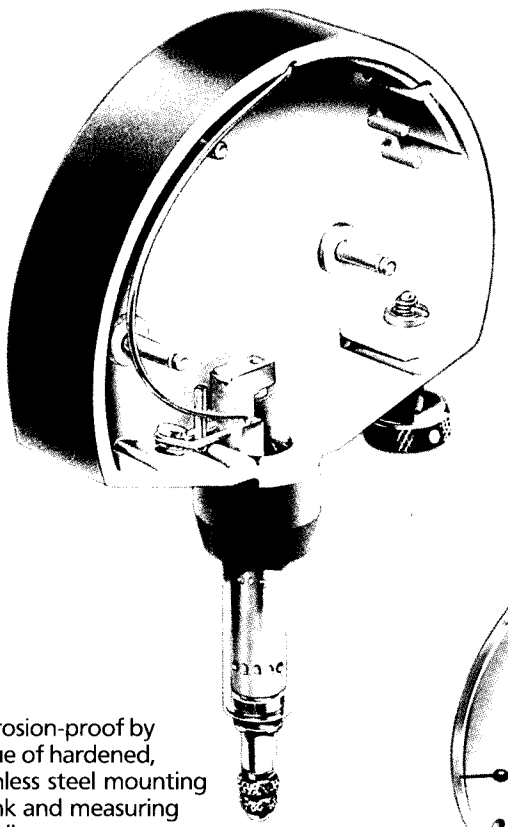
Design features of Mahr dial comparators

- Constant measuring force over entire range due to built-in compression spring



- Corrosion-proof by virtue of hardened, stainless steel mounting shank and measuring spindle

- Protection of ball guide against contamination by means of a sleeve seal ring which is provided with a groove for mounting slip-on rubber bellows to prevent the ingress of splashwater

- Drip-proof version available on request. Features rubber bellows at measuring spindle, sealed screws and splash guard cover

- Measuring spindle mounted in high-precision ball guide prevents tilting and virtually precludes friction and play. The extremely low level of friction makes for high measurement accuracy and minimal hysteresis

- Dial comparators with ball guide are particularly insensitive to lateral forces acting on the spindle (Dial Comparators 1010 and 1050 feature high-precision sleeve bearings for the spindle)

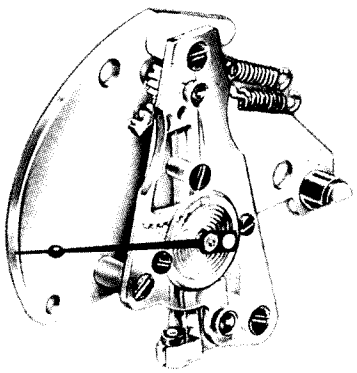
- Shockproof movement.
  The precision ball of the first transmission lever rest on the lapped saphire plane surface of the upper end of the measuring spindle. If the spindle is subject to severe impact, the plane surface is automatically raised, thus preventing transmission of the shock to the movement

- Box-type housing only open at the front

- Bottom and side walls made of one piece. This shell totally encloses the movement and provides maximum protection against shock and damage

- Simple fine adjustment by way of lockable screw

- Self-contained movement.
  This unit can be removed and replaced quickly and easily for repair or maintenance purposes



- Maximum sensitivity and accuracy are ensured by jewelled bearings of movement in conjunction with precision gears and pinions

- Easy to read due to clear-cut scale

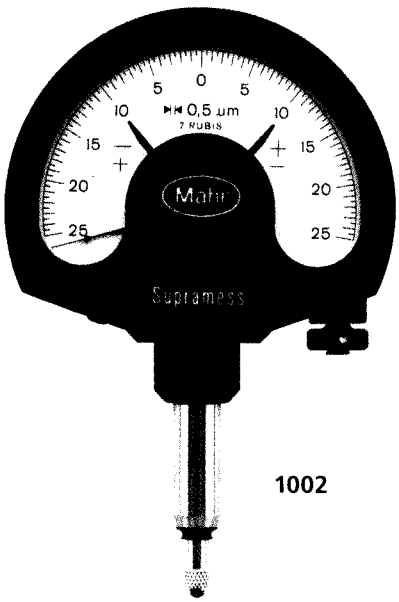
- Pointer moves over limited sector

- Adjustable tolerance markers facilitate setting and observation of tolerance limits

