






MarTest. Test Indicators

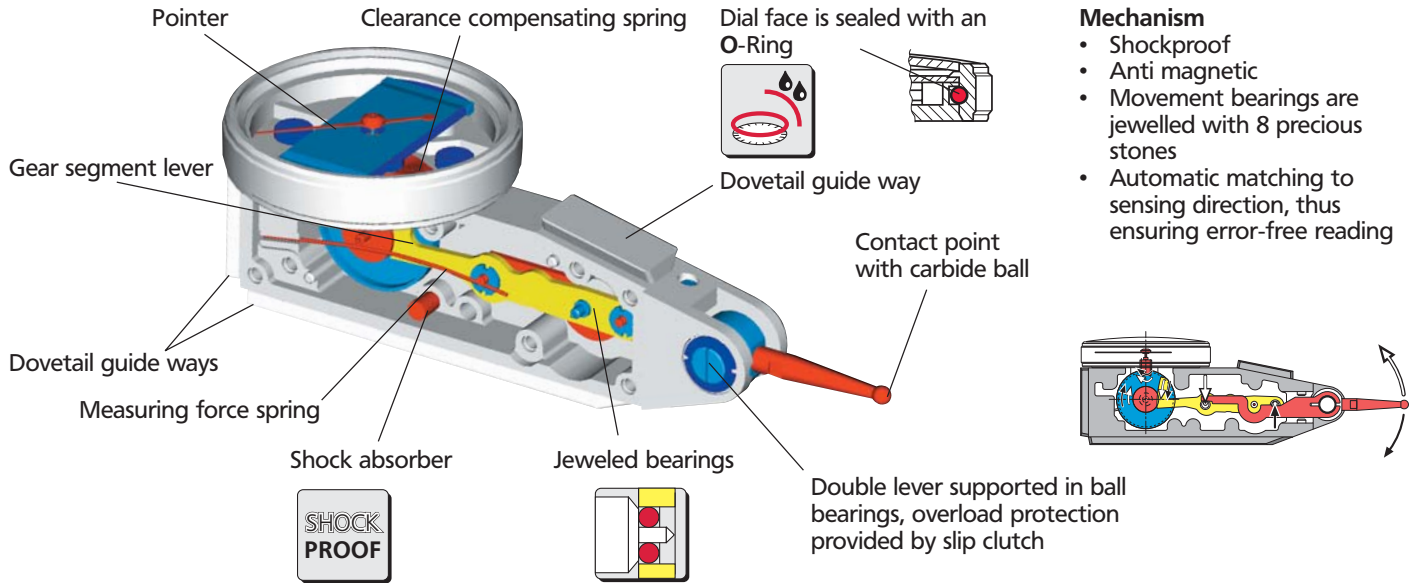
Overview

MarTest - Versions

	Measuring range	Dial style	Readings	Styli	Order no.	Order no. with Kit*
Standard						
	801 S1	± .015"	0-15-0	.001"	14.5 mm	4305960 2015317
	801 S	± .015"	0-15-0	.0005"	14.5 mm	4305950 2015316
	801 SG	± .015"	0-15-0	.0005"	14.5 mm	4307950 2015318
	801 SGI	± .015" (±0.30 mm)	0-15-0 (0-30-0)	.0005" (0.01 mm)	14.5 mm	4307970 2015311
	800 S	± 0.4 mm	0-40-0	0.01 mm	14.5 mm	4305200 2015309
	800 SG	± 0.4 mm	0-40-0	0.01 mm	14.5 mm	4307200 2015310
	800 SA	± 0.25 mm	0-25-0	0.01 mm	14.5 mm	4301200 2015343
	800 SGA	± 0.25 mm	0-25-0	0.01 mm	14.5 mm	4301250 2015344
Extra Long Styli						
	801 SL	± .010"	0-10-0	.0005"	41.24 mm	4306950 2015319
	801 SGL	± .010"	0-10-0	.0005"	41.24 mm	4306960 2015320
	800 SL	± 0.25 mm	0-25-0	0.01 mm	41.24 mm	4306200 2015312
	800 SGL	± 0.25 mm	0-25-0	0.01 mm	41.24 mm	4306250 2015313
	800 SGB	± 0.5 mm	0-50-0	0.01 mm	32.325 mm	4301300 2015346
Higher Resolution						
	800 SM	± 0.1 mm	0-100-0	0.002 mm	14.5 mm	4308150 2015315
	800 SGM	± 0.1 mm	0-100-0	0.002 mm	14.5 mm	4308200 2015314
	800 SGE	± 0.07 mm	0-70-0	0.001 mm	9.155 mm	4308220 2015345
	801 SM	± .010"	0-10-0	.0001"	14.5 mm	4308960 2015321
	801 SGM	± .004"	0-4-0	.0001"	14.5 mm	4308970 2015322
	801 SGE	± .004"	0-4-0	.00005"	14.5 mm	4308985 2015323
Larger Measuring Range						
	801 SR	± .030"	0-15-0	.0005"	14.5 mm	4307960 2015350
	801 SRM	± .008"	0-4-0	.0001"	14.5 mm	4308980 2015351
	800 SR	± 0.8 mm	0-40-0	0.01 mm	14.5 mm	4307250 2015348
	800 SRM	± 0.2 mm	0-100-0	0.002 mm	14.5 mm	4308250 2015349
Horizontal Models						
	801 H	± .015"	0-15-0	.0005"	14.5 mm	4303950 2015324
	800 H	± 0.4 mm	0-40-0	0.01 mm	14.5 mm	4303200 2015328
Vertical Models						
	801 V	± .015"	0-15-0	.0005"	14.5 mm	4302950 2015325
	801 VGM	± .004"	0-4-0	.0001"	14.5 mm	4302960 2015326
	800 V	± 0.4 mm	0-40-0	0.01 mm	14.5 mm	4302200 2015327
	800 VGM	± 0.1 mm	0-100-0	0.002 mm	14.5 mm	4302250 2015347

