

## 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.

Available in single revolution or multi-revolution styles

Revolution counters are a standard feature on all Dorsey multi-revolution indicators

"Cartridge Style" movement

Friction free fully jeweled movement

High accuracy gear segment movement

Jam proof/Shock proof-"following lever spindle" eliminates the possibility of jamming as the gage movement is not driven by rack & pinion spindle

Zero adjustment knob keeps the zero always at 12:00 position (ANSI/AGD 3 & 4 only)

HARDENED STEEL STEM is virtually crush proof

Universal movements can be used in either ANSI/AGD group 2, 3, or 4 indicators

Eccentric cam

The illustration to the left shows Dorsey's unique shock proof, high amplification indicator movement. Our indicators feature this lever principal and an adjustable eccentric cam to achieve 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.

Stainless steel heavy duty rack spindle

Fully jeweled cartridge style movement

Revolution counters are standard

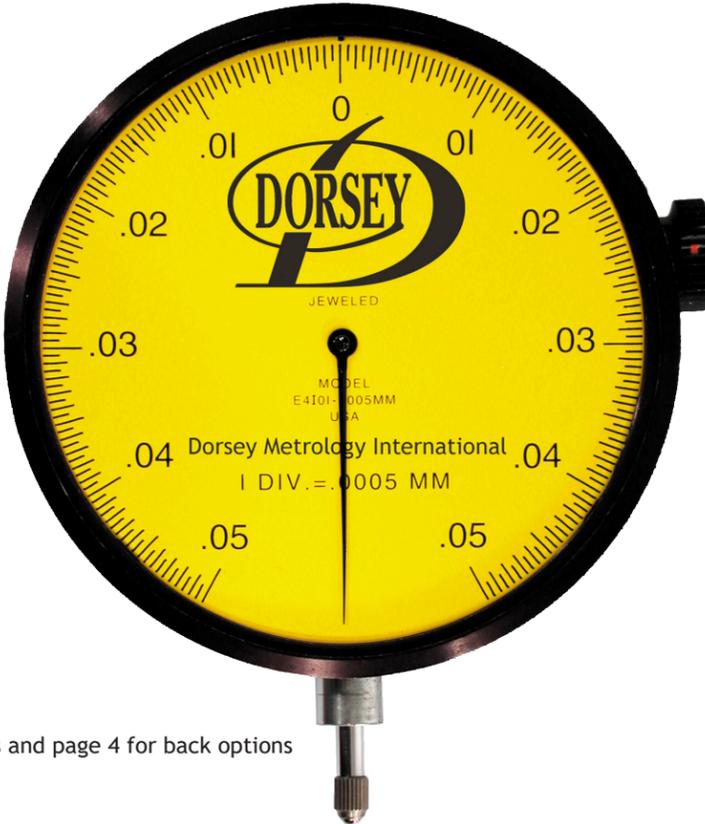
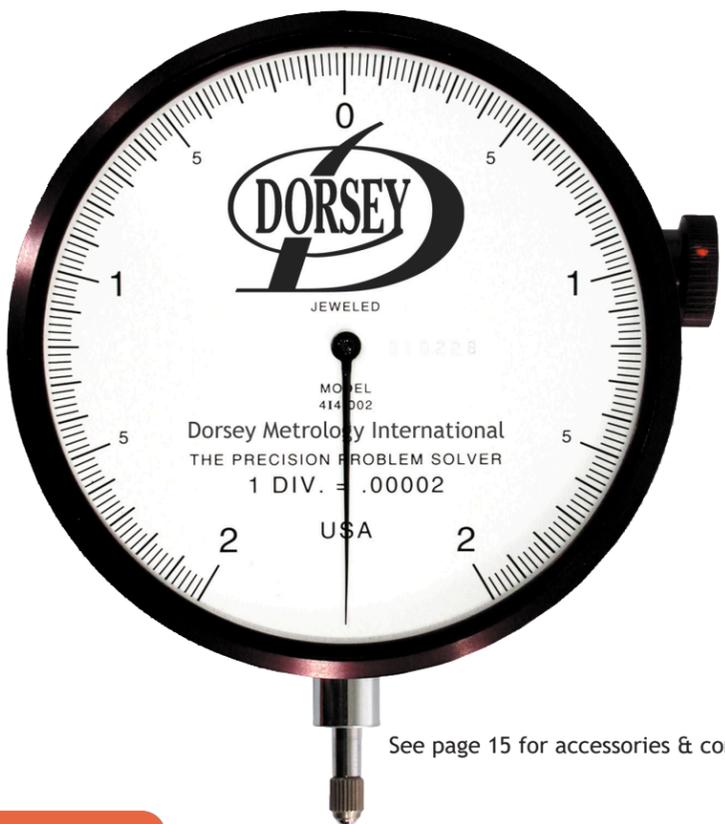
Machined aluminum bezel, sealed with teflon "O" ring

Unique case design features solid back to protect movement from contamination

## 20 MILLIONTHS THAT YOU CAN ACTUALLY READ!

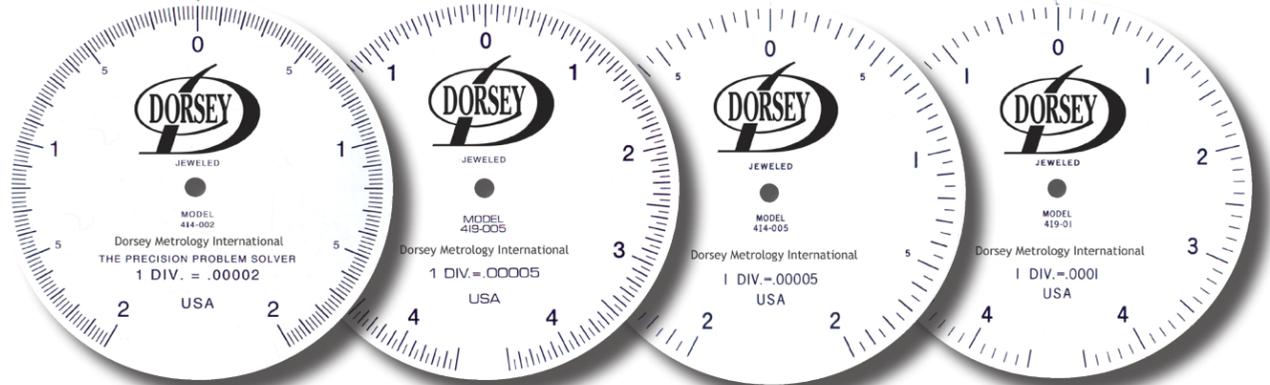
### FEATURES:

- 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

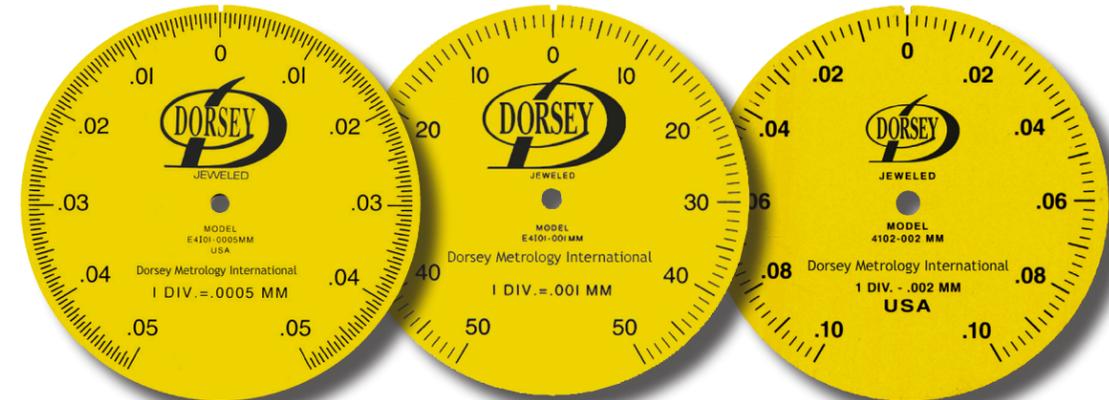


See page 15 for accessories & contacts and page 4 for back options

## 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.

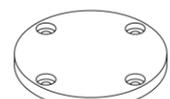
## FEATURES:

- 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

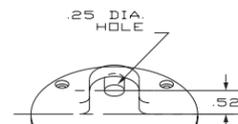


See page 15 accessories and contacts options

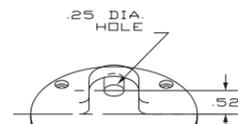
### Indicator back options for Group 3 & 4



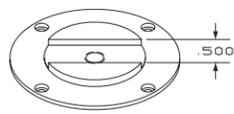
Flat  
Part # 49162



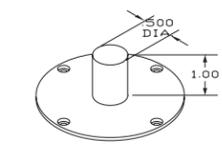
Lugback  
Part# 49161



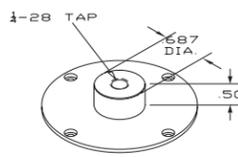
Offset Lugback  
Part # 49160



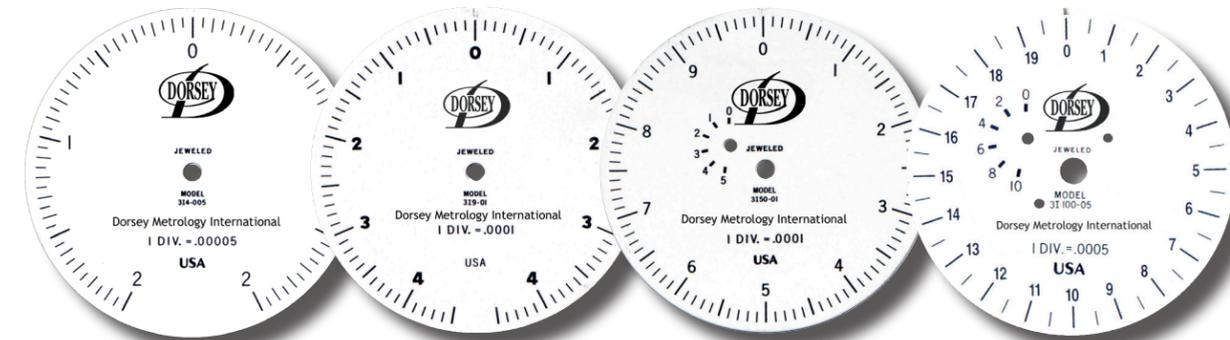
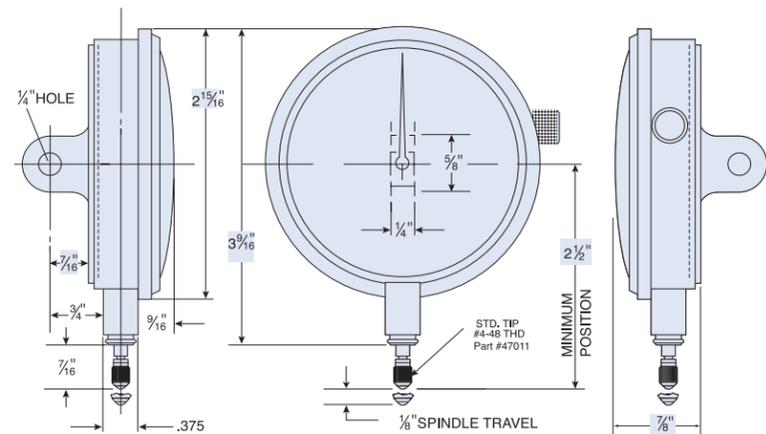
Slideback  
Part # 49188



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

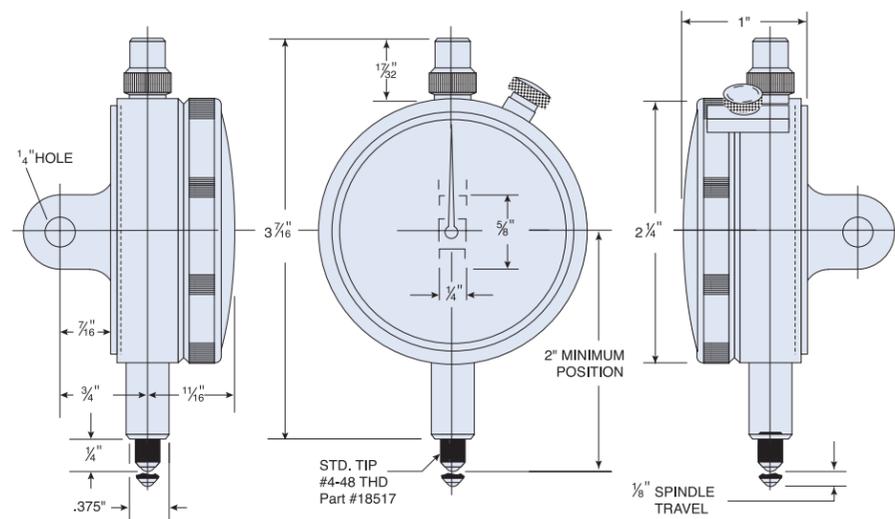
\* Special order

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

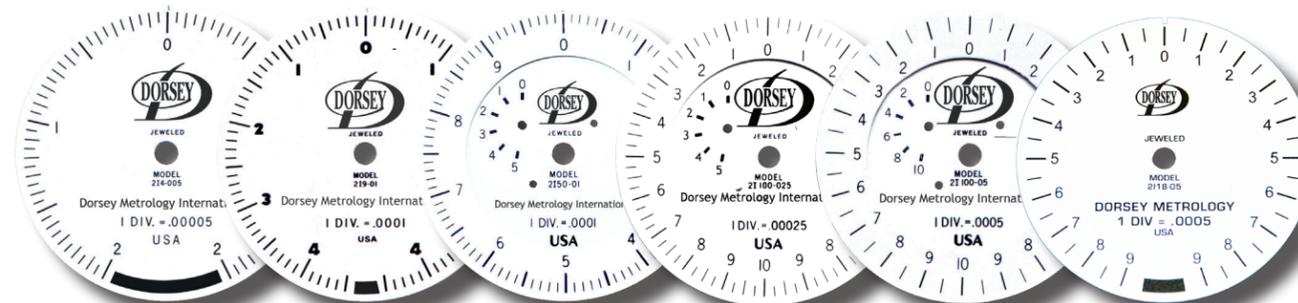
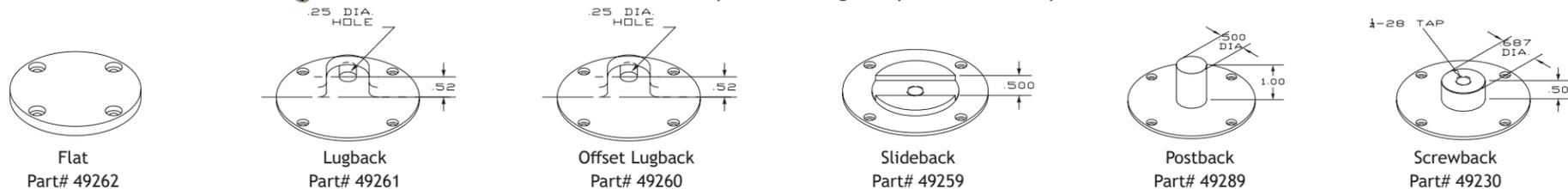
All Dorsey Ultra High Amplification Indicators utilize the lever principle of motion. They do not rely on rack and pinion motion. This eliminates the inherent error between the meshing of racks and gears.

## 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



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.

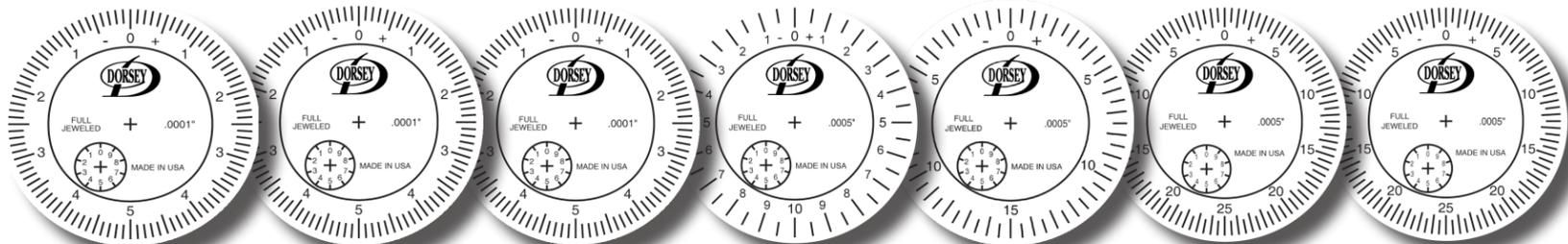
\*Balanced dial shown

\*\*Continuous dial

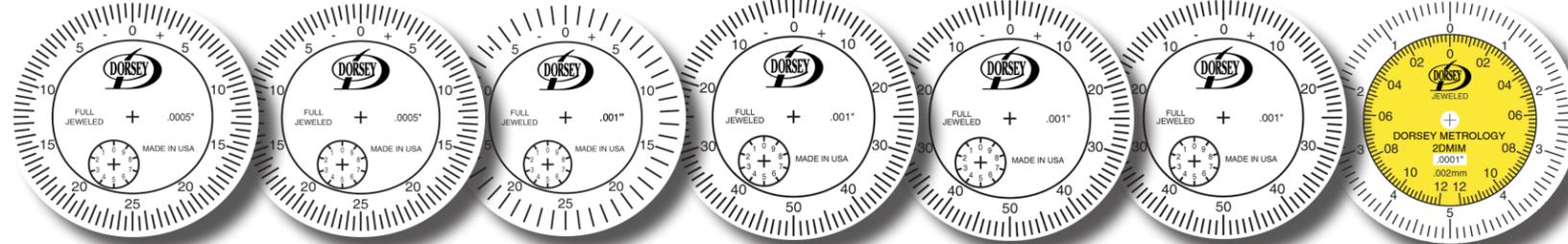
See page 14 for dial face options, page 15 for accessories and contacts.

### 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.

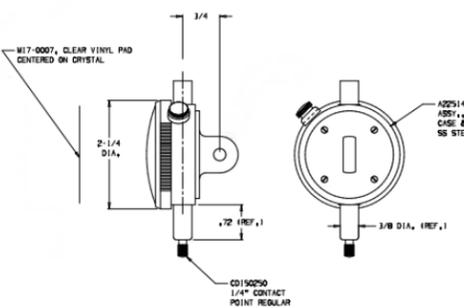
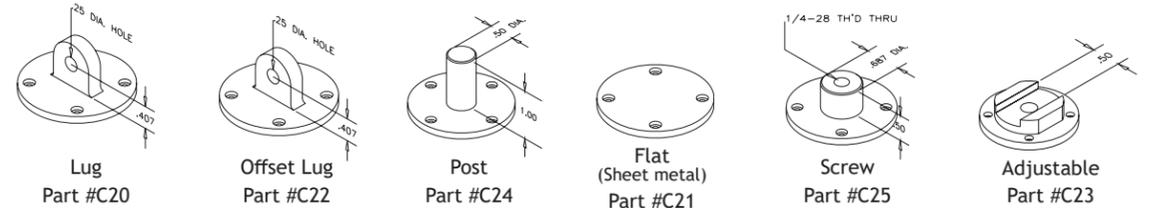
\*Balanced dial shown

### 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

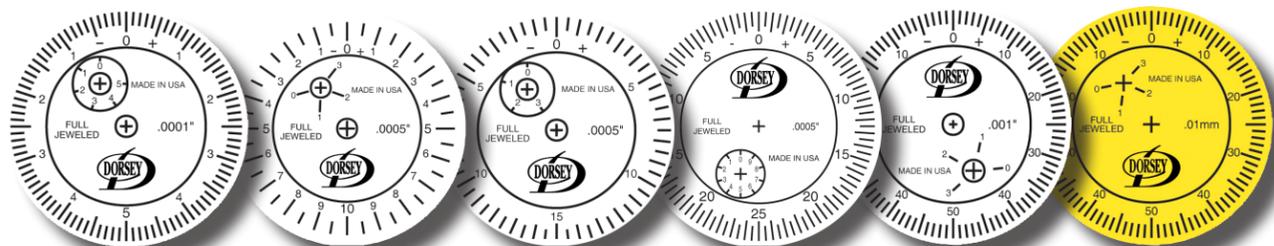
### BACK OPTIONS FOR GROUP 2



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

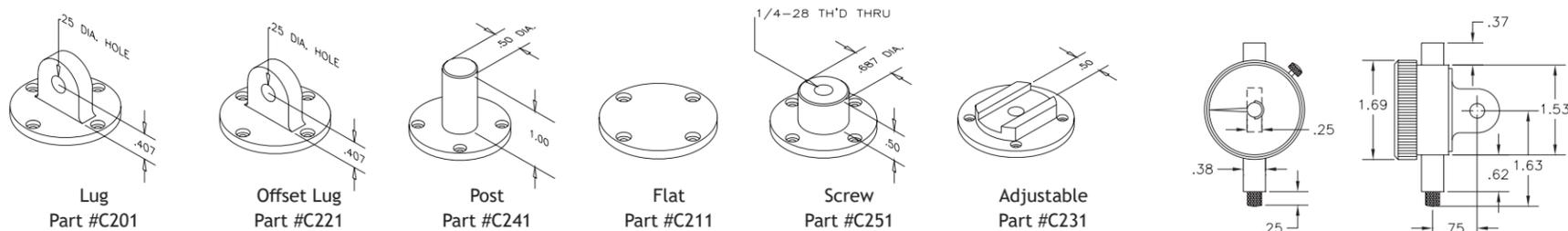
\*Balanced dial shown

## 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.					
Travel/Rev.	.010"	.020"	.030"	.050"	.100"	1.0mm

## BACK OPTIONS FOR GROUP 1



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

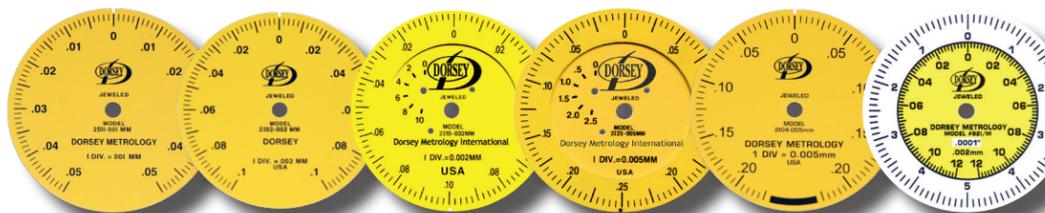
\*Balanced dial shown

## 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-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*	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

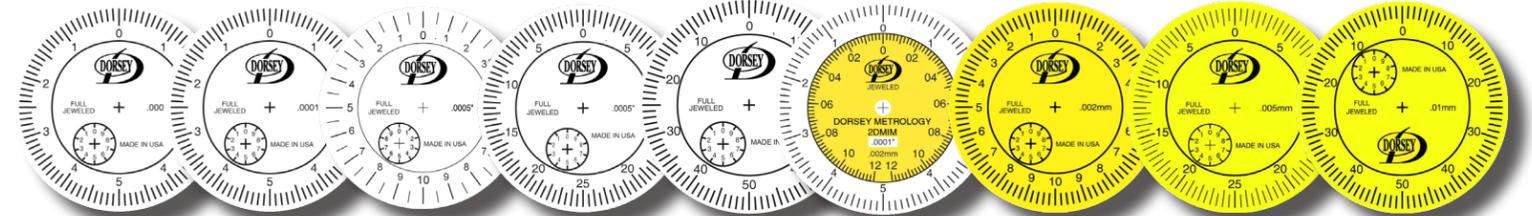
Intended for Bore Gages



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

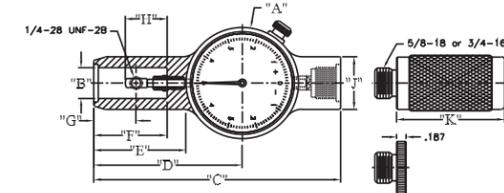
## TRADITIONAL MOVEMENT (RACK & PINION MOVEMENT) FEATURES

- 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"

