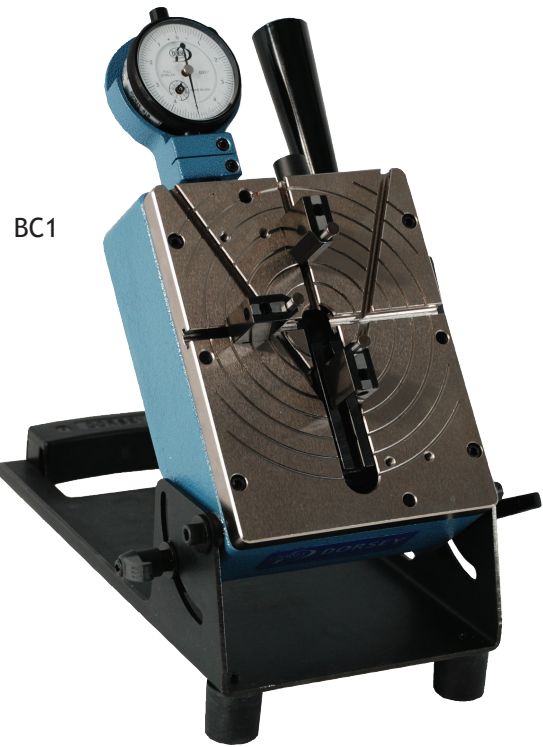


ADJUSTABLE INSIDE / OUTSIDE DIAMETER FIXTURES

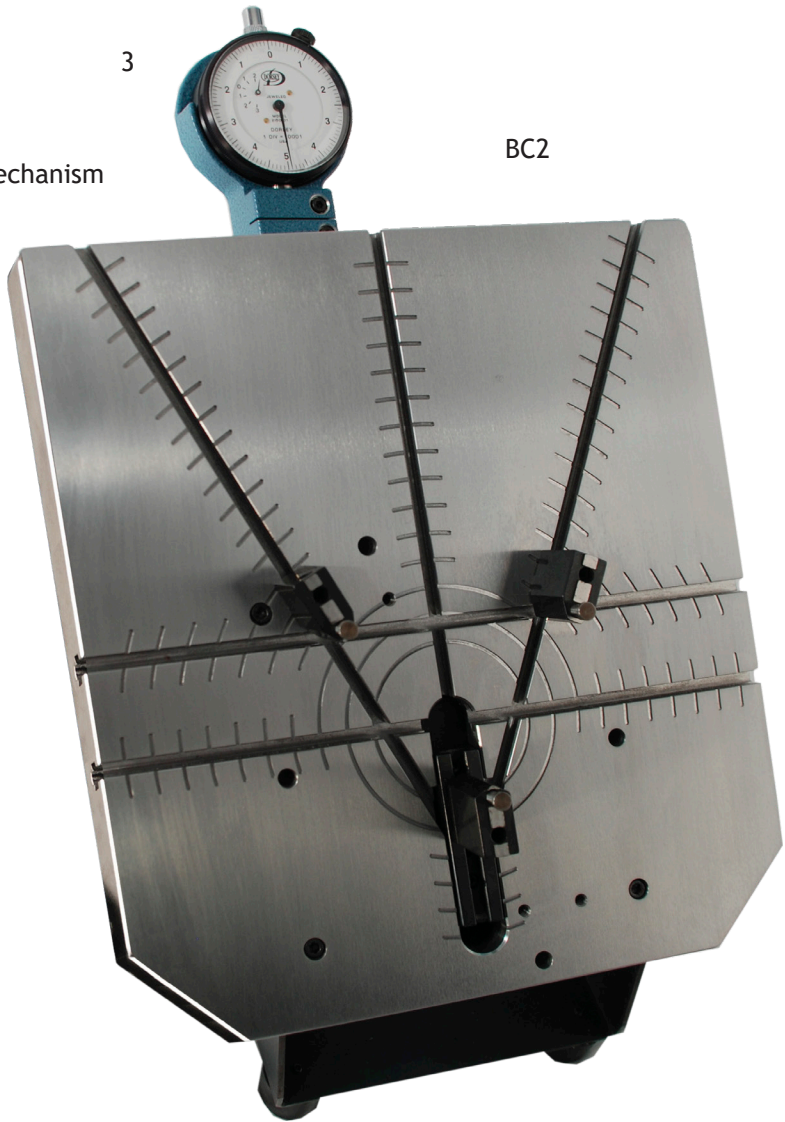
This comparator offers 2 or 3 point measurements for both ID and OD on one benchtop plate. Features include 2 or 3 point measurement, linear ball bushing movement, and a wide range of adjustment. The fixture can be positioned at any angle from horizontal to vertical to duplicate the machining process angle, eliminating deflection and deformation variation as potential sources of error. Hardened steel contact holders provide a work surface that ensures years of accurate, trouble free use.

FEATURES:

- Gage is supplied with model 2DM025-01 .0001" graduation 1:1 dial indicator, contact holders, and BCC-GS25 contact set
- Reversing the top plate selects either ID or OD
- Base with carrying handle features 90 degrees of adjustment with angle locking mechanism
- .400" linear gaging or retraction range
- Patented precision linear ball bushing gaging mechanism
- Ground and plated work stage 5.25" x 6.75" on BC1 and 9.75" x 10.75" on BC2
- Witness lines aid with gage alignment
- 2 Hex adjustment wrenches
- Special contacts designed per requested application



BC1



BC2

**Note:** Special ratio 4:5 dial indicator or electronically compensated digital indicator is required for 3 point non-diametric contact arrangement. See page 57 for optional indicators.

| ORDERING INFORMATION |   |                   |              |                   |               |
|----------------------|---|-------------------|--------------|-------------------|---------------|
| PART #               | DESCRIPTION   | "T" CONFIGURATION |              | "Y" CONFIGURATION |               |
|                      |   | ID RANGE          | OD RANGE     | ID RANGE          | OD RANGE      |
| BC1                  | Gaging Fixture with 3 contacts, 3 holders, and .0001" grad. indicator | .75" - 4.44"      | .25" - 5.19" | .75" - 5.25"      | .25" - 6.00"  |
| BC1-NI               | Same as above, less indicator   | .75" - 4.44"      | .25" - 5.19" | .75" - 5.25"      | .25" - 6.00"  |
| BC2                  | Gaging Fixture with 3 contacts, 3 holders, and .0001" grad. indicator | 2" - 8.44"        | 1.5" - 9.19" | 2" - 10.00"       | 1.5" - 10.88" |
| BC2-NI               | Same as above, less indicator   | .75" - 4.44"      | 1.5" - 9.19" | 2" - 10.00"       | 1.5" - 10.88" |

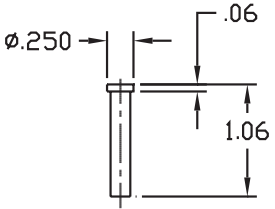
4:5 RATIO INDICATORS FOR RECOMMENDED USE WITH 3-POINT "Y"CONFIGURATION

Example: .010 spindle travel is displayed as .008" on indicator

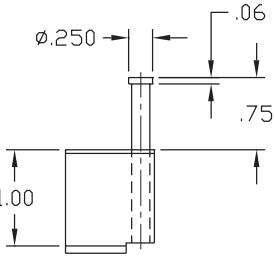
| MODEL        | 2DMR025-01Z | 2DMR125-05 | 2DMR005-002mm | 2DMR5-01mm | MT543      |
|--------------|-------------|------------|---------------|------------|------------|
| Graduation   | .0001"      | .0005"     | 0.002mm       | 0.01mm     | Selectable |
| Total Travel | .020"       | .100"      | 0.4mm         | 4.0mm      | .500"/12mm |
| Revolutions  | 2.5 Rev.    | 2.5 Rev.   | 2.5 Rev.      | 5 Rev.     | N/A        |
| Travel/Rev.  | .008"       | .040"      | 0.16mm        | 0.8mm      | N/A        |



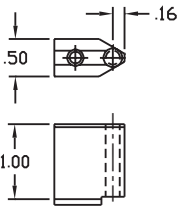
Dorsey Products - proudly made in the USA



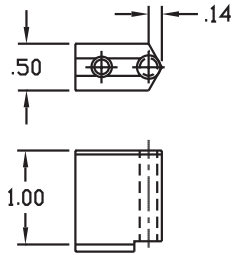
**Part #BCC-GS25**  
Steel groove contact



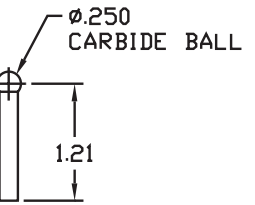
**Part #BCC-GS25**  
Shown in contact holder part #2760



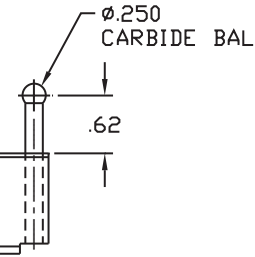
**Part #2759-S (Steel)**  
**Part #2759-C (Carbide)**  
Contact holder, flat (2 required)



**Part #2760-S (Steel)**  
**Part #2760-C (Carbide)**  
Contact holder, sharp (1 required)



**Part #BCC-CB25**  
Carbide ball contact



**Part #BCC-CB25**  
Shown in contact holder part #2760

|                | SIZE RANGE                           | CLASS | TOLERANCE | RING PART # | DISC PART # |
|----------------|--------------------------------------|-------|-----------|-------------|-------------|
| INCH<br>METRIC | .150 - .230"<br>3.81 - 5.84mm        | XX    | .00002"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00004"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00007"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | .2301 - .365"<br>5.84 - 9.27mm       | XX    | .00002"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00004"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00007"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | .3651 - .510"<br>9.27 - 12.95mm      | XX    | .00002"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00004"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00007"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | .5101 - .825"<br>12.95 - 20.96 mm    | XX    | .00002"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00004"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00007"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | .8251 - 1.135"<br>20.96 - 28.83mm    | XX    | .00003"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00006"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00009"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 1.1351 - 1.510"<br>28.83 - 38.35mm   | XX    | .00003"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00006"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00009"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 1.5101 - 2.010"<br>38.35 - 51.05mm   | XX    | .00004"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00008"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00012"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 2.0101 - 2.510"<br>51.05 - 63.75mm   | XX    | .00004"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00008"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00012"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 2.5101 - 3.010"<br>63.75 - 76.45mm   | XX    | .00005"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00010"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00015"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 3.0101 - 3.510"<br>76.45 - 89.15mm   | XX    | .00005"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00010"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00015"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 3.5101 - 4.010"<br>89.15 - 101.85mm  | XX    | .00005"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00010"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00015"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 4.0101 - 4.510"<br>101.85 - 114.55mm | XX    | .00005"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00010"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00015"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 4.5101 - 5.010"<br>114.55 - 127.25mm | XX    | .000065"  | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00013"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00019"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 5.0101 - 5.510"<br>127.25 - 139.95mm | XX    | .000065"  | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00013"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00019"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 5.5101 - 6.010"<br>139.95 - 152.65mm | XX    | .000065"  | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00013"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00019"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 6.0101 - 7.010"<br>152.65 - 178.05mm | XX    | .00008"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00016"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00024"   | RY-#.#####  | DY-#.#####  |
| INCH<br>METRIC | 7.0101 - 8.010"<br>178.05 - 203.45mm | XX    | .00008"   | RXX-#.##### | DXX-#.##### |
|                |                                      | X     | .00016"   | RX-#.#####  | DX-#.#####  |
|                |                                      | Y     | .00024"   | RY-#.#####  | DY-#.#####  |

All masters are ground and lapped to size then polished. Non-gaging surfaces are black oxide and the faces are surface ground.

RINGS:

Hardened Steel, bilateral tolerance, go, no-go per ASME B89.1.6.

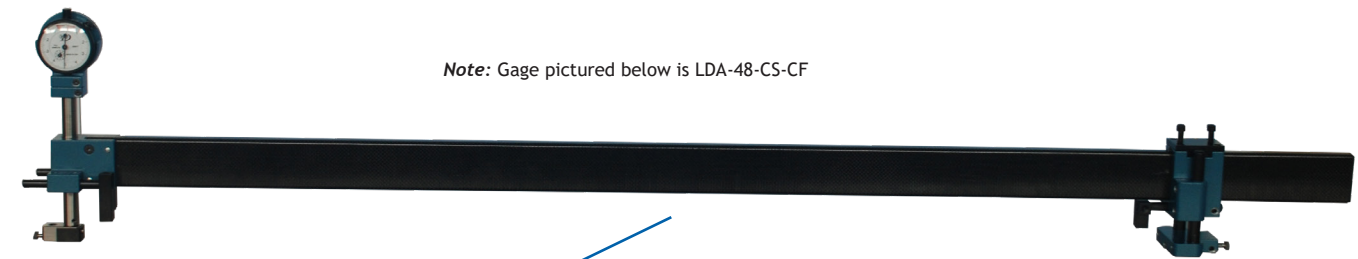


DISCS:

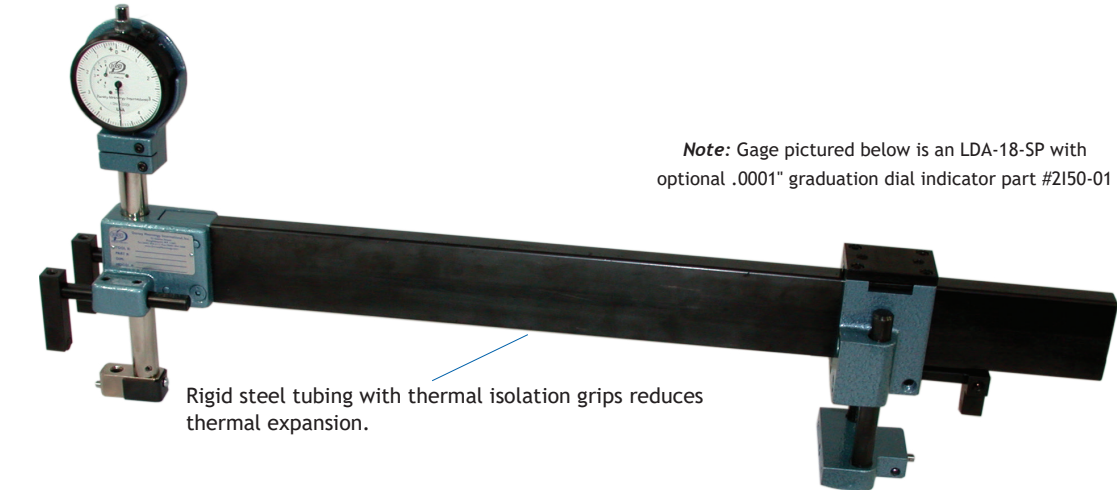
Hardened Steel, bilateral tolerance, go, no-go per ASME B89.1.5.



Our most popular adjustable series of ID/OD gage uses rigid steel tubing, precision machined end blocks, and a precision right angle transfer mechanism similar to our bore gages which give accurate and sensitive readings.



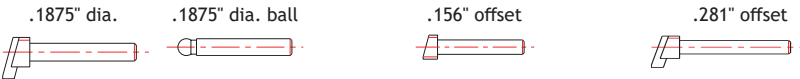
Note: Gage pictured below is LDA-48-CS-CF



Lightweight carbon fiber material. Approximately 50% lighter than steel.

Note: Gage pictured below is an LDA-18-SP with optional .0001" graduation dial indicator part #2150-01

Rigid steel tubing with thermal isolation grips reduces thermal expansion.



| PART # | INCH     | METRIC (mm)  | STEEL PIN | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | EXTENDED CARBIDE SHOVEL | CARBON FIBER |
|--------|----------|--------------|-----------|--------------|--------------|----------------|-------------------------|--------------|
|        | RANGE    | RANGE        | SP        | CB           | SS           | CS             | ES                      | CF           |
| LDA-12 | 6 to 12  | 150 to 300   | LDA-12-SP | LDA-12-CB    | LDA-12-SS    | LDA-12-CS      | LDA-12-ES               | LDA-12-XX-CF |
| LDA-18 | 12 to 18 | 301 to 460   | LDA-18-SP | LDA-18-CB    | LDA-18-SS    | LDA-18-CS      | LDA-18-ES               | LDA-18-XX-CF |
| LDA-24 | 18 to 24 | 461 to 610   | LDA-24-SP | LDA-24-CB    | LDA-24-SS    | LDA-24-CS      | LDA-24-ES               | LDA-24-XX-CF |
| LDA-30 | 24 to 30 | 611 to 760   | LDA-30-SP | LDA-30-CB    | LDA-30-SS    | LDA-30-CS      | LDA-30-ES               | LDA-30-XX-CF |
| LDA-36 | 30 to 36 | 761 to 915   | LDA-36-SP | LDA-36-CB    | LDA-36-SS    | LDA-36-CS      | LDA-36-ES               | LDA-36-XX-CF |
| LDA-42 | 36 to 42 | 916 to 1070  | LDA-42-SP | LDA-42-CB    | LDA-42-SS    | LDA-42-CS      | LDA-42-ES               | LDA-42-XX-CF |
| LDA-48 | 42 to 48 | 1071 to 1220 | LDA-48-SP | LDA-48-CB    | LDA-48-SS    | LDA-48-CS      | LDA-48-ES               | LDA-48-XX-CF |
| LDA-54 | 48 to 54 | 1221 to 1370 | LDA-54-SP | LDA-54-CB    | LDA-54-SS    | LDA-54-CS      | LDA-54-ES               | LDA-54-XX-CF |
| LDA-60 | 54 to 60 | 1371 to 1525 | LDA-60-SP | LDA-60-CB    | LDA-60-SS    | LDA-60-CS      | LDA-60-ES               | LDA-60-XX-CF |

Available in Carbon Fiber

- Standard with part #2DM125-05 .0005" graduation dial indicator
- Standard gaging depth range is 0-2".
- Standard LDA frame clearance is 1.25". Contact us for a quotation if additional clearance is required
- Standard gaging contact travel is .100
- Optional gaging depth of 3", 4", or up to 5"
- Reference contact features .50" fine adjustment which makes setting this gage fast and easy
- Indicator and housing rotate 360 degrees for best viewing angle
- Entire assembly rotates 180 degrees for ID/OD measurement
- Optional roller rests available



Optional perpendicular indicator unit

See page 70 for SMA series companion setmasters

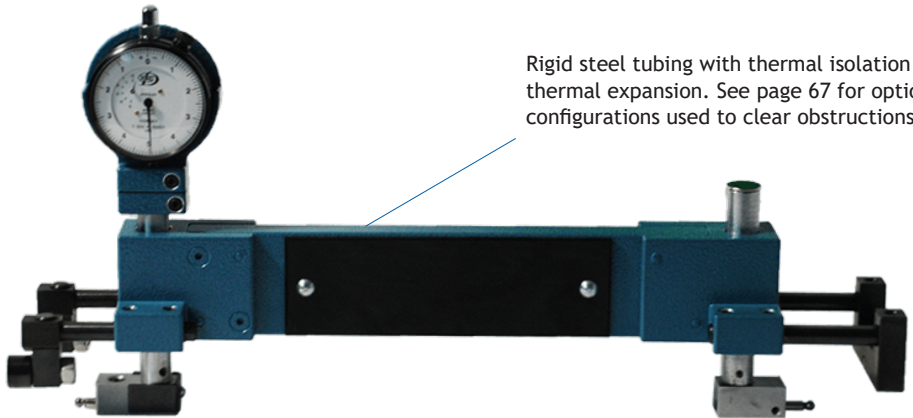




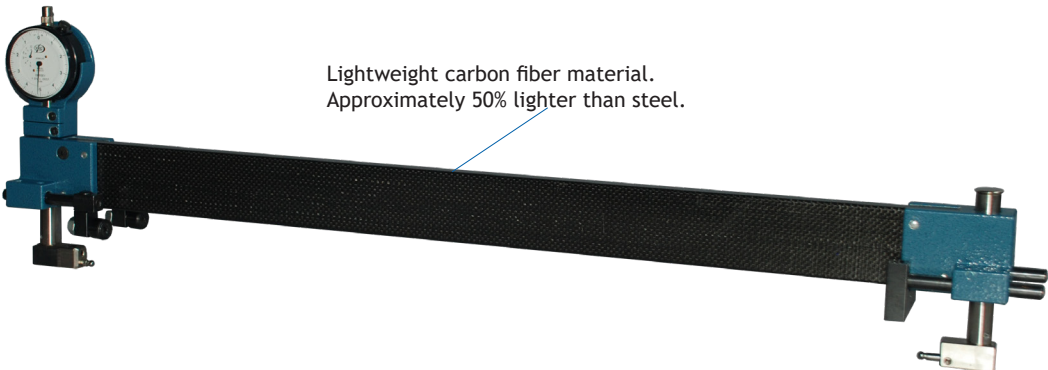
# LDF SERIES - ID/OD FIXED FRAME

www.dorseymetrology.com

LDF series production gages utilize fixed frames which are more rigid, lighter, and compact than LDA series adjustable gages. LDF gages are normally used for tight tolerances and built to order based on application requirements.



Rigid steel tubing with thermal isolation grips reduces thermal expansion. See page 67 for optional frame configurations used to clear obstructions.



