Precision Dial Gauges

Precision Dial Gauges

Specifications of the Technical Data of Metric Dial Gauges

Page	Model	Reading	Range per revolution	Range	Bezel-Ø	Special Feature
42	KM 5 a	0.1 mm	5 mm	5 mm	40 mm	
42	KM 10 a	0.1 mm	10 mm	10 mm	40 mm	
–	KM 5 a R	0.1 mm	5 mm	5 mm	40 mm	Back Plunger
43	M 10 a	0.1 mm	10 mm	10 mm	58 mm	
43	M 10 b	0.1 mm	10 mm	20 mm	58 mm	
44	M 10 c	0.1 mm	10 mm	30 mm	58 mm	
44	M 10 d	0.1 mm	10 mm	50 mm	58 mm	
–	M 10/5 R	0.1 mm	5 mm	5 mm	58 mm	Back Plunger
–	SI-9/0.1	0.1 mm	–	8 mm	58 mm	Error Free
–	GM 10/80	0.1 mm	10 mm	20 mm	80 mm	
–	GM 10/100	0.1 mm	10 mm	10 mm	100 mm	
25	MU 28	0.01 mm	0.5 mm	3.5 mm	28 mm	
25	KM 6 T	0.01 mm	0.5 mm	3 mm	32 mm	
26	KM 4 T	0.01 mm	0.5 mm	3 mm	40 mm	
–	KM 4 T – 100	0.01 mm	1.0 mm	3 mm	40 mm	
28	KM 4 TOP	0.01 mm	0.5 mm	3 mm	40 mm	
–	KM 4 X	0.01 mm	0.5 mm	3 mm	40 mm	
30	KM 4 S	0.01 mm	0.5 mm	3 mm	40 mm	Shockproof
–	KM 4 S – 100	0.01 mm	1.0 mm	3 mm	40 mm	Shockproof
–	KM 4 TOP ‚S'	0.01 mm	0.5 mm	3 mm	40 mm	Shockproof
–	KM 4 XS	0.01 mm	0.5 mm	3 mm	40 mm	Shockproof
27	KM 4/5 T	0.01 mm	0.5 mm	5 mm	40 mm	
29	KM 4/5 T – 100	0.01 mm	1.0 mm	5 mm	40 mm	
–	KM 4/5 TOP	0.01 mm	0.5 mm	5 mm	40 mm	
–	KM 4/5 X	0.01 mm	0.5 mm	5 mm	40 mm	
31	KM 4/5 S	0.01 mm	0.5 mm	5 mm	40 mm	Shockproof
–	KM 4/5 S – 100	0.01 mm	1.0 mm	5 mm	40 mm	Shockproof
28	KM 4/5 TOP ‚S'	0.01 mm	0.5 mm	5 mm	40 mm	Shockproof
–	KM 4/5 XS	0.01 mm	0.5 mm	5 mm	40 mm	Shockproof
29	KM 4/10 TK – 100	0.01 mm	1.0 mm	10 mm	40 mm	Concentric Hands
45	KM 4 R	0.01 mm	0.5 mm	3 mm	40 mm	Back Plunger
45	KM 4/5 R	0.01 mm	0.5 mm	5 mm	40 mm	Back Plunger
48	SI-45	0.01 mm	–	0.4 mm	40 mm	Error Free
–	SI-45 W	0.01 mm	–	0.4 mm	44.5 mm	Error Free
48	SI-45/0.8	0.01 mm	–	0.8 mm	40 mm	Error Free
54	KM 4 SW	0.01 mm	0.5 mm	3 mm	44.5 mm	Waterproof
54	KM 4/5 SW	0.01 mm	0.5 mm	5 mm	44.5 mm	Waterproof
–	KM 4 S wa	0.01 mm	0.5 mm	3 mm	41 mm	Water Protected
102	KM 4 T Magnet	0.01 mm	0.5 mm	3 mm	40 mm	Magnetic Back
7	M 2 T	0.01 mm	1 mm	10 mm	58 mm	
8	M 2 TK	0.01 mm	1 mm	10 mm	58 mm	Concentric Hands
9	M 2 T with special fittings	0.01 mm	1 mm	10 mm	58 mm	Extended Stem, Special Dials
10	M 2 T with special fittings	0.01 mm	1 mm	10 mm	58 mm	Reverse Spring Traction, Two Stems
11	M 2 TOP	0.01 mm	1 mm	10 mm	58 mm	
12	M 2 X	0.01 mm	1 mm	10 mm	58 mm	
13	MU 52 T	0.01 mm	1 mm	10 mm	58 mm	
15	M 2 S	0.01 mm	1 mm	10 mm	58 mm	Fine adjustment of the hand
14	M 2 SN	0.01 mm	1 mm	10 mm	58 mm	Shockproof
16	M 2 TOP ‚S'	0.01 mm	1 mm	10 mm	58 mm	Shockproof
16	M 2 XS	0.01 mm	1 mm	10 mm	58 mm	Shockproof
13	MU 52 ST	0.01 mm	1 mm	10 mm	58 mm	Shockproof
17	M 3 T	0.01 mm	0.5 mm	5 mm	58 mm	
17	M 3 S	0.01 mm	0.5 mm	5 mm	58 mm	Shockproof
18	M 2/20 T	0.01 mm	1 mm	20 mm	58 mm	
18	M 2/20 S	0.01 mm	1 mm	20 mm	58 mm	Shockproof
18	M 2/25 T	0.01 mm	1 mm	25 mm	58 mm	Compact Size
18	M 2/25 S	0.01 mm	1 mm	25 mm	58 mm	Compact Size, Shockproof
19	M 2/30 T	0.01 mm	1 mm	30 mm	58 mm	
20	M 2/30 S	0.01 mm	1 mm	30 mm	58 mm	Shockproof
21	MU 2/30 T	0.01 mm	1 mm	30 mm	58 mm	
21	MU 2/30 S	0.01 mm	1 mm	30 mm	58 mm	Shockproof
22	M 2/50 T	0.01 mm	1 mm	50 mm	58 mm	
22	M 2/50 S	0.01 mm	1 mm	50 mm	58 mm	Shockproof
21	M 2/80 T	0.01 mm	1 mm	80 mm	58 mm	
21	M 2/80 S	0.01 mm	1 mm	80 mm	58 mm	Shockproof
–	M 2/100 T	0.01 mm	1 mm	100 mm	58 mm	Stem dia. 10 mm

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Precision Dial Gauges

Specifications of the Technical Data of Metric Dial Gauges

Page	Model	Reading	Range per revolution	Range	Bezel-Ø	Special Feature
46	M 2 R	0.01 mm	1 mm	3 mm	58 mm	Back Plunger
46	M 2/5 R	0.01 mm	1 mm	5 mm	58 mm	Back Plunger
56	M 2 R W	0.01 mm	1 mm	3 mm	58 mm	Back Plunger, Waterproof
49	SI-90	0.01 mm	–	0.8 mm	58 mm	Error Free
–	SI-90 X	0.01 mm	–	0.8 mm	58 mm	Error Free
51	MU 52 ST – SI	0.01 mm	–	0.8 mm	58 mm	Error Free
–	SI-90 R	0.01 mm	–	0.8 mm	58 mm	Error Free
57	SI-90 W	0.01 mm	–	0.8 mm	61.5 mm	Error Free
49	SI-18	0.01 mm	–	1.6 mm	58 mm	Error Free
55	M 2 SW	0.01 mm	1 mm	10 mm	61.5 mm	Waterproof
–	M 2/30 SW	0.01 mm	1 mm	30 mm	61.5 mm	Waterproof
60	M 2 S wa	0.01 mm	1 mm	10 mm	58 mm	Water Protected
102	M 2 T Magnet	0.01 mm	1 mm	10 mm	58 mm	Magnetic Back
32	GM 80 T	0.01 mm	1 mm	10 mm	80 mm	
32	GM 80 S	0.01 mm	1 mm	10 mm	80 mm	Shockproof
–	GM 80/30 T	0.01 mm	1 mm	30 mm	80 mm	
–	GM 80/50 T	0.01 mm	1 mm	50 mm	80 mm	
–	GM 80/100 T	0.01 mm	1 mm	100 mm	80 mm	Stem dia. 10 mm
58	GM 80 SW	0.01 mm	1 mm	10 mm	80 mm	Waterproof
32	GM 100 T	0.01 mm	1 mm	10 mm	100 mm	
32	GM 100 S	0.01 mm	1 mm	10 mm	100 mm	Shockproof
–	GM 100/30 T	0.01 mm	1 mm	30 mm	100 mm	
–	GM 100/50 T	0.01 mm	1 mm	50 mm	100 mm	
17	M 3 a T	0.005 mm	0.5 mm	5 mm	58 mm	
17	M 3 a S	0.005 mm	0.5 mm	5 mm	58 mm	Shockproof
–	M 3 a SI	0.005 mm	–	0.4 mm	58 mm	Error Free
–	KM 500 T	0.002 mm	0.2 mm	1 mm	40 mm	
34	KM 500 S	0.002 mm	0.2 mm	1 mm	40 mm	Shockproof
–	KM 500/3 S	0.002 mm	0.2 mm	3 mm	40 mm	Shockproof
–	KM 500 R	0.002 mm	0.2 mm	1 mm	40 mm	Back Plunger
	KM 500 SI	0.002 mm	–	0.16 mm	40 mm	Error Free
–	KM 500 SW	0.002 mm	0.2 mm	1 mm	44.5 mm	Waterproof
36	FM 500 T	0.002 mm	0.2 mm	1 mm	58 mm	
–	FM 500 R	0.002 mm	0.2 mm	1 mm	58 mm	Back Plunger
–	FM 500 SI	0.002 mm	–	0.16 mm	58 mm	Error Free
–	KM 1000 T	0.001 mm	0.2 mm	1 mm	40 mm	
–	KM 1000 S	0.001 mm	0.2 mm	1 mm	40 mm	Shockproof
39	Feinika KM 1101	0.001 mm	0.1 mm	1 mm	40 mm	Shockproof, extra accurate
–	KM 1000 R	0.001 mm	0.2 mm	1 mm	40 mm	Back Plunger
52	Feinika SI-914	0.001 mm	–	0.08 mm	40 mm	Error Free
–	Feinika SI-910	0.001 mm	–	0.10 mm	40 mm	Error Free
–	KM 1000 SI	0.001 mm	–	0.16 mm	40 mm	Error Free
–	KM 1000 S wa	0.001 mm	0.2 mm	1 mm	40 mm	Water Protected
–	Feinika KM 1101 W	0.001 mm	0.1 mm	1 mm	44.5 mm	Waterproof
36	FM 1000 T	0.001 mm	0.2 mm	1 mm	58 mm	
–	FM 1000 S	0.001 mm	0.2 mm	1 mm	58 mm	Shockproof
40	Feinika FM 1101	0.001 mm	0.1 mm	1 mm	58 mm	Shockproof, extra accurate
37	FM 1000/5 T	0.001 mm	0.2 mm	5 mm	58 mm	
–	FM 1000/5 S	0.001 mm	0.2 mm	5 mm	58 mm	Shockproof
52	Feinika SI-915	0.001 mm	–	0.08 mm	58 mm	Error Free
–	Feinika SI-916	0.001 mm	–	0.10 mm	58 mm	Error Free
–	Feinika SI-918	0.001 mm	–	0.16 mm	58 mm	Error Free
–	SI-180	0.001 mm	–	0.16 mm	58 mm	Error Free
–	FM 1000 S wa	0.001 mm	0.2 mm	1 mm	58 mm	Water Protected
59	FM 1000 SW	0.001 mm	0.2 mm	1 mm	61.5 mm	Waterproof
–	FM 1101 W	0.001 mm	0.1 mm	1 mm	61.5 mm	Waterproof
–	FM 1000/5 S wa	0.001 mm	0.2 mm	5 mm	58 mm	Water Protected
59	FM 1000/5 SW	0.001 mm	0.2 mm	5 mm	61.5 mm	Waterproof
–	FM 1000/80 T	0.001 mm	0.2 mm	1 mm	80 mm	
–	FM 1000/80 S	0.001 mm	0.2 mm	1 mm	80 mm	Shockproof
–	FM 1000/80-5 T	0.001 mm	0.2 mm	5 mm	80 mm	
–	FM 1000/80-5 S	0.001 mm	0.2 mm	5 mm	80 mm	Shockproof

Dial Gauge M 2 T

A well thought-out design, the use of high-quality components and materials as well as the precision engineered mechanism guarantee the outstanding quality of the Precision Dial Gauge M 2 T.

All details of this Dial Gauge conform to DIN 878 in conjunction with DIN EN ISO 463. This applies not only to the outside dimensions but also to allowed tolerances, the measuring force and the measuring force reversal range.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2 T	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 8

Optionally, the Dial Gauge M 2 T is also available with special fittings:

- **Dial Gauge M 2 T**
  with fixing screw for the bezel
- **Dial Gauge M 2 T**
  with lifting device
- **Dial Gauge M 2 T**
  with special transmission ratio
  (range per revolution = 2, 5 or 10 mm)
- **Dial Gauge M 2 T**
  with counter clockwise dial reading
- **Dial Gauge M 2 T**
  with balanced dial reading 0-50-0
- **Dial Gauge M 2 T**
  with increased measuring force
- **Dial Gauge M 2 T**
  with reduced measuring force
- **Dial Gauge M 2 T**
  with reverse spring traction
- **Dial Gauge M 2 T**
  with extended stem
- **Dial Gauge M 2 T**
  with two stems: top and bottom

Model M 1 T is a Dial Gauge with the same technical data but with only one large hand and no revolution counter.

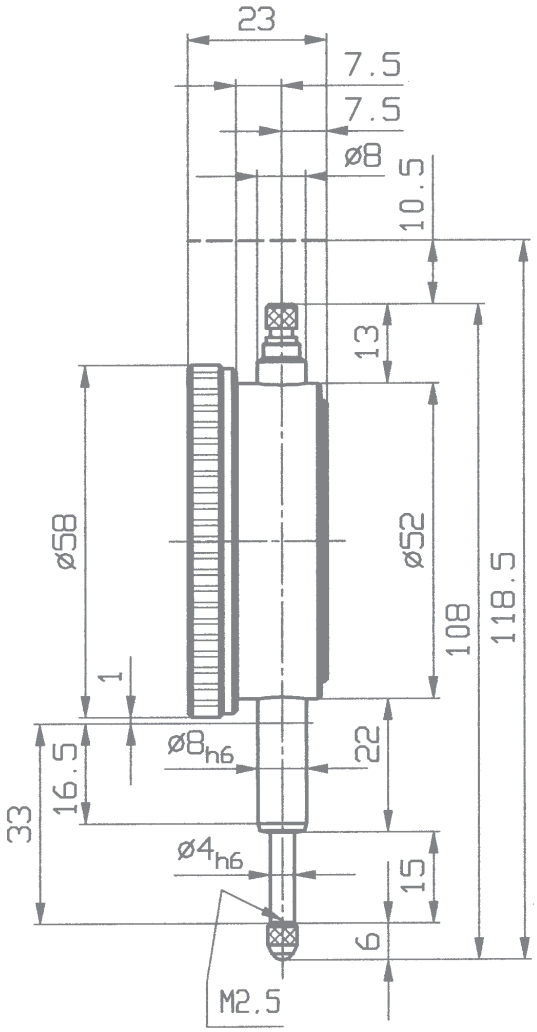
Dial Gauge M 2 TK

The technical features of Dial Gauge M 2 TK are the same as for model M 2 T.

Both pointers are concentrically arranged on the Dial Gauge M 2 TK. This allows particularly clear reading.

On request this Dial Gauge can also be supplied in a shockproof version.

Precision Dial Gauge M 2 TK	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 8

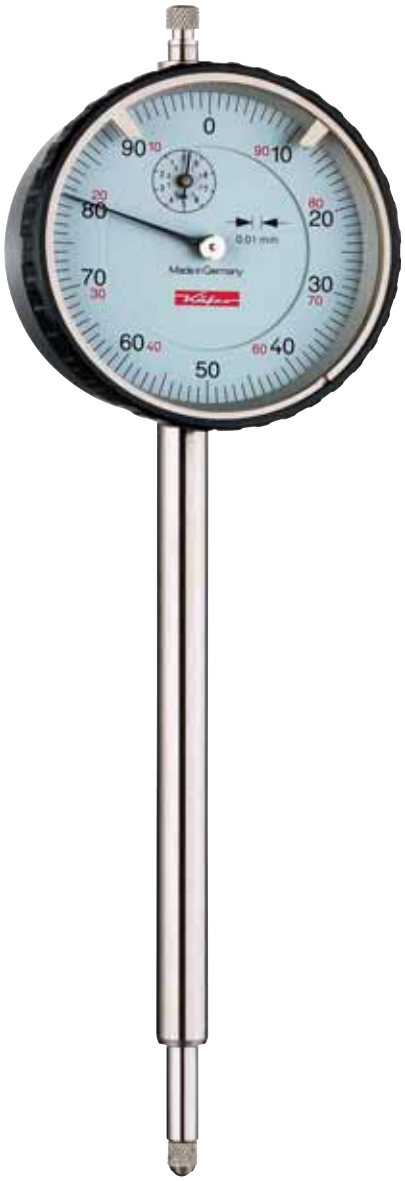


Dial Gauge M 2 T

with special fittings

Precision Dial Gauge M 2 T with extended stem	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions except for L_2 and accuracy according to	DIN EN ISO 463/DIN 878
Hysteresis	fu = 5 µm
Stem lengths	50, 75, 100, 125 or 150 mm
Dimensioned drawing	on request

Precision Dial Gauge M 2 T with counter clockwise reading	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 /DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 8



On request other Dial Gauges from our manufacturing programme are available with extended stem, with counter clockwise reading or with balanced dial reading. Please request our offers.

Dial Gauge M 2 T

with special fittings

Precision Dial Gauge M 2 T with reverse spring traction	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Hysteresis	fu = 5 µm
Spindle	lapped
Dimensioned drawing	on request

Precision Dial Gauge M 2 T with two stems: top and bottom	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	on request

On request other Dial Gauges from our manufacturing programme are available with reverse spring traction or with two stems. Please request our offers.

Dial Gauge M 2 TOP

D.B.P. No. 36 43 200

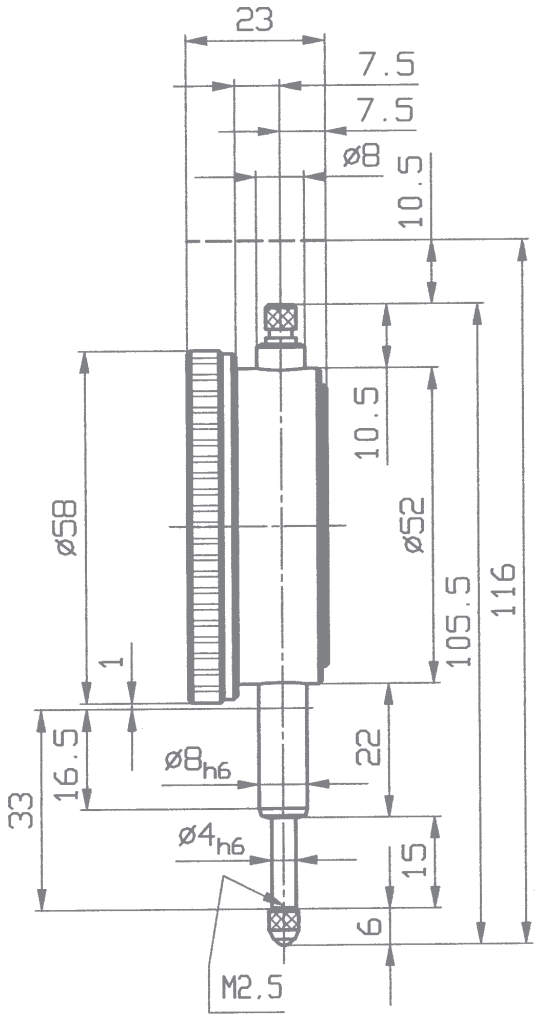
We hold German patent no. 36 43 200 for TOP series Dial Gauges.

New technological production methods enable us to market it at an astonishingly low price.

All details of this Dial Gauge conform to DIN 878 in conjunction with DIN EN ISO 463. This applies not only to the dimensions but also to allowed tolerances.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2 TOP	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 11



Dial Gauge M 2 X

Enabled by the use of a polyamide quality injection-moulded casing we can offer the Dial Gauge M 2 X having very low weight.

The successful design of the M 2 X Dial Gauge offers high precision at a low price.

All details of this Dial Gauge conform to DIN 878 in conjunction with DIN EN ISO 463. This applies not only to the dimensions but also to allowed tolerances.

Spindle and stem are made of stainless steel.
The spindle is lapped.

Precision Dial Gauge M 2 X	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 16

Thanks to an appropriate combination of quality injection-moulded parts and standard metal parts, we were able to create a new design of Dial Gauges.

The metal gear elements are inserted by simple means into two injection moulded parts.
This substitutes for the conventional mechanism.

This nearly 20 year old design, in the past protected by German Federal Patent, has proved itself on the market.
Despite several improvements the basic concept has remained unchanged. Series 'X' Dial Gauges have become a trademark of our competence in the manufacture of Dial Gauges.

Dial Gauge MU 52 T

Dial Gauge MU 52 ST

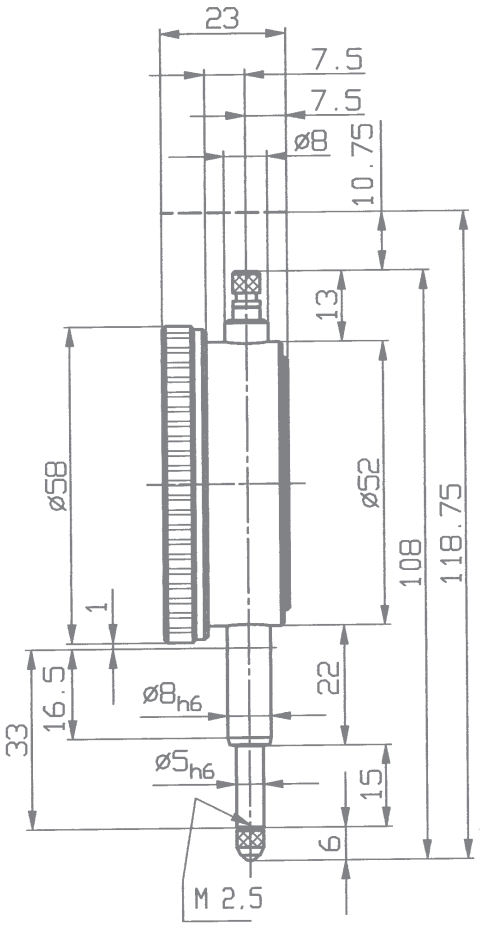
shockproof

Our new Dial Gauge Series MU 52 has been designed and manufactured by Käfer Dial Gauges Shanghai.
The racks and pinions – the key parts for the accuracy of Dial Gauges – are however supplied by Käfer Germany.
All Dial Gauges are checked for their accuracy on a Feinmess Suhl automatic Dial Gauge Measuring Machine.

All details of these Dial Gauges conform to DIN EN ISO 463 / DIN 878. Except for the shockproof system all technical features of the Dial Gauge MU 52 ST are the same as for the MU 52 T Dial Gauge. Effective impact protection protects the Dial Gauge MU 52 ST even from hard impacts on the spindle, thereby reducing the risk of damage of the teeth.

Precision Dial Gauge MU 52 T	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 13

Precision Dial Gauge MU 52 ST shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 13



Dial Gauge M 2 SN

shockproof

With this shockproof series, a product of our extensive design expertise, we offer an accurate, reliable and long-lasting Dial Gauge.

A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the gauge movement. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2 SN shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	same as SI-100 on page 50

Optionally, the Dial Gauge M 2 SN is also available with special fittings:

- **Dial Gauge M 2 SN**
  with fixing screw for the bezel
- **Dial Gauge M 2 SN**
  with threaded protective sleeve
- **Dial Gauge M 2 SN**
  with concentric revolution counter instead of small revolution counter
- **Dial Gauge M 2 SN**
  with special transmission ratio
  (range per revolution = 2, 5 or 10 mm)
- **Dial Gauge M 2 SN**
  with wire release for easy spindle lifting
- **Dial Gauge M 2 SN**
  with counter clockwise dial reading
- **Dial Gauge M 2 SN**
  with balanced dial reading 0-50-0
- **Dial Gauge M 2 SN**
  with increased measuring force
- **Dial Gauge M 2 SN**
  with reduced measuring force
- **Dial Gauge M 2 SN**
  with reverse spring traction
- **Dial Gauge M 2 SN**
  with extended stem

Dial Gauge M 2 S

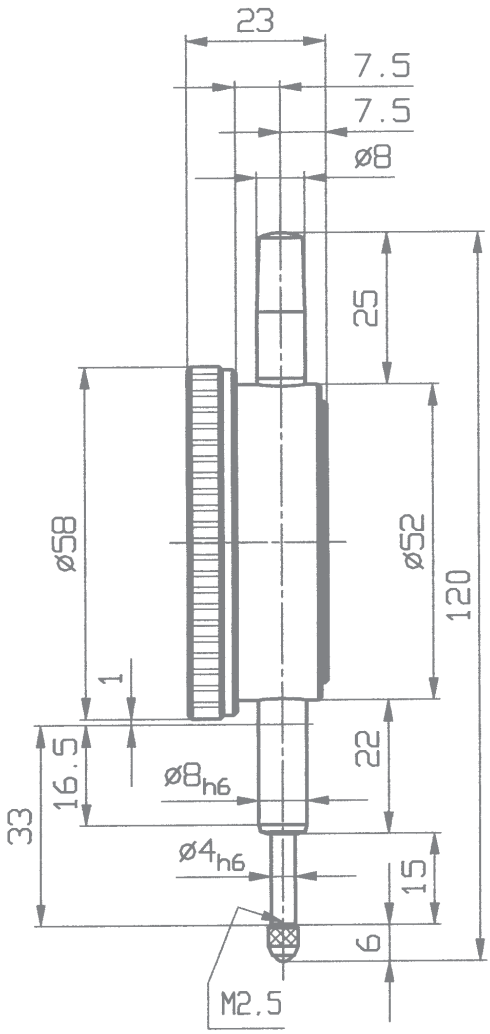
with fine adjustment of the pointer, shockproof

The technical features of Dial Gauge M 2 S are the same as for model M 2 SN.

As additional feature this Dial Gauge offers fine adjustment of the pointer. By simply moving the knurled screw at the top of the Dial Gauge the large hand can be set to the required position and without turning the bezel and the outer dial the Dial Gauge can be easily zeroed.

Removal of the black protective sleeve allows access to the knurled screw.

Precision Dial Gauge M 2 S shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 15



Dial Gauge M 2 TOP ‚S'

shockproof, D.B.P. No. 36 43 200

Except for the additional shockproof system all technical features of the Dial Gauge M 2 TOP ‚S' are the same as for the M 2 TOP Dial Gauge on page 11 of this catalogue. Effective impact protection protects the Dial Gauge M 2 TOP ‚S' even from hard impacts on the spindle, thereby reducing the risk of damage to the teeth.
Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2 TOP ‚S' shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 11

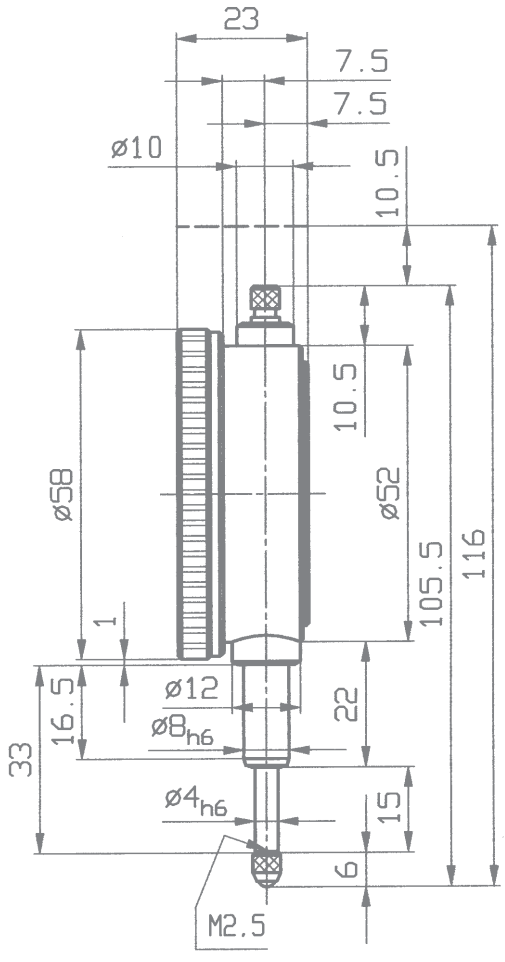
Dial Gauge M 2 XS

shockproof

The Dial Gauge M 2 XS is another shockproof version. Its additional technical data are the same as for model M 2 X on page 12 of this catalogue.

All details of this Dial Gauge conform to DIN 878 in conjunction with DIN EN ISO 463. This applies not only to the dimensions but also to allowed tolerances.
Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2 XS shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 16



Dial Gauge M 3 S

shockproof

Dial Gauge M 3 a S

shockproof

Due to their effective shockproof system these Dial Gauges have an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that shocks against the measuring insert are not transferred to the movement. The Dial Gauges are robust in operation.
Their precision is maintained with practically no limitations.

Our models M 3 T and M 3 a T have exactly the same technical data, but are not shockproof.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 3 S shockproof	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1.2 N
Dimensioned drawing	same as FM 1000/5 S on page 35

Precision Dial Gauge M 3 a S shockproof	
Reading	0.005 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1.2 N
Dimensioned drawing	same as FM 1000/5 S on page 35

Dial Gauge M 2/20 T

Dial Gauge M 2/25 T

The concentric millimetre pointer allows easy and safe reading of these Dial Gauges.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Our models M 2/20 S and M 2/25 S have exactly the same technical data, but are shockproof.

Precision Dial Gauge M 2/20 T	
Reading	0.01 mm
Range	20 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy	according to DIN EN ISO 463 / manufacturing standard 1.0200.9.0014
Initial measuring force	0.8 N
Dimensioned drawing	on request

Precision Dial Gauge M 2/25 T	
Reading	0.01 mm
Range	25 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0014
Initial measuring force	0.8 N
Dimensioned drawing	on request

Dial Gauge M 2/30 T

The concentric millimetre pointer allows easy and safe reading of this Dial Gauge. The carefully thought-out design, the use of selected components and materials as well as the movement perfected by precision engineering guarantee reliable measuring results and a long service life of the Precision Dial Gauge M 2/30 T. The essential parts of the movement are jewelled.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2/30 T	
Reading	0.01 mm
Range	30 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0014
Initial measuring force	0.8 N
Dimensioned drawing	page 20

On request the Dial Gauge M 2/30 T is also available with special fittings:

- **Dial Gauge M 2/30 T** with fixing screw for the bezel
- **Dial Gauge M 2/30 T** with lifting device at the back
- **Dial Gauge M 2/30 T** with special transmission ratio (range per revolution = 25 or 30 mm)
- **Dial Gauge M 2/30 T** with counter clockwise dial reading
- **Dial Gauge M 2/30 T** with balanced dial reading 0-50-0
- **Dial Gauge M 2/30 T** with increased measuring force
- **Dial Gauge M 2/30 T** with reduced measuring force
- **Dial Gauge M 2/30 T** with reverse spring traction
- **Dial Gauge M 2/30 T** with two stems: top and bottom
- **Dial Gauge M 2/30 T** with extended stem

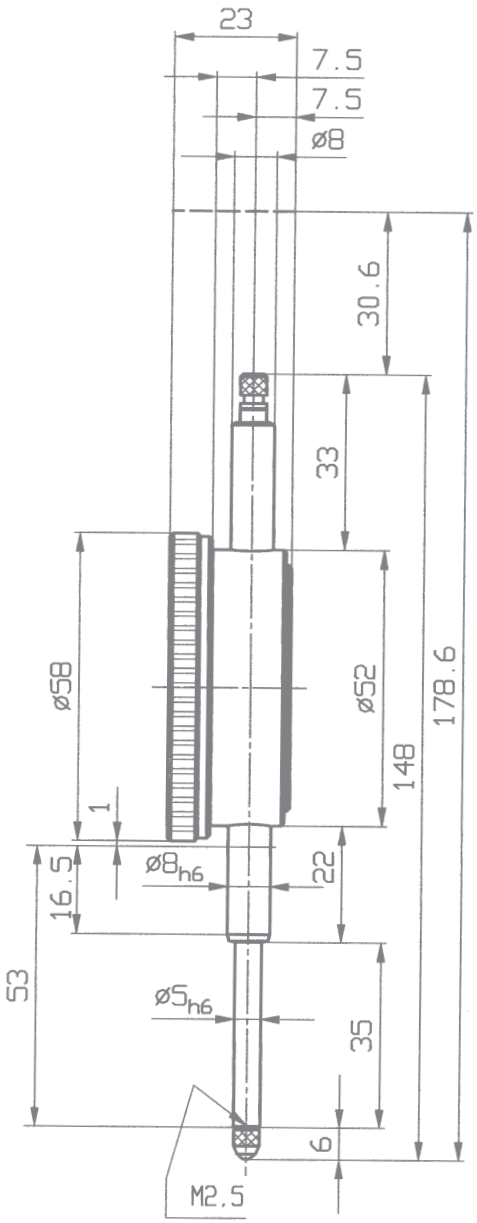
Dial Gauge M 2/30 S

shockproof

Except for the additional shockproof system all technical features of the Dial Gauge M 2/30 S are the same as for the M 2/30 T Dial Gauge on page 19 of this catalogue. Effective impact protection protects the Dial Gauge M 2/30 S even from hard impacts on the spindle, thereby reducing the risk of damage to the teeth.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2/30 S shockproof	
Reading	0.01 mm
Range	30 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0014
Initial measuring force	0.8 N
Dimensioned drawing	page 20



Dial Gauge MU 52/30 T

Dial Gauge MU 52/30 S

shockproof

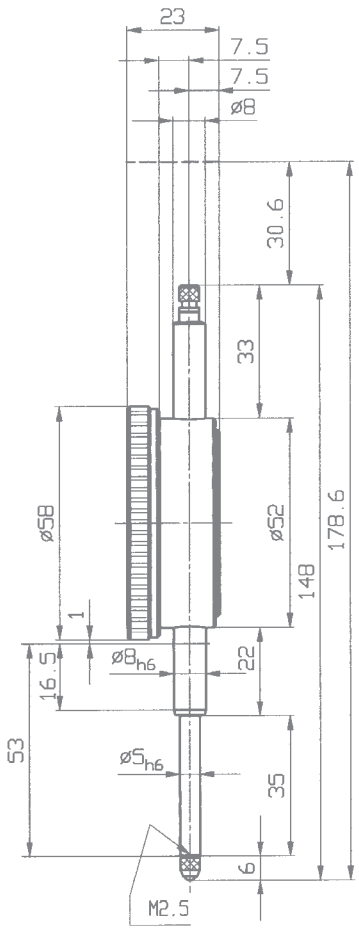
Our new Dial Gauge Series MU 52 has been designed and manufactured by Käfer Dial Gauges Shanghai.
The racks and pinions – the key parts for the accuracy of Dial Gauges – are however supplied by Käfer Germany.
All Dial Gauges are checked for their accuracy on a Feinmess Suhl automatic Dial Gauge Measuring Machine.

