



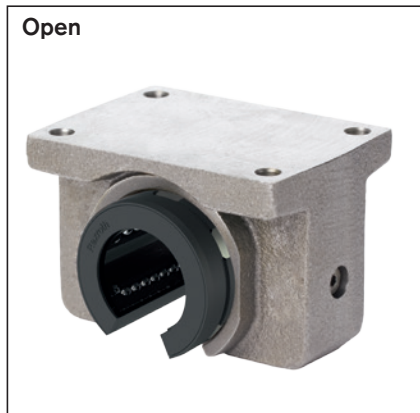
Linear sets with super linear bushings  or 



Linear sets, R1067 Open

Linear sets, R1068 Open, adjustable



Design

- Precision housing (spheroidal graphite cast iron/steel)
- Secured with locating screw
- Super linear bushing with or without misalignment compensation
- Integrated wiper seals



Shaft Ø d (mm)	Material number		Weight (kg)
	Super linear bushing  Integrated wiper seals LSGO-A- ... -DD	Super linear bushing  Integrated wiper seals LSGO-B- ... -DD	
12	R1067 612 40	R1067 812 40	0.13
16	R1067 616 40	R1067 816 40	0.20
20	R1067 620 40	R1067 820 40	0.36
25	R1067 625 40	R1067 825 40	0.70
30	R1067 630 40	R1067 830 40	1.05
40	R1067 640 40	R1067 840 40	2.05
50	R1067 650 40	R1067 850 40	2.77



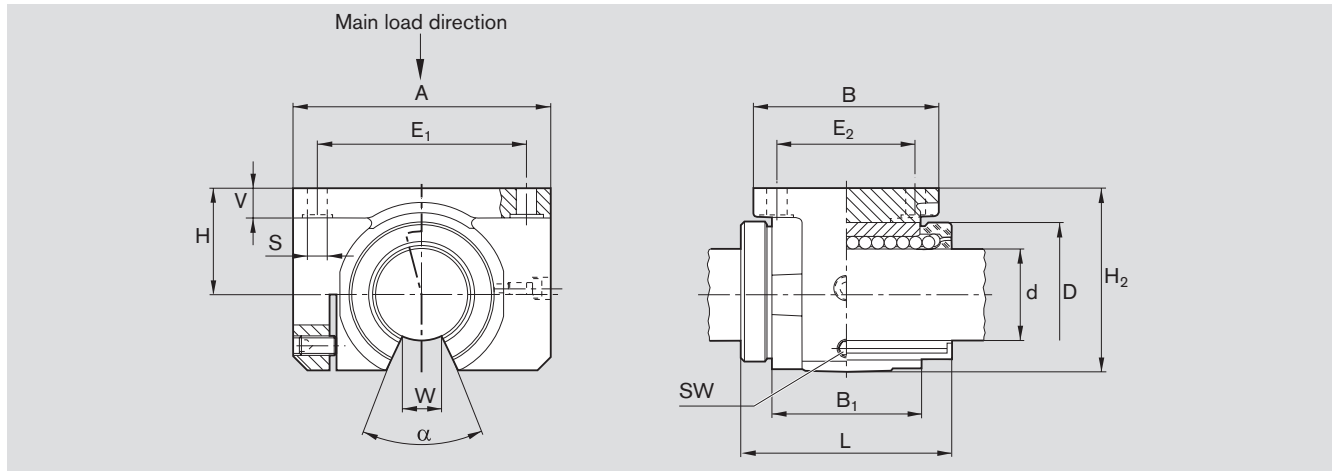
Shaft Ø d (mm)	Material number		Weight (kg)
	Super linear bushing  Integrated wiper seals LSGOE-A- ... -DD	Super linear bushing  Integrated wiper seals LSGOE-B- ... -DD	
12	R1068 612 40	R1068 812 40	0.12
16	R1068 616 40	R1068 816 40	0.20
20	R1068 620 40	R1068 820 40	0.36
25	R1068 625 40	R1068 825 40	0.69
30	R1068 630 40	R1068 830 40	1.02
40	R1068 640 40	R1068 840 40	2.02
50	R1068 650 40	R1068 850 40	2.71

Explanation of sample short product name

LS	G	O	A	20	DD
Linear set	Cast iron	Open	Super 	Ø 20	Two seals

See page 39 for more information on short product names.

