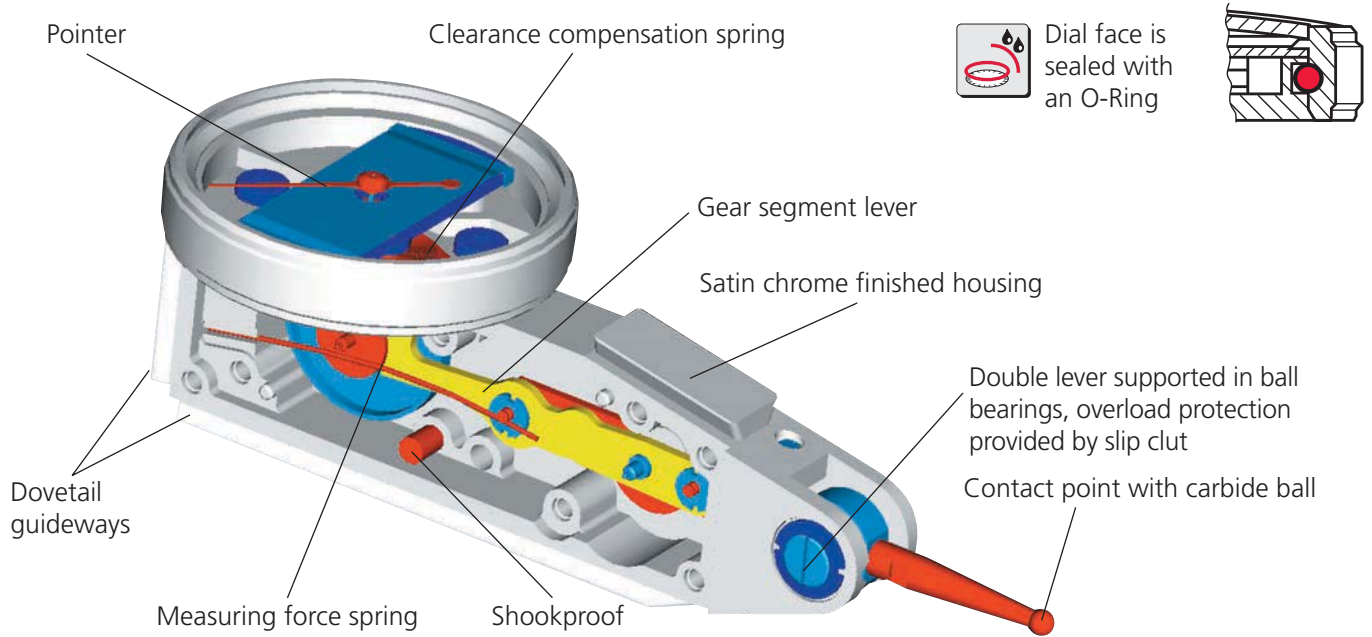


# MarTest. Test Indicators and Touch Probes

## 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

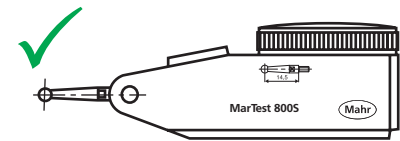
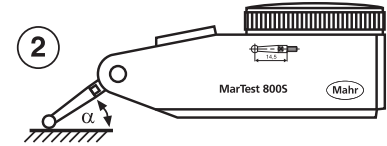
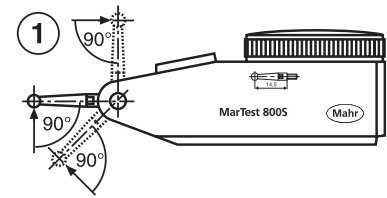
For accurate measurements the axis of the contact point must be perpendicular to the measuring direction (fig. 1). If this is not possible, it is necessary to multiply the reading on the dial with a correction factor, which depends on angle  $\alpha$  (fig. 2). The correction factor is negligible for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

Angle $\alpha$	$15^\circ$	$30^\circ$	$45^\circ$	$60^\circ$
Corr. factor	0,96	0,87	0,70	0,50