All details of these Dial Gauges conform to DIN EN ISO 463 / manufacturing standard 1.0200.9.0014. Except for the shockproof system all technical features of the Dial Gauge MU 52/30 S are the same as for the MU 52/30 T Dial Gauge. Effective impact protection protects the Dial Gauge MU 52/30 S even from hard impacts on the spindle, thereby reducing the risk of damage of the teeth.

Precision Dial Gauge MU 52/30 T	
Reading	0.01 mm
Range	30 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0014
Initial measuring force	0.8 N
Dimensioned drawing	page 21

Precision Dial Gauge MU 52/30 S shockproof	
Reading	0.01 mm
Range	30 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0014
Initial measuring force	0.8 N
Dimensioned drawing	page 21

Model shown: MU 52/30 S



Dial Gauge M 2/50 T

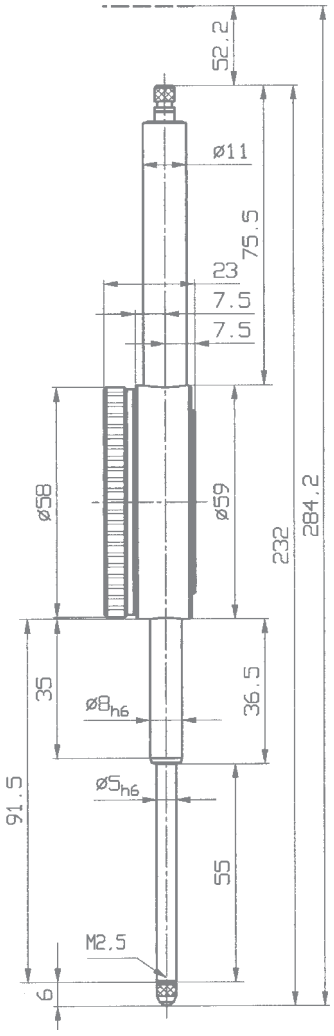
Dial Gauge M 2/50 S
shockproof

The concentric millimetre pointer allows easy and safe reading of these Dial Gauges. The essential parts of the movement are jewelled.
An effective shockproof gear protects the Dial Gauge M 2/50 S even from hard shocks on the spindle, therefore reducing the risk of damage to its teeth.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2/50 T	
Reading	0.01 mm
Range	50 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0002
Initial measuring force	1.5 N
Dimensioned drawing	page 22

Precision Dial Gauge M 2/50 S shockproof	
Reading	0.01 mm
Range	50 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0002
Initial measuring force	1.5 N
Dimensioned drawing	page 22



Dial Gauge M 2/80 T

Dial Gauge M 2/80 S

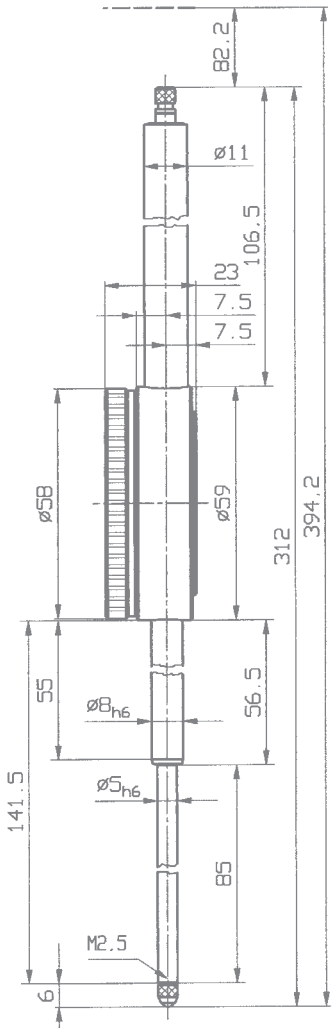
shockproof

The concentric millimetre pointer allows easy and safe reading of these Dial Gauges. The essential parts of the movement are jewelled.
An effective shockproofed gear protects the Dial Gauge M 2/80 S even from hard shocks on the spindle, therefore reducing the risk of damage to its teeth.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2/80 T	
Reading	0.01 mm
Range	80 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 1.0200.9.0002
Initial measuring force	1.5 N
Dimensioned drawing	page 23

Precision Dial Gauge M 2/80 S shockproof	
Reading	0.01 mm
Range	80 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 1.0200.9.0002
Initial measuring force	1.5 N
Dimensioned drawing	page 23



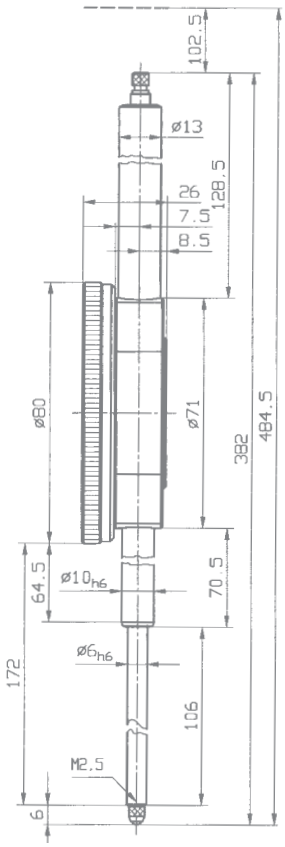
Dial Gauge GM 80/100 T

The concentric millimetre pointer allows easy and safe reading of the Dial Gauge.
In comparison with Dial Gauges having smaller measuring ranges the model GM 80/100 T has a measuring spindle Ø of 6 mm and a stem Ø of 10 mm. These features increase the stability and durability of the Dial Gauge.

Dial Gauges with 100 mm measuring range are also available in the following versions:

- bezel-Ø 58 mm (model M 2/100 T)
- bezel-Ø 100 mm (model GM 100/100 T)
- shockproof (model GM 80/100 S)
- with reading of 0.1 mm (model GM 10/100 f)

Precision Dial Gauge GM 80/100 T	
Reading	0.01 mm
Range	100 mm
Range per revolution	1 mm
Bezel-Ø	80 mm
Stem-Ø	10 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 1.0200.9.0002
Initial measuring force	1.2 N
Dimensioned drawing	page 24



Small Dial Gauge MU 28

The Dial Gauge MU 28 is the smallest model of our broad manufacturing programme. Its extremely small overall dimensions require a special adjustment procedure according to manufacturing standards.

Spindles and stems of the Small Dial Gauges MU 28 and KM 6 T are made of resistant stainless steel.

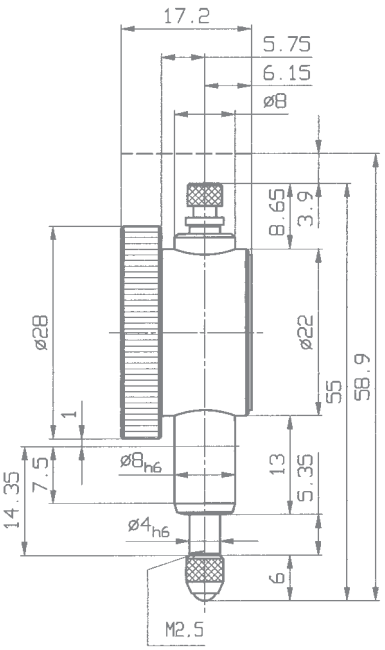
Small Dial Gauge MU 28	
Reading	0.01 mm
Range	3.5 mm
Range per revolution	0.5 mm
Bezel-Ø	28 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 4.0000.9.0012
Initial measuring force	0.8 N
Dimensioned drawing	page 25

Small Dial Gauge KM 6 T

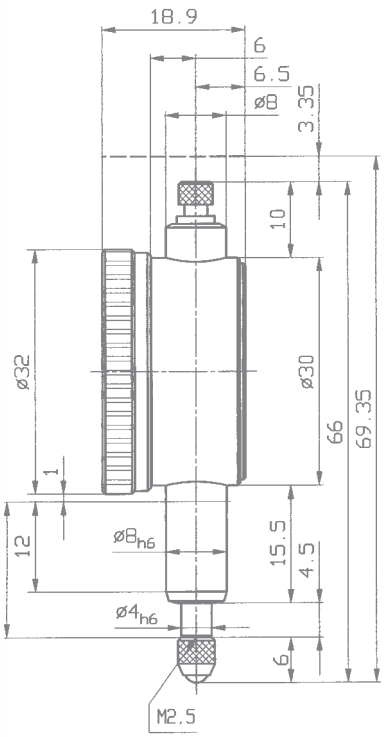
All allowed tolerances of the Small Dial Gauge KM 6 T conform to DIN 878.
On request the Small Dial Gauge KM 6 T is also available with special fittings:

- KM 6 T with lifting device
- KM 6 T with counter clockwise dial reading
- KM 6 T with balanced dial reading 0-25-0
- KM 6 T with increased or reduced measuring force

Small Dial Gauge KM 6 T	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	32 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.5 N
Dimensioned drawing	page 25



Model shown: KM 6 T



Small Dial Gauge KM 4 T

Our Small Dial Gauges have 40 mm Ø bezel. As standard they have 0.5 mm travel range per revolution and 50 graduations on the dial. This offers the advantage of a clear and easily readable Dial Gauge.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4 T	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.9 N
Dimensioned drawing	page 27

On request the Dial Gauge KM 4 T is also available with special fittings:

- **Small Dial Gauge KM 4 T** with fixing screw for the bezel
- **Small Dial Gauge KM 4 T** with lifting device
- **Small Dial Gauge KM 4 T** with special transmission ratio (range per revolution = 1 mm)
- **Small Dial Gauge KM 4 T** with counter clockwise reading
- **Small Dial Gauge KM 4 T** with balanced dial reading 0-25-0
- **Small Dial Gauge KM 4 T** with increased measuring force
- **Small Dial Gauge KM 4 T** with reduced measuring force
- **Small Dial Gauge KM 4 T** with reverse spring traction
- **Small Dial Gauge KM 4 T** with extended stem

Model KM 4/5 T illustrated on the opposite page can also be manufactured according to the above listed versions.

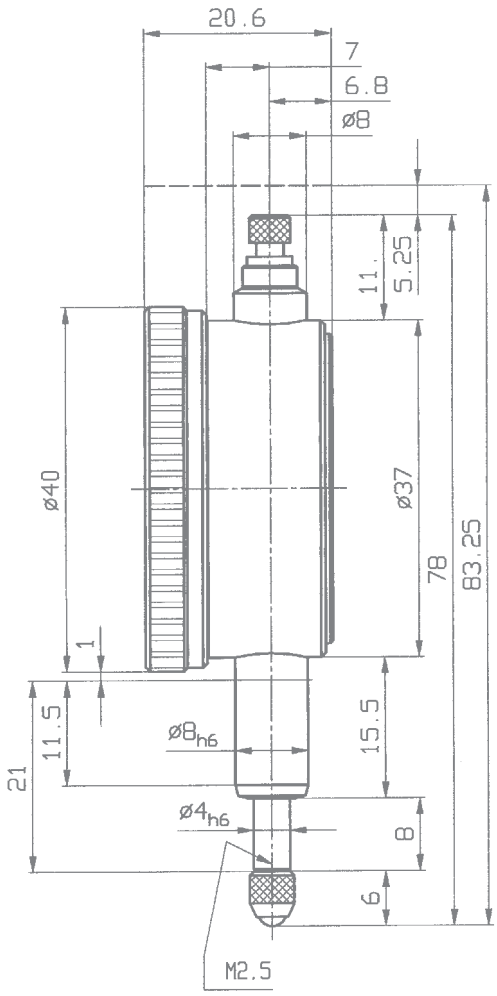
Small Dial Gauge KM 4/5 T

Except for the longer measuring range all technical features of Small Dial Gauge KM 4/5 T are the same as for model KM 4 T.

All details of this Small Dial Gauge conform to DIN EN ISO 463 / DIN 878. This applies not only to the outside dimensions but also to allowed tolerances, the measuring force and the measuring force reversal range.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4/5 T	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.9 N
Dimensioned drawing	page 27



On the Small Dial Gauge KM 4 T the dimensions of 83.25 and 5.25 have to be decreased to 81.25 and 3.25.

Small Dial Gauges KM 4 TOP and KM 4/5 TOP S

D.B.P. No. 36 43 200

We hold German patent no. 36 43 200 for TOP series Dial Gauges.

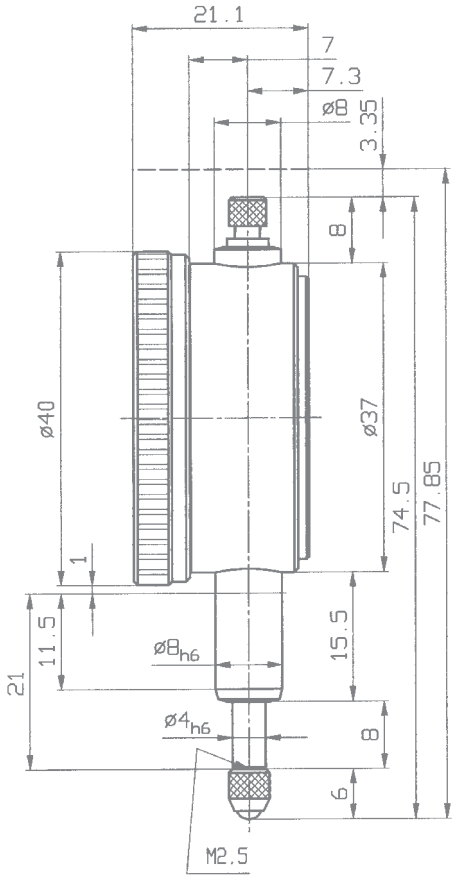
New technological production methods enable us to market them at an astonishingly low price. All details of these Dial Gauges conform to DIN EN ISO 463 / DIN 878. This applies not only to the dimensions but also to allowed tolerances.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4 TOP	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.6 N
Dimensioned drawing	page 28

Small Dial Gauge KM 4/5 TOP S shockproof	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.6 N
Dimensioned drawing	page 28

Model shown: KM 4 TOP



On the Small Dial Gauge KM 4/5 TOP S the dimensions of 77.85 and 3.35 have to be increased to 79.85 and 5.35.
The range of Small Dial Gauges is also available as X-types.
The design features conform in this case to model M 2 X on page 12 of the catalogue.

Small Dial Gauges KM 4/5 T – 100 and KM 4/10 TK – 100

1 pointer revolution = 1 mm

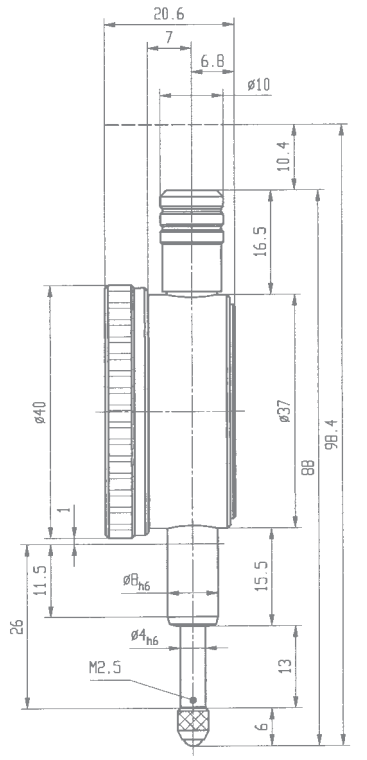
Apart from our standard Small Dial Gauges, which have a pointer revolution of 0.5 mm, the models illustrated on this page have 1 mm per revolution and 100 graduations on the dial.

Model KM 4/10 TK – 100 offers with 10 mm the longest range of our broad manufacturing programme of Small Dial Gauges. The concentric millimetre pointer allows easy and safe reading of this Small Dial Gauge.

All details of these Dial Gauges conform to DIN EN ISO 463 / DIN 878. This applies not only to the dimensions but also to allowed tolerances

Small Dial Gauge KM 4/5 T-100	
Reading	0.01 mm
Range	5 mm
Range per revolution	1 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.9 N
Dimensioned drawing	page 27

Small Dial Gauge KM 4/10 TK-100	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.7 N
Dimensioned drawing	page 29



Small Dial Gauge KM 4 S

shockproof

The high-class impact protection of the Small Dial Gauge KM 4 S results in an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Small Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4 S shockproof	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1 N
Dimensioned drawing	on request

On request the Dial Gauge KM 4 S is also available with special fittings:

- **Small Dial Gauge KM 4 S**
  with fixing screw for the bezel
- **Small Dial Gauge KM 4 S**
  with lifting device
- **Small Dial Gauge KM 4 S**
  with threaded protective sleeve
- **Small Dial Gauge KM 4 S**
  with special transmission ratio
  range per revolution = 1 mm
- **Small Dial Gauge KM 4 S**
  with counter clockwise reading
- **Small Dial Gauge KM 4 S**
  with balanced dial reading 0-25-0
- **Small Dial Gauge KM 4 S**
  with increased measuring force
- **Small Dial Gauge KM 4 S**
  with reduced measuring force
- **Small Dial Gauge KM 4 S**
  with extended stem
  (length from casing 29.5 mm)

Model KM 4/5 S illustrated on the opposite page can also be manufactured according to the above listed versions.

Small Dial Gauge KM 4/5 S

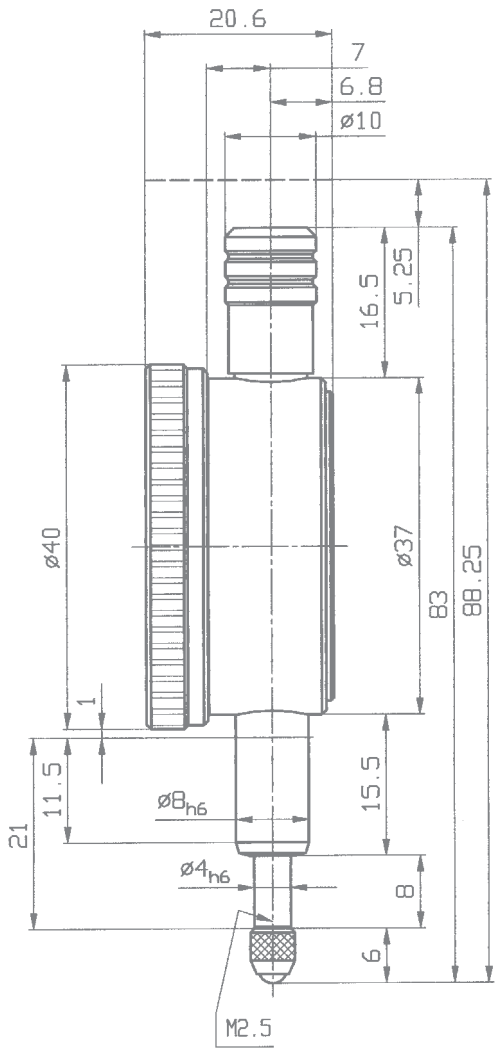
shockproof

Except for the longer measuring range all technical features of the Small Dial Gauge KM 4/5 S are the same as for model KM 4 S.

All details of this Small Dial Gauge conform to DIN EN ISO 463 / DIN 878. This applies not only to the outside dimensions but also to allowed tolerances.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4/5 S shockproof	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1 N
Dimensioned drawing	page 31

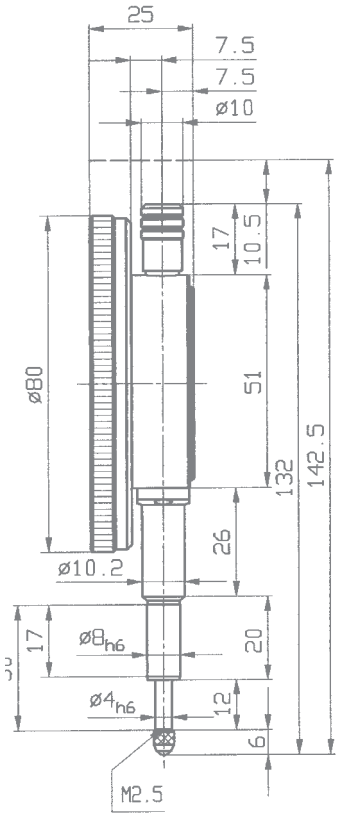


Dial Gauge GM 80 S

shockproof

The high-class impact protection of the Dial Gauge GM 80 S results in an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.



Dial Gauge GM 80 S shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	80 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0200.9.0016
Initial measuring force	1 N
Dimensioned drawing	page 32

Other Dial Gauges with large bezel diameter from our production range:

Dial Gauge GM 80 T	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	80 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0200.9.0016
Initial measuring force	1 N
Dimensioned drawing	on request

Dial Gauge GM 100 T	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	100 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0200.9.0016
Initial measuring force	1 N
Dimensioned drawing	on request

Dial Gauge GM 100 S shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	100 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0200.9.0016
Initial measuring force	1 N
Dimensioned drawing	on request

High Precision Dial Gauges

Our High Precision Dial Gauges are high-resolution gauges with 0.001 mm or 0.002 mm graduations and 0.1 mm or 0.2 mm measuring distance per pointer revolution. The high magnification gear train and high-resolution dials allow a very precise reading of the measured value.

The well thought-out design as well as the extremely precise, while robust in operation, execution of our High Precision Dial Gauges with precision gear movement guarantee for their reliability and long service life. The following quality features apply to our entire manufacturing programme:

- Highly responsive movements.
- Precisely matched measuring spindles and stems to minimise lateral play.
- All gear pivots run in high-class ruby bearings.
- Lifting cap to raise the plunger easily and to prevent ingress of contaminants.
- All waterproof and water protected models have a threaded protection sleeve to prevent ingress of contaminants.
- All shockproof models contain an effective impact protection sleeve.
- Dimensions according to DIN EN ISO 463 (except waterproof and waterprotected models)

As standard High Precision Dial Gauges are manufactured with measuring ranges up to 5 mm. However the gear movements can accommodate ranges up to 10 mm. Please contact us if you require longer measuring ranges.

DIN 878 does not include these High Precision Dial Gauges. They are subject to a strict manufacturing standard.
For the High Precision Dial Gauges with precision gear movements listed in the following table our works standard 0.0500.9.0001 applies.

Please see pages 38 – 40 for our series ‚FEINIKA‘ High Precision Dial Gauges.

Technical data for Metric High Precision Dial Gauges with gear movement

Model	Reading	Range per revolution	Range	Overtravel	Bezel-Ø	Special Feature
KM 500 T	0.002 mm	0.2 mm	1 mm	–	40 mm	
KM 500 S	0.002 mm	0.2 mm	1 mm	–	40 mm	Shockproof
KM 500/3 S	0.002 mm	0.2 mm	3 mm	–	40 mm	Shockproof
KM 500 SW	0.002 mm	0.2 mm	1 mm	–	44.5 mm	Waterproof
FM 500 T	0.002 mm	0.2 mm	1 mm	–	58 mm	
FM 500 SI	0.002 mm	–	0.16 mm	5 mm	58 mm	Error Free
KM 1000 T	0.001 mm	0.2 mm	1 mm	–	40 mm	
KM 1000 S	0.001 mm	0.2 mm	1 mm	–	40 mm	Shockproof
FM 1000 T	0.001 mm	0.2 mm	1 mm	–	58 mm	
FM 1000 S	0.001 mm	0.2 mm	1 mm	4 mm	58 mm	Shockproof
FM 1000/5 T	0.001 mm	0.2 mm	5 mm	–	58 mm	
FM 1000/5 S	0.001 mm	0.2 mm	5 mm	–	58 mm	Shockproof
SI-180	0.001 mm	–	0.16 mm	5 mm	58 mm	Error Free
FM 1000 S wa	0.001 mm	0.2 mm	1 mm	4 mm	58 mm	Water Protected
FM 1000 SW	0.001 mm	0.2 mm	1 mm	4 mm	61.5 mm	Waterproof
FM 1000/5 SW	0.001 mm	0.2 mm	5 mm	–	61.5 mm	Waterproof
FM 1000/80 T	0.001 mm	0.2 mm	1 mm	–	80 mm	
FM 1000/80 S	0.001 mm	0.2 mm	1 mm	4 mm	80 mm	Shockproof
FM 1000/80-5 T	0.001 mm	0.2 mm	5 mm	–	80 mm	
FM 1000/80-5 S	0.001 mm	0.2 mm	5 mm	–	80 mm	Shockproof

Small Dial Gauge KM 500 S

shockproof

Small Dial Gauge KM 1000 S

shockproof

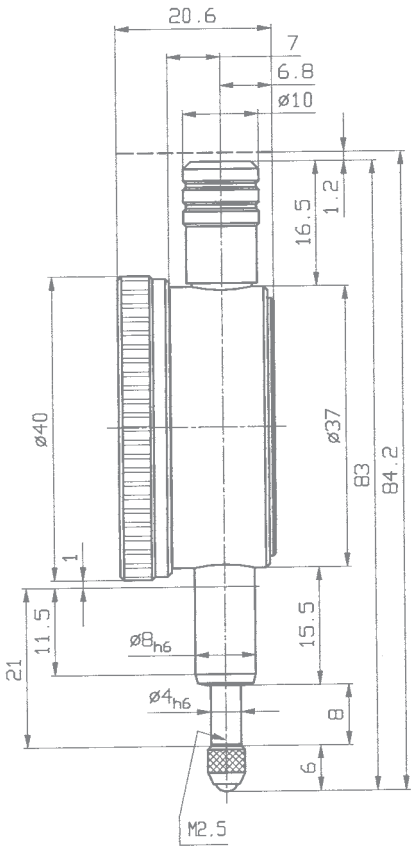
The High Precision Small Dial Gauges KM 500 S and KM 1000 S equipped with a high-class impact protection have an extremely long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Small Dial Gauges are robust in operation. Their precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

High Precision Dial Gauge KM 500 S shockproof	
Reading	0.002 mm
Range	1 mm
Range per revolution	0.2 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0001
Initial measuring force	1 N
Dimensioned drawing	page 34

High Precision Dial Gauge KM 1000 S shockproof	
Reading	0.001 mm
Range	1 mm
Range per revolution	0.2 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0001
Initial measuring force	1 N
Dimensioned drawing	page 34

Model shown: KM 500 S



Dial Gauge FM 1000/5 S

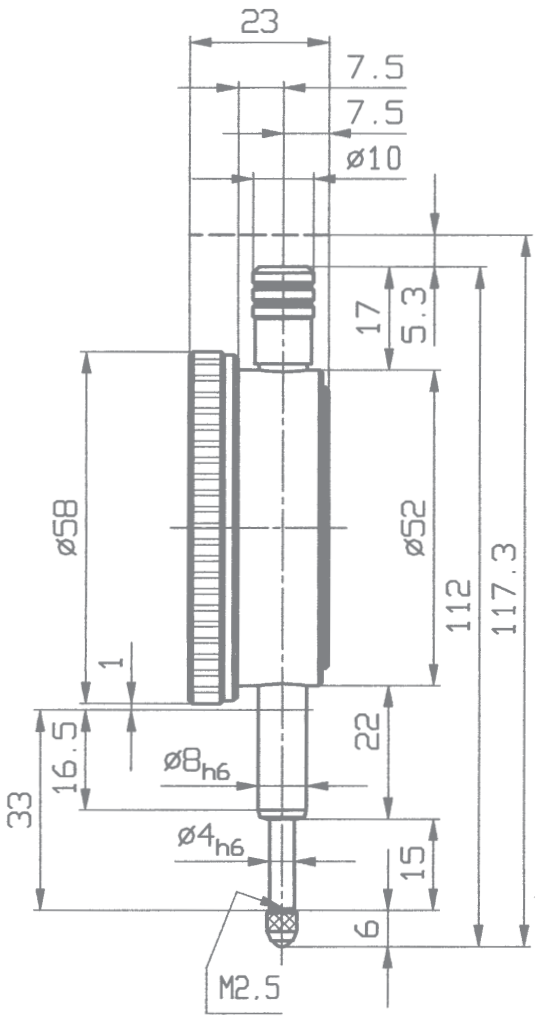
shockproof

Except for the longer measuring range and the bezel diameter of 58 mm all technical features of Dial Gauge FM 1000/5 S are the same as for model KM 1000 S.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

We manufacture also High Precision Dial Gauges with a bezel Ø of 80 mm. The model FM 1000/80-5 S has the same technical data as the model FM 1000/5 S, but a bezel diameter of 80 mm.

High Precision Dial Gauge FM 1000/5 S shockproof	
Reading	0.001 mm
Range	5 mm
Range per revolution	0.2 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0001
Initial measuring force	1.2 N
Dimensioned drawing	page 35



Dial Gauge FM 1000 T

Dial Gauge FM 500 T

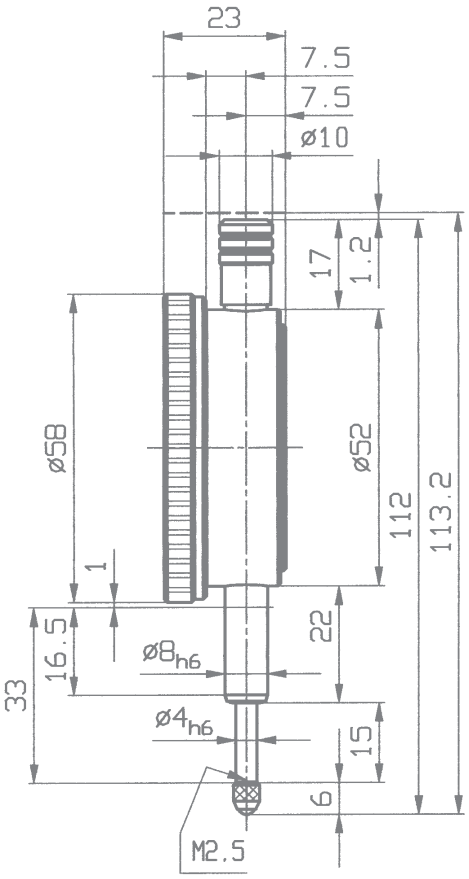
The only difference between FM 1000 T and FM 500 T is the number of graduations on the dial face.
FM 1000 T has 200 graduations, each of 0.001 mm, whereas FM 500 T has 100 graduations of 0.002 mm.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

High Precision Dial Gauge FM 1000 T	
Reading	0.001 mm
Range	1 mm
Range per revolution	0.2 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0500.9.0001
Initial measuring force	1.5 N
Dimensioned drawing	page 36

High Precision Dial Gauge FM 500 T	
Reading	0.002 mm
Range	1 mm
Range per revolution	0.2 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0500.9.0001
Initial measuring force	1.5 N
Dimensioned drawing	page 36

Model shown: FM 1000 T



Dial Gauge FM 1000/5 T

The carefully thought-out design, the use of selected components and materials as well as the movement perfected by precision engineering guarantee reliable measuring results and a long service life of our Precision Dial Gauges.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

High Precision Dial Gauge FM 1000/5 T	
Reading	0.001 mm
Range	5 mm
Range per revolution	0.2 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0001
Spindle	lapped
Dimensioned drawing	on request

On request the Dial Gauges FM 1000 T and FM 1000/5 T are also available with special fittings:

- **FM 1000 T resp. FM 1000/5 T** with fixing screw for the bezel
- **FM 1000 T resp. FM 1000/5 T** with lifting device
- **FM 1000 T resp. FM 1000/5 T** with wire release
- **FM 1000 T resp. FM 1000/5 T** with threaded protective sleeve
- **FM 1000 T resp. FM 1000/5 T** with special transmission ratio (range per revolution = 0.25 mm)
- **FM 1000 T resp. FM 1000/5 T** with counter clockwise dial reading
- **FM 1000 T resp. FM 1000/5 T** with increased measuring force
- **FM 1000 T resp. FM 1000/5 T** with reduced measuring force
- **FM 1000 T resp. FM 1000/5 T** with reverse spring traction
- **FM 1000 T resp. FM 1000/5 T** with extended stem

High Precision Dial Gauges with the movement of Comparator Gauges

The FEINIKA High Precision Dial Gauges have similar movements to those of our range of COMPIKA Comparator Gauges. The travel of the plunger is transmitted and magnified by means of a lever device to the hand. This lever transmission has two advantages. It provides extremely high accuracy, as well as an effective shockproof system.

The following quality features apply to our entire manufacturing programme of FEINIKA High Precision Dial Gauges:

- Effective shockproof system.
- With metal bezel.
- Lifting cap to raise the plunger easily.
- All waterproof models have a threaded protection sleeve to prevent ingress of contaminants.
- Dimensions according to DIN EN ISO 463 (except waterproof models).
- Hardened plunger to protect against damage.
- Additional over-travel for easy insertion of test pieces under the measuring tip.
- Highly responsive movements.
- Precisely matched plunger and stem to minimise lateral play.
- All gear pivots run in high-class ruby bearings.
- A lifting cap to prevent ingress of contaminants.

DIN 878 does not include these High Precision Dial Gauges. So we subject these gauges to more stringent standards as laid down in the table 0.0500.9.0010 of our manufacturing standard.

Technical data for Metric High Precision Dial Gauges of the series Feinika

Model	Reading	Range per revolution	Range	Overtravel	Bezel-Ø	Special Feature
Feinika KM 1102	0.002 mm	0.1 mm	1 mm	2.5 mm	40 mm	Shockproof
Feinika FM 1102	0.002 mm	0.1 mm	1 mm	4 mm	58 mm	Shockproof
Feinika KM 1101	0.001 mm	0.1 mm	1 mm	2.5 mm	40 mm	Shockproof
Feinika KM 1101 W	0.001 mm	0.1 mm	1 mm	2.5 mm	44.5 mm	Waterproof
Feinika SI-914	0.001 mm	–	0.08 mm	3 mm	40 mm	Error Free
Feinika SI-910	0.001 mm	–	0.1 mm	3 mm	40 mm	Error Free
Feinika FM 1101	0.001 mm	0.1 mm	1 mm	4 mm	58 mm	Shockproof
Feinika FM 1101 W	0.001 mm	0.1 mm	1 mm	4 mm	61.5 mm	Waterproof
Feinika SI-915	0.001 mm	–	0.08 mm	5 mm	58 mm	Error Free
Feinika SI-916	0.001 mm	–	0.1 mm	5 mm	58 mm	Error Free
Feinika SI-918	0.001 mm	–	0.16 mm	5 mm	58 mm	Error Free

Small Dial Gauge Feinika KM 1101

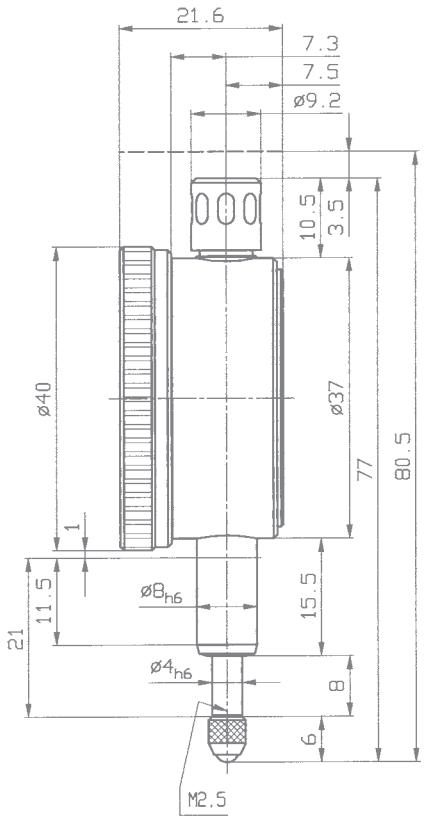
shockproof

High Precision Dial Gauges Feinika have a scale with 100 graduations for one pointer revolution of 0.1 mm. This enables very precise read-off results.

