

MITUTOYO - MISCELLANEOUS**MISCELLANEOUS**

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Pocket Magnifiers

Series 183

Features

- A handy instrument that is suitable for inspecting metal surfaces and shear and unevenness in offset printing.

Specifications

Order No.	Magnification
183-201	25X
183-202	25X
183-203	50X



183-201



183-202



183-203

Clear Loupe

Series 183

Features

- Drawtube is made of acrylic resin for clear image of the workpiece.
- Drawtube is removable for use as a magnifying glass.

Specifications

Order No.	Magnification
183-301	7X
183-302	10X
183-303	15X



183-301



183-302



183-101

183-121

183-131

183-303

Pocket Comparators/ Magnifiers with Reticles

Series 183

Features

- By replacing reticles (optional), dimensional, angle, and other types of measurements can be performed.

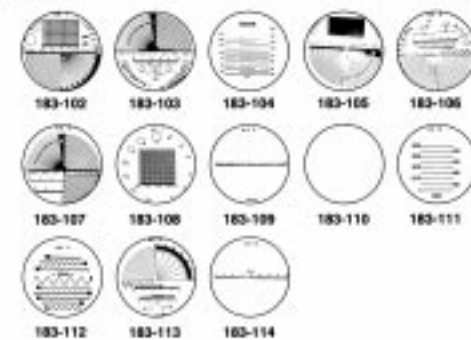
Specifications

Order No.	Magnification
183-101	8X
183-121	9X
183-131	10X
950757	Illumination Attachment

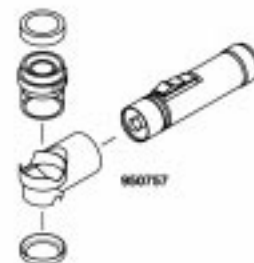
Comparator (8X) and reticle sets

Order No.	Reticle
183-901	183-106
183-902	183-102, 106, 107, 183-112, 113, 114

Reticles



Illuminator



DIGITAL PROTRACTOR

Digital Protractor Series 950

These Digital Protractors present inclination values on an easy-to-read liquid crystal display. The measurements are generated by an electronic gravity sensor and processed by the latest low-power electronic circuit technology.

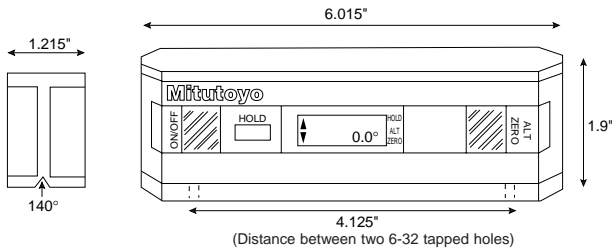
Features

- Full 360° range (90° x 4).
- Machined aluminum frame.
- Alternate reference (zero).
- Reading hold.
- Simple calibration requiring no special fixtures.
- Display remains upright to view at all angles.
(950-315, Pro 360 Model).
- RS232C output. (950-316 Pro 3600 Model).



950-315

DIMENSIONS



950-316

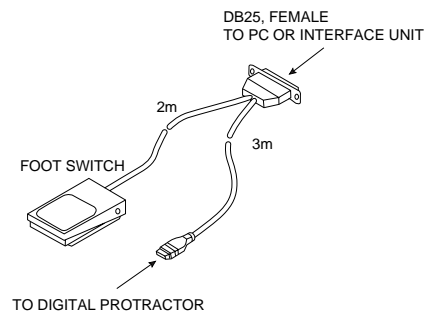
Optional Accessories

Order No.	Description
64PPP794	Magnetic base
50AAA983	RS-232C Output cable w/foot switch

Specifications

Order No.	950-315	950-316	50AAA983
Model	Pro 360	Pro3600	RS-232C Output Cable with foot switch 10P-25P
Range	360° (90°x4)	360° (90°x4)	
Resolution	0.1°	0.01° (0° to 9.99°) 0.1° (10° to 90°)	
Accuracy	±0.1° Level ±10°, Plumb ±10° ±0.2° Maximum error	±0.05° (0° to 10°) ±0.1° (80° to 90°) ±0.2° (10° to 80°)	
Repeatability	±0.1°	±0.05°	
Cross Axis Error	Minimal		
Battery Life	500 Hrs. Standard 9-Volt Battery		
Temperature Operation	-5°C to 50°C (23° to 122°F)		
Storage	-20°C to 65°C (-4°F to 149°F)		
Weight	289g (10.2oz.)	295g (10.4oz.)	
Output	N/A	RS-232C Compatible	
Standard Accessories	Pouch	Plastic Box	

±Represents clockwise or counter-clockwise slope.



LEVELS

Precision Levels Series 960

MITUTOYO's new Series 960 Precision Levels have high precision longitudinal and transverse vials which make it possible to check or level surfaces to very high accuracies. An exclusive MITUTOYO Adjustment Screw permits readjustment of the levels after long usage. Levels are made of high quality cast iron and feature precisely ground V (140°) surfaces. Furnished with a fitted wooden case.

Specifications

Precision Levels

Order No.	Sensitivity	Accuracy	Dimensions		
			W	D	H
960-611	.0012"/12"	±.0006"	7.87"	1.73"	1.50"
960-612	.0006"/12"	±.0003"	7.87"	1.73"	1.50"
960-613	.00024"/12"	±.00017"	7.87"	1.73"	1.50"



960-612

Levels

(Not available in Canada.)

Specifications

Spirit Levels

Order No.	Dimensions			Remarks
	W	D	H	
980-501	11.81"	.87"	1.93"	One plumb tube and one level tube.
980-502	23.62"	.87"	1.93"	Aluminum housing.
980-503	35.43"	.87"	1.93"	Shockproof vials.
980-504	47.24"	.87"	1.93"	

Order No.	Dimensions			Remarks
	W	D	H	
980-505	11.81"	1.10"	2.32"	Extruded aluminum housing.
980-506	23.62"	1.10"	2.32"	Factory set plumb and horizontal vials.
980-507	35.43"	1.10"	2.32"	Angle setting vial.

Order No.	Dimensions			Remarks
	W	D	H	
980-508	23.62"	1.06"	2.44"	Aluminum housing.
980-510	47.24"	1.06"	2.44"	Two plumb, one horizontal, one adjustable vials.



980-508

980-506



980-502

Digimatic Universal Protractor

187-552



Features

- Digimatic Universal Protractor with output function.
- Programmable presetting point.
- Interchangeable measuring face on the blade.
- Can be attached to Height gages.
- Battery life: 2000 hours.
- Product conforming to the EMC directive.

Specifications

Code No.	187-552
Model	BP-D300E
Blade	12" (187-103)
Display	LCD - 5, (-) sign, character height 6.5mm
Measuring range	-360° ~ +360°
Resolution	1' (0.01°)
Accuracy	±2' (±0.03°)
Straightness & Parallelism	4 + L/50µm
Repeatability	1' (0.01°)
Mass	1.45 lbs. (659g)
Dust/Water protection level	IP40
Function	Zero, direction select, Data output/Data hold, Preset, Switchable Segesimal or Decimal Notation
Max. response	3 rps
Battery	Lithium battery (CR2032) 1pc. (Part No. 05SAA217)
Battery life	2,000 hours
Alarm	Battery voltage low, Over speed error (Err)
Temperature	Operation temperature: 0 to 40°C Storage temperature: -10 to 60°C
Standard Accessories	12" Blade (Code No. 187-103) Battery (CR2032) (Part No. 05SAA217) Clamp box for inch Height Gage (Part No. 950749) Plastic Case

OPTIONAL ACCESSORIES

Order No.	Description
187-104	6" blade
187-105	Acute angle attachment
950750	Clamp box for Metric Height Gage
905338	Connecting cable 1m (40")
905409	Connecting cable 2m (80")

PROTRACTORS

Universal Bevel Protractor

Series 187

Features

- Hardened stainless steel, rust and wear resistant for long life.
- Flush-reading, no parallax error, gives a high degree of accurate measurements.
- With Magnifier glass for easier and faster reading.

Specifications

Universal Bevel Protractors

Order No.	Graduation		Remarks
	Dial	Vernier	
187-904	1°	5 min	with 6" blade (187-104) and Clamp box for Inch Height Gages (950749)
187-906	1°	5min	with 12" blade (187-103) and Clamp box for Inch Height Gages (950749)

Universal Bevel Protractor Accessories and Parts

Order No.	Remarks
187-103	12" Blade.
187-104	6" Blade.
187-105	Acute angle attachment
950749	Clamp box for Inch Height Gages
950750	Clamp box for Metric Height Gages

187-904



Accuracy

Straightness	(4+L/50) μm
Parallelism	(4+L/50) μm
Vernier Accuracy	±5'

"L" is in mm



187-105

Acute Angle Attachment

Protractor

Series 187

The bevel protractor consists of three sheets of stainless steel, the middle one of which is made for angle measurements.

Specifications

Bevel Protractor

Order No.	Graduation	Remarks
187-201	1°/5 min	Center black knob locks the blade position Protractor Graduation: 0°–90°, 90°–0°

187-201



Measuring Tapes

Series 980

(Not available in Canada.)

Features

- Hardened, tempered high phosphated to prevent rust or corrosion.
- Nylon coating.
- Quick rewind handle.



980-635



980-131

Frame Winder

Series 980

(Not available in Canada.)

Features

- Hardened, tempered high carbon steel tape, phosphated to prevent rust or corrosion.
- Tape is sheathed in heavy duty nylon.
- Quick rewind handle.



980-160



980-638

Specifications

Measuring Tapes

Inch/Metric

Order No.	Length	Unit of Measure	Width of Blade	Blade Color	Remarks
980-131	100 ft	in/ft	3/8"	white	Tough ABS plastic housing
980-140	50 ft	in/ft	1/2"	white	Tough ABS plastic housing
980-631	66 ft/20m	in/mm	1/2"	yellow	Tough ABS plastic housing
980-632	100 ft/30m	in/mm	1/2"	yellow	Tough ABS plastic housing
980-635	100 ft/30m	in/mm	1/2"	white	Tough ABS plastic housing

Frame Winder Tapes

Order No.	Length	Unit of Measure	Width of Blade	Blade Color	Remarks
980-160	100 ft	in/ft	3/8"	white	Tough ABS plastic housing
980-161	150 ft	in/ft	3/8"	white	Tough ABS plastic housing
980-630	100ft/30m	in/mm	1/2"	yellow	Tough ABS plastic housing

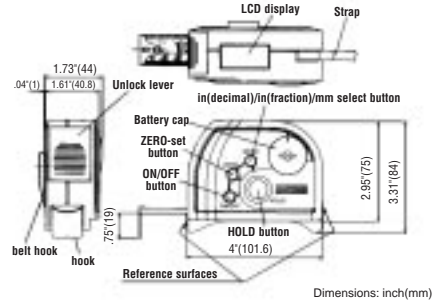
Measuring Tapes

Order No.	Length	Unit of Measure	Width of Blade	Blade Color	Remarks
980-637	66 ft/20m	in/mm	10mm	white	Tough ABS plastic housing
980-638	100 ft/30m	in/mm	10mm	white	Tough ABS plastic housing

Digital Tape Measure Series 216



216-380



Mitutoyo's new Digital Tape Measure is a fast and convenient tool for a wide range of length measuring jobs. Its digital readout is displayed on a large, easy-to-read LCD. The zero set button allows the origin point to be set at any time, eliminating the need for manually calculating comparison measurements. The one inch steel blade is also easy to read.