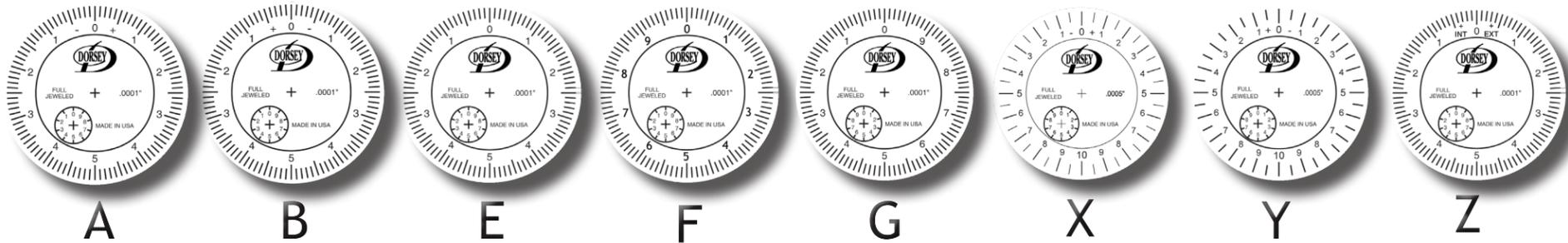


For .500" dia. shaft Part # Example: DS-2150-01-2  
 For .625" dia. shaft Part # Example: DS-2150-01  
 Standard unit used unless otherwise specified  
 For .625" dia. shaft Part # Example: DS-2DM025-01  
 For 1" dia. shaft Part # Example: DS-2150-01-6  
 Digital or independent dial indicator housing 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



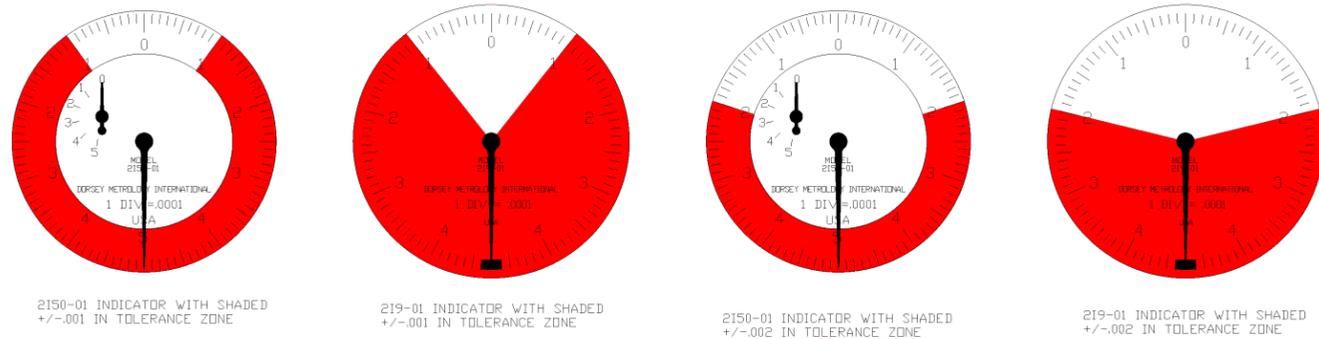


A	B	E	F	G	X	Y	Z
Balanced Numbering	Balanced Numbering	Balanced Numbering	Continuous Clockwise Numbering	Continuous Counter-Clockwise Numbering	Preloaded	Reversed Action	No Charge
(Plus on right. Minus on left.)	(Plus on left. Minus on right.)	(Plus and minus omitted)			When the indicator contact is fully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

The letter designating the dial format follows the indicator part number. Example #1: 2150-01B, 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
	47066	Steel	1.00"	.156" Dia.
	16631	Steel	.236"	
	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.
	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.				
	199		.375	
Used to adapt 8mm indicator stem to 3/8" hole.				
	120		.230" Dia. X .56"	
Used in conjunction with part #110 mushroom shoulder contact to increase spindle pressure.				

	PART#	MATERIAL	L	DIA/ or RAD
	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		

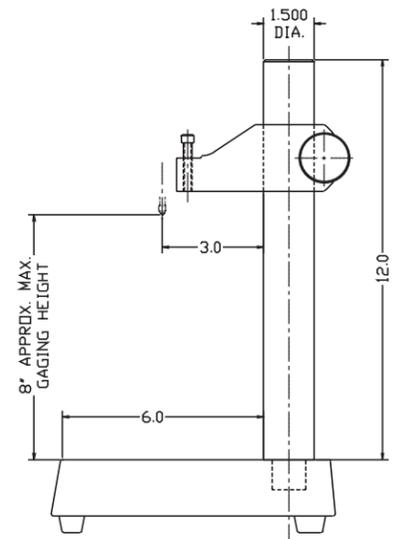
# E1 COMPARATOR STAND

www.dorseymetrology.com

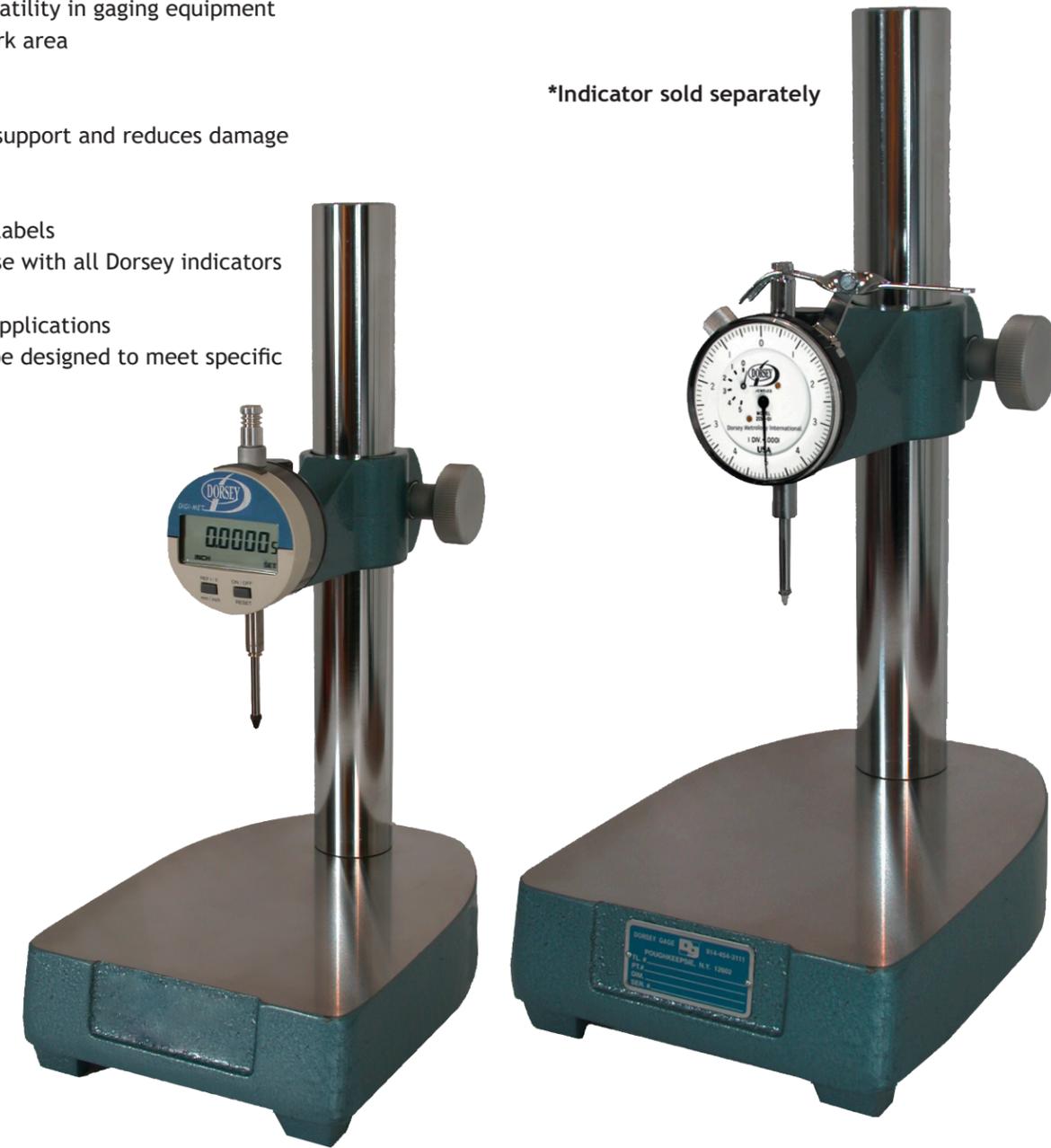
The Dorsey E1 comparator stand is specially designed for use in production and shop areas. The comparator stand has a large base and 3" throat clearance to give the user maximum flexibility for measuring various size pieces. This product may be used with any of Dorsey's dial or digital indicators.

## 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.

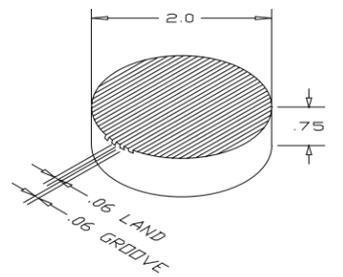
The S2N production and shop area comparator stand is specifically designed without fine adjustment for use with digital indicators, long range indicators, and electronic probes with remote readouts. The S2N stand maximum gaging height is 4.0" inches and the throat clearance is 2.4".

## 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

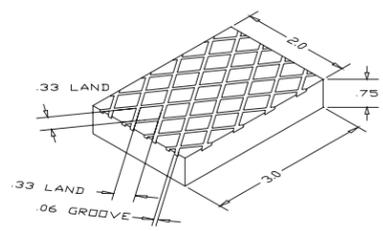
Part# 47141

Straight serrated surface anvil 2" dia.



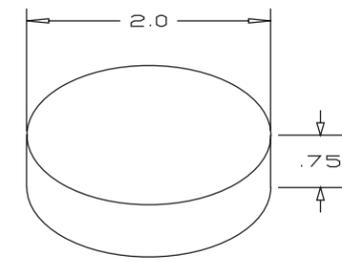
Part# 47139

Flat diamond serrated surface anvil 2"x3"



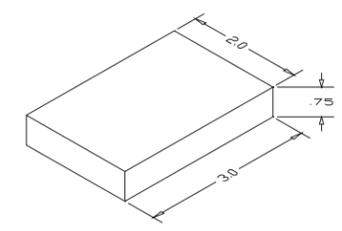
Part# 47113

Flat surface anvil 2" dia.



Part# 47138

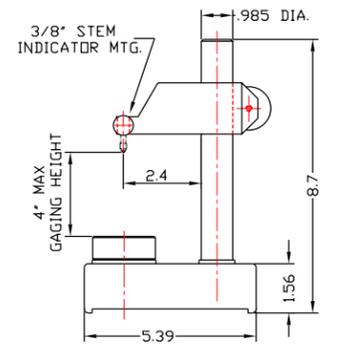
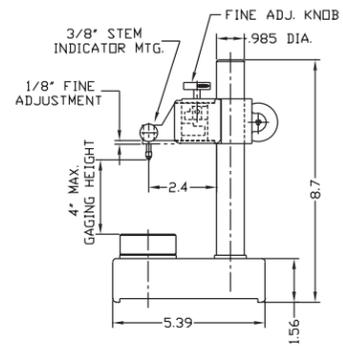
Flat surface anvil 2"x3"



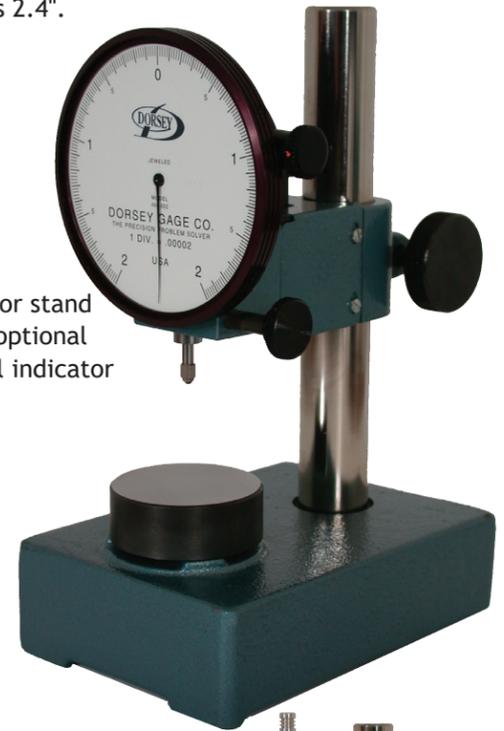
PART #	DESCRIPTION
47145	S2 STAND WITHOUT ANVIL
S2-HEAD	FINE ADJUSTMENT HEAD ONLY
47145N	S2N STAND WITHOUT ANVIL

For Anvil options, please see above

\*Indicator sold separately



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



S2N comparator stand shown with optional extended range digital indicator

# S4 COMPARATOR HEIGHT

www.dorseymetrology.com

# S3 COMPARATOR STAND

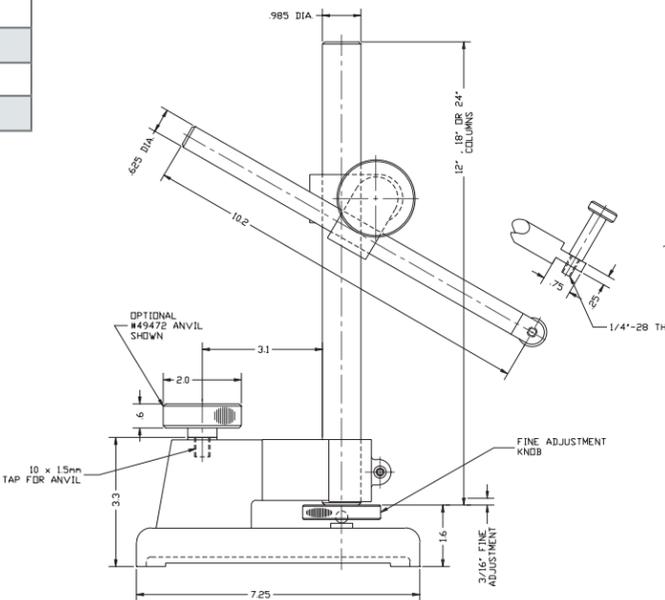
845-454-3111 | 800-549-4243

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.

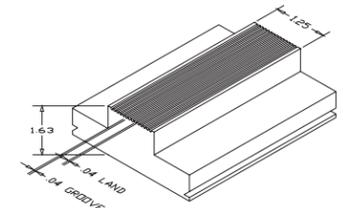
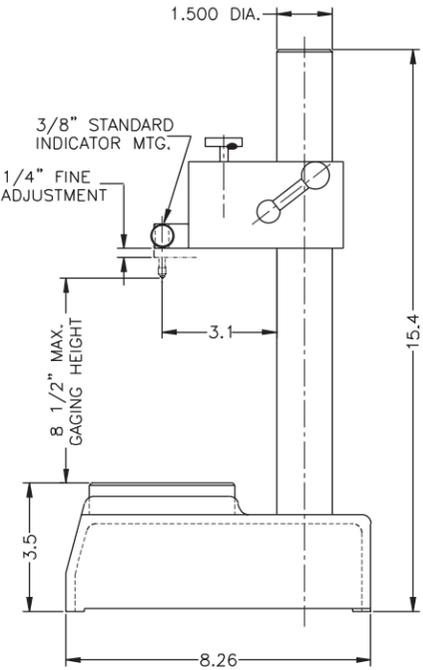


The S3 precision comparator stand was designed for manufacturing areas requiring high accuracy, such as grinding and inspection departments. It is recommended for use with all Dorsey high amplification dial and digital indicators, but it will also accommodate other gaging devices having a standard .375"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

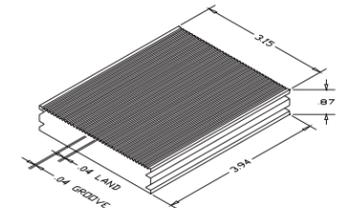
## FEATURES:

- 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

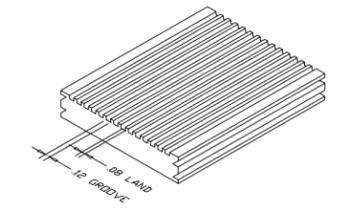
PART #	DESCRIPTION
47405	S3 STAND WITHOUT ANVIL
S3-HEAD	S3 FINE ADJUSTMENT HEAD ONLY



Part# 47403  
Rail type anvil 1.25" x 3.88"

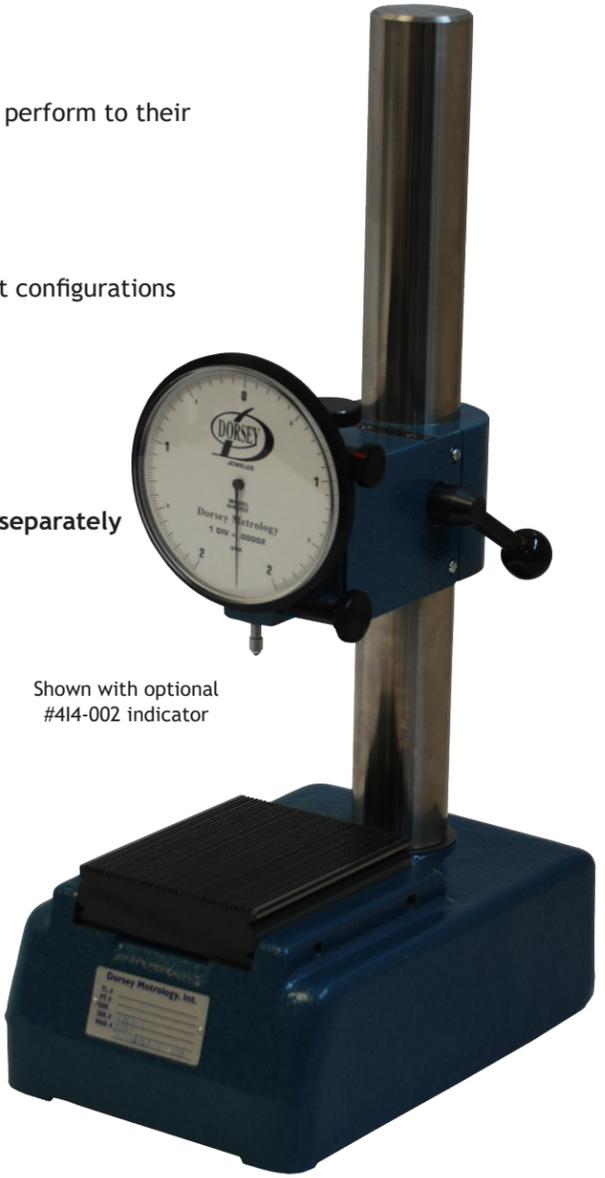


Part# 47402  
Thin serration and flat reversible anvil



Part# 47404  
Wide serration and flat reversible anvil

\*Indicator sold separately



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:**

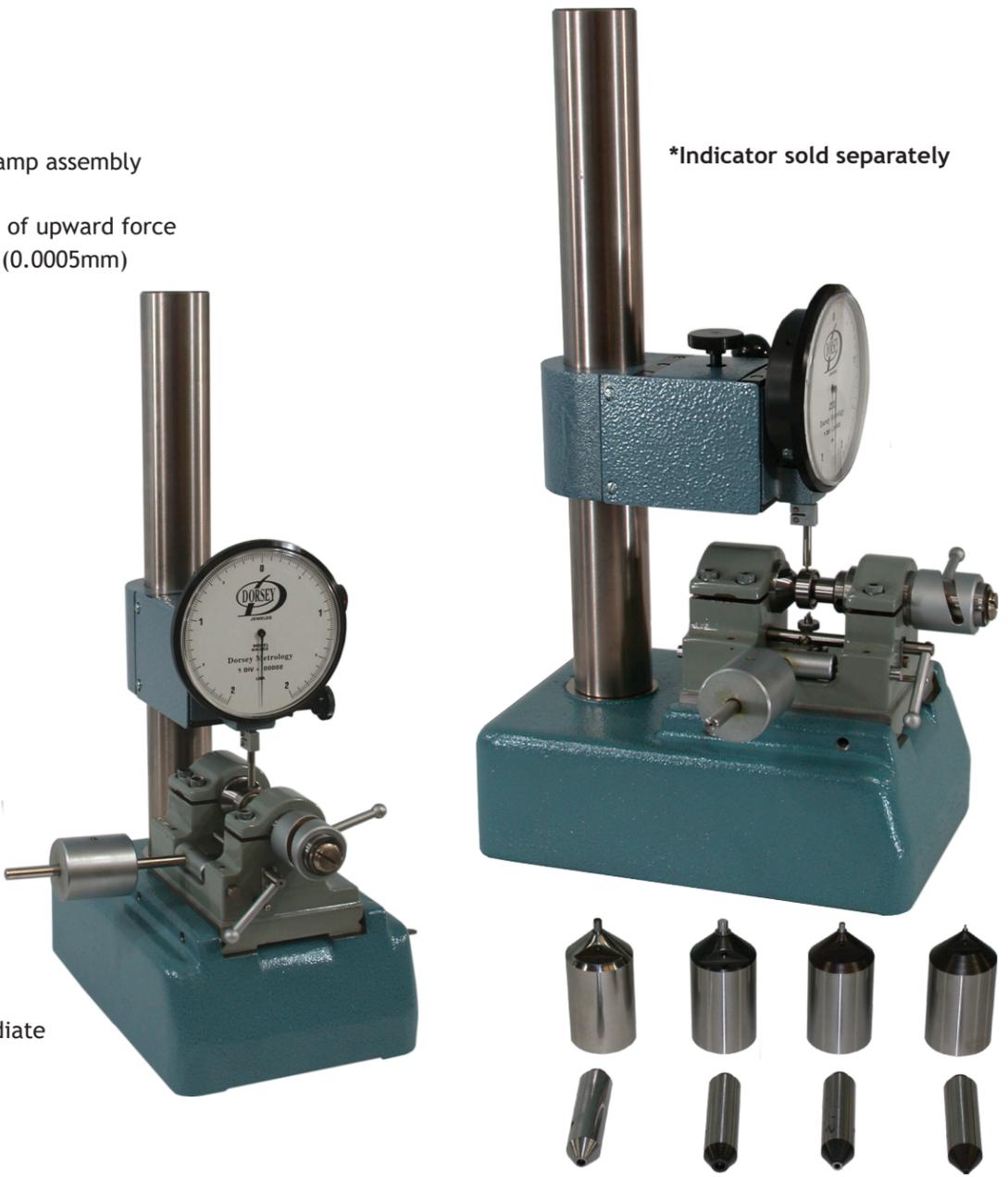
- S3 stand
- Radial play attachment
- Choice of standard anvil set which includes the carrier, anvil, and clamp assembly
- Special radial play contact
- Variable pressure weight arm assembly adjustable from 6.5 to 16 oz. of upward force
- Dial indicator model #414-002 (.00002 graduation) or #4101-0005mm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

STANDARD ANVILS (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.



\*Indicator sold separately

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 #FC1-NI Frame and contacts, less indicator

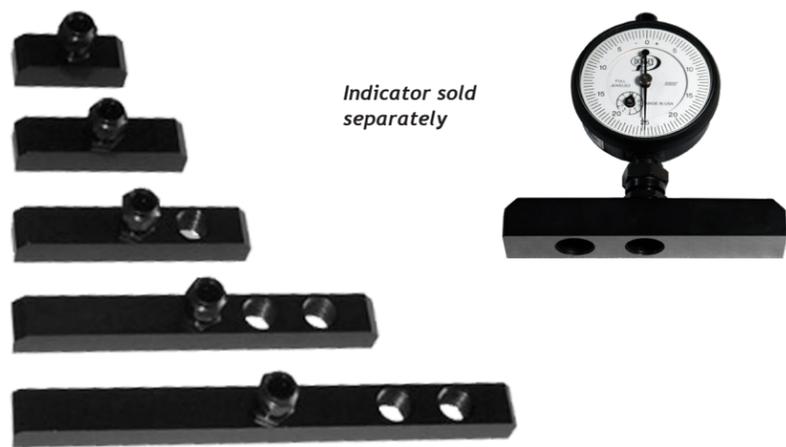
Part #FC2 Tube wall thickness  
1.5" opening, 2" throat depth, .312 dia. lower anvil with part# 2DM1000-10F .001" Grad. dial with 1" travel



Part #FC2-NI Frame and contact, less indicator

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

## “V” BASE DIAL DEPTH GAGE

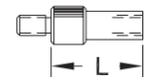
Used to measure depths of small holes, engravings, rivets, or slots with extreme accuracy. Knife edge base with center cut permits unobstructed view of point for exact positioning.



