



Measuring and testing equipment



Comparator stands



Comparator stands with round table

MT 25
MT 50

MT 25



MT 50



MT 50 K



MT 50 R



(MT 50 with horizontal measuring frame MB 22)

The table surfaces of models MT 25 and MT 50 are lapped. The table of MT 50 K is made of high-quality Al_2O_3 99.7% ceramic and is also lapped.

The columns of all models are made of hardened and precision-ground steel.

The measuring frame of MT 25 can be inclined to an optimal working position.

Measuring inserts for MT 25:

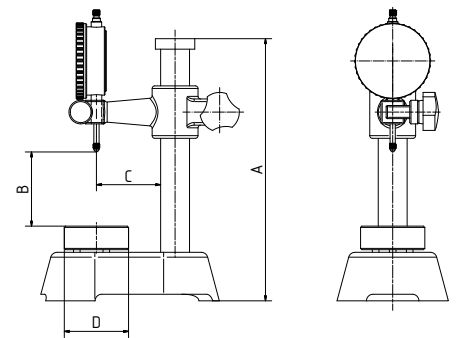
MT 25-A: Measuring table plate dia. 5 mm

MT 25-B: Measuring table plate dia. 8 mm

MT 50 F



Model with fine adjustment of dial gauge height. Adjustment range 22 mm.



Model		MT 25	MT 50	MT 50 K	MT 50 F	MT 50 KF
Total height	A mm	150	200	200	200	200
Measuring range – vertical	B mm	40	100	100	100	100
Reach	C mm		49	49	49	49
Measuring table dia.	D mm	20	50	50	50	50
Flatness	μm			≤ 2		≤ 2
Column diameter	mm		22	22	22	22
Dial gauge holder	mm	8H7	8H7	8H7	8H7	8H7
Measuring table material		Steel	Steel	Ceramic	Steel	Ceramic
Weight	kg	approx. 1.2	approx. 2.3	approx. 2.3	approx. 2.5	approx. 2.5
Extras						
Horizontal measuring frame MB 22			•	•	•	•

Horizontal measuring frame		MB 22
Reach of measuring frame	mm	40
Size of gap	mm	50
Fits column diameter	mm	22
Dial gauge holder	mm	8H7
Weight	kg	approx. 0.5

The measuring frame of MB 22 can be used with all measuring tables with a column diameter of 22 mm. It can be used for run-out tests and for measurements of grooves and recesses on cylinders.

Comparator stands with a rectangular table MT 100

The table surfaces of models MT 100 and MT 100 b are lapped.

The tables of MT 100 K and MT 100 bK are made of high-quality Al₂O₃ 99.7% ceramic and are also lapped.

The columns of all models are made of hardened and precision-ground steel.

MT 100



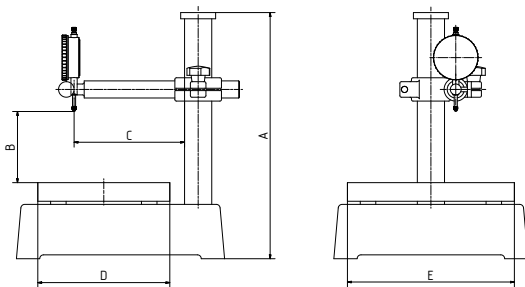
MT 100 b



MT 100 K



MT 100 bK



Model			MT 100	MT 100 b	MT 100 K	MT 100 bK
Total height	A	mm	200	200	200	200
Measuring range – vertical	B	mm	100	100	100	100
Measuring range – horizontal	C	mm	49	49	49	49
Cross arm length		mm		120		120
Measuring table dia.	D	mm	60 x 68	60 x 68	60 x 75	60 x 75
Column diameter		mm	22	22	22	22
Dial gauge holder		mm	8H7	8H7	8H7	8H7
Measuring table material			Steel	Steel	Ceramic	Ceramic
Flatness		µm			≤ 2	≤ 2
Dust grooves			•	•		
Weight		kg	approx. 3.2	approx. 3.5	approx. 3.2	approx. 3.5
Extras						
Measuring frame MB22			•	•	•	•

Comparator stands with rectangular table MT 130

The table surfaces of models MT 130 and MT 130 b are lapped.

The tables of models MT 130 K and MT 130 bK are made of high-quality lapped Al_2O_3 99.7% ceramic.

The columns of all models are made of hardened and precision-ground steel.

