

## 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)

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

Lapped chrome plated steel spindle

Chrome plated **HARDENED STEEL STEM** is virtually crush proof

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

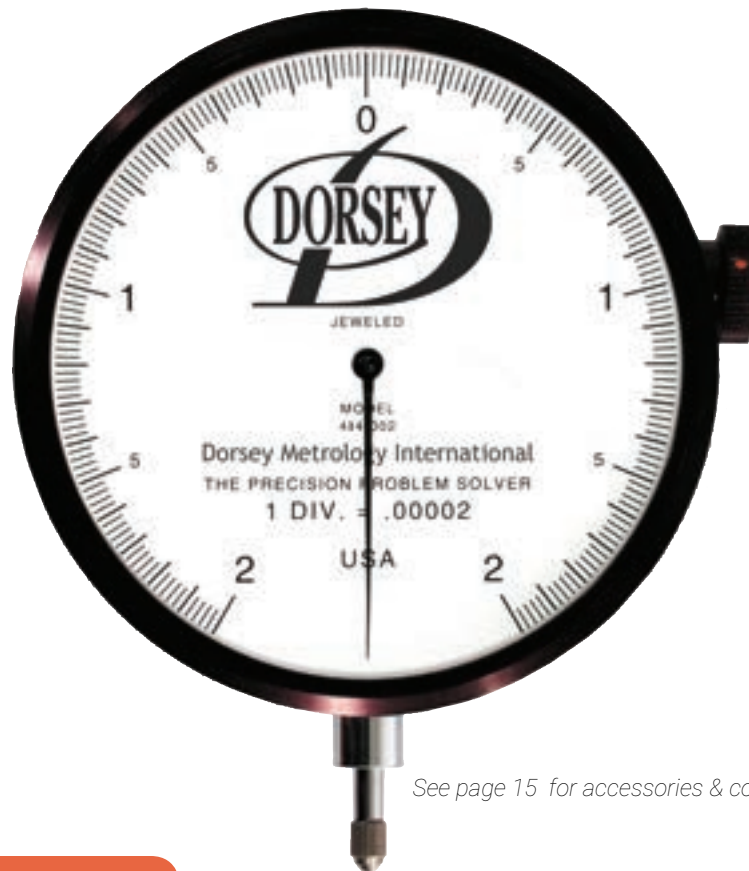
Machined aluminum bezel, sealed with teflon "O" ring

Unique case design features solid back to protect movement from contamination

## 20 MILLIONTHS THAT YOU CAN ACTUALLY READ!

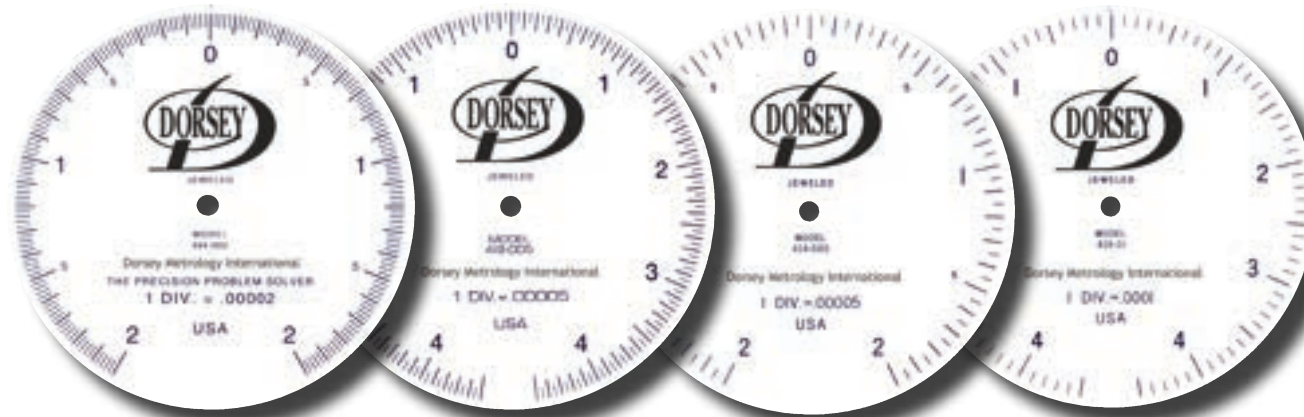
### FEATURES:

- ✓ 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

## THE MOST PRECISE INDICATOR ON THE PLANET!



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

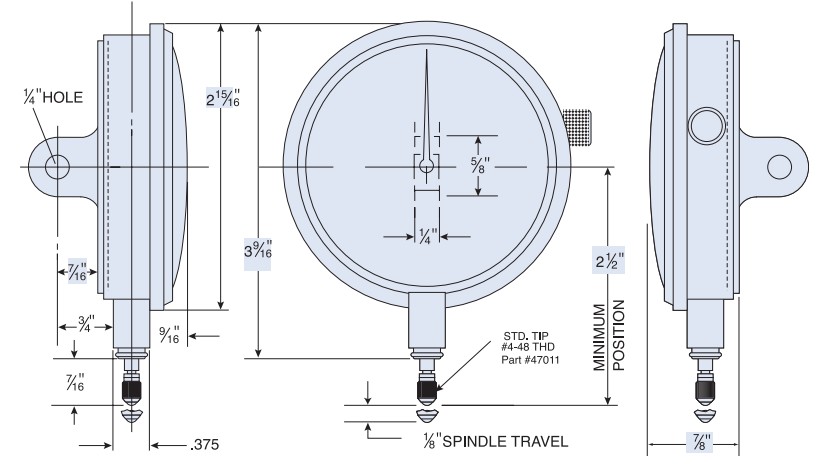
\*Special order



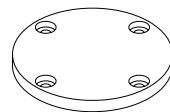
## FEATURES:

- ✔ 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.

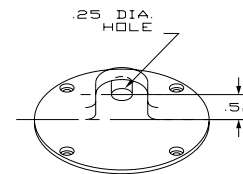
See page 15 accessories and contacts options



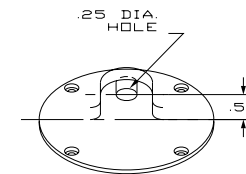
### Indicator back options for Group 3 & 4



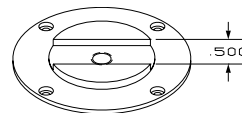
Flat  
Part # 49162



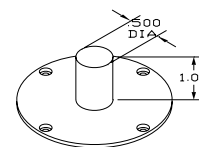
Lugback  
Part # 49161



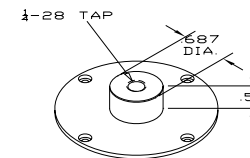
Offset Lugback  
Part # 49160



Slideback  
Part # 49188

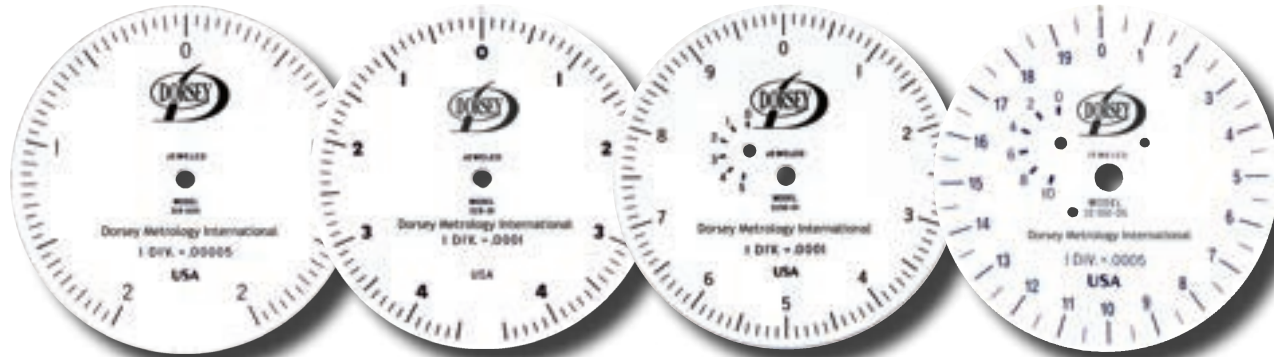


Screwback  
Part # 49201



Postback  
Part # 49293





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

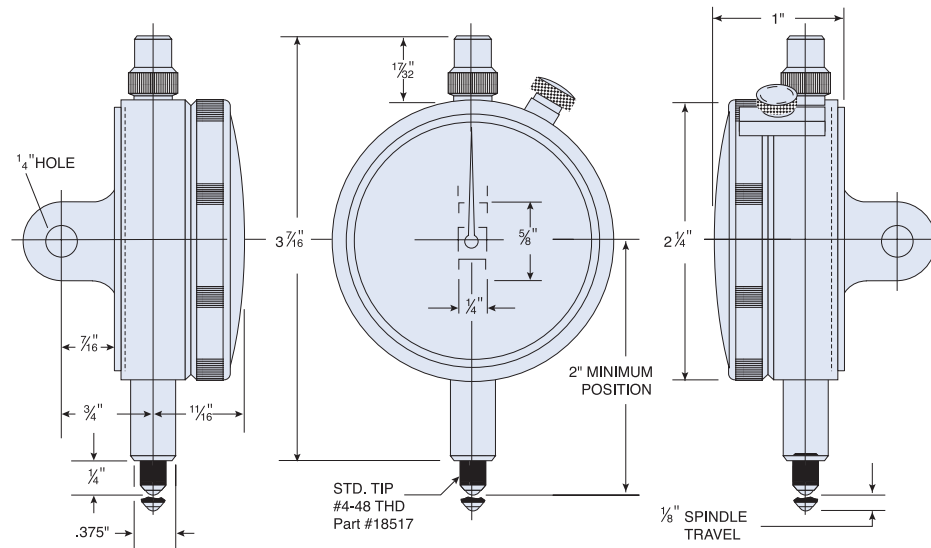
\* Special order

# GROUP 2 HIGH AMPLIFICATION

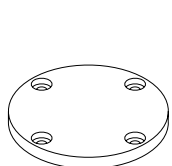
All Dorsey Ultra High Amplification Indicators utilize the lever principle of motion. They do not rely on rack and pinion motion. This eliminates the inherent error between the meshing of racks and gears.

## FEATURES:

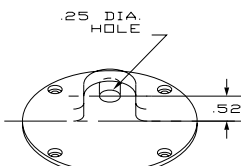
- ✓ Available with ISO 17025 certification.
- ✓ High amplification movement - graduations as low as .00005". Improves readability and minimizes judgement error.
- ✓ Lever principle of amplification - minimizes effect of spindle sideshake. Linearity and repeatability maintained through millions of cycles.
- ✓ 2.25" Bezel - fits many existing fixtures. Conforms to ANSI/AGD standards.
- ✓ Low gaging force - standard is 3 oz.
- ✓ Chrome plated hardened steel stem is designed for clamping. It is 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.



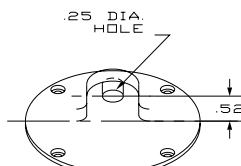
Indicator back options for High Amplification Group 2



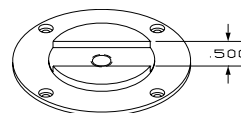
Flat  
Part# 49262



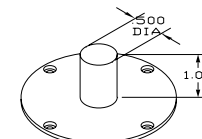
Lugback  
Part# 49261



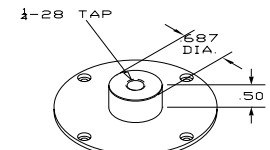
Offset Lugback  
Part# 49260



Slideback  
Part# 49259



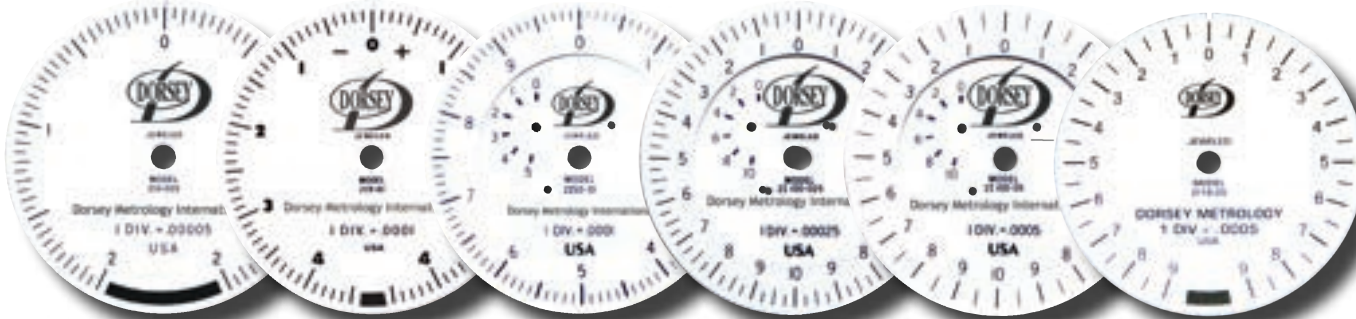
Postback  
Part# 49289



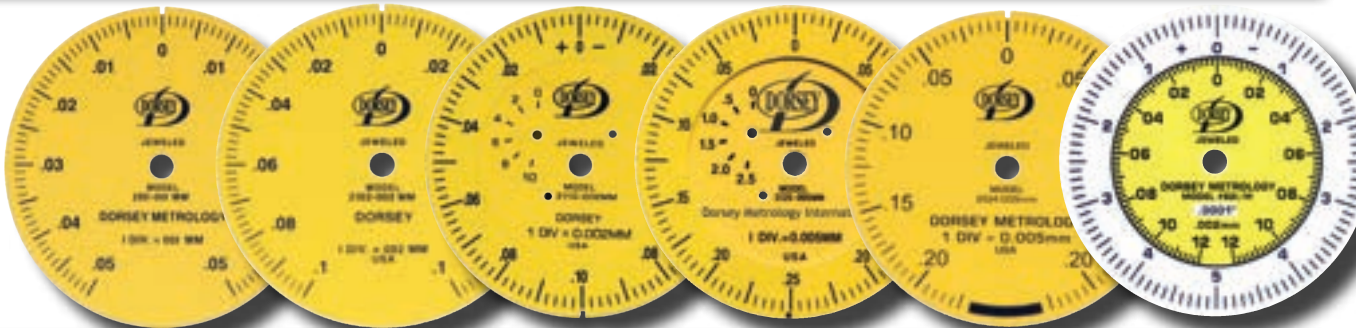
Screwback  
Part# 49230

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

Dials can be supplied to your specification. See page 14 for options.



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"



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	0.05-0-0.05mm	0.1-0-0.1mm	0-.1mm-0	0-.25mm-0	0.2-0-0.2mm	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 extended indicator stem of 3 inches add D4- as prefix. Example: D4-2150-01



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

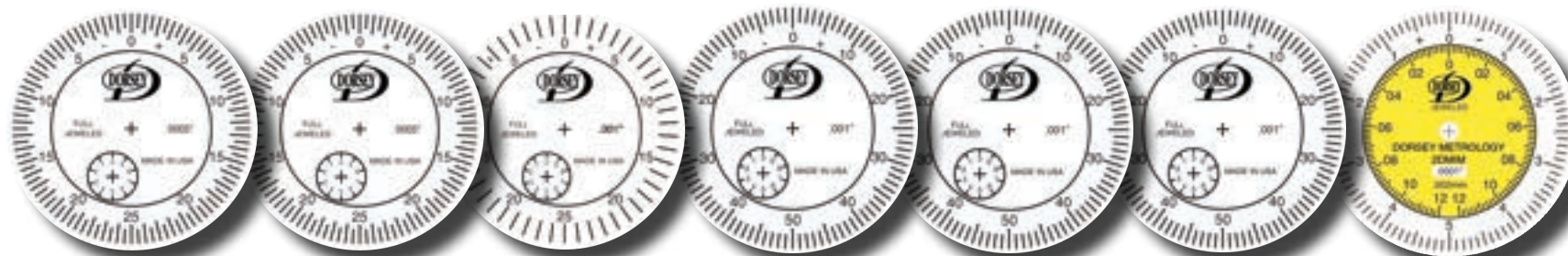


## FEATURES:

- ✓ 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"
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
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

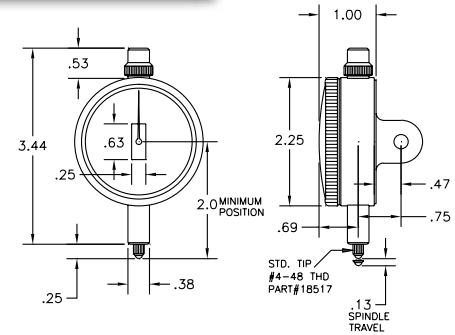
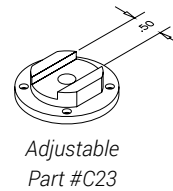
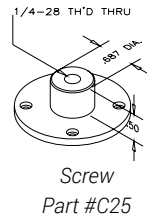
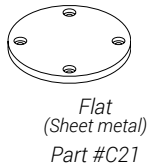
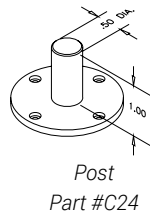
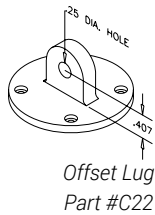
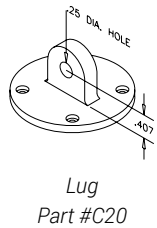


## TRADITIONAL DIAL INDICATORS, GROUP 2-CONTINUED



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
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



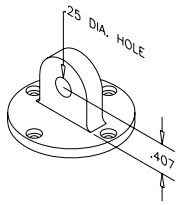
See page 14 for dial face options, 15 for accessories and contacts

## GROUP 1 TRADITIONAL DIAL INDICATORS

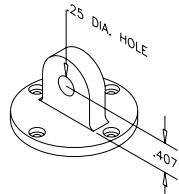


MODEL	1DM025-01	1DM050-05	1DM075-05	1DM125-05	1DM250-10	1DM2-01mm
Graduation	.0001"	.0005"	.0005"	.0005"	.001"	0.01mm
Total Travel	.025"	.050"	.075"	.125"	.250"	2.5mm
Revolutions	2.5 Rev.	2.5 Rev.	2.5 Rev.	2.5 Rev.	2.5 Rev.	2.5 Rev.
Travel/Rev.	.010"	.020"	.030"	.050"	.100"	1.0mm

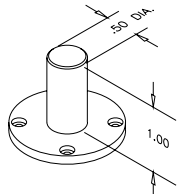
## BACK OPTIONS FOR GROUP 1-CONTINUED



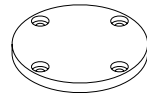
Lug  
Part #C201



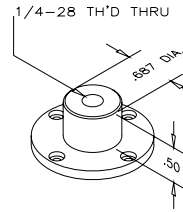
Offset Lug  
Part #C221



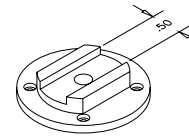
Post  
Part #C241



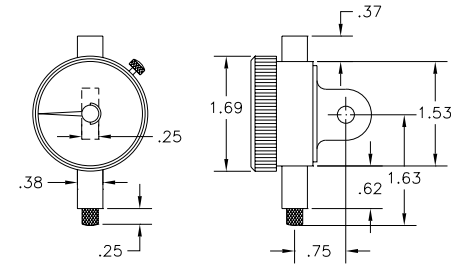
Flat  
Part #C211



Screw  
Part #C251

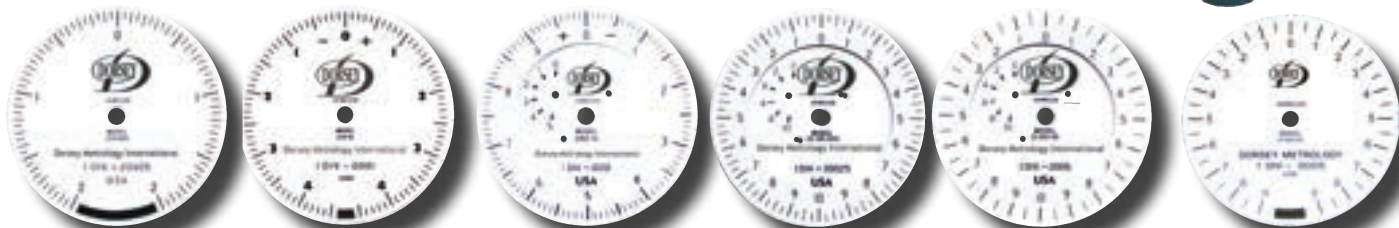


Adjustable  
Part #C231



## 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-.10"-0	0-.10"-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"

## DIAL INDICATING UNITS-CONTINUED



Model	DS-2I01-001mm	DS-2I02-002mm	DS-2I10-002mm	DS-2I25-005mm	DS-2I04-005mm	DS-S2I/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	0.05-0-0.05mm	0.10-0-0.10mm	0-.10mm-0	0-.25mm-0	0.2-0-0.2mm	0-.050"-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)



For perpendicular indicator unit add -90 as suffix.  
 Example: DS-2I40-05-90  
 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.

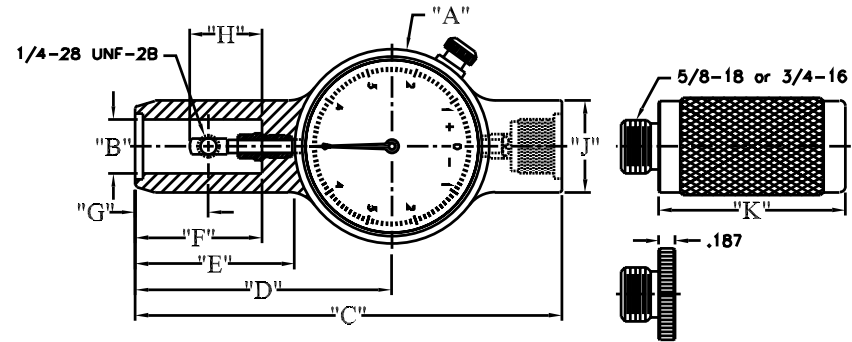


Model	DS-2DM025-01	DS-2DM100-01	DS-2DM050-05	DS-2DM125-05	DS-2DM250-10	DS-2DMIM	DS-2DM005-002mm	DS-2DM012-005mm	DS-2DM5-01mm
Graduation	.0001"	.0001"	.0005"	.0005"	.001"	.0001"/0.002mm	0.002mm	0.005mm	0.01mm
Total Travel	.025"	.100"	.050"	.125"	.250"	.010" / 0.24mm	.5mm	1.25mm	5mm
Revolutions	2.5 Rev.	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 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"



## INDICATOR HOUSING OPTIONS



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



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



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








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



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

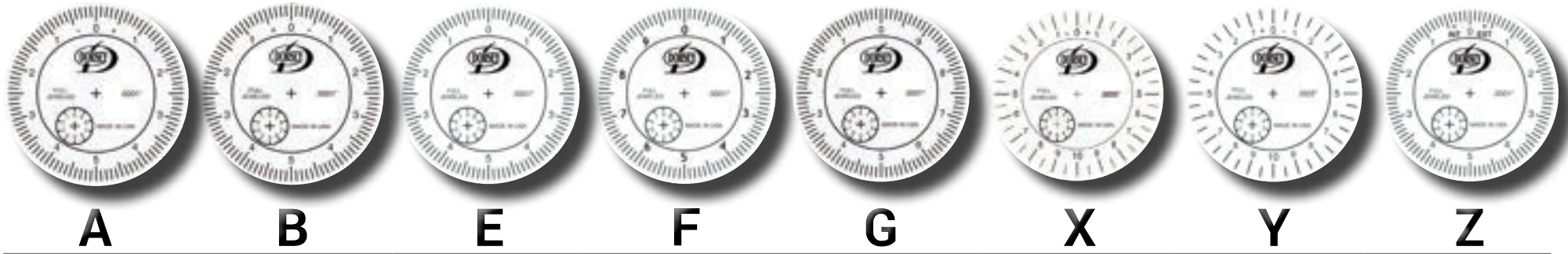


Dorsey offers the most popular styles of digital indicators to complement our gages. Use the matrix below to select the proper indicator for your application. Please note that we offer many other digital indicators. Contact us if your requirements are not met by these selections.

	PART#	RANGE	RESOLUTION	ACCURACY	FEATURES/DESCRIPTION
 <p>STYLE 1</p>	MT543-XX1	.500" / 12.7mm	.00005" / 0.001mm	< .0008"	ID-S series, SPC output, inch/metric select, rotating face, capacitive system, 20,000 hour battery life.
	MT543-XX2	.500" / 12.7mm	.00005" / .0001" / .0005" Inch and 0.001mm / 0.01mm Metric Selectable	< .00012"	This ID-C series includes large digital readout display, Inch/Metric switchable, go/ no-go feature by setting upper & lower limits, and SPC data output, rotating face, 5,000 hour battery life.
	MT543-XBG	.500" / 12.7mm	.00005" / 0.001mm	< .00012"	This ID-C series is designed for ID/bore gage applications, digital readout and analog bar graph displays, Inch/Metric switchable, minimum value holding function, go/no-go feature and SPC data output, 2,000 hour battery life.
	MT543-XX3	.500" / 12.7mm	.00001"-.05"/ 0.0002 - 1mm	< .00012"	Programmable model Inch/Metric 2:1 and 4:1 Digital Indicator
 <p>STYLE 2</p>	A2500-C	.250"	.0001" / 0.002mm	+/- .0001"	Numeric & analog visual display, inch/metric selectable, floating zero, rotating bezel, incremental measuring mode, high/low tolerance settings, min/max hold reading, TIR, absolute/preset measuring mode, max/min reading and display/freeze reading hold, programmable lock combination, data output.
	A3500-C	.250"	.00005" / 0.001mm	+/- .00005"	
	A2600-C	.600"	.0001" / 0.002mm	+/- .00005"	
	A2110-C	1.00"	.0001" / 0.002mm	+/- .00005"	
	Q2500-C	.250"	.0001" / 0.002mm		Same as above except without analog visual display and with programmable presets and ratios used for three point gages and countersink and chamfer gages.
	Q3500-C	.250"	.00005" / 0.001mm		
	Q2600-C	.600"	.0001" / 0.002mm		
 <p>STYLE 3</p>	M2034101	+/- .040"/1.00mm	.00001" / 0.0002mm .00002" / 0.0005mm .00005" / 0.001mm .0001" / 0.002mm	+/- .020" = 0.25%	Digital readout and analog bar graph display, Inch/Metric and resolution switchable, deviation from zero or preset capabilities for actual size, auto power down, Go/No-go feature and data output.
	M2034201	+/- .040"/1.00mm	.0002" / 0.005mm .0005" / 0.01mm .001" / 0.02mm	+/- .040" = 0.50%	Utilizes the features above plus hold, min/max & TIR functions, multiplier function for ratios and two point difference measurement.
 <p>STYLE 4</p>	M2033101	+/- .040"/1.00mm	Digital Display .00002" / 0.0005mm .00005" / 0.001mm .0005" / 0.001mm .0001" / 0.002mm	+/- 0.50%	Inch/Metric, resolution switchable Digital readout and analog fan display, min/max TIR, hold and reset function without output.
	M2033111	+/- .040"/1.00mm	Analog Display .0005" / 0.001mm .0001" / 0.002mm .001" / 0.02mm	+/- 0.50%	Includes same features as above, but also includes RS232 output.
 <p>STYLE 5</p>	FV545301350	.50"/12.5mm	.00005" / 0.001mm	+/- .00012"/.003mm	Mark VI electronic indicator, USB/RS232 output, wireless, 10,000 hours battery life, bezel rotates 270 degrees.
	FV545301550	1.00"/25mm		+/- .00016"/.004mm	

Note: All indicator part numbers shown above include a standard flat back. Contact us for other optional backs & accessories. Wireless indicators available upon request.