Shown is DDG-125C

## FEATURES:

- 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

## 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

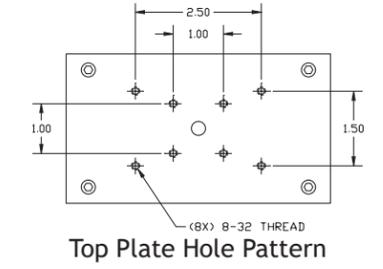
PART #	DESCRIPTION
DDG-125B	“V” Base dial depth gage with .0005" graduation, .125" range balanced dial (Mil. Spec.)
DDG-125C	“V” Base dial depth gage with .0005" graduation, .125" range continuous dial
2DM125-05AY	Replacement indicator, .0005" graduation, .125" range, balanced dial, push down series
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.

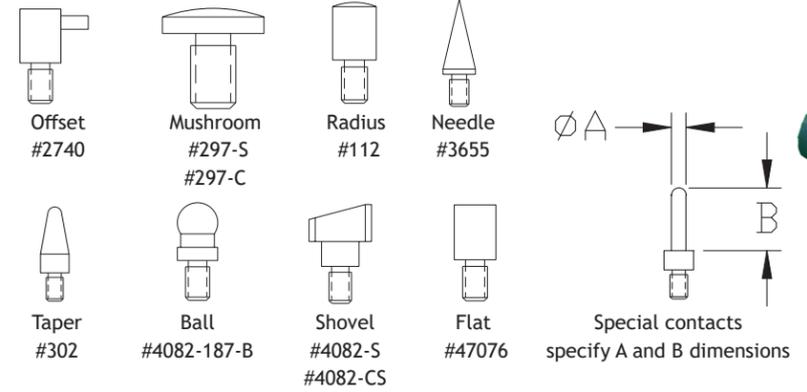


BG Direct

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



Top Plate Hole Pattern



BG2 Bench Gage

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"



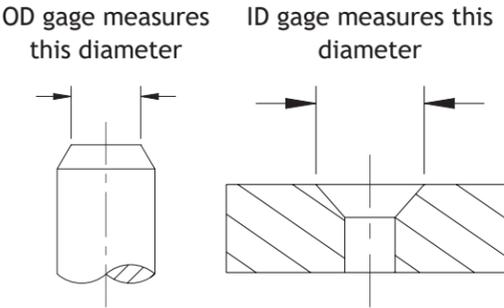
ID- COUNTERSINK MODEL 0-90°				
RANGE	INCH PART#	RANGE	METRIC PART#	DIGITAL PART#
0-3/8"	DC-90-375	0-9.5MM	DC-90-375M	DC-90-375-D
0-1/2"	DC-90-500	0-12.7MM	DC-90-500M	DC-90-500-D
0-1"	DC-90-1000	0-25MM	DC-90-1000M	DC-90-1000-D
1-2"	DC-90-2000	25-50MM	DC-90-2000M	DC-90-2000-D
2-3"	DC-90-3000	50-75MM	DC-90-3000M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

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

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 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



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.

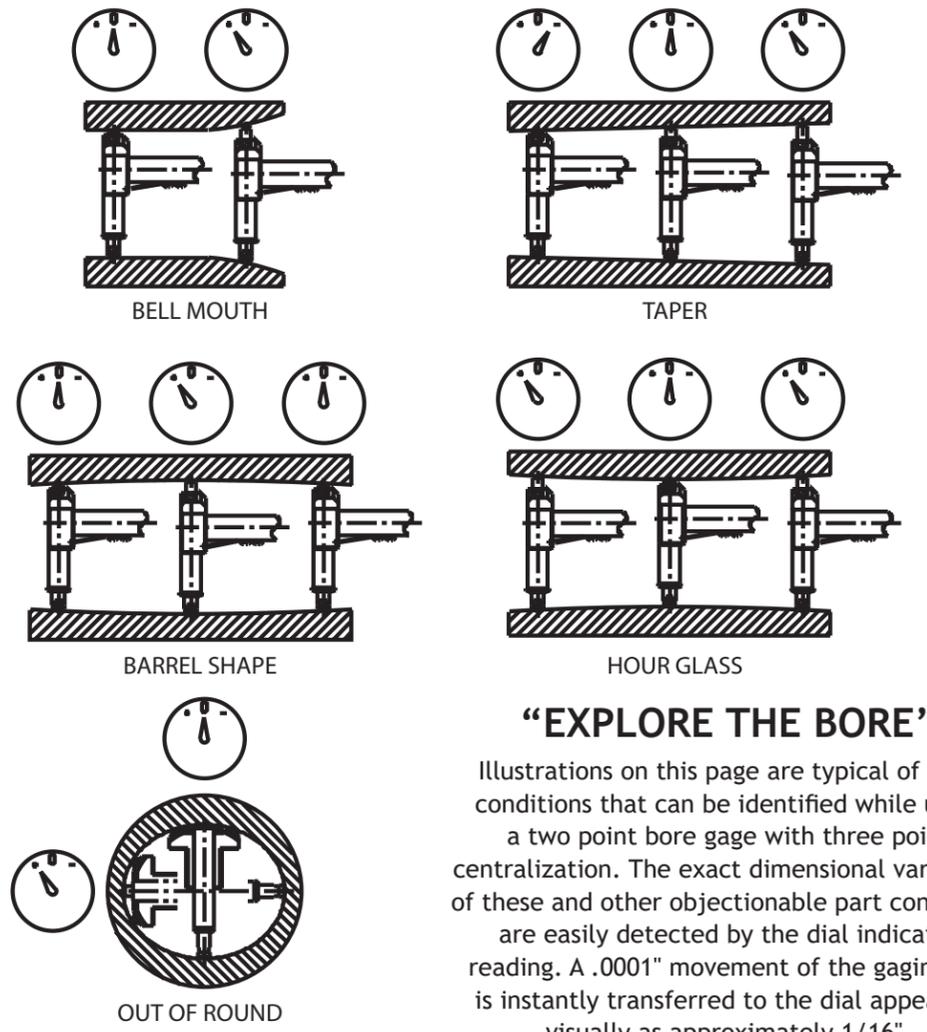
Dorsey offers a variety of reference masters from specific size master rings to Dorsey's corresponding family of adjustable bore gage setmasters.

### 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.



**2 Point**  
Indicating plug gage  
recommended for  
diameter under .248"  
See page 41

**DBL-300**  
3.00 - 6.00"  
76.200 - 152.400mm



**DBL-248**  
.248 - .501"  
6.299 - 12.725mm



**DBL-499**  
.499 - 1.001"  
12.674 - 25.425mm



**DBL-998**  
.998 - 1.501"  
25.349 - 38.125mm



**DBL-1499**  
1.499 - 3.00"  
38.0746 - 76.200mm



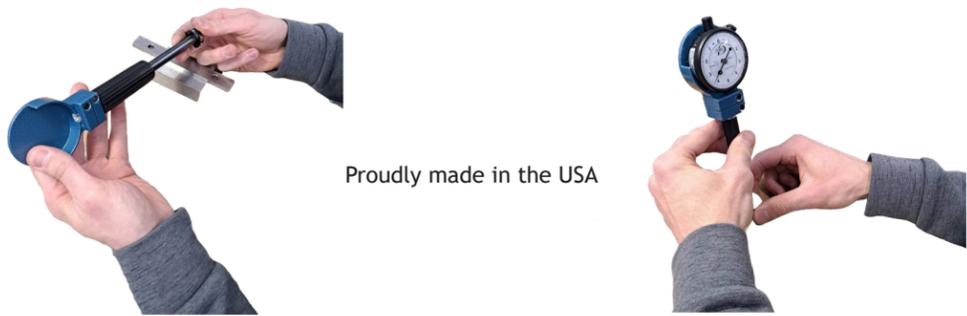
All DBL series gages include carbide centralizing contacts, a .0001" or 0.002mm graduation dial indicator. Fitted wooden storage box included.

Other available options: carbide contacts, depth stops and choice of any Dorsey indicators including "high amplifications", "traditional" single rev or digital.

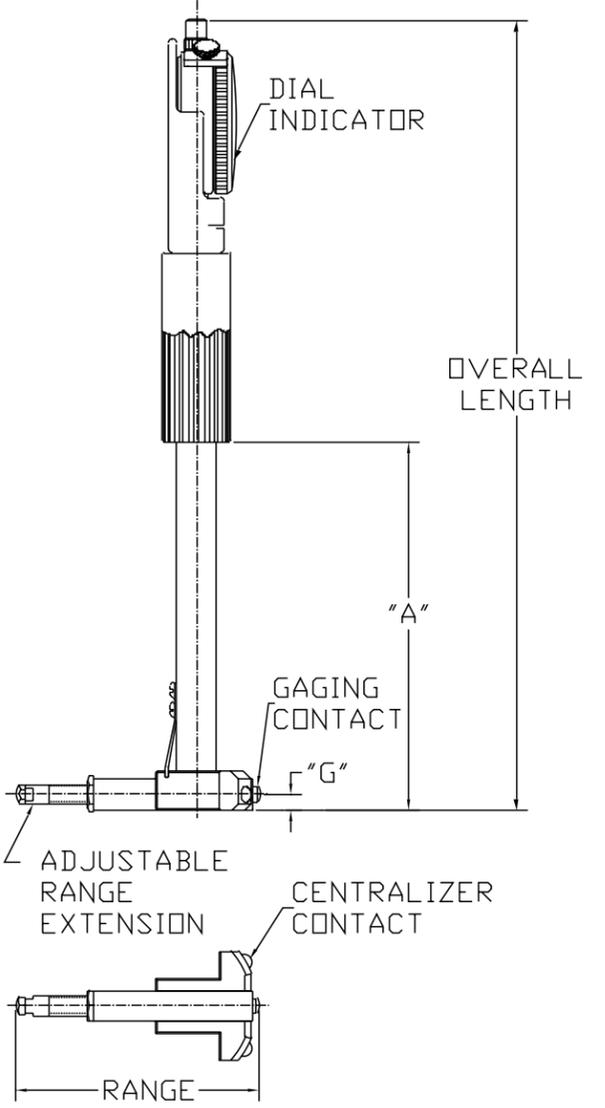
MODEL	RANGE (inches)	OVERALL LENGTH (inches)	RANGE (metric)	"A" GAGING DEPTH (inches)	"G" DIMENSION (inches)	GAGING CONTACT TRAVEL	
						STANDARD (inches)	OPTIONAL (inches)
DBL-248-S	.248-.501	6.31	6.299-12.725	2.25	.140	.010	.016
DBL-248-C	.248-.501	6.31	6.299-12.725	2.25	.140	.010	.016
DBL-499-S	.499-1.001	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	.025	.050
DBL-998-C	.998-1.501	9.75	25.349-38.125	3.00	.188	.025	.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 #.  
 For gage less indicator, add -NI to part #.  
 Special gaging depths available per application.  
 -S - Steel, -C - Carbide

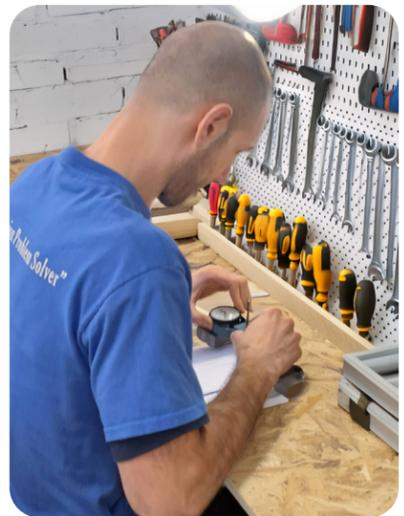
Also available with ISO 17025 certifications.



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"

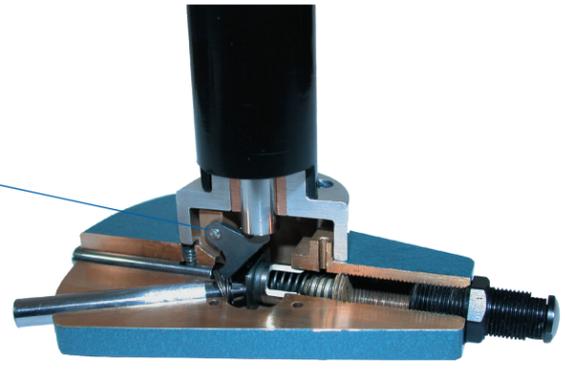
S - Steel, C - Carbide

## 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
<i>Not available in additional depths</i>					



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-2150-01
- DS-MB-2110-002mm
- 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 SIZE	STANDARD STYLE 1			RIGHT ANGLE STYLE 2			VERTICAL STYLE 3			PERPENDICULAR STYLE 4			PISTOL GRIP STYLE 5			
	A		B	A		B	C	A		B	A		B	A		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"	6.00"	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"	6.00"	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"	6.00"	1.63"	5.75"
5	6.00"	2.63"	11.50"	2.53"	2.35"	3.88"	6.25"	6.00"	2.63"	9.00"	6.00"	2.63"	8.13"	6.00"	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"	6.00"	3.00"	9.38"

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 #

## 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)

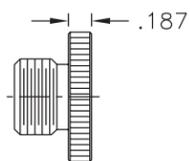
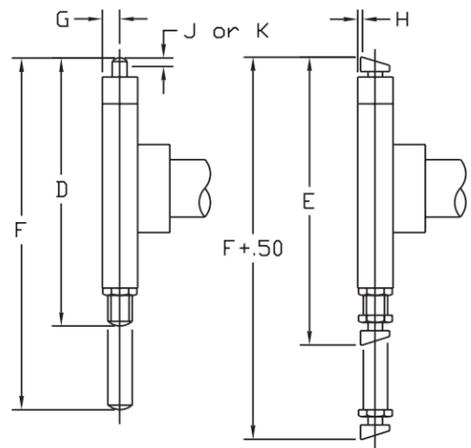


**OPTIONAL: BORE GAGE DEPTH EXTENSIONS**

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"

## GAGE-HEAD DIMENSIONS (ALL STYLES)

SIZE	D		E		F	G	H	J	K	RANGE EXTENSION 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



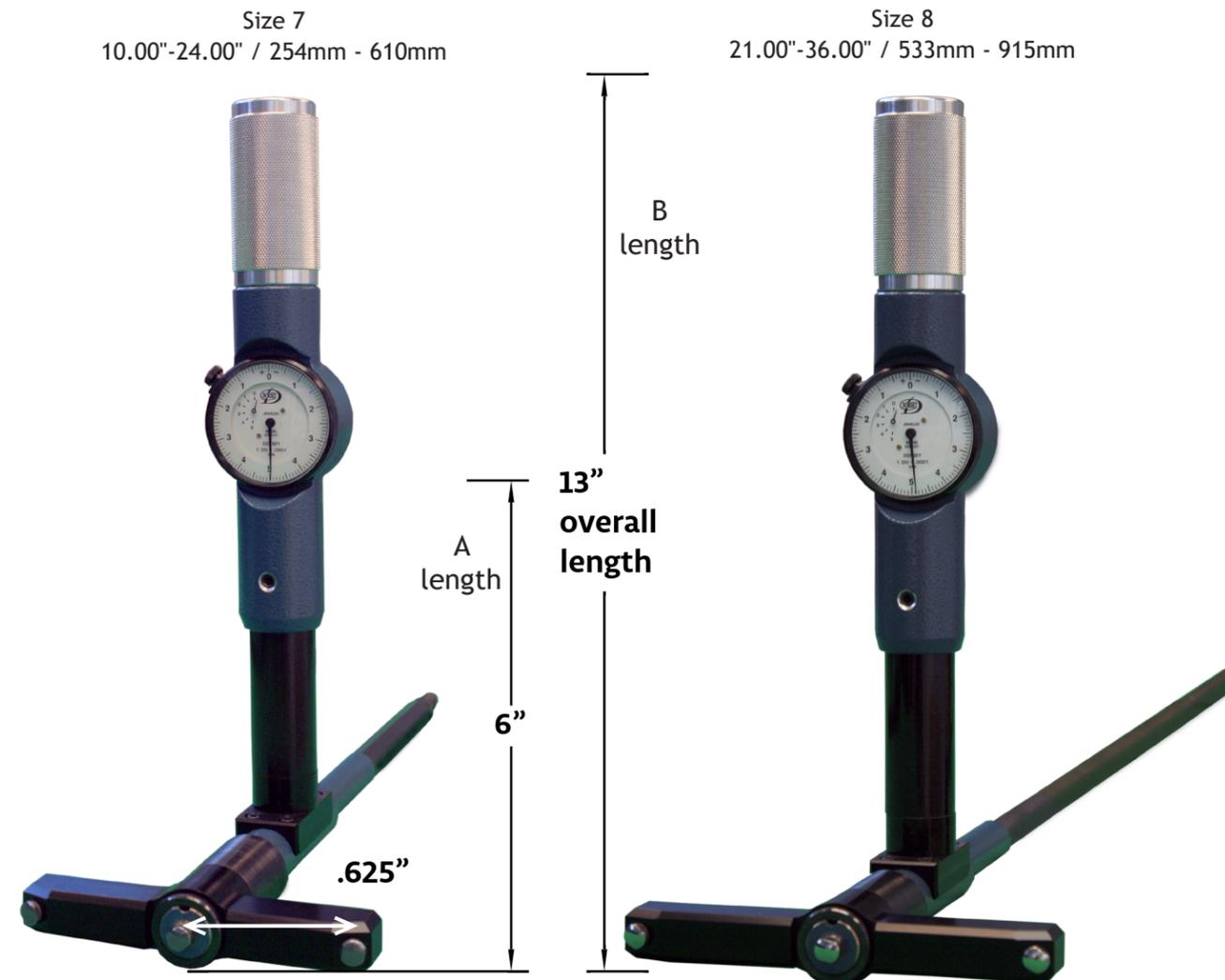
### BORE GAGE DUST CAP

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

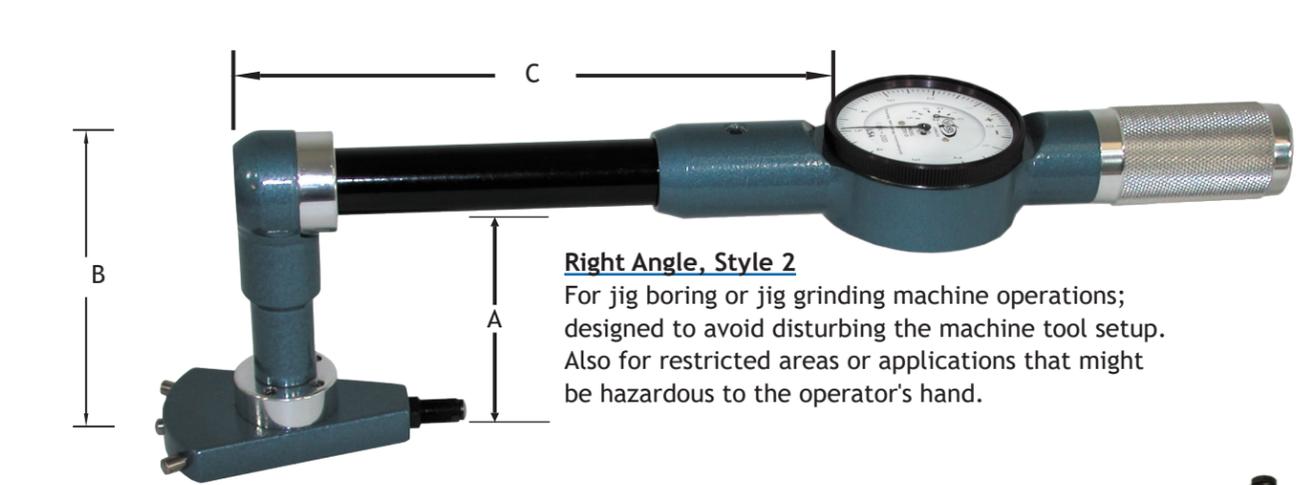
SIZE	REDUCES "B" DIM. BY	PART #
2-6	2.06"	DS-B0-84725
6 Heavy Duty	2.81"	DS-B0-84731
7-8	2.81"	DS-B0-84731

## BORE GAGE EXTENSION HOUSING #3, 4 & 5

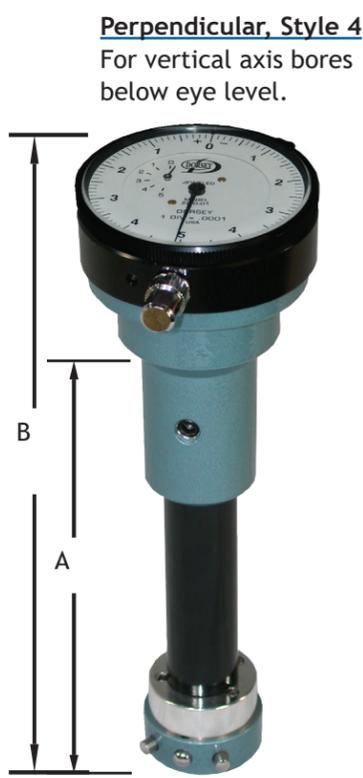
EXTENSION HOUSING ASSEMBLY	
PART #	DESCRIPTION
DX2-81005-03	3" "A" LENGTH EXTENSION
DX2-81005-04	4" "A" LENGTH EXTENSION
DX2-81005-05	5" "A" LENGTH EXTENSION
DX2-81005-06	6" "A" LENGTH EXTENSION
DX2-81005-08	8" "A" LENGTH EXTENSION
DX2-81005-10	10" "A" LENGTH EXTENSION
DX2-81005-12	12" "A" LENGTH EXTENSION
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"	



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.



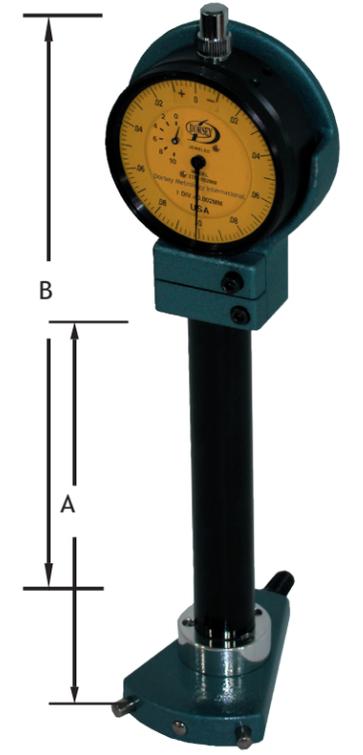
**Perpendicular, Style 4**  
For vertical axis bores below eye level.



