



DIN 879-1.
All sizes as per
EN ISO 463

Ball-bearing
plunger,
except for the
metric model to 0,01 mm
mounted on a plain
bearing

Metal
case
housing.
Plunger made from hardened
stainless steel

Adjustable
tolerance
markers.
Coupling thread for the
lifting cable.
M2,5 thread for the
measuring insert.

≈ 1 N

1 mounted
insert with
a 3,175 mm
diameter steel ball tip along
with 1 lifting cable

Suited
plastic case

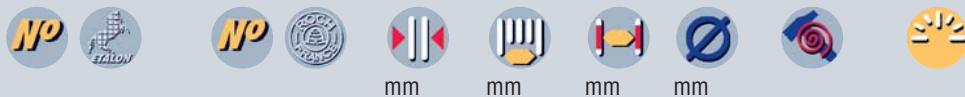
Declaration
of conformity

ETALON Basic and ROCH Precision Indicators

0,01 mm or 0,001 mm reading

Remarkably reliable, even when constantly used for series inspection – Specially made for comparative measurements demanding a very low measurement uncertainty – Measure axial and radial runouts with the lowest hysteresis.

- Shock proof movement with gear-lever transmission and long dead travel.
- Large, non-dazzling dial for easy readout.
- No coarse reading errors as the measuring travel is limited to less than one revolution.
- Fine adjustment and protective knob to prevent unintentional pointer displacement.



Regular models

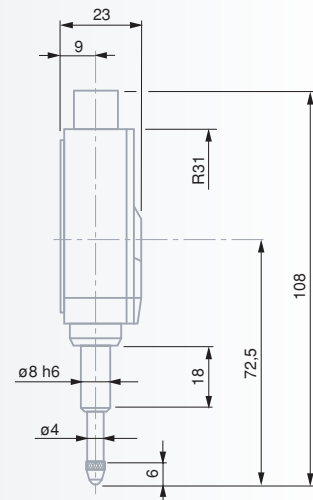
	0141761371	0,01	0,5	2,5	62	●	25 ÷ 0 ÷ 25
01419051	0141761373	0,001	0,1	3,0	62	●	50 ÷ 0 ÷ 50

Model IP54 protected against the penetration of liquids

01419052		0,001	0,1	3,0	62	●	50 ÷ 0 ÷ 50
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Maximum permissible errors

		0,01 mm	0,001 mm
	Max. perm. errors in one direction throughout the measuring range, G_e	10 μ m	1 μ m
	over any local measuring range including 10 scale divisions, G_l	7 μ m	0,7 μ m
	in both measuring directions throughout the measuring range, G_{ges}	12 μ m	1,2 μ m
	Repeatability limit, r_w	5 μ m	0,5 μ m
	Max. hysteresis, f_h	5 μ m	0,5 μ m



ETALON Basic Dial Gauges

0,01 mm reading
Regular and long range models



- EN ISO 463 Factory standard
- 0,01 mm
- Dial diameter 40 or 58 mm: 2,2 or 1,5 mm, resp.
- Rotating dial
- Full-metal case housing. Fixing shank and plunger in hardened stainless steel.
- With or without shock proof mechanism
- Adjustable tolerance markers. Measuring insert with a M2.5 thread.
- See table opposite
- Mounted insert with a 3,175 mm dia. steel ball tip
- Plastic case or cardboard box
- Identification number
- Declaration of conformity

NO							N
01419047	0,01	5	40	●	0,5	0 ÷ 25 ÷ 50	≈1
01419048	0,01	10	58	—	1	0 ÷ 50 ÷ 100	≈1
01419049	0,01	30	58	●	1	0 ÷ 50 ÷ 100	1,5 ÷ 2
01419050	0,01	50	58	●	1	0 ÷ 50 ÷ 100	1,5 ÷ 2