# DIAL FACE FORMATS (AGD SIZE 2)



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

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

## SPECIAL SHADED DIALS



## TRADITIONAL DIAL INDICATOR OPTIONS



Internal hole attachment 1.68" depth  
Part #C28



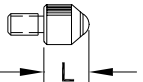
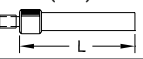
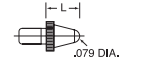
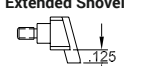
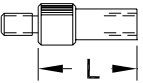
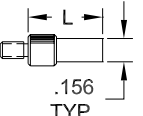
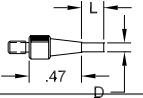
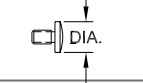
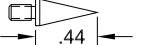
Internal hole attachment  
.81" depth  
Part #C29

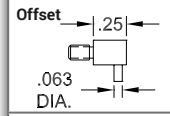
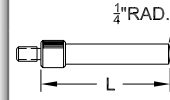
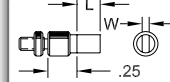
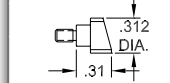
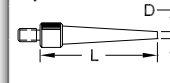






Right angle attachment  
Part #C30



Top left lifting lever  
Part #C77  
Part #C77R

CONTACTS	PART #	MATERIAL	L	W	DIA/ or RAD	
 <p>Ball</p>	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	
 <p>Blank (Soft)</p>	47066	Steel	1.00"		.156" Dia.	
 <p>Extended Range</p> <p>Standard for Long Range Indicators</p>	16631	Steel	.236"		.079" DIA.	
 <p>Extended Shovel</p>	4082-ES	Carbide		Steel	.125" Dia.	
 <p>Extensions &amp; Thread Adapters</p>	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	
 <p>Flat</p> <p>.156 TYP.</p>	47937	Steel	.250"		.156" Dia.	
	47076	Steel	.500"		.156" Dia.	
	47079	Steel	.750"		.156" Dia.	
	47074	Steel	1.00"		.156" Dia.	
	18532	Carbide	.250"		.156" Dia.	
	18533	Carbide	.500"		.156" Dia.	
	18534	Carbide	.750"		.156" Dia.	
	18535	Carbide	1.00"		.156" Dia.	
	 <p>Flat Pin</p>	18524	Steel	.100"		.020" Dia.
		18525	Steel	.100"		.040" Dia.
18526		Steel	.200"		.060" Dia.	
18527		Steel	.500"		.080" Dia.	
 <p>Mushroom</p>		297-S	Steel			.250" Dia.
	297-C	Carbide			.250" Dia.	
	298-S	Steel			.500" Dia.	
	110	Steel	.250"		.250" Dia.	
	 <p>Needle</p>	3655	Steel			.44

	PART #	MATERIAL	L	DIA/ or RAD
 <p>Offset</p> <p>.25 .063 DIA.</p>	2740	Steel		
	2740-C	Carbide		
 <p>Radius</p> <p>1/4" RAD .7</p>	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.
 <p>Rail</p> <p>L W .25</p>	18528	Steel	.100"	
	18529	Steel	.150"	
	18530	Steel	.200"	
 <p>Shovel</p> <p>.312 DIA. .31</p>	4082-SN	Steel		With locknut
	4085-CSN	Carbide		With locknut
	4082-ESN	Carbide		Extended / nut
 <p>Taper Flat</p> <p>D L</p>	18522	Carbide	.375"	.040" Dia.
	47077	Steel	1.00"	.060" Dia.
	47943	Carbide	1.00"	.060" Dia.
 <p>Taper Radius</p> <p>.44</p>	302-S	Steel		
	302-C	Carbide		
 <p>Contact Spacer</p>	175-1		.040" Thick	
	175-2		.060" Thick	
	175-3		.090" Thick	
Use between indicator and spindle to extend contact reach.				
 <p>Stem Bushing</p>	125			
Used to adapt 8mm indicator stem to 3/8" hole.				
 <p>Helping Spring</p>	120		.230" Dia. X5"	
Used in conjunction with part #110 mushroom shoulder contact to increase spindle pressure.				

- ✓ All Dorsey dimensional measurement instruments that are used with digital indicators can be connected to wireless transmitters.
- ✓ The real time wireless data collection and recording system efficiently sends the measurement files to a base station, saving time and eliminating errors.
- ✓ The electronically collected measurement can be used for a variety of purposes:
  - To enter data directly into any statistical process control (SPC), data acquisition (DAQ) software or take real-time data directly into Windows applications such as Excel, Minitab, SPC software, etc.
  - The dimensional readings taken in real time can be sent to interface with the CNC controllers of machine tools to automatically adjust the machine settings for part size variations and trends.



DYN Groove Gage



#6 Bore Gage



ID Indicating Plug Gage



SDN Snap Gage with bench stand



SSG Snap Gage

Countersink Gage



J-2 Jaw Gage



LDF Series Large Diameter Gage

Dorsey Metrology and MicroRidge have come together to offer the MobileCollect Wireless on any Dorsey Instrument available with variety of manufacturer's digital indicators such as Mahr-Federal, Mitutoyo, Starrett, and Sylvac-Fowler. The MobileCollect is a great alternative to their proprietary wireless data collections systems but both options are available.

**MobileCollect**  
*wireless on the move*

MicroRidge Systems Inc.

Tel: 541-593-1656

www.microridge.com

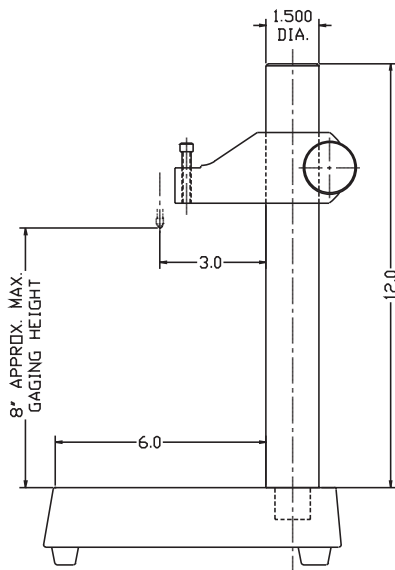




The Dorsey E1 comparator stand is specially designed for use in production and shop areas. The comparator stand has a large base and 3" throat clearance to give the user maximum flexibility for measuring various size pieces. This product may be used with any of Dorsey's dial or digital indicators.

## 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



# S2 COMPARATOR STAND

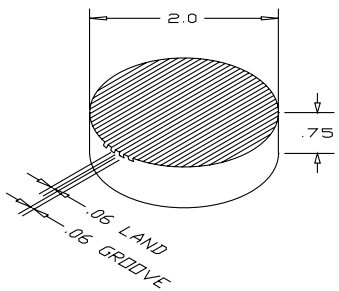
The S2 precision comparator stand was designed for manufacturing areas requiring high accuracy such as grinding and inspection departments. It is recommended for use with all Dorsey high amplification dial and digital indicators, but will accommodate other gaging devices having a standard .375" or 8mm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

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

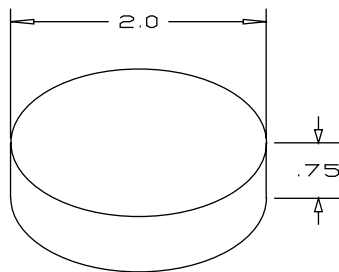
## FEATURES:

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

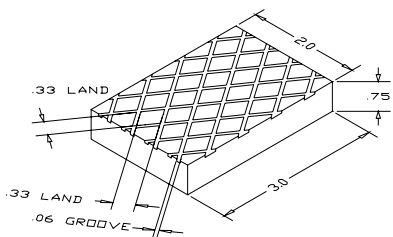
Part# 47141  
Straight serrated surface anvil 2" dia.



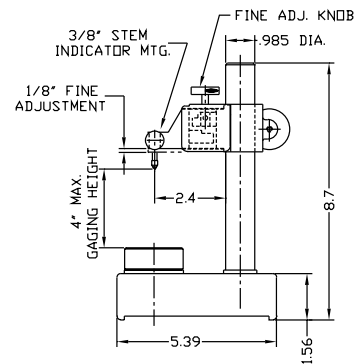
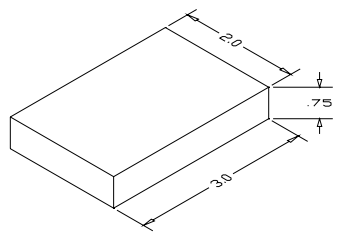
Part# 47113  
Flat surface anvil 2" dia.



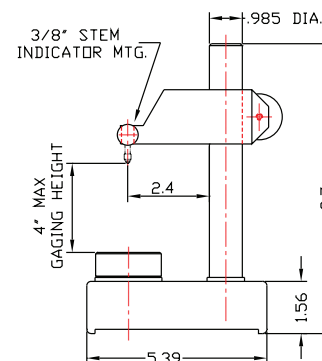
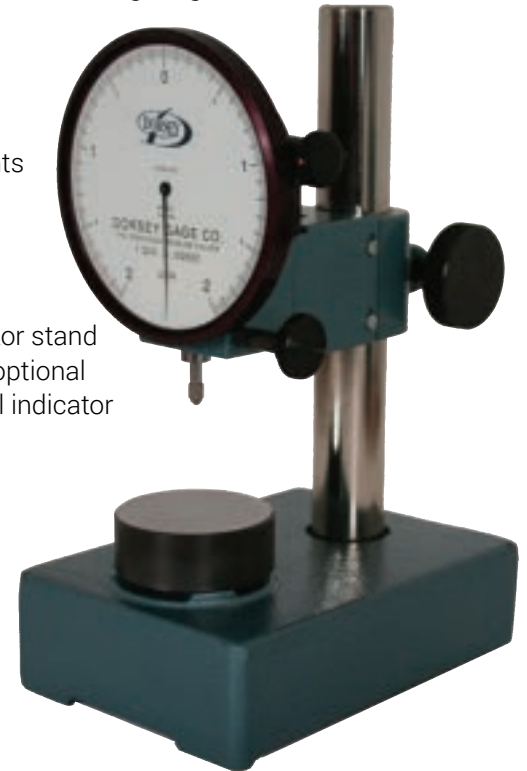
Part# 47139  
Flat diamond serrated surface anvil 2"x3"



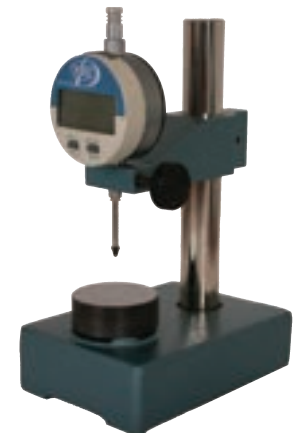
Part# 47138  
Flat surface anvil 2"x3"



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



S2N comparator stand shown with optional extended range digital indicator



PART #	DESCRIPTION
47145	S2 STAND WITHOUT ANVIL
S2-HEAD	FINE ADJUSTMENT HEAD ONLY
47145N	S2N STAND WITHOUT ANVIL
For Anvil options, please see above	



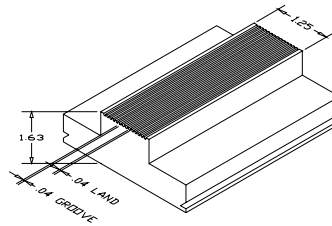
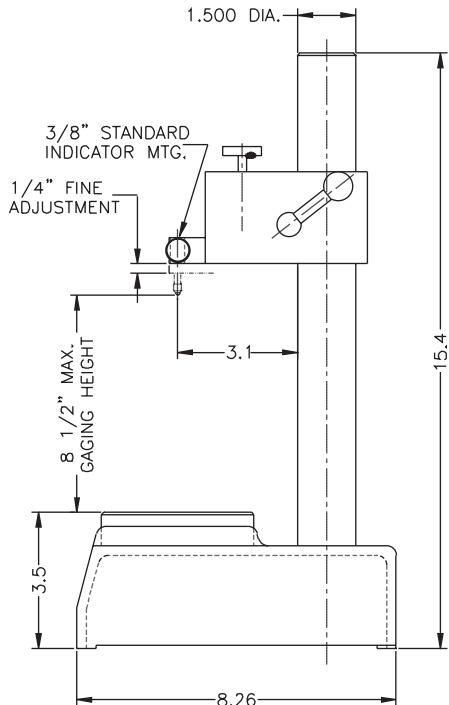
# S3 COMPARATOR STAND

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".

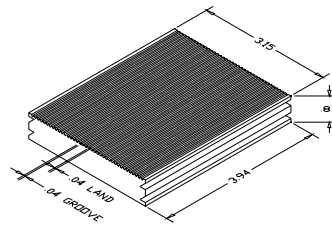
## FEATURES:

- ✔ 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.

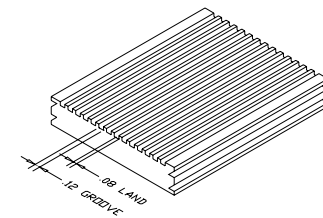
PART #	DESCRIPTION
47405	S3 STAND WITHOUT ANVIL
S3-HEAD	S3 FINE ADJUSTMENT HEAD ONLY



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



Shown with optional  
#414-002 indicator



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

## FEATURES:

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

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

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

## INTERMEDIATE AND LARGE SIZE BEARINGS

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



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



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

**Part #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

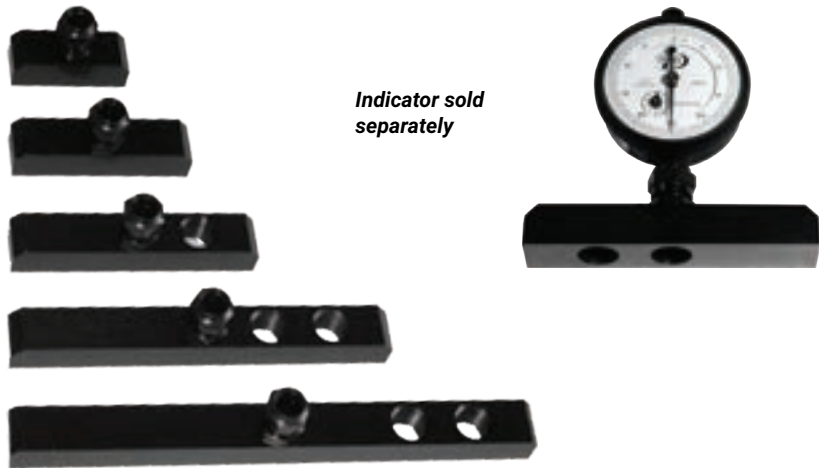
**Part #FC2-NI** Frame and contact, less indicator



**Part #FC3** Spherical contacts

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

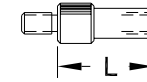
**Part #FC3-NI** Frame and contacts, less indicator



Indicator sold separately

## FEATURES:

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



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

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

## "V" BASE DIAL DEPTH GAGE

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



Shown is DDG-125C

## FEATURES:

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

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

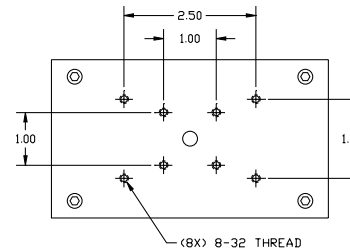
# BG DIRECT & BG2 BENCH GAGE

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.

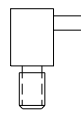
PART #	DESCRIPTION
BGD	Model BG Direct with Part #112 steel pin contact and (1" range, .001" graduation) dial indicator
BGD-NI	Model BG Direct with Part #112 steel pin contact less indicator
BGD-SET	Model BG Direct with set of steel contacts (shown below) (1" range, .001" graduation) dial indicator
BGD-SETNI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



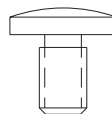
BG Direct



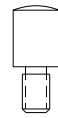
Top Plate Hole Pattern



Offset  
#2740



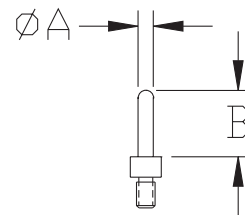
Mushroom  
# 297



Radius  
#112



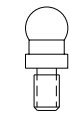
Needle  
#3655



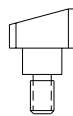
Special contacts  
specify A and B dimensions



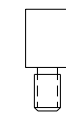
Taper  
#302



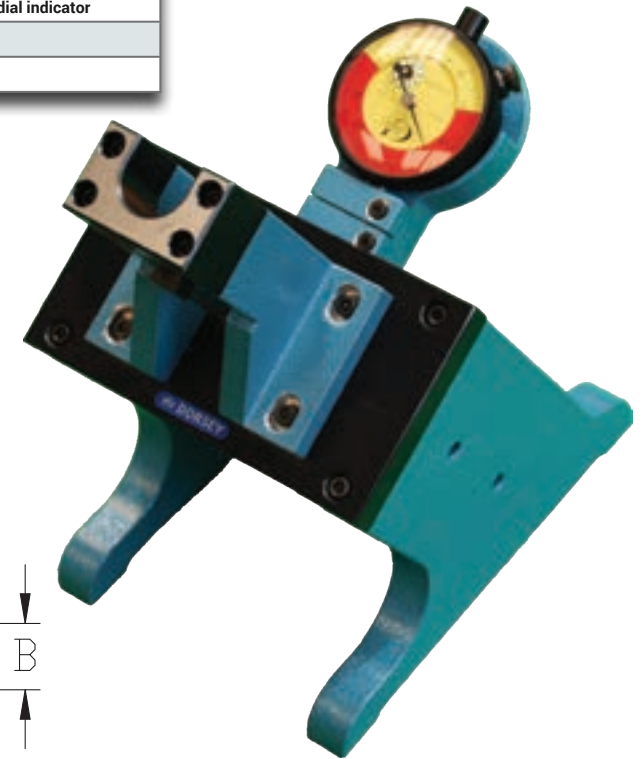
Ball  
#4087-187-B



Shovel  
# 4082S



Flat  
#47076



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

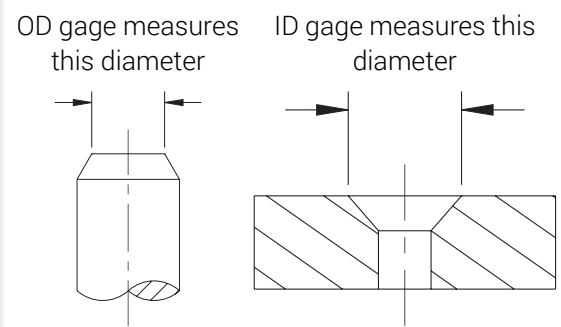
ID- COUNTERSINK MODEL 90-127°				
RANGE	INCH PART#	RANGE	METRIC PART#	DIGITAL PART#
0-3/8"	DC-127-375	0-9.5MM	DC-127-375M	DC-127-375-D
0-1/2"	DC-127-500	0-12.7MM	DC-127-500M	DC-127-500-D
0-1"	DC-127-1000	0-25MM	DC-127-1000M	DC-127-1000-D
1-2"	DC-127-2000	25-50MM	DC-127-2000M	DC-127-2000-D
2-3"	DC-127-3000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

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

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

\* Special Order



# SPECIAL APPLICATIONS

In addition to its already diverse product line of precision dimensional gaging instruments, Dorsey offers special applications to accommodate a variety of needs.

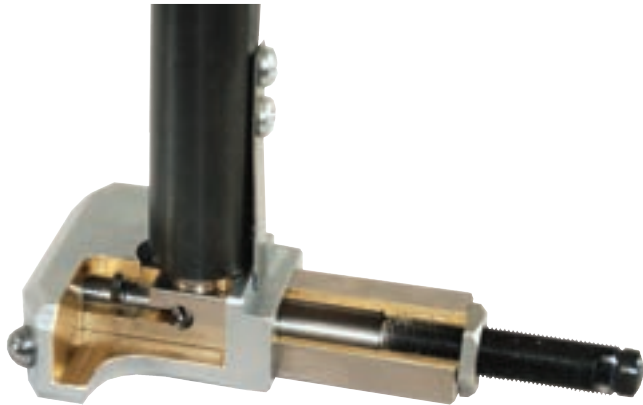


Bore gages are comparative instruments designed to check hole diameter and condition. Bore gages use the principle of two point gaging and three point centralization. The gaging contacts are diametrically opposed which allows the most accurate reading of a bore. The reference contact is constructed to 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.

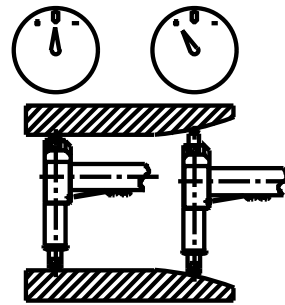
## DBL SERIES BORE GAGES

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

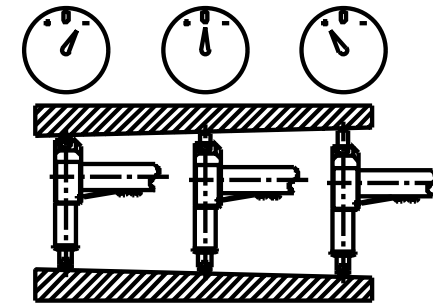


## DORSEY STANDARD BORE GAGES

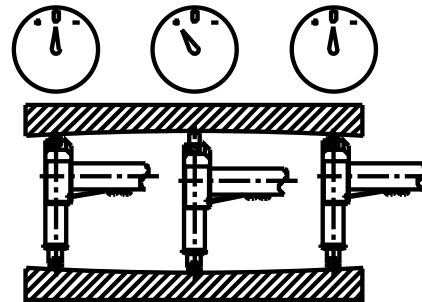
A single piece gaging head encloses both gaging pin centralizing pins in one rugged, compact, and durable unit.



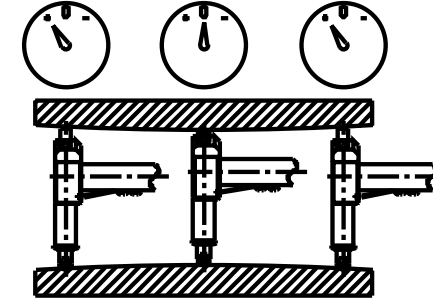
BELL MOUTH



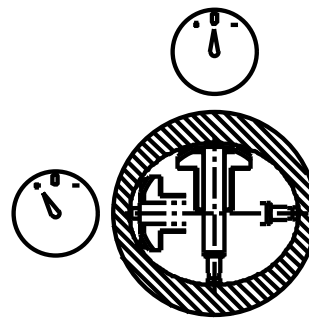
TAPER



BARREL SHAPE



HOUR GLASS



OUT OF ROUND

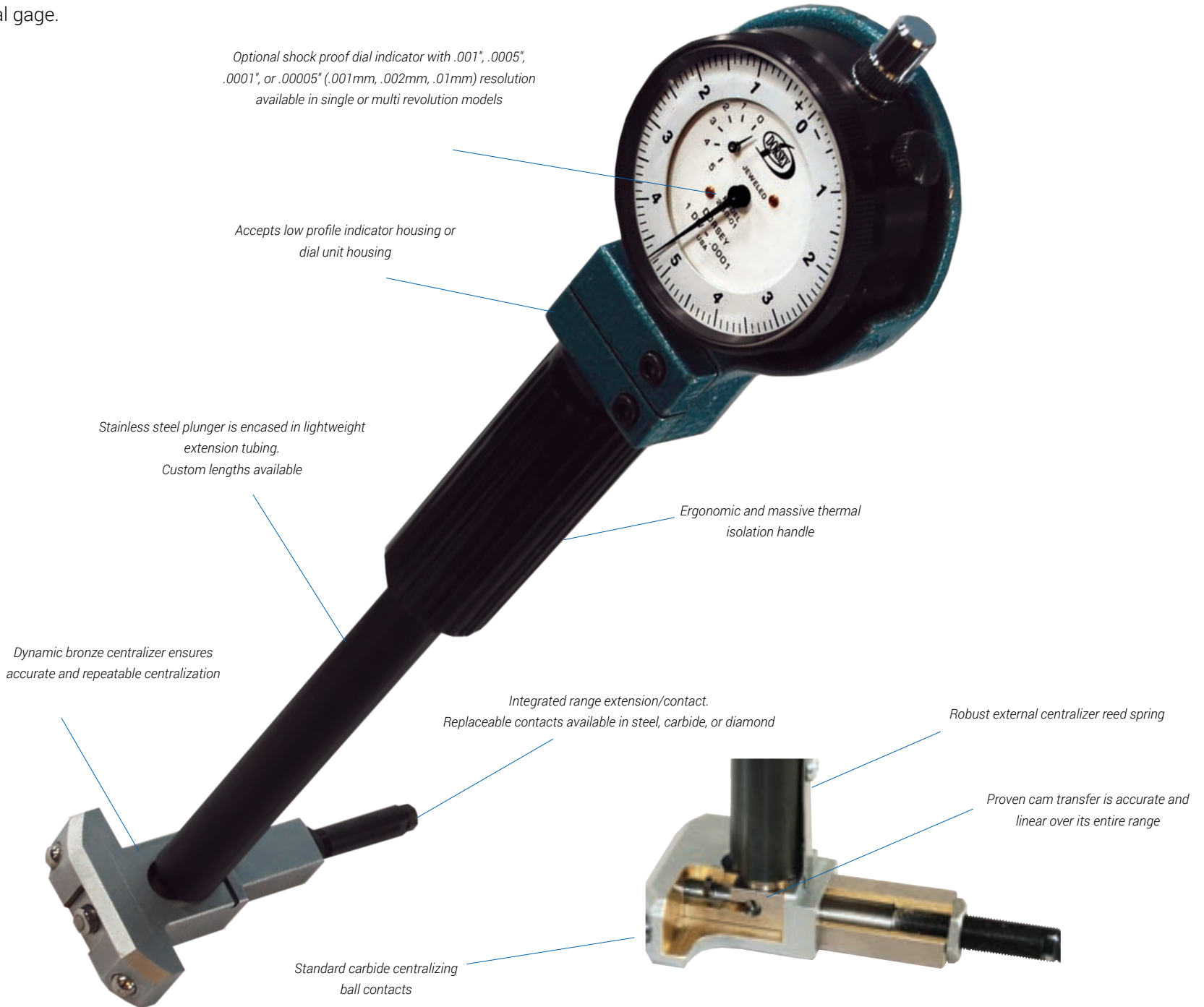
## "EXPLORE THE BORE"

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 SERIES - INTERNAL DIAL BORE GAGES

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.



**2 Point**  
Recommended for smaller diameters (Standard Feature)



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.