Lightweight carbon fiber material. Approximately 50% lighter than steel.

| PART # | INCH     | METRIC (mm)  | STEEL PIN | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | EXTENDED CARBIDE SHOVEL | CARBON FIBER |
|--------|----------|--------------|-----------|--------------|--------------|----------------|-------------------------|--------------|
|        | RANGE    | RANGE        | SP        | CB           | SS           | CS             | ES                      | CF           |
| LDF-12 | 6 to 12  | 150 to 300   | LDF-12-SP | LDF-12-CB    | LDF-12-SS    | LDF-12-CS      | LDF-12-ES               | LDF-12-XX-CF |
| LDF-18 | 12 to 18 | 301 to 460   | LDF-18-SP | LDF-18-CB    | LDF-18-SS    | LDF-18-CS      | LDF-18-ES               | LDF-18-XX-CF |
| LDF-24 | 18 to 24 | 461 to 610   | LDF-24-SP | LDF-24-CB    | LDF-24-SS    | LDF-24-CS      | LDF-24-ES               | LDF-24-XX-CF |
| LDF-30 | 24 to 30 | 611 to 760   | LDF-30-SP | LDF-30-CB    | LDF-30-SS    | LDF-30-CS      | LDF-30-ES               | LDF-30-XX-CF |
| LDF-36 | 30 to 36 | 761 to 915   | LDF-36-SP | LDF-36-CB    | LDF-36-SS    | LDF-36-CS      | LDF-36-ES               | LDF-36-XX-CF |
| LDF-42 | 36 to 42 | 916 to 1070  | LDF-42-SP | LDF-42-CB    | LDF-42-SS    | LDF-42-CS      | LDF-42-ES               | LDF-42-XX-CF |
| LDF-48 | 42 to 48 | 1071 to 1220 | LDF-48-SP | LDF-48-CB    | LDF-48-SS    | LDF-48-CS      | LDF-48-ES               | LDF-48-XX-CF |
| LDF-54 | 48 to 54 | 1221 to 1370 | LDF-54-SP | LDF-54-CB    | LDF-54-SS    | LDF-54-CS      | LDF-54-ES               | LDF-54-XX-CF |
| LDF-60 | 54 to 60 | 1371 to 1525 | LDF-60-SP | LDF-60-CB    | LDF-60-SS    | LDF-60-CS      | LDF-60-ES               | LDF-60-XX-CF |



Available in Carbon Fiber

- Available with ISO 17025 certification
- All gage depths are custom
- Gage depths after 3" may need to be a hump frame
- Standard gaging contact travel is .100" (can be limited by indicator travel)
- Standard with part #2DM125-05 .0005" graduation dial indicator
- Three point hardened steel rests
- Indicator and housing rotate 360 degrees for best viewing angle
- LDF series requires a part print
- Optional roller rests available

See page 71 for SMF series companion setmasters

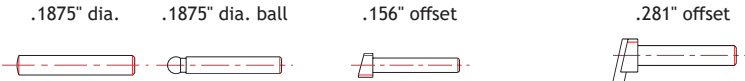


845-454-3111 | 800-549-4243

# LDVA - ID/OD ADJUSTABLE DIAMETER AND DEPTH

The LDVA is similar to the LDA series gage, except that it offers adjustment in the vertical axis to accommodate depths up to 5".

- Standard with part # 2DM125-05 .0005" graduation dial indicator
- 5" vertical adjustment on rests allows frame clearance from 1.25" min. to 5.87" max
- 5" vertical adjustment on gage heads



| PART #  | INCH     | METRIC (mm)  | STEEL PIN  | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | EXTENDED CARBIDE SHOVEL | CARBON FIBER  |
|---------|----------|--------------|------------|--------------|--------------|----------------|-------------------------|---------------|
|         | RANGE    | RANGE        | SP         | CB           | SS           | CS             | ES                      | CF            |
| LDVA-12 | 6 to 12  | 150 to 300   | LDVA-12-SP | LDVA-12-CB   | LDVA-12-SS   | LDVA-12-CS     | LDVA-12-ES              | LDVA-12-XX-CF |
| LDVA-18 | 12 to 18 | 301 to 460   | LDVA-18-SP | LDVA-18-CB   | LDVA-18-SS   | LDVA-18-CS     | LDVA-18-ES              | LDVA-18-XX-CF |
| LDVA-24 | 18 to 24 | 461 to 610   | LDVA-24-SP | LDVA-24-CB   | LDVA-24-SS   | LDVA-24-CS     | LDVA-24-ES              | LDVA-24-XX-CF |
| LDVA-30 | 24 to 30 | 611 to 760   | LDVA-30-SP | LDVA-30-CB   | LDVA-30-SS   | LDVA-30-CS     | LDVA-30-ES              | LDVA-30-XX-CF |
| LDVA-36 | 30 to 36 | 761 to 915   | LDVA-36-SP | LDVA-36-CB   | LDVA-36-SS   | LDVA-36-CS     | LDVA-36-ES              | LDVA-36-XX-CF |
| LDVA-42 | 36 to 42 | 916 to 1070  | LDVA-42-SP | LDVA-42-CB   | LDVA-42-SS   | LDVA-42-CS     | LDVA-42-ES              | LDVA-42-XX-CF |
| LDVA-48 | 42 to 48 | 1071 to 1220 | LDVA-48-SP | LDVA-48-CB   | LDVA-48-SS   | LDVA-48-CS     | LDVA-48-ES              | LDVA-48-XX-CF |
| LDVA-54 | 48 to 54 | 1221 to 1370 | LDVA-54-SP | LDVA-54-CB   | LDVA-54-SS   | LDVA-54-CS     | LDVA-54-ES              | LDVA-54-XX-CF |
| LDVA-60 | 54 to 60 | 1371 to 1525 | LDVA-60-SP | LDVA-60-CB   | LDVA-60-SS   | LDVA-60-CS     | LDVA-60-ES              | LDVA-60-XX-CF |

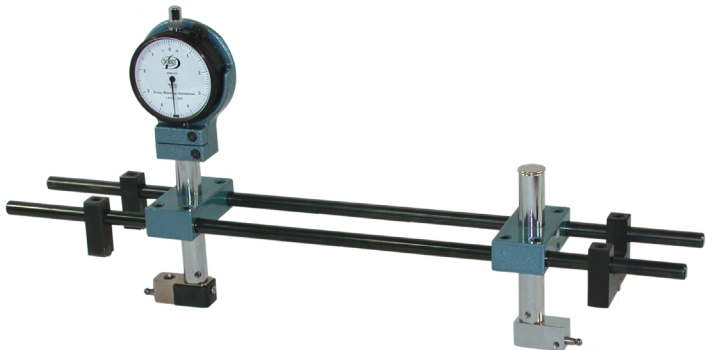
**\*Note:** Gage pictured below is an LDVA-18-SP-025 with steel pin contacts and optional high amplification dial indicator part #21100-025



See page 70 for SMVA series companion setmasters

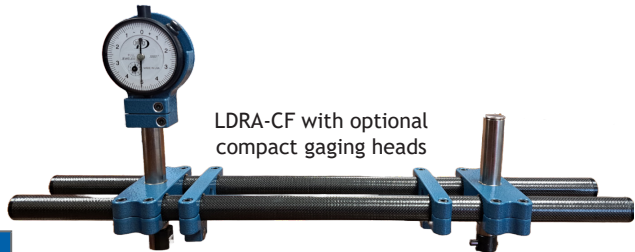
## LDRA SERIES - ID/OD ADJUSTABLE RAIL FRAME

The LDRA gage uses twin parallel rails for a versatile and economical adjustable frame. End blocks and rest blocks act as reinforcing braces to the rail system once locked in their appropriate gaging positions.



| PART #    | INCH    | METRIC (mm) | STEEL PIN    | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | EXTENDED CARBIDE SHOVEL | CARBON FIBER |
|-----------|---------|-------------|--------------|--------------|--------------|----------------|-------------------------|--------------|
|           | RANGE   | RANGE       | SP           | CB           | SS           | CS             | ES                      | CF           |
| LDRA-4-12 | 4 to 12 | 100 to 300  | LDRA-4-12-SP | LDRA-4-12-CB | LDRA-4-12-SS | LDRA-4-12-CS   | LDRA-4-12-ES            | LDRA-4-12-CF |

- Sturdy .375" diameter twin rail frame
- 0-2" vertical adjustment on heads
- To order the LDRA Series, specify contact point
- Standard LDRA frame clearance is .75"
- Optional compact gaging head available
  - Compact head requires .875" clearance



LDRA-CF with optional compact gaging heads

SMRA 4-12 is the companion setmaster. See page 70.

# LDDA - DIRECT READING ID/OD ADJUSTABLE FRAME

www.dorseymetrology.com

These direct reading gages feature lightweight rigid steel tubing, and end blocks to accommodate depths up to 5". The indicator contacts the part directly on this series of gage; therefore, retraction and gaging travel depend on the indicator selected.



- Standard gaging depth range is 0-2"
- Optional gaging depths up to 5"
- Standard LDDA frame clearance is 1.25" - Contact us for a quotation if additional clearance is required

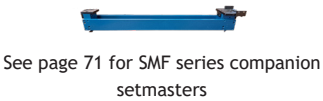
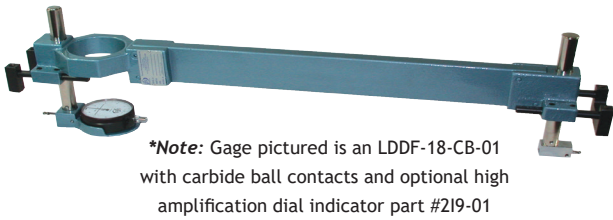
| PART #  | INCH     | METRIC (mm)  | STEEL PIN  | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | EXTENDED CARBIDE SHOVEL | CARBON FIBER  |
|---------|----------|--------------|------------|--------------|--------------|----------------|-------------------------|---------------|
|         | RANGE    | RANGE        | SP         | CB           | SS           | CS             | ES                      | CF            |
| LDDA-12 | 6 to 12  | 150 to 300   | LDDA-12-SP | LDDA-12-CB   | LDDA-12-SS   | LDDA-12-CS     | LDDA-12-ES              | LDDA-12-XX-CF |
| LDDA-18 | 12 to 18 | 301 to 460   | LDDA-18-SP | LDDA-18-CB   | LDDA-18-SS   | LDDA-18-CS     | LDDA-18-ES              | LDDA-18-XX-CF |
| LDDA-24 | 18 to 24 | 461 to 610   | LDDA-24-SP | LDDA-24-CB   | LDDA-24-SS   | LDDA-24-CS     | LDDA-24-ES              | LDDA-24-XX-CF |
| LDDA-30 | 24 to 30 | 611 to 760   | LDDA-30-SP | LDDA-30-CB   | LDDA-30-SS   | LDDA-30-CS     | LDDA-30-ES              | LDDA-30-XX-CF |
| LDDA-36 | 30 to 36 | 761 to 915   | LDDA-36-SP | LDDA-36-CB   | LDDA-36-SS   | LDDA-36-CS     | LDDA-36-ES              | LDDA-36-XX-CF |
| LDDA-42 | 36 to 42 | 916 to 1070  | LDDA-42-SP | LDDA-42-CB   | LDDA-42-SS   | LDDA-42-CS     | LDDA-42-ES              | LDDA-42-XX-CF |
| LDDA-48 | 42 to 48 | 1071 to 1220 | LDDA-48-SP | LDDA-48-CB   | LDDA-48-SS   | LDDA-48-CS     | LDDA-48-ES              | LDDA-48-XX-CF |
| LDDA-54 | 48 to 54 | 1221 to 1370 | LDDA-54-SP | LDDA-54-CB   | LDDA-54-SS   | LDDA-54-CS     | LDDA-54-ES              | LDDA-54-XX-CF |
| LDDA-60 | 54 to 60 | 1371 to 1525 | LDDA-60-SP | LDDA-60-CB   | LDDA-60-SS   | LDDA-60-CS     | LDDA-60-ES              | LDDA-60-XX-CF |

## LDDF SERIES- DIRECT READING FIXED FRAME

LDDF Series gages include all the same features as the LDDA shown above except both end blocks are rigidly bolted and pinned in place. This makes the LDDF stronger and lighter.

- Standard LDDF frame clearance is .75"

| PART #  | INCH     | METRIC (mm)  | STEEL PIN  | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | EXTENDED CARBIDE SHOVEL | CARBON FIBER  |
|---------|----------|--------------|------------|--------------|--------------|----------------|-------------------------|---------------|
|         | RANGE    | RANGE        | SP         | CB           | SS           | CS             | ES                      | CF            |
| LDDF-12 | 6 to 12  | 150 to 300   | LDDF-12-SP | LDDF-12-CB   | LDDF-12-SS   | LDDF-12-CS     | LDDF-12-ES              | LDDF-12-XX-CF |
| LDDF-18 | 12 to 18 | 301 to 460   | LDDF-18-SP | LDDF-18-CB   | LDDF-18-SS   | LDDF-18-CS     | LDDF-18-ES              | LDDF-18-XX-CF |
| LDDF-24 | 18 to 24 | 461 to 610   | LDDF-24-SP | LDDF-24-CB   | LDDF-24-SS   | LDDF-24-CS     | LDDF-24-ES              | LDDF-24-XX-CF |
| LDDF-30 | 24 to 30 | 611 to 760   | LDDF-30-SP | LDDF-30-CB   | LDDF-30-SS   | LDDF-30-CS     | LDDF-30-ES              | LDDF-30-XX-CF |
| LDDF-36 | 30 to 36 | 761 to 915   | LDDF-36-SP | LDDF-36-CB   | LDDF-36-SS   | LDDF-36-CS     | LDDF-36-ES              | LDDF-36-XX-CF |
| LDDF-42 | 36 to 42 | 916 to 1070  | LDDF-42-SP | LDDF-42-CB   | LDDF-42-SS   | LDDF-42-CS     | LDDF-42-ES              | LDDF-42-XX-CF |
| LDDF-48 | 42 to 48 | 1071 to 1220 | LDDF-48-SP | LDDF-48-CB   | LDDF-48-SS   | LDDF-48-CS     | LDDF-48-ES              | LDDF-48-XX-CF |
| LDDF-54 | 48 to 54 | 1221 to 1370 | LDDF-54-SP | LDDF-54-CB   | LDDF-54-SS   | LDDF-54-CS     | LDDF-54-ES              | LDDF-54-XX-CF |
| LDDF-60 | 54 to 60 | 1371 to 1525 | LDDF-60-SP | LDDF-60-CB   | LDDF-60-SS   | LDDF-60-CS     | LDDF-60-ES              | LDDF-60-XX-CF |

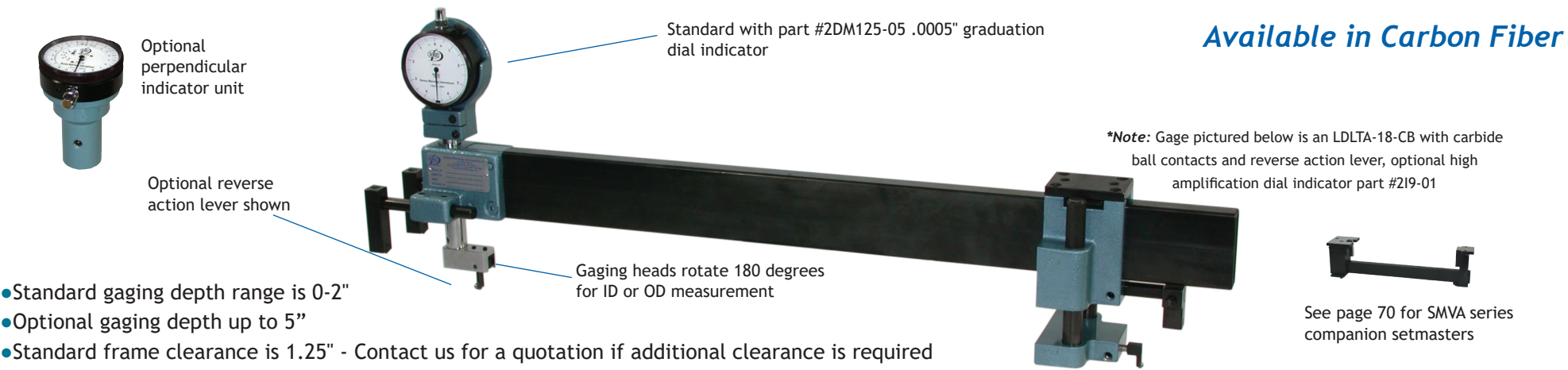


See page 71 for SMF series companion setmasters

845-454-3111 | 800-549-4243

# LDLTA - ID/OD LEVER TRANSFER ADJUSTABLE FRAME

The LDLT series gage uses a 1:1 ratio lever principle. This method of motion transfer is used in conditions of limited accessibility, such as face grooves. This low friction transfer is also ideal for checking shallow angles at specified depths without incurring binding in the transfer.



- Standard gaging depth range is 0-2"
- Optional gaging depth up to 5"
- Standard frame clearance is 1.25" - Contact us for a quotation if additional clearance is required
- Reverse action lever available

| PART #   | TYPE       | INCH     | METRIC (mm) | CARBIDE BALL | CARBIDE HALF BALL | CARBON FIBER   |
|----------|------------|----------|-------------|--------------|-------------------|----------------|
|          |            | RANGE    | RANGE       | CB           | HB                | CF             |
| LDLTA-12 | Adjustable | 6 to 12  | 150 to 300  | LDLTA-12-CB  | LDLTA-12-HB       | LDLTA-12-XX-CF |
| LDLTF-12 | Fixed      | 6 to 12  | 150 to 300  | LDLTF-12-CB  | LDLTF-12-HB       | LDLTF-12-XX-CF |
| LDLTA-18 | Adjustable | 12 to 18 | 301 to 460  | LDLTA-18-CB  | LDLTA-18-HB       | LDLTA-18-XX-CF |
| LDLTF-18 | Fixed      | 12 to 18 | 301 to 460  | LDLTF-18-CB  | LDLTF-18-HB       | LDLTF-18-XX-CF |
| LDLTA-24 | Adjustable | 18 to 24 | 461 to 610  | LDLTA-24-CB  | LDLTA-24-HB       | LDLTA-24-XX-CF |
| LDLTF-24 | Fixed      | 18 to 24 | 461 to 610  | LDLTF-24-CB  | LDLTF-24-HB       | LDLTF-24-XX-CF |
| LDLTA-30 | Adjustable | 24 to 30 | 611 to 760  | LDLTA-30-CB  | LDLTA-30-HB       | LDLTA-30-XX-CF |
| LDLTF-30 | Fixed      | 24 to 30 | 611 to 760  | LDLTF-30-CB  | LDLTF-30-HB       | LDLTF-30-XX-CF |
| LDLTA-36 | Adjustable | 30 to 36 | 761 to 915  | LDLTA-36-CB  | LDLTA-36-HB       | LDLTA-36-XX-CF |

| PART #   | TYPE       | INCH     | METRIC (mm)  | CARBIDE BALL | CARBIDE HALF BALL | CARBON FIBER   |
|----------|------------|----------|--------------|--------------|-------------------|----------------|
|          |            | RANGE    | RANGE        | CB           | HB                | CF             |
| LDLTF-36 | Fixed      | 30 to 36 | 761 to 915   | LDLTF-36-CB  | LDLTF-36-HB       | LDLTF-36-XX-CF |
| LDLTA-42 | Adjustable | 36 to 42 | 916 to 1070  | LDLTA-42-CB  | LDLTA-42-HB       | LDLTA-42-XX-CF |
| LDLTF-42 | Fixed      | 36 to 42 | 916 to 1070  | LDLTF-42-CB  | LDLTF-42-HB       | LDLTF-42-XX-CF |
| LDLTA-48 | Adjustable | 42 to 48 | 1071 to 1220 | LDLTA-48-CB  | LDLTA-48-HB       | LDLTA-48-XX-CF |
| LDLTF-48 | Fixed      | 42 to 48 | 1071 to 1220 | LDLTF-48-CB  | LDLTF-48-HB       | LDLTF-48-XX-CF |
| LDLTA-54 | Adjustable | 48 to 54 | 1221 to 1370 | LDLTA-54-CB  | LDLTA-54-HB       | LDLTA-54-XX-CF |
| LDLTF-54 | Fixed      | 48 to 54 | 1221 to 1370 | LDLTF-54-CB  | LDLTF-54-HB       | LDLTF-54-XX-CF |
| LDLTA-60 | Adjustable | 54 to 60 | 1371 to 1525 | LDLTA-60-CB  | LDLTA-60-HB       | LDLTA-60-XX-CF |
| LDLTF-60 | Fixed      | 54 to 60 | 1371 to 1525 | LDLTF-60-CB  | LDLTF-60-HB       | LDLTF-60-XX-CF |

See page 70 for SMVA series companion setmasters

## LDLTF SERIES - LEVER TRANSFER FIXED

LDLTF Series gages include all the same features as the LDLTA shown above except both end blocks are rigidly bolted and pinned in place. This makes the LDLTF Series more rigid for tighter tolerances and lighter weight than the LDLTA.