Dimensions




Dimensions (mm)													
Ø d	D	H	H ₂ ¹⁾	L	A ¹⁾	B ¹⁾	B ₁	E ₁	E ₂	S	V ¹⁾	W ²⁾	SW
12	22	18	28	32	42	32	20	32±0.15	23±0.15	4.5	5.5	6.5	2.5
16	26	22	35	36	50	35	22	40±0.15	26±0.15	4.5	6.5	9.0	2.5
20	32	25	42	45	60	42	28	45±0.15	32±0.15	4.5	8.0	9.0	2.5
25	40	30	51	58	74	54	40	60±0.15	40±0.15	5.5	9.0	11.5	3.0
30	47	35	60	68	84	60	48	68±0.20	45±0.20	6.6	10.0	14.0	3.0
40	62	45	77	80	108	78	56	86±0.20	58±0.20	9.0	12.0	19.5	4.0
50	75	50	88	100	130	70	72	108±0.20	50±0.20	9.0	14.0	22.5	5.0

Ø d (mm)	Angle α (°)	Radial clearance (µm)		Tolerance for H ³⁾ (µm)	Load ratings ⁴⁾ (N)	
		R1067 h6 shaft	R1068		dyn. C	stat. C ₀
12	66	+28	Comes clamped to h5 shaft (lower limit) and set to zero clearance	+8	1,060	510
		-1		-16		
16	68	+28		+8	1,280	630
		-1		-16		
20	55	+31		+8	2,570	1,180
		-2		-16		
25	57	+31		+8	5,040	2,470
		-2		-16		
30	57	+31	+8	5,020	2,880	
		-2	-16			
40	56	+35	+8	8,620	4,480	
		-3	-16			
50	54	+35	+13	12,500	6,620	
		-3	-21			

- 1) ISO 8062-3 - DCTG 9 tolerance.
- 2) Minimum size in relation to Ø d.
- 3) Clamped (fastened) in relation to Ø d.
- 4) The load ratings apply for the main load direction.



The dynamic load ratings are based on a total travel of 100,000 m.
When based on 50,000 m, the C values in the table are multiplied by 1.26.

⚠ Refer to the diagrams on page 41 for load in the direction of opening.

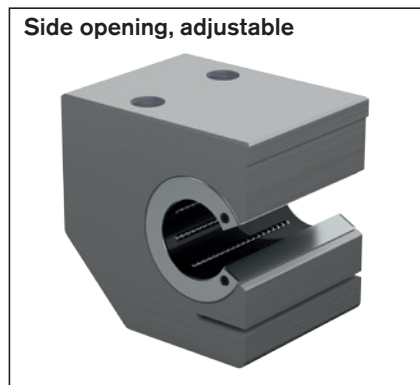
Linear sets with super linear bushings  or 





Linear sets, R1706 Side opening, adjustable

Design

- Precision housing (aluminum)
- Super linear bushing  or 
- Compensate for misalignments of up to 30 ft
- Fully sealed
- Secured with bolt
- Relubricatable

See “Technical data – Load direction factors” for exact values for the 4 main load directions.



Shaft Ø d (mm)	Material number Super linear bushing ¹⁾		Weight (kg) Super linear bushing	
				
	LSAHSE-H- ... -VD	LSAHSE-SH- ... -VD		
20	R1706 220 70	R1706 420 70	0.35	0.37
25	R1706 225 70	R1706 425 70	0.70	0.73
30	R1706 230 70	R1706 430 70	1.03	1.10
40	R1706 240 70	R1706 440 70	1.80	1.95
50	R1706 250 70	R1706 450 70	3.00	3.25

