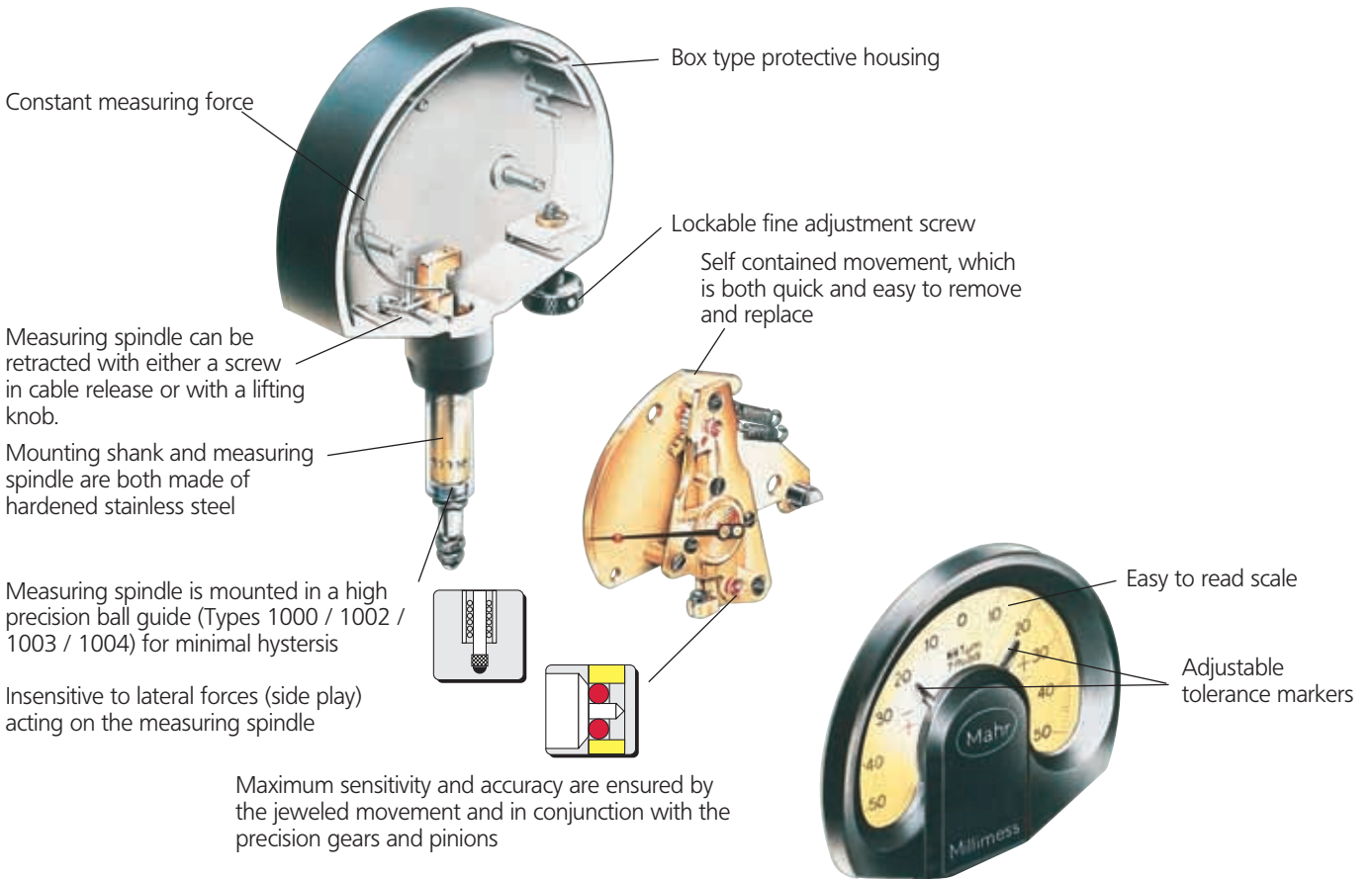


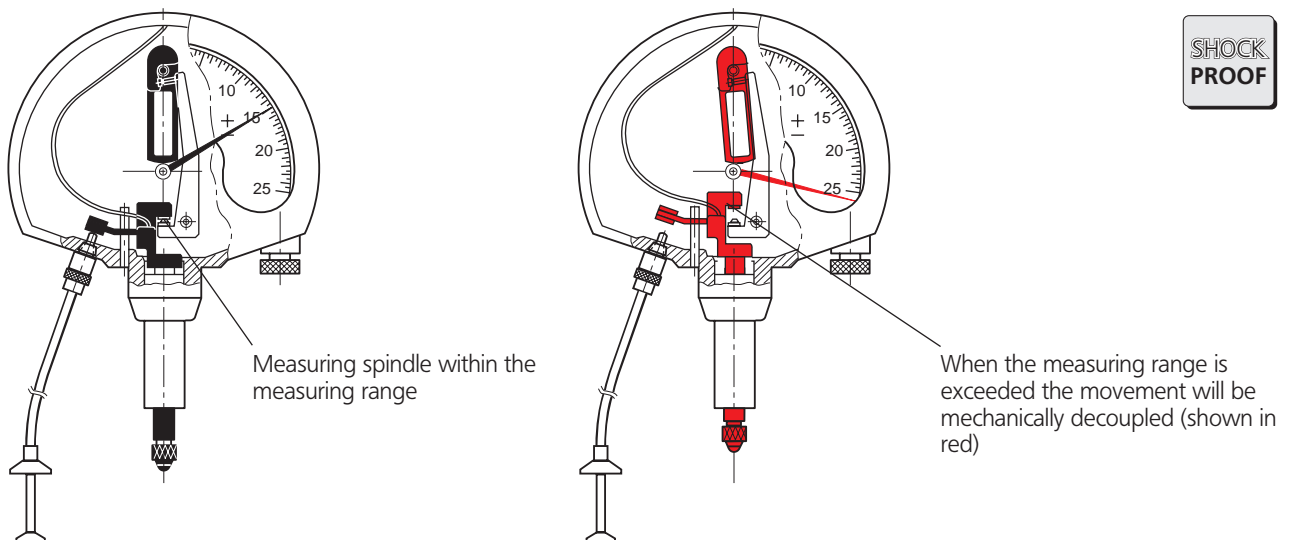
# Millimess. Dial Comparators

## OVERVIEW

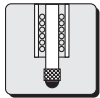
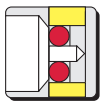
### Design Features



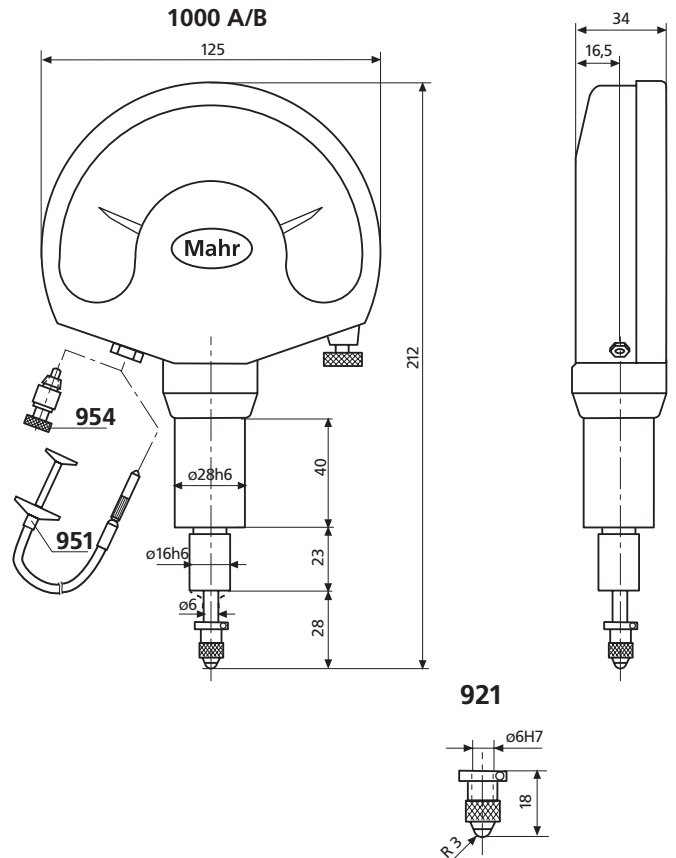
### Shockproof Mechanism



## Mechanical Dial Comparator Large Type Millimess



1000 A



921

### Features

- Large design
- Easy to read dial
- Shockproof movement
- Jeweled movement bearings
- Measuring spindle is mounted in a high-precision ball guide which precludes play
- Supplied with: Cable Release 951, case

