

3.1 Linear Bearings Type RN



The RN linear bearing represents a consistent optimization of the R linear bearing. Thanks to the enlarged contact surface of the roller with the guideway, the performance capacity is significantly increased, with unchanged fitting dimensions.

The features of the RN include:

- approx. 3 × higher load carrying capacity
- significantly reduced susceptibility to cage drift
- reduced danger of contamination due to the narrower gap between the individual guides

3.2 Material

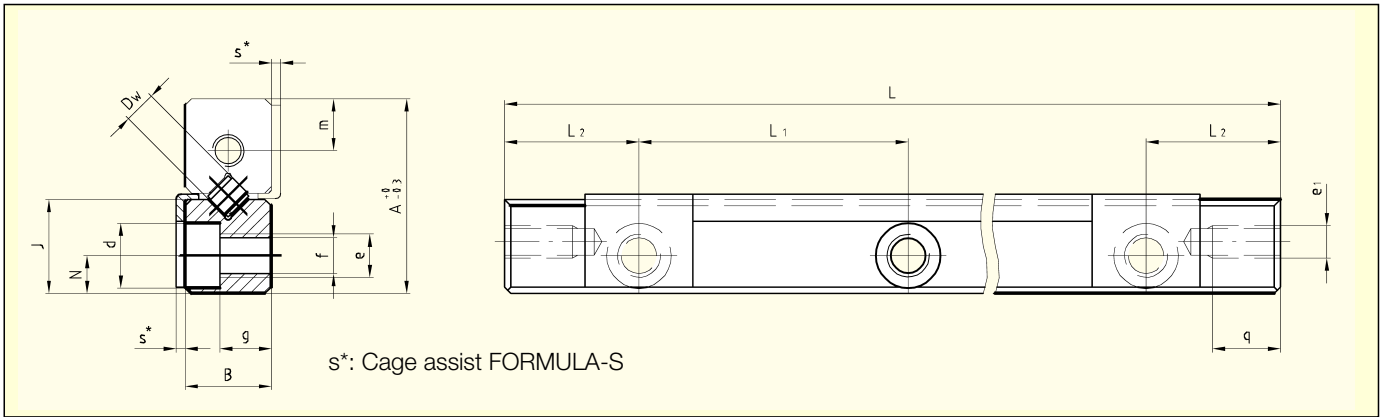
SCHNEEBERGER **linear bearings** are normally manufactured from tool steel No. 1.2510 or 1.2842. The hardness is between 58 and 62 HRC, or min. 54 HRC for certain corrosion resistant models (material No. 1.4125).

The whole SCHNEEBERGER **rolling element range** is made generally from bearing steel No. 1.3505. The hardness is between 58 and 64 HRC, or min. 56 HRC for corrosion-resistant models.

3.3 Special version

Also available in a special corrosion resistant material. The comprehensive standardized program is complemented as the situation requires with special models so that every desired, technically optimal design can be realized. We can supply complete solutions specific to the application conditions.