**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.

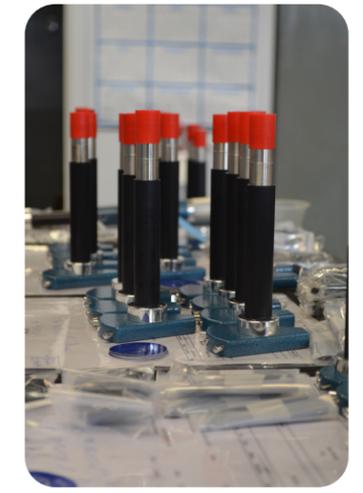
	DS-	B1-MB- (for modular)	1 Style	2 Indicator	1 Contacts
GAGE SIZE	INDICATOR GRADUATION	HIGH AMPLIFICATION INDICATOR	HIGH AMPLIFICATION PART NUMBER	TRADITIONAL INDICATOR	TRADITIONAL PART NUMBER
.63" - 1.00"	.00005 <sup>s</sup>	DS-214-005	DS-B1-10101		
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11101		
	.0001"	DS-2150-01	DS-B1-12101		
	.00025"	DS-21100-025	DS-B1-10111		
	.0005"	DS-21100-05	DS-B1-14101		
1	NONE	LESS INDICATING UNIT	DS-B1-15101		
	0.005mm	DS-2125-005mm	DS-B1-17101		
	0.002mm	DS-2110-002mm	DS-B1-18101		
16 - 25.4mm	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		
1.00 - 1.53"	.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
2	NONE	LESS INDICATING UNIT	DS-B1-15102		
	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
25.4 - 38.9mm	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		

	DS-	B1-MB- (for modular)	1 Style	2 Indicator	1 Contacts	0 Indicator	4 Gage Size	-12 A Length
GAGE SIZE	INDICATOR GRADUATION	HIGH AMPLIFICATION INDICATOR	HIGH AMPLIFICATION PART NUMBER	TRADITIONAL INDICATOR	TRADITIONAL PART NUMBER			
1.50 - 2.16"	.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			
3	NONE	LESS INDICATING UNIT	DS-B1-15103					
	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			
38.1 - 54.8mm	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					
2.12 - 3.13"	.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			
4	NONE	LESS INDICATING UNIT	DS-B1-15104					
	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			
54.0 - 79.5mm	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					
3.09 - 6.13"	.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			
5	NONE	LESS INDICATING UNIT	DS-B1-15105					
	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			
78.5 - 156mm	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					

<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"	.0005 <sup>s</sup>	DS-214-005	DS-B1-10106		
	.001 <sup>s</sup>	DS-219-01	DS-B1-11106		
	.001"	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		
	.0005 <sup>s</sup>	DS-214-005	DS-B1-10107		
	.001 <sup>s</sup>	DS-219-01	DS-B1-11107		
	.001"	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
10.00 - 24.00"	0.002mm <sup>s</sup>	DS-2102-002mm	DS-B1-19107		
	0.001mm <sup>s</sup>	DS-2101-001mm	DS-B1-10127		
	.0001" / .002mm <sup>s</sup>	S2I.M	DS-B1-12107M		
	.00005" / 0.001mm	DIGITAL	DS-B5-10107		
	.0005 <sup>s</sup>	DS-214-005	DS-B1-10108		
	.001 <sup>s</sup>	DS-219-01	DS-B1-11108		
	.001"	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		
21.00 - 36.00"	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		
	.0001" / .002mm <sup>s</sup>	S2I.M	DS-B1-12108M		
	.00005" / 0.001mm	DIGITAL	DS-B5-10108		
	.0005 <sup>s</sup>	DS-214-005	DS-B1-10108		
	.001 <sup>s</sup>	DS-219-01	DS-B1-11108		
	.001"	DS-2150-01	DS-B1-12108	DS-2DM025-01	DS-B2-12108
	.00025"	DS-21100-025	DS-B1-10118		
533 - 915mm	.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		
	.0001" / .002mm <sup>s</sup>	S2I.M	DS-B1-12108M		
	.00005" / 0.001mm	DIGITAL	DS-B5-10108		

## 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

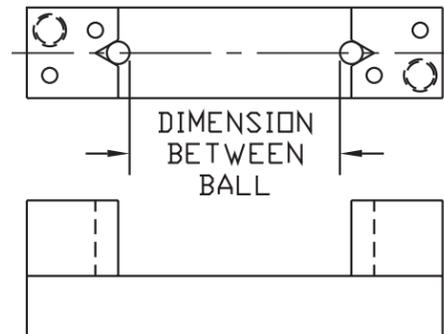
## FEATURES:

- 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

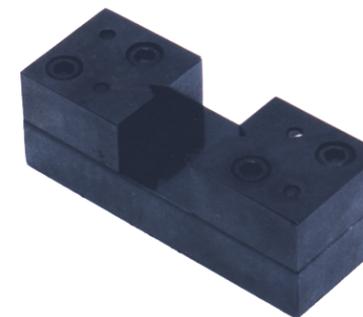
The Internal Pitch Diameter gage is ideally suited to check the internal pitch diameter of gears and splines. It can also be used to check any internal dimension where centralization is not necessary. Production models are available for a specific "best wire size" dimension. Models over 1.25" are supplied 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



Order Model: PD-1000-A



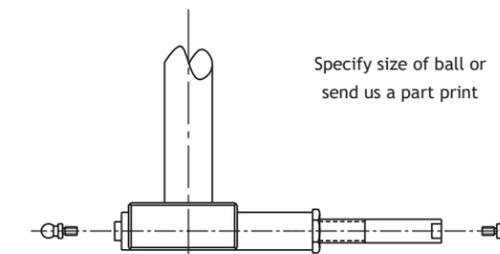
"V" Style pitch diameter setmaster, built per application

Order Model: PD-3000-A



\*Indicator sold separately

To order a fitted wooden storage box see the chart.



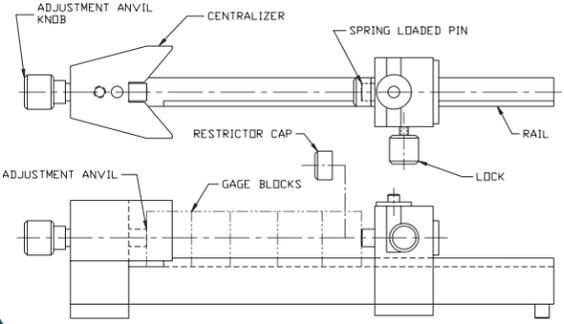
PART #	CONTACT TYPE	GAGING DEPTH (INCHES)	BOTTOM OF HEAD TO CENTERLINE OF CONTACT	FRAME STYLE	BETWEEN BALL/ROLL DIMENSION	STORAGE BOX PART #
PD-500	FIXED	3"	.188"	DBL-499	.50" - 1.25"	9005
DSPD-1000-A	INTERCHANGEABLE	5"	.224"	DS # 3	1.25" - 3.00"	DX2-89953
PD-1000-A	INTERCHANGEABLE	4"	.188"	DBL-998	1.25"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

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

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"

DBM-250 .25"-1"



DBL-300 shown being set with DBM-1000 master

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.

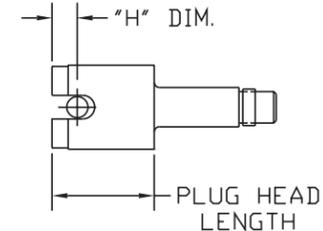
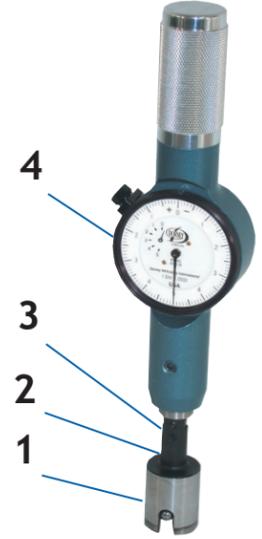
### FEATURES:

- 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 H=.400"	BLIND BORES		SUPER BLIND BORES 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)



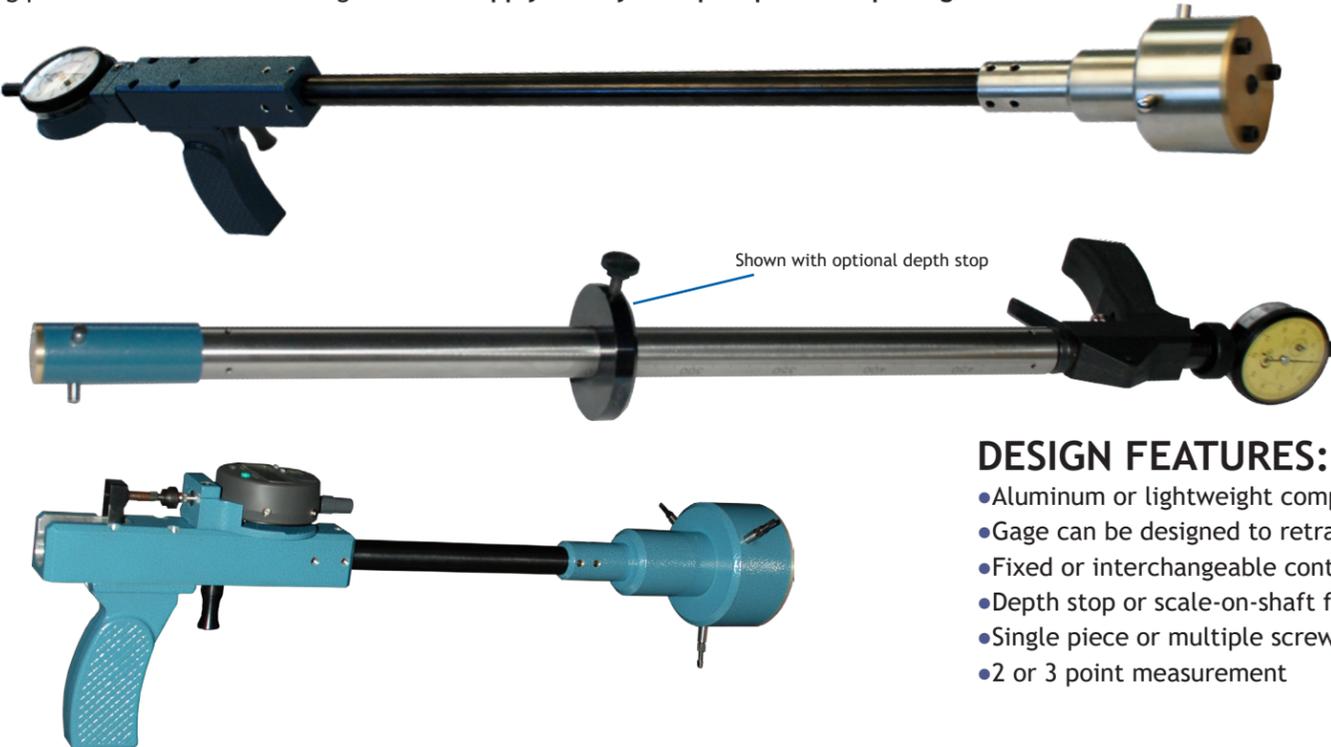
Part #DX4-81035  
Digital indicator housing  
(indicator not included)



Depth stops available upon request

DEPTH EXTENSIONS FOR USE ON HEADS WITH DIAMETERS 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

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*

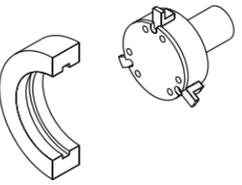
Shown with optional depth stop

**DESIGN FEATURES:**

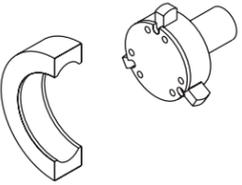
- Aluminum or lightweight composite pistol grip housing
- Gage can be designed to retract into or away from the indicator
- Fixed or interchangeable contacts
- Depth stop or scale-on-shaft facilitates checking at a specific depth
- Single piece or multiple screw together gaging shafts
- 2 or 3 point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

**RETRACTABLE BORE GAGE APPLICATIONS**

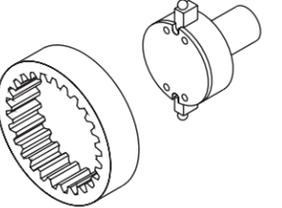
**Groove measurement**  
Precise groove measurements can be made easily and accurately.



**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.



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



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

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

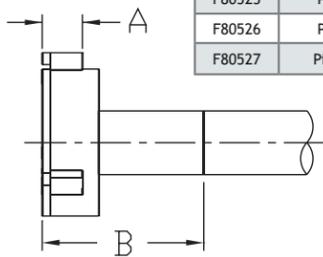
Dorsey Metrology requires part print to quote and build. This gage is made-to-order and non-returnable.

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

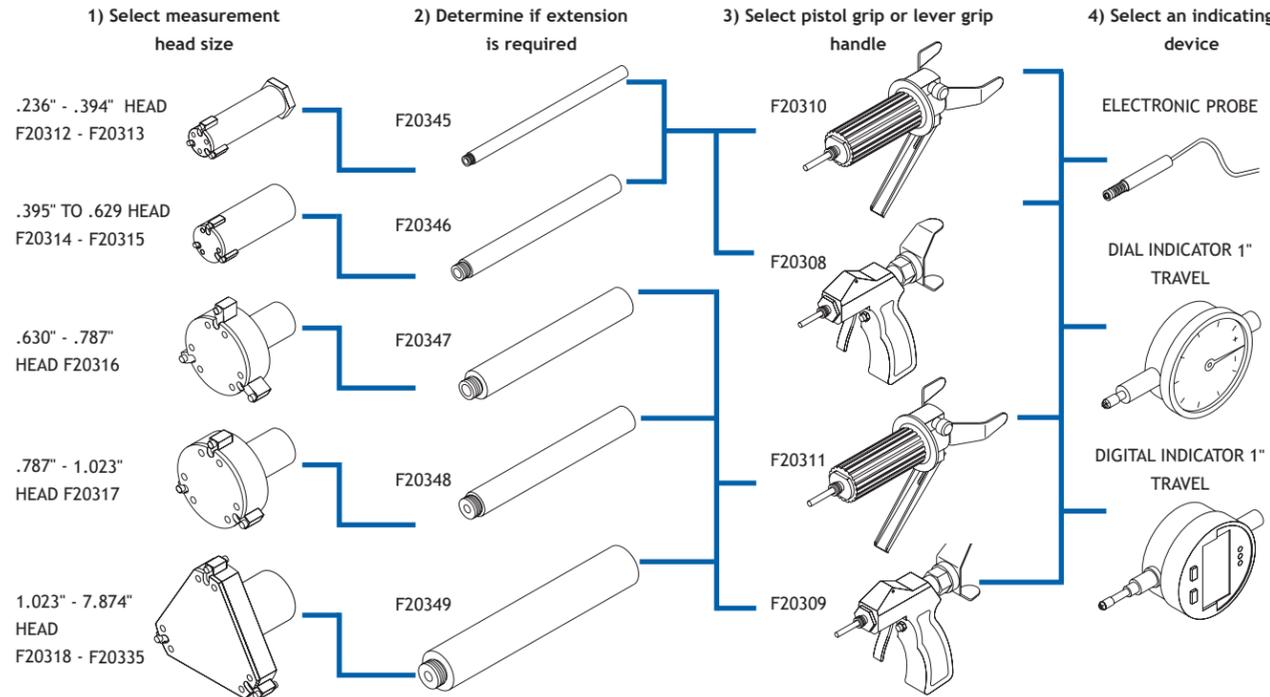
PART #	FITTED STORAGE CASE DESCRIPTION
F80524	Pistol grip head and master 16-40mm
F80525	Pistol grip head and master 41-60mm
F80526	Pistol grip head and master 61-80mm
F80527	Pistol grip head and master 81-100mm



HEAD PART #	HEAD SIZE		LINE A	LINE B	MASTER SETTINGS BILATERAL SIZE	
	MM	INCH			INCH	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

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		

## INDIVIDUAL GAGE SELECTION GUIDE



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-B4-2150-01	.0001"	.050"
DS-B4-21100-025	.00025"	.100"
DS-B4-21100-05	.0005"	.100"
DS-B4-S21/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

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

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

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



Gage kits include .0005" graduation dial indicator. Ball contacts are available for measuring pitch diameters. Available as a complete set or as an individual gage with a 3" range of adjustment.

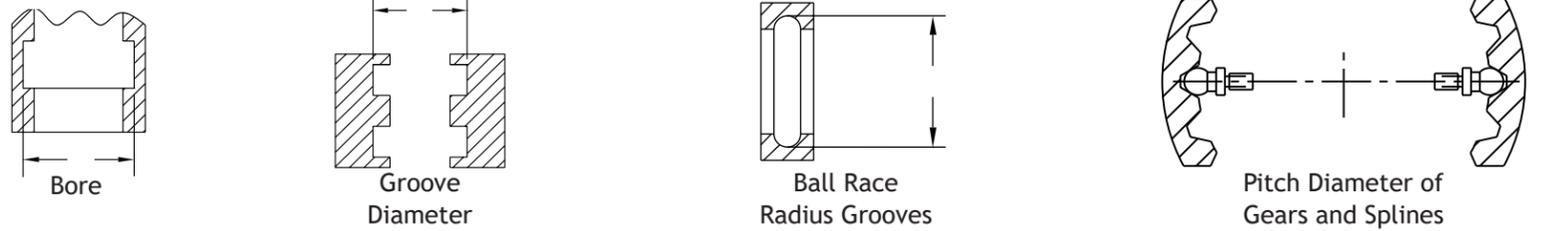
DS-B4 series dial pin gage



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

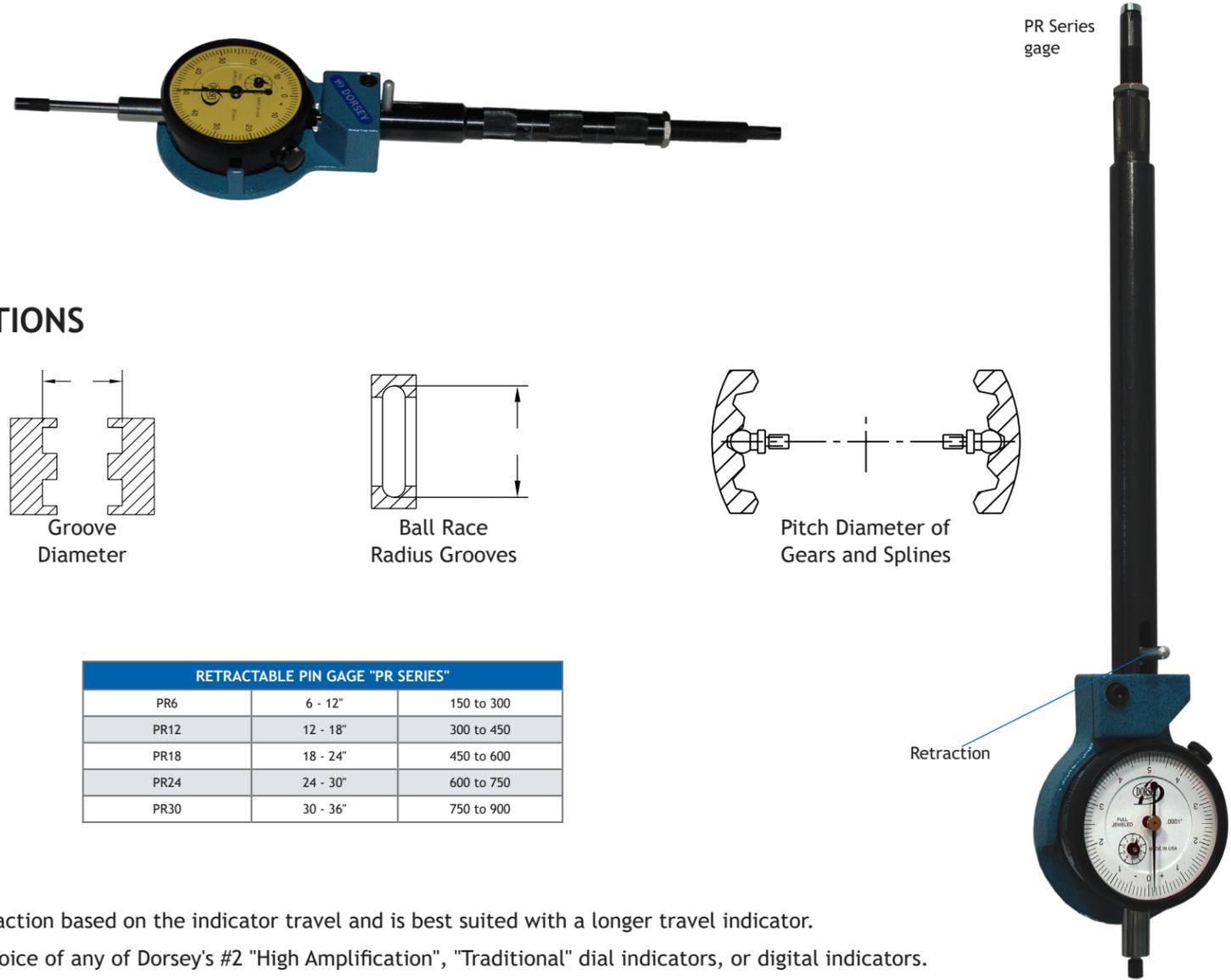
Adjustable inside diameter pin gages are used to check various applications including, Straight bores, Inside grooves, spherical radii, spline, gear and pitch diameters. We offer a variety of interchangeable threaded contacts to suit each application. The Retractable pin gage provide the principle and 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



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.



PR Series gage

Retraction

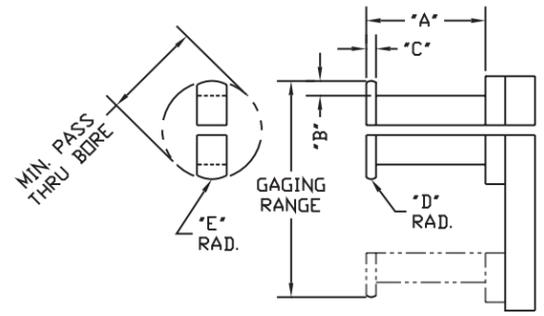
Dorsey's Dynamike Model DYS groove gage combines a lightweight, compact, rigid cast frame and a patented ball bushing slide with a series of interchangeable gaging arms to suit virtually any application.

### 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



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 substituted.