- Standard LDLTF frame clearance is .75"
- Heavy duty reference head
- Reverse action lever available
- Reversed reference contact available to LDLTA & LDLTF features

Available in Carbon Fiber

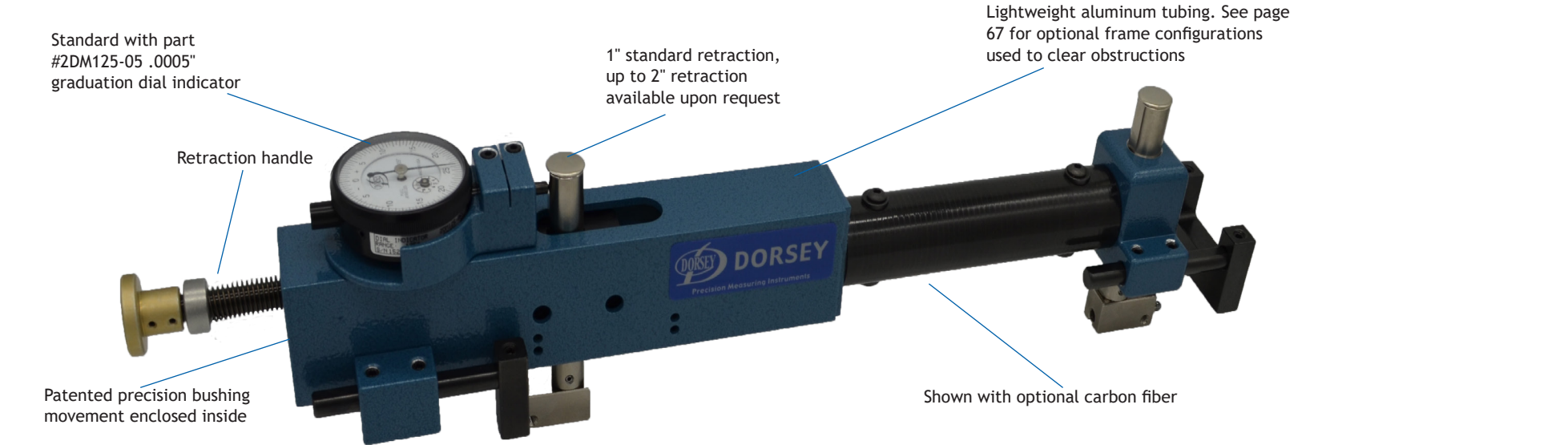


See page 71 for SMF series companion setmasters





LBBS series gages use a precision bushing slide mechanism for applications where retraction is required beyond the range of the indicator. The movement is light, sensitive, and accurate while free of any side play. Ideal for applications to bypass obstructions, inspect grooves, contours, recesses, or retraction over the major diameter of a reverse taper. Models are available in fixed or adjustable frame designs. **Please supply Dorsey with part print for quoting.**



| PART #    | INCH     | METRIC (mm)  | STEEL PIN    | CARBIDE BALL | STEEL SHOVEL | CARBIDE SHOVEL | CARBON FIBER    |
|-----------|----------|--------------|--------------|--------------|--------------|----------------|-----------------|
|           | RANGE    | RANGE        | SP           | CB           | SS           | CS             | CF              |
| LBBS-A-18 | Up to 18 | 301 to 460   | LBBS-A-18-SP | LBBS-A-18-CB | LBBS-A-18-SS | LBBS-A-18-CS   | LBBS-A-18-XX-CF |
| LBBS-F-18 | Up to 18 | 301 to 460   | LBBS-F-18-SP | LBBS-F-18-CB | LBBS-F-18-SS | LBBS-F-18-CS   | LBBS-F-18-XX-CF |
| LBBS-A-24 | 18 to 24 | 461 to 610   | LBBS-A-24-SP | LBBS-A-24-CB | LBBS-A-24-SS | LBBS-A-24-CS   | LBBS-A-24-XX-CF |
| LBBS-F-24 | 18 to 24 | 461 to 610   | LBBS-F-24-SP | LBBS-F-24-CB | LBBS-F-24-SS | LBBS-F-24-CS   | LBBS-F-24-XX-CF |
| LBBS-A-30 | 24 to 30 | 611 to 760   | LBBS-A-30-SP | LBBS-A-30-CB | LBBS-A-30-SS | LBBS-A-30-CS   | LBBS-A-30-XX-CF |
| LBBS-F-30 | 24 to 30 | 611 to 760   | LBBS-F-30-SP | LBBS-F-30-CB | LBBS-F-30-SS | LBBS-F-30-CS   | LBBS-F-30-XX-CF |
| LBBS-A-36 | 30 to 36 | 761 to 915   | LBBS-A-36-SP | LBBS-A-36-CB | LBBS-A-36-SS | LBBS-A-36-CS   | LBBS-A-36-XX-CF |
| LBBS-F-36 | 30 to 36 | 761 to 915   | LBBS-F-36-SP | LBBS-F-36-CB | LBBS-F-36-SS | LBBS-F-36-CS   | LBBS-F-36-XX-CF |
| LBBS-A-42 | 36 to 42 | 916 to 1070  | LBBS-A-42-SP | LBBS-A-42-CB | LBBS-A-42-SS | LBBS-A-42-CS   | LBBS-A-42-XX-CF |
| LBBS-F-42 | 36 to 42 | 916 to 1070  | LBBS-F-42-SP | LBBS-F-42-CB | LBBS-F-42-SS | LBBS-F-42-CS   | LBBS-F-42-XX-CF |
| LBBS-A-48 | 42 to 48 | 1071 to 1220 | LBBS-A-48-SP | LBBS-A-48-CB | LBBS-A-48-SS | LBBS-A-48-CS   | LBBS-A-48-XX-CF |
| LBBS-F-48 | 42 to 48 | 1071 to 1220 | LBBS-F-48-SP | LBBS-F-48-CB | LBBS-F-48-SS | LBBS-F-48-CS   | LBBS-F-48-XX-CF |
| LBBS-A-54 | 48 to 54 | 1221 to 1370 | LBBS-A-54-SP | LBBS-A-54-CB | LBBS-A-54-SS | LBBS-A-54-CS   | LBBS-A-54-XX-CF |
| LBBS-F-54 | 48 to 54 | 1221 to 1370 | LBBS-F-54-SP | LBBS-F-54-CB | LBBS-F-54-SS | LBBS-F-54-CS   | LBBS-F-54-XX-CF |
| LBBS-A-60 | 54 to 60 | 1371 to 1525 | LBBS-A-60-SP | LBBS-A-60-CB | LBBS-A-60-SS | LBBS-A-60-CS   | LBBS-A-60-XX-CF |
| LBBS-F-60 | 54 to 60 | 1371 to 1525 | LBBS-F-60-SP | LBBS-F-60-CB | LBBS-F-60-SS | LBBS-F-60-CS   | LBBS-F-60-XX-CF |

Available in Carbon Fiber



See page 71 for fixed SMF series companion setmasters or page 70 for adjustable SMA series companion setmasters

This economical, heavy duty production gage features a rigid steel plate frame and our shop proof reed spring gaging transfer. The LDAR mechanism is resistant to coolants, dirt, and contaminants and offers great repeatability.

- Three point hardened steel rests allow .375" frame clearance and can be adjusted to accomodate a wide variety of parts
- Standard with part #2DM125-05 .0005" graduation dial indicator
- 0 - .5" gaging depth adjustment
- +/- .050" gaging travel on reed mechanism

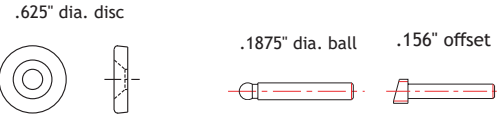


| PART #  | INCH                                       | METRIC (mm) | STEEL DISC | CARBIDE DISC |
|---------|--|-------------|------------|--------------|
|         | RANGE                                      | RANGE       | SD         | CD           |
| LDAR-6  | 2" - 6"                                    | 50 - 150mm  | LDAR-6-SD  | LDAR-6-CD    |
| LDAR-8  | 2" - 8"                                    | 50 - 200mm  | LDAR-8-SD  | LDAR-8-CD    |
| LDAR-12 | 2" -12"                                    | 50 - 305mm  | LDAR-12-SD | LDAR-12-CD   |
| 7062    | .437 Diameter Steel Conical Disc Contact   |             |            |              |
| 7062-C  | .437 Diameter Carbide Conical Disc Contact |             |            |              |
| 7530    | .500 Diameter Carbide Conical Disc Contact |             |            |              |

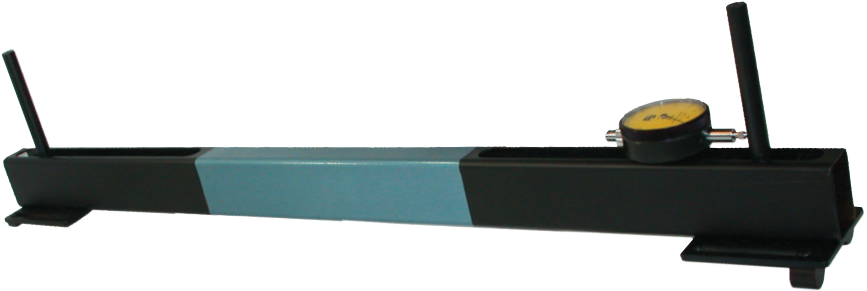
LDAR SERIES

LDAR gages feature a lightweight tubular steel frame with a reed pantograph movement. The pantograph movement utilizes parallel springs to transfer motion and is well suited to production applications as dust, dirt, or coolant cannot harm or jam the mechanism.

- 3" of depth adjustment
- Reed movement is enclosed in lightweight steel tubular frame, minimizing the possibility of damage
- Three point rest system offers .625" frame clearance
- Standard with part #2DM125-05 .0005" graduation dial indicator



| PART #  | INCH     | METRIC (mm)  | STEEL DISC | CARBIDE DISC | CARBIDE BALL | CARBIDE SHOVEL |
|---------|----------|--------------|------------|--------------|--------------|----------------|
|         | RANGE    | RANGE        | SD         | CD           | CB           | CS             |
| LDAR-12 | 6 to 12  | 150 to 300   | LDAR-12-SD | LDAR-12-CD   | LDAR-12-SB   | LDAR-12-CS     |
| LDAR-18 | 12 to 18 | 301 to 460   | LDAR-18-SD | LDAR-18-CD   | LDAR-18-SB   | LDAR-18-CS     |
| LDAR-24 | 18 to 24 | 461 to 610   | LDAR-24-SD | LDAR-24-CD   | LDAR-24-SB   | LDAR-24-CS     |
| LDAR-30 | 24 to 30 | 611 to 760   | LDAR-30-SD | LDAR-30-CD   | LDAR-30-SB   | LDAR-30-CS     |
| LDAR-36 | 30 to 36 | 761 to 915   | LDAR-36-SD | LDAR-36-CD   | LDAR-36-SB   | LDAR-36-CS     |
| LDAR-42 | 36 to 42 | 916 to 1070  | LDAR-42-SD | LDAR-42-CD   | LDAR-42-SB   | LDAR-42-CS     |
| LDAR-48 | 42 to 48 | 1071 to 1220 | LDAR-48-SD | LDAR-48-CD   | LDAR-48-SB   | LDAR-48-CS     |
| LDAR-54 | 48 to 54 | 1221 to 1370 | LDAR-54-SD | LDAR-54-CD   | LDAR-54-SB   | LDAR-54-CS     |
| LDAR-60 | 54 to 60 | 1371 to 1525 | LDAR-60-SD | LDAR-60-CD   | LDAR-60-SB   | LDAR-60-CS     |



See page 70 for SMA series companion setmasters  
**Note:** specify .18" restrictor for CB or CS contacts, specify .62" restrictor for SD and CD contacts

The LDR Series gage uses a lightweight stainless steel tubular frame and a reed pantograph movement. This pantograph movement utilizes parallel reed springs to transfer motion and is well suited to production applications as dust, dirt, or coolant cannot harm or jam the mechanism.



*\*Note:* Gage pictured below is an LDR-18-CB with optional .0001" graduation dial indicator part #219-01

| PART # | ID/OD INCH                                  | ID/OD METRIC (mm) |
|--------|---|-------------------|
|        | RANGE                                       | RANGE             |
| LDR-12 | 4.5 to 12                                   | 115 to 305        |
| LDR-18 | 12 to 18                                    | 305 to 460        |
| LDR-24 | 18 to 24                                    | 460 to 610        |
| LDR-36 | 24 to 36                                    | 640 to 915        |
| LDR-48 | 36 to 48                                    | 915 to 1220       |
| LDR-60 | 48 to 60                                    | 1220 to 1525      |
| 5557CB | .25" Dia. Carbide Ball Contacts (Each)      |                   |
| 5557HB | .25" Dia. Carbide Half Ball Contacts (Each) |                   |



See page 70 for SMA series companion setmasters specify .25" wide restrictor

- Lightweight heat treated stainless steel tubing
- Standard with part #2DM125-05 .0005" graduation dial indicator
- Contacts feature 1" vertical depth adjustment
- Standard 0.25" carbide ball contacts, 0.5" ball optional
- Carbide rest surfaces are offset 2" to resist tipping
- Indicator housing protects indicator
- Frictionless reed movement transfer with +/- .050" gaging travel
- Precision cam-lock fine adjustment mechanism makes setting this gage fast and easy

LDB SERIES- ULTRA LIGHTWEIGHT FRAME WITH BALL BUSHING

LDB series gages use a lightweight stainless steel tubular frame and a precision ball bushing slide mechanism. This gage can be switched from ID to OD and is designed to be used where a full inch of gaging travel or retraction is desired.



*\*Note:* Gage pictured is LDB-14-CB with an optional 1" travel digital indicator

| PART #    | ID/OD INCH                               | ID/OD METRIC (mm) |
|-----------|--|-------------------|
|           | RANGE                                    | RANGE             |
| LDB-14    | 6.5 to 14                                | 165 to 355        |
| LDB-24    | 14 to 24                                 | 355 to 610        |
| LDB-36    | 24 to 36                                 | 640 to 915        |
| LDB-48    | 36 to 48                                 | 915 to 1220       |
| LDB-60    | 48 to 60                                 | 1220 to 1525      |
| 7533      | .625" Dia. Steel Disc Contact (Each)     |                   |
| 7534      | .625" Dia. Carbide Disc Contact (Each)   |                   |
| 4082-187B | .1875" Dia. Carbide Ball Contacts (Each) |                   |

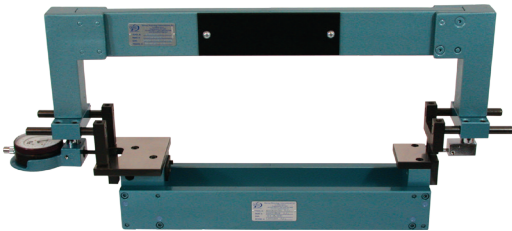


- Standard with part #2DM1000-05 .0005" graduation dial indicator
- Indicator housing guards to protect indicator
- Carbide rest surfaces are offset 2" to resist tipping
- Full 1.00" of gaging travel
- Gaging depth adjustable to 5"
- Standard carbide ball contacts, optional contact choices: Steel Disc (-SD), Carbide Disc (-CD), or Carbide Ball (-CB)
- Gaging shafts can be inverted to accomodate disc contacts or perpendicular style contacts
- Precision cam-lock fine adjustment mechanism makes setting this gage fast and easy

See page 70 for SMA series companion setmasters  
*Note:* specify .18" restrictor for CB contacts, specify .62" restrictor for SD and CD contacts

When using large diameter gages, the part configuration, tooling, or fixturing can present obstacles that make part inspection impossible with standard frame gages. Below we have listed some typical frame configurations to help overcome these obstacles. Contact us for further details. **Please supply Dorsey with part print for quoting.**

*All special frames listed below are available in carbon fiber*



BRIDGE FRAME OR HUMP FRAME

The gage shown here is an LDDF with a Bridge Frame design. This design permits the gage frame to bridge over short center obstructions such as posts, clamps, or raised contours.

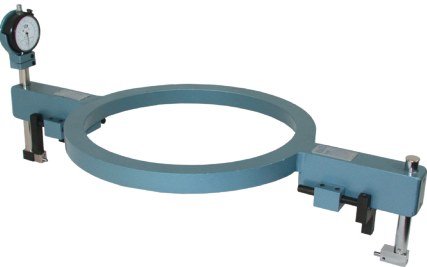
The Hump Frame and Bridge frame gages can be used on the LDF, LDDF or LDLTF. These gages are designed to increase rigity in the vertical gaging shaft either below the rest location or to go around an obstruction. Recommended to clear a part at a 3" height or more or a depth of 3" or more.



"C" FRAME

LDC series "C" frame gages are used for applications where the gage cannot be placed directly over the part. The frame is intended to partially encircle the part and is "side loaded" during use. Cam style (LDF), lever style (LDLT), or direct read type (LDD) transfer mechanisms can be used on this frame.

*\*Note:* Shown here in carbon fiber. LDC Series gages are designed for a specific application. *Contact us for details.*



DONUT FRAME

The gage shown here is an LDO with a Donut Frame design. This design can be used on LDF, LDDF, or LDLTF. The Donut Frame design permits the gage to completely encircle a large obstruction such as the part's hub, case, clamp, or fixture setup. Special size Donut Frames are also available.



EXTENDED END BLOCK FRAME

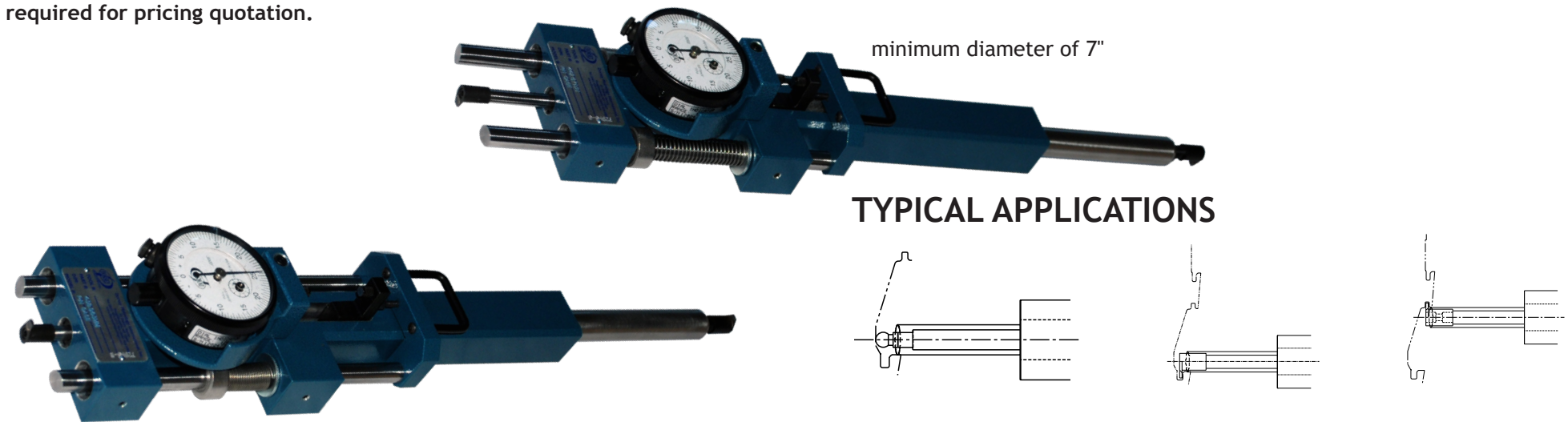
Due to part configuration, it is sometimes necessary for the gage frame to rest internally or externally to the check dimension. Holding fixtures used during the machining operations can introduce further restrictions that may require gages to rest on fixture pads located outside or inside the part.

All above gages require part print for quoting. Design charge and design approval is required.



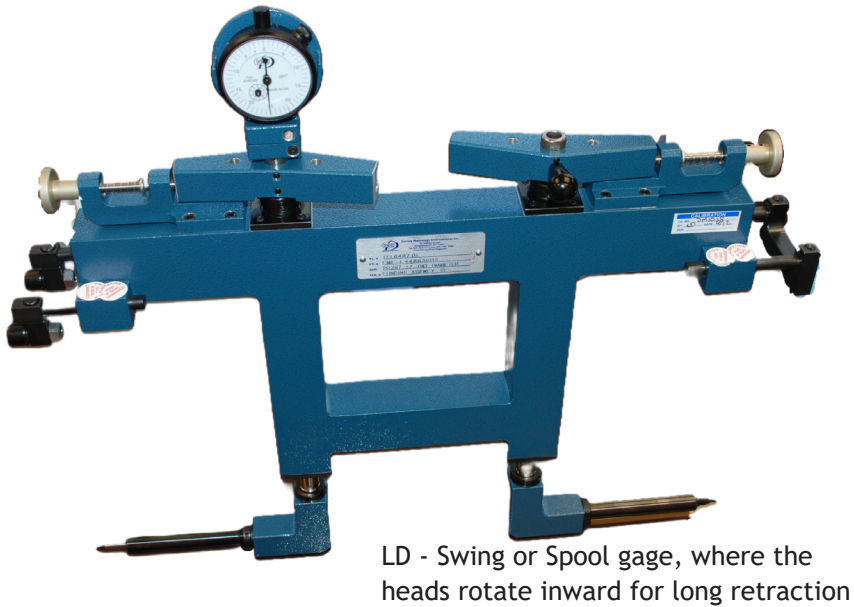
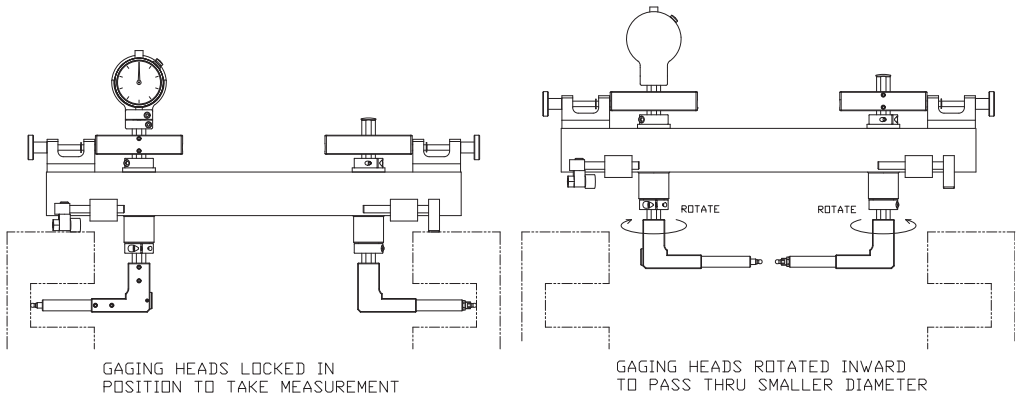
RETRACTABLE PIN AND REST GAGES

Retractable pin gages are specially designed for entry into hard to reach areas and for checking a variety of measurement features. These gages require rests to locate on a datum face. In most cases, both the rest and movement require total retraction beyond the range of the indicator to enter into recessed areas such as; under flange faces, spool cavities, or within deep grooves. These gages are used to check upper and lower “L” grooves, retaining grooves, and basic angular diameters from the datum surface, spherical radii, and other configurations. Companion part-simulating setting masters are also supplied upon request. **Part print required for pricing quotation.**



SWING/SPOOL GAGES

The Swing gage is ideal for ID applications where sideloading is not an option or that requires more than an inch of retraction or have to pass through a smaller diameter and check a groove.



| CONTACTS                    | PART #     | MATERIAL |
|-----------------------------|------------|----------|
| Pin (Reference)             | 4060-P     | Steel    |
|                             | 4060-CP    | Carbide  |
| Pin (Gaging)                | 4030-P     | Steel    |
|                             | 4030-CP    | Carbide  |
| One Way Radius (Reference)  | 4060-OWR-S | Steel    |
|                             | 4060-OWR-C | Carbide  |
| One Way Radius (Gaging)     | 4030-OWR-S | Steel    |
|                             | 4030-OWR-C | Carbide  |
| .187" Dia. Ball (Reference) | 4060-187-B | Carbide  |
| .187" Dia. Ball (Gaging)    | 4030-187-B | Carbide  |