3.4 Dimension Table Type RN

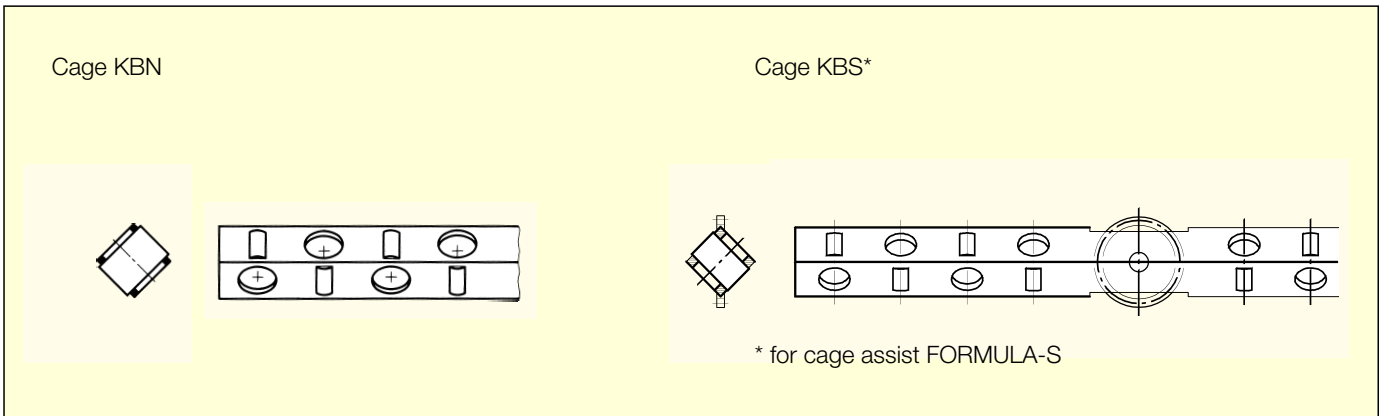


Type	Size	A	B	Dw	J	L ₁	L ₂	N	d	e	e ₁	f	g	m	q	s
RN	3	18	8	3	8.7	25	12.5	3.5	6	M4	M3	3.3	4.8	4.8	7	0.85
RN	4	22	11	4.5	10.5	40	20	4.5	8	M5	M3	4.3	6.9	5.5	7	0.85
RN	6	31	15	6.5	14.8	50	25	6	9.5	M6	M5	5.2	9.8	7.5	9	0.85
RN	9	44	22	9	21.1	100	50	9	10.5	M8	M6	6.8	15.8	11.5	9	–
RN	12	58	28	12	27.6	100	50	12	13.5	M10	M8	8.5	19.8	15	12	–

RN 15, RN 18, RN 24 on request

Type	Size	Length L											Max L
RN	3	050	075	100	125	150	175	200	225	250	275	300	700
RN	4	080	120	160	200	240	280	320	360	400			700
RN	6	100	150	200	250	300	350	400	450	500			1500
RN	9	200	300	400	500	600	700	800					1500
RN	12	200	300	400	500	600	700	800	900	1000			1500

Other lengths on request



Type	Size	Accessories (see also chapter 7)		Spec. Attaching screws GD	Options							
		Cages KBN	Endscrews GAN or GA		SQ	SSQ	RF	EG	ZG	HA	DU	KS
RN	3	•	•	•	(•)	(•)	(•)	•	•	•	•	•
RN	4	•	•	•	(•)	(•)	(•)	•	•	•	•	•
RN	6	•	•	•	(•)	(•)	(•)	•	•	•	•	•
RN	9	•	•	•	(•)	(•)	(•)	•	•	•	•	•
RN	12	•	•	•	(•)	(•)	(•)	•	•	•	•	•

(•) Maximum length 600 mm

Corrosion resistant rolling elements on request

Ordering information Linear Bearings

Standard

Options

Type	Size	–	Length	–	Additional ordering information
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RN 9 – 800 –

SQ	Special quality, high requirements ¹⁾
SSQ	Super special quality, most stringent requirements ¹⁾
RF	Corrosion resistant ²⁾
EG	Inlets rounded ³⁾
ZG	Linear Bearings ground together ¹⁾
HA	Of Height Matched Linear Bearings in pairs ¹⁾
DU	Chrome coating type Duralloy ^{®2)}
KS	Integrated cages with assisted movement

Order information

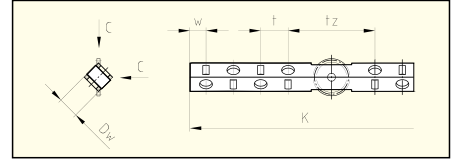
4 Linear Bearings Type RN 9-800-SQ
2 Roller Cages KBN 9 x 30 rollers
8 Endpieces GA

