



**YOUR MEASURING TASKS ARE SENSITIVE.
MARTEST IS HIGHLY SENSITIVE.**

Since 1936, Mahr has been one of the world's leading suppliers of dial test indicator measuring devices. Our company's success has been built on the continuous advancement of our products. Because of our unrelenting commitment to innovation, we can meet and exceed market expectations. Our core philosophy is to offer our customers a highly accurate and simple solution for wide variety of measuring tasks. Our extensive product range and a wide variety of accessories are at your disposal. The sensitive computer-optimized mechanism ensures maximum security and precision. A hardened mineral glass panel effectively protects the dial against scratching and cracks when used in harsh workshop conditions, and a seal prevents liquids from penetrating.

MarTest. Test Indicators and Touch Probes

Mechanical Dial Test Indicators 150
Overview

MarTest 800 SA / 800 SGA / 800 S / 800 SG / 800 SR 152
Metric, Standard version

MarTest 800 SL / 800 SGL / 800 SGB 153
Metric, with a long styli

MarTest 800 SGM / 800 SM / 800 SRM / 800 SGE 154
Metric, with a higher resolution

MarTest 801 SM / 801 SGM / 801 SRM / 801 SGE 156
Inch, with a higher resolution

MarTest 801 SGI / 801 S / 801 S1 / 801 SG 157
Inch, Standard version

MarTest 801 SR 157
With a larger measuring range

MarTest 801 SL / 801 SGL 158
Inch, with a longer styli

MarTest 800 V / 800 VGM / 801 V / 801 VGM 159
Vertical version

MarTest 800 H / 801 H 163
Horizontal version

Digital Test Indicators

MarTest 800 EW 165
Standard version

MarTest 800 EWL 165
With a longer styli

3D-Touch Probes

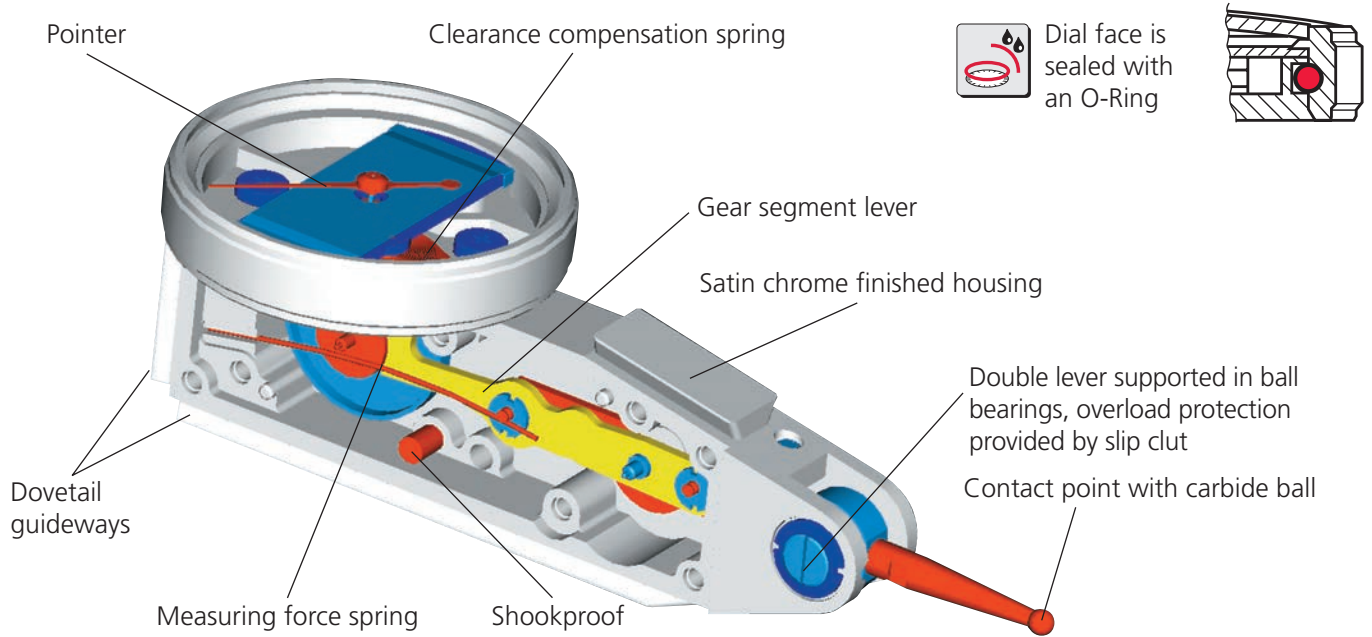
MarTest 802 EW 172
Water proof, with a Digital display

MarTest 802 NW 173
Water proof, with a Analog display

MarTest. Test Indicators and Touch Probes

OVERVIEW

MarTest – Design



Mechanism

- Shockproof
- Anti magnetic
- Movement bearings are jeweled with 8 precious stones

Styli with carbide contact points



Styli with ruby contact points



MarTest – Applications

Concentricity of a shaft



Concentricity of a sleeve



Centering of a bore



Aligning a surface



Testing parallelism



MarTest – Angle of stylus

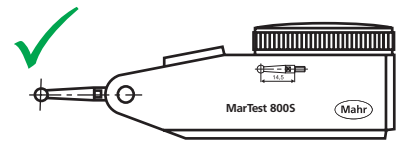
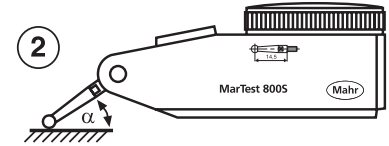
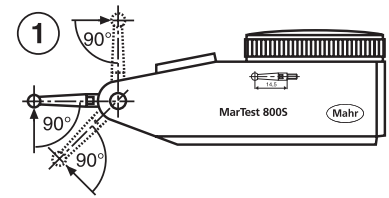
For accurate measurements the axis of the contact point must be perpendicular to the measuring direction (fig. 1). If this is not possible, it is necessary to multiply the reading on the dial with a correction factor, which depends on angle α (fig. 2). The correction factor is negligible for angles below 15°.

Angle α	15°	30°	45°	60°
Corr. factor	0,96	0,87	0,70	0,50

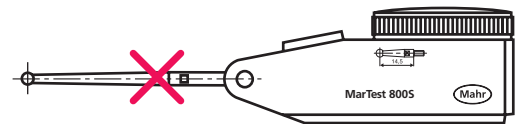
Example:

Angle α : 30° (estimated)
 Reading on dial: 0,38 mm
 Meas. values: 0,38 x 0,87 = 0,33 mm

Note: Please use only the provided measuring insert length for the type of device (e.g. 800 S)



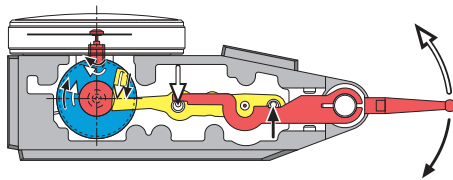
$I = 14,5$



$I = 41,2$

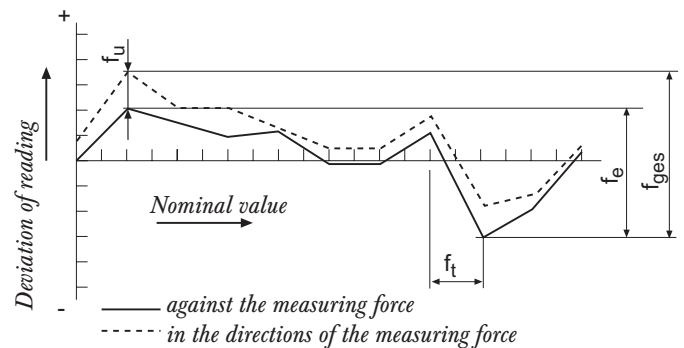
MarTest – Automatic switch of measuring direction

Measurement in both directions is possible without switch. The pointer moves clockwise. This guarantees clear and errorless reading.



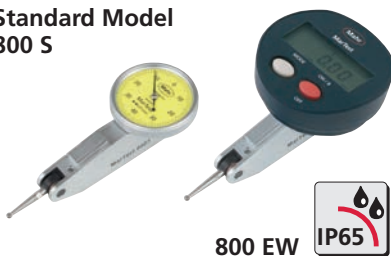
functional description

MarTest – Metrological characteristics



MarTest – Versions

Standard Model
800 S



800 EW



Extra Long Styli
800 SL



800 EWL



Higher Resolution
800 SM



Larger Measuring Range
800 SR



Horizontal Model
800 H



Vertical Model
800 V



Test Indicator MarTest 800 S / 800 SG / 800 SR / 800 SA / 800 SGA



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

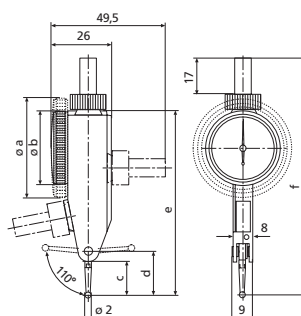
Technical Data

Product type		800 S	800 SG	800 SR	800 SA	800 SGA
Order no.	Order no. set	4305200 2015309	4307200 2015310	4307250 2015348	4301200 2015343	4301250 2015344
Measuring range	mm	± 0.4		± 0.8	± 0.25	
Graduation value	mm	0.01				
Scale diameter	mm	28	38		28	38
Type of dial face		40-0-40			25-0-25	
Dial color		yellow				
Measuring force	N	0.15		0.1		
Range per rev.	mm	0.8		0.5		
Deviation range f_e	μm	10				
Total deviation range f_{ges}	μm	13	14		8	
Hysteresis f_u	μm	3		4	3	
Partial measuring span f_t	μm	5				
Repeatability f_w	μm	3				
Standard		DIN 2270			Factory standard	

Standard model

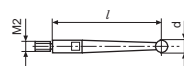
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a8

Order no.	a	b	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm	mm
4305200		30	13,6	17,8	75	99	14,5
4307200	40,5		13,6	17,8	75	99	14,5
4307250	40,5		13,6	17,8	75	99	14,5
4301200		30	13,6	17,8	75	99	14,5
4301250	40,5		13,6	17,8	75	99	14,5
2015309		30	13,6	17,8	75	99	14,5
2015310	40,5		13,6	17,8	75	99	14,5
2015343		30	13,6	17,8	75	99	14,5
2015344	40,5		13,6	17,8	75	99	14,5
2015348	40,5		13,6	17,8	75	99	14,5



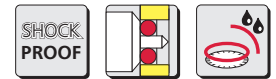
Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, $l = 14,5$ mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, $l = 14,5$ mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, $l = 14,5$ mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, $l = 14,5$ mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 800 SL / 800 SGL / 800 SGB



With long stylus, for measurements at poorly accessible measuring points

- High-contrast dial face, sealed with O-ring
- Mineral glass viewing panel for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a8, Holding bar HB-2157, Clamp CP-2199



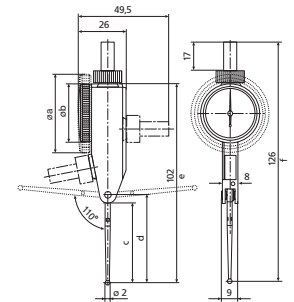
Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

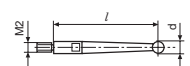
Product type		800 SL	800 SGL	800 SGB
Order no.	Order no.	4306200	4306250	4301300
	Order no. set	2015312	2015313	2015346
Measuring range	mm	± 0.25		± 0.5
Graduation value	mm	0.01		
Scale diameter	mm	28	38	
Type of dial face		25-0-25		50-0-50
Dial color		yellow		
Measuring force	N	0.07		
Range per rev.	mm	0.5	1	
Deviation range f_e	μm	10		
Total deviation range f_{ges}	μm	13		
Hysteresis f_u	μm	5	4	
Partial measuring span f_t	μm	5		
Repeatability f_w	μm	3		
Standard		Factory standard		
Set included		Holding bar HB-2157, Clamp CP-2199		

Order no.	a	b	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm	mm
2015312		30	40,3	44,6	102	126	41,24
2015313	40,5		40,3	44,6	102	126	41,24
2015346	40,5		31,4	35,7	93	117	32,3
4301300	40,5		31,4	35,7	93	117	32,3
4306200		30	40,3	44,6	102	126	41,24
4306250	40,5		40,3	44,6	102	126	41,24



Accessories

Order no.	Product description	Product type
4301851	Stylus \varnothing 1,0 mm, Carbide, l = 32,3 mm	800 tb
4301850	Stylus \varnothing 2,0 mm, Carbide, l = 32,3 mm	800 tb
4301852	Stylus \varnothing 3,0 mm, Carbide, l = 32,3 mm	800 tb
4309052	Stylus \varnothing 2,0 mm, Ruby, l = 32,3 mm	800 tbr
4305868	Spanner	
4306851	Stylus \varnothing 1,0 mm, Carbide, l = 41,24 mm	800 tl
4306850	Stylus \varnothing 2,0 mm, Carbide, l = 41,24 mm	800 tl
4306853	Stylus \varnothing 3,0 mm, Carbide, l = 41,24 mm	800 tl
4309053	Stylus \varnothing 2,0 mm, Ruby, l = 41,24 mm	800 tlr



800 tb

Test Indicator MarTest 800 SGM / 800 SM / 800 SRM



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

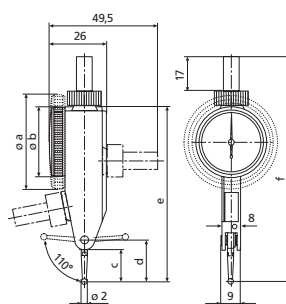
Technical Data

Product type		800 SGM	800 SM	800 SRM
Order no.	Order no.	4308200	4308150	4308250
	Order no. set	2015314	2015315	2015349
Measuring range	mm	± 0.1		± 0.2
Graduation value	mm	0.002		
Scale diameter	mm	38	28	38
Type of dial face		100–0–100		
Dial color		yellow		
Measuring force	N	0.15		
Range per rev.	mm	0.2		
Deviation range f_e	μm	3		
Total deviation range f_{ges}	μm	4		5
Hysteresis f_u	μm	2		3
Partial measuring span f_t	μm	2		
Repeatability f_w	μm	1.5		
Standard		DIN 2270		Factory standard
Set included		Holding bar HB–2157, Clamp CP–2199		

For high-precision measurements

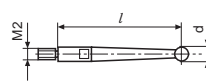
- High-contrast dial face, sealed with O-ring
- Mineral glass viewing panel for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a8, Holding bar HB–2157, Clamp CP–2199

Order no.	a	b	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm	mm
2015314	40,5		13,6	17,8	75	99	14,5
2015315		30	13,6	17,8	75	99	14,5
2015349	40,5		13,6	17,8	75	99	14,5
4308150		30	13,6	17,8	75	99	14,5
4308200	40,5		13,6	17,8	75	99	14,5
4308250	40,5		13,6	17,8	75	99	14,5



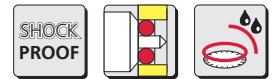
Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 800 SGE



For high-precision measurements

- High-contrast dial face, sealed with O-ring
- Mineral glass viewing panel for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a8, Holding bar HB-2157, Clamp CP-2199



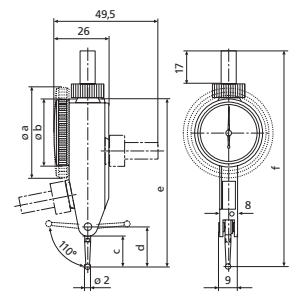
Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

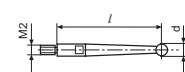
Product type		800 SGE	
Order no.	Order no.		4308220
	Order no. set		2015345
Measuring range		mm	± 0.07
Graduation value		mm	0.001
Scale diameter		mm	38
Type of dial face			70-0-70
Dial color			yellow
Measuring force		N	0.2
Range per rev.		mm	0.14
Deviation range f_e		μm	3
Total deviation range f_{ges}		μm	4
Hysteresis f_u		μm	2
Partial measuring span f_t		μm	2
Repeatability f_w		μm	1.5
Standard			Factory standard
Set included			Holding bar HB-2157, Clamp CP-2199

Order no.	a	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm
2015345	40,5	8,3	12,5	70	94	9,15
4308220	40,5	8,3	12,5	70	94	9,15



Accessories

Order no.	Product description	Product type
4308851	Stylus \varnothing 1,0 mm, Carbide, $l = 9,1$ mm	800 te
4308850	Stylus \varnothing 2,0 mm, Carbide, $l = 9,1$ mm	800 te
4308852	Stylus \varnothing 3,0 mm, Carbide, $l = 9,1$ mm	800 te
4309050	Stylus \varnothing 2,0 mm, Ruby, $l = 9,1$ mm	800 ter
4305868	Spanner	



800 t

Test Indicator MarTest 801 SM / 801 SGM / 801 SRM / 801 SGE



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

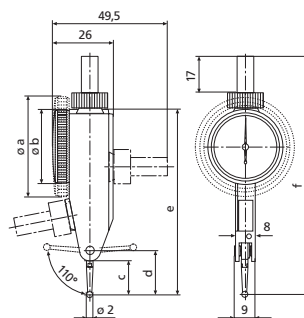
Technical Data

Product type		801 SM	801 SGM	801 SRM	801 SGE
Order no.	Order no.	4308960	4308970	4308980	4308985
	Order no. Set	2015321	2015322	2015351	2015323
Measuring range	inch	± .004"		± .008"	± .004"
Graduation value	inch	.0001"			.00005"
Scale diameter	inch	1.1"		1.5"	
Type of dial face				4-0-4	
Dial color				green	
Measuring force	N			0.15	
Range per rev.	inch			.008"	
Deviation range f_e	inch		.00012"		.0004"
Total deviation range f_{ges}	inch	.00016"		.0002"	.0005"
Measuring value hysteresis f_u	inch	.00008"		.00012"	
Partial measuring span f_t	inch		.00008"		.0002"
Repeatability f_w	inch		.0001"		
Standard		Factory standard			
Set included		Holding bar HB-2157, Clamp CP-2199			

For high-precision measurements

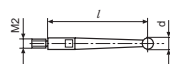
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a3/8, Holding bar HB-2157, Clamp CP-2199

Order no.	a	b	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm	mm
2015321		30	13,6	17,8	75	99	14,5
2015322	40,5		13,6	17,8	75	99	14,5
2015351	40,5		13,6	17,8	75	99	14,5
2015323	40,5		13,6	17,8	75	99	14,5
4308960		30	13,6	17,8	75	99	14,5
4308970	40,5		13,6	17,8	75	99	14,5
4308980	40,5		13,6	17,8	75	99	14,5
4308985	40,5		13,6	17,8	75	99	14,5



Accessories

Order no.	Product description	Product type
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 801 SGI / 801 S / 801 S1 / 801 SG / 801 SR

Standard model

- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a3/8, Holding bar HB-2157, Clamp CP-2199



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

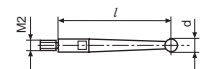
Technical Data

Product type		801 SGI	801 S	801 S1	801 SG	801 SR
Order no.	Order no. Set	4307970	4305950	4305960	4307950	4307960
		2015311	2015316	2015317	2015318	2015350
Measuring range	mm	± 0.3				
Measuring range	inch	± .015"				
Graduation value	mm	0.01				
Graduation value	inch	.0005"		.001"	.0005"	
Scale diameter	inch	1.5"	1.1"	1.5"		
Type of dial face		15-0-15				
Dial color		green				
Measuring force	N	0.15				
Range per rev.	mm	0.6				
Range per rev.	inch	.03"				
Deviation range f_e	inch	.0004"				
Total deviation range f_{ges}	inch	.0005"				
Measuring value hysteresis f_u	inch	.00012"				
Partial measuring span f_t	inch	.0002"				
Repeatability f_w	inch	.0001"				
Standard		Factory standard				
Set included		Holding bar HB-2157, Clamp CP-2199				

Order no.	a	b	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm	mm
2015311	40,5		13,6	17,8	75	99	14,5
2015316		30	13,6	17,8	75	99	14,5
2015317		30	13,6	17,8	75	99	14,5
2015318	40,5		13,6	17,8	75	99	14,5
2015350	40,5		13,6	17,8	75	99	14,5
4305950		30	13,6	17,8	75	99	14,5
4305960		30	13,6	17,8	75	99	14,5
4307950	40,5		13,6	17,8	75	99	14,5
4307960	40,5		13,6	17,8	75	99	14,5
4307970	40,5		13,6	17,8	75	99	14,5

Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 801 SL / 801 SGL



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

Product type		801 SL	801 SGL
Order no.	Order no.	4306950	4306960
	Order no. Set	2015319	2015320
Measuring range	inch	± .010"	
Graduation value	inch	.0005"	
Scale diameter	inch	1.1"	1.5"
Type of dial face		10-0-10	
Dial color		green	
Measuring force	N	0.07	
Range per rev.	inch	.02"	
Deviation range f_e	inch	.0004"	
Total deviation range f_{ges}	inch	.0005"	
Measuring value hysteresis f_u	inch	.0002"	
Partial measuring span f_t	inch	.0002"	
Repeatability f_w	inch	.0001"	
Standard		Factory standard	
Set included		Holding bar HB-2157, Clamp CP-2199	

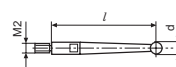
With long stylus, for measurements at poorly accessible measuring points

- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a3/8, Holding bar HB-2157, Clamp CP-2199

Order no.	a	b	c	d	e	f	Stylus length
	mm	mm	mm	mm	mm	mm	mm
2015319		30	40,3	44,6	102	126	41,24
2015320	40,5		40,3	44,6	102	126	41,24
4306950		30	40,3	44,6	102	126	41,24
4306960	40,5		40,3	44,6	102	126	41,24

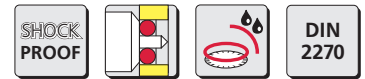
Accessories

Order no.	Product description	Product type
4306851	Stylus \varnothing 1,0 mm, Carbide, l = 41,24 mm	800 tl
4306850	Stylus \varnothing 2,0 mm, Carbide, l = 41,24 mm	800 tl
4306853	Stylus \varnothing 3,0 mm, Carbide, l = 41,24 mm	800 tl
4309053	Stylus \varnothing 2,0 mm, Ruby, l = 41,24 mm	800 tlr
4305868	Spanner	



800 t

Test Indicator MarTest 800 V



Vertical model

- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a8, Holding bar HB-2157, Clamp CP-2199

Application:

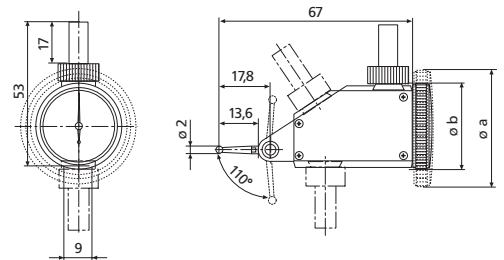
- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces



Technical Data

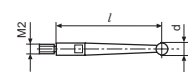
Order no.	2015327		4302200
Product type			800 V
Measuring range	mm		$\pm 0,4$
Readings	mm		0,01
Scale diameter	mm		28
Type of dial face			40-0-40
Dial color			yellow
Measuring force	N		0,2
Range per rev.	mm		0,8
Span of error f_e	μm		10
Total span of error f_{ges}	μm		13
Hysteresis f_u	μm		3
Local span f_t	μm		5
Repeatability f_w	μm		3
Standard			DIN 2270
Set included	Holding bar HB-2157, Clamp CP-2199		

Order no.	b	Stylus length
	mm	mm
2015327		14,5
4302200	30	14,5



Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, $l = 14,5$ mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, $l = 14,5$ mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, $l = 14,5$ mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, $l = 14,5$ mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 800 VGM



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

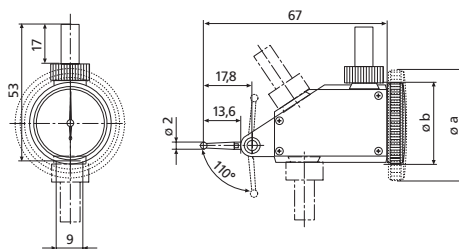
Technical Data

Order no.	2015347		4302250
Product type			800 VGM
Measuring range	mm		$\pm 0,1$
Readings	mm		0,002
Scale diameter	mm		38
Type of dial face			100-0-100
Dial color			yellow
Measuring force	N		0,25
Range per rev.	mm		0,2
Span of error f_e	μm		3
Total span of error f_{ges}	μm		4
Hysteresis f_u	μm		2
Local span f_t	μm		2
Repeatability f_w	μm		1,5
Standard			DIN 2270
Set included		Holding bar HB-2157, Clamp CP-2199	

Vertical model

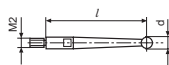
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. $\varnothing 2$ mm, Mounting shaft 800a8, Holding bar HB-2157, Clamp CP-2199

Order no.	a	Stylus length
	mm	mm
2015347		14,5
4302250	40,5	14,5



Accessories

Order no.	Product description	Product type
4305870	Stylus $\varnothing 1,0$ mm, Carbide, $l = 14,5$ mm	800 ts
4305850	Stylus $\varnothing 2,0$ mm, Carbide, $l = 14,5$ mm	800 ts
4305871	Stylus $\varnothing 3,0$ mm, Carbide, $l = 14,5$ mm	800 ts
4309051	Stylus $\varnothing 2,0$ mm, Ruby, $l = 14,5$ mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 801 VGM

Vertical model

- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a3/8, Holding bar HB-2157, Clamp CP-2199



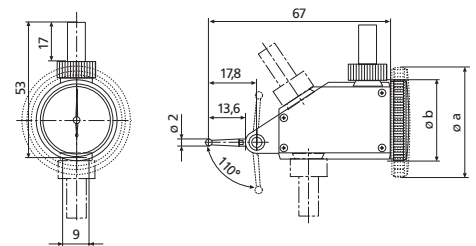
Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

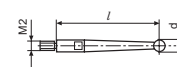
Order no.	2015326	4302960
Product type		801 VGM
Measuring range	inch	$\pm .004''$
Graduation value	inch	.0001''
Scale diameter	inch	1.5''
Type of dial face		4-0-4
Dial color		green
Measuring force	N	0.25
Range per rev.	inch	.008''
Deviation range f_e	inch	.00012''
Total deviation range f_{ges}	inch	.00016''
Measuring value hysteresis f_u	inch	.00008''
Partial measuring span f_t	inch	.00008''
Repeatability f_w	inch	.0001''
Standard		Factory standard
Set included	Holding bar HB-2157, Clamp CP-2199	

Order no.	a	Stylus length
	mm	mm
2015326		14,5
4302960	40,5	14,5



Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 801 V



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Vertical model

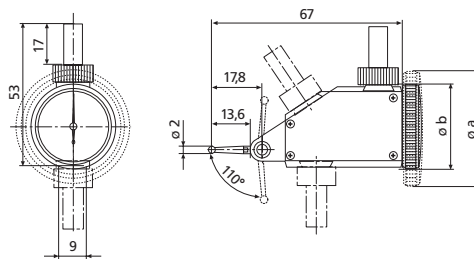
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball

• **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a3/8, Holding bar HB-2157, Clamp CP-2199

Technical Data

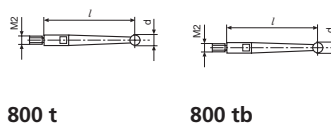
Order no.	2015325		4302950	
Product type			801 V	
Measuring range	inch		$\pm .015''$	
Graduation value	inch		.0005''	
Scale diameter	inch		1.1''	
Type of dial face			15-0-15	
Dial color			green	
Measuring force	N		0.2	
Range per rev.	inch		.03''	
Deviation range f_e	inch		.0004''	
Total deviation range f_{ges}	inch		.0005''	
Measuring value hysteresis f_u	inch		.00012''	
Partial measuring span f_t	inch		.0002''	
Repeatability f_w	inch		.0001''	
Standard			Factory standard	
Set included			Holding bar HB-2157, Clamp CP-2199	

Order no.	b	Stylus length
	mm	mm
2015325		14,5
4302950	30	14,5



Accessories

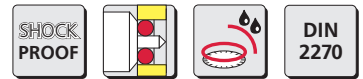
Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4305868	Spanner	



800 t

800 tb

Test Indicator MarTest 800 H



Horizontal model

- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball
- **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a8, Holding bar HB-2157, Clamp CP-2199



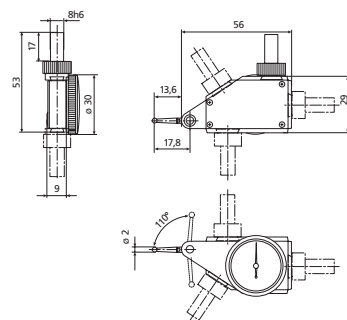
Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

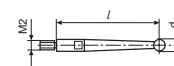
Order no.	2015328	4303200
Product type		800 H
Measuring range	mm	$\pm 0,4$
Readings	mm	0,01
Scale diameter	mm	28
Type of dial face		40-0-40
Dial color		yellow
Measuring force	N	0,25
Range per rev.	mm	0,8
Span of error f_e	μm	10
Total span of error f_{ges}	μm	13
Hysteresis f_u	μm	3
Local span f_t	μm	5
Repeatability f_w	μm	3
Standard		DIN 2270
Set included	Holding bar HB-2157, Clamp CP-2199	

Order no.	Stylus length
	mm
2015328	14,5
4303200	14,5



Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, $l = 14,5$ mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, $l = 14,5$ mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, $l = 14,5$ mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, $l = 14,5$ mm	800 tsr
4305868	Spanner	



800 t

Test Indicator MarTest 801 H



Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

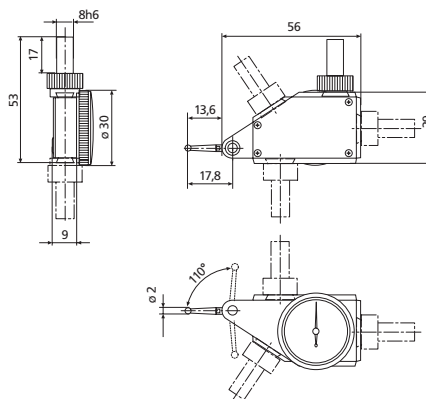
Order no.	2015324		4303950	
Product type			801 H	
Measuring range	inch		± .015"	
Graduation value	inch		.0005"	
Scale diameter	inch		1.1"	
Type of dial face			15-0-15	
Dial color			green	
Measuring force	N		0.25	
Range per rev.	inch		.03"	
Deviation range f_e	inch		.0004"	
Total deviation range f_{ges}	inch		.0005"	
Measuring value hysteresis f_u	inch		.00012"	
Partial measuring span f_t	inch		.0002"	
Repeatability f_w	inch		.0001"	
Standard			Factory standard	
Set included			Holding bar HB-2157, Clamp CP-2199	

Horizontal model

- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensures infallible readings
- Ball bearing mounted double lever
- Friction clutch overload protection
- Stylus with carbide ball

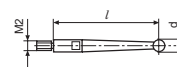
• **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Mounting shaft 800a3/8, Holding bar HB-2157, Clamp CP-2199

Order no.	Stylus length
	mm
2015324	14,5
4303950	14,5



Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4305868	Spanner	



800 t

Digital Test Indicator MarTest 800 EW / 800 EWL



Functions:

- ON/OFF
 - RESET (set display to zero)
 - mm/inch
 - MAX/MIN memory for searching the reversal point
 - TIR (MAX-MIN) for testing flatness and concentricity
- Inductive measuring system
 - Battery life approx. 2 years
 - Operating unit is protected against coolants and lubricants, protection class IP65
 - Combined analog and digital display
 - Operating and display unit (bezel) can be rotated through 360°
 - Satin chrome finished housing with 3 dovetail guideways
 - Shockproof
 - Movement bearings are jeweled
 - Automatic matching to sensing direction
 - Anti-magnetic
 - Double lever supported in ball bearings
 - Overload protection provided by slip clutch
 - **Data interface:** Opto RS232C, USB
 - **IP protection category:** IP 65
 - **Scope of delivery:** Mounting shaft 800a8, Spanner for changing the styli, Stylus dia. \varnothing 2 mm, Case



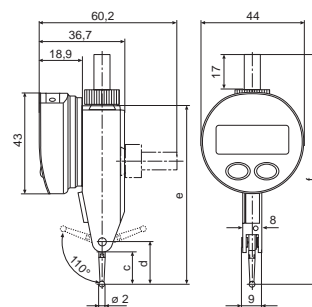
Application:

- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces

Technical Data

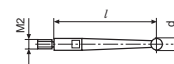
Order no.		4305120	4306120
Product type		800 EW	800 EWL
Measuring range	mm	$\pm 0,4$	$\pm 0,25$
Measuring range, test indicator, comparator, probe	inch	$\pm .015''$	$\pm .010''$
Resolution	mm		0,001
Resolution	inch		.00005''
Measuring force	N	0,13	0,07
Span of error f_e	μm		10
Total span of error f_{ges}	μm		13
Hysteresis f_u	μm	3	5
Local span f_t	μm		5
Repeatability f_w	μm		3
Standard		Factory standard	

Order no.	c	d	e	f	Mounting shaft	Stylus length
	mm	mm	mm	mm	mm	mm
4305120	13,6	17,8	75	99	8	14,5
4306120	40,3	44,6	102	126	8	41,24



Accessories

Order no.	Product description	Product type
4305870	Stylus \varnothing 1,0 mm, Carbide, l = 14,5 mm	800 ts
4305850	Stylus \varnothing 2,0 mm, Carbide, l = 14,5 mm	800 ts
4305871	Stylus \varnothing 3,0 mm, Carbide, l = 14,5 mm	800 ts
4102520	Battery 3 V, CR 2032	
4305122	Data Connection Cable RS232C (2 m)	800 EWr
4305121	Data Connection Cable USB (2 m)	800 EWu
4309051	Stylus \varnothing 2,0 mm, Ruby, l = 14,5 mm	800 tsr
4306850	Stylus \varnothing 2,0 mm, Carbide, l = 41,24 mm	800 tl
4306851	Stylus \varnothing 1,0 mm, Carbide, l = 41,24 mm	800 tl
4306853	Stylus \varnothing 3,0 mm, Carbide, l = 41,24 mm	800 tl
4309053	Stylus \varnothing 2,0 mm, Ruby, l = 41,24 mm	800 tlr



800 t

Mounting shaft MarTest 800 a4 / 800 a6 / 800 a8 / 800 a3/8 / 800 a1/4"

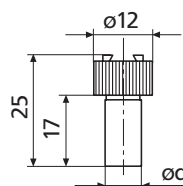


- Clamping shafts can be moved on dovetail guide rails on the housing
- Clamping in any position with milled nut (no tools required)

Technical Data

Order no.	Product type
4305885	800 a4
4301865	800 a6
4305865	800 a8
4305875	800 a3/8
4305895	800 a1/4"

Order no.	Mounting shaft	
	mm	inch
4305885	4	
4301865	6	
4305865	8	
4305875		.375"
4305895		.25"