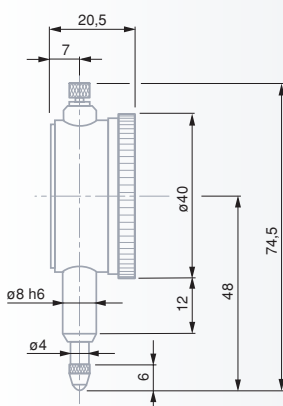
Plunger retraction device

01462003 Lift lever

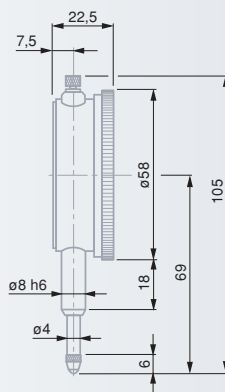
Backs with permanent magnet or central lug, see page E-47.

Maximum permissible errors for a metrological characteristic (MPE)

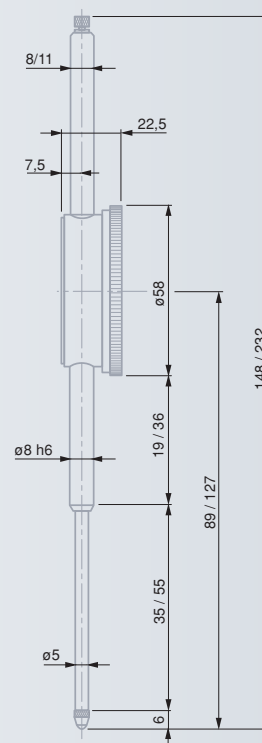
		mm	5	10	30	50
	Deviation span	µm	12	15	20	25
	Deviation span within the local measuring span of 0,1 mm	µm	6	8	9	12
	Repeatability limit	µm	3	3	3	3



01419047



01419048



01419049 - 01419050

ROCH Precision Dial Gauges

0,01 mm reading

Models C 40

The dial gauge N° 0141760560 is the perfect low-cost model.



EN ISO 463
Factory
standard

0,01 mm

2,2 mm

Rotating dial

Full-metal
case housing.
Fixing shank and
plunger in hardened stainless
steel.

With or without
shock proof
mechanism

Adjustable
tolerance
markers.

Measuring insert with
a M2.5 thread.

See table
opposite

Mounted insert
with a 3,175 mm
dia. steel ball tip

Plastic case or
cardboard box

Identification
number

Declaration
of conformity



Regular models

0141760560	0,01	3	3,4	—	0,5	0 ÷ 25 ÷ 50*	≤1,4
0141760561	0,01	3	3,4	—	0,5	0 ÷ 25 ÷ 50*	≤1,4
0141760582	0,01	5	5,4	●	0,5	0 ÷ 25 ÷ 50*	≤1,4

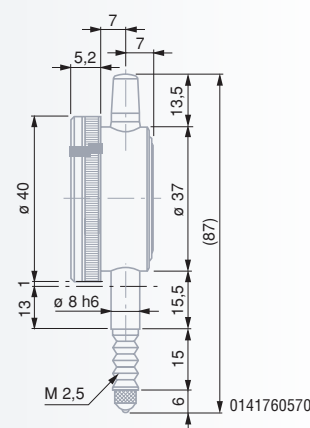
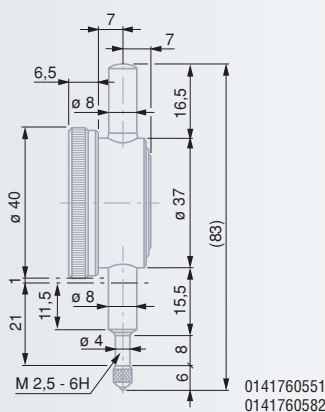
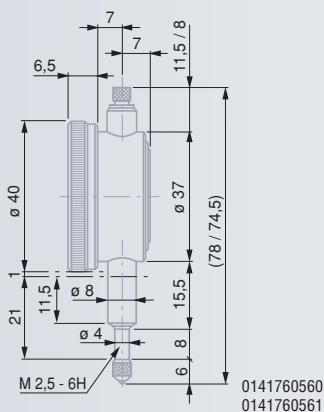
Model with restricted reading range

0141760551	0,01	0,4	4,5	●		20 ÷ 0 ÷ 20	≤1,4
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Model IP54 protected against the penetration of liquids

0141760570	0,01	3	3,4	●	0,5	0 ÷ 25 ÷ 50*	≤2
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* With extra red tinted reverse numbering.