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

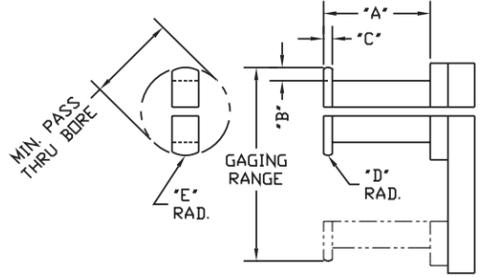
Dorsey's Dynamike Model DYN groove gage combines a patented ball bushing slide with a series of gaging arms to suit almost any application. Gaging contact retraction is accomplished by using a conveniently mounted thumb lever while gaging range adjustment is accomplished by sliding the static gaging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

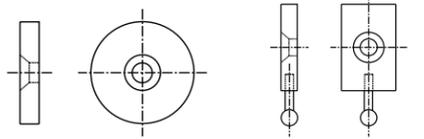
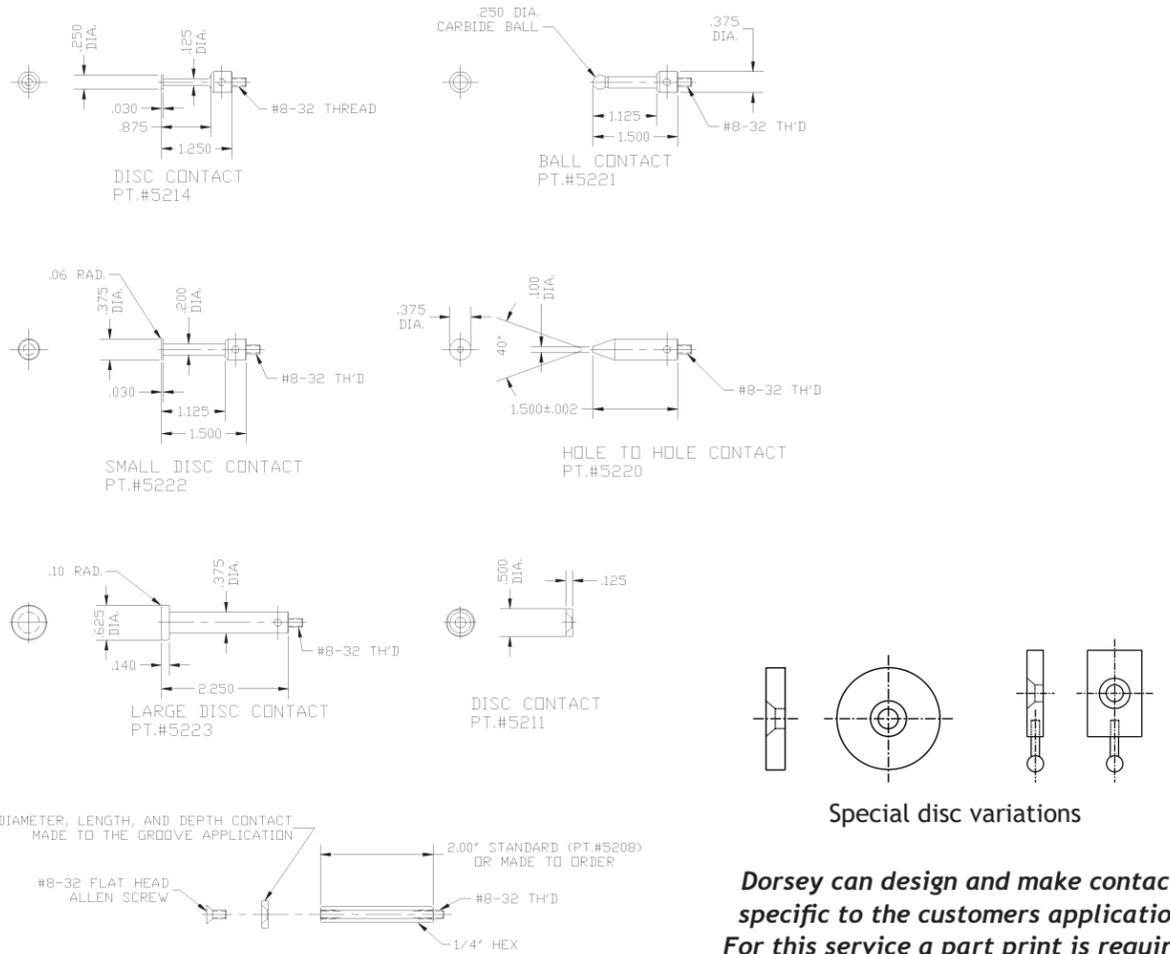
## FEATURES:

- 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

MODEL	DESCRIPTION
UG-1	Universal gage complete with standard disc contact (part #5211)
UG-KIT	Universal gage complete with digital indicator, standard disc contacts (PT#5211) with extension (PT#5208), ball contacts (PT#5221), and .25" disc contacts (PT#5214)
48502-S	Bench Stand for UG



Special disc variations

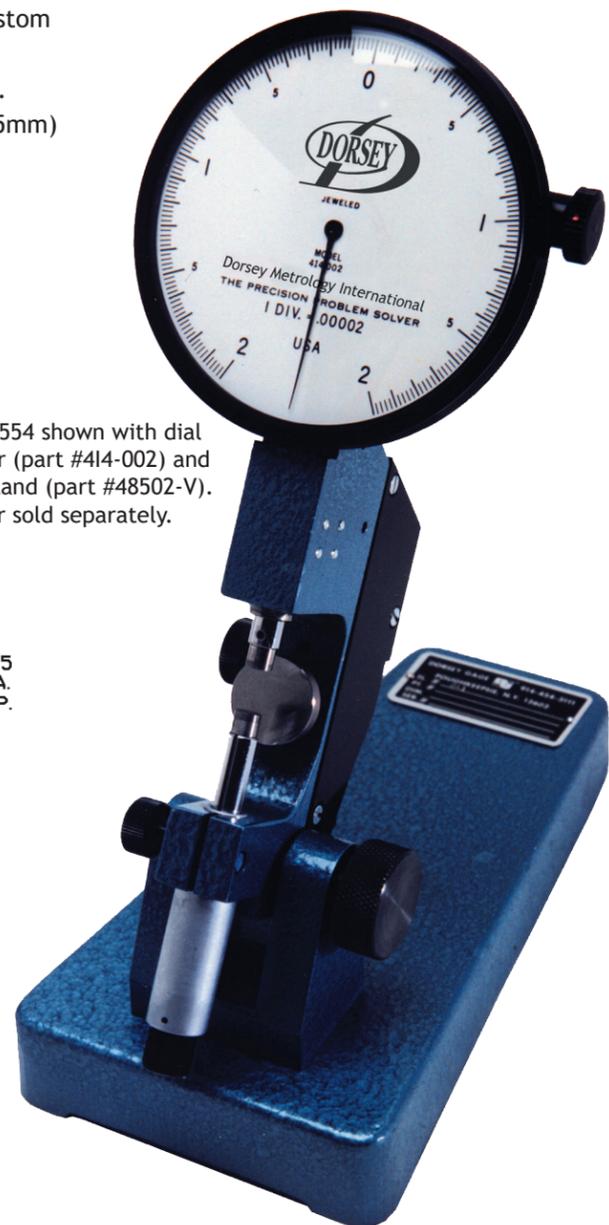
**Dorsey can design and make contacts specific to the customers application. For this service a part print is required.**

## FEATURES:

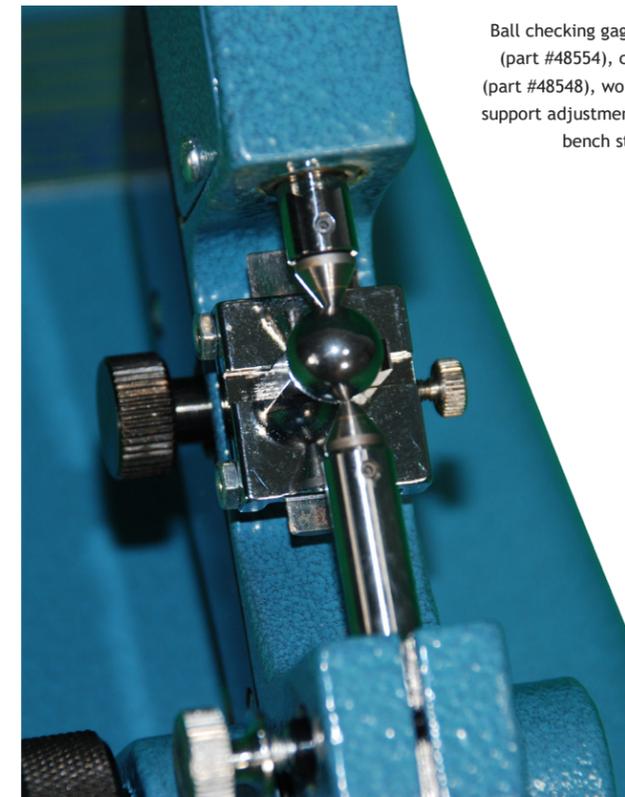
- Checks multiple shapes: a combination of contact points, backstops, and accessories may be selected and custom assembled to meet the most exacting needs
- Comparative measurements can be made of almost any shape: diameters, spheres, grooves, shafts, flats, etc.
- Specifically designed for Dorsey's 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.

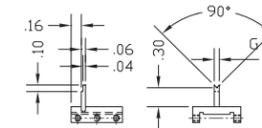


Additional contacts can be found on page 52.

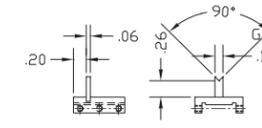


Ball checking gage shown is comprised of gage (part #48554), carbide tapered flat contacts (part #48548), work support (part #48569), work support adjustment assembly (part #48581), and bench stand (part #48502-V)

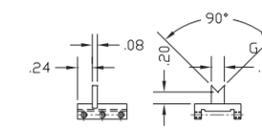
**Work Support Note:** Work support adjustment assembly part #48581 must be used with work support No.1 through No.6



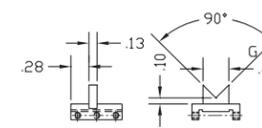
Work support No.1  
**Part #48568**  
.060" - .100" balls



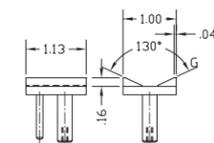
Work support No.2  
**Part #48569**  
.100" - .160" balls



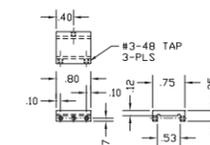
Work support No.3  
**Part #48570**  
.160" - .250" balls



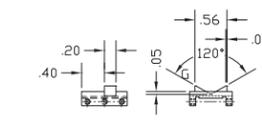
Work support No.4  
**Part #48571**  
.250" - .500" balls



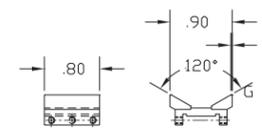
"V" block screw controlled backstop  
**Part #48583**  
1.000" - 2.000" balls



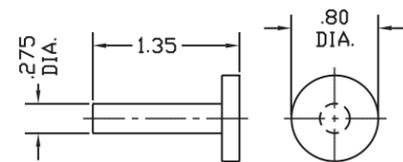
Work support blank  
**Part #48582**



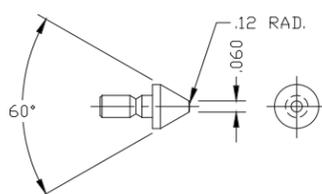
Work support No.5  
**Part #48572**  
.500" - 1.000" balls



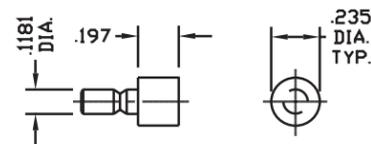
Work support No.6  
**Part #48574**  
1.000" - 1.750" balls



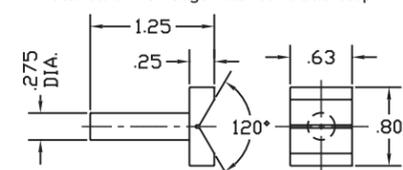
**Part #48531**  
Standard with Gage Flat round backstop



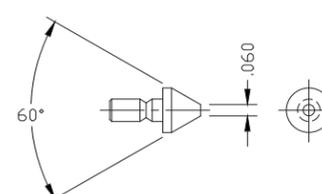
**Part #48547-C**  
Taper Radius



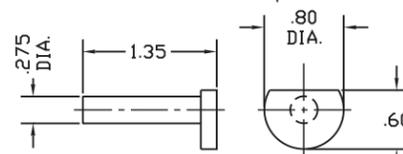
**Part #48544-C**  
Round (.235")



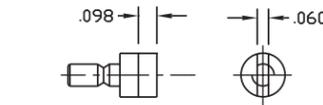
**Part #48532**  
"V" block backstop



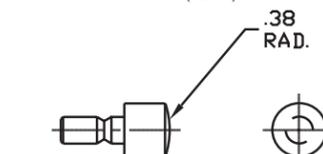
**Part #48548-C**  
Taper Flat



**Part #48530**  
Semi round backstop



**Part #48545-C**  
Rail (.235")

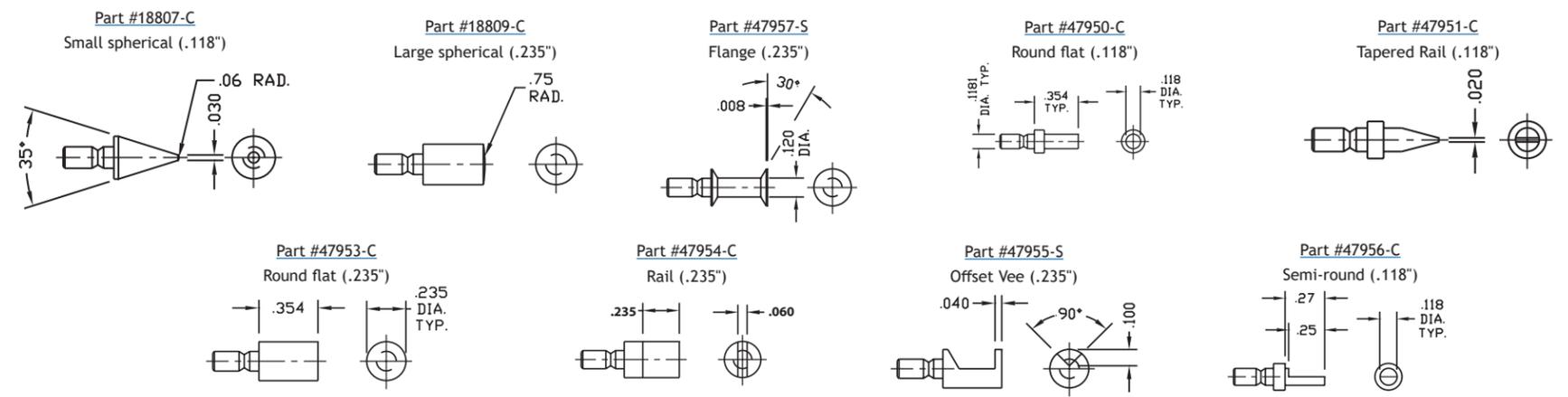


**Part #48546-C**  
Large Spherical

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



J-2 WITH #47950 CONTACTS

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

Additional contacts can be found on page 50.

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

Range		Flat 5/8" sq. anvils		
		.0001" grad multi rev.	0.002mm multi rev.	Without Indicator
Inch	Metric	2150-01	2110-002mm	
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			



\*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. -T100 = .100" Travel 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)

Special Large Carbon Fiber Snap Gages available to quote by request

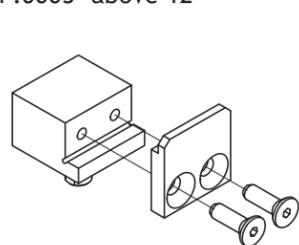
This rugged snap gage features a precision box-way range adjustment channel to protect the anvil shafts and maximize frame clearance.

## FEATURES:

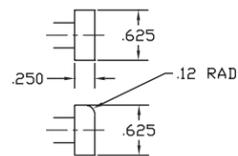
- .090" gaging travel is standard
- Precision box-way slide allows 1" of range adjustment
- Rugged frame is machined from 5/8" thick aluminum jig plate
- 5/8" solid carbide lapped anvils with generous lead radius
- Anvils are flat and parallel within .00015" on frame sizes below 4", within .0002" on 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

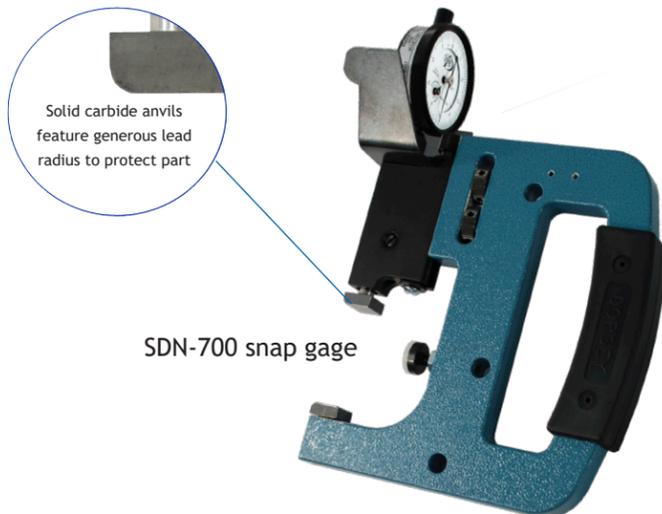
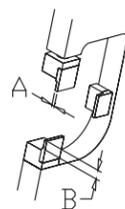
Range		Flat 5/8" sq. anvils	
		.0001" grad multi rev.	Without Indicator
Inch	Metric	SDN-00	SDN-00NI
0 - 1"	0 - 25mm	SDN-00	SDN-00NI
1 - 2"	25 - 51mm	SDN-100	SDN-100NI
2 - 3"	51 - 76mm	SDN-200	SDN-200NI
3 - 4"	76 - 102mm	SDN-300	SDN-300NI
4 - 5"	102 - 127mm	SDN-400	SDN-400NI
5 - 6"	127 - 152mm	SDN-500	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

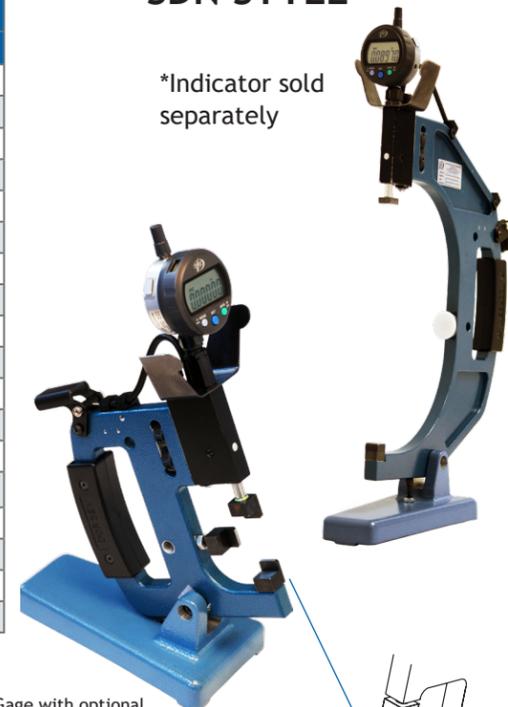
OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM. (WIDTH)	B DIM. (HEIGHT)
To specify extended gaging contact travel, add "TXX" to end of part number. -T100 = .100" Travel Lever (-L)	2274-1	.040" (1.0mm)	.08" (2.0mm)
	2274-2	.060" (1.5mm)	.12" (3.0mm)
	2274-3	.080" (2.0mm)	.16" (4.0mm)
	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)

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	
		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

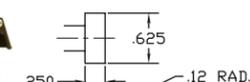


LRS Snap Gage with optional bench stand #48502-S

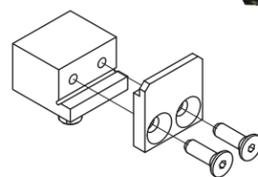
## SSG STYLE

\*Indicator sold separately

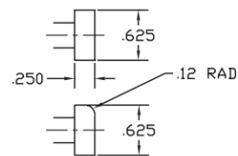
LRS-15377 shown



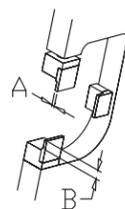
Part #2029  
Standard carbide anvil



Blade type anvil  
Special sizes available



Part #2029  
Standard carbide anvil



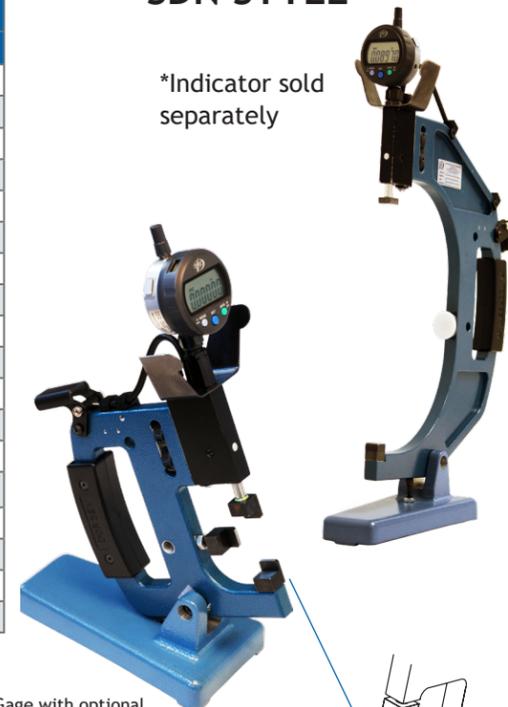
SDN-700 snap gage

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. -T100 = .100" Travel 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)

OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM.	B DIM.
To specify extended gaging contact travel, add "TXX" to end of part number.	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)

## SDN STYLE

\*Indicator sold separately

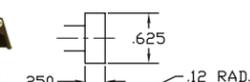


LRS Snap Gage with optional bench stand #48502-S

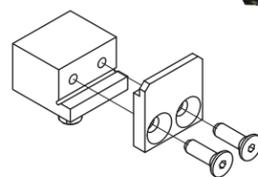
## SSG STYLE

\*Indicator sold separately

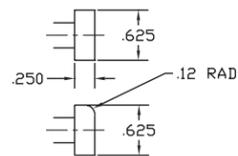
LRS-15377 shown



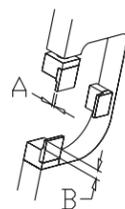
Part #2029  
Standard carbide anvil



Blade type anvil  
Special sizes available



Part #2029  
Standard carbide anvil



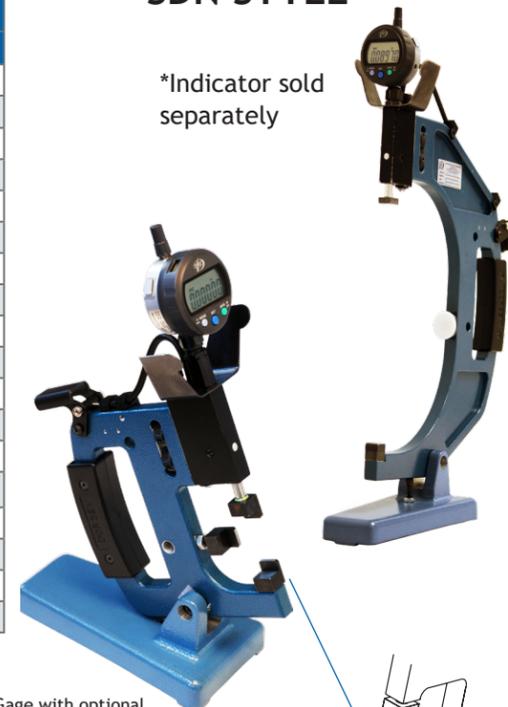
SDN-700 snap gage

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. -T100 = .100" Travel 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)

OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM.	B DIM.
To specify extended gaging contact travel, add "TXX" to end of part number.	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)

## SDN STYLE

\*Indicator sold separately

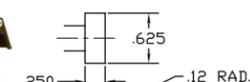


LRS Snap Gage with optional bench stand #48502-S

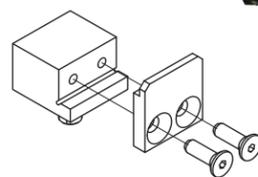
## SSG STYLE

\*Indicator sold separately

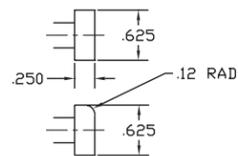
LRS-15377 shown



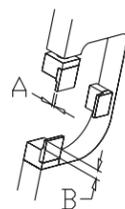
Part #2029  
Standard carbide anvil



Blade type anvil  
Special sizes available



Part #2029  
Standard carbide anvil



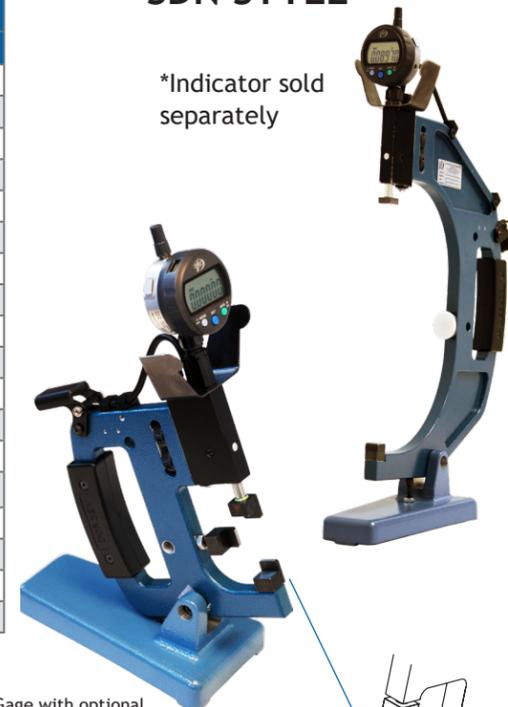
SDN-700 snap gage

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. -T100 = .100" Travel 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)

OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM.	B DIM.
To specify extended gaging contact travel, add "TXX" to end of part number.	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)