**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

**DBL-300**

3.00 - 6.00"  
76.200 - 152.400mm



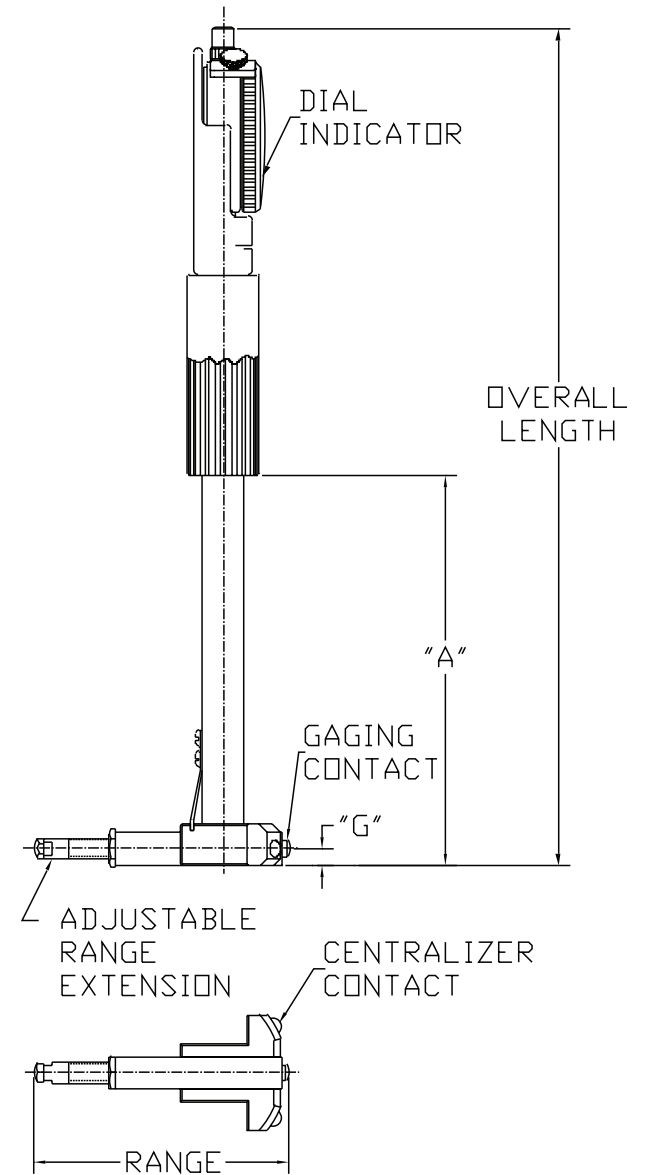
All DBL series gages include carbide centralizing contacts, a .0001" or 0.002mm graduation dial indicator, and fitted wooden storage box.

Other options available: carbide or diamond contacts, extra lengths, 2 and 3 point depth stops, choice of any Dorsey "high amplification", "traditional" or digital indicators, single rev models, and digital indicators.

# DBL SERIES - INTERNAL DIAL BORE GAGES

MODEL	RANGE (inches)	OVERALL LENGTH (inches)	RANGE (metric)	"A" GAGING DEPTH (inches)	"G" DIMENSION (inches)	GAGING CONTACT TRAVEL	
						STANDARD (inches)	OPTIONAL (inches)
DBL-248-S	.248-.501	6.31	6.299-12.725	2.25	.140	.010	.016
DBL-248-C	.248-.501	6.31	6.299-12.725	2.25	.140	.010	.016
DBL-499-S	.499-1.001	9.75	12.674-25.425	3.00	.188	.016	.022
DBL-499-C	.499-1.001	9.75	12.674-25.425	3.00	.188	.016	.022
DBL-998-S	.998-1.501	9.75	25.349-38.125	3.00	.188	0.25	.050
DBL-998-C	.998-1.501	9.75	25.349-38.125	3.00	.188	0.25	.050
DBL-1499-S	1.499-3.00	10.75	38.0746-76.200	4.00	.188	.025	.050
DBL-1499-C	1.499-3.00	10.75	38.0746-76.200	4.00	.188	.025	.050
DBL-300-S	3.00-6.00	11.75	76.200-152.400	5.00	.250	.025	.070
DBL-300-C	3.00-6.00	11.75	76.200-152.400	5.00	.250	.025	.070
SPECIAL RANGE MODELS							
DBL-365-S	.365-.620	6.31	9.271-15.748	2.25	.140	.010	.016
DBL-620-S	.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-400-S	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. Price includes fitted storage case.



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"

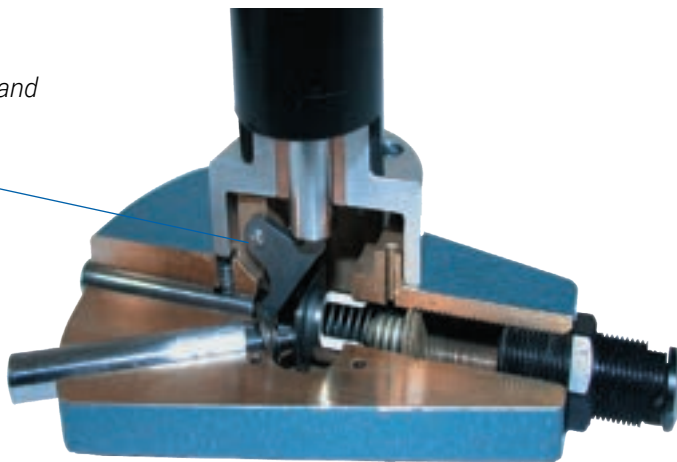
## A TIME PROVEN DESIGN MADE BETTER BY DORSEY

This design of rugged production line bore gages has been an industry standard for more than 75 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. We also build bore gages with modifications, special gages, and new models to meet their current and future needs.

- ✓ **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 .001", .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.*





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 housing, 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 anytime
- ✓ Easy to order instead of the DS-B1 part number use DS-MB to order
- ✓ Available in Combination kit and you will never have to worry about losing the spring!
- ✓ Wooden storage box available

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



**STYLE 1** - All sizes utilize the same dial unit housing for extreme versatility.

Size 1  
.63" - 1.00"  
16mm - 25.4mm

Size 2  
1.00"-1.53"  
25.4 - 38.9mm

Size 3  
1.50"-2.16"  
38.1 - 54.8mm

Size 4  
2.12"-3.13"  
54.0 - 79.5mm

Size 5  
3.09"-6.13"  
78.5 - 156mm

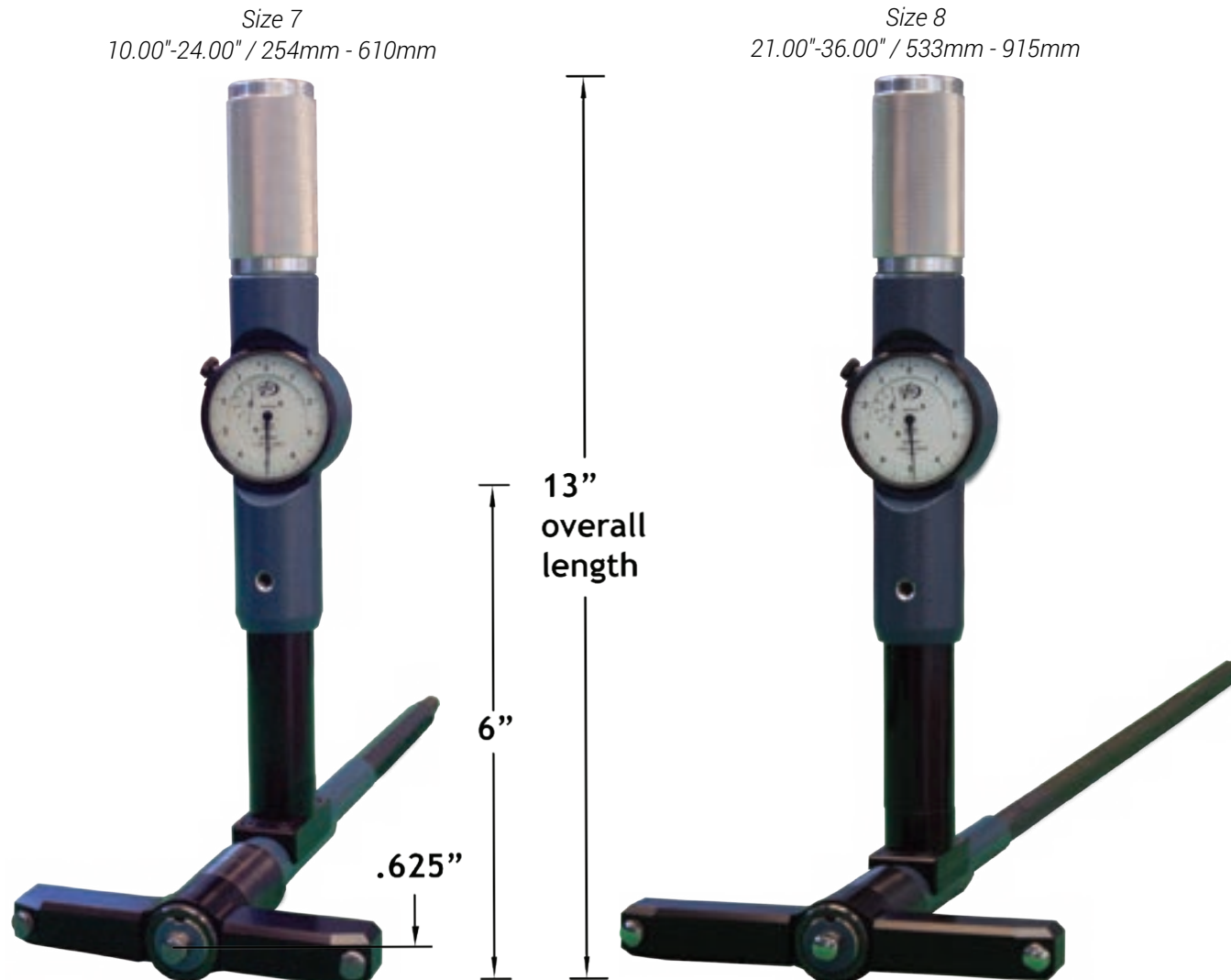
Size 6  
6.00"-12.13"  
152.5 - 308.0mm



## 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 (12"-24") and # DBM-24000 (20" to 36") are adjustable, more convenient to handle, and less expensive than a library of traditional large rings.

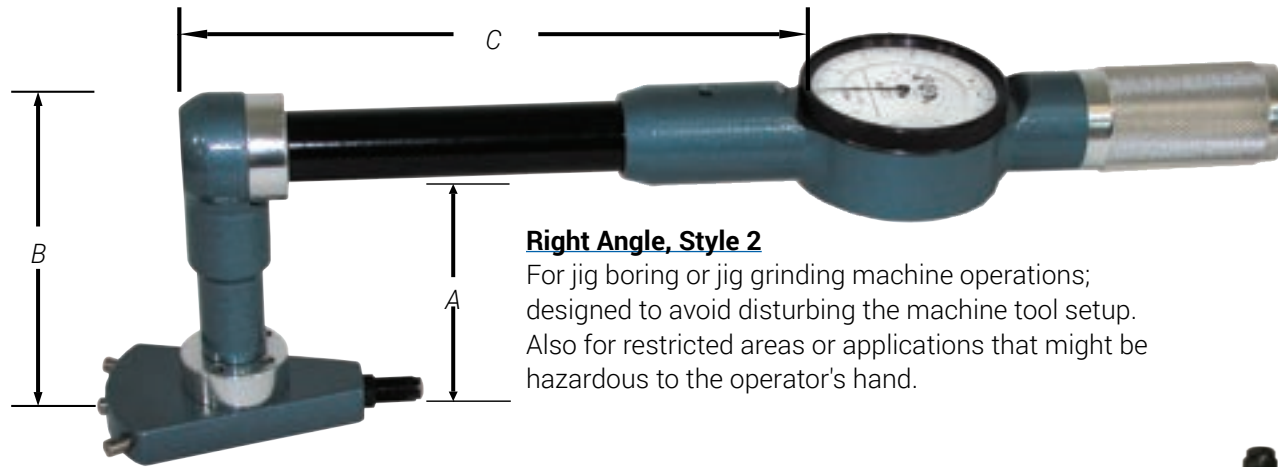


### OPTIONAL: BORE GAGE DEPTH EXTENSIONS

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"

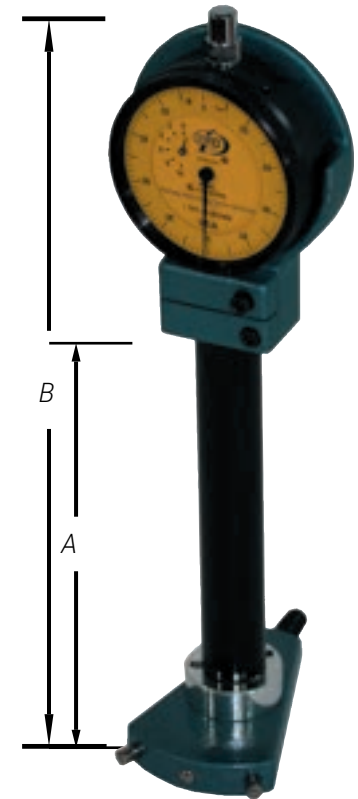
# DORSEY STANDARD BORE GAGES

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.

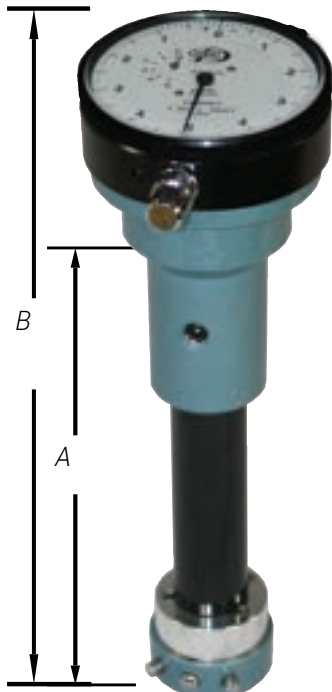


### **Vertical, Style 3**

For vertical axis bores at eye level; best choice for bench inspection applications.

### **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.

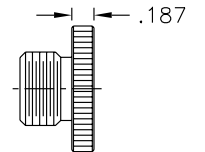
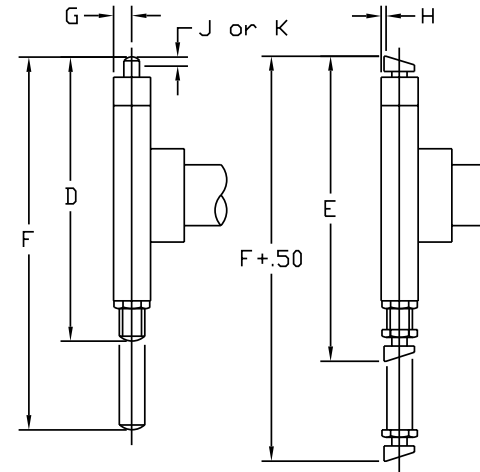


GAGE SIZE	STANDARD STYLE 1			RIGHT ANGLE STYLE 2				VERTICAL STYLE 3			PERPENDICULAR STYLE 4			PISTOL GRIP STYLE 5			FLUSH STYLE 7
	A		B	A	B	C	A	B	A	B	A	B	A	B	B		
	STD	MIN		STD	MIN		STD	MIN	STD	MIN	STD	MIN	STD	MIN			
1	2.70"	2.70"	7.27"	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	5.00"	2.31"	8.12"	2.53"	2.35"	3.88"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

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

## GAGE-HEAD DIMENSIONS (ALL STYLES)

SIZE	D		E		F	G	H	J	K	RANGE 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 EXTENSION HOUSING #3, 4 & 5

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



## BORE GAGE DUST CAP

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

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

# DIAL BORE GAGE COMBINATION KIT

## 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.
- ✓ Considerable cost savings.
- ✓ Convenient carrying case.
- ✓ 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).

*Available in Carbon Fiber*



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

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



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

	DS-	B1- MB- (for modular)	1 Style	2 Indicator	1 Contacts	
GAGE SIZE	INDICATOR GRADUATION	HIGH AMPLIFICATION INDICATOR	PART NUMBER	TRADITIONAL INDICATOR	TRADITIONAL PART NUMBER	
.63" - 1.00"	.0005 <sup>s</sup>	DS-214-005	DS-B1-10101			
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11101			
	.0001"	DS-2150-01	DS-B1-12101			
	.00025"	DS-21100-025	DS-B1-10111			
	.0005"	DS-21100-05	DS-B1-14101			
	NONE	LESS INDICATING UNIT	DS-B1-15101			
	0.005mm	DS-2125-005mm	DS-B1-17101			
	0.002mm	DS-2110-002mm	DS-B1-18101			
	0.002mm <sup>s</sup>	DS-2102-002mm	DS-B1-19101			
	0.001mm <sup>s</sup>	DS-2101-001mm	DS-B1-10121			
16 - 25.4mm	.0001" / .002mm <sup>s</sup>	S2LM	DS-B1-12101M			
	.00005" / 0.001mm	DIGITAL	DS-B5-10101			
	1.00 - 1.53"	.0005 <sup>s</sup>	DS-214-005	DS-B1-10102		
		.0001 <sup>s</sup>	DS-219-01	DS-B1-11102		
		.0001"	DS-2150-01	DS-B1-12102	DS-2DM025-01	DS-B2-12102
		.00025"	DS-21100-025	DS-B1-10112		
		.0005"	DS-21100-05	DS-B1-14102	DS-2DM050-05	DS-B2-14102
		NONE	LESS INDICATING UNIT	DS-B1-15102		
		0.005mm	DS-2125-005mm	DS-B1-17102	DS-2DM012-005mm	DS-B2-17102
		0.002mm	DS-2110-002mm	DS-B1-18102	DS-2DM005-002mm	DS-B2-18102
0.002mm <sup>s</sup>		DS-2102-002mm	DS-B1-19102			
0.001mm <sup>s</sup>		DS-2101-001mm	DS-B1-10122			
25.4 - 38.9mm	.0001" / .002mm <sup>s</sup>	S2LM	DS-B1-12102M			
	.00005" / 0.001mm	DIGITAL	DS-B5-10102			

	0 Indicator	4 Gage Size	-12 A Length			
GAGE SIZE	INDICATOR GRADUATION	HIGH AMPLIFICATION INDICATOR	PART NUMBER	TRADITIONAL INDICATOR	TRADITIONAL PART NUMBER	
1.50 - 2.16"	.0005 <sup>s</sup>	DS-214-005	DS-B1-10103			
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11103			
	.0001"	DS-2150-01	DS-B1-12103	DS-2DM025-01	DS-B2-12103	
	.00025"	DS-21100-025	DS-B1-10113			
	.0005"	DS-21100-05	DS-B1-14103	DS-2DM050-05	DS-B2-14103	
	NONE	LESS INDICATING UNIT	DS-B1-15103			
	0.005mm	DS-2125-005mm	DS-B1-17103	DS-2DM012-005mm	DS-B2-17103	
	0.002mm	DS-2110-002mm	DS-B1-18103	DS-2DM005-002mm	DS-B2-18103	
	0.002mm <sup>s</sup>	DS-2102-002mm	DS-B1-19103			
	0.001mm <sup>s</sup>	DS-2101-001mm	DS-B1-10123			
38.1 - 54.8mm	.0001" / .002mm <sup>s</sup>	S2LM	DS-B1-12103M			
	.00005" / 0.001mm	DIGITAL	DS-B5-10103			
	2.12 - 3.13"	.0005 <sup>s</sup>	DS-214-005	DS-B1-10104		
		.0001 <sup>s</sup>	DS-219-01	DS-B1-11104		
		.0001"	DS-2150-01	DS-B1-12104	DS-2DM025-01	DS-B2-12104
		.00025"	DS-21100-025	DS-B1-10114		
		.0005"	DS-21100-05	DS-B1-14104	DS-2DM050-05	DS-B2-14104
		NONE	LESS INDICATING UNIT	DS-B1-15104		
		0.005mm	DS-2125-005mm	DS-B1-17104	DS-2DM012-005mm	DS-B2-17104
		0.002mm	DS-2110-002mm	DS-B1-18104	DS-2DM005-002mm	DS-B2-18104
0.002mm <sup>s</sup>		DS-2102-002mm	DS-B1-19104			
0.001mm <sup>s</sup>		DS-2101-001mm	DS-B1-10124			
54.0 - 79.5mm	.0001" / .002mm <sup>s</sup>	S2LM	DS-B1-12104M			
	.00005" / 0.001mm	DIGITAL	DS-B5-10104			
	3.09 - 6.13"	.0005 <sup>s</sup>	DS-214-005	DS-B1-10105		
		.0001 <sup>s</sup>	DS-219-01	DS-B1-11105		
		.0001"	DS-2150-01	DS-B1-12105	DS-2DM025-01	DS-B2-12105
		.00025"	DS-21100-025	DS-B1-10115		
		.0005"	DS-21100-05	DS-B1-14105	DS-2DM050-05	DS-B2-14105
		NONE	LESS INDICATING UNIT	DS-B1-15105		
		0.005mm	DS-2125-005mm	DS-B1-17105	DS-2DM012-005mm	DS-B2-17105
		0.002mm	DS-2110-002mm	DS-B1-18105	DS-2DM005-002mm	DS-B2-18105
0.002mm <sup>s</sup>		DS-2102-002mm	DS-B1-19105			
0.001mm <sup>s</sup>		DS-2101-001mm	DS-B1-10125			
78.5 - 156mm	.0001" / .002mm <sup>s</sup>	S2LM	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	PART NUMBER	TRADITIONAL INDICATOR	TRADITIONAL PART NUMBER
6.00 - 12.13"  6  152.5 - 308.0mm	.00005 <sup>s</sup>	DS-214-005	DS-B1-10106		
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11106		
	.0001"	DS-2150-01	DS-B1-12106	DS-2DM025-01	DS-B2-12106
	.00025 <sup>s</sup>	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		
10.00 - 24.00"  7  254 - 610mm	.00005 <sup>s</sup>	DS-214-005	DS-B1-10107		
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11107		
	.0001"	DS-2150-01	DS-B1-12107	DS-2DM025-01	DS-B2-12107
	.00025 <sup>s</sup>	DS-21100-025	DS-B1-10117		
	.0005"	DS-21100-05	DS-B1-14107	DS-2DM050-05	DS-B2-14107
	NONE	LESS INDICATING UNIT	DS-B1-15107		
	0.005mm	DS-2125-005mm	DS-B1-17107	DS-2DM012-005mm	DS-B2-17107
	0.002mm	DS-2110-002mm	DS-B1-18107	DS-2DM005-002mm	DS-B2-18107
	0.002mm <sup>s</sup>	DS-2102-002mm	DS-B1-19107		
	0.001mm <sup>s</sup>	DS-2101-001mm	DS-B1-10127		
21.00 - 36.00"  8  533 - 915mm	.00005 <sup>s</sup>	DS-214-005	DS-B1-10108		
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11108		
	.0001"	DS-2150-01	DS-B1-12108	DS-2DM025-01	DS-B2-12108
	.00025 <sup>s</sup>	DS-21100-025	DS-B1-10118		
	.0005"	DS-21100-05	DS-B1-14108	DS-2DM050-05	DS-B2-14108
	NONE	LESS INDICATING UNIT	DS-B1-15108		
	0.005mm	DS-2125-005mm	DS-B1-17108	DS-2DM012-005mm	DS-B2-17108
	0.002mm	DS-2110-002mm	DS-B1-18108	DS-2DM005-002mm	DS-B2-18108
	0.002mm <sup>s</sup>	DS-2102-002mm	DS-B1-19108		
	0.001mm <sup>s</sup>	DS-2101-001mm	DS-B1-10128		
21.00 - 36.00"  8  533 - 915mm	.0001" / .002mm <sup>s</sup>	S21.M	DS-B1-12108M		
	.00005" / 0.001mm	DIGITAL	DS-B5-10108		
	.00005 <sup>s</sup>	DS-214-005	DS-B1-10108		
	.0001 <sup>s</sup>	DS-219-01	DS-B1-11108		
	.0001"	DS-2150-01	DS-B1-12108	DS-2DM025-01	DS-B2-12108
	.00025 <sup>s</sup>	DS-21100-025	DS-B1-10118		
	.0005"	DS-21100-05	DS-B1-14108	DS-2DM050-05	DS-B2-14108
	NONE	LESS INDICATING UNIT	DS-B1-15108		
	0.005mm	DS-2125-005mm	DS-B1-17108	DS-2DM012-005mm	DS-B2-17108
	0.002mm	DS-2110-002mm	DS-B1-18108	DS-2DM005-002mm	DS-B2-18108
21.00 - 36.00"  8  533 - 915mm	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>	S21.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.

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.

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

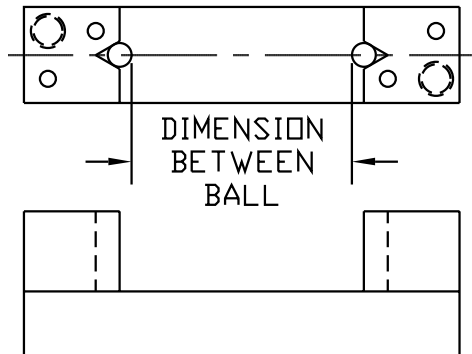


# INTERNAL PITCH DIAMETER BORE GAGE

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.
- ✓ Can be used to check PD or major root diameter of gears and splines.
- ✓ Optional fitted storage case available.



INTERCHANGEABLE CARBIDE CONTACTS	
DIAMETER	PART #
.1250"	4082-125-B
.1875"	4082-187-B
.2500"	4082-250-B
SPECIALS QUOTED PER APPLICATION	

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

Order Model:  
PD-3000-A

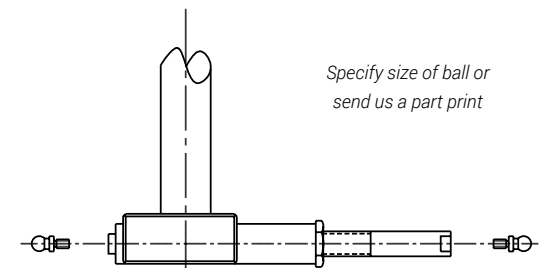
\* Indicator sold separately

Order Model:  
PD-1000-A

"V" Style pitch diameter setmaster, built per application



To order a fitted wooden storage box see the chart.

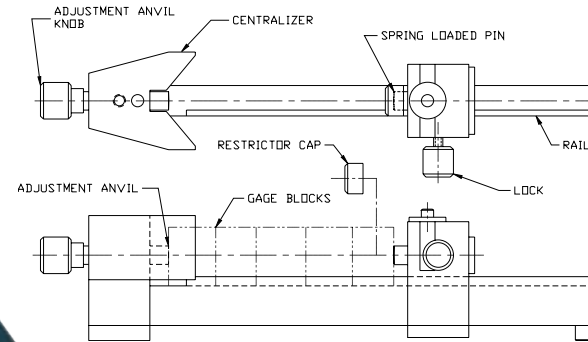


# ADJUSTABLE BORE GAGE SETMASTERS

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 12"-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.

