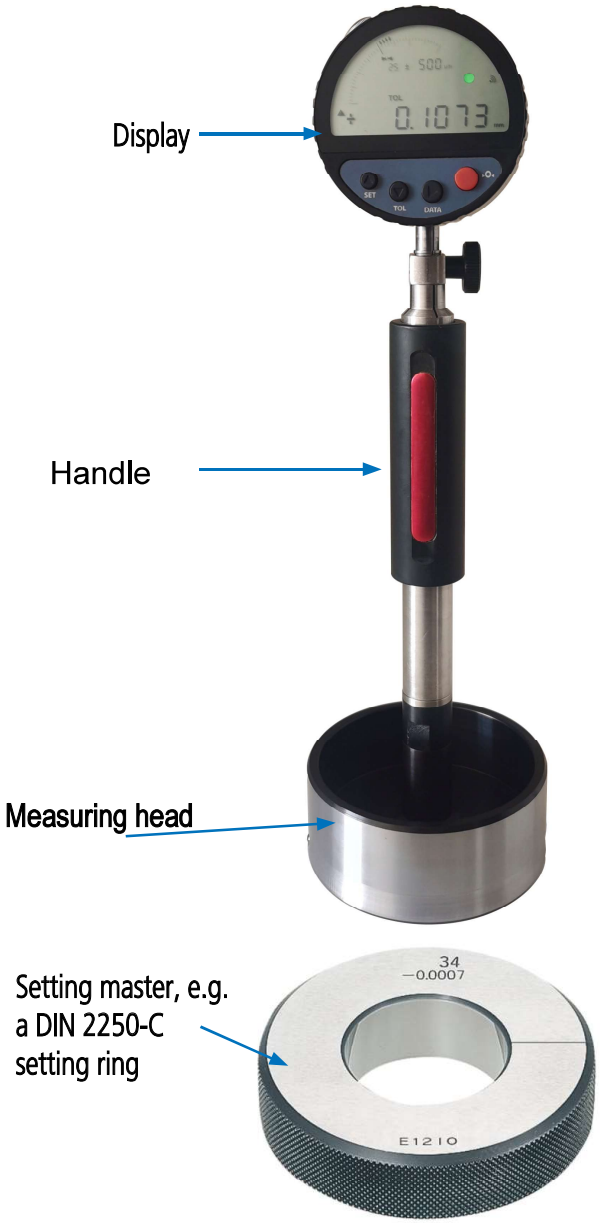
ID BORE GAUGE

for bores and internal profiles from dia. 2.7 mm - 320 mm

Basic principle



The ID BOREGAUGE is a mechanical two-point con-tact comparator measuring instrument suited for manual or automatic measurement. Each measuring instrument is specially tailored to suit a specific diameter and the corresponding tolerance.

The ID bore gauge serves for the measurement of bores with a diameter from 2.7 up to 320 mm, as well as their deviations in form, without searching for the reversal point on the indicating unit. For the indication of the measuring value, precision indicators, mechanical or electronic dial gauges or electronic probes can be used.

Applications

The ID bore gauge is a robust and easy to use comparator measuring instrument, which is conceived for the series control of bores.
The ID bore gauge meets the following require-ments:

- easy handling
- quick measurment
- maximal measurement certainty

The ID bore gauge is ideally suited wherever it is necessary to get a quick and reliable measuring result:

- direct on the production machine
- in the incoming or final inspection
- in the room for precision measuring

The ID bore gauge is the ideal replacement for usual gauges, whenever the statement "good / bad“ is not satisfying enough. Furthermore, it is possible to use it either manually, or as a part of a fully automatic measuring station.

Advanges

Highest precision

The precision of a comparator gauge is shown clearly with the repeatability. For the ID bore gauge this is max. 0,5 to 1 µm (for standard design up to diameter 130 mm).

Easy handling

The ID bore gauge enables the measurement without searching for the reversal point on the indicating unit and is therefore also suitable for unskilled users.

High measuring certainty

Since the ID gauge head, which is exactly tailored for a specific measuring situation, centres and guides the measuring instrument in the bore, the influence of the user on the measuring result is minimised.

Fast measuring process

A stationary measuring value is obtained immediately when entering the bore to be measured. This enables a large number of measurements within the shortest period of time.

High flexibility

All the measuring heads and the corresponding holders have a thread connection M11 x 0,75.

Therefore it is possible to choose any combination required; a quick adjustment to any measuring task is ensured.

Accessories, like for example an angle piece or measuring depth extensions, can be assembled without any problem.

Easy setting

As setting references, setting rings are often used in practice; the use of master pieces or external micrometers is also pos-sible.

Cross heads

From diameter 170 mm, we offer the so-called cross head or cross head with runners. In opposition to the conventional full round head, the cross head (with runners) presents advantages regarding weight and handling when measuring large diameters.

Cross head for dia. 170-320 mm for blind bores or short centring shoulders

INDICATING ID BORE GAUGE

FOR MEASURING INTERNAL DIAMETERS,

APPLICATION RANGE 2,7 - 320 MM

Assembly complete set:

Measuring **heads** with two radially movable contact pins, offset by 180° + ID holder + indication unit of choice.