The travel of the plunger is transmitted by means of a lever device to the hand. This lever transmission of the movement has two advantages. It provides extremely high accuracy, as well as an effective shockproof system.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge Feinika KM 1101 shockproof	
Reading	0.001 mm
Range	1 mm
Range per revolution	0.1 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0010
Initial measuring force	1 N
Dimensioned drawing	page 39



Dial Gauge Feinika FM 1101

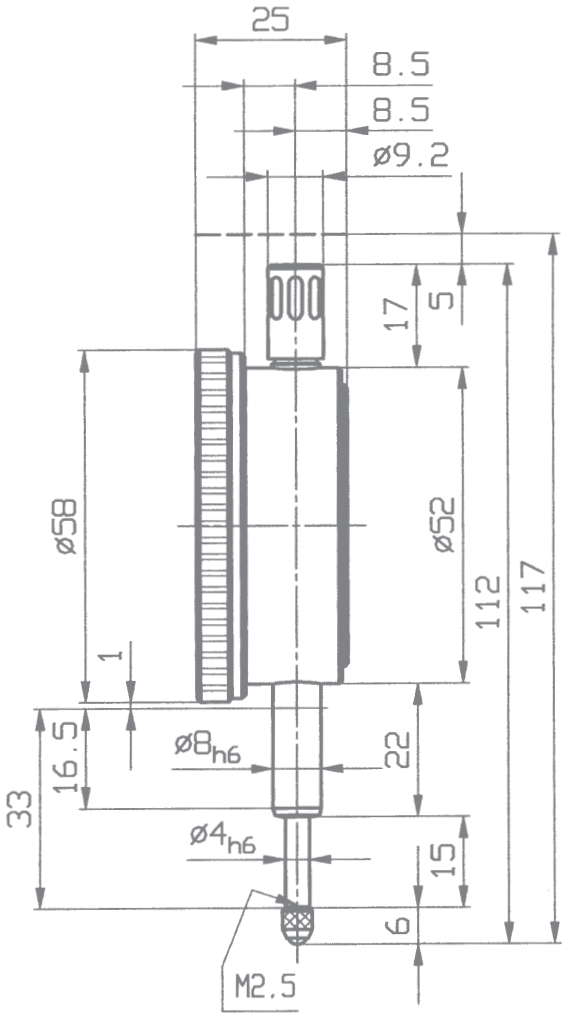
shockproof

The travel of the plunger is transmitted by means of a lever device to the hand. This lever transmission of the movement has two advantages. It provides extremely high accuracy, as well as an effective shockproof system.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

High Precision Dial Gauges of the Feinika series are also available in waterproof version and also as Error Free Dial Gauges.

Dial Gauge Feinika FM 1101 shockproof	
Reading	0.001 mm
Range	1 mm
Range per revolution	0.1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0500.9.0010
Initial measuring force	1.5 N
Dimensioned drawing	page 40



Dial Gauges with 0.1 mm reading

Dial Gauges with 0.1 mm graduations are supplied without tolerance pointers as standard. On request they can be supplied with tolerance pointers at no extra charge.

Because of the rather course transmission ratio effective on Dial Gauges with a reading of 0.1 mm the danger of damage to the gearing through shocks received by the spindle is considerably minimised. In this range we only offer Standard Dial Gauges without impact protection. Offers for Dial Gauges with a reading of 0.1 mm and shockproof are available on request.

These 0.1 mm reading Gauges are also available in waterproof and back-plunger versions. Please contact us for price and availability.

On Dial Gauges KM 5 a, KM 10 a and M 10 a one revolution of the pointer corresponds to the entire measuring range. For this reason they are specially suitable for applications benefiting from a slave pointer. A functional description of Dial Gauges with slave pointers is given on page 75 of the catalogue.

The carefully thought-out design as well as the operationally robust execution of our Dial Gauges with a reading of 0.1 mm guarantee reliable measuring results and a long service life.

Dial Gauges with a reading of 0.1 mm are not included in DIN 878. They are subject to a strict manufacturing standard. For the models listed in the following table our manufacturing standard 0.0100.9.0004 applies. Their dimensions are according to DIN EN ISO 463 (exception: Length L_2 with model M 10 d).

Technical data for Dial Gauges with 0.1 mm reading

Model	Reading	Range per revolution	Range	Bezel-Ø	Initial measuring force	Special Feature
KM 5 a	0.1 mm	5 mm	5 mm	40 mm	0.7 N	
KM 10 a	0.1 mm	10 mm	10 mm	40 mm	1.0 N	
KM 5 a R	0.1 mm	5 mm	5 mm	40 mm	1.5 N	Back Plunger
M 10 a	0.1 mm	10 mm	10 mm	58 mm	0.7 N	
M 10 b	0.1 mm	10 mm	20 mm	58 mm	0.7 N	
M 10 c	0.1 mm	10 mm	30 mm	58 mm	0.8 N	Linear display to indicate revolution
M 10 d	0.1 mm	10 mm	50 mm	58 mm	1.2 N	
SI-9/0.1	0.1 mm	–	8 mm	58 mm	0.7 N	Error Free
M 10/5 R	0.1 mm	5 mm	5 mm	58 mm	1.5 N	Back Plunger
GM 10/80	0.1 mm	10 mm	20 mm	80 mm	0.7 N	
GM 10/100	0.1 mm	10 mm	10 mm	100 mm	0.7 N	

Small Dial Gauges KM 5 a and KM 10 a

On request the Small Dial Gauges KM 5 a and KM 10 a are also available with special fittings:

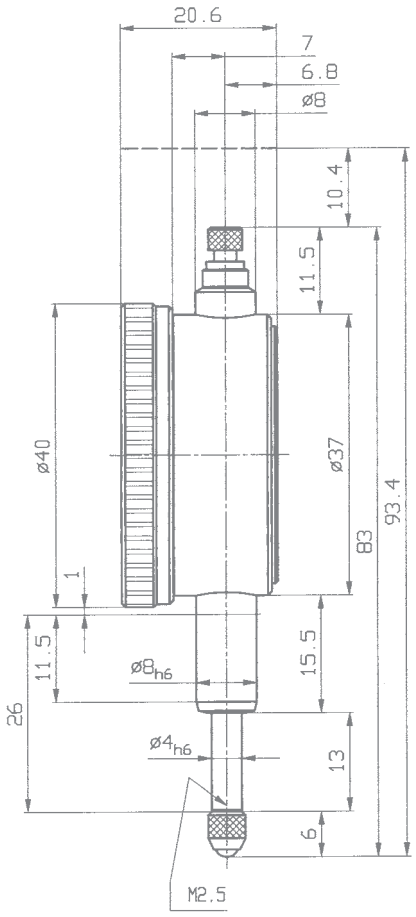
- **KM 5 a resp. KM 10 a** with lifting lever
- **KM 5 a resp. KM 10 a** with counter clockwise dial reading
- **KM 5 a resp. KM 10 a** with increased measuring force
- **KM 5 a resp. KM 10 a** with reverse spring traction
- **KM 5 a resp. KM 10 a** with tolerance indicators
- **KM 5 a resp. KM 10 a** with extended stem

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 5 a	
Reading	0.1 mm
Range	5 mm
Range per revolution	5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
Dimensioned drawing	on request

Small Dial Gauge KM 10 a	
Reading	0.1 mm
Range	10 mm
Range per revolution	10 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
Dimensioned drawing	page 42

Model shown: KM 10 a



Dial Gauges M 10 a and M 10 b

The Dial Gauges with graduations of 0.1 mm have no tolerance indicators. If anyway desired they are available at no extra charge.

Dial Gauges M 10 a and M 10 b possess a stem which is laterally offset by 3.5 mm.

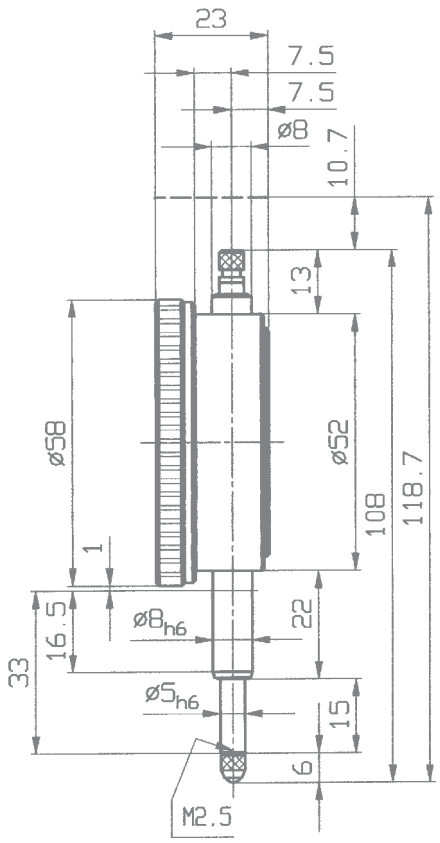
Spindle and stem are made of resistant stainless steel. The spindle is lapped.

In comparison to model M 10 a the Dial Gauge M 10 b has an additional revolution counter.

Dial Gauge M 10 a	
Reading	0.1 mm
Range	10 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
Dimensioned drawing	page 43

Dial Gauge M 10 b	
Reading	0.1 mm
Range	20 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
Dimensioned drawing	on request

Model shown: M 10 a



Dial Gauges M 10 c and M 10 d

On model M 10 c a straight line display is used as revolution counter instead of the traditional rotating pointer.

Dial Gauges M 10 c and M 10 d possess a stem which is laterally offset by 3.5 mm.

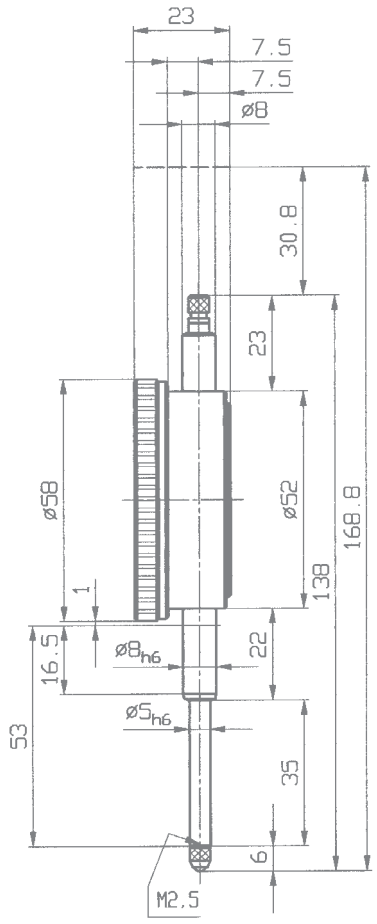
Spindle and stem are made of resistant stainless steel. The spindle is lapped.

In comparison to model M 10 c the Dial Gauge M 10 d has a rotating pointer as revolution counter.

Dial Gauge M 10 c	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
Dimensioned drawing	page 44

Dial Gauge M 10 d	
Reading	0.1 mm
Range	50 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
Dimensioned drawing	on request

Model shown: M 10 c



Small Dial Gauge KM 4 R

with back plunger

Small Dial Gauge KM 4/5 R

with back plunger

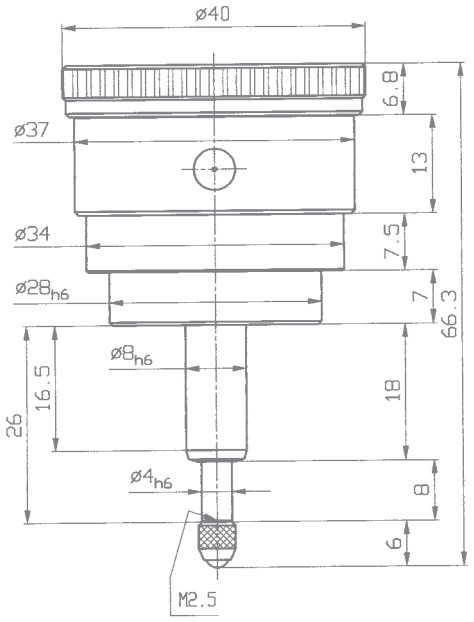
The models KM 4 R and KM 4/5 R differ only in their measuring ranges. Both Dial Gauges can be held either on the standard 8 mm h 6 stem or on the 28 mm diameter spigot.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4 R with back plunger	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0006
Initial measuring force	1 N
Dimensioned drawing	page 45

Small Dial Gauge KM 4/5 R with back plunger	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0006
Initial measuring force	0.9 N
Dimensioned drawing	page 45

Model shown: KM 4 R



On the Small Dial Gauge KM 4/5 R the dimension of 7.5 mm in the above dimensioned drawing has been increased to 9.5 mm and the overall length from 66.3 mm to 68.3 mm.

Technical data for other Small Dial Gauges with back plunger

Model	Reading	Range	Dial Numbering	Bezel Ø	Dimensions and accuracy according to
KM 5 a R	0.1 mm	5 mm	0 – 5	40 mm	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
SI-45 R	0.01 mm	0.4 mm	20 – 0 – 20	40 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0006
SI-45/0.8 R	0.01 mm	0.8 mm	40 – 0 – 40	40 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0006
KM 500 R	0.002 mm	1 mm	0 – 100 / 0 – 100	40 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0007
KM 1000 R	0.001 mm	1 mm	0 – 100 / 0 – 100	40 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0007

Dial Gauge M 2 R

with back plunger

Dial Gauge M 2/5 R

with back plunger

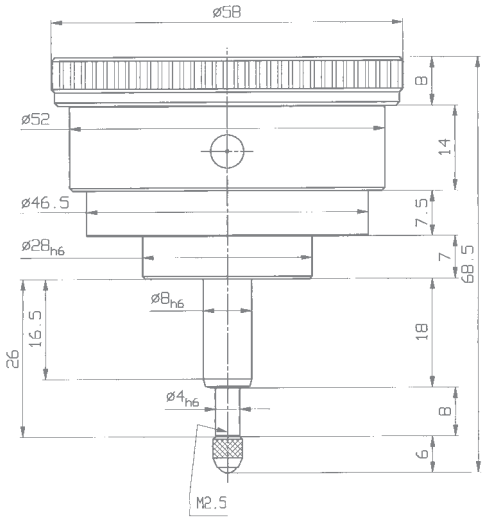
The models M 2 R and M 2/5 R differ only in their measuring ranges. Both Dial Gauges can be held either on the standard 8 mm h 6 stem or on the 28 mm diameter spigot.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Dial Gauge M 2 R with back plunger	
Reading	0.01 mm
Range	3 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0500.9.0006
Initial measuring force	1.5 N
Dimensioned drawing	page 46

Dial Gauge M 2/5 R with back plunger	
Reading	0.01 mm
Range	5 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 0.0500.9.0006
Initial measuring force	1.5 N
Dimensioned drawing	page 46

Model shown: M 2 R



On the Dial Gauge M 2/5 R the dimension of 7.5 mm at Ø 46.5 mm in the above dimensioned drawing has been increased to 9.5 mm and the overall length from 68.5 mm to 70.5 mm.

Technical data for other Dial Gauges with back plunger

Model	Reading	Range	Dial Numbering	Bezel Ø	Dimensions and accuracy according to
M 10/5 R	0.1 mm	5 mm	0 – 5	58 mm	DIN EN ISO 463 / manufacturing standard 0.0100.9.0004
SI-90 R	0.01 mm	0.8 mm	40 – 0 – 40	58 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0006
SI-18 R	0.01 mm	1.6 mm	80 – 0 – 80	58 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0006
FM 500 R	0.002 mm	1 mm	0 – 100 / 0 – 100	58 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0007
FM 1000 R	0.001 mm	1 mm	0 – 100 / 0 – 100	58 mm	DIN EN ISO 463 / manufacturing standard 0.0500.9.0007

Error Free Dial Gauges

with overtravel and limited measuring range

In order to avoid reading errors the measuring range of these Dial Gauges is limited to slightly less than one revolution of the pointer. Therefore a measurement can only be performed within the range of one revolution of the hand guaranteeing error free reading of the Dial Gauge.

The following quality features apply with exception of model SI-9/0.1 to our entire manufacturing programme of Error Free Dial Gauges:

- The large overtravel assists with the insertion of test pieces into the measuring device.
- The circular scale can only be rotated by 36° (Except model MU 52 ST-SI: bezel rotatable by 360°)
- Double safeguard for the limitation of the measuring range:
  a) Stop in the movement
  b) Stop on the facet ring
  (Except model MU 52 ST-SI)
- Effective impact protection

Error Free Dial Gauges designated with capital letter W in the order code are waterproof. A detailed description of the model series of Waterproof Dial Gauges can be found on pages **53** to **59** of the catalogue.

The Dial Gauge SI-90 X from our series X incorporates quality injection moulded components combined with conventional metal components. This design concept offers high precision model SI-90 X having very low weight.

Technical data for Metric Error Free Dial Gauges

Model	Reading	Range	Dial Reading	Overtravel	Bezel-Ø	Accuracy according to
SI-9/0.1	0.1 mm	8 mm	4 - 0 - 4	–	58 mm	Manufacturing standard 0.0100.9.0004
SI-45	0.01 mm	0.4 mm	20 - 0 - 20	4.5 mm	40 mm	DIN 878
SI-45/0.8	0.01 mm	0.8 mm	40 - 0 - 40	4 mm	40 mm	DIN 878
SI-50	0.01 mm	0.5 mm	25 - 0 - 25	4.5 mm	58 mm	DIN 878
SI-90	0.01 mm	0.8 mm	40 - 0 - 40	9 mm	58 mm	DIN 878
MU 52 ST-SI	0.01 mm	0.8 mm	40 - 0 - 40	7 mm	58 mm	DIN 878
M 2 TOP SI	0.01 mm	0.8 mm	40 - 0 - 40	7 mm	58 mm	DIN 878
SI-90 X	0.01 mm	0.8 mm	40 - 0 - 40	7 mm	58 mm	DIN 878
SI-100	0.01 mm	1.0 mm	50 - 0 - 50	9 mm	58 mm	DIN 878
SI-18	0.01 mm	1.6 mm	80 - 0 - 80	8 mm	58 mm	Manufacturing standard 0.4223.9.0008
M 3 a SI	0.005 mm	0.4 mm	20 - 0 - 20	4.5 mm	58 mm	DIN 878
KM 500 SI	0.002 mm	0.16 mm	80 - 0 - 80	4.5 mm	40 mm	Manufacturing standard 0.0500.9.0001
FM 500 SI	0.002 mm	0.16 mm	80 - 0 - 80	4.5 mm	58 mm	Manufacturing standard 0.0500.9.0001
Feinika SI-914	0.001 mm	0.08 mm	40 - 0 - 40	3 mm	40 mm	Manufacturing standard 0.0500.9.0010
Feinika SI-910	0.001 mm	0.1 mm	50 - 0 - 50	3 mm	40 mm	Manufacturing standard 0.0500.9.0010
Feinika SI-915	0.001 mm	0.08 mm	40 - 0 - 40	4.5 mm	58 mm	Manufacturing standard 0.0500.9.0010
Feinika SI-916	0.001 mm	0.1 mm	50 - 0 - 50	4.5 mm	58 mm	Manufacturing standard 0.0500.9.0010
SI-180	0.001 mm	0.16 mm	80 - 0 - 80	4.5 mm	58 mm	Manufacturing standard 0.0500.9.0001
Feinika SI-918	0.001 mm	0.16 mm	80 - 0 - 80	4.5 mm	58 mm	Manufacturing standard 0.0500.9.0010

Dimensions of all models according to DIN EN ISO 463.

Error Free Dial Gauge SI-45

shockproof, with overtravel

Error Free Dial Gauge SI-45/0.8

shockproof, with overtravel

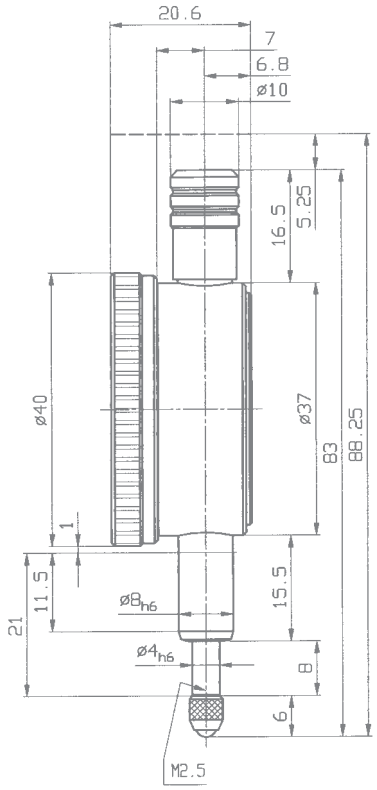
Due to their high-class impact protection the Error Free Dial Gauges SI-45 and SI-45/0.8 offer an extremely long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauges are robust in operation. Their precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Error Free Dial Gauge SI-45 shockproof, with overtravel	
Reading	0.01 mm
Range	0.4 mm
Overtravel	4.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1 N
Dimensioned drawing	page 48

Error Free Dial Gauge SI-45/0.8 shockproof, with overtravel	
Reading	0.01 mm
Range	0.8 mm
Overtravel	4 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 48

Model shown: SI-45



On request the Safety Dial Gauges SI-45 and SI-45/0.8 can also be supplied as waterproof version. Their model designations are SI-45 W and SI-45/0.8 W. Please note that in this case the dimensions of the above drawing do not apply.

Error Free Dial Gauge SI-90

shockproof

Error Free Dial Gauge SI-18

shockproof

Due to their effective shockproof system these Dial Gauges have an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that shocks against the measuring insert are not transferred to the movement. The Dial Gauges are robust in operation. Their precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Error Free Dial Gauge SI-90 shockproof, with overtravel	
Reading	0.01 mm
Range	0.8 mm
Overtravel	9 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 50

Error Free Dial Gauge SI-18 shockproof, with overtravel	
Reading	0.01 mm
Range	1.6 mm
Overtravel	8 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.4233.9.0008
Initial measuring force	0.8 N
Dimensioned drawing	page 50

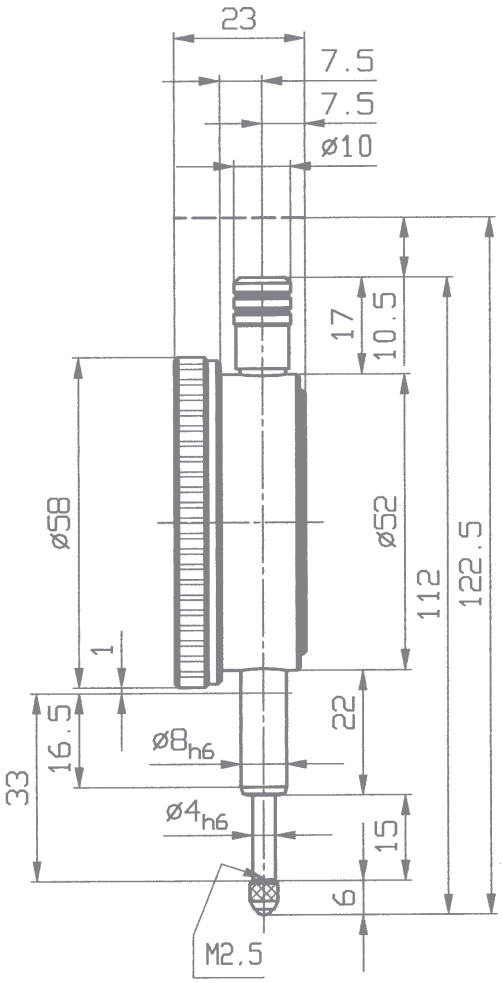
Error Free Dial Gauge SI-100

shockproof, with overtravel

Due to its high-class impact protection the Safety Dial Gauge SI-100 offers an extremely long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Error Free Dial Gauge SI-100 shockproof, with overtravel	
Reading	0.01 mm
Range	1.0 mm
Overtravel	9 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 50



Error Free Dial Gauge MU 52 ST – SI

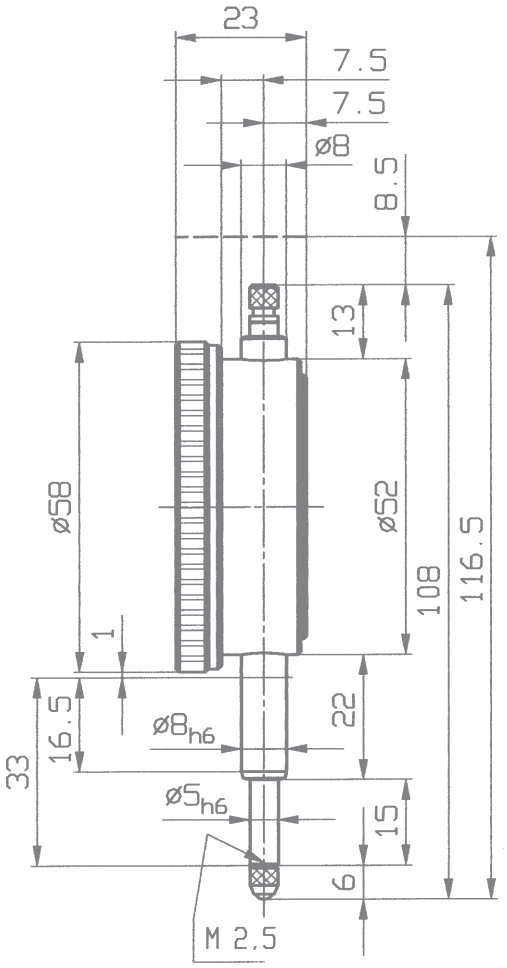
shockproof, with overtravel

Except for the limited measuring range all technical features of model MU 52 ST – SI are the same as for model MU 52 ST shown on catalogue page 13.

The bezel of model MU 52 ST – SI can be rotated through 360°.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Error Free Dial Gauge MU 52 ST - SI shockproof, with over travel	
Reading	0.01 mm
Range	0.8 mm
Overtravel	7 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.8 N
Dimensioned drawing	page 51



Error Free Dial Gauge Feinika SI-914

shockproof, with overtravel

Error Free Dial Gauge Feinika SI-915

shockproof, with overtravel

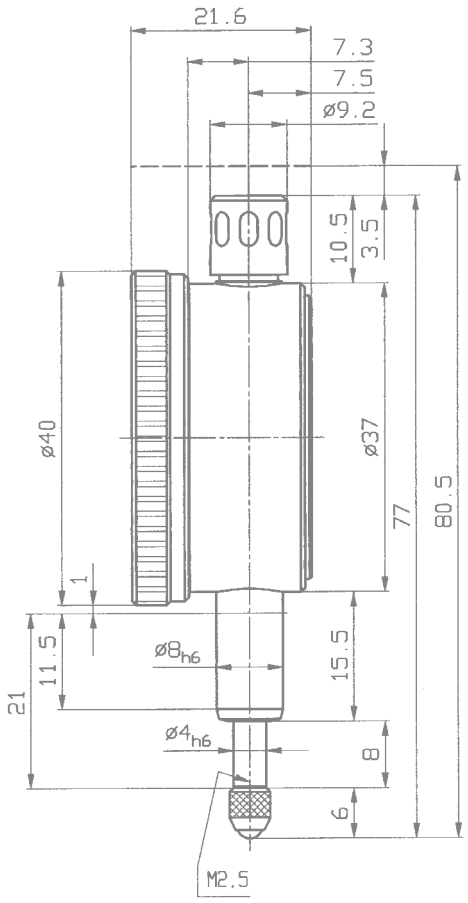
Dial Gauges Feinika possess a movement similar to that of Comparator Gauges. The combined gear and lever transmission guarantees high accuracy and low hysteresis. Dial Gauges Feinika are therefore best suited as error free 0.001 mm-reading Dial Gauges.

Dial Gauges Feinika are supplied as standard version with lifting bush and metal bezel. The spindle is lapped.

Error Free Dial Gauge SI-914 shockproof, with overtravel	
Reading	0.001 mm
Range	0.08 mm
Overtravel	3.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0010
Initial measuring force	0.7 N
Dimensioned drawing	page 52

Error Free Dial Gauge SI-915 shockproof, with overtravel	
Reading	0.001 mm
Range	0.08 mm
Overtravel	4.5 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0500.9.0010
Initial measuring force	1.2 N
Dimensioned drawing	on request

Model shown: SI 914



On request the Error Free Dial Gauges SI-914 and SI-915 can also be supplied as waterproof version. Their model designations are SI-914 W and SI-915 W. Please note that in this case the dimensions of the above drawing do not apply.

Waterproof Dial Gauges

shockproof

In the workshop it is unavoidable that Precision Dial Gauges are in contact with oil, water mist or dust. Our range of hermetically sealed Waterproof Dial Gauges has been specially designed to withstand these conditions. These extremely robust Precision Dial Gauges conforming to protection class IP 67 bear the order code 'W'.

Their features are:

- A flexible rubber bellows is fitted where the spindle enters the stem.
- The upper end of the measuring spindle is sealed by a safety cap and an 'O' ring.
- A new design of the metal bezel and its assembly produces a perfect seal. Its special features include 'O' rings, flat glasses and a screwed-on brass ring.
- An additional 'O' ring is placed between the rotating outer ring and the indicator's metal housing.
- The back plate is fitted in such a way that no foreign matter can enter.
- Effective shockproof system.

Technical data for Metric Waterproof Dial Gauges IP 67

Model	Reading	Range per revolution	Range	Bezel-Ø	Accuracy according to
KM 4 SW	0.01 mm	0.5 mm	3 mm	44.5 mm	DIN 878
KM 4/5 SW	0.01 mm	0.5 mm	5 mm	44.5 mm	DIN 878
SI-45 W	0.01 mm	–	0.4 mm	44.5 mm	DIN 878
M 2 SW	0.01 mm	1 mm	10 mm	61.5 mm	DIN 878
M 2/30 SW	0.01 mm	1 mm	30 mm	61.5 mm	Manufacturing standard 1.0200.9.0014
M 2 R W	0.01 mm	1 mm	3 mm	61.5 mm	Manufacturing standard 0.0500.9.0006
SI-90 W	0.01 mm	–	0.8 mm	61.5 mm	DIN 878
GM 80 SW	0.01 mm	1 mm	10 mm	80 mm	Manufacturing standard 0.0200.9.0006
KM 500 SW	0.002 mm	0.2 mm	1 mm	44.5 mm	Manufacturing standard 0.0500.9.0001
Feinika KM 1101 W	0.001 mm	0.1 mm	1 mm	44.5 mm	Manufacturing standard 0.0500.9.0010
Feinika FM 1101 W	0.001 mm	0.1 mm	1 mm	61.5 mm	Manufacturing standard 0.0500.9.0010
FM 1000 SW	0.001 mm	0.2 mm	1 mm	61.5 mm	Manufacturing standard 0.0500.9.0001
FM 1000/5 SW	0.001 mm	0.2 mm	5 mm	61.5 mm	Manufacturing standard 0.0500.9.0001

Other Dial Gauges from our manufacturing programme with a measuring range of maximum 30 mm can also be supplied water- and oilproof. Please request our respective offer.

Small Dial Gauge KM 4 SW

waterproof, shockproof

Small Dial Gauge KM 4/5 SW

waterproof, shockproof

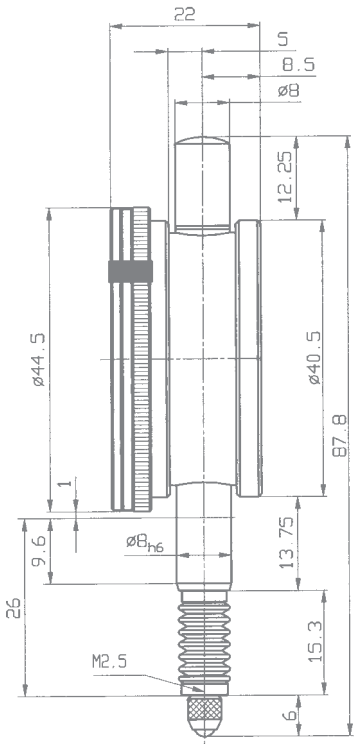
Due to their high-class impact protection the Small Dial Gauges KM 4 SW and KM 4/5 SW offer an extremely long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. These Dial Gauges are robust in operation. Their precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Small Dial Gauge KM 4 SW waterproof, shockproof	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	44.5 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	1.2 N
Dimensioned drawing	page 54

Small Dial Gauge KM 4/5 SW waterproof, shockproof	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	44.5 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	1.2 N
Dimensioned drawing	page 54

Model shown: KM 4 SW



The above dimensioned drawing also applies to the Safety Dial Gauge SI-45 W.

On model KM 4/5 SW the dimension 12.25 mm at the top is 15.25 mm instead. The overall length thus becomes 90.8 mm instead of 87.8 mm.

Dial Gauge M 2 SW

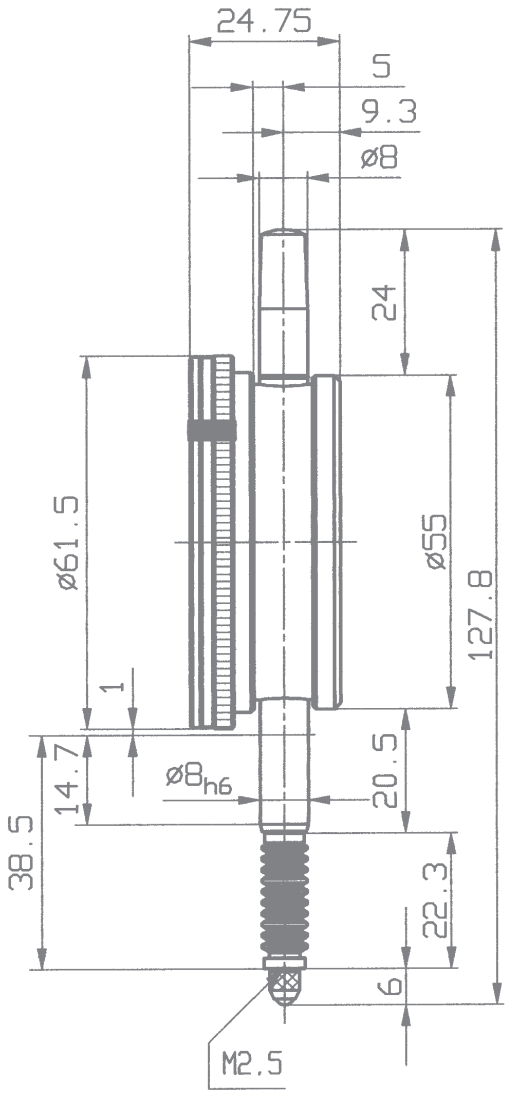
waterproof, shockproof

The waterproof Precision Dial Gauge M 2 SW also has a bezel which can be rotated through 360°.