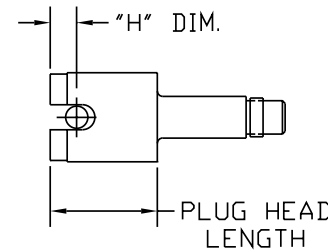
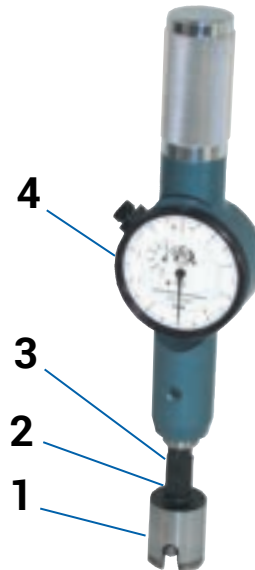
## FEATURES:

- ✓ 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)



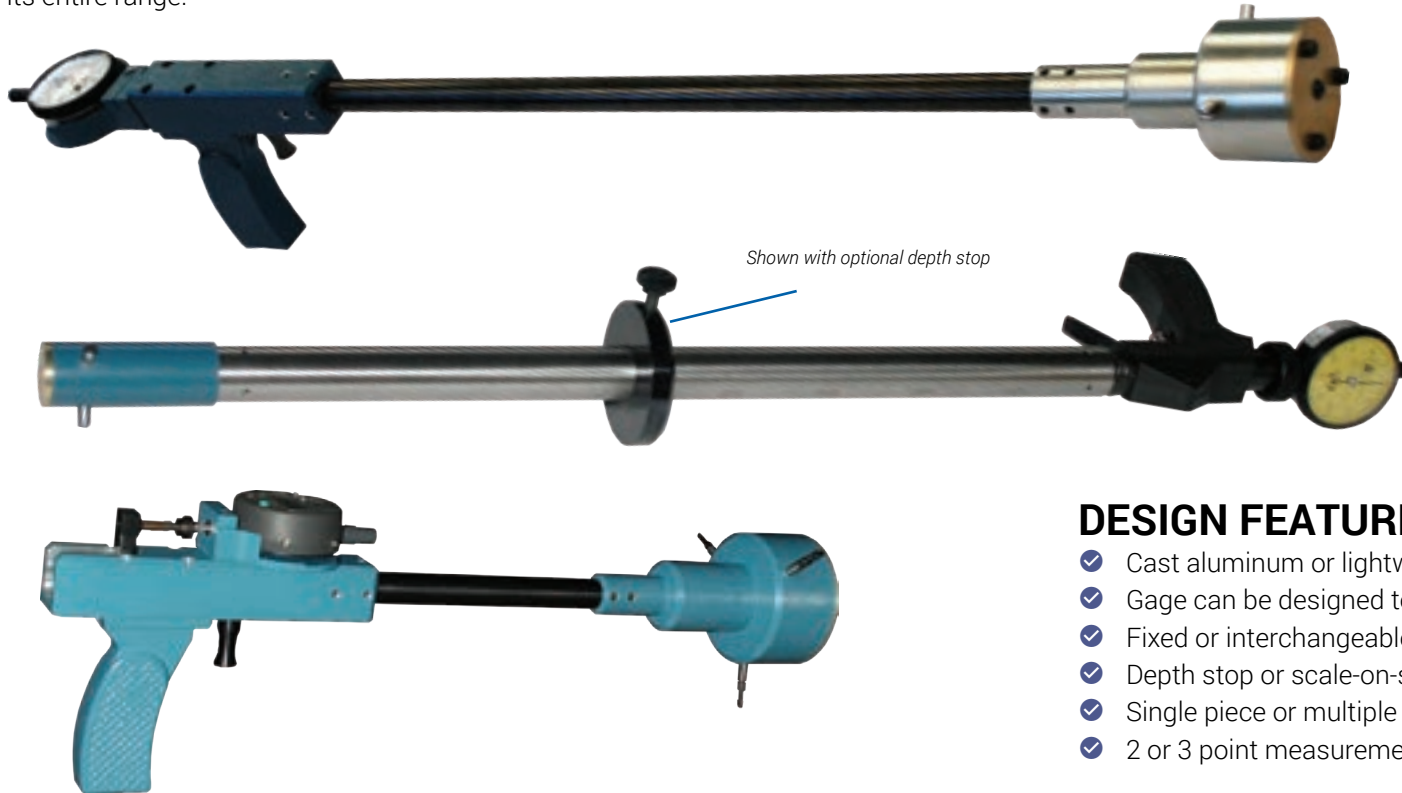
Depth stops available upon request

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

# RLBG SERIES - RETRACTABLE BORE GAGE

www.dorseymetrology.com

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



**Deep Depths Available in Carbon Fiber**

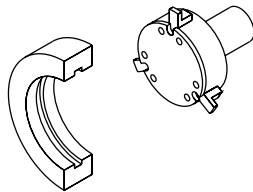
## DESIGN FEATURES:

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

## RETRACTABLE BORE GAGE APPLICATIONS

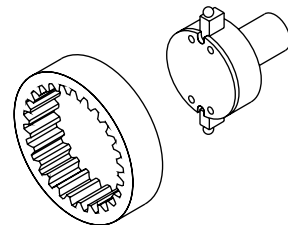
### Groove measurement

Precise groove measurements can be made easily and accurately.



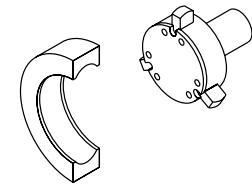
### Spline & Gear measurement

Spline or gear measurement of pitch diameter or major diameter is available.



### Spherical or irregular shape measurement

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



### Ball race or radius groove measurement

The RLBG can be configured to quickly and accurately check ball races and spherical grooves.





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:

- ✓ Two point measurement.
- ✓ Fixed centralizing locators.
- ✓ .025" gaging contact travel.
- ✓ Can be used with digital or dial indicator.
- ✓ Available with perpendicular indicator.
- ✓ Standard 2 point contact or optional 3 point contact.



Dorsey Products -  
proudly made in the USA



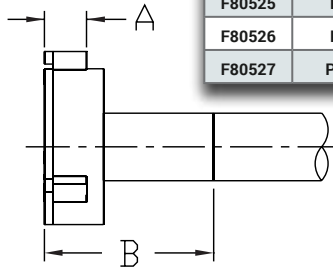
ID	
PART #	WITHIN DIAMETER RANGE (INCHES)
IDG-ID-75	.50 - 1.75
IDG-ID-200	1.75 - 2.75
IDG-ID-300	2.75 - 3.75
IDG-ID-400	3.75 - 4.75
IDG-ID-500	4.75 - 5.75
IDG-ID-600	5.75 - 6.75
IDG-ID-700	6.75 - 7.75
IDG-ID-800	7.75 - 8.75

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

# EASY BORE SERIES (2 or 3 POINT RETRACTABLE HOLE GAGES) [www.dorseymetrology.com](http://www.dorseymetrology.com)

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".

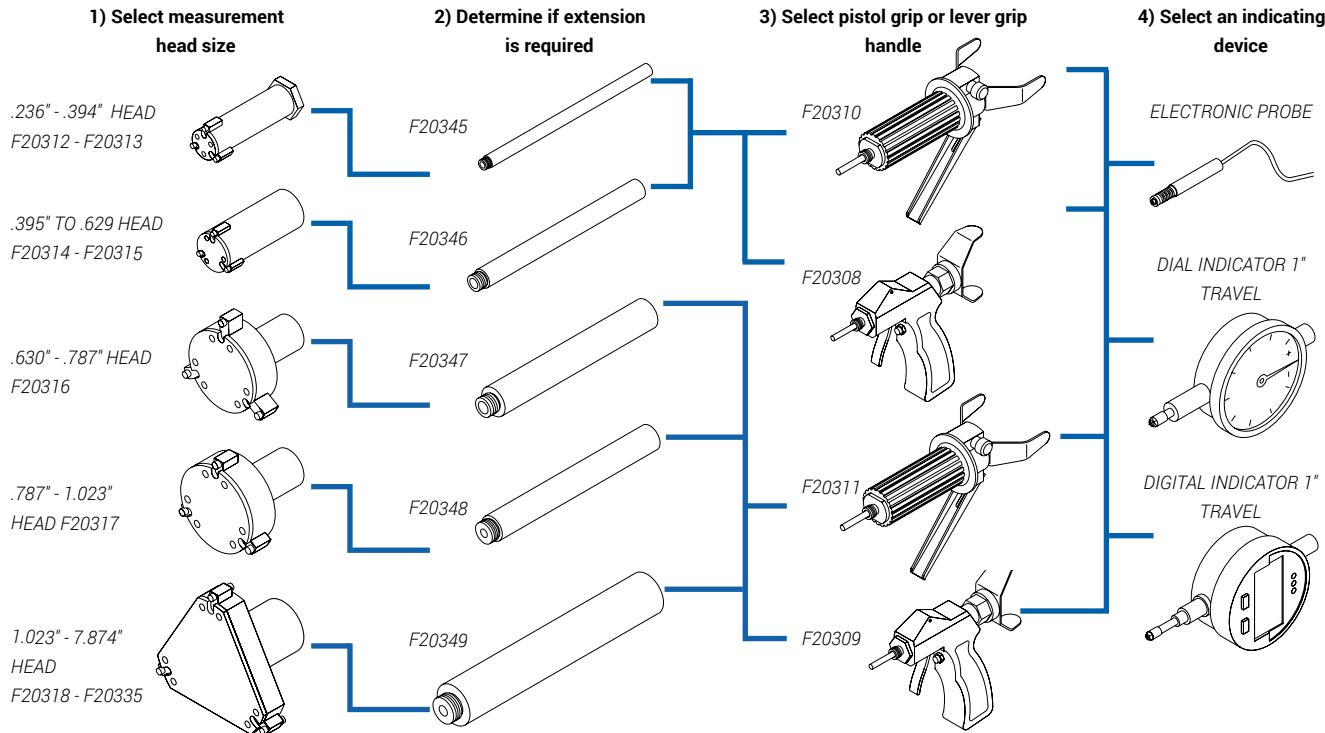


PART #	PISTOL GRIP & LEVER HANDLE DESCRIPTION
F20308	Pistol grip for .236" - .629" diameter
F20309	Pistol grip for .630" - 7.87" diameter
F20310	Lever grip for .236" - .629" diameter
F20311	Lever grip for .630" - 7.87" diameter

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

## INDIVIDUAL GAGE SELECTION GUIDE



OPTIONS			
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		

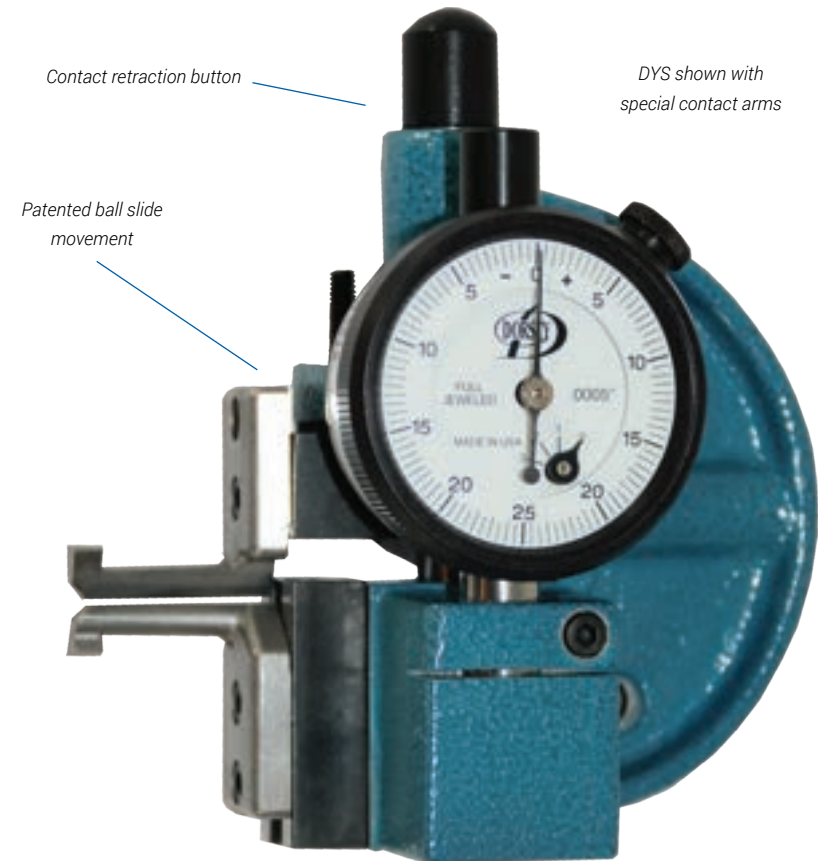
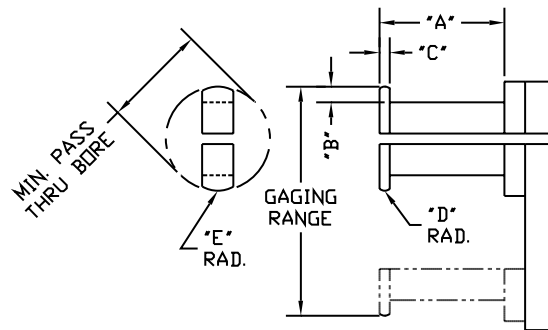
Dorsey's Dynamike Model DYS groove gage combines a lightweight, compact, rigid cast frame and a patented ball bushing slide with a series of interchangeable gaging arms to suit virtually any application.

## 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 arms, and part # 18967 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.

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

PART #	DESCRIPTION
DYS-FRAME	DYS Groove Gage body only, less gaging arms and indicator
18967	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.

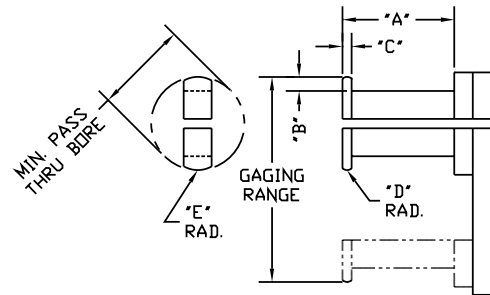
Dorsey's Dynamike Model DYN groove gage combines a patented ball bushing slide with a series of gaging arms to suit almost any application. Gaging contact retraction is accomplished by using a conveniently mounted thumb lever while gaging range adjustment is accomplished by sliding the static gaging 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.	CONTACT ARM #
DYN-750-2	.750 - 2.00	.500	2 Point	1.50	.125	.125	# 2405-2
DYN-750-3	.750 - 2.00	.500	3 Point	1.50	.125	.125	# 2405-3
DYN-2000-2	2.00 - 3.50	2.000	2 Point	2.00	.125	.125	# 2465-2
DYN-2000-3	2.00 - 3.50	2.000	3 Point	2.00	.125	.125	#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.



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.

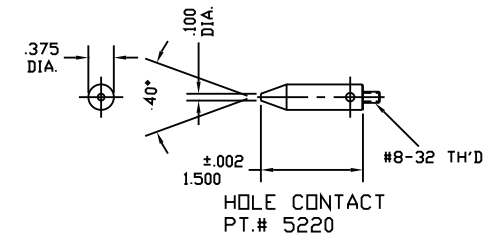
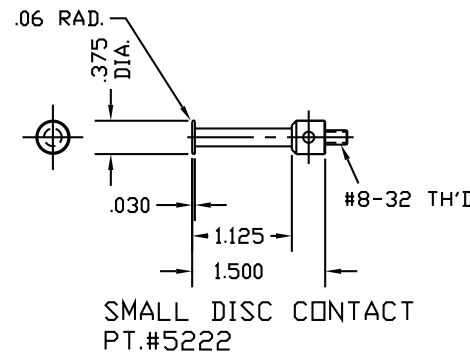
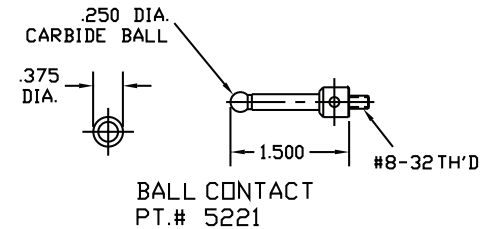
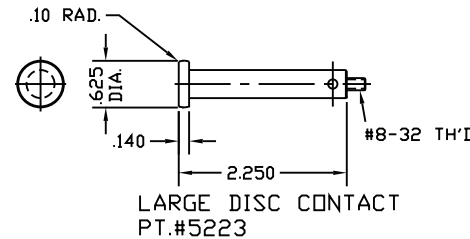
## FEATURES:

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

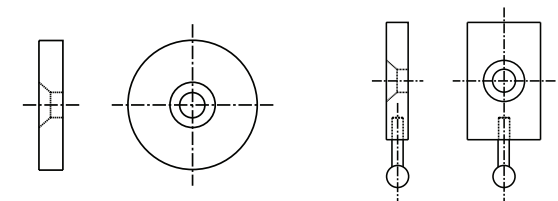
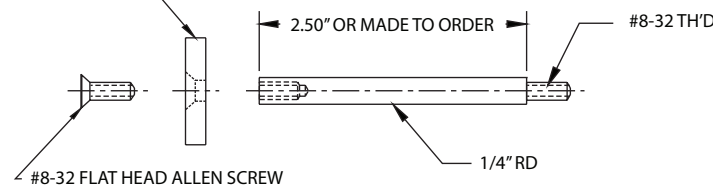


*\*Indicator sold separately*

MODEL	DESCRIPTION
UG-1	Universal gage complete with standard disc contact (part #5211-2)
UG-KIT	Universal gage complete with standard disc contact (part #5211-2), ball contacts (part #5213), .25" disc contacts (part #5214), digital indicator (part #F15830), and fitted storage case
48502-S	Bench Stand for UG



DIAMETER, LENGTH AND DEPTH CONTACT  
MADE TO THE GROOVE APPLICATION



*Contact designed specific to groove which can be manufactured by Dorsey for the customer, Send print part, Dorsey will help with the contact design.*

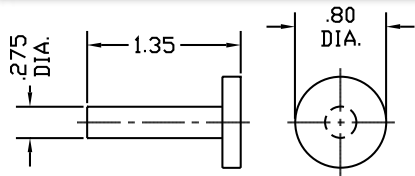
## FEATURES:

- ✓ 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

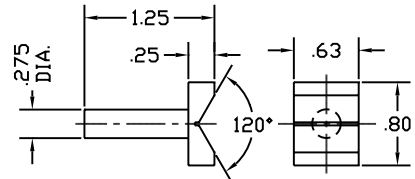
Part #48554 shown with dial indicator (part #414-002) and bench stand (part #48502-V). Indicator sold separately.

All blades installed on left side unless otherwise specified



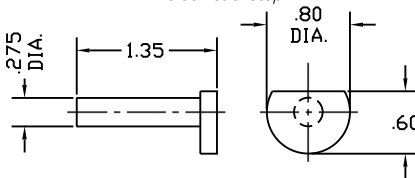
Part #48531

Standard with Gage Flat round backstop



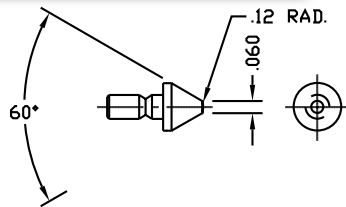
Part #48532

"V" block backstop



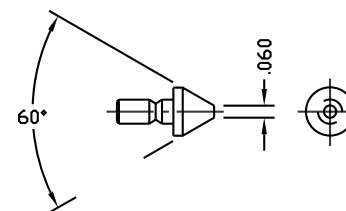
Part #48530

Semi round backstop



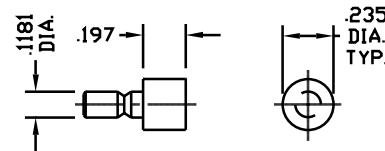
Part #48547-C

Taper Radius



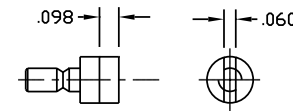
Part #48548-C

Taper Flat



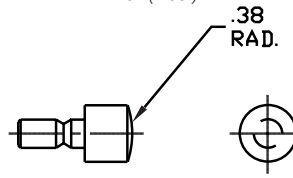
Part #48544-C

Round (.235")



Part #48545-C

Rail (.235")



Part #48546-C

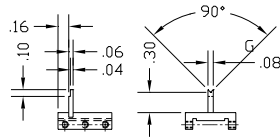
Large Spherical

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

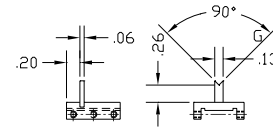


Ball checking gage shown is comprised of gage (part #48554), carbide tapered flat contacts (part #48548), work support (part #48569), work support adjustment assembly (part #48581), and bench stand (part #48502-V)

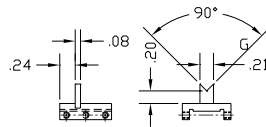
**Work Support Note:** Work support adjustment assembly part #48581 must be used with work support No.1 through No.6



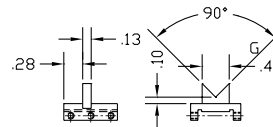
Work support No.1  
**Part #48568**  
.060" - .100" balls



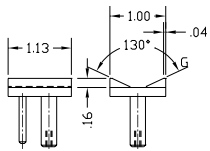
Work support No.2  
**Part #48569**  
.100" - .160" balls



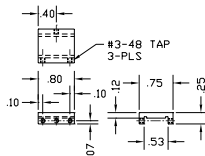
Work support No.3  
**Part #48570**  
.160" - .250" balls



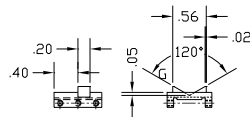
Work support No.4  
**Part #48571**  
.250" - .500" balls



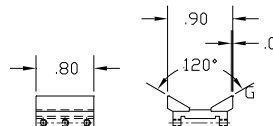
"V" block screw controlled backstop  
**Part #48583**  
1.000" - 2.000" balls



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

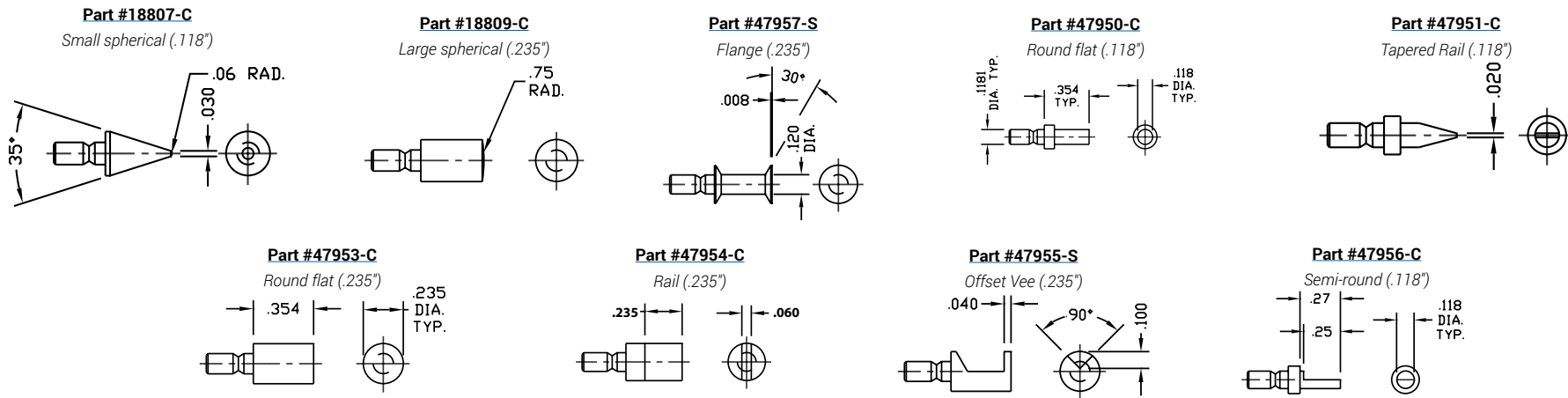


# MODEL J2 HORIZONTAL JAW GAGE

The model J2 jaw gage features Dorsey's proven precision lapped chrome/steel bushing in a rigid cast iron 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.



All blades installed on left side unless otherwise specified

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

J-2 WITH #47950 CONTACTS





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

## FEATURES:

- ✓ .060" gaging travel is standard, optional with .100" or .500".
- ✓ 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		
		2150-01	2110-002mm	Without indicator
Inch	Metric	.0001" grad multi rev.	0.002mm multi rev.	
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 #2110-002 indicator and optional #48502-S bench stand



For snap gages with carbon fiber frame 5" diameter and above, add -CF to model number.  
For example: DS-S2-12376-CF

**Available in Carbon Fiber**

To specify a lifting lever, add "-L" to end of part number.

To specify side stops, add "-SS" to end of part number. Note: Side stops are made to order.

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 -T500 = .500" 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)

Part # sequence: snap gage part #, contact travel, blade anvil, lifting lever, side stops

Special Large Carbon Fiber Snap Gages available to quote by request

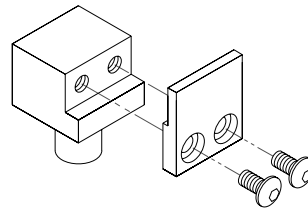
# SDN STYLE SNAP GAGES

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

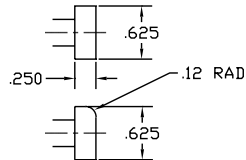
## FEATURES:

- ✓ .090" gaging travel is standard, optional with .500".
- ✓ 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	
		2150-01 .0001" grad multi rev.	Without indicator
Inch	Metric		
0 - 1"	0 - 25mm	SDN-00	SDN-00NI
1 - 2"	25 - 51mm	SDN-100	SDN-100NI
2 - 3"	51 - 76mm	SDN-200	SDN-200NI
3 - 4"	76 - 102mm	SDN-300	SDN-300NI
4 - 5"	102 - 127mm	SDN-400	SDN-400NI
5 - 6"	127 - 152mm	SDN-500	SDN-500NI
6 - 7"	152 - 178mm	SDN-600	SDN-600NI
7 - 8"	178 - 203mm	SDN-700	SDN-700NI
8 - 9"	203 - 229mm	SDN-800	SDN-800NI
9 - 10"	229 - 254mm	SDN-900	SDN-900NI
10 - 11"	254 - 279mm	SDN-1000	SDN-1000NI
11 - 12"	279 - 305mm	SDN-1100	SDN-1100NI
12 - 13"	305 - 330mm	SDN-1200	SDN-1200NI
13 - 14"	330 - 356mm	SDN-1300	SDN-1300NI
14 - 15"	356 - 381mm	SDN-1400	SDN-1400NI
15 - 16"	381 - 406mm	SDN-1500	SDN-1500NI
16 - 17"	406 - 432mm	SDN-1600	SDN-1600NI
17 - 18"	432 - 458mm	SDN-1700	SDN-1700NI
18 - 19"	458 - 483mm	SDN-1800	SDN-1800NI
19 - 20"	483 - 508mm	SDN-1900	SDN-1900NI
20 - 21"	508 - 533mm	SDN-2000	SDN-2000NI
21 - 22"	533 - 559mm	SDN-2100	SDN-2100NI
22 - 23"	559 - 584mm	SDN-2200	SDN-2200NI
23 - 24"	584 - 610mm	SDN-2300	SDN-2300NI
48502-S	BENCH STAND		



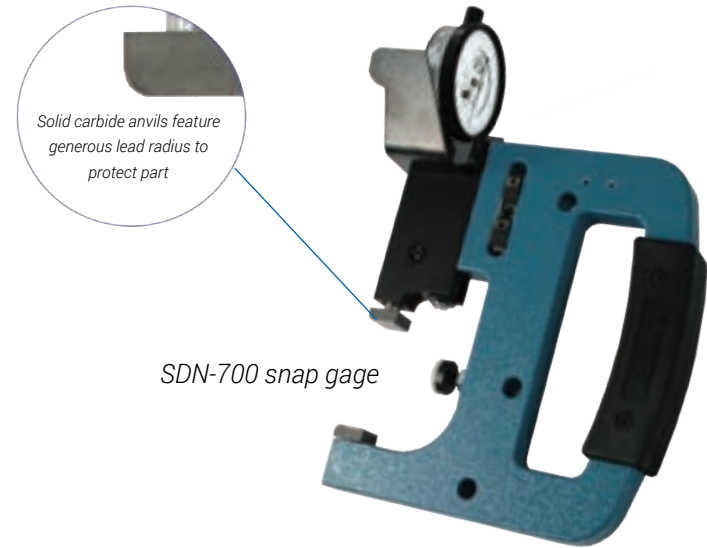
Blade type anvil  
Special sizes available



Part #2029  
Standard carbide  
anvil

To specify a lifting lever, add "-L" to end of part number.

To specify side stops, add "SS" to end of part number. Note: Side stops are made to order.