Please let us know the exact bore tolerance with your order:

Example: if your specimen tolerance is Ø35 + 0,15/-0,01,and THROUGH BORES,then you can choose model PGD-T3545-D35,if you use electronic probe,then you should order PGD-T3545-D35-DS

Measuring Heads for FOR STANDARD BORES,THROUGH BORES,BLIND HOLE BORES,SUPER BLIND HOLE BORES

INDICATING ID BORE GAUGE

Measuring Heads for FOR STANDARD BORES PGD-S

nominal-Ø [mm]	Accuracy mm	Stroke	FOR STANDARD BORES	
			Height	Model No.
φ2.7-3.0	＜0.001	0.15	1.3	PGD-S2730
φ3.0-3.5	＜0.001	0.15	1.3	PGD-S3035
φ3.5-4.0	＜0.001	0.15	1.5	PGD-S3540
φ4.0-4.6	＜0.001	0.15	1.5	PGD-S4046
φ4.6-5.2	＜0.001	0.2-0.25	1.5	PGD-S4652
φ5.2-6.0	＜0.001	0.2-0.25	1.5	PGD-S5260
φ6.0-7.0	＜0.001	0.2-0.25	2	PGD-S6070
φ7.0-9.0	＜0.001	0.2-0.25	2	PGD-S7090
φ9.0-11.0	＜0.001	0.2-0.25	2.5	PGD-S9011
φ11.0-14.0	＜0.001	0.2-0.4	2.5	PGD-S1114
φ14.0-25.0	＜0.001	0.2-0.4	2.8	PGD-S1425
φ25.0-35.0	＜0.001	0.2-0.4	4	PGD-S2535
φ35.0-45.0	＜0.001	0.2-0.4	4	PGD-S3545
φ45.0-60.0	＜0.001	0.2-0.4	4.5	PGD-S4560
φ60.0-200	＜0.002	0.3-0.4	4.5	PGD-S60200
φ170-320	＜0.0025	0.4	5	PGD-S170320

Measuring Heads for FOR THROUGH BORES PGD-T

nominal-Ø [mm]	Accuracy mm	Stroke	FOR THROUGH BORES	
			Height	Model No.
φ2.7-3.0	＜0.001	0.15	3	PGD-T2730
φ3.0-3.5	＜0.001	0.15	3.5	PGD-T3035
φ3.5-4.0	＜0.001	0.15	3.5	PGD-T3540
φ4.0-4.6	＜0.001	0.15	3.5	PGD-T4046
φ4.6-5.2	＜0.001	0.2-0.25	4	PGD-T4652
φ5.2-6.0	＜0.001	0.2-0.25	4	PGD-T5260
φ6.0-7.0	＜0.001	0.2-0.25	5	PGD-T6070
φ7.0-9.0	＜0.001	0.2-0.25	5	PGD-T7090
φ9.0-11.0	＜0.001	0.2-0.25	10	PGD-T9011
φ11.0-14.0	＜0.001	0.2-0.4	10	PGD-T1114

φ14.0-25.0	＜0.001	0.2-0.4	10	PGD-T1425
φ25.0-35.0	＜0.001	0.2-0.4	10	PGD-T2535
φ35.0-45.0	＜0.001	0.2-0.4	10	PGD-T3545
φ45.0-60.0	＜0.001	0.2-0.4	10	PGD-T4560
φ60.0-200	＜0.002	0.3-0.4	10	PGD-T60200
φ170-320	＜0.0025	0.4	14	PGD-T170320

Measuring Heads for FOR BLIND HOLE BORES PGD-B

nominal-Ø [mm]	Accuracy mm	Stroke	FOR BLIND HOLE BORES	
			Height	Model No.
φ2.7-3.0	＜0.001	0.15	1.1	PGD-B2730
φ3.0-3.5	＜0.001	0.15	1.1	PGD-B3035
φ3.5-4.0	＜0.001	0.15	1.1	PGD-B3540
φ4.0-4.6	＜0.001	0.15	1.1	PGD-B4046
φ4.6-5.2	＜0.001	0.2-0.25	1.1	PGD-B4652
φ5.2-6.0	＜0.001	0.2-0.25	1.1	PGD-B5260
φ6.0-7.0	＜0.001	0.2-0.25	1.1	PGD-B6070
φ7.0-9.0	＜0.001	0.2-0.25	1.1	PGD-B7090
φ9.0-11.0	＜0.001	0.2-0.25	1.2	PGD-B9011
φ11.0-14.0	＜0.001	0.2-0.4	1.2	PGD-B1114
φ14.0-25.0	＜0.001	0.2-0.4	1.2	PGD-B1425
φ25.0-35.0	＜0.001	0.2-0.4	2.3	PGD-B2535
φ35.0-45.0	＜0.001	0.2-0.4	2.3	PGD-B3545
φ45.0-60.0	＜0.001	0.2-0.4	4.5	PGD-B4560
φ60.0-200	＜0.002	0.3-0.4	4.5	PGD-B60200
φ170-320	＜0.0025	0.4	5	PGD-B170320

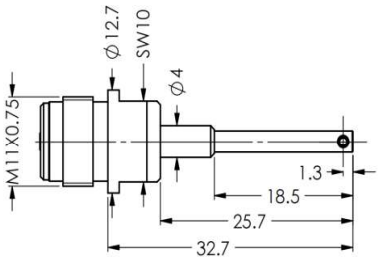
Measuring Heads for FOR SUPER BLIND HOLE BORES PGD-SB

nominal-Ø [mm]	Accuracy mm	Stroke	FOR SUPER BLIND HOLE BORES	
			Height	Model No.
φ20.0-35.0	＜0.001	0.2-0.4	1.5	PGD-SB2035
φ35.0-60.0	＜0.001	0.2-0.4	1.5	PGD-SB3560
φ60.0-200	＜0.002	0.3-0.4	1.5	PGD-SB60200