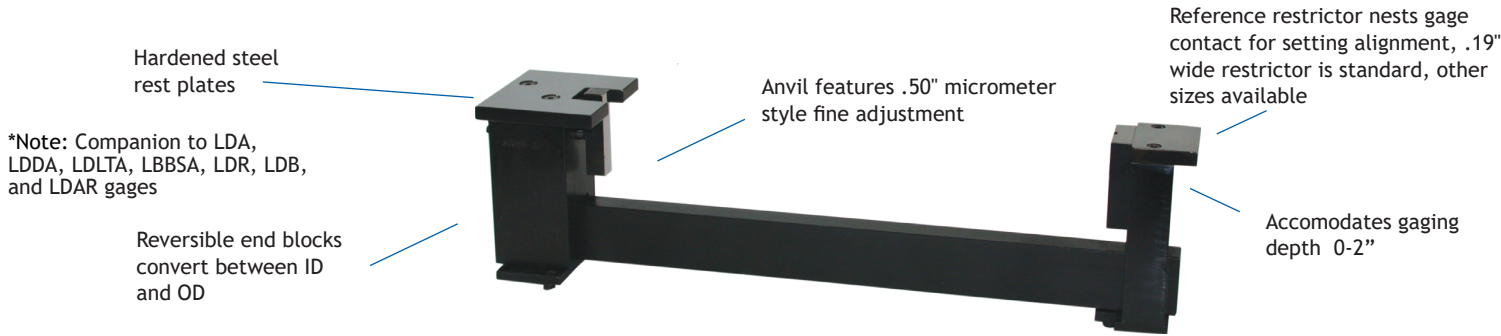
| CONTACTS                    | PART #     | MATERIAL |
|-----------------------------|------------|----------|
| .250" Dia. Ball (Reference) | 4060-250B  | Carbide  |
| .250" Dia. Ball (Gaging)    | 4030-250-B | Carbide  |
| Shovel (Reference)          | 4060-SS    | Steel    |
|                             | 4060-CS    | Carbide  |
| Shovel (Gaging)             | 4030-SS    | Steel    |
|                             | 4030-CS    | Carbide  |
| Extended Shovel (Gaging)    | 4030-ES    | Carbide  |
| Threaded (Reference)        | 4060-M     | Steel    |
| Threaded (Gaging)           | 4030-M     | Steel    |

| CONTACTS                   | PART #    | MATERIAL |
|----------------------------|-----------|----------|
| LDAR-6 or 8 .50" Dia. Disc | 7062      | Steel    |
|                            | 7530      | Carbide  |
| LDAR .63" Dia. Disc        | 7533      | Steel    |
|                            | 7534      | Carbide  |
| LDAR Pin                   | 7534-P    | Steel    |
| LDAR Shovel                | 7534-S    | Steel    |
|                            | 7534-CS   | Carbide  |
| LDAR .187" Dia. Ball       | 7534-187B | Carbide  |
| Thread in Ball Contact     | 4082-187B | Steel    |

# SMA SERIES -ADJUSTABLE DIAMETER

www.dorseymetrology.com

SMA Series setmasters feature a precision ground steel rail as the rigid foundation for adjustability. These masters can be continuously reset for various dimensions.



| MODEL # | DIAMETER RANGE | METRIC (mm) |
|---------|----------------|-------------|
| SMA-12  | 6 to 12        | 150 to 300  |
| SMA-18  | 12 to 18       | 150 to 300  |
| SMA-24  | 18 to 24       | 301 to 460  |
| SMA-30  | 24 to 30       | 301 to 460  |
| SMA-36  | 30 to 36       | 461 to 610  |
| SMA-42  | 36 to 42       | 461 to 610  |
| SMA-48  | 42 to 48       | 611 to 760  |
| SMA-54  | 48 to 54       | 611 to 760  |
| SMA-60  | 54 to 60       | 761 to 915  |

## SMRA SERIES SETMASTER

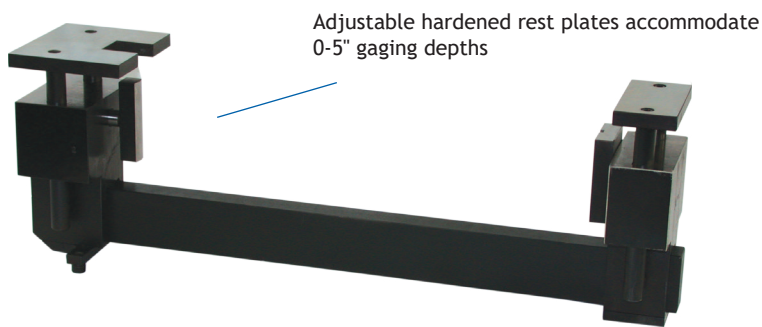


This setmaster has the same features and capabilities as the SMA but accommodates 4-12" of overall diameter and 0-1" depth adjustment to accommodate LDRA 4-12, LDAR and Miget Read.

| MODEL #   | INCH    | METRIC (mm) |
|-----------|---------|-------------|
|           | RANGE   | RANGE       |
| SMRA-4-12 | 4 to 12 | 100 to 300  |

# SMVA SERIES- ADJUSTABLE DIAMETER/DEPTH

SMVA setmasters offer the same features as the SMA Series setmasters except that they allow for vertical adjustment to accomodate various gaging depths.



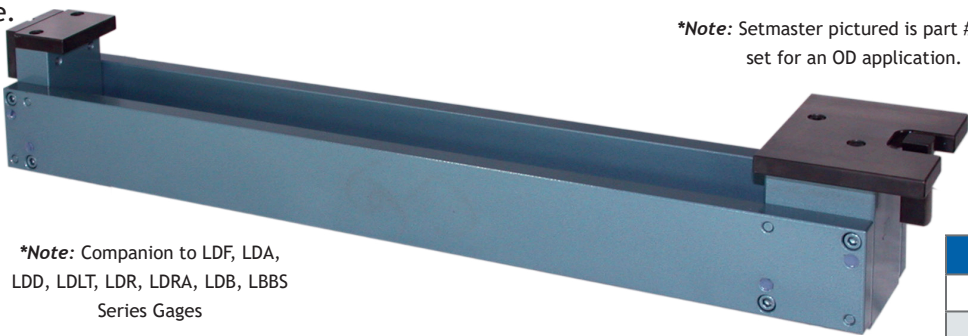
| MODEL # | DIAMETER RANGE | METRIC (mm) |
|---------|----------------|-------------|
| SMVA-12 | 6 to 12        | 150 to 300  |
| SMVA-18 | 12 to 18       | 150 to 300  |
| SMVA-24 | 18 to 24       | 301 to 460  |
| SMVA-30 | 24 to 30       | 301 to 460  |
| SMVA-36 | 30 to 36       | 461 to 610  |
| SMVA-42 | 36 to 42       | 461 to 610  |
| SMVA-48 | 42 to 48       | 611 to 760  |
| SMVA-54 | 48 to 54       | 611 to 760  |
| SMVA-60 | 54 to 60       | 761 to 915  |

*\*Note:* Companion to LDVA or other adjustable gages with gaging depths between 0-5". Both SMA and SMVA Series are available with storage case.

845-454-3111 | 800-549-4243

# SMF SERIES FIXED FRAME SETMASTERS

SMF Series setmasters are designed to be used in a production environment where a specific diameter and gaging depth are required. These masters use solid steel rails with precision ground end blocks bolted and doweled in place. A hardened steel restrictor is fixed to one side, while the adjustable anvil features .50" of micrometer style fine adjustment. The anvil can be continuously reset within its .5" range for various dimensions or it can be set, sealed, and pinned to a specific size.



| MODEL #                                   | RANGE*   | METRIC (mm) |
|---|----------|-------------|
| SMF-12                                    | 0 to 12  | 150 to 300  |
| SMF-18                                    | 12 to 18 | 150 to 300  |
| SMF-24                                    | 18 to 24 | 301 to 460  |
| SMF-30                                    | 24 to 30 | 301 to 460  |
| SMF-36                                    | 30 to 36 | 461 to 610  |
| SMF-42                                    | 36 to 42 | 461 to 610  |
| SMF-48                                    | 42 to 48 | 611 to 760  |
| SMF-54                                    | 48 to 54 | 611 to 760  |
| SMF-60                                    | 54 to 60 | 761 to 915  |
| *set to a specific size within that range |          |             |

- Special anvil and restrictor for gage height more than .5"
- Roller rest guides for anvil rest plate
- Set and sealed to a specific size with NIST traceable certification
- Optional Set, seal and pin to size with ISO 17025 compliant certification

## SMFC- SERIES SETMASTER



Outtrigger assembly for SMF or SSM series masters

## VERTICAL SETMASTER STANDS



Part# 4350  
(used on SMF)



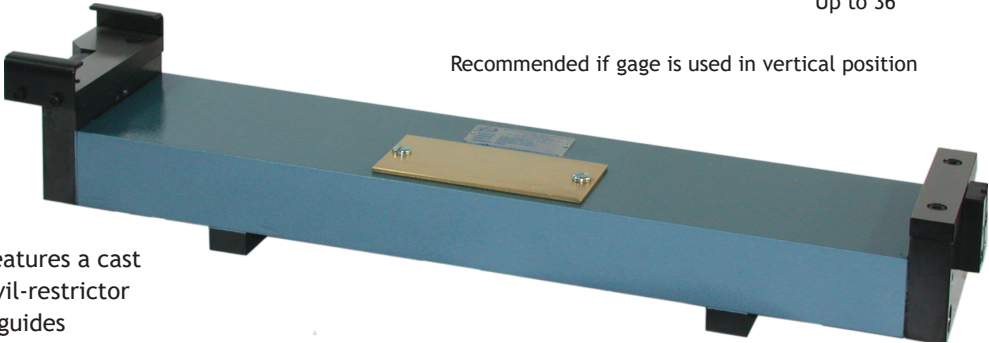
Part# 4394 (used on SMA)  
Part# 4395 (used on SSM)  
Up to 36"

# SSM SERIES SOLID FRAME SETMASTER

Solid setmasters are ground to a specific diameter and gaging depth. This setmaster is recommended for close tolerances and dedicated gages. The base can be made from solid steel, cast iron, or aluminum to better match the coefficient of thermal expansion of the part being machined. Anvils made from either hardened steel or carbide are available in a flat and parallel configuration or angular configuration.

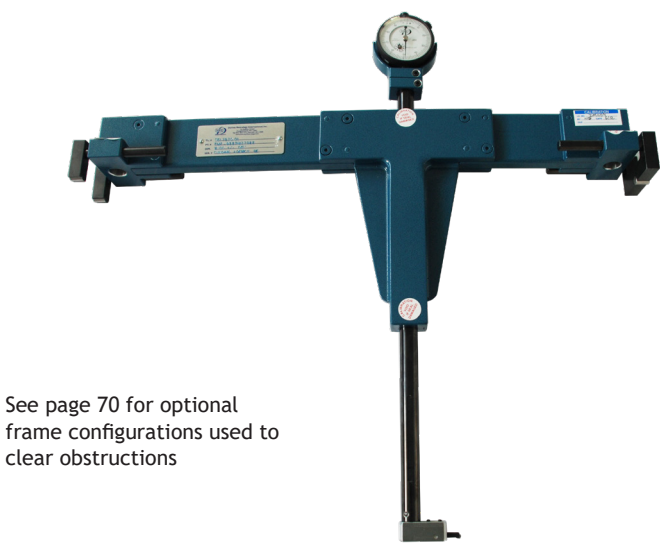
Certification options:

- Set and sealed to a specific size with NIST traceable certification
- Set and sealed to ISO 17025 compliant certification



*\*Note:* Setmaster shown features a cast iron bar base, carbide anvil-restrictor set, and roller rest guides





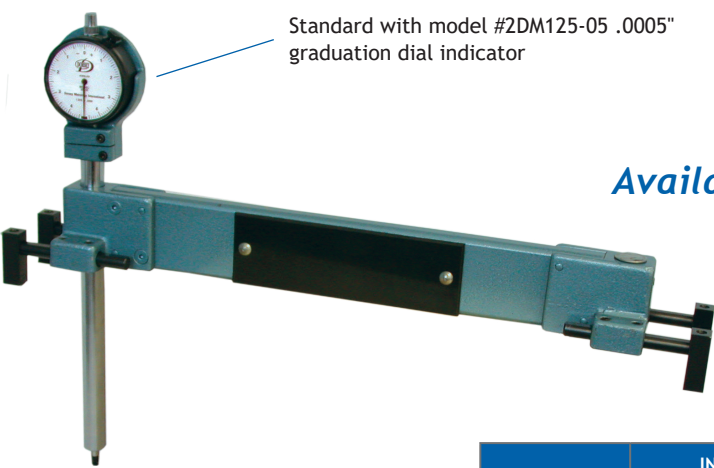
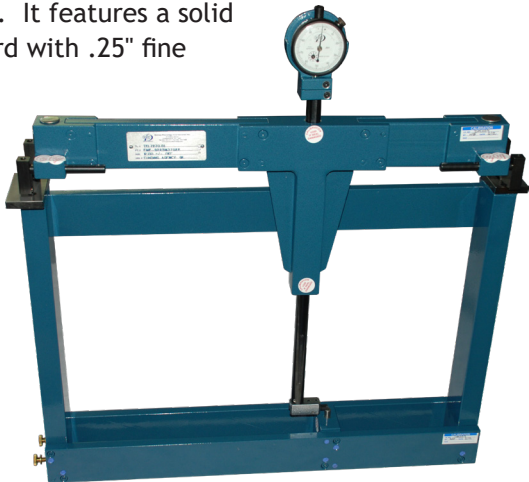
Dorsey Fixed DDG style Depth and Height gages are designed to measure distances from one surface to another. Additionally they can be used to check from a machine fixture to a specific location. The DDG gages are designed for a specific application. Depth units can be used with either a lever transfer or a standard gaging movement. Gaging travel is determined per application.

*Please supply Dorsey with part print for quoting. Requires design charge and design approval.*

DDGM SETMASTER

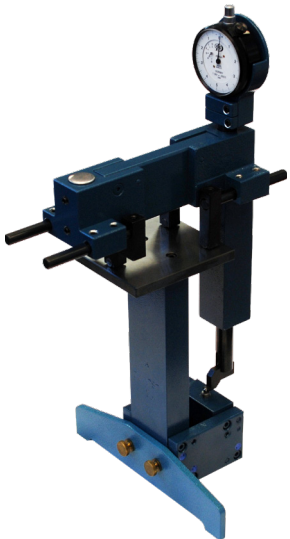
The DDGM setmaster is a companion for the DDG series depth gage. It features a solid steel precision ground base, hardened rest plates. It comes standard with .25" fine adjustment. Certification available upon request.

| MODEL # | DIAMETER RANGE | METRIC (mm) RANGE |
|---------|----------------|-------------------|
| DDGM-12 | 6 to 12        | 150 to 300        |
| DDGM-18 | 12 to 18       | 301 to 460        |
| DDGM-24 | 18 to 24       | 461 to 610        |
| DDGM-30 | 24 to 30       | 611 to 760        |
| DDGM-36 | 30 to 36       | 761 to 915        |
| DDGM-42 | 36 to 42       | 916 to 1070       |
| DDGM-48 | 42 to 48       | 1071 to 1220      |
| DDGM-54 | 48 to 54       | 1221 to 1370      |
| DDGM-60 | 54 to 60       | 1371 to 1525      |



Available in Carbon Fiber

| PART # | INCH           | METRIC (mm)    |
|--------|----------------|----------------|
|        | DIAMETER RANGE | DIAMETER RANGE |
| DDG-12 | 6 to 12        | 150 to 300     |
| DDG-18 | 12 to 18       | 301 to 460     |
| DDG-24 | 18 to 24       | 461 to 610     |
| DDG-30 | 24 to 30       | 611 to 760     |
| DDG-36 | 30 to 36       | 761 to 915     |
| DDG-42 | 36 to 42       | 916 to 1070    |
| DDG-48 | 42 to 48       | 1071 to 1220   |
| DDG-54 | 48 to 54       | 1221 to 1370   |
| DDG-60 | 54 to 60       | 1371 to 1525   |



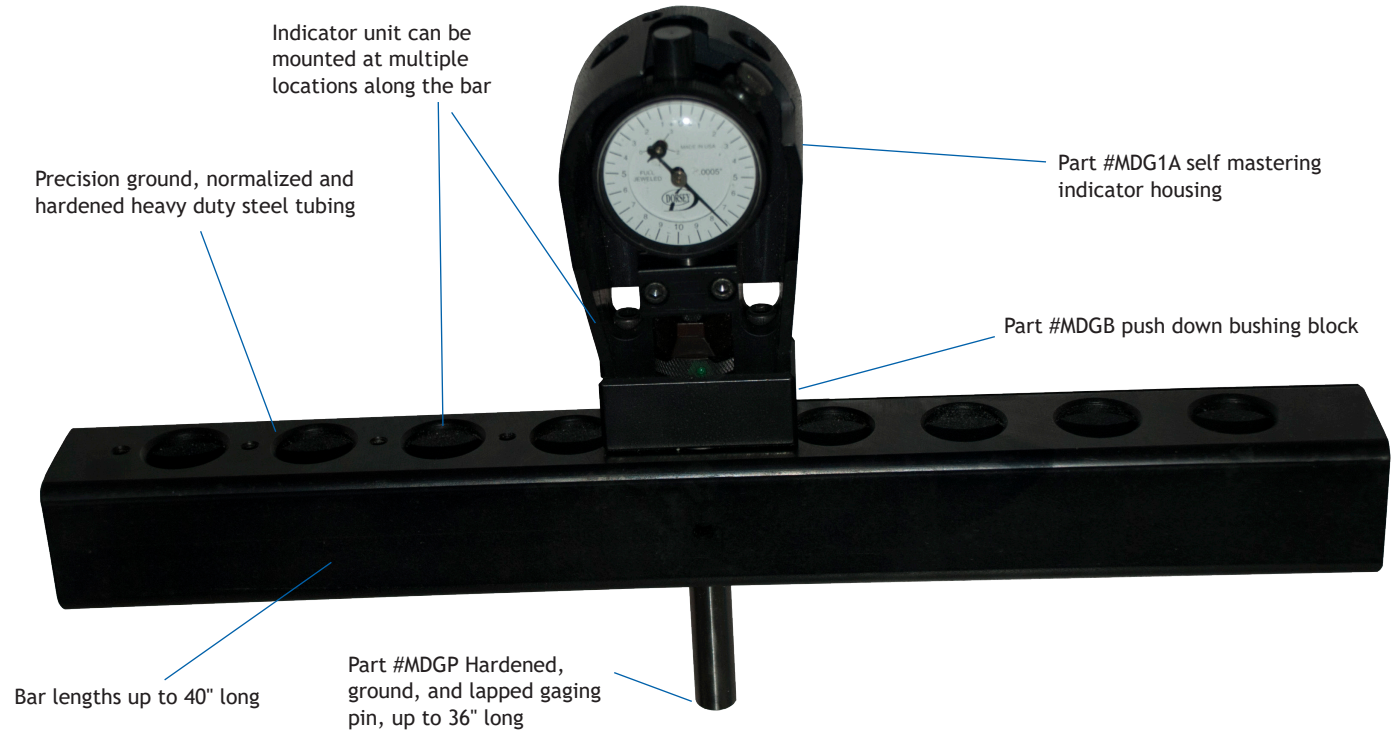
The MDG series of modular indicating depth gages are available as fixed or adjustable models. This versatile design allows the mixing and matching of components to build a gage which can suit any application. Designed to replace many dedicated flush pin gages, these gages feature a unique self mastering mechanism, further eliminating the requirement for a setmaster. An offset contact can be used to check groove depths or locations.

FEATURES

- Modular design offers maximum versatility
- Heavy duty tube
- Self mastering adjustable and fixed model
- A single gage can replace many flush pin gages
- Accommodates ANSI AGD #1, #2 dial or digital indicators
- Indicator is sold separately

To order MDG series depth gages (part # on next page):

1. Specify frame part # / bar length
2. Specify pin length by solid pin part # or threaded pin part #
3. Specify choice of indicator housing: #1 or #2 adjustable self-mastering housing - pull down, #1 or #2 adjustable self-mastering housing - pull up, #1 or #2 fixed series self-mastering housing
4. Add desired options: extended rest sets, reversible thread-in contact, choice of any #2 "High Amplification", #1 or #2 "Traditional" dial indicators, or digital indicator



Dorsey Products - proudly made in the USA



Gaging pins 7/16" Dia.

| BAR LENGTH | HEAVY DUTY FRAME |
|------------|------------------|
|            | PART #           |
| 13.12"     | MDGHT13          |
| 15.75"     | MDGHT15          |
| 18.38"     | MDGHT18          |
| 21.00"     | MDGHT21          |
| 26.25"     | MDGHT30          |
| 31.50"     | MDGHT40          |
| 39.36"     | MDGHT47          |

| MAX GAGING DEPTH | PIN LENGTH | SOLID PIN PART # | THREADED PIN PART # |
|------------------|------------|------------------|---------------------|
| 2"               | 5.5"       | MDGP2            | MDGPT2              |
| 4"               | 7.5"       | MDGP4            | MDGPT4              |
| 6"               | 9.5"       | MDGP6            | MDGPT6              |
| 10"              | 13.5"      | MDGP10           | MDGPT10             |
| 12"              | 15.5"      | MDGP12           | MDGPT12             |
| 16"              | 19.5"      | MDGP16           | MDGPT16             |
| 20"              | 23.5"      | MDGP20           | MDGPT20             |
| 24"              | 27.5"      | MDGP24           | MDGPT24             |
| 30"              | 33.5"      | MDGP30           | MDGPT30             |
| 36"              | 39.5"      | MDGP36           | MDGPT36             |

EXTENDED REST KITS

MDG series depth gage with optional extended rest kit used to provide additional frame clearance

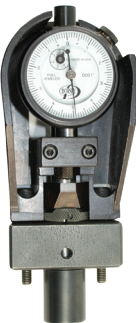


Part # MDGRK2  
Rest kit, 2" Tall

| FRAME CLEARANCE | PART # |
|-----------------|--------|
| 1.5"            | MDGRK1 |
| 2"              | MDGRK2 |
| 2.5"            | MDGRK3 |

INDICATOR HOUSING ASSEMBLIES

Adjustable self mastering indicator housing assembly  
**push down**  
(Indicator not included)  
Indicator size:  
AGD 1 Part #MDGPD1  
AGD 2 Part #MDGPD2



Adjustable self mastering indicator housing assembly  
**pull up**  
(Indicator not included)  
Indicator size:  
AGD 1 Part #MDGPU1  
AGD 2 Part #MDGPU2

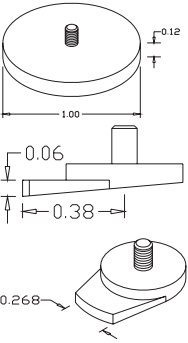


Fixed series self mastering indicator housing assembly for AGD # 1, #2 or digital indicators  
(Indicator not included)  
Indicator size:  
Part #MDGF



REVERSIBLE THREAD IN CONTACT

Requires MGPT series threaded pin



Part #5616 offset rest foot

| PART # | DESCRIPTION             |
|--------|-------------------------|
| 5615   | 1" Disc Contact         |
| 5616   | .75" Reversible Contact |

Gaging used for solving your largest accuracy measurement problems!