Specifications

Order No.	216-380
Model	TD-S551C
Measuring range(L)	216" / 18' / 5.5m
Blade width	1"
Resolution	.01" / 1/32" / 0.1mm
Instrumental error	±0.06" / ±1/16" / ±1.5mm
Scale graduation	Inch: 0–6" 1/32", 6–216" 1/16" / Metric: 1mm
Accuracy of the scale graduation	±1.5mm/0.6"
Battery	Lithium cell CR2032 (05SAA217)
Battery life	2500 hours
Mass	0.86 lbs. (390g)

L=Measuring length. (m)

Radius Gages Series 186

Features

- Each radius gage has five measuring locations.
- Each location is identified with its particular radius.
- Decimal radius gages available up to 1".
- Fractional radius gages available up to 1".
- Accuracy: $\pm 0.0016"/0.04\text{mm}$ "

Order No. Range

186-101	1/32–1/4"	30 leaves
186-102	17/64–1/2"	32 leaves
186-103	1/32–17/64"	16 leaves
186-104	9/32–33/64"	18 leaves
186-105	1–7mm	34 leaves
186-106	7.5–15mm	32 leaves
186-107	15.5–25mm	30 leaves



186-102

Protractor Series 968 – with Rectangular Base

Basegular Base Protractor's scale plate and indicator blade are made entirely of stainless steel. (968-201) (968-202 and 986-203 Satin chrome finish). With 6" arm.

Specifications

Rectangular Base Protractor

Order No.	Graduation	Remarks
968-201	1°	Protractor Graduation: 0°–90°, 90°–180°, 180°–90°, 90°–0°
968-202	1°	Semi-Circle: 0°–180°, 180°–0°
968-203*		Rectangle: 0°–180°, 180°–0°

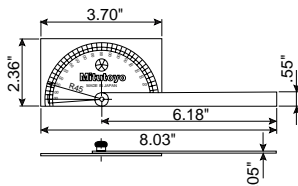
*6" Arm with graduation rule.



968-201



968-202



968-203

Radius Gages

Series 186

Decimal Radius Gages to 1" Fractional Radius Gages to 1"

MITUTOYO Radius Gages are recommended for checking or laying out concave or convex radii. An individual gage for each dimension makes it possible to verify radius or fillet dimensions easier, faster and more accurately in machining, layout, inspection and pattern-making work. The measuring surfaces are precisely finished with smooth, accurate edges. The Radius Gages are available separately or in six handy sets.

Each Radius Gage has five measuring locations, and it is identified with its particular radius dimensions. The gages have a satin or dull-chrome finish.

The Holding Cases, provided to protect the sets of Radius Gages, have indexed pockets to facilitate the selection of the proper size gage. A 4" long holder is furnished with Set No. **186-901** to make it possible to check radii in confined or hard-to-reach locations.

Specifications

Radius Gage

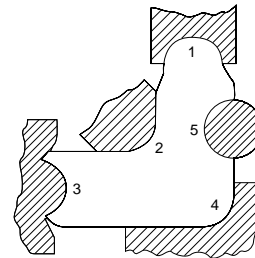
Order No.	No. of Leaves	Sizes
186-901	25	1/64"–17/64" by 64ths and 9/32"–1/2" by 32nds
186-903	17	1/64"–17/64" by 64ths
186-904	8	9/32"–1/2" by 32nds
186-905	8	9/16"–1" by 16ths
186-906	26	.010–.030" by .005"
		.040–.100" by .010"
		.120–.220" by .020"
		.240–.300" by .020"
186-907	10	.350–.500" by .050"
		.550–1" by .050"

Decimal		Fraction	
Radius	Part No.	Radius	Part No.
.010"	211798	1/64"	201441
.015"	211799	1/32"	201442
.020"	211800	3/64"	201443
.025"	211801	1/16"	201444
.030"	211802	5/64"	201445
.040"	211803	3/32"	201446
.050"	211804	7/64"	201447
.060"	211805	1/8"	201448
.070"	211806	9/64"	201449
.080"	211807	5/32"	201450
.090"	211808	11/64"	201451
.100"	211809	3/16"	201452
.120"	211810	13/64"	201453
.140"	211811	7/32"	201454
.160"	211812	15/64"	201455
.180"	211813	1/4"	201456
.200"	211814	17/64"	201457
.220"	211815	9/32"	201458

186-901



Accuracy: ±.0016"/0.04mm



5 concave and convex radii per each leaf.

Decimal		Fraction	
Radius	Part No.	Radius	Part No.
.240"	211816	5/16"	201459
.260"	211817	11/32"	201460
.280"	211818	3/8"	201461
.300"	211819	13/32"	201462
.350"	211820	7/16"	201463
.400"	211821	15/32"	201464
.450"	211822	1/2"	201465
.500"	211823	9/16"	211790
.550"	211824	5/8"	211791
.600"	211825	11/16"	211792
.650"	211826	3/4"	211793
.700"	211827	13/16"	211794
.750"	211828	7/8"	211795
.800"	211829	15/16"	211796
.850"	211830	1"	211797
.900"	211831		
.950"	211832		
1.000"	211833		

Angle Gages Series 186

Features

- Manufactured from stainless steel, satin finished.
- 18 individual gages for easy use.
- Eight gaging surfaces per gage.
- Precision finished edges for accurate checking.
- Each gage checks primary, 1/2 primary and complementary angles.
- Sharp cornered workpieces can be checked at all 8 angles except below 50° on primary angle 2.
- Quick and accurate inspection of angles and I.D. or O.D. chamfers—in or out of the machine.
- Positioning of lathe tools for chamfers.
- Inspecting angles on ground form tools and cutters.
- Fast set-ups and fixturing of workpieces.
- Eliminates time consuming measuring set-ups.

Specifications

Angle Gages

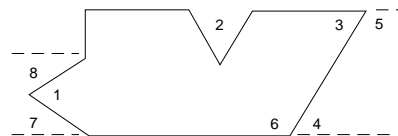
Set Order No.	Description	No. of Leaves
186-910	Angle Gage Set w/case	18

Individual Part No.

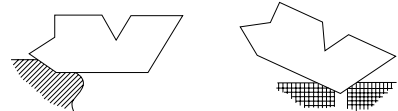
Inch

Part No.	Primary Angle	1/2 Primary Angle	Accuracy	Complementary Angle
051000*	5°	2° 30'	±5'	175°
051001*	10°	5°	±5'	170°
051002*	15°	7° 30'	±5'	165°
051003	20°	10°	±5'	160°
051004	35°	12° 30'	±5'	155°
051005	30°	15°	±5'	150°
051006	35°	17° 30'	±5'	145°
051007	40°	20°	±5'	140°
051008	45°	22° 30'	±5'	135°
051009	50°	25°	±5'	130°
051010	55°	27° 30'	±5'	125°
051011	60°	30°	±5'	120°
051012	65°	32° 30'	±5'	115°
051013	70°	35°	±5'	110°
051014	75°	37° 30'	±5'	105°
051015	80°	40°	±5'	100°
051016	85°	42° 30'	±5'	95°
051017	90°	45°	±5'	90°
051018	Vinyl Case			

* Angle 2 omitted

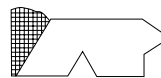


Angles 1, 2, 3, 4 are primary
Angles 5, 6, are complementary
Angles 7, 8 are 1/2 primary

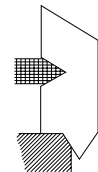


Gaging of angles of adjoining inside/outside diameters or flat surfaces.

Gaging of the countersink angles of drilled and tapped holes.



Gaging of primary and complementary angles from a surface plate.



Gaging of I.D. and O.D. chamfers. Included angles are easily verified.

Depth Gage, Adjustable Angle Series 950

Features

- Head made of hardened steel.
- Base surface measures 2 1/2" x 1/8" thick.
- Includes 6" rule: 7/32" wide and .041" thick.
- Includes 6" rod: 3/32" diameter.



950-271

Order No.	Protractor Graduation	Rule Graduation
950-271	30°, 45°, 60°	1/32", 1/64"

Pitch Gages Series 188, 950

Features

- Pitch size is stamped on each gage.
- Whitworth, Unified and Metric Pitch Gages.

Specifications

Order No.	Range	Composition of Gages
Whitworth Screw Pitch Gages (55°)		
188-101	4 - 42 TPI (30 leaves)	4, 4 1/2, 5, 5 1/2, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42 TPI
188-102	4 - 60 TPI (28 leaves)	4, 4 1/2, 5, 5 1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 34, 36, 40, 48, 60 TPI
Unified Screw Pitch Gages (60°)		
188-111	4 - 42 TPI (30 leaves)	4, 4 1/2, 5, 5 1/2, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42 TPI
950-253	4 - 84 TPI (51 leaves)	4, 4 1/2, 5, 5 1/2, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84 TPI
Metric Screw Pitch Gages (60°)		
188-130	0.35 - 6mm (22 leaves)	0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm and 60° angle gage
188-122	0.4 - 7mm (21 leaves)	0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm
188-121	0.4 - 7mm (18 leaves)	0.4, 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm
Metric and Unified Screw Pitch Gage Set (60°)		
188-151	0.4 - 7mm 4 - 42 TPI (51 leaves)	Set of 188-122 and 188-111



188-102

Thickness Gages Series 184, 950



950-251

Specifications

Thickness Gages - Inch

Order No.	Range	Type of Blade	Blade Length	Composition of leaves
184-101	.0015"-.015" (9 leaves)	Tapered	3"	.0015, .002, .003, .004, .006, .008, .010, .012, .015"
184-102	.004" - .025" (22 leaves)	Tapered	3"	.004 thru .025" by .001" step
184-405	.002" - .025" (15 leaves)	Straight	3"	.002, .003, .004, .005, .006, .008, .010, .012, .013, .015, .018, .019, .020, .022, .025
184-406	.0015" - .025" (18 leaves)	Tapered	3"	.0015 thru .0055" by .0005" step, .006 thru .010" by .001" step plus .012, .015, .020, .025"
950-251	.002" - .035" (26 leaves)	Straight 1/2" width at tip	3"	.002 thru .018" by .001" step plus .022, .024, .025, .028, .030, .032, .035"
950-252	.0015" - .025" (26 leaves)	Tapered 1/4" width at tip	3"	.002 thru .025" by .001" step plus .0015, .0025"
950-254	.0015" - .200" (15 leaves)	Straight 1/2" width at tip	3"	.0015, .002, .003, .004, .006, .008, .010, .012, .015, .020, .030, .040, .075, .100, .200"
950-255	.0015" - .200" (13 leaves)	Straight 1/2" width at tip	4 1/2"	.0015, .002, .003, .004, .006, .008, .010, .020, .030, .040, .075, .100, .200"
950-256	.0015" - .015" (8 leaves)	Straight 1/2" width at tip	6"	.0015, .002, .003, .004, .008, .010, .012, .015"

Thickness Gages - Metric

184-302	0.03 - 0.5mm (13 leaves)	Straight	150mm	0.03 thru 0.1mm by 0.01mm step plus 0.15, 0.2, 0.3, 0.4, 0.5mm
184-307	0.03 - 0.5mm (13 leaves)	Straight	100mm	0.03 thru 0.1mm by 0.01mm step plus 0.15, 0.2, 0.3, 0.4, 0.5mm
184-303	0.05 - 1mm (28 leaves)	Straight	150mm	0.05 thru 0.15mm by 0.01 mm step 0.2 thru 1 mm by 0.05mm step
184-313	0.05 - 1mm (28 leaves)	Straight	100mm	0.05 thru 0.15mm by 0.01mm step 0.2 thru 1mm by 0.05mm step
184-306	0.05 - 0.8mm (10 leaves)	Straight	100mm	0.05 thru 0.2mm by 0.05mm step 0.3 thru 0.8mm by 0.1mm step

Center Gage Series 950

Features

- Hardened with lapped edges and notches.
- Meets requirements of the American National and US 60° Standards.
- Scales with 14ths and 20ths graduations provided on one side, 24ths and 32nds on reverse side.