Solid carbide anvils feature generous lead radius to protect part

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 -T500 = .500" 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)

Part # sequence: snap gage part #, contact travel, blade anvil, lifting lever, side stops

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.

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

## SDN STYLE

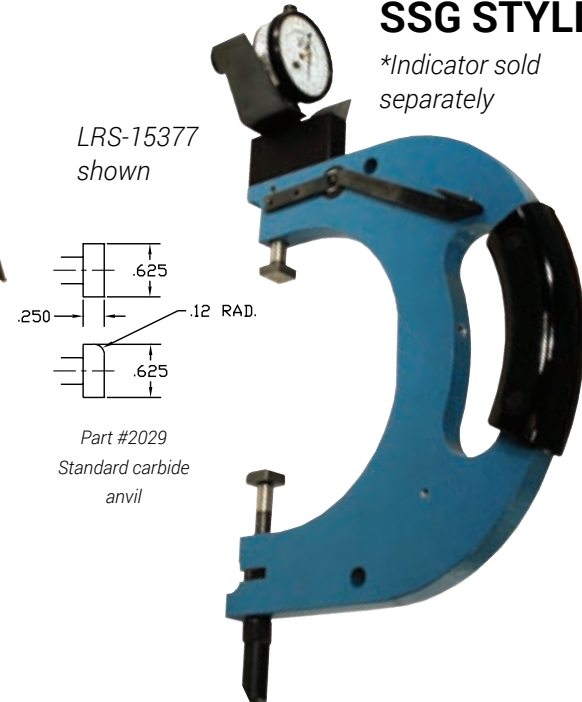
*\*Indicator sold separately*



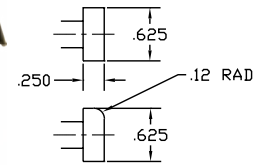
LRS Snap Gage with optional bench stand #48502-S

## SSG STYLE

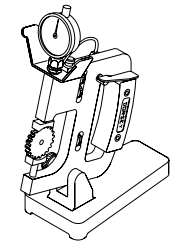
*\*Indicator sold separately*



LRS-15377 shown



Part #2029  
Standard carbide anvil



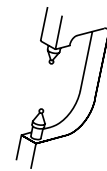
Self centering form anvils  
Applications include measurement of major diameter

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

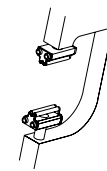
OPTIONAL CONTACT TRAVEL	INTERCHANGABLE BLADE ANVILS		
	PART #	A DIM.	B DIM.
To specify extended gaging contact travel, add "TXX" to end of part number.	2274-1	.040" (1.0mm)	.08" (2.0mm)
	2274-2	.060" (1.5mm)	.12" (3.0mm)
	2274-3	.080" (2.0mm)	.16" (4.0mm)
	2274-4	.100" (2.5mm)	.20" (5.0mm)
	2274-5	.125"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

To specify side stops, add "SS" to end of part number.  
Note: Side stops are made to order.

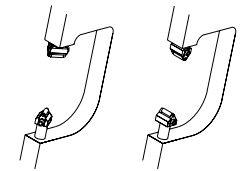
### PITCH DIAMETER GEAR AND SPLINE CONTACTS



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



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



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

The following options can be specified on either the SSG, SDN, or LRS series snap gages.

# ADJUSTABLE LIMIT SNAP GAGES

Adjustable limit snap gages are an economical choice for the go/no go measurement of outside diameters or thicknesses. They are also known as AGD snap gages. Frames are machined from stabilized cast iron and are manufactured to ANSI B47-1-1988.

CS STYLE ANVILS			
RANGE		FRAME #	PART #
INCH	METRIC		
.00 - .195	0 - 5	00	Y88-10150
.195 - .385	5 - 9.8	00X	Y88-10151
.385 - .570	9.8 - 14.5	0	Y88-10152
.570 - .760	14.5 - 19.3	0X	Y88-10153
.00 - .25	0 - 6	1	Y86-10050
.25 - .50	6 - 12.7	2	Y86-10051
.50 - .75	12.7 - 19	2X	Y86-10052
.75 - 1.00	19 - 25.4	3	Y86-10053
1.00 - 1.25	25.4 - 31.8	3X	Y86-10054
1.25 - 1.50	31.8 - 38.1	4	Y86-10055
1.50 - 1.75	38.1 - 44.5	4X	Y86-10056
1.75 - 2.00	44.5 - 50.8	5	Y86-10057
2.00 - 2.25	50.8 - 57.2	5X	Y86-10058
2.25 - 2.50	57.2 - 63.5	6	Y86-10059
2.50 - 2.75	63.5 - 69.9	6X	Y86-10060
2.75 - 3.06	69.9 - 77.7	7	Y86-10061
3.06 - 3.44	77.7 - 87.4	7X	Y86-10062
3.44 - 3.81	87.4 - 96.8	8	Y86-10063
3.81 - 4.19	96.8 - 106.4	8X	Y86-10064
4.19 - 4.56	106.4 - 115.8	9	Y86-10065
4.56 - 4.94	115.8 - 125.5	9X	Y86-10066
4.94 - 5.31	125.5 - 134.9	10	Y86-10067
5.31 - 5.69	134.9 - 144.5	10X	Y86-10068
5.69 - 6.12	144.5 - 155.4	11	Y86-10069
6.12 - 6.62	155.4 - 168.1	11X	Y86-10070
6.62 - 7.12	168.1 - 180.8	12	Y86-10071
7.12 - 7.62	180.8 - 193.5	12X	Y86-10072
7.62 - 8.12	193.5 - 206.2	13	Y86-10073
8.12 - 8.62	206.2 - 218.9	13X	Y86-10074



BLADE ANVILS			
RANGE		FRAME #	PART #
INCH	METRIC		
.00 - .195	0 - 5	00	Y88-10200
.195 - .385	5 - 9.8	00X	Y88-10201
.385 - .570	9.8 - 14.5	0	Y88-10202
.570 - .760	14.5 - 19.3	0X	Y88-10203
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
0 - .25	0 - 6	2X	Y87-10100
.25 - .50	6 - 12.7	3	Y87-10101
.50 - .75	12.7 - 19	3X	Y87-10102
.75 - 1.00	19 - 25.4	4	Y87-10103
1.00 - 1.25	25.4 - 31.8	4X	Y87-10104
1.25 - 1.50	31.8 - 38.1	5	Y87-10105
1.50 - 1.75	38.1 - 44.5	5X	Y87-10106
1.75 - 2.00	44.5 - 50.8	6	Y87-10107
2.00 - 2.25	50.8 - 57.2	6X	Y87-10108
2.25 - 2.63	57.2 - 66.8	7	Y87-10109
2.63 - 3.00	66.8 - 76.2	7X	Y87-10110
3.00 - 3.38	76.2 - 85.7	8	Y87-10111
3.38 - 3.75	85.7 - 95.3	8X	Y87-10112
3.75 - 4.12	95.3 - 104.6	9	Y87-10113
4.12 - 4.50	104.6 - 114.3	9X	Y87-10114
4.50 - 4.88	114.3 - 124	10	Y87-10115
4.88 - 5.25	124 - 133.4	10X	Y87-10116
5.25 - 5.75	133.4 - 146.1	11	Y87-10117
5.75 - 6.25	146.1 - 158.8	11X	Y87-10118
6.25 - 6.75	158.8 - 171.5	12	Y87-10119
6.75 - 7.25	171.5 - 184.2	12X	Y87-10120
7.25 - 7.75	184.2 - 196.9	13	Y87-10121
7.75 - 8.25	196.9 - 210	13X	Y87-10122



**ADJUSTABLE INSIDE / OUTSIDE DIAMETER FIXTURES**

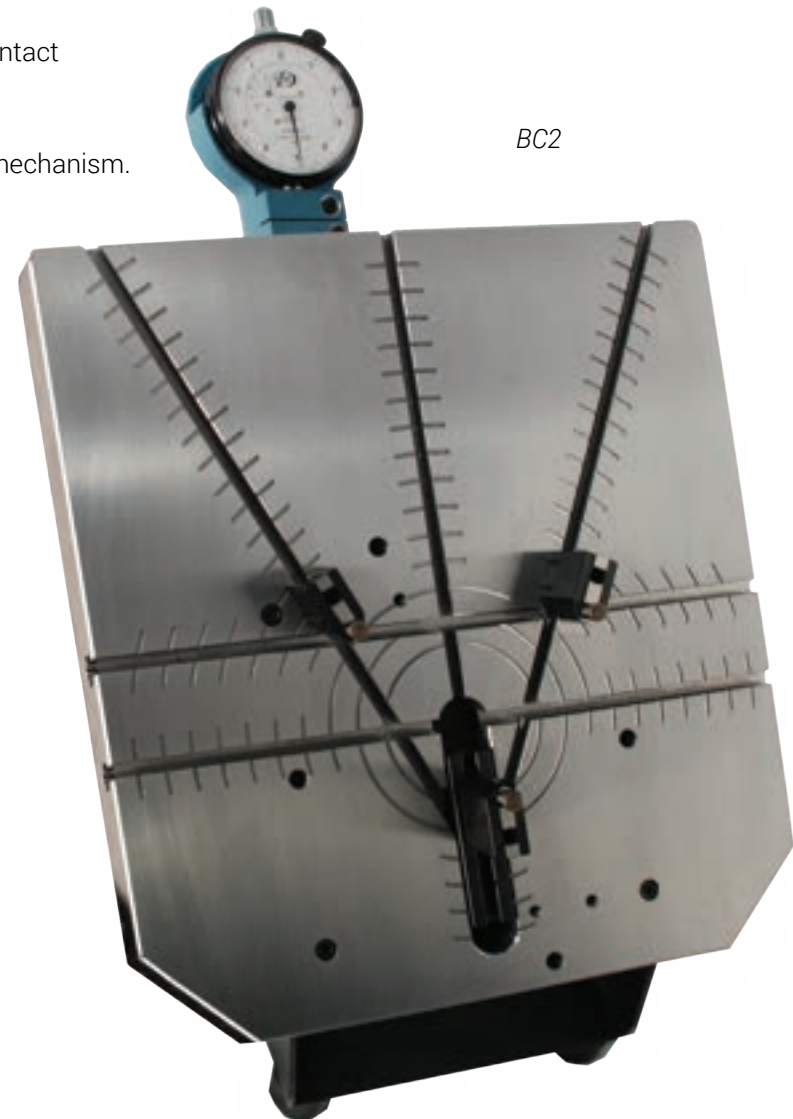
This comparator offers 2 or 3 point measurements for both ID and OD on one benchtop plate. Features include 2 or 3 point measurement, linear ball bushing movement, and a wide range of adjustment. The fixture can be positioned at any angle from horizontal to vertical to duplicate the machining process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

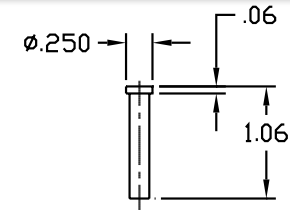
Example: .010 spindle travel is displayed as .008" on indicator



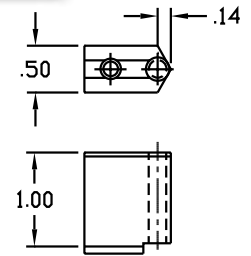
MODEL	2DMR025-01Z	2DMR125-05	2DMR005-002mm	2DMR5-01mm	MT543-312B
Graduation	.0001"	.0005"	0.002mm	0.01mm	Selectable
Total Travel	.020"	.100"	0.4mm	4.0mm	.500"/12mm
Revolutions	2.5 Rev.	2.5 Rev.	2.5 Rev.	5 Rev.	N/A
Travel/Rev.	.008"	.040"	0.16mm	0.8mm	N/A



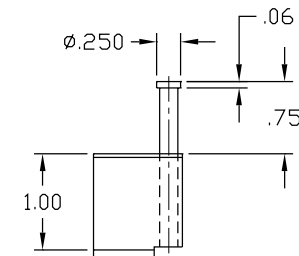
Dorsey Products - proudly made in the USA



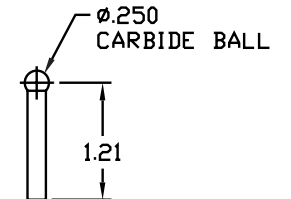
**Part #BCC-GS25**  
Steel groove contact



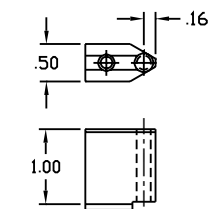
**Part #2760-S (Steel)**  
**Part #2760-C (Carbide)**  
Contact holder, sharp  
(1 required)



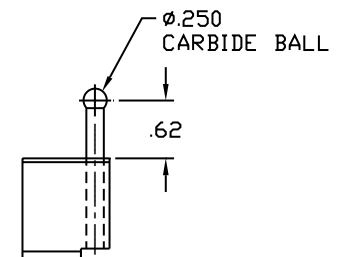
**Part #BCC-GS25**  
Shown in contact holder part #2760



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

All masters are ground and lapped to size then polished. Non-gaging surfaces are black oxide and the faces are surface ground. Blanks meet requirements of B47.1-1988 and gages are manufactured in accordance with ANSI B89.1.6-1984.

## PLUG GAGES/PIN GAGES:

Reversible wires, taper lock, tri-lock, whistle notch, go, no-go, reference, bilateral, or unilateral, with or without handles



\* Special sizes and part simulating masters are available upon request.

## RINGS:

Hardened Steel, bilateral tolerance, go, no-go



## DISCS:

Hardened Steel, bilateral tolerance, go, no-go





LDF Series



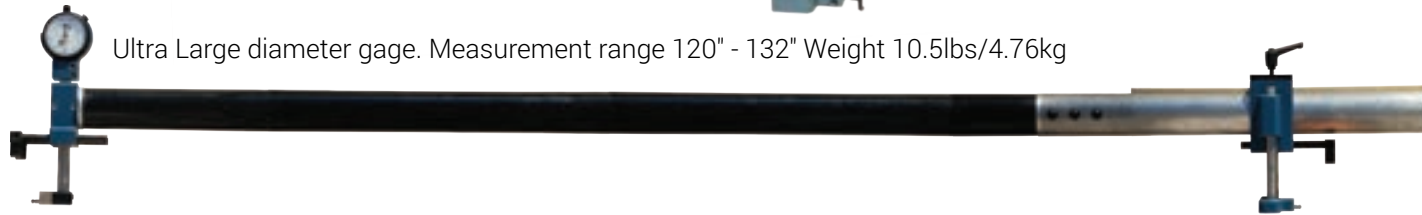
LDVA Series



LDLTA Series



LDD Series

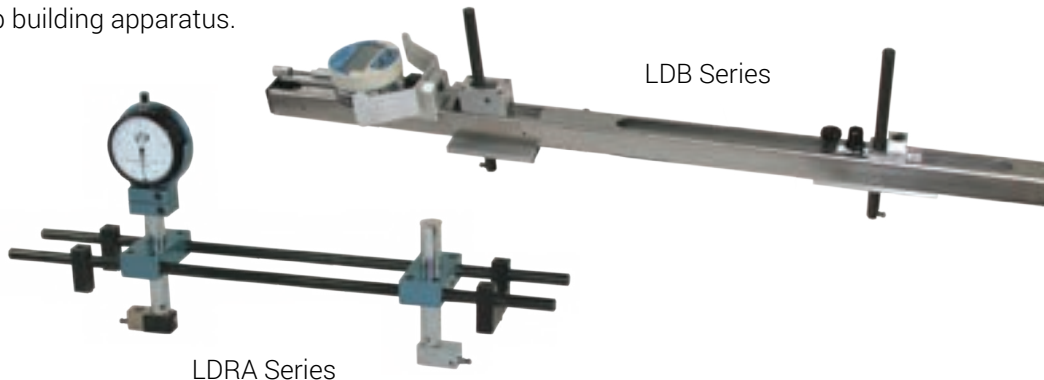


Ultra Large diameter gage. Measurement range 120" - 132" Weight 10.5lbs/4.76kg

*Available in Carbon Fiber*

Carbon fiber diameter gages are lighter weight, more thermally stable, and structurally stronger.

Dorsey Metrology has built a reputation as a leader in the field of large component dimensional measurement. Dorsey's expertise brings together the largest selection of precise linear measurement movements, frame configurations, sizes, materials, contact point shapes, rest designs, and other accessories: all with the knowledge of how to apply them to any large part inspection requirement. With the Dorsey modular design system, it is possible to solve the inspection of almost any part configuration such as inside / outside diameters, ID / OD grooves, bearing raceways, lengths, large gear pitch diameters, and conical and angular shapes. Applications for these instruments include inspection of components used in aircraft engines and housings, generators, turbines, windmill parts, large bearings, gears, large shaft lengths, and ship building apparatus.



LDB Series

LDRA Series



LDR Series

LDAR - Midget Reed Series





LDF-PD pitch diameter gage



LDF with hump frame



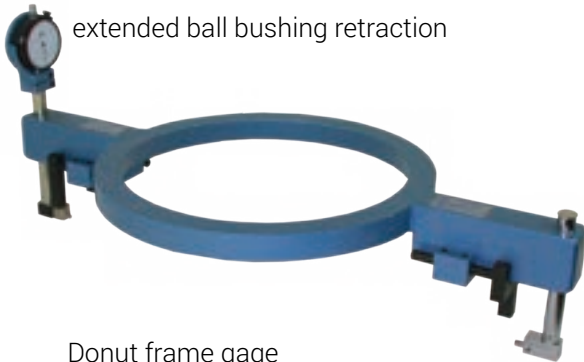
LD-EBB Series  
extended ball bushing retraction



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



LDF for double depths



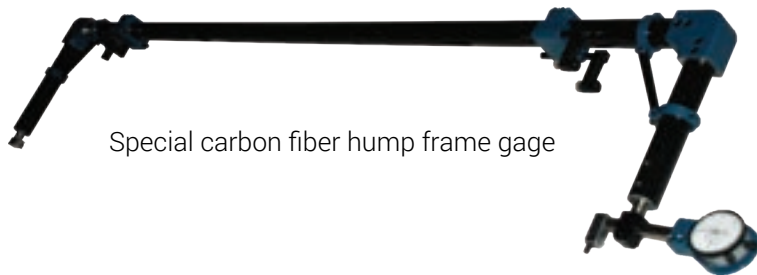
Donut frame gage



C-frame gage & master shown

**Available in Carbon Fiber**

Special carbon fiber frame gage with master



Special carbon fiber hump frame gage



# LDA SERIES- ID/OD ADJUSTABLE FRAME

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

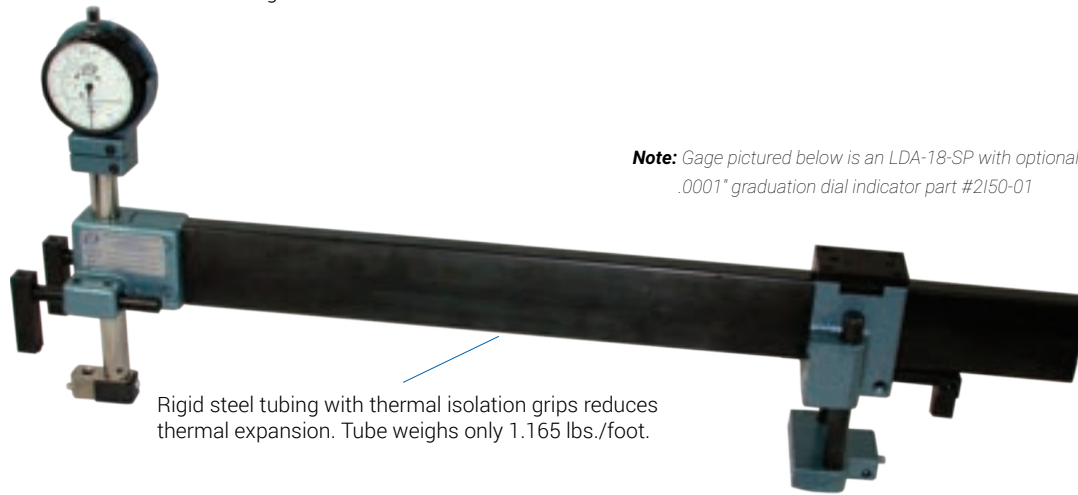
*Note: Gage pictured below is LDA-48-CS-CF*

**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. Tube weighs only 1.165 lbs./foot.

- ✓ Standard with part #2DM125-05 .0005" graduation dial indicator.
- ✓ Standard gaging depth range is 0-2". Optional gaging depth of 3", 4", or 5" is available.
- ✓ Standard LDA frame clearance is 1.25". Contact us for a quotation if additional clearance is required.
- ✓ Standard gaging contact travel is .100.
- ✓ Reference contact features .50" micrometer style 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 perpendicular indicator unit

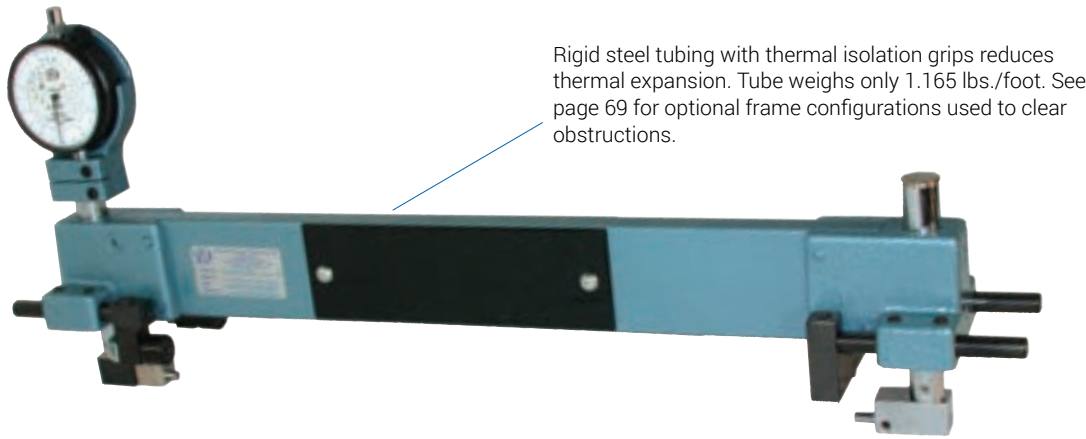
See page 72 for SMA series companion setmasters

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



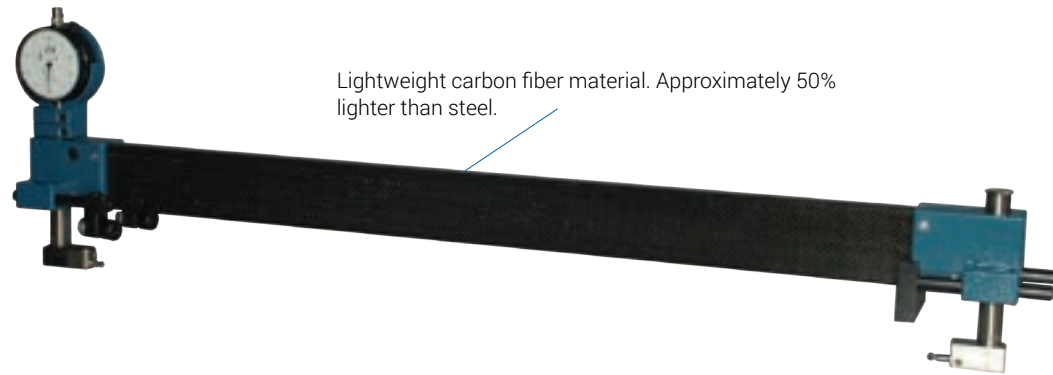
# LDF SERIES - ID/OD FIXED FRAME

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.



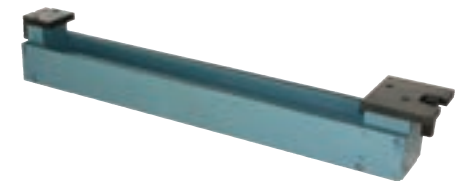
## Available in Carbon Fiber

- ✔ Available with ISO 17025 certification.
- ✔ Standard gaging depth range is 0-1". Optional gaging depth of 2" - 5" is available.
- ✔ Standard gaging contact travel is .100".
- ✔ Standard LDF frame clearance is .75".
- ✔ 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.



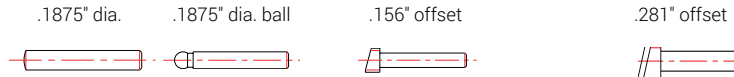
PART #	INCH	METRIC (mm)	STEEL PIN	CARBIDE BALL	STEEL SHOVEL	CARBIDE SHOVEL	EXTENDED CARBIDE SHOVEL	CARBON FIBER
	RANGE	RANGE	SP	CB	SS	CS	ES	CF
LDF-12	6 to 12	150 to 300	LDF-12-SP	LDF-12-CB	LDF-12-SS	LDF-12-CS	LDF-12-ES	LDF-12-XX-CF
LDF-18	12 to 18	301 to 460	LDF-18-SP	LDF-18-CB	LDF-18-SS	LDF-18-CS	LDF-18-ES	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 73 for SMF series companion setmasters



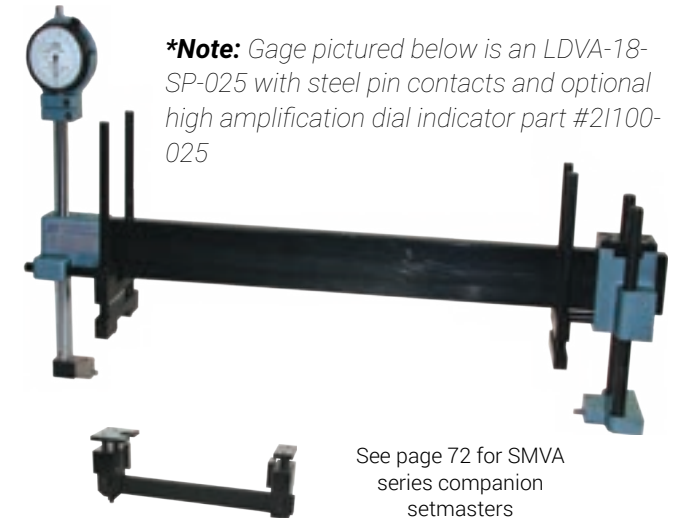
The LDVA is similar to the LDA series gage, except that it offers adjustment in the vertical axis to accommodate depths up to 5".

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



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

## Available in Carbon Fiber

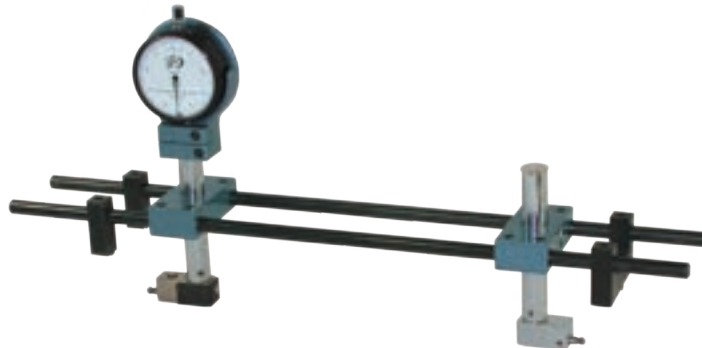


**\*Note:** Gage pictured below is an LDVA-18-SP-025 with steel pin contacts and optional high amplification dial indicator part #21100-025

See page 72 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".



PART #	INCH	METRIC (mm)	STEEL PIN	CARBIDE BALL	STEEL SHOVEL	CARBIDE SHOVEL	EXTENDED CARBIDE SHOVEL
	RANGE	RANGE	SP	CB	SS	CS	ES
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



SMRA 4-12 is the companion setmaster. See page 72.