Holder MarTest 800 h1

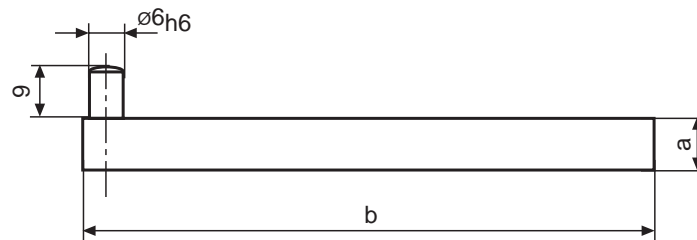
- Used for holding dial test indicator measuring devices on machine tools in conjunction with the 800k universal clamp



Technical Data

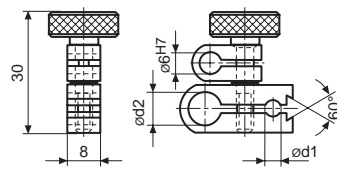
Order no.	Product type
4305888	800 h1

Order no.	Cross-section	a	b
	mm	mm	mm
4305888	9x9	9	100

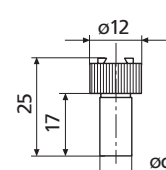


Accessories

Order no.	Product description	Product type
4305865	Mounting shaft \varnothing 8 mm	800 a8
4305875	Mounting shaft \varnothing 0,375 inch	800 a3/8
4305885	Mounting shaft \varnothing 4 mm	800 a4
4305891	Universal clamp, \varnothing d1 = 4 mm, \varnothing d2 = 8 mm, dovetail clamp	800 k8
4305892	Universal clamp, \varnothing d1 = 5/32", \varnothing d2 = 3/8", dovetail clamp	800 k3/8"



800 k



800 a

Universal holder with dovetail clamp MarTest 800 hs8

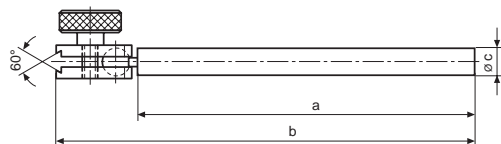


- For aligning and centering workpieces on machine tools
- Pivoting holding clamp for dovetail

Technical Data

Order no.	Product type
4305886	800 hs8

Order no.	a	b	c
	mm	mm	mm
4305886	100	124	8



Measuring and centering arm MarTest 801 v

For aligning and centering work pieces on machine tools

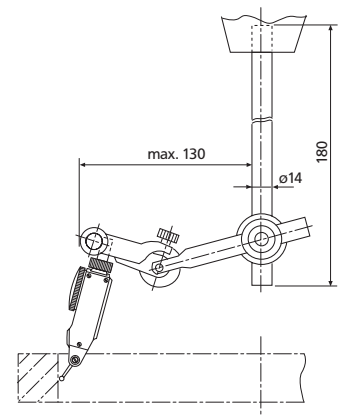
- Swivel mounting clamp and fine adjustment
- Stainless steel rods



Technical Data

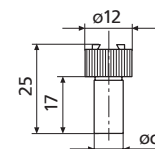
Order no.	Product type
4309070	801 v

Order no.	Mounting hole	Swivel range of mounting clamp
4309070	8 mm	180



Accessories

Order no.	Product description	Product type
4305865	Mounting shaft ø 8 mm	800 a8



800 a

Measuring stand MarTest 801 p



- With swivel holder
- Base with V-groove

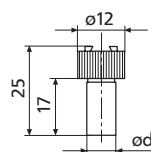
Technical Data

Order no.	Product type
4309090	801 p

Order no.	Base surface	Column diameter	Height	Mounting hole	V-angle
4309090	65 x 40 mm	8 mm	150 mm	4 and 8 mm	140°

Accessories

Order no.	Product description	Product type
4305865	Mounting shaft \varnothing 8 mm	800 a8
4305885	Mounting shaft \varnothing 4 mm	800 a4



800 a

Universal centering support frame MarTest 800 b

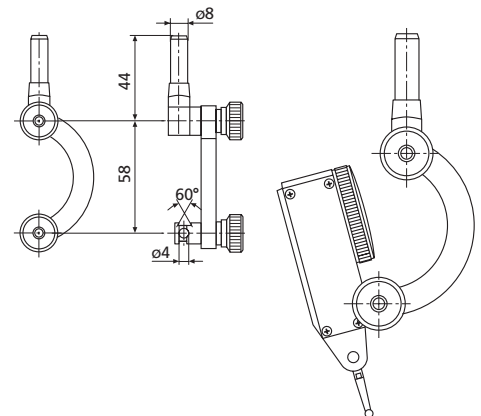
- For aligning and centering workpieces on machine tools
- Pivoting holding clamp



Technical Data

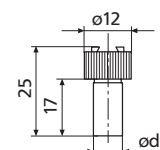
Order no.	Product type
4305893	800 b

Order no.	Mounting hole
4305893	4 mm



Accessories

Order no.	Product description	Product type
4305885	Mounting shaft \varnothing 4 mm	800 a4



800 a

Digital 3D-Touch Probe MarTest 802 EW



Application:

Can be used on milling and CNC machines to

- determine the zero position on a work piece
- determine the center of a bore
- determine and correct the position of a work piece
- and for measurement of
 - lengths
 - depths

Functions:

- ON/OFF
- Auto OFF after 2 h

Excellent readability thanks to combined display:

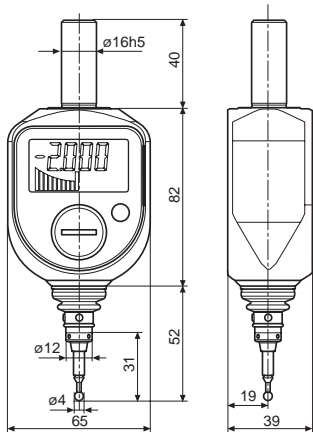
- bar graph for dynamic path information
- digital display for exact readings
- Can be controlled independently of a machine tool

- Large working range in all axes (X, Y, Z) prevents damage to the stylus by contacting errors
- Compact metal housing and long probe arm
- Shockproof movement
- **IP protection category:** IP 65
- **Scope of delivery:** Battery, Instruction manual, Stylus 802 EWt

Technical Data

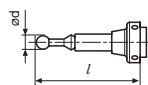
Order no.	4304300	4304305
Product type	802 EW	
Resolution	mm	0,005
Resolution	inch	.0001"
Working range X, Y,Z -Axis	-2 to 4 mm	-.0787" to .157"
Repeatability at zero, unidirectional	± 0,005 mm	± .0001"
Standard	Factory standard	

Order no.	Mounting shaft	Mounting shaft
	mm	inch
4304300	16	
4304305		.75"



Accessories

Order no.	Product description	Product type
4304320	Styluses $\phi 4,0$ mm, $l = 31$ mm	802 EWt
4102520	Battery 3 V, CR 2032	



802 EWt

Mechanical 3D-Touch Probe MarTest 802 NW



- Large, high contrast dial face
- Can be controlled independently of a machine tool
- Large working range in all axes (X, Y, Z) prevents damage to the stylus by contacting errors
- Compact metal housing and long probe arm
- High accuracy and linearity
- Shockproof and waterproof, ideal for the use on a machine with a tool changer
- **IP protection category:** IP 67
- **Scope of delivery:** Battery, Instruction manual, Stylus 802 EWt



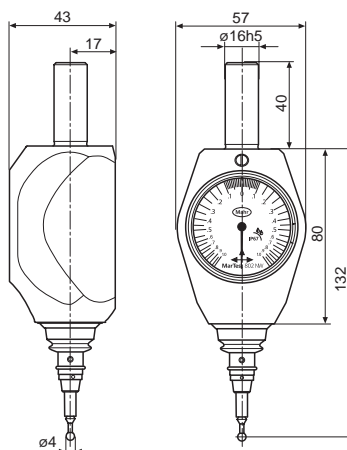
Application:

- Can be used on milling and CNC machines to
- determine the zero position on a work piece
 - determine the center of a bore
 - determine and correct the position of a work piece
 - and for measurement of
 - lengths
 - depths

Technical Data

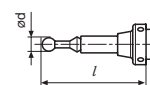
Order no.	4304311	4304312
Product type		802 NW
Readings	mm	0,01
Readings	inch	.0004"
Working range X, Y, Z -Axis		6,6 mm
Repeatability at zero, unidirectional		± 0,01mm
Standard		Factory standard

Order no.	Mounting shaft	Mounting shaft
	mm	inch
4304311	16	
4304312		.75"



Accessories

Order no.	Product description	Product type
4304320	Styluses \varnothing 4,0 mm, l = 31 mm	802 EWt
4304321	Styluses \varnothing 6 mm, l = 56,6 mm	802 NWt



802 EWt / NWt

THEY POINT YOU IN THE RIGHT DIRECTION. MARCATOR DIAL INDICATORS.



Due to their versatility, dial indicators rank as some of the most commonly used transducers. That is certainly the case with our MarCator series. Our mechanical dial indicators have precision gears and pinions for maximum accuracy. They are also available in shockproof and waterproof versions. Our MarCator digital indicator range contains high-precision electronic measuring systems, which allow for additional measuring functions without sacrificing the proven benefits of an analog display. With the simple operating system, the large, easy-to-read display and the option of fast and easy transmission of all your measuring results, they satisfy all the requirements of a modern measuring instrument.

MarCator. Dial and Digital Indicators

Overview	
MarCator dial and digital Indicators	176
MarCator 1075 R / 1086 R	178
Digital Indicator	
MarCator 1086 WR / 1086 Ri / 1086 WRi / 1087 R	181
Digital Indicator	
MarCator 1087 Ri / 1087 BR / 1087 BRi	186
Digital Indicator	
MarCator 803 S / 803 A / 805 A	189
Small Precision Dial Indicators	
MarCator 810 S / 810 A / 810 AT / 810 SV / 810 AU	190
Precision Dial Indicator	
MarCator 810 SM / 810 SRM / 810 AX	191
Precision Dial Indicator	
MarCator 810 SW / 803 SW / 810 SB / 803 SB / 810 AG	193
Precision dial indicator	
Contact Points for ANSI / AGD Dial Indicators	198
Overview ANSI / AGD Dial Indicators	204
MarCator Dial Indicators ANSI/AGD Groups 0, 1, 2, 3, 4	206
MarCator 810 AZ / 803 AZ	217
Dial Indicator	
Large Range and Extra Long Range Indicators	226
MarCator C1-RN	228
Dial Indicator	
Wetproof Dial Indicator Series WC & WP	230
Perpendicular Dial Indicators	232
Measuring Anvils for Dial Indicators	234
Accessories for Dial Indicators	236
Dial Indicator Calibrator	239

MarCator. Dial and Digital Indicators

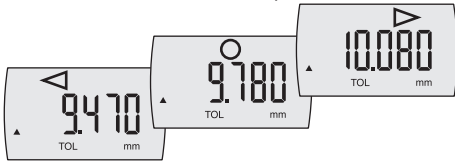
DIGITAL INDICATORS WITH REFERENCE SYSTEM

Mahr sets a very high standard in the Digital Indicator product segment with Digital Indicators MarCator 1086 Ri / 1087 Ri. With the Reference System the MarCator Digital Indicators can be applied immediately; the zero-position only has to be set once for all further measurements. Also, if you need to document your data, we have integrated wireless indicators; that offer consumers an energy efficient wireless data transmission system. This is an optimal solution for transmitting your measured values to a PC.

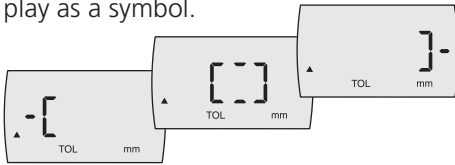
Clear Display

Tolerance indication with the displayed value

Displayed is the actual measured value and the tolerance zone position



Tolerance indication without the value in the display. In and out of tolerance will be indicated in the display as a symbol.



Error free operation



Lock function:

This prevents unintentional activation of an operating button. Either all the operating buttons or certain individual buttons can be locked. If a locked operating button is pressed, the "LOC" symbol will appear in the display.



Protection class IP54 (optional)

- Protection cap is sealed
- Rubber bellows for the measuring spindle
- Sealed battery compartment

Code Initials	IP	International Protection
First digit	5	Dust protected
Second digit	4	Protection against splash water in all directions

Universal Data-Interface



- **Integrated Wireless**
The wireless interface for the price of a cable



- **USB**
No interface box is required! Simple and inexpensive way to set up a multiple measuring instruments via a USB hub



- **Digimatic**
To connect a Digimatic compatible evaluation instrument



- **Mahr Opto RS232C**
For direct connection to a COM port on a PC



Absolute-Function:

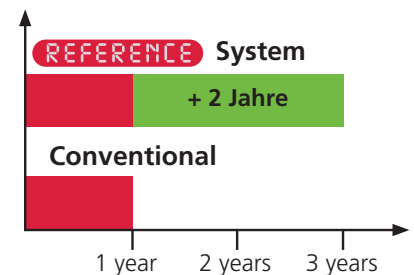


- Micrometer can be set in any position to 0,000 mm / .0000" without losing reference to the preset value.

Battery service life is 3 years

The new Reference System is extremely energy efficient because of its standby mode; almost no power is required, thus **extending the life of the battery up to 3 years***.

* When Integrated Wireless is deactivated



Just set once to zero

REFERENCE

All Mahr digital indicators with this logo are equipped with the innovative Reference System. The zero position just has to be set once: after setting the zero position, the zero remains stored for all further measurements. Therefore, once the indicator is switched ON or the contact point is moved the indicator is immediately ready for measurement. Once the digital indicator is initially set to zero, there is no need to reset to zero each time the indicator is turned on.

MarConnect Integrated Wireless – For the price of a data cable

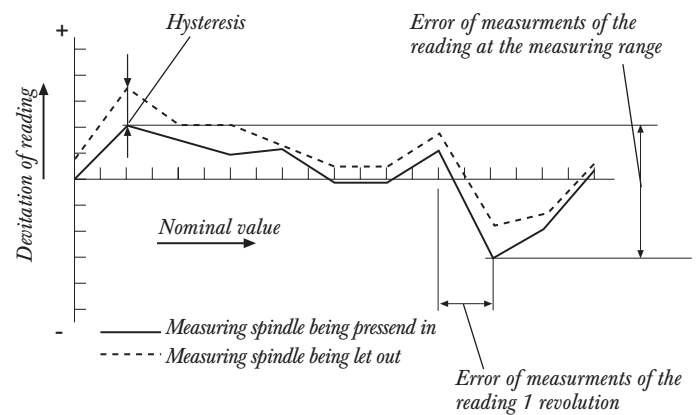


Wireless data transmission for the price of a data cable. With Integrated Wireless, you have a new Integrated Wireless data transmission system from Mahr **for the price of a data cable**. Data acquisition with digital Indicators is now even simpler: Simply transmit your measured data without being caught up between cables directly into Microsoft Office Excel® or via a keyboard code into any Windows program.

MarCator - Features

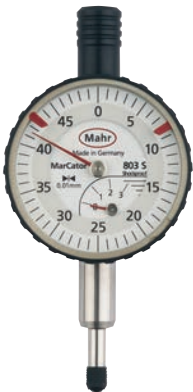


Metrological characteristics

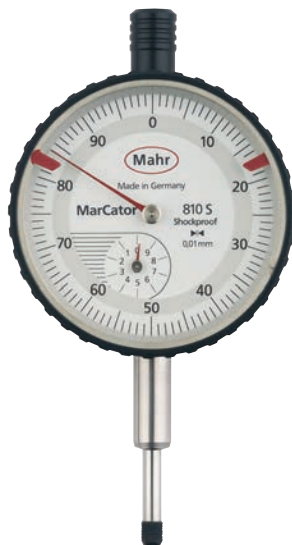


MarCator - Versions

Precision small Dial Indicator 803 S



Precision Dial Indicator 810 S



Digital Indicator 1075 R



Digital Indicator 1087 Ri



Digital Indicator MarCator 1075 R



REFERENCE



Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- PRESET (for entering a numerical value)
- DATA (Data transmission via connection cable)
- LOCK function (key lock)
- AUTO-ON / OFF

- High contrast LCD
- Hermetically sealed protective measuring spindle cap
- Mounting shank and measuring spindle are both made of hardened stainless steel

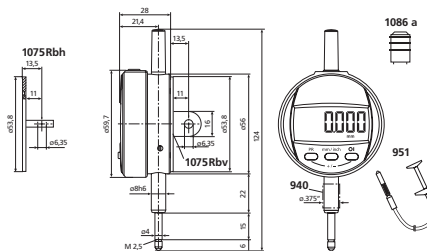
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)

- **Digit height:** 12 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery life approx. 3 years
- **IP protection category:** IP 52
- **Scope of delivery:** Battery, Instruction manual

Technical Data

Order no.	4336010	4336020	4336030
Product type		1075 R	
Measuring span	mm	12.5	
Measuring span	inch	.5"	
Resolution	mm	0.01	0.001
Resolution	inch	.0005"	.00005"
Error limit	mm	0.02	0.005
Measuring force	N	0.5 – 1	
Standard		Factory standard	
Protective measuring spindle cap		•	

Order no.	Mounting shaft
	mm
4336010	8
4336020	8
4336030	8



Accessories

Order no.	Product name	Product type
4102520	Battery 3 V, CR 2032	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4310103	Adapter bush (.375" / 8 mm)	940
4372000	Cable release (250 mm)	951
4337320	Lift-off cap, complete 12.5 / 25 mm	
4336041	Lug back, horizontal	1075 Rbh
4336042	Lug back, vertical	1075 Rbv
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s

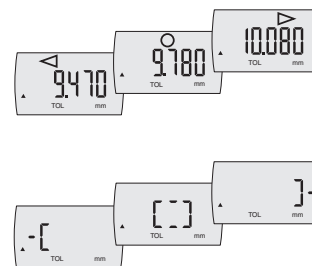
Digital Indicator MarCator 1086 R

REFERENCE



Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- PRESET (for entering a numerical value)
- TOL (enter tolerance limit values)
- <0> (tolerance GO / NO GO display mode)
- ABS (display can be set to zero without losing reference to preset)
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)

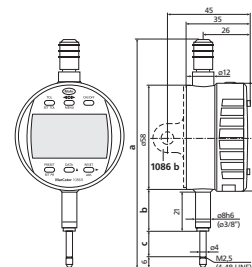


- High contrast LCD
- Operating and display unit (bezel) can be rotated through 280°
- Lifter protection cap on the measuring spindle
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Immediate measurements due to the Reference System
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 11 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery life approx. 3 years
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Technical Data

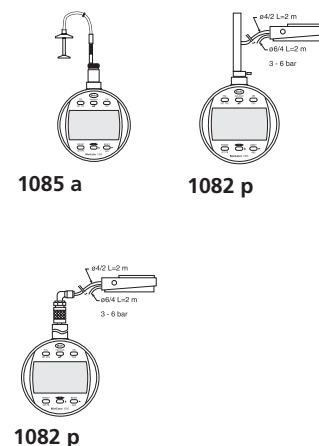
Order no.	4337620	4337621	4337622	4337623	4337650	4337651	
Product type	1086 R			1086 ZR			
Measuring span	mm	12.5	25	50	100	12.5	25
Measuring span	inch	.5"	1"	2"	4"	.5"	1"
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01					
Resolution	inch	.00002", .00005", .0001", .0002", .0005"					
Error limit	mm	0.004		0.007		0.008	
Error limit over 50 graduations	mm	0.002					
Repeatability	mm	0.001					
Measuring force	N	0.65 - 0.9	0.65 - 1.15	1.25 - 2.7	1.8 - 3.5	0.65 - 0.65	0.9 - 1.15
Standard	Factory standard						

Order no.	a	b	c	Mounting shaft	Mounting shaft
	mm	mm	mm	mm	inch
4337620	126.3	23	13.5	8	
4337621	153.4	26.8	26.5	8	
4337622	267.3	40	52	8	
4337623	420.3	91	103	8	
4337650	126.3	23	13.5		.375"
4337651	153.4	26.8	26.5		.375"



Accessories

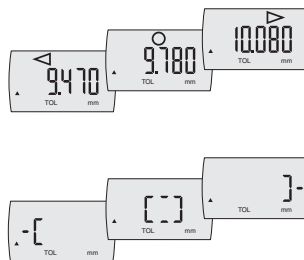
Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2255936	Post back	
2255778	Adjustable back for 75B	
2255653	Rack back	
2254939	Screw back	
2246308	Adjustable back	
4336311	Cable Release (12,5 + 25 mm)	1085 a
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4310103	Adapter bush (.375" / 8 mm)	940
4336230	Pneumatic lifting (50 + 100 mm)	1082 p



Digital Indicator MarCator 1086 R



REFERENCE



Functions:

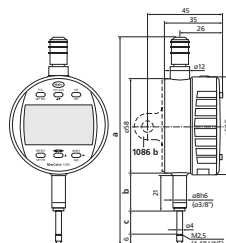
- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- PRESET (for entering a numerical value)
- TOL (enter tolerance limit values)
- <0> (tolerance GO / NO GO display mode)
- ABS (display can be set to zero without losing reference to preset)
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)

- High contrast LCD
- Operating and display unit (bezel) can be rotated through 280°
- Lifter protection cap on the measuring spindle
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Immediate measurements due to the Reference System
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 11 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery life approx. 3 years
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Technical Data

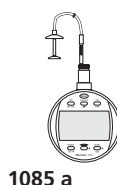
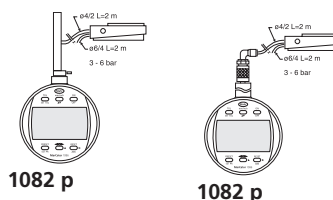
Order no.		4337130	4337131	4337132	4337133
Product type		1086 R			
Measuring span	mm	12.5	25	50	100
Measuring span	inch	.5"	1"	2"	4"
Resolution	mm	0.01			
Resolution	inch	.0005"			
Error limit	mm	0.02			
Error limit over 50 graduations	mm	0.02			
Repeatability	mm	0.01			
Measuring force	N	0.65 – 0.9	0.65 – 1.15	1.25 – 2.7	1.6 – 3.5
Standard		Factory standard			
Lifting protection cap		•			

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337130	126.3	23	13.5	8
4337131	153.4	26.8	26.5	8
4337132	267.3	40	52	8
4337133	420.3	91	103	8



Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWD
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336311	Cable Release (12,5 + 25 mm)	1085 a
4310103	Adapter bush (.375" / 8 mm)	940
4336230	Pneumatic lifting (50 + 100 mm)	1082 p



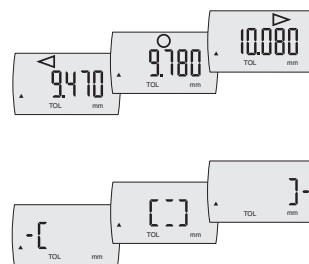
Digital Indicator MarCator 1086 WR

REFERENCE



Functions:

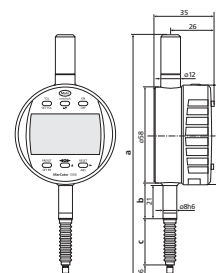
- ON/OFF
 - RESET (set display to zero)
 - mm/inch
 - Reversal of counting direction
 - PRESET (for entering a numerical value)
 - TOL (enter tolerance limit values)
 - <0> (tolerance GO / NO GO display mode)
 - ABS (display can be set to zero without losing reference to preset)
 - DATA (Data transmission via connection cable)
 - Factor (adjustable)
 - LOCK (individual button lock)
-
- High contrast LCD
 - Operating and display unit (bezel) can be rotated through 280°
 - Hermetically sealed protective measuring cap
 - Mounting shank and measuring spindle are both made of hardened stainless steel
 - Immediate measurements due to the Reference System
 - **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
 - **Digit height:** 11 mm
 - **Data interface:** Digimatic, Opto RS232C, USB
 - **Energy supply:** Battery life approx. 3 years
 - **IP protection category:** IP 54
 - **Scope of delivery:** Instruction manual, Battery



Technical Data

Order no.		4337640	4337641
Product type		1086 WR	
Measuring span	mm	12.5	25
Measuring span	inch	.5"	1"
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01	
Resolution	inch	.00002", .00005", .0001", .0002", .0005"	
Error limit	mm	0.004	
Error limit over 50 graduations	mm	0.002	
Repeatability	mm	0.001	
Measuring force	N	0.65 – 1.4	1 – 2.25
Standard		Factory standard	
Protective measuring spindle cap		•	

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337640	144.3	21	28.5	8
4337641	193.2	24.8	50	8

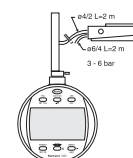


Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336311	Cable Release (12,5 + 25 mm)	1085 a
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4337472-E	Rubber bellows (12,5 mm)	
4310103	Adapter bush (.375" / 8 mm)	940
4337474-E	Rubber bellows (25 mm)	



1085 a

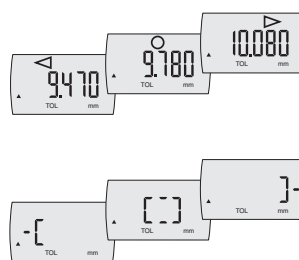


1082 p

Digital Indicator MarCator 1086 Ri



REFERENCE



Functions:

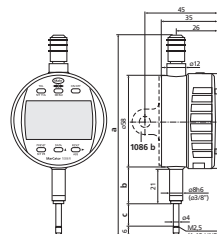
- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- PRESET (for entering a numerical value)
- TOL (enter tolerance limit values)
- <0> (tolerance GO / NO GO display mode)
- ABS (display can be set to zero without losing reference to preset)
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)

- Integrated wireless transmitter
- High contrast LCD
- Operating and display unit (bezel) can be rotated through 280°
- Lifter protection cap on the measuring spindle
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Immediate measurements due to the Reference System
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 11 mm
- **Data interface:** Digimatic, Opto RS232C, USB, Integrated wireless
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.	4337624	4337625	4337626	4337627	4337628	
Product type	1086 Ri					
Measuring span	mm	12.5	25	50	100	25
Measuring span	inch	.5"	1"	2"	4"	1"
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01				
Resolution	inch	.00002", .00005", .0001", .0002", .0005"				
Error limit	mm	0.004	0.008	0.009	0.004	
Error limit over 50 graduations	mm	0.002				
Repeatability	mm	0.001				
Measuring force	N	0.65 - 0.9	0.65 - 1.15	1.25 - 2.7	1.8 - 3.5	0 - 0
Standard		Factory standard				
Lifting protection cap		•				

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337624	126.3	23	13.5	8
4337625	153.4	26.8	26.5	8
4337626	267.3	40	52	8
4337627	420.3	91	103	8
4337628	153.4	26.8	26.5	8



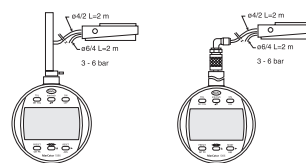
Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4102220	Receiver	i-Stick
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336311	Cable Release (12,5 + 25 mm)	1085 a
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4310103	Adapter bush (.375" / 8 mm)	940
4336230	Pneumatic lifting (50 + 100 mm)	1082 p



i-Stick

1085 a



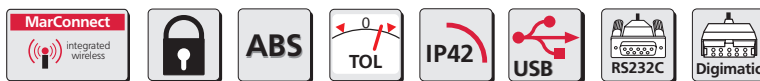
1082 p

1082 p

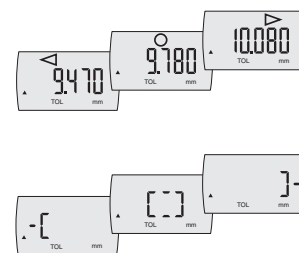
Digital Indicator MarCator 1086 Ri

Functions:

- ON/OFF
 - RESET (set display to zero)
 - mm/inch
 - Reversal of counting direction
 - PRESET (for entering a numerical value)
 - TOL (enter tolerance limit values)
 - <0> (tolerance GO / NO GO display mode)
 - ABS (display can be set to zero without losing reference to preset)
 - DATA (Data transmission via connection cable)
 - Factor (adjustable)
 - LOCK (individual button lock)
- Integrated wireless transmitter
 - High contrast LCD
 - Operating and display unit (bezel) can be rotated through 280°
 - Lifter protection cap on the measuring spindle
 - Mounting shank and measuring spindle are both made of hardened stainless steel
 - Immediate measurements due to the Reference System
 - **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232C interface)
 - **Digit height:** 11 mm
 - **Data interface:** Digimatic, Opto RS232C, USB, Integrated wireless
 - **IP protection category:** IP 42
 - **Scope of delivery:** Instruction manual, Battery



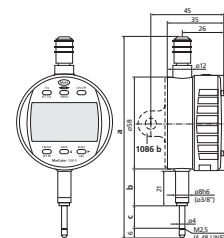
REFERENCE



Technical Data

Order no.	4337134	4337135
Product type		1086 Ri
Measuring span	mm 12.5	25
Measuring span	inch .5"	1"
Resolution	mm 0.01	
Resolution	inch .0005"	
Error limit	mm 0.02	
Error limit over 50 graduations	mm 0.02	
Repeatability	mm 0.01	
Measuring force	N 0.65 – 0.9	0.65 – 1.15
Standard		Factory standard
Lifting protection cap		•

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337134	126.3	23	13.5	8
4337135	153.4	26.8	26.5	8

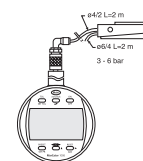


Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4102220	Receiver	i-Stick
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336230	Pneumatic lifting (50 + 100 mm)	1082 p
4310103	Adapter bush (.375" / 8 mm)	940



i-Stick

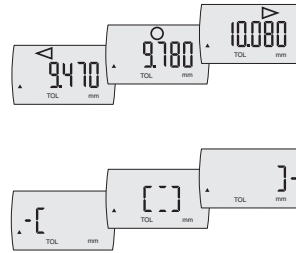


1082 p

Digital Indicator MarCator 1086 WRi



REFERENCE



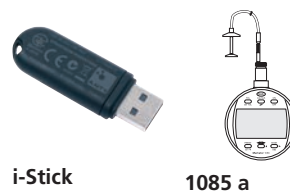
Technical Data

Order no.	4337142		4337143	
Product type			1086 WRi	
Measuring span	mm	12.5		25
Measuring span	inch	.5"		1"
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01		
Resolution	inch	.00002", .00005", .0001", .0002", .0005"		
Error limit	mm	0.004		
Error limit over 50 graduations	mm	0.002		
Repeatability	mm	0.001		
Measuring force	N	0.65 – 1.4		1 – 2.25
Standard	Factory standard			
Lifting protection cap	•			

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337142	144.3	21	28.5	8
4337143	193.2	24.8	50	8

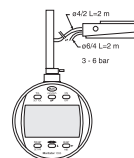
Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4102220	Receiver	i-Stick
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336311	Cable Release (12,5 + 25 mm)	1085 a
4310103	Adapter bush (.375" / 8 mm)	940
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4337472-E	Rubber bellows (12,5 mm)	
4337474-E	Rubber bellows (25 mm)	



i-Stick

1085 a



1082 p

Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- PRESET (for entering a numerical value)
- TOL (enter tolerance limit values)
- <0> (tolerance GO / NO GO display mode)
- ABS (display can be set to zero without losing reference to preset)
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)

- Integrated wireless transmitter
- High contrast LCD
- Operating and display unit (bezel) can be rotated through 280°
- Lifter protection cap on the measuring spindle
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Immediate measurements due to the Reference System
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 11 mm
- **Data interface:** Digimatic, Opto RS232C, USB, Integrated wireless
- **IP protection category:** IP 54
- **Scope of delivery:** Instruction manual, Battery

Digital Indicator MarCator 1087 R

REFERENCE



Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- PRESET (for entering a numerical value)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- ABS (display can be set to zero without losing reference to preset)
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)

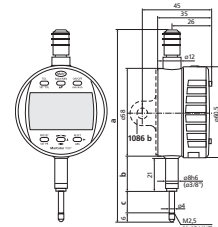


- High contrast LCD
- Operating and display unit (bezel) can be rotated through 280°
- Immediate measurements due to the Reference System
- Lifter protection cap on the measuring spindle
- Mounting shank and measuring spindle are both made of hardened stainless steel
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 8.5 mm
- **Data interface:** Opto RS232C, Digimatic, USB
- **Energy supply:** Battery life approx. 3 years
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.		4337660	4337661	4337670	4337671
Product type		1087 R		1087 ZR	
Measuring span	mm	12.5	25	12.5	25
Measuring span	inch	.5"	1"	.5"	1"
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01			
Resolution	inch	.00002", .00005", .0001", .0002", .0005"			
Graduation values	mm	0.001, 0.002, 0.005, 0.01, 0.02, 0.05			
Range of analog display	mm	± 0,01, ± 0,02, ± 0,04, ± 0,1, ± 0,2			
Error limit	mm	0.004			
Error limit over 50 graduations	mm	0.002			
Repeatability	mm	0.001			
Measuring force	N	0.65 – 0.9	0.65 – 1.15	0.65 – 0.9	0.65 – 1.15
Standard		Factory standard			
Lifting protection cap		•			

Order no.	a	b	c	Mounting shaft	Mounting shaft
	mm	mm	mm	mm	inch
4337660	126,3	23	13,5	8	
4337661	153,4	26,8	26,5	8	
4337670	126,3	23	13,5		.375"
4337671	153,4	26,8	26,5		.375"

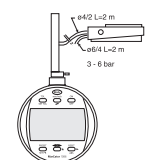


Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4336311	Cable Release (12,5 + 25 mm)	1085 a
4310103	Adapter bush (.375" / 8 mm)	940



1085 a



1082 p

Digital Indicator MarCator 1087 Ri



REFERENCE



Functions:

- 0 (set the analog display to zero)
- ABS (display can be set to zero without losing reference to preset)
- AUTO-ON / OFF
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)
- MAX/MIN memory for searching the reversal point
- ON/OFF
- PRESET (for entering a numerical value)
- RANGE (switch the measuring range and resolution)
- RESET (set display to zero)
- TIR (MAX-MIN) for testing flatness and concentricity
- TOL (enter tolerance limit values)
- Reversal of counting direction
- mm/inch

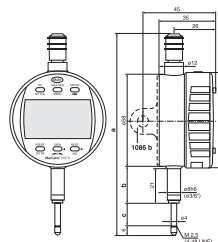
Technical Data

Order no.	4337663		4337665	
Product type			1087 Ri	
Measuring span	mm	12.5	25	
Measuring span	inch	.5"	1"	
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01		
Resolution	inch	.00002", .00005", .0001", .0002", .0005"		
Graduation values	mm	0,001, 0,002, 0,005, 0,01, 0,02, 0,05		
Range of analog display	mm	± 0,01, ± 0,02, ± 0,04, ± 0,1, ± 0,2		
Error limit	mm	0.004		
Error limit over 50 graduations	mm	0.002		
Repeatability	mm	0.001		
Measuring force	N	0.65 – 0.85	0.9 – 0.65	
Standard	Factory standard			
Lifting protection cap	•			

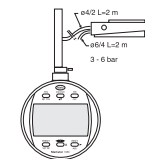
Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337663	126.3	23	13.5	8
4337665	153.4	26.8	26.5	8

Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102411	Digimatic data cable (2 m)	16 EXd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4102220	Receiver	i-Stick
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4336311	Cable Release (12,5 + 25 mm)	1085 a
4310103	Adapter bush (.375" / 8 mm)	940



i-Stick



1082 p



1085 a

- Integrated wireless transmitter
- High-contrast LCD display
- Operating and display unit (bezel) can be rotated through 280°
- Lift-off cap on end of measuring pin
- Clamping shaft and measuring pin in hardened stainless steel
- Immediate measurements due to the Reference System
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 8.5 mm
- **Data interface:** Digimatic, Opto RS232C, USB, Integrated wireless
- **Energy supply:** Battery operation
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Digital Indicator MarCator 1087 BR

REFERENCE

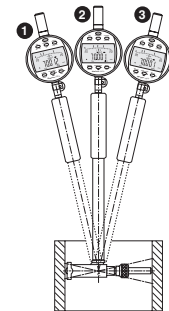


Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- PRESET (for entering a numerical value)
- Reversal of counting direction
- TOL (enter tolerance limit values)
- START/STOP search for reversal point
- MAX/MIN memory for searching the reversal point
- ABS (display can be set to zero without losing reference to preset)
- 0 (set the analog display to zero)
- DATA (Data transmission via connection cable)
- Factor (adjustable)

Application:

In measurements with a 2-point bore gage the reversing point can be calculated automatically during oscillation. Then a PRESET value can be assigned. The ACTUAL value measured is saved by the MIN or MAX function and is shown on the display. The 1087 BR model can process 64 measured values per second, for fast measuring movements combined with measuring certainty.