* Only available in North America, Canada and Mexico; includes holding bar and clamp

Design Features



MarTest - Applications

The Test Indicator serves as an instrument for comparative measurements. It can be used in any type of measuring stand. Due to the swiveling feature of the styli and the reversal of its sensing direction, the MarTest Test Indicator is suitable for various measuring and inspection tasks. Areas of application for example are:

- Testing concentricity and run-out of shafts and bores
- Testing of parallelism and alignment of surfaces in engineering and tool making

Concentricity of a shaft



Concentricity of a sleeve



Centering of a bore



Aligning a surface

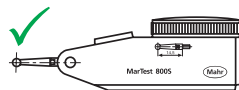


Testing parallelism

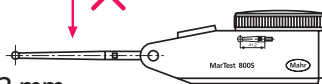


Reference to application:

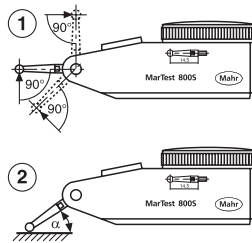
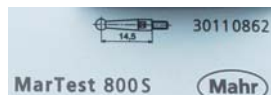
$l = 14.5$
mm



$l = 41.2$ mm



Use only the styli whose length is engraved on the side of the housing.



For accurate measurements the axis of the contact point must be perpendicular to the measuring direction (fig. 1).

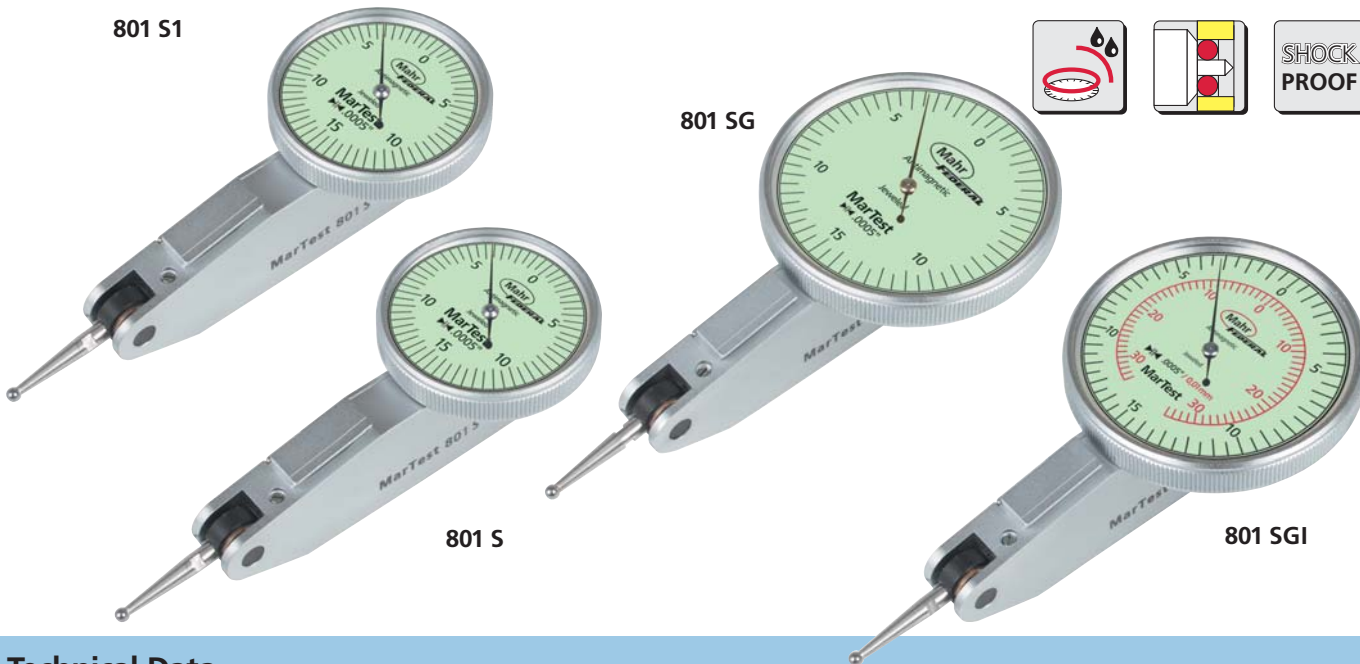
If this is not possible, it is necessary to multiply the reading on the dial with a correction factor, which depends on angle α (fig. 2). The correction factor is negligible for angles below 15° .