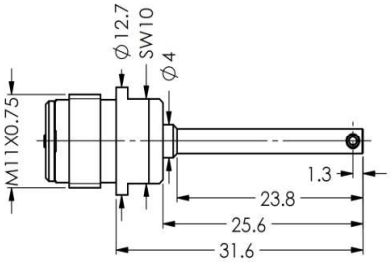
Measuring Head Types

FOR STANDARD BORES

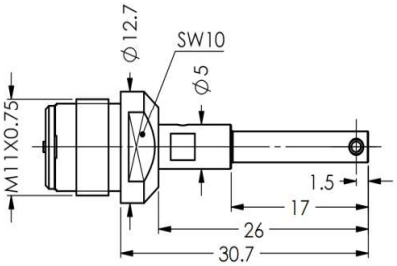
Model：PGD-S2730 Φ2.7-3.0



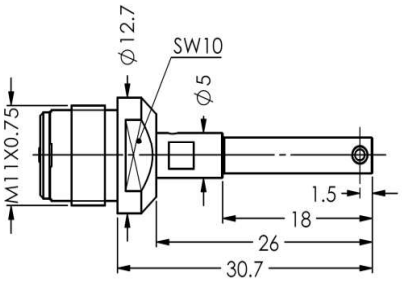
Model：PGD-S3035 Φ3.0-3.5



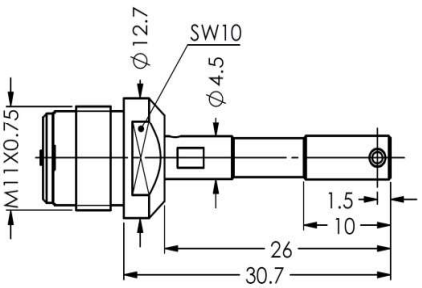
Model：PGD-S3540 Φ3.5-4.0



Model：PGD-S4046 Φ4.0-4.6

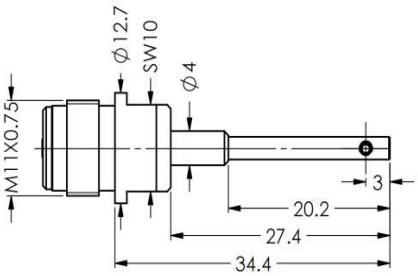


Model：PGD-S4652 Φ4.6-5.2

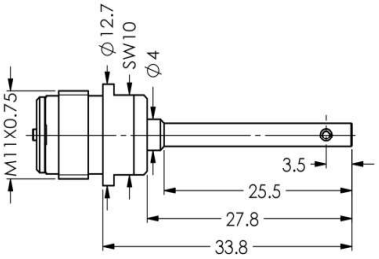


FOR THROUGH BORES

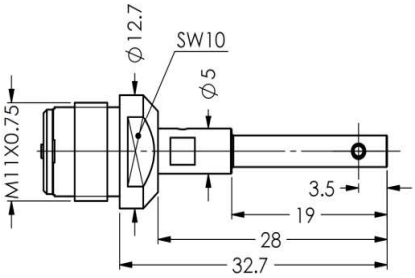
Model：PGD-T2730 Φ2.7-3.0



Model：PGD-T3035 Φ3.0-3.5



Model：PGD-T3540 Φ3.5-4.0



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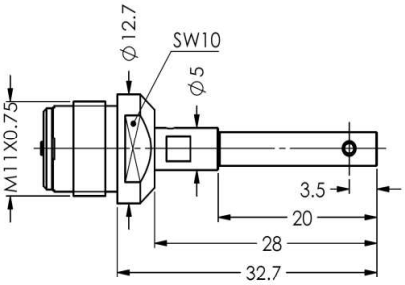
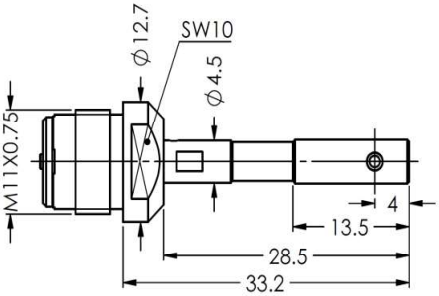
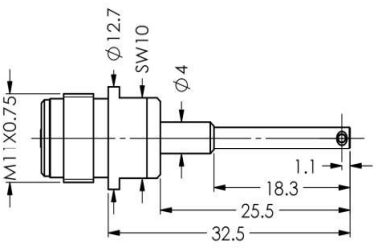