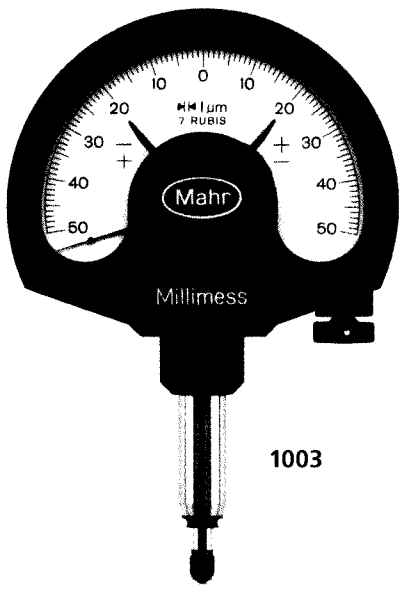
- Raising of measuring spindle either by way of screw-in cable or lifting knob

Dial Comparators

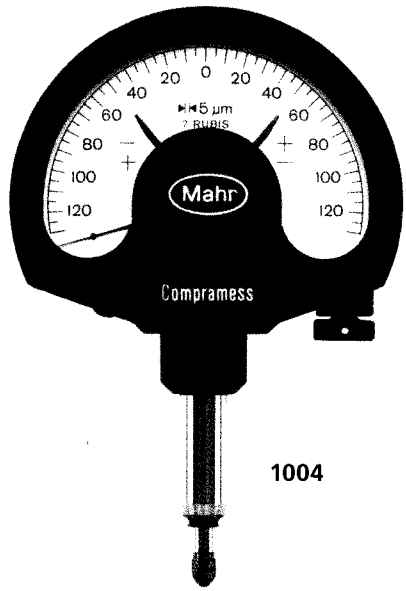
Mechanical Dial Comparators



1002



1003



1004

Technical Data

	Measuring range	Readings	Over-travel	Meas. force	Accuracy* (DIN 879-1) f_e	f_{ges}	f_u	Order no. standard**	Order no. drip-proof***
Metric									
1002 Supramess	± 25 µm	0,5 µm	2,8 mm	1 N	0,5 µm	0,6 µm	0,25 µm	**4335000**	**4335005**
1003 Millimess	± 50 µm	1 µm	2,8 mm	1 N	1 µm	1,2 µm	0,5 µm	**4334000**	**4334005**
1004 Compramess	± 0,13 mm	5 µm	2,5 mm	1 N	3,5 µm	4 µm	1 µm	**4333000**	**4333005**
1010 Zentimess	± 0,25 mm	0,01 mm	2,5 mm	1 N	7 µm	8 µm	2 µm	**4332000**	**4332005**
1050 Dezimess	± 1,5 mm	0,05 mm	0,3 mm	1 N	35 µm	40 µm	10 µm	**4330000**	**4330005**
Inch									
1002 Z Supramess	± .0010"	.00002"	.11"	1 N	.00002"	.000025"	.00001"	**4335900**	**4335905**
1003 Z Millimess	± .0020"	.00005"	.11"	1 N	.00005"	.00006"	.000025"	**4334900**	**4334905**
1004 Z Compramess	± .0050"	.0001"	.10"	1 N	.0001"	.00012"	.00003"	**4333900**	**4333905**
1010 Z Zentimess	± .0100"	.0005"	.10"	1 N	.00035"	.0004"	.0001"	**4332900**	**4332905**

* *Accuracy of 1004, 1010, 1010 Z, 1050 better than DIN 879-1*

** *Incl. plastic case; Adapter 940 (for inch instruments only)*

*** *Incl. plastic case, Splash Guard Cover 957, rubber bellows (only 1002/1003/1004); Adapter 940 (for inch instruments only)*