## SDN STYLE

\*Indicator sold separately

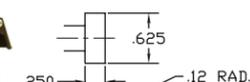


LRS Snap Gage with optional bench stand #48502-S

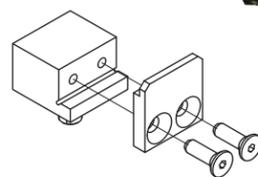
## SSG STYLE

\*Indicator sold separately

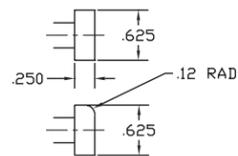
LRS-15377 shown



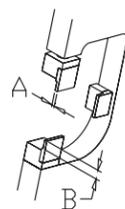
Part #2029  
Standard carbide anvil



Blade type anvil  
Special sizes available



Part #2029  
Standard carbide anvil



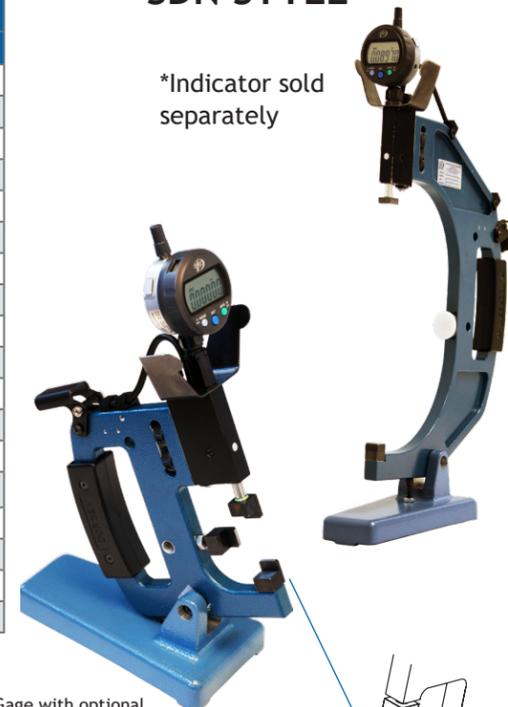
SDN-700 snap gage

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. -T100 = .100" Travel 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)

OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM.	B DIM.
To specify extended gaging contact travel, add "TXX" to end of part number.	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)

## SDN STYLE

\*Indicator sold separately

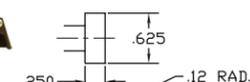


LRS Snap Gage with optional bench stand #48502-S

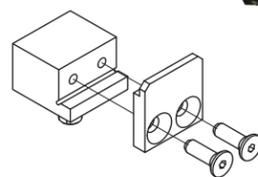
## SSG STYLE

\*Indicator sold separately

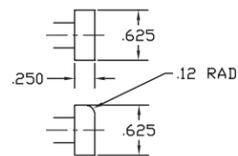
LRS-15377 shown



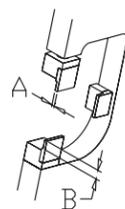
Part #2029  
Standard carbide anvil



Blade type anvil  
Special sizes available



Part #2029  
Standard carbide anvil



SDN-700 snap gage

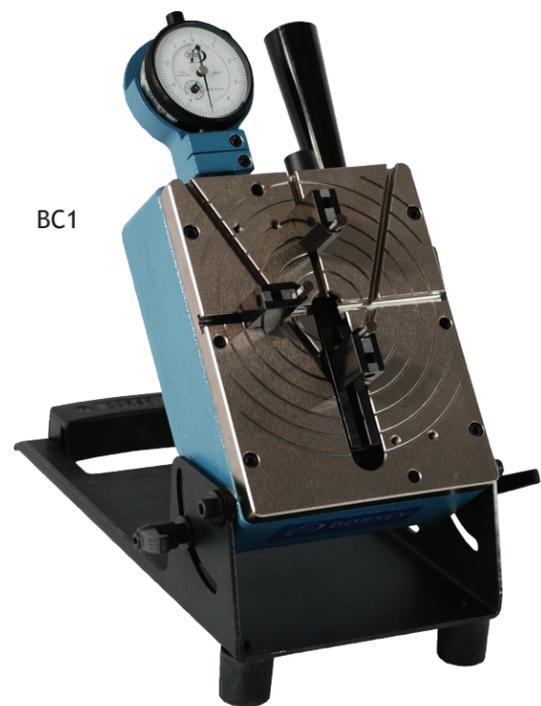
OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM. (WIDTH)	B DIM. (HEIGHT)
To specify extended gaging contact travel, add "TXX" to end of part number. -T100 = .100" Travel Lever (-L)	2274-1	.040" (1.0mm)	.08" (2.0mm)
	2274-2	.060" (1.5mm)	.12" (3.0mm)
	2274-3	.080" (2.0mm)	.16" (4.0mm)
	2274-4	.100"	

## ADJUSTABLE INSIDE / OUTSIDE DIAMETER FIXTURES

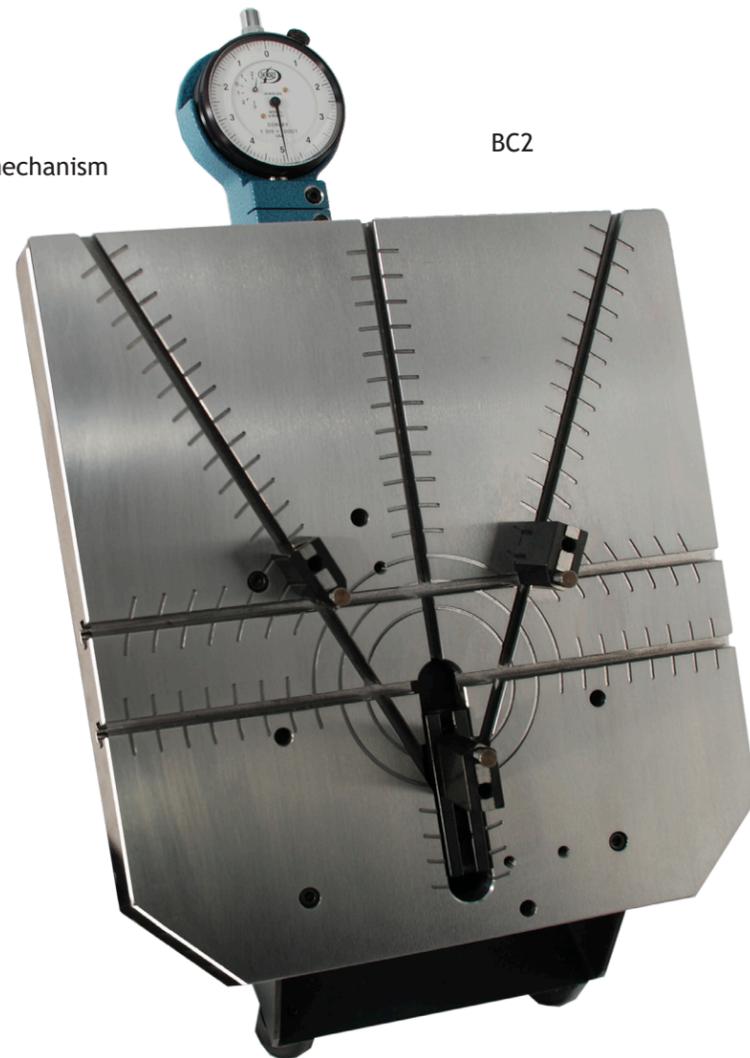
This comparator offers 2 or 3 point measurements for both ID and OD on one benchtop plate. Features include 2 or 3 point measurement, linear ball bushing movement, and a wide range of adjustment. The fixture can be positioned at any angle from horizontal to vertical to duplicate the machining process 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, 3 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



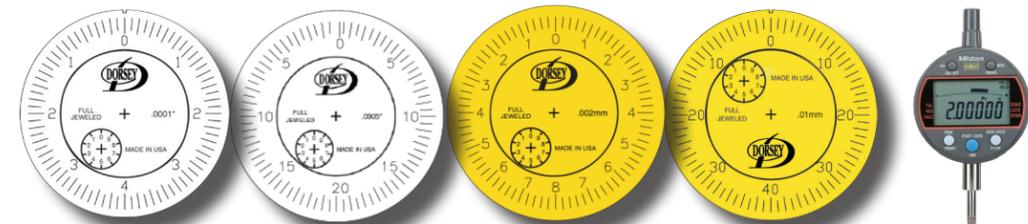
BC2

**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

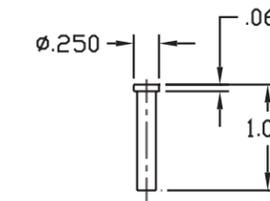
Example: .010 spindle travel is displayed as .008" on indicator



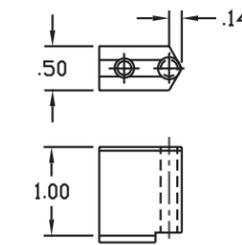
MODEL	2DMR025-01Z	2DMR125-05	2DMR005-002mm	2DMR5-01mm	MT543
Graduation	.0001"	.0005"	0.002mm	0.01mm	Selectable
Total Travel	.020"	.100"	0.4mm	4.0mm	.500" / 12mm
Revolutions	2.5 Rev.	2.5 Rev.	2.5 Rev.	5 Rev.	N/A
Travel/Rev.	.008"	.040"	0.16mm	0.8mm	N/A



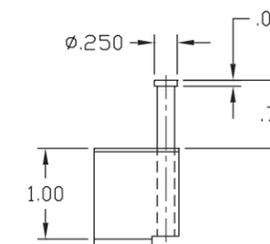
Dorsey Products - proudly made in the USA



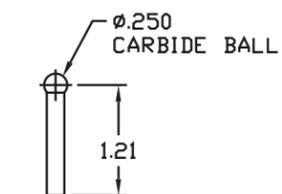
**Part #BCC-GS25**  
Steel groove contact



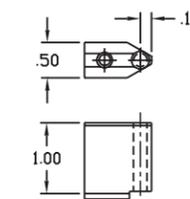
**Part #2760-S (Steel)**  
**Part #2760-C (Carbide)**  
Contact holder, sharp  
(1 required)



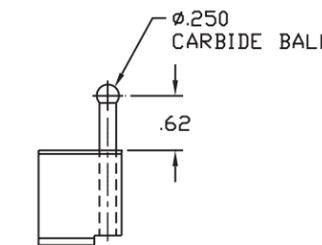
**Part #BCC-GS25**  
Shown in contact holder part #2760



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



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



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

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



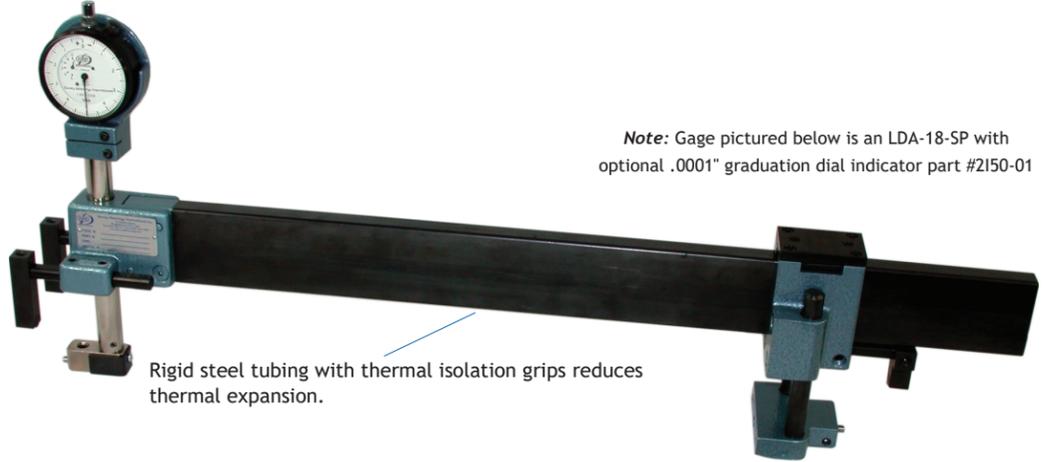
Our most popular adjustable series of ID/OD gage uses rigid steel tubing, precision machined end blocks, and a precision right angle transfer mechanism similar to our bore gages which give accurate and sensitive readings.



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

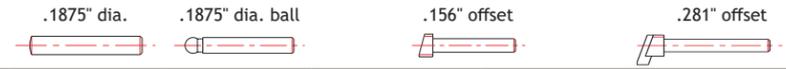
Available in Carbon Fiber

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.



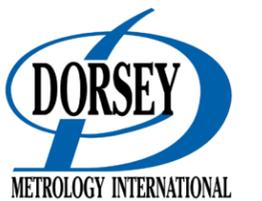
- Standard with part #2DM125-05 .0005" graduation dial indicator
- Standard gaging depth range is 0-2"
- Standard LDA frame clearance is 1.25". Contact us for a quotation if additional clearance is required
- Standard gaging contact travel is .100
- Optional gaging depth of 3", 4", or up to 5"
- Reference 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

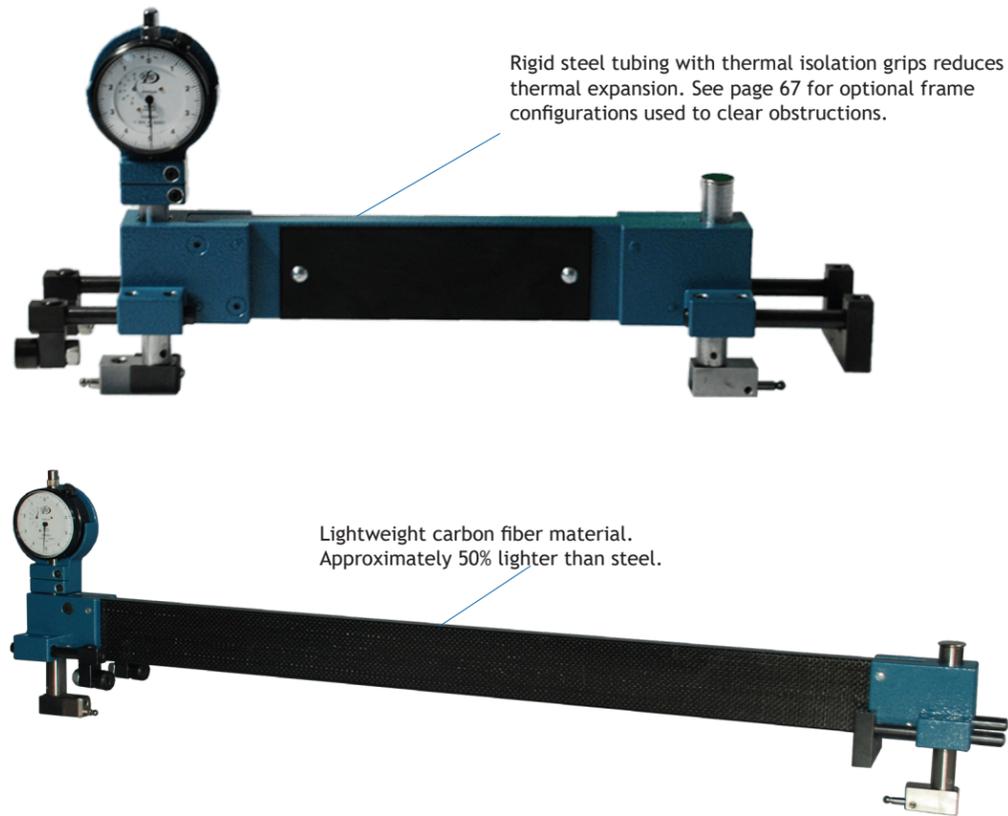
PART #	INCH	METRIC (mm)	STEEL PIN	CARBIDE BALL	STEEL SHOVEL	CARBIDE SHOVEL	EXTENDED CARBIDE SHOVEL	CARBON FIBER
	RANGE	RANGE	SP	CB	SS	CS	ES	CF
LDA-12	6 to 12	150 to 300	LDA-12-SP	LDA-12-CB	LDA-12-SS	LDA-12-CS	LDA-12-ES	LDA-12-XX-CF
LDA-18	12 to 18	301 to 460	LDA-18-SP	LDA-18-CB	LDA-18-SS	LDA-18-CS	LDA-18-ES	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



# 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.

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

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



See page 71 for SMF series companion setmasters



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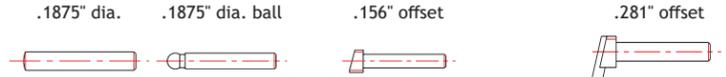
# LDVA - ID/OD ADJUSTABLE DIAMETER AND DEPTH

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

Available in Carbon Fiber

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



See page 70 for SMVA series companion setmasters

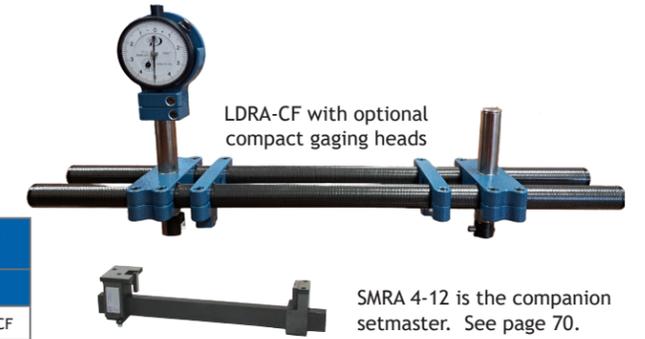
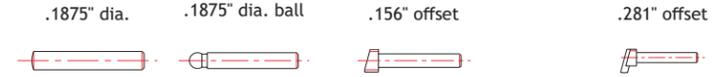
## LDRA SERIES - ID/OD ADJUSTABLE RAIL FRAME

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.



- 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

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



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 is 0-2"  
Gaging units rotates 180 degrees for ID or OD measurement

Gaging travel is that of indicator selected

Standard with part #2DM125-05 .0005" graduation dial indicator



*\*Note:* Gage pictured below is an LDDA-24-CB with carbide ball contacts and optional high amplification dial indicator part #2150-01

Available in Carbon Fiber

- 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



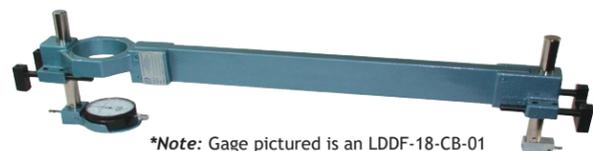
See page 70 for SMA series companion setmasters

## 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



*\*Note:* Gage pictured is an LDDF-18-CB-01 with carbide ball contacts and optional high amplification dial indicator part #219-01



See page 71 for SMF series companion setmasters

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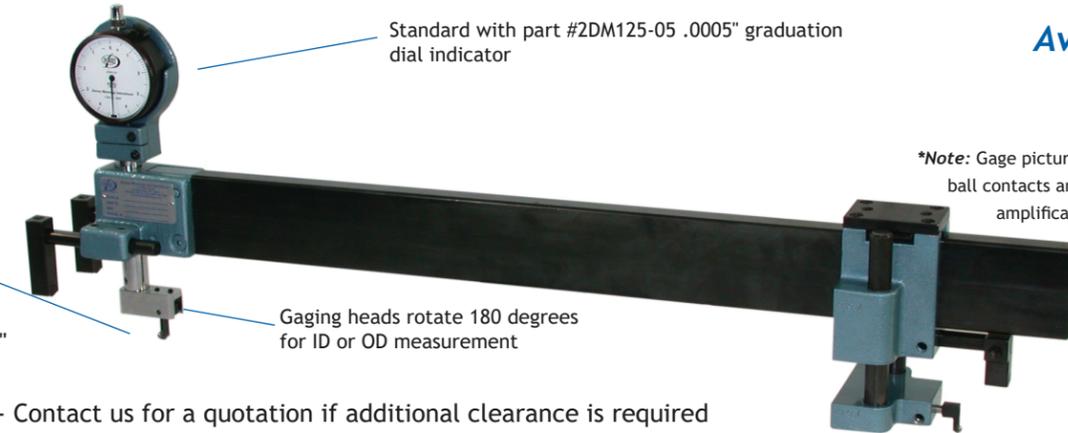
# LDLTA - ID/OD LEVER TRANSFER ADJUSTABLE FRAME

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.



Optional perpendicular indicator unit

Optional reverse action lever shown



Standard with part #2DM125-05 .0005" graduation dial indicator

Gaging heads rotate 180 degrees for ID or OD measurement

*\*Note:* Gage pictured below is an LDLTA-18-CB with carbide ball contacts and reverse action lever, optional high amplification dial indicator part #219-01

Available in Carbon Fiber



See page 70 for SMVA series companion setmasters

- 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	PART #	TYPE	INCH	METRIC (mm)	CARBIDE BALL	CARBIDE HALF BALL	CARBON FIBER
		RANGE	RANGE	CB	HB	CF			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-36	Fixed	30 to 36	761 to 915	LDLTF-36-CB	LDLTF-36-HB	LDLTF-36-XX-CF
LDLTF-12	Fixed	6 to 12	150 to 300	LDLTF-12-CB	LDLTF-12-HB	LDLTF-12-XX-CF	LDLTA-42	Adjustable	36 to 42	916 to 1070	LDLTA-42-CB	LDLTA-42-HB	LDLTA-42-XX-CF
LDLTA-18	Adjustable	12 to 18	301 to 460	LDLTA-18-CB	LDLTA-18-HB	LDLTA-18-XX-CF	LDLTF-42	Fixed	36 to 42	916 to 1070	LDLTF-42-CB	LDLTF-42-HB	LDLTF-42-XX-CF
LDLTF-18	Fixed	12 to 18	301 to 460	LDLTF-18-CB	LDLTF-18-HB	LDLTF-18-XX-CF	LDLTA-48	Adjustable	42 to 48	1071 to 1220	LDLTA-48-CB	LDLTA-48-HB	LDLTA-48-XX-CF
LDLTA-24	Adjustable	18 to 24	461 to 610	LDLTA-24-CB	LDLTA-24-HB	LDLTA-24-XX-CF	LDLTF-48	Fixed	42 to 48	1071 to 1220	LDLTF-48-CB	LDLTF-48-HB	LDLTF-48-XX-CF
LDLTF-24	Fixed	18 to 24	461 to 610	LDLTF-24-CB	LDLTF-24-HB	LDLTF-24-XX-CF	LDLTA-54	Adjustable	48 to 54	1221 to 1370	LDLTA-54-CB	LDLTA-54-HB	LDLTA-54-XX-CF
LDLTA-30	Adjustable	24 to 30	611 to 760	LDLTA-30-CB	LDLTA-30-HB	LDLTA-30-XX-CF	LDLTF-54	Fixed	48 to 54	1221 to 1370	LDLTF-54-CB	LDLTF-54-HB	LDLTF-54-XX-CF
LDLTF-30	Fixed	24 to 30	611 to 760	LDLTF-30-CB	LDLTF-30-HB	LDLTF-30-XX-CF	LDLTA-60	Adjustable	54 to 60	1371 to 1525	LDLTA-60-CB	LDLTA-60-HB	LDLTA-60-XX-CF
LDLTA-36	Adjustable	30 to 36	761 to 915	LDLTA-36-CB	LDLTA-36-HB	LDLTA-36-XX-CF	LDLTF-60	Fixed	54 to 60	1371 to 1525	LDLTF-60-CB	LDLTF-60-HB	LDLTF-60-XX-CF

## 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

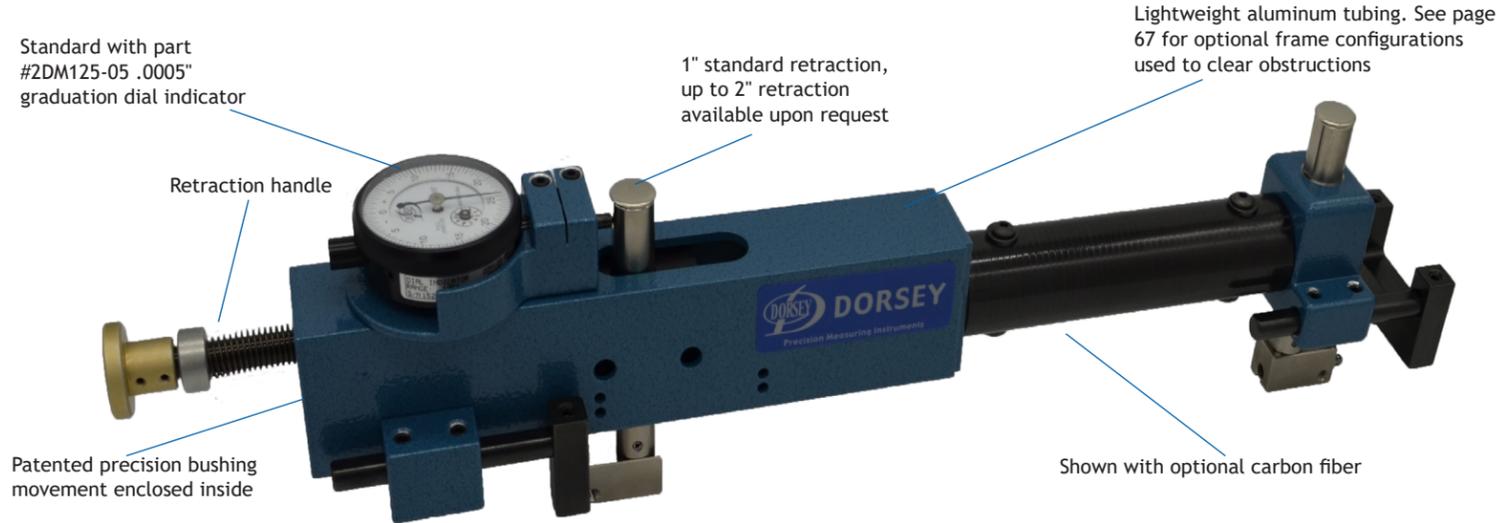
Available in Carbon Fiber



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 accommodate 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



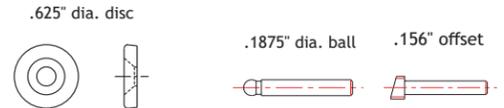
PART #	INCH	METRIC (mm)	STEEL DISC	CARBIDE DISC
	RANGE	RANGE	SD	CD
LDAR-6	2" - 6"	50 - 150mm	LDAR-6-SD	LDAR-6-CD
LDAR-8	2" - 8"	50 - 200mm	LDAR-8-SD	LDAR-8-CD
LDAR-12	2" - 12"	50 - 305mm	LDAR-12-SD	LDAR-12-CD
7062	.437 Diameter Steel Conical Disc Contact			
7062-C	.437 Diameter Carbide Conical Disc Contact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

- 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



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

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)	

## 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

- 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 accommodate 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

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)	

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 rigidity 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.