950-201

Order No.	Description
950-201	Center Gage

Standard Gages

Series 950

Specifications

Standard Gages

Inch

Order No.	Description	Size
950-202	Am. Standard Wire Gage	Gage No. 0–36
950-203	U.S. Standard Wire Gage	Gage No. 0–36

950-202



950-203



Tap and Drill Gage

Series 950

Features

- Each drill gage has a total of 29 holes marked with drill size in fractions and decimals.
- Tap and drill gage shows the correct tap drill for National Fine or National Coarse thread series.
- Approximate plate size is 6-3/8" x 2-1/2" x 5/64".

Specifications

Tap and Drill Gage

Inch/Metric

Order No.	Description	Size
950-200	Drill Gage	61-80 Twist Drill and Drill Rod
950-204	Tap and Drill Gage	Tap Size 2–56 to 1/4–28
950-206	Drill Gage	Drill Size 1/16" to 1/2"
950-207	Metric Drill Gage	1.5 to 12.5mm 30 holes
950-208	Metric Drill Gage	1.0 to 5.9mm 57 holes
950-209	Drill Gage	Drill size A to Z

950-209



950-204



Drill Point Gage

Features

- For measuring properly grounded 59° drill tips.
- Rule and slide made of steel.
- Satin chrome finish.
- Slide graduated in 32nds.
- End clip is adjustable and removable.
- Versatile - Can be used as Rule, Hook Rule, Try Square, Depth Gage or Caliper, and for Layout

Specifications

Order No.	Size	Rule Graduations
950-275	6"	1/8, 1/16, 1/32, 1/64



950-275

Thread Gage

Features

Used for grinding and setting tools when cutting acme threads whose side have an inclination of 14-1/2° (29° included angle)

Specifications

Order No.	Description
950-257	29° acme screw thread gage

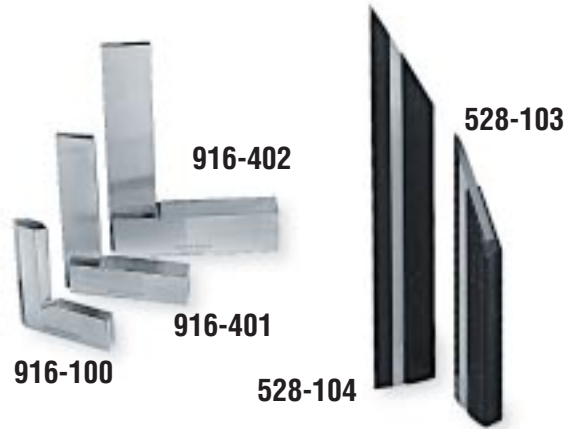


950-257

Knife Edge Straight Edge Series 528

The test edge is approximately .004" in thickness, a cross section of which has radius to provide a straight line contact with the work surface. Straightness is $\pm .00005$ ".

For ease of inspection, the blade is dyed in black, and the upper edge is covered with a grip plate. The acute angle is 30 degrees.



Specifications

Knife Edge Straight Edge

Inch		
Length	Order No.	Remarks
4"	528-102	with protective cover
6"	528-103	with protective cover
8"	528-104	with protective cover
10"	528-105	with protective cover

Steel Squares Series 916

Regular type and beveled-edge type squares are available from MITUTOYO.

All edges are hardened and precision ground. (Only blade is hardened on engineers Square)

Beveled Edge Squares

Inch			
Size	Order No.	Outs. Dim.	Squareness
2"	916-100	2 x 1.6"	.00010"
3"	916-101	3 x 2"	.00011"
4"	916-102	4 x 2.75"	.00012"
6"	916-103	6 x 4"	.00014"
8"	916-104	8 x 5"	.00018"

Regular Squares

Inch			
3"	916-401	2.9 x 1.9"	.00026"
4"	916-402	3.9 x 2.7"	.00028"
6"	916-403	5.9 x 3.9"	.00032"
8"	916-404	7.8 x 5.1"	.00036"
10"	916-405	9.8 x 6.5"	.00040"
12"	916-406	11.8 x 7.8"	.00044"
16"	916-407	15.7 x 9.8"	.00052"
20"	916-408	19.6 x 11.8"	.00059"
30"	916-409	29.7 x 15.7"	.00080"
40"	916-410	39.3 x 19.6"	.00116"



Regular Squares "Engineers Square"

Inch			
3 ¹ / ₂ "	916-591	3.8 x 2.2"	.00063"
5"	916-592	5.3 x 3.4"	.00063"
7"	916-593	7.2 x 4.2"	.00063"
10 ¹ / ₂ "	916-594	10.8" x 5.7"	.00079"
13 ³ / ₄ "	916-595	14.2 x 7.3"	.00094"

Beveled Edge Squares with Beam

Inch			
3"	916-421	3 x 2"	.000091"
4"	916-422	4 x 2.75"	.000094"
6"	916-423	6 x 4"	.00010"
8"	916-424	8 x 5"	.00011"

COMBINATION SQUARE SETS

Combination Square Sets Series 180

Blades only

Inch/Metric

Order No.	Length	Graduations	Accuracy (length)
180-401	6"	8, 16, 32, 64ths (4R)	
180-402	6"	32, 64, 50, 100ths (16R)	+0.004" (+0.1mm)
180-403	6" x 150mm	32, 64ths, 1, 1/2mm	-0.002" (-0.05mm)
180-405	150mm	1, 1/2, 1, 1/2mm	
180-501	12"	8, 16, 32, 64ths (4R)	
180-502	12"	32, 64, 50, 100ths (16R)	
180-503	12" x 300mm	32, 64ths, 1, 1/2mm	
180-505	300mm	1, 1/2, 1, 1/2mm	+0.005" (+0.13mm)
180-701	18"	8, 16, 32, 64ths (4R)	-0.002" (-0.05mm)
180-702	18"	32, 64, 50, 100ths (16R)	
180-703	18" x 450mm	32, 64ths, 1, 1/2mm	
180-705	450mm	1, 1/2, 1, 1/2mm	
180-601	24"	8, 16, 32, 64ths (4R)	
180-602	24"	32, 64, 50, 100ths (16R)	+0.006" (+0.15mm)
180-603	24" x 600mm	32, 64ths, 1, 1/2mm	-0.003" (-0.075mm)
180-605	600mm	1, 1/2, 1, 1/2mm	

Heads only

Inch (Hardened Cast Iron)

Order No.	Description
180-101	Square Head for 6" models
180-102	Square Head for 12" to 24" models
180-201	Center Head for 6" models
180-202	Center Head for 12" to 24" models

Inch (Cast Iron-Not Hardened)

Order No.	Description
180-111	Square Head for 6" models
180-112	Square Head for 12" to 24" models
180-211	Center Head for 6" models
180-212	Center Head for 12" to 24" models
180-301	Protractor Head for 12" to 24" models

Specifications

Combination Square Sets

Inch

Set No.	Blade	Square Head	Center Head	Protractor Head
180-801	6" (4R)	180-401	180-111†	180-211†
180-802	6" (16R)	180-402	180-111†	180-211†
180-803	12" (4R)	180-501	180-112†	180-212†
180-804	12" (16R)	180-502	180-112†	180-212†
180-805	12" (4R)	180-501	180-112†	180-212†
180-806	12" (16R)	180-502	180-112†	180-212†
180-901	6" (4R)	180-401	180-101*	180-201*
180-902	6" (16R)	180-402	180-101*	180-201*
180-903	12" (4R)	180-501	180-102*	180-202*
180-904	12" (16R)	180-502	180-102*	180-202*
180-905	12" (4R)	180-501	180-102*	180-202*
180-906	12" (16R)	180-502	180-102*	180-202*

Inch/Metric

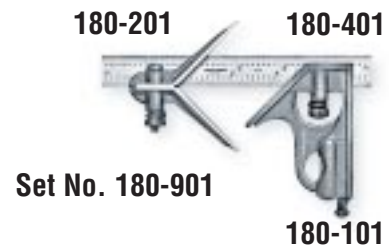
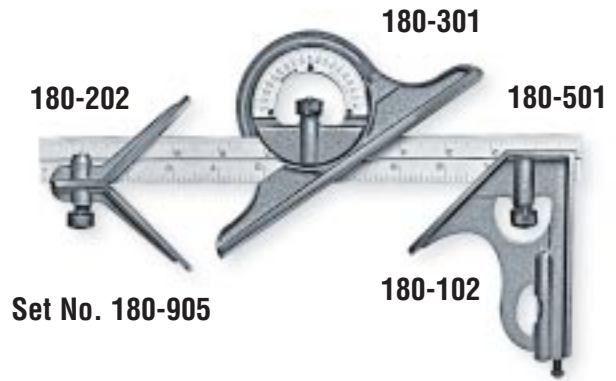
Set No.	Blade	Square Head	Center Head	Protractor Head
180-807	12"/300mm	180-503	180-112†	180-212†
180-907	12"/300mm	180-503	180-102*	180-202*

Metric

Set No.	Blade	Square Head	Center Head	Protractor Head
180-810	300mm	180-505	180-112†	180-212†
180-910	300mm	180-505	180-102*	180-202*

*Hardened Cast Iron Heads.

†Non-Hardened Heads.



RULES

Steel Rules

Series 182

Features

- Satin chrome finish.
- Stainless tempered.
- Black chrome rule.