¹⁾ see chapter 15.1
²⁾ see chapter 15.2
³⁾ see chapter 16.7

7.1 Cages

Roller Cages Type KBS, Sizes 3–6 for FORMULA-S

- Suitable for all types of fitting
- Captive rollers

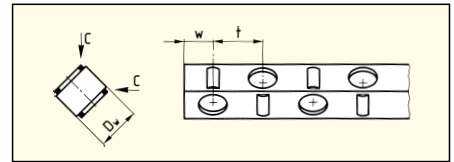


Type	Size	D _w	t	t _z	w	C/Roller in N
KBS	3	3	5	18	3.5	410
KBS	4	4.5	6.5	23	4	850
KBS	6	6.5	8.5	27	5	1800

Ordering example: 2 Roller Cages KBS 4 × 15 rollers for RN 4

Roller cages Type KBN, for RN and RNG, Sizes 3–12

- Suitable for all types of fitting
- Captive rollers
- DELRIN 500 CL

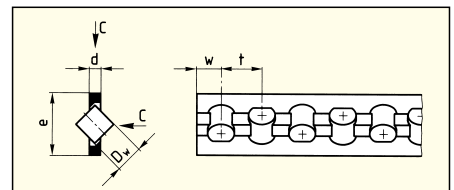


Type	Size	D _w	t	w	C/Roller in N
KBN	3	3	5	3.5	410
KBN	4	4.5	6.5	4	850
KBN	6	6.5	8.5	5	1800
KBN	9	9	12	7.5	3900
KBN	12	12	15	9	6500

Ordering example: 2 Roller Cages KBN 4 × 15 rollers

Roller Cages Type AC, Sizes 1–12 for R and RD

- Suitable for all types of fitting
- Captive rollers
- Material: Sizes 1 and 2 Delrin 500 CL
from size 3 PA 12 GF 30%
Steel wire

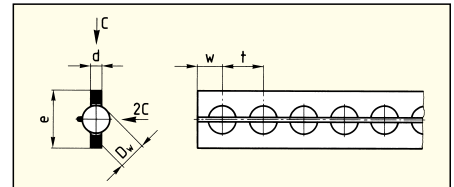


Type	Size	D _w	d	e	t	w	C/ Roller in N	Number of rollers	Max. Length
AC	1	1.5	0.45	3.5	3	1.5	50		70
AC	2	2	0.75	5	4	2	85		85
AC	3	3	1	7	5	2.5	130	240	1200
AC	6	6	2.5	14	9	6	530	166	1500
AC	9	9	3.5	20	14	9	1300	107	1500
AC	12	12	4.5	25	18	11	2500	83	1500

Ordering example: 2 Roller cages AC 3 × 20 rollers

Ball cages Type AK, Sizes 1–12 for R and RD

- Suitable for all types of fitting
- Captive balls
- Material: Sizes 1 to 3 POM
from size 6 PA 12 GF 30%
Steel wire composite



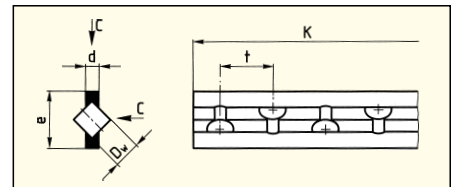
Type	Size	D _w	d	e	t	w	C/ Ball in N	Number of balls	Max. Length
AK	1	1.5	0.45	3.5	2.2	1.5	9	23	80
AK	2	2	0.75	5	4	2	15	23	100
AK	3	3	1	7	4.2	2.5	25	42	180
AK	6	6	2.5	14	9	6	65	166	1500
AK	9	9	3.5	20	14	9	150	107	1500
AK	12	12	4.5	25	18	11	260	83	1500

Ordering example: 2 Ball cages AK 1 × 5 balls

Roller Cages Type EE, Sizes 6 and 9 for R 6, R 9, RD 6 and RD 9 (Special Accessories)