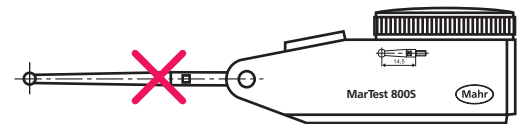
Example:

Angle  $\alpha$ :  $30^\circ$  (estimated)  
 Reading on dial: 0,38 mm  
 Meas. values:  $0,38 \times 0,87 = 0,33$  mm

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



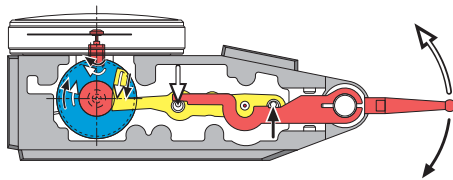
$I = 14,5$



$I = 41,2$

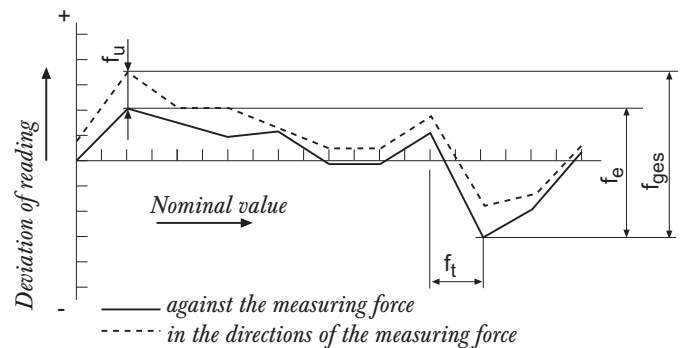
## MarTest – Automatic switch of measuring direction

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



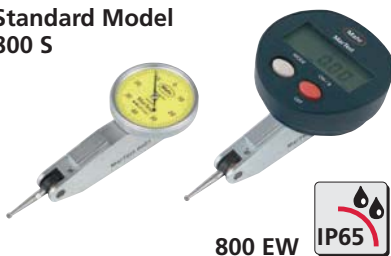
functional description

## 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

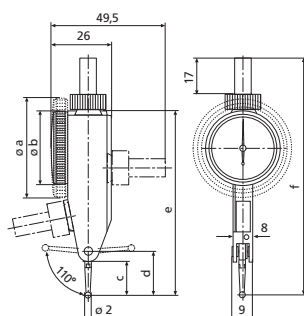
## Technical Data

Product type		800 S	800 SG	800 SR	800 SA	800 SGA
Order no.	Order no.	4305200	4307200	4307250	4301200	4301250
	Order no. set	2015309	2015310	2015348	2015343	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 $f_e$	$\mu\text{m}$	10				
Total deviation range $f_{ges}$	$\mu\text{m}$	13	14		8	
Hysteresis $f_u$	$\mu\text{m}$	3			4	
Partial measuring span $f_t$	$\mu\text{m}$	5			3	
Repeatability $f_w$	$\mu\text{m}$	3				
Standard		DIN 2270			Factory standard	

## Standard model

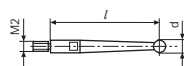
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic 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



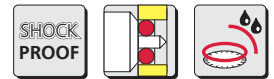
## Accessories

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



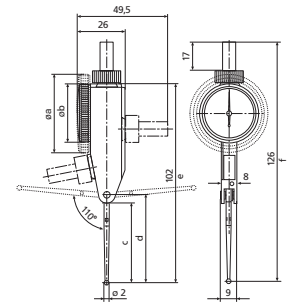
## Application:

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

## Technical Data

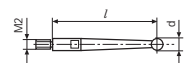
Product type		800 SL	800 SGL	800 SGB
Order no.	Order no.	4306200	4306250	4301300
	Order no. set	2015312	2015313	2015346
Measuring range	mm	$\pm 0.25$		$\pm 0.5$
Graduation value	mm	0.01		
Scale diameter	mm	28	38	
Type of dial face		25-0-25		50-0-50
Dial color		yellow		
Measuring force	N	0.07		
Range per rev.	mm	0.5	1	
Deviation range $f_e$	$\mu\text{m}$	10		
Total deviation range $f_{ges}$	$\mu\text{m}$	13		
Hysteresis $f_u$	$\mu\text{m}$	5	4	
Partial measuring span $f_t$	$\mu\text{m}$	5		
Repeatability $f_w$	$\mu\text{m}$	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