This "ultra large diameter gage and setting master series" was developed to measure part sizes beyond those of the Dorsey Metrology traditional large diameter gage family. The ultra large series measures large parts in the range from 60"/1500mm to 132"/3350mm. These instruments are designed to be accurate, rigid, stable, lightweight, and durable.

Please supply Dorsey with part print for quoting. Requires design charge and design approval.

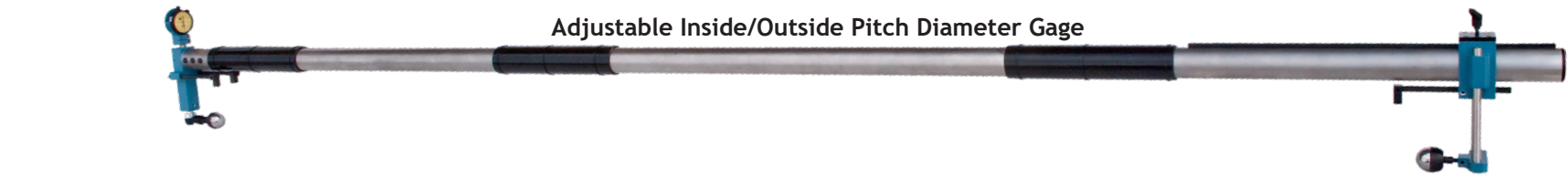


Gage shown 120" - 132" (3048 - 3353mm) diameter range Ultra Large Carbon Fiber Adjustable Gage

- Carbon fiber gage
- Range available 60"dia to 132" dia (1524 - 3353mm)
- 12" of diameter adjustment
- 0-3" depth adjustment
- Weight 10.5lbs/4.76kg
- Carbon fiber diameter gages are lighter weight, more thermally stable, and structurally stronger

Available in Carbon Fiber

Ultra Large Master comes fixed with fine adjustment



Adjustable Inside/Outside Pitch Diameter Gage

External Bearing Raceway Gage



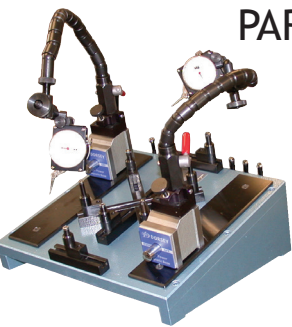


In addition to it's already diverse product line of precision dimensional gaging instruments, Dorsey has an extensive special applications division. We offer a design-to-build service to meet nearly all gaging needs. We can modify standard product or design custom solutions to meet the customers needs.

Below are a few examples of products we have made in the past.



The rotoround is an adjustable fixture used to check concentricities, runout, and/or TIR of one or more surfaces to a basic diameter. Three precision bearings set the primary datum plane and support the weight of the part while 2 roller bearings mounted on the angled base define the circular datum. Indicators then contact the part as it is being rotated to determine various parameters.



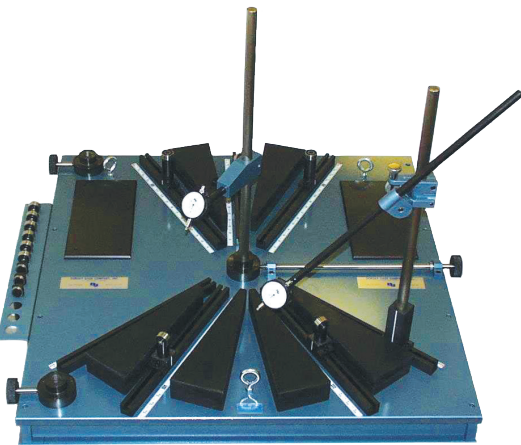
PART #CPF

- For parts 1-5" (25mm-130mm) in diameter. Fixture includes:
- .0001" grad. Test indicator
  - .00005" grad. Test indicator
  - Two sets of adjustable load bearings (3 each)
  - Two sets of banking bearings (2 each): bearing number 9028 (.25" OD x .12" thick),bearing number 2426 (.312" OD x .12" thick)
  - 15 degree angled base plate
  - Tool set with holder
  - Wooden storage box sold separately

For parts 3-12" (75mm-300mm) in diameter with maximum weight of 150 lbs. (70Kg.). Fixture includes:

- One .0005" grad. AGD group 2 dial indicator
- Two .0001" grad. AGD group 2 dial indicator
- One magnetic base stand
- One indicating unit with right angle transfer
- One adjustable height stand
- Three sets of adjustable load bearings in .50" increments (3 each) bearing number 9020 (.866 OD x .406" thick)
- One set of banking bearings (2 each): bearing number 9018 (.75" OD x .281" thick)
- 15 degree angled base plate with adjustable bridge gantry
- Tool set with holder
- Wooden shipping/storage case sold separately

PART #CPF-2



PART #P-CPF-33824

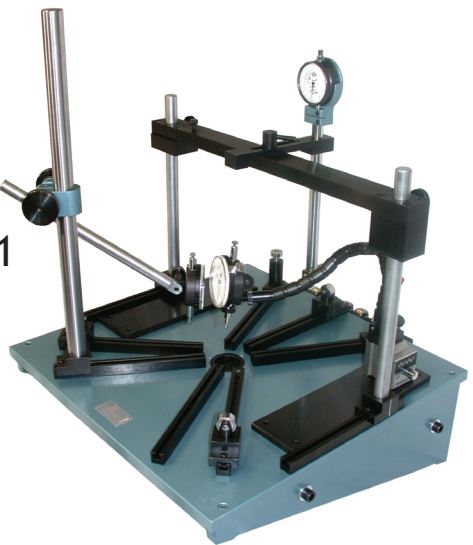
For parts 10-30" (250mm-760mm) in diameter with maximum weight up to 1000 lbs. (450Kg.). Fixture includes:

- Two .0005" grad. AGD group 2 dial indicator
- One magnetic base stand
- One adjustable pole stand
- Three sets of adjustable load bearings in .50" increments (3 each)
- One set of banking bearings (2 each): bearing number 9029 (1.10" OD x .562" thick)
- 15 degree angled base plate
- Tool set with holder
- Wooden shipping/storage crate sold separately

As described in Pratt & Whitney overhaul manual, similar to CPF-2 but features:

- Canted base
- Rubber bumpers
- Special bearing set
- Additional post location

PART #CPF-1





DORSEY OPTICAL COMPARATORS - DISCOVER THE DORSEY DIFFERENCE!

Dorsey has been building optical comparators for nearly 40 years and continues to make one of the few remaining domestically manufactured optical comparator product lines. We take pride in every product we make and in every machine we demonstrate that attention to detail does matter. Dorsey continues to manufacturer on the foundation of accuracy and stability, crafting shop hardened products that stand the test of time.

We manufacture both horizontal and vertical comparators from 14" up to 32" screen sizes with choices of table travel and weight capacity.

For assistance in selecting and configuring the correct Dorsey Comparator to meet your measurement and inspection needs, please contact us at 845-454-3111 or 800-549-4243 and visit us at www.DorseyMetrology.com.



Dorsey Products - proudly made in the USA



LENS TECHNICAL SPECIFICATIONS\*

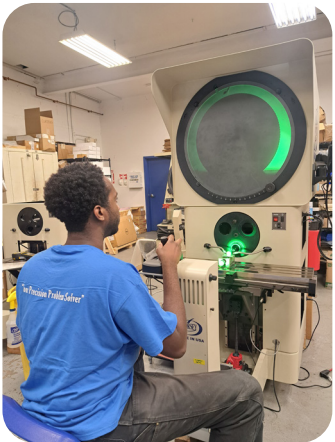
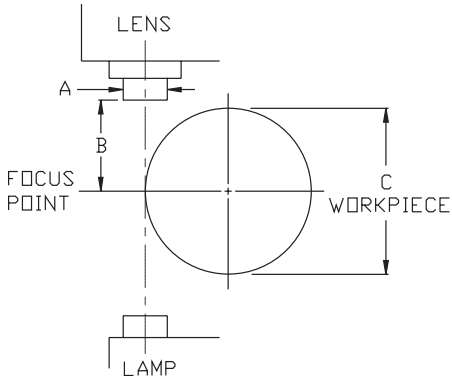
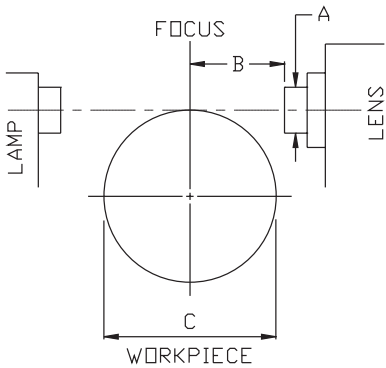
| LENS MAGNIFICATION | 14" SCREEN |    |     |
|--------------------|------------|----|-----|
|                    | A          | B  | C   |
| 10X                | 54         | 81 | 162 |
| 20X                | 47         | 81 | 162 |
| 50X                | 28         | 51 | 102 |

| LENS MAGNIFICATION | 16" SCREEN |    |     |
|--------------------|------------|----|-----|
|                    | A          | B  | C   |
| 10X                | 58         | 80 | 160 |
| 20X                | 40         | 82 | 164 |
| 50X                | 30         | 53 | 106 |

| LENS MAGNIFICATION | 24" SCREEN |     |     |
|--------------------|------------|-----|-----|
|                    | A          | B   | C   |
| 10X                | 79         | 138 | 276 |
| 20X                | 68         | 138 | 276 |
| 50X                | 68         | 100 | 200 |

| LENS MAGNIFICATION | 32" SCREEN |     |     |
|--------------------|------------|-----|-----|
|                    | A          | B   | C   |
| 10X                | 117        | 158 | 316 |
| 20X                | 117        | 109 | 218 |
| 50X                | 117        | 60  | 120 |

\*Other lenses may be available by request



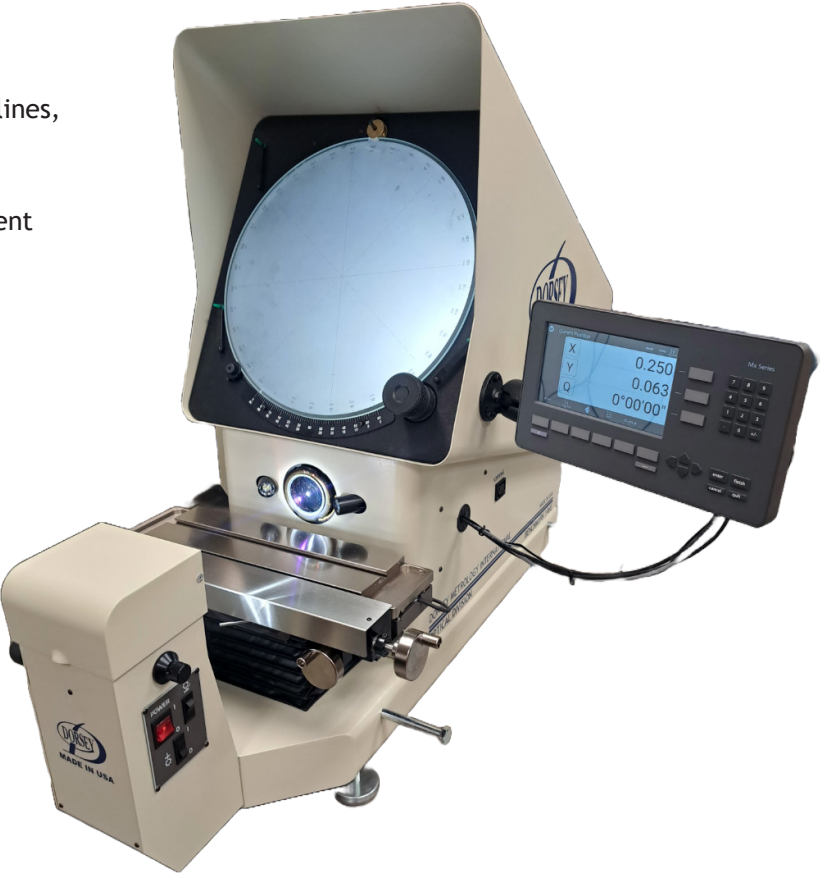
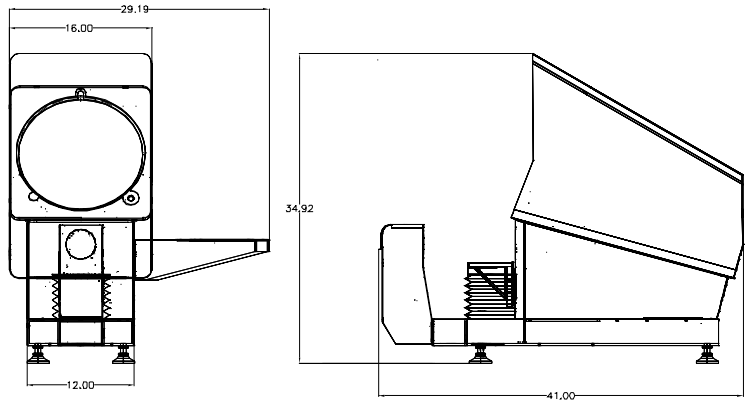
FEATURES:

- 14" (350mm) angled high-resolution glass screen for optimum viewing with 90-degree cross lines, calibration reticle, and chart clips
- Reversed and inverted profile image
- Machined chart ring with vernier protractor, 1 minute graduation facilitates optimal alignment
- Coated telecentric parfocal optics
- Quick change single lens mount
- Integrated hood
- Solid cast iron, nickel plated stage
- X&Y solid rail crossed roller bearings
- Single universal dovetail stage
  - 16" x 4" (400 x 100mm) overall stage size
  - 8" / (200mm) X-axis travel with quick release
  - 4" / (100mm) Y-axis travel (vertical movement/rise & fall)
  - 50 lbs capacity
  - ± 5 degree light source helix adjustment
- NIST traceable calibration certificate
- 0.1 µm scales are standard equipment
- 2 year limited warranty

OPTIONAL FEATURES:

- Internal edge detection
- LED surface illumination
- Choice of readout options, see page 90
- Output for electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy +/- 0.5 degrees
- Harsh Environment Package
- Additional lens magnifications available
- Tooling

DIMENSIONS



| Technical Specification   |  |
|---------------------------|--|
| Illumination              | Profile: Dimmable LED<br>Surface: 2-Triple LED lights (optional) |
| Screen Size               | 14" (350mm) Ground glass with cross-lines                        |
| Stage                     | Cast iron, nickel plated, 16" x 4" single dovetail               |
| Stage Travel              | X = 8" (200mm)<br>Y = 4" (100mm)<br>Focus = 1.5" (38mm)          |
| Stage Accuracy            | Within +/- 0.004mm +[(L/20).001]                                 |
| Linear Scale Resolution   | Standard: 0.1 µm/.000004"  |
| Repeatability of Scales   | +/- 1 Scale count (0.1 µm/.000004")                              |
| Coated Telecentric Lenses | 10x, 20x, 50x  |
| Optical Accuracy          | Within +/- .10% Profile, +/- .15% Surface                        |
| Power Requirements        | 120V or 240V AC, 50/60 Hz, 10 Amp                                |
| Weight                    | 230 lbs/105 kg   |



The Benchmark 14H is an Industry Standard Erect and Reversed Image bench top comparator and is another example of our expanding range of products. This new comparator has the same high quality features as the current product line, with an erect projection image and our "ultra-precision" crossed roller bearing stage system, but in a smaller package. The measurement scales have zero backlash and are mounted in the center of the stage travel which provides maximum measurement accuracy. The optional extra long-life LED surface illumination is another Dorsey innovation.

FEATURES:

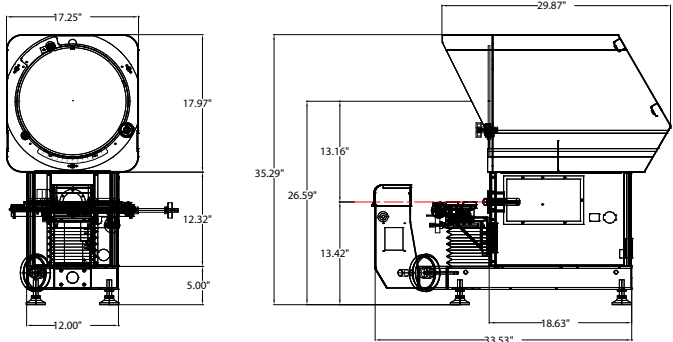
- Industry Standard - erect and reversed profile image
- 14" (350mm) vertical screen for optimum viewing, high resolution ground glass screen with 90 degree cross lines, with calibration reticle and chart clips
- Machined chart ring with vernier protractor, 1 minute graduation facilitates optimal alignment
- Coated telecentric parfocal optics
- Quick change single lens mount
- Integrated hood
- Solid cast iron, nickel plated stage
- X&Y solid rail crossed roller bearings
- Single universal dovetail stage
- 16" x 4" (400x100mm) overall stage size
- 8" / (200mm) X-axis travel with quick release
- 4" / (100mm) Y-axis travel (vertical movement/rise and fall)
- 50 lbs capacity
- ± 5 degree light source helix adjustment
- LED surface & dimmable profile illumination
- 0.1 µm scales are standard equipment
- NIST traceable calibration certificate
- 2 year limited warranty

OPTIONAL FEATURES:

- Internal edge detection
- Choice of readout options, see page 90
- Output for electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy of +/- 0.5 degrees
- Harsh Environment Package
- Additional lens magnifications available
- Tooling

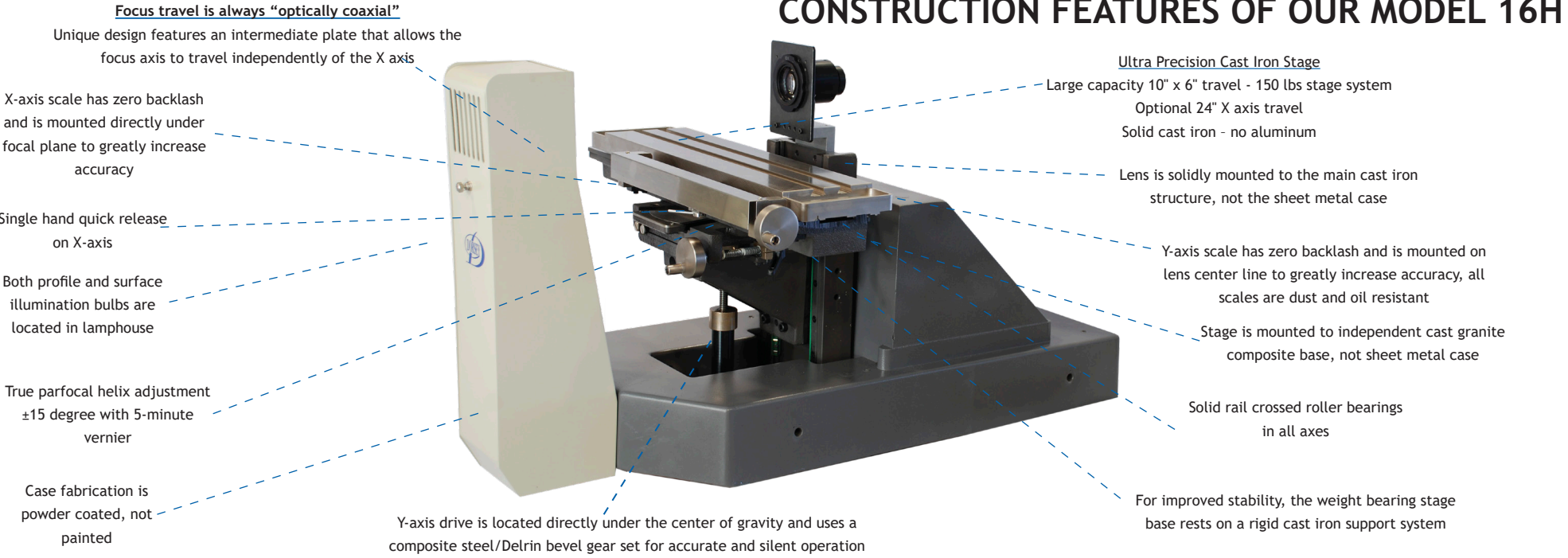


DIMENSIONS



| Technical Specification   |   |
|---------------------------|---|
| Illumination              | Profile: Dimmable LED<br>Surface: 2-Triple LED lights   |
| Screen Size               | 14" (350mm) Ground glass with cross-lines               |
| Stage                     | Cast iron, nickel plated, 16" x 4" single dovetail      |
| Stage Travel              | X = 8" (200mm)<br>Y = 4" (100mm)<br>Focus = 1.5" (38mm) |
| Stage Accuracy            | Within +/- 0.004mm +[(L/20).001]                        |
| Linear Scale Resolution   | Standard: 0.1 µm/.000004"                               |
| Repeatability of Scales   | +/- 1 Scale count (0.1 µm/.000004")                     |
| Coated Telecentric Lenses | 10x, 20x, 50x   |
| Optical Accuracy          | Within +/- .10% Profile, +/- .15% Surface               |
| Power Requirements        | 120V or 240V AC, 50/60 Hz, 10 Amp                       |
| Weight                    | 250 lbs/113 kg  |

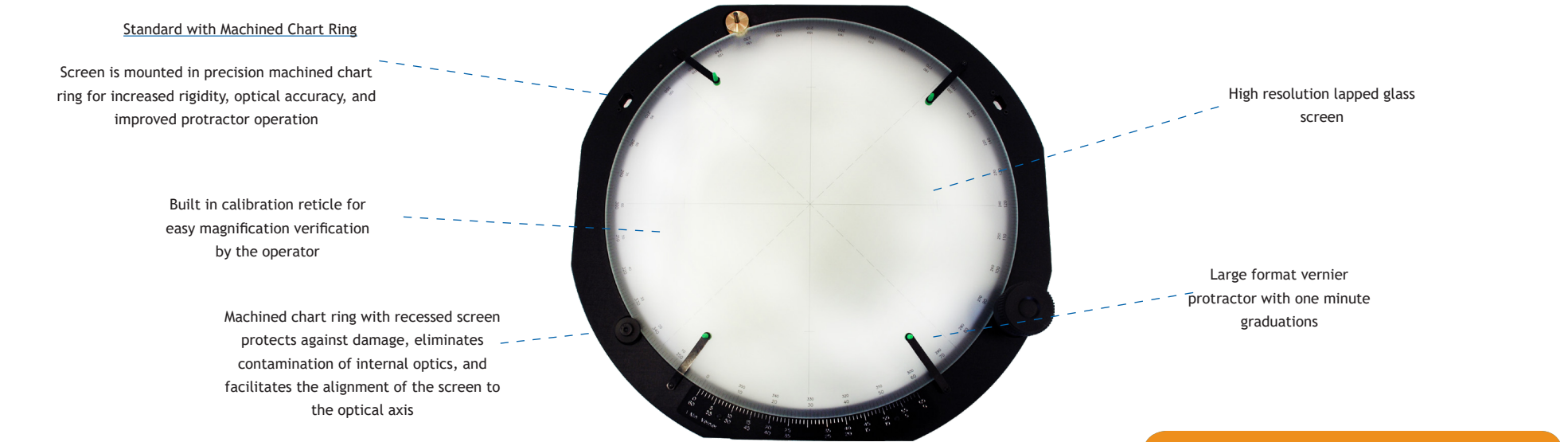
CONSTRUCTION FEATURES OF OUR MODEL 16H



Available with internal edge detection ("IED")

This feature provides automatic edge detection without the viewing obstruction of a plexiglass arm on the screen. The IED target is aligned directly behind the screen center crossline.