Angle α	15°	30°	45°	60°
Corr.-Factor	0.96	0.87	0.70	0.50

Example:

Angle α : 30° (estimated)
 Reading on dial: 0.38 mm
 Meas. result: $0.38 \times 0.87 = 0.33$ mm

MarTest standard versions



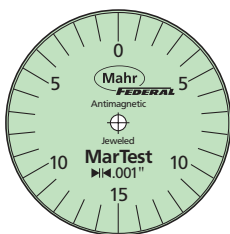
Technical Data

	Measuring range	Readings	Dial dia.	Measuring force	Accuracy		Order no.	Order no. Kit
					f_e	f_u DIN 2270		
801 S1	$\pm .015''$	.001"	1.1"	0.15 N	.0004"	.00012"	4305960	2015317
801 S	$\pm .015''$	.0005"	1.1"	0.15 N	.0004"	.00012"	4305950	2015316
801 SG	$\pm .015''$	.0005"	1.5"	0.15 N	.0004"	.00012"	4307950	2015318
801 SGI	$\pm .015'' (\pm 0.3 \text{ mm})$	.0005" (0.01 mm)	1.5"	0.15 N	.0004"	.00012"	4307970	2015311
800 S	$\pm 0.4 \text{ mm}$	0.01 mm	27.5 mm	0.15 N	10 μm	3 μm ●	4305200	2015309
800 SG	$\pm 0.4 \text{ mm}$	0.01 mm	38 mm	0.15 N	10 μm	3 μm ●	4307200	2015310
800 SA	$\pm 0.25 \text{ mm}$	0.01 mm	27.5 mm	0.1 N	5 μm	3 μm	4301200	2015343
800 SGA	$\pm 0.25 \text{ mm}$	0.01 mm	38 mm	0.1 N	5 μm	3 μm	4301250	2015344

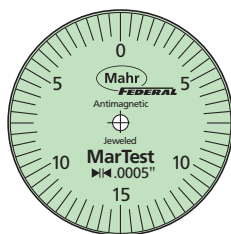
Scope of supply:

Plastic storage case, spanner for changing the styli, styli dia. $.080'' / 2 \text{ mm}$, mounting shaft 800 a8 (for metric versions), mounting shaft 800 a6 (800 SA, 800 SGA), mounting shaft 800 a3/8 (for inch versions)

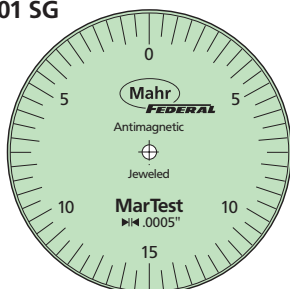
801 S1



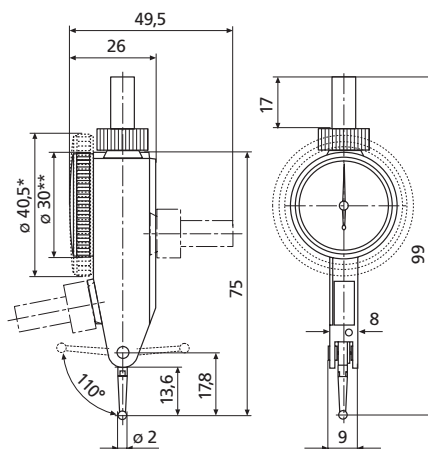
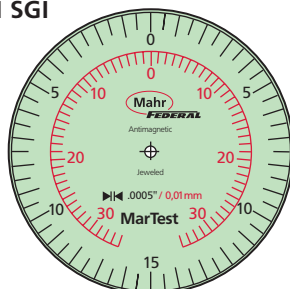
801 S