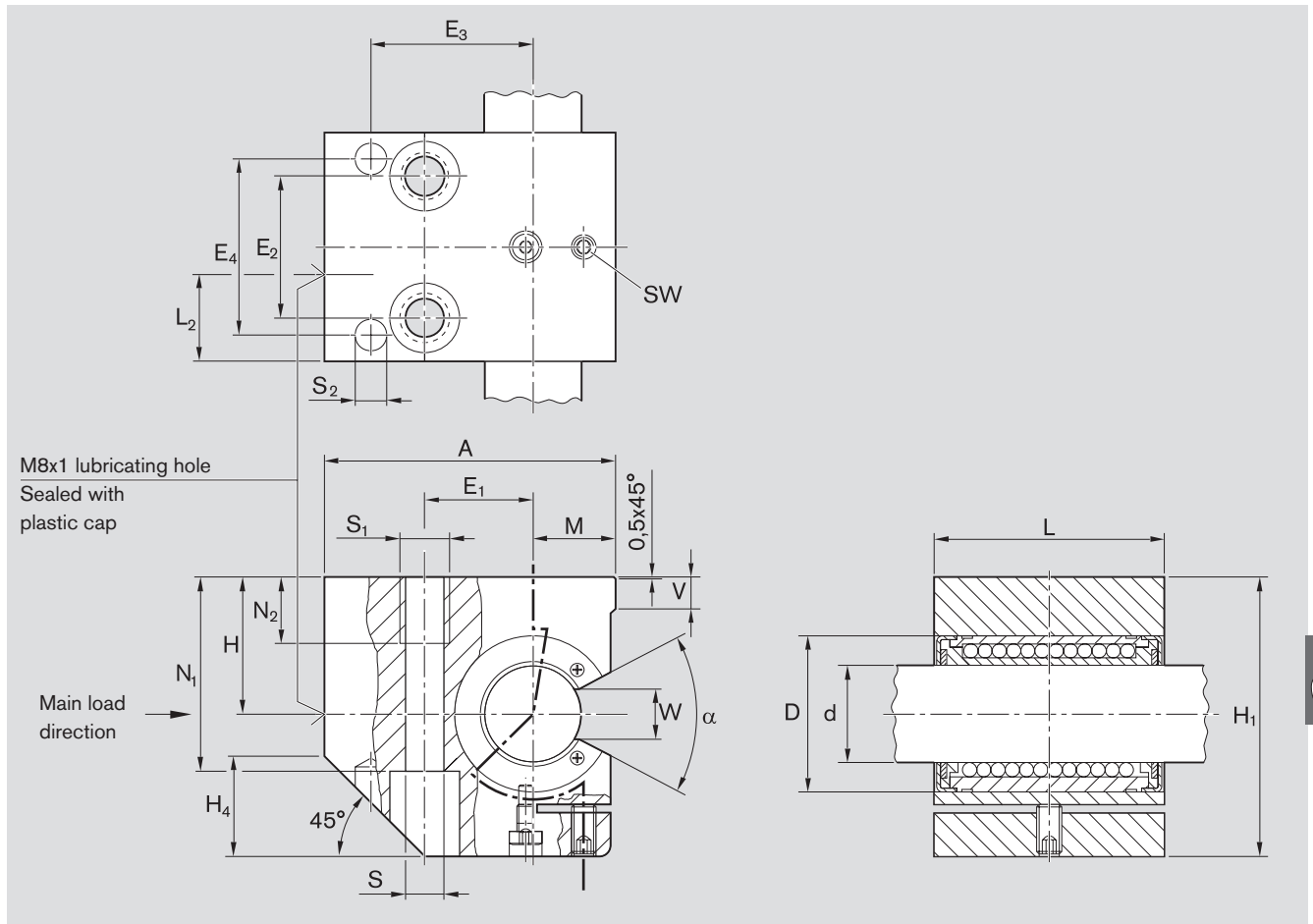
1) Fully sealed, relubricatable

Explanation of sample short product name

LS	A	HSE	H	20	VD
Linear set	Aluminum	Heavy-duty, side opening, adjustable	Super linear bushing 	Ø 20	Fully sealed

See page 75 for more information on short product names.

Dimensions



Dimensions (mm)

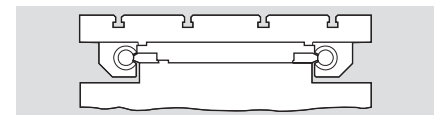
Ø d	D	H ¹⁾ +0.008 -0.016	H ₁	M ¹⁾ ±0.01	A	L	E ₁	E ₂	E ₃	E ₄	S	S ₁	S ₂	N ₁	N ₂	L ₂	V	SW	M	H ₄
20	32	30	60	17	60	47	22±0.15	30±0.15	35	35	8.4	M10	6	42	15	17.5	5.0	2.5	9.5	22
25	40	35	72	21	75	59	28±0.15	36±0.15	42	45	10.5	M12	8	50	18	22.0	6.5	3.0	12.0	26
30	47	40	82	25	86	69	34±0.15	42±0.15	52	52	13.5	M16	10	55	24	27.0	8.0	30.0	12.8	30
40	62	45	100	32	110	81	43±0.15	48±0.15	65	60	15.5	M20	12	67	30	31.0	10.0	4.0	16.8	38
50	75	50	115	38	127	101	50±0.15	62±0.15	75	75	17.5	M20	12	78	30	39.0	12.0	5.0	22.1	45