182-125



182-110

Specifications

Wide Rigid Rules (Thickness 3/64")

Order No.	Black Chrome Rule Order No.	Size	Graduations				Width	Accuracy (Length)
182-101	182-109	6"(4R)	1/8	1/16	1/32	1/64th	3/4"	+ .004"/-.002" (+0.1mm/-0.05mm)
182-102	182-112	6"(16R)	1/32	1/64	1/50	1/100th	3/4"	
182-103	182-110	6"(5R)	1/32	1/64	1/10	1/100th	3/4"	
182-104	182-113	6"(3R)	1/32	1/64	1/10	1/50th	3/4"	
182-105	182-114	6" x 150mm	1/32	1/64	1mm	0.5mm	3/4"	
182-106	—	6" x 150mm	1/50	1/100	1mm	0.5mm	3/4"	
182-107	—	6" x 150mm	1/10	1/100	1mm	0.5mm	3/4"	
182-108	—	6" x 150mm	1/10	1/50	1mm	0.5mm	3/4"	
182-111	182-115	150mm	1mm	0.5mm	1mm	0.5mm	19mm	+ .005"/-.002" (+0.13mm/-0.05mm)
182-121	182-127	12"(4R)	1/8	1/16	1/32	1/64th	1"	
182-122	182-129	12"(16R)	1/32	1/64	1/50	1/100th	1"	
182-123	182-128	12"(5R)	1/32	1/64	1/10	1/100th	1"	
182-124	—	12"(3R)	1/32	1/64	1/10	1/50th	1"	
182-125	182-130	12" x 300mm	1/32	1/64	1mm	0.5mm	1"	
182-126	—	12" x 300mm	1/50	1/100	1mm	0.5mm	1"	
182-131	182-132	300mm	1mm	0.5mm	1mm	0.5mm	25mm	
182-241	182-146	18"(4R)	1/8	1/16	1/32	1/64	13/16"	
182-142	182-148	18"(16R)	1/32	1/64	1/50	1/100th	13/16"	
182-143	182-147	18"(5R)	1/32	1/64	1/10	1/100th	13/16"	
182-144	—	18"(3R)	1/32	1/64	1/10	1/100th	13/16"	
182-145	—	18" x 450mm	1/32	1/64	1mm	0.5mm	13/16"	
182-151	—	450mm	1mm	0.5mm	1mm	0.5mm	30mm	
182-161	182-166	24"(4R)	1/8	1/16	1/32	1/64	13/16"	+ .006"/-.003" (+0.15mm/-0.075mm)
182-162	182-168	24"(16R)	1/32	1/64	1/50	1/100th	13/16"	
182-163	182-167	24"(5R)	1/32	1/64	1/10	1/100th	13/16"	
182-164	—	24"(3R)	1/32	1/64	1/10	1/50th	13/16"	
182-165	—	24" x 600mm	1/32	1/64	1mm	0.5mm	13/16"	
182-171	—	600mm	1mm	0.5mm	1mm	0.5mm	30mm	
182-401	—	36"(4R)	1/8	1/16	1/32	1/64	1 1/4"	+ .007"/-.003" (+0.18mm/-0.075mm)
182-403	—	36"(16R)	1/32	1/64	1/50	1/100th	1 1/4"	
182-405	—	36"(5R)	1/32	1/64	1/10	1/100th	1 1/4"	
182-406	—	36" x 900mm	1/32	1/64	1mm	0.5mm	1 1/4"	+ .008"/-.003" (+0.20mm/-0.075mm)
182-402	—	48"(4R)	1/8	1/16	1/32	1/64	1 1/4"	
182-404	—	48"(16R)	1/32	1/64	1/50	1/100th	1 1/4"	
182-407	—	48" x 1000mm	1/32	1/64	1mm	0.5mm	1 1/4"	

RULES

Steel Rules

Series 182

Features

- Satin chrome finish.
- Stainless tempered.



182-265



182-223

Specifications

Full-Flexible Rules (Thickness 1/64")

Order No.	Black Chrome Rule Order No.	Size	Graduations				Width	Accuracy (Length)
182-201	182-212	6"(4R)	1/8	1/16	1/32	1/64th	1/2"	+0.004"/-0.002" (+0.1mm/-0.05mm)
182-202	182-214	6"(16R)	1/32	1/64	1/50	1/100th	1/2"	
182-203	182-213	6"(5R)	1/32	1/64	1/10	1/100th	1/2"	
182-204	182-215	6"(3R)	1/32	1/64	1/10	1/50th	1/2"	
182-205	182-216	6" x 150mm	1/32	1/64	1mm	0.5mm	1/2"	
182-206	—	6" x 150mm	1/50	1/100	1mm	0.5mm	1/2"	
182-207	—	6" x 150mm	1/10	1/100	1mm	0.5mm	1/2"	
182-208	—	6" x 150mm	1/10	1/50	1mm	0.5mm	1/2"	
182-211	182-209	150mm	1mm	0.5mm	1mm	0.5mm	12mm	+0.005"/-0.002" (+0.13mm/-0.05mm)
182-221	182-217	12"(4R)	1/8	1/16	1/32	1/64th	1/2"	
182-222	182-219	12"(16R)	1/32	1/64	1/50	1/100th	1/2"	
182-223	182-218	12"(5R)	1/32	1/64	1/10	1/100th	1/2"	
182-224	—	12"(3R)	1/32	1/64	1/10	1/50th	1/2"	
182-225	182-220	12" x 300mm	1/32	1/64	1mm	0.5mm	1/2"	
182-226	—	12" x 300mm	1/50	1/100	1mm	0.5mm	1/2"	
182-231	182-210	300mm	1mm	0.5mm	1mm	0.5mm	12mm	
182-141	182-246	18"(4R)	1/8	1/16	1/32	1/64	3/4"	+0.006"/-0.003" (+0.15mm/-0.075mm)
182-242	182-248	18"(16R)	1/32	1/64	1/50	1/100th	3/4"	
182-243	182-247	18"(5R)	1/32	1/64	1/10	1/100th	3/4"	
182-244	—	18"(3R)	1/32	1/64	1/10	1/50th	3/4"	
182-245	—	18" x 450mm	1/32	1/64	1mm	0.5mm	3/4"	
182-251	—	450mm	1mm	0.5mm	1mm	0.5mm	18mm	
182-261	182-266	24"(4R)	1/8	1/16	1/32	1/64	3/4"	
182-262	182-268	24"(16R)	1/32	1/64	1/50	1/100th	3/4"	
182-263	182-267	24"(5R)	1/32	1/64	1/10	1/100th	3/4"	
182-264	—	24"(3R)	1/32	1/64	1/10	1/50th	3/4"	
182-265	—	24" x 600mm	1/32	1/64	1mm	0.5mm	3/4"	+0.006"/-0.003" (+0.15mm/-0.075mm)
182-271	—	600mm	1mm	0.5mm	1mm	0.5mm	18mm	

Flexible Rules

182-411	—	36"(4R)	1/8	1/16	1/32	1/64	3/4"	+0.007"/-0.003" (+0.18mm/-0.075mm)
182-413	—	36"(16R)	1/32	1/64	1/50	1/100th	3/4"	
182-415	—	36"(5R)	1/32	1/64	1/10	1/100th	3/4"	
182-416	—	36" x 900mm	1/32	1/64	1mm	0.5mm	3/4"	+0.008"/-0.003" (+0.20mm/-0.075mm)
182-412	—	48"(4R)	1/8	1/16	1/32	1/64	3/4"	
182-414	—	48"(16R)	1/32	1/64	1/50	1/100th	3/4"	

Semi-Flexible Rules

Series 182

(Thickness 1/64")



182-304

Features

- Engraved on frontside only.

Specifications

Inch/Metric

Order No.	Size	Graduations			Width	Accuracy (Length)
182-301	4" x 100mm	1/2mm	1mm	1/32 1/64 1/16th	5/8"	+.004"/-.002" (+0.1mm/-0.05mm)
182-302	6" x 150mm	1/2mm	1mm	1/32 1/64 1/16th	5/8"	
182-304	10" x 250mm	1/2mm	1mm	1/32 1/64 1/16th	5/8"	
182-305	12" x 300mm	1/2mm	1mm	1/32 1/64 1/16th	5/8"	+.006"/-.003" (+0.15mm/-0.075mm)
182-307	20" x 500mm	1/2mm	1mm	1/32 1/64 1/16th	5/8"	
182-309	40" x 1000mm	1/2mm	1mm	1/32 1/64 1/16th	5/8"	

Hook Rules

Series 182

(Thickness .040")



182-421

Features

- Hardened and tempered tool steel.
- Hard chrome finish.
- Furnished with adjustable hook.

Specifications

Order No.	Size	Graduations			Width	Accuracy (Length)
182-421	6"(4R)	1/8	1/16	1/32 1/64	3/4"	+0.0004"/-.002"
182-422	12"(4R)	1/8	1/16	1/32 1/64	1"	+0.0005"/-.002"
182-423	18"(4R)	1/8	1/16	1/32 1/64	1-1/8"	

Pocket Steel Rule

Series 950

with Pocket Clip (thickness 1/64")



950-300

Features

- Engraved on frontside only.
- Backside: Inch/Metric equivalents

Order No.	Size	Graduation	Width	Accuracy (Length)
950-300	6" x 150mm	1mm	1/2"	+0.004"/-.002" (+0.1mm/-0.05mm)

Demagnetizers

Series 986

(Not available in Canada.)

MITUTOYO Table-Top Demagnetizers make it possible to remove magnetic forces, retained in workpieces, tools or plates of any description, by simply touching the magnetized piece to the demagnetizer surface. Magnetism in thick materials can be removed by touching both outside surfaces to the demagnetizer.

Specifications

Demagnetizers

Order No.	Mass	Dimensions			Remarks
		W	D	H	
986-271	12.79 lbs.	6.30"	4.72"	4.72"	
986-275	20.94 lbs.	7.87"	5.91"	3.94"	Waterproof Type



986-275

Precision Sine Vises

Series 986

(Not available in Canada.)

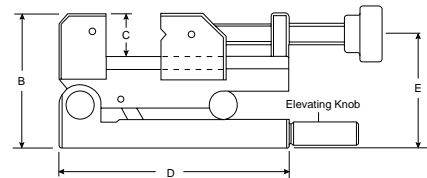
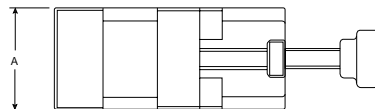
Features

- Precision Vise, Order No. **986-124**, provides sine function on one axis. Metric square gage blocks recommended for precise angle settings. Positive locking provided on each sine function base to assure positive locking at angle setting without distortion.
- Vises made of hardened (HRC-60) alloy tool steel. Stress relieved, through subzero treatment, to assure dimensional stability and high accuracy over long lasting service.
- Parallelism within .0001"/4".
- Squareness within .0002"/4".
- Roller Center Distance within .0001".
- Rollers hardened and ground to within .00005" of same diameter.
- Supplied with plastic case.

986-121



986-124



Specifications

Precision Sine Vises

Inch

Order No.	Clamping Capacity	Maximum Angle	Dimensions				
			A	B	C	D	E
986-121	3.54"	45°	2.75"	3.72"	1.18"	6.69"	3.13"
986-122	4.72"	45°	3.54"	4.51"	1.57"	8.27"	3.76"
986-124	3.77"	45°	2.95"	3.72"	1.18"	6.30"	3.13"

Precision Vises

Series 986

(Not available in Canada.)

The Mitutoyo Precision Vises are designed to provide many years of dependable workpiece holding service. These units are ideal for precision grinding, finishing and marking operations.

Features

- Parallelism: within .0001"/4".
- Squareness: within .0002"/4".
- Outstanding stability from subzero treatment.
- Hardness to Rockwell C Scale: HRC 60.