801 SG



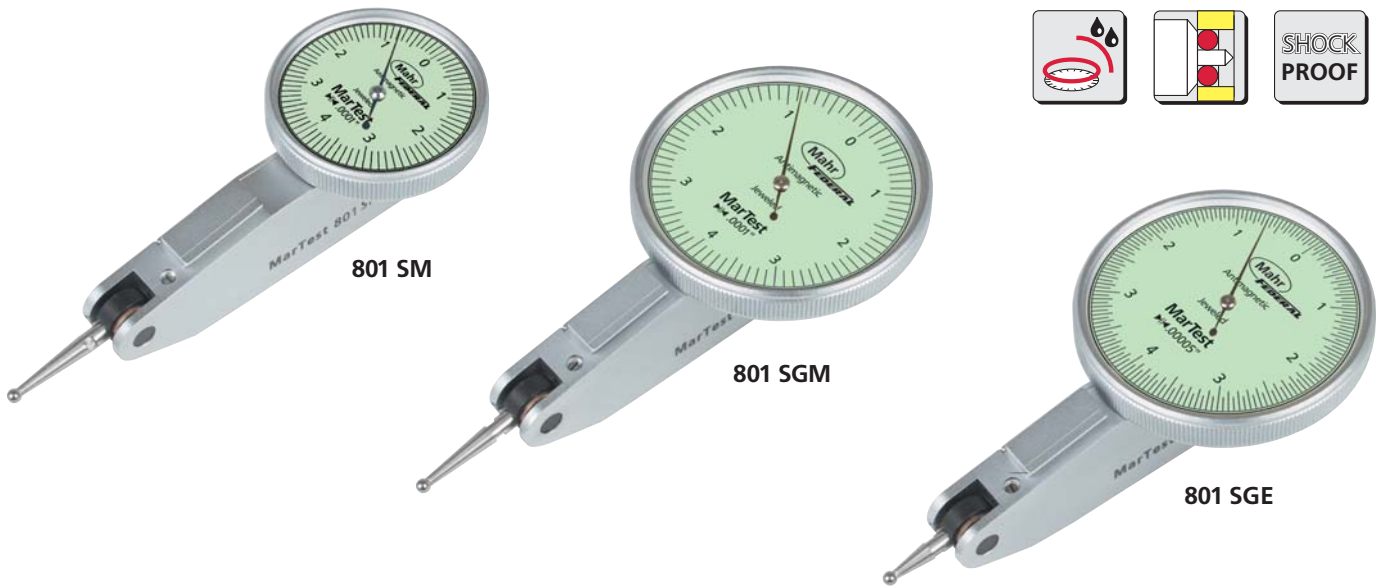
801 SGI



* 800 SG, 800 SGA, 801 SG, 801 SGI

** 800 S, 800 SA, 801 S1, 801 S

MarTest with resolution .0001"/.00005" / 0.002 mm/0.001 mm for higher accuracy



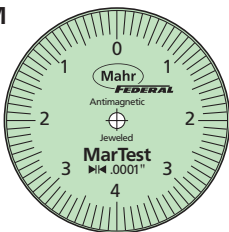
Technical Data

	Measuring range	Readings	Dial dia.	Measuring force	Accuracy		Order no.	Order no. Kit
					f_e	f_U 		
801 SM	$\pm .004''$	.0001"	1.1"	0.15 N	.00012"	.00008"	4308960	2015321
801 SGM	$\pm .004''$	.0001"	1.5"	0.15 N	.00012"	.00008"	4308970	2015322
801 SGE	$\pm .004''$	.00005"	1.5"	0.15 N	.00012"	.00008"	4308985	2015323
800 SM	± 0.1 mm	0.002 mm	27.5 mm	0.15 N	3 μ m	2 μ m ●	4308150	2015315
800 SGM	± 0.1 mm	0.002 mm	38 mm	0.15 N	3 μ m	2 μ m ●	4308200	2015314
800 SGE	± 0.07 mm	0.001 mm	38 mm	0.2 N	3 μ m	2 μ m	4308220	2015345

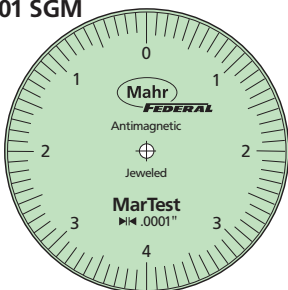
Scope of supply:

Plastic storage case, spanner for changing the styli, styli dia. .080" / 2 mm, mounting shaft 800 a8 (for metric versions), mounting shaft 800 a6 (800 SA, 800 SGA), mounting shaft 800 a3/8 (for inch versions)

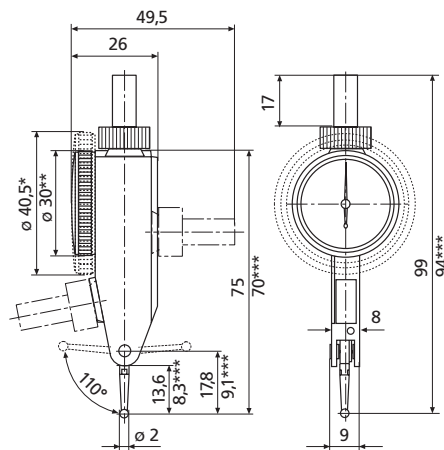
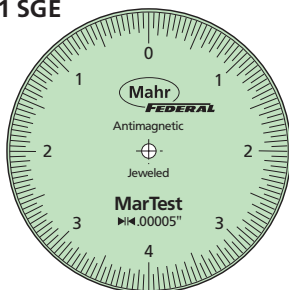
801 SM