### Accessories

	Order no.
<b>Contact Points</b>	
with Steel ball	921 4362001
with Ruby ball	921 R 4362002
<b>Cable Release</b> to raise the measuring spindle	951 4372000
<b>Lifting Knob</b> for lifting the measuring spindle	954 4372030
<b>Rubber Bellows</b> to seal the open end of the measuring spindle	4338008
<b>Additional Accessories</b>	Page
<b>Precision Stand</b>	824 GT 8-13

### Technical Data

Metric	Measuring range	Reading	Scale division	Over-travel	Measuring force	Order no.
1000 A	± 100 μm	1 μm	1 mm	4 mm	3.5 N	4338000
1000 B	± 50 μm	1 μm	2 mm	4 mm	3.5 N	4339000

## Contact Points and Accessories for Dial Indicators, Dial Comparators and Probes

### Standard Contact Points 901

Ball dia. 3 mm

Catalog no.		Order no.
901	with steel ball	4360001
901 H	with carbide ball	4360002
901 R	with ruby ball	4360003

### Spherical Contact Points 902 Flat Contact Points 903

902	902 H	903	903 H
Steel	Carbide contact face	Steel	Carbide tipped
Length mm	Order no.	Order no.	Order no.
4	4360007	-	4360070
6	4360009	-	4360071
8	4360010	4360040	4360072
10	4360011	4360041	4360073
12	4360012	4360042	4360074
15	4360013	4360043	4360075
20	4360014	4360044	4360076
25	4360015	4360045	4360077
30	4360016	4360046	4360300
35	4360017	4360047	4360078
40	4360019	4360049	4360310
45	4360026	4360050	4360303
50	4360018	4360048	4360079
55	4360031		4360109
65	4360035		
75	4360020		
85	4360036		
95	4360029		

### Ball Contact Point 906 H

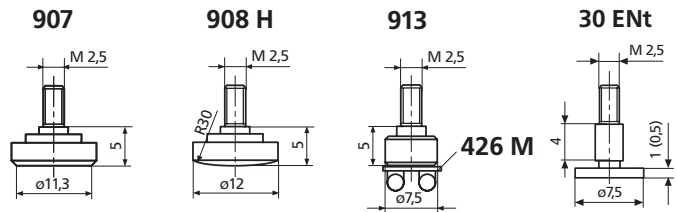
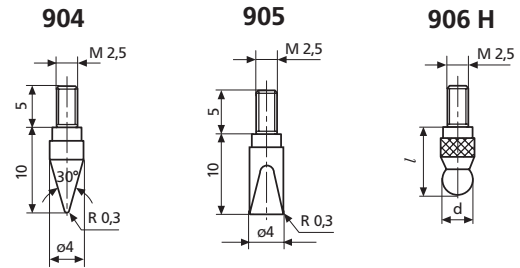
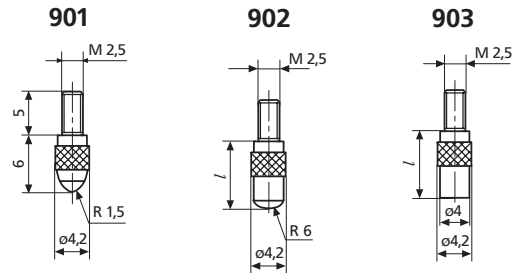
with carbide ball, accuracy ball dia. 0/-6µm

Ball dia. d mm	l mm	Order no.	Ball dia. d mm	l mm	Order no.
1	8.5	4360150	5.5	9	4360161
1.25	8.5	4360151	6	9	4360162
1.5	8.5	4360152	6.35 (1/4")	9	4360163
1.75	8.5	4360153	6.5	10	4360164
2	8.5	4360154	7	10	4360165
2.5	8.5	4360155	7.5	11	4360166
3	8.5	4360156	8	11	4360167
3.5	8.5	4360157	8.5	12	4360168
4	8.5	4360158	9	12	4360169
4.5	8.5	4360159	10	13	4360170
5	9	4360160			

### Contact Rollers 909

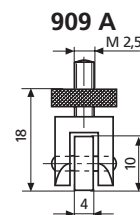
Concentricity error 3 µm

	Order no.
Cylindrical Roller	909 A 4360220
Radiused Roller, R = 5 mm	909 B 4360221