When changing the measuring insert attention has to be paid that the spacer disc between the measuring insert and the rubber bellows is put back again. Otherwise the Dial Gauge is no longer sealed against the ingress of contamination.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Precision Dial Gauge M 2 SW waterproof, shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	61.5 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	0.9 N
Dimensioned drawing	page 55



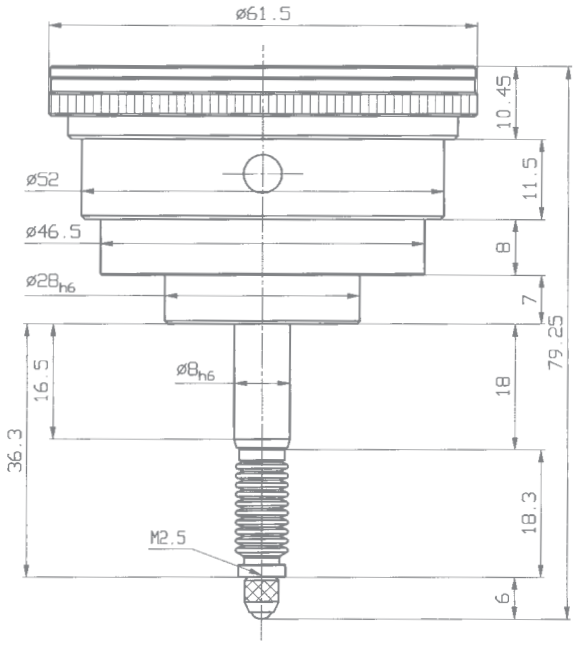
Dial Gauge M 2 R W

waterproof, back plunger

For the first time we are introducing with this catalogue edition model M 2 R W, a Precision Dial Gauge with back plunger which is waterproof according to protection class IP 67.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Dial Gauge M 2 R W waterproof, back plunger	
Reading	0.01 mm
Range	3 mm
Range per revolution	1 mm
Bezel-Ø	61.5 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0500.9.0006
Initial measuring force	1.7 N
Dimensioned drawing	page 56



Error Free Dial Gauge SI-90 W

waterproof, shockproof

Due to its high-class impact protection the Safety Dial Gauge SI-90 W offers an extremely long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Error Free Dial Gauge SI-90 W waterproof, shockproof	
Reading	0.01 mm
Range	0.8 mm
Overtravel	9 mm
Bezel-Ø	61.5 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	0.9 N
Dimensioned drawing	page 55

On request other Dial Gauges from our manufacturing programme are available in waterproof version.

- Dial Gauge M 3 SW
- Dial Gauge M 3 a SW
- Dial Gauge SI-18 W

Please request our offers.

Dial Gauge GM 80 SW

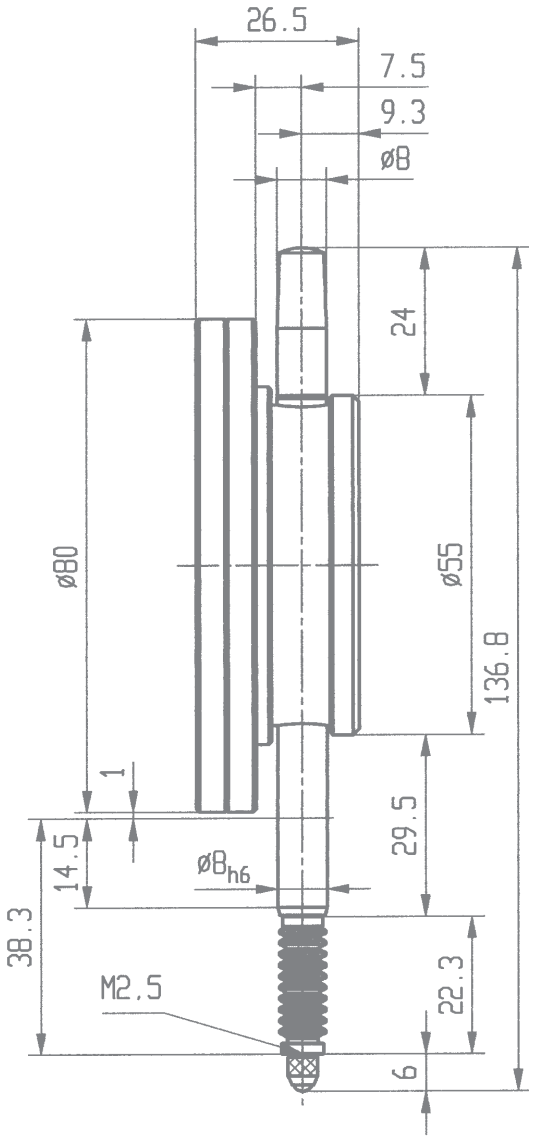
waterproof, shockproof

For the first time we are introducing with this catalogue edition model GM 80 SW, a Precision Dial Gauge with 80 mm bezel diameter which is waterproof according to protection class IP 67.

The high-class impact protection of the Dial Gauge GM 80 SW results in an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Dial Gauge GM 80 SW waterproof, shockproof	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	80 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0200.9.0016
Initial measuring force	1.5 N
Dimensioned drawing	page 58



Dial Gauge FM 1000/5 SW

waterproof, shockproof

Dial Gauge FM 1000 SW

waterproof, shockproof

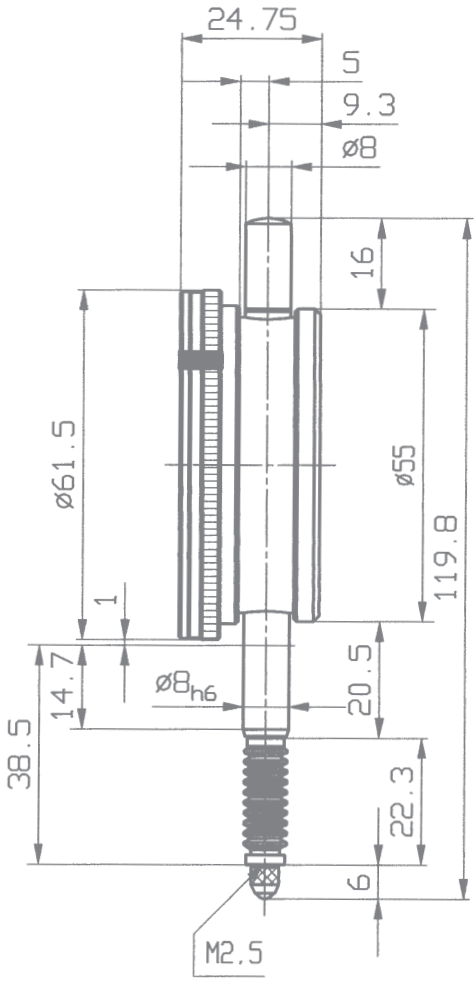
The high-class impact protection of the Dial Gauges FM 1000/5 SW and FM 1000 SW results in an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Dial Gauge FM 1000/5 SW waterproof, shockproof	
Reading	0.001 mm
Range	5 mm
Range per revolution	0.2 mm
Bezel-Ø	61.5 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0500.9.0001
Initial measuring force	1.2 N
Dimensioned drawing	page 59

Dial Gauge FM 1000 SW waterproof, shockproof	
Reading	0.001 mm
Range	1 mm
Range per revolution	0.2 mm
Bezel-Ø	61.5 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0500.9.0001
Initial measuring force	1.2 N
Dimensioned drawing	page 59

Model shown: FM 1000/5 SW



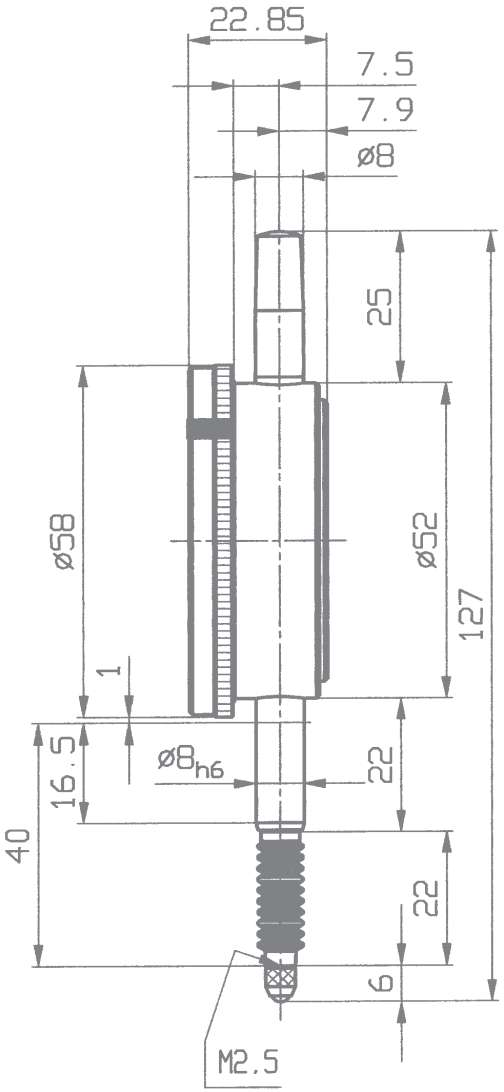
Dial Gauge M 2 S wa

water protected, shockproof

Water protected Dial Gauges are to be recommended for applications where splash water prevails. These Dial Gauges conforming to protection class **IP53** bear the order code 'wa'.

The transparent front cover, made of knock resistant plastics, with its anti-reflective coating reduces shadows on the dial face and makes the Dial Gauge M 2 S wa very easy to read even at awkward angles that may often be found in fixture applications.

Precision Dial Gauge M 2 S wa, water protected	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	0.9 N
Dimensioned drawing	page 60



Inch Reading Precision Dial Gauges

Technical data for Inch Reading Precision Dial Gauges with metric stem-Ø and thread size

Page	Model	Reading	Range per revolution	Dial Reading	Range	Bezel-Ø	Stem-Ø	Special Feature
63	MU 28 ZO	.0005″	.020″	0–20	.140″	28 mm	8 mm h 6	
63	KZO 6 T	.0005″	.020″	0–20	.120″	32 mm	8 mm h 6	
–	KZO 4 T	.001″	.020″	0–20	.120″	40 mm	8 mm h 6	
–	KZO 4 R	.001″	.020″	0–20	.120″	40 mm	8 mm h 6	Back Plunger
–	KZO 4/5 SW	.001″	.100″	0–100	.200″	44.5 mm	8 mm h 6	Waterproof
–	ZO 2 T	.001″	.100″	0–100	.500″	58 mm	8 mm h 6	
–	ZO 2 S	.001″	.100″	0–100	.400″	58 mm	8 mm h 6	Shockproof
–	SI–90 Z	.001″	–	40–0–40	.080″	58 mm	8 mm h 6	Error Free
–	ZO 2/30 T	.001″	.100″	0–100	1.000″	58 mm	8 mm h 6	
–	ZO 2/50 T	.001″	.100″	0–100	2.000″	58 mm	8 mm h 6	
62	ZO 3 T	.0005″	.050″	0–50	.500″	58 mm	8 mm h 6	
62	ZO 3 S	.0005″	.050″	0–50	.400″	58 mm	8 mm h 6	Shockproof
–	ZO 3/30 T	.0005″	.050″	0–50	1.000″	58 mm	8 mm h 6	
–	ZO 3/50 T	.0005″	.050″	0–50	2.000″	58 mm	8 mm h 6	
–	ZO 3 R	.0005″	.050″	0–50	.120″	58 mm	8 mm h 6	Back Plunger
–	ZO 3/5 R	.0005″	.050″	0–50	.200″	58 mm	8 mm h 6	Back Plunger
–	ZO 3 SNW	.0005″	.050″	0–50	.400″	61.5 mm	8 mm h 6	Waterproof
–	GZ 80 T	.0005″	.050″	0–50	.500″	80 mm	8 mm h 6	
–	GZ 100 T	.0005″	.050″	0–50	.500″	100 mm	8 mm h 6	
–	KFZO T	.0001″	.010″	0–10	.040″	40 mm	8 mm h 6	
–	KFZO S	.0001″	.010″	0–10	.040″	40 mm	8 mm h 6	Shockproof
–	KFZO 1101	.00005″	.005″	0–50	.040″	40 mm	8 mm h 6	Shockproof, extra accurate movement
–	SI–914 ZO	.00005″	–	20–0–20	.004″	40 mm	8 mm h 6	Error Free, extra accurate movement
64	FZO T	.0001″	.010″	0–10	.040″	58 mm	8 mm h 6	
64	FZO 5 T	.0001″	.010″	0–10	.200″	58 mm	8 mm h 6	
–	FZO 1101	.00005″	.005″	0–50	.040″	58 mm	8 mm h 6	Shockproof, extra accurate movement
–	SI–915 ZO	.00005″	–	20–0–20	.004″	58 mm	8 mm h 6	Error Free, extra accurate movement
–	FZ 80 T	.0001″	.010″	0–10	.040″	80 mm	8 mm h 6	
–	FZ 80/5 T	.0001″	.010″	0–10	.200″	80 mm	8 mm h 6	

All models of the above table have a stem-diameter of 8 mm h 6 and a thread M 2.5. The Dial Gauges will be supplied with flat backs. A mounting lug is available at extra charge.

Inch Reading Dial Gauges are also available with measurements equivalent to the American Standard ANSI B89.1.10M-2001. These instruments have a stem-Ø of $^{3}/_{8}$″, the thread for the contact point is 4/48 NF. For details concerning this Dial Gauge series please see the table on pages 65 and 66.

Inch Dial Gauge ZO 3 T

Inch Dial Gauge ZO 3 S

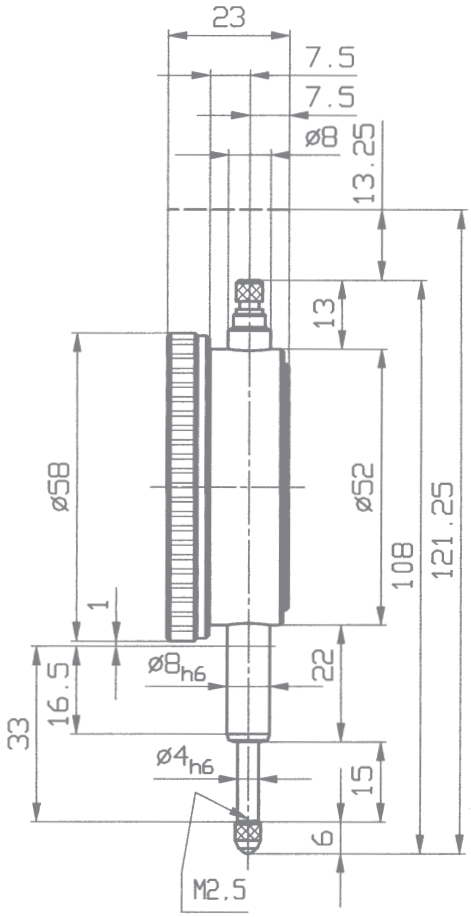
shockproof

The Dial Gauges ZO 3 T and ZO 3 S will be supplied with continuous dial reading and flat backs. On request balanced dials and lug backs are available at extra charge.
Due to its effective shockproof system the Dial Gauge ZO 3 S has an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. An additional feature of this Dial Gauge is the incorporated fine adjustment of the pointer. By turning the knurled screw at the top, the large hand can be easily set to 0 without turning the bezel and the outer dial.
DIN-standard 878 applies to all permissible deviation spans analogous.
Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Inch Dial Gauge ZO 3 T	
Reading	.0005"
Range	.500"
Range per revolution	.050"
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1 N
Dimensioned drawing	page 62

Inch Dial Gauge ZO 3 S shockproof	
Reading	.0005"
Range	.400"
Range per revolution	.050"
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	1 N
Dimensioned drawing	same as M 2 S on page 15

Model shown: ZO 3 T



Small Inch Dial Gauge MU 28 ZO

The Dial Gauge MU 28 ZO is the smallest model of our broad manufacturing programme. Its extremely small overall dimensions require a special adjustment procedure according to a manufacturing standard.

Spindles and stems of the Small Dial Gauges MU 28 ZO and KZO 6 T are made of resistant stainless steel. The spindles are lapped.

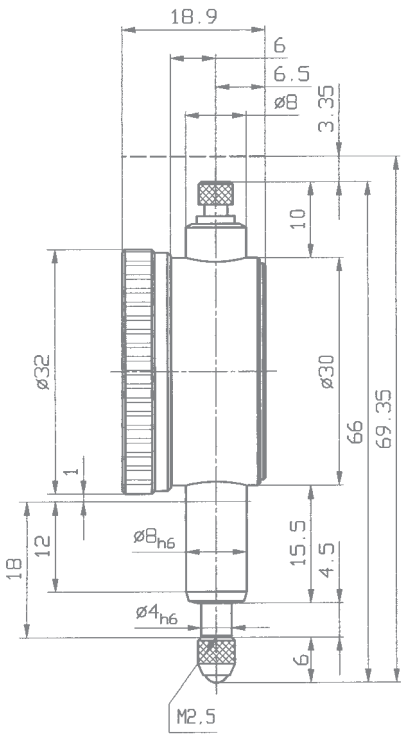
Small Inch Dial Gauge MU 28 ZO	
Reading	.0005"
Range	.140"
Range per revolution	.020"
Bezel-Ø	28 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463 / manufacturing standard 4.0000.9.0012
Initial measuring force	0.8 N
Dimensioned drawing	same as model MU 28 page 25

Small Inch Dial Gauge KZO 6 T

On request the Small Dial Gauge KZO 6 T is also available with special fittings:

- KZO 6 T with lifting device
- KZO 6 T with counter clockwise dial reading
- KZO 6 T with balanced dial reading 0-25-0
- KZO 6 T increased or reduced measuring force

Small Inch Dial Gauge KZO 6 T	
Reading	.0005"
Range	.120"
Range per revolution	.020"
Bezel-Ø	32 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN EN ISO 463/DIN 878
Initial measuring force	0.5 N
Dimensioned drawing	page 63



Inch Dial Gauge FZO T

Inch Dial Gauge FZO 5 T

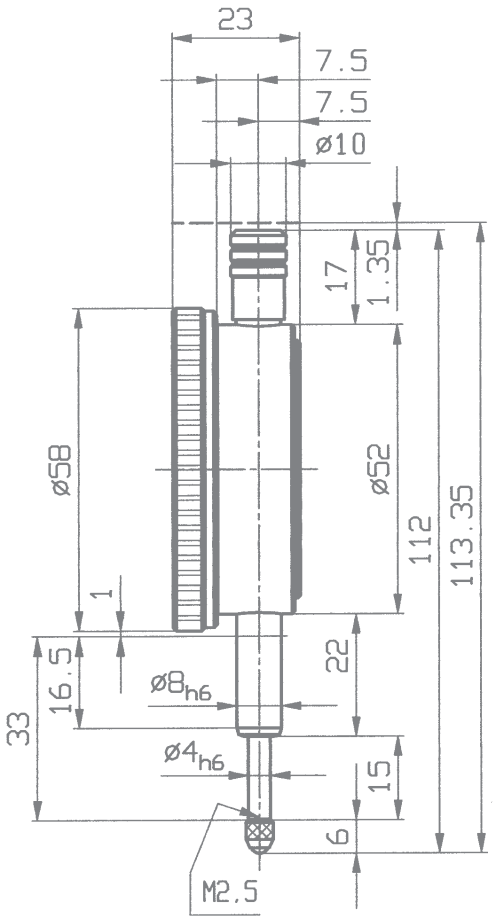
The carefully thought-out design, the use of selected components and materials as well as the movement perfected by precision engineering guarantee reliable measuring results and a long service life of our Precision Dial Gauges.

Spindle and stem are made of resistant stainless steel. The spindle is lapped.

Inch Dial Gauge FZO T	
Reading	.0001"
Range	.040"
Range per revolution	.010"
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0800.9.0005
Initial measuring force	1.5 N
Dimensioned drawing	page 64

Inch Dial Gauge FZO 5 T	
Reading	.0001"
Range	.200"
Range per revolution	.010"
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to manufacturing standard	DIN EN ISO 463 / 0.0800.9.0005
Initial measuring force	1.2 N
Dimensioned drawing	on request

Model shown: FZO T



Inch Reading Precision Dial Gauges to ANSI Standard

Technical data for Inch Reading Precision Dial Gauges to ANSI Standard

Page	Model	Reading	Range per revolution	Dial Reading	Range	Bezel-Ø	Stem-Ø	Special Feature
-	KZ 6 T	.0005″	.020″	0-20	.120″	1 13/50 ″	3/8″	
67	KZ 4/5 Sb	.001″	.100″	0-50-0	.200″	1 9/16″	3/8″	Shockproof
-	KZ 4/5 Sb FS	.001″	.100″	0-50-0	.200″	1 9/16″	3/8″	Shockproof, fixing screw
-	KZ 4/5 Sb LB	.001″	.100″	0-50-0	.200″	1 9/16″	3/8″	Shockproof, lug back
72	KZ 4/5 Rb	.001″	.020″	0-10-0	.200″	1 9/16″	3/8″	Back plunger
-	KZ 4/5 Rb FS	.001″	.020″	0-10-0	.200″	1 9/16″	3/8″	Back plunger, fixing screw
-	KZ 4 SI	.001″	-	40-0-40	.080″	1 9/16″	3/8″	Error Free
-	KZ 4 SI FS	.001″	-	40-0-40	.080″	1 9/16″	3/8″	Error Free, fixing screw
-	KZ 4 SI LB	.001″	-	40-0-40	.080″	1 9/16″	3/8″	Error Free, lug back
-	KZ 4/5 SW b	.001″	.100″	0-50-0	.200″	1 4/5″	3/8″	Waterproof
-	Z 1 Ta	.001″	.100″	0-100	.250″	2 1/4″	3/8″	
-	Z 1 Ta FS	.001″	.100″	0-100	.250″	2 1/4″	3/8″	Fixing screw
-	Z 1 Ta LB	.001″	.100″	0-100	.250″	2 1/4″	3/8″	Lug back
-	Z 1 Tb	.001″	.100″	0-50-0	.250″	2 1/4″	3/8″	
-	Z 1 Tb FS	.001″	.100″	0-50-0	.250″	2 1/4″	3/8″	Fixing screw
-	Z 1 Tb LB	.001″	.100″	0-50-0	.250″	2 1/4″	3/8″	Lug back
-	Z 2 Ta	.001″	.100″	0-100	.250″	2 1/4″	3/8″	
-	Z 2 Ta FS	.001″	.100″	0-100	.250″	2 1/4″	3/8″	Fixing screw
-	Z 2 Ta LB	.001″	.100″	0-100	.250″	2 1/4″	3/8″	Lug back
-	Z 2 Tb	.001″	.100″	0-50-0	.250″	2 1/4″	3/8″	
-	Z 2 Tb FS	.001″	.100″	0-50-0	.250″	2 1/4″	3/8″	Fixing screw
-	Z 2 Tb LB	.001″	.100″	0-50-0	.250″	2 1/4″	3/8″	Lug back
68	Z 2/8 SNb	.001″	.100″	0-50-0	.312″	2 1/4″	3/8″	Shockproof
-	Z 2/8 SNb FS	.001″	.100″	0-50-0	.312″	2 1/4″	3/8″	Shockproof, fixing screw
-	Z 2/8 SNb LB	.001″	.100″	0-50-0	.312″	2 1/4″	3/8″	Shockproof, lug back
69	ZMU 52 TK	.001″	.100″	0-100	.500″	2 1/4″	3/8″	
-	ZMU 52 TK LB	.001″	.100″	0-100	.500″	2 1/4″	3/8″	Lug back
69	ZMU 52/30 T	.001″	.100″	0-100	1.000″	2 1/4″	3/8″	
-	ZMU 52/30 T LB	.001″	.100″	0-100	1.000″	2 1/4″	3/8″	Lug back
70	Z 2/30 Ta	.001″	.100″	0-100	1.000″	2 1/4″	3/8″	
-	Z 2/30 Ta FS	.001″	.100″	0-100	1.000″	2 1/4″	3/8″	Fixing screw
-	Z 2/30 Ta LB	.001″	.100″	0-100	1.000″	2 1/4″	3/8″	Lug back
-	Z 2/50 Ta	.001″	.100″	0-100	2.000″	2 1/4″	3/8″	
-	Z 2/50 Ta FS	.001″	.100″	0-100	2.000″	2 1/4″	3/8″	Fixing screw
-	Z 2/50 Ta LB	.001″	.100″	0-100	2.000″	2 1/4″	3/8″	Lug back
-	Z 2/100 Ta	.001″	.100″	0-100	4.000″	2 1/4″	3/8″	
-	Z 2/100 Ta FS	.001″	.100″	0-100	4.000″	2 1/4″	3/8″	Fixing screw
-	Z 2/100 Ta LB	.001″	.100″	0-100	4.000″	2 1/4″	3/8″	Lug back
73	Z 2 SI	.001″	-	40-0-40	.080″	2 1/4″	3/8″	Error Free
-	Z 2 SI FS	.001″	-	40-0-40	.080″	2 1/4″	3/8″	Error Free, fixing screw
-	Z 2 SI LB	.001″	-	40-0-40	.080″	2 1/4″	3/8″	Error Free, lug back
-	GZ 80/100 T	.001″	.100″	0-100	4.000″	3 1/8″	3/8″	
-	GZ 80/100 T LB	.001″	.100″	0-100	4.000″	3 1/8″	3/8″	Lug back
67	KZ 3/5 Sb	.0005″	.040″	0-20-0	.200″	1 9/16″	3/8″	Shockproof
-	KZ 3/5 Sb FS	.0005″	.040″	0-20-0	.200″	1 9/16″	3/8″	Shockproof, fixing screw
-	KZ 3/5 Sb LB	.0005″	.040″	0-20-0	.200″	1 9/16″	3/8″	Shockproof, lug back
-	KZ 3 SI	.0005″	-	10-0-10	.020″	1 9/16″	3/8″	Error Free
-	KZ 3 SI FS	.0005″	-	10-0-10	.020″	1 9/16″	3/8″	Error Free, fixing screw
-	KZ 3 SI LB	.0005″	-	10-0-10	.020″	1 9/16″	3/8″	Error Free, lug back
-	Z 3 Ta	.0005″	.050″	0-50	.125″	2 1/4″	3/8″	
-	Z 3 Ta FS	.0005″	.050″	0-50	.125″	2 1/4″	3/8″	Fixing screw
-	Z 3 Ta LB	.0005″	.050″	0-50	.125″	2 1/4″	3/8″	Lug back
-	Z 3 Tb	.0005″	.050″	0-25-0	.125″	2 1/4″	3/8″	
-	Z 3 Tb FS	.0005″	.050″	0-25-0	.125″	2 1/4″	3/8″	Fixing screw
-	Z 3 Tb LB	.0005″	.050″	0-25-0	.125″	2 1/4″	3/8″	Lug back
-	Z 3/0.04 SNb	.0005″	.040″	0-20-0	.312″	2 1/4″	3/8″	Shockproof
-	Z 3/0.04 SNb FS	.0005″	.040″	0-20-0	.312″	2 1/4″	3/8″	Shockproof, fixing screw
-	Z 3/0.04 SNb LB	.0005″	.040″	0-20-0	.312″	2 1/4″	3/8″	Shockproof, lug back
70	Z 3/30 Ta	.0005″	.050″	0-50	1.000″	2 1/4″	3/8″	
-	Z 3/30 Ta FS	.0005″	.050″	0-50	1.000″	2 1/4″	3/8″	Fixing screw
-	Z 3/30 Ta LB	.0005″	.050″	0-50	1.000″	2 1/4″	3/8″	Lug back
-	Z 3/50 Ta	.0005″	.050″	0-50	2.000″	2 1/4″	3/8″	
-	Z 3/50 Ta FS	.0005″	.050″	0-50	2.000″	2 1/4″	3/8″	Fixing screw
-	Z 3/50 Ta LB	.0005″	.050″	0-50	2.000″	2 1/4″	3/8″	Lug back

Inch Reading Precision Dial Gauges to ANSI Standard

Technical data for Inch Reading Precision Dial Gauges to ANSI Standard

Page	Model	Reading	Range per revolution	Dial Reading	Range	Bezel-Ø	Stem-Ø	Special Feature
72	Z3/5 Rb	.0005″	.050″	0-25-0	.200″	2 1/4″	3/8″	Back plunger
-	Z3/5 Rb FS	.0005″	.050″	0-25-0	.200″	2 1/4″	3/8″	Back plunger, fixing screw
74	Z3 SNW	.0005″	.050″	0-50	.400″	2 27/64″	3/8″	Waterproof
-	FZ3 SI	.0005″	-	10-0-10	.020″	2 1/4″	3/8″	Error Free
-	FZ3 SI FS	.0005″	-	10-0-10	.020″	2 1/4″	3/8″	Error Free, fixing screw
-	FZ3 SI LB	.0005″	-	10-0-10	.020″	2 1/4″	3/8″	Error Free, lug back
-	KFZ Tb	.0001″	.010″	0-5-0	.040″	1 9/16″	3/8″	
-	KFZ Tb FS	.0001″	.010″	0-5-0	.040″	1 9/16″	3/8″	Fixing screw
-	KFZ Tb LB	.0001″	.010″	0-5-0	.040″	1 9/16″	3/8″	Lug back
-	KFZ3 Sb	.0001″	.010″	0-5-0	.100″	1 9/16″	3/8″	Shockproof
-	KFZ3 Sb FS	.0001″	.010″	0-5-0	.100″	1 9/16″	3/8″	Shockproof, fixing screw
-	KFZ3 Sb LB	.0001″	.010″	0-5-0	.100″	1 9/16″	3/8″	Shockproof, lug back
-	KFZ 1101	.00005″	.005″	0-50	.040″	1 9/16″	3/8″	Shockproof
-	KFZ 1101 FS	.00005″	.005″	0-50	.040″	1 9/16″	3/8″	Shockproof, fixing screw
-	KFZ 1101 LB	.00005″	.005″	0-50	.040″	1 9/16″	3/8″	Shockproof, lug back
-	SI-914 Z	.00005″	-	20-0-20	.004″	1 9/16″	3/8″	Error Free
-	SI-914 Z FS	.00005″	-	20-0-20	.004″	1 9/16″	3/8″	Error Free, fixing screw
-	SI-914 Z LB	.00005″	-	20-0-20	.004″	1 9/16″	3/8″	Error Free, lug back
-	FZ Ta	.0001″	.010″	0-10	.025″	2 1/4″	3/8″	
-	FZ Ta FS	.0001″	.010″	0-10	.025″	2 1/4″	3/8″	Fixing screw
-	FZ Ta LB	.0001″	.010″	0-10	.025″	2 1/4″	3/8″	Lug back
-	FZ Tb	.0001″	.010″	0-5-0	.025″	2 1/4″	3/8″	
-	FZ Tb FS	.0001″	.010″	0-5-0	.025″	2 1/4″	3/8″	Fixing screw
-	FZ Tb LB	.0001″	.010″	0-5-0	.025″	2 1/4″	3/8″	Lug back
-	FZ 1101	.00005″	.005″	0-50	.040″	2 1/4″	3/8″	Shockproof
-	FZ 1101 FS	.00005″	.005″	0-50	.040″	2 1/4″	3/8″	Shockproof, fixing screw
-	FZ 1101 LB	.00005″	.005″	0-50	.040″	2 1/4″	3/8″	Shockproof, lug back
-	FZ/2.5 Sb	.0001″	.010″	0-5-0	.100″	2 1/4″	3/8″	Shockproof
-	FZ/2.5 Sb FS	.0001″	.010″	0-5-0	.100″	2 1/4″	3/8″	Shockproof, fixing screw
-	FZ/2.5 Sb LB	.0001″	.010″	0-5-0	.100″	2 1/4″	3/8″	Shockproof, lug back
-	SI-915 Z	.00005″	-	20-0-20	.004″	2 1/4″	3/8″	Error Free
-	SI-915 Z FS	.00005″	-	20-0-20	.004″	2 1/4″	3/8″	Error Free, fixing screw
-	SI-915 Z LB	.00005″	-	20-0-20	.004″	2 1/4″	3/8″	Error Free, lug back

All the models of the above table have measurements equivalent to the American Standard ANSI B 89. 1/10M-2001. These instruments have a stem-Ø of 3/8″, the thread for the contact point is 4/48 NF.

In standard version the Dial Gauges will be delivered without fixing device for the bezel and flat back. At extra charge versions with fixing screw as well as lug back are available. Please add the type code FS for fixing screw resp. LB for lug back should you require the Dial Gauge with these features. Extra charges can be found in our price list below the listing of Inch Dial Gauges.

Additional accessories are available for Inch Dial Gauges:
- Offset lug back
- Screw type back
- Special contact points (see page 89)

Inch reading Dial Gauges are also available with a stem-Ø 8 mm h 6 and a thread M 2.5.
For details of this Dial Gauge Series please see the table on page 61.

Small Inch Dial Gauges KZ 4/5 Sb and KZ 3/5 Sb

to ANSI standard, shockproof

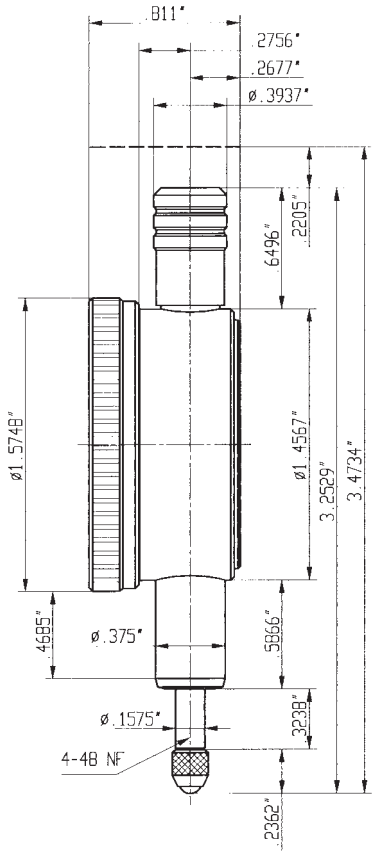
The high-class impact protection of the Inch Dial Gauges KZ 4/5 Sb and KZ 3/5 Sb results in an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauges are robust in operation. Their precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel.

Small Inch Dial Gauge KZ 4/5 Sb shockproof	
Reading	.001"
Range	.200"
Range per revolution	.100"
Dial reading	0-50-0
Bezel-Ø	1 9/16"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 67

Small Inch Dial Gauge KZ 3/5 Sb shockproof	
Reading	.0005"
Range	.200"
Range per revolution	.040"
Dial reading	0-20-0
Bezel-Ø	1 9/16"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 67

Model shown: KZ 4/5 Sb



For model KZ 3/5 Sb the spindle is shorter by .0285" thus reducing the overall length to 3.4449" from 3.4734".

