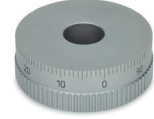
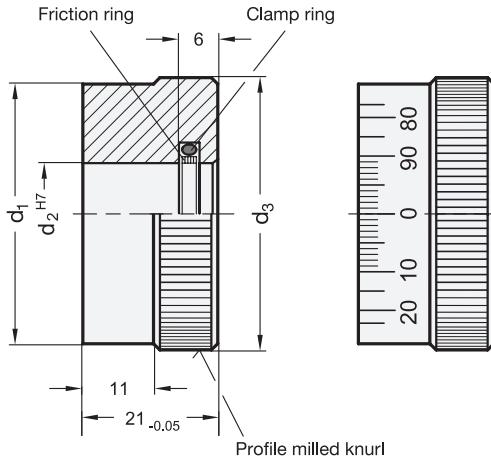
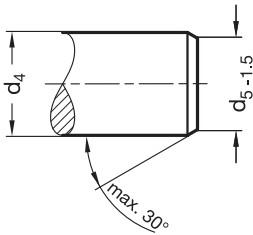


Connection measurements for version with friction ring



- 2 Bore code:**
  - B** Without friction ring
  - R** With friction ring
- 4 Coding**
  - MCR** Matte chrome plated, standard scale
  - MCRS** Matte chrome plated, standard scale 0...90, 100 graduations, acc. to scale scheme d<sub>1</sub>/100 A RA 0-10 20...90/10

<b>1</b> d <sub>1</sub> ±0,02	<b>3</b> d <sub>2</sub> H7 Bore		d <sub>3</sub>	d <sub>4</sub> <sup>-0,02</sup> / <sub>-0,05</sub>		d <sub>5</sub>
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**

**Scale ring**

- Steel
- Profile-milled knurl
- Scale lug d<sub>1</sub> fine turned
- plain, without scale
- Matte chrome plated, without scale **MCR**
- Matte chrome plated, with standard scale **MCRS**
- Scale laser-engraved, black discharged

**Clamp ring**

Rubber

**Friction ring**

Polyamide

RoHS

**On request**

- Special graduations (see „How to Order Graduations“)

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 (Coding 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 color is given.

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“

**see also...**

	Page
<b>GN 736.1</b> Control Handwheels with Standard Scale	QVX
<b>GN 264</b> Scale Rings	QVX

**Technical Information**

How to order - Graduations	QVX
ISO Fundamental Tolerances	QVX

How to order (Scale ring without scale) **1 2 3**

1	d <sub>1</sub>
2	Bore code
3	d <sub>2</sub>

GN 164-40-R14

How to order (Scale ring with scale) **1 2 3 4**

1	d <sub>1</sub>
2	Bore code
3	d <sub>2</sub>
4	Coding

GN 164-50-R16-MCRS

1.1  
1.2  
1.3  
1.4  
2.1  
2.2  
2.3  
2.4