Specifications

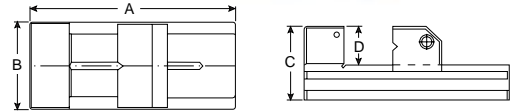
Precision Vises

Order No.	Clamping Capacity	Dimensions			
		A	B	C	D
986-106	3.15"	6.30"	2.75"	2.44"	1.18"
986-107	4.72"	8.26"	3.54"	2.95"	1.57"

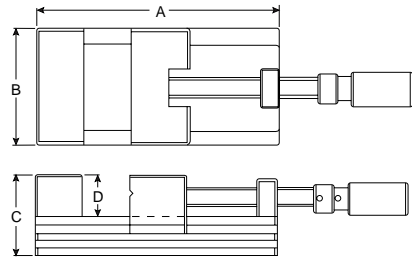
Order No.	Clamping Capacity	Dimensions			
		A	B	C	D
986-101	3.15"	6.30"	2.75"	2.44"	1.18"
986-102	4.72"	8.26"	3.54"	2.95"	1.57"
986-111	1.22"	3.54"	2.36"	1.96"	.98"
986-112	5.90"	11.22"	4.72"	3.54"	1.57"



986-106



986-111



Precision Hydraulic Vise

(Not available in Canada.)

Relatively light handle-exertion will produce, through hydraulic leverage, up to 1.5 ton clamping pressure on workpiece.

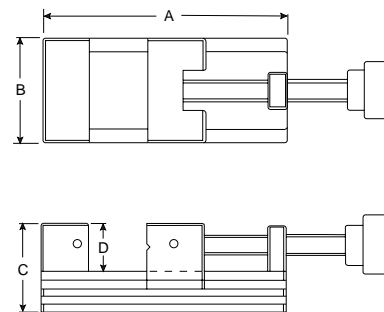
Specifications

Precision Hydraulic Vise

Order No.	Clamping Capacity	Dimensions			
		A	B	C	D
986-116	5.90"	11.22"	4.72"	3.54"	1.57"



986-116



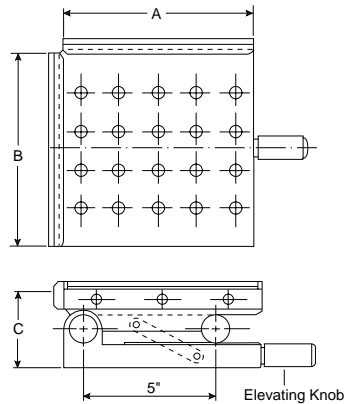
Precision Sine Plates

Series 986

(Not available in Canada.)

Features

- Parallelism within .0001"/4".
- Squareness within .0002"/4".
- Roller center distance within .0001".
- Rollers hardened and ground to within .00005" of same diameter.
- Supplied with plastic case.



986-126

Specifications

Precision Sine Plates

Order No.	Plate Size	Maximum Angle	Dimensions			Remarks
			A	B	C	
986-126	5.90" x 5.90"	45°	5.90"	5.90"	2.54"	Sine Function: One Axis

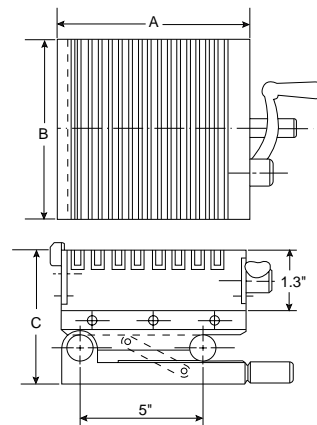
Precision Magnetic Sine Plates

Series 986

(Not available in Canada.)

Features

- Parallelism within .0001"/4".
- Squareness within .0002"/4".
- Roller center distance within .0001".
- Rollers hardened and ground to within .00005" of same diameter.
- Supplied with plastic case.



986-127

Specifications

Precision Magnetic Sine Plates

Order No.	Plate Size	Maximum Angle	Dimensions			Remarks
			A	B	C	
986-127	5.90" x 5.90"	45°	5.90"	5.90"	3.84"	Sine Function: One Axis

Precision Two and Three Dimensional Vises

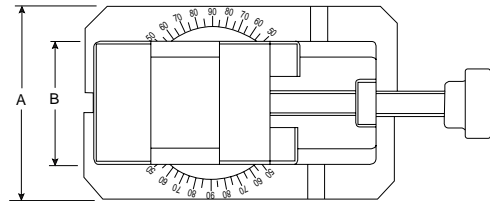
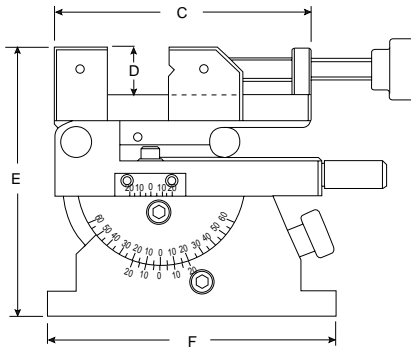
Series 986

(Not available in Canada.)

Features

- Precision Two Dimensional Vises, Order Nos. **986-136** and **986-137** are basic vises for precise cutting, grinding and engraving operations. Precision Vise No. **986-137** has hydraulic leverage for clamping pressure.
- All Precision Vises are made of hardened (RC-60) alloy tool steel. Stress relieved through sub-zero treatment, to assure dimensional stability and high accuracy over long lasting service.
- Parallelism within: $.0001"/4"$.
- Fine adjustment screw provided on the swiveling base.
- 5-minute vernier is attached to graduation of the rotation and angle.
- Supplied with plastic case.

986-136



Specifications

Precision Two and Three Dimensional Vises

Order No.	Clamping Capacity	Dimensions					
		A	B	C	D	E	F
986-136	3.15"	4.33"	2.75"	6.30"	1.18"	5.39"	7.08"
986-137	10.72"	6.30"	4.72"	11.22"	1.56"	8.26"	10.63"

Magnetic V-Block Series 986

(Not available in Canada.)

Precisely finished V-blocks will hold tools or workpieces firmly for measuring or scribing. Magnetism controlled by on-off switch actuated by furnished Allen Wrench.

Specifications

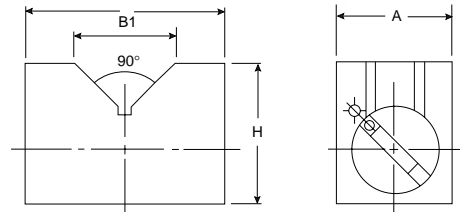
Magnetic V-Block

Order No.	Parallelism (under-base of V-surface)	Mass	Pull (V-surface)	Dimensions				Holding Capacity
				A	B	H	B1	
986-291	.0004"	2.2 lbs	22.0 lbs	1.57"	2.67"	1.96"	1.41"	ø2"
986-292	.0006"	6.6 lbs	33.0 lbs	1.96"	4.33"	3.15"	2.36"	ø3.3"
986-293	.0006"	11.0 lbs	55.1 lbs	1.96"	5.90"	3.93"	3.54"	ø5"

Note: 2 pcs. per Order No.



986-291



Magnetic Adjustable Links Series 986

(Not available in Canada.)

Two magnetic holders, linked together, provide a means of mounting workpieces at any angle to facilitate assembly procedures or operations such as welding. Link with V-groove holders (Order No. 986-254) will adhere to and/or hold curved as well as flat surface.

Specifications

Magnetic Adjustable Links

Order No.	Pull	Mass	Dimensions	Remarks
986-251	22.0 lbs	1.43 lbs	.98" x 2.28" x .98" x 5.0"	
986-254	176.3 lbs	4.41 lbs	1.81" x 2.36" x 1.96" x 6.10"	w/ON/OFF switch
986-256	77.1 lbs	5.51 lbs	5.90" x 5.90" x 1.37"	90°



986-256



986-254

V-Blocks and Clamps Series 181

Specifications

Magnetic V-Block (series 181)

Order No.	Accuracy (over all)	Pull	Holding Capacity
181-146	.0006"	132.2 lbs	1 Piece ø2"

V-Blocks & Clamps

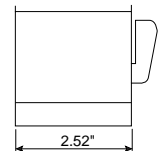
Order No.	Parallelism (base surface to V-surface)	Parallelism (each block)	Remarks
181-901	.00024"	.0005"	Matched Pair V-Blocks with Clamps Clamping Capacities: 1"
181-902	0.006mm	0.012mm	Matched Pair V-Blocks with Clamps Clamping Capacities: 25mm
181-904	.00024"	.0005"	Matched Pair V-Blocks with Clamps Clamping Capacities: 2"

Note: 2 pcs. per Order No.

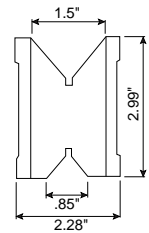


181-146

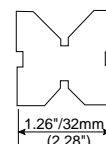
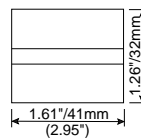
Magnetic V-Blocks



181-901
(Matching Pair)



V-Blocks



() : Size for
181-904

Magnetic Hexagonal Holder

Series 986

(Not available in Canada.)

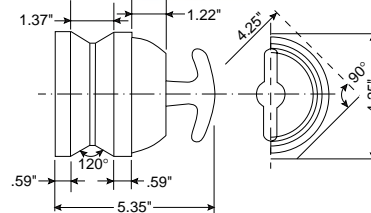
Multiple surfaces and angles require a holder for firmly mounting oddly shaped pieces, as well as bars and plates, during measuring, scribing, welding and drilling operations. Angles of 45°, 90° and 135°. Lever turns magnetic force on or off.

Specifications

Magnetic Hexagonal Holder

Order No.	Pull	Mass
986-261	176.3 lbs	12.3 lbs

986-261



Magnetic Cubic Blocks

Series 986

(Not available in Canada.)

Blocks numbered 986-301, 302, and 307 feature magnetic forces in the two V grooves on the top surface, in addition to the balance of the top surface and two side surfaces.

Blocks numbered 986-303, 304, 305 and 306 have magnetic forces in the V groove on the top and the balance of the top surface.

Specifications

Magnetic Cubic Blocks

Order No.	Pull	Mass	Accuracy (under-base of V-surface)	Dimensions			
				A	B	C	D
986-301	176.3 lbs	15.4 lbs	.0004"	3.93"	3.93"	3.93"	.98"
986-302	308.6 lbs	48.5 lbs	.0006"	5.90"	5.90"	5.90"	1.18"
986-303*	88.1 lbs	13.2 lbs	.0008"	3.93"	3.93"	3.93"	1.57"
986-304*	176.3 lbs	37.5 lbs	.0006"	5.90"	5.90"	5.90"	1.57"
986-305*	220.4 lbs	70.5 lbs	.0008"	7.87"	7.87"	7.87"	1.96"
986-307	330.7 lbs	116.8 lbs	.0008"	7.87"	7.87"	7.87"	1.37"

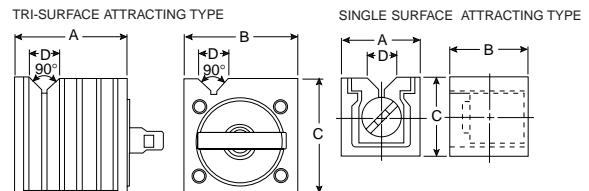
* Single Surface Attracting Type.