Shaft Ø d (mm)	Angle α (°)	Radial clearance (µm)	Load ratings ²⁾ (N)			
			Super linear bushing		SP	
			dyn. C	stat. C ₀	dyn. C	stat. C ₀
20	54	Comes clamped to h5 shaft (lower limit) and set to zero clearance	2,520	1,880	3,530	2,530
25	55		4,430	3,360	6,190	4,530
30	60		6,300	5,230	8,800	7,180
40	60		9,680	7,600	13,500	10,400
50	52		16,000	12,200	22,300	16,800

The dynamic load ratings are based on a total travel of 100,000 m. When based on 50,000 m, the C values in the table are multiplied by 1.26.

⚠ Refer to the diagrams on page 78 and page 79 for load in the direction of opening.

- 1) Clamped (fastened) in relation to Ø d.
- 2) The load ratings apply for the main load direction.



Torque-resistant linear bushings

Torque-resistant linear bushings, R0696 0..
Type 1: One ball guide groove

Torque-resistant linear bushings, R0696 3..
Type 2: Two ball guide grooves

Design

- Ball retainer and outer sleeve made of PA or POM
- Hardened steel bearing plates
- Balls made of rolling bearing steel
- Precision steel shaft with ball guide groove
- Hardened steel set screw
- Steel lock nut



Shaft Ø d (mm)	Material number for torque-resistant linear bushing with shaft		
	Standard length as per table	Shaft length cut to size ¹	Customized shaft
	KBDR1- ... -WV- ...	KBDR1- ... -K	KBDR1- ... -SPECIAL
12	R0696 012 80	R0696 012 89	R0696 012 86
16	R0696 016 80	R0696 016 89	R0696 016 86
20	R0696 020 80	R0696 020 89	R0696 020 86
25	R0696 025 80	R0696 025 89	R0696 025 86
30	R0696 030 80	R0696 030 89	R0696 030 86
40	R0696 040 80	R0696 040 89	R0696 040 86
50	R0696 050 80	R0696 050 89	R0696 050 86

- 85 Shaft length 900 mm
- 87 Shaft length 1,200 mm
- 88 Shaft length 2,000 mm

Material number for torque-resistant linear bushing without shaft: R0696 0.. 00



Shaft Ø d (mm)	Material number for torque-resistant linear bushing with shaft		
	Standard length as per table	Shaft length cut to size ¹	Customized shaft
	KBDR2- ... -WV- ...	KBDR2- ... -K	KBDR2- ... -SPECIAL
20	R0696 320 80	R0696 320 89	R0696 320 86
25	R0696 325 80	R0696 325 89	R0696 325 86
30	R0696 330 80	R0696 330 89	R0696 330 86
40	R0696 340 80	R0696 340 89	R0696 340 86
50	R0696 350 80	R0696 350 89	R0696 350 86

- 85 Shaft length 900 mm
- 87 Shaft length 1,200 mm
- 88 Shaft length 2,000 mm

Material number for torque-resistant linear bushing without shaft: R0696 3.. 00

1) Also available with hollow shaft for shaft diameters 25 and higher: R0696 ... 69 or with ISO 683-17/EN 10088 stainless steel solid shaft: R0696 ... 79.



Shaft Ø d (mm)	Material number		Weight (g)
	Type 1	Type 2	
12	R1331 112 00	-	1.6
16	R1331 116 00	-	2.0
20	R1331 120 00	R1331 320 00	4.5
25	R1331 125 00	R1331 325 00	6.6
30	R1331 130 00	R1331 330 00	9.3
40	R1331 140 00	R1331 340 00	17.0
50	R1331 150 00	R1331 350 00	24.0