Maximum permissible errors for a metrological characteristic (MPE)

Characteristic	Reading range			
	0,01 mm	3 mm	5 mm	10 mm
Deviation span	7 μm	10 μm	12 μm	15 μm
Deviation span within the local measuring span of 0,1 mm	5 μm	5 μm	5 μm	5 μm
Total deviation span	9 μm	12 μm	14 μm	17 μm
Repeatability limit	3 μm	3 μm	3 μm	3 μm
Max. hysteresis	3 μm	3 μm	3 μm	3 μm



ROCH Precision Dial Gauges 0,01 mm reading

Models C 58 and C 60

Both models No. 0141760635 and 0141760636 are particularly profitable.



EN ISO 463
Factory standard



0,01 mm



1,5 mm



Rotating dial



Full-metal case housing.
Fixing shank and plunger in hardened stainless steel.



With or without shock proof mechanism



Adjustable tolerance markers.

Model No. 0141760640 with fine adjust mounted under the protective cap for dial reading.
Measuring insert with a M2.5 thread.



For accuracy, see table on page E-43



See table opposite



Mounted insert with a 3,175 mm dia. steel ball tip.

Exceptions:
Models No. 0141760631, 0141761210, 0141761211 have a ruby ball tip.



Plastic case or cardboard box



Identification number

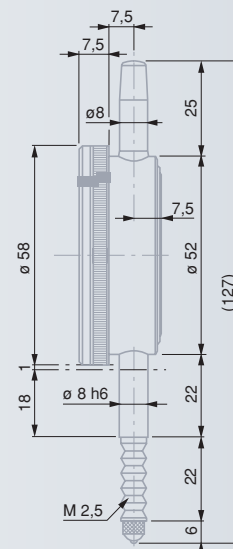
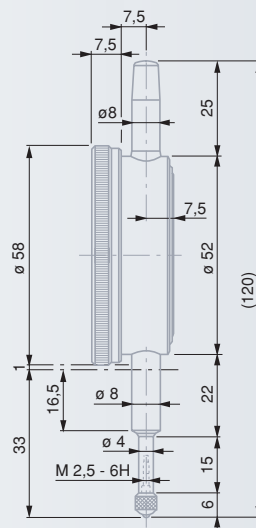
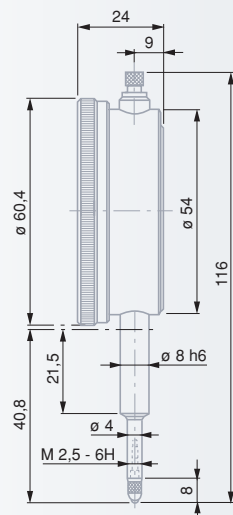
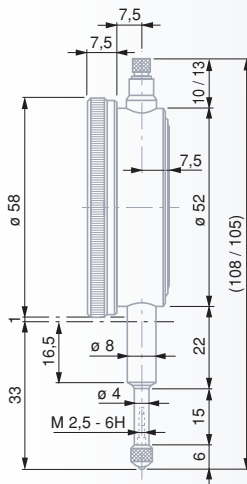