Inch Dial Gauge Z 2/8 SNb

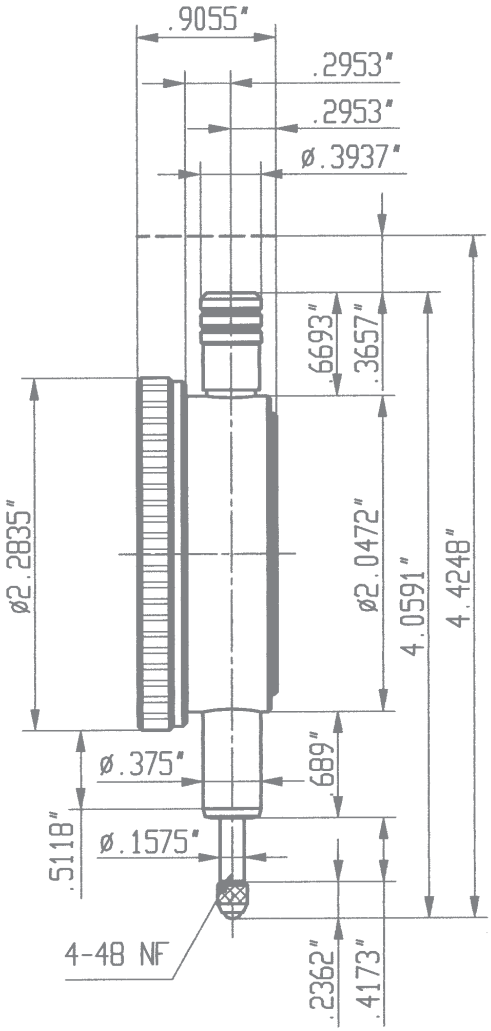
to ANSI standard, shockproof

With this shockproof series, a product of our extensive design expertise, we offer an accurate, reliable and long-lasting Dial Gauge.

A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear. The Dial Gauge is robust in operation. Its precision is maintained with practically no limitations.

Spindle and stem are made of resistant stainless steel.

Inch Dial Gauge Z 2/8 SNb shockproof	
Reading	.001"
Range	.312"
Range per revolution	.100"
Dial reading	0-50-0
Bezel-Ø	2 1/4"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 68



Dial Gauge ZMU 52 TK

to ANSI standard

Dial Gauge ZMU 52/30 T

to ANSI standard, shockproof

Our new Dial Gauge Series MU 52 has been designed and manufactured by Käfer Dial Gauges Shanghai.
The racks and pinions – the key parts for the accuracy of Dial Gauges – are however supplied by Käfer Germany.
All Dial Gauges are checked for their accuracy on a Feinmess Suhl automatic Dial Gauge Measuring Machine.

All details of these Dial Gauges conform to the American Standard ANSI B 89. Particularly clear reading due to the concentrically positioned small pointer.

Precision Dial Gauge ZMU 52 TK	
Reading	.001″
Range	.5″
Range per revolution	.1″
Bezel-Ø	2 1/4″
Stem-Ø	3/8″
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	on request

Precision Dial Gauge ZMU 52/30 T	
Reading	.001″
Range	1″
Range per revolution	.1″
Bezel-Ø	2 1/4″
Stem-Ø	3/8″
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	on request

Inch Dial Gauge Z 2/30 Ta

to ANSI standard

Inch Dial Gauge Z 3/30 Ta

to ANSI standard

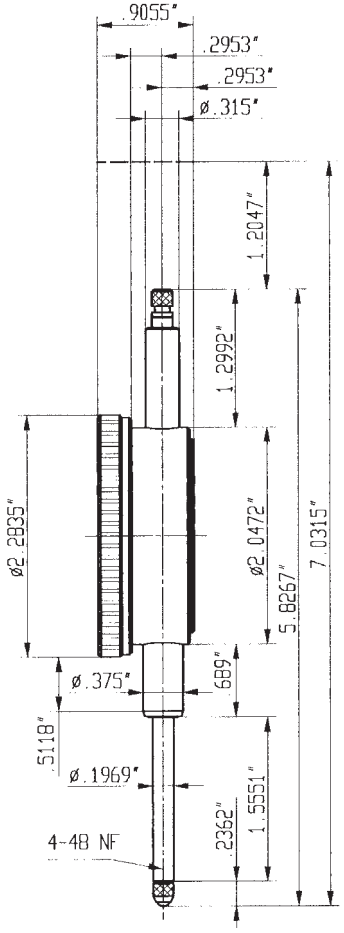
The concentric millimetre pointer allows an easy and safe reading of these Dial Gauges. The carefully thought out design, the use of selected components and materials as well as the movement perfected by precision engineering guarantee reliable measuring results and a long service life of the Precision Dial Gauges Z 2/30 Ta and Z 3/30 Ta.

The essential parts of the movement are jewelled.
Spindle and stem are made of resistant stainless steel.

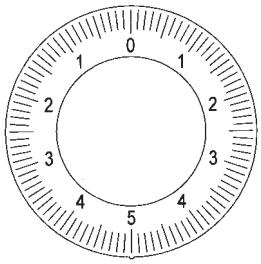
Inch Dial Gauge Z 2/30 Ta	
Reading	.001"
Range	1"
Range per revolution	.100"
Dial reading	0-100
Bezel-Ø	2 1/4"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 70

Inch Dial Gauge Z 3/30 Ta	
Reading	.0005"
Range	1"
Range per revolution	.050"
Dial reading	0-50
Bezel-Ø	2 1/4"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 70

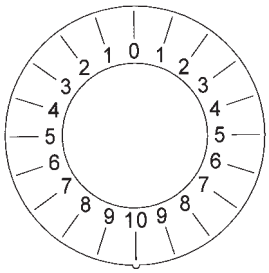
Model shown: Z 2/30 Ta



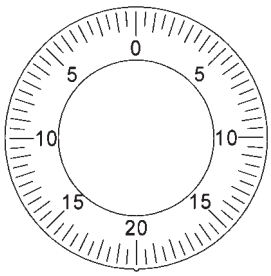
Dial Numbering of Inch Reading Dial Gauges to ANSI



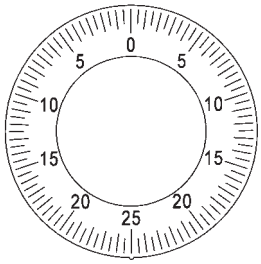
0-5-0 reading .0001"
KFZ Tb, KFZ3 Sb, FZ Tb,
FZ 2.5 Sb



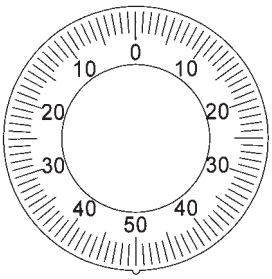
0-10-0 reading .001"
KZ 4/5 Rb



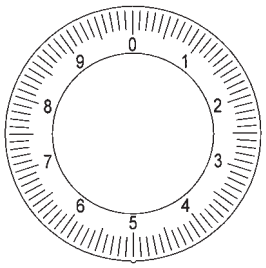
0-20-0 reading .0005"
KZ 3/5 Sb, Z 3/0.4 SNb



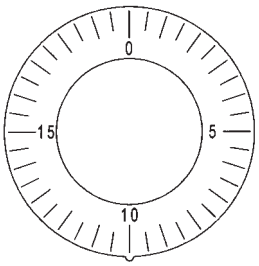
0-25-0 reading .0005"
Z3 Tb, Z 3/5 Rb



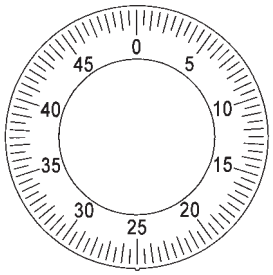
0-50-0 reading .001"
KZ 4/5 Sb, KZ 4/5 SWb,
Z 1 Tb, Z 2 Tb, Z 2/8 SNb



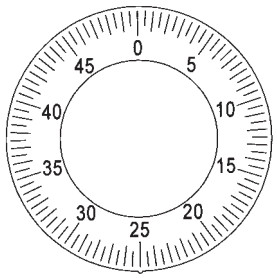
0-10 reading .0001"
FZ Ta



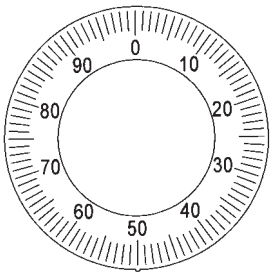
0-20 reading .0005"
KZ 6 T



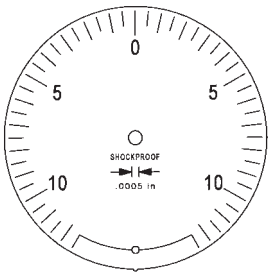
0-50 reading .0005"
Z 3 Ta, Z 3/30 Ta, Z 3/50 Ta
Z 3 SNW



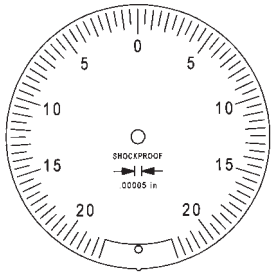
0-50 reading .00005"
KFZ 1101, FZ 1101



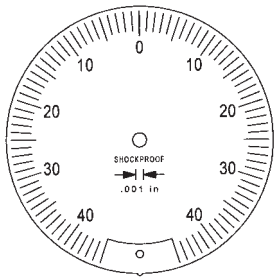
0-100 reading .001"
Z 1 Ta, Z 2 Ta, Z 2/30 Ta,
Z 2/50 Ta, Z 2/100 Ta,
GZ 80/100 T, ZMU 52 TK,
ZMU 52/30 T



10-0-10 reading .0005"
KZ 3 SI, FZ 3 SI



20-0-20 reading .00005"
SI – 914 Z, SI – 915 Z



40-0-40 reading .001"
KZ4 SI, Z 2 SI

All models bearing the same prefix but with a suffix identifying a special version (i.e. FS for fixing screw or LB for lug back) have the same dial numbering as the illustrated basic models.

Small Inch Dial Gauge KZ 4/5 Rb

with back plunger

Inch Dial Gauge Z 3/5 Rb

with back plunger

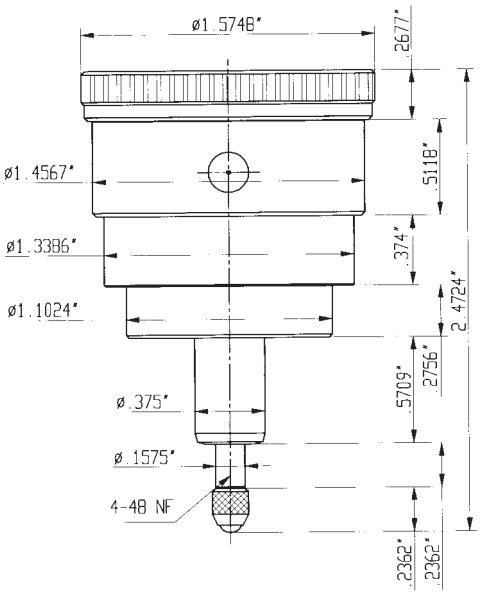
The models with back plunger provide the designer with new construction possibilities. They allow positioning with optimal read-out facility. These models can be held either on the stem Ø 3/8" or on the 1.1024" diameter spigot.

Spindle and stem are made of resistant stainless steel.

Small Inch Dial Gauge KZ 4/5 Rb with back plunger	
Reading	.001"
Range	.200"
Range per revolution	.020"
Dial reading	0-10-0
Bezel-Ø	1 9/16"
Stem-Ø	3/8"
Accuracy according to	manufacturing standard 0.0500.9.0007
Spindle	lapped
Dimensioned drawing	page 72

Inch Dial Gauge Z 3/5 Rb with back plunger	
Reading	.0005"
Range	.200"
Range per revolution	.050"
Dial reading	0-25-0
Bezel-Ø	2 1/4"
Stem-Ø	3/8"
Accuracy according to	manufacturing standard 0.0500.9.0007
Spindle	lapped
Dimensioned drawing	on request

Model shown: KZ 4/5 Rb



Error Free Inch Dial Gauge Z2 SI

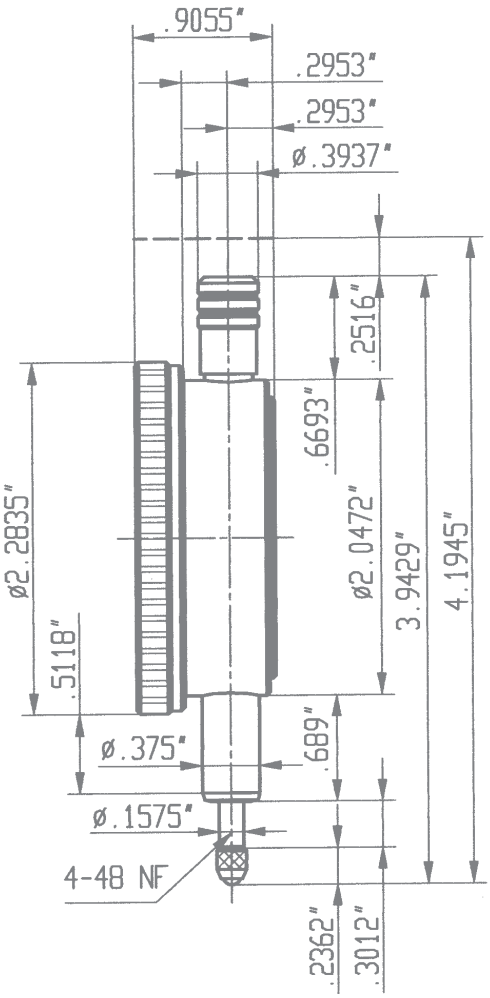
to ANSI, with overtravel, shockproof

In order to avoid reading errors the measuring ranges of our Error Free Dial Gauges series ‚SI' are limited to slightly less than one revolution of the hand. Therefore a measurement can only be performed within the range of one revolution of the hand guaranteeing an error free reading of the Dial Gauges.

The high-class impact protection of the Error Free Dial Gauge Z2 SI results in an exceptionally long service life. A gear rack sleeve covering the length of the spindle is arranged and sprung in such a way that the shocks against the measuring insert are not transferred to the measuring gear.

Spindle and stem are made of resistant stainless steel.

Error Free Inch Dial Gauge Z2 SI shockproof, with overtravel	
Reading	.001"
Range	.080"
Overtravel	.1568"
Bezel-Ø	2 1/4"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 73



The above dimensioned drawing also applies to model FZ 3 SI which is not shown in this catalogue.

Inch Dial Gauge Z3 SNW

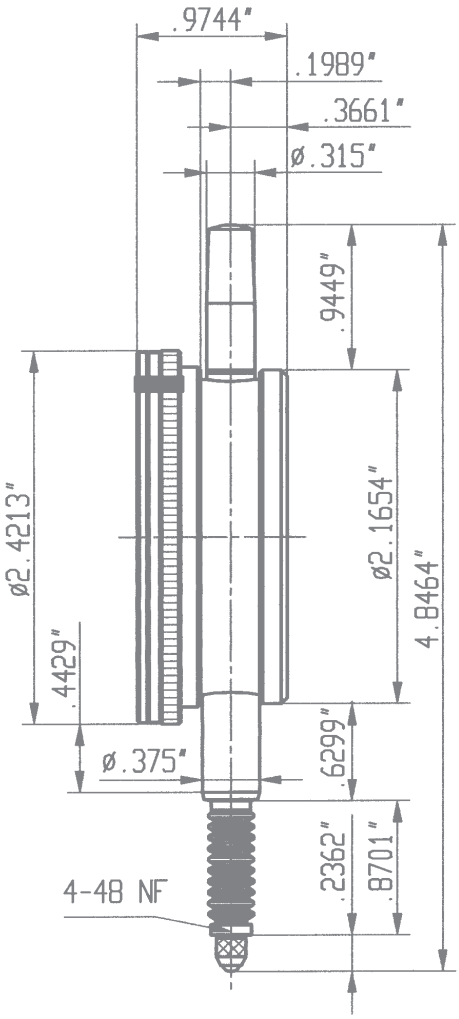
waterproof, shockproof

The technical features of our waterproof Inch Dial Gauges are the same as for the metric models on page 53 of this catalogue.

When changing the measuring insert attention has to be paid that the spacer disc between the measuring insert and the rubber bellows is put back again. Otherwise the Dial Gauge is no longer sealed against the ingress of contamination.

Spindle and stem are made of resistant stainless steel.

Inch Dial Gauge Z3 SNW waterproof, shockproof	
Reading	.0005"
Range	.400"
Range per revolution	.050"
Bezel-Ø	2 27/64"
Stem-Ø	3/8"
Dimensions and accuracy according to	ANSI
Spindle	lapped
Dimensioned drawing	page 74



Additional Equipment for Mechanical Dial Gauges

Locking screw

The knurled bezel on Dial Gauges can be turned with the outer dials. This allows zero point adjustment.

In order to avoid unintentional adjustment, Dial Gauges can be supplied with locking plate and knurled screw at extra charge for the purpose of locking the bezel.

Following Dial Gauges are available with the locking screw:
- range not greater than 80 mm
- no model of the X series
- bezel-Ø 40 or 58 mm

Retrofitting of this device to existing Dial Gauges is not possible.

Slave Pointer

On Dial Gauges with slave pointer facility, the displayed measured value remains visible after the dial gauge pointer returns to its original setting, because the additional pointer dragged along with it stays at the position from where the main pointer returns.

It must be noted that the slave pointer facility is only effective within one pointer revolution.

Following Dial Gauges without concentric small hands are available with a slave pointer device:
- reading 0.1 or 0.01 mm
- not shockproof
- bezel Ø 40 or 58 mm

Retrofitting of this device to existing Dial Gauges is possible.

Lifting Device

The lifting lever permits quick lifting of the spindle. The lever itself can be swivelled and permits its use in the most comfortable position.

Lifting devices are available in 2 sizes for Small Dial Gauges with 40 mm Ø and for standard Dial Gauge models with 58 mm Ø.

Following Dial Gauges are available with lifting device:
- range up to 10 mm
- bezel Ø 40 or 58 mm

Retrofitting of this device is possible on condition that the Dial Gauge is not fitted with a protection sleeve and that it is not a model of the X-series.

Lifting devices for Dial Gauges with 30 mm range are available on request.

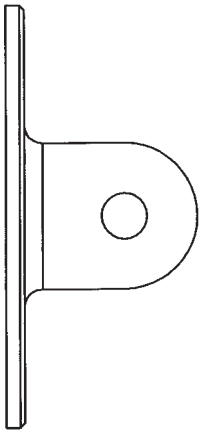
Additional Equipment for Mechanical Dial Gauges

Magnetic Back

Magnetic backs allow Dial Gauges to be used without a holder and without a stand. The magnet, made of sinter metal does in no way affect the mechanism of the Dial Gauge.
Magnetic backs are available in 2 sizes for the following Dial Gauges:

- Dial Gauges with 40 mm (1 $^{9}/_{16}$“) Ø
- Dial Gauges with 58 mm (2 $^{1}/_{4}$“) Ø or larger

Retrofitting of magnetic backs is possible.



Lug Back

Lug backs are available in 3 sizes for:

- Dial Gauges with 32 mm (1 $^{13}/_{50}$“) Ø
- Dial Gauges with 40 mm (1 $^{9}/_{16}$“) Ø
- Dial Gauges with 58 mm (2 $^{1}/_{4}$“) Ø or larger.

The standard bore diameter in the fixing lug is 5 mm. Delivery of Dial Gauges conforming to American standards with $^{1}/_{4}$” bore diameter. On request a bore diameter of 6 mm is also possible.

Retrofitting of lug backs is possible.
Offset lug backs are available on request.

Special Backs

All standard model Dial Gauges will be delivered with flat backs. Delivery of special back versions on request. Retrofitting is possible.

Post type backs with post Ø 12.7 mm (.500“)

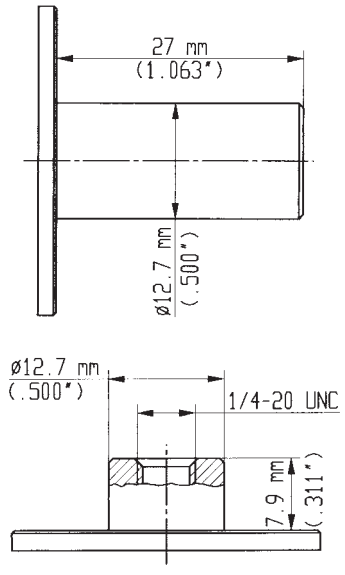
a) Back with drawing number 020603/2 is for models AGD1 (40 mm Ø)
b) Back with drawing number 020603/1 is for models AGD 2 (58 mm Ø)

Screw type backs with female thread $^{1}/_{4}$-20UNC

a) Back with drawing number 020603/4 is for models AGD1 (40 mm Ø)
b) Back with drawing number 020603/3 is for models AGD 2 (58 mm Ø)

Back with adjustable bracket

a) Back with drawing number 020308/3 is for models AGD 2 (58 mm Ø)



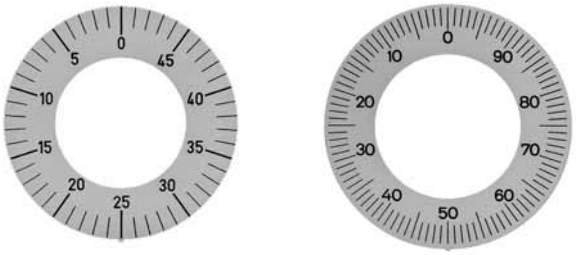
Special Dials for mechanical Dial Gauges

Dials with coloured tolerance segments

The colours red, green and yellow are available. Please indicate in your order text what segments of the dial should be marked red, green or yellow.

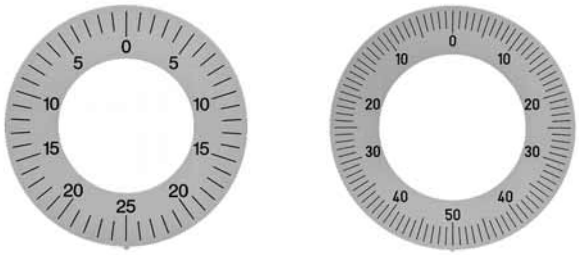
Dials for anti-clockwise reading

Unless otherwise stated on the order both the inner and outer dials are supplied for anti-clockwise reading.



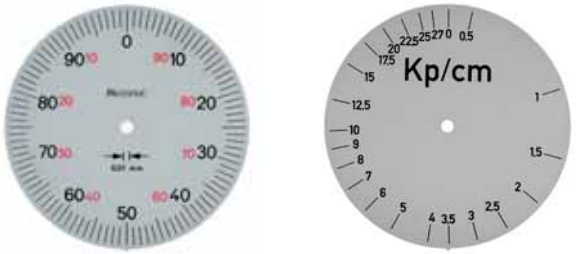
Balanced Dials

Unless otherwise stated on the order only the outer dial is supplied with balanced numbers. The inner dial is supplied with numbers for clockwise reading.



Custom-made Dials

We can supply custom-made dials with special logos, with special numbers, with special imprints and in special colours. Both the inner and outer dials can be supplied in custom-made versions.



Special dials are available for many models but not for all Dial Gauges. Please request our offers.

EXTRACTS OF MANUFACTURING STANDARDS FOR METRIC DIAL GAUGES

Manufacturing standard	Field of application	Span of error	Range	Maximum value
0.0100.9.0004	Dial Gauges			
	with 0.1 mm reading	Span of error ft	1 mm	30 µm
		Span of error fe	up to 30 mm	50 µm
			50 mm	80 µm
			80 mm	100 µm
			100 mm	100 µm
		Hysteresis fu		15 µm
		Repeatability fw		15 µm
0.0500.9.0006	Dial Gauges			
	with 0.01 mm reading	Span of error ft	0.1 mm	5 µm
	and back plunger	Span of error fe	up to 3 mm	12 µm
			5 mm	17 µm
		Span of error fges	up to 3 mm	15 µm
			5 mm	20 µm
		Hysteresis fu	up to 3 mm	5 µm
			5 mm	8 µm
		Repeatability fw		5 µm
0.0500.9.0001	High Precision Dial Gauges			
	with 0.001 mm reading	Span of error ft	0.1 mm	3 µm
	and 0.002 mm reading	Span of error fe	0.16 mm	3 µm
			1 mm	5 µm
			5 mm	10 µm
		Span of error fges	0.16 mm	4 µm
			1 mm	7 µm
			5 mm	12 µm
		Hysteresis fu		3 µm
		Repeatability fw		3 µm
		Some values may differ on Large Dial Gauges		
0.0500.9.0010	High Precision Dial Gauges FEINIKA			
	with 0.001 mm reading	Span of error ft	0.01 mm	1 µm
	and 0.002 mm reading	Span of error fe	0.08 mm	2 µm
			0.16 mm	2 µm
			1 mm	3 µm
		Span of error fges	0.08 mm	3 µm
			0.16 mm	3 µm
			1 mm	4 µm
		Hysteresis fu		1.5 µm
		Repeatability fw		1.5 µm
1.0200.9.0002	Dial Gauges			
	with 0.01 mm reading	Span of error ft	0.1 mm	5 µm
	and range > 30 mm	Span of error fe	50 mm	25 µm
			80 mm	30 µm
			100 mm	50 µm
		Span of error fw	up to 80 mm	3 µm
			100 mm	5 µm
		Some values may differ on Large Dial Gauges		
1.0200.9.0014	Dial Gauges			
	with 0.01 mm reading	Span of error ft	0.1 mm	5 µm
	and ranges 20 – 30 mm	Span of error fe		20 µm
		Span of error fges		25 µm
		Hysteresis fu		5 µm
		Repeatability fw		3 µm
		Some values may differ on Large Dial Gauges		

Manufacturing standards for Dial Gauges MU 28 (4.0000.9.0012) and SI-18 (0.4223.9.0008) and for Inch Dial Gauges on request.

Digital Dial Gauge MDMV 12 T

Accessories for MDMV 12 T

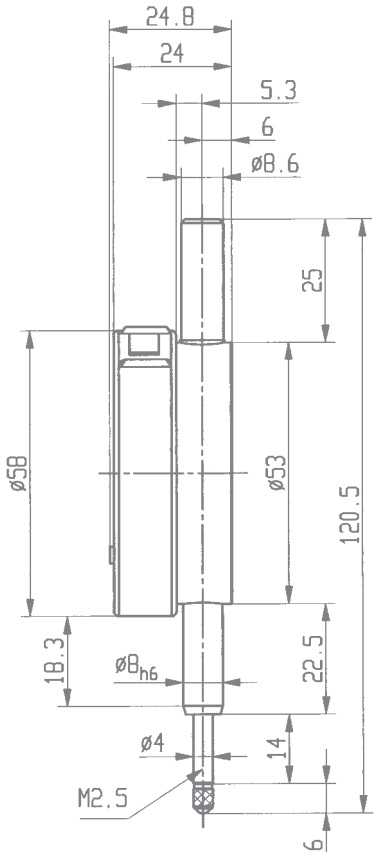
The compact construction and the well placed operating keys permit versatile application and simple operation.

Following functions of the Digital Dial Gauge MDMV 12 T can be used:

- Zero setting
- mm/inch selection
- Data transmission
- Preset of any value
- Reversal of measuring direction
- Data output Opto RS 232C or Digimatic

Digital Dial Gauge MDMV 12 T	
Resolution	0.01 mm / .0005"
Range	12.5 mm /.5"
Digital display LCD, height of digits	8.5 mm
Measuring system	capacitive
Power supply	on battery 3 V, CR 2032
Battery life	2 years
Output	Opto RS 232 or Digimatic
Measuring force	0.7 – 1.1 N
Working temperature	+10°C – +40°C
Maximum error	20 µm / .0008" + 1 Digit
Dimensioned drawing	page 79

Accessories for MDMV 12 T	
Data connection cable Opto RS232C with SUB-D jack 9-pin	
Order number:	DCMV 232
Data connection cable Digimatic with flat connector 10-pin	
Order number:	DCMV DIGIMATIC
Battery 3V, type CR 2032	
Order number:	BCR 2032
Contact points	see pages 87 – 88



Digital Dial Gauge MD 12 T

Digital Dial Gauge FMD 12 T

The digital display with its large numerals makes it very simple to use this Dial Gauge. Function and display section can be rotated through 270°. The sturdy construction guarantees precision and reliability.

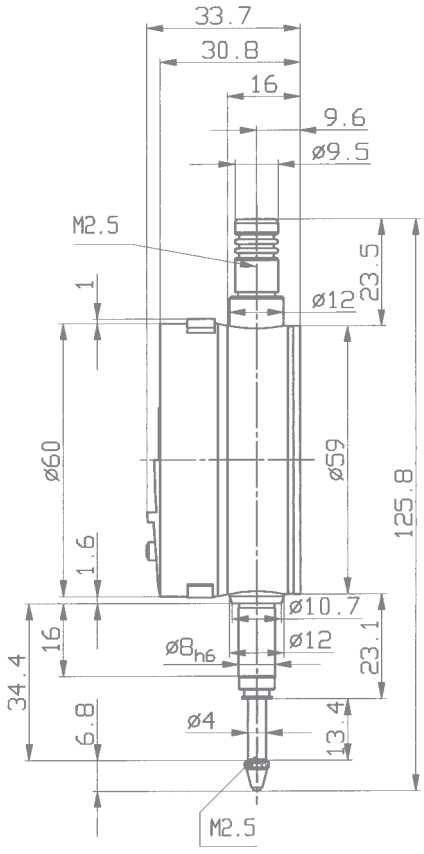
Following functions of the Digital Dial Gauges MD 12 T and FMD 12 T can be used:

- Zero setting
- mm/inch selection
- Memory set Hold
- Data transmission
- Ref I / Ref II
- Preset value recall
- Selection of measuring direction
- Selection of reading (only FMD 12 T)
- Data request by any ASCII Code

Digital Dial Gauge MD 12 T	
Resolution	0.01 mm / .0005"
Range	12.5 mm / .5"
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004" ± 1 Digit
Dimensioned drawing	page 80

Digital Dial Gauge FMD 12 T	
Resolution	0.001 mm / .00005"
Range	12.5 mm / .5"
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	5 µm / .0002"
Dimensioned drawing	page 80

Model shown: MD 12 T



Digital Dial Gauge MD 25 T

Digital Dial Gauge FMD 25 T

The digital display with its large numerals makes it very simple to use this Dial Gauge. Function and display section can be rotated through 270°. The sturdy construction guarantees precision and reliability.

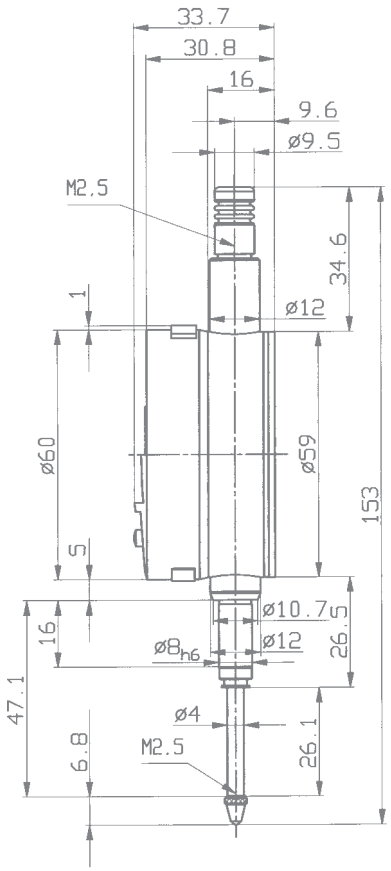
Following functions of the Digital Dial Gauges MD 25 T and FMD 25 T can be used:

- Zero setting
- mm/inch selection
- Memory set Hold
- Data transmission
- Ref I / Ref II
- Preset value recall
- Selection of measuring direction
- Selection of reading (only FMD 25 T)
- Data request by any ASCII Code

Digital Dial Gauge MD 25 T	
Resolution	0.01 mm / .0005"
Range	25 mm / 1"
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004" ± 1 Digit
Dimensioned drawing	page 81

Digital Dial Gauge FMD 25 T	
Resolution	0.001 mm / .00005"
Range	25 mm / 1"
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	5 µm / .0002"
Dimensioned drawing	page 81

Model shown: FMD 25 T

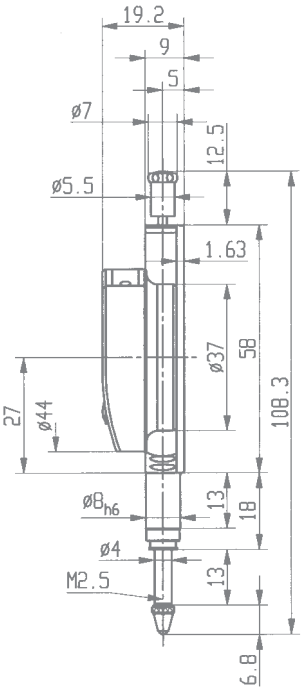


Small Digital Dial Gauge KMD 12 T

Following functions of the Small Digital Dial Gauge KMD 12 T can be used:

- Zero setting
- mm/inch selection
- Absolute / relative mode
- Preset value recall
- Data transmission
- Selection of measuring direction

The dovetail at the rear offers an additional fixing option. The standard contact point can be exchanged for specially styled contact points as listed on pages 87 and 88.



Small Digital Dial Gauge KMD 12 T	
Resolution	0.01 mm/.0005"
Range	12.5 mm/.5"
Digital display LCD, height of digits	6 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	5000 h
Output	RS 232, with external power supply / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004" ± 1 Digit
Dimensioned drawing	page 82

Summary of important technical data of other Digital Dial Gauges and accessories

Digital Dial Gauges	Resolution	Range	Bezel-Ø	Stem-Ø	Maximum error	Data cable	Special feature
KMD 5 R	0.01 mm	5 mm	44 mm	8 h 6	10 µm ± 1 Digit	DCKMD 232/DCKMD USB	back plunger
KMD 12 T wa	0.01 mm	12.5 mm	44 mm	8 h 6	10 µm ± 1 Digit	DCKMD 232/DCKMD USB	water protected
FKMD 5 R	0.001 mm	5 mm	44 mm	8 h 6	5 µm	DCKMD 232/DCKMD USB	back plunger
FKMD 12 T	0.001 mm	12.5 mm	44 mm	8 h 6	5 µm	DCKMD 232/DCKMD USB	
MD 50 T	0.01 mm	50 mm	60 mm	8 h 6	20 µm ± 1 Digit	DCMD 232/DCMD USB	
FMD 50 T	0.001 mm	50 mm	60 mm	8 h 6	7 µm	DCMD 232/DCMD USB	
MD 100 T	0.01 mm	100 mm	60 mm	8 h 6	20 µm ± 1 Digit	DCMD 232/DCMD USB	
FMD 100 T	0.001 mm	100 mm	60 mm	8 h 6	8 µm	DCMD 232/DCMD USB	
DK 30	0.001 mm	0.8 mm	44 mm	-	10 µm	DCKMD 232/DCKMD USB	model lever type

Accessories	Model	Technical features	Suitable for model
Data cable	DCMV 232	2m long, SUB-D jack 9-pin	MDMV 12 T
Data cable	DCMV DIGIMATIC	2m long, flat connector 10-pin	MDMV 12 T
Data cable	DCMD 232	Max. 15 m, standard 2m long, SUB-D jack 9-pin/F	MD 12 T, MD 25 T, MD 50 T, MD 100 T FMD12T, FMD25T, FMD50T, FMD100T
Data cable	DCMD USB	2m long, USB connector	MD 12 T, MD 25 T, MD 50 T, MD 100 T FMD12T, FMD25T, FMD50T, FMD100T
Data cable	DCKMD 232	Max. 15 m, standard 2m long, SUB-D jack 9-pin/F; power supply	KMD 12 T, KMD 12 Twa, FKMD 12 T, DK 30, KMD 5 R, FKMD 5 R
Data cable	DCKMD USB	2m long, USB connector	KMD 12 T, KMD 12 Twa, FKMD 12 T, DK 30, KMD 5 R, FKMD 5 R
Battery	BCR 2032	Lithium 3V type CR 2032	For all Digital Gauges

The cable for data transmission is not included in the scope of supply of Digital Dial Gauges but has to be ordered separately.