These direct reading gages feature lightweight rigid steel tubing, and cast 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".
- ✓ 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 72 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 cast 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 73 for SMF series companion setmasters

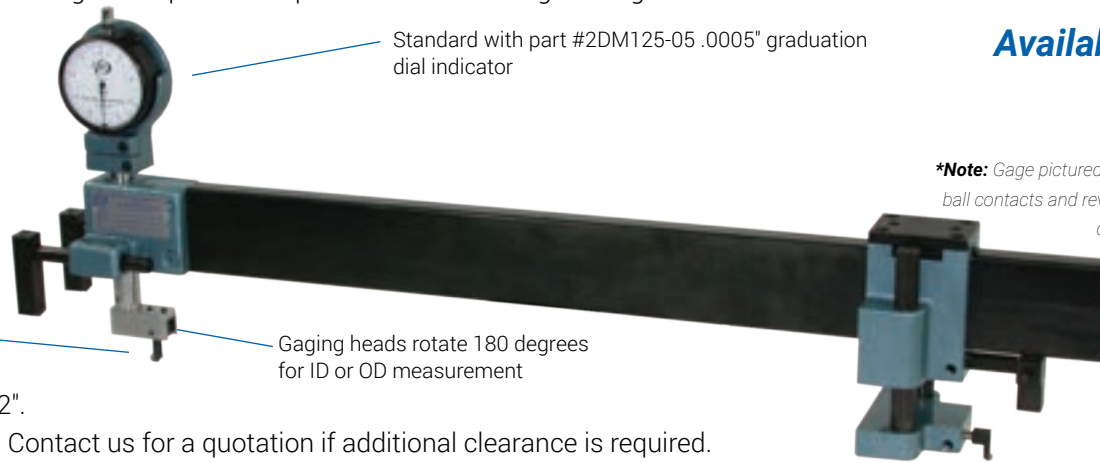
# LDLTA - ID/OD LEVER TRANSFER ADJUSTABLE FRAME

www.dorseymetrology.com

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



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

Optional reverse action lever shown

Gaging heads rotate 180 degrees for ID or OD measurement

**Available in Carbon Fiber**

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



See page 72 for SMVA series companion setmasters

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

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

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

## LDLTF SERIES - LEVER TRANSFER ADJUSTABLE

LDLTF Series gages include all the same features as the LDLTA shown above except both cast 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 reverse reference head (for LDLTF only).
- ✓ Reverse action lever available.

**Available in Carbon Fiber**



See page 73 for SMF series companion setmasters



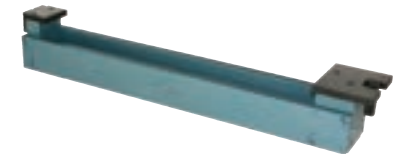
# LBBS SERIES - PRECISION SLIDE MECHANISM

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.



**Available in Carbon Fiber**

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



See page 73 for fixed SMF series companion setmasters or page 72 for adjustable SMA series companion setmasters

# LDAR-6 - MIDGET REED

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

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



\*Note: Gage pictured is LDAR-8 with an optional .0001" graduation dial indicator part #2150-01

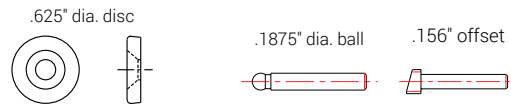


PART #	INCH	METRIC (mm)	STEEL DISC	CARBIDE DISC
	RANGE	RANGE	SD	CD
LDAR-6	2" - 6"	50 - 150mm	LDAR-6-SD	LDAR-6-CD
LDAR-8	2" - 8"	50 - 200mm	LDAR-8-SD	LDAR-8-CD
7062	.437 Diameter Steel Conical Disc Contact			
7530	.500 Diameter Carbide Conical Disc Contact			

## 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, eliminating 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 72 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-01 with optional .0001" graduation dial indicator part #219-01*



See page 72 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)	

- ✓ Lightweight heat treated aerospace grade stainless steel tubing weighs only .817 lbs. per foot
- ✓ Standard with part #2DM125-05 .0005" graduation dial indicator
- ✓ Contacts feature 1" vertical depth adjustment
- ✓ Standard carbide ball contacts, 0.5" ball optional
- ✓ Carbide rest surfaces are offset 2" to resist tipping
- ✓ Indicator housing protects indicator
- ✓ Frictionless reed movement transfer with +/- .050" gaging travel
- ✓ Precision cam-lock fine adjustment mechanism makes setting this gage fast and easy

## LDB SERIES- ULTRA LIGHTWEIGHT FRAME WITH BALL BUSHING

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



*\*Note: Gage pictured is LDB-14-CB-DI with an optional 1" travel digital indicator part #FV54520777*



- ✓ Standard with part #2DM1000-05 .0005" graduation dial indicator
- ✓ Indicator housing protects 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

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)	

See page 72 for SMA series companion setmasters  
**Note:** specify .18" restrictor for CB contacts, specify .62" restrictor for SD and CD contacts

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

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

## HUMP FRAME

The gage shown here is an LDDF with a Hump Frame design. This design can be used on the LDF, LDDF, or the LDLTF to increase the rigidity of the vertical gaging shafts by extending the support castings up to 5.5" deeper. It is generally recommended to use this type of frame design if the gaging depth exceeds 6". Add "-HF" to the part # of the basic gage to select this option.

## 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.

## BRIDGE 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. These castings extend and support the gaging extension shafts in order to gain measuring rigidity. This raises the frame 2.75". Add "-BF" to the part # of the basic gage for this option.

## "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.*

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



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-B4-2I9-01	.0001"	.009"
DS-B4-2DM025-01	.0001"	.025"
DS-B4-2I50-01	.0001"	.050"
DS-B4-2I100-025	.00025"	.100"
DS-B4-2I100-05	.0005"	.100"
DS-B4-2I40-05	.0005"	.040"
DS-B4-2I40-10	.001"	.040"
DS-B4-S2I/M	.0001"/0.0025mm	.010"/.25mm
DS-B4-2I02-002mm	0.002mm	0.2mm
DS-B4-2I10-002mm	0.002mm	1.0mm
DS-B4-2I25-005mm	0.005mm	2.5mm
DS-B4-2I10-01mm	0.010mm	1.0mm

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

**PMA Series adjustable setmaster**  
6" range and .50" fine adjustment

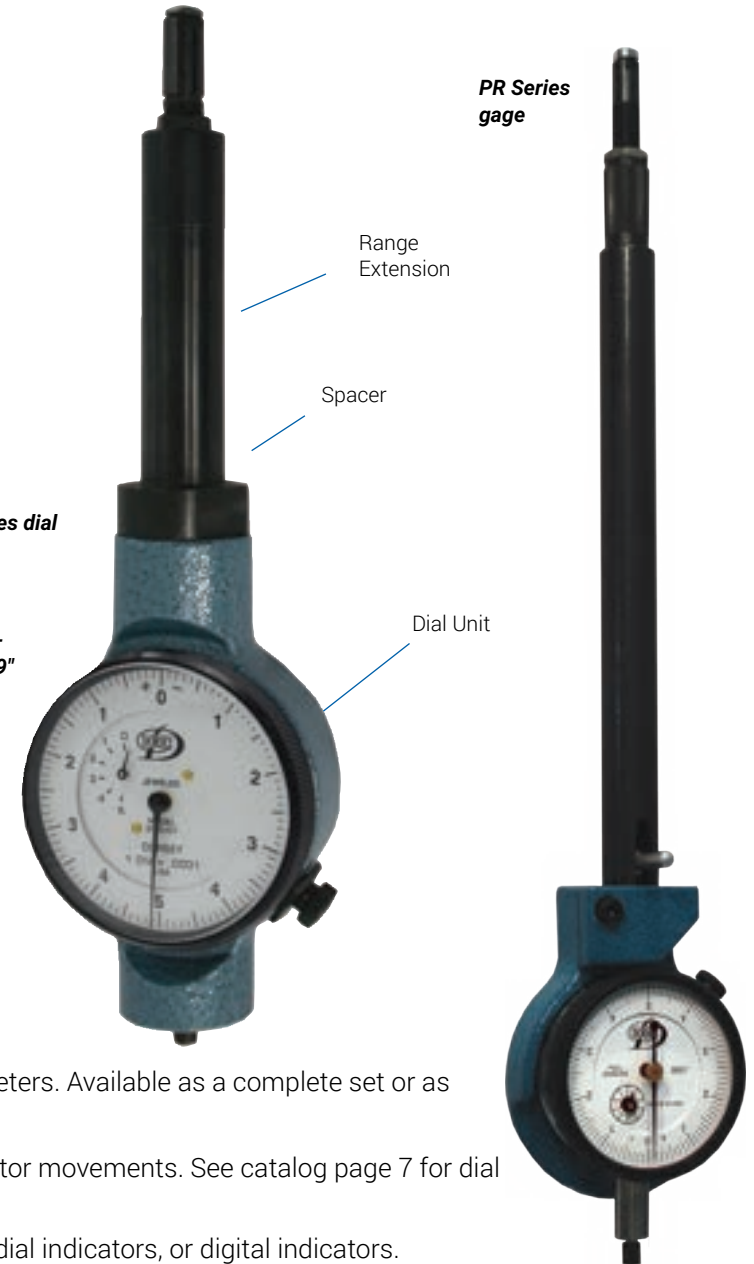


PIN GAGE MASTERS "PM SERIES"		
PART #	RANGE	
	INCHES	METRIC
PM-6	6 - 12"	150 to 300
PM-12	12 - 18"	300 to 450
PM-18	18 - 24"	450 to 600
PM-24	24 - 30"	600 to 750
PM-30	30 - 36"	750 to 900

RETRACTABLE PIN GAGE "PR SERIES"		
PART #	RANGE	SPACER LENGTH
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

*\*Note: Gage pictured features DS-B4-2I100-05 dial unit and DS-B4-81853 9" spacer*

*DS-B4 series dial pin gage*



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.

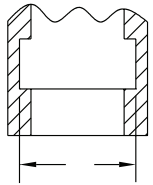
DS-B4 series pin gages are available with a choice of any of Dorsey's #2 "High Amplification" dial indicator movements. See catalog page 7 for dial selections.

PR series pin gages are available with a choice of any of Dorsey's #2 "High Amplification", "Traditional" dial indicators, or digital indicators.

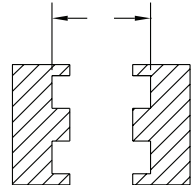
## RETRACTABLE PIN GAGES

Adjustable inside diameter pin gages are used to check straight bores, grooves, spherical radii, and spline and gear pitch diameters. A variety of interchangeable threaded contacts allows the gage to be altered to suit the application. The gage utilizes the principle and portability of an inside diameter micrometer with the accuracy, speed, and total retraction of the dial indicator range. The displays can be balanced, continuous dial, or digital indicators.

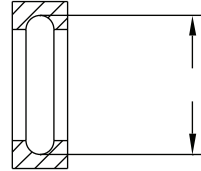
### TYPICAL APPLICATIONS



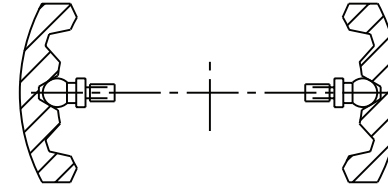
Bore



Groove Diameter



Ball Race Radius Grooves

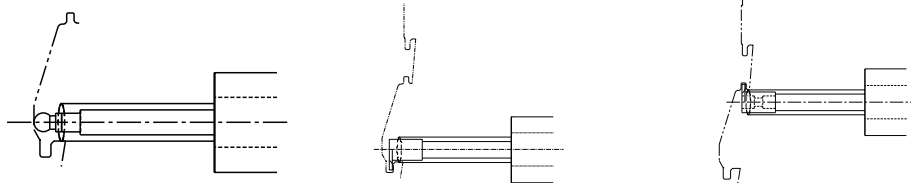


Pitch Diameter of Gears and Splines

## SPECIAL RETRACTABLE PIN AND REST GAGES

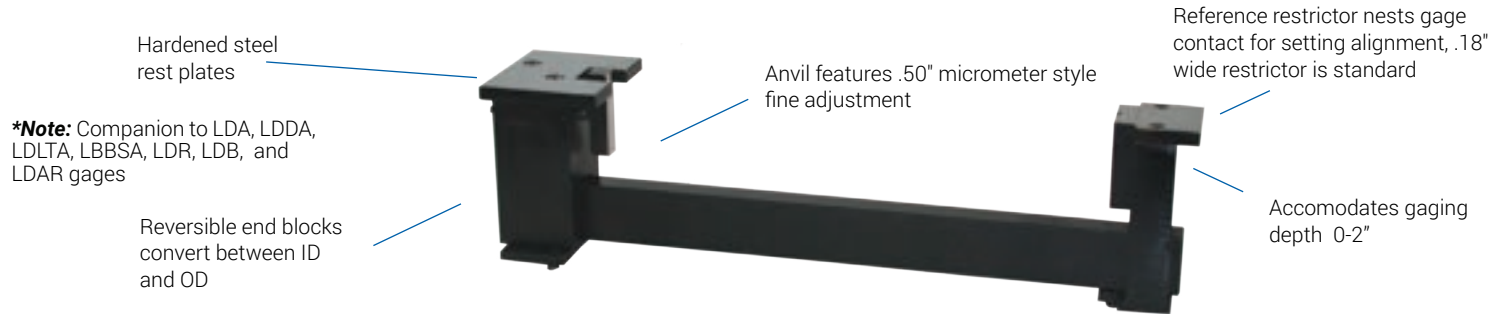
Retractable pin gages are specially designed for entry into hard to reach areas and for checking a variety measurement features. These gages require rests to locate on a datum face. In most cases, both the rest and movement require total retraction beyond the range of the readout to enter into recessed 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.

### TYPICAL APPLICATIONS





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

MODEL #	RANGE
SMA-12	6 to 12
SMA-18	12 to 18
SMA-24	18 to 24
SMA-30	24 to 30
SMA-36	30 to 36
SMA-42	36 to 42
SMA-48	42 to 48
SMA-54	48 to 54
SMA-60	54 to 60

✓ Certification of Conformance available.

## SMRA SERIES SETMASTER

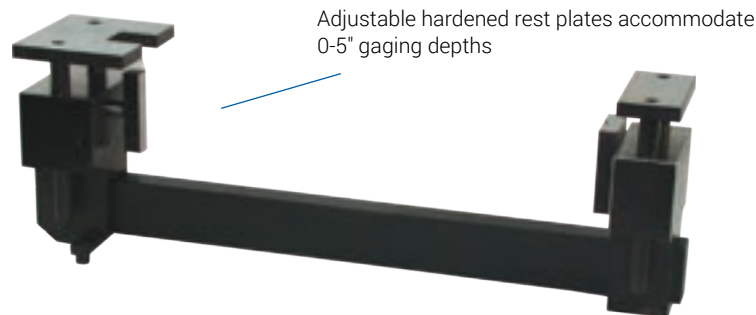


This setmaster has the same features and capabilities as the SMA but accommodates 4-12" of overall diameter and 0-1" depth adjustment to accommodate LDRA series gages.

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.

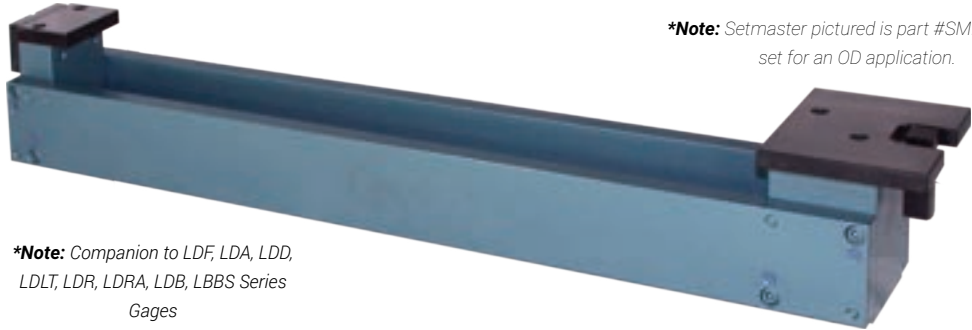


MODEL #	RANGE
SMVA-12	6 to 12
SMVA-18	12 to 18
SMVA-24	18 to 24
SMVA-30	24 to 30
SMVA-36	30 to 36
SMVA-42	36 to 42
SMVA-48	42 to 48
SMVA-54	48 to 54
SMVA-60	54 to 60

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

# SMF SERIES FIXED FRAME SETMASTERS

SMF Series setmasters are designed to be used in a production environment where a specific set size is 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: Setmaster pictured is part #SMF-18-GD1 set for an OD application.*

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

MODEL #	RANGE
SMF-12	0 to 12
SMF-18	12 to 18
SMF-24	18 to 24
SMF-30	24 to 30
SMF-36	30 to 36
SMF-42	36 to 42
SMF-48	42 to 48
SMF-54	48 to 54
SMF-60	54 to 60

## SMFC- SERIES SETMASTER



Outrigger assembly for SMF or SSM series masters.

- ✓ Angular anvil and restrictor set, 1" long for cone or inverted cone.
- ✓ Intermediate rest surfaces.
- ✓ 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.
- ✓ **Set, sealed, and pinned to size with ISO 17025 compliant certification.**

## VERTICAL SETMASTER STANDS



Part# 4350  
(used on SMF)



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

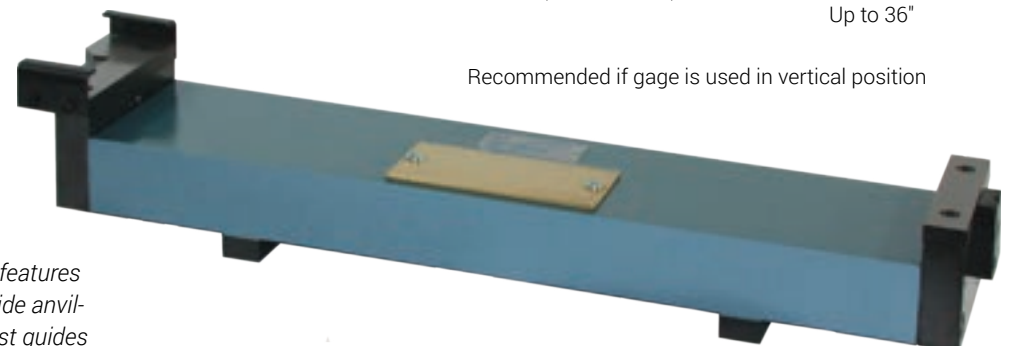
Recommended if gage is used in vertical position

# SSM SERIES SOLID FRAME SETMASTER

Solid setmasters are ground to a specific fixed size and are not adjustable. This setmaster is recommended for close tolerances and dedicated gages. The base can be made from tubular or 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:

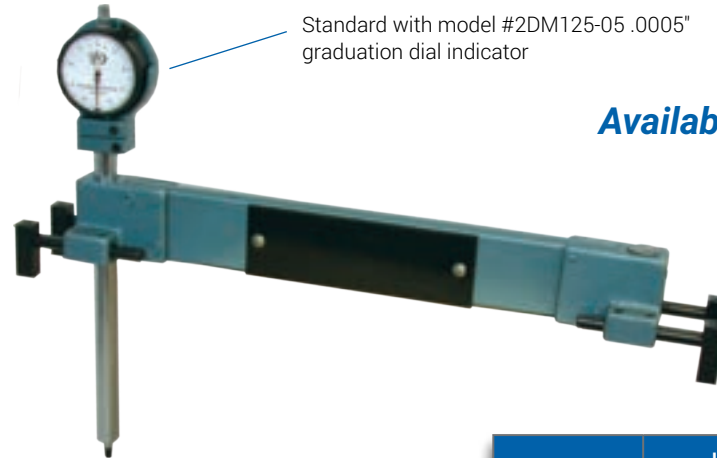
- ✓ Set and sealed to a specific size with NIST traceable certification.
- ✓ **Set and sealed to ISO 17025 compliant certification.**



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



See page 69 for optional frame configurations used to clear obstructions



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

*Available in Carbon Fiber*

Dorsey DDG style Depth or Height gages are used to measure distances from one surface to another or from one surface to a machine/tool fixture. They are generally designed for a specific application. Depth units can be lever transfer type or direct reading. Gaging travel resolutions are per application requirements.

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

PART #	INCH	METRIC (mm)
	RANGE	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

## DDGM SETMASTER

The DDGM setmaster is the companion to the DDG series depth gage. It features solid steel precision ground base, hardened rest plates, and .25" of adjustment.

MODEL #	DIAMETER RANGE
DDGM-12	0 to 12
DDGM-18	12 to 18
DDGM-24	18 to 24
DDGM-30	24 to 30
DDGM-36	30 to 36
DDGM-42	36 to 42
DDGM-48	42 to 48
DDGM-54	48 to 54
DDGM-60	54 to 60



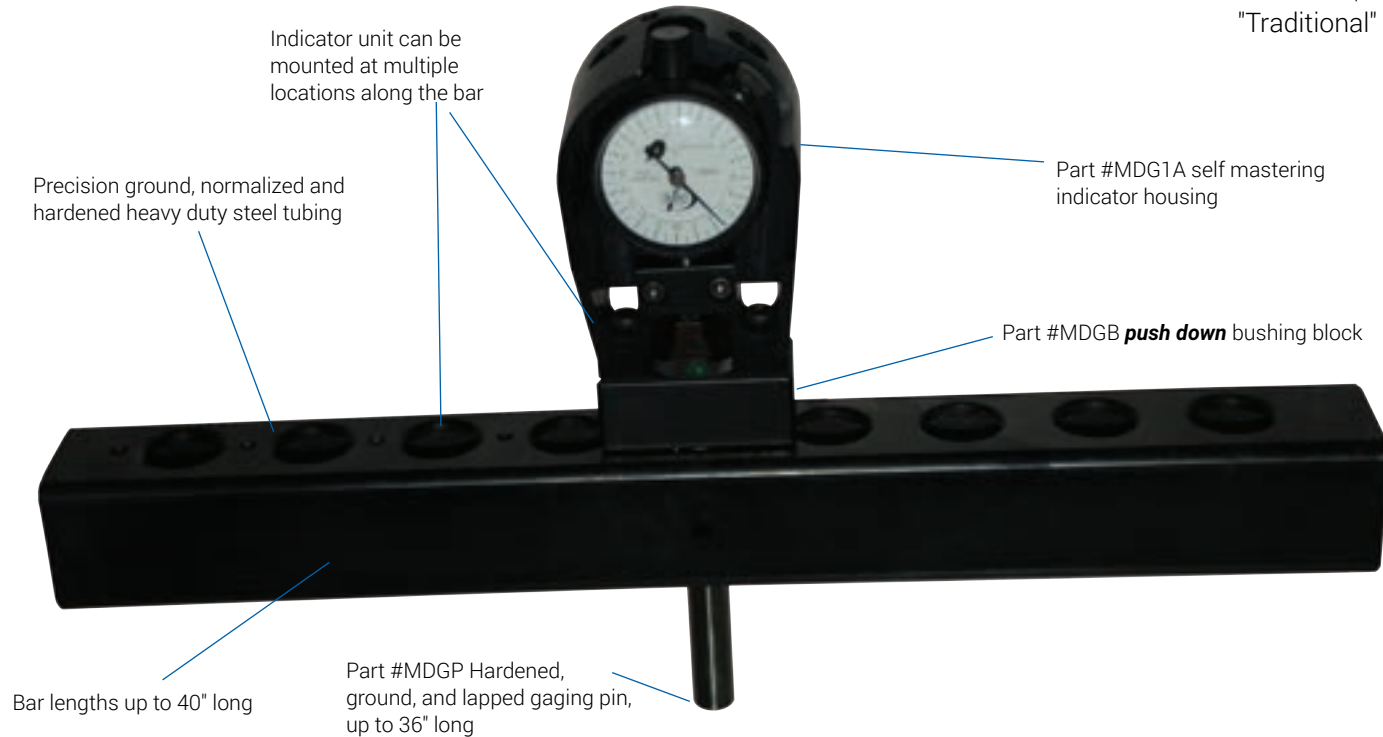
The MDG series of modular indicating depth gages are available as fixed or adjustable models. This versatile design allows the mixing and matching of components to build a gage which can suit any application. Designed to replace many dedicated flush pin gages, these gages feature a unique self-mastering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

## Features

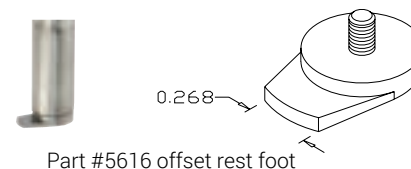
- ✔ Modular design offers maximum versatility.
- ✔ Frame style to suit any application.
- ✔ Heavy duty tube.
- ✔ Self-mastering adjustable and fixed models.
- ✔ A single gage can replace many flush pin gages.
- ✔ Accommodates ANSI AGD #1, #2 dial or digital indicators.
- ✔ Precision ground, stress relieved, and hardened frames and pins.
- ✔ Indicator is sold separately.

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

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



Dorsey Products - proudly made in the USA







1.5" x 1.5" Heavy Duty tube 3.5 lbs per ft.

BAR LENGTH	HEAVY DUTY FRAME
	PART #
13.25"	MDGHT13
15.75"	MDGHT15
18.38"	MDGHT18
21.00"	MDGHT21
26.25"	MDGHT30
31.50"	MDGHT40
39.36"	MDGHT47
47.23"	MDGHT49

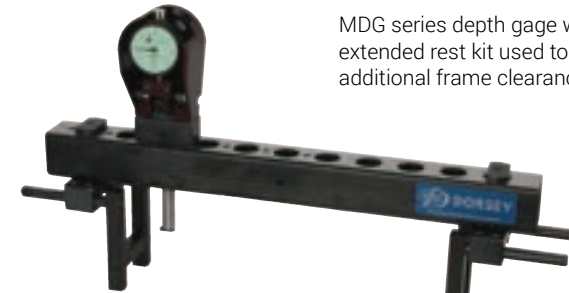


Gaging pins 7/16" Dia.

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

## Extended rest kits

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



Part # MDGRK2 Rest kit, 2" Tall

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

## Indicator Housing Assemblies

Adjustable self mastering indicator housing assembly

**push down**

(Indicator not included)

AGD 1 Part #MDGPD1

AGD 2 Part #MDGPD2



Adjustable self mastering indicator housing assembly

**pull up**

(Indicator not included)

AGD 1 Part #MDGPU1

AGD 2 Part #MDGPU2



Fixed series self mastering indicator housing assembly for AGD # 1, #2 or digital indicators

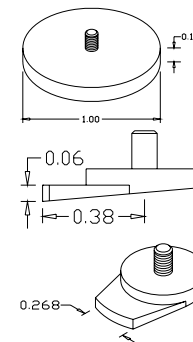
(Indicator not included)

Part #MDGF



## REVERSIBLE THREAD IN CONTACT

Requires MGPT series threaded pin



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

# ULTRA LARGE DIAMETER GAGES

www.dorseymetrology.com

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 240"/6000mm. 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.**



- ✓ 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.

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

***Available in Carbon Fiber***

Dorsey has built a reputation as a leader in the field of large component measurement. Our experience brings together the largest selection of precise linear measurement movements, frame configurations, materials, contact point shapes, rest designs, and other accessories; all with the knowledge of how to apply them to any large part inspection requirement. With our modular design, it is possible to solve the inspection of almost any part configuration such as; inside/outside diameters, ID/OD grooves, bearing raceways, conical and angular shapes. Applications for these instruments include inspection of large elements used in generators, turbines, aircraft engine housings, windmill parts, large bearings, large gears, large shaft lengths, and ship building apparatus.