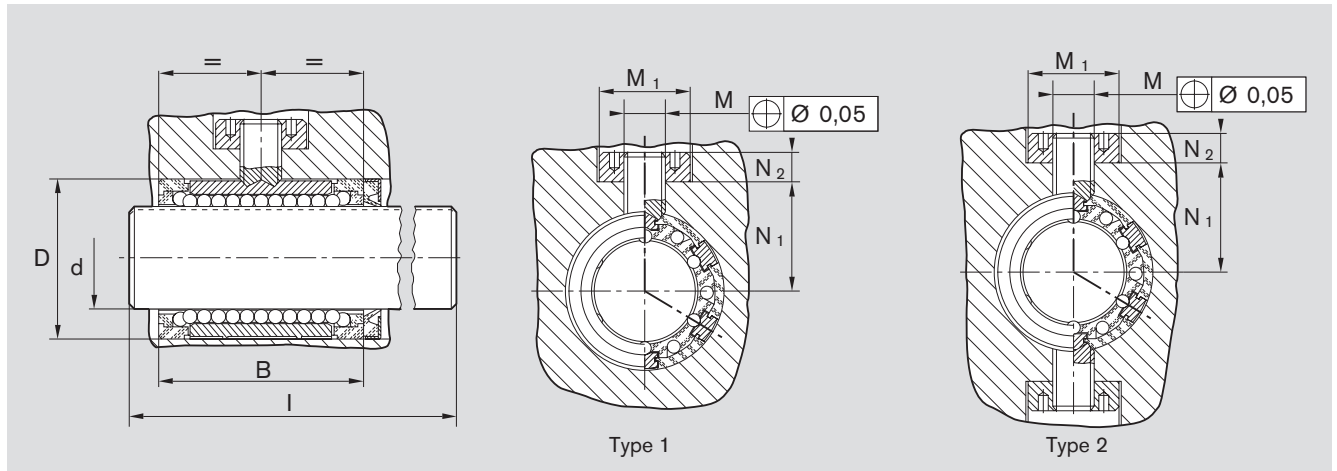
Wiper seal must be ordered separately.

Explanation of sample short product name

KB	DR	2	25	WV	2000
Linear bushing	Torque	Two ball guide grooves	Ø 25	Shaft included	2000

See page 158 for more information on short product names.

Dimensions



Dimensions (mm)								Standard length (mm)	Torsional load moment M_t (Nm)		Load ratings ² (N)		Weight	
Type 1	Type 2	D ¹⁾	B	M	M ₁ +0.1	N ₁	N ₂		Type 1	Type 2	dyn. C	stat. C ₀	Linear bushing (kg)	Shaft (kg/m)
12	-	22	32	M6x0.5	14	15.5	5.0	400	2.0	-	640	420	0.026	0.89
16	-	26	36	M6x0.5	14	19.5	5.0	400	3.3	-	780	530	0.032	1.57
20	20	32	45	M10x1	22	21.5	8.0	500	7.5	12	1,550	1,050	0.064	2.45
25	25	40	58	M10x1	22	28.5	8.0	500	15.0	24	3,030	2,180	0.135	3.80
30	30	47	68	M12x1	26	32.0	9.5	600	23.0	37	3,680	2,790	0.210	5.50
40	40	62	80	M12x1	26	44.0	9.5	600	53.0	86	6,320	4,350	0.390	9.80
50	50	75	100	M16x1.5	34	52.0	12.5	600	103.0	167	9,250	6,470	0.680	15.30

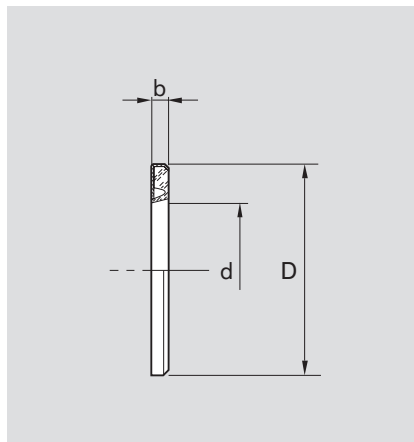
- 1) Recommended installation bore: D^JS⁷.
- 2) The load ratings indicated are minimal values as the load direction cannot be clearly defined.

The dynamic load ratings are based on a total travel of 100,000 m.
When based on 50,000 m, the C values in the table are multiplied by 1.26.

Wiper seal

Design

- Galvanized metal case
- Elastomer wiper seal



Dimensions (mm)		
Ø d	D ³⁾	b +0.3
12	22	3
16	26	3
20	32	4
25	40	4
30	47	5
40	62	5
50	75	6

- 3) Outer diameter D is oversized by about 0.1 mm.
No additional securing is needed.