Declaration of conformity

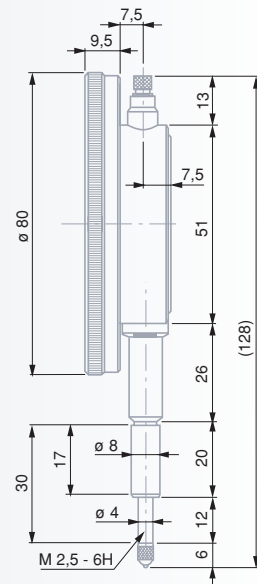
No	mm	mm	mm	mm	mm	mm	N
<i>Regular models</i>							
0141760631	58	0,01	10	10,5	—	1	0 ÷ 50 ÷ 100* ≤ 1,4
0141760632	58	0,01	10	10,5	—	1	0 ÷ 50 ÷ 100* ≤ 1,4
0141760635	58	0,01	10	10,5	—	1	0 ÷ 50 ÷ 100* ≤ 1,4
0141760636**	58	0,01	10	10,5	—	1	0 ÷ 50 ÷ 100* ≤ 1,4
0141760640	58	0,01	10	10,5	●	1	0 ÷ 50 ÷ 100* ≤ 1,4
0141761210	60,4	0,01	10	10,5	●	1	0 ÷ 50 ÷ 100* ≤ 1,4
0141761211**	60,4	0,01	10	10,5	●	1	0 ÷ 50 ÷ 100* ≤ 1,4
<i>Model with restricted reading range</i>							
0141760601	58	0,01	±0,4	9,0	●		40 ÷ 0 ÷ 40 ≤ 1,4
<i>Model IP54 protected against the penetration of liquids</i>							
0141760624	58	0,01	10	10,5	●	1	0 ÷ 50 ÷ 100* ≤ 2

* With extra red tinted reverse numbering.

** With mounted central lug back No. 0351669012 (also refer to page E-47).



ROCH Precision Dial Gauges
0,01 mm reading
Model C 80



EN ISO 463
Factory standard

0,01 mm

2,2 mm

Rotating dial

Full-metal case housing.
Fixing shank and plunger in hardened stainless steel

Without shock proof mechanism

Adjustable tolerance markers.

Measuring insert with a M2.5 thread.

Deviation span:
15 µm.
Deviation span within the local measuring span of 0,1 mm: 5 µm.
Total deviation span: 19 µm

3 µm

3 µm

See in the table opposite

Mounted insert with a 3,175 mm dia. steel ball tip

Cardboard box

Identification number

Declaration of conformity



Regular model

0141761221

* With extra red tinted reverse numbering.



mm



mm



mm



mm



mm



N

ROCH Precision Dial Gauges with a Long Range,
0,01 mm reading
Models C 58, C 60 and C 80



Regular models

0141761213

* With extra red tinted reverse numbering.