Comparator Gauges Compika

The Comparator Gauges Compika offer a high degree of security and precision. They are based on a solid and well thought-out construction taking into account the latest technology. They are manufactured by the most up-to-date methods.

The following quality features characterize our manufacturing programme of Comparator Gauges Compika:

- Their design conforms to the requirements of DIN 879-1. This applies not only to the dimensions but also to permitted spans of error, hysteresis and measuring pressure.
- Effective shockproof system.
- Pinions and shafts of the movement are jewelled.
- After removal of the safety cap the adjustment screw on top of the case allows simple and safe zero setting of the instrument over the total measuring range.
- A safety cap prevents unintentional turning of the fine adjustment facility.
- Stem and spindle are made of hardened stainless steel.
- The measuring spindles are very sensitive on account of their accurate guides.
- Additional overtravel assists with the insertion of workpieces into the measuring device.
- The clear scale is shadow free.
- The red tolerance markers are easy to recognize and to set.
- On request all models are available with a reduced pressure of 0.5 N.

Summary of important technical details of Comparator Gauges Compika

Metric models	Reading	Range	Dial reading	Overtravel	Special feature
Compika 101, 101 B	0.01 mm	0.5 mm	25-0-25	2.5 mm	Shockproof
Compika 101 wa	0.01 mm	0.5 mm	25-0-25	2.5 mm	Water Protected
Compika 505, 505 B	0.005 mm	0.2 mm	100-0-100	2.8 mm	Shockproof
Compika 502, 502 B	0.002 mm	0.2 mm	100-0-100	2.8 mm	Shockproof
Compika 1001, 1001 B	0.001 mm	0.1 mm	50-0-50	3.0 mm	Shockproof
Compika 1001 wa	0.001 mm	0.1 mm	50-0-50	3.0 mm	Water Protected
Inch models	**Reading**	**Range**	**Dial reading**	**Overtravel**	**Special feature**
Compika 105 Z, 105 BZ	.0005"	.020"	10-0-10	.10"	Shockproof
Compika 502 Z, 502 BZ	.0002"	.008"	40-0-40	.11"	Shockproof
Compika 501 Z, 501 BZ	.0001"	.008"	40-0-40	.11"	Shockproof
Compika 1005 Z, 1005 BZ	.00005"	.004"	20-0-20	.12"	Shockproof

Models with order code 'B' have shortened measuring spindles. These can be used in most precision inside measuring instruments or measuring devices available on the market today.

Comparator Gauge Compika 1001

shockproof, with overtravel

The Comparator Gauge Compika 1001 is manufactured conforming to DIN 879-1.
The precisely guided measuring spindle and the use of selected materials make the Comparator Gauge Compika 1001 extremely wear-resistant.

Stem and spindle are made of resistant stainless steel.

Comparator Gauge Compika 1001 shockproof, with overtravel	
Reading	0.001 mm
Range	0.1 mm
Dial reading	50-0-50
Bezel-Ø	62 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN 879-1
Initial measuring force	1.2 N
Dimensioned drawing	page 86

Comparator Gauge Compika 1001 B

shockproof, with overtravel

The Comparator Gauge Compika 1001 B is identical to the model Compika 1001 except for the reduced protrusion of the measuring spindle beyond the stem of 6 mm instead of 14 mm. This gauge fits most precision inside measuring instruments and measuring devices available on the market.
Stem and spindle are made of resistant stainless steel.

Comparator Gauge Compika 1001 B shockproof, with overtravel	
Reading	0.001 mm
Range	0.1 mm
Dial reading	50-0-50
Bezel-Ø	62 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN 879-1
Initial measuring force	1.2 N
Dimensioned drawing	on request

On request the Comparator Gauges Compika are also available with special fittings:

- **Comparator Gauge Compika** with measuring force reduced to 0.5 N
- **Comparator Gauge Compika** with increased measuring force
- **Comparator Gauge Compika** with special dial
- **Comparator Gauge Compika** with stem length 85 mm

Please request our offers.

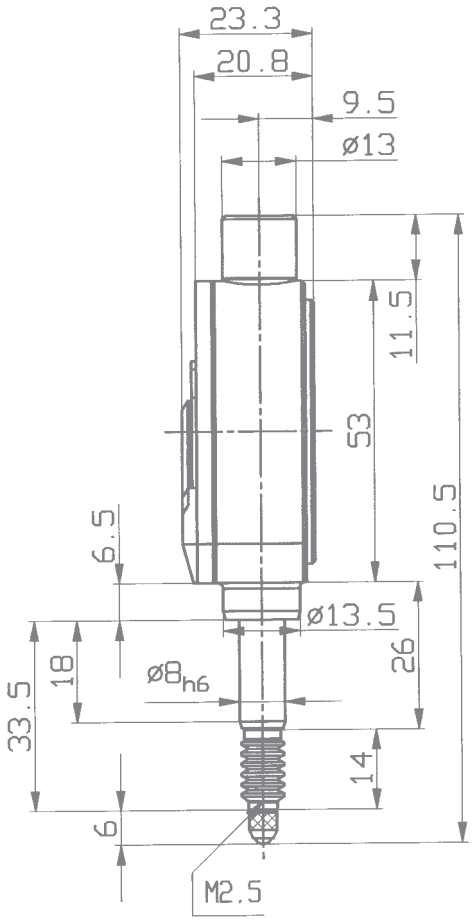
Comparator Gauge Compika 1001 wa

water protected, shockproof, with overtravel

The use of a water protected Comparator Gauge is recommended for applications in splash water environments. This version, conforming to protection class IP 53, features the following:

- A flexible rubber bellows is fitted where the spindle enters the stem.
- The back is sealed with a rubber ring.

Comparator Gauge Compika 1001 wa water protected	
Reading	0.001 mm
Range	0.1 mm
Dial reading	50-0-50
Bezel-Ø	62 mm
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN 879-1
Initial measuring force	1.4 N
Dimensioned drawing	page 85



Comparator Gauge Compika 1005 Z

shockproof, with overtravel

The Comparator Gauge Compika 1005 Z is manufactured conforming to DIN 879-1.
The precisely guided measuring spindle and the use of selected materials make the Comparator Gauge Compika 1005 Z extremely wear-resistant.

Stem and spindle are made of resistant stainless steel.

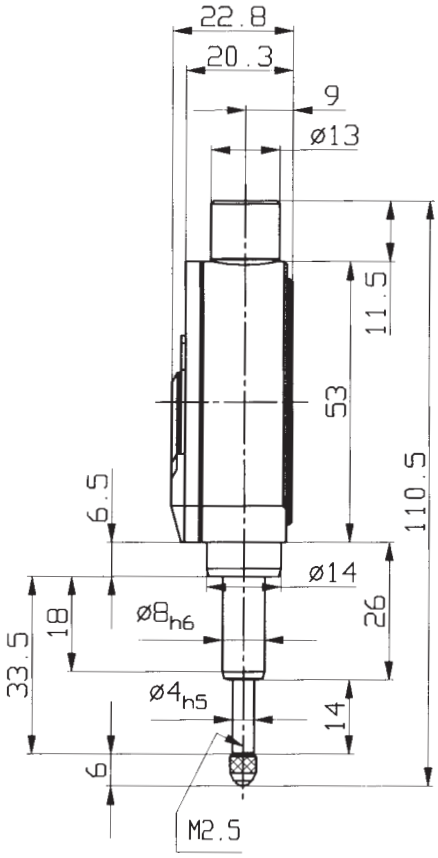
Comparator Gauge Compika 1005 Z shockproof, with overtravel	
Reading	.00005"
Range	.004"
Dial reading	20-0-20
Bezel-Ø	2.44"
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN 879-1
Initial measuring force	1.2 N
Dimensioned drawing	page 86

Comparator Gauge Compika 501 Z

shockproof, with overtravel

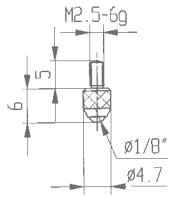
Comparator Gauges with Inch reading are also available as short version B. They have a measuring spindle shortened by 8 mm to protrude 6 mm beyond the stem. These gauges fit most precision inside measuring instruments and measuring devices available on the market.
Stem and spindle are made of resistant stainless steel.

Comparator Gauge Compika 501 Z shockproof, with overtravel	
Reading	.0001"
Range	.008"
Dial reading	40-0-40
Bezel-Ø	2.44"
Stem-Ø	8 h 6
Dimensions and accuracy according to	DIN 879-1
Initial measuring force	1.2 N
Dimensioned drawing	page 86



Contact Points for Dial Gauges and Comparator Gauges

with male thread M 2.5



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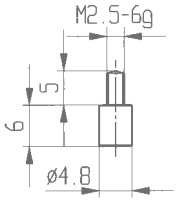
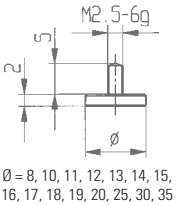
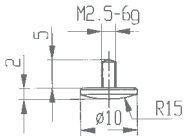


573/10



Ø = 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 25, 30, 35

573/11



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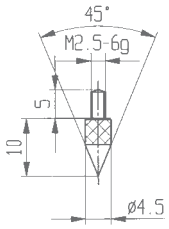

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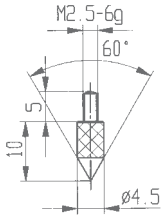
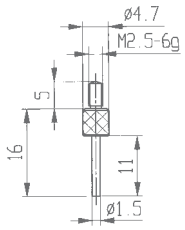
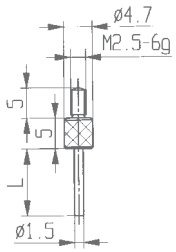


573/13-60

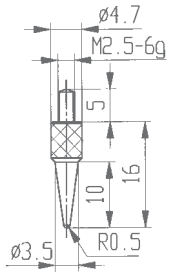


573/14

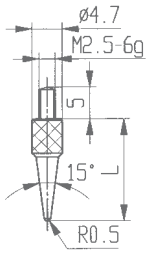


L= 15, 20, 25, 30, 35, 40, 50 mm

573/14 L

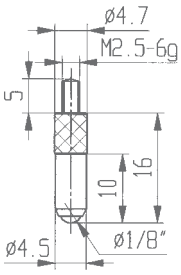


573/15

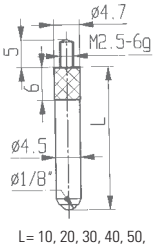


L= 5, 10, 15, 20, 30 mm

573/15 L

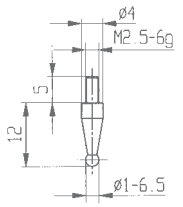


573/16

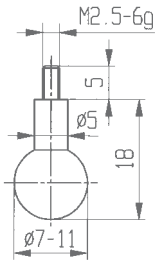


L= 10, 20, 30, 40, 50, 60, 70, 80, 90 mm

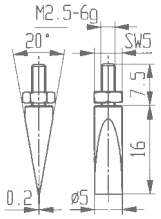
573/17 L



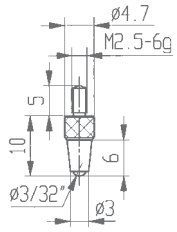
573/18



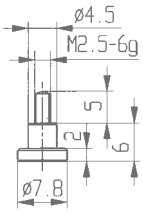
573/19



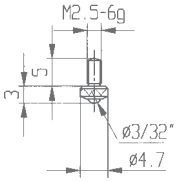
573/20 E



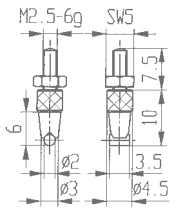
573/21



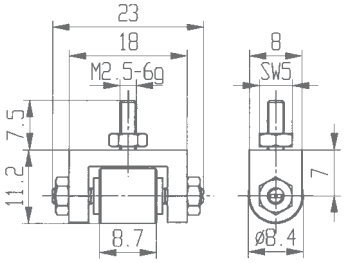
573/22



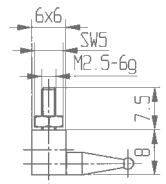
573/23



573/24 E

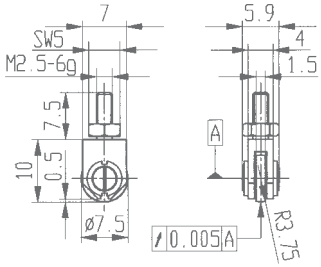


573/25 E

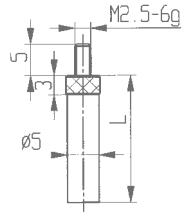


with female thread M 2.5 for use with contact points 573/18 Ø 1-6 mm and with female thread M 1.6 for use with contact points for Dial Test Indicators.

573/27 E

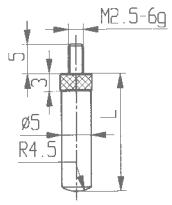


573/28 E



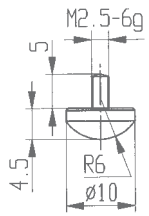
L= 3, 5, 8, 10, 12, 15, 20 mm

573/29 L

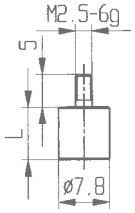


L= 3, 5, 8, 10, 12, 15, 20 mm

573/30 L

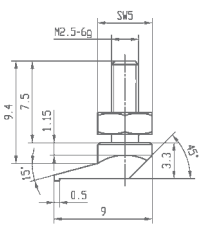


573/32

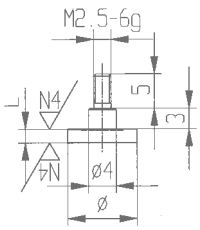


L = 3, 5, 8, 10 mm

573/35 L



573/39 E



Ø = 7, 8 or 10
L = 1, 1.5 or 2 mm

573/40-D-L

Contact Point Extensions

Contact Points with carbide (H) or ceramic (C) insert

Contact Points with balls from ruby (R), sapphire (S) or plastic (KU)

with male thread M 2.5

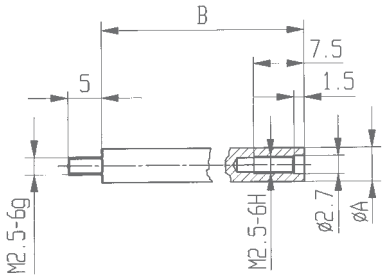
Contact Point Extensions:

Dimension A: 4 mm (used at Dial Gauges with spindle Ø of 4 mm)

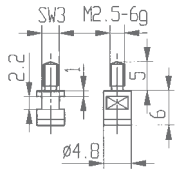
Dimension A: 5 mm (used at Dial Gauges with spindle Ø of 5 mm)

Dimension B available in the following standard lengths: 10, 15, ….. 90, 95 and 100 mm

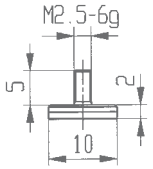
Custom lengths are available.



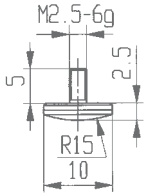
Contact Points with carbide (H), ruby (R), sapphire (S), ceramic (C), or plastic (KU) inserts



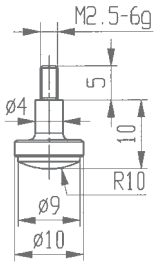
573/10 H



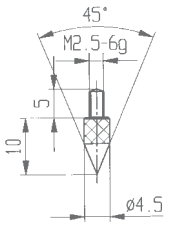
573/11 H/C



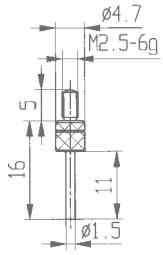
573/12 H/C



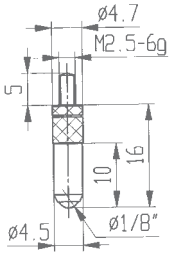
573/12-10 H



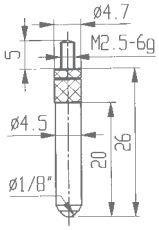
573/13 H



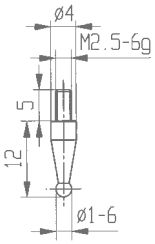
573/14 H



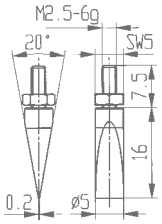
573/16 H/R/S



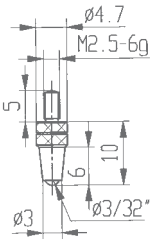
573/17 H/R/S



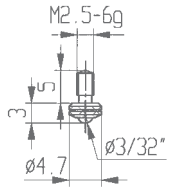
573/18 H



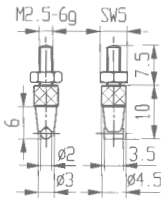
573/20 HE



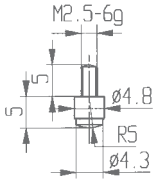
573/21 H



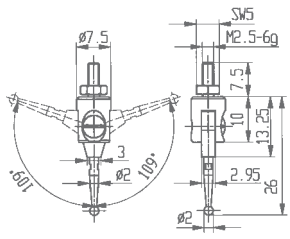
573/23 H



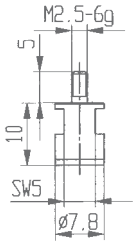
573/24 HE



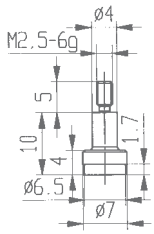
573/31 H



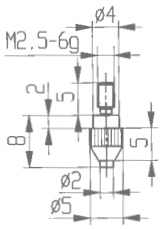
573/33 HE



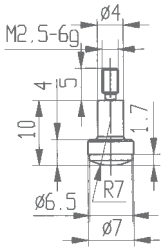
573/35 H



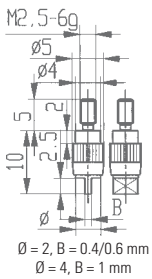
573/102 H



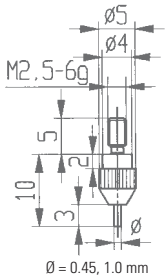
573/105 H



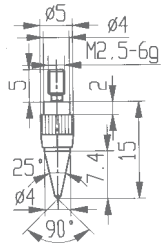
573/108 H



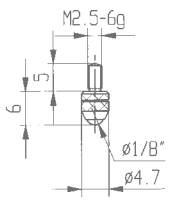
573/110 H



573/112 H



573/114 H



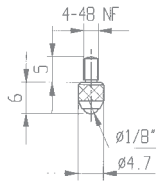
M 2/70 H/R/S/C/KU

Special contact points to customers' drawings are available on request.

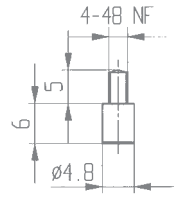
Steel contact points (Z) for Dial Gauges and Comparator Gauges

Carbide (HZ) and ruby (RZ) contact points

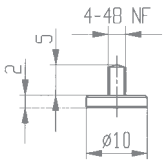
with 4/48 male threads



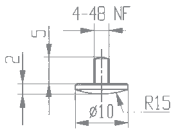
M2/70 Z



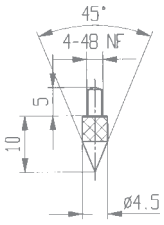
573/10 Z



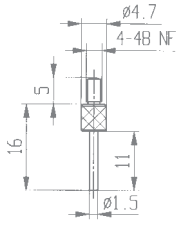
573/11 Z



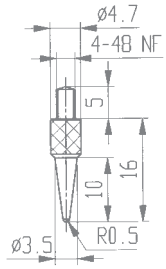
573/12 Z



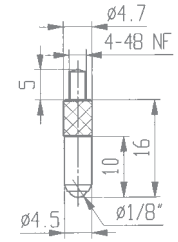
573/13 Z



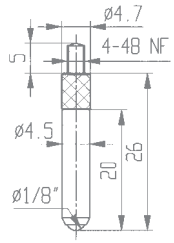
573/14 Z



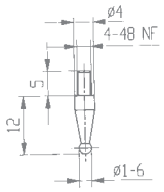
573/15 Z



573/16 Z

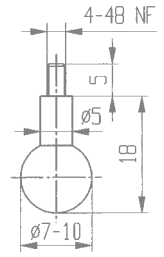


573/17 Z



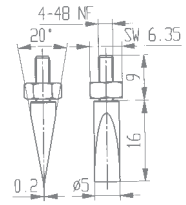
Ø= 1, 2, 3, 4, 5, 6 mm

573/18 Z

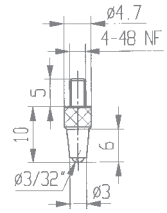


Ø= 7, 8, 9, 10 mm

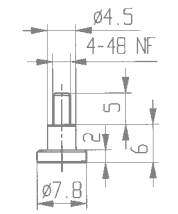
573/19 Z



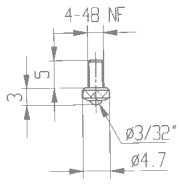
573/20 ZE



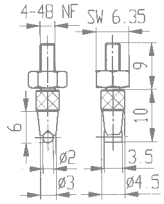
573/21 Z



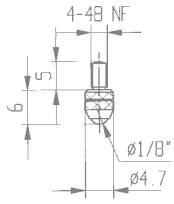
573/22 Z



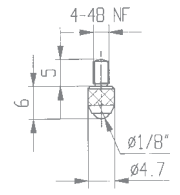
573/23 Z



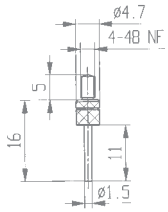
573/24 ZE



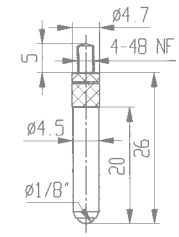
M2/70 HZ



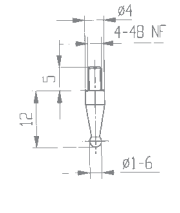
M2/70 RZ/SZ



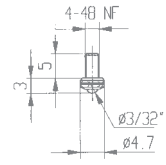
573/14 HZ



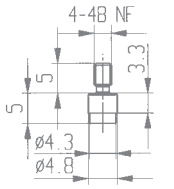
573/17 HZ



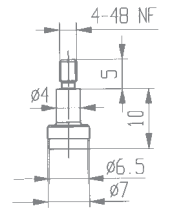
573/18 HZ



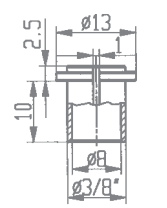
573/23 HZ



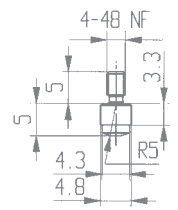
573/101 HZ



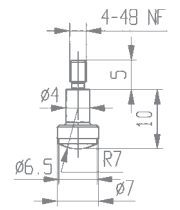
573/102 HZ



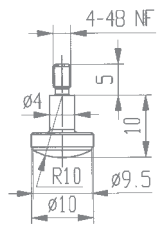
Adapter 62168



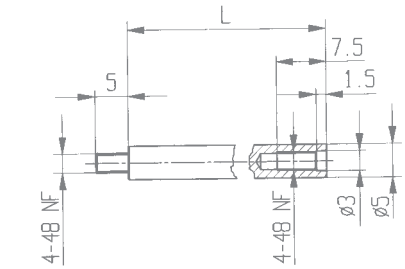
573/107 HZ



573/108 HZ



573/109 HZ



Contact Point Extensions

Dimension L available in the following standard lengths: 1", 2", 3" and 4". Custom lengths are available.

Special contact points to customers' drawings are available on request.

Dial Test Indicators

Most modern methods are applied in the production of our high quality Dial Test Indicators. They are both sensitive and shock-resistant. Here are some of the advantages applicable to the whole series:

- All features of the models reading up to 1 mm measuring range conform to DIN 2270. This applies to all deviation spans, the measuring force and the hysteresis error of the measuring force.
- Automatic change of the direction of measurement.
- Indication clockwise in all types.
- Precise components, running in ruby bearings, warrant highest precision throughout.
- Precision bearing for the lever shaft.
- Body with 3 dovetail slides for clamping the stem and other equipment.
- Body hard-chromed in order to protect the dovetail slides against damage.
- Tungsten carbide ball 2 mm Ø in measuring inserts.
- Dial adjustable by knurled bezel.
- Supplied in a convenient box with transparent lid with 1 stem Ø 8 mm h 6 and 1 spanner for changing the contact points.

Technical data for metric Dial Test Indicators Lever Type

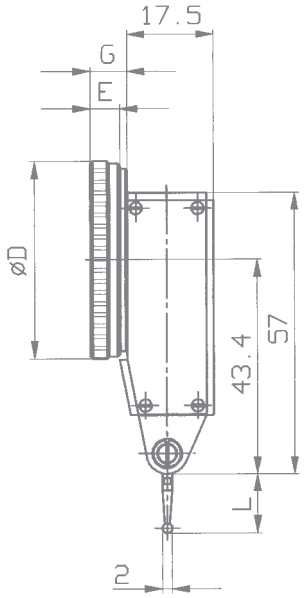
Model	Reading	Range	Dial reading	Bezel-Ø	Form to DIN 2270	Length of contact point
K 30	0.01 mm	0.8 mm	0-40-0	32 mm	A	12.8 mm
K 30/1	0.01 mm	1.0 mm	0-50-0	32 mm	A	16.6 mm
K 31	0.01 mm	0.8 mm	0-40-0	32 mm	B	12.8 mm
K 32	0.01 mm	0.8 mm	0-40-0	32 mm	C	12.8 mm
K 33	0.01 mm	0.5 mm	0-25-0	32 mm	A	35.7 mm
K 34	0.01 mm	0.5 mm	0-25-0	32 mm	B	35.7 mm
K 35	0.01 mm	0.5 mm	0-25-0	32 mm	C	35.7 mm
K 36	0.002 mm	0.2 mm	0-100-0	32 mm	A	12.8 mm
K 37	0.002 mm	0.2 mm	0-100-0	32 mm	B	12.8 mm
K 38	0.002 mm	0.2 mm	0-100-0	32 mm	C	12.8 mm
K 40	0.01 mm	0.8 mm	0-40-0	40 mm	A	12.8 mm
K 40/1	0.01 mm	1.0 mm	0-50-0	40 mm	A	16.6 mm
K 41	0.01 mm	0.8 mm	0-40-0	40 mm	B	12.8 mm
K 42	0.01 mm	0.8 mm	0-40-0	40 mm	C	12.8 mm
K 43	0.01 mm	0.5 mm	0-25-0	40 mm	A	35.7 mm
K 44	0.01 mm	0.5 mm	0-25-0	40 mm	B	35.7 mm
K 45	0.01 mm	0.5 mm	0-25-0	40 mm	C	35.7 mm
K 46	0.002 mm	0.2 mm	0-100-0	40 mm	A	12.8 mm
K 47	0.002 mm	0.2 mm	0-100-0	40 mm	B	12.8 mm
K 48	0.002 mm	0.2 mm	0-100-0	40 mm	C	12.8 mm
K 40 AD	0.01 mm	0.8 mm	0-40-0	40 mm	A	12.8 mm
K 43 AD	0.01 mm	0.5 mm	0-25-0	40 mm	A	35.7 mm
K 46 AD	0.002 mm	0.2 mm	0-100-0	40 mm	A	12.8 mm
K 49 AD	0.001 mm	0.2 mm	0-100-0	40 mm	A	12.8 mm
K 40/2	0.02 mm	2 mm	0-100-0	40 mm	A	35.7 mm
K 58	0.001 mm	0.2 mm	0-100-0	58 mm	A	12.8 mm

Dial Test Indicators adding 'AD' in the model designation possess a water-protected dial casing. The transparent front cover, made of knock resistant plastic, produces a good seal of the dial casing only conforming to protection class IP 53. Another advantage of this design is that the anti-reflective coating of the front cover reduces shadows on the dial face and makes the Dial Test Indicators easy to read even at awkward angles.

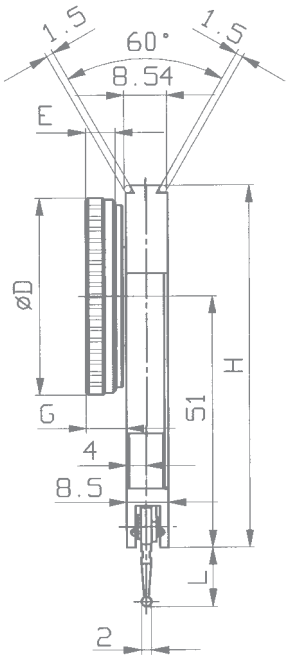
Inch Dial Test Indicators Lever Type see page 97.

Dimensioned drawings for Dial Test Indicators

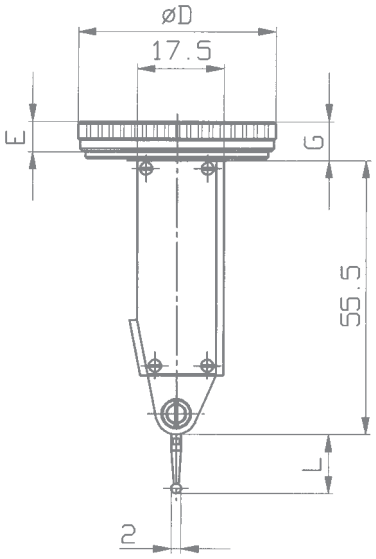
	Dimensions					
Models	**D**	**E**	**G**	**H**	**L**	**Form to DIN 2270**
K 30, K 36	32 mm	5.6 mm	7.1 mm	–	12.8 mm	A
K 31, K 37	32 mm	5.6 mm	7.7 mm	69.5 mm	12.8 mm	B
K 32, K 38	32 mm	5.6 mm	7.5 mm	–	12.8 mm	C
K 33	32 mm	5.6 mm	7.1 mm	–	35.7 mm	A
K 34	32 mm	5.6 mm	7.7 mm	69.5 mm	35.7 mm	B
K 35	32 mm	5.6 mm	7.5 mm	–	35.7 mm	C
K 40, K 46	40 mm	6 mm	7.5 mm	–	12.8 mm	A
K 41, K 47	40 mm	6 mm	8.1 mm	73.5 mm	12.8 mm	B
K 42, K 48	40 mm	6 mm	7.9 mm	–	12.8 mm	C
K 43	40 mm	6 mm	7.5 mm	–	35.7 mm	A
K 44	40 mm	6 mm	8.1 mm	73.5 mm	35.7 mm	B
K 45	40 mm	6 mm	7.9 mm	–	35.7 mm	C
K 40/2	40 mm	6 mm	7.5 mm	–	35.7 mm	A



Form A DIN 2270



Form B DIN 2270



Form C DIN 2270

Dial Test Indicator K 30

Dial Test Indicator K 40

The friction clutch mechanism of these Dial Test Indicators provides a very effective shockproof system. Standard versions are equipped with contact points having a tungsten carbide ball of 2 mm diameter. On request contact points with ball diameters of 0.4 mm, 1 mm or 3 mm can be fitted. Also available are contact points with a 2 mm diameter ruby ball.

Standard equipment includes: 1 contact point with tungsten carbide ball 2 mm Ø, 1 stem 8 mm Ø and 1 spanner for changing the contact points.

Dial Test Indicator K 30	
Reading	0.01 mm
Range	0.8 mm
Dial reading	0-40-0
Bezel-Ø	32 mm
Form to DIN 2270	A
Dimensions and accuracy according to	DIN 2270
Length of contact point	12.8 mm
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	page 91

Dial Test Indicator K 40	
Reading	0.01 mm
Range	0.8 mm
Dial reading	0-40-0
Bezel-Ø	40 mm
Form to DIN 2270	A
Dimensions and accuracy according to	DIN 2270
Length of contact point	12.8 mm
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	page 91

Dial Test Indicators are also available with extended measuring ranges of 1 mm or 2 mm.
Please request our offer for the models K 30/1, K 30/2, K 40/1 and K 40/2.

Dial Test Indicator K 37

Dial Test Indicator K 46

These are instruments distinguished by high sensitivity and accuracy. They are used whenever especially high demands are made for accurate measurements of concentricity and run-out. Clearly defined scale divisions warrant easy, non-tiring use.

Standard equipment includes: 1 contact point with 2 mm Ø tungsten carbide ball, 1 stem 8 mm Ø and 1 spanner for changing the contact points.

Dial Test Indicator K 37	
Reading	0.002 mm
Range	0.2 mm
Dial reading	0-100-0
Bezel-Ø	32 mm
Form to DIN 2270	B
Dimensions and accuracy according to	DIN 2270
Length of contact point	12.8 mm
Swivelling range of contact point parallel to the scale	240°
Dimensioned drawing	page 91

Dial Test Indicator K 46	
Reading	0.002 mm
Range	0.2 mm
Dial reading	0-100-0
Bezel-Ø	40 mm
Form to DIN 2270	A
Dimensions and accuracy according to	DIN 2270
Length of contact point	12.8 mm
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	page 91

Dial Test Indicator K 30/1

The extended range of 1 mm with model K 30/1 offers an even wider field of application than the standardized models to DIN 2270 with 0.8 mm range.

Even with the extended range of 1 mm its deviation spans conform to DIN 2270.

Dial Test Indicator K 30/1	
Reading	0.01 mm
Range	1.0 mm
Dial Reading	0-50-0
Bezel-Ø	32 mm
Form to DIN 2270	A
Dimensions and accuracy according to	DIN 2270
Length of contact point	16.6 mm
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	on request

Dial Test Indicator K 49 AD

Model K 49 AD possesses a water-protected dial casing. The transparent front cover, made from resistant plastic, produces a good seal of the dial casing only conforming to protection class IP 53. Another advantage of this design is that the anti-reflective coating of the front cover reduces shadows on the dial face and makes model K 49 AD easy to read.

Dial Test Indicator K 49 AD	
Reading	0.001 mm
Range	0.2 mm
Dial Reading	0-100-0
Bezel-Ø	40 mm
Form to DIN 2270	A
Dimensions and accuracy according to	DIN 2270
Length of contact point	12.8 mm
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	on request

Another Dial Test Indicator with a reading of 0.001 mm is our model K 58. This model provides excellent readability due to its bezel diameter of 58 mm.

Dial Test Indicator K 33

Dial Test Indicator K 45

The Dial Test Indicators K 33 and K 45 have a 35 mm long contact point which makes them suitable for difficult accessible applications.
Please make sure to use contact points with correct length because of the effect of the angle ratio of the Dial Test Indicator. Using contact points with incorrect length will result in measuring errors.

Standard equipment includes: 1 contact point with 2 mm Ø tungsten carbide ball, 1 stem 8 mm Ø and 1 spanner for changing the contact points.