986-301



986-303



Magnetic Holders

Series 986

Specifications

Magnetic Holders (series 986)

Order No.	Pull	Mass	Dimensions	Remarks
986-311	1.7 lbs	.02 lbs	.39" (DIA) x .59"	
986-312	6.6 lbs	.02 lbs	.59" (DIA) x .59"	
986-313	11.0 lbs	.09 lbs	.78" (DIA) x .78"	
986-314	22.0 lbs	.13 lbs	.98" (DIA) x .98"	Connect bolt hole M6 (P = 1.0mm)
986-315	66.1 lbs	.35 lbs	1.57" (DIA) x 1.37"	Connect bolt hole M8 (P = 1.25mm)
986-321	11.0 lbs	.26 lbs	.98" x .98" x .98"	
986-322	22.0 lbs	.55 lbs	.98" x 2.28" x .98"	

986-322

986-321



986-311

986-313

Permanent Magnetic Chucks

Series 986

(Not available in Canada.)

Strong Rectangular Type Chucks

Thicker workpieces will be held firmly, during grinding operations, with this coarser pitch, more powerful magnetic chuck.

Regular Rectangular Type Pitchless Chucks

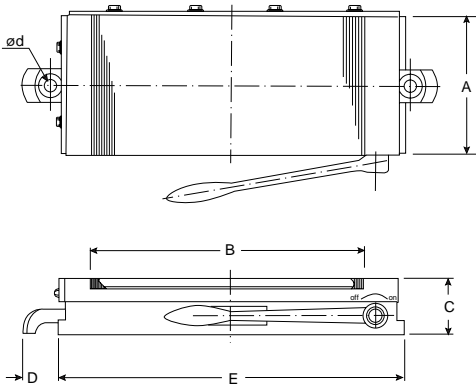
Pitchless chucks are recommended for use when grinding small and/or thin workpieces as small as 4mm DIA., as thin as 0.2mm.



986-204



986-211



Specifications

Permanent Magnetic Chucks—Strong Rectangular Type

Inch

Order No.	Mass	A	B	C	D	E	(DIA) d
986-201	12.1 lbs	3.93"	5.55"	2.28"	1.22"	7.28"	.39"
986-202	17.6 lbs	3.93"	8.38"	2.28"	1.22"	10.23"	.39"
986-203	22.0 lbs	4.92"	8.38"	2.28"	1.22"	10.23"	.39"
986-204	37.4 lbs	5.90"	9.33"	2.36"	1.57"	12.36"	.55"
986-205	44.1 lbs	5.90"	11.22"	2.36"	1.57"	14.33"	.55"

Regular Rectangular Type Pitchless Chucks

Order No.	Mass	A	B	C	D	E	(DIA) d
986-211	5.5 lbs	2.75"	4.29"	1.85"	1.22"	5.51"	.39"
986-215	37.4 lbs	5.90"	9.37"	2.36"	1.57"	12.36"	.55"

Permanent Magnetic Chucks

Series 986

(Not available in Canada.)

Swivel Rectangular Type Chucks

Jigs, molds and tools can be located at any angle, for forming or grinding operations, using the swiveling magnetic chuck. Installation is simple since no electrical power is required, which eliminates the possibility of loss of accuracy due to increase in temperature.

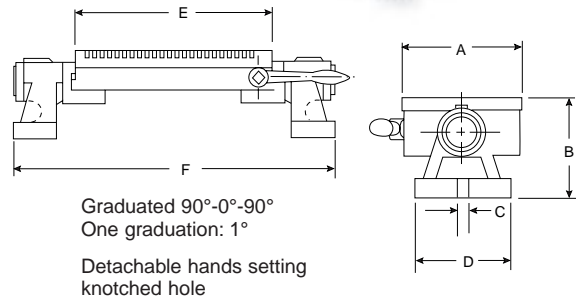
Specifications

Permanent Magnetic Chucks—Swiveling Rectangular Type

Order No.	Mass	Dimensions					
		A	B	C	D	E	F
986-221	22.0 lbs	2.75"	3.15"	.39"	2.75"	5.11"	10.70"



986-221



Round Type Pitchless Chucks

Fine pole spacing recommends pitchless chucks for small and/or thin materials.

Specifications

Permanent Magnetic Chucks—Round type pitchless

Order No.	Mass	Dimensions				
		A	B	C	D	E
986-242	19.8 lbs	6.30"	5.51"	6.0mm	.39"	2.60"
986-243	28.6 lbs	7.87"	7.08"	8.0mm	.55"	2.60"



986-242

Round Type Chucks

Ideal for grinding and cutting operations on small and/or thin workpieces on rotary grinders, lathes, rotary milling machines and other machine tools.

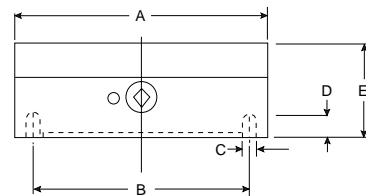
Specifications

Permanent Magnetic Chucks—Round type

Order No.	Mass	Dimensions				
		A	B	C	D	E
986-231	8.8 lbs	4.92"	4.41"	6.0mm	.39"	2.60"
986-232	19.8 lbs	6.30"	5.51"	6.0mm	.39"	2.60"
986-233	28.6 lbs	7.87"	7.08"	8.0mm	.55"	2.60"



986-233



Spring Dividers, Outside Spring Calipers, Inside Spring Calipers

Series 950

Specifications

Inside, Outside Spring Calipers, Spring Dividers

Order No.	Range	Remarks
950-211	4"	Spring Dividers
950-212	6"	
950-213	8"	
950-214	10"	
950-215	12"	
950-221	4"	Outside Spring Calipers
950-222	6"	
950-223	8"	
950-224	10"	
950-225	12"	
950-231	4"	Inside Spring Calipers
950-232	6"	
950-233	8"	
950-234	10"	
950-235	12"	
950-241	4"	Hermaphrodite Caliper
950-242	6"	



Small Hole Gages

Series 154

Features

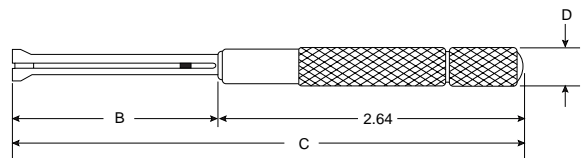
- Extra long for gaging deep and shallow holes, slots and similar work.
- Gaging surface is full-round with a flat bottom.
- Gaging surface is fully hardened to ensure long tool life.
- Supplied set of 4 gages in a fitted case.

Specifications

Small Hole Gages

Order No.	Range	Dimensions			Remarks
		B	C	D	
154-105	.118-.197"	.88"	3.54"	.21"	Set of 4 Gages
154-106	.197-.295"	1.18"	3.84"	.21"	
154-107	.295-.393"	1.37"	4.04"	.33"	
154-108	.393-.511"	1.57"	4.25"	.33"	
154-901	.118-.511"				

154-901



Telescoping Gages

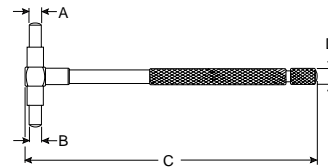
Series 155 (5/16"~6")

Specifications

Telescoping Gages

Order No.	Range	Dimensions				Remarks
		A	B	C	D	
155-121	.315-.50"	.12"	.16"	4.33"	.20"	
155-122	.50-.748"	.14"	.20"	4.33"	.22"	
155-123	.748-1.26"	.14"	.20"	4.33"	.22"	
155-124	1.26-2.126"	.23"	.29"	5.90"	.31"	
155-125	2.126-3.54"	.23"	.29"	5.90"	.31"	
155-126	3.54-5.90"	.23"	.29"	5.90"	.31"	
155-903	.315-5.90"					Set of 6 Gages
155-904	.50-5.90"					Set of 5 Gages
155-907	.315-2.126"					Set of 4 Gages

155-903



Tap Wrench

T-Handle

(Not available in Canada.)

MITUTOYO Tap Wrenches, for small, finishing work, have ratchet action to left or right and may also be locked. Chuck is hardened for resistance to abuse and for long-lasting service.

Specifications

Tap Wrench (T-Handle)

Order No.	Clamping Capacity	Remarks
985-121	.118"-.315"	with Ratchet
985-122	.315"-.551"	with Ratchet

985-122



985-121

Parallel Clamps

Features

- Material: hardened steel.
- Black-oxide finish.

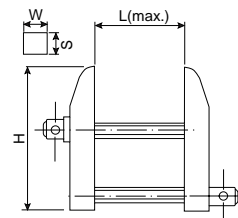
Specifications

Parallel Clamps

Order No.	Dimensions			
	H	L (Max)	W	S
985-126	1.96"	1.18"	.39"	.39"
985-127	2.95"	2.36"	.47"	.47"
985-128	3.93"	2.75"	.55"	.55"
985-129	4.92"	3.15"	.63"	.63"



985-128



985-127

Scribers

Series 985

MITUTOYO provides a full line of scribers to accommodate every shop need. All the scribers, with the exception of the **985-105**, have tungsten-carbide tips. The **985-105** has a diamond tip.

Specifications

Scribers

Order No.	Length	Replacement Point
985-101	6.75"	No. 050561
985-102	6.12"	—
985-103	8.87"	—
985-104	5.75"	No. 050562*
985-105	5.12"	No. 050563*
985-111	5.62"	No. 050564

*Retractable



Center Punches

Series 985

Specifications

Center Punches

Order No.	Length	Replacement Point	Remarks
985-112	5.25"	No. 050565	.68" (DIA), Plastic housing
985-113	6.0"	No. 050566	1.0" (DIA), Metal housing
985-114	3.0"	—	.31" (DIA)
985-115	4.0"	—	.39" (DIA)
985-116	4.3"	—	.59" (DIA)
985-117	5.0"	—	.67" (DIA)



Drive Pin Punches

Series 985

Specifications

Drive Pin Punches

Order No.	Length	Remarks
985-118	8"	5pcs. Extra long Drive Pin Punch Set 1/8, 3/16, 1/4, 5/16, 3/8"
985-119	4"	8pcs. Drive Pin Punch Set 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16"
985-120	4"	8pcs. Brass Drive Pin Punch Set 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16"



Edge & Center Finders

The Edge and Center Finders are hardened and ground on all surfaces.

Specifications

Edge & Center Finders

Order No.	Shank (DIA)	Tip (DIA)	Remarks
050101	3/8" (.375")	.20"	Edge Type
050102	1/2" (.50")	.20"	Edge Type
050103	3/8" (.375")	.20"	Center Type
050104	1/2" (.50")	.20"	Center Type
050105	.375"/10mm	10mm	Edge Type
050106	10mm	10mm	Edge Type
050109	1/2" (.50")	.50"	Edge Type
050110	1/2" (.50")	.20", .50"	Double Edge Finder



Surface Gage

Series 156

This Surface Gage has a coarse-adjusting clamp for upright post, fine-adjusting knob and baked-enamel-finished, hardened-steel base. The two gage pins provided are held tightly against the base.

The rocker runs the entire length of the base and pivots against a heavy spring, allowing a wide range of fine adjustment, yet holding the tip of the scriber firmly.

Use of a test indicator along with this Surface Gage is recommended.

In addition to the above stems for test indicators, the **156-502** Surface Gage accepts $\varnothing 3/8"$, $5/32"$ (9.5mm, 4mm) stems.