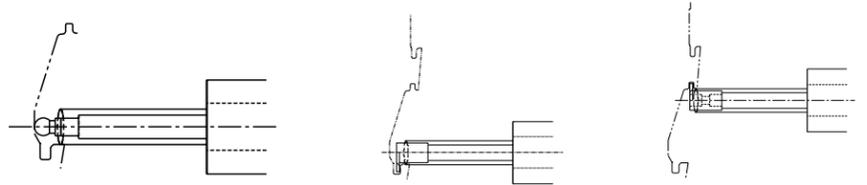
All above gages require part print for quoting. Design charge and design approval is required.

## 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.**

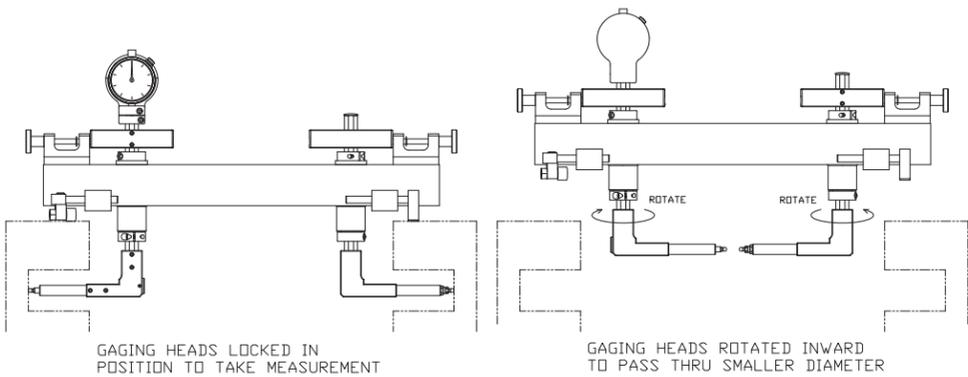


### TYPICAL APPLICATIONS



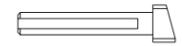
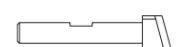
## SWING/SPOOL GAGES

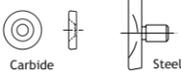
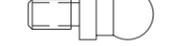
The Swing gage is ideal for ID applications where sideloading is not an option or that requires more than an inch of retraction or have to pass through a smaller diameter and check a groove.



LD - Swing or Spool gage, where the heads rotate inward for long retraction

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

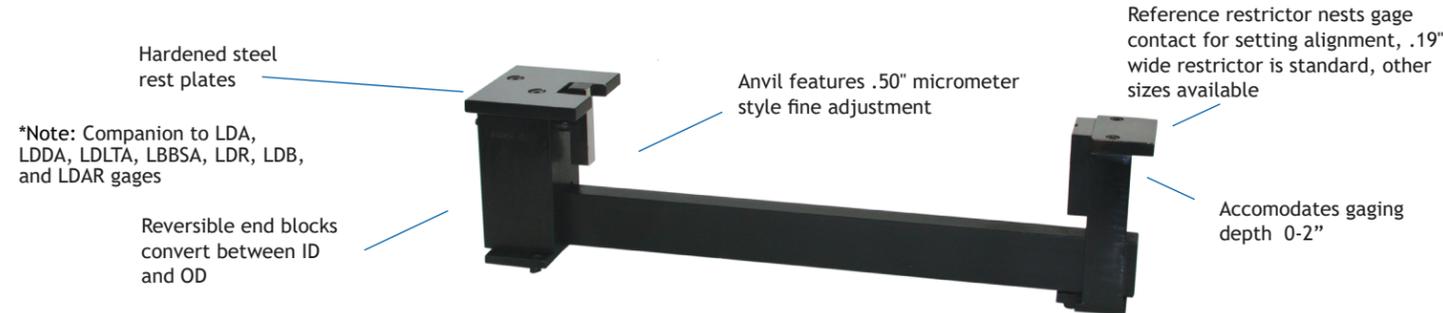
CONTACTS	PART #	MATERIAL
.250" Dia. Ball (Reference) 	4060-250B	Carbide
	4030-250-B	Carbide
Shovel (Reference) 	4060-SS	Steel
	4060-CS	Carbide
Shovel (Gaging) 	4030-SS	Steel
	4030-CS	Carbide
Extended Shovel (Gaging) 	4030-ES	Carbide
	4030-M	Steel
Threaded (Reference) 	4060-M	Steel
	4030-M	Steel

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.



\*Note: Companion to LDA, LDDA, LDLTA, LBBSA, LDR, LDB, and LDAR gages

## SMRA SERIES SETMASTER



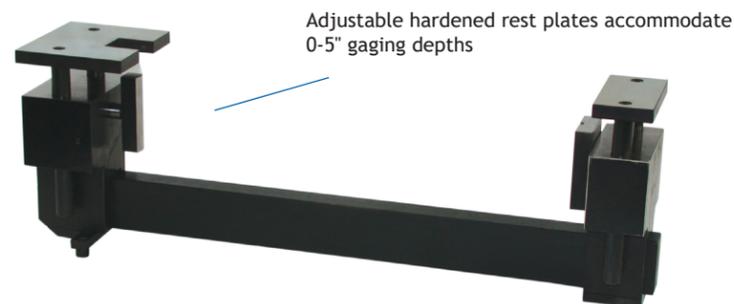
This setmaster has the same features and capabilities as the SMA but accommodates 4-12" of overall diameter and 0-1" depth adjustment to accommodate LDRA 4-12, LDAR and Miget Read.

MODEL #	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

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 accommodate various gaging depths.



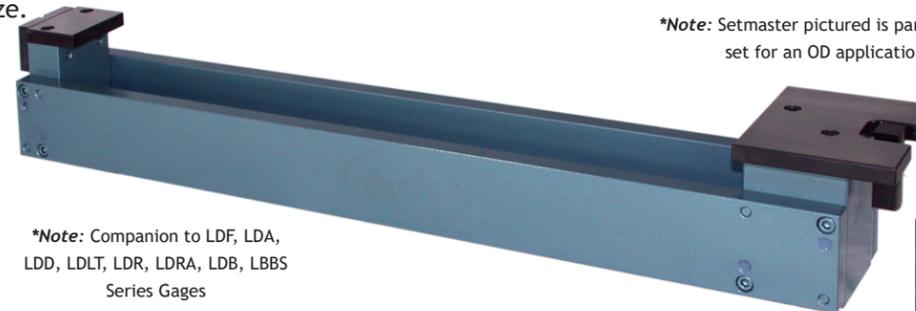
\*Note: Companion to LDVA or other adjustable gages with gaging depths between 0-5". Both SMA and SMVA Series are available with storage case.

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

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# 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.



\*Note: Companion to LDF, LDA, LDD, LDLT, LDR, LDRA, LDB, LBBS Series Gages

- 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

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

## SMFC- SERIES SETMASTER



Outrigger 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"

Recommended if gage is used in vertical position

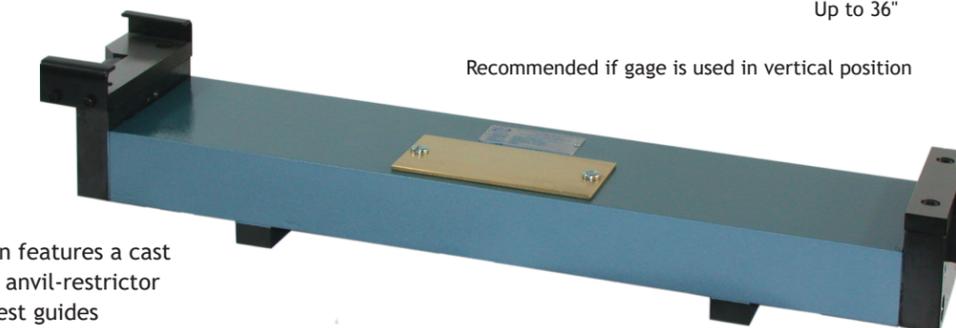
# SSM SERIES SOLID FRAME SETMASTER

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:

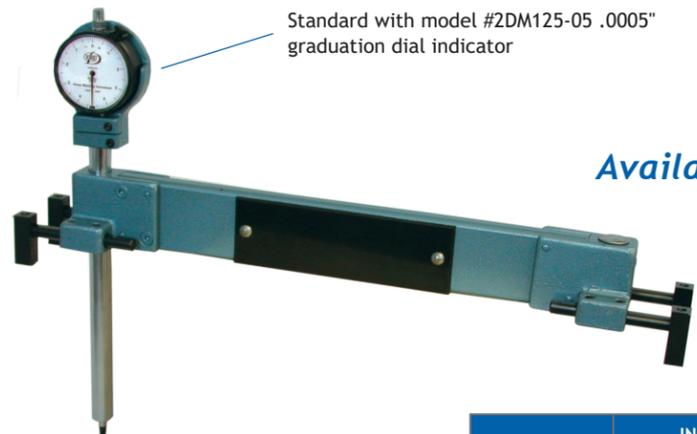
- Set and sealed to a specific size with NIST traceable certification
- Set and sealed to ISO 17025 compliant certification

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





See page 70 for optional frame configurations used to clear obstructions



Standard with model #2DM125-05 .0005" graduation dial indicator

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

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



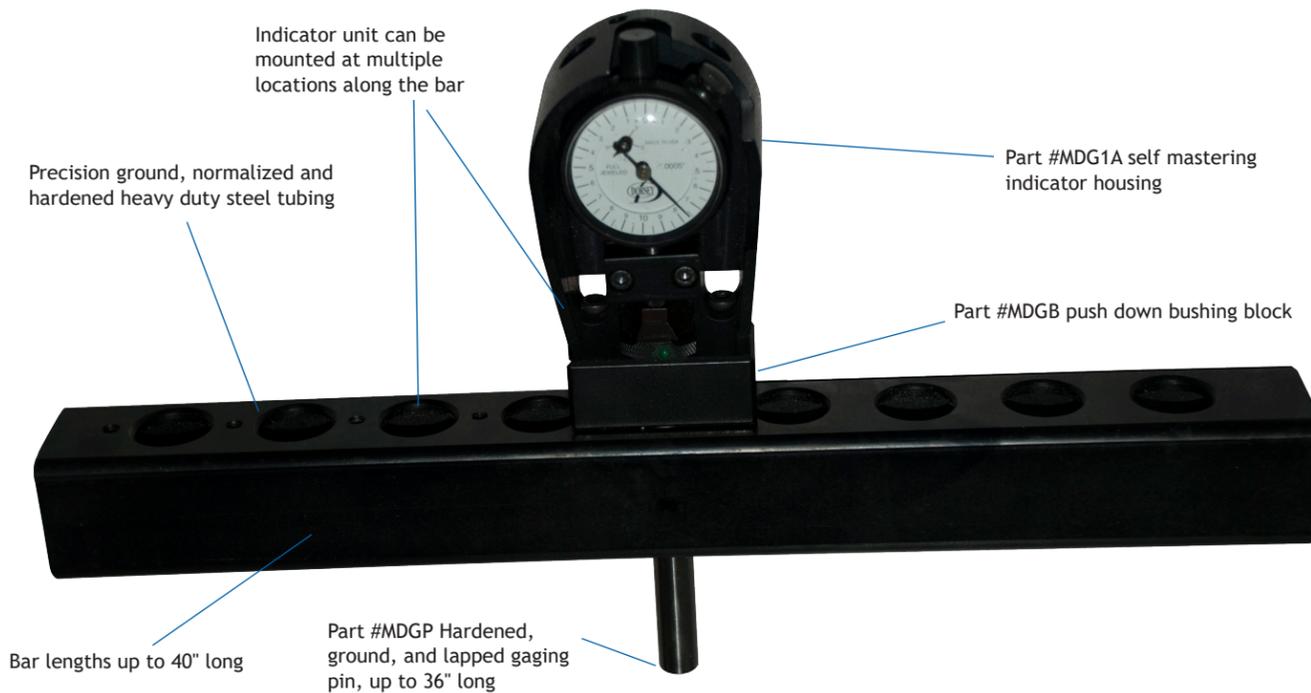
The MDG series of modular indicating depth gages are available as fixed or adjustable models. This versatile design allows the mixing and matching of components to build a gage which can suit any application. Designed to replace many dedicated flush pin gages, these gages feature a unique self mastering 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



Part #MDGP Hardened, ground, and lapped gaging pin, up to 36" long



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

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



## 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)

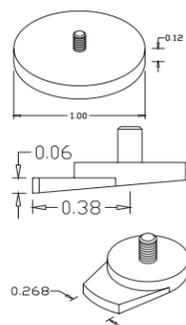
Indicator size:

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

## Adjustable Inside/Outside Pitch Diameter Gage



## External Bearing Raceway Gage

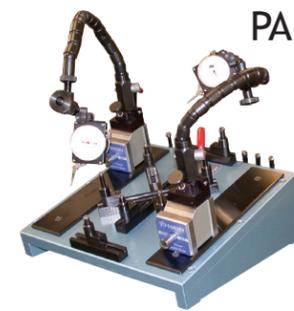


In addition to its already diverse product line of precision dimensional gaging instruments, Dorsey has an extensive special applications division. We offer a design-to-build service to meet nearly all gaging needs. We can modify standard product or design custom solutions to meet the customer's needs.

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**

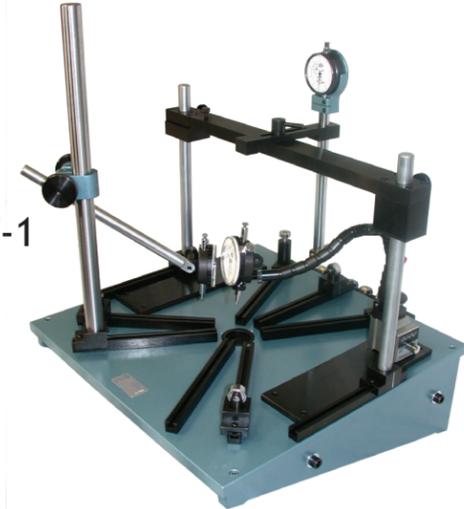
For parts 1-5" (25mm-130mm) in diameter. Fixture includes:

- .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

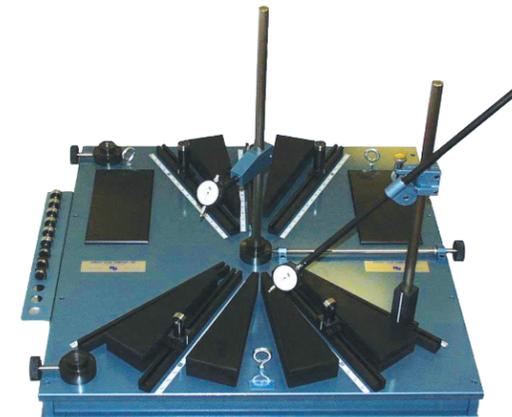
For parts 3-12" (75mm-300mm) in diameter with maximum weight of 150 lbs. (70Kg.). Fixture includes:

- 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-1**



**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

## 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\*

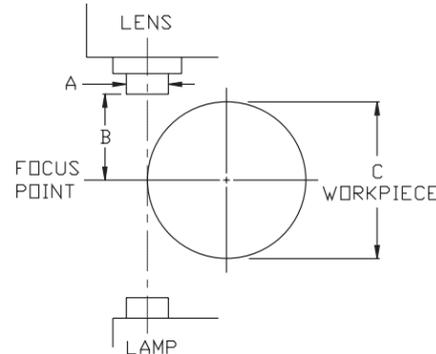
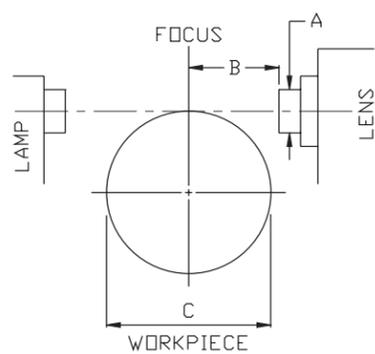
LENS MAGNIFICATION	14" SCREEN		
	A	B	C
10X	54	81	162
20X	47	81	162
50X	28	51	102

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:

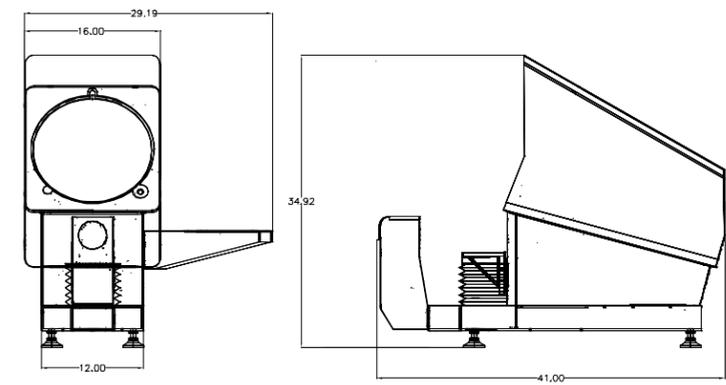
- 14" (350mm) angled high-resolution glass screen for optimum viewing with 90-degree cross lines, calibration reticle, and chart clips
- Reversed and inverted profile image
- Machined chart ring with vernier protractor, 1 minute graduation facilitates optimal alignment
- Coated telecentric parfocal optics
- 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 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) Y = 4" (100mm) 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:

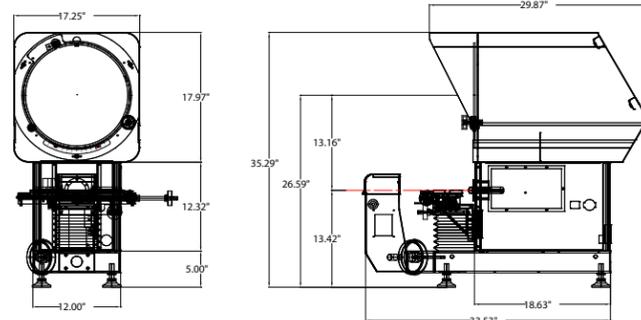
- Industry Standard - erect and reversed profile image
- 14" (350mm) vertical screen for optimum viewing, high resolution ground glass screen with 90 degree cross lines, with calibration reticle and chart clips
- Machined chart ring with vernier protractor, 1 minute graduation facilitates optimal alignment
- 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 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) Y = 4" (100mm) 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

**Focus travel is always "optically coaxial"**  
Unique design features an intermediate plate that allows the focus axis to travel independently of the X axis

X-axis scale has zero backlash and is mounted directly under focal plane to greatly increase accuracy

Single hand quick release on X-axis

Both profile and surface illumination bulbs are located in lamphouse

True parfocal helix adjustment ±15 degree with 5-minute vernier

Case fabrication is powder coated, not painted

Y-axis drive is located directly under the center of gravity and uses a composite steel/Delrin bevel gear set for accurate and silent operation

**Ultra Precision Cast Iron Stage**  
Large capacity 10" x 6" travel - 150 lbs stage system  
Optional 24" X axis travel  
Solid cast iron - no aluminum

Lens is solidly mounted to the main cast iron structure, not the sheet metal case

Y-axis scale has zero backlash and is mounted on lens center line to greatly increase accuracy, all scales are dust and oil resistant

Stage is mounted to independent cast granite composite base, not sheet metal case

Solid rail crossed roller bearings in all axes

For improved stability, the weight bearing stage base rests on a rigid cast iron support system

## 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.

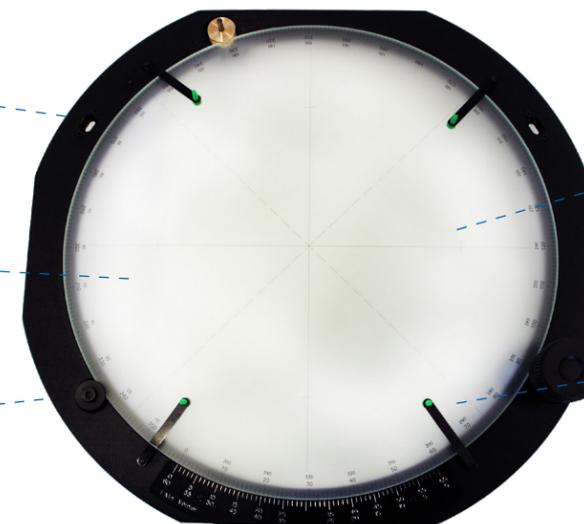
- IED is more accurate because the image is "read directly" and is not diffused through the ground glass screen
- IED is also not subject to the stability and rigidity of a plastic arm, our IED sensor cannot be bumped out of alignment under normal use, like the external arm can

## Standard with Machined Chart Ring

Screen is mounted in precision machined chart ring for increased rigidity, optical accuracy, and improved protractor operation

Built in calibration reticle for easy magnification verification by the operator

Machined chart ring with recessed screen protects against damage, eliminates contamination of internal optics, and facilitates the alignment of the screen to the optical axis



High resolution lapped glass screen

Large format vernier protractor with one minute graduations

# MODEL 16H HORIZONTAL BEAM

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# MODEL 24P HORIZONTAL BEAM

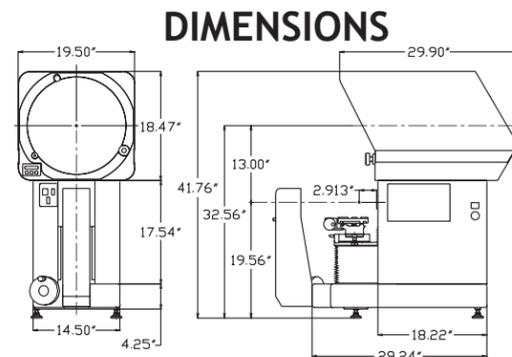
This extremely versatile measurement instrument features a robust cast granite composite base and our proven cast iron "ultra precision" stage system. This comparator comes standard with integrated fiber optic surface illumination. Measurement scales are mounted in the center of travel with zero backlash. 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 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) Y = 6" (150mm) 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

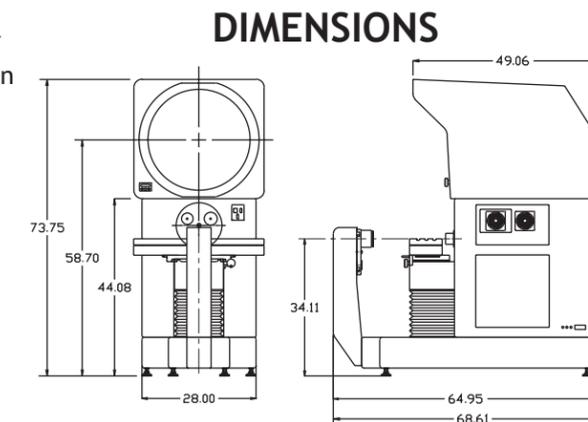
The 24P is designed to be an all purpose measurement/inspection instrument capable of performing both light and heavy duty tasks. Choose any lens system to customize this machine to match your requirements.

