

9.1 Linear Bearings Type M and V



Type M/V 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.

9.2 Material

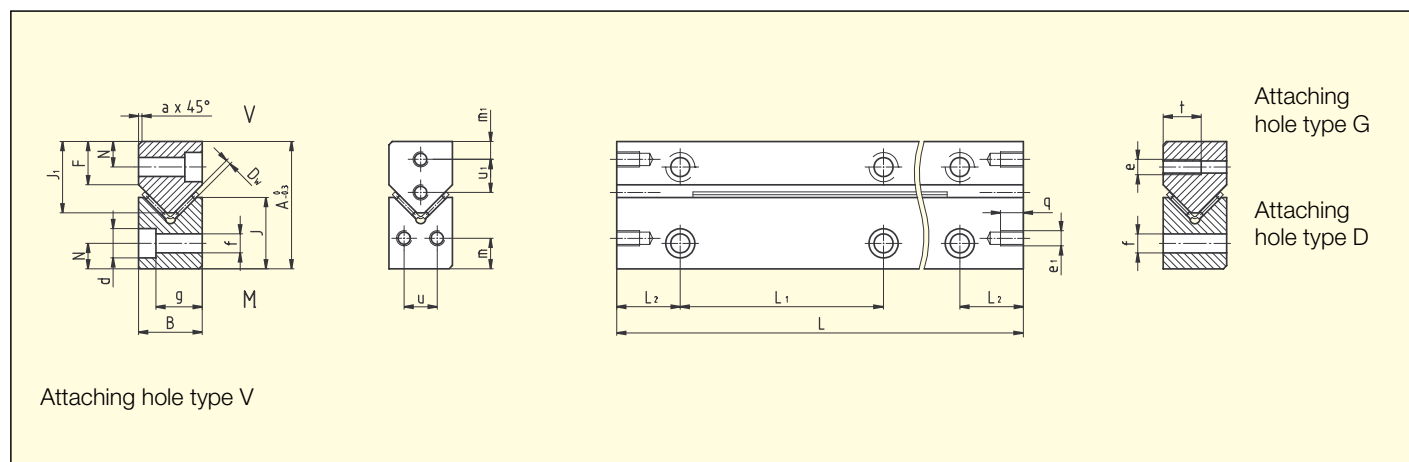
SCHNEEBERGER **linear bearings** are normally manufactured from tool steel No. 1.2510 or 1.2842. The hardness is between 58 and 62 HRC, or min. 54 HRC for certain corrosion resistant models (material No. 1.4125).

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.

9.3 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.

9.4 Dimension Table Type M/V



Type	Size	A	B	Dw	F	J	J ₁	L ₁	L ₂	N	a	d	e	e ₁	f	g	m	m ₁	q	t	u	u ₁
M/V	3015	30	15	2	10.5	15.5	17.4	¹⁾ 40	³⁾	5.5	0.7	8.5	M4	M3	5.25	10.5	8	5.5	7	15	7	7
M/V	4020	40	20	2	13.5	22.5	22	²⁾ 80	⁴⁾	7.5	1.3	11.5	M6	M5	7.5	13.2	10	5.5	8	20	11	10.5
M/V	5025	50	25	2	17	28	28	²⁾ 80	⁴⁾	10	1.3	11.5	M6	M6	7.5	18.2	12	7	9	15	13	13
M/V	6035	60	35	2.5	20	35	35.5	100	50	11	1.3	15	M8	M6	10	26	14	8	9	20	20	18
M/V	7040	70	40	3	24	40	41.5	100	50	13	1.3	18.5	M10	M6	12.5	29	16	10	9	25	20	20
M/V	8050	80	50	3.5	26	45	48	100	50	14	1.3	20	M12	M6	14	37	20	10	9	30	30	25

¹⁾ For length 100 : L₁ = 35 (2×)

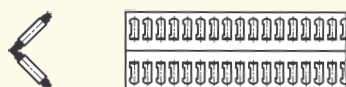
²⁾ For length 100 : L₁ = 50

³⁾ min. 15

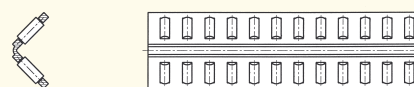
⁴⁾ min. 20

Type	Size	Length L										Max L
M/V	3015	100	150	200	300	400	500	600				1200
M/V	4020	100	150	200	300	400	500	600				1500
M/V	5025	100	200	300	400	500	600	700	800	900	1000	1500
M/V	6035	200	300	400	500	600	700	800	900	1000		1500
M/V	7040	200	300	400	500	600	700	800	900	1000		1500
M/V	8050	300	400	500	600	700	800	900	1000			1500
Other Lengths on request												

Cage SHW



Cage HW



Type	Size	Accessories (see also chapter 10)						Options						
		Cages		Endpieces		EAM	EAV	SQ	SSQ	RF	EG	ZG	HA	KS
		SHW	HW	EM	EV									
M/V	3015		•	•	•	•	•	(•)	(•)	(•)	•	•	•	
M/V	4020	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•
M/V	5025	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•
M/V	6035	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•
M/V	7040	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•
M/V	8050	•	•	•	•	•	•	(•)	(•)	(•)	•	•	•	•

(•) Maximum length 600 mm

Ordering information Linear Bearings

Standard

Type	Size	–	Length
M	5025	–	600
V	5025	–	600

Options

Additional ordering information	
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⁾
KS	Integrated cage assist

Order information

2 Linear Bearings Type M 5025-600
2 Linear Bearings Type V 5025-600
2 Needle Cages SHW 15 x 500 mm
4 Endpieces Type GFN 5025
4 Endpieces Type GFO 5025

¹⁾ see chapter 15.1

²⁾ see chapter 15.2

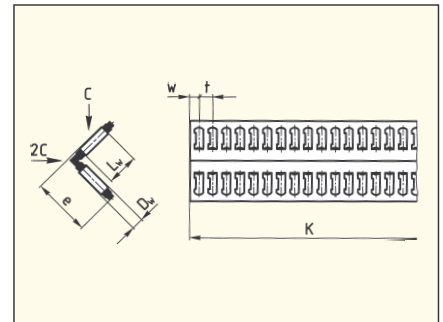
³⁾ see chapter 16.7

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.

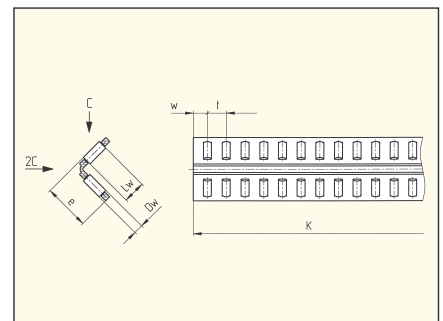


Type	Size	D_w	L_w	e	t	w	C/Needle in N	Suitable for Linear Bearings Type	Max. Length
SHW	15	2	6.8	14	4	2.9	750	N/O 92025 and 2025 M/V 4025 and 5025	1500
SHW	20	2.5	9.8	19	4.75	3.4	1375	N/O 2535 M/V 6035	1500
SHW	25	3	13.8	25	5.2	3.6	2350	N/O 3045 M/V 7040	1500
SHW	30	3.5	17.8	30	6.1	4.3	3600	N/O 3555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