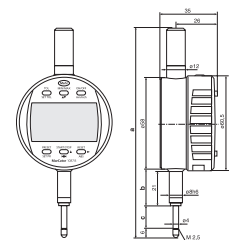


- High contrast LCD
- Operating and display unit (bezel) can be rotated through 280°
- Immediate measurements due to the Reference System
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Hermetically sealed protective measuring cap
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 8.5 mm
- **Data interface:** Opto RS232C, Digimatic, USB
- **Energy supply:** Battery life approx. 3 years
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.	4337662		
Product type	1087 BR		
Measuring span	mm	12.5	
Measuring span	inch	.5"	
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01	
Resolution	inch	.00002", .00005", .0001", .0002", .0005"	
Graduation values	mm	0,001, 0,002, 0,005, 0,01, 0,02, 0,05	
Range of analog display	mm	± 0,01, ± 0,02, ± 0,04, ± 0,1, ± 0,2	
Error limit	mm	0.004	
Error limit over 50 graduations	mm	0.002	
Repeatability	mm	0.001	
Measuring force	N	0.65 – 0.9	
Standard	Factory standard		
Protective measuring spindle cap	•		

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337662	126.3	23	13.5	8



Accessories

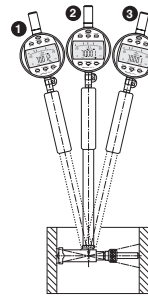
Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4310103	Adapter bush (.375" / 8 mm)	940

Digital Indicator MarCator 1087 BRi



Application:

In measurements with a 2-point bore gage the reversing point can be calculated automatically during oscillation. Then a PRESET value can be assigned. The ACTUAL value measured is saved by the MIN or MAX function and is shown on the display. The 1087 BRi model can process 64 measured values per second, for fast measuring movements combined with measuring certainty.



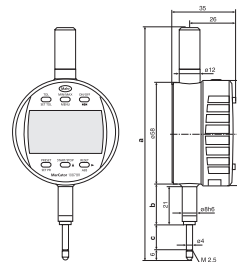
Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- PRESET (for entering a numerical value) from range 500 mm
- Reversal of counting direction
- TOL (enter tolerance limit values)
- START/STOP search for reversal point
- MAX/MIN memory for searching the reversal point
- ABS (display can be set to zero without losing reference to preset)
- 0 (set the analog display to zero)
- DATA (Data transmission via connection cable)
- Factor (adjustable)
- LOCK (individual button lock)

Technical Data

Order no.	4337664		
Product type	1087 BRi		
Measuring span	mm	12.5	
Measuring span	inch	.5"	
Resolution	mm	0.0005, 0.001, 0.002, 0.005, 0.01	
Resolution	inch	.00002", .00005", .0001", .0002", .0005"	
Graduation values	mm	0,001, 0,002, 0,005, 0,01, 0,02, 0,05	
Range of analog display	mm	± 0,01, ± 0,02, ± 0,04, ± 0,1, ± 0,2	
Error limit	mm	0.004	
Error limit over 50 graduations	mm	0.002	
Repeatability	mm	0.001	
Measuring force	N	0.65 – 0.9	
Standard	Factory standard		
Protective measuring spindle cap	•		

Order no.	a	b	c	Mounting shaft
	mm	mm	mm	mm
4337664	126.3	23	13.5	8

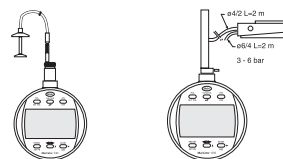


Accessories

Order no.	Product name	Product type
4884464	Battery 3 V, Type CR 2450	
4102357	16 EXu Data Connection Cable USB (2 m)	16 EXu
4102915	Digimatic data cable (2 m)	16 EWd
4102410	Data Connection Cable RS232C (2 m)	16 EXr
4102220	Receiver	i-Stick
4375004	Protective cap for 1075 R / 1086 R / 1087 R	1086 s
4337421	Lug back	1086 b
2246308	Adjustable back	
2254939	Screw back	
2255653	Rack back	
2255778	Adjustable back for 75B	
2255936	Post back	
4336311	Cable Release (12,5 + 25 mm)	1085 a
4336237	Pneumatic lifting (12,5 + 25 mm)	1082 p
4310103	Adapter bush (.375" / 8 mm)	940



i-Stick



1085 a

1082 p

- Integrated wireless transmitter
- High-contrast LCD display
- Operating and display unit (bezel) can be rotated through 280°
- Lift-off cap on end of measuring pin
- Clamping shaft and measuring pin in hardened stainless steel
- Immediate measurements due to the Reference System
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 8.5 mm
- **Data interface:** Opto RS232C, Digimatic, USB, Integrated wireless
- **Energy supply:** Battery life approx. 3 years
- **IP protection category:** IP 42
- **Scope of delivery:** Instruction manual, Battery

Small Precision Dial Indicators MarCator 803 S / 803 A / 805 A

DIN
878

- Shockproof movement
- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Lifter protection cap on the measuring spindle
- Precision gears and pinions
- **Scope of delivery:** Case



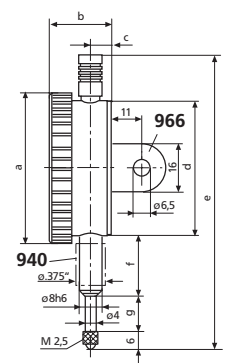
Application:

To be used on all smaller indicating measuring instruments, or due to a confined space a smaller indicating instrument is required

Technical Data

Order no.	4324000	4324050	4324060
Product type	803 S	803 A	805 A
Measuring span	mm	3	5
Graduation value	mm		0.01
Type of dial face		0 - 50	0 - 100
Range per rev.	mm	0.5	1
Error limit, measuring range	µm	10	12
Error limit, 1 revolution	µm	9	10
Error limit, 1/2 revolution	µm	8	9
Error limit, 1/10 revolution	µm		5
Repeatability f_w	µm		3
Measuring value hysteresis f_u	µm		3
Overtravel	mm		0.1
Measuring force	N		0.7 - 1.1
Standard			DIN 878
Shockproof movement		•	
Lifting protection cap			•
Dial color			white

Order no.	a	b	c	d	e	f	g	Mounting shaft	Scale diameter
	mm	mm	mm	mm	mm	mm	mm	mm	mm
4324000	40	20.6	6.8	37	80	15.5	5.5	8	34
4324050	40	20.6	6.8	37	83	15	8	8	34
4324060	40	20.6	6.8	37	83	15	8	8	34

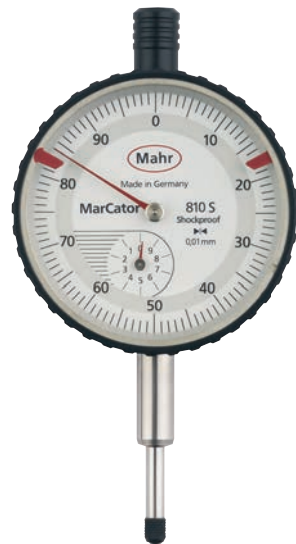


Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4375020	Lug back, vertical, for 803	966
4375021	Lug back, horizontal, for 803	967

Precision Dial Indicator MarCator 810 S / 810 A / 810 AT / 810 SV / 810 AU

DIN 878

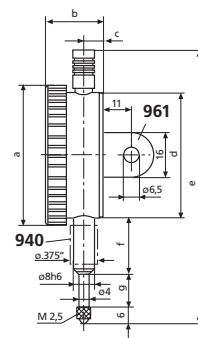


- Shockproof movement
- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Lifter protection cap on the measuring spindle
- Precision gears and pinions
- **Scope of delivery:** Case

Technical Data

Order no.	4311000	4311050	4311060	4321000	4329050
Product type	810 S	810 A	810 AT	810 SV	810 AU
Measuring span	mm	10		40	10
Graduation value	mm		0.01		
Type of dial face		0 – 100	100 – 0	0 – 100	100 – 0
Range per rev.	mm		1		
Error limit, measuring range	µm	15		25	15
Error limit, 1 revolution	µm	10		15	10
Error limit, 1/2 revolution	µm	9		10	9
Error limit, 1/10 revolution	µm		5		
Repeatability f_w	µm		3		5
Measuring value hysteresis f_u	µm		3	6	5
Overtravel	mm	0.1	0.8	0.1	
Measuring force	N		0.7 – 1.3	0.8 – 1.8	1 – 1.8
Standard			DIN 878		Factory standard
Shockproof movement		•		•	
Lifting protection cap			•		
Reverse measuring force direction					•
Dial color			white		

Order no.	a	b	c	d	e	f	g	Mounting shaft	Scale diameter
	mm	mm	mm	mm	mm	mm	mm	mm	mm
4311000	58	23	7.5	52	111.5	21	16	8	50
4311050	58	23	7.5	52	112	22	15	8	50
4311060	58	23	5.5	52	112	22	15	8	50
4321000	58	24.2	8.7	52	169	22	45	8	50
4329050	58	23	7.5	52	111.5	22	4.5	8	50

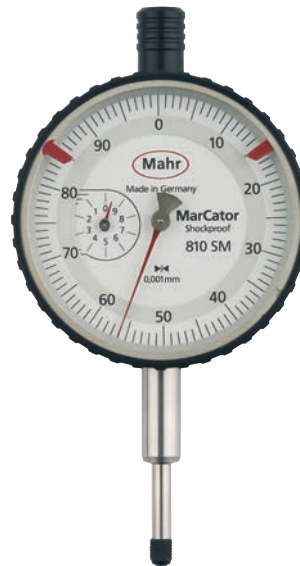


Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4373020	Splash proof cap (58 mm)	955
4375010	Lug back, vertical, for 810	961
4375011	Lug back, horizontal, for 810	962

Precision Dial Indicator MarCator 810 SM / 810 SRM

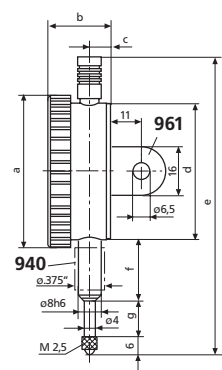
- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Lifter protection cap on the measuring spindle
- Precise mechanism with a combined gear lever transmission
- High accuracy with a minimum span of error
- **Scope of delivery:** Case



Technical Data

Order no.		4311070	4311080
Product type		810 SM	810 SRM
Measuring span	mm	1	5
Graduation value	mm	0.001	
Type of dial face		0–100	0–100–0
Range per rev.	mm	0.1	0.2
Error limit, measuring range	µm	4	10
Error limit, 1 revolution	µm	3	5
Error limit, 1/2 revolution	µm	2	3
Error limit, 1/10 revolution	µm	1	2
Repeatability f_w	µm	1.5	3
Measuring value hysteresis f_u	µm	1.5	3
Overtravel	mm	4	0.1
Measuring force	N	1.3–1.8	1.2–1.7
Standard		Factory standard	
Shockproof movement		•	
Lifting protection cap		•	

Order no.	a	b	c	d	e	f	g	Mounting shaft	Scale diameter
	mm	mm	mm	mm	mm	mm	mm	mm	mm
4311070	58	23	8.5	52	111.5	22	15	8	50
4311080	58	23	7.5	52	111.5	22	15	8	50



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4373020	Splash proof cap (58 mm)	955
4375010	Lug back, vertical, for 810	961
4375011	Lug back, horizontal, for 810	962

Precision Dial Indicator MarCator 810 AX

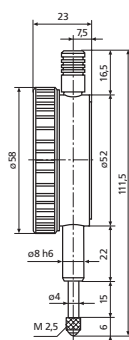


- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Lifter protection cap on the measuring spindle
- Precision gears and pinions
- **Scope of delivery:** Case

Technical Data

Order no.	4331000		
Product type	810 AX		
Measuring span	mm	10	
Graduation value	mm	0.1	
Type of dial face	0 – 10		
Range per rev.	mm	10	
Error limit, measuring range	µm	50	
Error limit, 1 revolution	µm	50	
Error limit, 1/2 revolution	µm	30	
Error limit, 1/10 revolution	µm	15	
Repeatability f_w	µm	15	
Measuring value hysteresis f_v	µm	15	
Overtravel	mm	0.5	
Measuring force	N	0.7 – 1.3	
Standard	Factory standard		
Lifting protection cap	•		
Dial color	white		

Order no.	Mounting shaft	Scale diameter
	mm	mm
4331000	8	50



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4373020	Splash proof cap (58 mm)	955
4375010	Lug back, vertical, for 810	961
4375011	Lug back, horizontal, for 810	962

Precision dial indicator MarCator 810 SW / 803 SW



- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Precision gears and pinions
- Hermetically sealed upper protective measuring spindle cap, bezel and transparent dial cover; sealed with O-rings
- Measuring spindle sealed with rubber sleeve, thus preventing contamination by liquids and impurities
- **IP protection category:** IP 54
- **Scope of delivery:** Case



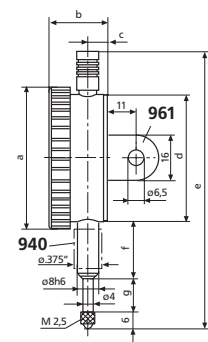
Application:

At the place of measurement where the dial indicator is exposed to extreme contamination or moisture

Technical Data

Order no.		4315000	4326000
Product type		810 SW	803 SW
Measuring span	mm	10	3
Graduation value	mm	0.01	
Type of dial face		0 – 100	0 – 50
Range per rev.	mm	1	0.5
Error limit, measuring range	µm	15	10
Error limit, 1 revolution	µm	10	9
Error limit, 1/2 revolution	µm	9	8
Error limit, 1/10 revolution	µm	5	
Repeatability f_w	µm	3	
Measuring value hysteresis f_u	µm	3	
Overtravel	mm	0.1	
Measuring force	N	0.7 – 1.6	0.7 – 1.7
Standard		DIN 878	
Shockproof movement		•	
Protective measuring spindle cap		•	
Dial color		white	

Order no.	a	b	c	d	e	f	g	Mounting shaft
	mm	mm	mm	mm	mm	mm	mm	mm
4315000	61	24.2	7.9	52	127.6	22	22.1	8
4326000	44	21.6	7.1	37	86	15	11	8



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4375010	Lug back, vertical, for 810	961
4375011	Lug back, horizontal, for 810	962
4375020	Lug back, vertical, for 803	966
4375021	Lug back, horizontal, for 803	967

Precision dial indicator MarCator 810 SB / 803 SB

DIN 878

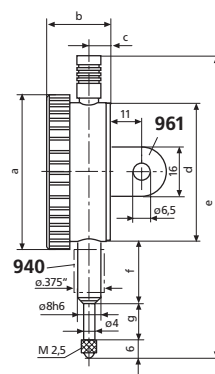


- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Hermetically sealed protective measuring spindle cap
- Limited measuring range for error free readings
- Large overtravel (ca. 9 mm) for easier insertion of test items in measuring devices
- Precision gears and pinions
- **Scope of delivery:** Case

Technical Data

Order no.	4317000		4324250	
Product type	810 SB		803 SB	
Measuring span	mm	0.8	0.4	
Graduation value	mm	0.01		
Type of dial face	40 –0 –40		20 –0 –20	
Range per rev.	mm	0.8		
Error limit, measuring range	µm	7		
Error limit, 1/2 revolution	µm	6	8	
Error limit, 1/10 revolution	µm	5		
Repeatability f_w	µm	3		
Hysteresis f_v	µm	3		
Overtravel	mm	9	4.5	
Measuring force	N	0.7 – 1.1	0.9 – 1.1	
Standard	DIN 878			
Shockproof movement	•			
Protective measuring spindle cap	•			
Dial color	white			

Order no.	a	b	c	d	e	f	g	Mounting shaft
	mm	mm	mm	mm	mm	mm	mm	mm
4317000	58	23	7.5	52	120	22	15	8
4324250	44	21.6	6.8	37	83	15.5	8	8

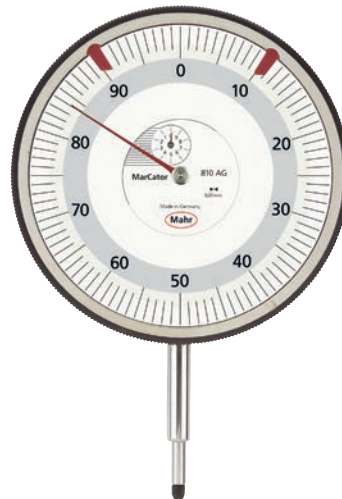


Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4375010	Lug back, vertical, for 810	961
4375011	Lug back, horizontal, for 810	962
4375020	Lug back, vertical, for 803	966
4375021	Lug back, horizontal, for 803	967

Large dial indicator MarCator 810 AG

- Large, high contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Lifter protection cap on the measuring spindle
- Precision gears and pinions



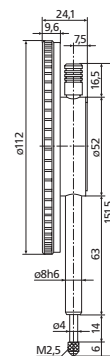
Application:

Ideal for long reading distance and in poorly lit conditions

Technical Data

Order no.	4322000	
Product type		810 AG
Measuring span	mm	10
Graduation value	mm	0.01
Type of dial face		0 – 100
Range per rev.	mm	1
Error limit, measuring range	µm	17
Error limit, 1 revolution	µm	15
Error limit, 1/2 revolution	µm	15
Error limit, 1/10 revolution	µm	5
Repeatability f_w	µm	3
Measuring value hysteresis f_u	µm	5
Overtravel	mm	0.1
Measuring force	N	1.3 – 2.3
Standard		Factory standard
Lifting protection cap		•
Dial color		white

Order no.	Mounting shaft	Scale diameter
	mm	mm
4322000	8	112



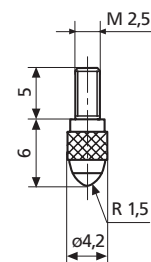
Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940

Indicators MarCator

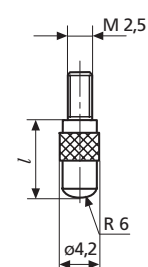
Standard contact point

Order no.	Product type	l	Measurement surface radius	Measuring surface
		mm	mm	
4360001	901	6	1.5	Steel
4360002	901 H	6	1.5	Carbide
4360003	901 R	6	1.5	Ruby



Spherical contact point

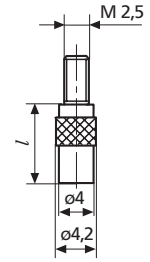
Order no.	Product type	l	Measuring surface ϕ	Measurement surface radius	Measuring surface
		mm	mm	mm	
4360007	902	4	4	6	Steel
4360008	902	5	4	6	Steel
4360009	902	6	4	6	Steel
4360010	902	8	4	6	Steel
4360011	902	10	4	6	Steel
4360012	902	12	4	6	Steel
4360013	902	15	4	6	Steel
4360014	902	20	4	6	Steel
4360015	902	25	4	6	Steel
4360016	902	30	4	6	Steel
4360017	902	35	4	6	Steel
4360018	902	50	4	6	Steel
4360019	902	40	4	6	Steel
4360020	902	75	4	6	Steel
4360021	902	80	4	6	Steel
4360022	902	60	4	6	Steel
4360023	902	100	4	6	Steel
4360024	902	70	4	6	Steel
4360025	902	90	4	6	Steel
4360026	902	45	4	6	Steel
4360029	902	95	4	6	Steel
4360031	902	55	4	6	Steel
4360035	902	65	4	6	Steel
4360036	902	85	4	6	Steel
4360040	902 H	8	4	6	Carbide
4360041	902 H	10	4	6	Carbide
4360042	902 H	12	4	6	Carbide
4360043	902 H	15	4	6	Carbide
4360044	902 H	20	4	6	Carbide
4360045	902 H	25	4	6	Carbide
4360046	902 H	30	4	6	Carbide
4360047	902 H	35	4	6	Carbide
4360048	902 H	50	4	6	Carbide
4360049	902 H	40	4	6	Carbide
4360050	902 H	45	4	6	Carbide



Indicators MarCator

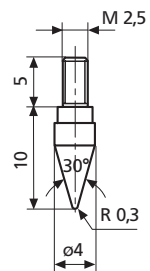
Flat contact point

Order no.	Product type	l	Measuring surface ϕ	Measuring surface
		mm	mm	
4360070	903	4	4	Steel
4360071	903	6	4	Steel
4360072	903	8	4	Steel
4360073	903	10	4	Steel
4360074	903	12	4	Steel
4360075	903	15	4	Steel
4360076	903	20	4	Steel
4360077	903	25	4	Steel
4360300	903	30	4	Steel
4360078	903	35	4	Steel
4360079	903	50	4	Steel
4360101	903 H	6	4	Carbide
4360102	903 H	8	4	Carbide
4360103	903 H	10	4	Carbide
4360104	903 H	12	4	Carbide
4360105	903 H	15	4	Carbide
4360106	903 H	20	4	Carbide
4360107	903 H	25	4	Carbide
4360110	903 H	30	4	Carbide
4360108	903 H	35	4	Carbide
4360111	903 H	40	4	Carbide
4360310	903	40	4	Steel
4360109	903 H	50	4	Carbide



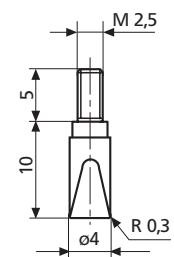
Conical contact point

Order no.	Product type	l	Measurement surface radius	Angle α	Measuring surface
		mm	mm	°	
4360130	904	10	0.3	30	Steel
4360131	904 H	10	0.3	30	Carbide



Wedge Shaped Contact Points

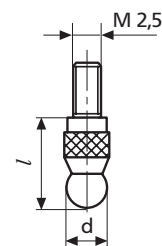
Order no.	Product type	l	Measuring surface ϕ	Measurement surface radius	Measuring surface
		mm	mm	mm	
4360140	905	10	4	0.3	Steel
4360141	905 H	10	4	0.3	Carbide



Indicators MarCator

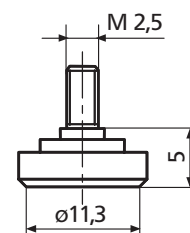
Ball Contact Points

Order no.	Product type	d	l	Measuring surface
		mm	mm	
4360150	906 H	1	8.5	Carbide
4360151	906 H	1.25	8.5	Carbide
4360152	906 H	1.5	8.5	Carbide
4360153	906 H	1.75	8.5	Carbide
4360154	906 H	2	8.5	Carbide
4360155	906 H	2.5	8.5	Carbide
4360156	906 H	3	8.5	Carbide
4360157	906 H	3.5	8.5	Carbide
4360158	906 H	4	8.5	Carbide
4360159	906 H	4.5	8.5	Carbide
4360160	906 H	5	9	Carbide
4360161	906 H	5.5	9	Carbide
4360162	906 H	6	9	Carbide
4360163	906 H	6.35	9	Carbide
4360164	906 H	6.5	10	Carbide
4360165	906 H	7	10	Carbide
4360166	906 H	7.5	11	Carbide
4360167	906 H	8	11	Carbide
4360168	906 H	8.5	12	Carbide
4360169	906 H	9	12	Carbide
4360170	906 H	10	13	Carbide



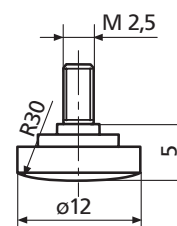
Flat contact plates

Order no.	Product type	l	Measuring surface	Measuring surface ϕ	Measuring surface
		mm	cm ²	mm	
4360200	907	5	1	11.3	Steel
4360201	907 H	5		7	Carbide



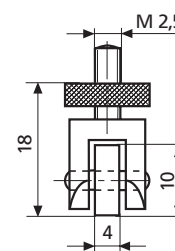
Spherical contact plates, steel

Order no.	Product type	l	Measuring surface ϕ	Measurement surface radius	Measuring surface
		mm	mm	mm	
4360210	908	5	12	30	Steel
4360211	908 H	5	12	30	Carbide



Measuring Rollers

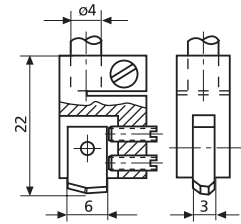
Order no.	Product type	l	Measurement surface radius	Radial run-out deviation	Measuring surface
		mm	mm	μm	
4360220	909 A	18		3	Steel
4360221	909 B	18	5	3	Steel



Indicators MarCator

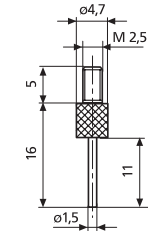
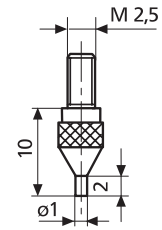
Measuring attachment

Order no.	Product type	l	Measuring surface
		mm	
4360230	910 H	22	Carbide



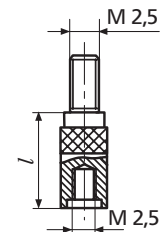
Pin contact point

Order no.	Product type	l	Measuring surface \varnothing	Measuring surface
		mm	mm	
4360240	911 H1	2	1	Carbide
4360241	911 H2	11	1.5	Carbide
4360280	911	15	1.5	Steel
4360281	911	20	1.5	Steel
4360282	911	25	1.5	Steel
4360283	911	30	1.5	Steel
4360284	911	35	1.5	Steel
4360285	911	40	1.5	Steel
4360286	911	50	1.5	Steel



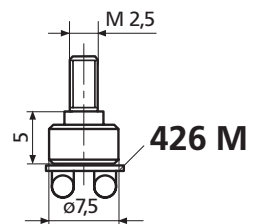
Measuring spindle extensions

Order no.	Product type	l
		mm
4360250	912	10
4360251	912	15
4360252	912	20
4360253	912	25
4360254	912	35
4360255	912	50
4360256	912	75
4360257	912	100



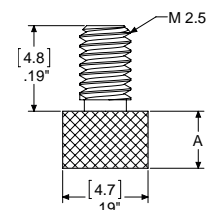
Flat contact points

Order no.	Product type	Measuring surface \varnothing
		mm
4360400	913	7.5



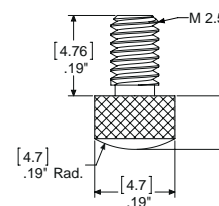
Flat contact point

Order no.	Product type	Dimension A	Length	Measuring surface
		mm	mm	
2208646	EAL-1016-W1	6	6	hardened steel
2208647	EAL-1016-W2	10	10	hardened steel
2208648	EAL-1016-W3	15	15	hardened steel
2208649	EAL-1016-W4	20	20	hardened steel
2208650	EAL-1016-W5	25	25	hardened steel



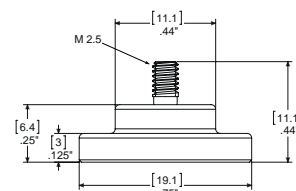
Contact point, radiused surface

Order no.	Product type	Dimension A	Length	Measurement surface radius	Measuring surface
		mm	mm	mm	
2216191	EPT-1037-W1	6	6	4.6	hardened steel
2216192	EPT-1037-W2	10	10	4.6	hardened steel
2216193	EPT-1037-W3	12	15	4.6	hardened steel
2216194	EPT-1037-W4	15	20	4.6	hardened steel
2216195	EPT-1037-W5	20	25	4.6	hardened steel
2216196	EPT-1037-W6	25	12	4.6	hardened steel



Wide face contact point with metric 2.5

Order no.	Product type	Dimension A	B	Measuring surface	Number
		mm	mm		
2208654	EAL-1020-W1	9.04	6.35	hardened steel	1
2208655	EAL-1020-W2	12.7	9.50	hardened steel	1
2208656	EAL-1020-W3	15.6	12.70	hardened steel	1
2208657	EAL-1020-W4	18.6	15.90	hardened steel	1
2208658	EAL-1021	9.04	6.35	carbide tipped	1

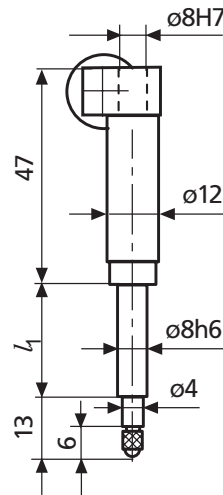


Thread adapter, M2.5 to #4-48

Order no.	Product type
2201833	AD-185

Straight holder MarCator 941 G

- **Scope of delivery:** Contact point 901



Application:

- For all types of measuring devices
- To be used in conjunction with a dial indicator or an inductive probe
- To position the measuring instrument at a certain angle

Technical Data

Order no.	Length l1	Transmission	Product type
	mm		
4365000	25	3 mm	941 G
4365001	50	3 mm	941 G
4365002	75	3 mm	941 G

Order no.	Length l1
	mm
4365000	25
4365001	50
4365002	75

Angular holder MarCator 941 W



• **Scope of delivery:** Contact point 901, Contact point 903 (l = 10 mm)

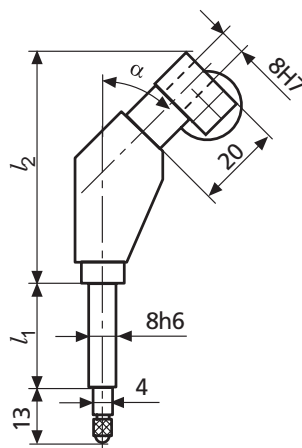
Application:

- For all types of measuring devices
- To be used in conjunction with a Dial Indicator or an Inductive Probe
- To be positioned (tilted) at the measurement direction and also at a certain distance or angle

Technical Data

Order no.	Length l1	Length l2	Transmission	Product type
	mm	mm		
4365010	25	53.7	3 mm	941 W
4365011	50	53.7	3 mm	941 W
4365020	25	49.3	3 mm	941 W
4365021	50	49.3	3 mm	941 W
4365022	75	49.3	3 mm	941 W
4365030	25	34.5	3 mm	941 W
4365031	50	34.5	3 mm	941 W
4365032	75	34.5	3 mm	941 W

Order no.	Angle α	Length l1	Length l2
	°	mm	mm
4365010	45	25	53.7
4365011	45	50	53.7
4365020	60	25	49.3
4365021	60	50	49.3
4365022	60	75	49.3
4365030	90	25	34.5
4365031	90	50	34.5
4365032	90	75	34.5



Sensor level MarCator 943

- Integrated lifting device
- Interchangeable contact point
- **Scope of delivery:** Contact point 901

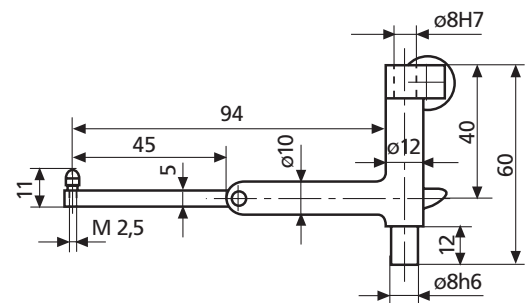


Application:

- For testing concentricity in bore holes as well as difficult to reach outside diameters
- To be inserted in a measuring stand with a lifting device

Technical Data

Order no.	Transmission	Product type
4367000	+/- 1mm	943



Dial Indicators per ANSI/AGD

You get more with Mahr Dial Indicators

- Proven for the most demanding applications
- Superior design and serviceability
- Unmatched customer and technical support
- Catalog and customized styles
- Full range of accessories to suit virtually every need
- Unit construction and removable movement save repair/cleaning time and maintenance costs
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminate slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pull back spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- Many models employ stainless steel stem for added durability

How to order

How to order your dial indicator and accessories

1. Select the type of Indicator you require. Check the specialized types as well as regular ANSI/AGD models.
2. Choose the model best suited to the magnification, range and viewing needs of your job.
3. Accessories are important because they greatly increase the speed, efficiency and convenience of obtaining desired results. Mahr's wide selection of dial indicator accessories are shown in this catalog.
4. Our customers have many options; they are not restricted to the normally furnished equipment mentioned above. A wide choice of optionally available points, backs or dial arrangements can be specified at little or no extra cost. We maintain the most extensive stock of indicators and gages for dimensional measurement available anywhere. Items which are in stock are normally shipped within five working days. If you need them sooner, inquire when ordering. We can often make next-day deliveries. Understandably, some of the items in this catalog are not always in stock or are special order items, which take a little longer to ship.

If you need help in determining what Indicators right for your application, just ask us. Contact Mahr:

1-800-333-4243

One of our experienced professionals will give you courteous, professional advice that can save you time and money.

Replacement indicators

Although Mahr dial indicators are known for their lifetime service, it is not uncommon to change an indicator back, contact point, dial or to even add an accessory to suit your latest application.

When ordering a replacement dial indicator for a specific application, always verify the configuration of the indicator.

Ordering a replacement using the standard model number shown on your indicator may not provide you with the configuration or accessories you desire.



Dial Indicators per ANSI/AGD

Selecting a Dial Indicator

Since modern manufacturing involves a wide range of tolerances, choosing a dial indicator might be difficult, especially since the number of indicators available is so vast. The following guidelines were prepared to assist you in selecting the right model for your application.

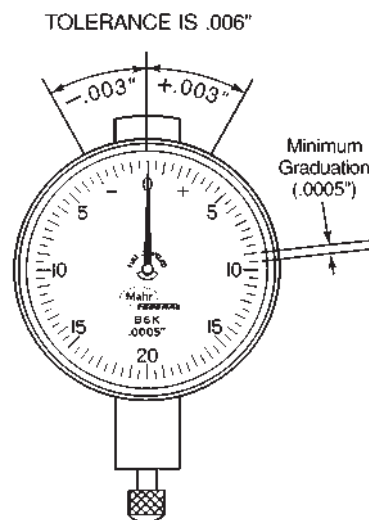
Consider four characteristics when selecting a dial indicator:

- Minimum Graduation Value** — value of the smallest graduations marked on the dial. From several different values available from Mahr, select the one which is closest to 10% of the tolerance spread of the work you are measuring. This assures that the tolerance will span about ten divisions of the dial.
- Size** — represents the bezel diameter. Make your selection on the basis of space available for the indicator and the distance from which it will be viewed. The Indicator photograph shown on the first page of each ANSI/AGD Group is full scale. Simply place the page which illustrates the Indicator at the expected viewing distance, and choose the size that offers you the best readability and is the proper size for your fixture. Mahr's "C" size bezels (ANSI/AGD Group 2), which have a diameter of 2-1/4", are the most popular.
- Range per Revolution** — represents the distance the spindle travels with one complete revolution of the dial hand. From the dials available in the size and minimum graduation value you choose, select the range per revolution which allows the tolerance spread to occupy 1/10 to 1/4 of the dial.
- Total Range** — the maximum distance over which the indicator spindle can travel. Usually, this represents 2-1/2 revolutions of the hand, which is adequate for most needs. Sometimes, however, this may not be adequate for your application and a special total range may be necessary.