- IED is more accurate because the image is "read directly" and is not diffused through the ground glass screen
- IED is also not subject to the stability and rigidity of a plastic arm, our IED sensor cannot be bumped out of alignment under normal use, like the external arm can



MODEL 16H HORIZONTAL BEAM

www.dorseymetrology.com

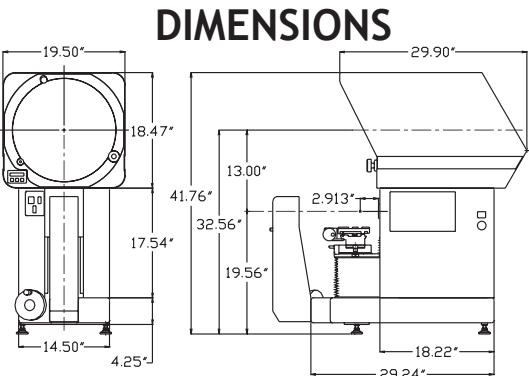
This extremely versatile measurement instrument features a robust cast granite composite base and our proven cast iron "ultra precision" stage system. This comparator comes standard with integrated fiber optic surface illumination. Measurement scales are mounted in the center of travel with zero backlash. A variety of readout options combine to make this one of the most accurate and versatile horizontal benchtop comparators.

FEATURES:

- 16" (400mm) Vertical screen for optimum viewing
- Erect and reversed profile image
- Precision ground glass screen with calibration reticle, 90 degree cross lines, and chart clips
- Machined chart ring with vernier protractor, 1 minute graduation
- Coated telecentric parfocal optics
- Quick change single lens mount
- LED surface & dimmable profile illumination
- Integrated hood
- Precision machined solid cast iron, nickel plated stage
  - 3-axis solid rail crossed roller bearings
  - Twin universal dovetails
  - 18" x 5" (457mmx127mm) overall size
  - 10" (250mm) X-axis travel with quick release
  - 6" (150mm) Y-axis travel (vertical movement/rise & fall)
  - 150 lbs capacity
  - ±15 degree true parfocal helix stage adjustment with 5 minute vernier
- NIST traceable calibration certificate
- 0.1 µm scales are standard equipment
- 2 Year limited warranty

OPTIONAL FEATURES:

- Internal edge detection
- Swing away lamp house arm
- 24" (610mm) extended stage travel on X-axis (50 lbs capacity), 5" (127mm) Y-axis travel (vertical movement Rise & Fall)
- Choice of readout options, see page 90
- Motorized CNC computer controlled systems, 50 lbs capacity
- Output for electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy of +/- 0.5 degrees
- Through-lens surface illumination
- Harsh Environment Package
- Additional lens magnifications available (10X, 20X, 50X, 100X)
- Tooling



| Technical Specification   |  |
|---------------------------|--|
| Illumination              | Profile: Dimmable LED<br>Surface: Built-in 24V/250W via fiber optics |
| Screen Size               | 16" (400mm) Ground glass with cross-lines                            |
| Stage                     | Cast iron, nickel plated, 18" x 5", twin dovetail                    |
| Stage Travel              | X = 10" (250mm)<br>Y = 6" (150mm)<br>Focus = 2" (50mm)               |
| Stage Options             | Optional increase of stage travel 24" (600mm) on X axis              |
| Stage Accuracy            | Within +/- 0.004mm +[(L/20).001]                                     |
| Linear Scale Resolution   | Standard: 0.1 µm/.000004"  |
| Repeatability of Scales   | +/- 1 Scale count (0.1 µm/.000004")                                  |
| Coated Telecentric Lenses | 10x, 20x, 50x  |
| Optical Accuracy          | Within +/- .10% Profile, +/- .15% Surface                            |
| Power Requirements        | 120V or 240V AC, 50/60 Hz, 10 Amp                                    |
| Weight                    | 460 lbs/209 kg   |

845-454-3111 | 800-549-4243

MODEL 24P HORIZONTAL BEAM

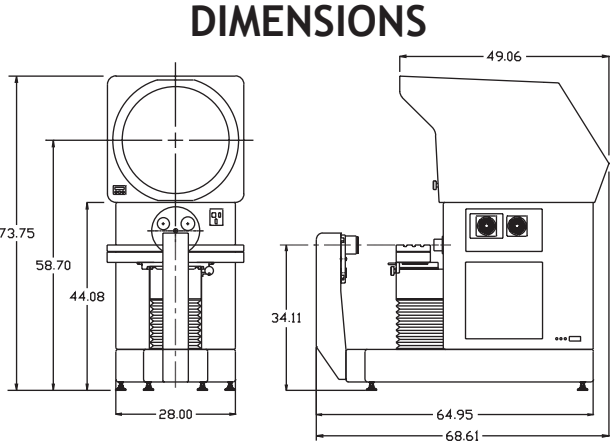
The 24P is designed to be an all purpose measurement/inspection instrument capable of performing both light and heavy duty tasks. Choose any lens system to customize this machine to match your requirements.

FEATURES:

- 24" (600mm) Vertical screen for optimum viewing
- Erect and reversed profile image
- Precision ground glass screen with calibration reticle, 90 degree cross lines
- Machined chart ring with vernier protractor, 1 minute graduation
- Coated telecentric parfocal optics
- 3 position rotary lens & condenser turret
- LED surface & dimmable profile illumination
- Bright fiber optic surface illumination
- Machine precisioned solid cast iron, nickel plated stage
  - Triple universal dovetails accomodate wide range of fixtures
  - 36" x 8" (914x200mm)overall size
  - Crossed roller bearings for superior performance
  - 500 lbs capacity
  - 24"(610mm) X-axis motorized travel
  - 10" (250mm)Y-axis motorized travel
  - 3" Motorized focus travel
  - Linear scale resolution 0.1 µm/.000004"
  - ±15 degree true parfocal helix stage adjustment, with 5 minute vernier
  - Joystick control, computerized microstep motor controller with X and Y axes & focus
- Integrated hood
- NIST traceable calibration certificate
- 2 Year limited warranty

OPTIONAL FEATURES:

- Internal edge detection
- Output for electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy of +/- 0.5 degrees
- Choice of readout options, see page 90
- CNC computer controlled readout systems
- 4 lens turret available
- Harsh Environment Package
- Wide selection of lenses
- Extended hood & curtains
- Tooling



| Technical Specification   |  |
|---------------------------|--|
| Illumination              | Profile: Dimmable LED<br>Surface: LED  |
| Screen Size               | 24" (600mm) Ground glass with cross-lines  |
| Stage                     | Cast iron, nickel plated, 36" x 8", triple dovetails                                     |
| Stage Travel              | X = 24" (610mm), Motorized<br>Y = 10" (250mm), Motorized<br>Focus = 3" (75mm), Motorized |
| Stage Accuracy            | Within +/- 0.004mm +[(L/20).001]   |
| Linear Scale Resolution   | Standard: 0.1 µm/.000004"  |
| Repeatability of Scales   | +/- 1 Scale count (0.1 µm/.000004")  |
| Coated Telecentric Lenses | 10x, 20x, 50x  |
| Optical Accuracy          | Within +/- .10% Profile, +/- .15% Surface  |
| Power Requirements        | 120V or 240V AC, 50/60 Hz, 10 Amp  |
| Weight                    | 1980 lbs/898 kg  |



# MODEL 32P HORIZONTAL BEAM

www.dorseymetrology.com

The 32P was designed with crisp, clear telecentric optics and a precision solid cast iron stage to be an instrument capable of handling almost any measurement/ inspection requirement. This welded steel fabrication assures years of accurate, trouble free service.

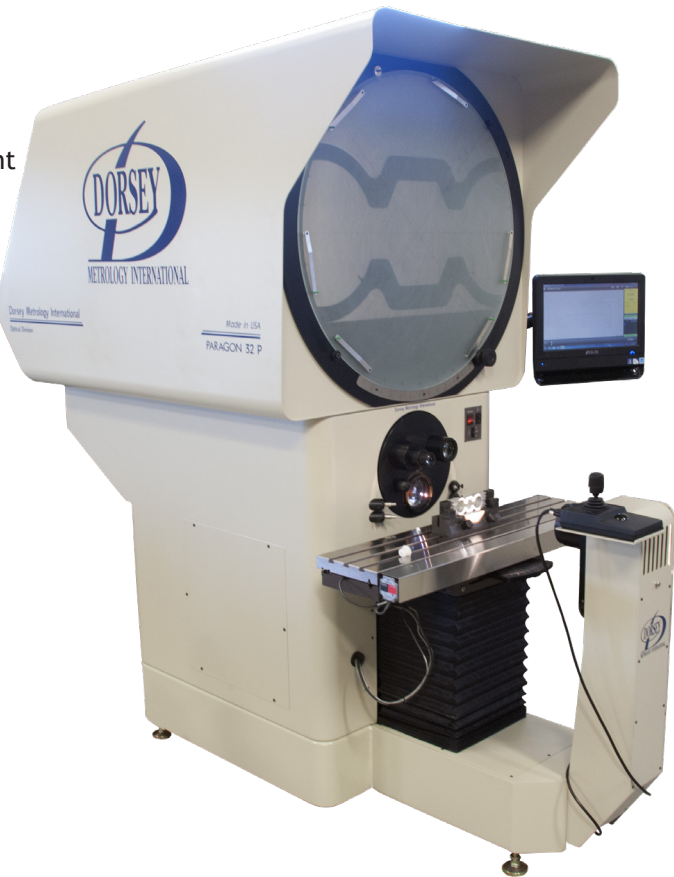
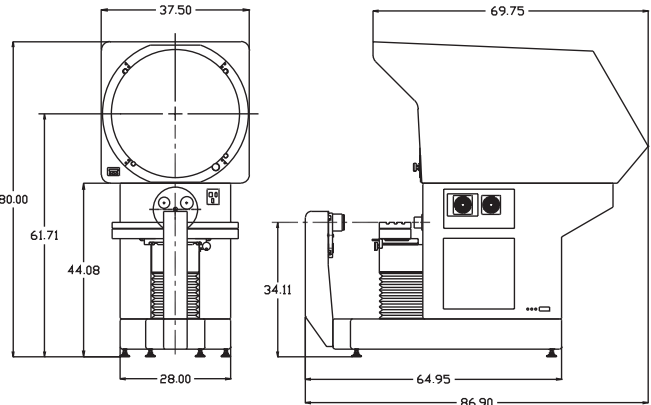
## FEATURES:

- 32" (800mm) Vertical screen for optimum viewing
- Erect and reversed profile image
- Precision ground glass screen with calibration reticle, 90 degree cross lines
- Machined chart ring with vernier protractor, chart clips,1 minute graduation facilitates optimal alignment
- Coated telecentric parfocal optics
- 3 position rotary lens & condenser turret
- Dimmable LED profile light sources
- Dual LED fiber optic surface illumination
- Linear Scale Resolution 0.1 μm/.000004"
- Machine precisioned solid cast iron, nickel plated stage
  - Triple universal dovetails accommodate a wide range of fixtures
  - 36" x 8" (914x200mm) Overall size
  - Solid crossed roller stage bearings
  - 500 lbs capacity
  - 24" (610 mm) X-axis motorized travel
  - 10" (250mm)Y-axis motorized travel
  - 3" Motorized focus axis
  - ±15 Degree true parfocal helix stage adjustment with 5 minute vernier
  - Joystick control, computerized microstep motor controller with X and Y axes & focus
- Integrated hood visor
- NIST traceable calibration certificate
- 2 Year limited warranty

## OPTIONAL FEATURES:

- Internal edge detection
- Output for electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy of +/- 0.5 degrees
- Choice of readout options, see page 90
- CNC computer controlled readout systems
- Harsh Environment Package
- Extended hood & curtains
- Wide selection of lenses
- Tooling

## DIMENSIONS



| Technical Specification   |  |
|---------------------------|--|
| Illumination              | Profile: Dimmable LED<br>Surface: LED  |
| Screen Size               | 32" (800mm) Ground glass with cross-lines  |
| Stage                     | Cast iron, nickel plated, 36" x 8", triple dovetail                                      |
| Stage Travel              | X = 24" (610mm), Motorized<br>Y = 10" (250mm), Motorized<br>Focus = 3" (75mm), Motorized |
| Stage Accuracy            | Within +/- 0.004mm +[(L/20).001]   |
| Linear Scale Resolution   | Standard: 0.1 μm/.000004"  |
| Repeatability of Scales   | +/- 1 Scale count (0.1 μm/.000004")  |
| Coated Telecentric Lenses | 10x, 20x, 50x  |
| Optical Accuracy          | Within +/- .10% Profile, +/- .15% Surface  |
| Power Requirements        | 120V or 240V AC, 50/60 Hz, 10 Amp  |
| Weight                    | 3950 lbs/1792 kg   |

845-454-3111 | 800-549-4243

This dynamic vertical optical system is the first of its kind manufactured in the USA. This system allows a much greater stage capacity up to 50 pounds (15 lbs in the center of the glass plate) with optional stage travel up to 12" x 4".

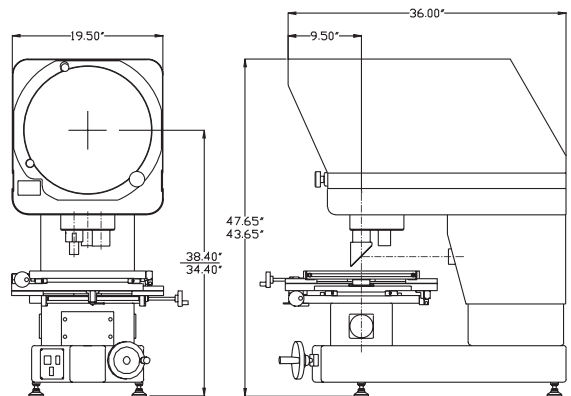
## FEATURES:

- 16" (400mm) Diameter vertical screen for optimum viewing
- Reversed and inverted image
- Precision ground glass screen with calibration reticle, 90 degree cross lines, and chart clips
- Machined chart ring with vernier protractor
- High specification stage
  - 50 lbs stage capacity (15 lbs on glass)
  - 15" x 10.5" (350x267mm) overall size of stage
  - 11" x 7" (280x178mm) glass insert
  - 8" x 4" (200x100mm) travel
  - 4" (100mm) focal distance in the Z-axis
  - Multiple stage options with up to 16" x 8" of travel
- LED light source. Fan cooled and electronically dimmed for long lamp life
- Dynamic optical head to maintain constant mass accuracy
- Built in rotary 3 lens turret & 2 position condenser turret
- Non coaxial surface illumination is standard
- Welded plate steel case fabrication
- Coated telecentric parfocal optics
- Lens choices of 10X through 100X
- Linear Scale Resolution 0.1 μm/.000004" X & Y-axis
- Choice of readout or full CNC computerized systems available
- NIST traceable calibration certificate
- 2 Year limited warranty

## OPTIONAL FEATURES:

- CNC controlled motorized stage
- Internal edge detection
- Coaxial surface illumination
- Output for electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy of +/- 0.5 degrees
- Choice of readout options
- For choices of other vertical stages see page 96
- Wide selection of lenses
- Harsh Environment Package
- Tooling

## DIMENSIONS



# MODEL 16VS VERTICAL BEAM

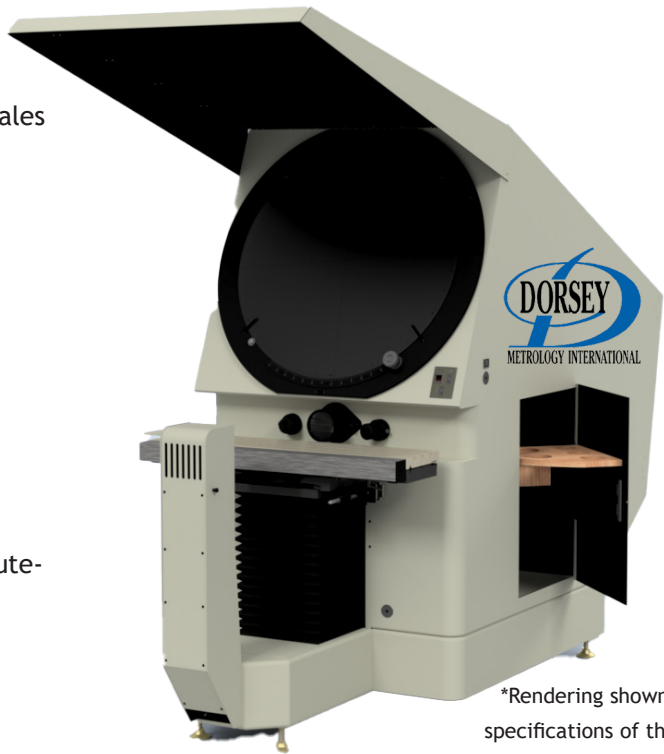


| Technical Specification   |  |
|---------------------------|--|
| Illumination              | Profile: Dimmable LED<br>Surface: LED                  |
| Screen Size               | 16" (400mm) Ground glass with cross-lines              |
| Stage                     | Cast iron, nickel plated, 15" x 10.5" overall size     |
| Stage Travel              | X = 8" (200mm)<br>Y = 4" (100mm)<br>Focus = 4" (100mm) |
| Stage Accuracy            | Within +/- 0.004mm +[(L/20).001]                       |
| Linear Scale Resolution   | Standard: 0.1 μm/.000004" (X & Y axis)                 |
| Repeatability of Scales   | +/- 1 Scale count (0.1 μm/.000004")                    |
| Coated Telecentric Lenses | 10x, 20x, 50x  |
| Optical Accuracy          | Within +/- 0.1% Profile, +/- .15% Surface              |
| Power Requirements        | 120V or 240V AC, 50/60 Hz, 10 Amp                      |
| Weight                    | 375 lbs/170 kg   |

The “2600” Series 30" floor model horizontal beam optical comparator has been a leader in the industry for over 40 years. It offers high accuracy and weight capacity in a portable package, making it an excellent choice for an inspection room or shop floor application.