**Ultra Large Master comes fixed with fine adjustment**

## SPECIAL APPLICATIONS EXAMPLES

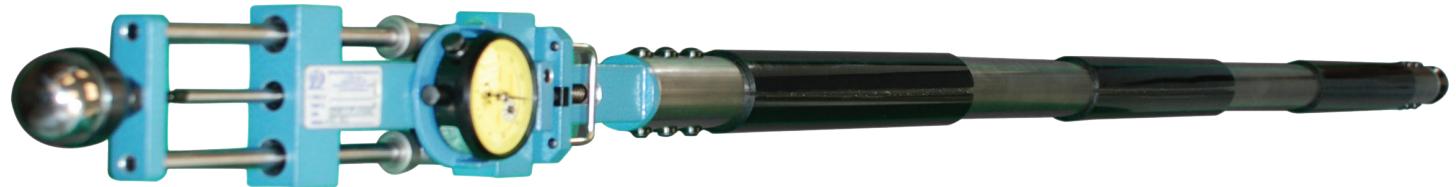
### ADJUSTABLE INSIDE/OUTSIDE PITCH DIAMETER GAGE



### ADJUSTABLE ID/OD DIAMETER



### INTERNAL BEARING RACEWAY GAGE



### EXTERNAL BEARING RACEWAY GAGE



*Available in Carbon Fiber*

### SETTING MASTER



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. large format double dial test indicator.
- ✓ .00005" grad. large format double dial 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.

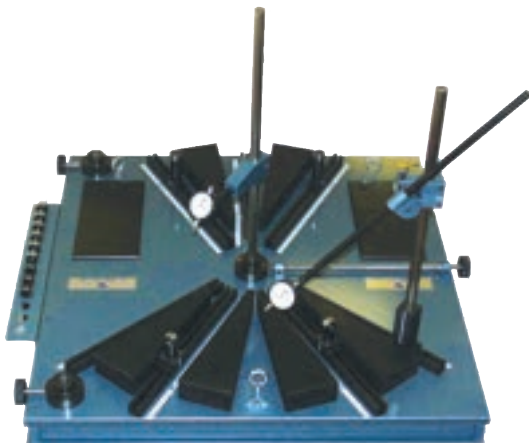
For parts 3-12" (75mm-300mm) in diameter with maximum weight of 150 lbs. (70Kg.). Fixture includes:

- ✓ 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.

## 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.

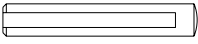

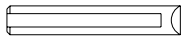
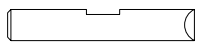
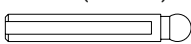
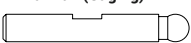
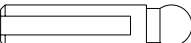
As described in Pratt & Whitney overhaul manual, similar to CPF-2 but features:

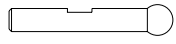
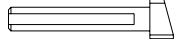
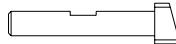
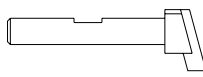
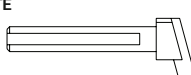


- ✓ Canted base.
- ✓ Rubber bumpers.
- ✓ Special bearing set.
- ✓ Additional post location.

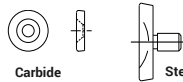

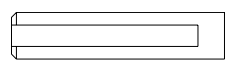
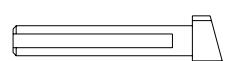
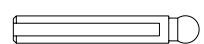
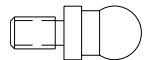
Dorsey also manufactures a line of portable concentricity fixtures for use if your part cannot be placed on a CPF fixture. Contact us for details.



## REPLACEMENT CONTACTS

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
.250" Dia. Ball (Reference) 	4060-250-B	Carbide

GAGING CONTACTS	PART #	MATERIAL
.250" Dia. Ball 	4030-250-B	Carbide
Shovel (Reference) 	4060-SS	Steel
	4060-CS	Carbide
Shovel 	4030-SS	Steel
	4030-CS	Carbide
Extended Shovel 	4030-ES	Carbide
	4060-ES	Carbide
GTE 	4060-M	Steel
Threaded 	4060-M	Steel
Threaded 	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
	7534-S	Steel
LDAR Shovel 	7534-S	Steel
	7534-CS	Carbide
LDAR .187" Dia. Ball 	7534-187B	Carbide
Thread in Ball Contact 	4082-187B	Steel

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AA	Angular Anvil, SMF or SSM	ES	Extended Shovel, Carbide, Gage
ARS	Angular Anvil Reversible, SMA or SMVA	FC	Frame Clearance, Adjustable Gage
BF	Bridge Frame, Gage	FC125	Frame Clearance 1.25", Fixed Gage
CB	Carbide Ball Contact, Gage	FC175	Frame Clearance 1.75", Fixed Gage
CD	Carbide Disc .50" or .62 Dia., Gage	GC025	Gaging Contact Travel .025"
CF	C Frame, Gage	GC050	Gaging Contact Travel .050"
CF	C Frame Outrigger, Set Master	DDR	Double Depth Rest
CS	Carbide Shovel Contact, Gage	GC075	Gaging Contact Travel .075"
DF-11	Donut Frame, 11" ID	GD3	Gaging Depth 3", Gage
DF-7	Donut Frame, 7" ID	GD4	Gaging Depth 4", Gage
DF-9	Donut Frame, 9" ID	GD5	Gaging Depth 5", Gage
DFS	Donut Frame, Special	GH	Gaging Height .5", Set Master

ABBREVIATION	DESCRIPTION
GH5	Gaging Height .5", Set Master
HCB	Half Carbide Ball, Gage
HF	Hump Frame, Gage
HRL	Heavy Duty Reverse Reference Head, LDLTF
IRS	Intermediate Rest Surfaces, Set Master
NI	No Indicator, Gage
R25	Restrictor Width .25", Set Master
R62	Restrictor Width .62", Set Master
RL	Reverse Action Lever
RR	Roller Rests
SD	Steel Disc .44" or .62" Dia.
SP	Steel Pin Contact, Gage

## DORSEY OPTICAL COMPARATORS

In the optical field, Dorsey is one of the few remaining domestically manufactured optical comparator product lines. Dorsey optical comparators demonstrate that attention to detail does matter and all are built on a foundation of stability and accuracy. Dorsey has tightened manufacturing tolerances to maintain uncompensated absolute inherent accuracy.

Below we've summarized some of the main items that should be taken into consideration when buying an optical comparator.

### Step 1 – Which light path is best for your application, Vertical or Horizontal?

- **Horizontal** light path instruments have a beam of light traveling horizontally across a stage. This type of machine is ideal for large heavy parts and shafts to be held on V blocks or between centers. Typical applications include castings, transmission shafts, thread form measurement, and machined components.
- **Vertical** light path instruments have a beam of light traveling vertically. Parts being measured/inspected are placed on a plate of glass, which is on the system's XY stage, which the light beam travels through. Vertical comparators are ideal for flat parts like gaskets, O-rings, stamped parts, and electronics. Dorsey's line of vertical comparators feature quick release mechanisms on both axes, making measurements on our vertical machines much faster than on horizontal machines which feature quick release on only 1 axis.

### Step 2 – What screen size and stage size best suits your application?

Screen sizes from 14" to 32" are available. Before choosing a screen size, determine how much of the part REALLY must be viewed at one time. When using a system it is not necessary to view the entire part to measure it. Calculations can be made by dividing the screen diameter by the lens magnification. For example, using a 10X lens on a 16" optical comparator would enable viewing 1.6" of the part on the screen ( $16"/10=1.6$ "). Keep in mind it is good practice to keep within one inch of the screen margin when viewing an image with an overlay. Verify that the stage size, travel, and weight capacity will accommodate all of the parts that are intended to be measured or inspected. In general, screen sizes 16" and smaller are benchtop units with weight capacities up to 150 pounds.

### Step 3 – What lens/lenses you will require?

Follow the chart below to decide what lens will match the tolerances required. A basic rule of thumb is that a typical attentive operator can repeatedly discriminate .004" on the comparator screen. Dividing the "discernible resolution" by the lens magnification determines the minimum resolution attainable for each lens.

LENS MAGNIFICATION	DISCERNABLE RESOLUTION
5X	.0008" (0.020mm)
10X	.0004" (0.010mm)
20X	.0002" (0.005mm)
25X	.00016" (0.004mm)

LENS MAGNIFICATION	DISCERNABLE RESOLUTION
31.25X	.0001" (0.003mm)
50X	.00008" (0.002mm)
62.5X	.00006" (0.0016mm)
100X	.00004" (0.001mm)

### Step 4 – What type of readout/software will you require, or will you be using overlays?

If you will be using overlays only, our base models without scales are an ideal cost effective solution. It is good practice to keep within one inch of the screen margin when viewing an image with an overlay. If measurements are required, select a basic XY digital readout if only positions and distances results are necessary. However, if measurement of circles, angles, and parametric distance is required, then select a readout or M2 software with geometric capability. Repetitive part measurement may encourage the selection of a CNC capable readout. Automatic edge sensing should be considered to eliminate operator subjectivity and increase repeatability and accuracy. See pages 91-93.

### Step 5 – What options or tooling will be required?

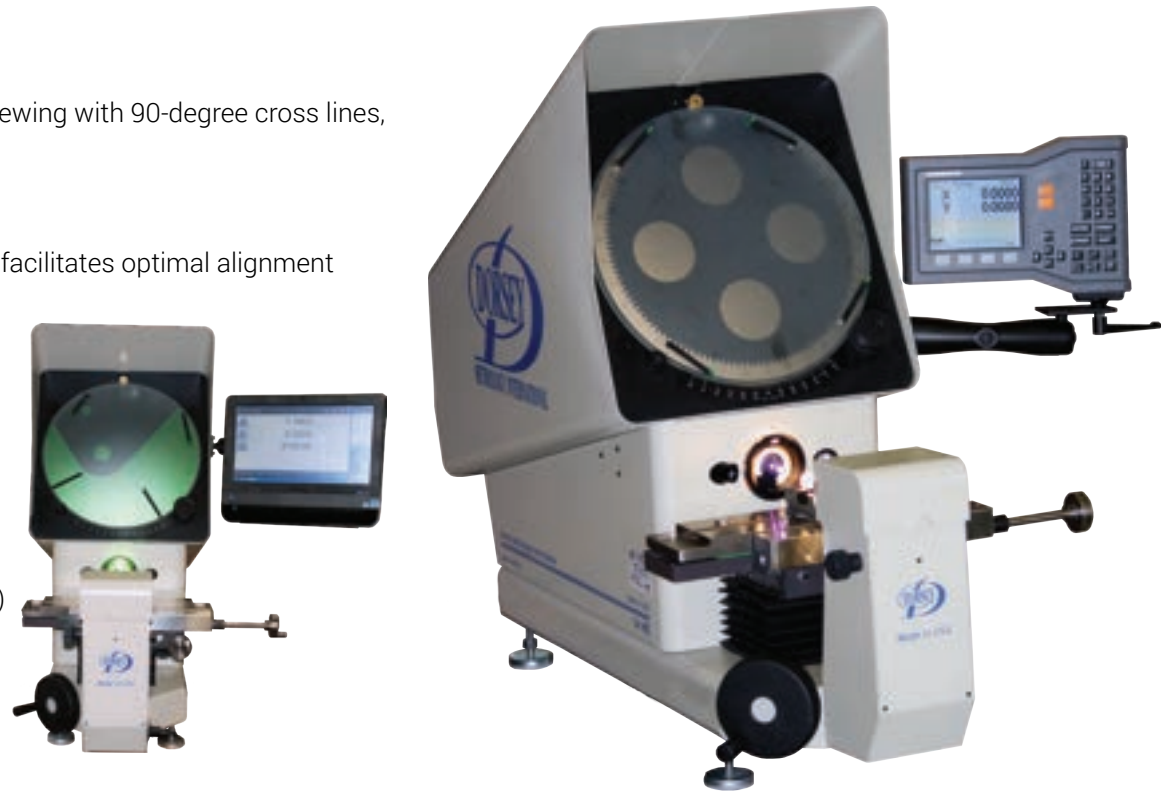
Repeatability and accuracy will suffer if the workpiece is not properly and securely held. Careful consideration should be given to tooling and to the surface on which you place your comparator. Review pages 94 and 95 for solutions.

For assistance in selecting and configuring the correct Dorsey Comparator to meet your measurement and inspection needs, please contact us at 845-454-3111.

The 14HE benchtop comparator is Dorsey Metrology's basic and most economical comparator with the same high quality features as the other comparators in our product line, but in a smaller package at a lower price. The addition of our extra long-life LED surface illumination is another Dorsey innovation.

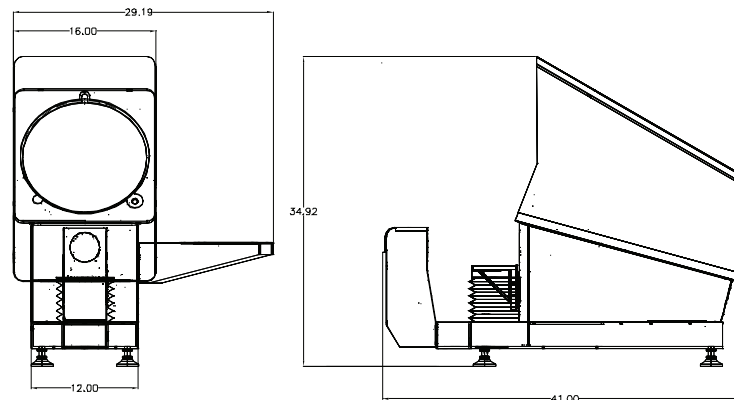
## FEATURES:

- ✓ 14" (350mm) angled high-resolution glass screen for optimum viewing with 90-degree cross lines, calibration reticle, and chart clips
- ✓ Dimmable LED profile illumination
- ✓ 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 1 minute or 1/100 of a degree resolution
- ✓ 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, 100x
Optical Accuracy	Within +/- .10% Profile, +/- .15% Surface
Power Requirements	120V or 240V AC, 50/60 Hz, 10 Amp
Weight	230 lbs/105 kg

# MODEL 14H HORIZONTAL BEAM

The Benchmark 14H is an Erect 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:

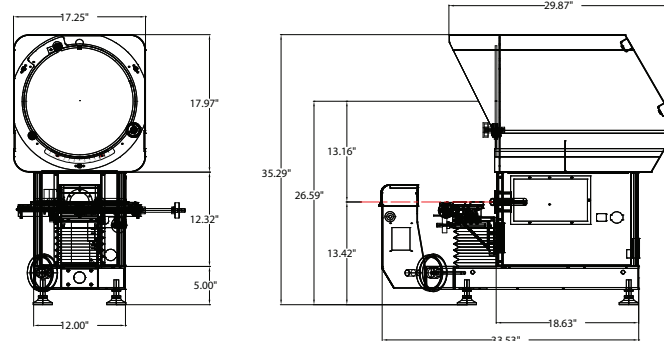
- ✓ Erect and reversed profile image
- ✓ 14" (350mm) vertical screen for optimum viewing, high resolution ground glass screen with 90 degree cross lines, with calibration reticle and chart clips
- ✓ Machined chart ring with vernier protractor, 1 minute graduation facilitates optimal alignment
- ✓ Coated 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 1 minute or 1/100 of a degree resolution
- ✓ Harsh Environment Package
- ✓ Additional lens magnifications available
- ✓ Tooling

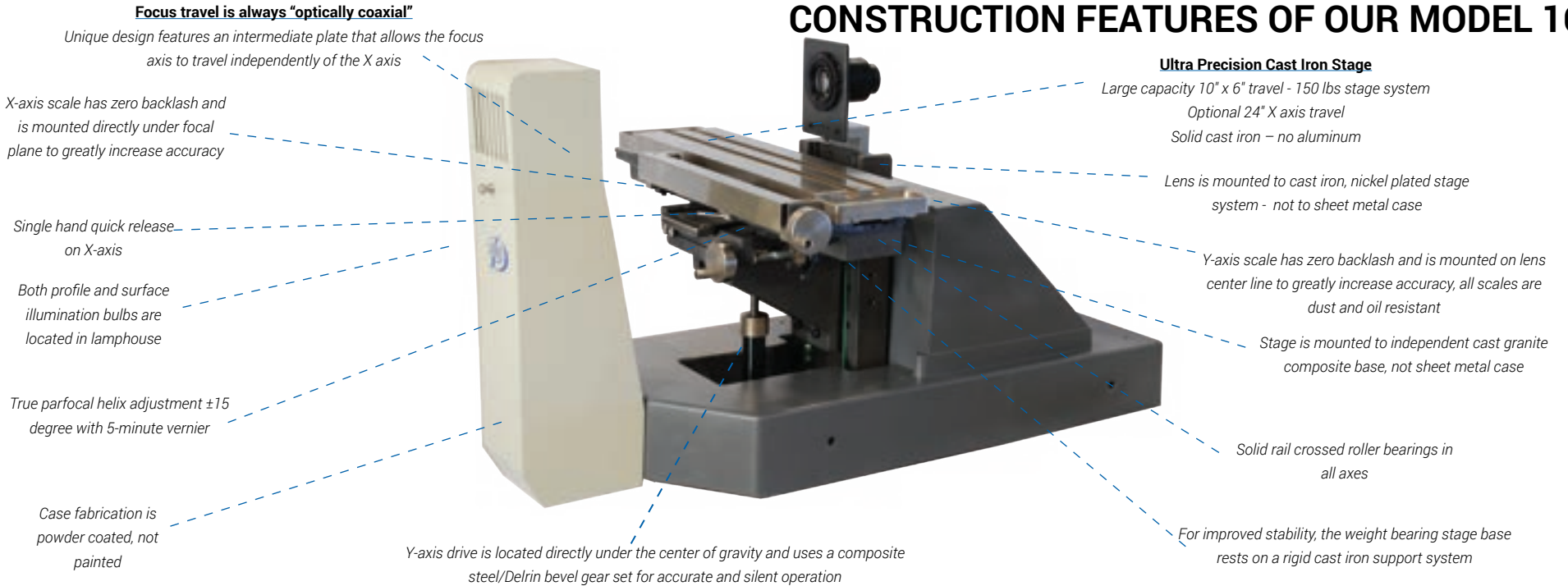
## DIMENSIONS



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, 100x
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  $\pm 15$  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 mounted to cast iron, nickel plated stage system - not to 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.

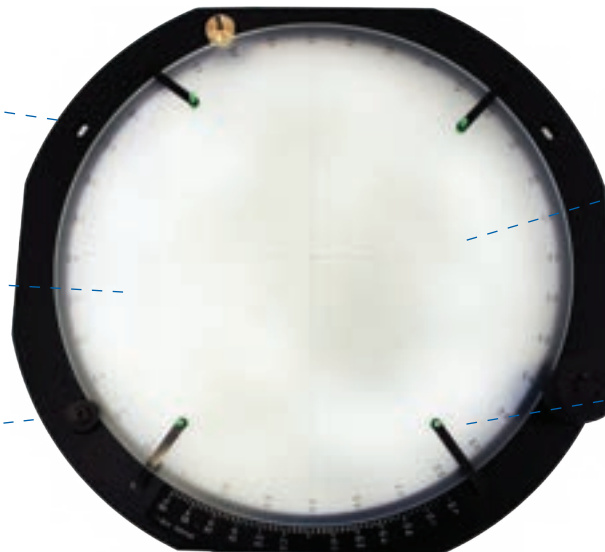
- ✔ IED is more accurate because the image is "read directly" and is not diffused through the ground glass screen.
- ✔ IED is also not subject to the stability and rigidity of a plastic arm, our IED sensor cannot be bumped out of alignment under normal use, like the external arm can.

**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

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:

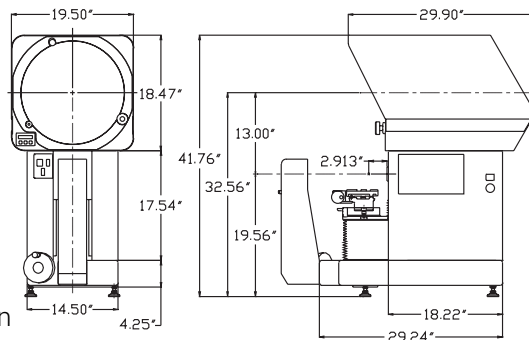
- ✔ 16" (400mm) Vertical screen for optimum viewing
- ✔ Erect and reversed profile image
- ✔ High resolution ground glass screen with calibration reticle, 90 degree cross lines, and chart clips
- ✔ Machined chart ring with vernier protractor, 1 minute graduation
- ✔ Coated telecentric parfocal optics
- ✔ Quick change single lens mount
- ✔ LED surface & dimmable profile illumination
- ✔ Integrated hood
- ✔ 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



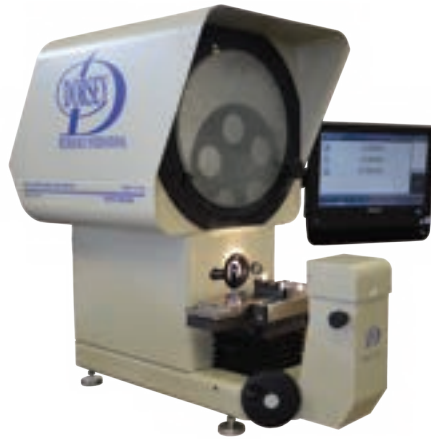
## OPTIONAL FEATURES:

- ✔ 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 and CNC computer controlled systems, 50 lbs capacity
- ✔ Output for electronic rotary screen protractor (Q-axis) with selectable 1 minute or 1/100 of a degree resolution
- ✔ Through-lens surface illumination
- ✔ Harsh Environment Package
- ✔ Additional lens magnifications available
- ✔ Tooling

## DIMENSIONS



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	5x, 10x, 20x, 25x, 31.25x, 50x, 62.5x, 100x
Optical Accuracy	Within +/- .10% Profile, +/- .15% Surface
Power Requirements	120V or 240V AC, 50/60 Hz, 10 Amp
Weight	460 lbs/209 kg

**14H****16H CNC****16H**

In the optical field, Dorsey is one of the few remaining domestically manufactured optical comparator product lines. Dorsey happily acknowledges that we have learned from our customers that quality and attention to detail does matter. Dorsey optical comparators are manufactured on a foundation of rigidity and accuracy. We manufacture both horizontal and vertical comparators from 14" up to 32" screen sizes with choices of table travel and weight capacity. Standard features include cast iron, nickel coated stages, linear cross roller bearings in all axes, helix adjustment. Options include internal edge detection, and a variety of readouts from simple X-Y to motorized and complete CNC format. Dorsey has been building optical comparators for over 20 years and has thousands of satisfied customers.

**16VS****24P****32P**

# MODEL 24P HORIZONTAL BEAM

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

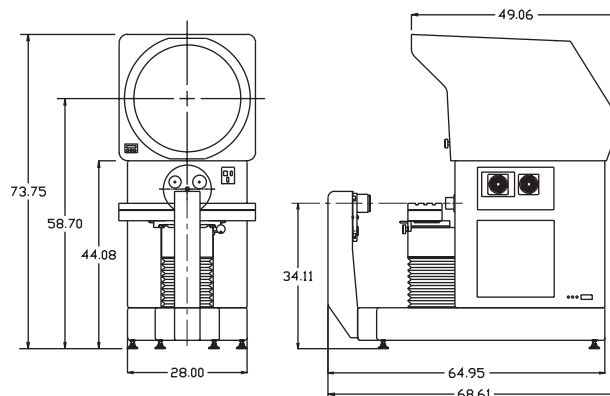
## FEATURES:

- ✔ 24" (600mm) Vertical screen for optimum viewing
- ✔ Erect and reversed profile image
- ✔ High resolution 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 (4 position optional)
- ✔ LED surface & dimmable profile illumination
- ✔ Bright fiber optic surface illumination
- ✔ 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  $\mu\text{m}/.000004"$
  - >  $\pm 15$  degree true parfocal helix stage adjustment, with 5 minute vernier
  - > Joystick control, computerized microstep motor controller with X and Y axes & focus
- ✔ Integrated hood
- ✔ NIST traceable calibration certificate
- ✔ 2 Year limited warranty

## OPTIONAL FEATURES:

- ✔ Internal edge detection
- ✔ Output for electronic rotary screen protractor (Q-axis) with selectable 1 minute or 1/100 of a degree resolution
- ✔ Choice of readout options, see page 90
- ✔ CNC computer controlled readout systems
- ✔ Extra bright through lens surface illumination with Nikon lens option
- ✔ Harsh Environment Package
- ✔ Wide selection of lenses
- ✔ Extended hood & curtains
- ✔ Tooling

## DIMENSIONS



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 $\mu\text{m}/.000004"$
Repeatability of Scales	+/- 1 Scale count (0.1 $\mu\text{m}/.000004"$ )
Coated Telecentric Lenses	10x, 20x, 31.25x, 25x, 50x, 62.5x, 100x
Optical Accuracy	Within +/- .10% Profile, +/- .15% Surface
Power Requirements	120V or 240V AC, 50/60 Hz, 10 Amp
Weight	1980 lbs/898 kg



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:

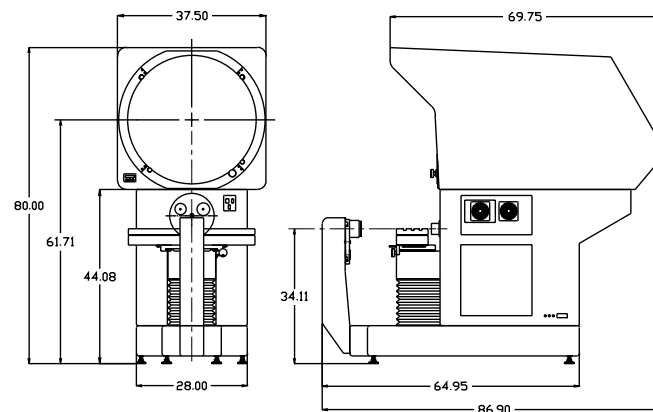
- ✓ 32" (800mm) Vertical screen for optimum viewing
- ✓ Erect and reversed profile image
- ✓ High resolution ground glass screen with calibration reticle, 90 degree cross lines
- ✓ Machined chart ring with vernier protractor, chart clips, 1 minute graduation facilitates optimal alignment
- ✓ Coated telecentric parfocal optics
- ✓ 3 position rotary lens & condenser turret
- ✓ Dimmable LED profile light sources
- ✓ LED fiber optic surface illumination
- ✓ Linear Scale Resolution 0.1  $\mu\text{m}/.000004"$
- ✓ 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
- ✓ NIST traceable calibration certificate
- ✓ 2 Year limited warranty

## OPTIONAL FEATURES:

- ✓ Internal edge detection
- ✓ Output for electronic rotary screen protractor (Q-axis) with selectable 1 minute or 1/100 of a degree resolution
- ✓ Choice of readout options, see page 90
- ✓ CNC computer controlled readout systems
- ✓ Harsh Environment Package
- ✓ Extended hood & curtains
- ✓ Wide selection of lenses
- ✓ Tooling



## DIMENSIONS



Technical Specification	
Illumination	Profile: Dimmable LED 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, 25x, 31.25x, 50x, 62.5x, 100x
Optical Accuracy	Within +/- .10% Profile, +/- .15% Surface
Power Requirements	120V or 240V AC, 50/60 Hz, 10 Amp
Weight	3950 lbs/1792 kg



# MODEL 16VS VERTICAL BEAM

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:

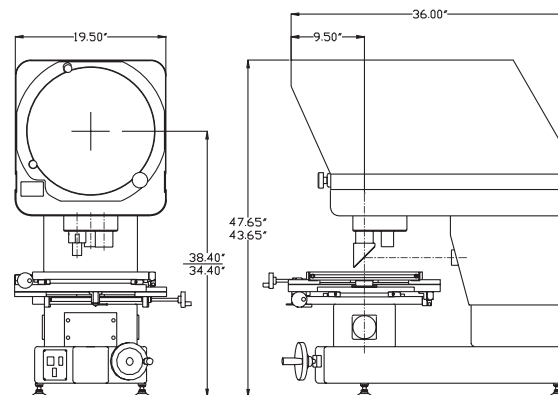
- ✓ 16" (400mm) Diameter vertical screen for optimum viewing
- ✓ Reversed and inverted image
- ✓ High resolution ground glass screen with calibration reticle, 90 degree cross lines, and chart clips
- ✓ Machined chart ring with vernier protractor
- ✓ High specification stage
  - > 50 lbs stage capacity (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:

- ✓ Motorized stage
- ✓ Internal edge detection
- ✓ Coaxial surface illumination
- ✓ Output for electronic rotary screen protractor (Q-axis) with selectable 1 minute or 1/100 of a degree resolution
- ✓ Choice of readout options
- ✓ For choices of other vertical stages see page 96
- ✓ Wide selection of lenses
- ✓ Harsh Environment Package
- ✓ Tooling

## DIMENSIONS



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, 25x, 31.25x, 50x, 62.5x, 100x
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. It features S-T's exclusive Gothic arch bearing ways which provide the best in accuracy and longevity.