Measuring tables MT 130 b and MT 130 bK have interchangeable dial gauge holders.

MT 130



MT 130 b



MT 130 K



MT 130 bK



Model		MT 130	MT 130 b	MT 130 K	MT 130 bK
Total height	mm	284	284	284	200
Measuring range – vertical	mm	150	150	150	100
Measuring range – horizontal	mm	76	135	76	135
Cross arm length	mm				120
Measuring table area	mm	98 x 115	98 x 115	98 x 115	98 x 115
Column diameter	mm	28	28	28	28
Dial gauge holder	mm	8H7	8H7	8H7	8H7
Measuring table material		Steel	Steel	Ceramic	Ceramic
Flatness	μm	4.46	4.46	≤ 3	≤ 3
Dust grooves		•	•		
Weight	kg	approx. 7.0	approx. 7.1	approx. 7.0	approx. 7.1

Dial gauges are not included.

Extra-sturdy comparator stands MT 150 U

MT 150-U1



MT 150-U2



MT 150-U3



The dial gauge holders of these models are interchangeable. Holders can be supplied with 20H7, 25H7, 28H7 and 30H7 holes. Adapters for commonly used electronic length measuring probes are available.

Model		MT 150 U-1	MT 150 U-2	MT 150 U-3
Total height	mm	400	400	400
Measuring range – vertical	mm	150	150	150
Measuring range – horizontal	mm	80	80	80
Measuring table area	mm	dia. 115	98 x 115	
Measuring block – V-block depth	mm			10 / 90 °
Measuring block – measuring table area	mm			100 x 48
Column diameter	mm	50	50	50
Dial gauge holder	mm	8H7	8H7	8H7
Measuring table material		Steel	Steel	Steel
Flatness	µm	4.46	4.46	4.32
Dust grooves		•	•	•
Weight	kg	approx. 20.0	approx. 20.0	approx. 20.0

Subject to technical modifications

Extra-sturdy comparator stands MT 160

The comparator stands in the MT 160 series are distinguished by a large measurement surface. They were designed for high accuracy in spite of their rugged construction.

The measuring table plate rests on an adjustable three-point support.

The models MT 160b and MT 160 U-50b have a sliding horizontal measuring arm that can reach every point of the measurement surface.

The horizontal measuring arm of models MT 160b and MT 160 U-50b can also be supplied with a rotation lock for special requirements.

MT 160 SOGG



MT 160 SOGGG



Model			MT 160 SOGG	MT 160 SOGL	MT 160 SMGG	MT 160 SMGL	MT 160 SOGGG	MT 160 SOGGL
Total height	A	mm	320	320	320	320	320	320
Measuring range – vertical	B	mm	160	160	160	160	160	160
Reach	C	mm	104	104	104	104	104	104
Measuring table area	D x E	mm	170 x 215	170 x 215	170 x 215	170 x 215	170 x 215	170 x 215
Precision-ground table surface			•		•		•	
Lapped table surface				•		•		•
Column diameter		mm	35	35	35	35	35	35
Smooth column			•	•				
Column with thread and setting ring					•	•		
Column with hand wheel for vertical adjustment							•	•
Dial gauge holder		mm	8H7	8H7	8H7	8H7	8H7	8H7
Measuring table material			Steel	Steel	Steel	Steel	Steel	Steel
Flatness		µm	4.86	4.86	4.86	4.86	4.86	4.86
Dust grooves			•	•	•	•	•	•
Weight		kg	approx. 22	approx. 22	approx. 22	approx. 22	approx. 22	approx. 22

Extra-sturdy comparator stands MT 160

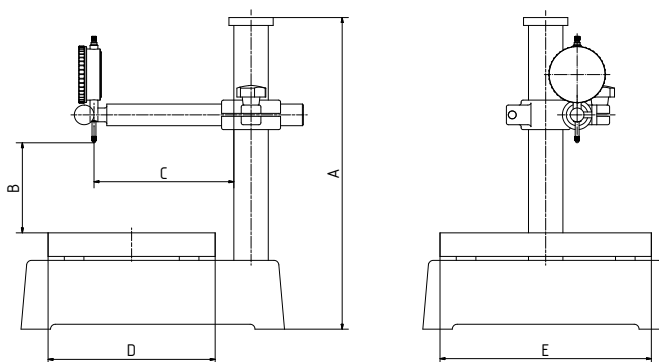
MT 160b SMGG



MT 160U 50b-GS



The dial gauge holders of the MT 160b types are interchangeable. Holders are available with 20H7, 25H7, 28H7 and 30H7 holes. Adapters for commonly used electronic lengthmeasuring probes are available.