Features

- Bottom surface, Vee and parallel side edges are ground.
- A pair of gage pins for linear work.
- Fine adjusting knob.
- Suitable as a small transfer stand with MITUTOYO test indicator.

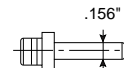
Specifications

Surface Gage

Order No.	Dimension of Scriber	Remarks
156-502	Length: 6.9" (DIA): .157" (4mm)	Base Dimension: 3.4"(W) x 2.4"(D) x 1.3"(H) Post Dimension: Length: 10.2", .44" (DIA)

Stems for test indicators (optional)

Stem 102036



Stem 190318 and Nut 190322



Magnetic Lamps

Series 986

(Not available in Canada.)

Concentrate light on the workpiece from any location and/or direction with MITUTOYO Magnetic Lamps. Two incandescent lamps and one fluorescent lamp have flexible supports mounted onto powerful magnetic bases. The bases have a V-groove and adhere to curved as well as flat surfaces. An on/off switch, for the magnetism of the bases facilitates positioning and releasing of lamps.

Specifications

Magnetic Lamps

Order No.	Lamp	Height	Pull	Remarks
986-281	60W incandescent	18"	165.3 lbs	without bulb
986-282	60W incandescent	15.75"	165.3 lbs	without bulb

986-281
(without bulb)



Permanent Magnet

986-282
(without bulb)



On-Off Switchable Magnet

ZERO-IT 950-110

"Zero-It" is specially designed for MITUTOYO Test Indicators with Dovetails, and functions as a quick and practical work positioning device.

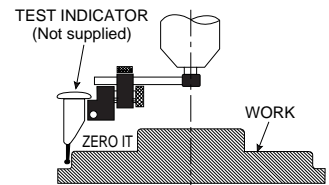
Attach "Zero-It" directly to the collet, then zero-in the work position by reading MITUTOYO Test Indicator. The hardened clamping post consists of three ODs, from top, 1/4", 3/8" and 1/2", and has hardness of approximately 58 to 60 Rockwell C.

Specifications

Zero-It

Order No.	Coarse	Fine
950-110	10"	3/8"

950-110



ZERO-SETTER

Series 950

Fast and sure establishment of "0" reference point with built-in indicator.

Spring loaded setting face to safe guard against damage from over run.

Body dia. 1.44" (36.5mm)

Wooden case included.

Specifications

Zero-It

Order No.	Height	Graduation
950-111	1"	.0005"
950-112	25mm	0.01mm

950-112



950-111

Angle Blocks

Series 981

Specifications

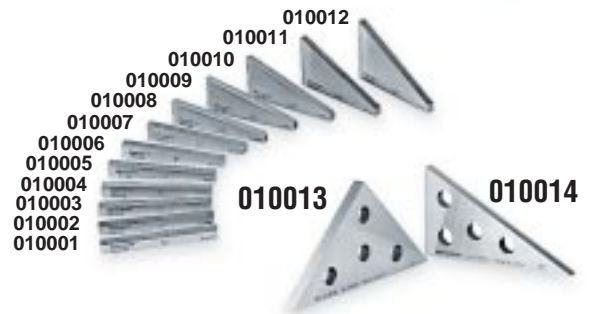
Angle Blocks

Order No.	Angle	Accuracy	Remarks
010001	1/4°	±20 sec	Hardened steel over HRC 55 Precision ground throughout
010002	1/2°		
010003	1°		
010004	2°		
010005	3°		
010006	4°		
010007	5°		
010008	10°		
010009	15°		
010010	20°		
010011	25°		
010012	30°		
010013	45°, 45°, 90°	±40 sec	
010014	30°, 60°, 90°		

Set Order No.	Remarks
981-101	10 pc. Set (Order No. 010003-010012)
981-102	12 pc. Set (Order No. 010001-010012)
981-103	2 pc. Set (Order No. 010013-010014)



981-102



2 pc. Set 981-103

Adjustable Parallels

Series 985

- Consists of two precision ground pieces which slide smoothly on each other.
- Locked into position by set screws.

- Can be quickly inserted into openings and expanded to exact size, then measured with a micrometer.

Order No.	Remarks
985-130	4 pcs. Adjustable Parallel Set 3/8 – 1-15/16"
985-131	6 pcs. Adjustable Parallel Set 3/8 – 2-1/4"
985-132	Size A Adjustable Parallel 3/8 – 1/2"
985-133	Size A Adjustable Parallel 1/2 – 11/16"
985-134	Size A Adjustable Parallel 11/16 – 15/16"
985-135	Size A Adjustable Parallel 15/16 – 1-5/16"
985-136	Size A Adjustable Parallel 1-5/16 – 1-3/4"
985-137	Size A Adjustable Parallel 1-3/4 – 2-1/4"



985-131

MU-Gage Plus

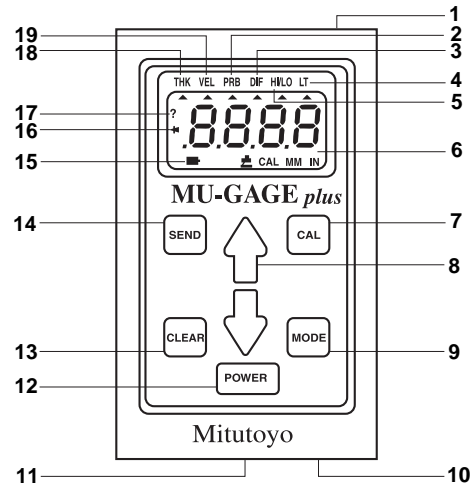
Series 179

Ultrasonic micrometer with SPC output

The MU-Gage Plus is high resolution ultrasonic micrometer with the following features.

Features

1. Lemo quick-disconnect transducer connector.
2. PRB carat lights when unit in probe selection mode.
3. DIF carat lights when unit in differential offset measurement mode.
4. LT carat lights when display backlight control mode is enabled.
5. HI/LO carat lights when unit in the HI/LO tolerance limits/alarm set-up mode.
6. Backlit display
7. Activates scrolling keys to set values in THK, VEL, DIF, HI/LO, PRB, and LT control options.
8. Scrolling keys.
9. Selects operating mode, THK, VEL, DIF, HI/LO, PRB, and LT across top of display window.
10. SPC output port.
11. Built-in calibration block for transducer recognition.
12. Power on/off switch.
13. Clears displays and erases/resets.
14. Sends data in memory to compatible computer or printer.
15. Low Battery indicator.
16. Indicates displayed value outside tolerance limit.
17. Over range indicator, exceeding available digits.
18. THK carat lights when unit in normal thickness measurement mode.
19. VEL carat lights when unit in material velocity mode.



Specifications

MU-Gage Plus

Order No.	179-207	179-208
Transducer	Thin Metal	Thin Plastics
Measuring Range	.010–1.000" 0.25–25mm	.005–.200" 0.13–5mm
Resolution	.0001"/0.001mm	.0001"/0.001mm
Accuracy	±.002"	±.0015"
Battery	4 pcs. AA Alkaline	
Dimension	W=3.5" x H=6.25" x D=1.5" (89mm x 159mm x 38mm)	
Operating Temp	+10°F to 120°F (-10°C to 50°C)	
Mass	.91lbs. (410g)	
Material Type	Thin Metal	Plastic

Standard Accessories

Order No.	Description
64AAA510	Transducer probe for 179-207 (cable length 4 ft.)
64AAA511	Transducer probe for 179-208 (cable length 4 ft.)
64AAA504	Couplant Bottle (4 Oz.)
64AAA512	Screw Driver
64AAA513	Plastic Case

Optional Accessories

Order No.	Description
64AAA514	Replacement for Probe Tip
64AAA515	Replacement Cable for Transducer
64AAA516	Soft case w/strap
936937	SPC Output connecting cable (1m)
965014	SPC Output connecting cable (2m)

MU-Gage Series 179

Ultrasonic micrometer with SPC output

The MU-Gage is an ultrasonic instrument for precise thickness measurement from just one side of a workpiece.

Features

1. Lemo quick-disconnect transducer connector.
2. Battery charger connect/data port
3. Built-in auto-probe zero block
4. Coupling indicator
5. Backlit LCD indicates modes, measurements and icons
6. Lightweight aluminum case
7. Weather resistant sealed keypad
8. POWER key
9. ALRM key enables alarm LEDs
10. SEND key for transmission of readings
11. Numeric keys
12. Material calibration key
13. SCAN key enables rapid scanning and minimum thickness capture
14. DIFF key enables display of positive or negative difference to preset value
15. Red and green LED indicators
16. Operator selectable Metric or English units



Specifications

MU-Gage Plus

Order No.	179-204	179-205	179-206
Transducer	Standards	Aluminum	High Resolution*
Measuring Range	.040–5.000" 1mm–125mm	.040–4.000" 1mm–102mm	.040–5.000" 1mm–125mm
Resolution	.001"/0.01mm		
Accuracy	±.002"		
Battery	4 pcs. AA Alkaline 300 Hours (80 Hours with backlight)		
Dimension	W=2.5" x H=4.5" x D=1.25" (64mm x 114mm x 33mm)		
Operating Temp	-18°C to 150°C (0°F to 300°C)		
Mass	.69lbs. (312g)		
Material Type	Glass, Plastic, Steel, Ceramics	Aluminum	Glass, Plastic, Steel, Ceramics

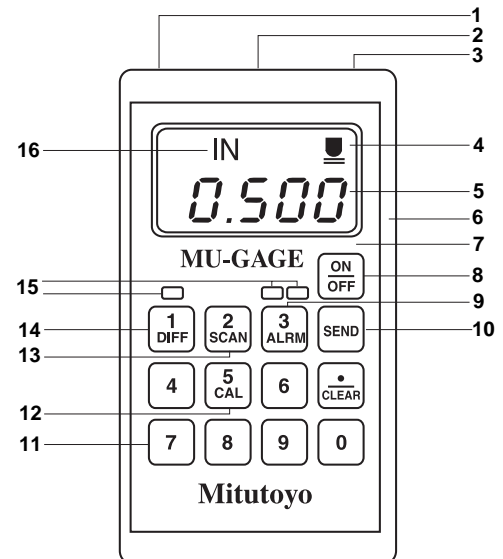
* Transducer probe has 25% higher sensitivity to small holes pitting than standard type.

Standard Accessories

Order No.	Description
64AAA501	Transducer probe for 179-204 (cable length 4 ft.)
64AAA502	Transducer probe for 179-205 (cable length 4 ft.)
64AAA503	Transducer probe for 179-206 (cable length 4 ft.)
64AAA504	Couplant Bottle (4 Oz.)
64AAA513	Plastic Case

Optional Accessories

Order No.	Description
64AAA505	Steel Calibration Block (5 Step)
64AAA506	Aluminum Calibration Block (5 Step)
64AAA507	Instrument Case with Strap
64AAA508	V-Block Transducer Holder
64AAA509	SPC Output Connecting Cable (3 ft.)



Roll Calipers Series 310

The Roll Caliper, as its name implies, is a special gage to measure rolled or turned products, such as: metal sheets; textile; rubber or paper rolls; large and cylindrical workpieces; extruded tubes; welded tubes; etc.