Model：PGD-T4652 Φ4.6-5.2

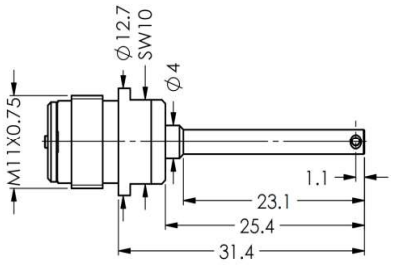


FOR BLIND HOLE BORES

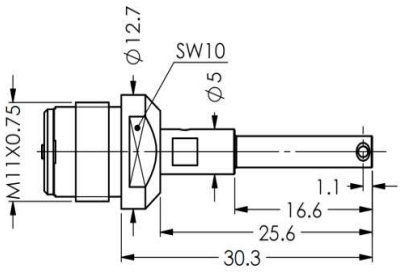
Model：PGD-B2730 Φ2.7-3.0



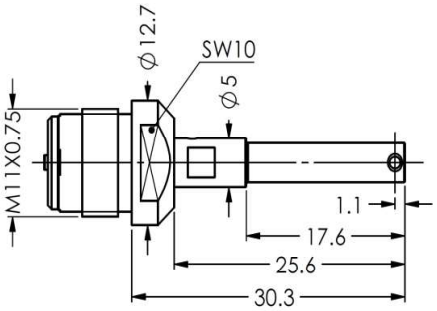
Model：PGD-B3035 Φ3.0-3.5



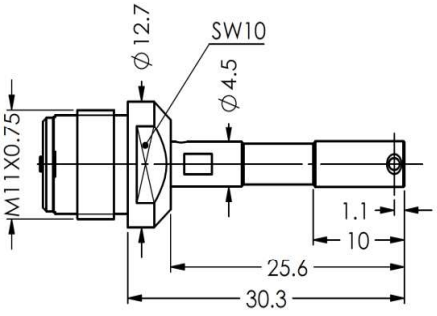
Model：PGD-B3540 Φ3.5-4.0



Model：PGD-B4046 Φ4.0-4.6



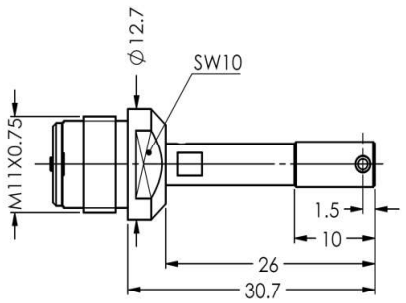
Model：PGD-B4652 Φ4.6-5.2



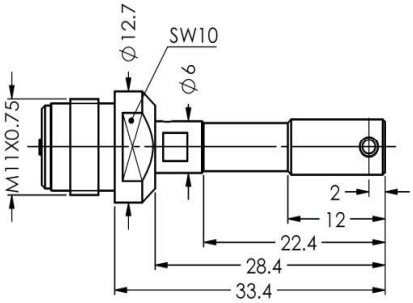
Measuring Head Types

FOR STANDARD BORES

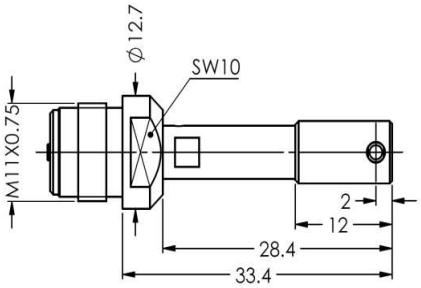
Model: PGD-S5260 Φ5.2-6.0



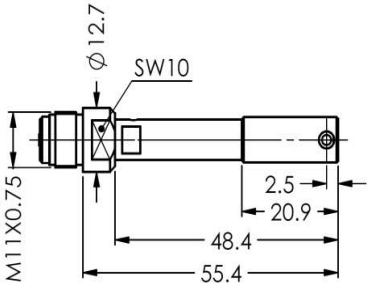
Model: PGD-S6070 Φ6.0-7.0



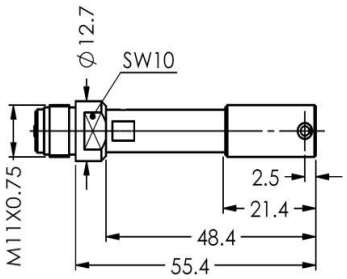
Model: PGD-S7090 Φ7.0-9.0



Model: PGD-S9011 Φ9.0-11.0

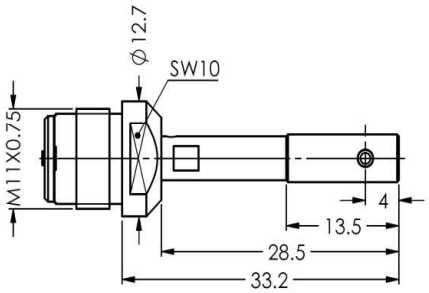


Model: PGD-S1114 Φ11.0-14.0

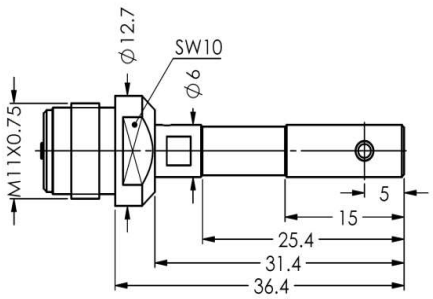


FOR THROUGH BORES

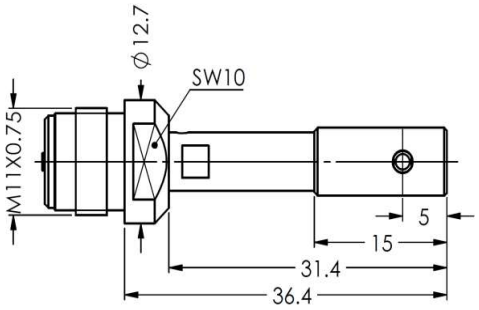
Model: PGD-T5260 Φ5.2-6.0



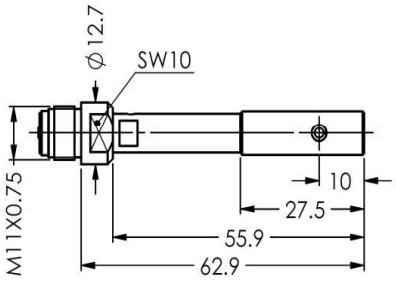
Model: PGD-T6070 Φ6.0-7.0



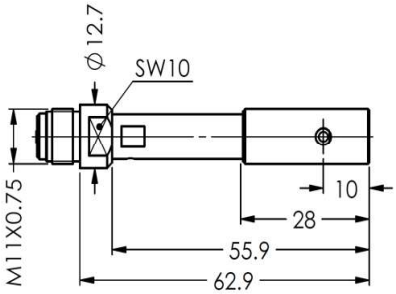
Model: PGD-T7090 Φ7.0-9.0



Model: PGD-T9011 Φ9.0-11.0

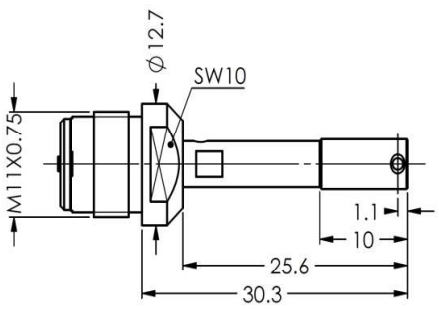


Model: PGD-T1114 Φ11.0-14.0

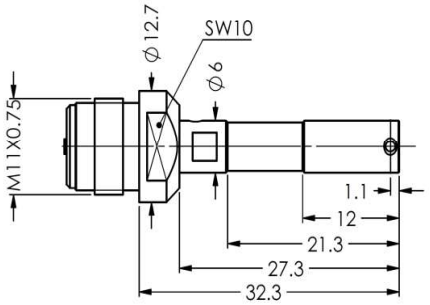


FOR BLIND HOLE BORES

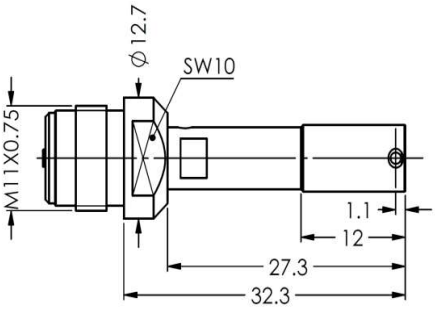
Model: PGD-B5260 Φ5.2-6.0