## FEATURES:

- ✓ High precision 24" x 10" measuring stage travel with 0.1 (one tenth) micron resolution precision glass 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.
- ✓ Digital screen protractor with readings to 1' or .01° with rotating steel ring.
- ✓ Helix angle +/- 10° by swinging lamphouse.
- ✓ Three 7" diameter wheels for portability.
- ✓ CNC option available.



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
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, 25x, 31.25x, 50x, 62.5x, 100x
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)

## 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 on X and Y axis
- ✓ 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.

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.

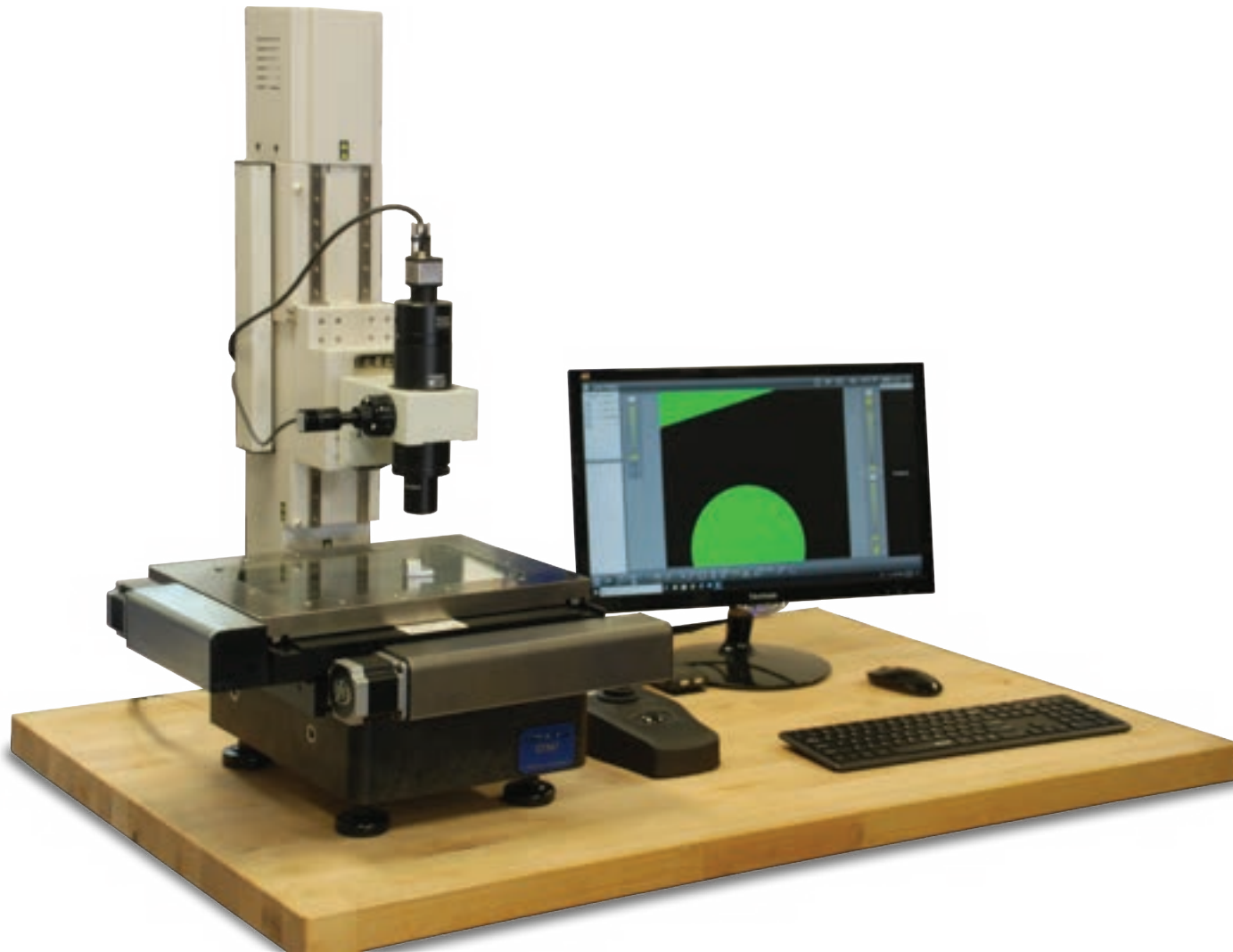
### FEATURES

- ✓ 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.



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

**FROM THE LEADING DOMESTIC OPTICAL COMPARATOR MANUFACTURER COMES DORSEY METROLOGY'S VISION MICROSCOPE SYSTEM.**



## **FEATURES:**

- ✓ (1/10) Micron Scales
- ✓ High Precision Linear Bearings
- ✓ Hard Nickel Plated Cast Top Plate
- ✓ 8x4" Fully Motorized Stage
- ✓ Encoded Z-Axis
- ✓ Programmable Lighting
- ✓ High Precision Microscope Optics
- ✓ Collimated LED Profile Illumination
- ✓ Thru the Lens Surface Illumination
- ✓ MetLogix M3 CNC Software
- ✓ NIST Traceable Calibration Certificate
- ✓ 2-Year Limited Warranty



## MX100

Absolute and Incremental encoder positions from up to 3 connected encoders. Simple zero and preset functions provide quick assessment of relative encoder displacement.

## MX200

Supporting Optical Edge and Crosshair Systems. Full geometric measurement support, tolerancing, data management, and part programming.

## 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.

## FEATURES AND CONSTRUCTIONS

Supporting industry standard feature measurement and popular construction types. Toggle feature construction sub-types quickly with the change feature type button.

### Supported construction types include:

- ✓ Intersections
- ✓ Bolt Circle
- ✓ Farthest Distance
- ✓ Perpendicular Line
- ✓ Mid/Center Point(s)
- ✓ Shortest Distance
- ✓ Angle Compliments
- ✓ Gage Circle/Line
- ✓ End Points
- ✓ Tangent Line(s)



## REPORT, PRINT, AND EXPORT

Choose from one of three report formats; CSV, Standard, or Tolerance. Report contents can include a report title, time and date stamps, and all feature measurement result data. Reports can be printed as hard copies to standard Windows compatible printers, or exported as PDF or CSV data files.

### Export choices include:

- ✔ Printer (USB, Wifi, Bluetooth)
- ✔ Save to a file (USB)
- ✔ RS232 Output

## MEASURING MACHINE INTEGRATION

Ask your MetLogix representative about the wide variety of encoder interface technologies and other hardware supported in the Mx200 Digital Readout.

Feature	Mx100 Series	Mx200 Series
Optical Edge Detection		✔
Video Edge Detection		
Advanced Probe Group		
Field 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		

## SUPPORT FOR ALL CURRENT INDUSTRY STANDARD SOFTWARE STAGE

### CALIBRATION METHODOLOGIES

Robust and reliable machine calibration can be achieved using popular machine correction methods including Linear Error Correction(LEC), Segmented Linear Correction(SLEC) , Non-Linear Error Correction(NLEC), and squareness correction.

Metlogix M2 software can be installed on an all-in-one touch screen PC with Microsoft Windows 7, 8.1, or 10.

## METLOGIX M2 MEASURING SOLUTION FEATURES

- ✓ Clean, intuitive design
- ✓ Available in horizontal or vertical formats
- ✓ Support for optical edge or crosshair measuring systems
- ✓ Designed for multi-touch software control
- ✓ Advanced crosshair probe toolbox
- ✓ Graphics based "Part View" constructions
- ✓ Feature detail graphics
- ✓ Geometric tolerancing
- ✓ Part programs and playback
- ✓ Presentation quality reports via local file, Wifi, or LAN



## GRAPHICS-BASED "PART VIEW" CONSTRUCTIONS

Generate popular construction types, such as Distances and Tangent Lines, from within the graphical part view itself. Constructions with multiple sub-types can be toggled quickly with the "change feature type" command.

Supported construction types include:

- ✓ Average
- ✓ Mid/Center Point(s)
- ✓ End Point(s)
- ✓ Intersections
- ✓ Shortest Distance
- ✓ Farthest Distance
- ✓ Tangent Line(s)
- ✓ Gage Circle(s)
- ✓ Bolt Circle
- ✓ Angle Compliments
- ✓ Perpendicular/Parallel Line(s)
- ✓ Offset Skew Lines

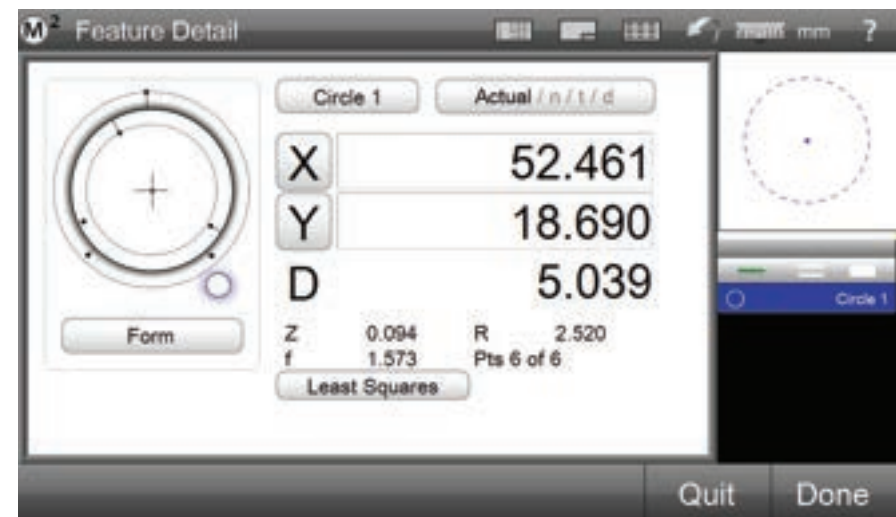


## METLOGIX CNC OPTION

The **MetLogix CNC option** provides closed loop control of optical comparators. The CNC option enables automatic and repetitive part measurement, boosting productivity and helping to reduce operator subjectivity.

## FEATURE DETAIL GRAPHICS

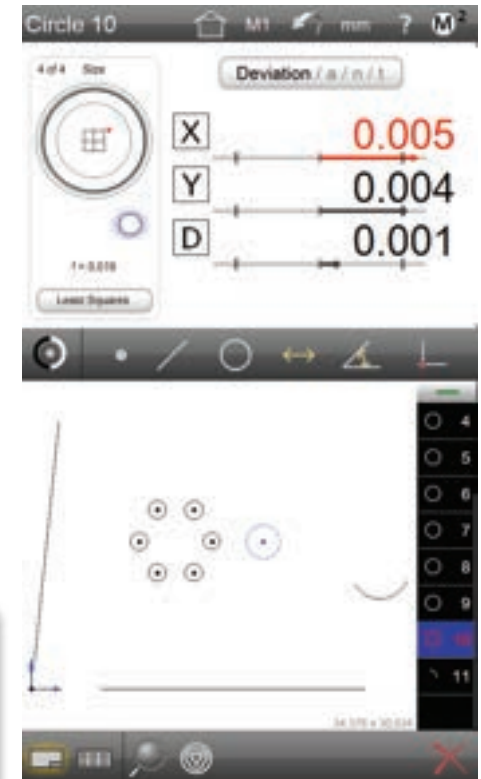
Individual feature views provide informative drawings displaying point cloud distributions as well as nominal deviations and tolerance results. Scroll through your measured features list from this view for a feature-by-feature display of Actual, Nominal, Tolerance, and Deviation results. Set the desired data fit type from the "Actual" screen using the "fit toggle" button.



You may measure features, set nominals, apply tolerances, and view deviation results with only a few quick clicks. You may also apply a variety of popular tolerance types to features in the standard “feature-to-feature” fashion, or utilize the “place tolerancing” system for applications where tolerances are specified in a block tolerance style call out. For these cases, the M2 software lets you enter and apply universal tolerance values according to your feature resolution groupings.

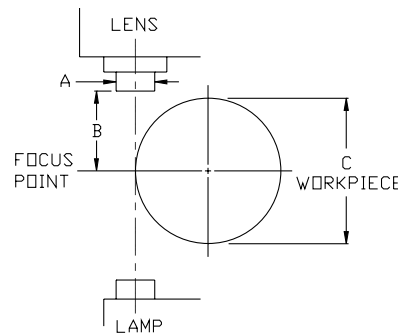
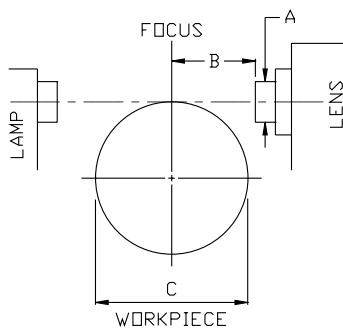
## SUPPORTED TOLERANCES INCLUDE:

- ✔ X/Y/Z Positional
- ✔ Diameter/Radius/Length/Width Size
- ✔ Theta (Angle)
- ✔ Form
- ✔ Parallelism
- ✔ Angularity
- ✔ True Position (LMC/MMC Modifiers)
- ✔ Straightness
- ✔ Perpendicularity
- ✔ Roundness
- ✔ Concentricity
- ✔ Runout



## LENS TECHNICAL SPECIFICATIONS

14" SCREEN				16" SCREEN				24" SCREEN				32" SCREEN				NIKON 20 +			
LENS MAGNIFICATION	METRIC (mm)			LENS MAGNIFICATION	METRIC (mm)			LENS MAGNIFICATION	METRIC (mm)			LENS MAGNIFICATION	METRIC (mm)			LENS MAGNIFICATION	METRIC (mm)		
	A	B	C		A	B	C		A	B	C		A	B	C		A	B	C
5X	58	81	162	5X	106	138	276	5X	158	220	440	5X	196	315	630	5X	120	73	146
10X	54	81	162	10X	58	80	160	10X	79	138	276	10X	117	158	316	10X	70	79	158
20X	47	81	162	20X	40	82	164	20X	68	138	276	20X	117	109	218	20X	50	85	170
25X	40	70	140	25X	40	70	140	25X	68	118	236	25X	117	92	184	50X	50	51	101
31.25X	34	56	112	31.25X	35	56	112	50X	68	100	200	31.25X	117	79	158	100X	50	51	101
50X	28	51	102	50X	30	53	106	100X	68	48	96	50X	117	60	120				
100X	27	43	86	62.5X	30	50	100	200X	20	24	48	62.5X	117	52	104				
				100X	30	43	86					100X	117	48	96				



## DESIGNED FOR MULTI-TOUCH SOFTWARE CONTROL

In addition to the conventional mouse interface, expanded Multi-Touch logic allows for one-touch feature measurements as well as versatile pan and zoom of the live video image and the active part view. Increase the efficiency of feature measurements, feature data manipulation, and reporting tasks with a simple pinch zoom, swipe pan, or double click.

## ADVANCED VIDEO PROBE TOOLBOX

The custom EyeMeasure™ probe captures complex edges by creating a custom “tool zone”. The MeasureLogic™ probe’s intelligent design provides an instant feature determination. The Vtouch™ probe provides industry first video touch probe functionality.

## SUPPORT UP TO 8 CHANNELS OF PROGRAMMABLE LIGHT CONTROL

On-screen controls let you adjust Coaxial, Substage, and Quadrant Ring light output accommodating a wide range of measuring requirements. Your light levels are also remembered and may be recalled for program playback.

## ADVANCED EDGE TEACH

Improve edge detection performance under a variety of image and lighting conditions. Features with poor edge contrast, or difficult spacing can be captured in a snap using the M3’s manual teach function. Press and hold on an edge in any video image to specify a teach region.

## QUICK ANNOTATE AND MARKUP

Gain access to instant feature markup tools using the part view “Gesture Menu”. Add customized feature data to your live video image or part view displaying only the desired coefficients. You may annotate one or several features simultaneously with the smart marquee feature selection.



## GRAPHICS-BASED “PART VIEW” CONSTRUCTIONS

Generate popular construction types, like Distances and Tangent Lines, from within the graphical part view itself. The “Gesture Menu” can be used within the part view to provide access to “on the fly” feature creation and manipulation tools.

### Supported construction types include:

- ✔ Average
- ✔ Intersections
- ✔ Tangent Line(s)
- ✔ Angle Compliments
- ✔ Offset Skew Lines
- ✔ Mid/Center Point(s)
- ✔ Shortest Distance
- ✔ Gage Circle(s)
- ✔ Perpendicular/Parallel Line(s)
- ✔ End Point(s)
- ✔ Farthest Distance
- ✔ Bolt Circle

## DXF OVERLAY AND FOV CAPABILITY

Using the DXF/FOVE option pack, you may import DXF files for “comparative style” Go/No-Go feature and part inspection. This includes a live error whisker display for part violations of the original DXF tolerance zones. You may even utilize custom DXF crosshair files, create “on the fly” overlay feature tools, and utilize pattern recognition for part program playback.

### DXF/FOV option pack features include:

- ✔ Custom DXF crosshair
- ✔ Create feature-based video overlays
- ✔ Import DXF overlay
- ✔ Export features to DXF
- ✔ Pattern teach and recognition
- ✔ Live image “freeze”

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

Part # ACC-CAB27



## STAND WITH SHELF

- ✓ 24" x 36" x 32"
- ✓ Solid steel construction
- ✓ Up to 350 lbs capacity
- ✓ Durable finish

Part # ACC-CAB32



Part # ACC-16ID



Part# ACC-24/32ID



Part # ACC-16GF



Part# ACC-24/32GF



Part# ACC-16PF

## IRIS DIAPHRAGM

- ✓ Part #ACC-16ID for 16" benchtops
- ✓ Part #ACC-24/32ID for 24" & 32" floor models
- ✓ Mounts over condenser
- ✓ Used to improve collimation and reduce glare
- ✓ Improved measurement accuracy for cylindrical parts

## GREEN FILTER

- ✓ Part #ACC-16GF for 16" benchtops
- ✓ Part #ACC-24/32GF for 24" & 32" floor models
- ✓ Mounts over condenser
- ✓ Monochromatic filter increases contrast and reduces optical aberrations while reducing operator eye fatigue

## POLARIZING FILTER

- ✓ Part #ACC-16PF for 16" benchtops
- ✓ Part #ACC-24/32PF for 24" & 32" floor models
- ✓ 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
- ✓ Chrome targets with 6" x 3" rule
- ✓ Inch/metric graduations
- ✓ Fitted storage box
- ✓ NIST Traceable accuracy certification
- ✓ For linear calibration and projection of magnification image



## PROJECTION MASTER STAND

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



Part # ACC-BF



Part # ACC-LBF

## FIXTURE BANKING PLATES

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



Part # ACC-V2  
(Only vertical V)



Part # ACC-V1

## PRECISION FIXTURE VISE

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



## PRECISION VISE STAND

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



Part # ACC-VB1

## PRECISION V BLOCK

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



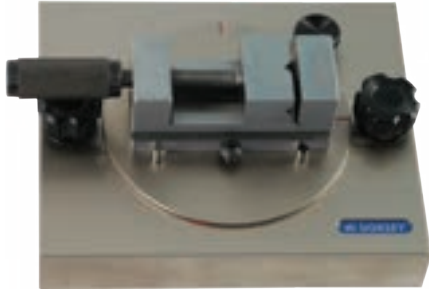
Part # ACC-VF7X5

## VERTICAL GLASS FIXTURE

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



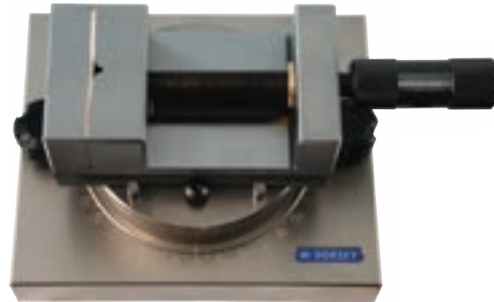
Dorsey Products - proudly made in the USA



Part # ACC-RV1

## ROTARY VISE STAGE

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



Part # ACC-RV2



Blocks lock into standard .5" dovetail

## MACHINABLE FIXTURE BLOCKS

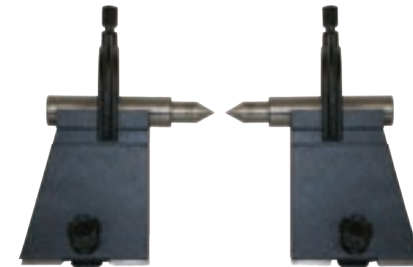
- ✓ Used to make custom fixtures
- ✓ Precision machined steel
- ✓ Available :
  - > 2" (50mm) Part #ACC-FB2
  - > 4" (100mm) Part #ACC-FB4
  - > 6" (150mm) Part #ACC-FB6
  - > 8" (200mm) Part #ACC-FB8

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



## BENCH CENTERS

- ✓ Part# ACC-VBC5.38
- ✓ Matched ground hardened steel
- ✓ 90 degree V
- ✓ 5.385" (137mm) tall
- ✓ 3/4" (19mm) diameter centers with fine adjustment
- ✓ 1.25" (32mm) fixed center



## HEAVY DUTY V BLOCK & CENTER KIT

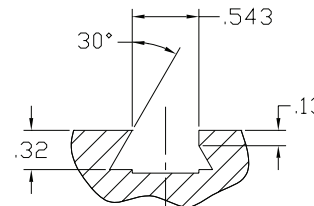
- ✓ Part# ACC-VBCHD
- ✓ Matched ground cast iron
- ✓ 90 degree V
- ✓ 5" (127mm) tall
- ✓ 1" (25mm) diameter centers with interchangeable Morse taper insert and clamps



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



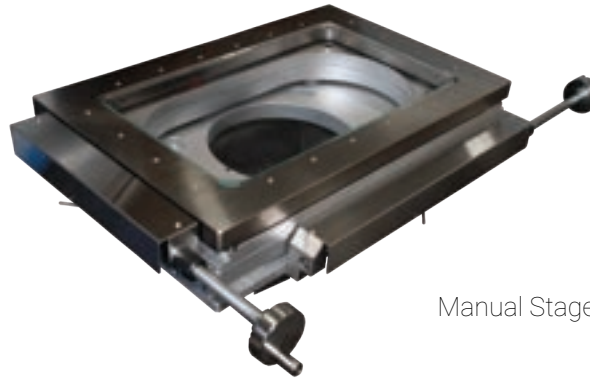
Typical universal dove tail detail used on all horizontal staging

# ULTRA PRECISION COORDINATE STAGING

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

## FEATURES:

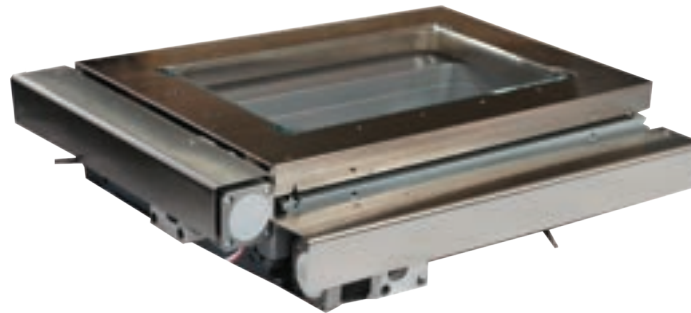
- ✓ Solid or glass plate stages available
- ✓ High precision linear bearings
- ✓ Hard nickel plated surfaces
- ✓ Fixturing holes with universal spacing
- ✓ Quick release on both axes on all manual stages
- ✓ Static axis bias on stage drives increases accuracy
- ✓ Universal mounting options fit many existing 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]
- ✓ NIST traceable calibration certificate
- ✓ 2 Year Warranty



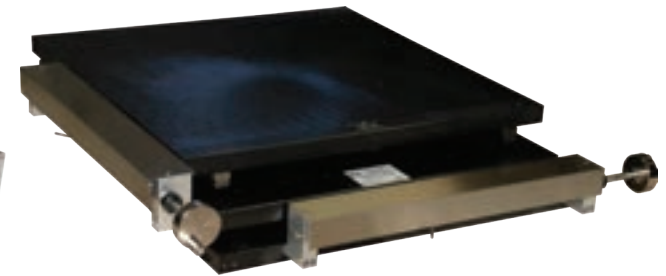
Manual Stage



Static Fixture Plate



Motorized



Solid Stage

## 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



**Dorsey Metrology Calibration Laboratory**53 Oakley Street  
Poughkeepsie, NY 12601**Scope of Accreditation<sup>1</sup>**  
**(ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994)**

## I. Dimensional

Parameter/Equipment	Range	CMC <sup>2,3</sup> (±)	Comments
Dial Indicator – High Amplification (high resolution) Course Graduation (low resolution)	Up to 0.050 in	23 µin + 0.6R	5P01WI1 Mitutoyo Calibration Tester
Digital Indicator	Up to 1 in	39 µin	5P01WI2 Gage Blocks
ID/OD Gage and Set Master	Up to 48 in OD Up to 49 in ID length	(12.9L + 0.6R) µin (12.9L + 0.6R) µin	5P01WI3 Gage Blocks
Thickness Gage and Set Master	Up to 6 in	150 µin + 0.6R	5P01WI6 Gage Blocks
Depth Gage and Set Master	Up to 12 in	190 µin + 0.6R	5P01WI7 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	70 µin 160 µin 290 µin 580 µin	5P01WI6 Bore Gage Calibrator

<sup>1</sup> We offer commercial calibration services. 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> 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.



## Dorsey Metrology Calibration Laboratory

25 Oakley Street  
Poughkeepsie, NY 12601

### Scope of Accreditation<sup>1</sup> (ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994)

#### I. Dimensional

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Optical Comparator <sup>3</sup> –			5P01W14
Squareness	Up to 8 in	140 μin	Perpendicular Master and Dial Test Indicator
Magnification	Up to 24 in (X and Y Axis)	80 μin	Magnification Glass Master
X,Y Linear Measurement	Up to 12 in (12 to 24) in (X and Y Axis)	180 μin 240 μin	Projection Glass Master

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<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 this calibration and this laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories 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.