FEATURES:

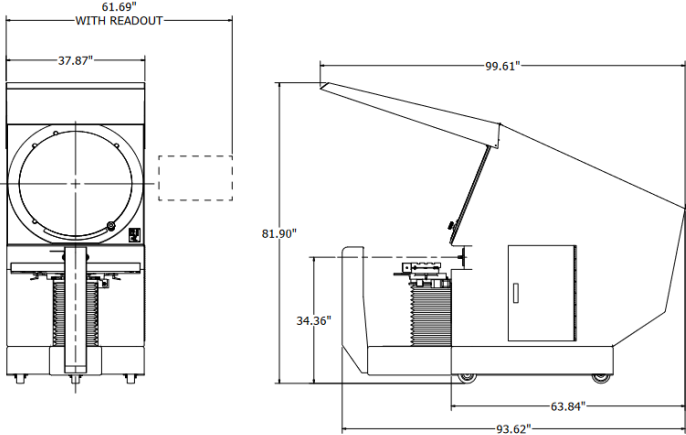
- High precision 24" x 10" measuring stage travel with 0.1 (one tenth) micron resolution precision scales
- Motorized X, Y, and Z (focus) axis with joystick control
- Metlogix® digital readouts
- Solid cast iron, nickel plated stages
- LED profile illumination for bright, sharp images at all magnifications
- Duplex adjustable surface illumination
- Internal lens storage rack included
- Extended hood and curtains
- Helix angle +/- 10° by swinging lamphouse
- Digital screen protractor with readings to 1' or .01° with rotating steel ring option available
- Three 7" diameter wheels for portability option available
- CNC option available
- Electronic rotary screen protractor (Q-axis) on readout with selectable between DMS (degree-minute-second) and DD (decimal-degrees) of a degree resolution
- Q axis accuracy of +/-0.5



\*Rendering shown due to the specifications of this machine.

| Technical Specification    |   |
|----------------------------|---|
| Illumination               | Profile: Dimmable LED<br>Surface: LED   |
| Screen Size                | 30" (750mm) Frosted glass with with 30-, 60- and 90-degree crosslines                 |
| Stage                      | 8" x 35", hardened steel, chrome-plated   |
| Stage Travel               | X = 24" (610mm) Motorized<br>Y = 10" (254mm) Motorized<br>Focus = 3" (75mm) Motorized |
| Stage Accuracy             | Within +/- 0.004mm +[(L/20).001]  |
| Allowable Work Load        | 500 lbs   |
| Stage Motion               | Motorized 3-axis variable speed joystick  |
| Measuring Stage Resolution | .000004"/0.1 µm   |
| Digital Screen Protractor  | 1 min/.01° arc  |
| Coated Telecentric Lenses  | 10x, 20x,50x  |
| Optical Accuracy           | Within +/- 0.1% Profile, +/- .15% Surface   |
| Power Requirements         | 115 V, 60 Hz; other voltages available.   |
| Weight                     | 1700 lbs (770 kg) - Crated 200 lbs (907 kg)   |

DIMENSIONS



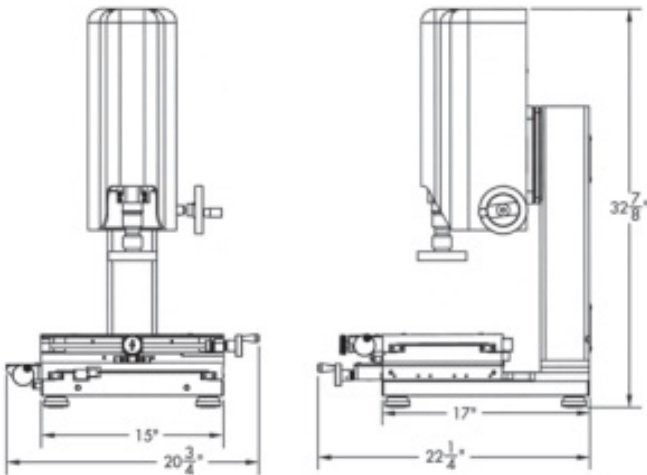
8700 SERIES VIDEO INSPECTION SYSTEM

The 8700 Series machine was one of the products adopted from the S-T Industries optical division acquisition. With the principles of the original S-T unit, Dorsey incorporated the Ultra precision coordinate stage making the 8700 with the highest standards.

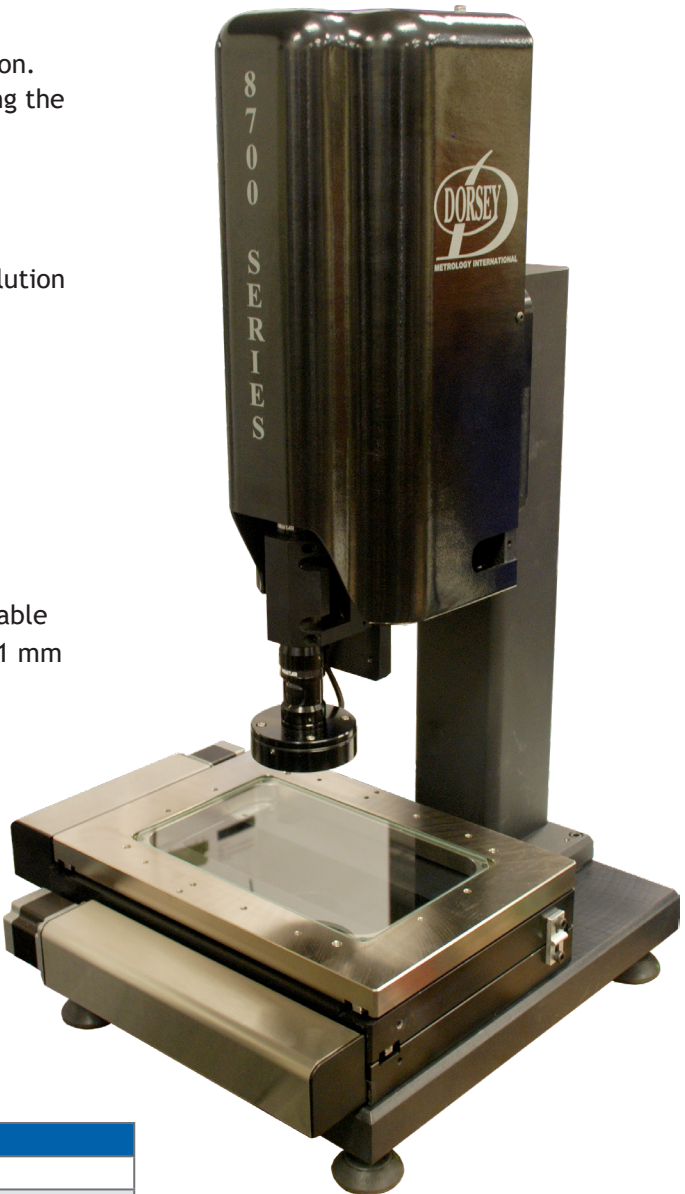
FEATURES

- LED profile and surface lighting
- High Precision 4" x 8" or 4" x 12" travel measuring stages with 0.1 (one tenth) micron scales standard resolution precision scales with quick release
- Heavy-Duty Steel column
- High-resolution 30X to 180X Par Focus zoom optics
- Scale resolution of 0.1(one tenth) micron standard
- 6" Focus travel with optional Z-axis measuring scales
- All in one windows PC
- Metlogix M3 Software
- Optional Motorized Stage
- Optional full CNC 3-axis Controls with Auto Focus, video edge detection, image capturing, and programmable lighting with joystick and trackball controls and fine-adjust knobs, allowing movements to .00005"/.001 mm

DIMENSIONS



| Technical Specification |   |
|-------------------------|---|
| Work Table:             | 10" x 14" or 10" x 18" - Black Anodized                         |
| Measuring Range:        | (X)--8" (Y)--4" (Z)--6" or<br>(X)--12" (Y)--4" (Z)--6"          |
| Allowable Work Load:    | 25 lb   |
| Illumination:           | Profile - LED<br>Surface - LED                                  |
| Magnification Lens:     | 30-180X Parfocal Zoom   |
| Power Requirements      | 100-240 V, 50/60 Hz Compatible                                  |
| Weight                  | Manual 150 lb    Crated 225 lb<br>CNC 180 lb      Crated 285 lb |





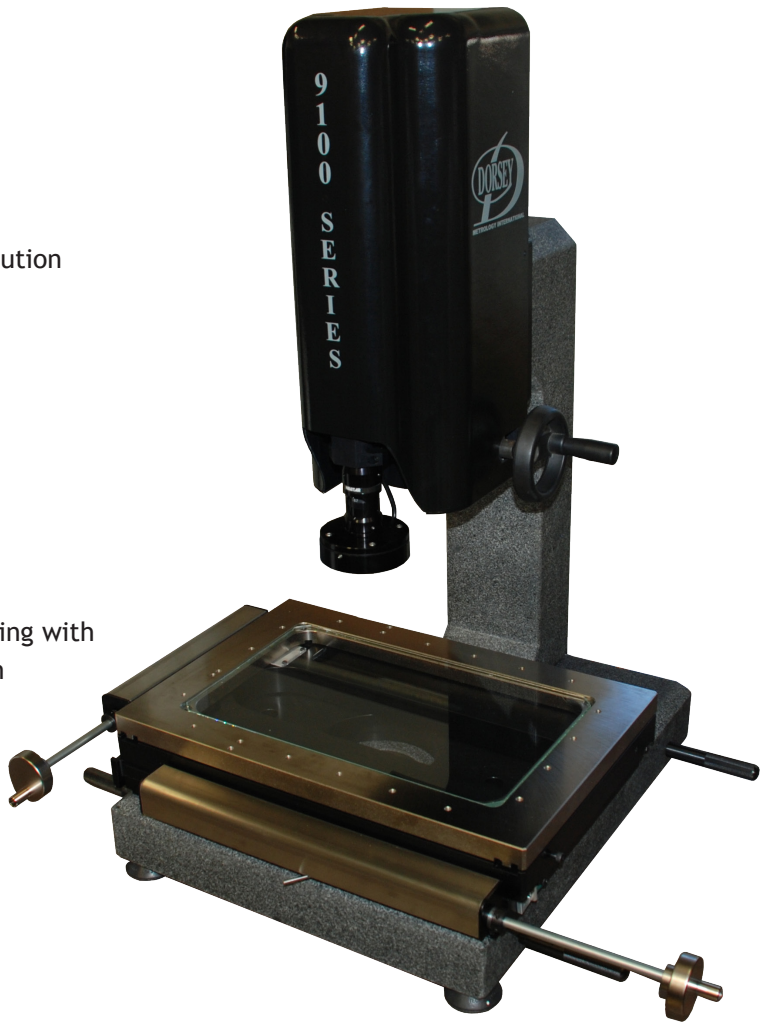
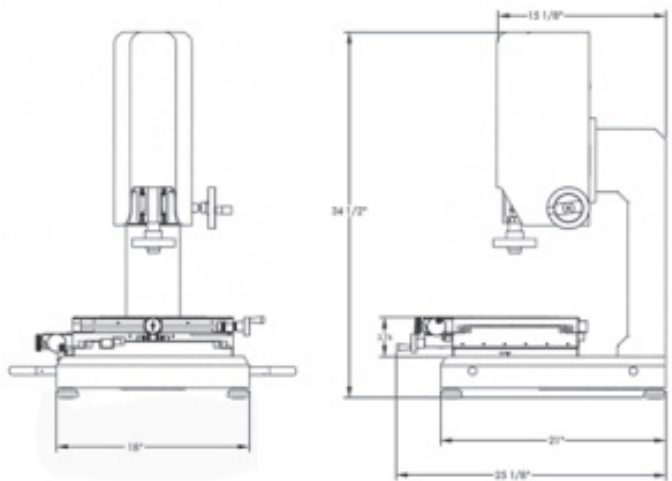
9100 SERIES VIDEO INSPECTION SYSTEM

The 9100 series machine was also adopted from the S-T Industries optical division acquisition. Integrated granite base and column with Dorsey’s ultra precise coordinate stage making it extremely accurate and durable.

FEATURES

- High-resolution zoom optics
- LED profile and surface lighting
- All in one windows PC
- Glass plated 12”X6” travel stage
- High Precision 6” x 12” travel measuring stages with 0.1 (one tenth) micron scales standard resolution precision scales with quick release on X and Y axis
- Nickel plated stage
- Integrated granite base and column
- High-resolution 30X to 180X Par Focus zoom optics
- Scale resolution of 0.1(one tenth) micron standard
- Digital crosshair generator with automatic edge indicator
- 6” Focus travel with optional Z-axis measuring scales
- Metlogix M3 Software
- Optional 2-axis or 3-axis Motor Controls
- Optional full CNC 3-axis controls with Auto Focus, video edge detection and programmable lighting with joystick and trackball controls and fine adjust knobs allowing movements to .00005”/.001 mm

DIMENSIONS



| Technical Specification |   |
|-------------------------|---|
| Work Table:             | 12" x 18" - Black Anodized                              |
| Measuring Range:        | (X)--12" (Y)--6" (Z)--6"                                |
| Allowable Work Load:    | 25 lb   |
| Illumination:           | Profile - LED<br>Surface - LED                          |
| Magnification Lens:     | 30-180X Parfocal Zoom                                   |
| Power Requirements      | 100-240 V, 50/60 Hz Compatible                          |
| Weight                  | Manual 330 lb Crated 365 lb<br>CNC 390 lb Crated 425 lb |

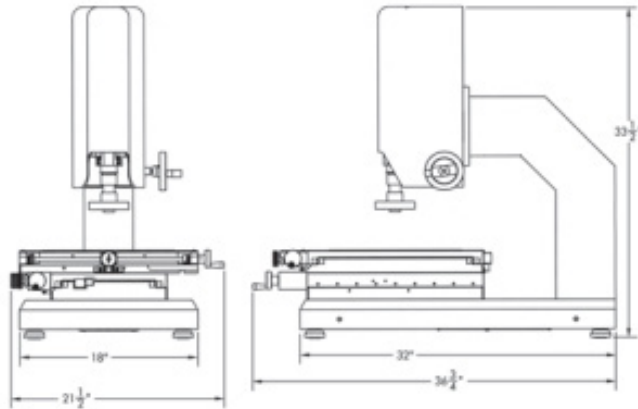
9700 SERIES VIDEO INSPECTION SYSTEM

The 9700 Series Video Inspection System is our largest heavy-duty model adopted from the S-T Industries optical division acquisition.

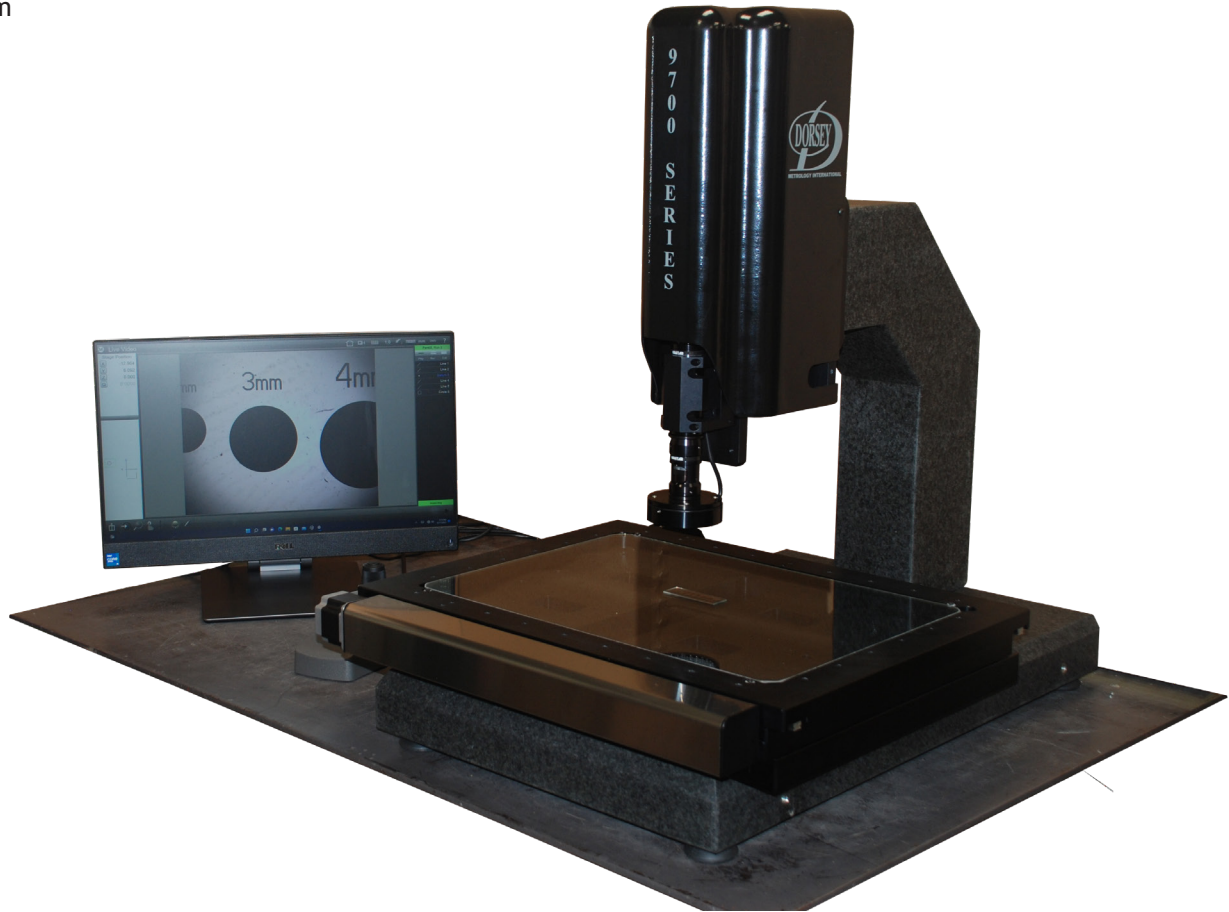
FEATURES

- LED profile and surface lighting
- High Precision 12" x 12" travel measuring stages with 0.1(one tenth) micron scales standard resolution precision scales with quick release on X and Y axis
- Integrated granite base and column
- High-resolution 30X to 180X Par Focus zoom optics
- Digital crosshair generator with automatic edge indicator
- 6 " Focus travel with optional Z-axis measuring scales
- Metlogix Software
- Optional 2-axis or 3-axis Motor Controls
- Optional full CNC 3-axis controls with Auto Focus, video edge detection and programmable lighting with joystick and trackball controls and fine adjust knobs allowing movements to .00005”/.001 mm

DIMENSIONS



| Technical Specification |   |
|-------------------------|---|
| Work Table:             | 18" x 18" - Black Anodized                              |
| Measuring Range:        | (X)--12" (Y)--12" (Z)--6"                               |
| Allowable Work Load:    | 25 lb   |
| Illumination:           | Profile - LED<br>Surface - LED                          |
| Magnification Lens:     | 30-180X Parfocal Zoom                                   |
| Power Requirements      | 100-240 V, 50/60 Hz Compatible                          |
| Weight                  | Manual 455 lb Crated 500 lb<br>CNC 515 lb Crated 560 lb |



ROBUST AND SHOP HARDENED DIGITAL READOUT

A sealed rubber keypad and durable powder coated enclosure provide lasting performance and trouble free operation in a variety of shop and laboratory conditions.

MX100

Simple and innovative readout solution for today's metrology marketplace.

FEATURES

- Clean, Intuitive Design
- Positional Display
- Support for all Current Industry Standard Software Stage Calibration Methodologies
- Machine Integration
- 7"color LCD with LED backlit touchscreen
- Input 100-240VAC



Scan to access MetLogix files and information.

MX200

Simple and innovative readout solution supporting Optical Edge detection.

FEATURES & BENEFITS

- Clean, Intuitive Design
- Optical Edge and Crosshair Probes
- Popular Feature Constructions Supported
- Geometric Tolerancing and Part Programming
- Reports
- Machine Integration
- Support for All Current Industry Standard Software Stage Calibration Methodologies
- 7" color LCD with LED backlit touchscreen
- Input 100-240VAC



Scan to access MetLogix files and information.

| Feature                       | Mx100 Series | Mx200 Series |
|-------------------------------|--------------|--------------|
| Optical Edge Detection        |              | >            |
| Video Edge Detection          |              |              |
| Advanced Probe Group          |              |              |
| Fiel of View Functions        |              |              |
| Superimage Frame Stitching    |              |              |
| Geometric Functions           |              | >            |
| Graphic-Based Constructions   |              | >            |
| Multi-UCS Datuming            |              |              |
| Tolerancing                   |              | >            |
| Data Export/Reporting         | >            | >            |
| Part Programming and Playback |              | >            |
| User Account Control          |              |              |
| Part View Display             |              |              |
| Feature Annotation            |              |              |
| Video Image Archiving         |              |              |
| Image Markup                  |              |              |
| Multi-Language Support        | >            | >            |
| XY, XYZ, or XYQ Axis Support  | >            | >            |
| Touchprobe/3D Option          |              |              |

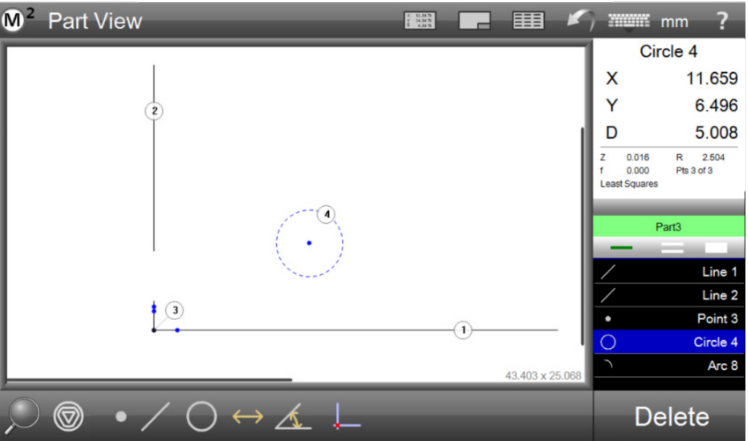
SUPPORTING POPULAR MEASURING MICROSCOPE AND OPTICAL COMPARATOR SYSTEMS WORLDWIDE

- Supporting touchscreen gesture controls
- Advanced optical edge easy-of-use measuring tools
- Cutting-edge user interface
- Clean, intuitive design
- Optical edge or crosshairs probes
- Feature Detail Views
- Graphics-based feature constructions
- Geometric tolerancing
- Part programs playback
- Data reporting
- Machine integration
- Support for all current industry standard softward stage calibration methodologies
- Industry leading operating system platform



Scan to access MetLogix files and information.

| Feature                       | M1 Series | M2 Series | M3 Series |
|-------------------------------|-----------|-----------|-----------|
| Optical Edge Detection        | >         | >         | >         |
| Video Edge Detection          |           |           | >         |
| Advanced Probe Group          |           |           | >         |
| Geometric Functions           | >         | >         | >         |
| Graphic-Based Constructions   |           | >         | >         |
| Multi-UCS Datuming            |           |           | >         |
| Tolerancing                   |           | >         | >         |
| Data Export/Reporting         | >         | >         | >         |
| Part Programming and Playback |           | >         | >         |
| User Account Control          |           | >         | >         |
| Part View Display             |           | >         | >         |
| Feature Annotation            |           | >         | >         |
| Video Image Archiving         |           |           | >         |
| Image Backup                  |           |           | >         |
| Multi-Language Support        | >         | >         | >         |
| XY, XYZ, or XYQ Axis Support  | >         | >         | >         |