Dial Test Indicator K 33	
Reading	0.01 mm
Range	0.5 mm
Dial reading	0-25-0
Bezel-Ø	32 mm
Form to DIN 2270	A
Dimensions and accuracy according to	DIN 2270
Length of contact point	35.7 mm
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	page 91

Dial Test Indicator K 45	
Reading	0.01 mm
Range	0.5 mm
Dial reading	0-25-0
Bezel-Ø	40 mm
Form to DIN 2270	C
Dimensions and accuracy according to	DIN 2270
Length of contact point	35.7 mm
Swivelling range of contact point perpendicular to the scale	240°
Dimensioned drawing	page 91

Accessories for metric Dial Test Indicators

Stems with dovetail:

2.4804 Ø 4 mm h6

2.4801 Ø 8 mm h6

Contact points thread M 1.6 length 12 mm

5.2297 Tungsten carbide ball Ø 0.4 mm, L = 12.0 mm

5.2282 Tungsten carbide ball Ø 1 mm, L = 12.3 mm

5.2281 Tungsten carbide ball Ø 2 mm, L = 12.8 mm

5.2283 Tungsten carbide ball Ø 3 mm, L = 13.3 mm

5.2296 Ruby ball Ø 2 mm, L = 12.8 mm

Contact points thread M 1.6 length 35 mm

5.2285 Tungsten carbide ball Ø 1 mm, L = 35.2 mm

5.2284 Tungsten carbide ball Ø 2 mm, L = 35.7 mm

5.2286 Tungsten carbide ball Ø 3 mm, L = 36.2 mm

5.2298 Ruby ball Ø 2 mm, L = 35.7 mm

Contact points thread M 1.6 length 16.6 mm

5.2280 Tungsten carbide ball Ø 2 mm

5.2299 Ruby ball Ø 2 mm

Centering Holder FH 8

Stem Ø 8 mm h6
with mounting bore Ø 4 mm H7 and dovetail clamp
Additional mounting bore Ø 8 mm H7

Round Holder FH 90

8 mm Ø x 90 mm
with mounting bore Ø 8 mm H7
and dovetail clamp

Square Holder 1.0958

6 x 12 x 80 mm
with mounting bore Ø 4 mm H7
and Ø 8 mm H7 and dovetail clamp

Spanner 3.1483

Inch Dial Test Indicators

Most modern methods are applied in the production of our high quality Dial Test Indicators. They are both sensitive and shock-resistant.

Here are some of the advantages applicable to the whole series of Inch reading models:

- All features of the models reading up to .04" measuring range conform analogous to the German Standard DIN 2270. This applies to all deviation spans, the measuring force and the hysteresis error of the measuring force.
- Automatic change of the direction of measurement.
- Indication clockwise in all types.
- Precise components, running in ceramic bearings, warrant highest precision throughout.
- Precision bearing for the lever shaft.
- Body with 3 dovetail slides for clamping the stem and other equipment.
- Body hard-chromed in order to protect the dovetail slides against damage.
- Contact points with tungsten carbide ball 2 mm Ø.
- Dial adjustable by knurled bezel.
- Supplied in a convenient box with transparent lid with 1 stem Ø 1/4" and 1 spanner for changing the contact points.

Technical data for Inch Reading Dial Test Indicators Lever Type

Model	Reading	Range	Dial reading	Bezel-Ø	Form to DIN 2270	Length of contact point
K 30 Z	.0005"	.030"	0-15-0	1 1/4"	A	.476"
K 30/1 Z	.0005"	.040"	0-20-0	1 1/4"	A	.665"
K 31 Z	.0005"	.030"	0-15-0	1 1/4"	B	.476"
K 32 Z	.0005"	.030"	0-15-0	1 1/4"	C	.476"
K 33 Z	.0005"	.020"	0-10-0	1 1/4"	A	1.429"
K 34 Z	.0005"	.020"	0-10-0	1 1/4"	B	1.429"
K 35 Z	.0005"	.020"	0-10-0	1 1/4"	C	1.429"
K 36 Z	.0001"	.008"	0-4-0	1 1/4"	A	.511"
K 37 Z	.0001"	.008"	0-4-0	1 1/4"	B	.511"
K 38 Z	.0001"	.008"	0-4-0	1 1/4"	C	.511"
K 40 Z	.0005"	.030"	0-15-0	1 9/16"	A	.476"
K 40/1 Z	.0005"	.040"	0-20-0	1 9/16"	A	.665"
K 41 Z	.0005"	.030"	0-15-0	1 9/16"	B	.476"
K 42 Z	.0005"	.030"	0-15-0	1 9/16"	C	.476"
K 43 Z	.0005"	.020"	0-10-0	1 9/16"	A	1.429"
K 44 Z	.0005"	.020"	0-10-0	1 9/16"	B	1.429"
K 45 Z	.0005"	.020"	0-10-0	1 9/16"	C	1.429"
K 46 Z	.0001"	.008"	0-4-0	1 9/16"	A	.511"
K 47 Z	.0001"	.008"	0-4-0	1 9/16"	B	.511"
K 48 Z	.0001"	.008"	0-4-0	1 9/16"	C	.511"
K 40 Z AD	.0005"	.030"	0-15-0	1 9/16"	A	.476"
K 43 Z AD	.0005"	.020"	0-10-0	1 9/16"	A	1.429"
K 46 Z AD	.0001"	.008"	0-4-0	1 9/16"	A	.511"

Dial Test Indicators adding 'AD' in the model designation possess a water-protected dial casing. The transparent front cover, made of knock resistant plastic, produces a good seal of the dial casing only conforming to protection class IP 53. Another advantage of this design is that the anti-reflective coating of the front cover reduces shadows on the dial face and makes the Dial Test Indicators easy to read even at awkward angles.

Form A = Horizontal Type Form B = Parallel Type Form C = Vertical Type

Dial Test Indicator K 30 Z

Dial Test Indicator K 46 Z

The friction clutch mechanism of these Dial Test Indicators provides a very effective shockproof system.
Standard versions are equipped with contact points having a tungsten carbide ball of 2 mm diameter.
On request contact points with ball diameters 1 mm or 3 mm can be fitted.

Standard equipment includes: 1 contact point with tungsten carbide ball 2 mm Ø, 1 stem 1/4" Ø and 1 spanner for changing the contact points.

Dial Test Indicator K 30 Z	
Reading	.0005"
Range	.030"
Dial reading	0-15-0
Bezel-Ø	1 1/4"
Form to DIN 2270	A
Accuracy analogous to	DIN 2270
Length of contact point	.476"
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	same as K 30 on page 91, but L = .476"

Dial Test Indicator K 46 Z	
Reading	.0001"
Range	.008"
Dial reading	0-4-0
Bezel-Ø	1 9/16"
Form to DIN 2270	A
Accuracy analogous to	DIN 2270
Length of contact point	.511"
Swivelling range of contact point at 90° to the scale	240°
Dimensioned drawing	same as K 46 on page 91, but L = .511"

Dial Test Indicators are also available with measuring range extended to .04".
Please request our offers for the models K 30/1 Z and K 40/1 Z.

Dial Test Indicator K 34 Z

Dial Test Indicator K 45 Z

The Dial Test Indicators K 34 Z and K 45 Z have a 1.4" long contact point which makes them suitable for difficult accessible applications.
Please make sure to use contact points with correct length because of the effect of the angle ratio of the Dial Test Indicator. Using contact points with incorrect length will result in measuring errors.

Standard equipment includes: 1 contact point with 2 mm Ø tungsten carbide ball, 1 stem $^1/_4$" Ø and 1 spanner for changing the contact points.

Dial Test Indicator K 34 Z	
Reading	.0005"
Range	.020"
Dial reading	0-10-0
Bezel-Ø	1 $^1/_4$"
Form to DIN 2270	B
Accuracy analogous to	DIN 2270
Length of contact point	1.429"
Swivelling range of contact point parallel to the scale	240°
Dimensioned drawing	same as K 34 on page 91, but L = 1.429"

Dial Test Indicator K 45 Z	
Reading	.0005"
Range	.020"
Dial reading	0-10-0
Bezel-Ø	1 $^9/_{16}$"
Form to DIN 2270	C
Accuracy analogous to	DIN 2270
Length of contact point	1.429"
Swivelling range of contact point perpendicular to the scale	240°
Dimensioned drawing	same as K 45 on page 91, but L = 1.429"

Accessories for Inch Dial Test Indicators

Stems with dovetail

2.4807 Ø 1/4" h6

2.4806 Ø 3/8" h6

Contact points thread M 1.6 length .450"

5.2287 Tungsten carbide ball Ø 2 mm, L = .476"

5.2288 Tungsten carbide ball Ø 1 mm, L = .457"

5.2289 Tungsten carbide ball Ø 3 mm, L = .496"

Contact points thread M 1.6 length 1.400"

5.2290 Tungsten carbide ball Ø 2 mm, L = 1.429"

5.2291 Tungsten carbide ball Ø 1 mm, L = 1.409"

5.2292 Tungsten carbide ball Ø 3 mm, L = 1.449"

Contact points thread M 1.6 length .490"

5.2293 Tungsten carbide ball Ø 2 mm, L = .511"

5.2294 Tungsten carbide ball Ø 1 mm, L = .492"

5.2295 Tungsten carbide ball Ø 3 mm, L = .531"

Centering Holder FH 8

Stem Ø 8 mm h6
with mounting bore Ø 4 mm H7 and dovetail clamp
Additional mounting bore Ø 8 mm H7

Round Holder FH 90

8 mm Ø x 90 mm
with mounting bore Ø 8 mm H7
and dovetail clamp

Square Holder 1.0958

6 x 12 x 80 mm
with mounting bore Ø 4 mm H7
and Ø 8 mm H7 and dovetail clamp

Spanner 3.1483

Magnetic Holder P 18

with vertically and horizontally adjustable swivel arm

Its extremely low overall height and simple handling make the Magnetic Holder P 18 very versatile for use in the manufacturing and tool making industry.
Two round magnets on the contact face make it a flat and efficiently holding base.
The use of star knobbed screws ensure safe clamping.

Delivery: without Dial Gauge

Magnetic Holder P 18	
Length of the magnetic base	73 mm
Height of the magnetic base	11 mm
Height with holder	46 mm
Breadth of the magnetic base	38 mm
Magnetic force	180 N
Length of swivel arm up to holder opening	35 mm
Holder opening	8 mm H7

Magnetic Holder P 19

with vertically and horizontally adjustable swivel arm

The support of the Dial Gauge can be rotated both vertically and horizontally, so that the Dial Gauge can be brought to any position. For that reason there are many possibilities of use.
The Magnetic Holder P 19 has a prismatic base with additional magnets on the wall.
The use of star knobbed screws ensure safe clamping.

Delivery: without Dial Gauge

Magnetic Holder P 19	
Length of the magnetic base	72 mm
Height of the magnetic base	26 mm
Height with holder	59 mm
Breadth of the magnetic base	37 mm
Magnetic force	180 N
Length of swivel arm up to holder opening	35 mm
Holder opening	8 mm H7

Both the Magnetic Holder P 18 and the model P 19 can also be supplied with a holder opening of $^{3}/_{8}$" instead of 8 mm H7. Please indicate in your order text if a holder opening of $^{3}/_{8}$" is required.

Small Dial Gauge KM 4 T Magnet

with magnetic back

Dial Gauge M 2 T Magnet

with magnetic back

The Dial Gauges KM 4 T Magnet and M 2 T Magnet have a magnetic back. These Dial Gauges therefore don't require any stands or holders.

The magnets are made of sintered metal which can in no way affect the mechanism or the accuracy of the Dial Gauges. Magnetic back plates can also be used on other Dial Gauges of our manufacturing programme.

Spindle and stem are made of resistant stainless steel.

Small Dial Gauge KM 4 T Magnet with magnetic back	
Reading	0.01 mm
Range	3 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	0.9 N
Magnetic force of the back	120 N

Dial Gauge M 2 T Magnet with magnetic back	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
Initial measuring force	0.7 N
Magnetic force of the back	220 N

Magnetic Stand P 17 and 3D – Magnetic Stand P 280

with on/off switch and fine adjustment

Magnetic Base PMF 10

The magnetic base PMF 10 with thread M 10 has a prismatic base. It securely holds on any flat or cylindrical, iron or steel surface. The magnet is activated by turning the toggle handle. Turning the handle to the 0 position switches the magnet off, turning it to the 1 position switches the magnet on. The magnetic force is 450 N.

Post and Support Arm Assemblies MS 280 and MS 17

The fine adjustment feature of the Post and Support Arm Assemblies MS 280 and MS 17 guarantees safe and accurate measuring.

The Post and Support Arm Assemblies MS 17 for the P 17 are also available as special version with 400 resp. 500 mm height of the vertical column or with 300 mm long horizontal arm.

Scope or supply P17 and P 280

The Magnetic Stands P 17 and P 280 are supplied completely mounted with Magnetic Base.

Post and Support Arm Assemblies and the Magnetic Base are separately available.

A wooden box is supplied at an extra charge.

Delivery: without Dial Gauge

Magnetic Stand P 17	
Length of the magnetic base	70 mm
Height of the magnetic base	65 mm
Breadth of the magnetic base	46 mm
Magnetic force	450 N
Length of the horizontal arm	180 mm
Diameter of the horizontal arm	16 mm
Fine adjustment	yes
Length of the vertical column	220 mm
Diameter of the vertical column	16 mm
Holder opening	8 mm H7

Magnetic Stand P 280	
Length of the magnetic base	70 mm
Height of the magnetic base	65 mm
Breadth of the magnetic base	46 mm
Magnetic force	450 N
On / off switch	yes
Operating range	280 mm
Fine adjustment	yes
Locking system	mechanical
Features a	mechanical central lock
Holder opening	8 mm H7

The Magnetic Stand P 17 can also be supplied with a holder opening of 10 mm H7: Order text: P 17 (10 H 7).

Precision Measuring Tables P 7 and P 7K

The Precision Measuring Tables P 7 and P 7K are sturdily built and accurately finished. Their surface plates are separated from the main body resting on three support points.

The carrying arm is adjustable for height on the vertical column. The column is hardened and ground.

Precision Measuring Table P 7K	
Measuring capacity	100 mm
Depth of throat	50 mm
Column-Ø	22 mm
Base-Ø	50 mm
Material of the base	ceramic AL_2O_3 99.7%
Roughness Ra	<= 0.1 mm
Flatness of the base	< 1.0 µm
Holder opening	8 mm H7

Precision Measuring Table P 7	
Measuring capacity	100 mm
Depth of throat	50 mm
Column-Ø	22 mm
Base-Ø	50 mm
Material of the base	steel
Base	hardened, ground and lapped
Flatness of the base	< 4.0 µm
Holder opening	8 mm H7

Model shown: P 7

On request the Measuring Table P 7 is also available with special fittings:

- **Measuring Table P 7** with fluting
- **Measuring Table P 7** with measuring ball Ø = 30 mm
- **Measuring Table P 7** with measuring height of 165 mm
- **Measuring Table P 7** with measuring height of 215 mm
- **Measuring Table P 7** with measuring height of 315 mm
- **Measuring Table P 7** with circular support plate of Ø 80 mm
- **Measuring Table P 7** with circular support plate of Ø 90 mm
- **Measuring Table P 7** with adjustable support plate for use as base for table-thickness gauges

Delivery without Dial Gauge.

Other Measuring Tables with different heights, support plates and in special versions are available on request.

Saw Setting Dial Gauge

with dial on both sides

The advantages of having a correctly set saw for all sawing work are well known. By using a Saw Setting Dial Gauge any specified set for various kinds of timber can be exactly maintained, thus ensuring maximum output and efficient workmanship.

The method of measuring could not be simpler. The Gauge is laid on the saw blade so that the sprung tracer touches the cutting edges of the saw. The pointer gives instant reading of the measurement. As the Gauge has a dial on both sides, it can be used either left or right handed.

Saw Setting Dial Gauge with dial an both sides with contact point and stand rods made from steel	
Reading	0.1 mm
Range	2 mm
Range per revolution	1 mm
Bezel-Ø	40 mm
Tolerance indicator	on both sides
Dial	on both sides for left or right handed use
Standard contact point	flat Ø 10 mm
Optional contact points, available on request:	
Model B, special contact point	pointed
Model C, special contact point	flat Ø 4.8 mm
Special contact point	spherical

Saw Setting Dial Gauge H with dial on both sides with contact point and stand rods made from carbide	
Reading	0.1 mm
Range	2 mm
Range per revolution	1 mm
Bezel-Ø	40 mm
Tolerance indicator	on both sides
Dial	on both sides for left or right handed use
Standard contact point	flat Ø 10 mm
Optional contact points, available on request:	
Model B, special contact point	pointed
Model C, special contact point	flat Ø 4.8 mm
Special contact point	spherical

As standard Saw Setting Dial Gauges are supplied with a flat contact point 10 mm diameter.
Please indicate in your order text if one of the optional contact points is needed. Please note that the contact points are not interchangeable.

On request the Saw Setting Dial Gauges are also available with 0.01 mm reading instead of 0.1 mm reading.
Order text: Saw Setting Dial Gauge – 0.01 mm or Saw Setting Dial Gauge H – 0.01 mm.

Standard version

Model B

Model C

Saw Setting Dial Gauge Z

inch reading with dial on both sides

The advantages of having a correctly set saw for all sawing work are well known. By using a Saw Setting Dial Gauge any specified set for various kinds of timber can be exactly maintained, thus ensuring maximum output and efficient workmanship.

The method of measuring could not be simpler. The Gauge is laid on the saw blade so that the sprung tracer touches the cutting edges of the saw. The pointer gives instant reading of the measurement. As the Gauge has a dial on both sides, it can be used either left or right handed.

Saw Setting Dial Gauge Z with dial an both sides with contact point and stand rods made from steel	
Reading	.001"
Range	.080"
Range per revolution	.040"
Bezel-Ø	1 9/16"
Tolerance indicator	on both sides
Dial	on both sides for left or right handed use
Standard contact point	flat Ø 10 mm
Optional contact points, available on request:	
Model B, special contact point	pointed
Model C, special contact point	flat Ø 4.8 mm
Special contact point	spherical

Saw Setting Dial Gauge HZ with dial on both sides with contact point and stand rods made from carbide	
Reading	.001"
Range	.080"
Range per revolution	.040"
Bezel-Ø	1 9/16"
Tolerance indicator	on both sides
Dial	on both sides for left or right handed use
Standard contact point	flat Ø 10 mm
Optional contact points, available on request:	
Model B, special contact point	pointed
Model C, special contact point	flat Ø 4.8 mm
Special contact point	spherical

As standard Saw Setting Dial Gauges Z and HZ are supplied with a flat contact point 10 mm diameter. Please indicate in your order text if one of the optional contact points is needed. Please note that the contact points are not interchangeable.

Model C

Model B

Standard version

Saw Setting Dial Gauge K 2/61

metric reading with dial on both sides with stand feet at right angel to the dial

Saw Setting Dial Gauge Z K 2/61

inch reading with dial on both sides with stand feet at right angel to the dial

The advantages of having a correctly set saw for all sawing work are well known. By using a Saw Setting Dial Gauge any specified set for various kinds of timber can be exactly maintained, thus ensuring maximum output and efficient workmanship.

The stand feet at right angle to the dial allow a very safe positioning of the Saw Setting Dial Gauge and thus an even more reliable measurement.

Saw Setting Dial Gauge K 2/61 with dial an both sides with stand feet at right angel to the dial	
Reading	0.1 mm
Range	2 mm
Range per revolution	1 mm
Bezel-Ø	40 mm
Tolerance indicator	on both sides
Dial	on both sides for left or right handed use
Standard contact point	flat Ø 10 mm
Optional contact points, available on request:	
Model B, special contact point	pointed
Model C, special contact point	flat Ø 4.8 mm
Special contact point	spherical

Saw Setting Dial Gauge Z K 2/61 with dial on both sides with stand feet at right angel to the dial	
Reading	.001"
Range	.080"
Range per revolution	.040"
Bezel-Ø	1 9/16"
Tolerance indicator	on both sides
Dial	on both sides for left or right handed use
Standard contact point	flat Ø 10 mm
Optional contact points, available on request:	
Model B, special contact point	pointed
Model C, special contact point	flat Ø 4.8 mm
Special contact point	spherical

As standard Saw Setting Dial Gauges K 2/61 and Z K 2/61 are supplied with a flat contact point 10 mm diameter. Please indicate in your order text if one of the optional contact points is needed. Please note that the contact points are not interchangeable.

Other special versions of Saw Setting Dial Gauges and of Saw Setting Dial Gauges Z are available on request:

- **Saw Setting Dial Gauge**
  with short case to drawing K 2/42
- **Saw Setting Dial Gauge**
  with supporting plate to drawing K 2/43
- **Saw Setting Dial Gauge Z**
  with short case to drawing K 2/42
- **Saw Setting Dial Gauge Z**
  with supporting plate to drawing K 2/43

Dial Depth Gauge TM 5 R

with matt chromed measuring base

The base is matt chromed, hardened and lapped.

The metal collet attachment guarantees reliable fixing of the Dial Gauge. An additional internal hexagon screw makes exchanging the Dial Gauge easier.

The back plunger Dial Gauge provides a very easy reading of this model of Dial Depth Gauge: The Gauge can be read from the top.

Dial Depth Gauge TM 5 R	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Base dimensions	80 x 16 mm
Accuracy to	manufacturing standard 0.0500.9.0006 hysteresis fu however not checked
Dial numbering	anti-clockwise

Spare Dial Gauge for TM 5 R

with contact point 537/21-L 13

The Spare Dial Depth Gauge for TM 5 R is supplied with contact point 573/21-L13, but without the base.

The contact point 573/21-L13 with a length of 13 mm is also available as a spare part. The article number is 62360.

Spare Dial Gauge for TM 5 R	
Reading	0.01 mm
Range	5 mm
Range per revolution	0.5 mm
Bezel-Ø	40 mm
Stem-Ø	8 h 6
Accuracy to	manufacturing standard 0.0500.9.0006 hysteresis fu howver not checked
Dial numbering	anti-clockwise

Bases for Dial Depth Gauges

For the Dial Depth Gauges, 5 bases are available with the following dimensions:

Base TB 50	50 x 16 mm
Base TB 80	80 x 16 mm
Base TB 100	100 x 16 mm
Base TB 120	120 x 20 mm
Base TB 150	150 x 20 mm

The bases are interchangeable. Each base has a bore of 8 mm Ø H7. It is matt chromed and hardened. The contact face is lapped. The metal collet attachment guarantees reliable fixing of the Dial Gauges.

Dial Depth Gauge TM/2

with matt chromed measuring base

The base is matt chromed, hardened and lapped.

The metal collet attachment guarantees reliable fixing of the Dial Gauge. An additional internal hexagon screw makes exchanging the Dial Gauge easier.

The Dial Depth Gauge TM/2 is supplied completely mounted with base TB 80 and the 10 mm long contact point 573/21.

Dial Depth Gauge TM/2	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Base dimensions	80 x 16 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Dial reading	anti-clockwise

Model shown: TM/2

Inch Dial Depth Gauge TZ/2

with matt chromed measuring base

The Dial Depth Gauge TZ/2 bears the same technical features as the model TM/2 except for the reading of .001".

The pointed insert 573/13 is of the same overall length as the standard contact point 573/21. It is suitable for measuring the depth of an engraving.

Spare Dial Depth Gauges are supplied with contact points 573/21, but without base.

Dial Depth Gauge TZ/2	
Reading	.001"
Range	.400"
Range per revolution	.100"
Bezel-Ø	58 mm
Base dimensions	80 x 16 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Dial reading	anti-clockwise

Bases for Dial Depth Gauges

For the Dial Depth Gauges, 5 bases are available with the following dimensions:

Base TB 50	50 x 16 mm
Base TB 80	80 x 16 mm
Base TB 100	100 x 16 mm
Base TB 120	120 x 20 mm
Base TB 150	150 x 20 mm

The bases are interchangeable. Each base has a bore of 8 mm Ø H7. It is matt chromed and hardened. The contact face is lapped. The metal collet attachment guarantees reliable fixing of the Dial Gauges. Flatness according to DIN 876/0.

Dial Depth Gauge TM 2/30

with matt chromed measuring base

The concentric millimetre pointer allows easy and safe reading of the Dial Depth Gauge TM 2/30. It is supplied completely mounted with contact point 573/21 and base TB 80.

Spare Dial Depth Gauges are supplied with contact points 573/21, but without base.

Dial Depth Gauge TM 2/30	
Reading	0.01 mm
Range	30 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Base dimensions	80 x 16 mm
Accuracy according to	manufacturing standard 1.0200.9.0014 hysteresis fu however not checked
Dial reading	anti-clockwise

Model shown: TM 2/30

Inch Dial Depth Gauge TZ 2/30

with matt chromed measuring base

The Dial Depth Gauge TZ 2/30 bears the same technical features as the model TM 2/30 except for the reading of .001".

Extensions are suitable accessories for Dial Depth Gauges. They are available in lengths from 10 to 100 mm and from .400“ to 4.000“. Please take note of the range of products on pages 88 and 89 of our catalogue.

Dial Depth Gauge TZ 2/30	
Reading	.001”
Range	1.000”
Range per revolution	.100”
Bezel-Ø	58 mm
Base dimensions	80 x 16 mm
Accuracy analogous to	manufacturing standard 1.0200.9.0014 hysteresis fu however not checked
Dial reading	anti-clockwise

Special Bases for Dial Depth Gauges

Due to its prismatic form the Base TB 66 P is particularly suited for measurements on tubes with a diameter of 10 – 100 mm.

Bases for Dial Depth Gauges with flat bearing surfaces are available in the following dimensions:

Base TB 200	200 x 20 mm
Base TB 250	250 x 20 mm
Base TB 300	300 x 25 mm

All Bases have a bore Ø of 8 mm H 7. The Bases are burnished, hardened, ground and finely lapped. Flatness according to DIN 876/0.
Bases with special lengths are available on request.

Digital Depth Gauge TMD 12

with matt chromed measuring base and digital display

The base is matt chromed, hardened and lapped.

The metal collet attachment guarantees reliable fixing of the Dial Gauge. An additional internal hexagon screw makes exchanging the Dial Gauge easier.

The Digital Depth Gauge TMD 12 is supplied completely mounted with base TB 80 and the 12 mm long contact point 573/18 with a ball Ø of 1 mm.

Digital Depth Gauge TMD 12	
Resolution	0.01 mm / .0005"
Range	12.5 mm / .5"
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C up to + 40 °C
Maximum error	10 µm / .0004" ± 1 Digit

Model shown: TMD 12

Digital Depth Gauge TMD 25

with matt chromed measuring base and digital display

The Digital Depth Gauge TMD 25 bears the same technical features as the model TMD 12 except for the range of 25 mm.

Both models can be set to Inch-display, their resolution is then .0005".

Spare Digital Depth Gauges are supplied with contact points 573/18, but without base.

Digital Depth Gauge TMD 25	
Resolution	0.01 mm / .0005"
Range	25 mm / 1.00"
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C up to + 40 °C
Maximum error	10 µm / .0004" ± 1 Digit

Bases for Digital Depth Gauges

For the Digital Depth Gauges, 5 bases are available with the following dimensions:

Base TB 50	50 x 16 mm
Base TB 80	80 x 16 mm
Base TB 100	100 x 16 mm
Base TB 120	120 x 20 mm
Base TB 150	150 x 20 mm

All bases have a bore Ø of 8 mm H7. They are mutually interchangeable. The bases are matt chromed and hardened. Their support faces are lapped. The metal collet attachment guarantees reliable fixing of the Dial Gauges.
Flatness according to DIN 876/0.

SPECIAL MEASURING GAUGES

Tyre Depth Gauge PTM

with round base

By means of the Tyre Depth Gauge PTM the tread depth of vehicle tyres can be accurately measured.

The method of measuring is very simple. The Gauge with its round Base is placed on the tyre so that the spindle with the contact point at its end enters into the tread of the tyre. The pointer gives instant reading of the measurement.

The red extent of tolerance from 1.6 to 0 mm indicates that the tread depth of the tyre is too small.

Reading ..... 0.1 mm
Range ..... 10.0 mm

JKA FEINTASTER Precision Gauge

with contact jaws

This special measuring instrument has been specially designed for the watchmaker. The contact jaws and the adjustable measuring table makes it possible to measure accurately and easily the thickness and run out of spigots and shafts.

Reading ..... 0.01 mm
Range ..... 10.0 mm

Distance Measuring Gauge Quickmess

with integrated measuring stops Ø 1, 3 and 5 mm

Due to its integrated measuring stop, Quickmess eliminates the need of a special inspection room when measuring small parts with small diameters and a maximum length of 30 mm. For the measuring operation, the specimen is inserted into the measuring stop. It pushes the measuring insert upwards. The stop limits the stroke of the spindle to the distance that requires measurement.

The Distance Measuring Gauge Quickmess is also available as a large version, with integrated measuring stops choice of Ø from 8 mm to 20 mm.

Reading ..... 0.01 mm
Range ..... 30.0 mm

Please request our offers.

Thickness Gauges

Technical Data for Metric Thickness Gauges

Page	Model	Reading mm	Range mm	Depth of jaw mm	Lifting device	Contact points standard	Contact points available on request
130	K 15	0.1	10	15	no	6.35 mm Ø flat	10 mm Ø flat,
130	K 15/2	0.1	20	15	no	6.35 mm Ø flat	convex or spherical
116	K 50	0.1	10	50	no	c	a, b, d or e
116	K 50 with lifting device	0.1	10	50	yes	c	a, b, d or e
117	K 50/2	0.1	20	50	no	c	a, b, d or e
117	K 50/3	0.1	30	50	no	c	a, b, d or e
118	K 50/5	0.1	50	50	no	c	a, b, d or e
-	K 100	0.1	30	100	no	c	a, b, d or e
119	K 200	0.1	30	200	yes	c	a, b, d or e
120	K 300	0.1	30	300	yes	c	a, b, d or e
120	K 400	0.1	30	400	yes	c	a, b, d or e
131	J 12	0.01	8	12	yes	6.35 mm Ø flat	spherical
131	J 15	0.01	10	18	yes	6.35 mm Ø flat	10 mm Ø flat,
-	J 45	0.01	10	45	yes	6.35 mm Ø flat	convex or spherical
121	J 50	0.01	10	50	no	c	a, b, d or e
122	J 50 with lifting device	0.01	10	50	yes	c	a, b, d or e
123	JD 50	0.01	10	50	yes	c	a, b, d or e
123	JD 50 TOP	0.01	10	50	yes	c	a, b, d or e
-	J 50 /30	0.01	30	50	no	c	a, b, d or e
-	J 50/30 with lifting device	0.01	30	50	yes	c	a, b, d or e
124	JD 50/25	0.01	25	50	yes	c	a, b, d or e
132	J 50 R	0.01	5	50	yes	rollers	
132	J 50 R without side discs	0.01	5	50	yes	rollers without side discs	
-	JD 50 R	0.01	10	50	yes	rollers	
-	JD 50 R without side discs	0.01	10	50	yes	rollers without side discs	
133	J 50 W	0.01	10	50	yes	pin with collar for pipe walls	
133	JD 50 W	0.01	10	50	yes	pin with collar for pipe walls	
138	J 50/3 WP	0.01	20	50	no	for corrugated boards	
125	J 100	0.01	10	100	yes	c	a, b, d or e
123	JD 100	0.01	10	100	yes	c	a, b, d or e
123	JD 100 TOP	0.01	10	100	yes	c	a, b, d or e
-	J 100/30	0.01	30	100	yes	c	a, b, d or e
124	JD 100/25	0.01	25	100	yes	c	a, b, d or e
125	J 200	0.01	10	200	yes	c	a, b, d or e
-	JD 200	0.01	10	200	yes	c	a, b, d or e
-	J 200/30	0.01	30	200	yes	c	a, b, d or e
137	9073-2	0.01	28	200	yes	flat to DIN EN ISO 9073/2	
-	JD 200/25	0.01	25	200	yes	c	a, b, d or e
-	J 300	0.01	10	300	yes	c	a, b, d or e
-	JD 300	0.01	10	300	yes	c	a, b, d or e
134	F 1000/30	0.001	1	30	yes	6.35 mm Ø flat	convex R 15 or R 40,
135	F 1101/30	0.001	1	30	yes	6.35 mm Ø flat	flat 10 mm Ø,
135	F 1101/30-0.1	0.001	0.1	30	yes	6.35 mm Ø flat	spherical
136	FD 1000/30-3	0.001	3	30	yes	6.35 mm Ø flat	
126	F 50	0.001	5	50	yes	c	a, b, d or e
127	FD 50 with lifting device	0.001	10	50	yes	c	a, b, d or e
-	FD 50/25	0.001	25	50	yes	c	a, b, d or e
-	FD 100/25	0.001	25	100	yes	c	a, b, d or e
127	FD 200/25	0.001	25	200	yes	c	a, b, d or e

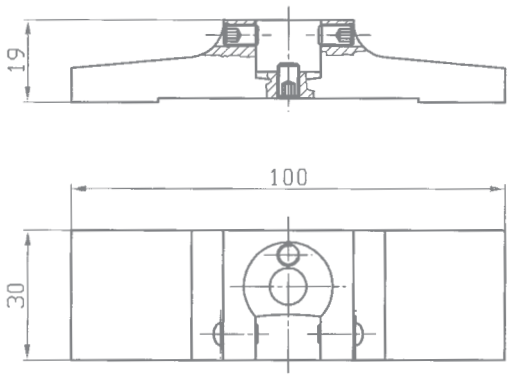
The contact points listed in the column 'standard' will be mounted unless the order calls for specials. Thickness Gauges can be supplied with contact points listed in the column 'available on request' without extra costs.
Schematic diagrams of the contact points style a, b, c, d and e can be found on page 115.
Thickness Gauges adding ‚D' in the model designation possess a digital indicating instrument.

Technical merits

of our Dial Thickness Gauges with large frame depth

Stand 2.1670

This Stand converts the Dial Thickness Gauges K 50, K 100, J 50, J 100 and F 1101/30 as well as the respective digital models, designed for hand-held use, to table models. Retrofitting this Stand to older models is possible.



Contact Points

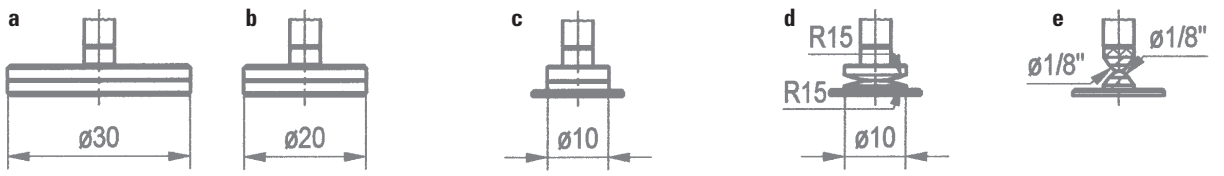
for Dial Thickness Gauges with large frame depth

Dial Thickness Gauges are used for measuring the thickness of a very wide range of materials such as leather, paperboard, paper, felt, rubber, glass, sheet, metal, films, plywood and plastics. The shape of the contact points should be adapted to the material being measured.

We normally supply all our Dial Thickness Gauges with contact points to form c as standard, unless otherwise stated in this catalogue. Gauges can be supplied with other forms of contact points (a, b, d or e) at no extra cost. Should you require non standard contact points, please state on your order the type of contact points we must supply (for example: Dial Thickness Gauge J 50 with contact points form a).

Special flat contact points up to diameter of 56 mm are available at additional cost. These include contact points with precise contact area, for example Ø of 11.3 m to give 1 cm^2 of contact area.