0141761214**

** With mounted central lug back No. 0351669012 (also report to page E-47).

0141760651

*** Counterclockwise numbering.

0141760652***

0141760653

0141760661

0141760662***

0141760663

0141760671

0141761224



mm



mm



mm



mm



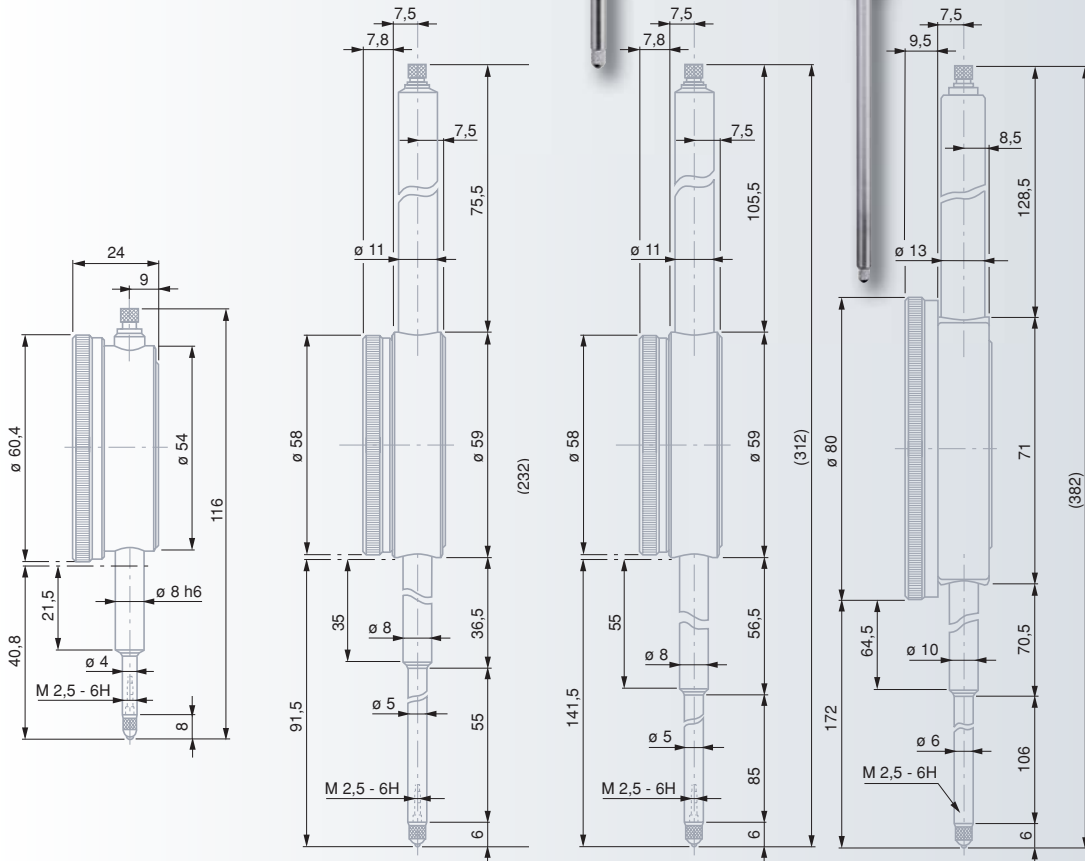
mm



mm



N



0141761213
0141761214

0141760651 – 0141760652
0141760653

0141760661 – 0141760663
0141760662 – 0141760671

0141761224



EN ISO 463
Factory standard



0,01 mm



1,5 mm
(C 58 or C 60)
2,2 mm
(C 80)



Rotating dial



Full-metal case housing.
Fixing shank and plunger in hardened stainless steel.



With or without shock proof system



Adjustable tolerance markers.

Measuring insert with a M2.5 thread.



In order to eliminate any hysteresis when measuring with the plunger moving downward, this feature has to be coupled on the measuring points, directly.



See table on the previous page E-45



Mounted insert with a 3,175 mm dia. steel ball tip.

Exceptions:
Models No. 0141761213 and 0141761214 fitted with a ruby ball tip



Cardboard box



Identification number



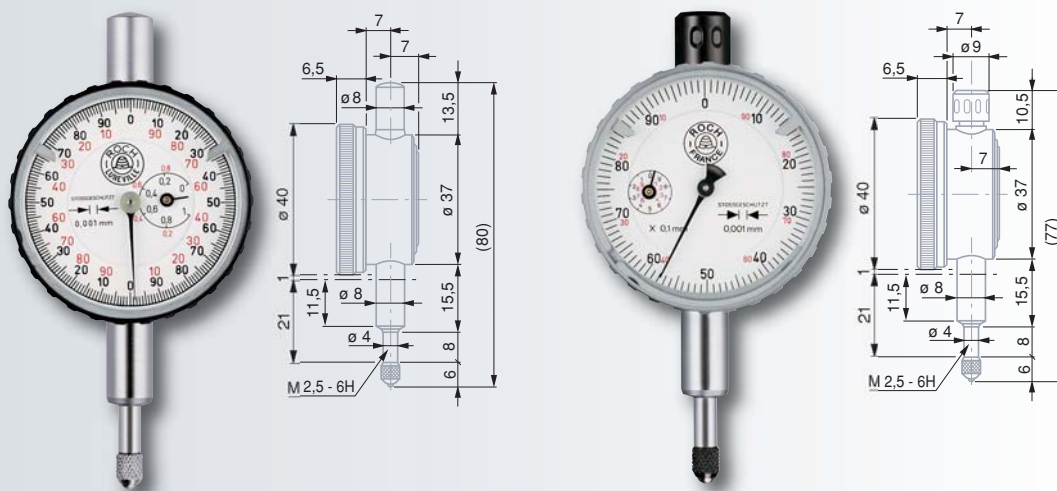
Declaration of conformity

Maximum permissible errors for a metrological characteristic (MPE)