801 SGM

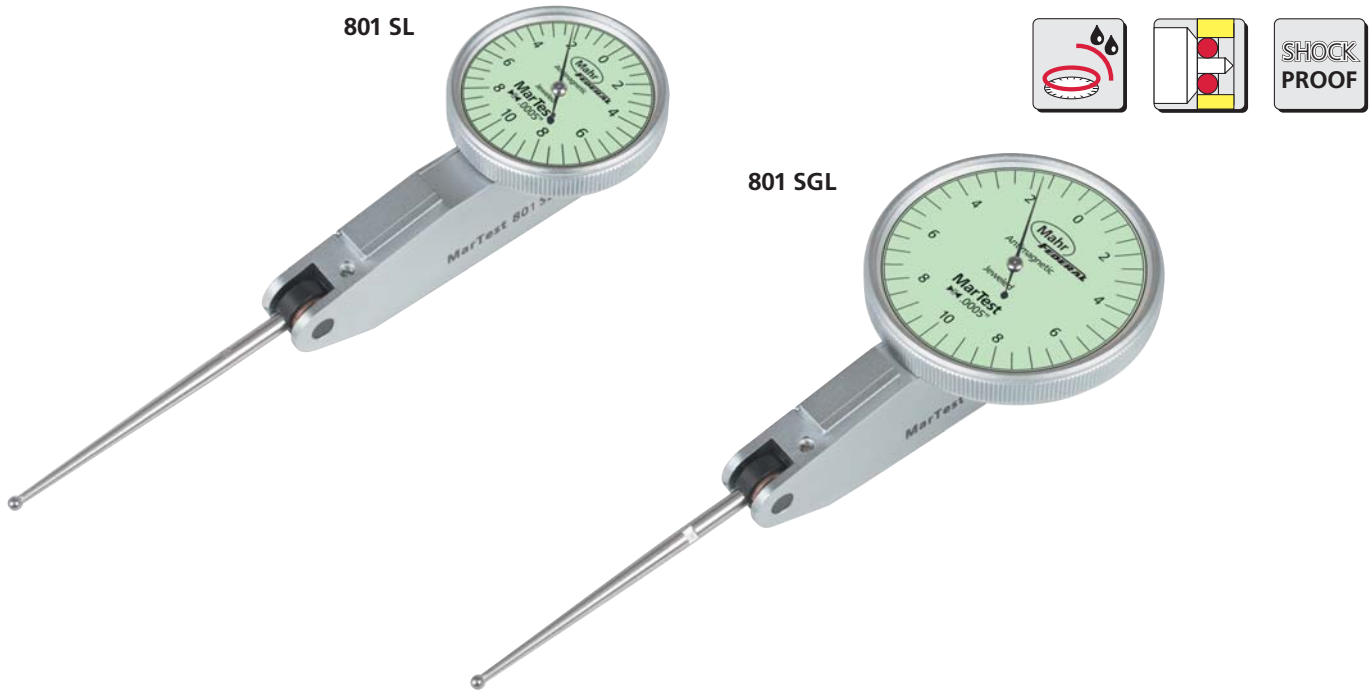


801 SGE



* 800 SGM, 800 SGE, 801 SGM, 801 SGE
 ** 800 SM, 801 SM
 *** 800 SGE

MarTest with extra long styli for measuring in even difficult to access positions



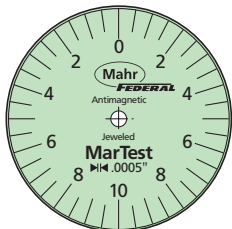
Technical Data

	Measuring range	Readings	Dial dia.	Measuring force	Accuracy	Order no.	Order no. Kit
					f_e f_u		
801 SL	$\pm .010''$	$.0005''$	1.1"	0.07 N	$.0004''$ $.0002''$	4306950	2015319
801 SGL	$\pm .010''$	$.0005''$	1.5"	0.07 N	$.0004''$ $.0002''$	4306960	2015320
800 SL	± 0.25 mm	0.01 mm	27.5 mm	0.07 N	10 μ m 5 μ m	4306200	2015312
800 SGL	± 0.25 mm	0.01 mm	38 mm	0.07 N	10 μ m 5 μ m	4306250	2015313
800 SGB	± 0.5 mm	0.01 mm	38 mm	0.07 N	10 μ m 4 μ m	4301300	2015346

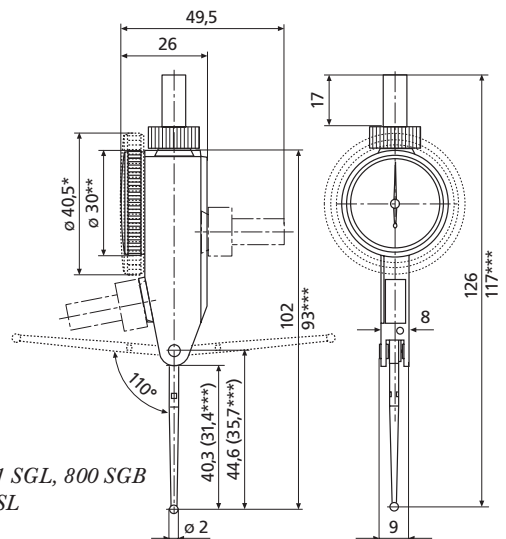
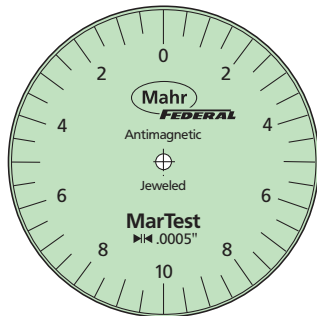
Scope of supply:

Plastic storage case, spanner for changing the styli, styli dia. $.080'' / 2$ mm, mounting shaft 800 a8 (for metric versions), mounting shaft 800 a6 (800 SA, 800 SGA), mounting shaft 800 a3/8 (for inch versions)

801 SL



801 SGL

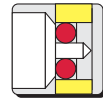
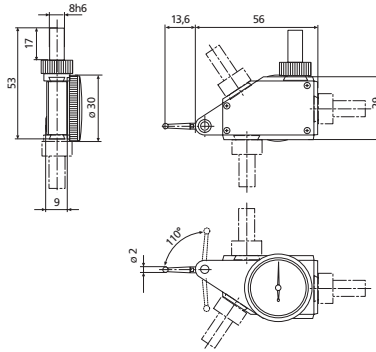


* 800 SGL, 801 SGL, 800 SGB
 ** 800 SL, 801 SL
 *** 800 SGB

MarTest styli can positioned horizontally to the dial face



801 H



Technical Data

	Measuring range	Readings	Dial dia.	Measuring force	Accuracy			Order no.	Order no. Kit
					f_e	f_u	DIN 2270		
801 H	± .015"	.0005"	1.1"	0.25 N	.0004"	.00012"	4303950	2015324	
800 H	± 0.4 mm	0.01 mm	27.5 mm	0.25 N	10 μm	3 μm ●	4303200	2015328	

Scope of supply:

Plastic storage case, spanner for changing the styli, styli dia. .080" / 2 mm, mounting shaft 800 a8 (for metric versions), mounting shaft 800 a6 (800 SA, 800 SGA), mounting shaft 800 a3/8 (for inch versions)

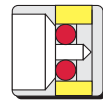
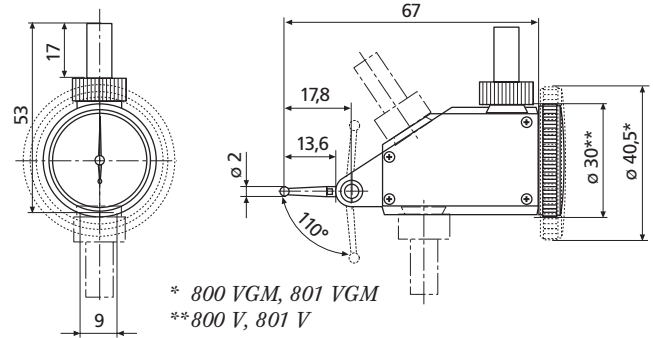
MarTest vertical model



801 V



801 VGM



Technical Data

	Measuring range	Readings	Dial dia.	Measuring force	Accuracy			Order no.	Order no. Kit
					f_e	f_u	DIN 2270		
801 V	± .015"	.0005"	1.1"	0.2 N	.0004"	.00012"	4302950	2015325	
801 VGM	± .004"	.0001"	1.5"	0.25 N	.00012"	.00008"	4302960	2013526	
800 V	± 0.4 mm	0.01 mm	27.5 mm	0.2 N	10 μm	3 μm ●	4302200	2015327	
800 VGM	± 0.1 mm	0.002 mm	38 mm	0.25 N	3 μm	2 μm ●	4302250	2015347	

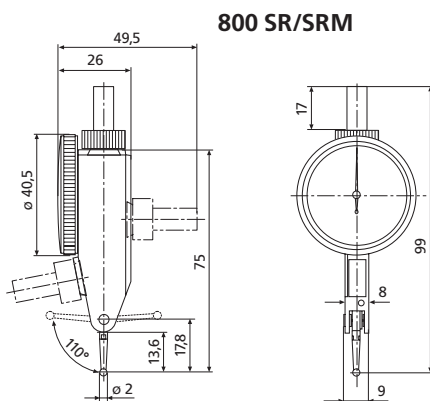
Scope of supply:

Plastic storage case, spanner for changing the styli, styli dia. .080" / 2 mm, mounting shaft 800 a8 (for metric versions), mounting shaft 800 a6 (800 SA, 800 SGA), mounting shaft 800 a3/8 (for inch versions)

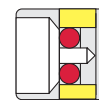
MarTest with larger measuring range



801 SRM



800 SR/SRM



Technical Data

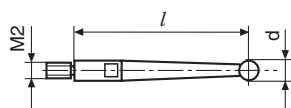
	Measuring range	Readings	Dial dia.	Measuring force	Accuracy		Order no.	Order no. Kit
					f_e	f_u		
801 SR	$\pm .030''$	$.0005''$	1.5"	0.15 N	$.0004''$	$.00016''$	4307960	2015350
801 SRM	$\pm .008''$	$.0001''$	1.5"	0.15 N	$.00012''$	$.00012''$	4308980	2015351
800 SR	± 0.8 mm	0.01 mm	38 mm	0.15 N	10 μ m	4 μ m	4307250	2015348
800 SRM	± 0.2 mm	0.002 mm	38 mm	0.15 N	3 μ m	3 μ m	4308250	2015349

