

8.1 Linear Bearings Type N and O



Type N/O linear bearings are equipped with needle cages and are suitable for high load applications. The SCHNEEBERGER composite cages used with these guides ensure that there is little resistance to motion as compared to other similar needle bearing guides, while providing very great rigidity.

8.2 Material

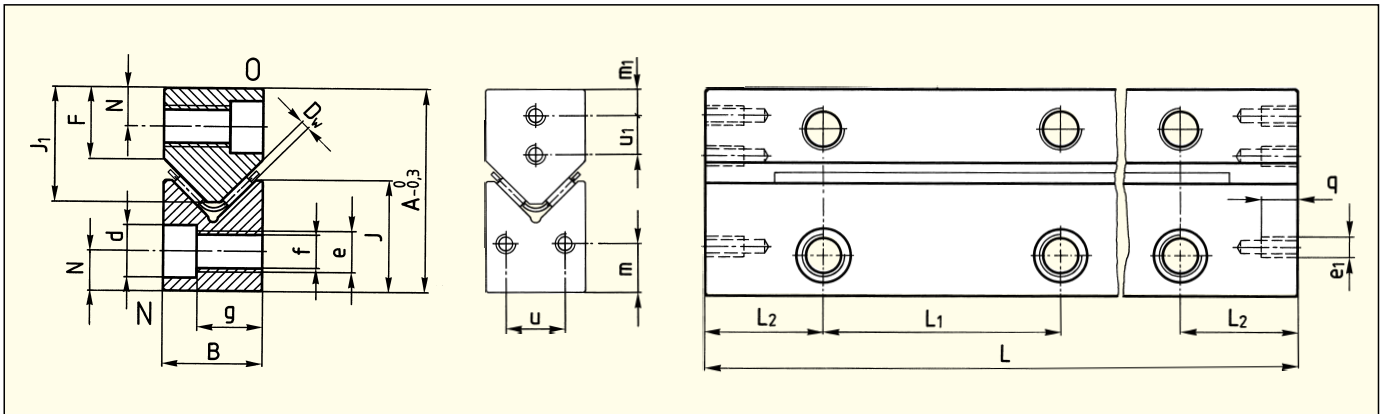
SCHNEEBERGER **linear bearings** are normally manufactured from tool steel No. 1.2510 or 1.2842. The hardness is between 58 and 62 HRC, or min. 54 HRC for certain corrosion resistant models (material No. 1.4125).

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.

8.3 Special version

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.

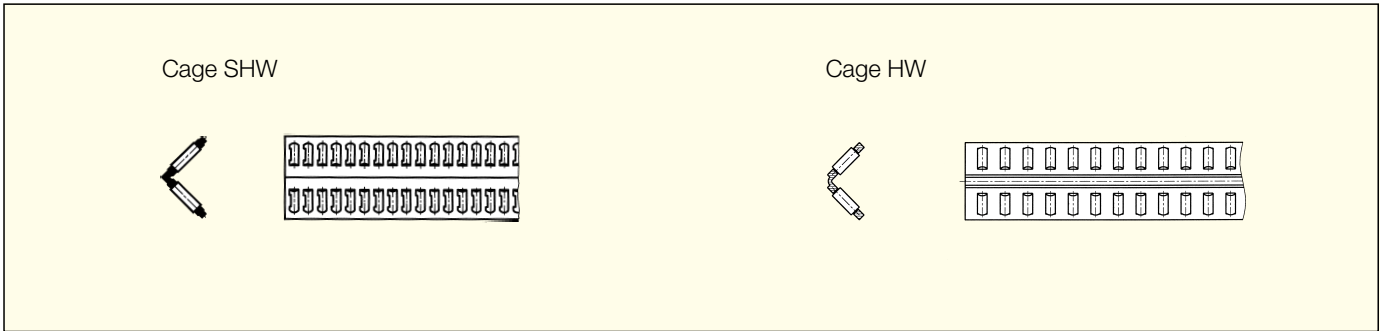
8.4 Dimension Table Type N/O



Type	Size	A	B	Dw	F	J	J ₁	L ₁	L ₂	N	d	e	e ₁	f	g	m	m ₁	q	u	u ₁
N/O	62015	31	15	2	11	16	18	50	25	6	9.5	M6	M3	5.2	9.8	7.5	4.5	7	7	7
N/O	92025	44	22	2	15	24	24.5	100	50	9	10.5	M8	M4	6.8	15.8	11	6	11	10	10
N/O	2025	52	25	2	18	28	29	100	50	10	13.5	M10	M6	8.5	16.8	12	7	11	14	11
N/O	2535	62	30	2.5	22	34	35	100	50	12	16.5	M12	M6	10.5	19.8	15	8	11	18	12
N/O	3045	74	35	3	25	42.5	40	100	50	14	18.5	M14	M6	12.5	22.8	18	10	11	19	16
N/O	3555	78	45	3.5	25	45	45	100	50	14	18.5	M14	M6	12.5	32.8	18	12	11	29	20

