

Scale Rings

Steel

SPECIFICATION

Types

- Type **MCR**: Matte chrome plated
- Type **MCRS**: Matte chrome plated, standard scale 0...90, 100 graduations, acc. to scale scheme d1/100 A RA 0-10 20...90/10

Bore code

- **B**: Without friction ring
- **R**: With friction ring

Scale ring

Steel

- Profile-milled knurl
- Scale lug d: 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

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 (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.

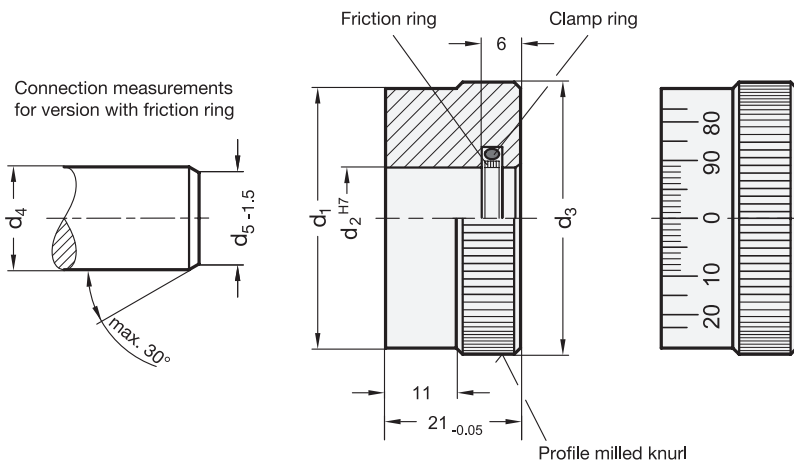
Regarding design, numbering run, numbering position and numbering sequence of the scale please see the layout for scale rings on the order sheet "How to order graduations" (see page 594).

ON REQUEST

- Special graduations (see "How to order graduations") (see page 594)

TECHNICAL INFORMATION

- "How to order graduations" (see page 594)
- ISO-Fundamental Tolerances (see page A21)



GN 164-Plain

Description	d1 ±0.02	d2 H7 Bore	d3	d4 -0.02/-0.05	d5	Δ
GN 164-30-B12	30	12	31.7	12	10.5	98
GN 164-30-R12	30	12	31.7	12	10.5	100
GN 164-30-B14	30	14	31.7	14	10.5	90
GN 164-30-R14	30	14	31.7	14	10.5	92
GN 164-40-B14	40	14	41.3	14	12.5	180
GN 164-40-R14	40	14	41.3	14	12.5	182
GN 164-40-B16	40	16	41.3	16	12.5	172
GN 164-40-R16	40	16	41.3	16	12.5	174
GN 164-50-B16	50	16	51.8	16	14.5	292
GN 164-50-R16	50	16	51.8	16	14.5	293
GN 164-50-B18	50	18	51.8	18	14.5	282
GN 164-50-R18	50	18	51.8	18	14.5	283
GN 164-60-B18	60	18	61.4	18	16.5	414
GN 164-60-R18	60	18	61.4	18	16.5	424
GN 164-60-B20	60	20	61.4	20	16.5	413
GN 164-60-R20	60	20	61.4	20	16.5	413

GN 164-Matte Chrome Plated

Description	d1 ±0.02	d2 H7 Bore	d3	d4 -0.02/-0.05	d5	Δ
GN 164-30-B12-MCR	30	12	31.7	12	10.5	98
GN 164-30-B12-MCRS	30	12	31.7	12	10.5	98
GN 164-30-R12-MCR	30	12	31.7	12	10.5	100
GN 164-30-R12-MCRS	30	12	31.7	12	10.5	100
GN 164-30-B14-MCR	30	14	31.7	14	10.5	90
GN 164-30-B14-MCRS	30	14	31.7	14	10.5	90
GN 164-30-R14-MCR	30	14	31.7	14	10.5	92
GN 164-30-R14-MCRS	30	14	31.7	14	10.5	92
GN 164-40-B14-MCR	40	14	41.3	14	12.5	180
GN 164-40-B14-MCRS	40	14	41.3	14	12.5	180
GN 164-40-R14-MCR	40	14	41.3	14	12.5	182
GN 164-40-R14-MCRS	40	14	41.3	14	12.5	162
GN 164-40-B16-MCR	40	16	41.3	16	12.5	172
GN 164-40-B16-MCRS	40	16	41.3	16	12.5	172
GN 164-40-R16-MCR	40	16	41.3	16	12.5	174
GN 164-40-R16-MCRS	40	16	41.3	16	12.5	174
GN 164-50-B16-MCR	50	16	51.8	16	14.5	292
GN 164-50-B16-MCRS	50	16	51.8	16	14.5	292
GN 164-50-R16-MCR	50	16	51.8	16	14.5	320
GN 164-50-R16-MCRS	50	16	51.8	16	14.5	293
GN 164-50-B18-MCR	50	18	51.8	18	14.5	281
GN 164-50-B18-MCRS	50	18	51.8	18	14.5	281
GN 164-50-R18-MCR	50	18	51.8	18	14.5	283
GN 164-50-R18-MCRS	50	18	51.8	18	14.5	283
GN 164-60-B18-MCR	60	18	61.4	18	16.5	422
GN 164-60-B18-MCRS	60	18	61.4	18	16.5	422
GN 164-60-R18-MCR	60	18	61.4	18	16.5	424
GN 164-60-R18-MCRS	60	18	61.4	18	16.5	424
GN 164-60-B20-MCR	60	20	61.4	20	16.5	413
GN 164-60-B20-MCRS	60	20	61.4	20	16.5	413
GN 164-60-R20-MCR	60	20	61.4	20	16.5	413
GN 164-60-R20-MCRS	60	20	61.4	20	16.5	413