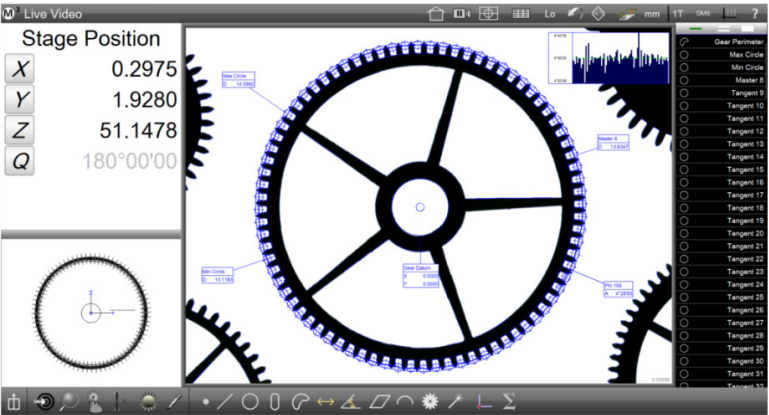
SUPPORTING INDUSTRY LEADING VIDEO, OPTICAL, AND TOUCH PROBE BASED METROLOGY SYSTEMS WORLDWIDE

- Supporting touchscreen gesture controls
- Advanced video and optical edge detection measurement tools
- Cutting-edge user interface thats clean and intuitive
- Designed for multi-touch softward control
- Advanced video probes
- Graphics-based part view constructions
- Geometric tolerancing
- Part programs playback
- Runs database and results view
- Flexible report content and formatting
- Feature detail graphics
- Quickly annotate and markup
- Field of view functions
- Expand the field of view with SuperImage
- Support up to 8 channels of Programmable Light Control
- DXF Overlay and FOV Capability
- Touch Probe Support
- Machine Integration
- Supports Industry Standart Stage and Camera Software Calibration Methodologies
- Industry Leading Operating System Platform



Scan to access MetLogix files and information.

| Feature                       | M1 Series | M2 Series | M3 Series |
|-------------------------------|-----------|-----------|-----------|
| Optical Edge Detection        | >         | >         | >         |
| Video Edge Detection          |           |           | >         |
| Advanced Probe Group          |           |           | >         |
| Geometric Functions           | >         | >         | >         |
| Graphic-Based Constructions   |           | >         | >         |
| Multi-UCS Datuming            |           |           | >         |
| Tolerancing                   |           | >         | >         |
| Data Export/Reporting         | >         | >         | >         |
| Part Programming and Playback |           | >         | >         |
| User Account Control          |           | >         | >         |
| Part View Display             |           | >         | >         |
| Feature Annotation            |           | >         | >         |
| Video Image Archiving         |           |           | >         |
| Image Backup                  |           |           | >         |
| Multi-Language Support        | >         | >         | >         |
| XY, XYZ, or XYQ Axis Support  | >         | >         | >         |



HEAVY DUTY LOCKING METAL STAND

- 28.5" x 22.3" x 27"
- Laminate top
- 2 Heavy duty locking drawers 5" & 11" deep
- Up to 1000 lbs. capacity
- Made exclusively for Dorsey Metrology 16H

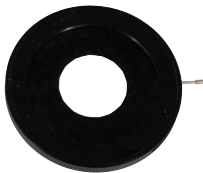
Part #ACC-CAB27



STAND WITH SHELF

- 24" x 36" x 32"
- Solid steel construction
- Up to 750 lbs capacity
- Durable finish

Part #ACC-CAB32



Part #ACC-16ID

IRIS DIAPHRAGM

- Part #ACC-16ID for 16" benchtops
- Mounts over condenser
- Used to improve collimation and reduce glare
- Improved measurement accuracy for cylindrial parts



Part #ACC-16GF

GREEN FILTER

- Part #ACC-16GF for 16" benchtops
- Mounts over condenser
- Monochromatic filter increases contrast and reduces optical aberrations while reducing operator eye fatigue



Part #ACC-16PF

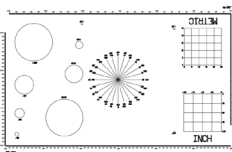
POLARIZING FILTER

- Part #ACC-16PF for 16" benchtops
- Mounts over condenser
- Used to reduce glare on ground parts
- Improves contrast on translucent plastic



GLASS READING MASTER

- Part #ACC-MAGMM
- 3" X 16" Overall size
- 14" scale
- Fitted storage box
- NIST Traceable accuracy certification
- For magnification calibration (measuring the projected image)



CALIBRATION PROJECTION MASTER

- Part #ACC-MAGPM-1
- Overall accuracy +/-0.003mm
- Line-to-line accuracy +/-0.001mm
- Inch/metric graduations
- Fitted storage box
- NIST Traceable accuracy certification
- For linear calibration and projection of magnification image

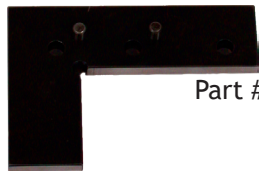


PROJECTION MASTER STAND

- Part #ACC-MAGPMF
- Designed to accurately hold and protect ACC-MAGPM during use on horizontal optical comparators
- Precision ground base
- Wooden storage box



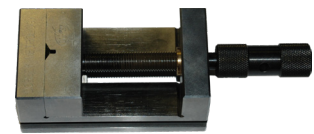
Part #ACC-BF



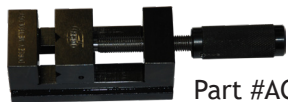
Part #ACC-LBF

**FIXTURE BANKING PLATES**

- Part #ACC-BF 6" x 1" (150x25mm)
- Part #ACC-LBF 3" x 2.5" (75x63mm)
- Precision ground steel
- Reversible for left or right bank
- Can be used on horizontal stages



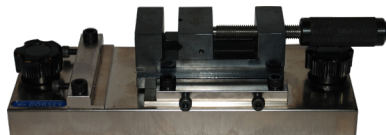
Part #ACC-V2  
(Only vertical V)



Part #ACC-V1

**PRECISION FIXTURE VISE**

- Part #ACC-V1 jaw opening of 1.25" (32mm)
- Part #ACC-V2 jaw opening of 2.12" (54mm)
- Precision ground steel
- Vertical and horizontal V



**PRECISION VISE STAND**

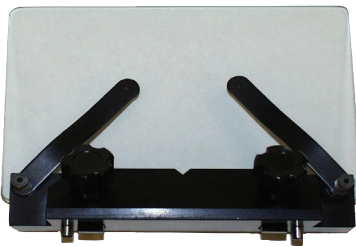
- Fixture to hold vise in 2 axes
- Part #ACC-PVS (ACC-V1 sold separately)



Part #ACC-VB1

**PRECISION V BLOCK**

- Part #ACC-VB1
- Precision V block
- Hardened and ground steel
- 90 degree V 2.7" (70mm)high



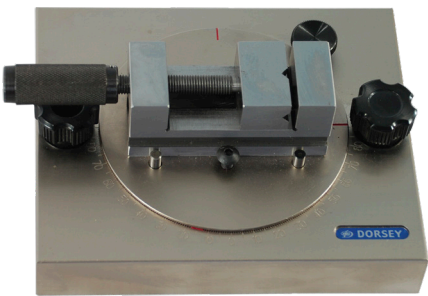
Part #ACC-VF7X5

**VERTICAL GLASS FIXTURE**

- Part #ACC-VF7x5
- Used to mount flat parts on horizontal comparators
- 7" x 5" (178x127mm) glass
- 2 Chart clips & V



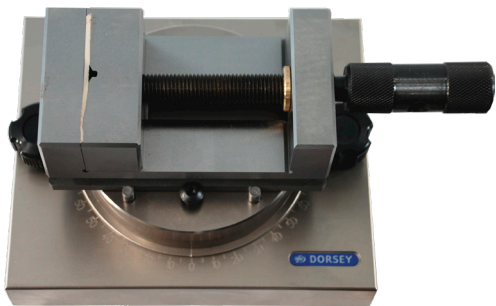
Dorsey Products - proudly made in the USA



Part #ACC-RV1

**ROTARY VISE STAGE**

- Part #ACC-RV1 jaw opening of 1.25" (32mm)
- Part #ACC-RV2 jaw opening of 2.12" (54mm)
- Precision ground steel
- Positions vise in X or Y axis
- 360 degree rotation with 1 degree graduation



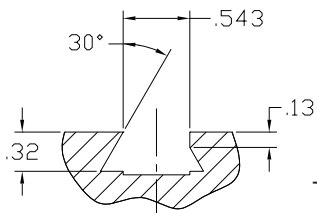
Part #ACC-RV2



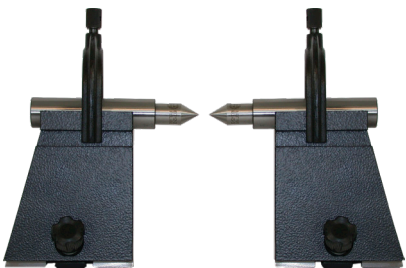
**MACHINABLE FIXTURE BLOCKS**

- Used to make custom fixtures
- Precision machined steel
- Available:
  - 2" (50mm) Part #ACC-FB2
  - 4" (100mm) Part #ACC-FB4
  - 6" (150mm) Part #ACC-FB6
  - 8" (200mm) Part #ACC-FB8

Blocks lock into standard  
.5" dovetail



Typical universal dove tail detail used on all horizontal staging



**HEAVY DUTY V BLOCK & CENTER KIT**

- Part #ACC-VBCHD
- Matched ground cast iron
- 90 degree V
- 5" (127mm) tall
- 1" (25mm) diameter centers with interchangeable Morse taper insert and clamps



Part #ACC-VBC2.5

**PRECISION V BLOCK & CENTER KIT**

- Part #ACC-VBC2.5
- Matched ground hardened steel
- 90 degree V
- 2.7" (70mm) tall
- 1" (25mm) diameter centers with interchangeable Morse taper insert and clamps

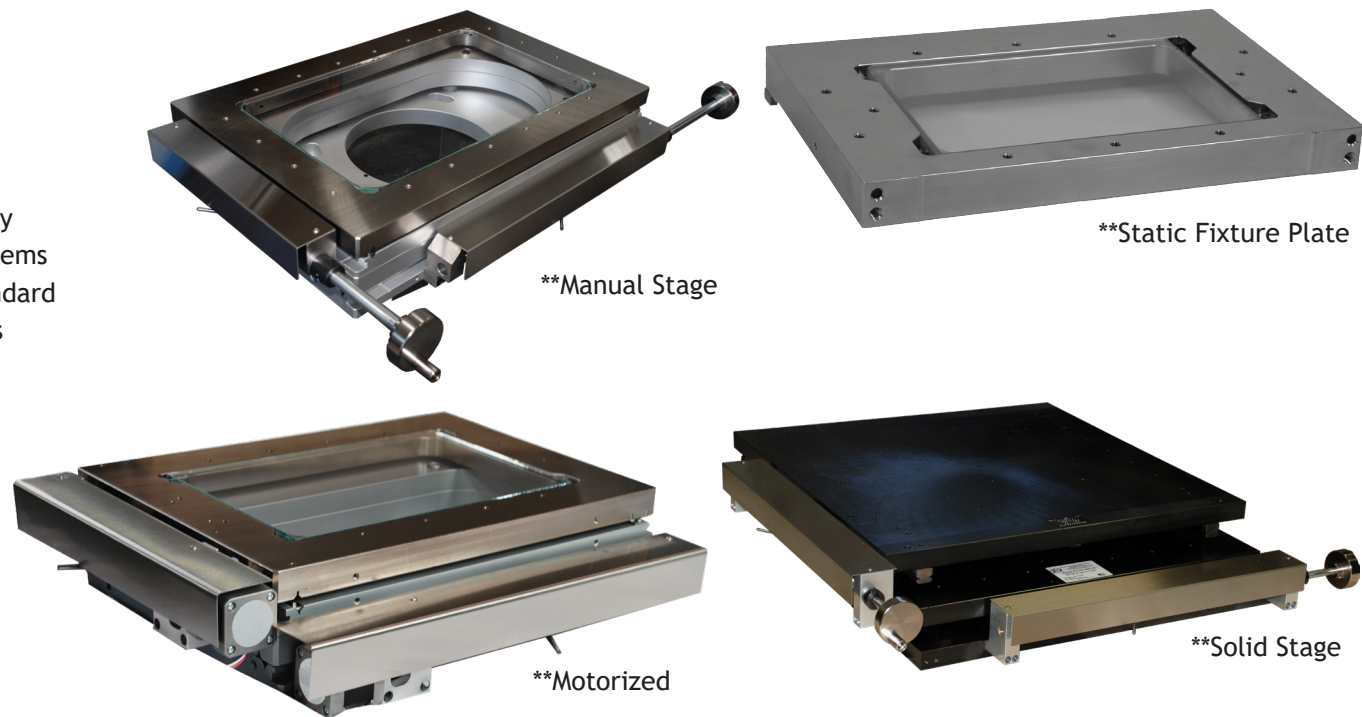
For special fixtures contact Dorsey Metrology or your local Dorsey representative.



These precision coordinate stages can be used for optical comparators, vision systems, or microscopes. Each stage features high precision bearings.

## FEATURES:

- Solid or glass plate stages available
- High precision linear bearings
- Fixturing holes with universal spacing
- Quick release on both axes on all manual stages
- Static axis bias on stage drives increases accuracy
- Universal mounting options fit many existing systems
- Scale resolution of 0.1 (one tenth) micron is standard
- Motorized versions available with stepper motors
- Motorized versions available with limit switches
- Accuracy formula  $\pm .004$   
 $\pm [(L/20).001]\text{mm}$
- NIST traceable calibration certificate
- 2 Year Warranty



**\*\*Pictures display custom precision stages made for customers**

## CONFIGURING A STAGE

## PART NUMBER

- Select stage travel
- After stage travel, add MN for manual or MO for motorized (Special cables, controls, and joysticks priced separately).
- After MN or MO add -01 for scales
- Example: 8X4MN-01 = 8" X 4" manual stage with scales

| TECHNICAL SPECIFICATIONS   |                 |              |                  | STAGE TRAVEL |           |
|----------------------------|-----------------|--------------|------------------|--------------|-----------|
| STAGE TRAVEL (X/Y)         | WEIGHT CAPACITY | FRAME SIZE   | GLASS PLATE SIZE | MANUAL       | MOTORIZED |
| Static fixture plate = SFP | 75 lbs*         | 11" x 7.4"   | 7" x 4.5"        | Static       | Static    |
| 6" x 4"                    | 75 lbs*         | 15" x 10.5"  | 11" x 7"         | Available    | Available |
| 8" x 4"                    | 75 lbs*         | 15" x 10.5"  | 11" x 7"         | Available    | Available |
| 8" x 6"                    | 75 lbs*         | 15" x 15"    | 10.5" x 10.5"    | Available    | Available |
| 8" x 8"                    | 75 lbs*         | 15" x 15"    | 10.5" x 10.5"    | Available    | Available |
| 12" x 4"                   | 75 lbs*         | 16.5" x 7.4" | 13.5" x 4.5"     | Available    | Available |
| 12" x 6"                   | 75 lbs*         | 16.5" x 7.4" | 13.5" x 4.5"     | Available    | Available |
| 12" x 12"                  | 75 lbs*         | 21" x 21"    | 14.9" x 14.9"    | Available    | Available |
| 13" x 13"                  | 75 lbs*         | 20" x 20"    | Solid stage only | Available    | Available |
| 16" x 6"                   | 75 lbs*         | 23" x 15"    | 18.5" x 10.5"    | Available    | Available |
| 16" x 8"                   | 75 lbs*         | 23" x 15"    | 18.5" x 10.5"    | Available    | Available |

\* only 15 lbs on center of glass

As further commitment to the quality of our products and services to our customers, Dorsey Metrology Calibration Laboratory was formed in 2010. The laboratory was accredited by A2LA on October 14, 2010 to ISO 17025 General Requirements for the Competence of Testing and Calibration. Having this accreditation has allowed Dorsey to remain highly competitive in the ever-changing manufacturing sector and encourages even further confidence in the quality of our products.

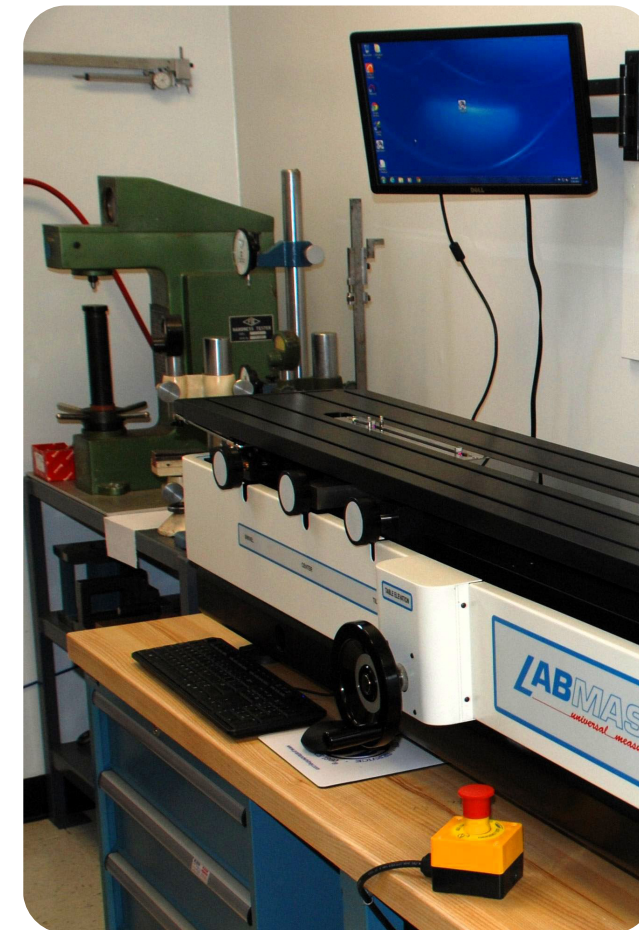
We are fully equipped to calibrate the full line of Dorsey and Standard Gage products. We offer ISO 17025 Accredited Calibrations (see our Scope of Accreditation for details) as well as Long Form Certifications.

Our calibration laboratory has an independent environmental system that controls temperature and humidity. Ultra precision equipment allows us to attain length measurement values to .000001" (one millionth of an inch). All primary standards are traceable to N.I.S.T. or other similarly recognized bodies.

- 16" optical comparator, .0001" resolution, 10-100x magnification
- Multi-function digital laser interferometer universal measurement system (UMS) for length measurement of up to 48" with .000001" resolution
- Multi-function vertical column electronic height gage for measurements up to 28" with .00001" resolution
- Miscellaneous layout equipment
- Specifically designed to calibrate short-range dial indicators to .00002" resolution



Dorsey's Calibration Laboratory,  
photo by Tom LaBarbera of Picture this Studios





**Dorsey Metrology Calibration Laboratory**  
53 Oakley Street  
Poughkeepsie, NY 12601

**Scope of Accreditation<sup>1</sup>**  
(ISO/IEC 17025:2017)

## I. Dimensional

In recognition of the successful completion of the A2LA evaluation process (Including assessment of the organization's compliance with A2LA's Calibration Program Requirements), accreditation is granted to this laboratory at the location listed above to perform the following calibrations<sup>1</sup>:

| Parameter/Equipment   | Range  | CMC <sup>2,4</sup> (±)   | Comments   |
|---|--|--|--|
| Dial Indicator - High Amplification (high resolution)<br>0.00002 in (0.0005 mm)<br>0.00005 in (0.001 mm)<br>0.0001 in (0.002 mm)                | Up to 0.050 in<br>Up to 1.30 mm  | 27 µin (0.7 µm)<br>38 µin (1.0 µm)<br>63 µin (1.6 µm)                        | MET-7.2.1, calibration tester<br>521-104   |
| Dial Indicator - Traditional (low resolution)<br>0.0001 in (0.002 mm)<br>0.00025 in (0.005 mm)<br>0.0005 in (0.01 mm)<br>0.001 in (0.02 mm)     | Up to 1 in<br>Up to 25.45 mm   | 67 µin (1.7 µm)<br>160 µin (4.0 µm)<br>290 µin (7.4 µm)<br>580 µin (14.7 µm) | MET-7.2.1, calibration tester<br>170-101   |
| Digital Indicator   | Up to 1 in   | 58 µin   | MET-7.2.2<br>Gage Blocks   |
| ID/OD Gage and Set Master   | Up to 48 in OD Length<br>Up to 49 in ID length                         | (13L + 0.6R) µin<br>(13L + 0.6R) µin   | MET-7.2.3<br>Gage Blocks   |
| Thickness Gage and Set Master   | Up to 6 in   | (160 + 0.6R) µin   | MET-7.2.4<br>Gage Blocks   |
| Depth/Height Gage and Set Master  | Up to 12 in  | (210 + 0.6R) µin   | MET-7.2.5<br>Gage Blocks   |
| Bore Gage -<br>0.0001 in (0.0025 mm) Graduation<br>0.00025 in (0.0064 mm) Graduation<br>0.0005 in (0.0127 mm) Graduation<br>0.001 in Graduation | (1 to 36) in<br>(1 to 36) in<br>(1 to 36) in<br>(1 to 36) in           | 90 µin (2.3 µm)<br>170 µin (4.3 µm)<br>300 µin (7.6 µm)<br>590 µin (15 µm)   | MET-7.2.6<br>Bore Gage Calibrator  |
| Optical Comparator <sup>3</sup><br>Squareness<br>Magnification<br>X,Y Linear Measurement  | Up to 9 in<br>Up to 24 in (X and Y Axis)<br>Up to 24 in (X and Y Axis) | 260 µin<br>80 µin<br>(150 + 86 x L/24) µin                                   | MET-7.2.7<br>Perpendicular master and dial test indicator<br>Magnification glass master<br>Projection glass master |

<sup>1</sup> We offer commercial calibration service and field service calibrations.<sup>3</sup> Please refer to our valid Scope and Certificate of Accreditation at [www.dorseymetrology.com](http://www.dorseymetrology.com).

<sup>2</sup> Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, usually using a coverage factor of  $k = 2$ . The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

<sup>3</sup> Field calibration service is available for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

<sup>4</sup> In the statement of CMC,  $L$  is the numerical value of the nominal length of the device measured in inches, and  $R$  is the resolution of the unit under test.