Application see chapter 17.5

- Use only with specially designated Linear bearings (suffix EE) and Type GB or GC endpieces
- For horizontal and vertical fitting
- Captive rollers
- Acts as a dirt wiper, thus running friction is somewhat higher
- When ordering, it is essential that the overall cage length K is quoted
- Material PE plastic
- Not suitable for protruding cages and gravity loaded bearings



Type	Size	D _w	d	e	t	C/Roller in N
EE	6	6	3.2	13.5	12	530
EE	9	9	4.6	19	18	1300

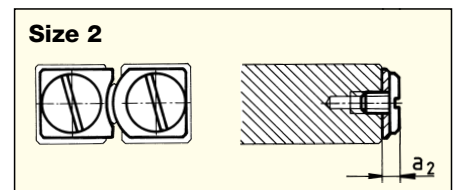
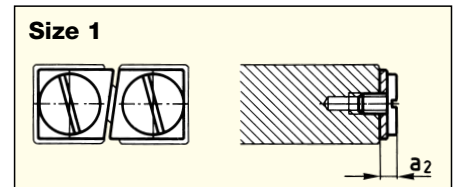
Ordering example: 2 Roller cages EE 6 × 150 mm length

Other materials for cages/rolling elements on request

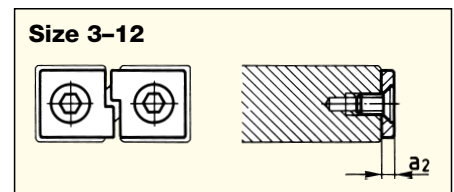
7.2 Endpieces

Endpieces Type GB

- For horizontal or vertical fitting
- For R 1 and R 2

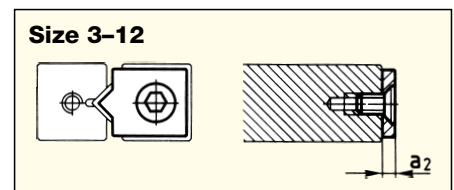


- For horizontal or vertical fitting
- For Type EE roller cages
- For R 3 to R 12



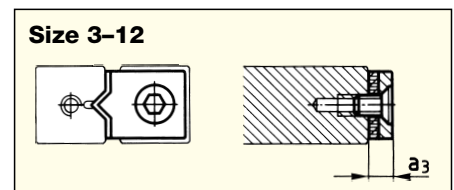
Endpieces Type GC

- For protruding cages
- For R 3 to R 12



Endpieces Type GC-A with Wipers

- For horizontal or vertical fitting
- Felt Wiper
- For R 3 to R 12



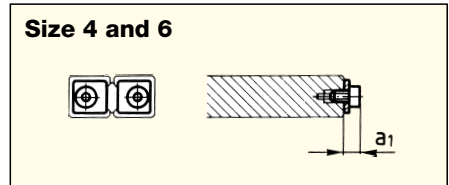
Size	1	2	3	6	9	12
a_1	-	-	2	3	3	3
a_2	1.7	2	2	3	4	5
a_3	-	-	5	6	7	8

Ordering example: 8 Endscrews GA 6 or 4 Endpieces GC-A 9

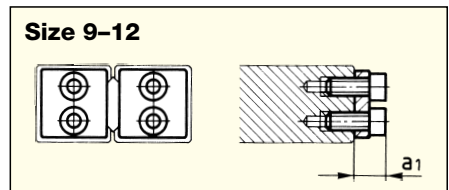
Endpieces delivered with attaching screws

