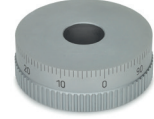
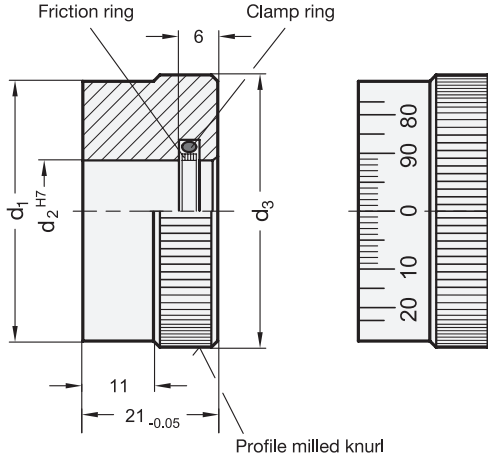
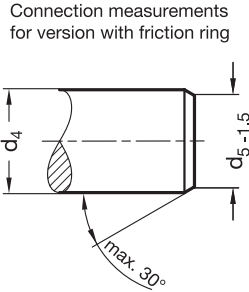


Metric



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

**Metric table**

<b>1</b>		<b>3</b>		Dimensions in: millimeters / inches		
<b>d<sub>1</sub> ±0.02</b>	<b>d<sub>2</sub> H7 Bore</b>		<b>d<sub>3</sub></b>	<b>d<sub>4</sub> <sup>-0.02</sup>/<sub>-0.05</sub></b>		<b>d<sub>5</sub></b>
30 1.1811	12 0.472	14 0.551	31.7 1.25	12 0.4724	14 0.55	10.5 0.41
40 1.5748	14 0.551	16 0.630	41.3 1.63	14 0.5512	16 0.63	12.5 0.49
50 1.9685	16 0.630	18 0.709	51.8 2.04	16 0.6299	18 0.71	14.5 0.57
60 2.3622	18 0.709	20 0.787	61.4 2.42	18 0.7087	20 0.79	16.5 0.65

**Specification**

**Scale ring**

- Steel
- Knurl milled
- Scale Ring Body d<sub>1</sub> fine turned
- Plain finish (standard version)
- Matte chrome plated without scale **MCR**
- Matte chrome plated with standard scale **MCRS**
- Scale black, laser engraved

**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 matte 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...**

- GN 736.1** Knurled Control Knobs **Page** QVX
- GN 264** Scale Rings **Page** QVX

**Technical Information**

- How to Order Graduations **Page** QVX
- ISO Fundamental Tolerances **Page** QVX

<b>How to order (Scale ring without scale)</b> <b>GN 164-40-R14</b>	<b>1</b>	Outside diameter d <sub>1</sub>
	<b>2</b>	Bore code
	<b>3</b>	Bore d <sub>2</sub>

<b>How to order (Scale ring with scale)</b> <b>GN 164-50-R16-MCRS</b>	<b>1</b>	Outside diameter d <sub>1</sub>
	<b>2</b>	Bore code
	<b>3</b>	Bore d <sub>2</sub>
	<b>4</b>	Coding

1.1  
1.2  
1.3  
1.4  
2.1  
2.2  
2.3  
2.4