The Roll Caliper is supplied without Gage Head. Select MITUTOYO Dial Indicator or Mu-Checker with Cartridge Head and order together with the Roll Caliper.



Supplied without Gage Head. Select Dial Indicator or Mu-Checker with Cartridge Head.

Order No.	Inch Range
310-141	20–56"
310-142	16–42"
310-143	11–32"
310-144	8–24"
310-145	4–17"

Digi-Derm Series 179

Digi-Derm is a non-destructive, electronic coating thickness gage. Readings are displayed on the clear LCD screen and can be sent to any Mitutoyo SPC system for data analysis. Digi-Derm is battery powered for portable use and can also operate on AC power with an optional adaptor.



179-746

Specifications

Digi-Derm

Inch/Metric

Order No.	Measuring Range	LCD Resolution	Accuracy	Remarks
179-746	0–.059" (0–1.5mm)	.00005" (0.001mm)	±.00008" ±1 digit (Range: 0–.0039") ±2% ±1 digit (Range: .004"–.043") ±3% ±1 digit (Range: .043"–.06")	Non-magnetic coating on magnetic material
179-756	0–.039" (0–1.0mm)	.00005" (0.001mm)	±.00008" ±1 digit (Range: 0–.0039") ±2% ±1 digit (Range: .0039"–.043")	Non-conductive coating on non-magnetic material

For SPC output order connecting cable 936937 (1m) or 965014 (2m).

Replacement Part (Calibration Film for 179 series)

Order No.	Film Set No.	527599 (25µm)	527600 (50µm)	527601 (100µm)	527602 (250µm)	527603 (500µm)	527604 (1000µm)	685013 (1500µm)	527605 (2000µm)
179-710	937287	●	●						
179-711	937288	●	●	●	●	●			
179-731-1	937288	●	●	●	●	●			
179-712	937289			●	●	●	●		●
179-746	945014	●	●	●	●	●	●	●	
179-756	945049	●	●	●	●	●	●		

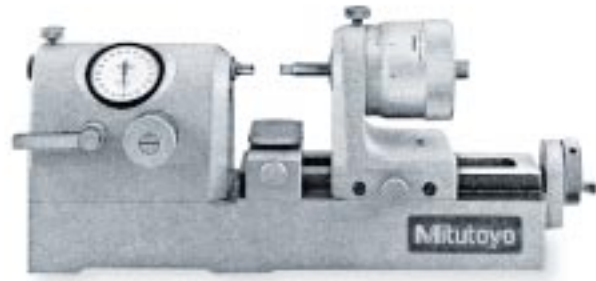
Replacement Part (Base metal)

Order No.	Can be used for coating thickness gages
	179-710
933038	179-711
	179-712
	179-746
	179-731-1
937305	179-756

Bench Comparator Series 162

Features

- Overall range 0–100mm, for OD measurements.
- Variable anvil pressures.
- Dial Indicator is shockproof.
- Adjustable work-table size: 1-9/16 x 2-3/4".
Vertical adjustment: 1-9/16".
- MITUTOYO Gage Blocks are furnished with the Bench Comparator.
Inch type: 1", 2"
Metric type: 25mm, 50mm
- Supplied with case.
- Weight: 33 lbs.



Mu-Checker: **519-402A**
Cartridge Head: **519-332, 334**
Bench Comparator: **162-102**

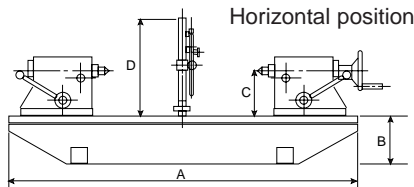
Specifications

Inch/Metric

Order No.	Overall Range	Micrometer Head Range	Micrometer Head Grad.	Dial Indicator Grad.	Accuracy		Variable Pressure	Attachment Diameter
					Micro-Head	Indicator		
162-101	0–100mm	0–25mm	0.001mm	0.001mm (0-50-0)	±2μm	within 1/3 graduations	200, 400, 100 gf	ø8mm
162-102	0–4"	0–1"	.0001"	.0001" (0-5-0)	±.0001"		0.5, 1, 1.5, 2, 2.5, 3 lbs.	ø3/8"

Bench Centers Series 967

Precision Concentricity Verification



967-201



069303

Supplied without Test Indicators

Vertical position
(**967-201** and **967-203** only)

Light-weight Type

Dimensions

Order No.	A	B	C	D	Weight
967-101	25.59"	2.36"	3.54"	9.05"	88 lbs.
967-203	12.2"	1.58"	1.96"	5.29"	15.4 lbs.
967-201	19.69"	1.78"	2.95"	7.65"	28.6 lbs.
967-204	27.56"	3.15"	3.93"	7.65"	132 lbs.
967-202	35.44"	3.94"	4.92"	9.05"	154 lbs.

Specifications

Order No.	Center-to-Center	Workpiece Capacity Diameter	Max. Weight	Parallelism of Centers	Flatness of Surface	Attachment Diameter
967-101	13.7"	7"	88 lbs.	.0002"	.0003"	ø3/8"
967-203	5.9"	3.8"	17.5 lbs.	.0002"	.0004"	ø3/8"
967-201	11.8"	5.8"	35 lbs.	.0002"	.0006"	ø3/8"
967-204	17.7"	7.8"	44 lbs.	.0002"	.0007"	ø3/8"
967-202	23.6"	9.8"	66 lbs.	.00024"	.0008"	ø3/8"

Optional Accessories

069303	Special attachment for mounting 967-201 in vertical position
069304	Special attachment for mounting 967-203 in vertical position

HAND TACHOMETERS

Digital Hand Tachometers Series 982



Specifications

Order No.	982-551	982-552
Revolution per minute	1.0 – 25,000 rpm	–
Rotation speed	–	Non-contact: 6.0 – 99,999 rpm; Contact: 6.0 – 25,000 rpm
Measuring accuracy Revolution	1.0 – 599.9rpm: ± 1 rpm, 600.0 – 25,000 rpm: $\pm 0.006\%$ and ± 0.5 digit	6.0 – 599.9 rpm: ± 1 rpm, 600.0 – 99,999 rpm $\pm 0.006\%$ and ± 0.5 digit
Surface, Speed, Length	$\pm 0.4\%$ and 1 digit	$\pm 0.4\%$ and ± 1 digit
Detection	Optical coupler, 20 pulses per revolution	Laser diode
Outside dimensions	4.83" L x 2.52" W x 1.24" H (1.22.5mm x 64mm x 31.5mm)	4.55" L x 2.52" W x 1.24" H Overall length with contact adapter: 149mm
Weight	0.37 lbs. with batteries (170 g)	Main unit: 0.35 lbs. with batteries (160 g) contact adapter: 0.11 lbs. (50 g)

Specifications

Optional Accessories For Digital Hand Tachometers, SERIES 982

Order No.	Description	Dimension	Drawing
010049	Cone Adapter, Standard	D = 1/2"	
010050	Cone Adapter, 5/8"	D = 5/8"	
010051	Cone Adapter, 3/4"	D = 3/4"	
010052	Cone Adapter, 1 1/4"	D = 1 1/4" d = 1/2"	
010053	Funnel Adapter, Standard	D = 1/2"	
010054	Funnel Adapter, 3/4"	D = 3/4"	
010055	Measuring Wheel FPM (6" cir)	D = 1.91"	
010056	Measuring Wheel FPM (12" cir)	D = 3.82"	
010057	Measuring Wheel YPM (0.1 yard cir)	D = 1.15"	
010058	Measuring Wheel MPM (0.1 meter cir)	D = 1.25"	
010059	Reflective Tabs 1/2" square (35 pcs)		
010060	Extension Shaft (3" length)		

TORQUE WRENCHES

Datatorq

Series 983 – Digital Torque Wrenches with SPC output



Features

- Programmable torque tolerance (high/low limits)
- Peak Hold mode
- Track mode
- Red and Green Go/No Go lights
- Analog auto scaling bar-graph display
- Audible buzzer

- Memory for up to 4000 torque data
- Batteries:
A 9V alkaline battery
Battery life 60 hours of operation
A "Lo Bat" indication on display signals for replacement.
- All calibration data is stored in the microprocessor.

Accuracy

±1% from 20-100% of range
±1%, Plus 5 increments, from 10-20% of range

- A Certificate of Accuracy, traceable to the NIST, is furnished with each Datatorq.

Specifications

Datatorq

Order No.	Range	Increments	Drive	Length	Mass
983-210	5-50 in.lb	.01 in. lb.	1/4"	13.5"	1.5 lb
	5.6-56 dNm	.01 dNm			
	5.7-57 cmkg	.01 cmkg			
	80-800 in. oz.	.1 in. oz.			
983-211	25-250 in. lb	.1 in. lb.	3/8"	14.9"	2.0 lb.
	28-282 dNm	.1 dNm			
	29-288 cmkg	.1 cmkg			
983-212	5-50 ft. lb.	.01 ft. lb.	3/8"	14.9"	2.0 lb.
	68-677 dNm	.1 dNm			
	69-691 cmkg	.1 cmkg			
	60-600 in. lb.	.1 in. lb.			
983-213	25-250 ft. lb.	.1 ft. lb.	1/2"	21.5"	3.2 lb.
	34-338 Nm	.1 Nm			
	3.4-34 mkg	.01 mkg			
983-214	60-600 ft. lb.	.1ft. lb.	3/4"	46.5"	9.5 lb.
	81-813 Nm	.1 Nm			
	8.3-83 mkg	.01 mkg			
983-215	100-1000 ft. lb.	1 ft. lb.	1"	74.0"	19.0 lb.
	135-1355 Nm	1 Nm			
	14-138 mkg	1 mkg			

Optional Accessories: SPC cable No. **50AAA620**

Miscellaneous Mitutoyo Products & Accessories



Ball Attachment

101468 .200" DIA. hardened steel ball
101469 .250" DIA. Micrometer Anvil to measure concave surface or cylindrical wall thickness.

NOTE: See additional information on micrometer anvil attachments at the end of the micrometer section in this catalog.



Tie Clips

101420 Micrometer (gold-color)
10142001 Dial Caliper (silver-color)
10142002 Digimatic Micrometer (silver-color)
10142003 Dial Indicator (silver-color)
10142004 Digimatic Caliper (silver-color)
10142005 CMM (silver-color)
10142006 Digimatic Indicator (silver-color)

PARTS LIST — ON CD-ROM

This single CD-ROM provides over 6,500 parts schematic breakdowns on Mitutoyo products. Multiple search methods are allowed including: Product/Tool Number, Product Description, Product Series, Part Numbers and Part Descriptions. Each screen displays a complete, exploded-view parts drawing with call-outs corresponding to the exact parts order number and list price. Other valuable features include a zoom function with the ability to scroll on the drawing or list, option for a full screen image and printing a complete page with all parts information for any one product. Request through your Mitutoyo distributor Part No. 050017CD.

PRICE LIST —

For Replacement Parts and Accessories MITUTOYO Tools & Instruments

This Price List supplements the Parts CD by providing the price information on all the parts and accessories of MITUTOYO's regular line of instruments. Each part is identified by a Code Number (listed numerically for easy location) and an accompanying description. Copies of the Price List are available upon request.