Copies of the current ANSI Standard for Dial Indicators (ANSI B89.1.1 0-1987) are available from:

The American Society of Mechanical Engineers
 ASME Order Desk
 22 Law Drive
 Fairfield, NJ 07007
 (973)882-1167

If your tolerance spread is .006" ($\pm .003$ "), then, the most suitable minimum graduation value is .0005".



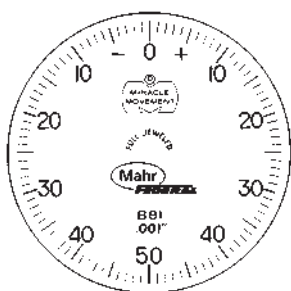
Your tolerance spread is .006". You have chosen an ANSI/AGD Group 2 (Mahr "C" Size) dial with a minimum graduation value of .0005". Mahr offers four indicator types in this size and minimum graduation value. Of these, type C5M has a range per revolution of .030" which is about midway between your tolerance extremes.

You selected a C5M indicator. Your total range, however, needs to be at least .200" so the spindle can clear the lip of your part. But, the longest range available in the C5M indicator you need is only .075".

Special ranges up to .400" are available for this indicator type. Select the closest range for your application (for Model C5M, you would select .250").

If the range you need is not listed under the "Special Ranges" category, contact Mahr. Chances are we can supply the range you need.

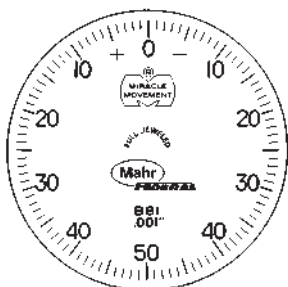
Dial Types



1. Balanced (+) on right.

Normally furnished on all Group 0, 1, 3 and 4 ANSI/AGD indicators only, unless otherwise specified. Indicates an increasing value when contact is depressed as in comparison type OD, snap and bench thickness gages.

Note: If Revolution Counter models are ordered, counter dial numbered counterclockwise.

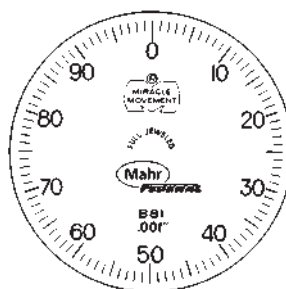


2. Balanced (+) on left.

Indicates decreasing values when contact is depressed as in comparison bore* and depth gages.

Note: With Revolution Counter models, counter dial numbered clockwise.

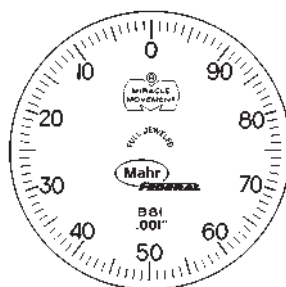
* Will vary as dictated by motion transfer design.



3. Continuous clockwise.

Normally furnished on Long and Extra Long Range Indicators, unless otherwise specified. Indicates an increasing value when contact is depressed as in direct-reading thickness gages.

Note: With Revolution Counter models, counter dial numbered counterclockwise.



4. Continuous counterclockwise.

Indicates a decreasing value when contact is depressed as in direct reading slot, recess or hole depth measurements.

Note: If Revolution Counter models are ordered, counter dial numbered clockwise

Dial Indicator per ANSI/AGD Group 0 – Mahr Series A



Application:

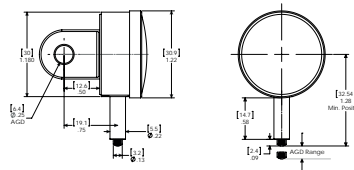
Where available space prohibits the use of longer dial indicators

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- Normally furnished: balanced dial with + on right; centered vertical lug back; regular contact point PT-43, .09" radiused, .093" long
- Optional dials: balanced with + on left; continuous clockwise; continuous counterclockwise
- Order by part number and specify dial style desired. For other dial styles or special requirements, call Mahr

Technical Data

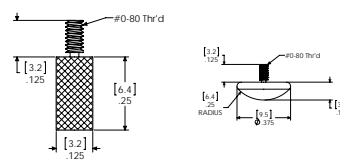
Order no.	Product type	Measuring span inch	Graduation value inch	Type of dial face	Range per rev. inch	Error limit inch	Standard	ANSI/AGD Group	Dial color
2011089	A1/2Q	.010"	.0001"	0-2-0	.004"	± .0001"	ANSI	0	green
2011093	A3Q	.050"	.0005"	0-10-0	.020"	± .0005"	ANSI	0	green
2011095	A6Q	.100"	.001"	0-20-0	.040"	± .001"	ANSI	0	green

Order no.	Mounting shaft inch	Scale diameter inch
2011089	.22"	1.25"
2011093	.22"	1.25"
2011095	.22"	1.25"

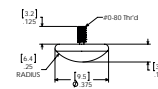


Accessories

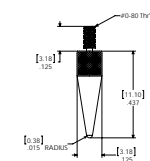
Order no.	Product name	Product type
2202329	Contact point, flat	AL-61
2204777	Flat back	BK-32
2204778	Lug back	BK-37
2204779	Post back 7/32"	BK-38
2204785	Adjustable back	BK-45
2204809	Screw type back 1/4-28	BK-88
2205082	Split bushing .218" x .374" x .5"	BU-112
2225757	Contact point, spherical	PT-118
2225758	Contact point, taper	PT-119
2225801	Contact point, spherical, A = 1/4"	PT-204
2225802	Contact point, spherical, A = 3/8"	PT-205
2225804	Contact point, spherical, A = 1/2"	PT-207
2225805	Contact point, spherical, A = 5/8"	PT-208
2225806	Contact point, spherical, A = 3/4"	PT-209
2225808	Contact point, spherical, A = 7/8"	PT-210
2225809	Contact point, spherical, A = 1"	PT-211
2225925	Contact point, spherical, A = 3/32" (normally furnished)	PT-43



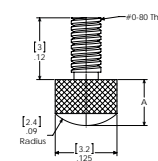
AL-61



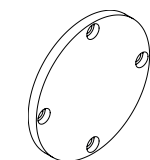
PT-118



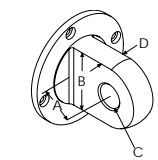
PT-119



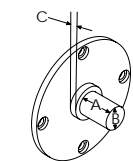
PT-43



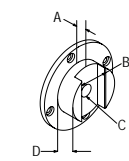
BK-32



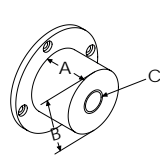
BK-37



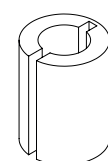
BK-38



BK-45



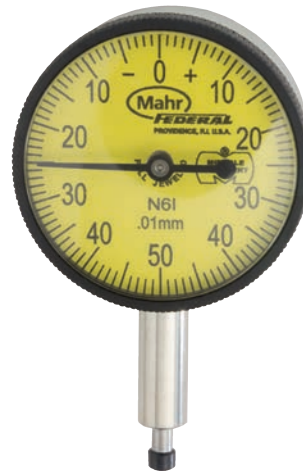
BK-88



BU-112

Dial Indicator per ANSI/AGD Group 0 – Mahr Series N

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbed gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- Normally furnished: balanced dial with + on right; centered vertical lug back; regular contact point PT-43, .09" radiused, .093" long
- Optional dials: balanced with + on left; continuous clockwise; continuous counterclockwise
- Order by part number and specify dial style desired. For other dial styles or special requirements, call Mahr



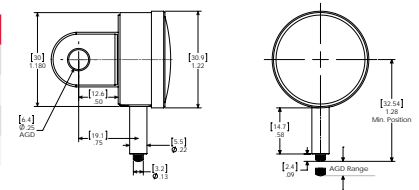
Application:

Where available space prohibits the use of longer dial indicators

Technical Data

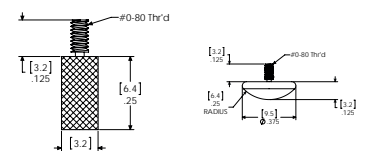
Order no.	Product type	Measuring span	Graduation value	Type of dial face	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		mm	mm		mm	mm			
2011743	N1/20	0.25	0.002	0-5-0	0.1	± 0,002	ANSI	0	yellow
2011745	N3I	1.25	0.005	0-25-0	0.5	± 0,005	ANSI	0	yellow
2011759	N6I	2.5	0.01	0-50-0	1	± 0,01	ANSI	0	yellow

Order no.	Mounting shaft	Scale diameter
	inch	mm
2011743	.22"	32
2011745	.22"	32
2011759	.22"	32



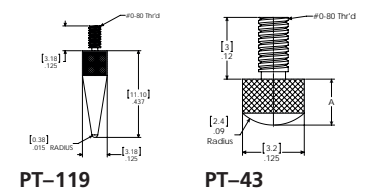
Accessories

Order no.	Product name	Product type
2202329	Contact point, flat	AL-61
2204777	Flat back	BK-32
2204778	Lug back	BK-37
2204779	Post back 7/32"	BK-38
2204785	Adjustable back	BK-45
2204809	Screw type back 1/4-28	BK-88
2205082	Split bushing .218" x .374" x .5"	BU-112
2225757	Contact point, spherical	PT-118
2225758	Contact point, taper	PT-119
2225801	Contact point, spherical, A = 1/4"	PT-204
2225802	Contact point, spherical, A = 3/8"	PT-205
2225804	Contact point, spherical, A = 1/2"	PT-207
2225805	Contact point, spherical, A = 5/8"	PT-208
2225806	Contact point, spherical, A = 3/4"	PT-209
2225808	Contact point, spherical, A = 7/8"	PT-210
2225809	Contact point, spherical, A = 1"	PT-211
2225925	Contact point, spherical, A = 3/32" (normally furnished)	PT-43



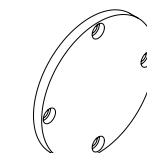
AL-61

PT-118

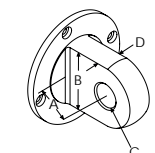


PT-119

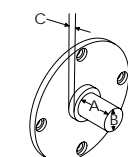
PT-43



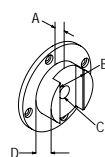
BK-32



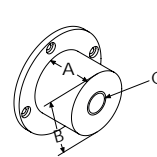
BK-37



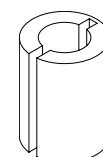
BK-38



BK-45



BK-88



BU-112

Dial Indicator per ANSI/AGD Group 1 – Mahr Series B

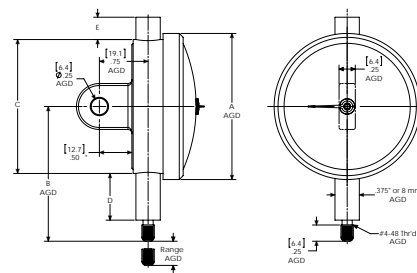


Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		inch	inch			inch	inch			
2011000	12I	.025"	.0001"	0-5-0		.010"	±.0001"	ANSI	1	green
2011001	12I-RC	.025"	.0001"	0-10	•	.010"	±.0001"	ANSI	1	green
2011004	12Q	.025"	.00025"	0-5-0		.010"	±.00025"	ANSI	1	green
2011005	12Q-RC	.025"	.00025"	0-10	•	.010"	±.00025"	ANSI	1	green
2011106	B3K	.050"	.00025"	0-10-0		.020"	±.00025"	ANSI	1	green
2011107	B3K-RC	.050"	.00025"	0-20	•	.020"	±.00025"	ANSI	1	green
2011110	B3Q	.050"	.0005"	0-10-0		.020"	±.0005"	ANSI	1	green
2011111	B3Q-RC	.050"	.0005"	0-20	•	.020"	±.0005"	ANSI	1	green
2011118	B5M	.075"	.0005"	0-15-0		.030"	±.0005"	ANSI	1	green
2011119	B5M-RC	.075"	.0005"	0-30	•	.030"	±.0005"	ANSI	1	green
2011123	B6K	.100"	.0005"	0-20-0		.040"	±.0005"	ANSI	1	green
2011124	B6K-RC	.100"	.0005"	0-40	•	.040"	±.0005"	ANSI	1	green
2011133	B7I	.125"	.0005"	0-25-0		.050"	±.0005"	ANSI	1	green
2011134	B7I-RC	.125"	.0005"	0-50	•	.050"	±.0005"	ANSI	1	green
2011114	B3W	.050"	.001"	0-10-0		.020"	±.001"	ANSI	1	green
2011115	B3W-RC	.050"	.001"	0-20	•	.020"	±.001"	ANSI	1	green
2011128	B6Q	.100"	.001"	0-20-0		.040"	±.001"	ANSI	1	green
2011129	B6Q-RC	.100"	.001"	0-40	•	.040"	±.001"	ANSI	1	green
2011137	B7O	.125"	.001"	0-25-0		.050"	±.001"	ANSI	1	green
2011138	B7O-RC	.125"	.001"	0-50	•	.050"	±.001"	ANSI	1	green
2011141	B8I	.250"	.001"	0-50-0		.100"	±.001"	ANSI	1	green
2011142	B8I-RC	.250"	.001"	0-100	•	.100"	±.001"	ANSI	1	green

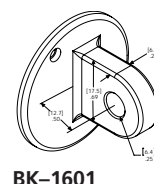
- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr

Dial Indicator per ANSI/AGD Group 1 – Mahr Series B

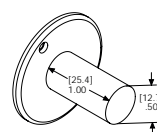


Accessories

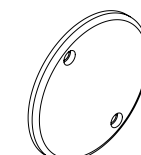
Order no.	Product name	Product type	ANSI/AGD Group
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203132	Mounting bracket with adjusting knob	AT-115	1
2203155	Mounting bracket with hex socket adjust	AT-27	1
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203183	Brake attachment (option)	AT-A-7-W1	1
2204603	Base for indicators with lug back	BA-1051	
2204756	Vertical lug back, Centered, 1/4" Hole	BK-1600	1
2204757	Vertical lug back, offset, 1/4" Hole	BK-1601	1
2204758	Adjustable back 1/4"-20 Thread	BK-1633	1
2204759	Post back 1/2"	BK-1634	1
2204760	Flat back	BK-1660	1
2204761	Screw type back 1/4-28	BK-1661	1
2204771	Horizontal lug back 1/4" Hole	BK-19	1
2204811	Rack back used on AT-27 and AT-115	BK-92	1
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2206230	Range limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220128	Tolerance hands w/screw on bezel (option)	HD-128	1
2220156	Tolerance hands w/screw on bezel (option)	HD-59	1
2220539	OX-Bow Lifting lever	LR-40	
2220542	Liftig lever, left hand	LR-46	1
2220543	Liftig lever, right hand	LR-47	1
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



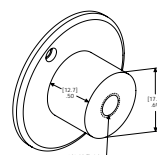
BK-1601



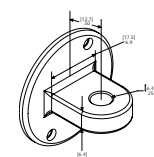
BK-1634



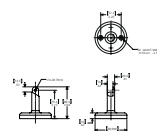
BK-1660



BK-1661



BK-19



BA-1051



BU-80



AD-138



LR-46

Dial Indicator per ANSI/AGD Group 1 – Mahr Series 0

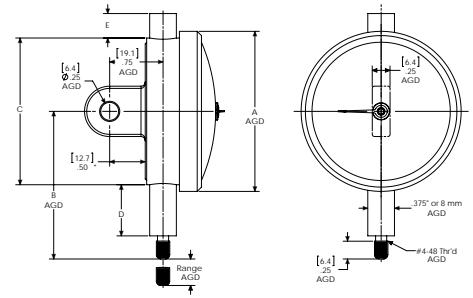


- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr

Technical Data

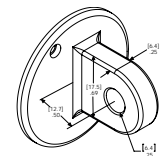
Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		mm	mm			mm	mm			
2011765	O1I	0.5	0.002	0-10-0		0.2	± 0,004	ANSI	1	yellow
2011767	O1I-RC	0.5	0.002	0-20	•	0.2	± 0,004	ANSI	1	yellow
2011770	O3I	1.25	0.005	0-25-0		0.5	± 0,005	ANSI	1	yellow
2011772	O3I-RC	1.25	0.005	0-50	•	0.5	± 0,005	ANSI	1	yellow
2011775	O6I	2.5	0.01	0-50-0		1	± 0,010	ANSI	1	yellow
2011776	O6I-RC	2.5	0.01	0-100	•	1	± 0,010	ANSI	1	yellow
2011779	O8I	6.25	0.025	0-125-0		2.5	± 0,025	ANSI	1	yellow
2011780	O8I-RC	6.25	0.025	0-250	•	2.5	± 0,025	ANSI	1	yellow

Dial Indicator per ANSI/AGD Group 1 – Mahr Series 0

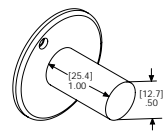


Accessories

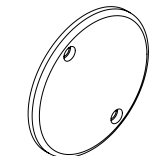
Order no.	Product name	Product type	ANSI/AGD Group
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203132	Mounting bracket with adjusting knob	AT-115	1
2203155	Mounting bracket with hex socket adjust	AT-27	1
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203183	Brake attachment (option)	AT-A-7-W1	1
2204603	Base for indicators with lug back	BA-1051	
2204756	Vertical lug back, Centered, 1/4" Hole	BK-1600	1
2204757	Vertical lug back, offset, 1/4" Hole	BK-1601	1
2204758	Adjustable back 1/4"-20 Thread	BK-1633	1
2204759	Post back 1/2"	BK-1634	1
2204760	Flat back	BK-1660	1
2204761	Screw type back 1/4-28	BK-1661	1
2204771	Horizontal lug back 1/4" Hole	BK-19	1
2204811	Rack back used on AT-27 and AT-115	BK-92	1
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2206230	Range limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220128	Tolerance hands w/screw on bezel (option)	HD-128	1
2220156	Tolerance hands w/screw on bezel (option)	HD-59	1
2220539	OX-Bow Lifting lever	LR-40	
2220542	Liftig lever, left hand	LR-46	1
2220543	Liftig lever, right hand	LR-47	1
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



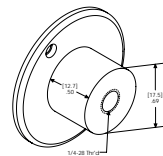
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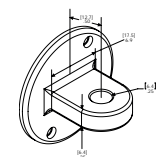
BK-1634



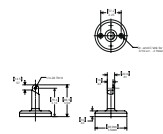
BK-1660



BK-1661



BK-19



BA-1051



BU-80



AD-138



LR-46

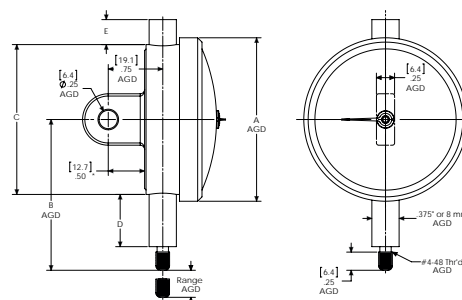
Dial Indicator per ANSI/AGD Group 2 – Mahr Series C



- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		inch	inch			inch	inch			
2011157	C1/2K	.010"	.00005"	0-2-0		.004"	±.0001"	ANSI	2	green
2011158	C1/2K-RC	.010"	.00005"	0-4	•	.004"	±.0001"	ANSI	2	green
2011161	C1K	.020"	.0001"	0-4-0		.008"	±.0001"	ANSI	2	green
2011162	C1K-RC	.020"	.0001"	0-8	•	.008"	±.0001"	ANSI	2	green
2015781	22I	.025"	.0001"	0-5-0		.010"	±.0001"	ANSI	2	green
2014761	22IN-RC	.025"	.0001"	0-10	•	.010"	±.0001"	ANSI	2	green
2015782	22QN	.025"	.00025"	0-5-0		.010"	±.00025"	ANSI	2	green
2014791	22QN-RC	.025"	.00025"	0-10	•	.010"	±.00025"	ANSI	2	green
2015783	23K	.050"	.00025"	0-10-0		.020"	±.00025"	ANSI	2	green
2014808	23K-RC	.050"	.00025"	0-20	•	.020"	±.00025"	ANSI	2	green
2015784	23Q	.050"	.0005"	0-10-0		.020"	±.0005"	ANSI	2	green
2014810	23Q-RC	.050"	.0005"	0-20	•	.020"	±.0005"	ANSI	2	green
2015786	25M	.075"	.0005"	0-15-0		.030"	±.0005"	ANSI	2	green
2014811	25M-RC	.075"	.0005"	0-30	•	.030"	±.0005"	ANSI	2	green
2015787	26K	.100"	.0005"	0-20-0		.040"	±.0005"	ANSI	2	green
2014812	26K-RC	.100"	.0005"	0-40	•	.040"	±.0005"	ANSI	2	green
2015790	27I	.125"	.0005"	0-25-0		.050"	±.0005"	ANSI	2	green
2014814	27I-RC	.125"	.0005"	0-50	•	.050"	±.0005"	ANSI	2	green
2015785	23W	.050"	.001"	0-10-0		.020"	±.001"	ANSI	2	green
2014809	23W-RC	.050"	.001"	0-20	•	.020"	±.001"	ANSI	2	green
2015789	26Q	.100"	.001"	0-20-0		.040"	±.001"	ANSI	2	green
2014813	26Q-RC	.100"	.001"	0-40	•	.040"	±.001"	ANSI	2	green
2015791	27O	.125"	.001"	0-25-0		.050"	±.001"	ANSI	2	green
2014815	27O-RC	.125"	.001"	0-50	•	.050"	±.001"	ANSI	2	green
2015792	28IN	.250"	.001"	0-50-0		.100"	±.001"	ANSI	2	green
2011049	28IN-RC	.250"	.001"	0-100	•	.100"	±.001"	ANSI	2	green



Dial Indicator per ANSI/AGD Group 2 – Mahr Series C

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2014804	Magnetic maximum hand w/snap on bezel (option)		2
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201843	Adaptor Bushing 0.275" ID to 0.375" OD	AD-58	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203133	Mounting bracket with adjusting knob for AGD 2	AT-116	2
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203184	Brake attachment (option)	AT-A-7-W2	2
2204603	Base for indicators with lug back	BA-1051	
2204772	Post back 1/2" Dia	BK-2093	2
2204773	Vertical Lug, Offset 1/4" Hole	BK-2168	2
2204780	Vertical lug back, Centered 1/4" Hole	BK-383	2
2204782	Horizontal lug back, Centered, 1/4" Hole	BK-400	2
2204786	Flat back for AGD 2	BK-470	2
2204790	Adjustable back 1/4-20 Thread	BK-531	2
2204802	Screw type back 1/4-28	BK-692	2
2204812	Rack back used on AT-116 and AT-28	BK-93	2
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD.	BU-94	
2205222	Tolerance hands w/screw on bezel (option)	BZ-2503	2
2206230	Range limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220154	Tolerance hands w/screw on bezel (option)	HD-57	2
2220177	Protective housing for AGD 2 models with rangers up to 6.35mm/ .250"	HG-100	2
2220178	Protective housing for AGD 2 models with rangers up to 25mm/ 1"	HG-101	2
2220539	OX-Bow Lifting lever	LR-40	
2220544	Liftig lever, left hand	LR-48	2
2220545	Liftig lever, right hand	LR-49	2
2235806	Tap 1/2 -32	V-892	



2014804



HD-57



LR-48



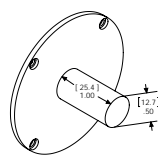
BU-80



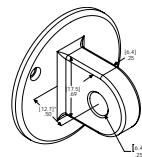
AD-138



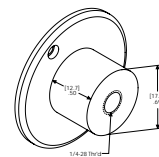
HG-100



BK-2093



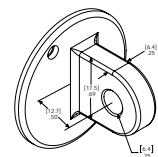
BK-1600



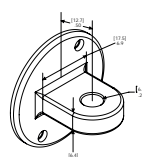
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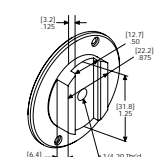
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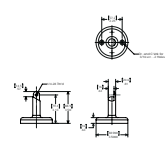
BK-1601



BK-19



BK-531



BA-1051

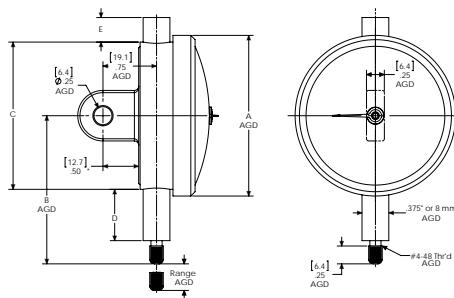
Dial Indicator per ANSI/AGD Group 2 – Mahr Series P



- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		mm	mm			mm	mm			
2011810	P1/2I	0.25	0.001	0-5-0		0.1	± 0,002	ANSI	2	yellow
2011812	P1/2I-RC	0.25	0.001	0-10	•	0.1	± 0,002	ANSI	2	yellow
2011815	P1I	0.5	0.002	0-10-0		0.2	± 0,004	ANSI	2	yellow
2011817	P1I-RC	0.5	0.002	0-20	•	0.2	± 0,004	ANSI	2	yellow
2015793	23I	1.25	0.005	0-25-0		0.5	± 0,005	ANSI	2	yellow
2014817	23IM-RC	1.25	0.005	0-50	•	0.5	± 0,005	ANSI	2	yellow
2015794	26I	2.5	0.01	0-50-0		1	± 0,010	ANSI	2	yellow
2014818	26IM-RC	2.5	0.01	0-100	•	1	± 0,010	ANSI	2	yellow
2015795	28IM	5	0.02	0-100-0		2	± 0,020	ANSI	2	yellow
2014819	28IM-RC	5	0.02	0-200	•	2	± 0,020	ANSI	2	yellow



Dial Indicator per ANSI/AGD Group 2 – Mahr Series P

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2014804	Magnetic maximum hand w/snap on bezel (option)		2
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201843	Adaptor Bushing 0.275" ID to 0.375" OD	AD-58	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203133	Mounting bracket with adjusting knob for AGD 2	AT-116	2
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203184	Brake attachment (option)	AT-A-7-W2	2
2204603	Base for indicators with lug back	BA-1051	
2204772	Post back 1/2" Dia	BK-2093	2
2204773	Vertical Lug, Offset 1/4" Hole	BK-2168	2
2204780	Vertical lug back, Centered 1/4" Hole	BK-383	2
2204782	Horizontal lug back, Centered, 1/4" Hole	BK-400	2
2204786	Flat back for AGD 2	BK-470	2
2204790	Adjustable back 1/4-20 Thread	BK-531	2
2204802	Screw type back 1/4-28	BK-692	2
2204812	Rack back used on AT-116 and AT-28	BK-93	2
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD.	BU-94	
2205222	Tolerance hands w/screw on bezel (option)	BZ-2503	2
2206230	Range limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220154	Tolerance hands w/screw on bezel (option)	HD-57	2
2220177	Protective housing for AGD 2 models with rangers up to 6.35mm/ .250"	HG-100	2
2220178	Protective housing for AGD 2 models with rangers up to 25mm/ 1"	HG-101	2
2220539	OX-Bow Lifting lever	LR-40	
2220544	Liftig lever, left hand	LR-48	2
2220545	Liftig lever, right hand	LR-49	2
2235806	Tap 1/2 -32	V-892	



2014804



HD-57



LR-48



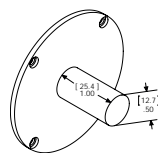
BU-80



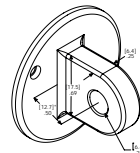
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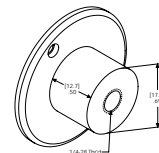
HG-100



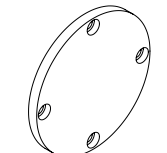
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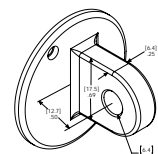
BK-1600



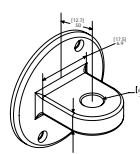
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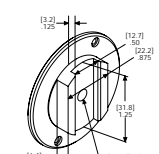
BK-32



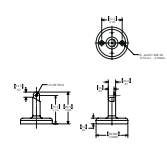
BK-1601



BK-19



BK-531



BA-1051

Dial Indicator MarCator



- Outstanding quality due to a well thought out design, use of high quality materials, and the precision engineered mechanism's guarantee
- The concentric "Speed Read" pointer (on 1.0" and .500" models) allows easy and safe reading of this Dial Indicator
- Spindle and stem are made of resistant stainless steel
- Supplied with: Lug Back and Tolerance Hands

Technical Data

Order no.	Measuring span inch	Graduation value inch	Type of dial face	Rev. counter	Range per rev. inch	Error limit inch	Standard	ANSI/AGD Group	Dial color
2016005	.250"	.001"	0-100	•	.100"	±.001"	ANSI	2	green
2016004	.500"	.001"	0-100	•	.100"	±.001"	ANSI	2	green
2016002	1.000"	.001"	0-100	•	.100"	±.001"	ANSI	2	green

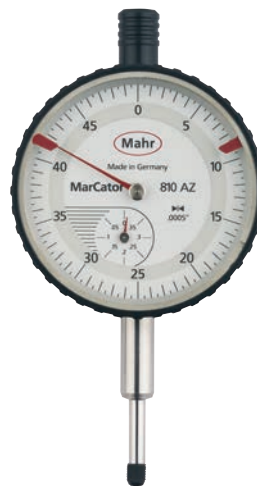
Order no.	Mounting shaft inch	Scale diameter inch
2016005	.375"	2.25"
2016004	.375"	2.25"
2016002	.375"	2.25"

Accessories

Order no.	Product name
2016007	Lug back
2016008	Screw back
2016009	Post back
2016010	Adjustable back
2247145	Flat back

Dial indicator MarCator 810 AZ / 803 AZ

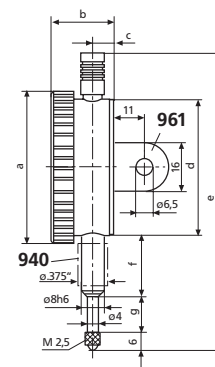
- High contrast dial face
- Adjustable tolerance markers
- Chrome plated housing
- Lifter protection cap on the measuring spindle
- Precision gears and pinions
- **Scope of delivery:** Adapter bush 940, 8mm to 3/8", Case



Technical Data

Order no.		4311900	4324900
Product type		810 AZ	803 AZ
Measuring span	inch	.400"	.120"
Graduation value	inch		.0005"
Type of dial face		0–50	0–20
Range per rev.	inch	.05"	.02"
Error limit	inch	.0005"	.0004"
Error limit, 1/10 revolution inches (text)	inch		.0002"
Repeatability f_w	inch		.00012"
Measuring value hysteresis f_u	inch		.00012"
Free stroke inches (text)	inch	.004"	.008"
Measuring force	N	0.9–1.5	0.7–1.1
Standard			Factory standard
Lifting protection cap			•
Dial color			white

Order no.	a	b	c	d	e	f	g	Mounting shaft	Mounting shaft	Scale diameter
	mm	mm	mm	mm	mm	mm	mm	mm	inch	inch
4311900	58	23	7.5	52	111.5	22	15	8	.375"	1.97"
4324900	40	20.6	6.8	37	83	15.5	8	8	.375"	1.4"



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4373020	Splash proof cap (58 mm)	955
4375010	Lug back, vertical, for 810	961
4375011	Lug back, horizontal, for 810	962
4375020	Lug back, vertical, for 803	966
4375021	Lug back, horizontal, for 803	967

Dial Indicator per ANSI/AGD Group 3 – Mahr Series D

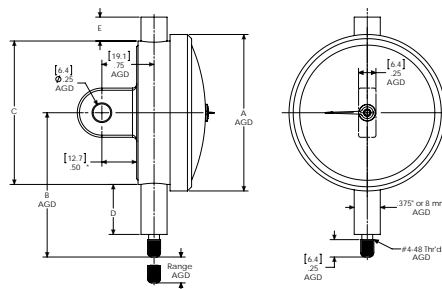


- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		inch	inch			inch	inch			
2011226	D1K	.020"	.0001"	0-4-0		.008"	±.0001"	ANSI	3	green
2011227	D1K-RC	.020"	.0001"	0-8	•	.008"	±.0001"	ANSI	3	green
2011050	32I	.025"	.0001"	0-5-0		.010"	±.0001"	ANSI	3	green
2011051	32I-RC	.025"	.0001"	0-10	•	.010"	±.0001"	ANSI	3	green
2011054	32Q	.025"	.00025"	0-5-0		.010"	±.00025"	ANSI	3	green
2011055	32Q-RC	.025"	.00025"	0-10	•	.010"	±.00025"	ANSI	3	green
2011230	D3K	.050"	.00025"	0-10-0		.020"	±.00025"	ANSI	3	green
2011231	D3K-RC	.050"	.00025"	0-20	•	.020"	±.00025"	ANSI	3	green
2011242	D5G	.075"	.00025"	0-15-0		.030"	±.00025"	ANSI	3	green
2011243	D5G-RC	.075"	.00025"	0-30	•	.030"	±.00025"	ANSI	3	green
2011234	D3Q	.050"	.0005"	0-10-0		.020"	±.0005"	ANSI	3	green
2011235	D3Q-RC	.050"	.0005"	0-20	•	.020"	±.0005"	ANSI	3	green
2011246	D5M	.075"	.0005"	0-15-0		.030"	±.0005"	ANSI	3	green
2011247	D5M-RC	.075"	.0005"	0-30	•	.030"	±.0005"	ANSI	3	green
2011250	D6K	.100"	.0005"	0-20-0		.040"	±.0005"	ANSI	3	green
2011251	D6K-RC	.100"	.0005"	0-40	•	.040"	±.0005"	ANSI	3	green
2011258	D7I	.125"	.0005"	0-25-0		.050"	±.0005"	ANSI	3	green
2011259	D7I-RC	.125"	.0005"	0-50	•	.050"	±.0005"	ANSI	3	green
2011238	D3W	.050"	.001"	0-10-0		.020"	±.001"	ANSI	3	green
2011239	D3W-RC	.050"	.001"	0-20	•	.020"	±.001"	ANSI	3	green
2011254	D6Q	.100"	.001"	0-20-0		.040"	±.001"	ANSI	3	green
2011255	D6Q-RC	.100"	.001"	0-40	•	.040"	±.001"	ANSI	3	green
2011262	D70	.125"	.001"	0-25-0		.050"	±.001"	ANSI	3	green
2011263	D70-RC	.125"	.001"	0-50	•	.050"	±.001"	ANSI	3	green
2011266	D8I	.250"	.001"	0-50-0		.100"	±.001"	ANSI	3	green
2011267	D8I-RC	.250"	.001"	0-100	•	.100"	±.001"	ANSI	3	green

- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr



Dial Indicator per ANSI/AGD Group 3 – Mahr Series D

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2011341	Magnetic maximum hand (option)		3
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203185	Brake attachment (option)	AT-A-7-W3	3
2204603	Base for indicators with lug back	BA-1051	
2204730	Adjustable back with 1/4-20 Thread	BK-10	3
2204734	Horizontal lug back, Centered	BK-109	3
2204763	Screw type back 1/4-28	BK-177	3
2204784	Vertical lug back, Centered	BK-431	3
2204787	Flat back	BK-473	3
2204791	Vertical lug back, offset	BK-545	3
2204799	Post back 1/2" Dia	BK-664	3
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2206230	Rane limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220539	OX-Bow Lifting lever	LR-40	
2220546	Liftig lever, left hand	LR-50	3
2220547	Liftig lever, right hand	LR-51	3
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



2011341



LR-50



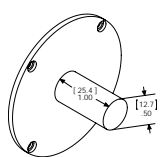
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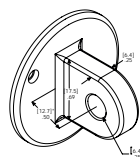
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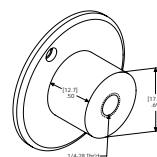
HG-100



BK-2093



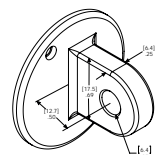
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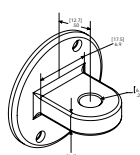
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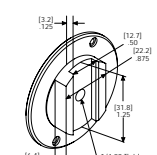
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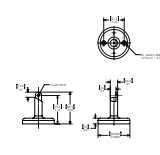
BK-1601



BK-19



BK-531



BA-1051

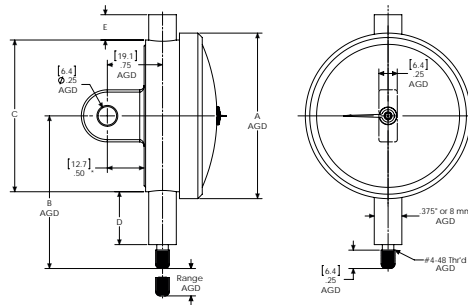
Dial Indicator per ANSI/AGD Group 3 – Mahr Series Q



- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		mm	mm			mm	mm			
2011867	Q1I	0.5	0.002	0-10-0		0.2	± 0,004	ANSI	3	yellow
2011868	Q1I-RC	0.5	0.002	0-20	•	0.2	± 0,004	ANSI	3	yellow
2011871	Q3I	1.25	0.005	0-25-0		0.5	± 0,005	ANSI	3	yellow
2011872	Q3I-RC	1.25	0.005	0-50	•	0.5	± 0,005	ANSI	3	yellow
2011875	Q6I	2.5	0.01	0-50-0		1	± 0,010	ANSI	3	yellow
2011876	Q6I-RC	2.5	0.01	0-100	•	1	± 0,010	ANSI	3	yellow
2011879	Q8I	5	0.02	0-100-0		2	± 0,020	ANSI	3	yellow
2011880	Q8I-RC	5	0.02	0-200	•	2	± 0,020	ANSI	3	yellow



Dial Indicator per ANSI/AGD Group 3 – Mahr Series Q

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2011341	Magnetic maximum hand (option)		3
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203185	Brake attachment (option)	AT-A-7-W3	3
2204603	Base for indicators with lug back	BA-1051	
2204730	Adjustable back with 1/4-20 Thread	BK-10	3
2204734	Horizontal lug back, Centered	BK-109	3
2204763	Screw type back 1/4-28	BK-177	3
2204784	Vertical lug back, Centered	BK-431	3
2204787	Flat back	BK-473	3
2204791	Vertical lug back, offset	BK-545	3
2204799	Post back 1/2" Dia	BK-664	3
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2206230	Rane limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220539	OX-Bow Lifting lever	LR-40	
2220546	Liftig lever, left hand	LR-50	3
2220547	Liftig lever, right hand	LR-51	3
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



2011341



LR-50



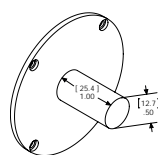
BU-80



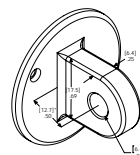
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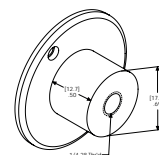
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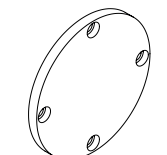
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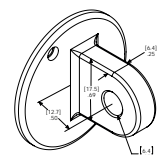
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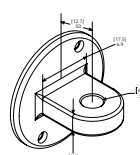
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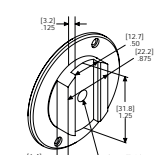
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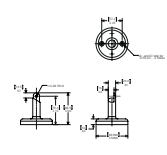
BK-1601



BK-19



BK-531



BA-1051

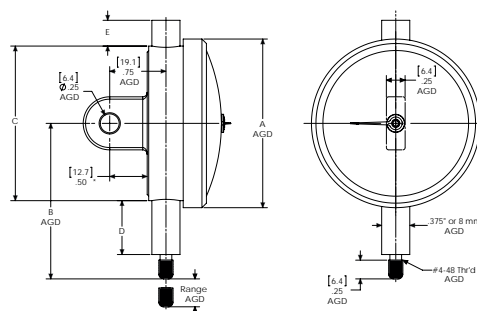
Dial Indicator per ANSI/AGD Group 4 – Mahr Series E



Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.		Standard	ANSI/AGD Group	Dial color
						inch	inch			
2011280	E1K	.020"	.0001"	0-4-0		.008"	± .0001"	ANSI	4	green
2011281	E1K-RC	.020"	.0001"	0-8	•	.008"	± .0001"	ANSI	4	green
2011060	42I	.025"	.0001"	0-5-0		.010"	± .0001"	ANSI	4	green
2011061	42I-RC	.025"	.0001"	0-10	•	.010"	± .0001"	ANSI	4	green
2011286	E3K	.050"	.00025"	0-10-0		.020"	± .00025"	ANSI	4	green
2011287	E3K-RC	.050"	.00025"	0-20	•	.020"	± .00025"	ANSI	4	green
2011298	E5G	.075"	.00025"	0-15-0		.030"	± .00025"	ANSI	4	green
2011299	E5G-RC	.075"	.00025"	0-30	•	.030"	± .00025"	ANSI	4	green
2011290	E3Q	.050"	.0005"	0-10-0		.020"	± .0005"	ANSI	4	green
2011291	E3Q-RC	.050"	.0005"	0-20	•	.020"	± .0005"	ANSI	4	green
2011302	E5M	.075"	.0005"	0-15-0		.030"	± .0005"	ANSI	4	green
2011303	E5M-RC	.075"	.0005"	0-30	•	.030"	± .0005"	ANSI	4	green
2011306	E7I	.125"	.0005"	0-25-0		.050"	± .0005"	ANSI	4	green
2011307	E7I-RC	.125"	.0005"	0-50	•	.050"	± .0005"	ANSI	4	green
2011294	E3W	.050"	.001"	0-10-0		.020"	± .001"	ANSI	4	green
2011295	E3W-RC	.050"	.001"	0-20	•	.020"	± .001"	ANSI	4	green
2011310	E7O	.125"	.001"	0-25-0		.050"	± .001"	ANSI	4	green
2011311	E7O-RC	.125"	.001"	0-50	•	.050"	± .001"	ANSI	4	green
2011314	E8I	.250"	.001"	0-50-0		.100"	± .001"	ANSI	4	green
2011315	E8I-RC	.250"	.001"	0-100	•	.100"	± .001"	ANSI	4	green

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr



Dial Indicator per ANSI/AGD Group 4 – Mahr Series E

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2201801	Adaptor	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203186	Brake attachment (option)	AT-A-7-W4	4
2204603	Base for indicators with lug back	BA-1051	
2204755	Screw type back 1/4-28	BK-16	4
2204762	Post back 1/2"	BK-17	4
2204765	Adjustable back 1/4-20 Thread	BK-18	4
2204775	Vertical and Horizontal lug back, Centered	BK-3	4
2204781	Vertical lug back, Offset	BK-4	4
2204788	Flat back	BK-5	4
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2206230	Range limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2220150	Bezel with Tolerance hands (Option)	HD-53	4
2220539	OX-Bow Lifting lever	LR-40	
2220557	Liftig lever, left hand	LR-68	4
2220558	Liftig lever, right hand	LR-69	4
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



BU-80



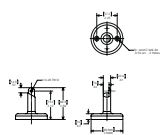
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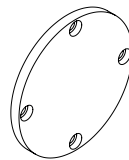
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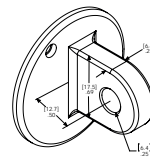
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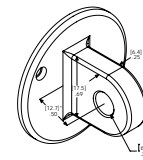
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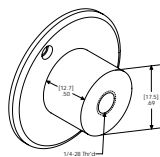
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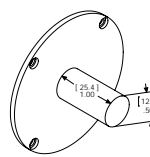
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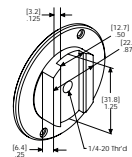
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BK-1661



BK-2093



BK-531

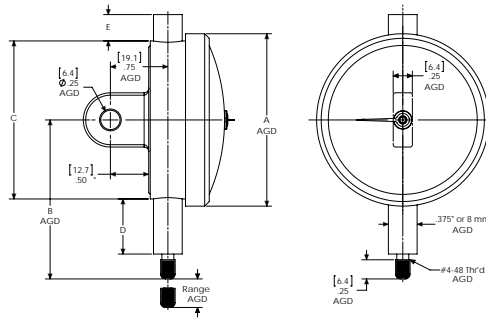
Dial Indicator per ANSI/AGD Group 4 – Mahr Series R



- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Compliance with ANSI/AGD dimensional and accuracy specifications
- These indicators are normally furnished with continuous dial (with R.C.) or + on right balance dial (w/o R.C.), lug back and .18" by .250" long contact
- Optional Dials: balanced dial with + on left; continuous clockwise; continuous counterclockwise. (Order by part number and specify dial style desired)
- For other dial styles or special requirements - call Mahr

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		mm	mm			mm	mm			
2012347	R1I	0.5	0.002	0-10-0		0.2	± 0,004	ANSI	4	yellow
2012348	R1I-RC	0.5	0.002	0-20	•	0.2	± 0,004	ANSI	4	yellow
2012351	R3I	1.25	0.005	0-25-0		0.5	± 0,005	ANSI	4	yellow
2012352	R3I-RC	1.25	0.005	0-50	•	0.5	± 0,005	ANSI	4	yellow
2012355	R6I	2.5	0.01	0-50-0		1	± 0,010	ANSI	4	yellow
2012356	R6I-RC	2.5	0.01	0-100	•	1	± 0,010	ANSI	4	yellow
2012359	R8I	5	0.02	0-100-0		2	± 0,020	ANSI	4	yellow
2012360	R8I-RC	5	0.02	0-200	•	2	± 0,020	ANSI	4	yellow



Dial Indicator per ANSI/AGD Group 4 – Mahr Series R

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2201801	Adaptor	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203186	Brake attachment (option)	AT-A-7-W4	4
2204603	Base for indicators with lug back	BA-1051	
2204755	Screw type back 1/4-28	BK-16	4
2204762	Post back 1/2"	BK-17	4
2204765	Adjustable back 1/4-20 Thread	BK-18	4
2204775	Vertical and Horizontal lug back, Centered	BK-3	4
2204781	Vertical lug back, Offset	BK-4	4
2204788	Flat back	BK-5	4
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2206230	Rane limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2220150	Bezel with Tolerance hands (Option)	HD-53	4
2220539	OX-Bow Lifting lever	LR-40	
2220557	Liftig lever, left hand	LR-68	4
2220558	Liftig lever, right hand	LR-69	4
2235806	Tap 1/2 -32	V-892	



BU-80



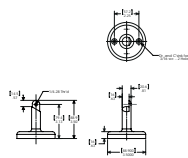
AD-138



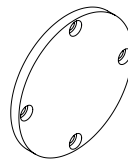
LR-68



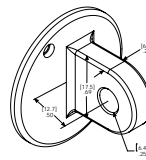
HD-53



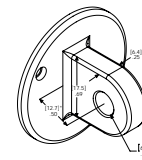
BA-1051



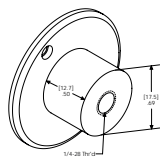
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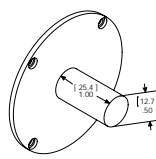
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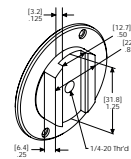
BK-1600



BK-1661



BK-2093



BK-531

Lang Range and Extra Long Range Indicators



- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Normally furnished: continuous clockwise dial; centered vertical lug back; regular contact point, .18" radiused, .250" long
- Long Range Models: include (1) revolution counter (except C9I without revolution counter). Extra Long Range Models: include (2) revolution counters.
- For other dial styles or special requirements - call Mahr.

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		inch	inch			inch	inch			
2011064	42IQ	.500"	.0001"	0-10	•	.010"	± .0001" for first 2 1/2 rev. only	ANSI	4	green
2014699	28IQN	.500"	.001"	0-100	•	.100"	± .001"	ANSI	2	green
2014698	28ISN	1.000"	.001"	0-100	•	.100"	± .001"	ANSI	2	green
2011270	D8IS	1.000"	.001"	0-100	•	.100"	± .001"	ANSI	3	green
2014816	29I	1.000"	.01"	0-1000		1.000"	± .010"	ANSI	2	green
2011272	D8IT	2.000"	.001"	0-100	•	.100"	± .001" for first 1" of travel	ANSI	3	green
2011318	E8IU	3.000"	.001"	0-100	•	.100"	± .001" for first 1" of travel	ANSI	4	green

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	ANSI/AGD Group	Dial color
		mm	mm			mm	mm			
2012381	SP6IS	25	0.01	0-100	•	1	± 0.02	ANSI	2	yellow
2012384	SQ6IS	25	0.01	0-100	•	1	± 0.02	ANSI	3	yellow
2011883	Q8IT	50	0.025	0-25	•	2.5	± 0.025 for first 25 mm of travel	ANSI	3	yellow
2012363	R8IU	75	0.025	0-25	•	2.5	± 0.025 for first 25 mm of travel	ANSI	4	yellow

Order no.	Mounting shaft	Scale diameter	Scale diameter
	inch	inch	mm
2011064	.375"	3.625"	
2014699	.375"	2.25"	
2014698	.375"	2.25"	
2011270	.375"	2.75"	
2014816	.375"	2.25"	
2011272	.375"	2.75"	
2011318	.375"	3.625"	
2012381	.375"		57
2012384	.375"		70
2011883	.375"		70
2012363	.375"		92

Lang Range and Extra Long Range Indicators

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2011341	Magnetic maximum hand (option)		3
2014804	Magnetic maximum hand w/snap on bezel (option)		2
2201801	Adaptor for inductive probes for use on dial indicators (AGD)	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203133	Mounting bracket with adjusting knob for AGD 2	AT-116	2
2203156	Mounting bracket with hex socket adjustable	AT-28	2
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203184	Brake attachment (option)	AT-A-7-W2	2
2203185	Brake attachment (option)	AT-A-7-W3	3
2204603	Base for indicators with lug back	BA-1051	
2204730	Adjustable back with 1/4-20 Thread	BK-10	3
2204734	Horizontal lug back, Centered	BK-109	3
2204763	Screw type back 1/4-28	BK-177	3
2204772	Post back 1/2" Dia	BK-2093	2
2204773	Vertical Lug, Offset 1/4" Hole	BK-2168	2
2204775	Vertical and Horizontal lug back, Centered	BK-3	4
2204780	Vertical lug back, Centered 1/4" Hole	BK-383	2
2204782	Horizontal lug back, Centered, 1/4" Hole	BK-400	2
2204784	Vertical lug back, Centered	BK-431	3
2204786	Flat back for AGD 2	BK-470	2
2204787	Flat back	BK-473	3
2204790	Adjustable back 1/4-20 Thread	BK-531	2
2204791	Vertical lug back, offset	BK-545	3
2204799	Post back 1/2" Dia	BK-664	3
2204802	Screw type back 1/4-28	BK-692	2
2204812	Rack back used on AT-116 and AT-28	BK-93	2
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2205222	Tolerance hands w/screw on bezel (option)	BZ-2503	2
2206230	Range limiting caps, adjustable up to 9.52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220150	Bezel with Tolerance hands (Option)	HD-53	4
2220154	Tolerance hands/screw on bezel (option)	HD-57	2
2220177	Protective housing for AGD 2 models with rangers up to 6.35mm/ .250"	HG-100	2
2220178	Protective housing for AGD 2 models with rangers up to 25mm/ 1"	HG-101	2
2220539	OX-Bow Lifting lever	LR-40	
2220544	Liftig lever, left hand	LR-48	2
2220545	Liftig lever, right hand	LR-49	2
2220546	Liftig lever, left hand	LR-50	3
2220547	Liftig lever, right hand	LR-51	3
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



2011341



HD-57



LR-48;LR-50



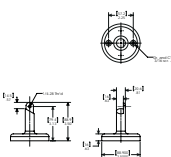
BU-80



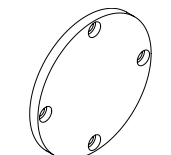
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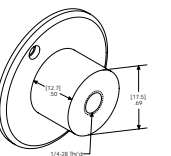
HG-100



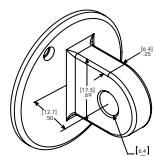
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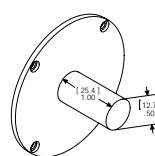
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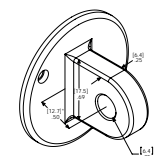
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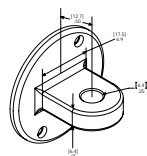
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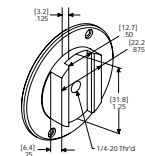
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BK-1600

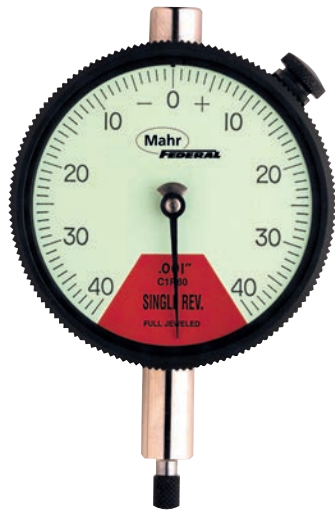


BK-19



BK-531

Dial Indicator MarCator C1RN-80 / C1RN-40



A practical solution for inspectors and machine operators who need to eliminate the potential for indicator misreadings. No matter how far out of tolerance a part may be, the needle of a one revolution indicator will always stay in the red, non-read zone — no passing zero again — no reading errors.

- No limited contact travel
- Shockproof "Following Movement" always keeps the hand within a single revolution
- Alternate contact points, backs and other accessories are optionally available
- Metric dials are yellow
- One piece case design
- Inserted precision bearings
- Available in ANSI/AGD Group 2 size
- Flat back

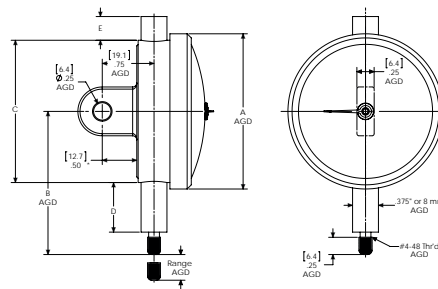
Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Standard	Dial color
		inch	inch			
2014792	C1RN-80	.080"	.001"	40-0-40	ANSI	green
2014793	C1RN-40	.040"	.0005"	20-0-20	ANSI	green

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Standard	Dial color
		mm	mm			
2014794	P1RN-200	2	0.02	100-0-100	ANSI	yellow
2014795	P1RN-100	1	0.01	50-0-50	ANSI	yellow
2014796	M1RN-200	2	0.02	100-0-100	ANSI	yellow
2014797	M1RN-100	1	0.01	50-0-50	ANSI	yellow

Order no.	Mounting shaft	
	mm	inch
2014792		.375"
2014793		.375"
2014794		.375"
2014795		.375"
2014796	8	
2014797	8	



Dial Indicator MarCator P1RN-200 / P1RN-100 / M1RN-200 / M1RN-100

Accessories

Order no.	Product name	Product type	ANSI/AGD Group
2014804	Magnetic maximum hand (Option)		2
2201801	Adaptor	AD-138	
2201846	Threaded Bushing .625" long .500" OD with 5/16-32 internal thread	AD-62	
2201854	Split Collet OD is 17.45 mm/ .687". Requires 1/2-32 threaded hole.	AD-87	
2203133	Mounting bracket with adjusting knob for AGD 2	AT-116	2
2203156	Mounting bracket with hex socket adjustable	AT-28	2
2203163	Brake attachment, dust cap mount (option), Range limited to 6.35mm/ .250" for group 1 and to 12mm/ .500" for group 2-4 indicators	AT-81	
2203184	Brake attachment (option)	AT-A-7-W2	2
2204603	Base for indicators with lug back	BA-1051	
2204772	Post back 1/2" Dia	BK-2093	2
2204773	Vertical Lug, Offset 1/4" Hole	BK-2168	2
2204780	Vertical lug back, Centered 1/4" Hole	BK-383	2
2204782	Horizontal lug back, Centered, 1/4" Hole	BK-400	2
2204786	Flat back for AGD 2	BK-470	2
2204790	Adjustable back 1/4-20 Thread	BK-531	2
2204802	Screw type back 1/4-28	BK-692	2
2204812	Rack back used on AT-116 and AT-28	BK-93	2
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111	
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80	
2205222	Tolerance hands w/screw on bezel (option)	BZ-2503	2
2206230	Rane limiting caps, adjustable up to 9,52 mm / .375"	CS-123	
2219994	Dust guard use with indicators with a .375" stem	GU-2	
2220154	Tolerance hands w/screw on bezel (option)	HD-57	2
2220177	Protective housing for AGD 2 models with rangers up to 6.35mm/ .250"	HG-100	2
2220178	Protective housing for AGD 2 models with rangers up to 25mm/ 1"	HG-101	2
2220539	OX-Bow Lifting lever	LR-40	
2220544	Liftig lever, left hand	LR-48	2
2220545	Liftig lever, right hand	LR-49	2
2235806	Tap 1/2 -32	V-892	
2205200	Split bushing without counterbore, .375" stem hole x .50" OD	BU-94	



2014804



HD-57



LR-48



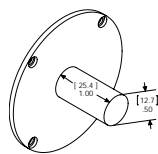
BU-80



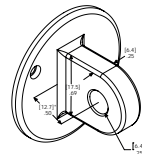
AD-138



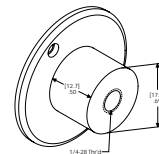
HG-100



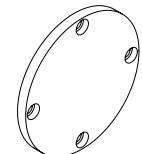
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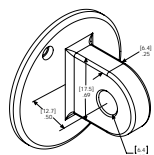
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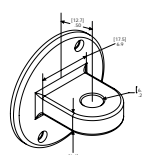
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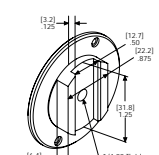
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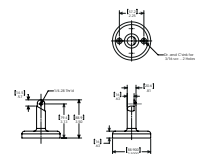
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BK-19



BK-531



BA-1051

Series WC Wetproof Dial Indicators



Application:

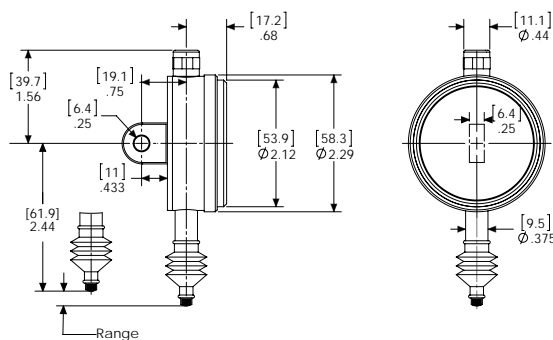
Splashproof protection from coolant, oil, or other contaminant's

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Normally furnished: continuous clockwise dial with revolution counter; BK-63 centered vertical lug back; regular contact point, .18" radius, .625" long
- Optional Dials: continuous counterclockwise with revolution counter; balanced outer dial with + on right or left. Order by dial type and specify dial style desired
- For other dial styles or special requirements - call Mahr

Technical Data

Order no.	Product type	Measuring span inch	Graduation value inch	Type of dial face	Rev. counter	Range per rev. inch	Error limit inch	Standard	Dial color
2014655	W22I	.025"	.0001"	0-10	•	.010"	± .0001"	ANSI	green
2014663	WC3K	.050"	.00025"	0-20	•	.020"	± .00025"	ANSI	green
2014665	WC3Q	.050"	.0005"	0-20	•	.020"	± .0005"	ANSI	green
2014667	WC5M	.075"	.0005"	0-30	•	.030"	± .0005"	ANSI	green
2014669	WC6K	.100"	.0005"	0-40	•	.040"	± .0005"	ANSI	green
2014671	WC7I	.125"	.0005"	0-50	•	.050"	± .0005"	ANSI	green
2014673	WC8I	.250"	.001"	0-100	•	.100"	± .001"	ANSI	green
2014675	WC8IS	1.000"	.001"	0-100	•	.100"	± .001"	ANSI	green

Order no.	Mounting shaft inch
2014655	.375"
2014663	.375"
2014665	.375"
2014667	.375"
2014669	.375"
2014671	.375"
2014673	.375"
2014675	.375"



Accessories

Order no.	Product name	Product type
2204797	Lug back	BK-63
2204800	Adjustable back 1/4-20 Thread	BK-68
2204810	Post back 1/2" Dia	BK-90
2204813	Flat back	BK-97

Series WP Wetproof Dial Indicators

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring . . . less maintenance
- Normally furnished: continuous clockwise dial with revolution counter; BK-63 centered vertical lug back; regular contact point, .18" radiused, .625" long
- Optional Dials: continuous counterclockwise with revolution counter; balanced outer dial with + on right or left. Order by dial type and specify dial style desired
- For other dial styles or special requirements - call Mahr



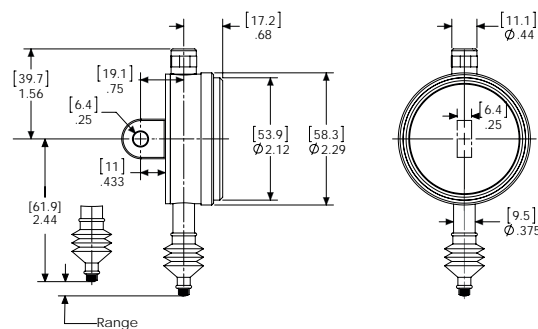
Application:

Splashproof protection from coolant, oil, or other contaminant's

Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Rev. counter	Range per rev.	Error limit	Standard	Dial color
		mm	mm			mm	mm		
2014679	WP11	0.5	0.002	0-20	•	0.2	± 0,004	ANSI	yellow
2014681	WP31	1.25	0.005	0-50	•	0.5	± 0,005	ANSI	yellow
2014683	WP61	2.5	0.01	0-100	•	1	± 0,01	ANSI	yellow

Order no.	Mounting shaft
	inch
2014679	
2014681	.375"
2014683	.375"



Accessories

Order no.	Product name	Product type
2204797	Lug back	BK-63
2204800	Adjustable back 1/4-20 Thread	BK-68
2204810	Post back 1/2" Dia	BK-90
2204813	Flat back	BK-97

Perpendicular Dial Indicators



Application:

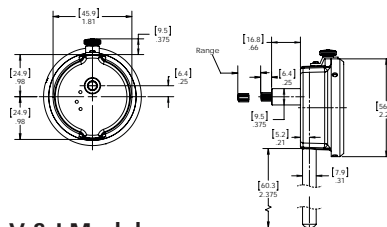
Provides improved readability where other style indicators cannot be used

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Normally furnished: balanced dial with + on right; mounting rod (see dimension drawings); regular contact point, .18" radiused, .250" long
- Threaded stem versions available as an option; AD-59 (.5622 long x .500" OD. for "J & W" styles), 3/8-32 internally threaded bushings and AD-60 (.687" long x .500" OD. for "G & F" Models) purchased separately. Bushings also available separately.
- For other dial styles or special requirements - call Mahr

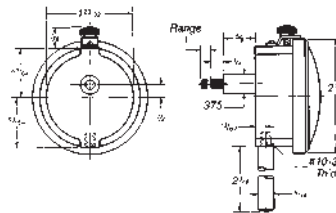
Technical Data

Order no.	Product type	Measuring span inch	Graduation value inch	Type of dial face	Range per rev. inch	Error limit inch	Gear type	Standard	Dial color
2011713	J1K	.008"	.0001"	0-4-0	.008"	± .0001"	crown	ANSI	green
2011715	J6K	.040"	.0005"	0-20-0	.040"	± .0005"	crown	ANSI	green
2011332	G4O	.100"	.0005"	0-12-0	.025"	± .0005"	spiral	ANSI	green
2011717	J8I	.100"	.001"	0-50-0	.100"	± .001"	crown	ANSI	green
2012411	V8I	.100"	.001"	0-50-0	.100"	± .001"	crown	ANSI	green
2011330	F8I	.200"	.001"	0-50-0	.100"	± .001"	spiral	ANSI	green
2011334	G8I	.200"	.001"	0-50-0	.100"	± .001"	spiral	ANSI	green

Order no.	Mounting shaft inch	Scale diameter inch
2011713	.313"	2,25"
2011715	.313"	2,25"
2011332	.313"	2,25"
2011717	.313"	2,25"
2012411	.375"	1,69"
2011330	.375"	1,72"
2011334	.313"	2,25"



V & I Models



J & W Models

Accessories

Order no.	Product name	Product type
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80
2205200	Split bushing without counterbore, .375" stem hole „x .50" OD.	BU-94
2219994	Dust guard use with indicators with a .375" stem	GU-2



BU-80

Perpendicular Dial Indicators

- Unit construction and removable movement save repair/cleaning time and maintenance
- Hardened gears and stainless steel racks provide lasting protection against indicator failure due to shock or wear
- Jeweled bearings resist friction, add to longer indicator life
- Skeletonized, hobbled gears for more sensitive response, superior indicator accuracy with minimal hysteresis error
- Soft tinted dials (green - inch / yellow - metric) minimize eye strain
- Special steel alloy, balanced dial hand affords no shift, precise reading
- Controlled rack and pinion mesh eliminates slope for precise response and reading
- Smooth adjusting bezels for easy setup
- Positive pressure pullback spring requires less maintenance
- Normally furnished: balanced dial with + on right; mounting rod (see dimension drawings); regular contact point, .18" radiused, .250" long
- Threaded stem versions available as an option; AD-59 (.5622 long x .500" OD. for "J & W" styles), 3/8-32 internally threaded bushings and AD-60 (.687" long x .500" OD. for "G & F" Models) purchased separately. Bushings also available separately.
- For other dial styles or special requirements - call Mahr



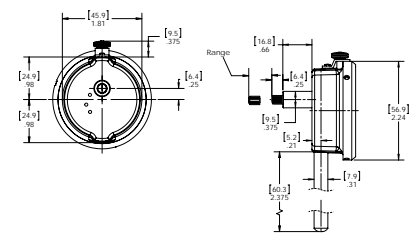
Application:

Provides improved readability where other style indicators cannot be used

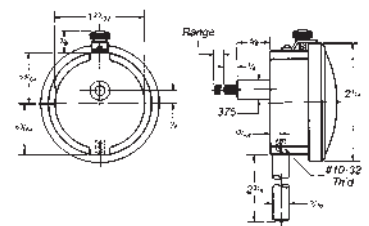
Technical Data

Order no.	Product type	Measuring span	Graduation value	Type of dial face	Range per rev.	Error limit	Gear type	Standard	Dial color
		mm	mm		mm	mm			
2014653	W1I	0.2	0.002	0-10-0	0.2	± 0.002	crown	ANSI	yellow
2014657	W6I	1	0.01	0-50-0	1	± 0.010	crown	ANSI	yellow
2014659	W8I	2.5	0.025	0-125-0	2.5	± 0.025	crown	ANSI	yellow
2011344	I8I	2.5	0.025	0-125-0	2.5	± 0.025	crown	ANSI	yellow

Order no.	Mounting shaft	Scale diameter
	inch	mm
2011344	.375"	43
2014653	.313"	57
2014657	.313"	57
2014659	.313"	57



V & I Models



J & W Models

Accessories

Order no.	Product name	Product type
2205081	Split bushing, for use with protective housing, .375" stem hole X .687" OD	BU-111
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197
2205195	Split bushing, with counterbore, .375" stem hole X .500" OD	BU-80
2205200	Split bushing without counterbore, .375" stem hole „x .50" OD.	BU-94
2219994	Dust guard use with indicators with a .375" stem	GU-2

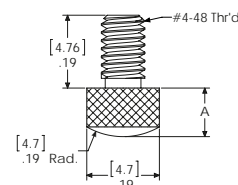


BU-80

Indicators MarCator

Standard measuring anvil

Order no.	Product type	Dimension A	Measuring surface	Number	Set contents
2225870	PT-225	1/8"	hardened steel	1	
2225867	PT-223	1/4"	hardened steel	1	
2225904	PT-35	1/4"	carbide tipped	1	
2225902	PT-317	1/4"	Diamond	1	
2225973	PT-563	3/8"	hardened steel	1	
2225763	PT-14	1/2"	hardened steel	5	5 units
2225974	PT-564	5/8"	hardened steel	1	
2225901	PT-31	3/4"	hardened steel	1	
2225799	PT-201	7/8"	hardened steel	1	
2225885	PT-232	1"	hardened steel	5	5 units
2225900	PT-305	1-1/8"	hardened steel	1	
2225975	PT-565	1-1/4"	hardened steel	5	5 units
2225888	PT-239	1-3/8"	hardened steel	1	
2225933	PT-50	1-1/2"	hardened steel	5	5 units
2225887	PT-235	1-5/8"	hardened steel	1	
2225890	PT-241	1-3/4"	hardened steel	5	5 units
2225738	PT-100	1-7/8"	hardened steel	1	
2225934	PT-51	2"	hardened steel	5	5 units
2225891	PT-243	2-1/8"	hardened steel	1	
2225986	PT-696	2-1/4"	hardened steel	1	
2225739	PT-101	2-3/8"	hardened steel	1	
2225892	PT-245	2-1/2"	hardened steel	1	
2225740	PT-102	2-5/8"	hardened steel	1	
2225976	PT-566	2-3/4"	hardened steel	1	
2225893	PT-247	2-7/8"	hardened steel	1	
2225765	PT-155	3"	hardened steel	5	5 units
2225756	PT-116	1/8" - 1"	hardened steel	8	1/8 - 1" in increments of 1/8"
2225755	PT-115	1/8" - 3"	hardened steel	24	1/8 - 3" in increments of 1/8"

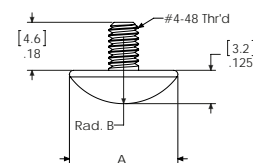


Plane measuring anvil

Order no.	Product type	Dimension A	Measuring surface	Number	Set contents
2202280	AL-19	1/8"	hardened steel	5	5 units
2202337	AL-673	1/4"	hardened steel	1	
2202322	AL-51	1/4"	carbide tipped	1	
2202281	AL-20	3/8"	hardened steel	1	
2202283	AL-21	1/2"	hardened steel	1	
2202284	AL-22	5/8"	hardened steel	1	
2202285	AL-23	3/4"	hardened steel	1	
2202286	AL-24	7/8"	hardened steel	1	
2202287	AL-25	1"	hardened steel	1	
2202327	AL-55	1/8" - 1"	hardened steel	8	1/8 - 1" in increments of 1/8"

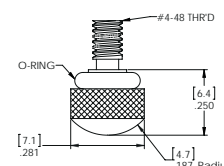
Spherical disk-type anvil

Order no.	Product type	Dimension A	Dimension B	Measuring surface	Number	Set contents
2225880	PT-227	.375"	.250"	hardened steel	5	5 units
2225760	PT-120	.375"	.250"	carbide tipped	1	
2225983	PT-619	.500"	.375"	hardened steel	1	



Measuring anvil with shock protection

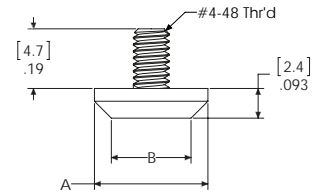
Order no.	Product type	Length	Measuring surface
2225875	PT-2263	.25"	hardened steel



Indicators MarCator

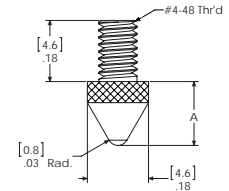
Disk-type anvil

Order no.	Product type	Dimension A	Dimension B	Measuring surface	Number
2202291	AL-291			hardened steel	1
2202321	AL-502	.356"	.250"	hardened steel	1
2202257	AL-1730	.356"	.250"	carbide tipped	1
2202256	AL-1510	.500"	.375"	hardened steel	1
2202324	AL-520	.615"	.500"	hardened steel	1
2202315	AL-44	.731"	.625"	hardened steel	1



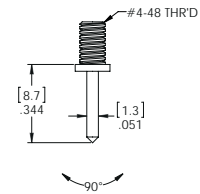
Conical measuring anvil

Order no.	Product type	Dimension A	Measuring surface	Number	Set contents
2225886	PT-233	3/16"	hardened steel	1	
2225881	PT-229	7/16"	hardened steel	1	
2225778	PT-181	7/16"	carbide tipped	1	
2225779	PT-182	3/4"	carbide tipped	1	
2225894	PT-253	1"	hardened steel	1	
2225780	PT-183	1"	carbide tipped	1	
2225883	PT-230	1-7/16"	hardened steel	5	5 units
2225884	PT-231	2"	hardened steel	5	5 units



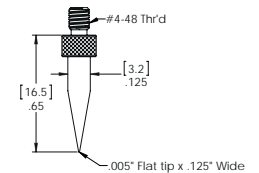
Conical measuring anvil

Order no.	Product type	Angle °	Measuring surface	Number
2225876	PT-2265	90	hardened steel	1



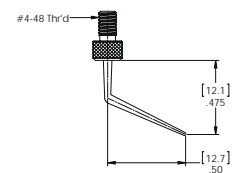
Conical measuring anvil

Order no.	Product type	Measuring surface	Number
2225877	PT-2266	hardened steel	1



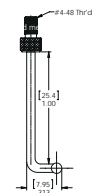
Offset measuring anvil

Order no.	Product type	Measuring surface	Number
2225878	PT-2267	hardened steel	1



Angled measuring anvil

Order no.	Product type	Measuring surface	Number
2225879	PT-2268	hardened steel	1



Adaptor #4-48 male to M2,5 female threads

Order no.	Number
2236519	1

Auxiliary Plunger 57mm/ 2.25" long MarCator AT-25 / AT-26



For extending reach of all ANSI/ AGD type and perpendicular indicators with .375" diameter stems and ranges up to 6.35 mm/ .250" range. Attaches to indicator stem by integral split collet. Body is 12 mm/ .500" OD.