Scope of supply:

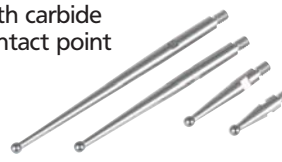
Plastic storage case, spanner for changing the styli, styli dia. $.080'' / 2$ mm, mounting shaft 800 a8 (for metric versions), mounting shaft 800 a6 (800 SA, 800 SGA), mounting shaft 800 a3/8 (for inch versions)

MarTest - Accessories

Styluses with ruby contact point



Styluses with carbide contact point



Spanner for changing the styluses 4305868

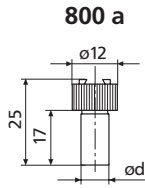


Model	Stylus length l	Styluses				Ruby contact point								
		Carbide contact point		d		d								
		Cat.-no.	$\varnothing 1$ mm	$\varnothing 2$ mm	$\varnothing 3$ mm	Cat.-no.	$\varnothing 2$ mm							
801 S1/801 S/800 S 801 SG/800 SG 800 SA 800 SGA 801 SM/800 SM 801 SGM/800 SGM 801 SGE 801 SR/800 SR 800 SRM/801 SRM 801 H/800 H 801 V/800 V 801 VGM/800 VGM	14.5 mm	800 ts	4305870	4305850	4305871	800 tsr	4309051							
800 SGE								800 te	4308851	4308850	4308852	800 ter	4309050	
801 SL/800 SL 801 SGL/800 SGL								41.2 mm	800 tl	4306851	4306850	4306853	800 tlr	4309053
800 SGB															800 tb	4301851	4301850	4301852	800 tbr	4309052

Martest - Accessories

Mounting shaft for dovetail

Mounting shaft	dia. d mm	Order no.
800 a8	8	4305865
800 a6	6	4301865
800 a4	4	4305885
800 a1/4	1/4"	4305895
800 a3/8	3/8"	4305875



Stand 801 p



- With swivel holder
- Base with V-groove 140°
- Total height 150 mm
- Mounting bore dia. 4 and 8 mm
- Column dia. 8 mm
- Base surface 65 x 40 mm

Order no. 4309090

Indicator not included.

Centering support rods 801 v

- For aligning and centering work pieces on machine tools
- Swivel mounting clamp and fine adjustment
- Stainless steel rods

Mounting bore dia. 8 mm
Swivel range of mounting clamp 180°

Order no. 4309070



Leveling Table TE-20

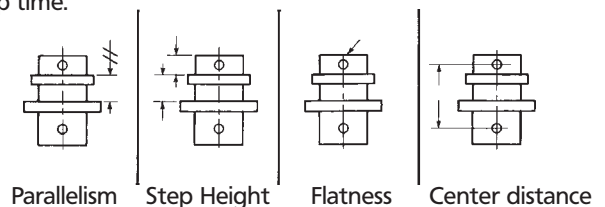
Cuts set-up time 60% or more for many height gage measurements.

- The leveling table, TE-20, permits you to quickly bring the surface of a part into alignment with a surface plate in both planes. Completely eliminates shimming. Saves so much time that, used only occasionally, it will pay for itself in two weeks.
- The top plate is stress-relieved steel providing about 67 square inches of work area. It is drilled and tapped for fixtures. Fine pitch screws and large knobs assure precisely controlled adjustments. Works with any type of height gage.
- Operation is simple. Height gage readings are taken at edges of the surface to be aligned. Each plate, independently adjustable at right angles to the other, is angled as required for precise alignment.
Flatness = .025 mm / .001"



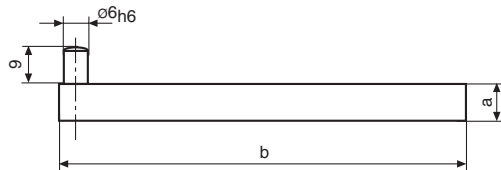
Adjustment	Top Plate	Bottom Plate
Total	± 1° 30'	± 1° 30'

Typical checks which require careful positioning of work because rest surface is not sufficiently parallel to other work surfaces. Leveling Table compensates for error quickly, drastically reduces set-up time.



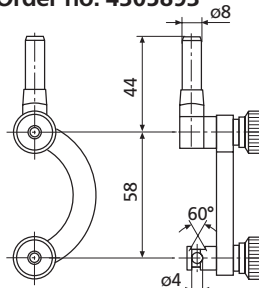
Martest - Accessories

Holder 800 h



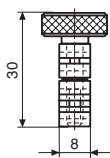
	Dimensions		Order no.
	a	b	
800 h1	9x9	100	4305888
800 h2	1/4" x 1/2"	4"	4305889

Universal centering support frame 800 b Order no. 4305893



Indicator not included.