Model			MT 160 b SOGG	MT 160 b SUGL	MT 160 b SMGG	MT 160 b SMGL	MT 160 U 50b-GS	MT 160 U 50b-GL	MT 160 U 50b-GSV	MT 160 U 50b-GLV
Total height	A	mm	320	320	320	320	370	370	370	370
Measuring range – vertical	B	mm	160	160	160	160	210	210	210	210
Reach up to	C	mm	180	180	180	180	220	220	220	220
Measuring table area	D x E	mm	170 x 215	170 x 215	170 x 215	170 x 215	170 x 215	170 x 215	170 x 215	170 x 215
Precision-ground table surface			•		•		•		•	
Lapped table surface				•		•		•		•
Column diameter		mm	35	35	35	35	50	50	50	50
Smooth column			•	•						
Column with thread and setting ring					•	•	•	•	•	•
Horizontal measuring arm with rotation lock (option)			•	•	•	•	•	•	•	•
Dial gauge holder		mm	8H7	8H7	8H7	8H7	8H7	8H7	8H7	8H7
Interchangeable dial gauge holder			•	•	•	•	•	•	•	•
Measuring table material			Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
Flatness		µm	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86
Dust grooves			•	•	•	•	•	•	•	•
Weight		kg	approx. 22	approx. 22	approx. 22	approx. 22	approx. 26	approx. 26	approx. 26	approx. 26

Comparator stands with long reach MT 180

The measuring tables in the MT 180 series are distinguished by their long reach, sturdy column and large measurement surface. Another advantage is their low weight.

The measuring table plate rests on an adjustable three-point support.

The MT 180b models have a sliding horizontal measuring arm that can reach every point of the measurement surface.

The horizontal measuring arm can also be equipped with a rotation lock.

The dial gauge holder is interchangeable. Mounting holes for commonly used length measuring probes are available.

MT 180-1



MT 180 1H



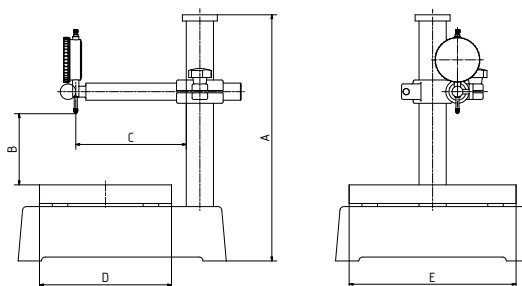
Model			MT 180-1	MT 180-2	MT 180-G1	MT 180-G2	MT 180-1H	MT 180-2H
Total height	A	mm	320	320	320	320	320	320
Measuring range – vertical	B	mm	160	160	160	160	160	160
Reach	C	mm	104	104	104	104	104	104
Measuring table area	D x E	mm	98 x 180	98 x 180	98 x 180	98 x 180	98 x 180	98 x 180
Precision-ground table surface			•		•		•	
Lapped table surface				•		•		•
Column diameter		mm	35	35	35	35	35	35
Smooth column			•	•				
Column with thread and setting ring					•	•		
Column with hand wheel for vertical adjustment							•	•
Dial gauge holder		mm	8H7	8H7	8H7	8H7	8H7	8H7
Interchangeable dial gauge holder								
Measuring table material			Steel	Steel	Steel	Steel	Steel	Steel
Flatness		µm	10	4.74	10	4.74	10	4.74
Dust grooves			•	•	•	•	•	•
Weight		kg	approx. 12	approx. 12	approx. 12	approx. 12	approx. 12	approx. 12

Comparator stands with long reach MT 180

MT 180 b-1



MT 180 b-G1



Model			MT 180 b-1	MT 180 b-2	MT 180 b-G1	MT 180 b-G2
Total height	A	mm	320	320	320	320
Measuring range – vertical	B	mm	160	160	160	160
Reach up to	C	mm	180	180	180	180
Measuring table area	D x E	mm	98 x 180	98 x 180	98 x 180	98 x 180
Precision-ground table surface			•		•	
Lapped table surface				•		•
Column diameter		mm	35	35	35	35
Smooth column			•	•		
Column with thread and setting ring					•	•
Dial gauge holder		mm	8H7	8H7	8H7	8H7
Interchangeable dial gauge holder			•	•	•	•
Measuring table material			Steel	Steel	Steel	Steel
Flatness		µm	10	4.74	10	4.74
Dust grooves			•	•	•	•
Weight		kg	approx. 13	approx. 13	approx. 13	approx. 13

Comparator stands with granite base plate.