			≤ 30 mm	50 mm	80 mm	100 mm
Deviation span			20 µm	25 µm	30 µm	35 µm
Deviation span within the local measuring span of 0,1 mm			5 µm	5 µm	5 µm	8 µm
Repeatability limit			3 µm	3 µm	3 µm	8 µm

ROCH Precision Dial Gauges 0,001 mm reading

Models C 40



EN ISO 463
Factory
standard

0,001 mm

1,1 mm
(0141761261)
2,2 mm
(0141761262)

Rotating dial

Full-metal
case housing.
Fixing shank and
plunger in hardened stainless
steel.

With shock proof
mechanism

Adjustable
tolerance
markers.
Measuring insert with
a M2.5 thread.

See table
opposite

Mounted insert
with a 3,175 mm
dia. steel ball tip

Suited
plastic case

Identification
number

Declaration
of conformity



Regular models

0141761261	0,001	1	1,1	●	0,2	0 ÷ 100/0 ÷ 100*	≤ 1,5
0141761262	0,001	1	1,1	●	0,1	0 ÷ 50 ÷ 100*	≤ 1,2

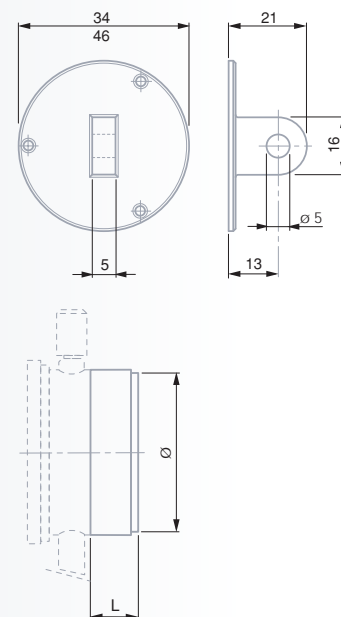
* With extra red tinted reverse numbering.

Maximum permissible errors for a metrological characteristic (MPE)

	0,001 mm		1 mm
	Deviation span		5 µm
	Deviation span within the local measuring span of 0,01 mm		3 µm
	Total deviation span		7 µm
	Repeatability limit		3 µm
	Max. hysteresis max.		3 µm

Backs for ROCH or ETALON Basic Precision Dial Gauges

	Bezel diameter	Back diameter	Magnetic face	L mm
<i>Central lug backs</i>				
01462004	40 mm	34 mm		
01462005	58, 60, 80 mm	46 mm		
<i>Magnetic backs with permanent magnets</i>				
01462000	40 mm	34 mm	34 mm	14,5 mm
01462001	58, 60, 80 mm	46 mm	46 mm	17 mm



ROCH Precision Dial Gauges 0,001 mm reading

Models C 58 and C 80



EN ISO 463
Factory
standard



0,001 mm



0,8 mm
(No. 0141761281,
0141761282
and 0141761283)
1,5 mm (No 0141761284
and 0141761291)



Rotating dial



Full-metal
case housing.
Fixing shank and
plunger in hardened stainless
steel.



With or without
shock proof
system



Adjustable
tolerance
markers.
Measuring insert with
a M2.5 thread.