Universal clamp 800 k

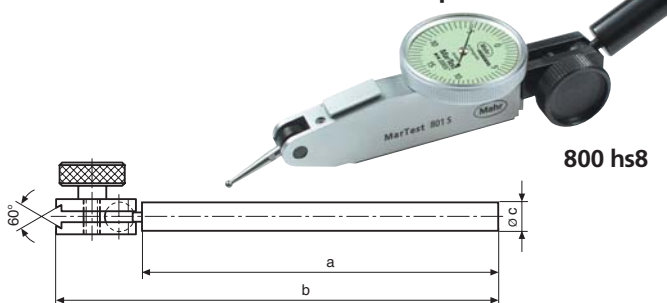


800 h1 with 800 k8

	Dimensions		Order no.
	dia. d1	dia. d2	
800 k8	4	8	4305891
800 k3/8	5/32"	3/8"	4305892

Indicator not included.

Universal holder with dovetail clamp



800 hs8

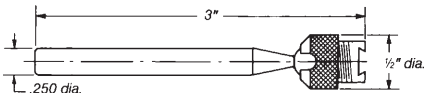
	Dimensions			Order no.
	a	b	dia. c	
800 hs8	100	124	8	4305886
800 hs3/8	4"	5"	3/8"	4305887

Indicator not included.

Ball Clamp

- Dovetail and ball for indicator mounting and omni-irectional orientation

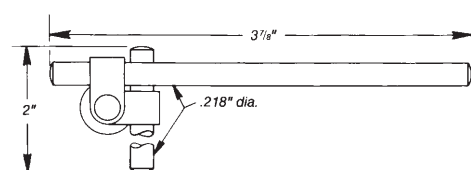
Order no. AT-50



Jig Borer Attachment

- Furnished with two rods and clamp for fast machine mounting

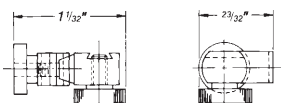
Order no. RD-21



Swivel Clamp

- Normally furnished with MarTest models. Allows indicator to be mounted on most indicator stands and fixtures

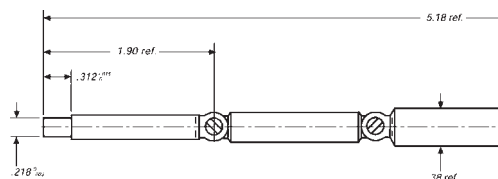
Order no. CP-2199



Double-jointed Clamp

- Reaches up to 127 mm / 5" with easy positioning for many applications including milling machine and Jig Borers

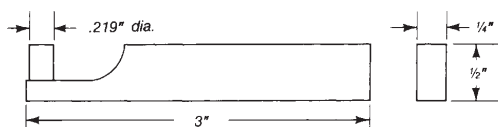
Order no. AT-100



Holding Bar

- Normally furnished with MarTest models. Three-inch length provides ample reach for most applications

Order no. HB-2157



Martest - Accessories

Test Stand 1492B

- Use with any MarTest Indicator - Support arms stepped at one end (.218in dia.) for Swivel Clamp (CP-2199).
- Accommodates Vertical and Horizontal lug back mounts for AGD type Indicators.
- Bases have powerful "ON/OFF" permanent magnets which hold from any of four faces - three sides or bottom.



Indicator not included.

Base Dimensions W x L x H		Main Post		Support Arm		Order no.
mm	(inch)	Length mm/inch	Diameter mm/inch	Length mm/inch	Diameter mm/inch	
60 x 48 x 59	(2.4" x 1.9" x 2.2")	178/ 7"	10/ .47"	165/ 6.5"	9.9/ .39"	1492B-5
60 x 48 x 59	(2.4" x 1.9" x 2.2")	178/ 7"	10/ .47"	149/ 5.9"	9.9/ .39"	1492B-10
114 x 48 x 59	(4.5" x 1.9" x 2.2")	401/ 15.8"	20/ .79"	200/ 7.9"	14/ .55"	1492B-15

Measurements are mm/inch. All models furnished with post clamp and indicator mounting clamp. Style 1492B-10 has fine adjustment on post clamp.

Transfer Stand 2300

- Fine adjustment conveniently located in base.
- Three-point base pads improve accuracy.
- Contoured shape facilitates movement.
- Use with any Testmaster Indicator - stud accommodates Swivel Clamp (CP-2199).
- EHE-2048 Gage head requires a CP-116 Clamp.



Indicator not included.

Base Dimensions W x L x H		Column (dia. x H)	Maximum vertical capacity	Reach (base to contact point)	Mounting stud dia.	Order no.
mm	(inch)	mm/inch	mm/inch	mm/inch	mm/inch	
76 x 110 x 45	(3 x 4.375 x 1.75")	25 x 430/ .995 x 17"	457/ 18"	approx. 86/ 3.375"	5.55/ .218"	2300