Technical Data

Order no.	Mounting bore		Length		Product type
	inch	mm	inch	mm	
2203153	3/8"	57	2.25"	57	AT-25
2203154	3/8"	104	4"	104	AT-26

Accessories

Order no.	Product name	Product type
2225781	Spherical contact point, 8-32 thread, for AT-26	PT-184

Hole attachment, 47,50 mm / 1.87" long MarCator AT-7293 / AT-7294

For ANSI/AGD type and perpendicular indicators with .375" diameter stems. For measuring internal surfaces.



Technical Data

Order no.	Mounting bore		Length		Product type
	inch	mm	inch	mm	
2203160	3/8"	47.5	1.87"	47.5	AT-7293
2203161	3/8"	25	1"	25.4	AT-7294

Angle attachment for ranges up to 3,05 mm / .120" MarCator A-9 / AT-24



A-9



AT-24

For ANSI/AGD type and perpendicular indicators (.375" diameter stems). For making measurements at right angle to spindle movement.

Application:

for ranges up to 3,05 mm / .120"

Technical Data

Order no.	Mounting bore	Product type
	inch	
2201391	3/8"	A-9
2203152	3/8"	AT-24

Accessories

Order no.	Product name	Product type
2232596	Replacement spring for right angle attachment A-9	SP-56

MarCator 400B-3 / 400B-4

- For checking and calibrating dial indicators, test indicators, digital indicators, and LVDT inductive probes
- Large micrometer style wheel has widely spaced graduations for easy setting and viewing
- Adjustable crosshair provides exact on-the-mark setting
- Anvil uses Tungsten Carbide for maximum wear resistance
- Indicator clamped in line with micrometer spindle for direct contact measurement
- **Data interface:** none
- **Scope of delivery:** Adaptor bushing AD-58, Split bushing BU-112, Split bushing BU-197



Application:

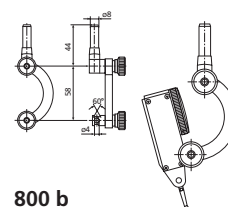
Portable Dial Calibrator

Technical Data

Order no.	Product type	Measuring span		Graduation value		Range per rev.		Error limit	
		mm	inch	mm	inch	mm	inch	mm	inch
2050665	400B-3		1.000"		.0001"		.0025"		.00005"
2050666	400B-4	25		0.002		0.05		0.001	

Accessories

Order no.	Product name	Product type
4305893	Universal centering support frame	800 b
2201843	Adaptor Bushing 0.275" ID to 0.375" OD	AD-58
2205127	Split bushing with shoulder 8mm stem hole X .375" OD	BU-197
2205082	Split bushing .218" x .374" x .5"	BU-112



800 b

For the regular testing / calibration of your MarCator dial gages, please see chapter 14, Precimar, for the suitable testing device.



SIMPLE, ACCURATE AND INEXPENSIVE MEASUREMENT. MILLIMESS DIAL COMPARATORS.



Millimess is the "classic" amongst all measuring instrument. For over 60 years, the Millimess series of dial comparators has been synonymous with both high precision and extreme robustness. Both maximum accuracy and a minimal reversal span error are obtained through the levers, gears and pinions being supported with jeweled bearings and the measuring spindle running in a ball bush guide. Millimess is therefore particularly suitable for measuring tasks where the accuracy and the reversal span of a conventional dial indicator are not sufficient. Further advantages of Millimess are the simple handling, the easy reading as well as the movement being absolute shockproof. Our digital comparator with an inductive measuring system is equipped with highest precise technology - readings as small as $0.2 \mu\text{m}$ / $10 \mu\text{inch}$ are realized. The practical control functions (for example: tolerance monitoring or the storage of measuring values for dynamic measurements), the combined analog and digital display and the easy to use data transmission rounds off the complete Millimess spectrum.

Millimes. Digital and Dial Comparator

Digital and Dial Comparators Overview

242

Inductive digital comparator

Millimes 2001

For static and dynamic measurements

244

Millimes 2000

For static measurements

246

Millimes μ Max μ m II

With digital display

247

Millimes Max μ m III

With digital and analog display, probe

250

Mechanical Dial Comparator

Millimes 1002 / 1003 / 1004

Standard Versions

259

Millimes 1000 A / 1000 B

With large dial

261

Millimes 1010 / 1010 T / 1050 / 1050 T

Mechanical Dial Comparators

262

Millimes 1002 Z / 1003 Z / 1004 Z / 1010 Z

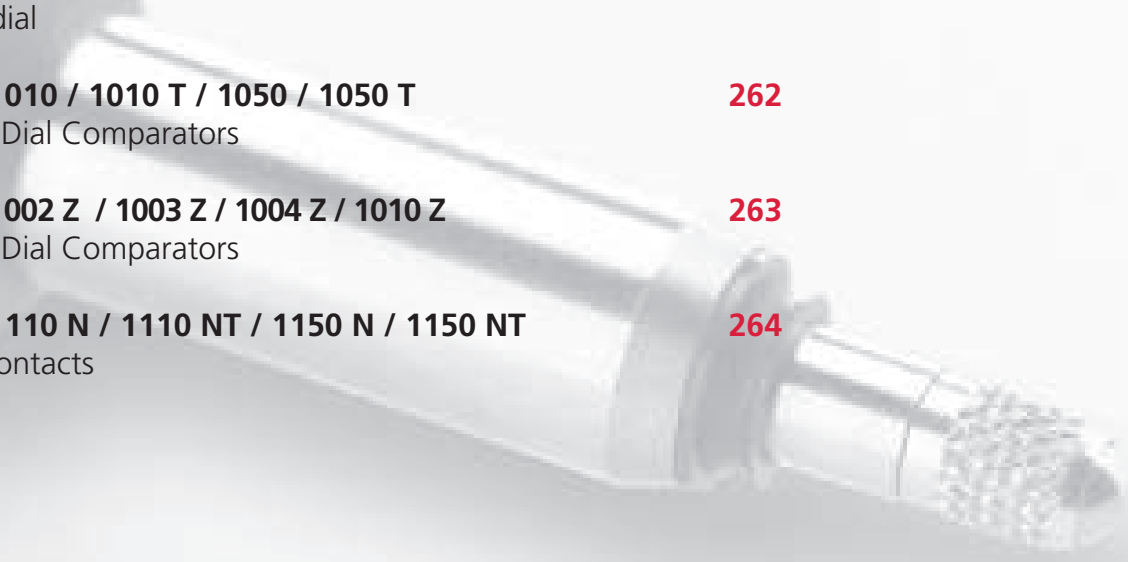
Mechanical Dial Comparators

263

Millimes 1110 N / 1110 NT / 1150 N / 1150 NT

With limit contacts

264



Millimess. Digital and Dial Comparators

OVERVIEW

The Inductive Digital Comparator Millimess 2001: tolerance monitoring is simplified with the color change in the background lit display.

Dynamic measuring functions:



- MAX / MIN finding the reversal point
- MAX - MIN storing values when testing concentricity and flatness



Control output can be connected to a SPS

Universal SPS Interface



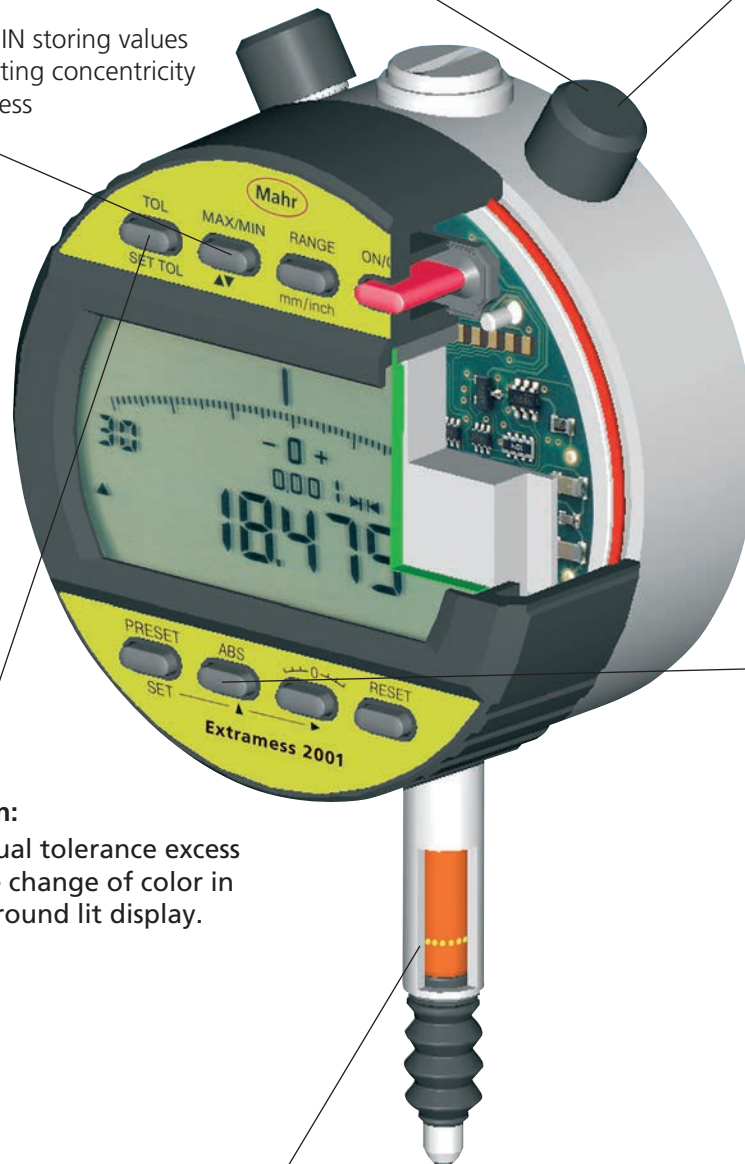
The choice is yours:
MarConnect Data output, choose between USB, Digimatic or RS232C



• **Digimatic**
To connect a Digimatic compatible evaluation instrument



• **Mahr Opto RS232C**
for direct connection to a COM port on a pc



Tolerance function:

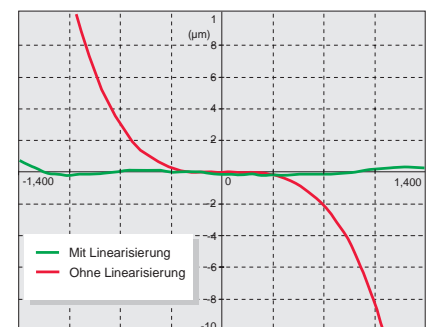


Clearly visual tolerance excess due to the change of color in the background lit display.

Absolute measuring system:



Linearized, inductive **absolute measuring system**. Reference point is not lost when the instrument is switched off



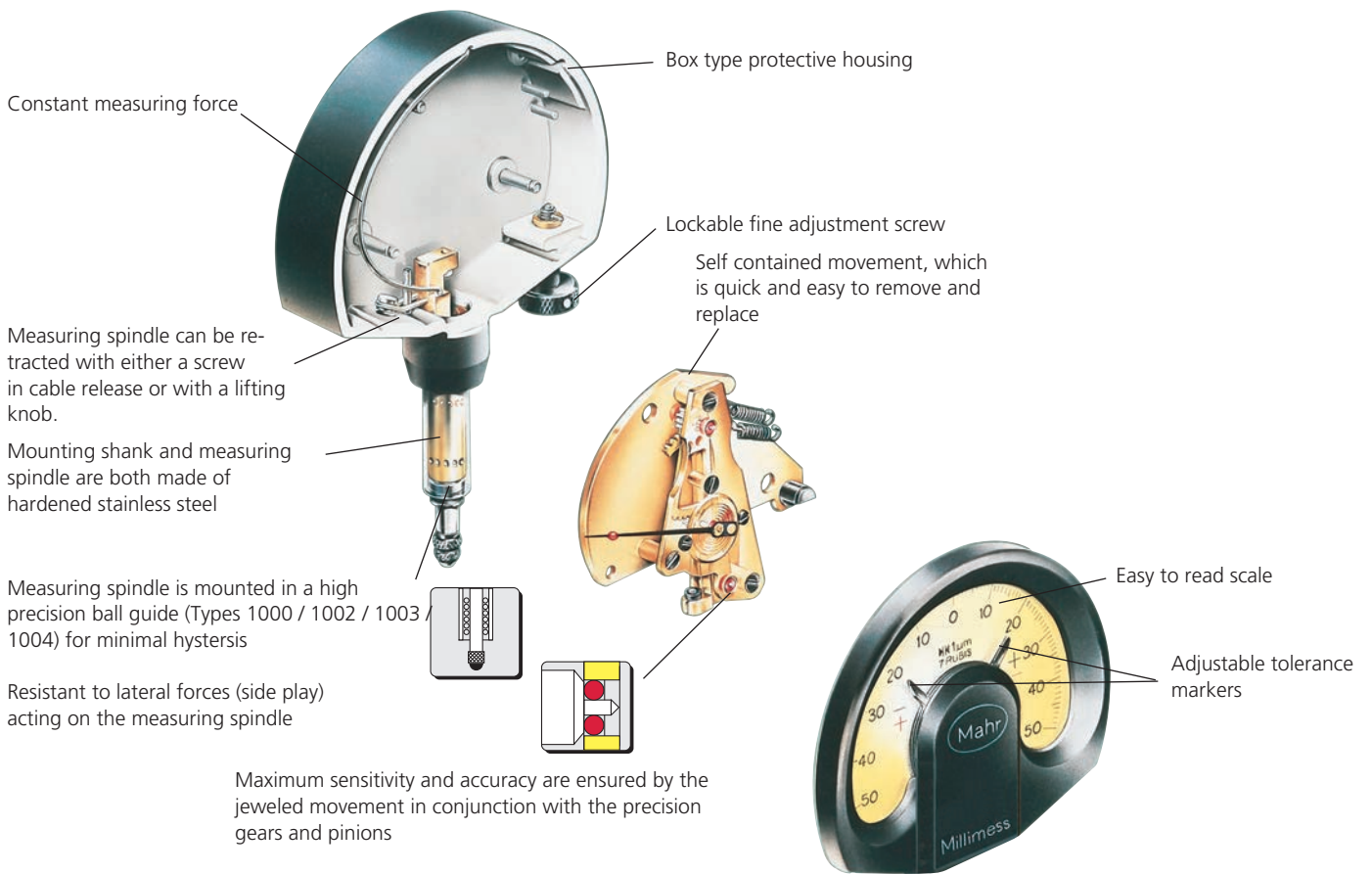
High precision rotary stroke bearings for a longer service life and higher capacity



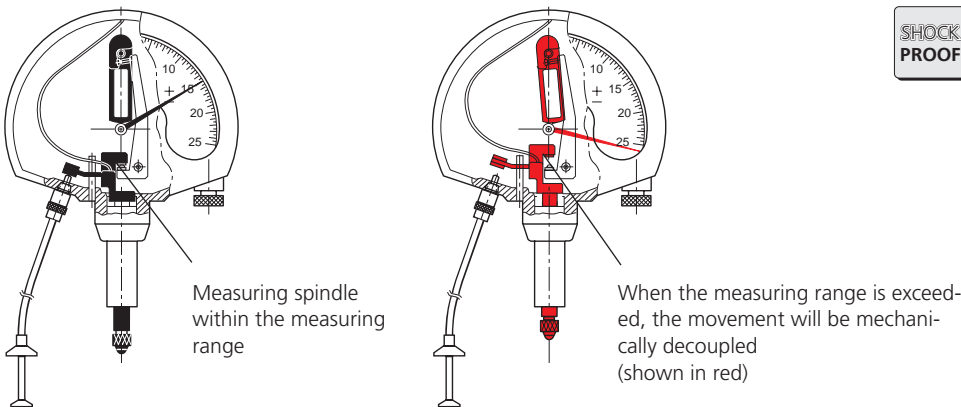
Especially suited for use in a manufacturing environment. **Waterproof: protection class IP54** in accordance to IEC 60529

Code Initial	IP	International Protection
First Numeral	5	Dust protected
Second Numeral	4	Protection against splash water in all directions

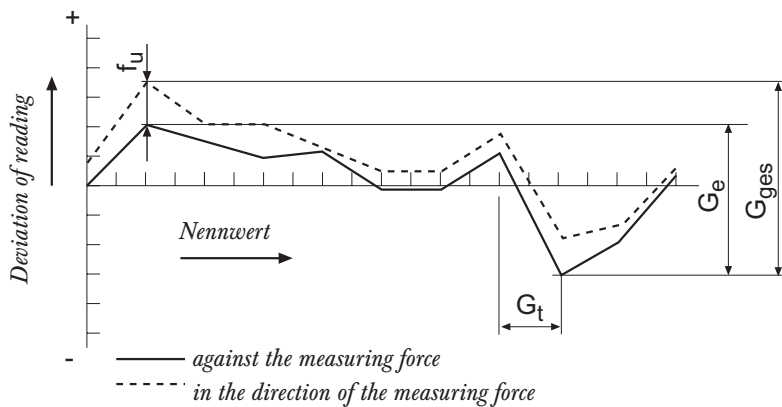
Millimess. Design



Millimess - Shockproof Mechanism



Millimess - Metrological characteristics



Millimess - Versions



Inductive Digital Comparator



Mechanical Dial Comparator



Mechanical Dial Comparator with limit contacts

Inductive digital comparator Millimes 2001



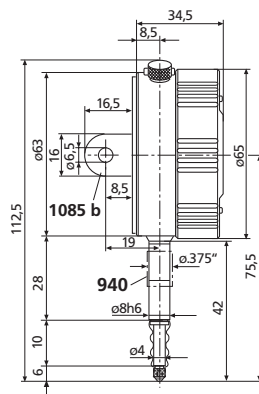
Application:

For static and dynamic measurements

Technical Data

Order no.	4346100	4346910	4346911
Product type		2001	
Measuring range	mm	± 0.9	
Measuring range	inch	± .035"	
Partial measuring range	mm	± 0.4	
Partial measuring range	inch	± .031"	
Resolution	mm	0.001, 0.0005, 0.0002	
Resolution	inch	.00001", .00002", .00005"	
Error limit	µm	0.6 ± 1 Digit	
Error limit in partial measuring range	µm	0.3 ± 1 Digit	
Standard		Factory standard	
Measuring force	N	0.7 - 0.9	
Range of analog display	mm	± 0,030, ± 0,015, ± 0,006	
IP protection category		IP 54	
Supply voltage		230 V	115 V 100 V

Order no.	Mounting shaft
	mm
4346100	8
4346910	8
4346911	8



Functions:

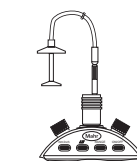
- ON/OFF
- RESET (set display to zero)
- 0 (set the analog display to zero)
- PRESET (for entering a numerical value)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- TOL (enter tolerance limit values)
- Factor (adjustable)
- Remote-controlled via interface (optoRS232/USB)

- High contrast LCD
- Analog display with 4 mm pointer ensures better visual recognition, ideal when checking concentricity or flatness as well as searching for the reversal point when measuring bores
- Operating and display unit (bezel) can be rotated through 280°
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Linearized inductive absolute measuring system
- Measuring force spring is interchangeable
- Lower stop is adjustable
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 6.5 mm
- **Data interface:** Digimatic, Opto RS232C, USB, Control output
- **Energy supply:** Integrated rechargeable batteries (max. 40 hrs.) or via the power source
- **Scope of delivery:** Instruction manual, Rubber bellows, Spanner for preliminary stroke setting, Power source, Case

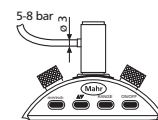
Inductive digital comparator Millimes 2001

Accessories

Order no.	Product name	Product type
4346010	Manual lifer with cable release	2000 h
4346011	pneumatic lifter	2000 p
4346012	Measuring force adjuster	2000 m
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4102232	Transmitter for e-Stick	2000 e
4102230	Receiver	e-Stick
4346031	Cables for control output for connection to PLC	2000 sps
4346035	Control unit for remote control of the RESET, PRESET, RANGE, DATA functions	2000 sg
4310103	Adapter bush (.375" / 8 mm)	940
4336310	lug back	1085 b
4346050	Measuring force spring 0,25 N	
4346051	Measuring force spring 0,50 N	
4882284	Measuring force spring 0,75 N	
4346052	Measuring force spring 1,00 N	
4346053	Measuring force spring 1,50 N	
4346054	Measuring force spring 2,00 N	
4346055	Measuring force spring 2,50 N	



2000 h



2000 p



2000 m



e-Stick



2000 sg

Inductive digital comparator Millimes 2000



Application:

For static measurements

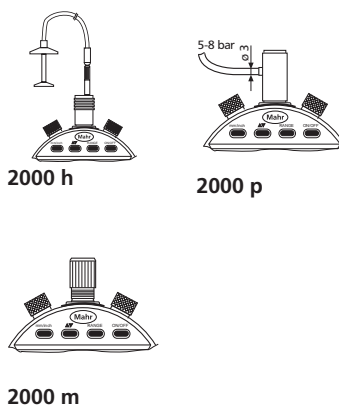
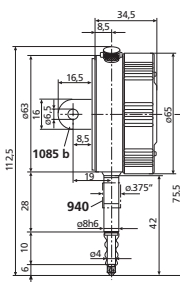
Technical Data

Order no.	4346000	4346900
Product type		2000
Measuring range	mm	± 0.9
Measuring range	inch	± .035"
Partial measuring range	mm	± 0.4
Partial measuring range	inch	± .031"
Resolution	mm	0.001, 0.0005, 0.0002
Resolution	inch	.00001", .00002", .00005"
Error limit	µm	0.6 ± 1 Digit
Error limit in partial measuring range	µm	0.3 ± 1 Digit
Standard		Factory standard
Measuring force	N	0.7 - 0.9
Range of analog display	mm	± 0,030, ± 0,015, ± 0,006
IP protection category		IP 54
Supply voltage		230 V / 115 V

Order no.	Mounting shaft
	mm
4346000	8
4346900	8

Accessories

Order no.	Product name	Product type
4346010	Manual lifter with cable release	2000 h
4346011	pneumatic lifter	2000 p
4346012	Measuring force adjuster	2000 m
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4310103	Adapter bush (.375" / 8 mm)	940
4336310	lug back	1085 b
4346050	Measuring force spring 0,25 N	
4346051	Measuring force spring 0,50 N	
4882284	Measuring force spring 0,75 N	
4346052	Measuring force spring 1,00 N	
4346053	Measuring force spring 1,50 N	
4346054	Measuring force spring 2,00 N	
4346055	Measuring force spring 2,50 N	



Functions:

- ON/OFF
- RESET (set display to zero)
- 0 (set the analog display to zero)
- PRESET (for entering a numerical value)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (display can be set to zero without losing reference to preset)

- High contrast LCD
- Analog display with 4 mm pointer ensures better visual recognition, ideal when checking concentricity or flatness as well as searching for the reversal point when measuring bores
- Operating and display unit (bezel) can be rotated through 280°
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Linearized inductive absolute measuring system
- Measuring force spring is interchangeable
- Lower stop is adjustable
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 6.5 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Integrated rechargeable batteries (max. 40 hrs.) or via the power source
- **Scope of delivery:** Instruction manual, Rubber bellows, Spanner for preliminary stroke setting, Power source, Case

Inductive digital comparator Millimes μMaxμm II

Functions:

- ON/OFF
- PRESET (for entering a numerical value)
- RESET (set display to zero)
- Switch resolution
- Reversal of counting direction
- <0> (tolerance GO / NO GO display mode)
- mm/inch

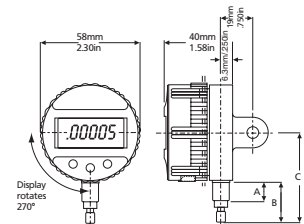
- Inductive absolute measuring system
- Large, high-contrast display with numerical and scale display
- Control and display unit rotatable through 270°
- Zero point setting is retained even after switching off the dial indicator
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232C interface)
- **Digit height:** 8 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery operation
- **Scope of delivery:** Instruction manual, Battery



Technical Data

Order no.	2034101	2034103	2034105	2034107
Product type	μMaxμm II			
Measuring range	mm	±1		
Measuring range	inch	±.040"		
Partial measuring range	mm	± 0.5		
Partial measuring range	inch	± .020"		
Resolution	mm	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02		
Resolution	inch	.00001", .00002", .00005", .0001", .0002", .0005", .001"		
Error limit	μm	± 5		
Error limit	inch	± .0002"		
Error limit in partial measuring range	μm	± 1.25		
Error limit in partial measuring range	inch	± .00005"		
Standard	Factory standard			
Measuring force	N	0.8 – 1.1		
IP protection category	IP 54			

Order no.	a	b	c	a	b	c	Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm	mm	inch
2034101	.46"	.95"	2.11"	11.7	24.1	53.6		.375"
2034103	1.5"	2.25"	3.41"	38	57.2	86.6		.375"
2034105	.46"	.95"	2.11"	11.7	24.1	53.6	8	
2034107	1.5"	2.25"	3.41"	38	57.2	86.6	8	



Accessories

Order no.	Product name	Product type
2210555	Lug back	EBK-1010
2210556	Back panel with cylindrical holder, Ø = .5", l = 1"	EBK-1012
2210557	Back panel with threaded bore 1/4-28, Ø = 11/16", l = .5"	EBK-1013
2210558	Back panel with rack	EBK-1014
2210559	Back panel with adjustable holder	EBK-1016
2210561	Flat back panel	EBK-1018
2212878	Splash guard cover	ECV-1307-W2
2232570	Measuring force springs 0.35N	SP-351
2201833	Thread adapter, M2.5 to #4-48	AD-185
4310103	Adapter bush (.375" / 8 mm)	940
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4102230	Receiver	e-Stick
4102232	Transmitter for e-Stick	2000 e



e-Stick

Inductive digital comparator Millimess μ Max μ m II



Functions:

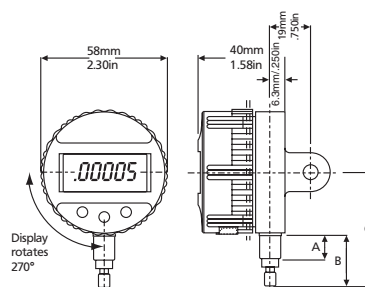
- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- ABS (display can be set to zero without losing reference to preset)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- Factor (adjustable)
- HOLD (storage of measured values)

- Inductive absolute measuring system
- Large, high-contrast display with numerical and scale display
- Control and display unit rotatable through 270°
- Zero point setting is retained even after switching off the dial indicator
- **Digit height:** 8 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery operation
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.	2034201	2034203	2034205	2034207
Product type				μ Max μ m II
Measuring range	mm	± 1		
Measuring range	inch	$\pm .040''$		
Partial measuring range	mm	± 0.5		
Partial measuring range	inch	$\pm .020''$		
Resolution	mm	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02		
Resolution	inch	.00001", .00002", .00005", .0001", .0002", .0005", .001"		
Error limit	μ m	± 5		
Error limit	inch	$\pm .0002''$		
Error limit in partial measuring range	μ m	± 1.25		
Error limit in partial measuring range	inch	$\pm .00005''$		
Standard	Factory standard			
Measuring force	N	0.8 – 1.1		
IP protection category	IP 54			

Order no.	a	b	c	a	b
	inch	inch	inch	mm	mm
2034201	.46"	.95"	2.11"	11.7	24.1
2034203	1.5"	2.25"	3.41"	38	57.2
2034205	.46"	.95"	2.11"	11.7	24.1
2034207	1.5"	2.25"	3.41"	38	57.2



Accessories

Order no.	Product name	Product type
2210555	Lug back	EBK-1010
2212878	Splash guard cover	ECV-1307-W2
4310103	Adapter bush (.375" / 8 mm)	940
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4102232	Transmitter for e-Stick	2000 e
4102230	Receiver	e-Stick
2210556	Back panel with cylindrical holder, $\varnothing = .5''$, $l = 1''$	EBK-1012
2210557	Back panel with threaded bore 1/4-28, $\varnothing = 11/16''$, $l = .5''$	EBK-1013
2210561	Flat back panel	EBK-1018
2210559	Back panel with adjustable holder	EBK-1016
2210558	Back panel with rack	EBK-1014
2232570	Measuring force springs 0.35N	SP-351



e-Stick

Inductive digital comparator Millimes μMaxμm II



Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- ABS (display can be set to zero without losing reference to preset)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- Factor (adjustable)
- HOLD (storage of measured values)

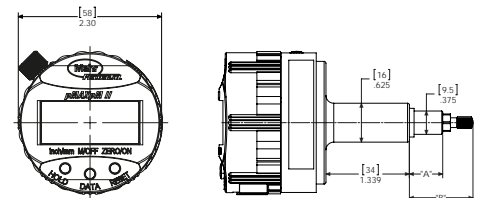


- Inductive absolute measuring system
- Large, high-contrast display with numerical and scale display
- Control and display unit rotatable through 270°
- Zero point setting is retained even after switching off the dial indicator
- **Digit height:** 8 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery operation
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.	2034401	
Product type	μMaxμm II	
Measuring range	mm	±1
Measuring range	inch	± .040"
Partial measuring range	mm	± 0.5
Partial measuring range	inch	± .020"
Resolution	mm	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02
Resolution	inch	.00001", .00002", .00005", .0001", .0002", .0005", .001"
Error limit	μm	± 5
Error limit	inch	± .0002"
Error limit in partial measuring range	μm	± 1.25
Error limit in partial measuring range	inch	± .00005"
Standard	Factory standard	
Measuring force	N	0.8 – 1.1
IP protection category	IP 54	

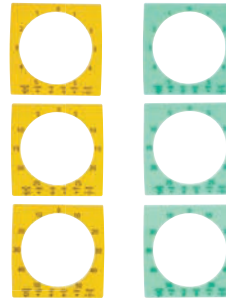
Order no.	a	b	c
2034401	.46"	.95"	2.11"



Accessories

Order no.	Product name	Product type
2212878	Splash guard cover	ECV-1307-W2
2232570	Measuring force springs 0.35N	SP-351
2201833	Thread adapter, M2.5 to #4-48	AD-185
4310103	Adapter bush (.375" / 8 mm)	940
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r

Inductive digital comparator Millimess Maxµm III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

- Interchangeable dials

- Inductive absolute measuring system

- Metal cast housing with robust buttons

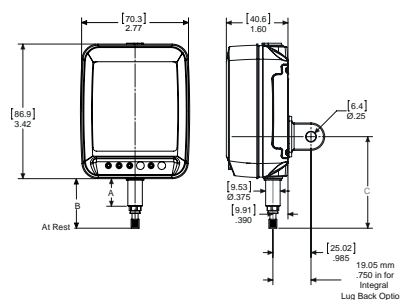
- **Energy supply:** Battery life approx. 4000 hrs.

- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

Technical Data

Order no.	2033101	2033103	2033105	2033107	2033102	2033104	2033106	2033108
Product type	Maxµm III							
Measuring range	mm	±1			±1.99			
Measuring range	inch	± .040"			± .100"			
Partial measuring range	mm	± 0.199						
Partial measuring range	inch	± .0199"						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	± .0004"			± .0007"			
Error limit in partial measuring range	µm	± 1						
Error limit in partial measuring range	inch	± .0001"						
Standard	Factory standard							
Overtravel	mm	0.8			1.3			
Measuring force	N				0.8 - 1.1			
Range of analog display	mm	± 5, ± 25, ± 50			± 25, ± 50			
Data output Maxµm	No output							
IP protection category:	IP 54							

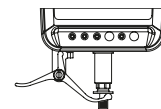
Order no.	a	b	c	a	b	c	Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm	mm	inch
2033101	.670"	1.42"	2.50"	17	36	63.5		.375"
2033103	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033105	.670"	1.42"	2.50"	17	36	63.5	8	
2033107	1.5"	2.25"	3.33"	38	57	84.6	8	
2033102	.87"	1.84"	2.87"	22	47	73		.375"
2033104	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033106	.87"	1.84"	2.87"	22	47	73	8	
2033108	1.5"	2.25"	3.33"	38	57	84.6	8	



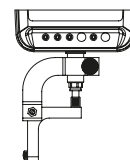
Inductive digital comparator Millimes Maxum III

Accessories

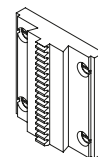
Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2209094	Lifting lever, left	EAS-1903
2210406	Right Angle Attachment - Spring Type (± .187" range)	EAT-1034-W1
2210407	Right Angle Attachment - Spring Type (± .060" range)	EAT-1035-W1
2210551	Back panel with rack	EBK-1005
2236895	Mounting block for back panel with rack	
2210552	Back panel with eyelets	EBK-1006
2210553	Back panel with adjustable holder	EBK-1007
2212877	Dust cover	ECV-1307-W1
2239040	Set of 3 inch and 3 metric scale overlay	
2217907	Spare screws for back panels	ESW-1252



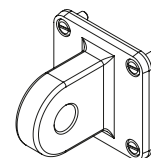
EAS-1903



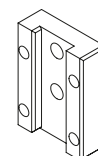
EAT-1034-W1



EBK-1005

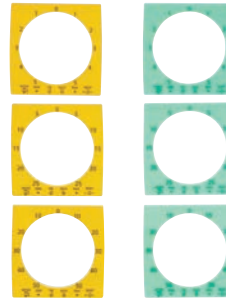


EBK-1006



EBK-1007

Inductive digital comparator Millimes Maxµm III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

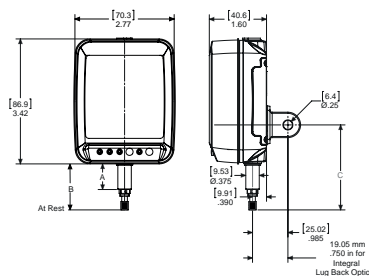
- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

Technical Data

Order no.	2033111	2033113	2033115	2033117	2033112	2033114	2033116	2033118
Product type	Maxµm III							
Measuring range	mm	±1			±1.99			
Measuring range	inch	±.040"			±.100"			
Partial measuring range	mm	± 0.199						
Partial measuring range	inch	± .0199"						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	± .0004"			± .0007"			
Error limit in partial measuring range	µm	± 1						
Error limit in partial measuring range	inch	± .0001"						
Standard	Factory standard							
Overtravel	mm	0.8			1.3			
Measuring force	N	0.8 – 1.1						
Range of analog display	mm	± 5, ± 25, ± 50			± 25, ± 50			
Data output Maxµm	Data output 6 pin (E2)							
IP protection category	IP 54							

- Interchangeable dials
- Inductive absolute measuring system
- Metal cast housing with robust buttons
- **Data interface:** RS232C, Digimatic, USB
- **Energy supply:** Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual
- **Data interface:** RS232C, Digimatic, USB
- **Energy supply:** Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

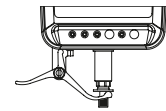
Order no.	a			b			Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm		
2033111	.670"	1.42"	2.50"	17	36	63.5		.375"
2033113	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033115	.670"	1.42"	2.50"	17	36	63.5	8	
2033117	1.5"	2.25"	3.33"	38	57	84.6	8	
2033112	.87"	1.84"	2.87"	22	47	73		.375"
2033114	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033116	.87"	1.84"	2.87"	22	47	73	8	
2033118	1.5"	2.25"	3.33"	38	57	84.6	8	



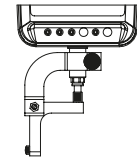
Inductive digital comparator Millimes Maxum III

Accessories

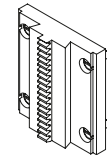
Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2209094	Lifting lever, left	EAS-1903
2210406	Right Angle Attachment - Spring Type (\pm .187" range)	EAT-1034-W1
2210407	Right Angle Attachment - Spring Type (\pm .060" range)	EAT-1035-W1
2210551	Back panel with rack	EBK-1005
2236895	Mounting block for back panel with rack	
2210552	Back panel with eyelets	EBK-1006
2210553	Back panel with adjustable holder	EBK-1007
2212877	Dust cover	ECV-1307-W1
2217907	Spare screws for back panels	ESW-1252
2239035	Digimatic data cable (2 m) (D, E1)	
2239036	Data cable RS232C (2 m) (D, E1)	
2200362	Foot Switch for send data (Maxum) or dynamic reset/zeroing (832), 1,5m / 5 ft cable	300-50
2240545	Maxum III, Unlock Setup & Unlock Calibration Key, (D, E1)	
2239040	Set of 3 inch and 3 metric scale overlay	



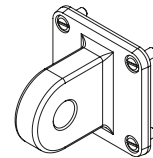
EAS-1903



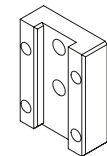
EAT-1034-W1



EBK-1005

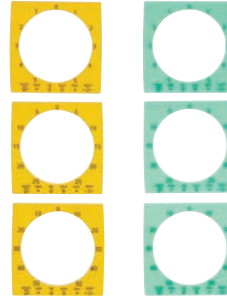


EBK-1006



EBK-1007

Inductive digital comparator Millimess Maxµm III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

- Interchangeable dials

- Inductive absolute measuring system

- Metal cast housing with robust buttons

- **Data interface:** RS232C, USB

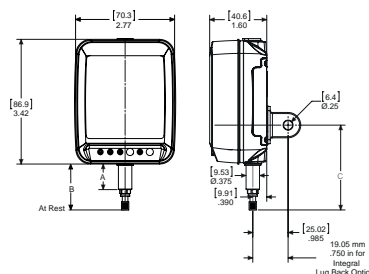
- **Energy supply:** Battery life approx. 4000 hrs.

- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

Technical Data

Order no.	2033121	2033123	2033125	2033127	2033122	2033124	2033126	2033128
Product type	Maxµm III							
Measuring range	mm	±1			±1.99			
Measuring range	inch	±.040"			±.100"			
Partial measuring range	mm	± 0.199						
Partial measuring range	inch	±.0199"						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	±.0004"			±.0007"			
Error limit in partial measuring range	µm	± 1						
Error limit in partial measuring range	inch	±.0001"						
Standard	Factory standard							
Overtravel	mm	0.8			1.3			
Measuring force	N	0.8 - 1.1						
Range of analog display	mm	± 5, ± 25, ± 50			± 25, ± 50			
Data output Maxµm	Data output 10 pin (E2)							
IP protection category	IP 54							

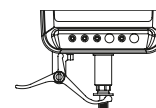
Order no.	a			b			Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm		
2033121	.670"	1.42"	2.50"	17	36	63.5		.375"
2033123	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033125	.670"	1.42"	2.50"	17	36	63.5	8	
2033127	1.5"	2.25"	3.33"	38	57	84.6	8	
2033122	.87"	1.84"	2.87"	22	47	73		.375"
2033124	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033126	.87"	1.84"	2.87"	22	47	73	8	
2033128	1.5"	2.25"	3.33"	38	57	84.6	8	



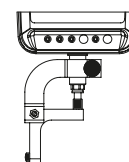
Inductive digital comparator Millimes Maxum III

Accessories

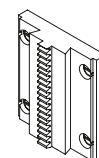
Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2209094	Lifting lever, left	EAS-1903
2210406	Right Angle Attachment - Spring Type (\pm .187" range)	EAT-1034-W1
2210407	Right Angle Attachment - Spring Type (\pm .060" range)	EAT-1035-W1
2210551	Back panel with rack	EBK-1005
2236895	Mounting block for back panel with rack	
2210552	Back panel with eyelets	EBK-1006
2210553	Back panel with adjustable holder	EBK-1007
2212877	Dust cover	ECV-1307-W1
2217907	Spare screws for back panels	ESW-1252
2239037	Digimatic data cable (2 m) (E2)	
2239038	Data Connection Cable RS232C (2 m) (E2)	
2200362	Foot Switch for send data (Maxum) or dynamic reset/zeroing (832), 1,5m / 5 ft cable	300-50
2239040	Set of 3 inch and 3 metric scale overlay	
2240547	Maxum III, Unlock Setup & Unlock Calibration Key, (E2)	
2209924	Hand Switch for Hold/Reset	EAS-2867
2209925	Foot Switch for Hold/Reset	EAS-2868
2121428	USB data cable (2 m) (E2)	



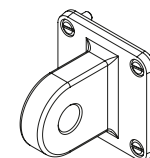
EAS-1903



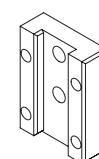
EAT-1034-W1



EBK-1005

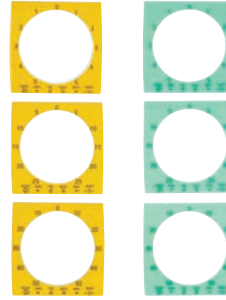
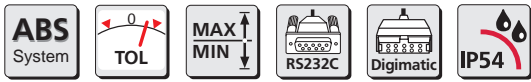


EBK-1006



EBK-1007

Display unit Millimes Maxum III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

- Interchangeable dials
- Inductive absolute measuring system
- Metal cast housing with robust buttons
- **Data interface:** none
- **Energy supply:** Battery operation, Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

Technical Data

Order no.	2033001	2033011	2033021
Product type		Maxum III	
Measuring range	mm	Depending on probe type	
Standard		Factory standard	
Measuring force	N	-	
Data output Maxum		without data output	Data output 6-pin (D, E1) / Data output 10 pin (E2)
IP protection category		IP 54	

Accessories

Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2212877	Dust cover	ECV-1307-W1
2239040	Set of 3 inch and 3 metric scale overlay	
2217907	Spare screws for back panels	ESW-1252
2240545	Maxum III, Unlock Setup & Unlock Calibration Key, (D, E1)	
2239035	Digimatic data cable (2 m) (D, E1)	
2239036	Data cable RS232C (2 m) (D, E1)	
2240547	Maxum III, Unlock Setup & Unlock Calibration Key, (E2)	
2239037	Digimatic data cable (2 m) (E2)	
2239038	Data Connection Cable RS232C (2 m) (E2)	
2121428	USB data cable (2 m) (E2)	

Digital probe Millimes Maxum III

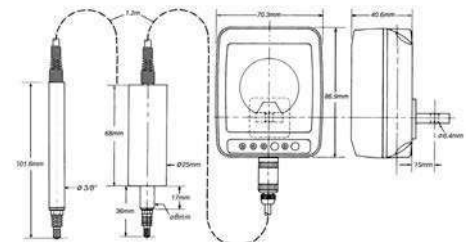
- Maxum transducers are available as replacement parts - refer to part price list for part numbers and pricing
- Maxum III remote indicating units are sold without digital transducer
- Any digital transducer may be used with a Maxum III remote indicating unit
- For alternate cable lengths, extension cables or special indicator options - call Mahr's Technical Assistance Group



Technical Data

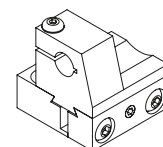
Order no.	2033091	2033093	2033095	2033097	2033092	2033094	2033096	2033098
Product type	Maxum III							
Measuring range	mm	± 1,00			± 1,99			
Measuring range	inch	± .040"			± .100"			
Partial measuring range	mm	± 0,199						
Partial measuring range	inch	± .199						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	± .0004"			± .0007"			
Error limit in partial measuring range	µm	± 1.25						
Error limit in partial measuring range	inch	± .0001"						
Standard	Factory standard							
Measuring force	N	0.8 - 1.1						

Order no.	a		Mounting shaft	
	inch	mm	mm	inch
2033091	.670"	17		.375"
2033093	1.50"	38		.375"
2033095	.670"	17	8	
2033097	1.50"	38	8	
2033092	.670"	17		.375"
2033094	1.50"	38		.375"
2033096	.670"	17	8	
2033098	1.50"	38	8	

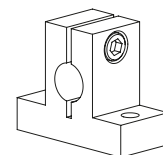


Accessories

Order no.	Product name	Product type
2009148	Adaptor - T-bracket, d = .375"	AAD-91
2208615	Adapter - Rack Bracket, for Maxum III Transducer Probes, d = .375"	EAD-1007-W1
2208616	Adapter - Rack Bracket, for Maxum III Transducer Probes, d = 8 mm	EAD-1007-W2
2236895	Mounting block for back panel with rack	



EAD-1007-W1



AAD-91

Digital probe Millmess Maxum III

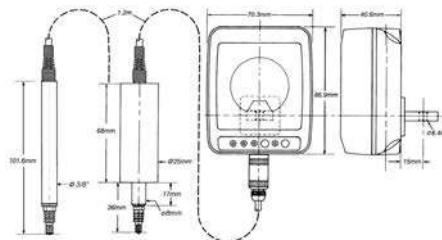


- Maxum transducers are available as replacement parts - refer to part price list for part numbers and pricing
- Maxum III remote indicating units are sold without digital transducer
- Any digital transducer may be used with a Maxum III remote indicating unit
- For alternate cable lengths, extension cables or special indicator options - call Mahr's Technical Assistance Group

Technical Data

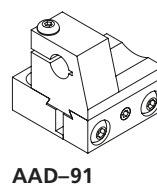
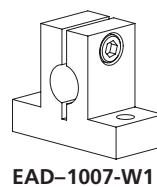
Order no.	2033099	
Product type	Maxum III	
Measuring range	mm	± 1,00
Measuring range	inch	± .040"
Partial measuring range	mm	± 0,199
Partial measuring range	inch	± .199
Resolution	mm	0.0005, 0.001, 0.005
Resolution	inch	.00002", .00005", .0001", .0005"
Error limit	µm	± 10
Error limit	inch	± .0004"
Error limit in partial measuring range	µm	± 1.25
Error limit in partial measuring range	inch	± .0001"
Standard	Factory standard	
Measuring force	N	0.8 - 1.1

Order no.	a	a	Mounting shaft
	inch	mm	inch
2033099	3.25"	82.5	.375"



Accessories

Order no.	Product name	Product type
2009148	Adaptor - T-bracket, d = .375"	AAD-91
2208615	Adapter - Rack Bracket, for Maxum III Transducer Probes, d = .375"	EAD-1007-W1
2208616	Adapter - Rack Bracket, for Maxum III Transducer Probes, d = 8 mm	EAD-1007-W2
2236895	Mounting block for back panel with rack	



Mechanical Dial Comparator Millimess 1002 / 1002 T / 1003 / 1003 T / 1003 XL / 1003 XLT / 1004 / 1004 T



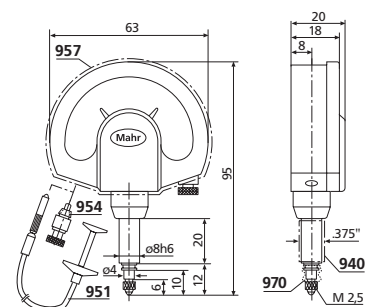
- Large, high contrast dial face
- Adjustable tolerance markers
- Lockable fine adjustment screw
- Shockproof movement
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Insensitive to lateral forces (side play) acting on the measuring spindle
- Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
- Box type protective housing
- Constant measuring force
- Measuring spindle can be retracted with either a screw in cable release or with a lifting knob
- **Scope of delivery:** Case



Technical Data

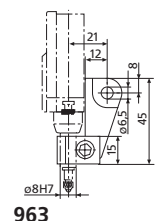
Order no.	4335000	4334102	4335005	4334000	4334103	4334005	4334001	4334006	4333000	4333005
Product type	1002		1002 T	1003		1003 T	1003 XL	1003 XLT	1004	1004 T
Measuring range μm	± 25			± 50			± 130			
Graduation value μm	0.5			1			2		5	
Type of dial face	25–0–25			50–0–50			130–0–130			
Error limit G_e μm	0.5			1			2		3.5	
Error limit G_{ges} μm	0.6			1.2			2.4		4	
Error limit G_t μm	0.4			0.7			1.4		3	
Measuring value hysteresis f_u μm	0.3			0.5			1			
Repeatability f_w μm	0.3			0.5			1			
Standard	Factory standard			DIN 879–1			Factory standard			
Overtravel mm	2.8						2.5			
Measuring force N	1									
Scale diameter mm	50									
Dial color	yellow	white	yellow	white	yellow	white	yellow		white	
IP protection category			IP 54				IP 54		IP 54	

Order no.	Mounting shaft	Scale diameter
	mm	mm
4335000	8	50
4334102	8	50
4335005	8	50
4334000	8	50
4334103	8	50
4334005	8	50
4334001	8	50
4334006	8	50
4333000	8	50
4333005	8	50



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4372000	Cable release (250 mm)	951
4372030	Lifting knob	954
4373030	Splash guard cover	957
4334786	Rubber bellows	970
4375002	Lug back to mount on mounting shank 8h6 mm	963



Mechanical Dial Comparator Millimess 1003

DIN 879-1



Application:

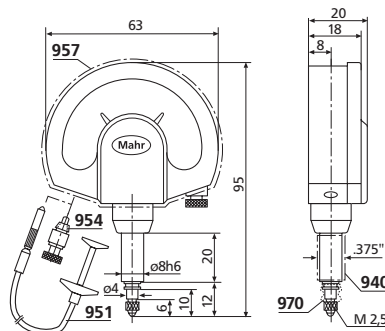
- Models with reduced / increased measuring force
- for measurements on thin-walled or soft materials, or delicate surfaces

Technical Data

Order no.	4334075	4334070	4334050	4334076	4334071	4334010	4334011
Product type	1003						
Measuring range	± 50						
Graduation value	1						
Type of dial face	50–0–50						
Error limit G_e	1						
Error limit G_{ges}	1.2						
Error limit G_t	0.7						
Measuring value hysteresis f_u	0.5						
Repeatability f_w	0.5						
Standard	DIN 879-1					Factory standard	
Overtravel	2.8						
Measuring force	0.3	0.4	0.5	0.6	0.7	2	3
Scale diameter	50						
Dial color	yellow						

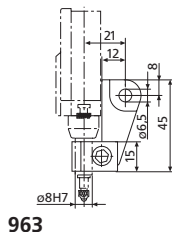
- Large, high contrast dial face
- Adjustable tolerance markers
- Lockable fine adjustment screw
- Shockproof movement
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Insensitive to lateral forces (side play) acting on the measuring spindle
- Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
- Box type protective housing
- Constant measuring force
- Measuring spindle can be retracted with either a screw in cable release or with a lifting knob
- **Scope of delivery:** Case

Order no.	Mounting shaft	Scale diameter
	mm	mm
4334075	8	50
4334070	8	50
4334050	8	50
4334076	8	50
4334071	8	50
4334010	8	50
4334011	8	50



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4372000	Cable release (250 mm)	951
4372030	Lifting knob	954
4373030	Splash guard cover	957
4334786	Rubber bellows	970
4375002	Lug back to mount on mounting shank 8h6 mm	963



Mechanical Dial Comparator Millimes 1000 A / 1000 B

- Large, high contrast dial face
 - Adjustable tolerance markers
 - Lockable fine adjustment screw
 - Shockproof movement
 - Mounting shank and measuring spindle are both made of hardened stainless steel
 - Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
 - Insensitive to lateral forces (side play) acting on the measuring spindle
 - Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
 - Box type protective housing
 - Constant measuring force
 - Measuring spindle can be retracted with either a screw in cable release or with a lifting knob
- **Scope of delivery:** Cable release, Case

Application:

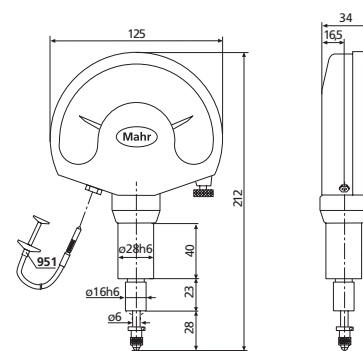
Very clear, reliable and fatigue-free readings due to extra-large housing. Ideal for test stations at which large numbers of serial parts are measured or can only be read at large intervals.



Technical Data

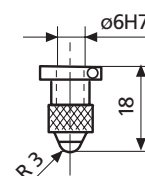
Order no.		4338100	4339100
Product type		1000 A	1000 B
Measuring range	µm	± 120	± 50
Graduation value	µm		1
Type of dial face		120-0-120	50-0-50
Error limit G_e	µm		1.5
Error limit G_{ges}	µm		2
Error limit G_t	µm		0.7
Measuring value hysteresis f_u	µm		1
Repeatability f_w	µm		0.5
Standard		Factory standard	
Overtravel	mm	4	
Measuring force	N	3.5	
Scale diameter	mm	110	
Dial color		yellow	

Order no.	Mounting shaft	Scale diameter
	mm	mm
4338100	28	110
4339100	28	110



Accessories

Order no.	Product name	Product type
4362001	Contact point, Steel ball	921
4362002	Contact point, Ruby ball	921 R
4372000	Cable release (250 mm)	951
4338008	Rubber bellows for 1000 A/B	



Mechanical Dial Comparator Millimess 1010 / 1010 T / 1050 / 1050 T

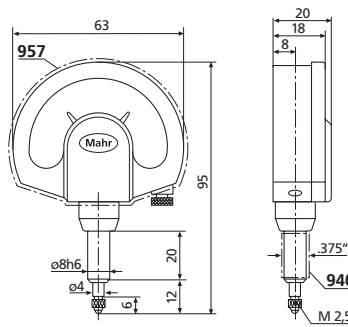


- Large, high contrast dial face
- Adjustable tolerance markers
- Lockable fine adjustment screw
- Shockproof movement
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Insensitive to lateral forces (side play) acting on the measuring spindle
- Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
- Box type protective housing
- Constant measuring force
- Measuring spindle can be retracted with either a screw in cable release or with a lifting knob
- **Scope of delivery:** Case

Technical Data

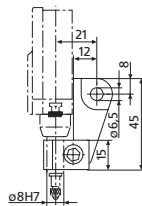
Order no.		4332000	4332005	4330000	4330005
Product type		1010	1010 T	1050	1050 T
Measuring range	mm	±0.25		±1.5	
Graduation value	mm	0.01		0.05	
Type of dial face		25-0-25		15-0-15	
Error limit G_e	μm	7		35	
Error limit G_{ges}	μm	8		40	
Error limit G_t	μm	4		24	
Measuring value hysteresis f_u	μm	2		10	
Repeatability f_w	μm	2		10	
Standard		Factory standard			
Overtravel	mm	2.5		0.3	
Measuring force	N			1	
Scale diameter	mm			50	
Dial color		white			
IP protection category		IP 54			

Order no.	Mounting shaft	Scale diameter
	mm	mm
4332000	8	50
4332005	8	50
4330000	8	50
4330005	8	50



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4372000	Cable release (250 mm)	951
4372030	Lifting knob	954
4373030	Splash guard cover	957
4375002	Lug back to mount on mounting shank 8h6 mm	963



963

Mechanical Dial Comparator Millimess 1002 Z / 1002 ZT / 1003 Z / 1003 ZT / 1004 Z / 1004 ZT / 1010 Z / 1010 ZT



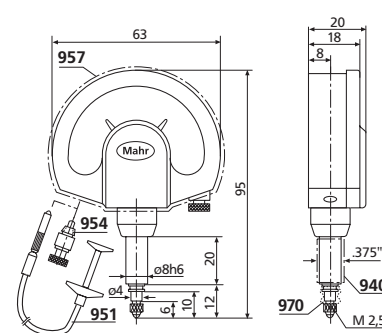
- Large, high contrast dial face
- Adjustable tolerance markers
- Lockable fine adjustment screw
- Shockproof movement
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Insensitive to lateral forces (side play) acting on the measuring spindle
- Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
- Box type protective housing
- Constant measuring force
- Measuring spindle can be retracted with either a screw in cable release or with a lifting knob
- **Scope of delivery:** Case, Adapter bush 940, 8 mm to 3/8"



Technical Data

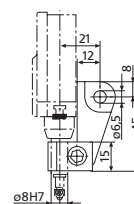
Order no.		4335900	4335905	4334900	4334905	4333900	4333905	4332900	4332905
Product type		1002 Z	1002 ZT	1003 Z	1003 ZT	1004 Z	1004 ZT	1010 Z	1010 ZT
Measuring range	inch	± .0010"		± .0020"		± .0050"		± .0100"	
Graduation value	inch	.00002"		.00005"		.0001"		.0005"	
Type of dial face		.001"–0–.001"		.002"–0–.002"		.005"–0–.005"		.01"–0–.01"	
Error limit G_e	inch	.00002"		.00005"		.0001"		.00035"	
Error limit G_{ges}	inch	.00003"		.00006"		.00012"		.0004"	
Error limit G_t	inch	.000014"		.000035"		.00005"		.00025"	
Measuring value hysteresis f_u	inch	.00001"		.000025"		.00003"		.0001"	
Repeatability f_w	inch	.00001"		.000025"		.00003"		.0001"	
Standard		Factory standard							
Measuring force	N	1							
Scale diameter	mm	50							
Dial color		white							
IP protection category		IP 54		IP 54		IP 54		IP 54	

Order no.	Mounting shaft	Scale diameter
	mm	mm
4335900	8	50
4335905	8	50
4334900	8	50
4334905	8	50
4333900	8	50
4333905	8	50
4332900	8	50
4332905	8	50



Accessories

Order no.	Product name	Product type
4310103	Adapter bush (.375" / 8 mm)	940
4372000	Cable release (250 mm)	951
4372030	Lifting knob	954
4373030	Splash guard cover	957
4334786	Rubber bellows	970
4375002	Lug back to mount on mounting shank 8h6 mm	963



963

Mechanical Dial Comparator with limit contacts Millimes 1110 N / 1110 NT



Application:

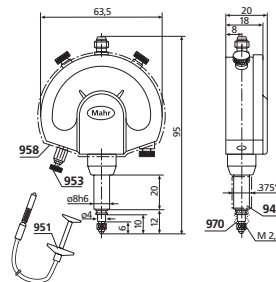
Can be applied for example as tolerance control or as a precision contacter in automatic control systems

Technical Data

Order no.	4343100		4343105	
Product type	1110 N		1110 NT	
Measuring range	mm			±0.25
Graduation value	mm			0.01
Type of dial face			25–0–25	
Error limit G_e	µm			6.5
Error limit G_{ges}	µm			12
Error limit G_t	µm			5
Measuring value hysteresis f_u	µm			3.5
Repeatability f_w	µm			3.5
Standard	Factory standard			
Overtravel	mm			0.3
Measuring force	N			2
Scale diameter	mm			50
Dial color			white	
IP protection category			IP 54	
Maximum switching capacity	mW			240
Maximum switching voltage	V			24
Maximum switching current	mA			100
Switching accuracy with non-inductive load of 10 mA/24 V	µm			1.5

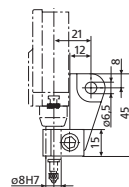
- Large, high contrast dial face
- Adjustable tolerance markers
- Lockable fine adjustment screw
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Insensitive to lateral forces (side play) acting on the measuring spindle
- Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
- Self contained movement, which is both quick and easy to remove and replace
- Box type protective housing
- Constant measuring force
- Adjustable limit contacts made from high-grade precious metal
- Limit contacts are particularly well protected against vibration and mechanical overload
- **Scope of delivery:** Case, Instruction manual, Adjusting knob 953, Connection Cable 1,2m

Order no.	Mounting shaft	Scale diameter
	mm	mm
4343100	8	50
4343105	8	50



Accessories

Order no.	Product name	Product type
4372000	Cable release (250 mm)	951
4372020	Setting knob for setting the limit contacts without an additional setting standard	953
4372030	Lifting knob	954
4373031	Splash guard cover	958
4310103	Adapter bush (.375" / 8 mm)	940
4334786	Rubber bellows	970
4375002	Lug back to mount on mounting shank 8h6 mm	963
4345694	Connection cable (5 m), axial	
4345695	Connection cable (1,2 m), axial	



963

Mechanical Dial Comparator with limit contacts Millimes 1150 N / 1150 NT



- Large, high contrast dial face
- Adjustable tolerance markers
- Lockable fine adjustment screw
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Insensitive to lateral forces (side play) acting on the measuring spindle
- Maximum sensitivity and accuracy are ensured by the jeweled movement and in conjunction with the precision gears and pinions
- Self contained movement, which is both quick and easy to remove and replace
- Box type protective housing
- Constant measuring force
- Adjustable limit contacts made from high-grade precious metal
- Limit contacts are particularly well protected against vibration and mechanical overload
- **Scope of delivery:** Case, Instruction manual, Adjusting knob 953, Connection Cable 1,2m



Application:

Can be applied for example as tolerance control or as a precision contactor in automatic control systems

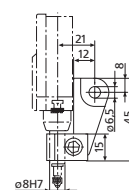
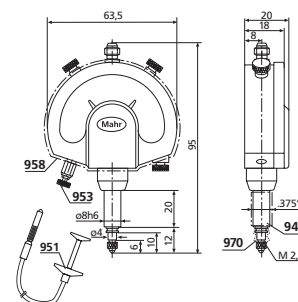
Technical Data

Order no.	4342100	4342105	
Product type	1150 N	1150 NT	
Measuring range	mm	±1.5	
Graduation value	mm	0.05	
Type of dial face		15–0–15	
Error limit G_e	µm	35	
Error limit G_{ges}	µm	60	
Error limit G_t	µm	25	
Measuring value hysteresis f_u	µm	17	
Repeatability f_w	µm	17	
Standard		Factory standard	
Overtravel	mm	2.5	3.5
Measuring force	N	1.5	
Scale diameter	mm	50	
Dial color		white	
IP protection category			IP 54
Maximum switching capacity	mW	240	
Maximum switching voltage	V	24	
Maximum switching current	mA	100	
Switching accuracy with non-inductive load of 10 mA/24 V	µm	7	

Order no.	Mounting shaft	Scale diameter
	mm	mm
4342100	8	50
4342105	8	50

Accessories

Order no.	Product name	Product type
4372000	Cable release (250 mm)	951
4372020	Setting knob for setting the limit contacts without an additional setting standard	953
4372030	Lifting knob	954
4373031	Splash guard cover	958
4310103	Adapter bush (.375" / 8 mm)	940
4334786	Rubber bellows	970
4375002	Lug back to mount on mounting shank 8h6 mm	963
4345694	Connection cable (5 m), axial	
4345695	Connection cable (1,2 m), axial	



963

YOUR STABLE PARTNER FOR MANUFACTURING.

MARSTAND



MarStand Indicator Stands, Comparator Stands and Run out Testing Instruments offer high stability which ensures precise measurements. Whether you are using a dial indicator, a dial comparator, a test indicator or a measuring probe, you will always have the best possible support.