## For high-precision measurements

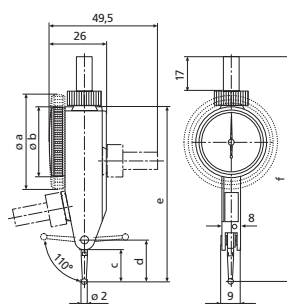
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic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

## 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 $f_e$	$\mu\text{m}$	3		
Total deviation range $f_{ges}$	$\mu\text{m}$	4		5
Hysteresis $f_u$	$\mu\text{m}$	2		3
Partial measuring span $f_t$	$\mu\text{m}$	2		
Repeatability $f_w$	$\mu\text{m}$	1.5		
Standard		DIN 2270		Factory standard
Set included		Holding bar HB-2157, Clamp CP-2199		

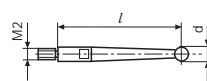
• **Scope of delivery:** Case, Instruction manual, Spanner for changing the styli, Stylus dia.  $\varnothing$  2 mm, Mounting shaft 800a8, Holding bar HB-2157, Clamp CP-2199

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



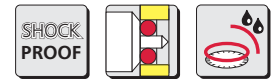
## Accessories

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



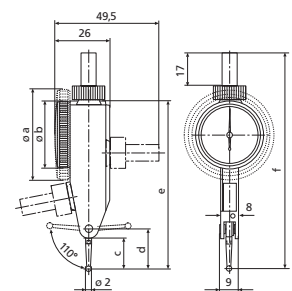
## Application:

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

## Technical Data

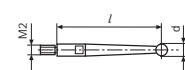
Product type		800 SGE	
Order no.	Order no.		4308220
	Order no. set		2015345
Measuring range		mm	$\pm 0.07$
Graduation value		mm	0.001
Scale diameter		mm	38
Type of dial face			70-0-70
Dial color			yellow
Measuring force		N	0.2
Range per rev.		mm	0.14
Deviation range $f_e$		$\mu\text{m}$	3
Total deviation range $f_{ges}$		$\mu\text{m}$	4
Hysteresis $f_u$		$\mu\text{m}$	2
Partial measuring span $f_t$		$\mu\text{m}$	2
Repeatability $f_w$		$\mu\text{m}$	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

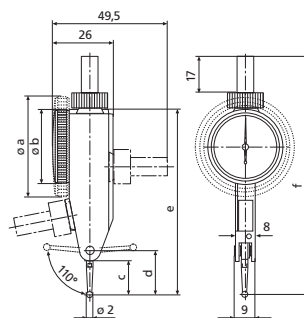
## Technical Data

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

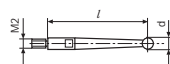
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic 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

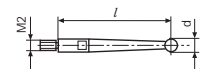
## Technical Data

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"		.00016"
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	

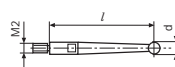
**With long stylus**, for measurements at poorly accessible measuring points

- 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

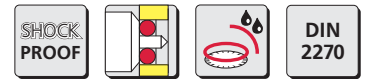
## Accessories

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:

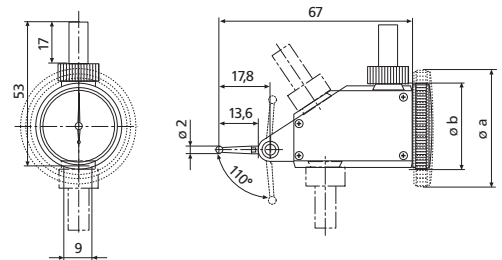
- Measurement of concentricity, alignment, parallelism and flatness
- Centering of bores and shafts
- Parallel or perpendicular alignment of work pieces