### Special Contact Points

	Order no.
<b>Conical Contact Points, Steel</b>	904 4360130
Carbide tipped	904 H 4360131
<b>Wedge Shaped Contact Points, Steel</b>	905 4360140
Carbide tipped	905 H 4360141
<b>Flat Contact Points, Steel, A = 1 cm<sup>2</sup></b>	907 4360200
Carbide tipped, dia. 7 mm	907 H 4360201
<b>Spherical Contact Points, Steel</b>	908 4360210
Carbide tipped	908 H 4360211
<b>Flat Contact Point, for mounting</b>	
Pin Gage Holder 426 M for measuring threads using three-wire method	913 4360400
<b>Disc Type anvil</b> thickness 0.5 mm, hardened	30 ENT 4126310
<b>Disc Type anvil</b> thickness 1 mm, hardened	30 ENT 4882022



**Contact Points and Accessories** for Dial Indicators, Dial Comparators and Probes

**Measuring Attachment 910 H**

	Order no.
with parallel adjustable carbide blades	<b>910 H 4360230</b>

**Pin Contact Point 911**

dia. 1.5 mm, flat

Length <i>l</i> mm	Order no.	Length <i>l</i> mm	Order no.
15	<b>4360280</b>	35	<b>4360284</b>
20	<b>4360281</b>	40	<b>4360285</b>
25	<b>4360282</b>	50	<b>4360286</b>
30	<b>4360283</b>		

**Pin Contact Point 911 H**

	Order no.
Carbide tipped, dia 1 mm, flat	<b>911 H1 4360240</b>
Carbide tipped, dia 1.5 mm, flat	<b>911 H2 4360241</b>

**Measuring Spindle Extensions 912**

Length <i>l</i> mm	Order no.	Length <i>l</i> mm	Order no.
10	<b>4360250</b>	35	<b>4360254</b>
15	<b>4360251</b>	50	<b>4360255</b>
20	<b>4360252</b>	75	<b>4360256</b>
25	<b>4360253</b>	100	<b>4360257</b>

**Special Holder 941**

For all types of measuring equipment  
 For placing a dial indicator at a certain distance or angle  
 Travel of the measuring spindle 3 mm  
 Contact Point 901 (interchangeable)

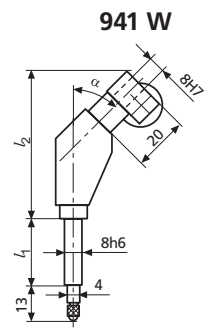
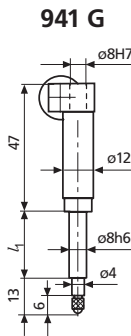
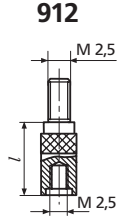
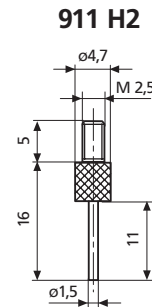
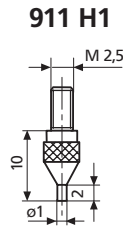
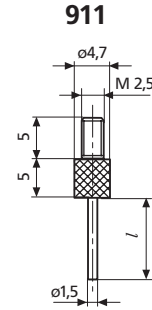
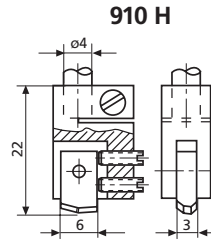
**Straight Holder 941 G**  
 Mounting shank length *l*<sub>1</sub>

**Angular Holder 941 W**

Order no.	<i>l</i> <sub>2</sub>	Order no.	<i>l</i> <sub>2</sub>	Order no.	<i>l</i> <sub>2</sub>
25	<b>4365000</b>	} 53.7	} 49.3	} 34.5	
50	<b>4365001</b>				
75	<b>4365002</b>				
<b>4365010</b>	} 53.7	<b>4365020</b>	} 49.3	} 34.5	
<b>4365011</b>		<b>4365021</b>			
<b>4365012</b>		<b>4365022</b>			

**Sensor Level 943**

	Order no.
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 Contact Point 901 interchangeable Travel ±1 mm	<b>4367000</b>



Transmission error with the 941 W  
 max. 1%;  
 for travel 3 mm = 0.03 mm