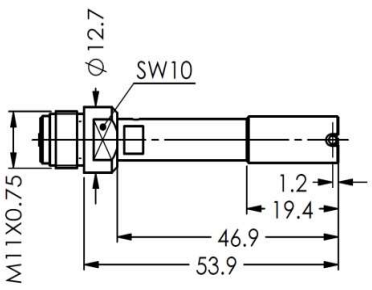
Model: PGD-B6070 Φ6.0-7.0



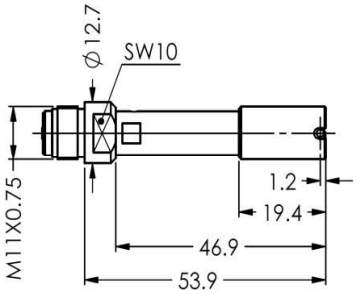
Model: PGD-B7090 Φ7.0-9.0



Model: PGD-B9011 Φ9.0-11.0



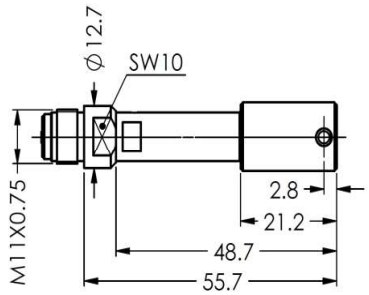
Model: PGD-B1114 Φ11.0-14.0



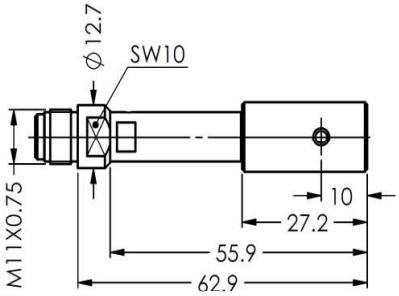
Measuring Head Types

FOR STANDARD BORES FOR THROUGH BORES FOR BLIND HOLE BORES

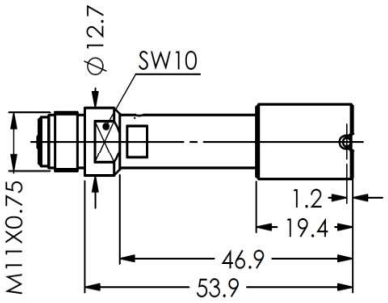
Model: PGD-S1425 Φ14.0-25.0



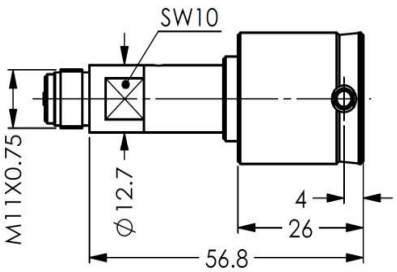
Model: PGD-T1425 Φ14.0-25.0



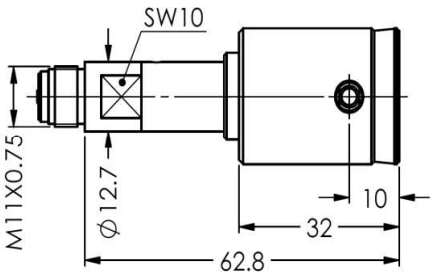
Model: PGD-B1425 Φ14.0-25.0



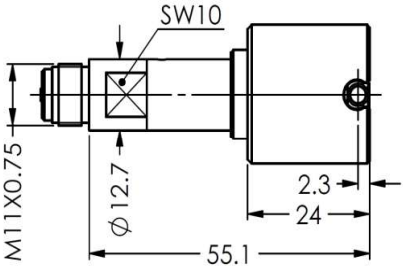
Model: PGD-S2535 Φ25.0-35.0



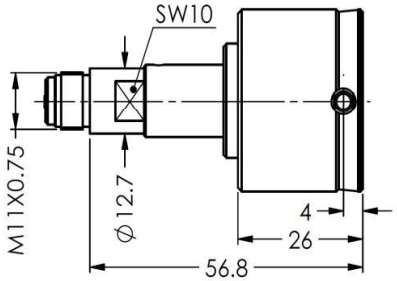
Model: PGD-T2535 Φ25.0-35.0



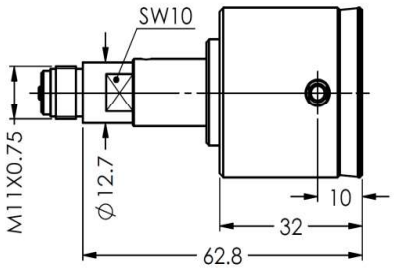
Model: PGD-B2535 Φ25.0-35.0



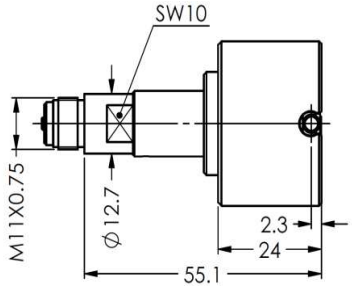
Model: PGD-S3545 Φ35.0-45.0



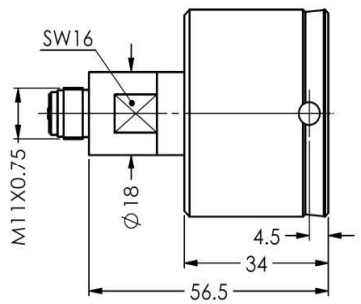
Model: PGD-T3545 Φ35.0-45.0



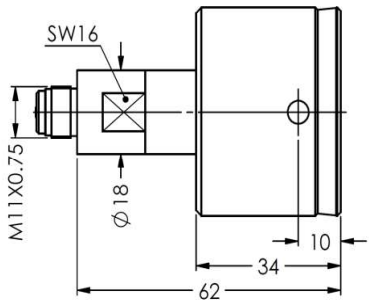
Model: PGD-B3545 Φ35.0-45.0



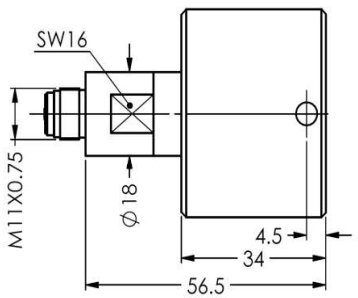
Model: PGD-S4560 Φ45.0-60.0



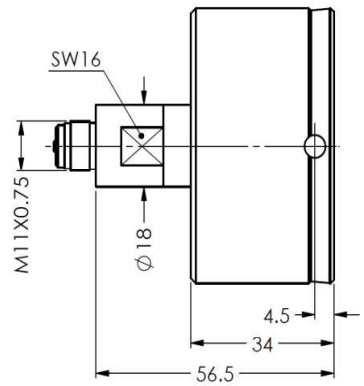
Model: PGD-T4560 Φ45.0-60.0



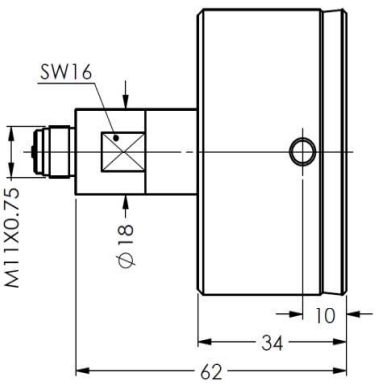
Model: PGD-B4560 Φ45.0-60.0



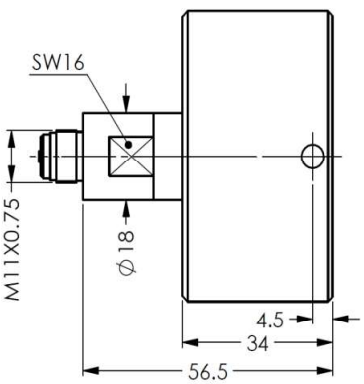
Model: PGD-S60200 Φ60.0-200.