For accuracy, see
table on previous
page E-47



See table
opposite



Mounted insert
with a 3,175 mm
dia. steel ball tip



Suited plastic case



Identification
number



Declaration
of conformity



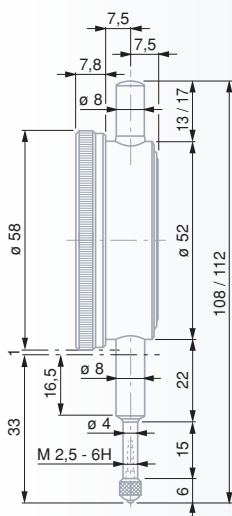
Regular models

No	mm	mm	mm	mm	mm	mm	mm	N
0141761282	58	0,001	1	1,1	—	0,2	0 ÷ 100/0 ÷ 100*	≤ 1,5
0141761283	58	0,001	1	1,1	●	0,2	0 ÷ 100/0 ÷ 100*	≤ 1,5
0141761284	58	0,001	1	1,1	●	0,1	0 ÷ 50 ÷ 100*	≤ 1,5
0141761291	80	0,001	1	1,1	—	0,2	0 ÷ 100/0 ÷ 100*	≤ 2,5

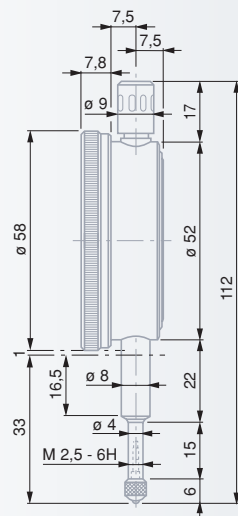
Models IP54 protected against the penetration of liquids

0141761281	58	0,001	1	1,1	●	0,2	0 ÷ 100/0 ÷ 100*	≤ 2,0
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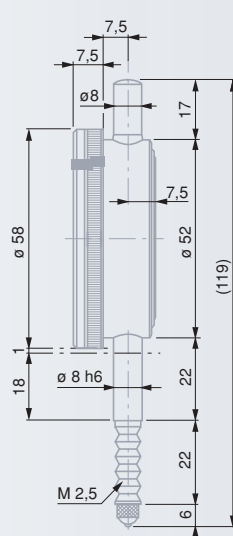
* With extra red tinted reverse numbering.



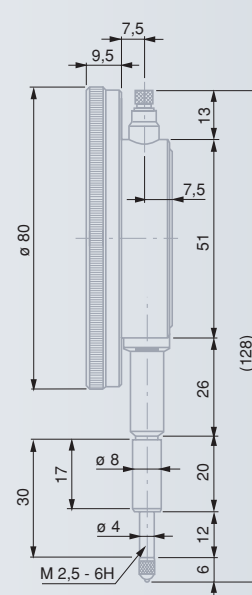
0141761282
0141761283



0141761284



0141761281



0141761291

ROCH Precision Dial Gauges 0,01 mm reading

Models C 40, C 58 and C 80



EN ISO 463
Factory standard

0,1 mm

1,1 mm (C 40)
1,5 mm (C 58)
2,2 mm (C 80)

Rotating dial

Full-metal case housing.
Fixing shank and plunger in hardened stainless steel.

Without shock proof mechanism

Measuring insert with a M2,5 thread

See table opposite

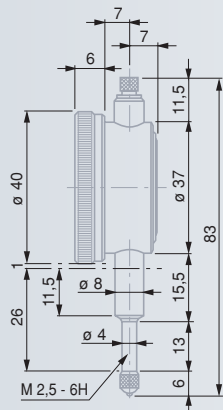
Mounted insert with a 3,175 mm dia. steel ball tip