Type	Size	Length L									Max L
N/O	62015	100	150	200	250	300	350	400	450	500	1200
N/O	92025	200	300	400	500	600	700	800			2000
N/O	2025	200	300	400	500	600	700	800	900	1000	2000
N/O	2535	300	400	500	600	700	800	900	1000		2000

N/O 3045, N/O 3555 and other lengths on request



Type	Size	Accessories (see also chapter 10)								Spec. Attaching Screws	Options							
		Cages		Endpieces				GD	SQ		SSQ	RF	EG	ZG	HA	DU	KS	
		SHW	HW	GFN	GFO	GH	GH-A		GW	GW-A								
N/O	62015	•	•	•	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•	
N/O	92025	•	•	•	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•	
N/O	2025	•	•	•	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•	
N/O	2535	•	•	•	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•	
N/O	3045	•	•	•	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•	
N/O	3555	•	•	•	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•	

(•) Maximum length 600 mm

Ordering information Linear Bearings

Standard

Options

Type	Size	Length	Additional ordering information
N	2025	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 cage assist
O	2025	400	

Order information

- 2 Linear Bearings Type N 2025-800
- 2 Linear Bearings Type O 2025-400-EG
- 2 Needle Cages SHW 15 x 600 mm
- 4 Endpieces GH 2025

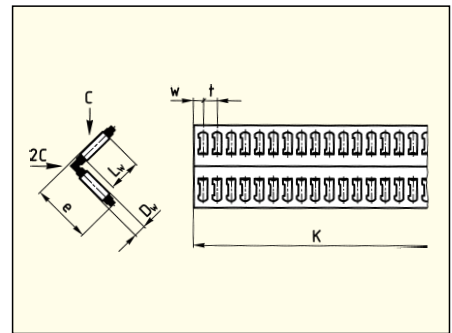
1) see chapter 15.1
 2) see chapter 15.2
 3) see chapter 16.7

10.1 Cages

Needle Cage Type SHW, Sizes 15–30

- For all types of fitting
- Captive needles
- Material plastic PA 12 GF 30%/Stainless steel composite

The needle cages are supplied in one piece in the customer specified length K.

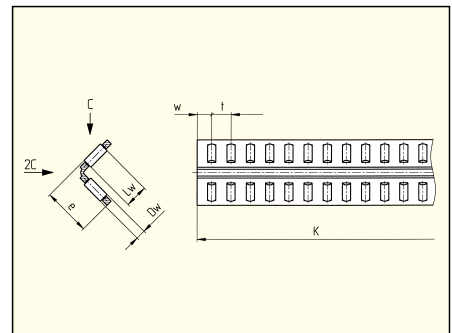


Type	Size	D _w	L _w	e	t	w	C/Needle in N	Suitable for Linear Bearings Type	Max. Length
SHW	15	2	6.8	14	4	2.9	750	N/O 92025 and 2025 M/V 4025 and 5025	1500
SHW	20	2.5	9.8	19	4.75	3.4	1375	N/O 2535 M/V 6035	1500
SHW	25	3	13.8	25	5.2	3.6	2350	N/O 3045 M/V 7040	1500
SHW	30	3.5	17.8	30	6.1	4.3	3600	N/O 3555 M/V 8050	1500

Ordering example: 2 Needle cages SHW 20 × 402 mm length

Needle Cage Type HW, Sizes 10–30

- For all types of fitting
- Captive needles
- Material: Light metal; HW 10: steel

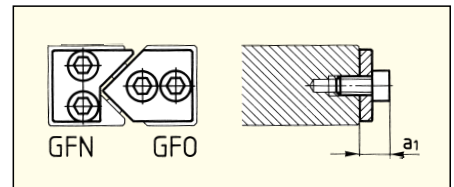


Type	Size	D _w	L _w	e	t	w	C/Needle in N	Suitable for Linear Bearings Type	Max. Length
HW	10	2	4.8	10	4	3	530	M/V 3015	2000
HW	15	2	6.8	14	4.5	3.5	750	M/V 4020 and 5025	2000
HW	16	2	8.8	16	3.8	2.8	970	M/V 5025	2000
HW	20	2.5	9.8	20	5.5	4	1375	M/V 6035	2000
HW	25	3	13.8	25	6	4.5	2350	M/V 7040	2000
HW	30	3.5	17.8	30	7	5	3600	M/V 8050	2000