Model: PGD-T60200 Φ60.0-200.0



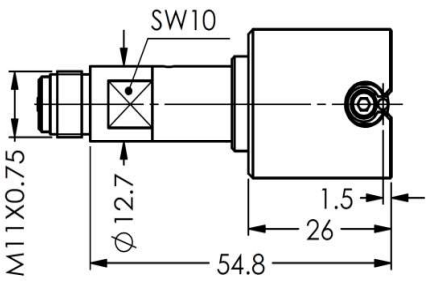
Model: PGD-B60200 Φ60.0-200.0



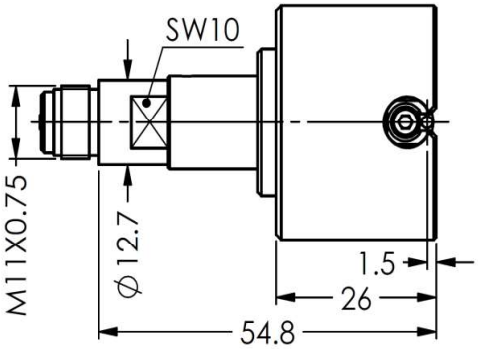
Measuring Head Types

FOR SUPERBLIND HOLE BORES

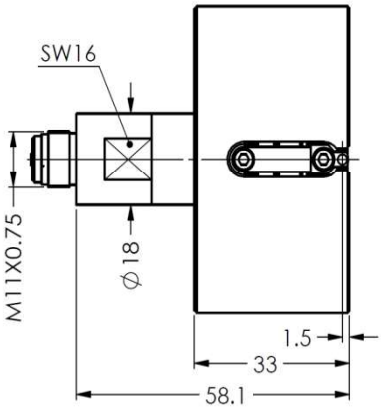
Model：PGD-SB2035　Φ20.0-35.0



Model：PGD-SB3560　Φ35.0-60.0

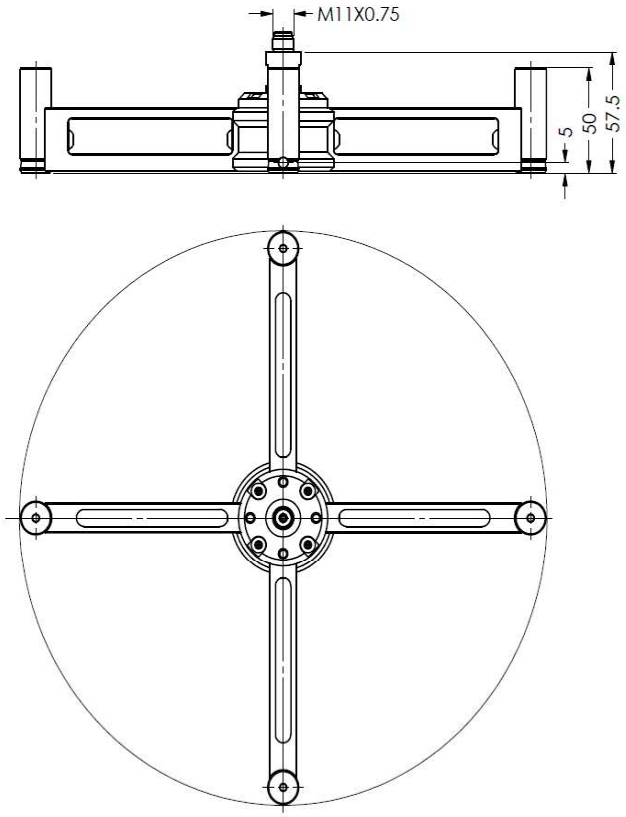


Model：PGD-SB60200　Φ60.0-200.0

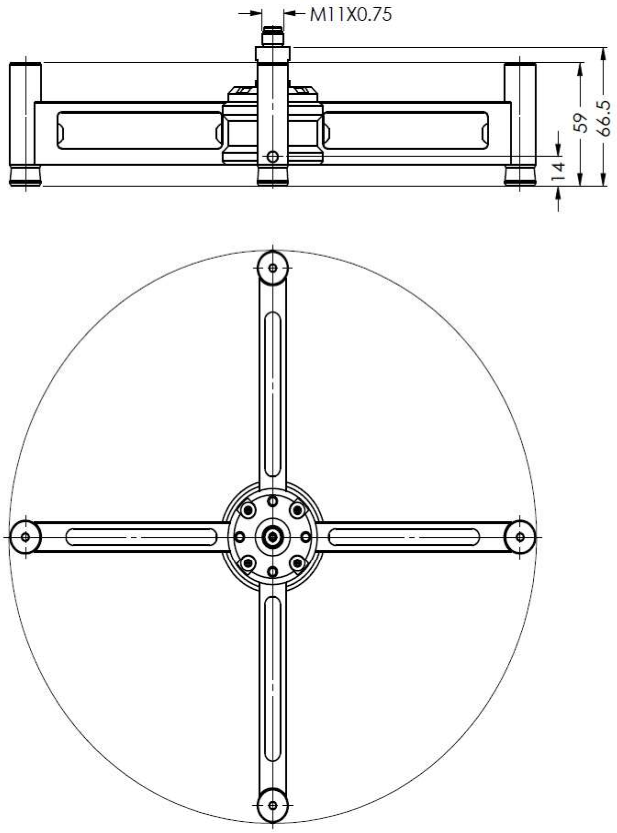


Cross Head for Ø170-320

Model：PGD-S170320　Φ170.0-320.0