## Technical Data

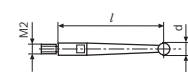
Order no.	2015327		4302200
Product type			800 V
Measuring range	mm		$\pm 0,4$
Readings	mm		0,01
Scale diameter	mm		28
Type of dial face			40-0-40
Dial color			yellow
Measuring force	N		0,2
Range per rev.	mm		0,8
Span of error $f_e$	$\mu\text{m}$		10
Total span of error $f_{ges}$	$\mu\text{m}$		13
Hysteresis $f_u$	$\mu\text{m}$		3
Local span $f_t$	$\mu\text{m}$		5
Repeatability $f_w$	$\mu\text{m}$		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

## Vertical model

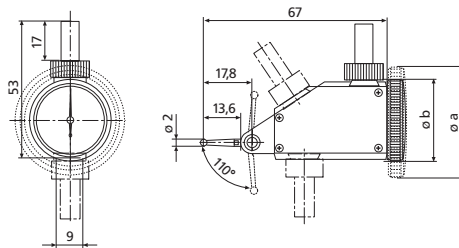
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic 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

## Technical Data

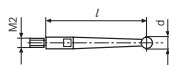
Order no.	2015347		4302250
Product type			800 VGM
Measuring range	mm		$\pm 0,1$
Readings	mm		0,002
Scale diameter	mm		38
Type of dial face			100-0-100
Dial color			yellow
Measuring force	N		0,25
Range per rev.	mm		0,2
Span of error $f_e$	$\mu\text{m}$		3
Total span of error $f_{ges}$	$\mu\text{m}$		4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



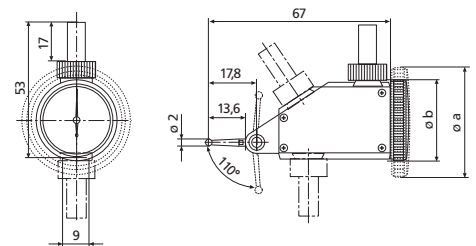
## Application:

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

## Technical Data

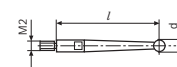
Order no.	2015326	4302960
Product type		801 VGM
Measuring range	inch	$\pm .004''$
Graduation value	inch	.0001''
Scale diameter	inch	1.5''
Type of dial face		4-0-4
Dial color		green
Measuring force	N	0.25
Range per rev.	inch	.008''
Deviation range $f_e$	inch	.00012''
Total deviation range $f_{ges}$	inch	.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

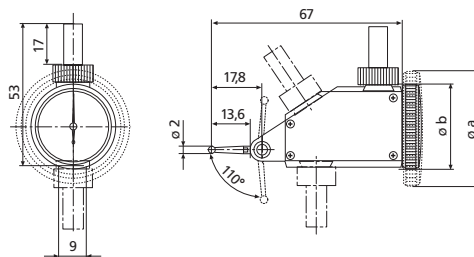
## Technical Data

Order no.	2015325		4302950	
Product type			801 V	
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		0.2	
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	

## Vertical model

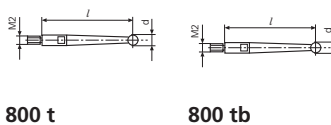
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic 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

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	





# 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

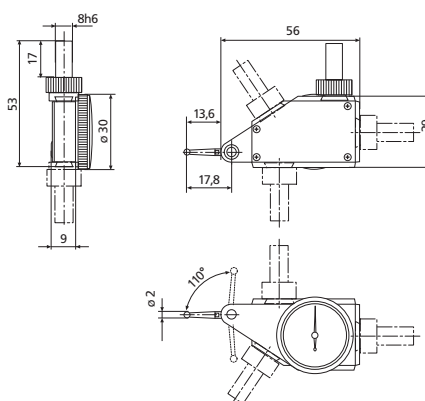
## Technical Data

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

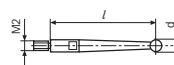
- High-contrast dial face, **sealed with O-ring**
- **Mineral glass viewing panel** for best protection against cracking, scratching, hot shavings and optimal resistance to solvents
- Matt chrome plated protective casing with three integrated dovetail guide rails
- Shockproof measuring mechanism
- Anti-magnetic 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



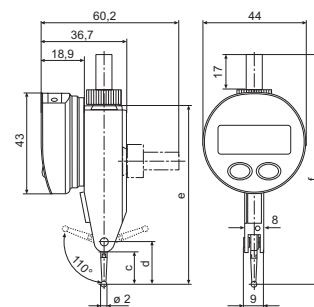
## Application:

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

## Technical Data

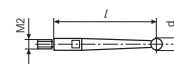
Order no.		4305120	4306120
Product type		800 EW	800 EWL
Measuring range	mm	$\pm 0,4$	$\pm 0,25$
Measuring range, test indicator, comparator, probe	inch	$\pm .015''$	$\pm .010''$
Resolution	mm		0,001
Resolution	inch		.00005''
Measuring force	N	0,13	0,07
Span of error $f_e$	$\mu\text{m}$		10
Total span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

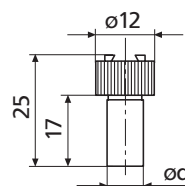


- Clamping shafts can be moved on dovetail guide rails on the housing
- Clamping in any position with milled nut (no tools required)

### 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

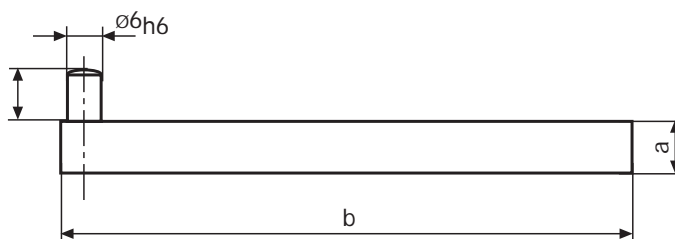
- Used for holding dial test indicator measuring devices on machine tools in conjunction with the 800k universal clamp



### Technical Data

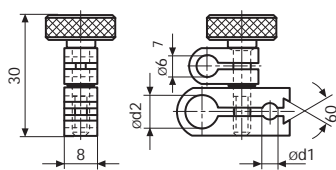
Order no.	Product type
4305888	800 h1

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

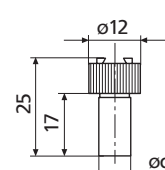


### Accessories

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

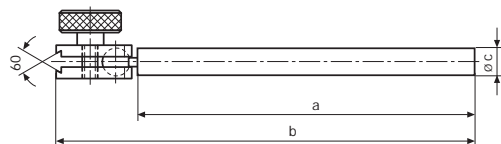


- For aligning and centering workpieces on machine tools
- Pivoting holding clamp for dovetail

### 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

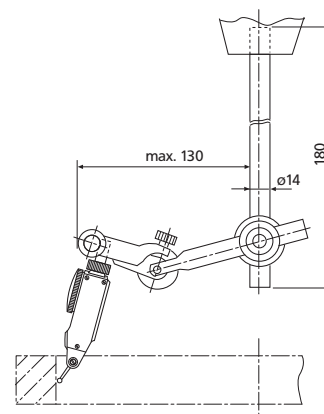
- Swivel mounting clamp and fine adjustment
- Stainless steel rods



## Technical Data

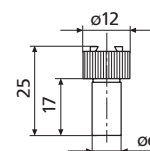
Order no.	Product type
4309070	801 v

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

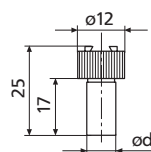
## Technical Data

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

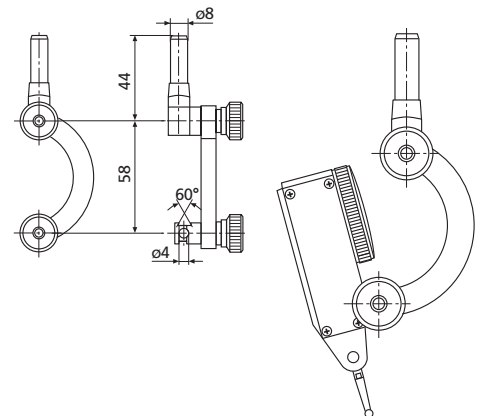
- For aligning and centering workpieces on machine tools
- Pivoting holding clamp



## Technical Data

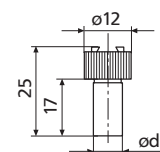
Order no.	Product type
4305893	800 b

Order no.	Mounting hole
4305893	4 mm



## Accessories

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



800 a