10.2 Endpieces for N/O

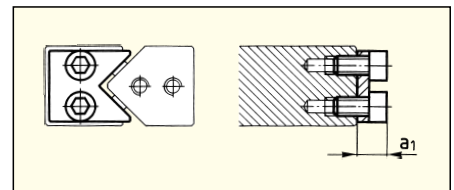
**Endpieces Type GFN and GFO,
Sizes 62015–3555**

- For horizontal and vertical fitting



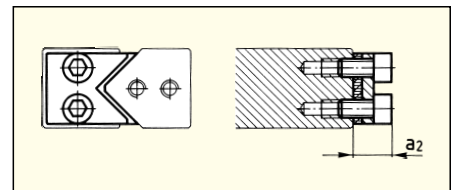
**Endpieces Type GH,
Sizes 62015–3555**

- For protruding cages



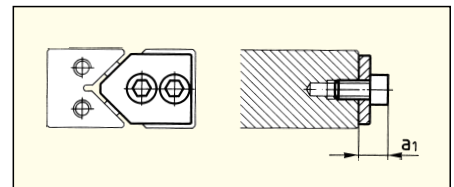
**Endpieces Type GH-A with Wipers,
Sizes 62015–3555**

- For horizontal and vertical fitting
- Felt wiper



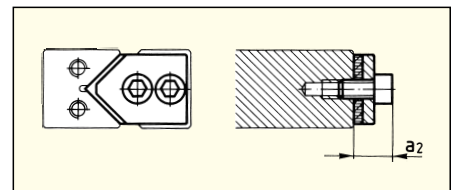
**Endpieces Type GW,
Sizes 62015–3555**

- For protruding cages



**Endpieces Type GW-A with Wipers,
Sizes 62015–3555**

- For horizontal and vertical fitting
- Felt wiper



Size	62015	92025	2025	2535	3045	3555
a ₁	6	7	10	10	10	11
a ₂	9	10	13	13	13	14

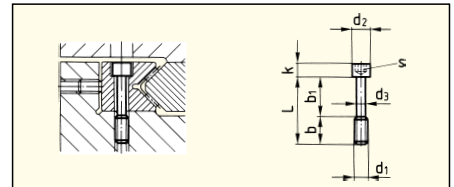
Ordering example: 4 Endpieces GFN 3045, 4 Endpieces GFO 3045 or 4 Endpieces GW 3045

Endpieces delivered with attaching screws

Screws for N/O

Special Attaching Screws Type GD, Size 6–3555

- To compensate for differences in hole pitches

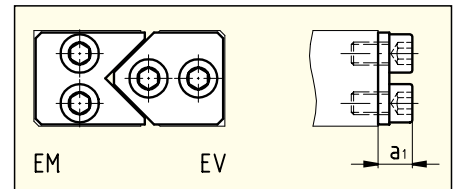


Type	Size	L	b	b ₁	d ₁	d ₂	d ₃	k	s	Suitable for Linear Bearings Type
GD	6	20	8	12	M5	8	3.9	5	4	N/O 62015
GD	9	30	12	18	M6	8.5	4.6	6	5	N/O 92025
GD	2025	35	16	19	M8	11.3	6.25	8	6	N/O 2025
GD	2535	40	18	22	M10	13.9	7.9	10	8	N/O 2535
GD	3045	50	25	25	M12	15.8	9.6	12	10	N/O 3045
GD	3555	60	25	35	M12	15.8	9.6	12	12	N/O 3555

Ordering example: 40 Special Attaching Screws GD 2025

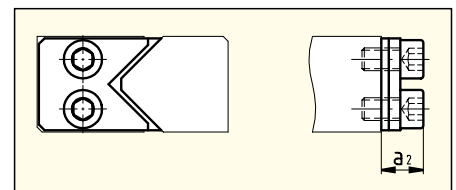
10.3 Endpieces for M/V

Endpieces Type EM/EV, Sizes 3015–8050



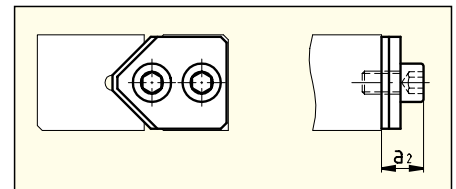
Endpieces Type EAM, Sizes 3015–8050

- Wiper



Endpieces Type EAV, Sizes 3015–8050

- Wiper



Dimension Table Type EM to EAV

Size	3015	4020	5025	6035	7040	8050
a ₁	5	8	9	9	9	9
a ₂	7	10	11	11	11	11

Endpieces delivered with attaching screws