MT 170 **MT 171**
MT 172 **MT 300**

Measuring and testing equipment



These measuring tables have base plates made of natural black granite. Aged over millions of years, the rock material is tension-free, wear-proof and harder than steel. The measurement surface is corrosion-free and non-magnetic. It requires no special care.

The surface is lapped and the flatness of the measurement surface conforms to DIN 876/00.

The columns are hard chrome-plated and ground.

In models

MT 170 b-HG

MT 171 b-HG

MT 300 b-HG

MT 300 b-HGV

the dial gauge holder is interchangeable.

Holders with 20H7, 25H7, 28H7 and 30H7 holes are available.

Adapters for commonly used electronic length measuring probes are available.

MT 170-HG



MT 171-HG



MT 171 b-HG



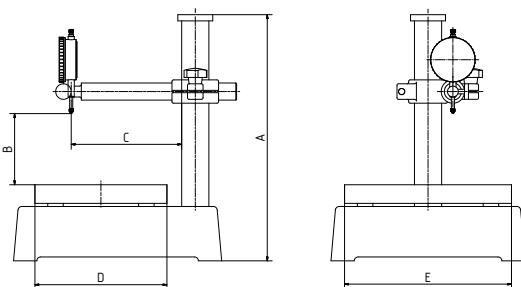
Model			MT 170-HG	MT 170 b-HG	MT 171-HG	MT 171 b-HG	MT 172-HG	MT 300 b-HG	MT 300 b-HGV
Total height	A	mm	320	320	320	320	405	650	650
Measuring range – vertical	B	mm	180	180	180	180	180	500	500
Reach	C	mm	104		104		104		
Reach up to	C	mm		200		200		220	220
Table dimensions	D x E	mm	260 x 150	260 x 150	260 x 150	260 x 150	260 x 150	300 x 350	300 x 350
Measurement surface	F x G	mm	200 x 150	200 x 150	200 x 150	200 x 150	200 x 150	300 x 260	300 x 260
Column diameter		mm	35	35	35	35	35	50	50
Smooth column			•	•					
Column with thread and setting ring					•	•		•	•
Column with hand wheel for vertical adjustment							•		
Horizontal measuring arm with rotation lock				on request		on request			•
Dial gauge holder		mm	8H7	8H7	8H7	8H7	8H7	8H7	8H7
Interchangeable dial gauge holder				•		•		•	•
Measuring table material			Granite	Granite	Granite	Granite	Granite	Granite	Granite
Flatness of measurement surface as per DIN 876			00	00	00	00	00	00	00
Weight		kg	approx. 8.5	approx. 9.0	approx. 8.8	approx. 9.5	approx. 8.8	approx. 41.0	approx. 41.0

MT 170 MT 171
MT 172 MT 300

MT 172-HG



MT 300 b-HG



The dial gauge stand MS 50b is distinguished by its long reach.

It is used mainly for setting up measuring equipment. It can be attached either using a T-slot block or by bolting the flange directly onto the base plate.

The dial gauge holders are interchangeable. Holders can be supplied with 20H7, 25H7, 28H7 and 30H7 holes. Adapters for commonly used length measuring probes are available.

The horizontal measuring arm can also be supplied with a rotation lock.

The columns and the adjustable horizontal measuring arm of the models MS 50b are hard chrome plated.

MS 50b



Model		MS 50b	MS 50b-V	MS 170-HG	MS 171-HG	MS 171b-HG	MS 172-HG
Total height	mm	400	400	245	245	245	310
Measuring range – vertical	mm	130 - 330	130 - 330	180	180	180	180
Reach	mm	220	220	104	104	180	104
Column diameter	mm	50	50	35	35	35	35
Dial gauge holder	mm	8H7	8H7	8H7	8H7	8H7	8H7
Interchangeable dial gauge holder		•	•			•	
Rotation lock for horizontal measuring arm			•				
Flange dia.	mm	115	115				
Weight	kg	approx. 11.5	approx. 11.5	approx. 2.5	approx. 2.7	approx. 3.1	approx. 3.2

The bottom faces of the type MS 170 to MS 172 dial gauge stands are surface-ground and have an M 10 thread for mounting. The stands are therefore easy to mount on measuring plates, measuring equipment and granite base plates.