A new attachment, 3.2272, with a female thread M 2.5 is available for Dial Thickness Gauges models K and J 50 - 300. This attachment enables the use of profiled contact points shown on the catalogue pages 87 and 88.



a: rubber, felt, soft materials

b

c: soft leather, cardboard, paper, foils

d: hard leather, plywood, fibrous plates

e: sheets, hard materials

Dial Thickness Gauge K 50

In standard version the Dial Thickness Gauge K 50 will be supplied with contact points form c.

When ordering, please state whether you require another form of contact points than form c. The forms of contact points a, b, d or e are available at the same price. Flat special contact points with special diameters of up to 56 mm Ø are available for a surcharge.

Dial Thickness Gauge K 50	
Reading	0.1 mm
Range	10 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauge for K 50

The Spare Dial Gauge for K 50 is equipped with the extension 3.2236. This extension with M 3 male thread is required for mounting the upper contact points form a and b. When fitting contact points form c, d or e then it is necessary to remove this extension.

For a surcharge we will supply the Spare Dial Gauge for K 50 with the upper contact point form a, b, c, d or e.

Spare Dial Gauge for K 50	
Reading	0.1 mm
Range	10 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Model **K 50 with lifting device** has the same technical specification as model K 50 with pressure lever. At rest the contact points are closed. This style has the advantage that the contact pressure of 0.5 N is applied independently of the user. The **Spare Dial Gauge for K 50 with lifting device** will be supplied without lifting device unless requested on the order.

Dial Thickness Gauge K 50/2

Dial Thickness Gauge K 50/3

The Dial Thickness Gauges K 50/2 and K 50/3 differ only in measuring range and the kind of revolution counter. On model K 50/3 the counter is designed as linear auxiliary scale while on model K 50/2 it is a revolution counter with a small hand.

Dial Thickness Gauge K 50/2	
Reading	0.1 mm
Range	20 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Dial Thickness Gauge K 50/3	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Model shown: K 50/3

On request the models K 50/2 and K 50/3 are also available with a strengthened lifting device at the back.

On both of these models a spring produces the measuring force. Thus the contact pressure is independent of the user.

Please request our offers.

Spare Dial Gauge for K 50/2	
Reading	0.1 mm
Range	20 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Spare Dial Gauge for K 50/3	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Dial Thickness Gauge K 50/5

In standard version the Dial Thickness Gauge K 50/5 will be supplied with contact points form c. Delivery with contact points form a, b, d or e only when stated in the order.

The Dial Thickness Gauge K 300/50 with 300 mm jaw depth and 50 mm measuring range can be delivered as special variant.

Please request our offers.

Dial Thickness Gauge K 50/5	
Reading	0.1 mm
Range	50 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauge for K 50/5

The Spare Dial Gauge for K 50/5 will be supplied with the extension 3.2236. For a surcharge we will supply the Spare Dial Gauge for K 50/5 with the upper contact point form a, b, c, d or e.

Delivery is without push rod, compression spring and push button. These spare parts are separately available.

Spare Dial Gauge for K 50/5	
Reading	0.1 mm
Range	50 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Dial Thickness Gauge K 200

The Dial Thickness Gauge K 200 possesses a lifting device and thus the contact force is independent of the user.

For the model K 200 in standard version the contact force is 1.8 N. Specials with increased or reduced contact force are available on request with values listed in the table below the illustration.

Dial Thickness Gauge K 200	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	200 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauge for K 200 – K 400

The Spare Dial Gauges for models K 200, K 300 and K 400 are of the same design. They will be supplied just like all the other Spare Dial Gauges without contact point but with the extension 3.2236.

For a surcharge we will supply the Spare Dial Gauge for K 200 - K 400 with the upper contact point form a, b, c, d or e.

Spare Dial Gauge for K 200 – K 400	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Table of Contact Force

Model	Standard Force	Reduced Force	Increased Force
K 50 with lifting device	0.5 N	—	1.2 N
K 200	1.8 N	0.9 N	2.5 N
K 300	1.8 N	0.9 N	2.5 N
K 400	1.8 N	0.9 N	2.5 N

Variants with push-on rod and additional weights on request.

Dial Thickness Gauges K 300 and K 400

The Dial Thickness Gauges K 200, K 300 and K 400 have the same form of jaw. Only the depth of jaw is different.

The use of aluminium for the body of the instruments makes them light and easy to handle. A mounting device makes it possible to use them as a table unit.

Additonal weigths for K 200 – K 400

Additional weights are available to increase the contact pressure on Dial Thickness Gauges K 200 to K 400.

These weights can be attached to the shaft at the top of the Dial Gauge.

Please contact us for further details.

Dial Thickness Gauge K 300	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	300 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Dial Thickness Gauge K 400	
Reading	0.1 mm
Range	30 mm
Range per revolution	10 mm
Bezel-Ø	58 mm
Depth of jaw	400 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Model shown: K 300 special version with additional weights and special contact points Ø 50 mm

We also offer a Dial Thickness Gauge with enlarged frame with jaw depth of 300 mm and extended measuring range of 50 mm or 80 mm. This instrument can be delivered with readings of 0.1 mm resp. 0.01 mm.
All variations are furnished with push button and stand. Please request our offers.

Dial Thickness Gauge J 50

In standard version the Dial Thickness Gauge J 50 will be supplied with contact points form c.

When ordering, please state whether you require another form of contact points than form c. The forms of contact points a, b, d or e are available at the same price. Flat special contact points with special diameters of up to 56 mm Ø are available for a surcharge.

Dial Thickness Gauge J 50	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauge for J 50

The Spare Dial Gauge for J 50 is equipped with the extension 3.2236. This extension with M 3 male thread is required for mounting the upper contact points form a and b. When fitting contact points form c, d or e then it is necessary to remove this extension.

For a surcharge we will supply the Spare Dial Gauge for J 50 with the upper contact point form a, b, c, d or e.

Spare Dial Gauge for J 50	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Another Dial Thickness Gauge of the same family is J 50/30 (depth of jaw 50 mm, range 30 mm).

Dial Thickness Gauge J 50

with lifting device

The Dial Thickness Gauge J 50 possesses a lifting device and thus the contact force is independent of the user.

For the model J 50 in standard version the contact force is 0.8 N. Specials with increased or reduced contact force are available on request with values listed in the table below the illustration.

Dial Thickness Gauge J 50 with lifting device	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauge for J 50

with lifting device

The Spare Dial Gauge for model J 50 with lifting device will be delivered like all other Spare Dial Gauges without lifting device and contact point but with extension 3.2236.

For a surcharge we will supply the Spare Dial Gauge for J 50 with the upper contact point form a, b, c, d or e.

Spare Dial Gauge for J 50 with lifting device	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Table of Contact Force

Model	Standard Force	Reduced Force	Increased Force
J 50 with lifting device	0.8 N	0.6 N	2.0 N
J 50/30 with lifting device	1.5 N	1.2 N	3.0 N
J 100	0.8 N	0.6 N	2.0 N
J 200	1.5 N	1.2 N	3.0 N
J 200/30	1.5 N	1.2 N	3.0 N

Variants with push-on rod and additional weights on request.

Digital Thickness Gauge JD 50

with lifting device

Digital Thickness Gauge JD 50 TOP

with lifting device

The large digital display has a good visual perception for easy reading of the measuring result. The use of aluminium for the body of the instruments makes them light and easy to handle.

Digital Thickness Gauge JD 50 with lifting device	
Resolution	0.01 mm / .0005"
Range	10 mm / .400"
Depth of jaw	50 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004" ± 1 Digit
Standard contact point	form c
Optional contact points	forms a, b, d or e

Digital Thickness Gauge JD 50 TOP with lifting device	
Resolution	0.01 mm / .0005"
Range	10 mm / .400"
Depth of jaw	50 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	capacitive
Power supply	on Lithium battery 3 V
Battery life	2 years
Output	Opto RS 232 or Digimatic
Working temperature	+10 °C – +40 °C
Maximum error	20 µm / .0008" + 1 Digit
Standard contact point	form c
Optional contact points	forms a, b, d or e

Our models JD 100 and JD 100 TOP have exactly the same technical data, but a jaw depth of 100 mm.

Digital Thickness Gauge JD 50/25

with lifting device

Digital Thickness Gauge JD 100/25

with lifting device

The use of a frame with large frame height together with a Digital Dial Indicator with 25 mm measuring range and a reinforced lifting device attached to the rear results in a Thickness Gauge which combines the advantages of easy handling and large measuring range suitable for various applications. Together with the Stand 2.1670 this converts a portable instrument quickly without complications to a table instrument.

The following functions can be used for all Digital Dial Gauges in connection with our Thickness Gauges:

- Zero setting
- mm/inch selection
- Memory set Hold
- Data transmission
- Ref I / Ref II
- Preset value recall
- Selection of measuring direction
- Selection of reading (only FD series)
- Data request by any ASCII Code

Digital Thickness Gauge JD 50/25 with lifting device	
Resolution	0.01 mm / .0005"
Range	25 mm / 1"
Depth of jaw	50 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004"± 1 Digit
Standard contact point	form c
Optional contact points	forms a, b, d or e

Digital Thickness Gauge JD 100/25 with lifting device	
Resolution	0.01 mm / .0005"
Range	25 mm / 1"
Depth of jaw	100 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004"± 1 Digit
Standard contact point	form c
Optional contact points	forms a, b, d or e

Other models of Digital Thickness Gauges of the same family:

- **Digital Thickness Gauge FD 50/25**
  resolution 0.001 mm/ .00005"
  range 25 mm / 1"
  depth of jaw 50 mm
- **Digital Thickness Gauge FD 100/25**
  resolution 0.001 mm / .00005"
  range 25 mm / 1"
  depth of jaw 100 mm

Dial Thickness Gauge J 100

Dial Thickness Gauge J 200

Dial Thickness Gauges J 100 and J 200 differ only by their jaw depth and by the kind of lifting device. On model J 100 the latter is positioned on top of the Dial Gauge. On the Dial Thickness Gauge J 200 the lifting lever is attached to a pin through the measuring spindle. Because of the use of a reinforced frame for J 200 this model can just as the model J 200/30 only be supplied as portable instrument. A stand is available on request.

Dial Thickness Gauge J 100	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	100 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Dial Thickness Gauge J 200	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	200 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

The **Dial Thickness Gauge J 200/30** is supplied with the same jaw as model J 200. The Dial Gauge has however a measuring range of 30 mm and a second concentric hand. This concentric hand allows easy and safe reading of the Dial Gauge.

Spare Dial Gauge for J 100	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Spare Dial Gauge for J 200	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Dial Thickness Gauge F 50

with lifting device

High resolution while offering a relative large measuring range distinguishes this Dial Thickness Gauge. The lifting device provides the initial measuring force of 1.2 N independent of the user.

In standard version the Dial Thickness Gauge F 50 will be supplied with contact points form c. When ordering, please state whether you require another form of contact points than form c. The forms of contact points a, b, d or e are available at the same price.

Dial Thickness Gauge F 50 with lifting device	
Reading	0.001 mm
Range	5 mm
Range per revolution	0.2 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Accuracy according to	manufacturing standard 0.0500.9.0001, hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauge for F 50

with lifting device

Spare Dial Gauges for the model F 50 with lifting device will be supplied like all the other Spare Dial Gauges without lifting device and without contact point but with extension 3.2236.

Delivery of a Spare Dial Gauge for F 50 with the upper contact point form a, b, c, d or e at a surcharge.

Spare Dial Gauge for F 50 with lifting device	
Reading	0.001 mm
Range	5 mm
Range per revolution	0.2 mm
Bezel-Ø	58 mm
Stem-Ø	8 h 6
Accuracy according to	manufacturing standard 0.0500.9.0001, hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Digital Thickness Gauge FD 50

with lifting device

Digital Thickness Gauge FD 200/25

with lifting device

The large digital display has a good visual perception for easy reading of the measuring result. While the model FD 50 together with stand 2.1670 can be used as table model, the model FD 200/25 with reinforced frame is supplied without stand for use as portable instrument. A stand is available on request.

The use of aluminium for the robust body of the instruments makes them light and easy to handle.

Digital Thickness Gauge FD 50 with lifting device	
Resolution	0.001 mm / .00005"
Range	10 mm / .400"
Depth of jaw	50 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	5 µm / .0002"
Standard contact point	form c
Optional contact points	forms a, b, d or e

Digital Thickness Gauge FD 200/25 with lifting device	
Resolution	0.001 mm / .00005"
Range	25 mm / 1"
Depth of jaw	200 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	5 µm / .0002"
Standard contact point	form c
Optional contact points	forms a, b, d or e

Spare Dial Gauges are available for all Digital Thickness Gauges. They will be delivered without contact point and without lifting device but with extension for mounting the upper contact points form a or b. For the contact points form c, d and e the extension is not required.

For all Digital Thickness Gauges except for model JD 50 TOP the data connection cable DCMD 232, illustrated on page 128, can be used as suitable accessory.

SPARE DIAL GAUGES FOR DIGITAL THICKNESS GAUGES

Spare Dial Gauges are available for all Digital Thickness Gauges. They will be supplied without contact point and without lifting device but with extension for mounting the upper contact points form a and b. For the contact points form c, d and e the extension is not required.

For Digital Thickness Gauges the data cables illustrated below are available at an extra charge.

Spare Gauges for Digital Thickness Gauges

Spare Dial Gauge	Resolution	Range	extension for contact points form a and b (included in the scope of delivery)	Data cable
JD 50	0.01 mm	10 mm	3.2236-0	DCMD 232 / DCMD USB
JD 50 TOP	0.01 mm	10 mm	3.2236-0	DCMV 232 or DCMV DIGIMATIC
JD 100	0.01 mm	10 mm	3.2236-0	DCMD 232 / DCMD USB
JD 50/25	0.01 mm	25 mm	3.2236-1	DCMD 232 / DCMD USB
JD 100/25	0.01 mm	25 mm	3.2236-1	DCMD 232 / DCMD USB
JD 200	0.01 mm	10 mm	3.2236	DCMD 232 / DCMD USB
JD 300	0.01 mm	10 mm	3.2236	DCMD 232 / DCMD USB
JD 200/25	0.01 mm	25 mm	3.2236	DCMD 232 / DCMD USB
JD 50 W	0.01 mm	10 mm	–	DCMD 232 / DCMD USB
FD 50	0.001 mm	10 mm	3.2236-0	DCMD 232 / DCMD USB
FD 50/25	0.001 mm	25 mm	3.2236-1	DCMD 232 / DCMD USB
FD 100/25	0.001 mm	25 mm	3.2236-1	DCMD 232 / DCMD USB
FD 200/25	0.001 mm	25 mm	3.2236	DCMD 232 / DCMD USB

Data cable DCMD 232

In standard version 2 m long, maximum length 15 m.
SUB-D jack 9 – pin / F.

Data cable DCMV 232

In standard version 2 m long.
SUB-D jack 9 – pin.

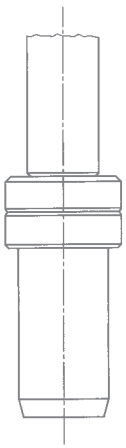
Contact points

for Pocket Dial Thickness Gauges

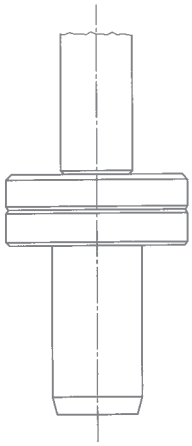
Pocket Dial Thickness Gauges are used for measuring the thickness of a very wide range of materials such as leather, paperboard, paper, felt, rubber, glass, sheet, metal, films, plywood and plastics. The shape of the contact points should be adapted to the material being measured. If other contact points than the standard contact points are required then this is to be stated in the order. (Example: J 45 with spherical contact points).

Standard contact points 6.35 mm Ø flat will be supplied unless otherwise stated on the order. The other three anvils shown below are available on request. The type of contact point does not affect the price of the Dial Thickness Gauge. Please note that the contact points are not interchangeable.

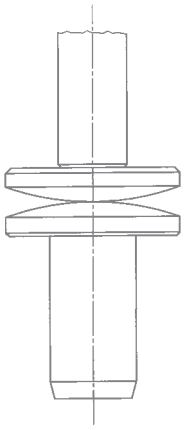
The Thickness Gauges K 15, K 15/2, J 15 and J 45 with contact points 10 resp. 14 mm Ø, ground down at the rear, are available at a surcharge. In this case the instrument is placed flat down on the table and is thus best suited for batch measurements of small components.



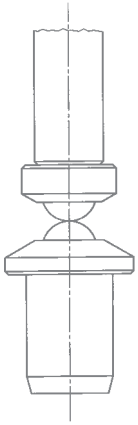
Standard contact point
6.35 mm Ø flat



Optional contact point
10 mm Ø flat



Optional contact point
convex



Optional contact point
spherical

Pocket Dial Thickness Gauge K 15

Pocket Dial Thickness Gauge K 15/2

The Pocket Dial Thickness Gauges K 15 and K 15/2 are supplied with flat contact points 6.35 mm Ø if no other form of contact points is ordered. When ordering, please state whether you require another form of contact points than 6.35 mm Ø flat. The optional contact points 10 mm Ø flat, convex or spherical are supplied at the same price. As the contact points are pressed in into the frame they are not individually exchangeable.

On request the Pocket Dial Thickness Gauges K 15 and K 15/2 can be supplied with a spindle blocking screw. The instruments can easily be set to zero by turning the knurled bezel.

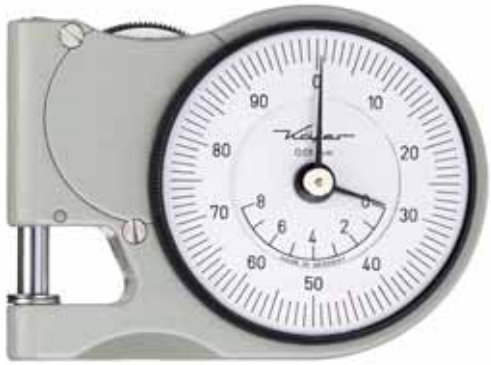
Pocket Dial Thickness Gauge K 15	
Reading	0.1 mm
Range	10 mm
Range per revolution	10 mm
Depth of jaw	15 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, convex or spherical

Pocket Dial Thickness Gauge K 15/2	
Reading	0.1 mm
Range	20 mm
Range per revolution	10 mm
Depth of jaw	15 mm
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, convex or spherical

Pocket Dial Thickness Gauge J 12

The Pocket Dial Thickness Gauge J 12 is light and handy. Solidly made, it has a wide application for measuring accurately within its measuring range of 8 mm.

Pocket Dial Thickness Gauge J 12	
Reading	0.01 mm
Range	8 mm
Range per revolution	1 mm
Depth of jaw	12 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact point	spherical



Pocket Dial Thickness Gauge J 15

The Pocket Dial Thickness Gauge J 15 distinguishes itself distinctly by its up to date and ergonomical design.
The Pocket Dial Thickness Gauge J 15 is equipped with plastic insulating plates. It is supplied in a convenient box with transparent lid.
The Pocket Dial Thickness Gauge J 45 is of similar design except for the jaw depth of 45 mm.

Pocket Dial Thickness Gauge J 15	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Depth of jaw	18 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, convex or spherical

The contact points are in contact when the Pocket Dial Thickness Gauges J 12 and J 15 are not in use. The serrated lifting wheel opens them for the insertion of the component. The size can be easily read off the scale. The instruments can be zeroed by using the knurled adjusting bezel.

Standard contact points 6.35 mm Ø will be supplied unless otherwise stated on the order. The optional contact points are available on request. The type of the contact point does not affect the price of the Pocket Dial Thickness Gauges. Please note that the contact points are not interchangeable.

A special version of the model J 15 for checking of drill core diameters up to max. 4 mm is equipped with contact points made of tungsten carbide according to drawing 791030/3. Please request our offers.

Dial Thickness Gauge J 50 R

This model has side discs at the lower roller for guiding the thread. It is therefore suited for measuring the thickness of wires and threads especially in continuous motion.

Dial Thickness Gauge J 50 R with side discs	
Reading	0.01 mm
Range	5 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Standard contact point	rollers with side discs
Width of the rollers	8.7 mm
Ø of the rollers	8.4 mm

Model shown: J 50 R without side discs

Dial Thickness Gauge J 50 R

without side discs

This model has no side discs at the lower roller.
It is therefore suited for the measurement of paper, foil, metal and sheet.

Dial Thickness Gauge J 50 R without side discs	
Reading	0.01 mm
Range	5 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	50 mm
Standard contact point	rollers without side discs
Width of the rollers	8.7 mm
Ø of the rollers	8.4 mm

Thickness Gauges with roller contact points are available in many variants:

- **Dial Thickness Gauge K 50 R**
  reading 0.1 mm, range 10 mm
- **Dial Thickness Gauge J 50/3 R**
  reading 0.01 mm, range 20 mm
- **Dial Thickness Gauge K 100 R**
  reading 0.1 mm, range 10 mm
  depth of jaw 100 mm
- **Dial Thickness Gauge K 200 R**
  reading 0.1 mm, range 10 mm
  depth of jaw 200 mm
- **Dial Thickness Gauge J 200 R**
  reading 0.01 mm, range 10 mm
  depth of jaw 200 mm
- **Dial Thickness Gauge F 50 R**
  reading 0.001 mm, range 5 mm
  depth of jaw 50 mm
- **Digital Thickness Gauge JD 50 R**
  resolution 0.01 mm / .0005”
  range 10 mm / .400”
  depth of jaw 50 mm
- **Digital Thickness Gauge JD 100 R**
  resolution 0.01 mm / .0005”
  range 10 mm / .400”
  depth of jaw 100 mm
- **Digital Thickness Gauge FD 50 R**
  resolution 0.001 mm / .00005”
  range 10 mm / .400”
  depth of jaw 50 mm

Please request our offers.

Wall Thickness Gauge JD 50 W

with digital reading

Wall Thickness Gauge J 50 W

with analogue reading

These Thickness Gauges allow accurate and fast measurement of the thickness of tube walls. They are equipped with contact points 6 mm Ø which have at their end a collar with a radius of 1 mm. This enables it to check tubes which still have a burr from parting.

A ground contact point pin of 6 mm Ø is included.

Wall Thickness Gauge JD 50 W with digital reading	
Resolution	0.01 mm / .0005"
Range	10 mm / .400"
Depth of jaw	50 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Working temperature	+5 °C – +40 °C
Maximum error	10 µm / .0004" ± 1 Digit

Wall Thickness Gauge J 50 W with analogue reading	
Reading	0.01 mm
Range	10 mm
Range per revolution	1 mm
Depth of jaw	50 mm
Bezel-Ø	58 mm
Accuracy according to	DIN 878
	hysteresis fu however not checked

Foil Dial Thickness Gauge F 1000/30

1 pointer revolution = 0.2 mm

Foil Thickness Gauge F 1000/30 is mainly used to measure the thickness of thick foils. It has a higher permissible deviation span than the models shown on page 135.

Its pointer revolution of 0.2 mm instead of 0.1 mm minimizes the impact of differences in temperature or other environmental influences. Therefore there is less need to set the hand to 0 by turning the plexi glass cover compared to the more accurate and more sensitive models F 1101/30 and F 1101/30-0.1.

Foil Dial Thickness Gauge F 1000/30	
Reading	0.001 mm
Range	1 mm
Depth of jaw	30 mm
Range per revolution	0.2 mm
Dial reading	0-100 / 0-100
Plexi glass	glare free
Bezel-Ø	58 mm
Accuracy according to	manufacturing standard 0.0500.9.0001, hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, upper contact point convex r 15 or r 40, lower contact point 6.35 mm Ø flat lower contact point convex r 15 spherical

The frame has the required rigidity, the insulation of the handle prevents transfer of heat from the hand of the user to the sensitive mechanical parts of the Dial Gauge.

Foil Dial Thickness Gauges F 1101/30 and F 1101/30-0.1

with extra accurate movement

Foil Dial Thickness Gauge F 1101/30	
Reading	0.001 mm
Range	1 mm
Range per revolution	0.1 mm
Dial reading	0-100
Plexi glass	glare free
Bezel-Ø	58 mm
Accuracy according to	manufacturing standard 0.0500.9.0010, hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, upper contact point convex r 15 or r 40, lower contact point 6.35 mm Ø flat lower contact point convex r 15 spherical

Foil Dial Thickness Gauge F 1101/30-0.1	
Reading	0.001 mm
Range	0.1 mm
Range per revolution	0.1 mm
Dial reading	0-100
Plexi glass	glare free
Bezel-Ø	58 mm
Maximum error	1.5 µm
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, upper contact point convex r 15 or r 40, lower contact point 6.35 mm Ø flat lower contact point convex r 15 spherical

Model shown: F 1101/30

These handy instruments are used exclusively to measure the thickness of thin foils. The frame has the required rigidity, the insulation of the handle prevents transfer of heat from the hand of the user to the sensitive mechanical parts of the Dial Gauge.

Model F 1101/30-0.1 is the most accurate Foil Thickness Gauge in our range. Its range is limited to one revolution or 0.1 mm.

The contact force is approximately 1.5 N. On request these instruments can be supplied at an extra charge with a lower contact force of 0.4 N.

Digital Foil Thickness Gauges FD 1000/30-3

Digital Foil Thickness Gauge FD 1000/30-3 is mainly used to measure the thickness of foils.

The frame has the required rigidity, the insulation of the handle prevents transfer of heat from the hand of the user to the sensitive mechanical parts of this Digital Foil Thickness Gauge.

The digital readout makes the reading of the measurement very easy. The measured value is clearly indicated on the display of the Thickness Gauge.

The contact force is 2 N. On request the instrument can be supplied with a lower contact force of 0.7 N.

Digital Foil Thickness Gauge FD 1000/30-3	
Resolution	0.001 mm / .00005"
Range	3 mm / .120"
Depth of jaw	30 mm
Digital display LCD, height of digits	8.5 mm
Measuring system	inductive
Power supply	on Lithium battery 3 V
Battery life	3000 h
Output	RS 232, optoelectronic / USB
Maximum error	3 µm
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, upper contact point convex r 15 or r 40, lower contact point 6.35 mm Ø flat lower contact point convex r 15 spherical

Fleece Dial Thickness Gauge 9073-2

to DIN EN ISO 9073/2 – edition 1997-2

This Dial Thickness Gauge is used exclusively to measure the thickness of fleece to DIN EN ISO 9073/2. It is equipped with special contact points and has a special contact force to meet DIN EN ISO 9073/2 requirements.

The concentric millimetre pointer allows easy and safe reading of the Dial Thickness Gauge.

Fleece Dial Thickness Gauge 9073-2	
Reading	0.01 mm
Range	28 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Depth of jaw	200 mm
Accuracy according to	manufacturing standard 1.0200.9.0014 hysteresis fu however not checked
Lower contact point	108 mm dia. flat
Upper contact point	56.5 mm dia. flat

In addition Fleece Dial Thickness Gauge to DIN EN ISO 5084 – edition 1996 can also be supplied. The technical data is the same as above, but it has an upper contact point diameter of 50 mm and a lower contact point diameter of 108 mm. This Thickness Gauge is supplied with an additional weight of 185 gram, which has to be mounted at its top in order to achieve the stipulated measuring pressure. Please request a quotation.

Corrugation Dial Thickness Gauge J 50/3 WP

to EN 494

This handy Dial Thickness Gauge is used exclusively to measure the thickness of fibre - cement profiled sheet and other corrugated plates or irons. It is equipped with special contact points which have a camber of 2 mm and a width of 10 mm.

The concentric millimetre pointer allows easy and safe reading of the Dial Thickness Gauge.

Corrugation Dial Thickness Gauge J 50/3 WP to EN 494	
Reading	0.01 mm
Range	20 mm
Range per revolution	1 mm
Bezel-Ø	58 mm
Accuracy according to	manufacturing standard 1.0200.9.0014, hysteresis fu however not checked
Standard contact point	radius 2 mm

In addition other purpose made Dial Thickness Gauges i.e. for leather or Pocket Dial Thickness Gauges for gauging precious stones are available on request.

Inch Reading Thickness Gauges

Considering frame execution and contact points, Inch Reading Dial Thickness Gauges conform to the metric models. This also applies to the M 3 thread of the Dial Gauges which is the same as in the metric models of Thickness Gauges. The contact points are interchangeable between metric and Inch models.

Inch Reading Dial Thickness Gauges differ from the models illustrated in the catalogue for metric reading only by the scale division in Inch and the scale marking.

Thickness Gauges bearing the additional ‚D' in their designation possess a digital indicating instrument.
The display can be selected to be either metric or Inch and therefore these instruments are listed in the table of metric models, too.

Technical data for Inch Reading Thickness Gauges

Model	Reading inch	Range inch	Depth of jaw inch	Lifting device	Contact points standard	Contact points available on request
KZ 15	.005	.400	.600	no	6.35 mm Ø flat	10 mm Ø flat, convex or spherical
KZ 15/2	.005	.800	.600	no	6.35 mm Ø flat	
JZ 12	.001	.300	.500	yes	6.35 mm Ø flat	spherical
JZ 15	.001	.400	.700	yes	6.35 mm Ø flat	10 mm Ø flat, convex or spherical
JZ 45	.001	.400	1.800	yes	6.35 mm Ø flat	
JZ 50	.001	.400	2.000	no	c	a, b, d or e
JZ 50 with lifting device	.001	.400	2.000	yes	c	a, b, d or e
JD 50 with lifting device	.0005	.400	2.000	yes	c	a, b, d or e
JZ 50 R	.001	.200	2.000	yes	rollers	
JZ 50 R without side discs	.001	.200	2.000	yes	rollers without side discs	
JD 50 W	.0005	.400	2.000	yes	pin with collar for pipe walls	
JZ 100	.001	.400	4.000	yes	c	a, b, d or e
JD 100	.0005	.400	4.000	yes	c	a, b, d or e
JZ 200	.001	.400	8.000	yes	c	a, b, d or e
JD 200	.0005	.400	8.000	yes	c	a, b, d or e
JD 200/25	.0005	1.000	8.000	yes	c	a, b, d or e
FZ 1101/30	.00005	.040	1.200	yes	6.35 mm Ø flat	convex R 15 or R 40, flat 10 mm Ø, spherical
FD 50 with lifting device	.00005	.400	2.000	yes	c	a, b, d or e
FD 50/25	.00005	1.000	2.000	yes	c	a, b, d or e
FD 100/25	.00005	1.000	4.000	yes	c	a, b, d or e
FD 200/25	.00005	1.000	8.000	yes	c	a, b, d or e

The contact points listed in the column 'standard' will be mounted unless the order calls for specials. Dial Thickness Gauges can be supplied with contact points listed in the column 'available on request' without extra costs. Schematic diagrams of the contact points style a, b, c, d and e can be found on page 115.

Pocket Dial Thickness Gauge KZ 15

The Pocket Dial Thickness Gauge KZ 15 is supplied with flat contact points 6.35 mm Ø if no other form of contact points is ordered. When ordering, please state whether you require another form of contact points than 6.35 mm Ø flat.

The model KZ 15/2 differs from the model KZ 15 only by the to .800" extended measuring range.

Pocket Dial Thickness Gauge KZ 15	
Reading	.005"
Range	.400"
Range per revolution	.400"
Depth of jaw	.600"
Accuracy according to	manufacturing standard 0.0100.9.0004, hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, convex or spherical

Pocket Dial Thickness Gauge JZ 15

The Pocket Dial Thickness Gauge JZ 15 distinguishes itself distinctly by its up to date and ergonomical design.

The Pocket Dial Thickness Gauge JZ 15 is equipped with plastic insulating plates. It is supplied in a convenient box with transparent lid.
The Pocket Dial Thickness Gauge JZ 45 is of similar design except for the jaw depth of 45 mm.

Pocket Dial Thickness Gauge JZ 15	
Reading	.001"
Range	.400"
Range per revolution	.100"
Depth of jaw	.700"
Accuracy according to	DIN 878 hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, convex or spherical

At rest the contact points on models KZ 15 and KZ 15/2 are open. Pushing the button on top of the instrument brings them together.

The contact points are in contact when the Pocket Dial Thickness Gauges JZ 15 and JZ 45 are not in use. The serrated lifting wheel opens them for the insertion of the component. The size can be easily read off the scale. The instruments can be zeroed by using the knurled adjusting bezel.

Standard contact points 6.35 mm Ø will be supplied unless otherwise stated on the order. Optional contact points are available on request. The type of the contact point does not affect the price of the Pocket Dial Thickness Gauges. Please note that the contact points are not interchangeable.

Dial Thickness Gauge JZ 100

Dial Thickness Gauge JZ 200

Dial Thickness Gauges JZ 100 and JZ 200 differ only by their jaw depth and by the kind of lifting device. On model JZ 100 the latter is positioned on top of the Dial Gauge. On the Dial Thickness Gauge JZ 200 the lifting lever is attached to a pin through the measuring spindle. Because of the use of a reinforced frame for JZ 200 this model can just as the model JZ 200/30 only be supplied as portable instrument. A stand is available on request.

Dial Thickness Gauge JZ 100	
Reading	.001"
Range	.400"
Range per revolution	.1"
Bezel-Ø	2 1/4"
Depth of jaw	4.000"
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

Dial Thickness Gauge JZ 200	
Reading	.001"
Range	.400"
Range per revolution	.1"
Bezel-Ø	2 1/4"
Depth of jaw	8.000"
Accuracy according to	DIN 878
	hysteresis fu however not checked
Standard contact point	form c
Optional contact points	forms a, b, d or e

With the exception of Pocket Dial Thickness Gauges, Spare Dial Gauges are also available for Inch Reading Thickness Gauges. They have like all the other Spare Dial Gauges a M 3 thread and will be supplied without contact point but with extension 3.2236.

For a surcharge we will supply all Spare Dial Gauges with the upper contact point form a, b, c, d or e.

Spare Dial Gauge for JZ 100	
Reading	.001"
Range	.400"
Range per revolution	.1"
Bezel-Ø	2 1/4"
Stem-Ø	8 h 6
Accuracy analogous to	DIN 878
	hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Spare Dial Gauge for JZ 200	
Reading	.001"
Range	.400"
Range per revolution	.1"
Bezel-Ø	2 1/4"
Stem-Ø	8 h 6
Accuracy analogous to	DIN 878
	hysteresis fu however not checked
Standard contact point	without
Optional contact points	forms a, b, c, d or e

Foil Dial Thickness Gauge FZ 1101/30

This handy instrument is used exclusively to measure the thickness of thin foils. The frame has the required rigidity, the insulation of the handle prevents transfer of heat from the hand of the user to the sensitive mechanical parts of the Dial Gauge.

The initial contact force is approximately 1.5 N.
On request the instrument can be supplied with a lower initial contact force of 0.4 N.

Foil Dial Thickness Gauge FZ 1101/30	
Reading	.00005"
Range	.040"
Range per revolution	.005"
Dial reading	0-50
Plexi glass	glare free
Bezel-Ø	2 ¼"
Accuracy according to	manufacturing standard 0.0500.9.0010, hysteresis fu however not checked
Standard contact point	6.35 mm Ø flat
Optional contact points	10 mm Ø flat, spherical upper contact point convex r = 15 or r = 40, lower contact point 6.35 mm Ø flat or convex r = 15