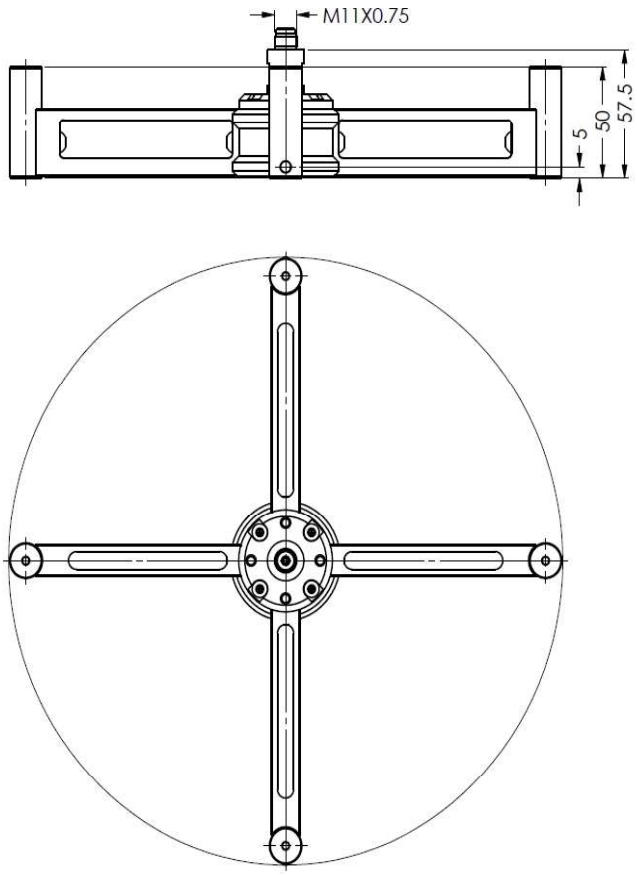


Model：PGD-T170320　Φ170.0-320.0



Measuring Head Types

Model：PGD-B170320　Φ170.0-320.0



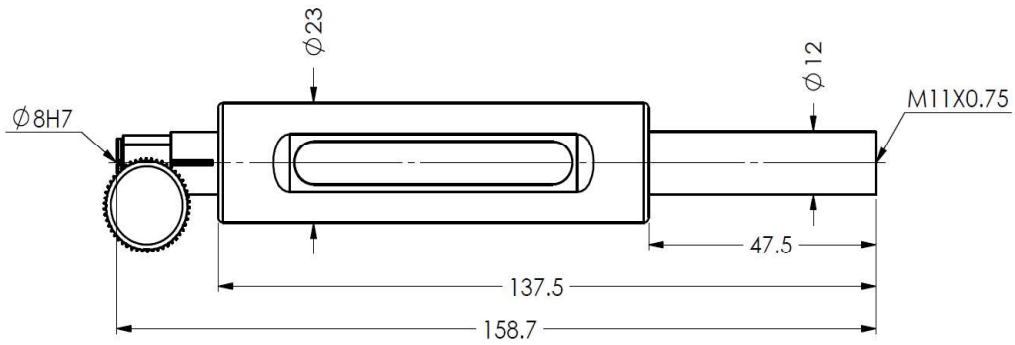
HANDLES & DEPTH EXTENSIONS

Description

ID bore gauge handles will accept 8 mm or 0.375" diameter stem indicator. Each handle includes two interchangeable brass bushings for each diameter and an allen wrench.

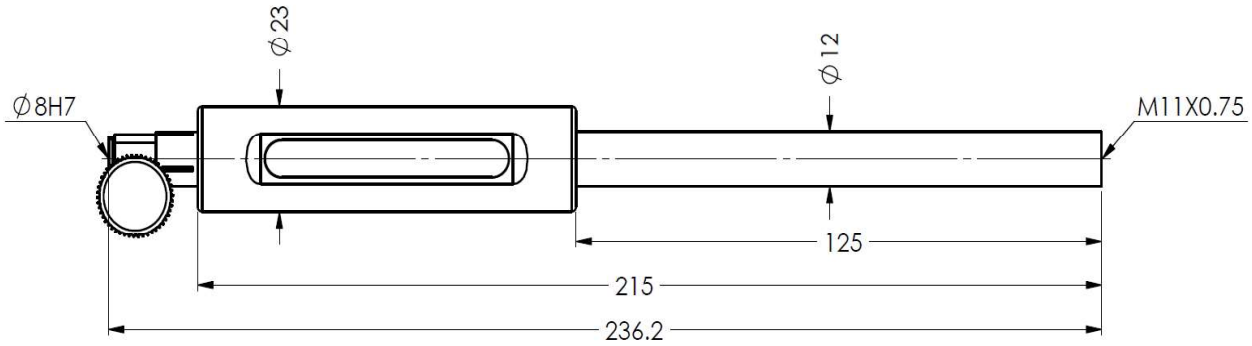
Model:PH12-160

Shaft Ø12， use for analog or digital indicator.



