



## Bore plug gauge standard OD, Sleeve Ø D: 12-20mm



### Order data

Order number	435154 12-20
GTIN	2050001677099
Item class	46D

### Description

#### Version:

OD bore plug gauges are mechanical two-point dial bore plug gauges for highest requirements. Hardened gauging sleeve. For bores of 3 – 100 mm. Centring by the gauging sleeve prevents tilt errors and therefore ensures maximum precision irrespective of the user. No need to seek the return point. Dial indicators with shank Ø 8 h6 can be used as displays.

- **Repetition accuracy 1 µm.**
- **Robust and reliable.**
- **Minimum measuring time with maximum measuring reliability.**
- **Thread connection bore gauge/ holder M10×1.**

#### Application:

For bores of 3 – 100 mm. For quality assurance in series production, manual or automatic measuring.

#### Supplied with:

Gauging sleeve with two radially movable 180° offset carbide measuring bars.

#### Optional extras:

Precision dial comparator No. 434674, inductive precision dial comparator No. 434670, dial indicator with anticlockwise scale 434807 size 10, digital dial indicator 434322, holder for plug gauges No. 435160, setting rings No. 484030. Measuring depth extensions, angle pieces and depth stops on request.

#### Note:

When ordering, please state **additionally** the exact bore tolerances, for example: No. 435154 size 6–12 **10H7**,

No. 435154 size 6–12 **10 + 0.15 / – 0.01**,

No. 435154 size 6–12 **9.990 / 10.15**.

When using precision dial indicators, an additional extension No. 434920 size 10 or probe No. 434900 size 16 is required.

- **Plug gauges for large bores (up to Ø 500), recesses, grooves, also in 3-point version available on request.**
- **Tolerance range 10 µm or fine fit quality 5 and finer on request.**
- **Measuring range > 0.2 mm on request.**
- **Measuring contacts with larger radius as well as in ruby, ceramic and DLC-coated are available.**

## Technical description

Face dimension h	2.5 mm
Repetition accuracy	1 µm
Gauging force	2 N
Sleeve dimension H	15 mm
Tolerance zone	FG
Tolerance zone	U
Tolerance zone	V
Tolerance zone	T
Tolerance zone	B
Tolerance zone	S
Tolerance zone	P
Tolerance zone	R
Tolerance zone	N
Tolerance zone	M
Tolerance zone	K
Tolerance zone	J
Tolerance zone	JS
Tolerance zone	H
Tolerance zone	G
Tolerance zone	A

Tolerance zone	FG
Tolerance zone	F
Tolerance zone	E
Tolerance zone	EF
Tolerance zone	D
Tolerance zone	CD
Tolerance zone	C
Tolerance zone	ZB
Tolerance zone	ZC
Tolerance zone	ZA
Tolerance zone	Z
Tolerance zone	ZC
Quality	9 mm
Quality	11 mm
Quality	6 mm
Quality	13 mm
Quality	10 mm
Quality	7 mm
Quality	12 mm
Quality	8 mm
Nominal size	12 - 20 mm
Calibration	C4
Type of product	Bore gauge micrometer head

## Services

DAkkS calibration Precision bore gauge (types B + C)  
maximum measuring range 60 mm

023220 60

Calibration Precision bore gauge (types B + C) maximum  
measuring range 60 mm

023210 60

## Accessories

Setting ringDIN 2250 C Nominal size Ø 19 mm	484030 19
Precision dial comparator ± measuring range / reading 25/0,5 µm	434674 25/0,5
Setting ringDIN 2250 C Nominal size Ø 13 mm	484030 13
Extension for contact points Length L 10 mm	434920 10
Setting ringDIN 2250 C Nominal size Ø 16 mm	484030 16
Setting ringDIN 2250 C Nominal size Ø 12 mm	484030 12
Setting ringDIN 2250 C Nominal size Ø 18 mm	484030 18
Steel contact point Type 16	434900 16
Setting ringDIN 2250 C Nominal size Ø 17 mm	484030 17
Precision dial comparator ± measuring range / reading 130/5 µm	434674 130/5
Holder for plug gaugeOD Holder length 105 mm	435160 105
Holder for plug gaugeOD Holder length 50 mm	435160 50
Setting ringDIN 2250 C Nominal size Ø 20 mm	484030 20
Setting ringDIN 2250 C Nominal size Ø 15 mm	484030 15
Precision dial comparator ± measuring range / reading 50/1 µm	434674 50/1
Precision dial comparator ± measuring range / reading 250/10 µm	434674 250/10
Inductive precision comparator Extramess Type 2001	434670 2001
Holder for plug gaugeOD Holder length 235 mm	435160 235
Setting ringDIN 2250 C Nominal size Ø 14 mm	484030 14