



- 2 Bore code**
B without friction ring
R with friction ring
- 4 Type**
MCR matt chrome plated
MCRS matt chrome plated, standard scale 0...90, 100 graduations, acc. scale scheme d_r/100 A RA 0-10 20...90/10

1 $d_1 \pm 0,02$	3 d_2 H7 Bore		d_3	d_4 $\begin{smallmatrix} -0,02 \\ -0,05 \end{smallmatrix}$		d_5
30	12	14	31,7	12	14	10,5
40	14	16	41,3	14	16	12,5
50	16	18	51,8	16	18	14,5
60	18	20	61,4	18	20	16,5

Specification

- Steel
 - Knurl milled
 - Scale lug d_1 fine turned
 - blank (standard version)
 - matt chrome plated
 - matt chrome plated with std. scale add MCR or MCRS on order code
- Scale engraved with laser precision, black
- Clamp ring Rubber
- Friction ring Polyamide
- ISO-Fundamental Tolerances → Page 1132
- RoHS compliant

On request

- special graduations see „How to order Graduations“ → Page 337

Information

The non-wearing friction ring ensures perfect engagement of the scale ring when re-aligning the spindle. In addition it allows the setting of the scale ring on a static shaft.

— Besides the standard scale (Type MCRS) the scale rings can be supplied with any type of graduation. It is suggested to use the matt chrome plated version (MCR) so that a nice discrepancy in colour is given.

MCR
MCRS

Regarding design, numbering run, numbering position and numbering sequence of the scale please see the layout for scale rings on the order sheet „How to order Graduations“ → Page 337

see also...

- Control handwheels GN 736.1 (with handle and graduations) → Page 179

Scale ring without scale, blank	1 d_1
1 2 3 GN 164-40-R14	2 Bore code
	3 d_2

Scale ring with standard scale	1 d_1
1 2 3 4 GN 164-50-R16-MCRS	2 Bore code
	3 d_2
	4 Type