MarStand. Comparator Stands, Indicator Stands, Center Bench

Indicator Stands

MarStand 815 GN 346
With Cast Iron Base

MarStand 2300 / 2400 347
For Electronic Measurements

MarStand 815 MA / 815 MB / 815 P / 815 MG / 349
With Magnetic Base

Post & Support Arm Assemblies

MarStand 815 XMA / 815 XMB / 815 XMS 285 / 355
815 XMS 485 / 815 XN / 815 XP
With Mounting thread and / or T-Slot

Center Bench

MarStand 818 356

Comparator Stands

MarStand 820 N / 820 NC / 820 FC / 820 NG / 820 FG 361
Small Version

MarStand 821 FG 364
Large Version

MarStand 824 NT / 824 FT / 824 GT 367
Heavy Version

Modular Units

MarStand 827 b 368

Indicator Stand with Delta Base MarStand 815 GN



Application:

- For use on measuring and control plates

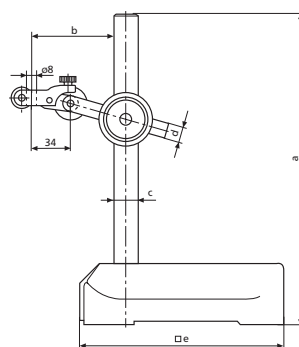
Indicator Stand with Base

- Sturdy base for stability and strength
- Convenient hand grip at the top of the base
- Structurally stable three-point support
- Stainless steel column and support arm
- Fine adjustment at support arm
- Display unit can be swiveled by $\pm 90^\circ$
- Easy to move, without vibration
- Front of the base is ground to allow movement along edges and rulers
- **Scope of delivery:** excludes indicator

Technical Data

Order no.	4413000	4413001	4413005	4413050	4413051	4413052	
Product type	815 GN						
Fine adjustment range	2						
Total height	mm	300	500	750	300	500	750
Total height	inch	12"	20"	30"	12"	20"	30"
Support arm reach (max.)	mm	185	200	230	185	200	230
Support arm reach (max.)	inch	7.28"	7.87"	9.06"	7.28"	7.87"	9.06"
Mounting hole	8H7			.375"			
Product weight	kg	4.20	9.00	10.00	4.20	9.00	10.00

Order no.	Base surface	a	b	c	d
		mm	mm	mm	mm
4413000	150 x 150 mm	300	185	18	14
4413001	190 x 180 mm	500	200	25	18
4413005	190 x 180 mm	750	230	35	25
4413050	150 x 150 mm	300	185	18	14
4413051	190 x 180 mm	500	200	25	18
4413052	190 x 180 mm	750	230	35	25



Indicator Stand with Delta Base MarStand 2300

Indicator Stand with Base

- Fine adjustment conveniently located in base
- Three-point base pads improve accuracy
- Contoured shape facilitates movement
- **Scope of delivery:** excludes indicator



Technical Data

Order no.	2050451		
Product type	2300		
Fine adjustment	•		
Total height	mm	457	
Total height	inch	18"	
Support arm reach (max.)	mm	86	
Support arm reach (max.)	inch	3.375"	
Attachment	5.55 mm / .218"		

Order no.	Base surface	Column diameter		Column height
		mm	inch	
2050451	110 x 76 mm / 4.375 x 3"	25	.995"	430 mm / 17 in

Indicator Stand with Delta Base MarStand 2400



Indicator Stand with Base

- A stable Height Stand for electronic measurement
- Fine adjustment in the base allows easy operator set up, even at high magnification
- Up to 3.8 mm / .150" adjustment when arms fully extended
- Collar has Teflon bearings and metal to metal clamping
- Post is thermally heatisolated from the base
- Arm lock is independent of the pivot lock
- Uses vertical lug mounting
- EHE-2056 Lever gagehead mounts directly to arm (as shown)
- EHE-2048 Lever gagehead requires an EAM-1071 adapter
- CP-83 Extra arm and swivel clamp assembly (allows mounting two lever gage heads on one stand)
- **Scope of delivery:** excludes indicator

Technical Data

Order no.	2050462		
Product type	2400		
Fine adjustment	•		
Fine adjustment range	mm	3.8	
Fine adjustment range	inch	0.150"	
Total height	mm	457	
Total height	inch	18"	
Support arm reach (max.)	mm	254	
Support arm reach (max.)	inch	10"	
Attachment	uses vertical Lug mounting		

Order no.	Base surface	Column diameter		Column height
		mm	inch	
2050462	162 x 94 mm	31.8	1.25"	457 mm / 18 in

Indicator Stand with Magnetic Base MarStand 815 MA

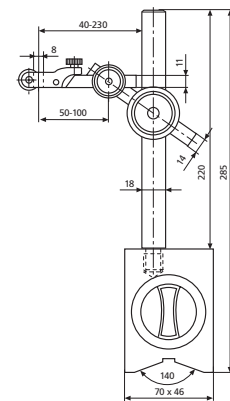
Indicator Stand with Magnetic Base

- Support arm with two joints
- Base has a powerful ON/OFF permanent magnet
- Magnetic force is active across the surfaces and the V-shaped bottom plus the front of the base
- Post and support arm are made of stainless steel
- Support arm can be finely adjusted
- **Scope of delivery:** excludes indicator



Technical Data

Order no.		4416000	4416050
Product type			815 MA
Fine adjustment range	mm		2
Total height	mm		285
Total height	inch		11.2"
Support arm reach (max.)	mm		230
Support arm reach (max.)	inch		9.06"
Mounting hole		8H7	.375"
V-block for shaft diameter	mm		20 – 100
Magnetic force	N		450
Product weight	kg		2.50



Accessories

Order no.	Product name
4416001	Wooden Case

Indicator Stand with Magnetic Base MarStand 815 MB

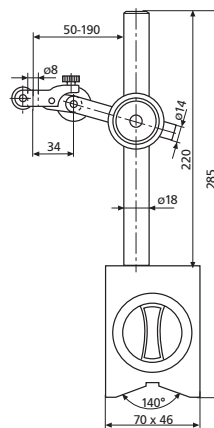


Indicator Stand with Magnetic Base

- Support arm with one joint
- Base has a powerful ON/OFF permanent magnet
- Magnetic force is active across the surfaces and the V-shaped bottom plus the front of the base
- Post and support arm are made of stainless steel
- Support arm can be finely adjusted
- Indicating instrument can be rotated through $\pm 90^\circ$
- **Scope of delivery:** excludes indicator

Technical Data

Order no.	4417000		4417050
Product type			815 MB
Fine adjustment range	mm		2
Total height	mm		285
Total height	inch		11.2"
Support arm reach (max.)	mm		190
Support arm reach (max.)	inch		7.48"
Mounting hole		8H7	.375"
V-block for shaft diameter	mm		20 – 100
Magnetic force	N		450
Product weight	kg		2.20



Accessories

Order no.	Product name
4416001	Wooden Case

Indicator Stand with Magnetic Base MarStand 1492B-5 / 1492B-10 / 1492B-15

Indicator Stand with Magnetic Base

- Use with any MarTest indicator
- Support arms stepped at one end (.218" Dia.) for supplied swivel clamp (CP-2199)
- Accommodates Vertical and Horizontal lug back mounts for AGD type Indicators
- Bases have powerful "ON/OFF" permanent magnets capable of attaching on any of four faces (three sides or bottom)
- **Scope of delivery:** Clamp CP-2199, excludes indicator



Technical Data

Order no.		2050360	2050358	2050359
Product type		1492B-5	1492B-10	1492B-15
Fine adjustment			•	
Total height	mm		237	460
Total height	inch		9.2"	18"
Support arm reach (max.)	mm	165	149	200
Support arm reach (max.)	inch	6.5"	5.9"	7.9"
Attachment		Dia. 5,54 mm / .218" post		

Order no.	Base surface	Column diameter		Column height
		mm	inch	
2050360	60 x 48 mm / 2.4 x 1.9"	10	.47"	178 mm / 7.0"
2050358	60 x 48 mm / 2.4 x 1.9"	10	.47"	178 mm / 7.0"
2050359	114 x 48 mm / 4.5 x 1.9"	20	.79"	401 mm / 15.8"

Indicator Stand with Magnetic Base MarStand 815 P

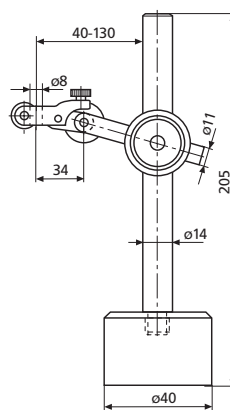


Indicator Stand with Magnetic Base

- Support arm has one joint
- Sturdy circular base with permanent magnet
- Post and support arm are made of stainless steel
- Support arm can be finely adjusted
- Indicating instrument can be rotated through $\pm 90^\circ$
- **Scope of delivery:** excludes indicator

Technical Data

Order no.		4422000	4422050
Product type			815 P
Fine adjustment range	mm		1.5
Total height	mm		205
Total height	inch		8"
Support arm reach (max.)	mm		130
Support arm reach (max.)	inch		5.12"
Mounting hole		8H7	.375"
Product weight	kg		0.70



Indicator Stand with Magnetic Base MarStand 815 MG

Indicator Stand with Magnetic Base

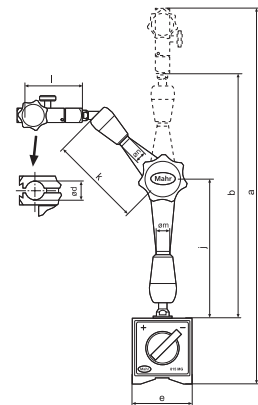
- 3D measuring stand, any position within the operating range can be reached
- Easy positioning of all three joints with a securely fixed handle
- Maintenance-free mechanical clamping system
- Black anodized arm components made from high quality light alloy
- Dial indicator holder with 8 mm receptacle bore and dovetail for dial test indicator measuring devices
- Fitted with zero play micro-precision adjuster
- Powerful magnet can be switched on and off
- **Scope of delivery:** excludes indicator



Technical Data

Order no.		4420350	4420360	4420370
Product type			815 MG	
Fine adjustment range	mm	5		
Total height	mm	224	316	401
Total height	inch	8.8"	12.4"	15.8"
Support arm reach (max.)	mm	130	200	280
Support arm reach (max.)	inch	5.12"	7.87"	11.02"
Mounting hole		8H7		
V-block for shaft diameter	mm	6 – 120		
Magnetic force	N	300	800	

Order no.	Base surface	j	k	l	m	a	b	d
		mm	mm	mm	mm	mm	mm	mm
4420350	34 x 34 mm	70	60	62	9	224	130	8
4420360	60 x 50 mm	120	80	64	10	316	200	8
4420370	60 x 50 mm	170	110	66	16	401	280	8



Indicator Stand with Magnetic Base MarStand 815 MG



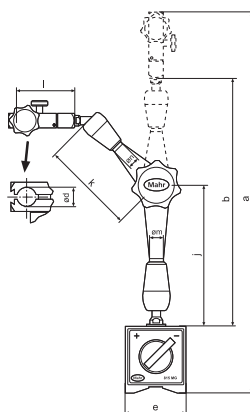
Indicator Stand with Magnetic Base

- 3D measuring stand, any position within the operating range can be reached
- easy positioning of all three joints with a securely fixed handle
- Very sturdy component, for excellent stability and accuracy
- Maintenance-free mechanical clamping system
- Black anodized arm components made from high quality light alloy
- Dial indicator holder with 8 mm mounting bore and dovetail for dial test indicator measuring devices
- Fitted with zero-play micro-precision adjuster
- Very easy to adjust, excellent repeatability
- Ideal for measuring instruments with μm resolution
- Powerful magnet can be switched on and off
- **Scope of delivery:** excludes indicator

Technical Data

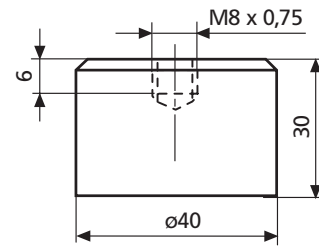
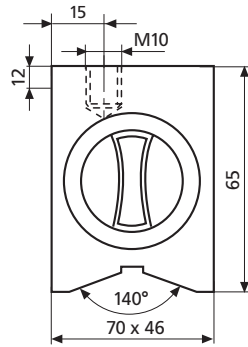
Order no.	4420380		
Product type	815 MG		
Fine adjustment range	mm	2	
Total height	mm	444	
Total height	inch	17.5"	
Support arm reach (max.)	mm	330	
Support arm reach (max.)	inch	13.00"	
Mounting hole	8H7		
V-block for shaft diameter	mm	6 – 120	
Magnetic force	N	1000	

Order no.	Base surface	j	k	l	m	a	b	d
		mm	mm	mm	mm	mm	mm	mm
4420380	73 x 50 mm	201	129	67	21	444	330	8



Magnetic Base MarStand

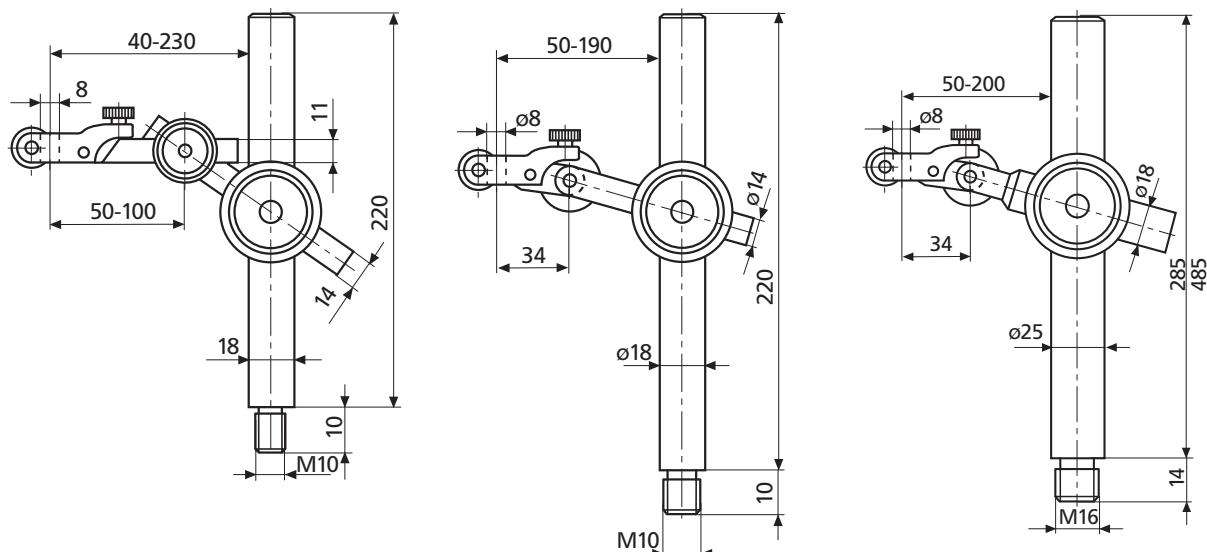
Overview



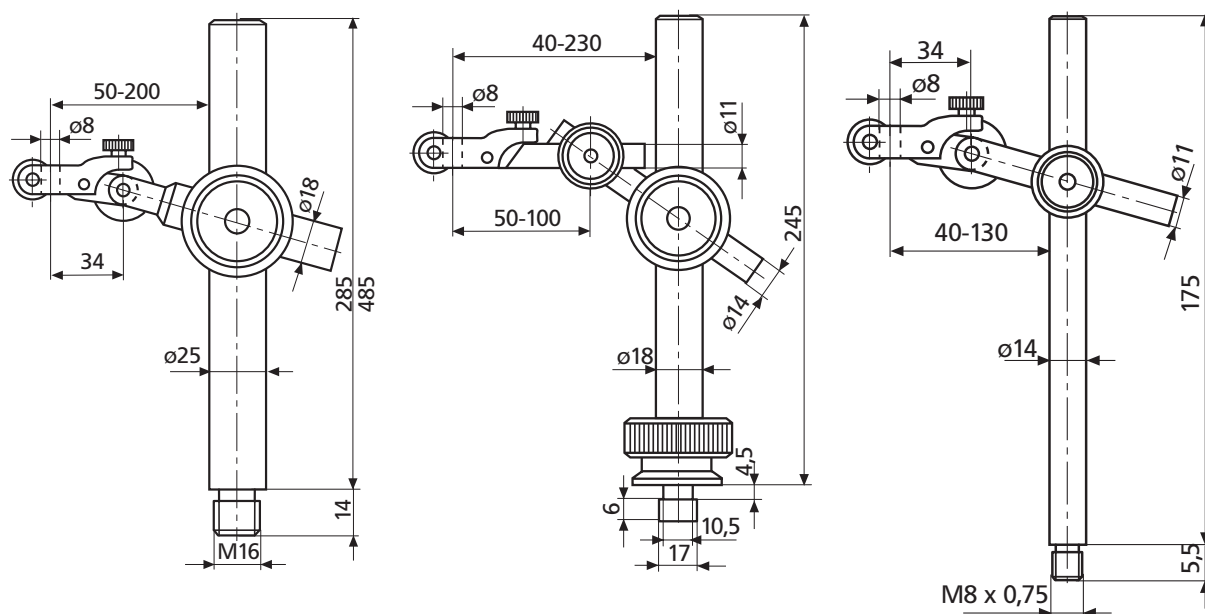
Order no.	4425000	4425002
Product type	815 YM	815 YP
Product	Standard version <ul style="list-style-type: none"> • Base has a powerful ON/OFF permanent magnet • With threaded mounting hole • V-groove in base • Front is flat • Magnetic force 450 N 	Round version <ul style="list-style-type: none"> • Permanent magnet plus threaded mounting hole • Underside of the base is flat • Magnetic force 250 N

Post and Support Assemblies MarStand

Overview



Order no.	4424005	4424006	4435011
Product type	815 XMA	815 XMB	815 XMS 285
Product	with mounting thread	with mounting thread	Exceptionally sturdy design with mounting thread
	<ul style="list-style-type: none"> • Two joints • Post and support arm are made of stainless steel • With fine adjustment 	<ul style="list-style-type: none"> • One joint • Post and support arm are made of stainless steel • With fine adjustment 	<ul style="list-style-type: none"> • One joint • Post and support arm are made of stainless steel • With fine adjustment



Order no.	4435015	4424000	4424015
Product type	815 XMS 485	815 XN	815 XP
Product	Exceptionally sturdy design with mounting thread	for mounting in a T-slot	with mounting thread
	<ul style="list-style-type: none"> • One joint • Stainless steel column and cantilever arms • Precision adjuster 	<ul style="list-style-type: none"> • Two joints • Knurled nut for clamping to the post • Post and support arm are made of stainless steel • With fine adjustment 	<ul style="list-style-type: none"> • One joint • Post and support arm are made of stainless steel • With fine adjustment

Radial run-out gage with center supports MarStand 818

Radial run-out gage with center supports

Unit composed of:

Bench:

- Flatness of the surface is in accordance to DIN 876/1
- Two T-slots for Tailstock and / or Support Arm

Support Arm 818 XNB:

- Support arm with one joint
- with fine adjustment

Tailstocks:

- Both Tailstocks can be relocated (slide into position)
- The Tailstock on the right side has a retractable (spring actuated) precision aligned center
- The Tailstocks have a peak height of 75 mm with a 90° prism for workpieces without a center, to a diameter of 20 mm (0.79")
- **Scope of delivery:** Measuring bench, Measuring arm 818 XNB, Center supports, excludes indicator



Application:

- Ideal for quick and accurate concentricity / run-out checks

Technical Data

Order no.		4622200	4622201	4622202	4622203
Distance between centers	mm	0-200	0-350	0-450	
Product type		818			
Height of centers	mm	50	75	100	150
T-groove width	mm	10H7		12H7	
Mounting hole		8H7			
Permitted height difference	mm	0.05			
Permitted lateral difference	mm	0.05			
Product weight	kg	8.00	12.00	35.00	38.00

Order no.	Column diameter	Structural dimensions (L x W) mm
	mm	mm
4622200	18	350 x 110
4622201	18	500 x 110
4622202	18	700 x 180
4622203	18	700 x 180

Radial run-out gage with center supports MarStand 818

Accessories

Order no.	Product name	Product type
4622210	V-support anvils in pairs, Diameter range 3 –15 mm, suitable for center height 50 / 75 mm	818 pe
4622275	Support Arm, Column height 205 mm, T-groove width 10 mm	818 XNB
4622220	Roller supports in pairs, Diameter range 3 –30 mm, T-groove width 10 mm	818 ab
4622215	V-support in pairs, Diameter range 5 –20 mm, T-groove width 10 mm	818 pb
4622276	Support Arm, Column height 260 mm, T-groove width 12 mm	818 XNB
4622211	V-support anvils in pairs, Diameter range 8 –45 mm, suitable for center height 100 mm	818 pe
4622277	Support Arm, Column height 360 mm, T-groove width 12 mm	818 XNB
4622221	Roller supports in pairs, Diameter range 4 –60 mm, T-groove width 12 mm	818 ab
4622216	V-support in pairs, Diameter range 5 –45 mm, T-groove width 12 mm	818 pb



818 pe



818 ab



818 pb

Center Bench with V-support MarStand 818

Center Bench with V-support

Unit composed of:

Bench:

- Flatness of the surface is in accordance to DIN 876/1
- Two T-slots for Tailstock and / or Support Arm

Support Arm 818 XNB:

- Support arm with one joint
- with fine adjustment

V-supports:

- Both V-supports can be relocated (slide into position)
- **Scope of delivery:** Measuring bench, Measuring arm 818 XNB, V-supports, excludes indicator



Application:

- Ideal for quick and accurate concentricity / run-out checks

Technical Data

Order no.		4622260	4622261	4622262
Product type			818	
Height of v-supports	mm	70		120
Diameter range	mm	5 – 20		5 – 45
T-groove width	mm	10H7		12H7
Mounting hole			8H7	
Permitted height difference	mm		0.05	
Permitted lateral difference	mm		0.05	
Product weight	kg	6.50	9.50	30.00

Order no.	Column diameter	Structural dimensions (L x W) mm
	mm	mm
4622260	18	350 x 110
4622261	18	500 x 110
4622262	18	700 x 180

Accessories

Order no.	Product name	Product type
4622275	Support Arm, Column height 205 mm, T-groove width 10 mm	818 XNB
4622276	Support Arm, Column height 260 mm, T-groove width 12 mm	818 XNB
4622277	Support Arm, Column height 360 mm, T-groove width 12 mm	818 XNB

Center Bench with Roller support MarStand 818



Application:

- Ideal for quick and accurate concentricity / run-out checks

Technical Data

Order no.		4622250	4622251	4622252
Product type			818	
Height of roller supports	mm	65		100
Diameter range	mm	3 – 30		4 – 60
T-groove width	mm	10H7		12H7
Mounting hole			8H7	
Permitted height difference	mm		0.05	
Permitted lateral difference	mm		0.05	
Product weight	kg	6.50	9.50	30.00

Order no.	Column diameter	Structural dimensions (L x W) mm
	mm	mm
4622250	18	350 x 110
4622251	18	500 x 110
4622252	18	700 x 180

Accessories

Order no.	Product name	Product type
4622275	Support Arm, Column height 205 mm, T-groove width 10 mm	818 XNB
4622276	Support Arm, Column height 260 mm, T-groove width 12 mm	818 XNB
4622277	Support Arm, Column height 360 mm, T-groove width 12 mm	818 XNB

Center Bench with Roller support

Unit composed of:

Bench:

- Flatness of the surface is in accordance to DIN 876/1
- Two T-slots for Tailstock and / or Support Arm

Support Arm 818 XNB:

- Support arm with one joint
- with fine adjustment

Roller supports:

- Both Roller supports can be relocated (slide into position)
- **Scope of delivery:** Measuring bench, Measuring arm 818 XNB, Balancing supports, excludes indicator

Small Comparator Stand made from steel MarStand 820 N / 820N

Small Comparator Stand made from steel

- Stable design
- Table plate made of hardened steel
- Rugged, ground stainless steel column
- Adjustable support arm for indicating instrument
- **Scope of delivery:** excludes indicator



Technical Data

Order no.	4430000		4430018	
Product type		820 N		820N
Working range a	mm		0 – 110	
Working range a	inch		0 – 4.3"	
Grade			DIN 876/00	
Flatness tolerance			$t_f = 2(1 + L/1000) \mu\text{m}$, L in mm	
Mounting hole		8H7		3/8"
Product weight	kg		2.60	

Accessories

Order no.	Product name	Quantity unit	Product type
4229000	107 V V-Block For shaft diameter 2 – 25 V-angle 108° Sales volume: Unit	Piece	107 V

Small Comparator Stand made from ceramic MarStand 820 NC / 820 FC



Small Comparator Stand made from ceramic

- Stable design
- Ceramic table plate (very high hardness for lasting precision)
- Rugged, ground stainless steel column
- Adjustable support arm for indicating instrument
- **Scope of delivery:** excludes indicator

Technical Data

Order no.		4432100	4432120	4433100	4433110
Product type		820 NC		820 FC	
Working range a	mm	0 - 110			
Working range a	inch	0 - 4.3"			
Fine adjustment				•	
Fine adjustment range	mm			0.4	
Grade		DIN 876/00			
Flatness tolerance		$t_1 = 2(1 + L/1000) \mu\text{m}$, L in mm			
Mounting hole		8H7	3/8"	8H7	3/8"
Product weight	kg	4.00			

Accessories

Order no.	Product name	Quantity unit	Product type
4229000	107 V V-Block For shaft diameter 2 - 25 V-angle 108° Sales volume: Unit	Piece	107 V

Small Comparator Stand, Plate made of granite MarStand 820 NG / 820 FG

Small Comparator Stand, Plate made of granite

- Stable design
- Table plate made of lapped black granite
- Rugged, ground stainless steel column
- Adjustable support arm for indicating instrument
- **Scope of delivery:** excludes indicator



Technical Data

Order no.		4430100	4430110	4431100	4431110
Product type		820 NG		820 FG	
Working range a	mm			0 – 130	
Working range a	inch			0 – 5.1"	
Fine adjustment				•	
Fine adjustment range	mm			0.4	
Grade		DIN 876/0			
Flatness tolerance		$t_f = 4(1 + L/1000) \mu\text{m}$, L in mm			
Mounting hole		8H7	3/8"	8H7	3/8"
Product weight	kg	3.20			

Accessories

Order no.	Product name	Quantity unit	Product type
4229000	107 V V-Block For shaft diameter 2 – 25 V-angle 108° Sales volume: Unit	Piece	107 V

Large Comparator Stand made from granite MarStand 821 NG / 821 FG



- Large Comparator Stand made from granite
- Exceptionally stable design
- Table plate made of lapped black granite
- Heavy duty column and adjustable support arm for maximum stability.
- Made of ground stainless steel
- Support arm fitted with fall brake
- **Scope of delivery:** excludes indicator

Technical Data

Order no.		4435100	4435101	4435110	4435111	4435150	4435151	4435160	4435161
Product type		821 NG	821 FG	821 NG	821 FG	821 NG	821 FG	821 NG	821 FG
Working range a	mm	0 – 250		0 – 430		0 – 250		0 – 430	
Working range a	inch	0 – 10"		0 – 17"		0 – 10"		0 – 17"	
Fine adjustment			•		•		•		•
Fine adjustment range	mm		0.4		0.4		0.4		0.4
Grade		DIN 876/0							
Flatness tolerance		$t_1 = 4(1 + L/1000) \mu\text{m}$, L in mm							
Mounting hole		8H7				3/8"			
Product weight	kg	15.80		48.00		15.80		48.00	

Accessories

Order no.	Product name	Quantity unit	Product type
4229000	107 V V-Block For shaft diameter 2 – 25 V-angle 108° Sales volume: Unit	Piece	107 V

Comparator Stand MarStand OMI-35B-21 / OMI-35B-30 / OMI-35B-32 / OMI-35B-41

Comparator Stand

- Model 35B has a precision ground base
- Indicator arms with and without fine adjustment are available
- Models are also available with lapped anvils for the highest precision
- Alternate post lengths, Indicators, Anvils and special fixturing available upon request
- For Dial or Digital Indicators having a horizontal lug back
- **Scope of delivery:** excludes indicator

Application:

Length Measurement with Plain Anvil (1" x 1" x 3") and Fine Adjustment



Technical Data

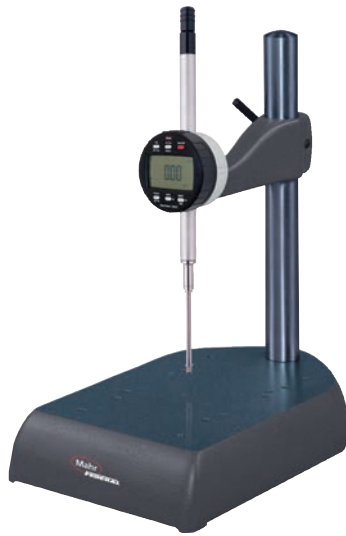
Order no.		2054319	2054320	2054321	2054322
Product type		OMI-35B-21	OMI-35B-30	OMI-35B-32	OMI-35B-41
Working range a	mm		0-222		
Working range a	inch		0-8.75"		
Fine adjustment		•			•
Fine adjustment range	mm	1.5			1.5
Fine adjustment range	inch	.06"			.06"
Support arm reach (max.)	mm	62.5			
Support arm reach (max.)	inch	2.5"			
Mounting		Lug Back Mount - Requires Horizontal Lug Back Type Indicators or Accessories			
Plate		AL-96, plain surface			AL-97, serrated

Order no.	Column diameter	Table surface (A x B) mm
	mm	
2054319	32	25 x 75 mm
2054320	32	
2054321	32	
2054322	32	25 x 75 mm

Accessories

Order no.	Product name	Product type
2202343	Plain anvil, 75 mm x 25 mm x 25mm / 3" x 1" x 1"	AL-96
2202344	Serrated anvil, 75 mm x 25 mm x 25mm / 3" x 1" x 1"	AL-97
2202459	Fine adjustment arm	AM-146

MarStand OMI-NB-60 / OMI-NB-61



Application:

Length Measurement with No Platen and with No Fine Adjustment

- Model NB-60 and NB-61 have the largest base and greatest throat depth
- Indicator arms with and without fine adjustment are available
- Base has a pattern of 1/4-20 tapped holes for mounting platens or special tooling
- Only indicating instruments that have a horizontal lug back can be used
- **Scope of delivery:** excludes indicator, without plate

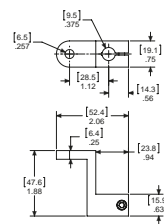
Technical Data

Order no.	2054324		2054325	
Product type		OMI-NB-60		OMI-NB-61
Working range a	mm		0 -200	
Working range a	inch		0 -8.0"	
Fine adjustment		false		•
Fine adjustment range	mm			1.5
Fine adjustment range	inch			.06"
Support arm reach (max.)	mm	124		
Mounting	Lug Back Mount - Requires Horizontal Lug Back Type Indicators or Accessories			

Order no.	Column diameter	Table surface (A x B) mm
	mm	
2054324	32	238 x 165 mm
2054325	32	238 x 165 mm

Accessories

Order no.	Product name	Product type
2223500	Measuring plate, serrated, 152 mm x 203 mm / 6" x 8"	PL-147
2223599	Measuring plate, serrated, 114 mm x 152 mm / 4.5" x 6"	PL-99
2202460	Fine adjustment arm	AM-147
2009177	Adapter, Mounting Bracket, L-bracket with 0.375" hole	AAD-66



AAD-66

Heavy measuring table MarStand 824 NT / 824 FT / 824 GT

Heavy measuring table

- Sturdy, T-shaped base made from special cast iron
- Extremely stable
- Heavy duty column and support arm for maximum stability
- Support arm locked against rotation and height adjustable via rack

Models:

824 NT - without fine adjustment

824 FT - with fine adjustment via parallel spring-loaded system

824 GT - specially designed for the large Millimes dial comparator, with fine adjustment via the adapter bushing

- **Scope of delivery:** excludes indicator, without plate

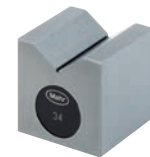


Technical Data

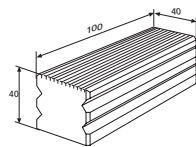
Order no.		4442100	4442105	4443100	4443105	4444200
Product type		824 NT		824 FT		824 GT
Working range a	mm	0 - 210				0 - 200
Working range a	inch	0 - 8.2"				0 - 8.0"
Fine adjustment				•		
Fine adjustment range	mm			0.4		3
Mounting hole		8H7	3/8"	8H7	3/8"	28H7
Product weight	kg	17.00		19.00		18.00

Accessories

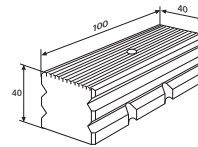
Order no.	Product name	Quantity unit	Product type
4082731	Plate for single measurement (100 x 40 mm)		827 b 31
4082732	Plate for sum measurement (100 x 40 mm)		827 b 32
4082733	Plate for single measurement (130 x 130 mm)		827 b 33
4082734	Plate for sum measurement (130 x 130 mm)		827 b 34
4229000	107 V V-Block For shaft diameter 2 - 25 V-angle 108° Sales volume: Unit	Piece	107 V



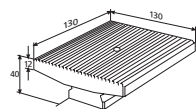
107 V



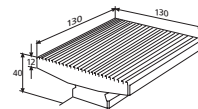
827 b 31



827 b 32



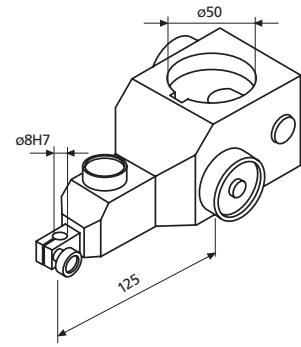
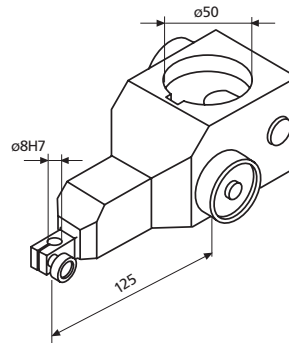
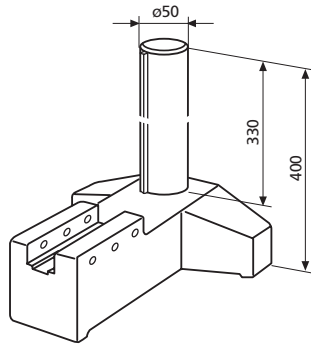
827 b 34



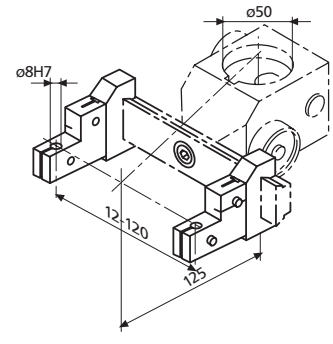
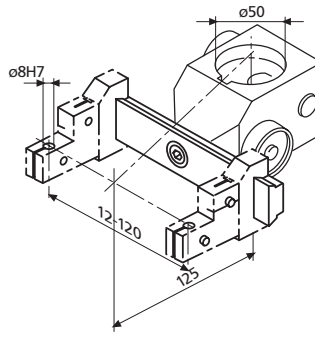
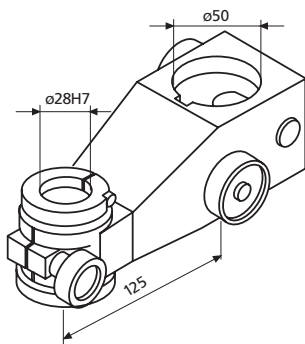
827 b 33

Base with Post MarStand

Overview



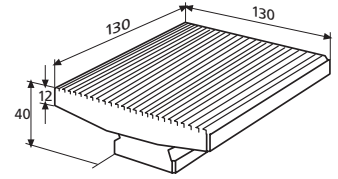
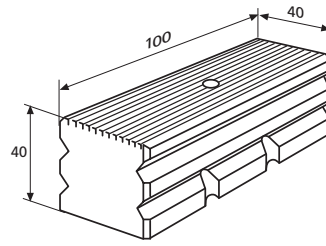
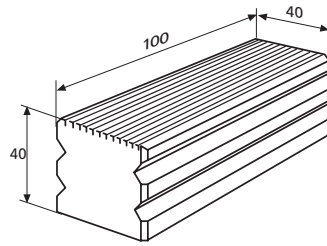
Order no.	4082705	4082716	4082717
Product type	827 b 5	827 b 16	827 b 17
Product	<ul style="list-style-type: none"> T-shaped base which is made from a special cast iron Post has a chrome finish 	<ul style="list-style-type: none"> Rugged construction for exceptionally high bending resistance Locked against rotation, and height adjustable via rack 	<ul style="list-style-type: none"> Rugged construction for exceptionally high bending resistance Locked against rotation, and height adjustable via rack



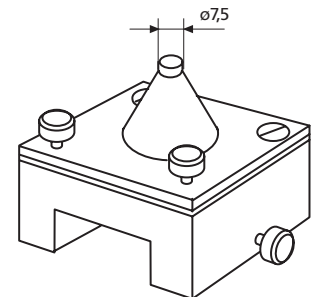
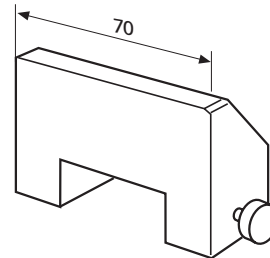
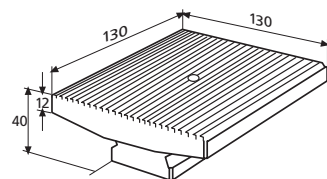
Order no.	4082718	4082719	4082714
Product type	827 b 18	827 b 19	827 b 14
Product	<ul style="list-style-type: none"> Rugged construction for exceptionally high bending resistance Locked against rotation, and height adjustable via rack 	<ul style="list-style-type: none"> Rugged construction for exceptionally high bending resistance Locked against rotation, and height adjustable via rack 	Probe holder, mounting hole 8 mm

Plate for single measurement MarStand

Overview



Order no.	4082731	4082732	4082733
Product type	827 b 31	827 b 32	827 b 33
Product	<ul style="list-style-type: none"> • For single measurement • Hardened and lapped • Reversible • One measuring surface with longitudinal ribbing • Both sides face lapped 	<ul style="list-style-type: none"> • For compound measurement • Hardened and lapped • With 8 mm mounting bore and clamping device for inductive probes • Measuring surface with longitudinal ribbing 	<ul style="list-style-type: none"> • For single measurement • Hardened and lapped • Reversible • Large measuring surface with longitudinal ribbing • Both sides face lapped



Order no.	4082734	4082735	4082736
Product type	827 b 34	827 b 35	827 b 36
Product	<ul style="list-style-type: none"> • For compound measurement • Hardened and lapped • With 8 mm mounting bore and clamping device for inductive probes • Large measuring surface with longitudinal ribbing 	<ul style="list-style-type: none"> • Ensures that a workpiece is correctly positioned • To be attached to plates 827 b 31 and 827 b 32 	<ul style="list-style-type: none"> • With adjustment screws for parallel alignment of 2 plan surfaces • Particularly suitable for mounting Pin Gages 426 M • To be attached to plates 827 b 31 and 827 b 32