Endpieces Type GBN

- For horizontal and vertical fitting
- For RNG 4 and 6

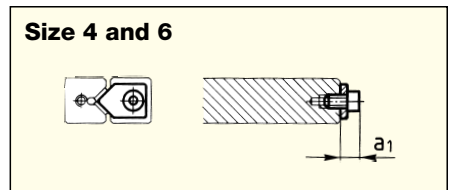


- For RNG 9 to 12

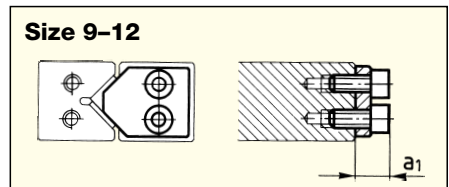


Endpieces Type GCN

- For protruding cages
- For RNG 4 and 6

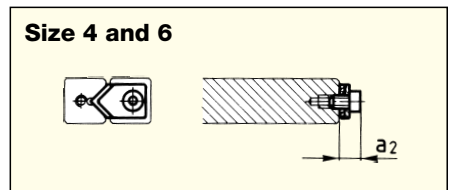


- For RNG 9 to 12

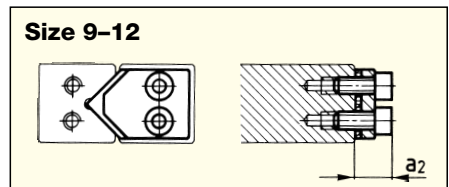


Endpieces Type GCN-A with Wipers

- For horizontal and vertical fitting
- Plastic wiper
- For RNG 4 and 6



- For RNG 9 to 12



Size	4	6	9	12
a ₁	4	4	4	8.5
a ₂	5.5	5.5	5.5	10

Ordering example: 40 Endpieces GBN 9

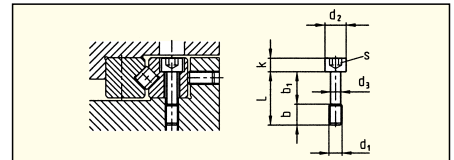
Endpieces delivered with attaching screws

7.3 Attaching Screws

Special Attaching Screws for R and RN

Type GD, Sizes 3-12

- To compensate for difference in hole pitch

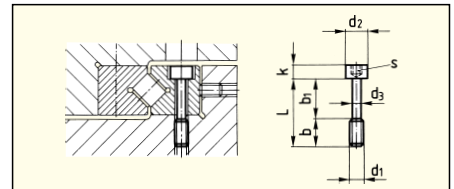


Type	Size	L	b	b ₁	d ₁	d ₂	d ₃	k	s
GD	3	12	5	7	M3	5	2.3	3	2.5
GD	4	16	7	9	M4	6.5	3	4	3
GD	6	20	8	12	M5	8	3.9	5	4
GD	9	30	12	18	M6	8.5	4.6	6	5
GD	12	40	17	23	M8	11.3	6.25	8	6

Special Attaching Screws for RNG

Type GDN, Sizes 4-12

- To compensate for difference in hole pitch



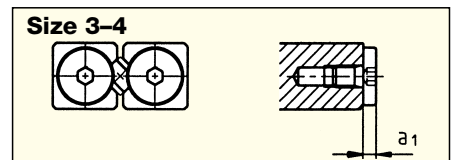
Type	Size	L	b	b ₁	d ₁	d ₂	d ₃	k	s
GDN	4	12	5	7	M2.5	4.5	1.85	2.5	2
GDN	6	16	5	11	M3	5.5	2.3	3	2.5
GDN	9	25	11	14	M4	7	3	4	3
GDN	12	30	12	18	M6	10	4.6	6	5

Ordering example: 50 Special Attaching Screws GDN 9

7.4 Endscrews

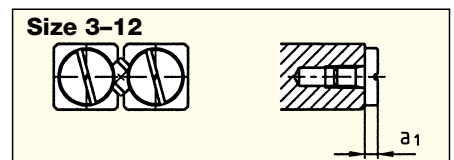
Endscrews Type GAN

- a₁ = 2
- For RN 3-RN 4



Endscrews Type GA

- For horizontal fitting
- For R 3-R 12
- From RN 6-RN 12



Order numbers in bold face are standard articles