## 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, and chart clips
- Coated telecentric parfocal optics
- 3 position rotary lens & condenser turret
- LED surface & dimmable profile illumination
- Bright fiber optic surface illumination
- Machine precision solid cast iron, nickel plated stage
  - Triple universal dovetails accommodate 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 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 Y = 10" (250mm), Motorized 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

845-454-3111 | 800-549-4243

# MODEL 16VS VERTICAL BEAM

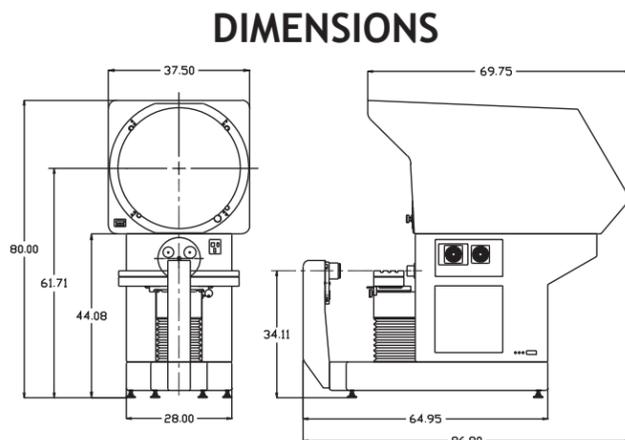
The 32P was designed with crisp, clear telecentric optics and a precision solid cast iron stage to be an instrument capable of handling almost any measurement/inspection requirement. This welded steel fabrication assures years of accurate, trouble free service.

## 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  $\mu\text{m}$  / .000004"
- Machine precision 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
  - $\pm 15$  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



Technical Specification	
Illumination	Profile: Dimmable LED 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 Y = 10" (250mm), Motorized Focus = 3" (75mm), Motorized
Stage Accuracy	Within +/- 0.004mm +[(L/20).001]
Linear Scale Resolution	Standard: 0.1 $\mu\text{m}$ / .000004"
Repeatability of Scales	+/- 1 Scale count (0.1 $\mu\text{m}$ / .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

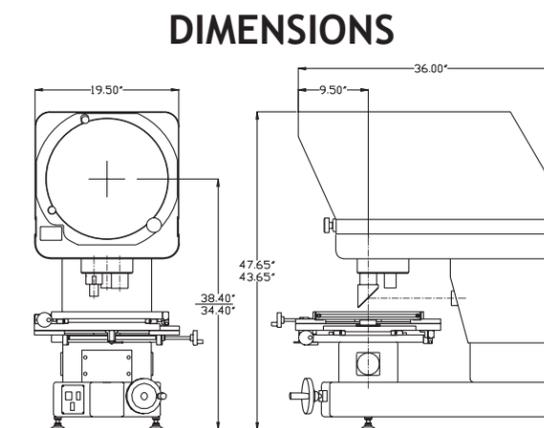
This dynamic vertical optical system is the first of its kind manufactured in the USA. This system allows a much greater stage capacity up to 50 pounds (15 lbs in the center of the glass plate) with optional stage travel up to 12" x 4".

## 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  $\mu\text{m}$  / .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



Technical Specification	
Illumination	Profile: Dimmable LED 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) Y = 4" (100mm) Focus = 4" (100mm)
Stage Accuracy	Within +/- 0.004mm +[(L/20).001]
Linear Scale Resolution	Standard: 0.1 $\mu\text{m}$ / .000004" (X & Y axis)
Repeatability of Scales	+/- 1 Scale count (0.1 $\mu\text{m}$ / .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.

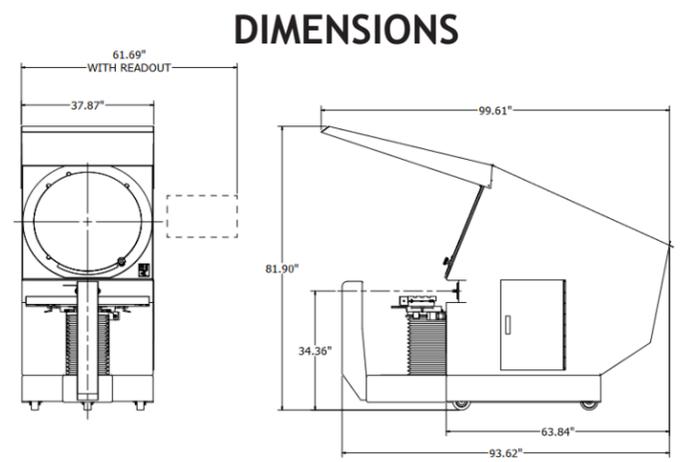
### FEATURES:

- 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 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 Y = 10" (254mm) Motorized 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

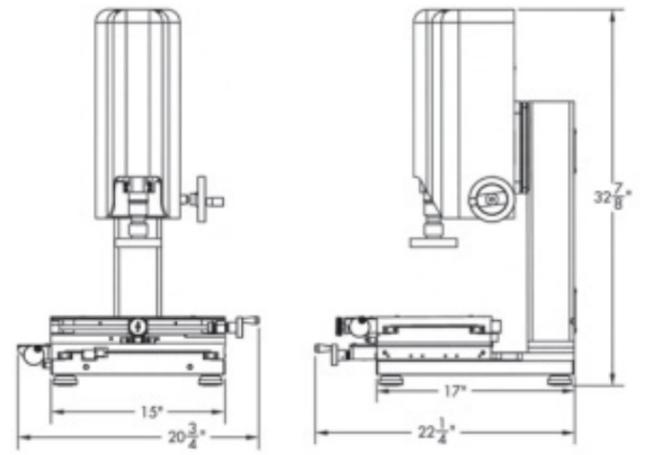
### 8700 SERIES VIDEO INSPECTION SYSTEM

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.

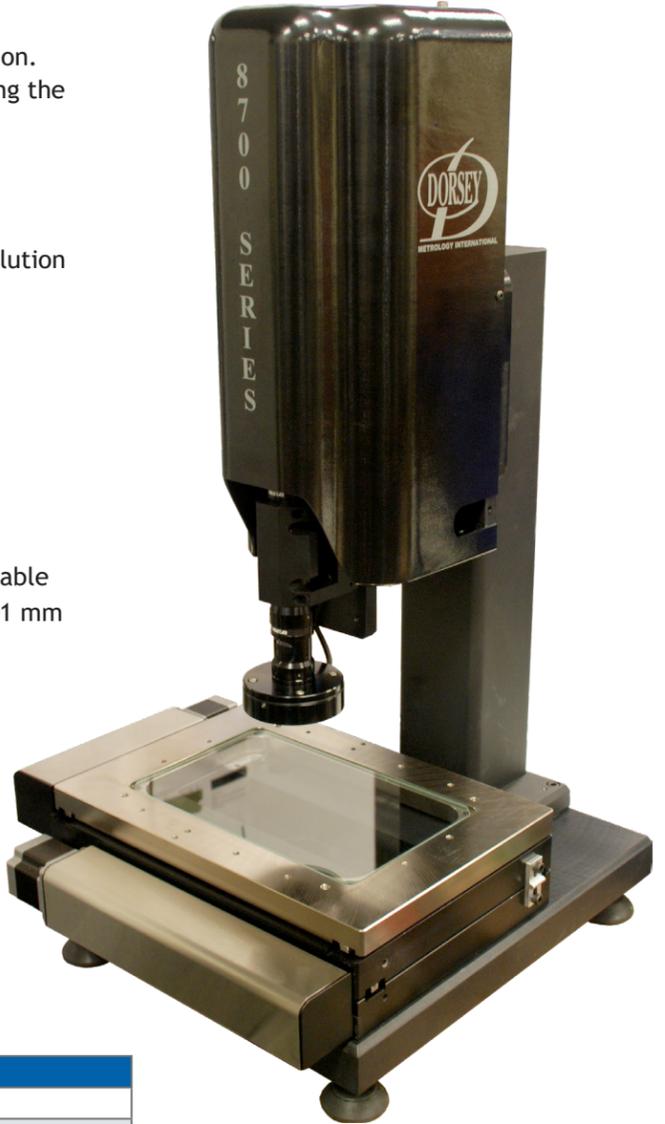
### FEATURES

- 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 (X)--12" (Y)--4" (Z)--6"
Allowable Work Load:	25 lb
Illumination:	Profile - LED Surface - LED
Magnification Lens:	30-180X Parfocal Zoom
Power Requirements	100-240 V, 50/60 Hz Compatible
Weight	Manual 150 lb Crated 225 lb CNC 180 lb Crated 285 lb



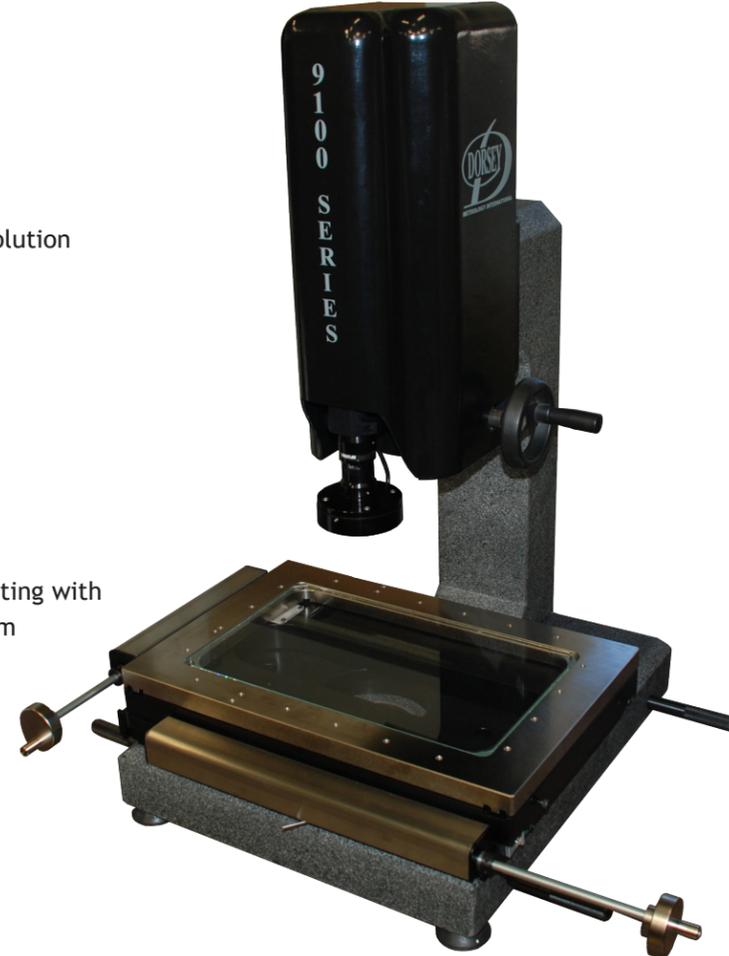
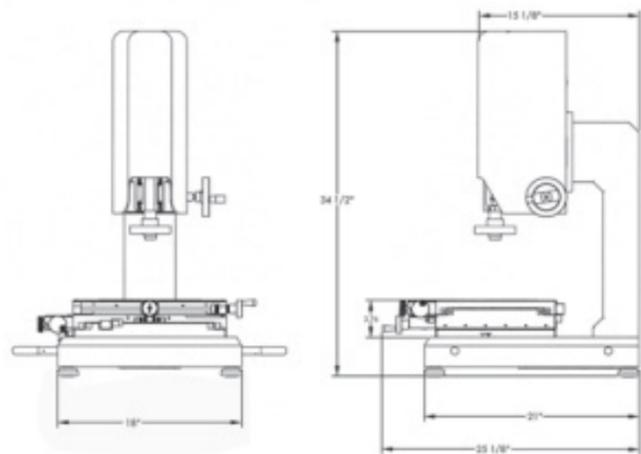
## 9100 SERIES VIDEO INSPECTION SYSTEM

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 Surface - LED
Magnification Lens:	30-180X Parfocal Zoom
Power Requirements	100-240 V, 50/60 Hz Compatible
Weight	Manual 330 lb Crated 365 lb CNC 390 lb Crated 425 lb

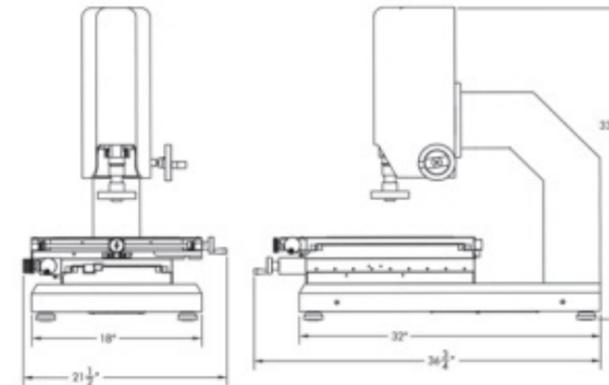
## 9700 SERIES VIDEO INSPECTION SYSTEM

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

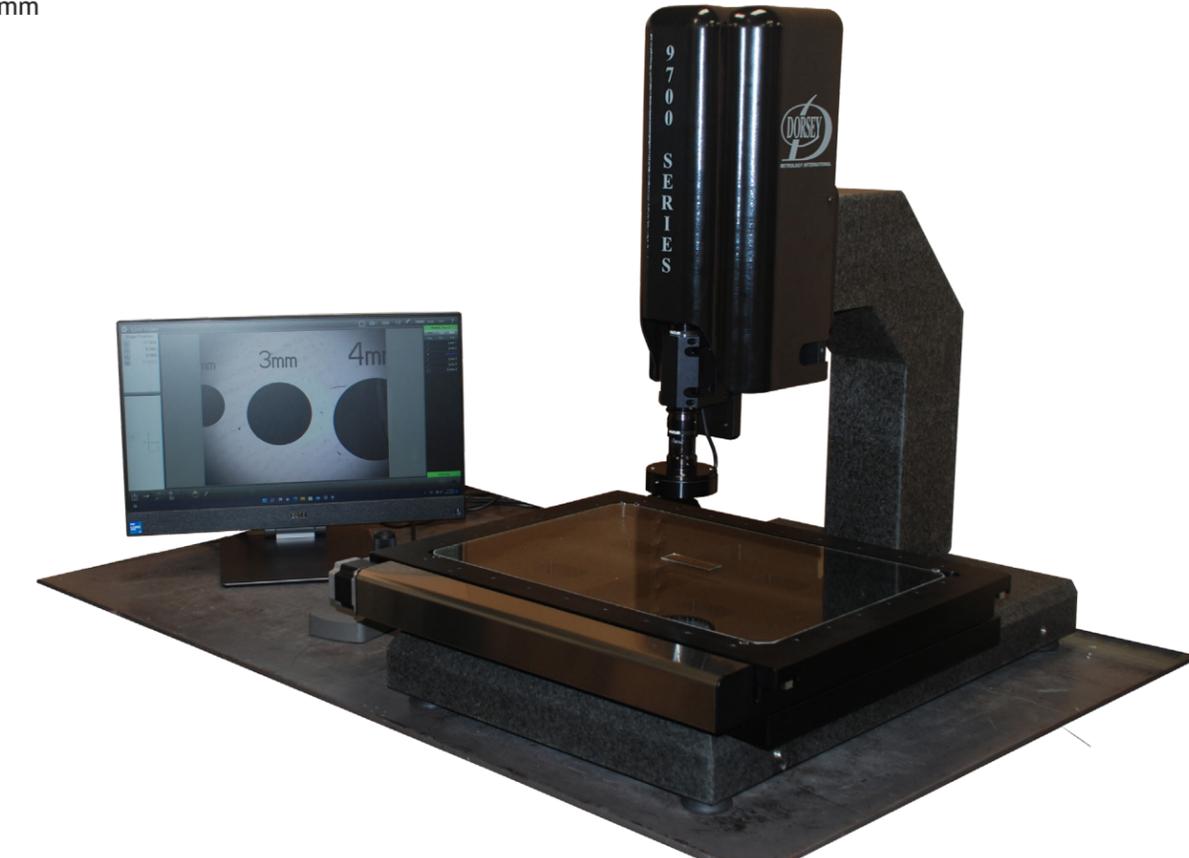
### FEATURES

- 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 Surface - LED
Magnification Lens:	30-180X Parfocal Zoom
Power Requirements	100-240 V, 50/60 Hz Compatible
Weight	Manual 455 lb Crated 500 lb 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		

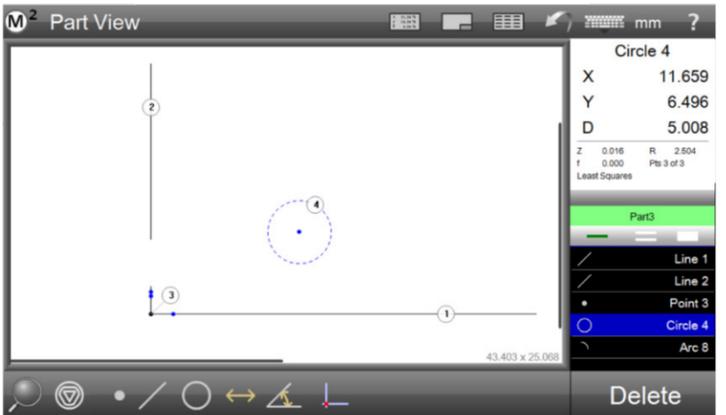
## SUPPORTING POPULAR MEASURING MICROSCOPE AND OPTICAL COMPARATOR SYSTEMS WORLDWIDE

- 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



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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	>	>	>



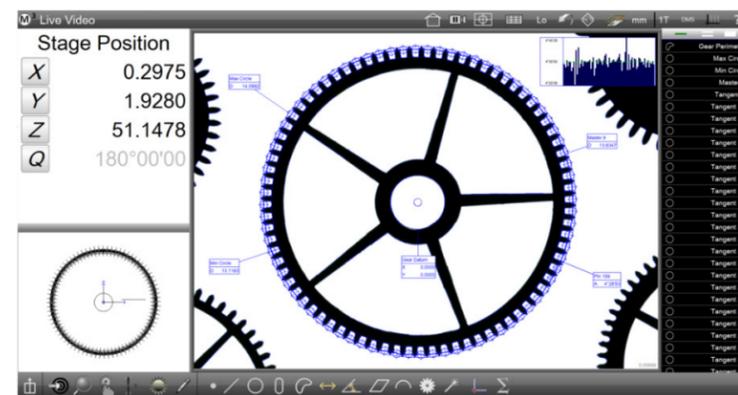
## SUPPORTING INDUSTRY LEADING VIDEO, OPTICAL, AND TOUCH PROBE BASED METROLOGY SYSTEMS WORLDWIDE

- Supporting touchscreen gesture controls
- Advanced video and optical edge detection measurement tools
- Cutting-edge user interface that's clean and intuitive
- Designed for multi-touch software 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 Standard 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 cylindrical 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

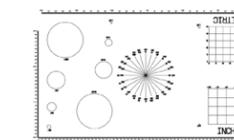
### POLARIZING FILTER

- 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)



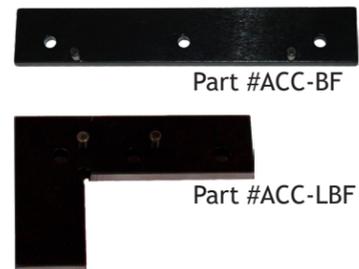
### CALIBRATION PROJECTION MASTER

- 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



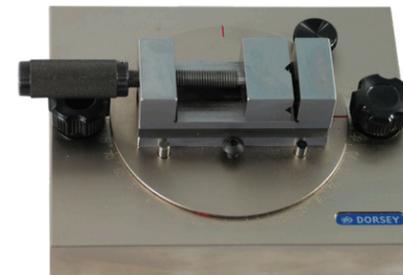
## FIXTURE BANKING PLATES

- 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



## PRECISION V BLOCK

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



## 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



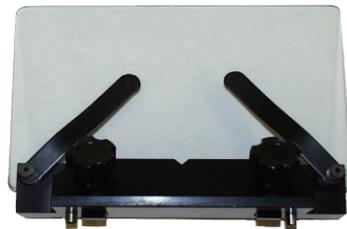
Part #ACC-V2  
(Only vertical V)

## 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



Part #ACC-V1



## VERTICAL GLASS FIXTURE

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

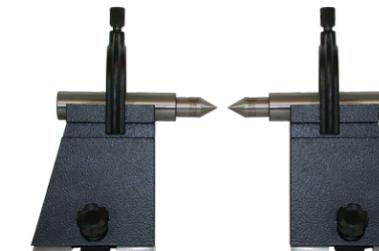
Part #ACC-VF7X5



## 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



## 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



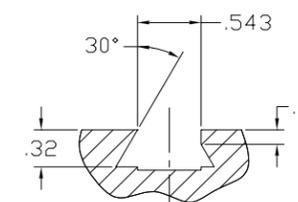
Part #ACC-VBC2.5

## 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



Dorsey Products - proudly made in the USA



Typical universal dove tail detail used on all horizontal staging

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 +/- .004  
+[(L/20).001]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.

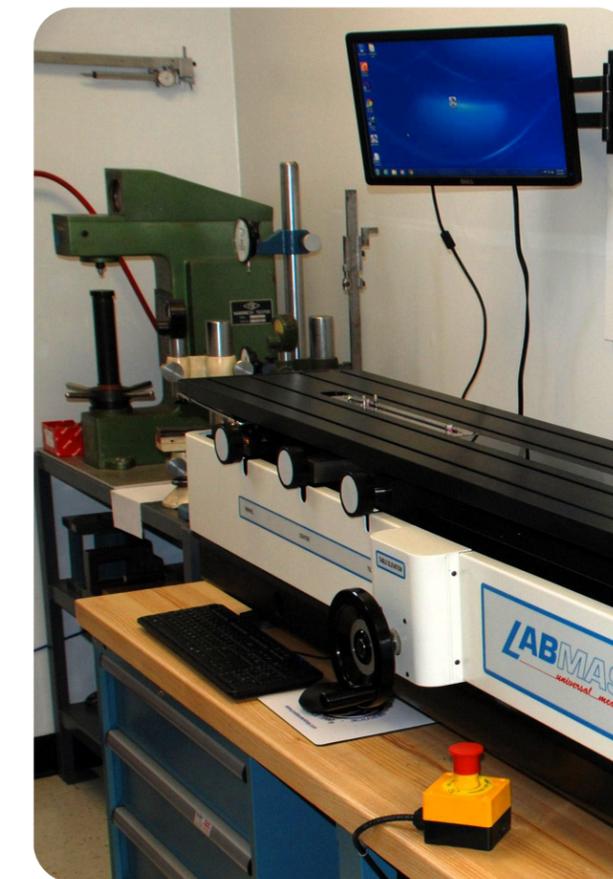
We are fully equipped to calibrate the full line of Dorsey and Standard Gage products. We offer ISO 17025 Accredited Calibrations (see our Scope of Accreditation for details) as well as Long Form Certifications.

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