MS 170-HG



MS 171-HG



Model MS 171b-HG

The dial gauge holder is interchangeable. The horizontal measuring arm can also be supplied with a rotation lock.

MS 171b-HG



MS 172-HG



MA-P 40



MA-P 50



MA ST



MA-P 55



Model		MA-P 40	MA-P 50	MA-P 55	MA ST
Total height	mm	140		200	280
Diameter of column and cross arm	mm	8		12	16
Reach	mm	100	60	150	180
Magnet area	mm	dia. 40	dia. 46	dia. 55	50 x 70
Magnet strength	N	60	130	120	250
Dial gauge holder	mm	8H7	8H7	8H7	8H7
Fine adjustment of dial gauge arm				•	•
Weight	kg	approx. 0.6	approx. 0.2	approx. 1.0	approx. 2.3

Dial gauge stands with sectional base

Swivel heads for dial gauge stands

UM-300



Swivel heads for dial gauge stands



The GK swivel head turns by 360° on all axes, allowing one to make stands, linkage mountings and other devices.

Hole diameters are provided in pairs as standard.

However, it is also possible to combine holes of different diameters.

MSV 250



V-block in base 120°

Model		UM 300	MSV 250	GK 12	GK 16	GK 18
Measuring height	mm	300	250			
Diameter of column and cross arm	mm	22	16			
Hole dia.	mm			12H7 x 12H7	16H7 x 16H7	18H7 x 18H7
Reach	mm	150	150			
Dimensions of base	mm	60 x 55 x 250	40 x 65 x 140			
Dial gauge holder	mm	8H7	8H7			
Fine adjustment of dial gauge arm		•	•			
Weight	kg	approx. 5.5	approx. 3.0	approx. 0.25	approx. 0.25	approx. 0.25

Flatness of measuring table plates – work-holding tables.

All of the measuring table plates listed are lapped. Plates designated as “ground” are precision-ground.

Model	Measuring table dimensions mm	Material	Precision as per DIN 876	Tolerance μm
MT 25	dia. 25	Steel	0	4.08
MT 50	dia. 50	Steel	0	4.4
MT 50 K	dia. 50.	Ceramic	Factory standard	2.0
MT 100	60 x 70	Steel	0	4.27
MT 100 ground	60 x 70	Steel	Factory standard	7.0
MT 100 bK	65 x 75	Ceramic	Factory standard	2.0
MT 100 K	65 x 75	Ceramic	Factory standard	2.0
MT 120-3	38 x 80	Steel	0	4.14
MT 130	98 x 115	Steel	0	4.46
MT 130 bK	100 x 115	Ceramic	0	2.0
MT 130 K	100 x 115	Ceramic	0	2.0
MT 150 U-1	dia. 115	Steel	0	4.46
MT 150 U-2	98 x 115	Steel	0	4.46
MT 150 U-2K	100 x 115	Ceramic	0	2.0
MT 150 U-3	40 x 100	Steel	0	4.32
MT 160	170 x 215	Steel	0	4.86
MT 160 ground	170 x 215	Steel	Factory standard	16.0
MT 170	150 x 200	Granite	00	5.04
MT 171	150 x 200	Granite	00	5.04
MT 172	150 x 200	Granite	00	5.04
MT 180	98 x 180	Steel	0	4.74
MT 180 ground	98 x 180	Steel	Factory standard	10.0
MT 300	300 x 500	Granite	00	5.4
RP 50-200	AT 200	Cast iron	1	12.0
RP 50-350	AT 350	Cast iron	1	13.5
RP 75-200	AT 200	Cast iron	1	12.0
RP 75-350	AT 350	Cast iron	1	13.5
RP 100	AT 700	Cast iron	1	17.5
RP 150	AT 700	Cast iron	1	17.5
RP 200	AT 1100	Granite	1	21.0

Run-out accuracy tolerances of collets.

The run-out accuracy is measured using a measuring pin at a distance L from the collet.

Holes from	to	L	Standard collet μm	Ultra-precision collet μm
0.5	1.0	3	10	5
1.1	1.6	6	10	5
1.7	3.0	10	15	8
3.1	6.0	16	15	8
6.1	10.0	25	15	8
10.1	16.0	40	20	10