Suited plastic case

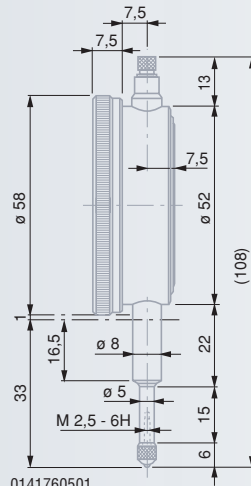
Identification number

Declaration of conformity

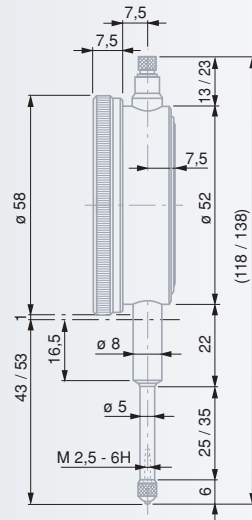
<i>Regular models</i>								
0141760500	40	0,1	10	10,5	–	10	0 ÷ 5 ÷ 10	≤ 1,0
0141760501	58	0,1	10	10,5	–	10	0 ÷ 5 ÷ 10	≤ 1,0
0141760502	58	0,1	20	20,5	–	10	0 ÷ 5 ÷ 10	≤ 1,0
0141760503	58	0,1	30	30,5	–	10	0 ÷ 5 ÷ 10	≤ 1,5
0141760513	80	0,1	30	30,5	–	10	0 ÷ 5 ÷ 10	≤ 2,0



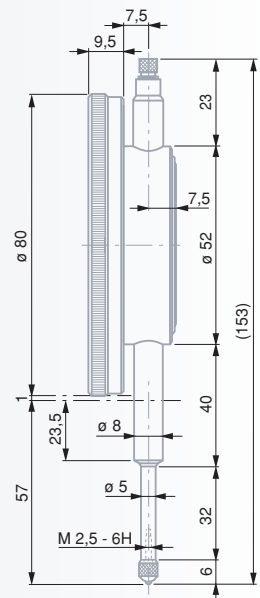
0141760500



0141760501



0141760503
Same as model:
0141760502



0141760513

Maximum permissible errors for a metrological characteristic (MPE)

	0,1 mm		10 mm
	Deviation span		40 µm
	Deviation span within the local measuring span of 1 mm		25 µm
	Total deviation span		55 µm
	Repeatability limit		15 µm
	Max. hysteresis		15 µm



ROCH Precision Dial Gauges 0,01 mm reading

Models C 40 and C 58 with back mounted plunger



EN ISO 463
Factory
standard



0,01 mm



2,2 mm (C 40)
1,5 mm (C 58)



Rotating dial



Full-metal
case housing.
Fixing shank and
plunger in hardened stainless
steel.



Without shock
proof system



Adjustable
tolerance
markers.
Measuring insert with
a M2,5 thread.



See table
opposite



Mounted insert
with a 3,175 mm
dia. steel ball tip



Cardboard box



Identification
number



Declaration
of conformity



mm

mm

mm

mm

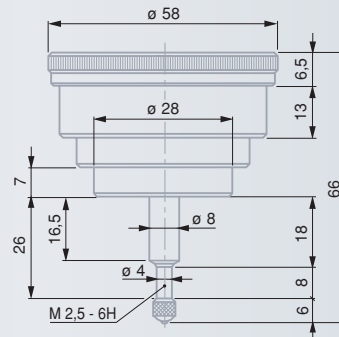
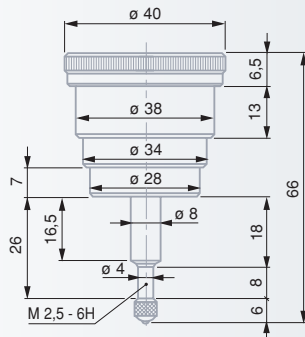
mm

N

Regular models

0141760566	40	0,01	3	3,5	–	0,5	0 ÷ 25 ÷ 50*	≤1,2
0141760611	58	0,01	5	5,5	–	1	0 ÷ 50 ÷ 100*	≤1,5

* With extra red tinted reverse numbering.



Maximum permissible errors for a metrological characteristic (MPE)



0,01 mm



3 mm 5 mm



Deviation span

12 µm 17 µm



Deviation span with the local
measuring span of 0,1 mm

5 µm 5 µm



Total deviation span

15 µm 20 µm



Repeatability limit

5 µm 5 µm



Max. hysteresis

15 µm 15 µm