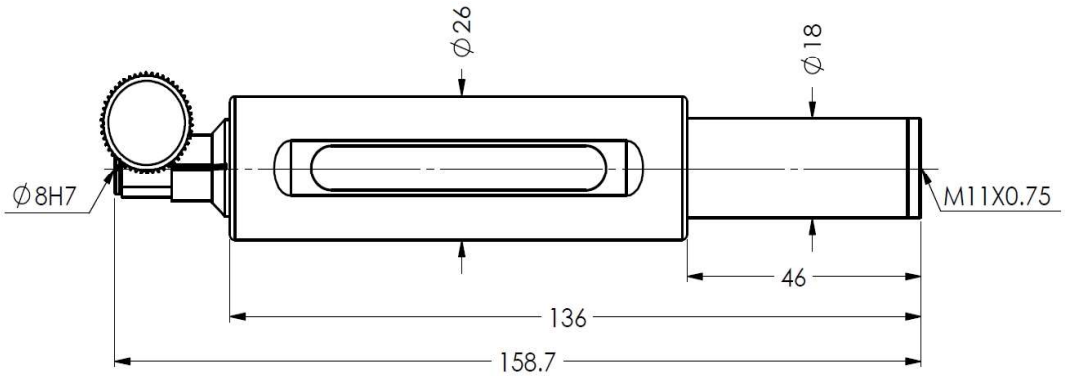
HANDLES & DEPTH EXTENSIONS

Model: PH12-235 with depth extention

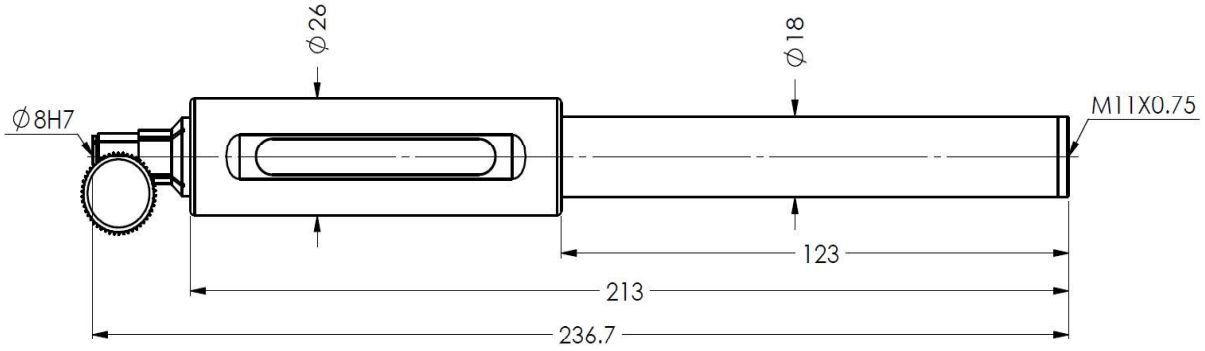


Model: PH18-160

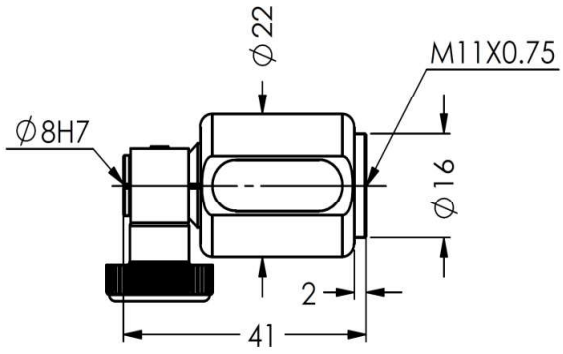
Shaft Ø18mm for analog or digital indicator.



Model: PH18-235 with depth extention

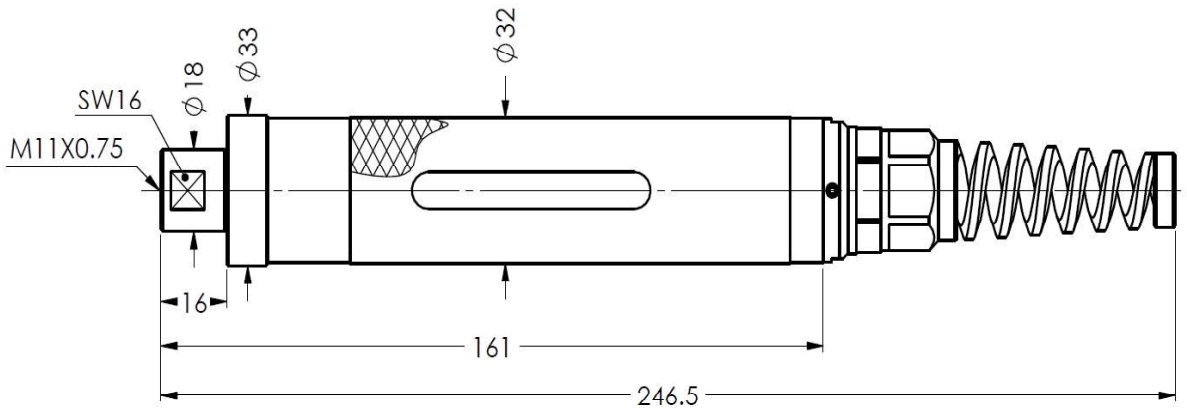


Model: PH12-40 very short handle



HANDLES & DEPTH EXTENSIONS

Model： PH-DS Used for Ø8MM electronic probes.



Depth stop

Model： PR-ST

- for specific measuring depths and for a higher measuring certainty.

Setting Gauge

Setting ring gauges for setting gauges to zero our OD plug gauges, nominal sizes from 1.000 to 400.000 mm DIN 2250-C setting rings available.